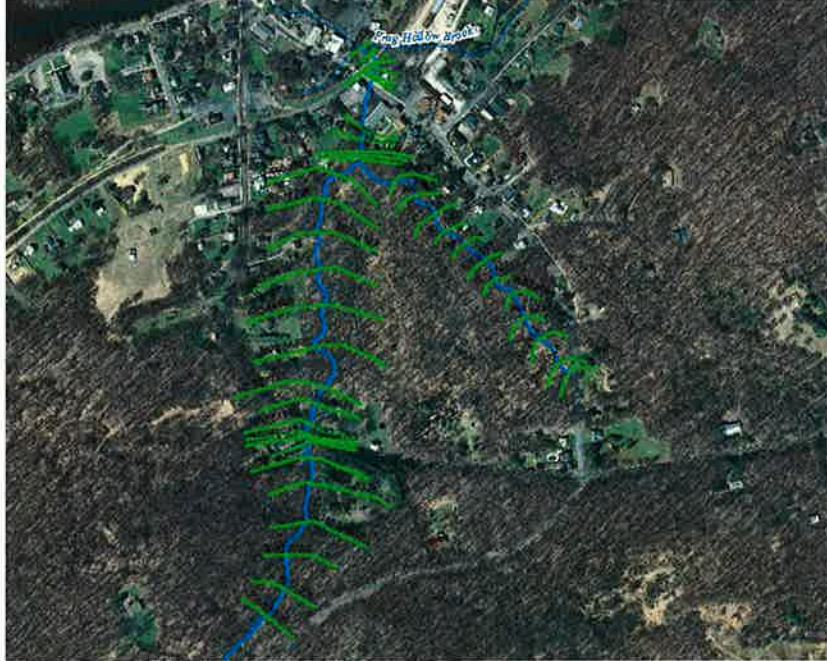


**CALIFON BOROUGH
PRELIMINARY WATERSHED STREAM
FLOODPLAIN ANALYSIS REPORT
PRELIMINARY EXISTING CONDITIONS
HYDROLOGIC & HYDRAULIC MODELING**

Califon Borough, Hunterdon County, New Jersey



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1.0 INTRODUCTION

This engineering analysis and report has been prepared by CV Associates (CVA) at the request of Keller & Kirkpatrick on behalf of the Borough of Califon. The report and supporting documentation is in support of the development of a preliminary hydrologic, hydraulic and watershed floodplain analysis for the existing stream tributary floodplain conditions within the central core of the Borough of Califon in Hunterdon County, New Jersey. The submitted analysis is in support of the Borough of Califon Highlands Water Protection and Planning Council grant. This analysis could serve as support for the development of a comprehensive plan for future infrastructure improvement within the Borough of Califon.

This report has been divided into five separate sections. Section 1.0 presents a general project description. Section 2.0 discusses data collected for this study. Section 3.0 presents design methodology and criteria. Section 4.0 presents the details of the completed hydrologic and hydraulic analysis. Section 5.0 summarizes and discusses the results and conclusions of the study. The appendices provide copies of the input and output data for the hydrologic and hydraulic model analysis and other various supporting documentation.

1.1 Background

The historic core of the Borough of Califon was developed during the mid to late 19th century around waterpower sites. Drainage systems were constructed specifically to collect and deliver stormwater to these waterpower sites and ultimately discharge into the South Branch of the Raritan River. Considerable segments of the original drainage courses and manmade infrastructure systems still remain in-place, but today are antiquated and unable to adequately convey stormwater runoff therefore resulting in frequent flooding conditions.

The Borough of Califon central core is located at the bottom of steeply sloped areas, in the range of 8 to 10 percent. In this area, a reoccurring flooding problem exists along unnamed tributaries, which traverses a natural wooded area between Academy Street and Main Street. The result is rapidly peaking storm runoff flows and erosive channel velocities along the rivulets and streams leading to the Borough of Califon central core, often resulting in flooding. The primary problem is the diversion of



stormwater runoff from the tributary watersheds to an antiquated conveyance system of ditches, open channels, pipes and culverts of inadequate capacity within the areas of the

stream corridor originating from the large wooded area between Academy Street and Main Street. Flooding along the area reoccurs on a regular basis and also contributes in the degradation of water quality of the downstream receiving watercourses.

Incoming storm runoff flows from the stream corridor tributaries are severely restricted by an existing small open stone channel and piping under the existing firehouse and parking area resulting in flooding during ranges of frequent storm events. The total tributary area to the open stone channel at Railroad Avenue/Main Street is approximately 137.2 acres, which has been subdivided into seven (7) smaller separate subarea watersheds for the purposes of this current analysis. Downstream flows are controlled by two (2), 36" pipes under Columbia Trail. After the confluence with Frog Hollow Brook, flows are controlled by a three (3) cell culvert under Bank Street which is affected by backwater off of the flood reach of the South Branch of the Raritan River.

1.2 Project Description

An initial study was performed by Keller & Kirkpatrick through the Highlands Council (Initial Assessment Grant No. 08-033-010-1004) for the purposes of identifying those issues that would relate to the Borough of Califon reaching Plan Conformance. The study included detailed field reconnaissance to inventory and document existing features as needed to confirm tributary and associated watershed areas. A detailed field reconnaissance survey was performed to inventory and document existing watershed features. The entire stream corridor and surrounding drainage areas were investigated to identify existing drainage features and determine the watershed areas tributary to the stream corridor.

The existing, unnamed tributary streams to the South Branch Raritan River that traverses the Borough of Califon center have not been studied or delineated by the New Jersey Department of Environmental Protection (NJDEP) or by the Federal Emergency Management Agency (FEMA). An existing, outdated NJDEP model terminates at the confluence with Frog Hollow Brook. Runoff flows at this location are controlled by a three (3) cell culvert under Bank Street which is affected by the flood reach of the South Branch. Runoff flows of the tributary streams are controlled by two (2) 36" pipes under the Columbia Trail just upstream of Bank Street. As part of this current study analysis, the existing tributary streams up to and including the Columbia Trail pathway crossing were modeled in detail for the following storm recurrence intervals; the 5-, 10-, 25-, 50-, and 100-year storm events.

Available existing topographic and watershed area mapping was used to develop a preliminary hydrologic model. The model was based on current, existing development conditions. No stream gauging station data is available along the project site area. Therefore, the peak runoff flow rates and flood flow hydrographs were estimated using the U.S. Army Corps of Engineers HEC-1 computer model program.

The computed peak flood flow rates were then used in performing the preliminary existing conditions hydraulic modeling. The existing conditions hydraulic analysis was performed for the existing tributary stream corridors. Hydraulic modeling was performed using the U.S. Army Corps of Engineers HEC-RAS computer model program. The existing conditions hydraulic modeling was used to determine peak water surface elevations and profiles along the tributary stream corridors.

This preliminary existing conditions hydrologic and hydraulic modeling analysis forms the basis and foundation for the information that is required to develop any future floodplain mapping delineations, for future infrastructure improvement planning and for the design of any proposed future flood risk reduction and flood mitigation measures.

2.0 AVAILABLE INFORMATION

2.1 Data Collection

CVA utilized the following documentation in conducting this project study analysis:

- Plan entitled “Highlands Implementation Plan Studies Stream Corridor Improvements Califon Borough, Hunterdon County Key Map”, sheet no. 1 of 4, prepared by Keller & Kirkpatrick Inc., stamp dated February 2, 2012,
- Plan entitled “Highlands Implementation Plan Studies Stream Corridor Improvements Califon Borough, Hunterdon County Replacement Culvert”, sheet no. 2 of 4, prepared by Keller & Kirkpatrick Inc., stamp dated February 2, 2012,
- Plan entitled “Highlands Implementation Plan Studies Stream Corridor Improvements Califon Borough, Hunterdon County Relief Pipe Layout”, sheet no. 3 of 4, prepared by Keller & Kirkpatrick Inc., stamp dated February 2, 2012,
- Plan entitled “Highlands Implementation Plan Studies Stream Corridor Improvements Califon Borough, Hunterdon County Recharge Trenches”, sheet no. 4 of 4, prepared by Keller & Kirkpatrick Inc., stamp dated February 2, 2012,
- Plan entitled “Drainage Structures Location Map Railroad Avenue/Main Street/Bank Street Borough of Califon, Hunterdon County, New Jersey”, map 1, prepared by Keller & Kirkpatrick Inc., undated,
- Plan entitled “Drainage Structures Location Map Railroad Avenue/Main Street/Bank Street Borough of Califon, Hunterdon County, New Jersey”, map 2, prepared by Keller & Kirkpatrick Inc., undated,
- Plan entitled “Watershed Boundary Aerial Map Railroad Avenue/Main Street/Bank Street Borough of Califon, Hunterdon County, New Jersey”, map 3, prepared by Keller & Kirkpatrick Inc., undated,
- Plan entitled “Watershed Boundary Topographic Map Railroad Avenue/Main Street/Bank Street Borough of Califon, Hunterdon County, New Jersey”, map 4, prepared by Keller & Kirkpatrick Inc., undated,
- Report entitled “Draft Interim Report”, prepared for the Highlands Water Protection and Planning Council, Amended Grant Agreement No. 09-033-011-1004, dated January 2012,

- Report entitled “Califon Borough – Initial Assessment Grant Stream Corridor Study”, Volume 1 of 2, prepared by Keller & Kirkpatrick Inc., and dated March 2009,
- Report entitled “Califon Borough – Initial Assessment Grant Stream Corridor Study”, Volume 2 of 2, prepared by Keller & Kirkpatrick Inc., and dated March 2009,
- Plan entitled “State of New Jersey, Department of Environmental Protection, Division of Water Resources, Bureau of Floodplain Management, Delineation of Floodway and Flood Hazard Area, South Branch Raritan River Sta. 3327+90 to Sta. 3410+30 Lebanon Township, Califon Borough, Hunterdon County, New Jersey”, plate SB-23, prepared by Anderson-Nichols & Co., Inc., dated September 1982,
- Effective FEMA Flood Insurance Study (FIS) for Hunterdon County, New Jersey (all jurisdictions) Volumes 1 thru 5 dated September 25, 2009,
- Effective FEMA Digital Flood Insurance Rate Map (DFIRM) Panel Numbers 34019C0127F and 34019C129F, for Hunterdon County, New Jersey (all jurisdictions) dated September 25, 2009,
- Topographic information in geographic information system (GIS) format digital elevation model (DEM) tile terrain of the subject area derived from LIDAR data collected by the Highlands Council (2 meter post spacing) and Earthdata (5,000 foot flying height and 2 meter post spacing),
- NJDEP 2007 Land Use/Land Cover Update, Upper Delaware Watershed Management Area, WMA-1 from the New Jersey Department of Environmental Protection, Office of Information Resource Management (OIRM), Bureau of Geographic Information Systems (BGIS),
- Soil Survey Geographic (SSURGO) database for Hunterdon County, New Jersey from the United States Department of Agriculture (USDA), Natural Resources Conservation Services (NRCS), Soils Data Mart, dated 2007,
- New Jersey 2007-2008 High Resolution Orthophotography (MrSID format) from the New Jersey Image Warehouse, and
- USGS Califon, NJ Topographic Quadrangle Maps in digital format.

2.2 Site Visit

CVA compiled information on the existing conditions of the central core of the Borough of Califon. Also, on April 3, 2012, CVA conducted a site visit to gather additional details on the project location and visually observe the contributory watershed areas, stream channel tributaries and roadway bridge, culvert and embankment areas. This work included:

Field Measurements and Visual Observations: During the site visit, CVA collected additional field measurements of the stream channel tributaries, culvert and related hydraulic openings to supplement and confirm the information provided by Keller & Kirkpartick. This included visual observations of Columbia Trail pathway, Main Street and Academy Street roadways, culvert structures and sections of the existing channel tributaries.

Watershed & Stream Field Observations: The watershed that contributes incoming runoff flow to the open stone channel which conveys flow under the firehouse parking lot to the Railroad Avenue/Main Street culvert was visually observed. The data collected during our field visit included information from visual observations of channel cross-sections, crossings and roadways. Areas of the channel system were observed as to the size and shape, type of soil and other materials in the banks and bottoms of the channel, an estimate of Manning's roughness coefficient, the apparent stability or lack of stability of the channel, and the proximity to existing homes and structures. In general, the watershed area is made up of mostly a combination of forest, agricultural and urban land cover areas.

Photographs: During the site visit color photographs were taken of various features for modeling support.

The elevations in this report reference to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. The topographic survey information and other elevations used in the hydrologic and hydraulic modeling were all in the North American Vertical Datum of 1988 (NAVD 1988).

3.0 DESIGN METHODOLOGY & BACKGROUND

Flooding generally occurs when a rainstorm or melting snow generates a specific amount of runoff flow that overtops the banks of a stream watercourse and flows onto the floodplain areas. Since the floodplain area is a desirable place to locate homes and businesses, these high flows generally cause damage and could sometimes also be associated with injuries and death. Floods vary greatly in intensity and duration depending on storm patterns, drainage basin characteristics, and other factors. Hydrologic and hydraulic analysis of floods provides a sound technical basis for facilities design as well as for management decision making that must weigh numerous other factors.

3.1 Hydrologic Evaluations

3.1.1 General Nature of Flood Hydrology

Flood hydrology involves the estimation of the magnitude of stream flow at various locations within a watershed resulting from a given precipitation input. The hydrologic system embodies all of the physical processes that are involved in the conversion of precipitation to stream flow, as well as physical characteristics of the watershed and atmosphere that influence runoff generation. The use of computer models to simulate the hydrologic system is of major significance in the performance of many flood-runoff analyses. A fundamental problem in simulating hydrologic systems is to employ the appropriate level of detail to represent those components of the system that have a significant influence on the phenomena being modeled. An associated problem is to acquire and interpret information on watershed characteristics, to enable an appropriate representation of the system.

3.1.1.1 Physical Processes

The hydrologic cycle comprises all of the physical processes that affect the movement of water in its various forms, from its occurrence as precipitation near the earth's surface to its discharge to the ocean. Such processes include interception, water storage in depressions, water storage in lakes and reservoirs, snow accumulation and melt, infiltration through the earth's surface, percolation to various depths in the subsurface, the storage of water in the subsurface, the lateral movement of water in both unsaturated and saturated portions of the subsurface, evaporation from water bodies and moist soil, transpiration from vegetation, overland flow, and streamflow. The processes are complex and can be defined with varying degrees of sophistication, with some processes being more significant than others for particular types of analysis.

3.1.1.2 Storm Characteristics

Precipitation is an input to a hydrologic system. The precipitation might be associated with a historical storm, a design storm, or may result from a stochastic generation procedure. Generally, precipitation is averaged spatially (i.e., “lumped”) over a subbasin, or perhaps over a geometric “element,” if a “distributed” model is being used. Likewise, precipitation intensity is averaged over a time interval. Thus, the precipitation input to the hydrologic system is commonly represented by hyetographs of spatially and temporally averaged precipitation.

Each storm type (e.g., convective, frontal, orographic) has predominant characteristics regarding the spatial extent and variability, intensity, and duration of precipitation. Precipitation fields associated with storms, especially the convective type, exhibit substantial spatial and temporal variability.

3.1.1.3 Watershed Characteristics

A key aspect of simulating a hydrologic system is representation of the physical properties of the actual system. Watersheds are heterogeneous with respect to topography, geology, soils, land use, vegetation, drainage density, river characteristics, etc. In most applications, the properties are lumped on a subbasin basis and represented by simple indices.

3.1.2 Data Considerations

Types and sources of data for flood-runoff analysis may be categorized as that related to physical attributes of a basin, and data pertaining to the historical movement of water (in its various states) through the hydrologic cycle. Physical attributes include area, surficial geometric characteristics (area, shape, slope, etc.), soil type, land use, vegetative cover, subsurface characteristics (location, size and geometry of subsurface features, hydraulic conductivities, etc.), and stream channel characteristics (shape, slope, roughness, etc.). Some of these attributes are static, while others may change seasonally or over longer time periods.

Data related to water movement include precipitation, snow depth and other snow-related information, storage of water in surface water bodies, infiltration, soil moisture, movement of water in both unsaturated and saturated portions of the subsurface, evaporation, transpiration, and streamflow (or flow in conduits or other drainage devices). In addition, meteorological data such as air temperature, solar radiation and wind may be used with energy relations to define water movement. Although a number of these data types might be used in a particular analysis, many flood-runoff studies rely primarily on historical precipitation and streamflow data.

3.1.3 Approaches to Flood-Runoff Analysis

Methods of flood-runoff analysis are generally categorized under three approaches including; simplified methods, frequency analysis of streamflow data and precipitation-runoff analysis of storm events analysis.

Simplified methods may involve use of formulas, previously derived regression equations, envelope curves, etc. as a basis for making hydrologic estimates. Where adequate streamflow data are available, frequency analysis of such data can be performed to develop exceedance frequency relationships. For situations where historical streamflow data is nonexistent or inadequate for required estimates, a precipitation-runoff simulation model is commonly used for flood-runoff analysis. In the case of the watershed floodplain analysis for Califon Borough no streamflow data was available and so a precipitation-runoff simulation model was developed.

The primary output of a precipitation-runoff simulation model is discharge hydrographs at locations of interest. Runoff consists of precipitation and other flow contributions collected from a drainage basin that appears in the surface stream at the outlet of the basin. In a basin that is divided into subbasins for modeling, the routing and combining of discharge hydrographs from individual subbasins are additional parts of the simulation of the precipitation-runoff process.

3.1.4 Hydrologic Simulation Program

For the Califon Borough watershed floodplain analysis, the U.S. Army Corps of Engineers (USACOE) HEC-1 computer model program was used to develop the 5-, 10-, 25-, 50-, and 100-year recurrence interval storm events.

3.2 Water Surface Profile Modeling

Just as the discharge hydrograph is a reflection of the hydrologic nature of a flood, the water surface profile is a reflection of the hydraulics of flood flow in a channel and floodplain. The water surface profile changes along a watercourse due to changes in natural channel geometry, surface roughness, and developments such as levees, bridges and channel improvements. The specific effect of these changes on the water surface profile depends on the type and class of flow.

3.2.1 Hydraulic Simulation Program

A standard step backwater analysis for the existing conditions along the stream tributaries within the central core of Califon Borough was used to develop the stream water surface elevations and profiles. The latest version (Version 4.1.0) of the U.S. Army Corps of Engineers (USACOE), Hydrologic Engineering Center River Analysis System (HEC-RAS) model program with steady flow analysis under subcritical flow regime was used

to compute the water surface elevations and profiles for the 5-, 10-, 25-, 50- and 100-year peak runoff flow rate storm events.

4.0 HYDROLOGIC & HYDRAULIC ANALYSIS

4.1 General

The main purpose of this study is to perform a detailed preliminary hydrologic and hydraulic analysis of the existing, unnamed tributary channel stream condition upstream of the South Branch Raritan River that traverses the Borough of Califon center core. This analysis consists of determining the flood flow hydrographs and peak runoff flow rates, as well as the associated peak water surface elevations and profiles during the 5-, 10-, 25-, 50- and 100-year storm event conditions. The existing conditions watershed floodplain analysis extends up to and including the Columbia Trail pathway crossing on the downstream end.

The following paragraphs describe the procedures used for determining the 5-, 10-, 25-, 50- and 100-year storm recurrence interval event inflow hydrographs and the determination of the associated peak water surface elevations and flood profiles using both the HEC-1 and HEC-RAS computer model programs.

4.2 HEC-1 Model

The USACOE HEC-1 Flood Hydrograph Package is a steady, non-uniform flow, computer model designed to simulate flood events through the surface response of a river basin to precipitation by representing the basin as an interconnected system of hydrologic and hydraulic components. Multiple sub-watershed areas can be modeled, as well as river reaches, to interconnect the sub-watersheds.

For this project, the HEC-1 model was used to develop inflow hydrographs and peak runoff flows based upon a sub-divided watershed precipitation-runoff simulation model for the 5-, 10-, 25-, 50- and 100-year storm recurrence interval events.

4.2.1 Precipitation, Watershed Area, Runoff and Hydrologic Parameters

4.2.1.1 Precipitation

The SCS Type III distribution has been designated for use in the project study area for the determination of the 5-, 10-, 25-, 50- and 100-year storm recurrence interval events. The intensity of rainfall varies considerably during a storm as well as by geographic region. To represent various regions of the United States, the Natural Resources Conservation Service (NRCS) developed the synthetic 24-hour rainfall distribution applicable to New Jersey from available National Weather Service (NWS) duration-frequency data and/or local storm data.

County rainfall frequency data for New Jersey has recently been revised following a study conducted by the National Oceanic and Atmospheric Administration (NOAA) for

the Ohio River Basin and Surrounding States including New Jersey. This study incorporated rainfall data collected since NWS Technical Paper 40 (TP-40) was developed in the early 1960's. The revised data, which is contained in NOAA Atlas 14, replaces the NWS TP-40 rainfall frequency values for New Jersey. Average county rainfall frequency data has been developed by NRCS based on the individual weather station values contained in NOAA Atlas 14.

The 5-, 10-, 25-, 50- and 100-year storm recurrence interval events are regionally determined storm magnitudes with a 24-hour duration that have a 20%, 10%, 4%, 2%, and 1% chance, respectively, of being equaled or exceeded in any one given year. The total rainfall was derived from a precipitation chart provided by the NRCS for each county in New Jersey. The following Table 4-1 below presents the rainfall frequency depths for Hunterdon County that were used as part of the input to the HEC-1 model:

**Table 4-1
NRCS/NOAA 24-Hour Rainfall Frequency Data
Hunterdon County, New Jersey**

5-year	10-year	25-year	50-year	100-year
4.3 inches	5.0 inches	6.1 inches	7.0 inches	8.0 inches

4.2.1.2 Watershed Area

The total watershed or drainage area, which contributes incoming runoff flow to the open stone channel conveying flow under the firehouse parking lot to the Railroad Avenue/Main Street culvert, was previously determined by Keller & Kirkpatrick to be approximately 137.20 acres (0.214 mi²).

This watershed was subdivided into seven smaller subareas (A, B1, B2, C, D, E, and F) for modeling purposes. The total watershed generally slopes in a south to north direction, which follows the direction of flow in the existing stream channel tributaries. Although a majority of the watershed areas are located within the Borough of Califon, smaller portions of the upstream end of the watershed areas are also located with the Boroughs of Lebanon and Tewksbury.

The upstream watershed area and the associated subareas were used as part of the hydrologic input parameters for the HEC-1 hydrologic modeling. The Watershed Area Map illustrated in Figure 1 shows the watershed and subarea boundary delineations and project site vicinity.

4.2.1.3 Runoff

The synthetic unit hydrograph method of the Soil Conservation Service (SCS), which is based on a dimensionless unit hydrograph, was utilized within the HEC-1 modeling. Three key parameters are required as input data for the SCS dimensionless hydrograph method of a precipitation-runoff relationship within a watershed/subarea consisting of: the watershed lag time, the runoff curve number, and soil infiltration.

The first parameter is time of concentration, T_c , defined as the time it takes storm runoff to travel from the most hydraulically distant point of the watershed to a point of interest within the watershed. T_c is computed by summing all the travel times for consecutive components of the drainage conveyance system. T_c influences the shape and peak of the runoff hydrograph.

The relative timing of hydrologic events must also be known. A basic measure of timing is the watershed lag time T_L or basin lag, which locates the hydrograph's position relative to the causative storm pattern. It is the property of the drainage area, which is defined as the difference in time between the center of mass of effective rainfall and the center of mass of runoff produced. The NRCS has developed a method of computing the watershed lag value for a typical watershed in terms of T_c using the empirical relation as $T_L = 0.6T_c$.

The second key parameter includes the characteristics of the land from which stormwater is collected. Land characteristics are described with a Soil Conservation Service (SCS) Runoff Curve Number (CN). The CN value provided in TR-55 accounts for the type of soil and specific land use and land cover. When several CN values are representative of differing areas in a watershed, a weighted average can be calculated.

The land-uses and hydrologic soil groups within the watershed were derived from GIS for land-use/land cover mapping, NJ 2007-2008 High Resolution Orthophotography of the project watershed, and NRCS Soil Survey data for Hunterdon County. Figure 4 illustrates the various land use types, Figure 3 illustrates the various hydrologic soil groups and Figure 1 illustrates the 2007-2008 digital color infrared (CIR) orthophotography of New Jersey in State Plane NAD83 Coordinates (aerial imagery) that are located within the Califon Borough central core watershed/subareas map delineation.

The final parameter required for runoff analysis is soil infiltration within each sub-basin during the design storm (loss of runoff). This parameter is expressed by a combination of equations 2-2 and 2-4 within TR-55:

$$\begin{aligned} &\text{Initial abstraction (stormwater losses to the soil before runoff begins),} \\ I_a &= 0.2[(1000/\text{CN}) - 10] \end{aligned}$$

Therefore, the parameter is directly related to the CN value determined for the watershed/subareas as discussed above.

4.2.1.4 Hydrologic Parameters

The hydrologic input parameters presented in Table 4-2 below were used for the hydrologic evaluation of the 5-, 10-, 25-, 50- and 100-year storm recurrence interval events in the input to the HEC-1 modeling that was prepared for the Califon Borough central core drainage basin area analysis.

Table 4-2
Summary of HEC-1 Hydrologic Parameters
Califon Borough Watershed Stream Floodplain Analysis

Watershed Subarea	HEC-1 INPUTS			
	Drainage Area (<i>acres</i>)	Runoff Curve Number	Time of Concentration (<i>hrs</i>)	Time Lag (<i>hrs</i>)
SUB A	70.2	77	0.71	0.43
SUB B1	32.1	64	0.93	0.56
SUB B2	1.7	71	0.08	0.05
SUB C	1.1	77	0.14	0.09
SUB D	4.0	71	0.27	0.16
SUB E	13.5	68	0.26	0.15
SUB F	14.6	66	0.38	0.26

Once the rainfall distribution and hydrologic subarea input parameters were determined, these were incorporated into the preliminary HEC-1 existing conditions model for the evaluation of the 5-, 10-, 25-, 50- and 100-year storm recurrence interval events. The HEC-1 model was set up to determine inflow hydrographs and peak runoff flow rates at the individual subarea outlet locations and the combined inflow hydrograph and peak runoff rates at the downstream outlet of the overall contributory watershed area.

4.2.2 Summary of Computed Peak Flow Discharges

The 5-, 10-, 25-, 50- and 100-year storm recurrence interval events existing conditions inflow hydrographs were computed. Table 4-3 below presents a summary of the computed peak inflow discharge results at seven individual subarea outlet locations as determined by the preliminary existing conditions HEC-1 computer model.

Table 4-3
Summary of HEC-1 Peak Discharges
Seven Subareas
Califon Borough Watershed Stream Floodplain Analysis

Watershed Subarea	Storm Recurrence Interval				
	5-Year <i>cfs</i>	10-Year <i>cfs</i>	25-Year <i>cfs</i>	50-Year <i>cfs</i>	100-Year <i>cfs</i>
SUB A	83	106	145	177	213
SUB B1	16	24	36	47	60
SUB B2	3	4	5	7	8
SUB C	2	3	4	4	5
SUB D	5	7	10	13	15
SUB E	15	21	31	39	49
SUB F	12	17	26	33	42

The preliminary existing conditions HEC-1 model was set up to also compute the peak runoff discharge rates for the 5-, 10-, 25-, 50- and 100-year storm recurrence interval events at the downstream location of the existing small open stone channel and piping under the firehouse and parking area, as well as locations along the stream tributary channels. This was accomplished through the use of combining, lagging and routing subroutine operations for the computed discharge hydrographs throughout the stream tributary channel network.

In addition, in the vicinity of the outlet of subarea E, there exists a split flow condition. In this area, flow will first be conveyed in a north-east direction before overbanking and then being conveyed in a north-west direction. Based upon the information that was provided by Keller & Kirkpatrick, the split off flow is initially diverted to the north-east

under Main Street to Frog Hollow Brook and is estimated to be about a 60 cfs flow capacity diversion before overbanking to the north-west and then contributing to flooding in the vicinity of the firehouse. The characteristics of this split flow condition and were included in the HEC-1 model for this project as a diversion subroutine.

Table 4-4 below presents a summary of the computed peak inflow discharge results at the downstream location of the existing small open stone channel and piping under the firehouse and parking area for the 5-, 10-, 25-, 50- and 100-year storm recurrence interval events as determined by the preliminary existing conditions HEC-1 computer model.

Table 4-4
Summary of HEC-1 Peak Discharges
Watershed Outlet
Open Stone Channel and Piping under the Firehouse
Califon Borough Watershed Stream Floodplain Analysis

Watershed Subarea	Storm Recurrence Interval				
	5-Year <i>cfs</i>	10-Year <i>cfs</i>	25-Year <i>cfs</i>	50-Year <i>cfs</i>	100-Year <i>cfs</i>
COMB5	88	113	155	191	246

4.3 HEC-RAS Model

In addition to the watershed hydrologic modeling that was performed and described above, hydraulic water surface profile modeling was also performed. The peak 5-, 10-, 25-, 50- and 100-year storm recurrence interval event discharges determined from the HEC-1 modeling were input into a steady flow data file of the existing conditions created in the HEC-RAS model to determine flood water surface elevations and profiles. The U.S. Army Corps of Engineers (USACOE), Hydrologic Engineering Center River Analysis System (HEC-RAS) software (version 4.1.0) allows the user to perform one-dimensional steady flow and unsteady river flow calculations and was set up to allow changes in the flow regime (supercritical, critical, and sub-critical) to account for stream contraction and rapidly changing slopes.

The HEC-RAS program has the ability to perform subcritical, supercritical or mixed flow regime calculations. Subcritical profiles computed by the program are constrained to critical depth or above, while supercritical profiles are constrained to critical depth or below. In cases where the flow regime will pass from subcritical to supercritical, or supercritical to subcritical, the program could be run in a mixed flow regime mode. Based upon the field conditions and characteristics of the modeled stream reach, one-

dimensional steady flow water surface elevations and profiles modeled in a subcritical flow regime mode were determined to be appropriate and developed as part of this project study.

HEC-GeoRAS was used to develop a georeferenced geometric data file. HEC-GeoRAS is a set of procedures, tools, and utilities for processing geospatial data in ArcGIS using a graphical user interface (GUI). The interface allows the preparation of geometric data for import into HEC-RAS and processes simulation results exported from HEC-RAS. To create the import file, the user must have an existing digital terrain model (DTM) of the river system in the ArcInfo triangular irregular network (TIN) or digital elevation model (DEM) format. The user creates a series of line themes pertinent to developing geometric data for HEC-RAS.

The HEC-RAS geometric data file for the existing conditions were developed using a combination of actual physical field survey data, supplemented and merged with information from DEM tile DTM of the subject area and other various bridge, culvert and roadway dimensions based on surveyed existing conditions plans. The digital terrain data was developed using LIDAR data collected by the Highlands Council (2 meter post spacing) and Earthdata (5,000 foot flying height and 2 meter post spacing).

A total of three unnamed stream corridors were modeled in the geometric file of the HEC-RAS model for this project, including two upstream stream tributary channels and one downstream tributary channel. The upstream stream tributary channels, labeled as the West Reach and the East Reach are joined at a junction just upstream of the firehouse and then the combined flows were modeled along the Downstream Reach and under and downstream of the firehouse.

4.3.1 Cross Sections

As noted previously, three stream corridors were modeled in the geometric file of the HEC-RAS model for this project. Cross sections along each of these streams, including the West Reach, the East Reach and the Downstream Reach, were developed for the model. These sections were developed by the use of the digital terrain model in the form of DEM grid tiles and supplemented with field survey data provided by Keller & Kirkpatrick. The DEM was used to extract station-elevation data along the cross-sections.

A total of forty-eight (48) total cross sections were constructed for the existing conditions Califon Borough HEC-RAS modeling. This included twenty (20) cross-sections along the West Reach, twelve (12) cross-sections along the East Reach, and sixteen (16) cross-sections along the Downstream Reach.

A combined stream reach length of about 0.71 miles (3,726 feet) was modeled as part of this project. This included 0.21 miles (1,124 feet) along the West Reach, 0.37 miles

(1,978 feet) along the East Reach, and 0.12 miles (624 feet) along the Downstream Reach.

Illustrations of the DEM extracted locations and plan layout of the cross-sections are included on Figure 5, while the overall section layouts are also illustrated on the geometric data file plan views of the location of the HEC-RAS model river cross-sections for the existing conditions and are included in the report appendices. The shape of each cross section is also illustrated in the appendices with the HEC-RAS model printout [see Appendix I, HEC-RAS Step Backwater Computations – Existing Condition].

4.3.2 Manning’s Roughness Coefficient

The following Manning’s roughness (n) coefficients were used as part of this preliminary study:

n = 0.035, used for the channel areas

n = 0.080, used for the right and left bank and overbank areas

The Manning’s roughness (n) coefficients used were based on information from the field observations of the project locations along the various unnamed stream channel tributaries.

4.3.3 Contraction and Expansion Coefficients

The following contraction and expansion coefficients were used as part of this preliminary study:

Gradual transitions: 0.1 (contraction) – 0.3 (expansion)

Prompt transitions: 0.3 (contraction) – 0.5 (expansion)

The contraction and expansion coefficients are used to compute energy losses associated with changes in the shape of river cross-sections. These losses are the result of the contraction and expansion of flow between cross sections.

4.3.4 Bridge and Culvert Structure Data

Existing stream channel crossings were observed in the field as to consider bridge and culvert opening sizes and shapes, opening and roadway materials, elevations, lengths and skew angles. These characteristics were considered in combination with field survey information and other details that were provided by Keller & Kirkpatrick. The downstream crossing and culvert locations that were included in the HEC-RAS modeling are as follows:

4.3.4.1 West Reach Crossings

The West Reach stream channel portion of the hydraulic modeling included two bridge/culvert crossings. The first crossing is an existing driveway for access to a private residence that is located just upstream of Academy Street with the following characteristics:

Bridge/Culvert Material:	Concrete & Stone with Rubble Channel Bottom
Opening Span (Normal):	4.0 feet \pm
Pier Width(s):	N/A none
Opening Rise:	5.0 feet \pm
Roadway Width:	14.0 feet \pm
Finished Roadway Grade:	594.0 feet NAVD 88 \pm
Underclearance Elevation:	593.0 feet NAVD 88 \pm

The second crossing along the West Reach stream channel is located along Academy Street just downstream of the paved driveway access. The following characteristics were modeled for the opening and crossing:

Bridge/Culvert Material:	Stone & Mortar with Rubble Channel Bottom
Culvert Span (Normal):	6.0 feet \pm
Pier Width(s):	N/A none
Opening Rise Upstream:	3.0 feet \pm
Opening Rise Downstream:	6.0 feet \pm
Roadway Width:	25.0 feet \pm
Finished Roadway Grade:	591.0 feet NAVD 88 \pm
Underclearance Elevation:	586.93 feet NAVD 88 \pm

4.3.4.2 East Reach Crossings

There were no bridge and/or culvert crossings included in the hydraulic modeling along the East Reach stream channel portion of the tributary channel.

4.3.4.3 Downstream Reach

The Downstream Reach stream channel portion of the hydraulic modeling included two bridge/culvert crossings. Specifically, the first crossing was included to model the obstruction and the existing piping that is located under the firehouse and parking area, that outlets just downstream of Main Street. The existing system of piping located under the firehouse and parking lot is complicated by the fact that; the system is antiquated; the hydraulic opening size is somewhat variable due to the irregular construction; and the system is compromised by obstructions, pass-through conduits and repair modifications. The following crossing characteristics were used for the hydraulic modeling of the first crossing:

Bridge/Culvert Material:	Stone Masonry with Rubble Channel Bottom
Culvert Span (Normal):	3.2 feet \pm
Pier Width(s):	N/A none
Culvert Rise:	2.2 feet \pm
Roadway Width:	175.0 feet \pm

The second crossing along the Downstream Reach stream channel is located along Columbia Trail pathway downstream of Main Street. The following characteristics were modeled for the opening and crossing:

Culvert Material:	Twin RCP Pipe Culverts
Culvert Diameter (each):	3.0 feet \pm
Culvert Length:	33.0 feet \pm
Top of Crossing Width:	10.0 feet \pm
Finished Crossing Grade:	484.0 feet NAVD 88 \pm

4.3.5 Stream Junction

Stream junctions are defined as locations where two or more stream channels either confluence together or they split apart. Junction data consists of a description, reach lengths across the junction, tributary angles and modeling approach. For steady flow hydraulics in HEC-RAS, a junction can be modeled by either the energy equations or the momentum equations.

For this project, the West Reach and the East Reach flows merge and confluence with the Downstream Reach which flows in the downstream direction. As such, a junction was included in the hydraulic model at the confluence these reaches. The junction was modeled by energy equations.

4.3.6 Boundary Conditions

For a subcritical flow regime mode hydraulic analysis, boundary conditions are necessary to establish the starting water surface elevations at the downstream ends of a river reach. A starting water surface elevation is necessary in order for the HEC-RAS program to begin the standard step backwater calculations.

For this project, normal depth was selected as the downstream end boundary conditions of the Downstream Reach. This type of boundary condition requires an energy slope that will be used in calculating normal depth, using Manning's equation, at that location. In general, using the average slope of the channel bottom or the average slope of the water surface in the vicinity of the cross-section can approximate the energy slope. For this study, a normal depth slope of 0.0027 was used for the downstream end boundary condition.

4.3.7 Bridge Modeling Approach

The bridge and culvert routines in HEC-RAS allow the modeler to analyze a bridge under various flow combinations; low flow, low flow and weir flow, pressure flow (orifice equations), pressure and weir flow, and highly submerged flows. For the modeling, “low flow” computations were based upon the Energy Equation (standard step method) while the “high flow” computations were based on the Pressure and/or Weir Flow Method.

Pressure flow occurs when the upstream flow comes into contact with the low chord of the bridge. Once the flow comes into contact with the upstream side of the bridge, a backwater occurs and orifice flow is established. The HEC-RAS program handles two cases of orifice flow; the first is when only the upstream side of the bridge is in contact with the water and the second is when the bridge opening is flowing completely full.

For the case when both the upstream and downstream side of the bridge is submerged, and the opening is flowing completely full, the standard full flowing orifice equation is used by the program. For the modeling, a coefficient of discharge (Cd) of 0.80 was used for the existing conditions and entered into the HEC-RAS model.

4.3.8 Standard Step Backwater Analysis

The HEC-RAS model with steady flow simulation under a subcritical flow regime mode was used for the standard step backwater computation of the existing water surface elevations and flood profiles. Input data and the resultant output of the hydraulic modeling for the existing conditions are provided in Appendix I.

The HEC-RAS model input and output elevations, as well as all of the other elevations referenced in this report, are based and referenced upon the North American Vertical Datum of 1988 (NAVD 88).

5.0 SUMMARY & CONCLUSIONS

5.1 Summary of Results

This engineering report presents the results of a preliminary hydrologic and hydraulic watershed floodplain analysis that has been prepared to evaluate the existing conditions, unnamed tributary channel streams upstream of the South Branch Raritan River and Main Street that traverses the Borough of Califon center core. The existing conditions watershed floodplain analysis extends up to and including the Columbia Trail pathway crossing on the downstream end. The submitted analysis is in support of the Borough of Califon Highlands Water Protection and Planning Council grant. This analysis will serve as support for the development of a comprehensive plan for future infrastructure improvement within the Borough of Califon.

5.1.1 Overview of Modeling Results

This analysis consists of a preliminary existing conditions hydrologic analysis of the entire watershed and downstream outlet for the Borough of Califon center core. The flood flow hydrographs and peak runoff flow rates during the 5-, 10-, 25-, 50- and 100-year storm recurrence interval events were determined.

In addition, the analysis consisted of a preliminary existing conditions hydraulic analysis by incorporating the results of the hydrologic analysis peak flow rates. A multiple run profile using the 5-, 10-, 25-, 50- and 100-year storm recurrence interval events was used to assess peak water surface profiles and elevations along the existing, unnamed tributary streams that contribute flows to the South Branch Raritan River and that traverse the Borough of Califon center core.

5.2 Watershed Floodplain Analysis Conclusions

This watershed floodplain hydrologic and hydraulic analysis has provided preliminary results for flood flow hydrographs, peak runoff flow rates and hydraulic water surface profiles and elevations during the 5-, 10-, 25-, 50- and 100-year storm recurrence interval events. The results of this analysis have confirmed that a flooding problem does exist along the existing unnamed stream channel tributaries, which traverse the natural wooded area between Academy Street and Main Street.

This study may serve as a guide in support of the Borough of Califon Stormwater Management Plan, as well as a valuable resource for the Highlands Regional Master Plan. This preliminary existing conditions hydrologic and hydraulic modeling analysis can also form the basis and foundation for the information that is required to develop any future floodplain mapping delineations, and for the design of any proposed future flood risk reduction and flood mitigation and control alternative measures. This analysis could

serve as support for the development of a comprehensive plan for future infrastructure improvement within the Borough of Califon.

Figure 1: Califon Borough Floodplain Study Watershed Boundary Overview Map



0 500 1,000 2,000 Feet

Figure 2: Califon Borough Floodplain Study Watershed Boundary Overview Map with Tc Path



0 500 1,000 2,000 Feet

Figure 3: Califon Borough Floodplain Study Watershed Boundary Hydrologic Soil Group Map

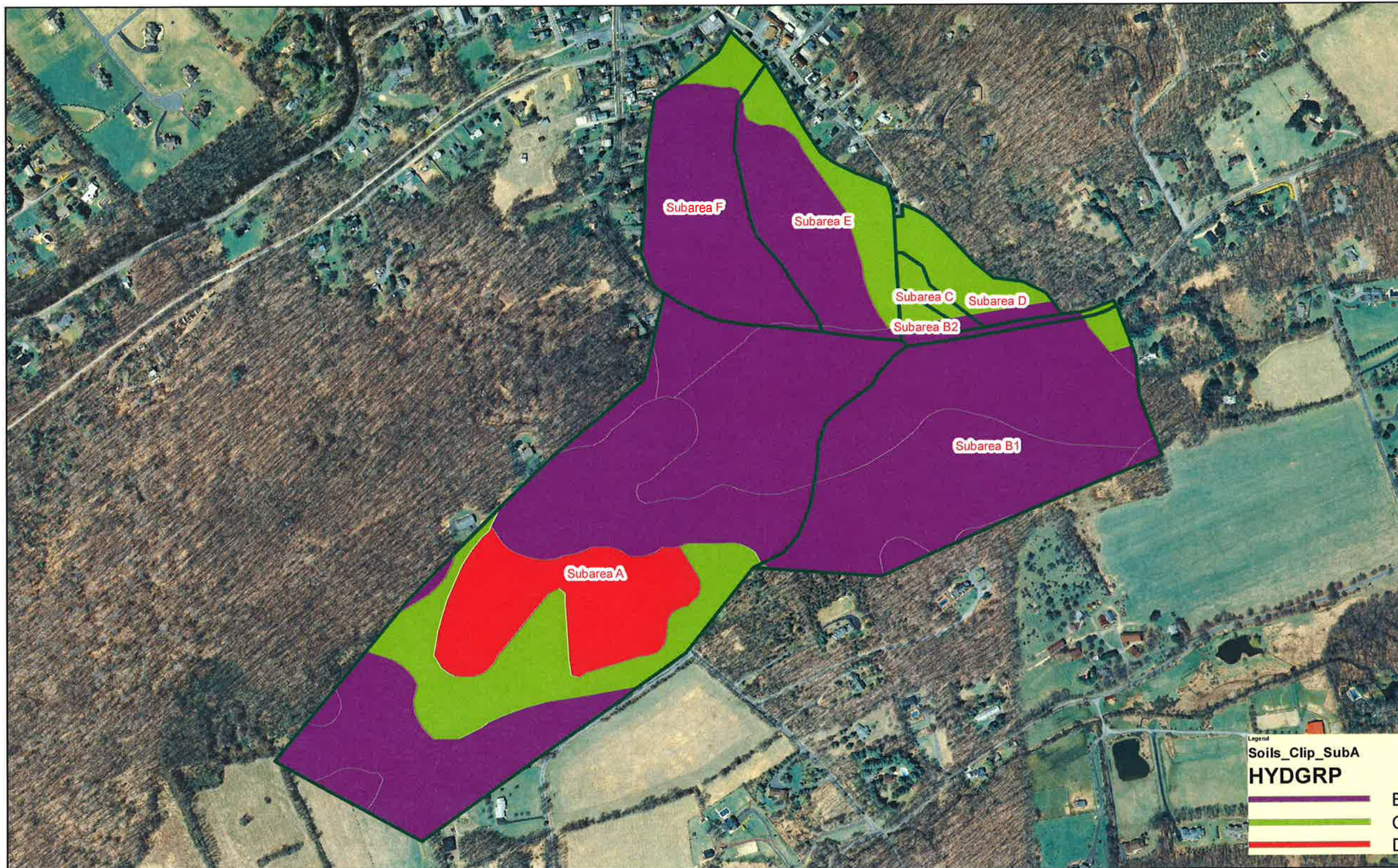
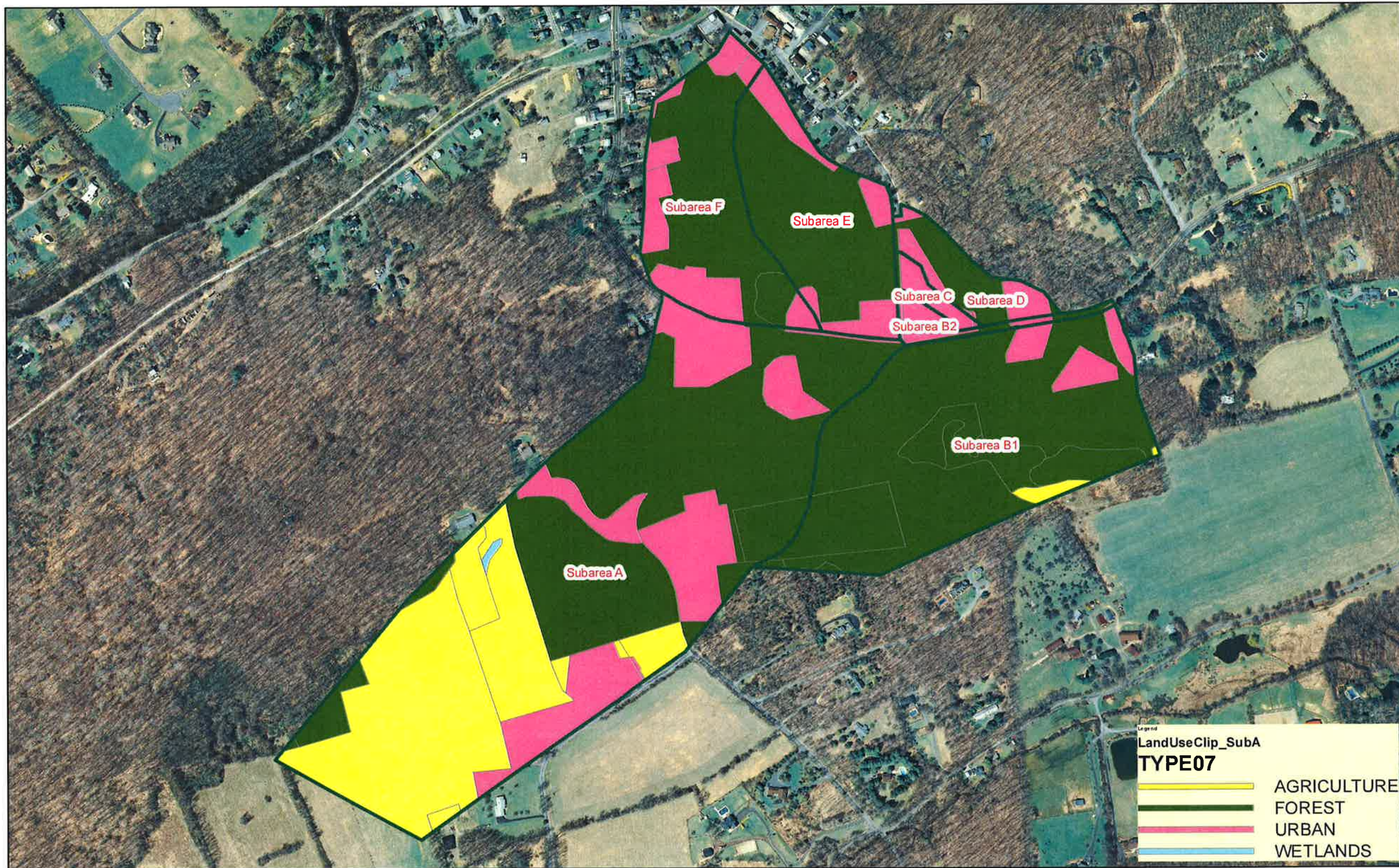
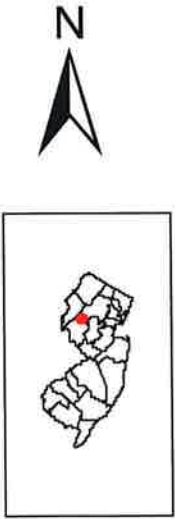


Figure 4: Califon Borough Floodplain Study Watershed Boundary Land Use Type Map



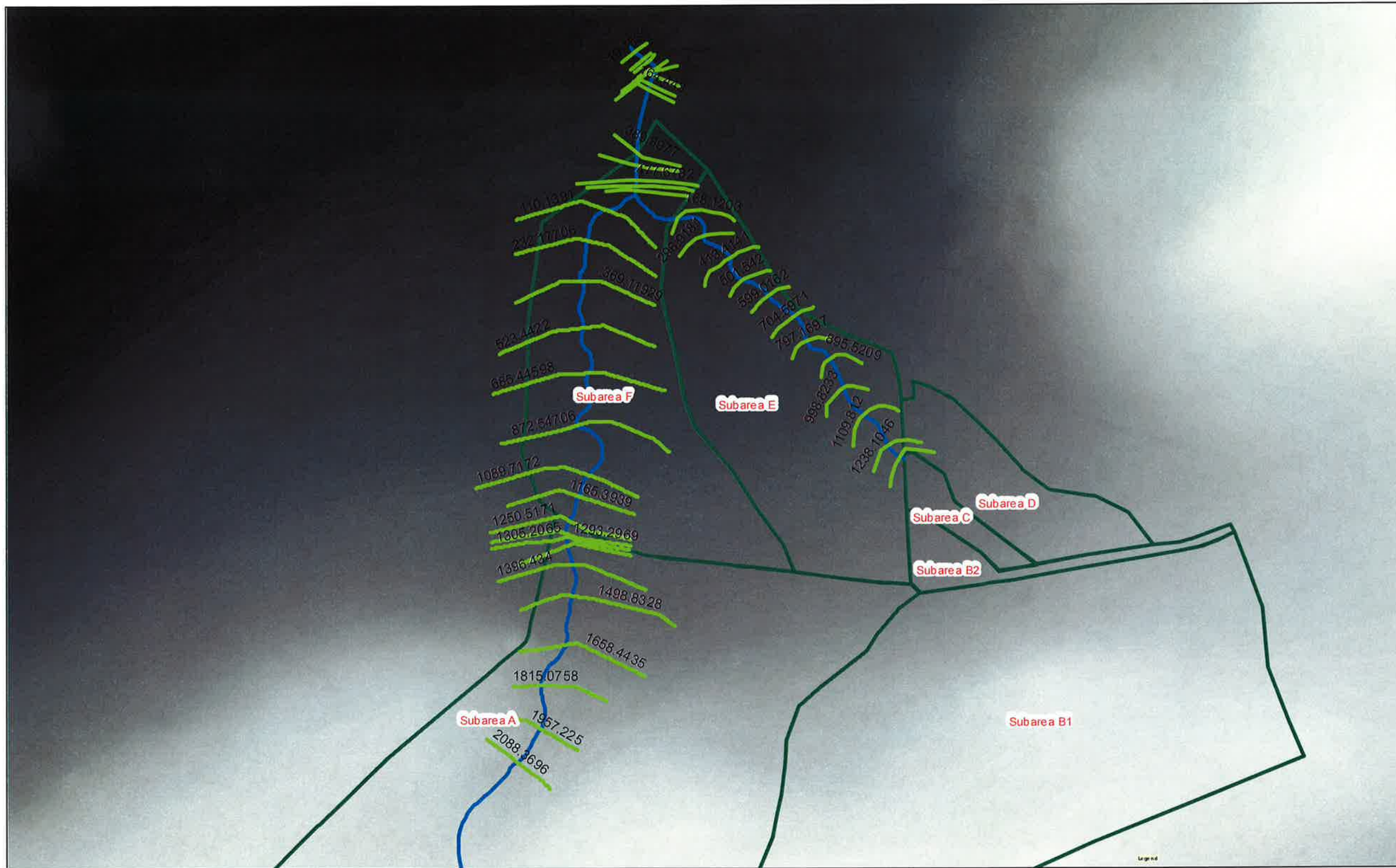
0 500 1,000 2,000 Feet

Figure 5: Califon Borough Floodplain Study Tributary and Cross-Section Layout Over Aerial Map



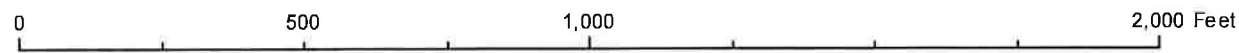
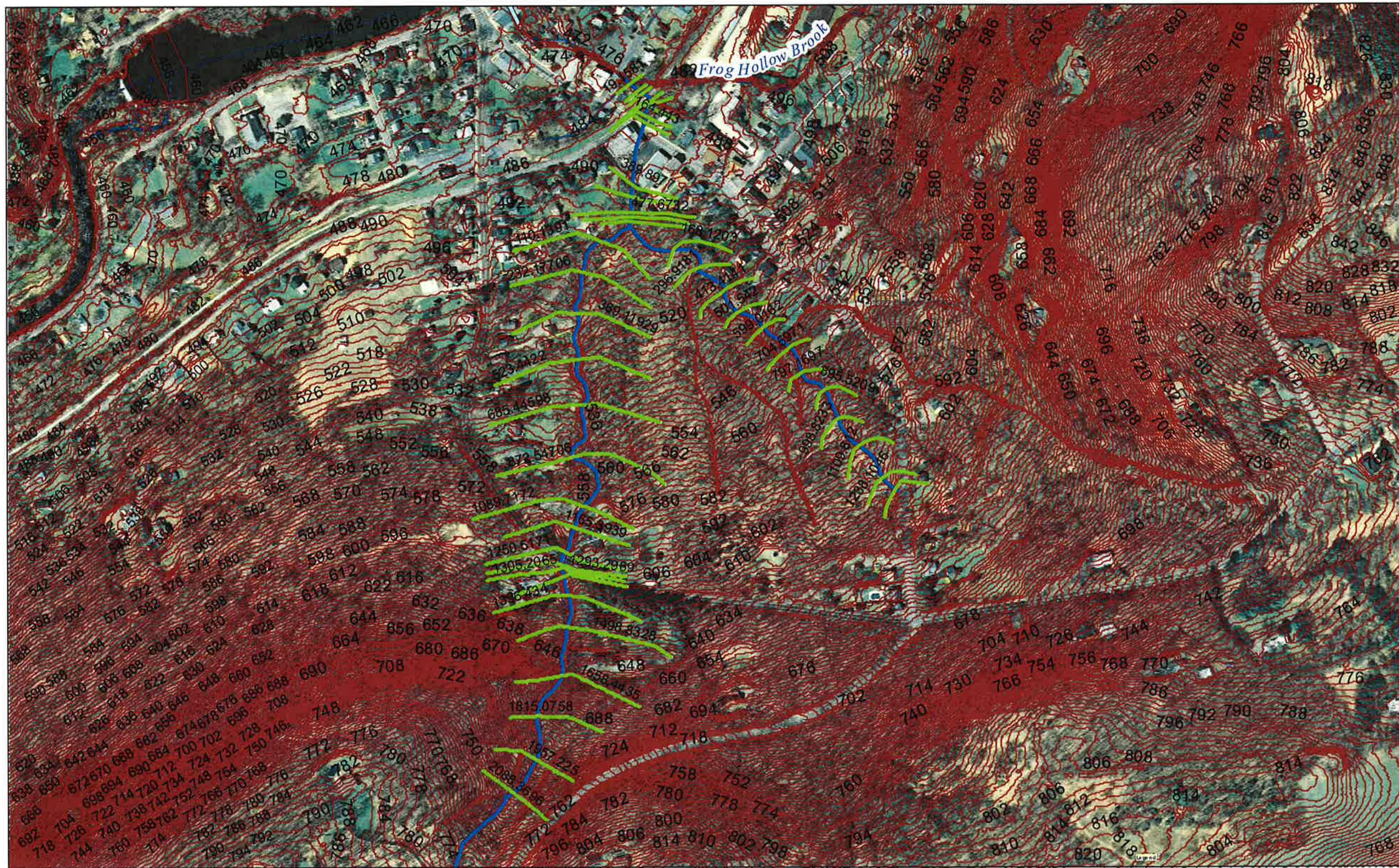
0 500 1,000 2,000 Feet

Figure 6: Califon Borough Floodplain Study Tributary and Cross-Section Layout Over DEM Map



0 500 1,000 2,000 Feet

Figure 7: Califon Borough Floodplain Study Tributary and Cross-Section Layout Over Topographic Countours Map



Appendix A

SubArea Runoff Curve Number (CN) Computations

Subarea A Runoff Curve Number Computations
Califon Borough Preliminary Watershed Stream Floodplain Analysis
Preliminary Existing Conditions Hydrologic Hydraulic Modeling
April 2012

LU07	LABEL07	HSG Used	HSG	Shape_Area	Column	CN	Area*CN	CN =	77
	2100 CROPLAND AND PASTURELAND	B	B	139035	3	79	10983727		77
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	169778	3	68	11544920	Area	1867272.54 ft ²
	4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	B	B	21163	3	60	1269810	Area	42.87 ac
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	24694	3	68	1679195		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	4262	3	68	289817		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	111	3	68	7519.035		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	523	3	68	35594.04		
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	B	B	52265	3	75	3919874		
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	35431	3	60	2125866		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	24938	3	68	1695796		
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	32786	3	60	1967150		
	2140 AGRICULTURAL WETLANDS (MODIFIED)	B	B	21621	3	98	2118852		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	13643	3	68	927750.1		
	2400 OTHER AGRICULTURE	B	B	2009	3	83	166761		
	4420 DECIDUOUS BRUSH/SHRUBLAND	B	B	397	3	56	22230.42		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	45858	3	68	3118344		
	2100 CROPLAND AND PASTURELAND	B	B	20769	3	79	1640717		
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	16289	3	60	977313.6		
	4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	B	B	5261	3	60	315685.2		
	2400 OTHER AGRICULTURE	B	B	83454	3	83	6926642		
	4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	B	B	3674	3	60	220435.7		
	2400 OTHER AGRICULTURE	B	B	12513	3	83	1038543		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	1074	3	68	73040.94		
	2100 CROPLAND AND PASTURELAND	B	B	7887	3	79	623065.7		
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	4185	3	60	251104.5		
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	5778	3	60	346675.4		
	2140 AGRICULTURAL WETLANDS (MODIFIED)	D	D	189	5	98	18523.59		
	2400 OTHER AGRICULTURE	D	D	1938	5	90	174408.3		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	D	D	15100	5	84	1268389		
	2400 OTHER AGRICULTURE	D	D	175896	5	90	15830657		
	2400 OTHER AGRICULTURE	D	D	7843	5	90	705887.3		
	2400 OTHER AGRICULTURE	D	D	308	5	90	27708.53		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	D	D	58600	5	84	4922429		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	D	D	41523	5	84	3487904		
	2100 CROPLAND AND PASTURELAND	D	D	73872	5	89	6574649		
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	D	D	126475	5	79	9991497		
	2400 OTHER AGRICULTURE	D	D	204	5	90	18354.9		
	2400 OTHER AGRICULTURE	C	C	1046	4	88	92076.67		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	C	C	58144	4	79	4593414		
	2400 OTHER AGRICULTURE	C	C	2658	4	88	233925.4		
	2400 OTHER AGRICULTURE	C	C	7027	4	88	618409.5		
	2400 OTHER AGRICULTURE	C	C	45106	4	88	3969371		
	4420 DECIDUOUS BRUSH/SHRUBLAND	C	C	74135	4	70	5189439		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	C	C	135	4	79	10632.13		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	C	C	3138	4	79	247887.4		
	2100 CROPLAND AND PASTURELAND	C	C	38198	4	86	3285041		

Subarea A Runoff Curve Number Computations
Califon Borough Preliminary Watershed Stream Floodplain Analysis
Preliminary Existing Conditions Hydrologic Hydraulic Modeling

	April 2012			
4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	C	C	7939	73 579547.3
4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	C	C	378400	73 27623174

Subarea B1 Runoff Curve Number Computations
 Calflon Borough Preliminary Watershed Stream Floodplain Analysis
 Preliminary Existing Conditions Hydrologic Hydraulic Modeling
 April 2012

LU07	LABEL07	HSG Used	HSG	Shape_Area	Column	CN	Area*CN	CN =
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	139035	3	68	9454348	64
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	169778	3	60	10186695	743619.58 ft ²
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	21163	3	68	1439118	Area
	4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	B	B	24694	3	60	1481642	
	1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	B	B	4262	3	70	298341.1	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	111	3	60	6634.443	
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	523	3	68	35594.04	
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	C	C	52265	4	79	4128934	
	4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	C	C	35431	4	73	2586471	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	C	C	24938	4	73	1820487	
	4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	B	B	32786	3	60	1967150	
	4420 DECIDUOUS BRUSH/SHRUBLAND	B	B	21621	3	56	1210773	
	4420 DECIDUOUS BRUSH/SHRUBLAND	B	B	13643	3	56	764029.5	
	4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	B	B	2009	3	60	120550.1	
	2100 CROPLAND AND PASTURELAND	B	B	397	3	79	31360.78	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	45858	3	60	2751480	
	4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	B	B	20769	3	60	1246114	
	4430 CONIFEROUS BRUSH/SHRUBLAND	B	B	16289	3	67	1091334	
	4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	B	B	5261	3	60	315685.2	
	4420 DECIDUOUS BRUSH/SHRUBLAND	B	B	83454	3	56	4673397	
	2100 CROPLAND AND PASTURELAND	B	B	3674	3	79	290240.3	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	12513	3	60	750754	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	C	C	1074	4	73	78411.6	
	4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	C	C	7887	4	73	575744.3	
	4430 CONIFEROUS BRUSH/SHRUBLAND	C	C	4185	4	77	322250.7	

Subarea B2 Runoff Curve Number Computations
 Califfon Borough Preliminary Watershed Stream Floodplain Analysis
 Preliminary Existing Conditions Hydrologic Hydraulic Modeling
 April 2012

LU07	LABEL07	HSG Used	HSG	Shape_Area	Column	CN	Area*CN	CN =
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	139035	3	68	9454348	71
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	169778	3	68	11544920	Area
	1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	B	B	21163	3	70	1481445	Area
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	B	B	24694	3	75	1852053	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	4262	3	60	255720.9	
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	C	C	111	4	79	8735.35	
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	C	C	523	4	79	41351.9	
	4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	C	C	52265	4	73	3815344	
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	C	C	35431	4	83	2940782	
	1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	C	C	24938	4	80	1995054	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	C	C	32786	4	73	2393366	

504986.44 ft²
 11.59 ac

Subarea C Runoff Curve Number Computations
 Califon Borough Preliminary Watershed Stream Floodplain Analysis
 Preliminary Existing Conditions Hydrologic Hydraulic Modeling
 April 2012

LU07	LABEL07	HSG Used	HSG	Shape_Area	Column	CN	Area*CN	CN =	77
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	696.4		3	68 47353.31		
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	6727.6		3	68 457476.3	Area	47459.85 ft ²
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	C	C	13298.5		4	79 1050578	Area	1.09 ac
	1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	C	C	22279.5		4	80 1782359		
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	388.9		3	60 23334.96		
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	C	C	4069.0		4	73 297038.6		

Subarea D Runoff Curve Number Computations
 Califon Borough Preliminary Watershed Stream Floodplain Analysis
 Preliminary Existing Conditions Hydrologic Hydraulic Modeling
 April 2012

LU07	LABEL07	HSG Used	HSG	Shape_Area	Column	CN	Area*CN	CN =
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	139035	3	68	9454348	71
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	169778	3	68	11544920	472200.60 ft ²
	1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	B	B	21163	3	70	1481445	10.84 ac
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	24694	3	60	1481642	
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	C	C	4262	4	79	336699.2	
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	C	C	111	4	79	8735.35	
	1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	C	C	523	4	80	41875.34	
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	C	C	52265	4	83	4337994	
	1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	C	C	35431	4	80	2834489	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	C	C	24938	4	73	1820487	

Subarea E Runoff Curve Number Computations
 Califon Borough Preliminary Watershed Stream Floodplain Analysis
 Preliminary Existing Conditions Hydrologic Hydraulic Modeling
 April 2012

LU07	LABEL07	HSG Used	HSG	Shape_Area	Column	CN	Area*CN	CN #	Area
	4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	B	B	139035	3	3	60	8342071	68
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	169778	3	3	68	11544920	504986.44 ft ²
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	21163	3	3	68	1439118	11.59 ac
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	C	C	24694	4	4	83	2049605	
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	B	B	4262	3	3	75	319651.2	
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	C	C	111	4	4	83	9177.646	
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	B	B	523	3	3	75	39258.13	
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	C	C	52265	4	4	83	4337994	
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	B	B	35431	3	3	75	2657333	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	C	C	24938	4	4	73	1820487	
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	32786	3	3	60	1967150	

Subarea F Runoff Curve Number Computations
 Calton Borough Preliminary Watershed Stream Floodplain Analysis
 Preliminary Existing Conditions Hydrologic Hydraulic Modeling
 April 2012

LU07	LABEL07	HSG Used	HSG	Shape_Area	Column	CN	Area*CN	CN =
	4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	B	B	139035		3	60	8342071
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	169778		3	68	11544920
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	B	B	21163		3	75	1587262
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	24694		3	60	1481642
	1200 COMMERCIAL/SERVICES	C	C	4262		4	94	400629.4
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	C	C	111		4	83	9177.646
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	C	C	523		4	83	43445.66
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	C	C	52265		4	73	3815344
	4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	B	B	35431		3	60	2125866
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	24938		3	68	1695796
	1140 RESIDENTIAL, RURAL, SINGLE UNIT	B	B	32786		3	68	2229437
	1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	B	B	21621		3	70	1513466
	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	B	B	13643		3	75	1023254
	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	B	B	2009		3	60	120550.1

66

542259.93 ft²
 12.45 ac

Appendix B

SubArea Time of Concentration (Tc) Computations

Subarea A TIME OF CONCENTRATION COMPUTATION
Califon Borough Preliminary Watershed Stream Floodplain Analysis Report
Preliminary Existing Conditions Hydrologic Hydraulic Modeling

Time of Concentration Calculation

Project: Califon Borough H&H
 County: Hunterdon
 Subtitle: Subarea A

State: NJ By: JR
 Checked: CVS

Date: 4/10/2012
 Date: 4/20/2012

FLOW TYPE	UNITS	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	TOTAL
SHEET FLOW									
1. Surface Description		AB							
2. Manning's roughness coeff., n (table 3.1)		Woods - Light Underbrush							
3. Flow length, L (total L < 100 ft)	ft	0.4							
4. Two-yr 24-hr rainfall, P ₂	in	100							
5. Land slope, S	ft/ft	3.4							
6. $T_c = [(0.007)(nL)^{0.5}]/[(P_2)^{0.5} * (S^{0.5})]$	hr	0.01							
		0.458							0.46
SHALLOW CONCENTRATED FLOW									
7. Surface Description (paved or unpaved - U or P)		BC		CD		EF			
8. Flow length, L	ft	U	890	U	540	U	650		
9. Watercourse slope, S	ft/ft	0.03	0.04	0.04	0.03				
10. Average Velocity, V (figure 3-1)	ft/s	2.9	3.1	3.0					
11. $T_c = L/3600 * V$	hr	0.086	0.048	0.061					0.20
CHANNEL FLOW									
12. Cross sectional flow area, A	ft ²	FG							
13. Wetted perimeter, P _w	ft	25							
14. Hydraulic radius, R=A/P _w	ft	50							
15. Channel slope, S	ft/ft	0.50							
16. Manning's roughness coeff., n		0.123							
17. $V = 1.49 * R^{2/3} * S^{1/2} / n$	ft/s	8.24							
18. Flow length, L	ft	1720							
19. $T_c = L/3600 * V$	hr	0.058							0.06
20. Watershed or subarea T _c or T _t (add T _c in steps 6, 11, and 19)	hr								0.71 hr
21. Watershed or subarea Lag Time	hr								0.43 hr

Note: Attach flow path figure showing segments, lengths and elevations

Reference: Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t) from TR55 program manual second edition, June 1986

Subarea B1 TIME OF CONCENTRATION COMPUTATION
Califon Borough Preliminary Watershed Stream Floodplain Analysis Report
Preliminary Existing Conditions Hydrologic Hydraulic Modeling

Time of Concentration Calculation

Project: Califon Borough H&H
 County: Hunterdon
 Subtitle: Subarea B1

State: NJ
 By: JR
 Checked: CVS

Date: 4/10/2012
 Date: 4/20/2012

FLOW TYPE	UNITS	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	TOTAL
SHEET FLOW									
1. Surface Description		AB							
2. Manning's roughness coeff., n (table 3.1)		0.4							
3. Flow length, L (total L < 100 ft)	ft	100							
4. Two-yr 24-hr rainfall, P ₂	in	3.4							
5. Land slope, S	ft/ft	0.002							
6. $T_c = [(0.007)(nL)^{0.6}]/(P_2^{0.5})(S^{0.4})$	hr	0.872							0.87
SHALLOW CONCENTRATED FLOW									
7. Surface Description (paved or unpaved - U or P)		BC		DE					
8. Flow length, L	ft	410		U					
9. Watercourse slope, S	ft/ft	0.15		U	520				
10. Average Velocity, V (figure 3-1)	ft/s	6.3		0.14	0.13				
11. $T_c = L/3600*V$	hr	0.018		6.1	5.9				0.06
				0.013	0.025				
CHANNEL FLOW									
12. Cross sectional flow area, A	ft ²	FG							
13. Wetted perimeter, P _w	ft	0							
14. Hydraulic radius, R=A/P _w	ft	0.00							
15. Channel slope, S	ft/ft	0.000							
16. Manning's roughness coeff., n	ft/s	0							
17. $V = (1.49 R^{2/3} S^{1/2})/n$	ft/s	0.00							
18. Flow length, L	ft	0							
19. $T_c = L/3600*V$	hr	0.000							0.00
20. Watershed or subarea T _c or T _t (add T _c in steps 6, 11, and 19)	hr								0.93 hr
21. Watershed or subarea Lag Time	hr								0.56 hr

Note: Attach flow path figure showing segments, lengths and elevations

Reference: Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t) from TR55 program manual second edition June 1986

Subarea B2 TIME OF CONCENTRATION COMPUTATION
Califon Borough Preliminary Watershed Stream Floodplain Analysis Report
Preliminary Existing Conditions Hydrologic Hydraulic Modeling

Time of Concentration Calculation

Project: Califon Borough H&H
 County: Hunterdon
 Subtitle: Subarea B2

State: NJ
 By: JR
 Checked: CVS

Date: 4/10/2012
 Date: 4/20/2012

FLOW TYPE	UNITS	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	TOTAL
SHEET FLOW									
1. Surface Description		Smooth Surface - Asphalt							
2. Manning's roughness coeff., n (table 3.1)		0.011							
3. Flow length, L (total L < 100 ft)	ft	100							
4. Two-yr 24-hr rainfall, P ₂	in	3.4							
5. Land slope, S	ft/ft	0.03							
6. $T_c = [(0.007)(nL)^{0.48} / (P_2^{0.5} S^{0.5})] (S^{-0.5})$	hr	0.017							
SHALLOW CONCENTRATED FLOW									
7. Surface Description (paved or unpaved -- U or P)		BC	CD						
8. Flow length, L	ft	U	U						
9. Watercourse slope, S	ft/ft	640	410						
10. Average Velocity, V (figure 3-1)	ft/s	0.08	0.12						
11. $T_c = L/3600 * V$	hr	4.5	5.7						
		0.039	0.020						
CHANNEL FLOW									
12. Cross sectional flow area, A	ft ²	FG							
13. Wetted perimeter, P _w	ft	0							
14. Hydraulic radius, R=A/P _w	ft	0							
15. Channel slope, S	ft/ft	0.00							
16. Manning's roughness coeff., n	ft/ft	0.000							
17. $V = [1.49 R^{2/3} S^{1/2}] / n$	ft/s	0							
18. Flow length, L	ft	0							
19. $T_c = L/3600 * V$	hr	0.000							
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)	hr								0.08 hr
21. Watershed or subarea Lag Time	hr								0.05 hr

Note: Attach flow path figure showing segments, lengths and elevations

Reference: Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t) from TR55 program manual second edition June 1986

Subarea C TIME OF CONCENTRATION COMPUTATION
Califon Borough Preliminary Watershed Stream Floodplain Analysis Report
Preliminary Existing Conditions Hydrologic Hydraulic Modeling

Time of Concentration Calculation

Project: Califon Borough H&H
 County: Hunterdon
 Subtitle: Subarea B2

State: NJ
 By: JR
 Checked: CVS

Date: 4/10/2012
 Date: 4/20/2012

FLOW TYPE	UNITS	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	TOTAL
SHEET FLOW									
1. Surface Description		AB	BC						
2. Manning's roughness coeff., n (table 3-1)		0.4	0.15						
3. Flow length, L (total L < 100 ft)	ft	35	65						
4. Two-yr 24-hr rainfall, P ₂	in	3.4	3.4						
5. Land slope, S	ft/ft	0.14	0.15						
6. $T_c = [(0.007)(nL)^{0.85}]/(P_2^{0.5} S^{0.5})$ (S ^{0.5})	hr	0.068	0.050						0.12
SHALLOW CONCENTRATED FLOW									
7. Surface Description (paved or unpaved - U or P)		CD	DE						
8. Flow length, L	ft	U	U						
9. Watercourse slope, S	ft/ft	260	250						
10. Average Velocity, V (figure 3-1)	ft/s	0.13	0.14						
11. $T_c = L/3600 \cdot V$	hr	5.8	6.0						0.02
		0.012	0.012						
CHANNEL FLOW									
12. Cross sectional flow area, A	ft ²	FG							
13. Wetted perimeter, P _w	ft	0							
14. Hydraulic radius, R=A/P _w	ft	0.00							
15. Channel slope, S	ft/ft	0.000							
16. Manning's roughness coeff., n		0							
17. $V = [1.49 R^{2/3} S^{1/2}] / n$	ft/s	0.00							
18. Flow length, L	ft	0							
19. $T_c = L/3600 \cdot V$	hr	0.000							0.00
20. Watershed or subarea T _c or T _i (add T _i in steps 6, 11, and 19)	hr								0.14 hr
21. Watershed or subarea Lag Time	hr								0.09 hr

Note: Attach flow path figure showing segments, lengths and elevations

Reference: Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t) from TR55 program manual second edition June 1986

Subarea D TIME OF CONCENTRATION COMPUTATION
Califon Borough Preliminary Watershed Stream Floodplain Analysis Report
Preliminary Existing Conditions Hydrologic Hydraulic Modeling

Time of Concentration Calculation

Project: Califon Borough H&H
 County: Hunterdon
 Subtitle: Subarea D

State: NJ
 By: JR
 Checked: CVS

Date: 4/10/2012
 Date: 4/20/2012

FLOW TYPE	UNITS	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	TOTAL
SHEET FLOW									
1. Surface Description		AB							
2. Manning's roughness coeff., n (table 3.1)		Woods - Light Underbrush							
3. Flow length, L (total L < 100 ft)	ft	0.4							
4. Two-yr 24-hr rainfall, P ₂	in	100							
5. Land slope, S	ft/ft	3.4							
6. $T_c = [(0.007)(nL)^{0.48} / (P_2^{0.5} S^{0.5})]$	hr	0.06							0.22
		0.224							
SHALLOW CONCENTRATED FLOW									
7. Surface Description (paved or unpaved -- U or P)		BC							
8. Flow length, L	ft	U							
9. Watercourse slope, S	ft/ft	650							
10. Average Velocity, V (figure 3-1)	ft/s	0.12							
11. $T_c = L / (3600 * V)$	hr	5.7							0.03
		0.032							
CHANNEL FLOW									
12. Cross sectional flow area, A	ft ²	CD							
13. Wetted perimeter, P _w	ft	25							
14. Hydraulic radius, R=A/P _w	ft	50							
15. Channel slope, S	ft/ft	0.50							
16. Manning's roughness coeff., n	ft/s	0.108							
17. $V = [1.49 * R^{2/3} * S^{1/2}] / n$	ft/s	0.04							
18. Flow length, L	ft	7.72							
19. $T_c = L / (3600 * V)$	hr	370							0.01
		0.013							
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)	hr								0.27 hr
21. Watershed or subarea Lag Time	hr								0.16 hr

Note: Attach flow path figure showing segments, lengths and elevations

Reference: Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t) from TR55 program manual second edition June 1986

Subarea E TIME OF CONCENTRATION COMPUTATION
Califon Borough Preliminary Watershed Stream Floodplain Analysis Report
Preliminary Existing Conditions Hydrologic Hydraulic Modeling

Time of Concentration Calculation

Project: Califon Bororough H&H
 County: Hunterdon
 Subtitle: Subarea E

State: NJ By: JR
 Checked: CVS

Date: 4/10/2012
 Date: 4/20/2012

FLOW TYPE	UNITS	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	TOTAL
SHEET FLOW									
1. Surface Description		AB							
2. Manning's roughness coeff., n (table 3-1)		0.4							
3. Flow length, L (total L < 100 ft)	ft	100							
4. Two-yr 24-hr rainfall, P ₂	in	3.4							
5. Land slope, S	ft/ft	0.09							
6. T _r =[(0.007)(nL) ^{0.85}]/(P ₂ ^{0.5})(S ^{0.5})	hr	0.190							0.19
SHALLOW CONCENTRATED FLOW									
7. Surface Description (paved or unpaved - U or P)		BC							
8. Flow length, L	ft	U							
9. Watercourse slope, S	ft/ft	240							
10. Average Velocity, V (figure 3-1)	ft/s	0.14							
11. T _r =L/3600*V	hr	6.0							
		0.011							0.01
CHANNEL FLOW									
12. Cross sectional flow area, A	ft ²	CD							
13. Wetted perimeter, P _w	ft	25							
14. Hydraulic radius, R=A/P _w	ft	50							
15. Channel slope, S	ft/ft	0.50							
16. Manning's roughness coeff., n	ft/s	0.081							
17. V=[1.49-R ^{2/3} S ^{1/2}]/n	ft/s	0.04							
18. Flow length, L	ft	6.67							
19. T _r =L/3600*V	hr	1140							
		0.048							0.06
20. Watershed or subarea T _c or T _r (add T _r in steps 6, 11, and 19)	hr								0.26 hr
21. Watershed or subarea Lag Time	hr								0.15 hr

Note: Attach flow path figure showing segments, lengths and elevations

Reference: Worksheet 3. Time of Concentration (T_c) or Travel Time (T_r) from TR55 program manual second edition June 1986

Subarea F TIME OF CONCENTRATION COMPUTATION
Califon Bororough Preliminary Watershed Stream Floodplain Analysis Report
Preliminary Existing Conditions Hydrologic Hydraulic Modeling

Time of Concentration Calculation

Project: Califon Bororough H&H
 County: Hunterdon
 Subtitle: Subarea F

State: NJ
 By: JR
 Checked: CVS

Date: 4/10/2012
 Date: 4/20/2012

FLOW TYPE	UNITS	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	TOTAL
SHEET FLOW									
1. Surface Description		AB							
2. Manning's roughness coeff., n (table 3-1)		Woods - Light Underbrush							
3. Flow length, L (total L < 100 ft)	ft	0.4							
4. Two-yr 24-hr rainfall, P ₂	in	100							
5. Land slope, S	ft/ft	3.4							
6. $T_c = [(0.007)(nL)^{0.85}]/(P_2^{0.5} S^{0.5})$	hr	0.04							
		0.263							0.26
SHALLOW CONCENTRATED FLOW									
7. Surface Description (paved or unpaved - U or P)		BC							
8. Flow length, L	ft	U							
9. Watercourse slope, S	ft/ft	780							
10. Average Velocity, V (figure 3-1)	ft/s	0.09							
11. $T_c = L/3600 \cdot V$	hr	4.8							
		0.045							0.05
CHANNEL FLOW									
12. Cross sectional flow area, A	ft ²	CD							
13. Wetted perimeter, P _w	ft	25							
14. Hydraulic radius, R=A/P _w	ft	50							
15. Channel slope, S	ft/ft	0.50							
16. Manning's roughness coeff., n	ft/ft	0.057							
17. $V = [1.49 R^{0.48} S^{0.58}] / n$	ft/s	0.04							
18. Flow length, L	ft	5.58							
19. $T_c = L/3600 \cdot V$	hr	1130							
		0.056							0.07
20. Watershed or subarea T _c or T _i (add T _i in steps 6, 11, and 19)	hr								0.38 hr
21. Watershed or subarea Lag Time	hr								0.23 hr

Note: Attach flow path figure showing segments, lengths and elevations

Reference: Worksheet 3: Time of Concentration (T_c) or Travel Time (T_t) from TR55 program manual second edition June 1986

Appendix C

HEC-1 Model Output 5-, 10-, 25-, 50- & 100-year Events

CALIFONHYDROLOGY

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1*****
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
*   JUN 1998
*   VERSION 4.1
*
* RUN DATE 21MAY12 TIME 23:20:31
*
*****
    
```

```

*****
*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
*****
    
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X   X XXXXXXX XXXXX   X
X   X X   X   X   XX
X   X X   X   X   X
XXXXXX XXXX X   XXXXX X
X   X X   X   X   X
X   X X   X   X   X
X   X XXXXXXX XXXXX   XXX
    
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.

THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION

NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL, LOSS RATE:GREEN AND AMPT INFILTRATION

KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1 ID *****
2 ID
3 ID
4 ID PRELIMINARY
5 ID EXISTING CONDITIONS
6 ID CALIFON BOROUGH WATERSHED STREAM FLOODPLAIN ANALYSIS
7 ID HYDROLOGIC, HYDRAULIC & FLOODPLAIN ANALYSIS
8 ID CALIFON BOROUGH, HUNTERDON COUNTY
9 ID NEW JERSEY
10 ID
11 ID
12 ID CALIFON BOROUGH WATERSHED
13 ID 5-, 10-, 25-, 50- & 100-YEAR STORM RECURRENCE INTERVAL EVENTS
14 ID HYDROLOGIC & HYDRAULIC ANALYSIS
15 ID
16 ID
17 ID PREPARED FOR:
18 ID KELLER & KIRKPATRICK
19 ID 301 GIBRALTAR DRIVE, SUITE 2A
20 ID MORRIS PLAINS, NJ 07950
21 ID
22 ID
23 ID PREPARED BY:
24 ID C.V. ASSOCIATES NY; PE, LS, P.C.
25 ID 148 ROUTE 17M, SUITE 2
26 ID HARRIMAN, NY 10926
27 ID (845) 774-1075 PHONE
28 ID (845) 774-8139 FAX
29 ID CVANY@CVASSOCIATESNY.COM
30 ID WWW.CVASSOCIATESNY.COM
31 ID
32 ID
33 ID USE NRCS METHODOLOGY
34 ID
35 ID FILENAME: CALIFONHYDROLOGY.DAT
36 ID
37 ID
38 ID APRIL 2012
39 ID
40 ID
41 ID *****
42 ID
43 IT 6 0 0 241
44 IO 5 0 0
    
```

*** FIX ***

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*DIAGRAM
* NJ 24-HOUR RAINFALL AMOUNTS
* FOR 5-, 10-, 25-, 50- & 100-YEAR EVENT
* 4.3 INCHES, 5.0 INCHES, 6.1 INCHES, 7.0 INCHES, 8.0 INCHES
JR PREC 0.5375 0.6250 0.7625 0.8750 1.000
JP 1
    
```

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
47 KK SUB B1 SUBAREA B1 WATERSHED AREA
48 KM COMPUTE INFLOW HYDROGRAPH FOR 5-, 10-, 25-, 50- & 100-YEAR, 24-HOUR EVENT
* 5-, 10-, 25-, 50- & 100-YEAR PRECIPITATION DEPTH FOR HUNTERDON COUNTY, NJ
49 KO 2
50 PB 8.00
51 IN 6
* SCS TYPE III RAINFALL DISTRIBUTION
52 PC 0.000 0.001 0.002 0.003 0.004 0.005 0.006 0.007 0.008 0.009
53 PC 0.010 0.011 0.012 0.013 0.014 0.015 0.016 0.017 0.018 0.019
54 PC 0.020 0.021 0.022 0.023 0.024 0.026 0.027 0.028 0.029 0.030
55 PC 0.031 0.032 0.034 0.035 0.036 0.037 0.038 0.040 0.041 0.042
56 PC 0.043 0.045 0.046 0.047 0.049 0.050 0.051 0.053 0.054 0.055
    
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CALIFONHYDROLOGY											
57	PC	0.057	0.058	0.060	0.061	0.063	0.064	0.066	0.067	0.069	0.070
58	PC	0.072	0.074	0.075	0.077	0.079	0.080	0.082	0.084	0.085	0.087
59	PC	0.089	0.091	0.093	0.095	0.097	0.100	0.103	0.106	0.109	0.112
60	PC	0.115	0.118	0.121	0.124	0.127	0.130	0.134	0.137	0.140	0.144
61	PC	0.148	0.151	0.155	0.159	0.163	0.167	0.171	0.176	0.180	0.185
62	PC	0.189	0.194	0.199	0.205	0.210	0.216	0.222	0.228	0.235	0.242
63	PC	0.250	0.258	0.266	0.276	0.287	0.298	0.312	0.328	0.363	0.416
64	PC	0.500	0.584	0.638	0.673	0.689	0.702	0.714	0.725	0.734	0.743
65	PC	0.751	0.758	0.766	0.772	0.779	0.785	0.790	0.796	0.801	0.806
66	PC	0.811	0.816	0.821	0.825	0.829	0.834	0.838	0.842	0.845	0.849
67	PC	0.853	0.857	0.860	0.864	0.867	0.870	0.874	0.877	0.880	0.883
68	PC	0.886	0.889	0.892	0.895	0.898	0.900	0.903	0.906	0.908	0.910
69	PC	0.911	0.913	0.915	0.917	0.919	0.920	0.922	0.924	0.925	0.927
70	PC	0.929	0.930	0.932	0.933	0.935	0.936	0.938	0.939	0.941	0.942
71	PC	0.944	0.945	0.946	0.948	0.949	0.951	0.952	0.953	0.955	0.956
72	PC	0.957	0.958	0.960	0.961	0.962	0.963	0.965	0.966	0.967	0.968
73	PC	0.969	0.971	0.972	0.973	0.974	0.975	0.976	0.977	0.978	0.979
74	PC	0.981	0.982	0.983	0.984	0.985	0.986	0.987	0.988	0.989	0.990
75	PC	0.991	0.992	0.993	0.994	0.995	0.996	0.997	0.998	0.9985	0.999
76	PC	1.000									
77	BA	0.0502									
78	LS	0	64								
79	UD	0.56									

80	KK	SUB B2	SUBAREA B2 WATERSHED AREA								
81	KM		COMPUTE INFLOW HYDROGRAPH FOR 5-, 10-, 25-, 50- & 100-YEAR, 24-HOUR EVENT								
82	KO	2									
83	BA	0.0027									
84	LS	0	71								
85	UD	0.05									
86	KK	COMB1	COMBINE FLOWS FROM SUB B1 & SUB B2								
87	KM		HYDROGRAPH COMBINATION OPERATION								
88	KO	2	2								
89	HC	2									
90	KK	SUB C	SUBAREA C WATERSHED AREA								
91	KM		COMPUTE INFLOW HYDROGRAPH FOR 5-, 10-, 25-, 50- & 100-YEAR, 24-HOUR EVENT								
92	KO	2									
93	BA	0.0017									
94	LS	0	77								
95	UD	0.09									

HEC-1 INPUT

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

96	KK	SUB D	SUBAREA D WATERSHED AREA								
97	KM		COMPUTE INFLOW HYDROGRAPH FOR 5-, 10-, 25-, 50- & 100-YEAR, 24-HOUR EVENT								
98	KO	2									
99	BA	0.0063									
100	LS	0	71								
101	UD	0.16									
102	KK	COMB2	COMBINE FLOWS FROM COMB1, SUB C & SUB D								
103	KM		HYDROGRAPH COMBINATION OPERATION								
104	KO	2	2								
105	HC	3									
106	KK	C2TOE	HYDROGRAPH LAG FROM FROM COMB2 TO OUTLET SUB E								
107	KM										
108	KO	2	2								
109	RT	0	0	2							
110	KK	SUB E	SUBAREA E WATERSHED AREA								
111	KM		COMPUTE INFLOW HYDROGRAPH FOR 5-, 10-, 25-, 50- & 100-YEAR, 24-HOUR EVENT								
112	KO	2									
113	BA	0.0211									
114	LS	0	68								
115	UD	0.15									
116	KK	COMB3	COMBINE FLOWS FROM COMB2 & SUB E								
117	KM		HYDROGRAPH COMBINATION OPERATION								
118	KO	2	2								
119	HC	2									
120	KK	Div									
121	DT	DIVERS									
	*	MODEL	DIVERSION SPLIT-OFF FROM SUB E TO FROG HOLLOW BROOK								
122	DI	0	5	10	15	20	25	30	35	40	45
123	DI	50	55	60	65	70	75	80	85	90	95
124	DQ	0	5	10	15	20	25	30	35	40	45
125	DQ	50	60	60	60	60	60	60	60	60	60
126	KK	SUB A	SUBAREA A WATERSHED AREA								
127	KM		COMPUTE INFLOW HYDROGRAPH FOR 5-, 10-, 25-, 50- & 100-YEAR, 24-HOUR EVENT								
128	KO	2									
129	BA	0.1097									
130	LS	0	77								
131	UD	0.43									
132	KK	A TO F	HYDROGRAPH LAG FROM FROM SUB A TO OUTLET SUB F								
133	KM										
134	KO	2	2								
135	RT	0	0	3							

HEC-1 INPUT

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

136	KK	SUB F	SUBAREA F WATERSHED AREA								
137	KM		COMPUTE INFLOW HYDROGRAPH FOR 5-, 10-, 25-, 50- & 100-YEAR, 24-HOUR EVENT								
138	KO	2									
139	BA	0.0228									
140	LS	0	66								
141	UD	0.26									

CALIFONHYDROLOGY

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142      KK  COMB4  COMBINE FLOWS FROM SUB A & SUB F
143      KM                HYDROGRAPH COMBINATION OPERATION
144      KO          2          2
145      HC          2
146      KK  COMB5  COMBINE FLOWS FROM COMB3 & COMB4
147      KM                HYDROGRAPH COMBINATION OPERATION
148      KO          2          2
149      HC          2
150      * HEC-1 MODEL END
        ZZ
    
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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INPUT LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW
NO. (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW
47  SUB B1
80  .      SUB B2
86  COMB1.....
90  .      SUB C
96  .      SUB D
102 COMB2.....
106 C2TOE
110 .      SUB E
116 COMB3.....
121 Div-----> DIVERS
120
126 .      SUB A
132 .      A TO F
136 .      SUB F
142 .      COMB4.....
146 COMB5.....
    
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

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*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1)
* JUN 1998
* VERSION 4.1
* RUN DATE 21MAY12 TIME 23:20:31
*****
    
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*****
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*****
    
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PRELIMINARY
 EXISTING CONDITIONS
 CALIFON BOROUGH WATERSHED STREAM FLOODPLAIN ANALYSIS
 HYDROLOGIC, HYDRAULIC & FLOODPLAIN ANALYSIS
 CALIFON BOROUGH, HUNTERDON COUNTY
 NEW JERSEY

CALIFON BOROUGH WATERSHED
 5-, 10-, 25-, 50- & 100-YEAR STORM RECURRENCE INTERVAL EVENTS
 HYDROLOGIC & HYDRAULIC ANALYSIS

PREPARED FOR:
 KELLER & KIRKPATRICK
 301 GIBALTAR DRIVE, SUITE 2A
 MORRIS PLAINS, NJ 07950

PREPARED BY:
 C.V. ASSOCIATES NY; PE, LS, P.C.
 148 ROUTE 17M, SUITE 2
 HARRIMAN, NY 10926
 (845) 774-1075 PHONE

CALIFONHYDROLOGY

STRTL 1.13 INITIAL ABSTRACTION
 CRVNB 64.00 CURVE NUMBER
 RTIMP .00 PERCENT IMPERVIOUS AREA

79 UD SCS DIMENSIONLESS UNITGRAPH
 TLAG .56 LAG

UNIT HYDROGRAPH
 30 END-OF-PERIOD ORDINATES

3. 9. 18. 30. 37. 40. 38. 34. 28. 21.
 15. 12. 9. 7. 5. 4. 3. 2. 2. 1.
 1. 1. 1. 0. 0. 0. 0. 0. 0. 0.

HYDROGRAPH AT STATION SUB B1

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q
1		0000	1	.00	.00	.00	0.		1		1206	122	.67	.27	.40	18.	
1		0006	2	.01	.01	.00	0.		1		1212	123	.43	.16	.28	27.	
1		0012	3	.01	.01	.00	0.		1		1218	124	.28	.09	.19	38.	
1		0018	4	.01	.01	.00	0.		1		1224	125	.13	.04	.09	48.	
1		0024	5	.01	.01	.00	0.		1		1230	126	.10	.03	.07	56.	
1		0030	6	.01	.01	.00	0.		1		1236	127	.10	.03	.07	60.	
1		0036	7	.01	.01	.00	0.		1		1242	128	.09	.03	.06	60.	
1		0042	8	.01	.01	.00	0.		1		1248	129	.07	.02	.05	56.	
1		0048	9	.01	.01	.00	0.		1		1254	130	.07	.02	.05	50.	
1		0054	10	.01	.01	.00	0.		1		1300	131	.06	.02	.05	44.	
1		0100	11	.01	.01	.00	0.		1		1306	132	.06	.02	.04	38.	
1		0106	12	.01	.01	.00	0.		1		1312	133	.06	.02	.05	33.	
1		0112	13	.01	.01	.00	0.		1		1318	134	.05	.01	.03	29.	
1		0118	14	.01	.01	.00	0.		1		1324	135	.06	.02	.04	26.	
1		0124	15	.01	.01	.00	0.		1		1330	136	.05	.01	.03	23.	
1		0130	16	.01	.01	.00	0.		1		1336	137	.04	.01	.03	21.	
1		0136	17	.01	.01	.00	0.		1		1342	138	.05	.01	.04	19.	
1		0142	18	.01	.01	.00	0.		1		1348	139	.04	.01	.03	17.	
1		0148	19	.01	.01	.00	0.		1		1354	140	.04	.01	.03	16.	
1		0154	20	.01	.01	.00	0.		1		1400	141	.04	.01	.03	15.	
1		0200	21	.01	.01	.00	0.		1		1406	142	.04	.01	.03	14.	
1		0206	22	.01	.01	.00	0.		1		1412	143	.04	.01	.03	13.	
1		0212	23	.01	.01	.00	0.		1		1418	144	.03	.01	.02	12.	
1		0218	24	.01	.01	.00	0.		1		1424	145	.03	.01	.02	11.	
1		0224	25	.01	.01	.00	0.		1		1430	146	.04	.01	.03	11.	
1		0230	26	.02	.02	.00	0.		1		1436	147	.03	.01	.02	10.	
1		0236	27	.01	.01	.00	0.		1		1442	148	.03	.01	.02	10.	
1		0242	28	.01	.01	.00	0.		1		1448	149	.02	.01	.02	10.	
1		0248	29	.01	.01	.00	0.		1		1454	150	.03	.01	.02	9.	
1		0254	30	.01	.01	.00	0.		1		1500	151	.03	.01	.02	9.	
1		0300	31	.01	.01	.00	0.		1		1506	152	.03	.01	.02	9.	
1		0306	32	.01	.01	.00	0.		1		1512	153	.02	.01	.02	8.	
1		0312	33	.02	.02	.00	0.		1		1518	154	.03	.01	.02	8.	
1		0318	34	.01	.01	.00	0.		1		1524	155	.02	.01	.02	8.	
1		0324	35	.01	.01	.00	0.		1		1530	156	.02	.01	.02	8.	
1		0330	36	.01	.01	.00	0.		1		1536	157	.03	.01	.02	7.	
1		0336	37	.01	.01	.00	0.		1		1542	158	.02	.01	.02	7.	
1		0342	38	.02	.02	.00	0.		1		1548	159	.02	.01	.02	7.	
1		0348	39	.01	.01	.00	0.		1		1554	160	.02	.01	.02	7.	
1		0354	40	.01	.01	.00	0.		1		1600	161	.02	.01	.02	7.	
1		0400	41	.01	.01	.00	0.		1		1606	162	.02	.01	.02	7.	
1		0406	42	.02	.02	.00	0.		1		1612	163	.02	.01	.02	7.	
1		0412	43	.01	.01	.00	0.		1		1618	164	.02	.01	.02	6.	
1		0418	44	.01	.01	.00	0.		1		1624	165	.02	.01	.02	6.	
1		0424	45	.02	.02	.00	0.		1		1630	166	.02	.00	.01	6.	
1		0430	46	.01	.01	.00	0.		1		1636	167	.02	.01	.02	6.	
1		0436	47	.01	.01	.00	0.		1		1642	168	.02	.01	.02	6.	
1		0442	48	.02	.02	.00	0.		1		1648	169	.02	.00	.01	6.	
1		0448	49	.01	.01	.00	0.		1		1654	170	.02	.00	.01	6.	
1		0454	50	.01	.01	.00	0.		1		1700	171	.01	.00	.01	6.	
1		0500	51	.02	.02	.00	0.		1		1706	172	.02	.00	.01	5.	
1		0506	52	.01	.01	.00	0.		1		1712	173	.02	.00	.01	5.	
1		0512	53	.02	.02	.00	0.		1		1718	174	.02	.00	.01	5.	
1		0518	54	.01	.01	.00	0.		1		1724	175	.02	.00	.01	5.	
1		0524	55	.02	.02	.00	0.		1		1730	176	.01	.00	.01	4.	
1		0530	56	.01	.01	.00	0.		1		1736	177	.02	.00	.01	4.	
1		0536	57	.02	.02	.00	0.		1		1742	178	.02	.00	.01	4.	
1		0542	58	.01	.01	.00	0.		1		1748	179	.01	.00	.01	4.	
1		0548	59	.02	.02	.00	0.		1		1754	180	.02	.00	.01	4.	
1		0554	60	.01	.01	.00	0.		1		1800	181	.02	.00	.01	4.	
1		0600	61	.02	.02	.00	0.		1		1806	182	.01	.00	.01	4.	
1		0606	62	.02	.02	.00	0.		1		1812	183	.02	.00	.01	4.	
1		0612	63	.01	.01	.00	0.		1		1818	184	.01	.00	.01	3.	
1		0618	64	.02	.02	.00	0.		1		1824	185	.02	.00	.01	3.	
1		0624	65	.02	.02	.00	0.		1		1830	186	.01	.00	.01	3.	
1		0630	66	.01	.01	.00	0.		1		1836	187	.02	.00	.01	3.	
1		0636	67	.02	.02	.00	0.		1		1842	188	.01	.00	.01	3.	
1		0642	68	.02	.02	.00	0.		1		1848	189	.02	.00	.01	3.	
1		0648	69	.01	.01	.00	0.		1		1854	190	.01	.00	.01	3.	
1		0654	70	.02	.02	.00	0.		1		1900	191	.02	.00	.01	3.	
1		0700	71	.02	.02	.00	0.		1		1906	192	.01	.00	.01	3.	
1		0706	72	.02	.02	.00	0.		1		1912	193	.01	.00	.01	3.	
1		0712	73	.02	.02	.00	0.		1		1918	194	.02	.00	.01	3.	
1		0718	74	.02	.02	.00	0.		1		1924	195	.01	.00	.01	3.	
1		0724	75	.02	.02	.00	0.		1		1930	196	.02	.00	.01	3.	
1		0730	76	.02	.02	.00	0.		1		1936	197	.01	.00	.01	3.	
1		0736	77	.02	.02	.00	0.		1		1942	198	.01	.00	.01	3.	
1		0742	78	.02	.02	.00	0.		1		1948	199	.02	.00	.01	3.	
1		0748	79	.02	.02	.00	0.		1		1954	200	.01	.00	.01	3.	
1		0754	80	.02	.02	.00	0.		1		2000	201	.01	.00	.01	3.	
1		0800	81	.02	.02	.00	0.		1		2006	202	.01	.00	.01	3.	
1		0806	82	.02	.02	.00	0.		1		2012	203	.02	.00	.01	3.	
1		0812	83	.02	.02	.00	0.		1		2018	204	.01	.00	.01	3.	

CALIFONHYDROLOGY														
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.01	3.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.01	3.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.02	.00	.01	3.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	3.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	3.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	3.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	3.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.02	.00	.01	3.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	3.
1	0912	93	.03	.03	.00	0.	*	1	2118	214	.01	.00	.01	2.
1	0918	94	.03	.03	.00	0.	*	1	2124	215	.01	.00	.01	3.
1	0924	95	.03	.03	.00	0.	*	1	2130	216	.01	.00	.01	2.
1	0930	96	.03	.03	.00	0.	*	1	2136	217	.01	.00	.01	2.
1	0936	97	.03	.03	.00	0.	*	1	2142	218	.01	.00	.01	2.
1	0942	98	.04	.04	.00	0.	*	1	2148	219	.01	.00	.01	2.
1	0948	99	.03	.03	.00	0.	*	1	2154	220	.01	.00	.01	2.
1	0954	100	.04	.04	.00	0.	*	1	2200	221	.02	.00	.01	2.
1	1000	101	.03	.03	.00	1.	*	1	2206	222	.01	.00	.01	2.
1	1006	102	.04	.03	.01	1.	*	1	2212	223	.01	.00	.01	2.
1	1012	103	.04	.03	.01	1.	*	1	2218	224	.01	.00	.01	2.
1	1018	104	.05	.04	.01	1.	*	1	2224	225	.01	.00	.01	2.
1	1024	105	.04	.03	.01	1.	*	1	2230	226	.01	.00	.01	2.
1	1030	106	.05	.04	.01	1.	*	1	2236	227	.01	.00	.01	2.
1	1036	107	.05	.04	.01	1.	*	1	2242	228	.01	.00	.01	2.
1	1042	108	.05	.04	.01	2.	*	1	2248	229	.01	.00	.01	2.
1	1048	109	.06	.04	.01	2.	*	1	2254	230	.01	.00	.01	2.
1	1054	110	.06	.04	.01	2.	*	1	2300	231	.01	.00	.01	2.
1	1100	111	.06	.05	.02	2.	*	1	2306	232	.01	.00	.01	2.
1	1106	112	.06	.05	.02	3.	*	1	2312	233	.01	.00	.01	2.
1	1112	113	.06	.05	.02	3.	*	1	2318	234	.01	.00	.01	2.
1	1118	114	.08	.06	.02	3.	*	1	2324	235	.01	.00	.01	2.
1	1124	115	.09	.06	.03	4.	*	1	2330	236	.01	.00	.01	2.
1	1130	116	.09	.06	.03	4.	*	1	2336	237	.01	.00	.01	2.
1	1136	117	.11	.07	.04	5.	*	1	2342	238	.01	.00	.01	2.
1	1142	118	.13	.08	.05	6.	*	1	2348	239	.00	.00	.00	2.
1	1148	119	.28	.17	.11	7.	*	1	2354	240	.00	.00	.00	2.
1	1154	120	.42	.23	.19	9.	*	1	0000	241	.01	.00	.01	2.
1	1200	121	.67	.32	.35	12.	*	2						

TOTAL RAINFALL = 8.00, TOTAL LOSS = 4.22, TOTAL EXCESS = 3.78

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
+	(CFS)	(HR)	(CFS)	(CFS)
+	60.	12.60	17.	5.
			(INCHES)	3.740
			(AC-FT)	8.
				10.
				10.

CUMULATIVE AREA = .05 SQ MI

HYDROGRAPH AT STATION SUB B1
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	0000	1	.00	.00	.00	0.	*	1	1206	122	.36	.25	.12	3.	
1	0006	2	.00	.00	.00	0.	*	1	1212	123	.23	.14	.09	5.	
1	0012	3	.00	.00	.00	0.	*	1	1218	124	.15	.09	.06	8.	
1	0018	4	.00	.00	.00	0.	*	1	1224	125	.07	.04	.03	12.	
1	0024	5	.00	.00	.00	0.	*	1	1230	126	.06	.03	.02	14.	
1	0030	6	.00	.00	.00	0.	*	1	1236	127	.05	.03	.02	16.	
1	0036	7	.00	.00	.00	0.	*	1	1242	128	.05	.03	.02	16.	
1	0042	8	.00	.00	.00	0.	*	1	1248	129	.04	.02	.02	16.	
1	0048	9	.00	.00	.00	0.	*	1	1254	130	.04	.02	.02	15.	
1	0054	10	.00	.00	.00	0.	*	1	1300	131	.03	.02	.02	13.	
1	0100	11	.00	.00	.00	0.	*	1	1306	132	.03	.02	.01	12.	
1	0106	12	.00	.00	.00	0.	*	1	1312	133	.03	.02	.02	10.	
1	0112	13	.00	.00	.00	0.	*	1	1318	134	.03	.01	.01	9.	
1	0118	14	.00	.00	.00	0.	*	1	1324	135	.03	.02	.01	8.	
1	0124	15	.00	.00	.00	0.	*	1	1330	136	.03	.01	.01	7.	
1	0130	16	.00	.00	.00	0.	*	1	1336	137	.02	.01	.01	7.	
1	0136	17	.00	.00	.00	0.	*	1	1342	138	.03	.01	.01	6.	
1	0142	18	.00	.00	.00	0.	*	1	1348	139	.02	.01	.01	6.	
1	0148	19	.00	.00	.00	0.	*	1	1354	140	.02	.01	.01	5.	
1	0154	20	.00	.00	.00	0.	*	1	1400	141	.02	.01	.01	5.	
1	0200	21	.00	.00	.00	0.	*	1	1406	142	.02	.01	.01	5.	
1	0206	22	.00	.00	.00	0.	*	1	1412	143	.02	.01	.01	4.	
1	0212	23	.00	.00	.00	0.	*	1	1418	144	.02	.01	.01	4.	
1	0218	24	.00	.00	.00	0.	*	1	1424	145	.02	.01	.01	4.	
1	0224	25	.00	.00	.00	0.	*	1	1430	146	.02	.01	.01	4.	
1	0230	26	.01	.01	.00	0.	*	1	1436	147	.02	.01	.01	4.	
1	0236	27	.00	.00	.00	0.	*	1	1442	148	.02	.01	.01	4.	
1	0242	28	.00	.00	.00	0.	*	1	1448	149	.01	.01	.01	3.	
1	0248	29	.00	.00	.00	0.	*	1	1454	150	.02	.01	.01	3.	
1	0254	30	.00	.00	.00	0.	*	1	1500	151	.02	.01	.01	3.	
1	0300	31	.00	.00	.00	0.	*	1	1506	152	.02	.01	.01	3.	
1	0306	32	.00	.00	.00	0.	*	1	1512	153	.01	.01	.01	3.	
1	0312	33	.01	.01	.00	0.	*	1	1518	154	.02	.01	.01	3.	
1	0318	34	.00	.00	.00	0.	*	1	1524	155	.01	.01	.01	3.	
1	0324	35	.00	.00	.00	0.	*	1	1530	156	.01	.01	.01	3.	
1	0330	36	.00	.00	.00	0.	*	1	1536	157	.02	.01	.01	3.	
1	0336	37	.00	.00	.00	0.	*	1	1542	158	.01	.01	.01	3.	
1	0342	38	.01	.01	.00	0.	*	1	1548	159	.01	.01	.01	3.	
1	0348	39	.00	.00	.00	0.	*	1	1554	160	.01	.01	.01	3.	
1	0354	40	.00	.00	.00	0.	*	1	1600	161	.01	.01	.01	3.	
1	0400	41	.00	.00	.00	0.	*	1	1606	162	.01	.01	.01	3.	
1	0406	42	.01	.01	.00	0.	*	1	1612	163	.01	.01	.01	2.	
1	0412	43	.00	.00	.00	0.	*	1	1618	164	.01	.01	.01	2.	

CALIFONHYDROLOGY

1	0418	44	.00	.00	.00	0.	1	1624	165	.01	.01	.01	2.
1	0424	45	.01	.01	.00	0.	1	1630	166	.01	.00	.00	2.
1	0430	46	.00	.00	.00	0.	1	1636	167	.01	.01	.01	2.
1	0436	47	.00	.00	.00	0.	1	1642	168	.01	.01	.01	2.
1	0442	48	.01	.01	.00	0.	1	1648	169	.01	.00	.00	2.
1	0448	49	.00	.00	.00	0.	1	1654	170	.01	.00	.00	2.
1	0454	50	.00	.00	.00	0.	1	1700	171	.00	.00	.00	2.
1	0500	51	.01	.01	.00	0.	1	1706	172	.01	.00	.00	2.
1	0506	52	.00	.00	.00	0.	1	1712	173	.01	.00	.00	2.
1	0512	53	.01	.01	.00	0.	1	1718	174	.01	.00	.00	2.
1	0518	54	.00	.00	.00	0.	1	1724	175	.01	.00	.00	2.
1	0524	55	.01	.01	.00	0.	1	1730	176	.00	.00	.00	2.
1	0530	56	.00	.00	.00	0.	1	1736	177	.01	.00	.00	2.
1	0536	57	.01	.01	.00	0.	1	1742	178	.01	.00	.00	2.
1	0542	58	.00	.00	.00	0.	1	1748	179	.00	.00	.00	2.
1	0548	59	.01	.01	.00	0.	1	1754	180	.01	.00	.00	1.
1	0554	60	.00	.00	.00	0.	1	1800	181	.01	.00	.00	1.
1	0600	61	.01	.01	.00	0.	1	1806	182	.00	.00	.00	1.
1	0606	62	.01	.01	.00	0.	1	1812	183	.01	.00	.00	1.
1	0612	63	.00	.00	.00	0.	1	1818	184	.00	.00	.00	1.
1	0618	64	.01	.01	.00	0.	1	1824	185	.01	.00	.00	1.
1	0624	65	.01	.01	.00	0.	1	1830	186	.00	.00	.00	1.
1	0630	66	.00	.00	.00	0.	1	1836	187	.01	.00	.00	1.
1	0636	67	.01	.01	.00	0.	1	1842	188	.00	.00	.00	1.
1	0642	68	.01	.01	.00	0.	1	1848	189	.01	.00	.00	1.
1	0648	69	.00	.00	.00	0.	1	1854	190	.00	.00	.00	1.
1	0654	70	.01	.01	.00	0.	1	1900	191	.01	.00	.00	1.
1	0700	71	.01	.01	.00	0.	1	1906	192	.00	.00	.00	1.
1	0706	72	.01	.01	.00	0.	1	1912	193	.00	.00	.00	1.
1	0712	73	.01	.01	.00	0.	1	1918	194	.01	.00	.00	1.
1	0718	74	.01	.01	.00	0.	1	1924	195	.00	.00	.00	1.
1	0724	75	.01	.01	.00	0.	1	1930	196	.01	.00	.00	1.
1	0730	76	.01	.01	.00	0.	1	1936	197	.00	.00	.00	1.
1	0736	77	.01	.01	.00	0.	1	1942	198	.00	.00	.00	1.
1	0742	78	.01	.01	.00	0.	1	1948	199	.01	.00	.00	1.
1	0748	79	.01	.01	.00	0.	1	1954	200	.00	.00	.00	1.
1	0754	80	.01	.01	.00	0.	1	2000	201	.00	.00	.00	1.
1	0800	81	.01	.01	.00	0.	1	2006	202	.00	.00	.00	1.
1	0806	82	.01	.01	.00	0.	1	2012	203	.01	.00	.00	1.
1	0812	83	.01	.01	.00	0.	1	2018	204	.00	.00	.00	1.
1	0818	84	.01	.01	.00	0.	1	2024	205	.00	.00	.00	1.
1	0824	85	.01	.01	.00	0.	1	2030	206	.00	.00	.00	1.
1	0830	86	.01	.01	.00	0.	1	2036	207	.01	.00	.00	1.
1	0836	87	.02	.02	.00	0.	1	2042	208	.00	.00	.00	1.
1	0842	88	.01	.01	.00	0.	1	2048	209	.00	.00	.00	1.
1	0848	89	.01	.01	.00	0.	1	2054	210	.00	.00	.00	1.
1	0854	90	.02	.02	.00	0.	1	2100	211	.00	.00	.00	1.
1	0900	91	.02	.02	.00	0.	1	2106	212	.01	.00	.00	1.
1	0906	92	.01	.01	.00	0.	1	2112	213	.00	.00	.00	1.
1	0912	93	.02	.02	.00	0.	1	2118	214	.00	.00	.00	1.
1	0918	94	.02	.02	.00	0.	1	2124	215	.00	.00	.00	1.
1	0924	95	.02	.02	.00	0.	1	2130	216	.00	.00	.00	1.
1	0930	96	.02	.02	.00	0.	1	2136	217	.00	.00	.00	1.
1	0936	97	.02	.02	.00	0.	1	2142	218	.00	.00	.00	1.
1	0942	98	.02	.02	.00	0.	1	2148	219	.00	.00	.00	1.
1	0948	99	.02	.02	.00	0.	1	2154	220	.00	.00	.00	1.
1	0954	100	.02	.02	.00	0.	1	2200	221	.01	.00	.01	1.
1	1000	101	.02	.02	.00	0.	1	2206	222	.00	.00	.00	1.
1	1006	102	.02	.02	.00	0.	1	2212	223	.00	.00	.00	1.
1	1012	103	.02	.02	.00	0.	1	2218	224	.00	.00	.00	1.
1	1018	104	.03	.03	.00	0.	1	2224	225	.00	.00	.00	1.
1	1024	105	.02	.02	.00	0.	1	2230	226	.00	.00	.00	1.
1	1030	106	.03	.03	.00	0.	1	2236	227	.00	.00	.00	1.
1	1036	107	.03	.03	.00	0.	1	2242	228	.00	.00	.00	1.
1	1042	108	.03	.03	.00	0.	1	2248	229	.00	.00	.00	1.
1	1048	109	.03	.03	.00	0.	1	2254	230	.00	.00	.00	1.
1	1054	110	.03	.03	.00	0.	1	2300	231	.00	.00	.00	1.
1	1100	111	.03	.03	.00	0.	1	2306	232	.00	.00	.00	1.
1	1106	112	.03	.03	.00	0.	1	2312	233	.00	.00	.00	1.
1	1112	113	.03	.03	.00	0.	1	2318	234	.00	.00	.00	1.
1	1118	114	.04	.04	.00	0.	1	2324	235	.00	.00	.00	1.
1	1124	115	.05	.05	.00	0.	1	2330	236	.00	.00	.00	1.
1	1130	116	.05	.05	.00	0.	1	2336	237	.00	.00	.00	1.
1	1136	117	.06	.06	.00	0.	1	2342	238	.00	.00	.00	1.
1	1142	118	.07	.06	.01	0.	1	2348	239	.00	.00	.00	1.
1	1148	119	.15	.13	.02	0.	1	2354	240	.00	.00	.00	1.
1	1154	120	.23	.19	.04	1.	2	0000	241	.00	.00	.00	1.
1	1200	121	.36	.27	.09	1.							

TOTAL RAINFALL = 4.30, TOTAL LOSS = 3.15, TOTAL EXCESS = 1.15

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR	AVERAGE FLOW 72-HR	24.00-HR
16.	12.70	5.	2.	2.	2.
		.932 (INCHES)	1.129 3.	1.129 3.	1.129 3.

CUMULATIVE AREA = .05 SQ MI

STATION	SUB B1	0.	2.	4.	6.	8.	10.	12.	14.	16.	18.	0. (L) PRECIP.	0. (X) EXCESS
DAHRMN PER		.0	.0	.0	.0	.0	.0	.0	.0	.4	.3	.2	.1
10000	10												
10006	20												
10012	30												
10018	40												
10024	50												
10030	60												

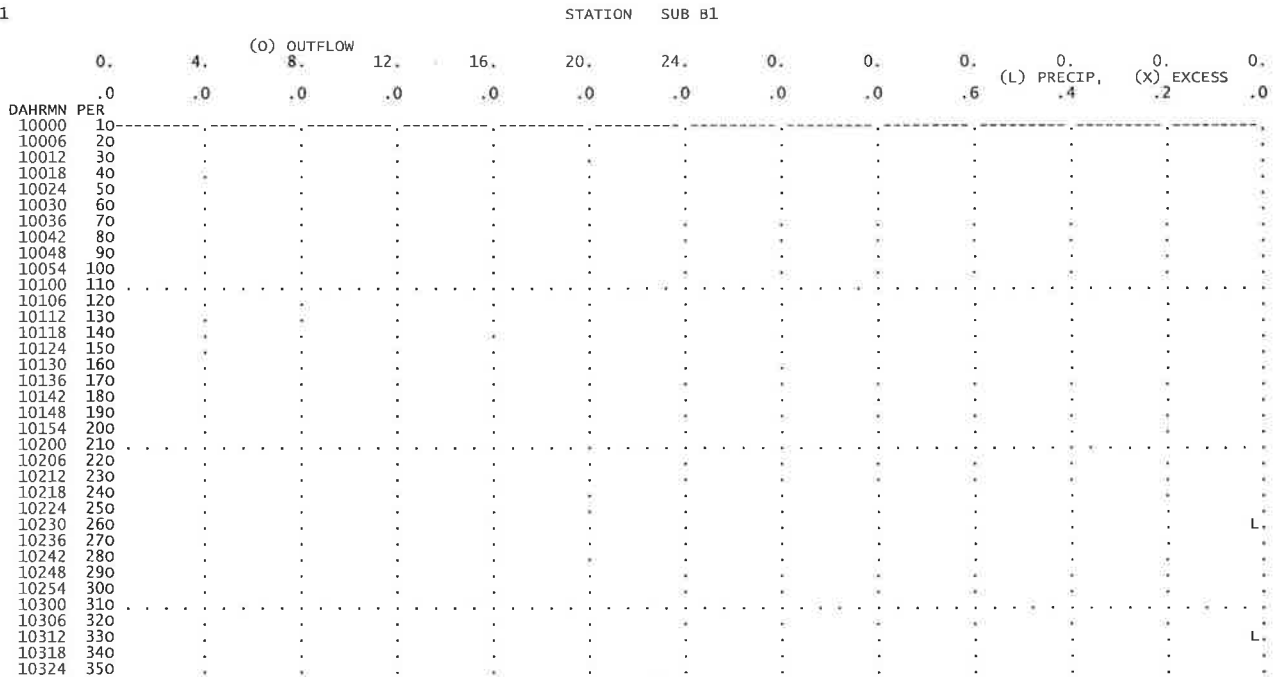
CALIFONHYDROLOGY

1	0712	73	.01	.01	.00	0.	1918	194	.01	.00	.01	2.
1	0718	74	.01	.01	.00	0.	1924	195	.00	.00	.00	1.
1	0724	75	.01	.01	.00	0.	1930	196	.01	.00	.01	1.
1	0730	76	.01	.01	.00	0.	1936	197	.01	.00	.00	1.
1	0736	77	.01	.01	.00	0.	1942	198	.00	.00	.00	1.
1	0742	78	.01	.01	.00	0.	1948	199	.01	.00	.01	1.
1	0748	79	.01	.01	.00	0.	1954	200	.00	.00	.00	1.
1	0754	80	.02	.02	.00	0.	2000	201	.01	.00	.00	1.
1	0800	81	.01	.01	.00	0.	2006	202	.00	.00	.00	1.
1	0806	82	.01	.01	.00	0.	2012	203	.01	.00	.01	1.
1	0812	83	.01	.01	.00	0.	2018	204	.01	.00	.00	1.
1	0818	84	.01	.01	.00	0.	2024	205	.00	.00	.00	1.
1	0824	85	.02	.02	.00	0.	2030	206	.00	.00	.00	1.
1	0830	86	.01	.01	.00	0.	2036	207	.01	.00	.01	1.
1	0836	87	.02	.02	.00	0.	2042	208	.01	.00	.00	1.
1	0842	88	.01	.01	.00	0.	2048	209	.00	.00	.00	1.
1	0848	89	.02	.02	.00	0.	2054	210	.00	.00	.00	1.
1	0854	90	.02	.02	.00	0.	2100	211	.00	.00	.00	1.
1	0900	91	.02	.02	.00	0.	2106	212	.01	.00	.01	1.
1	0906	92	.01	.01	.00	0.	2112	213	.00	.00	.00	1.
1	0912	93	.02	.02	.00	0.	2118	214	.00	.00	.00	1.
1	0918	94	.02	.02	.00	0.	2124	215	.00	.00	.00	1.
1	0924	95	.02	.02	.00	0.	2130	216	.01	.00	.00	1.
1	0930	96	.02	.02	.00	0.	2136	217	.00	.00	.00	1.
1	0936	97	.02	.02	.00	0.	2142	218	.00	.00	.00	1.
1	0942	98	.02	.02	.00	0.	2148	219	.00	.00	.00	1.
1	0948	99	.02	.02	.00	0.	2154	220	.00	.00	.00	1.
1	0954	100	.02	.02	.00	0.	2200	221	.01	.00	.01	1.
1	1000	101	.02	.02	.00	0.	2206	222	.00	.00	.00	1.
1	1006	102	.03	.03	.00	0.	2212	223	.00	.00	.00	1.
1	1012	103	.02	.02	.00	0.	2218	224	.01	.00	.00	1.
1	1018	104	.03	.03	.00	0.	2224	225	.00	.00	.00	1.
1	1024	105	.02	.02	.00	0.	2230	226	.00	.00	.00	1.
1	1030	106	.03	.03	.00	0.	2236	227	.00	.00	.00	1.
1	1036	107	.03	.03	.00	0.	2242	228	.00	.00	.00	1.
1	1042	108	.03	.03	.00	0.	2248	229	.01	.00	.00	1.
1	1048	109	.03	.03	.00	0.	2254	230	.00	.00	.00	1.
1	1054	110	.03	.03	.00	0.	2300	231	.00	.00	.00	1.
1	1100	111	.04	.04	.00	0.	2306	232	.00	.00	.00	1.
1	1106	112	.04	.04	.00	0.	2312	233	.00	.00	.00	1.
1	1112	113	.04	.04	.00	0.	2318	234	.01	.00	.00	1.
1	1118	114	.05	.05	.00	0.	2324	235	.00	.00	.00	1.
1	1124	115	.06	.05	.01	0.	2330	236	.00	.00	.00	1.
1	1130	116	.06	.05	.01	0.	2336	237	.00	.00	.00	1.
1	1136	117	.07	.06	.01	1.	2342	238	.01	.00	.00	1.
1	1142	118	.08	.07	.01	1.	2348	239	.00	.00	.00	1.
1	1148	119	.17	.14	.03	1.	2354	240	.00	.00	.00	1.
1	1154	120	.27	.20	.06	2.	0000	241	.00	.00	.00	1.
1	1200	121	.42	.29	.13	3.						

TOTAL RAINFALL = 5.00, TOTAL LOSS = 3.42, TOTAL EXCESS = 1.58

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	24-HR MAXIMUM AVERAGE FLOW	72-HR MAXIMUM AVERAGE FLOW	24.00-HR MAXIMUM AVERAGE FLOW
24.	12.70	7.	2.	2.	2.
		(INCHES) 1.295	1.560	1.560	1.560
		(AC-FT) 3.	4.	4.	4.

CUMULATIVE AREA = .05 SQ MI



CALIFONHYDROLOGY

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	*	1		1206	122	.51	.27	.25	10.
1		0006	2	.01	.01	.00	0.	*	1		1212	123	.33	.15	.18	15.
1		0012	3	.01	.01	.00	0.	*	1		1218	124	.21	.09	.12	21.
1		0018	4	.01	.01	.00	0.	*	1		1224	125	.10	.04	.06	28.
1		0024	5	.01	.01	.00	0.	*	1		1230	126	.08	.03	.05	33.
1		0030	6	.01	.01	.00	0.	*	1		1236	127	.07	.03	.04	36.
1		0036	7	.01	.01	.00	0.	*	1		1242	128	.07	.03	.04	36.
1		0042	8	.01	.01	.00	0.	*	1		1248	129	.05	.02	.03	34.
1		0048	9	.01	.01	.00	0.	*	1		1254	130	.05	.02	.03	31.
1		0054	10	.01	.01	.00	0.	*	1		1300	131	.05	.02	.03	27.
1		0100	11	.01	.01	.00	0.	*	1		1306	132	.04	.02	.03	24.
1		0106	12	.01	.01	.00	0.	*	1		1312	133	.05	.02	.03	21.
1		0112	13	.01	.01	.00	0.	*	1		1318	134	.04	.01	.02	18.
1		0118	14	.01	.01	.00	0.	*	1		1324	135	.04	.02	.03	16.
1		0124	15	.01	.01	.00	0.	*	1		1330	136	.04	.01	.02	15.
1		0130	16	.01	.01	.00	0.	*	1		1336	137	.03	.01	.02	13.
1		0136	17	.01	.01	.00	0.	*	1		1342	138	.04	.01	.02	12.
1		0142	18	.01	.01	.00	0.	*	1		1348	139	.03	.01	.02	11.
1		0148	19	.01	.01	.00	0.	*	1		1354	140	.03	.01	.02	10.
1		0154	20	.01	.01	.00	0.	*	1		1400	141	.03	.01	.02	10.
1		0200	21	.01	.01	.00	0.	*	1		1406	142	.03	.01	.02	9.
1		0206	22	.01	.01	.00	0.	*	1		1412	143	.03	.01	.02	8.
1		0212	23	.01	.01	.00	0.	*	1		1418	144	.02	.01	.02	8.
1		0218	24	.01	.01	.00	0.	*	1		1424	145	.02	.01	.02	8.
1		0224	25	.01	.01	.00	0.	*	1		1430	146	.03	.01	.02	7.
1		0230	26	.01	.01	.00	0.	*	1		1436	147	.02	.01	.02	7.
1		0236	27	.01	.01	.00	0.	*	1		1442	148	.02	.01	.02	7.
1		0242	28	.01	.01	.00	0.	*	1		1448	149	.02	.01	.01	6.
1		0248	29	.01	.01	.00	0.	*	1		1454	150	.02	.01	.02	6.
1		0254	30	.01	.01	.00	0.	*	1		1500	151	.02	.01	.02	6.
1		0300	31	.01	.01	.00	0.	*	1		1506	152	.02	.01	.02	6.
1		0306	32	.01	.01	.00	0.	*	1		1512	153	.02	.01	.01	6.
1		0312	33	.01	.01	.00	0.	*	1		1518	154	.02	.01	.02	5.
1		0318	34	.01	.01	.00	0.	*	1		1524	155	.02	.01	.01	5.
1		0324	35	.01	.01	.00	0.	*	1		1530	156	.02	.01	.01	5.
1		0330	36	.01	.01	.00	0.	*	1		1536	157	.02	.01	.02	5.
1		0336	37	.01	.01	.00	0.	*	1		1542	158	.02	.01	.01	5.
1		0342	38	.01	.01	.00	0.	*	1		1548	159	.02	.01	.01	5.
1		0348	39	.01	.01	.00	0.	*	1		1554	160	.02	.01	.01	5.
1		0354	40	.01	.01	.00	0.	*	1		1600	161	.02	.01	.01	5.
1		0400	41	.01	.01	.00	0.	*	1		1606	162	.02	.01	.01	5.
1		0406	42	.01	.01	.00	0.	*	1		1612	163	.02	.01	.01	4.
1		0412	43	.01	.01	.00	0.	*	1		1618	164	.02	.01	.01	4.
1		0418	44	.01	.01	.00	0.	*	1		1624	165	.02	.01	.01	4.
1		0424	45	.01	.01	.00	0.	*	1		1630	166	.01	.00	.01	4.
1		0430	46	.01	.01	.00	0.	*	1		1636	167	.02	.01	.01	4.
1		0436	47	.01	.01	.00	0.	*	1		1642	168	.02	.01	.01	4.
1		0442	48	.01	.01	.00	0.	*	1		1648	169	.01	.00	.01	4.
1		0448	49	.01	.01	.00	0.	*	1		1654	170	.01	.00	.01	4.
1		0454	50	.01	.01	.00	0.	*	1		1700	171	.01	.00	.00	4.
1		0500	51	.01	.01	.00	0.	*	1		1706	172	.01	.00	.01	4.
1		0506	52	.01	.01	.00	0.	*	1		1712	173	.01	.00	.01	3.
1		0512	53	.01	.01	.00	0.	*	1		1718	174	.01	.00	.01	3.
1		0518	54	.01	.01	.00	0.	*	1		1724	175	.01	.00	.01	3.
1		0524	55	.01	.01	.00	0.	*	1		1730	176	.01	.00	.00	3.
1		0530	56	.01	.01	.00	0.	*	1		1736	177	.01	.00	.01	3.
1		0536	57	.01	.01	.00	0.	*	1		1742	178	.01	.00	.01	3.
1		0542	58	.01	.01	.00	0.	*	1		1748	179	.01	.00	.00	3.
1		0548	59	.01	.01	.00	0.	*	1		1754	180	.01	.00	.01	3.
1		0554	60	.01	.01	.00	0.	*	1		1800	181	.01	.00	.01	3.
1		0600	61	.01	.01	.00	0.	*	1		1806	182	.01	.00	.00	2.
1		0606	62	.01	.01	.00	0.	*	1		1812	183	.01	.00	.01	2.
1		0612	63	.01	.01	.00	0.	*	1		1818	184	.01	.00	.00	2.
1		0618	64	.01	.01	.00	0.	*	1		1824	185	.01	.00	.01	2.
1		0624	65	.01	.01	.00	0.	*	1		1830	186	.01	.00	.00	2.
1		0630	66	.01	.01	.00	0.	*	1		1836	187	.01	.00	.01	2.
1		0636	67	.01	.01	.00	0.	*	1		1842	188	.01	.00	.00	2.
1		0642	68	.01	.01	.00	0.	*	1		1848	189	.01	.00	.01	2.
1		0648	69	.01	.01	.00	0.	*	1		1854	190	.01	.00	.00	2.
1		0654	70	.01	.01	.00	0.	*	1		1900	191	.01	.00	.01	2.
1		0700	71	.01	.01	.00	0.	*	1		1906	192	.01	.00	.00	2.
1		0706	72	.01	.01	.00	0.	*	1		1912	193	.01	.00	.00	2.
1		0712	73	.01	.01	.00	0.	*	1		1918	194	.01	.00	.01	2.
1		0718	74	.01	.01	.00	0.	*	1		1924	195	.01	.00	.00	2.
1		0724	75	.01	.01	.00	0.	*	1		1930	196	.01	.00	.01	2.
1		0730	76	.02	.02	.00	0.	*	1		1936	197	.01	.00	.00	2.
1		0736	77	.02	.02	.00	0.	*	1		1942	198	.01	.00	.00	2.
1		0742	78	.02	.02	.00	0.	*	1		1948	199	.01	.00	.01	2.
1		0748	79	.02	.02	.00	0.	*	1		1954	200	.01	.00	.00	2.
1		0754	80	.02	.02	.00	0.	*	1		2000	201	.01	.00	.00	2.
1		0800	81	.02	.02	.00	0.	*	1		2006	202	.01	.00	.00	2.
1		0806	82	.02	.02	.00	0.	*	1		2012	203	.01	.00	.01	2.
1		0812	83	.02	.02	.00	0.	*	1		2018	204	.01	.00	.00	2.
1		0818	84	.02	.02	.00	0.	*	1		2024	205	.01	.00	.00	2.
1		0824	85	.02	.02	.00	0.	*	1		2030	206	.01	.00	.00	2.
1		0830	86	.02	.02	.00	0.	*	1		2036	207	.01	.00	.01	2.
1		0836	87	.02	.02	.00	0.	*	1		2042	208	.01	.00	.00	2.
1		0842	88	.02	.02	.00	0.	*	1		2048	209	.01	.00	.00	2.
1		0848	89	.02	.02	.00	0.	*	1		2054	210	.01	.00	.00	2.
1		0854	90	.02	.02	.00	0.	*	1		2100	211	.01	.00	.00	2.
1		0900	91	.02	.02	.00	0.	*	1		2106	212	.01	.00	.01	2.
1		0906	92	.02	.02	.00	0.	*	1		2112	213	.01	.00	.00	2.
1		0912	93	.02	.02	.00	0.	*	1		2118	214	.01	.00	.00	2.
1		0918	94	.02	.02	.00	0.	*	1		2124	215	.01	.00	.00	2.
1		0924	95	.02	.02	.00	0.	*	1		2130	216	.01	.00	.00	2.
1		0930	96	.02	.02	.00	0.	*	1		2136	217	.01	.00	.00	2.
1		0936	97	.02	.02	.00	0.	*	1		2142	218	.01	.00	.00	2.
1		0942	98	.03	.03	.00	0.	*	1		2148	219	.01	.00	.00	2.
1		0948	99	.02	.02	.00	0.	*	1		2154	220	.01	.00	.00	2.
1		0954	100	.03	.03	.00	0.	*	1		2200	221	.01	.00	.01	2.
1		1000	101	.02	.02	.00	0.	*	1		2206	222	.01	.00	.00	2.

CALIFONHYDROLOGY														
1	1006	102	.03	.03	.00	0.	*	1	2212	223	.01	.00	.00	2.
1	1012	103	.03	.03	.00	0.	*	1	2218	224	.01	.00	.00	2.
1	1018	104	.04	.04	.00	0.	*	1	2224	225	.01	.00	.00	2.
1	1024	105	.03	.03	.00	0.	*	1	2230	226	.01	.00	.00	2.
1	1030	106	.04	.03	.00	0.	*	1	2236	227	.01	.00	.00	2.
1	1036	107	.04	.03	.00	0.	*	1	2242	228	.01	.00	.00	2.
1	1042	108	.04	.03	.00	0.	*	1	2248	229	.01	.00	.00	2.
1	1048	109	.04	.04	.00	0.	*	1	2254	230	.01	.00	.00	2.
1	1054	110	.04	.04	.00	0.	*	1	2300	231	.01	.00	.00	1.
1	1100	111	.05	.04	.01	1.	*	1	2306	232	.01	.00	.00	1.
1	1106	112	.05	.04	.01	1.	*	1	2312	233	.01	.00	.00	1.
1	1112	113	.05	.04	.01	1.	*	1	2318	234	.01	.00	.00	1.
1	1118	114	.06	.05	.01	1.	*	1	2324	235	.01	.00	.00	1.
1	1124	115	.07	.05	.01	1.	*	1	2330	236	.01	.00	.00	1.
1	1130	116	.07	.05	.01	2.	*	1	2336	237	.01	.00	.00	1.
1	1136	117	.09	.07	.02	2.	*	1	2342	238	.01	.00	.00	1.
1	1142	118	.10	.07	.02	2.	*	1	2348	239	.00	.00	.00	1.
1	1148	119	.21	.15	.06	3.	*	1	2354	240	.00	.00	.00	1.
1	1154	120	.32	.22	.11	4.	*	2	0000	241	.01	.00	.00	1.
1	1200	121	.51	.31	.21	6.	*							

TOTAL RAINFALL = 6.10, TOTAL LOSS = 3.77, TOTAL EXCESS = 2.33

PEAK FLOW	TIME	6-HR	MAXIMUM	AVERAGE	FLOW	24.00-HR
(CFS)	(HR)	(CFS)	24-HR	72-HR		
36.	12.70	10.	3.	3.	3.	3.
		(INCHES)	1.917	2.307	2.307	2.307
		(AC-FT)	5.	6.	6.	6.
CUMULATIVE AREA =		.05 SQ MI				

DAHRMN PER	STATION SUB B1										(L) PRECIP.	(X) EXCESS		
	0.	5.	10.	15.	20.	25.	30.	35.	40.	0.				
10000	10										.6	.4	.2	0.
10006	20													
10012	30													
10018	40													
10024	50													
10030	60													
10036	70													
10042	80													
10048	90													
10054	100													
10100	110													
10106	120													
10112	130													
10118	140													
10124	150													
10130	160													
10136	170													
10142	180													
10148	190													
10154	200													
10200	210													
10206	220													
10212	230													
10218	240													
10224	250													
10230	260													
10236	270													
10242	280													
10248	290													
10254	300													
10300	310													
10306	320													
10312	330													
10318	340													
10324	350													
10330	360													
10336	370													
10342	380													
10348	390													
10354	400													
10400	410													
10406	420													
10412	430													
10418	440													
10424	450													
10430	460													
10436	470													
10442	480													
10448	490													
10454	500													
10500	510													
10506	520													
10512	530													
10518	540													
10524	550													
10530	560													
10536	570													
10542	580													
10548	590													
10554	600													
10600	610													
10606	620													
10612	630													
10618	640													

CALIFONHYDROLOGY														
1	0224	25	.01	.01	.00	0.	*	1	1430	146	.03	.01	.02	9.
1	0230	26	.01	.01	.00	0.	*	1	1436	147	.03	.01	.02	9.
1	0236	27	.01	.01	.00	0.	*	1	1442	148	.03	.01	.02	8.
1	0242	28	.01	.01	.00	0.	*	1	1448	149	.02	.01	.01	8.
1	0248	29	.01	.01	.00	0.	*	1	1454	150	.03	.01	.02	8.
1	0254	30	.01	.01	.00	0.	*	1	1500	151	.03	.01	.02	7.
1	0300	31	.01	.01	.00	0.	*	1	1506	152	.03	.01	.02	7.
1	0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.01	.01	7.
1	0312	33	.01	.01	.00	0.	*	1	1518	154	.03	.01	.02	7.
1	0318	34	.01	.01	.00	0.	*	1	1524	155	.02	.01	.02	6.
1	0324	35	.01	.01	.00	0.	*	1	1530	156	.02	.01	.02	6.
1	0330	36	.01	.01	.00	0.	*	1	1536	157	.03	.01	.02	6.
1	0336	37	.01	.01	.00	0.	*	1	1542	158	.02	.01	.02	6.
1	0342	38	.01	.01	.00	0.	*	1	1548	159	.02	.01	.02	6.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.01	.02	6.
1	0354	40	.01	.01	.00	0.	*	1	1600	161	.02	.01	.02	6.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.01	.02	6.
1	0406	42	.01	.01	.00	0.	*	1	1612	163	.02	.01	.02	5.
1	0412	43	.01	.01	.00	0.	*	1	1618	164	.02	.01	.02	5.
1	0418	44	.01	.01	.00	0.	*	1	1624	165	.02	.01	.02	5.
1	0424	45	.01	.01	.00	0.	*	1	1630	166	.01	.00	.01	5.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.01	.02	5.
1	0436	47	.01	.01	.00	0.	*	1	1642	168	.02	.01	.02	5.
1	0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	5.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.01	.00	.01	5.
1	0454	50	.01	.01	.00	0.	*	1	1700	171	.01	.00	.01	5.
1	0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	4.
1	0506	52	.01	.01	.00	0.	*	1	1712	173	.01	.00	.01	4.
1	0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	4.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.01	.00	.01	4.
1	0524	55	.01	.01	.00	0.	*	1	1730	176	.01	.00	.01	4.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.01	.00	.01	3.
1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	3.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.01	3.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	3.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.01	.00	.01	3.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.01	.00	.01	3.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	3.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.01	3.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	3.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.01	.00	.01	3.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.01	.00	.01	3.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.01	.00	.01	3.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	3.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.01	3.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	3.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.01	.00	.01	3.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.01	.00	.01	3.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	3.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.01	.00	.01	2.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	2.
1	0730	76	.02	.02	.00	0.	*	1	1936	197	.01	.00	.01	2.
1	0736	77	.02	.02	.00	0.	*	1	1942	198	.01	.00	.01	2.
1	0742	78	.02	.02	.00	0.	*	1	1948	199	.01	.00	.01	2.
1	0748	79	.02	.02	.00	0.	*	1	1954	200	.01	.00	.01	2.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.01	2.
1	0800	81	.02	.02	.00	0.	*	1	2006	202	.01	.00	.01	2.
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.01	.00	.01	2.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.01	2.
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.01	2.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.01	2.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.01	.00	.01	2.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	2.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	2.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	2.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	2.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.01	.00	.01	2.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	2.
1	0912	93	.03	.03	.00	0.	*	1	2118	214	.01	.00	.01	2.
1	0918	94	.03	.03	.00	0.	*	1	2124	215	.01	.00	.01	2.
1	0924	95	.03	.03	.00	0.	*	1	2130	216	.01	.00	.01	2.
1	0930	96	.03	.03	.00	0.	*	1	2136	217	.01	.00	.01	2.
1	0936	97	.03	.03	.00	0.	*	1	2142	218	.01	.00	.01	2.
1	0942	98	.03	.03	.00	0.	*	1	2148	219	.01	.00	.01	2.
1	0948	99	.03	.03	.00	0.	*	1	2154	220	.01	.00	.01	2.
1	0954	100	.03	.03	.00	0.	*	1	2200	221	.01	.00	.01	2.
1	1000	101	.03	.03	.00	0.	*	1	2206	222	.01	.00	.01	2.
1	1006	102	.04	.03	.00	0.	*	1	2212	223	.01	.00	.01	2.
1	1012	103	.03	.03	.00	0.	*	1	2218	224	.01	.00	.01	2.
1	1018	104	.04	.04	.00	0.	*	1	2224	225	.01	.00	.01	2.
1	1024	105	.03	.03	.00	0.	*	1	2230	226	.01	.00	.01	2.
1	1030	106	.04	.04	.00	1.	*	1	2236	227	.01	.00	.01	2.
1	1036	107	.04	.04	.01	1.	*	1	2242	228	.01	.00	.01	2.
1	1042	108	.04	.04	.01	1.	*	1	2248	229	.01	.00	.01	2.
1	1048	109	.05	.04	.01	1.	*	1	2254	230	.01	.00	.01	2.
1	1054	110	.05	.04	.01	1.	*	1	2300	231	.01	.00	.01	2.
1	1100	111	.06	.05	.01	1.	*	1	2306	232	.01	.00	.01	2.
1	1106	112	.06	.04	.01	2.	*	1	2312	233	.01	.00	.01	2.
1	1112	113	.06	.04	.01	2.	*	1	2318	234	.01	.00	.01	2.
1	1118	114	.07	.05	.02	2.	*	1	2324	235	.01	.00	.01	2.
1	1124	115	.08	.06	.02	2.	*	1	2330	236	.01	.00	.01	2.
1	1130	116	.08	.06	.02	3.	*	1	2336	237	.01	.00	.01	2.
1	1136	117	.10	.07	.03	3.	*	1	2342	238	.01	.00	.01	2.
1	1142	118	.11	.08	.03	4.	*	1	2348	239	.00	.00	.00	2.
1	1148	119	.24	.16	.08	5.	*	1	2354	240	.00	.00	.00	2.
1	1154	120	.37	.22	.15	6.	*	2	0000	241	.01	.00	.01	2.
1	1200	121	.59	.31	.27	9.	*							

TOTAL RAINFALL = 7.00, TOTAL LOSS = 4.00, TOTAL EXCESS = 3.00

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW		
+ (CFS)	(HR)	(CFS)	6-HR	24-HR	72-HR
				24.00-HR	

+ 47. 12.60
 (INCHES) 13. 4. CALIFONHYDROLOGY 4. 4.
 (AC-FT) 2.462 7. 2.967 8. 2.967 8. 2.967 8.
 CUMULATIVE AREA = .05 SQ MI

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DAHRMN PER	(O) OUTFLOW					STATION SUB B1					(L) PRECIP.	(X) EXCESS	0.
	0.	10.	20.	30.	40.	50.	0.	0.	0.	0.			
.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.4	.2	.0
10000 10													
10006 20													
10012 30													
10018 40													
10024 50													
10030 60													
10036 70													
10042 80													
10048 90													
10054 100													
10100 110													
10106 120													
10112 130													
10118 140													
10124 150													
10130 160													
10136 170													
10142 180													
10148 190													
10154 200													
10200 210													
10206 220													
10212 230													
10218 240													
10224 250													
10230 260													
10236 270													
10242 280													
10248 290													
10254 300													
10300 310													
10306 320													
10312 330													
10318 340													
10324 350													
10330 360													
10336 370													
10342 380													
10348 390													
10354 400													
10400 410													
10406 420													
10412 430													
10418 440													
10424 450													
10430 460													
10436 470													
10442 480													
10448 490													
10454 500													
10500 510													
10506 520													
10512 530													
10518 540													
10524 550													
10530 560													
10536 570													
10542 580													
10548 590													
10554 600													
10600 610													
10606 620													
10612 630													
10618 640													
10624 650													
10630 660													
10636 670													
10642 680													
10648 690													
10654 700													
10700 710													
10706 720													
10712 730													
10718 740													
10724 750													
10730 760													
10736 770													
10742 780													
10748 790													
10754 800													
10800 810													
10806 820													
10812 830													
10818 840													
10824 850													
10830 860													
10836 870													
10842 880													
10848 890													
10854 900													
10900 910													
10906 920													
10912 930													

CALIFONHYDROLOGY

11954	200.	0
12000	201.	0
12006	202.	0
12012	203.	0
12018	204.	0
12024	205.	0
12030	206.	0
12036	207.	0
12042	208.	0
12048	209.	0
12054	210.	0
12100	211.	0
12106	212.	0
12112	213.	0
12118	214.	0
12124	215.	0
12130	216.	0
12136	217.	0
12142	218.	0
12148	219.	0
12154	220.	0
12200	221.	0
12206	222.	0
12212	223.	0
12218	224.	0
12224	225.	0
12230	226.	0
12236	227.	0
12242	228.	0
12248	229.	0
12254	230.	0
12300	231.	0
12306	232.	0
12312	233.	0
12318	234.	0
12324	235.	0
12330	236.	0
12336	237.	0
12342	238.	0
12348	239.	0
12354	240.	0
20000	241.	0

HYDROGRAPH AT STATION SUB B1
PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.67	.27	.40	18.
1		0006	2	.01	.01	.00	0.	1		1212	123	.43	.16	.28	27.
1		0012	3	.01	.01	.00	0.	1		1218	124	.28	.09	.19	38.
1		0018	4	.01	.01	.00	0.	1		1224	125	.13	.04	.09	48.
1		0024	5	.01	.01	.00	0.	1		1230	126	.10	.03	.07	56.
1		0030	6	.01	.01	.00	0.	1		1236	127	.10	.03	.07	60.
1		0036	7	.01	.01	.00	0.	1		1242	128	.09	.03	.06	60.
1		0042	8	.01	.01	.00	0.	1		1248	129	.07	.02	.05	56.
1		0048	9	.01	.01	.00	0.	1		1254	130	.07	.02	.05	50.
1		0054	10	.01	.01	.00	0.	1		1300	131	.06	.02	.05	44.
1		0100	11	.01	.01	.00	0.	1		1306	132	.06	.02	.04	38.
1		0106	12	.01	.01	.00	0.	1		1312	133	.06	.02	.05	33.
1		0112	13	.01	.01	.00	0.	1		1318	134	.05	.01	.03	29.
1		0118	14	.01	.01	.00	0.	1		1324	135	.06	.02	.04	26.
1		0124	15	.01	.01	.00	0.	1		1330	136	.05	.01	.03	23.
1		0130	16	.01	.01	.00	0.	1		1336	137	.04	.01	.03	21.
1		0136	17	.01	.01	.00	0.	1		1342	138	.05	.01	.04	19.
1		0142	18	.01	.01	.00	0.	1		1348	139	.04	.01	.03	17.
1		0148	19	.01	.01	.00	0.	1		1354	140	.04	.01	.03	16.
1		0154	20	.01	.01	.00	0.	1		1400	141	.04	.01	.03	15.
1		0200	21	.01	.01	.00	0.	1		1406	142	.04	.01	.03	14.
1		0206	22	.01	.01	.00	0.	1		1412	143	.04	.01	.03	13.
1		0212	23	.01	.01	.00	0.	1		1418	144	.03	.01	.02	12.
1		0218	24	.01	.01	.00	0.	1		1424	145	.03	.01	.02	11.
1		0224	25	.01	.01	.00	0.	1		1430	146	.04	.01	.03	11.
1		0230	26	.02	.02	.00	0.	1		1436	147	.03	.01	.02	10.
1		0236	27	.01	.01	.00	0.	1		1442	148	.03	.01	.02	10.
1		0242	28	.01	.01	.00	0.	1		1448	149	.02	.01	.02	10.
1		0248	29	.01	.01	.00	0.	1		1454	150	.03	.01	.02	9.
1		0254	30	.01	.01	.00	0.	1		1500	151	.03	.01	.02	9.
1		0300	31	.01	.01	.00	0.	1		1506	152	.03	.01	.02	9.
1		0306	32	.01	.01	.00	0.	1		1512	153	.02	.01	.02	8.
1		0312	33	.02	.02	.00	0.	1		1518	154	.03	.01	.02	8.
1		0318	34	.01	.01	.00	0.	1		1524	155	.02	.01	.02	8.
1		0324	35	.01	.01	.00	0.	1		1530	156	.02	.01	.02	8.
1		0330	36	.01	.01	.00	0.	1		1536	157	.03	.01	.02	7.
1		0336	37	.01	.01	.00	0.	1		1542	158	.02	.01	.02	7.
1		0342	38	.02	.02	.00	0.	1		1548	159	.02	.01	.02	7.
1		0348	39	.01	.01	.00	0.	1		1554	160	.02	.01	.02	7.
1		0354	40	.01	.01	.00	0.	1		1600	161	.02	.01	.02	7.
1		0400	41	.01	.01	.00	0.	1		1606	162	.02	.01	.02	7.
1		0406	42	.02	.02	.00	0.	1		1612	163	.02	.01	.02	7.
1		0412	43	.01	.01	.00	0.	1		1618	164	.02	.01	.02	6.
1		0418	44	.01	.01	.00	0.	1		1624	165	.02	.01	.02	6.
1		0424	45	.02	.02	.00	0.	1		1630	166	.02	.00	.01	6.
1		0430	46	.01	.01	.00	0.	1		1636	167	.02	.01	.02	6.
1		0436	47	.01	.01	.00	0.	1		1642	168	.02	.01	.02	6.
1		0442	48	.02	.02	.00	0.	1		1648	169	.02	.00	.01	6.
1		0448	49	.01	.01	.00	0.	1		1654	170	.02	.00	.01	6.
1		0454	50	.01	.01	.00	0.	1		1700	171	.01	.00	.01	6.
1		0500	51	.02	.02	.00	0.	1		1706	172	.02	.00	.01	5.
1		0506	52	.01	.01	.00	0.	1		1712	173	.02	.00	.01	5.
1		0512	53	.02	.02	.00	0.	1		1718	174	.02	.00	.01	5.

CALIFONHYDROLOGY

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11212 123.
11218 124.
11224 125.
11230 126.
11236 127.
11242 128.
11248 129.
11254 130.
11300 131.
11306 132.
11312 133.
11318 134.
11324 135.
11330 136.
11336 137.
11342 138.
11348 139.
11354 140.
11400 141.
11406 142.
11412 143.
11418 144.
11424 145.
11430 146.
11436 147.
11442 148.
11448 149.
11454 150.
11500 151.
11506 152.
11512 153.
11518 154.
11524 155.
11530 156.
11536 157.
11542 158.
11548 159.
11554 160.
11600 161.
11606 162.
11612 163.
11618 164.
11624 165.
11630 166.
11636 167.
11642 168.
11648 169.
11654 170.
11700 171.
11706 172.
11712 173.
11718 174.
11724 175.
11730 176.
11736 177.
11742 178.
11748 179.
11754 180.
11800 181.
11806 182.
11812 183.
11818 184.
11824 185.
11830 186.
11836 187.
11842 188.
11848 189.
11854 190.
11900 191.
11906 192.
11912 193.
11918 194.
11924 195.
11930 196.
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11942 198.
11948 199.
11954 200.
12000 201.
12006 202.
12012 203.
12018 204.
12024 205.
12030 206.
12036 207.
12042 208.
12048 209.
12054 210.
12100 211.
12106 212.
12112 213.
12118 214.
12124 215.
12130 216.
12136 217.
12142 218.
12148 219.
12154 220.
12200 221.
12206 222.
12212 223.
12218 224.
12224 225.
12230 226.
12236 227.
12242 228.

CALIFONHYDROLOGY														
1	0148	19	.01	.01	.00	0.	*	1	1354	140	.04	.01	.03	1.
1	0154	20	.01	.01	.00	0.	*	1	1400	141	.04	.01	.03	1.
1	0200	21	.01	.01	.00	0.	*	1	1406	142	.04	.01	.03	1.
1	0206	22	.01	.01	.00	0.	*	1	1412	143	.04	.01	.03	1.
1	0212	23	.01	.01	.00	0.	*	1	1418	144	.03	.01	.03	0.
1	0218	24	.01	.01	.00	0.	*	1	1424	145	.03	.01	.03	0.
1	0224	25	.01	.01	.00	0.	*	1	1430	146	.04	.01	.03	1.
1	0230	26	.02	.02	.00	0.	*	1	1436	147	.03	.01	.03	0.
1	0236	27	.01	.01	.00	0.	*	1	1442	148	.03	.01	.03	0.
1	0242	28	.01	.01	.00	0.	*	1	1448	149	.02	.00	.02	0.
1	0248	29	.01	.01	.00	0.	*	1	1454	150	.03	.01	.03	0.
1	0254	30	.01	.01	.00	0.	*	1	1500	151	.03	.01	.03	0.
1	0300	31	.01	.01	.00	0.	*	1	1506	152	.03	.01	.03	0.
1	0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.00	.02	0.
1	0312	33	.02	.02	.00	0.	*	1	1518	154	.03	.01	.03	0.
1	0318	34	.01	.01	.00	0.	*	1	1524	155	.02	.00	.02	0.
1	0324	35	.01	.01	.00	0.	*	1	1530	156	.02	.00	.02	0.
1	0330	36	.01	.01	.00	0.	*	1	1536	157	.03	.01	.03	0.
1	0336	37	.01	.01	.00	0.	*	1	1542	158	.02	.00	.02	0.
1	0342	38	.02	.02	.00	0.	*	1	1548	159	.02	.00	.02	0.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.00	.02	0.
1	0354	40	.01	.01	.00	0.	*	1	1600	161	.02	.00	.02	0.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.00	.02	0.
1	0406	42	.02	.02	.00	0.	*	1	1612	163	.02	.00	.02	0.
1	0412	43	.01	.01	.00	0.	*	1	1618	164	.02	.00	.02	0.
1	0418	44	.01	.01	.00	0.	*	1	1624	165	.02	.00	.02	0.
1	0424	45	.02	.02	.00	0.	*	1	1630	166	.02	.00	.01	0.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.00	.02	0.
1	0436	47	.01	.01	.00	0.	*	1	1642	168	.02	.00	.02	0.
1	0442	48	.02	.02	.00	0.	*	1	1648	169	.02	.00	.01	0.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.02	.00	.01	0.
1	0454	50	.01	.01	.00	0.	*	1	1700	171	.01	.00	.01	0.
1	0500	51	.02	.02	.00	0.	*	1	1706	172	.02	.00	.01	0.
1	0506	52	.01	.01	.00	0.	*	1	1712	173	.02	.00	.01	0.
1	0512	53	.02	.02	.00	0.	*	1	1718	174	.02	.00	.01	0.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.02	.00	.01	0.
1	0524	55	.02	.02	.00	0.	*	1	1730	176	.01	.00	.01	0.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.02	.00	.01	0.
1	0536	57	.02	.02	.00	0.	*	1	1742	178	.02	.00	.01	0.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.01	0.
1	0548	59	.02	.02	.00	0.	*	1	1754	180	.02	.00	.01	0.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.02	.00	.01	0.
1	0600	61	.02	.02	.00	0.	*	1	1806	182	.01	.00	.01	0.
1	0606	62	.02	.02	.00	0.	*	1	1812	183	.02	.00	.01	0.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.01	0.
1	0618	64	.02	.02	.00	0.	*	1	1824	185	.02	.00	.01	0.
1	0624	65	.02	.02	.00	0.	*	1	1830	186	.01	.00	.01	0.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.02	.00	.01	0.
1	0636	67	.02	.02	.00	0.	*	1	1842	188	.01	.00	.01	0.
1	0642	68	.02	.02	.00	0.	*	1	1848	189	.02	.00	.01	0.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.01	0.
1	0654	70	.02	.02	.00	0.	*	1	1900	191	.02	.00	.01	0.
1	0700	71	.02	.02	.00	0.	*	1	1906	192	.01	.00	.01	0.
1	0706	72	.02	.02	.00	0.	*	1	1912	193	.01	.00	.01	0.
1	0712	73	.02	.02	.00	0.	*	1	1918	194	.02	.00	.01	0.
1	0718	74	.02	.02	.00	0.	*	1	1924	195	.01	.00	.01	0.
1	0724	75	.02	.02	.00	0.	*	1	1930	196	.02	.00	.01	0.
1	0730	76	.02	.02	.00	0.	*	1	1936	197	.01	.00	.01	0.
1	0736	77	.02	.02	.00	0.	*	1	1942	198	.01	.00	.01	0.
1	0742	78	.02	.02	.00	0.	*	1	1948	199	.02	.00	.01	0.
1	0748	79	.02	.02	.00	0.	*	1	1954	200	.01	.00	.01	0.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.01	0.
1	0800	81	.02	.02	.00	0.	*	1	2006	202	.01	.00	.01	0.
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.02	.00	.01	0.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.01	0.
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.01	0.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.01	0.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.02	.00	.01	0.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	0.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	0.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	0.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	0.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.02	.00	.01	0.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	0.
1	0912	93	.03	.03	.01	0.	*	1	2118	214	.01	.00	.01	0.
1	0918	94	.03	.03	.01	0.	*	1	2124	215	.01	.00	.01	0.
1	0924	95	.03	.03	.01	0.	*	1	2130	216	.01	.00	.01	0.
1	0930	96	.03	.03	.01	0.	*	1	2136	217	.01	.00	.01	0.
1	0936	97	.03	.03	.01	0.	*	1	2142	218	.01	.00	.01	0.
1	0942	98	.04	.03	.01	0.	*	1	2148	219	.01	.00	.01	0.
1	0948	99	.03	.02	.01	0.	*	1	2154	220	.01	.00	.01	0.
1	0954	100	.04	.03	.01	0.	*	1	2200	221	.02	.00	.01	0.
1	1000	101	.03	.02	.01	0.	*	1	2206	222	.01	.00	.01	0.
1	1006	102	.04	.03	.01	0.	*	1	2212	223	.01	.00	.01	0.
1	1012	103	.04	.03	.01	0.	*	1	2218	224	.01	.00	.01	0.
1	1018	104	.05	.03	.01	0.	*	1	2224	225	.01	.00	.01	0.
1	1024	105	.04	.03	.01	0.	*	1	2230	226	.01	.00	.01	0.
1	1030	106	.05	.03	.02	0.	*	1	2236	227	.01	.00	.01	0.
1	1036	107	.05	.03	.02	0.	*	1	2242	228	.01	.00	.01	0.
1	1042	108	.05	.03	.02	0.	*	1	2248	229	.01	.00	.01	0.
1	1048	109	.06	.04	.02	0.	*	1	2254	230	.01	.00	.01	0.
1	1054	110	.06	.03	.02	0.	*	1	2300	231	.01	.00	.01	0.
1	1100	111	.06	.04	.03	0.	*	1	2306	232	.01	.00	.01	0.
1	1106	112	.06	.04	.03	0.	*	1	2312	233	.01	.00	.01	0.
1	1112	113	.06	.04	.03	0.	*	1	2318	234	.01	.00	.01	0.
1	1118	114	.08	.05	.03	1.	*	1	2324	235	.01	.00	.01	0.
1	1124	115	.09	.05	.04	1.	*	1	2330	236	.01	.00	.01	0.
1	1130	116	.09	.05	.04	1.	*	1	2336	237	.01	.00	.01	0.
1	1136	117	.11	.06	.05	1.	*	1	2342	238	.01	.00	.01	0.
1	1142	118	.13	.06	.07	1.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.28	.13	.15	2.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.42	.17	.25	4.	*	2	0000	241	.01	.00	.01	0.
1	1200	121	.67	.23	.44	7.	*							

CALIFONHYDROLOGY

TOTAL RAINFALL = 8.00, TOTAL LOSS = 3.42, TOTAL EXCESS = 4.58

PEAK FLOW (CFS)	TIME (HR)	(CFS)	6-HR (INCHES)	MAXIMUM 24-HR	AVERAGE 72-HR	FLOW 24.00-HR
8.	12.10	3.731	1.	4.574	0.	4.574
			1.	1.	1.	1.

CUMULATIVE AREA = .00 SQ MI

HYDROGRAPH AT STATION SUB B2
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1	1206	122	122	.36	.19	.17	3.
1		0006	2	.00	.00	.00	0.	1	1212	123	123	.23	.11	.12	2.
1		0012	3	.00	.00	.00	0.	1	1218	124	124	.15	.07	.08	2.
1		0018	4	.00	.00	.00	0.	1	1224	125	125	.07	.03	.04	1.
1		0024	5	.00	.00	.00	0.	1	1230	126	126	.06	.02	.03	1.
1		0030	6	.00	.00	.00	0.	1	1236	127	127	.05	.02	.03	1.
1		0036	7	.00	.00	.00	0.	1	1242	128	128	.05	.02	.03	0.
1		0042	8	.00	.00	.00	0.	1	1248	129	129	.04	.02	.02	0.
1		0048	9	.00	.00	.00	0.	1	1254	130	130	.04	.02	.02	0.
1		0054	10	.00	.00	.00	0.	1	1300	131	131	.03	.01	.02	0.
1		0100	11	.00	.00	.00	0.	1	1306	132	132	.03	.01	.02	0.
1		0106	12	.00	.00	.00	0.	1	1312	133	133	.03	.01	.02	0.
1		0112	13	.00	.00	.00	0.	1	1318	134	134	.03	.01	.02	0.
1		0118	14	.00	.00	.00	0.	1	1324	135	135	.03	.01	.02	0.
1		0124	15	.00	.00	.00	0.	1	1330	136	136	.03	.01	.02	0.
1		0130	16	.00	.00	.00	0.	1	1336	137	137	.02	.01	.01	0.
1		0136	17	.00	.00	.00	0.	1	1342	138	138	.03	.01	.02	0.
1		0142	18	.00	.00	.00	0.	1	1348	139	139	.02	.01	.01	0.
1		0148	19	.00	.00	.00	0.	1	1354	140	140	.02	.01	.01	0.
1		0154	20	.00	.00	.00	0.	1	1400	141	141	.02	.01	.01	0.
1		0200	21	.00	.00	.00	0.	1	1406	142	142	.02	.01	.01	0.
1		0206	22	.00	.00	.00	0.	1	1412	143	143	.02	.01	.01	0.
1		0212	23	.00	.00	.00	0.	1	1418	144	144	.02	.01	.01	0.
1		0218	24	.00	.00	.00	0.	1	1424	145	145	.02	.01	.01	0.
1		0224	25	.00	.00	.00	0.	1	1430	146	146	.02	.01	.01	0.
1		0230	26	.01	.01	.00	0.	1	1436	147	147	.02	.01	.01	0.
1		0236	27	.00	.00	.00	0.	1	1442	148	148	.02	.01	.01	0.
1		0242	28	.00	.00	.00	0.	1	1448	149	149	.01	.00	.01	0.
1		0248	29	.00	.00	.00	0.	1	1454	150	150	.02	.01	.01	0.
1		0254	30	.00	.00	.00	0.	1	1500	151	151	.02	.01	.01	0.
1		0300	31	.00	.00	.00	0.	1	1506	152	152	.02	.01	.01	0.
1		0306	32	.00	.00	.00	0.	1	1512	153	153	.01	.00	.01	0.
1		0312	33	.01	.01	.00	0.	1	1518	154	154	.02	.01	.01	0.
1		0318	34	.00	.00	.00	0.	1	1524	155	155	.01	.00	.01	0.
1		0324	35	.00	.00	.00	0.	1	1530	156	156	.01	.00	.01	0.
1		0330	36	.00	.00	.00	0.	1	1536	157	157	.02	.01	.01	0.
1		0336	37	.00	.00	.00	0.	1	1542	158	158	.01	.00	.01	0.
1		0342	38	.01	.01	.00	0.	1	1548	159	159	.01	.00	.01	0.
1		0348	39	.00	.00	.00	0.	1	1554	160	160	.01	.00	.01	0.
1		0354	40	.00	.00	.00	0.	1	1600	161	161	.01	.00	.01	0.
1		0400	41	.00	.00	.00	0.	1	1606	162	162	.01	.00	.01	0.
1		0406	42	.01	.01	.00	0.	1	1612	163	163	.01	.00	.01	0.
1		0412	43	.00	.00	.00	0.	1	1618	164	164	.01	.00	.01	0.
1		0418	44	.00	.00	.00	0.	1	1624	165	165	.01	.00	.01	0.
1		0424	45	.01	.01	.00	0.	1	1630	166	166	.01	.00	.01	0.
1		0430	46	.00	.00	.00	0.	1	1636	167	167	.01	.00	.01	0.
1		0436	47	.00	.00	.00	0.	1	1642	168	168	.01	.00	.01	0.
1		0442	48	.01	.01	.00	0.	1	1648	169	169	.01	.00	.01	0.
1		0448	49	.00	.00	.00	0.	1	1654	170	170	.01	.00	.01	0.
1		0454	50	.00	.00	.00	0.	1	1700	171	171	.00	.00	.00	0.
1		0500	51	.01	.01	.00	0.	1	1706	172	172	.01	.00	.01	0.
1		0506	52	.00	.00	.00	0.	1	1712	173	173	.01	.00	.01	0.
1		0512	53	.01	.01	.00	0.	1	1718	174	174	.01	.00	.01	0.
1		0518	54	.00	.00	.00	0.	1	1724	175	175	.01	.00	.01	0.
1		0524	55	.01	.01	.00	0.	1	1730	176	176	.00	.00	.00	0.
1		0530	56	.00	.00	.00	0.	1	1736	177	177	.01	.00	.01	0.
1		0536	57	.01	.01	.00	0.	1	1742	178	178	.01	.00	.01	0.
1		0542	58	.00	.00	.00	0.	1	1748	179	179	.00	.00	.00	0.
1		0548	59	.01	.01	.00	0.	1	1754	180	180	.01	.00	.01	0.
1		0554	60	.00	.00	.00	0.	1	1800	181	181	.01	.00	.01	0.
1		0600	61	.01	.01	.00	0.	1	1806	182	182	.00	.00	.00	0.
1		0606	62	.01	.01	.00	0.	1	1812	183	183	.01	.00	.01	0.
1		0612	63	.00	.00	.00	0.	1	1818	184	184	.00	.00	.00	0.
1		0618	64	.01	.01	.00	0.	1	1824	185	185	.01	.00	.01	0.
1		0624	65	.01	.01	.00	0.	1	1830	186	186	.00	.00	.00	0.
1		0630	66	.00	.00	.00	0.	1	1836	187	187	.01	.00	.01	0.
1		0636	67	.01	.01	.00	0.	1	1842	188	188	.00	.00	.00	0.
1		0642	68	.01	.01	.00	0.	1	1848	189	189	.01	.00	.01	0.
1		0648	69	.00	.00	.00	0.	1	1854	190	190	.00	.00	.00	0.
1		0654	70	.01	.01	.00	0.	1	1900	191	191	.01	.00	.01	0.
1		0700	71	.01	.01	.00	0.	1	1906	192	192	.00	.00	.00	0.
1		0706	72	.01	.01	.00	0.	1	1912	193	193	.00	.00	.00	0.
1		0712	73	.01	.01	.00	0.	1	1918	194	194	.01	.00	.01	0.
1		0718	74	.01	.01	.00	0.	1	1924	195	195	.00	.00	.00	0.
1		0724	75	.01	.01	.00	0.	1	1930	196	196	.01	.00	.01	0.
1		0730	76	.01	.01	.00	0.	1	1936	197	197	.00	.00	.00	0.
1		0736	77	.01	.01	.00	0.	1	1942	198	198	.00	.00	.00	0.
1		0742	78	.01	.01	.00	0.	1	1948	199	199	.01	.00	.01	0.
1		0748	79	.01	.01	.00	0.	1	1954	200	200	.00	.00	.00	0.
1		0754	80	.01	.01	.00	0.	1	2000	201	201	.00	.00	.00	0.
1		0800	81	.01	.01	.00	0.	1	2006	202	202	.00	.00	.00	0.
1		0806	82	.01	.01	.00	0.	1	2012	203	203	.01	.00	.01	0.
1		0812	83	.01	.01	.00	0.	1	2018	204	204	.00	.00	.00	0.
1		0818	84	.01	.01	.00	0.	1	2024	205	205	.00	.00	.00	0.

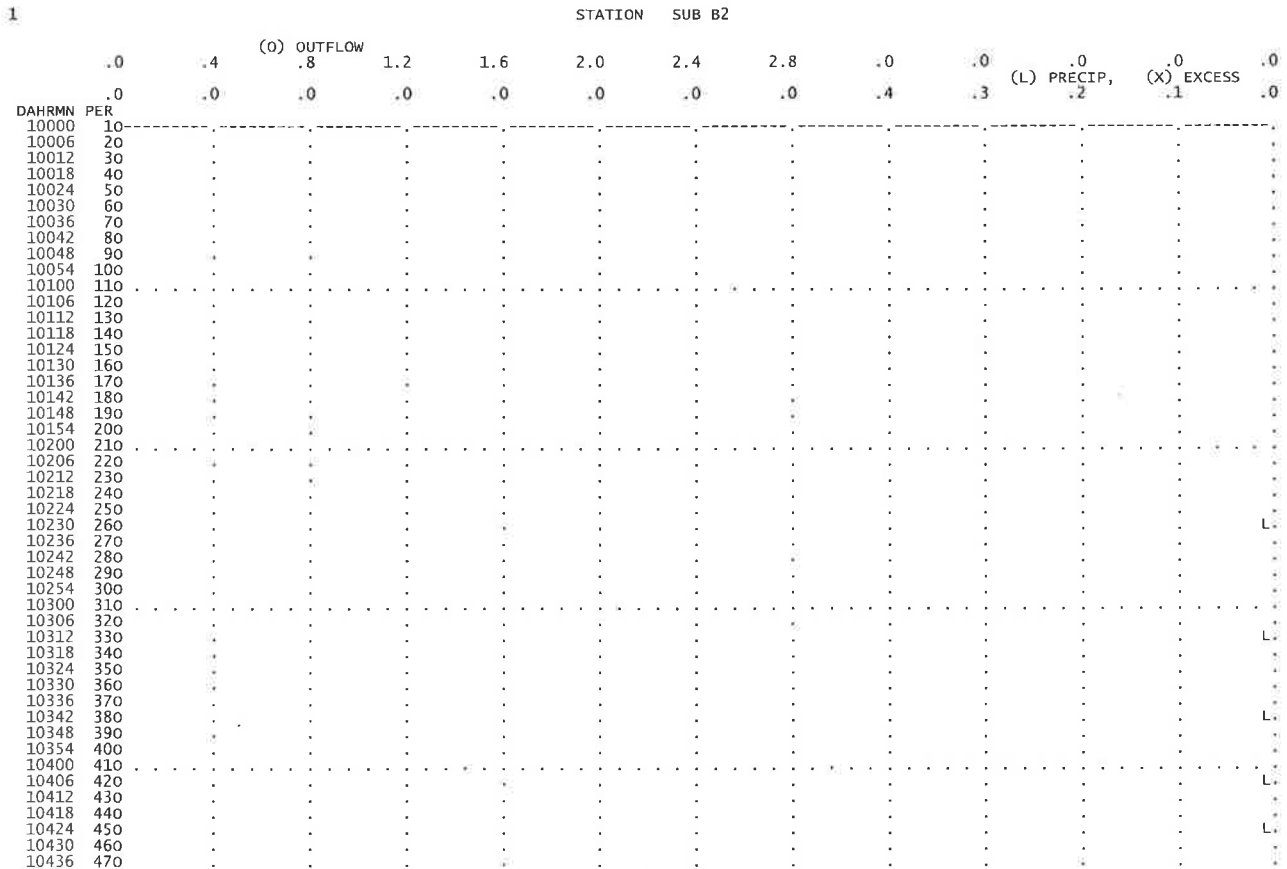
CALIFONHYDROLOGY

1	0824	85	.01	.01	.00	0.	*	1	2030	206	.00	.00	.00	0.
1	0830	86	.01	.01	.00	0.	*	1	2036	207	.01	.00	.01	0.
1	0836	87	.02	.02	.00	0.	*	1	2042	208	.00	.00	.00	0.
1	0842	88	.01	.01	.00	0.	*	1	2048	209	.00	.00	.00	0.
1	0848	89	.01	.01	.00	0.	*	1	2054	210	.00	.00	.00	0.
1	0854	90	.02	.02	.00	0.	*	1	2100	211	.00	.00	.00	0.
1	0900	91	.02	.02	.00	0.	*	1	2106	212	.01	.00	.01	0.
1	0906	92	.01	.01	.00	0.	*	1	2112	213	.00	.00	.00	0.
1	0912	93	.02	.02	.00	0.	*	1	2118	214	.00	.00	.00	0.
1	0918	94	.02	.02	.00	0.	*	1	2124	215	.00	.00	.00	0.
1	0924	95	.02	.02	.00	0.	*	1	2130	216	.00	.00	.00	0.
1	0930	96	.02	.02	.00	0.	*	1	2136	217	.00	.00	.00	0.
1	0936	97	.02	.02	.00	0.	*	1	2142	218	.00	.00	.00	0.
1	0942	98	.02	.02	.00	0.	*	1	2148	219	.00	.00	.00	0.
1	0948	99	.02	.02	.00	0.	*	1	2154	220	.00	.00	.00	0.
1	0954	100	.02	.02	.00	0.	*	1	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.00	0.	*	1	2206	222	.00	.00	.00	0.
1	1006	102	.02	.02	.00	0.	*	1	2212	223	.00	.00	.00	0.
1	1012	103	.02	.02	.00	0.	*	1	2218	224	.00	.00	.00	0.
1	1018	104	.03	.03	.00	0.	*	1	2224	225	.00	.00	.00	0.
1	1024	105	.02	.02	.00	0.	*	1	2230	226	.00	.00	.00	0.
1	1030	106	.03	.02	.00	0.	*	1	2236	227	.00	.00	.00	0.
1	1036	107	.03	.02	.00	0.	*	1	2242	228	.00	.00	.00	0.
1	1042	108	.03	.02	.00	0.	*	1	2248	229	.00	.00	.00	0.
1	1048	109	.03	.03	.00	0.	*	1	2254	230	.00	.00	.00	0.
1	1054	110	.03	.03	.00	0.	*	1	2300	231	.00	.00	.00	0.
1	1100	111	.03	.03	.00	0.	*	1	2306	232	.00	.00	.00	0.
1	1106	112	.03	.03	.00	0.	*	1	2312	233	.00	.00	.00	0.
1	1112	113	.03	.03	.00	0.	*	1	2318	234	.00	.00	.00	0.
1	1118	114	.04	.04	.01	0.	*	1	2324	235	.00	.00	.00	0.
1	1124	115	.05	.04	.01	0.	*	1	2330	236	.00	.00	.00	0.
1	1130	116	.05	.04	.01	0.	*	1	2336	237	.00	.00	.00	0.
1	1136	117	.06	.05	.01	0.	*	1	2342	238	.00	.00	.00	0.
1	1142	118	.07	.05	.02	0.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.15	.11	.04	1.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.23	.16	.07	1.	*	2	0000	241	.00	.00	.00	0.
1	1200	121	.36	.22	.14	2.	*							

TOTAL RAINFALL = 4.30, TOTAL LOSS = 2.70, TOTAL EXCESS = 1.60

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR (INCHES)	AVERAGE FLOW 72-HR (AC-FT)	24.00-HR (CFS)
3.	12.10	0.	1.325	1.601	0.
		0.	0.	0.	1.601
					0.

CUMULATIVE AREA = .00 SQ MI



CALIFONHYDROLOGY

1	0042	8	.01	.01	.00	0.	*	1	1248	129	.05	.02	.03	1.
1	0048	9	.01	.01	.00	0.	*	1	1254	130	.04	.02	.03	1.
1	0054	10	.00	.00	.00	0.	*	1	1300	131	.04	.01	.03	0.
1	0100	11	.01	.01	.00	0.	*	1	1306	132	.04	.01	.02	0.
1	0106	12	.01	.01	.00	0.	*	1	1312	133	.04	.01	.03	0.
1	0112	13	.01	.01	.00	0.	*	1	1318	134	.03	.01	.02	0.
1	0118	14	.01	.01	.00	0.	*	1	1324	135	.03	.01	.02	0.
1	0124	15	.01	.01	.00	0.	*	1	1330	136	.03	.01	.02	0.
1	0130	16	.00	.00	.00	0.	*	1	1336	137	.02	.01	.02	0.
1	0136	17	.01	.01	.00	0.	*	1	1342	138	.03	.01	.02	0.
1	0142	18	.01	.01	.00	0.	*	1	1348	139	.02	.01	.02	0.
1	0148	19	.00	.00	.00	0.	*	1	1354	140	.02	.01	.02	0.
1	0154	20	.01	.01	.00	0.	*	1	1400	141	.02	.01	.02	0.
1	0200	21	.01	.01	.00	0.	*	1	1406	142	.02	.01	.02	0.
1	0206	22	.01	.01	.00	0.	*	1	1412	143	.02	.01	.02	0.
1	0212	23	.01	.01	.00	0.	*	1	1418	144	.02	.01	.01	0.
1	0218	24	.01	.01	.00	0.	*	1	1424	145	.02	.01	.01	0.
1	0224	25	.01	.01	.00	0.	*	1	1430	146	.02	.01	.02	0.
1	0230	26	.01	.01	.00	0.	*	1	1436	147	.02	.01	.01	0.
1	0236	27	.01	.01	.00	0.	*	1	1442	148	.02	.01	.01	0.
1	0242	28	.01	.01	.00	0.	*	1	1448	149	.02	.00	.01	0.
1	0248	29	.00	.00	.00	0.	*	1	1454	150	.02	.01	.01	0.
1	0254	30	.01	.01	.00	0.	*	1	1500	151	.02	.01	.01	0.
1	0300	31	.01	.01	.00	0.	*	1	1506	152	.02	.01	.01	0.
1	0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.00	.01	0.
1	0312	33	.01	.01	.00	0.	*	1	1518	154	.02	.01	.01	0.
1	0318	34	.00	.00	.00	0.	*	1	1524	155	.01	.00	.01	0.
1	0324	35	.00	.00	.00	0.	*	1	1530	156	.02	.00	.01	0.
1	0330	36	.01	.01	.00	0.	*	1	1536	157	.02	.01	.01	0.
1	0336	37	.00	.00	.00	0.	*	1	1542	158	.01	.00	.01	0.
1	0342	38	.01	.01	.00	0.	*	1	1548	159	.02	.00	.01	0.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.00	.01	0.
1	0354	40	.00	.00	.00	0.	*	1	1600	161	.01	.00	.01	0.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.00	.01	0.
1	0406	42	.01	.01	.00	0.	*	1	1612	163	.02	.00	.01	0.
1	0412	43	.00	.00	.00	0.	*	1	1618	164	.01	.00	.01	0.
1	0418	44	.00	.00	.00	0.	*	1	1624	165	.02	.00	.01	0.
1	0424	45	.01	.01	.00	0.	*	1	1630	166	.01	.00	.01	0.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.00	.01	0.
1	0436	47	.00	.00	.00	0.	*	1	1642	168	.02	.00	.01	0.
1	0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	0.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.01	.00	.01	0.
1	0454	50	.00	.00	.00	0.	*	1	1700	171	.00	.00	.00	0.
1	0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	0.
1	0506	52	.00	.00	.00	0.	*	1	1712	173	.01	.00	.01	0.
1	0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	0.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.01	.00	.01	0.
1	0524	55	.01	.01	.00	0.	*	1	1730	176	.00	.00	.00	0.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.01	.00	.01	0.
1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	0.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.00	.00	.00	0.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	0.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.01	.00	.01	0.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.00	.00	.00	0.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	0.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.00	0.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	0.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.00	.00	.00	0.
1	0630	66	.00	.00	.00	0.	*	1	1836	187	.01	.00	.01	0.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.00	.00	.00	0.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	0.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.00	.00	.00	0.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	0.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.00	.00	.00	0.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.00	.00	.00	0.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	0.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.00	.00	.00	0.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	0.
1	0730	76	.01	.01	.00	0.	*	1	1936	197	.01	.00	.00	0.
1	0736	77	.01	.01	.00	0.	*	1	1942	198	.00	.00	.00	0.
1	0742	78	.01	.01	.00	0.	*	1	1948	199	.01	.00	.01	0.
1	0748	79	.01	.01	.00	0.	*	1	1954	200	.00	.00	.00	0.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.00	0.
1	0800	81	.01	.01	.00	0.	*	1	2006	202	.00	.00	.00	0.
1	0806	82	.01	.01	.00	0.	*	1	2012	203	.01	.00	.01	0.
1	0812	83	.01	.01	.00	0.	*	1	2018	204	.01	.00	.00	0.
1	0818	84	.01	.01	.00	0.	*	1	2024	205	.00	.00	.00	0.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.00	.00	.00	0.
1	0830	86	.01	.01	.00	0.	*	1	2036	207	.01	.00	.01	0.
1	0836	87	.02	.02	.00	0.	*	1	2042	208	.01	.00	.00	0.
1	0842	88	.01	.01	.00	0.	*	1	2048	209	.00	.00	.00	0.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.00	.00	.00	0.
1	0854	90	.02	.02	.00	0.	*	1	2100	211	.00	.00	.00	0.
1	0900	91	.02	.02	.00	0.	*	1	2106	212	.01	.00	.01	0.
1	0906	92	.01	.01	.00	0.	*	1	2112	213	.00	.00	.00	0.
1	0912	93	.02	.02	.00	0.	*	1	2118	214	.00	.00	.00	0.
1	0918	94	.02	.02	.00	0.	*	1	2124	215	.00	.00	.00	0.
1	0924	95	.02	.02	.00	0.	*	1	2130	216	.01	.00	.00	0.
1	0930	96	.02	.02	.00	0.	*	1	2136	217	.00	.00	.00	0.
1	0936	97	.02	.02	.00	0.	*	1	2142	218	.00	.00	.00	0.
1	0942	98	.02	.02	.00	0.	*	1	2148	219	.00	.00	.00	0.
1	0948	99	.02	.02	.00	0.	*	1	2154	220	.00	.00	.00	0.
1	0954	100	.02	.02	.00	0.	*	1	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.00	0.	*	1	2206	222	.00	.00	.00	0.
1	1006	102	.03	.03	.00	0.	*	1	2212	223	.00	.00	.00	0.
1	1012	103	.02	.02	.00	0.	*	1	2218	224	.01	.00	.00	0.
1	1018	104	.03	.03	.00	0.	*	1	2224	225	.00	.00	.00	0.
1	1024	105	.02	.02	.00	0.	*	1	2230	226	.00	.00	.00	0.
1	1030	106	.03	.03	.00	0.	*	1	2236	227	.00	.00	.00	0.
1	1036	107	.03	.03	.00	0.	*	1	2242	228	.00	.00	.00	0.
1	1042	108	.03	.03	.00	0.	*	1	2248	229	.01	.00	.00	0.
1	1048	109	.03	.03	.01	0.	*	1	2254	230	.00	.00	.00	0.
1	1054	110	.03	.03	.01	0.	*	1	2300	231	.00	.00	.00	0.
1	1100	111	.04	.03	.01	0.	*	1	2306	232	.00	.00	.00	0.
1	1106	112	.04	.03	.01	0.	*	1	2312	233	.00	.00	.00	0.
1	1112	113	.04	.03	.01	0.	*	1	2318	234	.01	.00	.00	0.

CALIFONHYDROLOGY														
1	1118	114	.05	.04	.01	0.	*	1	2324	235	.00	.00	.00	0.
1	1124	115	.06	.04	.01	0.	*	1	2330	236	.00	.00	.00	0.
1	1130	116	.06	.04	.01	0.	*	1	2336	237	.00	.00	.00	0.
1	1136	117	.07	.05	.02	0.	*	1	2342	238	.01	.00	.00	0.
1	1142	118	.08	.06	.02	0.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.17	.12	.06	1.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.27	.16	.10	2.	*	2	0000	241	.00	.00	.00	0.
1	1200	121	.42	.23	.19	3.	*							

TOTAL RAINFALL = 5.00, TOTAL LOSS = 2.88, TOTAL EXCESS = 2.12

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.00-HR
(CFS)	(HR)	(CFS)	(INCHES)	(AC-FT)	
4.	12.10	1.	1.747	0.	0.
		0.	0.	2.114	0.
			0.	0.	2.114
					0.

CUMULATIVE AREA = .00 SQ MI

DAHRMN PER	(O) OUTFLOW										(L) PRECIP.	(X) EXCESS	
	.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	.0			
10000	10	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10006	20	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10012	30	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10018	40	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10024	50	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10030	60	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10036	70	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10042	80	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10048	90	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10054	100	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10100	110	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10106	120	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10112	130	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10118	140	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10124	150	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10130	160	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10136	170	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10142	180	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10148	190	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10154	200	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10200	210	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10206	220	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10212	230	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10218	240	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10224	250	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10230	260	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10236	270	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10242	280	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10248	290	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10254	300	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10300	310	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10306	320	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10312	330	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10318	340	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10324	350	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10330	360	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10336	370	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10342	380	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10348	390	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10354	400	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10400	410	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10406	420	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10412	430	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10418	440	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10424	450	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10430	460	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10436	470	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10442	480	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10448	490	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10454	500	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10500	510	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10506	520	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10512	530	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10518	540	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10524	550	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10530	560	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10536	570	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10542	580	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10548	590	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10554	600	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10600	610	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10606	620	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10612	630	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10618	640	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10624	650	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10630	660	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10636	670	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10642	680	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10648	690	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10654	700	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10700	710	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10706	720	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10712	730	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10718	740	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10724	750	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10730	760	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0

CALIFONHYDROLOGY

11812	183.0
11818	184.0
11824	185.0
11830	186.0
11836	187.0
11842	188.0
11848	189.0
11854	190.0
11900	191.0
11906	192.0
11912	193.0
11918	194.0
11924	195.0
11930	196.0
11936	197.0
11942	198.0
11948	199.0
11954	200.0
12000	201.0
12006	202.0
12012	203.0
12018	204.0
12024	205.0
12030	206.0
12036	207.0
12042	208.0
12048	209.0
12054	210.0
12100	211.0
12106	212.0
12112	213.0
12118	214.0
12124	215.0
12130	216.0
12136	217.0
12142	218.0
12148	219.0
12154	220.0
12200	221.0
12206	222.0
12212	223.0
12218	224.0
12224	225.0
12230	226.0
12236	227.0
12242	228.0
12248	229.0
12254	230.0
12300	231.0
12306	232.0
12312	233.0
12318	234.0
12324	235.0
12330	236.0
12336	237.0
12342	238.0
12348	239.0
12354	240.0
20000	241.0

HYDROGRAPH AT STATION SUB B2
 PLAN 1, RATIO = .76

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	*	1	1206	122	.51	.20	.31	5.	
1		0006	2	.01	.01	.00	0.	*	1	1212	123	.33	.11	.22	4.	
1		0012	3	.01	.01	.00	0.	*	1	1218	124	.21	.07	.15	3.	
1		0018	4	.01	.01	.00	0.	*	1	1224	125	.10	.03	.07	2.	
1		0024	5	.01	.01	.00	0.	*	1	1230	126	.08	.02	.06	1.	
1		0030	6	.01	.01	.00	0.	*	1	1236	127	.07	.02	.05	1.	
1		0036	7	.01	.01	.00	0.	*	1	1242	128	.07	.02	.05	1.	
1		0042	8	.01	.01	.00	0.	*	1	1248	129	.05	.02	.04	1.	
1		0048	9	.01	.01	.00	0.	*	1	1254	130	.05	.02	.04	1.	
1		0054	10	.01	.01	.00	0.	*	1	1300	131	.05	.01	.04	1.	
1		0100	11	.01	.01	.00	0.	*	1	1306	132	.04	.01	.03	1.	
1		0106	12	.01	.01	.00	0.	*	1	1312	133	.05	.01	.04	1.	
1		0112	13	.01	.01	.00	0.	*	1	1318	134	.04	.01	.03	1.	
1		0118	14	.01	.01	.00	0.	*	1	1324	135	.04	.01	.03	1.	
1		0124	15	.01	.01	.00	0.	*	1	1330	136	.04	.01	.03	0.	
1		0130	16	.01	.01	.00	0.	*	1	1336	137	.03	.01	.02	0.	
1		0136	17	.01	.01	.00	0.	*	1	1342	138	.04	.01	.03	0.	
1		0142	18	.01	.01	.00	0.	*	1	1348	139	.03	.01	.02	0.	
1		0148	19	.01	.01	.00	0.	*	1	1354	140	.03	.01	.02	0.	
1		0154	20	.01	.01	.00	0.	*	1	1400	141	.03	.01	.02	0.	
1		0200	21	.01	.01	.00	0.	*	1	1406	142	.03	.01	.02	0.	
1		0206	22	.01	.01	.00	0.	*	1	1412	143	.03	.01	.02	0.	
1		0212	23	.01	.01	.00	0.	*	1	1418	144	.02	.01	.02	0.	
1		0218	24	.01	.01	.00	0.	*	1	1424	145	.02	.01	.02	0.	
1		0224	25	.01	.01	.00	0.	*	1	1430	146	.03	.01	.02	0.	
1		0230	26	.01	.01	.00	0.	*	1	1436	147	.02	.01	.02	0.	
1		0236	27	.01	.01	.00	0.	*	1	1442	148	.02	.01	.02	0.	
1		0242	28	.01	.01	.00	0.	*	1	1448	149	.02	.00	.01	0.	
1		0248	29	.01	.01	.00	0.	*	1	1454	150	.02	.01	.02	0.	
1		0254	30	.01	.01	.00	0.	*	1	1500	151	.02	.01	.02	0.	
1		0300	31	.01	.01	.00	0.	*	1	1506	152	.02	.01	.02	0.	
1		0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.00	.01	0.	
1		0312	33	.01	.01	.00	0.	*	1	1518	154	.02	.01	.02	0.	
1		0318	34	.01	.01	.00	0.	*	1	1524	155	.02	.00	.01	0.	
1		0324	35	.01	.01	.00	0.	*	1	1530	156	.02	.00	.01	0.	
1		0330	36	.01	.01	.00	0.	*	1	1536	157	.02	.01	.02	0.	

CALIFONHYDROLOGY

1	0336	37	.01	.01	.00	0.	*	1	1542	158	.02	.00	.01	0.
1	0342	38	.01	.01	.00	0.	*	1	1548	159	.02	.00	.01	0.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.00	.01	0.
1	0354	40	.01	.01	.00	0.	*	1	1600	161	.02	.00	.01	0.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.00	.01	0.
1	0406	42	.01	.01	.00	0.	*	1	1612	163	.02	.00	.01	0.
1	0412	43	.01	.01	.00	0.	*	1	1618	164	.02	.00	.01	0.
1	0418	44	.01	.01	.00	0.	*	1	1624	165	.02	.00	.01	0.
1	0424	45	.01	.01	.00	0.	*	1	1630	166	.01	.00	.01	0.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.00	.01	0.
1	0436	47	.01	.01	.00	0.	*	1	1642	168	.02	.00	.01	0.
1	0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	0.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.01	.00	.01	0.
1	0454	50	.01	.01	.00	0.	*	1	1700	171	.01	.00	.00	0.
1	0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	0.
1	0506	52	.01	.01	.00	0.	*	1	1712	173	.01	.00	.01	0.
1	0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	0.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.01	.00	.01	0.
1	0524	55	.01	.01	.00	0.	*	1	1730	176	.01	.00	.00	0.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.01	.00	.01	0.
1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	0.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.00	0.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	0.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.01	.00	.01	0.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.01	.00	.00	0.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	0.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.00	0.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	0.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.01	.00	.00	0.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.01	.00	.01	0.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.01	.00	.00	0.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	0.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.00	0.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	0.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.01	.00	.00	0.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.01	.00	.00	0.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	0.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.01	.00	.00	0.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	0.
1	0730	76	.02	.02	.00	0.	*	1	1936	197	.01	.00	.00	0.
1	0736	77	.02	.02	.00	0.	*	1	1942	198	.01	.00	.00	0.
1	0742	78	.02	.02	.00	0.	*	1	1948	199	.01	.00	.01	0.
1	0748	79	.02	.02	.00	0.	*	1	1954	200	.01	.00	.00	0.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.00	0.
1	0800	81	.02	.02	.00	0.	*	1	2006	202	.01	.00	.00	0.
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.01	.00	.01	0.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.00	0.
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.00	0.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.00	0.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.01	.00	.01	0.
1	0836	87	.02	.02	.00	0.	*	1	2042	208	.01	.00	.00	0.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.00	0.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.00	0.
1	0854	90	.02	.02	.00	0.	*	1	2100	211	.01	.00	.00	0.
1	0900	91	.02	.02	.00	0.	*	1	2106	212	.01	.00	.01	0.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.00	0.
1	0912	93	.02	.02	.00	0.	*	1	2118	214	.01	.00	.00	0.
1	0918	94	.02	.02	.00	0.	*	1	2124	215	.01	.00	.00	0.
1	0924	95	.02	.02	.00	0.	*	1	2130	216	.01	.00	.00	0.
1	0930	96	.02	.02	.00	0.	*	1	2136	217	.01	.00	.00	0.
1	0936	97	.02	.02	.00	0.	*	1	2142	218	.01	.00	.00	0.
1	0942	98	.03	.03	.00	0.	*	1	2148	219	.01	.00	.00	0.
1	0948	99	.02	.02	.00	0.	*	1	2154	220	.01	.00	.00	0.
1	0954	100	.03	.03	.00	0.	*	1	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.00	0.	*	1	2206	222	.01	.00	.00	0.
1	1006	102	.03	.03	.00	0.	*	1	2212	223	.01	.00	.00	0.
1	1012	103	.03	.03	.00	0.	*	1	2218	224	.01	.00	.00	0.
1	1018	104	.04	.03	.01	0.	*	1	2224	225	.01	.00	.00	0.
1	1024	105	.03	.02	.01	0.	*	1	2230	226	.01	.00	.00	0.
1	1030	106	.04	.03	.01	0.	*	1	2236	227	.01	.00	.00	0.
1	1036	107	.04	.03	.01	0.	*	1	2242	228	.01	.00	.00	0.
1	1042	108	.04	.03	.01	0.	*	1	2248	229	.01	.00	.00	0.
1	1048	109	.04	.03	.01	0.	*	1	2254	230	.01	.00	.00	0.
1	1054	110	.04	.03	.01	0.	*	1	2300	231	.01	.00	.00	0.
1	1100	111	.05	.04	.01	0.	*	1	2306	232	.01	.00	.00	0.
1	1106	112	.05	.04	.01	0.	*	1	2312	233	.01	.00	.00	0.
1	1112	113	.05	.03	.01	0.	*	1	2318	234	.01	.00	.00	0.
1	1118	114	.06	.04	.02	0.	*	1	2324	235	.01	.00	.00	0.
1	1124	115	.07	.05	.02	0.	*	1	2330	236	.01	.00	.00	0.
1	1130	116	.07	.04	.02	0.	*	1	2336	237	.01	.00	.00	0.
1	1136	117	.09	.05	.03	1.	*	1	2342	238	.01	.00	.00	0.
1	1142	118	.10	.06	.04	1.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.21	.12	.09	1.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.32	.17	.15	2.	*	2	0000	241	.01	.00	.00	0.
1	1200	121	.51	.23	.28	4.	*	2						

TOTAL RAINFALL = 6.10, TOTAL LOSS = 3.12, TOTAL EXCESS = 2.98

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	24-HR (CFS)	72-HR (CFS)	24.00-HR (CFS)
5.	12.10	1.0	2.450	2.976	2.976
		0.	0.	0.	0.

CUMULATIVE AREA = .00 SQ MI

STATION	SUB B2	0.	1.	2.	3.	4.	5.	6.	0.	0.	0.	0.	0.
0.	1.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

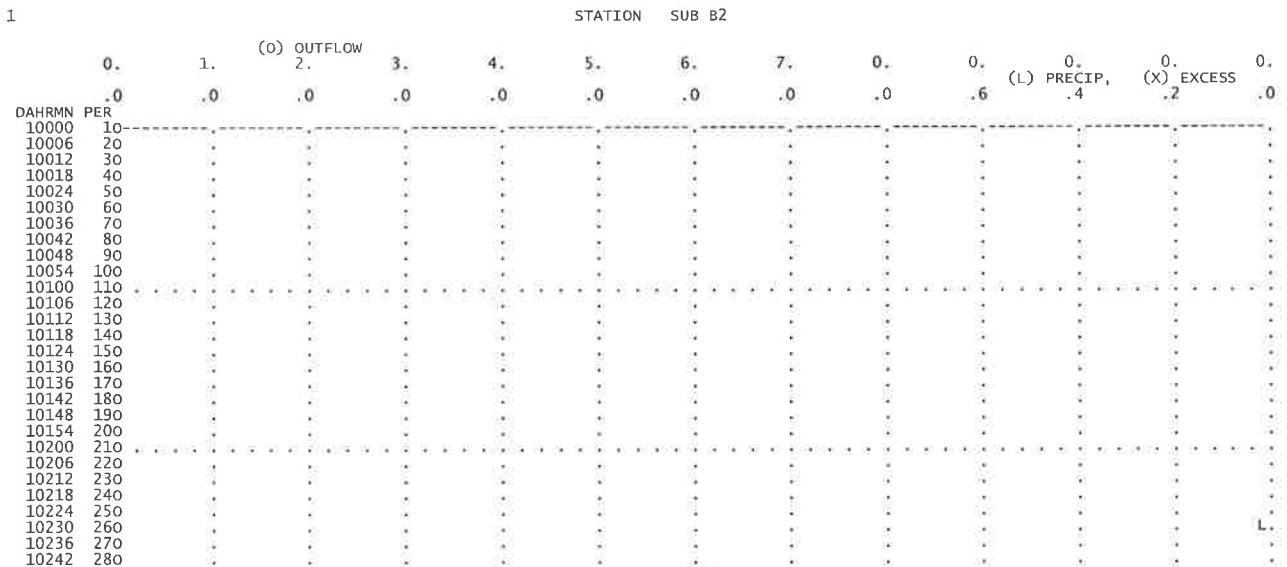
CALIFONHYDROLOGY

1	0630	66	.01	.01	.00	0.	1836	187	.01	.00	.01	0.
1	0636	67	.01	.01	.00	0.	1842	188	.01	.00	.01	0.
1	0642	68	.01	.01	.00	0.	1848	189	.01	.00	.01	0.
1	0648	69	.01	.01	.00	0.	1854	190	.01	.00	.01	0.
1	0654	70	.01	.01	.00	0.	1900	191	.01	.00	.01	0.
1	0700	71	.01	.01	.00	0.	1906	192	.01	.00	.01	0.
1	0706	72	.01	.01	.00	0.	1912	193	.01	.00	.01	0.
1	0712	73	.01	.01	.00	0.	1918	194	.01	.00	.01	0.
1	0718	74	.01	.01	.00	0.	1924	195	.01	.00	.01	0.
1	0724	75	.01	.01	.00	0.	1930	196	.01	.00	.01	0.
1	0730	76	.02	.02	.00	0.	1936	197	.01	.00	.01	0.
1	0736	77	.02	.02	.00	0.	1942	198	.01	.00	.01	0.
1	0742	78	.02	.02	.00	0.	1948	199	.01	.00	.01	0.
1	0748	79	.02	.02	.00	0.	1954	200	.01	.00	.01	0.
1	0754	80	.02	.02	.00	0.	2000	201	.01	.00	.01	0.
1	0800	81	.02	.02	.00	0.	2006	202	.01	.00	.01	0.
1	0806	82	.02	.02	.00	0.	2012	203	.01	.00	.01	0.
1	0812	83	.02	.02	.00	0.	2018	204	.01	.00	.01	0.
1	0818	84	.02	.02	.00	0.	2024	205	.01	.00	.01	0.
1	0824	85	.02	.02	.00	0.	2030	206	.01	.00	.01	0.
1	0830	86	.02	.02	.00	0.	2036	207	.01	.00	.01	0.
1	0836	87	.03	.03	.00	0.	2042	208	.01	.00	.01	0.
1	0842	88	.02	.02	.00	0.	2048	209	.01	.00	.01	0.
1	0848	89	.02	.02	.00	0.	2054	210	.01	.00	.01	0.
1	0854	90	.03	.03	.00	0.	2100	211	.01	.00	.01	0.
1	0900	91	.03	.03	.00	0.	2106	212	.01	.00	.01	0.
1	0906	92	.02	.02	.00	0.	2112	213	.01	.00	.01	0.
1	0912	93	.03	.02	.00	0.	2118	214	.01	.00	.01	0.
1	0918	94	.03	.02	.00	0.	2124	215	.01	.00	.01	0.
1	0924	95	.03	.02	.00	0.	2130	216	.01	.00	.01	0.
1	0930	96	.03	.02	.00	0.	2136	217	.01	.00	.01	0.
1	0936	97	.03	.02	.00	0.	2142	218	.01	.00	.01	0.
1	0942	98	.03	.03	.01	0.	2148	219	.01	.00	.01	0.
1	0948	99	.03	.03	.01	0.	2154	220	.01	.00	.01	0.
1	0954	100	.03	.03	.01	0.	2200	221	.01	.00	.01	0.
1	1000	101	.03	.02	.01	0.	2206	222	.01	.00	.01	0.
1	1006	102	.04	.03	.01	0.	2212	223	.01	.00	.01	0.
1	1012	103	.03	.03	.01	0.	2218	224	.01	.00	.01	0.
1	1018	104	.04	.03	.01	0.	2224	225	.01	.00	.01	0.
1	1024	105	.03	.03	.01	0.	2230	226	.01	.00	.01	0.
1	1030	106	.04	.03	.01	0.	2236	227	.01	.00	.01	0.
1	1036	107	.04	.03	.01	0.	2242	228	.01	.00	.01	0.
1	1042	108	.04	.03	.01	0.	2248	229	.01	.00	.01	0.
1	1048	109	.05	.03	.01	0.	2254	230	.01	.00	.01	0.
1	1054	110	.05	.03	.02	0.	2300	231	.01	.00	.01	0.
1	1100	111	.06	.04	.02	0.	2306	232	.01	.00	.01	0.
1	1106	112	.06	.04	.02	0.	2312	233	.01	.00	.01	0.
1	1112	113	.06	.04	.02	0.	2318	234	.01	.00	.01	0.
1	1118	114	.07	.04	.03	0.	2324	235	.01	.00	.01	0.
1	1124	115	.08	.05	.03	1.	2330	236	.01	.00	.01	0.
1	1130	116	.08	.05	.03	1.	2336	237	.01	.00	.01	0.
1	1136	117	.10	.06	.04	1.	2342	238	.01	.00	.01	0.
1	1142	118	.11	.06	.05	1.	2348	239	.00	.00	.00	0.
1	1148	119	.24	.13	.12	2.	2354	240	.00	.00	.00	0.
1	1154	120	.37	.17	.20	3.	0000	241	.01	.00	.01	0.
1	1200	121	.59	.23	.35	5.						0.

TOTAL RAINFALL = 7.00, TOTAL LOSS = 3.28, TOTAL EXCESS = 3.72

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	24-HR MAXIMUM AVERAGE FLOW (CFS)	72-HR MAXIMUM AVERAGE FLOW (CFS)	24.00-HR MAXIMUM AVERAGE FLOW (CFS)
7.	12.10	1.	0.	0.	0.
		(INCHES) 0.3050	3.719	3.719	3.719
		(AC-FT) 0.	1.	1.	1.

CUMULATIVE AREA = .00 SQ MI



CALIFONHYDROLOGY

20000 241.0

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HYDROGRAPH AT STATION SUB B2
PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.67	.19	.48	8.
1		0006	2	.01	.01	.00	0.	1		1212	123	.43	.11	.32	6.
1		0012	3	.01	.01	.00	0.	1		1218	124	.28	.06	.22	4.
1		0018	4	.01	.01	.00	0.	1		1224	125	.13	.03	.10	2.
1		0024	5	.01	.01	.00	0.	1		1230	126	.10	.02	.08	2.
1		0030	6	.01	.01	.00	0.	1		1236	127	.10	.02	.08	1.
1		0036	7	.01	.01	.00	0.	1		1242	128	.09	.02	.07	1.
1		0042	8	.01	.01	.00	0.	1		1248	129	.07	.01	.06	1.
1		0048	9	.01	.01	.00	0.	1		1254	130	.07	.01	.06	1.
1		0054	10	.01	.01	.00	0.	1		1300	131	.06	.01	.05	1.
1		0100	11	.01	.01	.00	0.	1		1306	132	.06	.01	.05	1.
1		0106	12	.01	.01	.00	0.	1		1312	133	.06	.01	.05	1.
1		0112	13	.01	.01	.00	0.	1		1318	134	.05	.01	.04	1.
1		0118	14	.01	.01	.00	0.	1		1324	135	.06	.01	.05	1.
1		0124	15	.01	.01	.00	0.	1		1330	136	.05	.01	.04	1.
1		0130	16	.01	.01	.00	0.	1		1336	137	.04	.01	.03	1.
1		0136	17	.01	.01	.00	0.	1		1342	138	.05	.01	.04	1.
1		0142	18	.01	.01	.00	0.	1		1348	139	.04	.01	.03	1.
1		0148	19	.01	.01	.00	0.	1		1354	140	.04	.01	.03	1.
1		0154	20	.01	.01	.00	0.	1		1400	141	.04	.01	.03	1.
1		0200	21	.01	.01	.00	0.	1		1406	142	.04	.01	.03	1.
1		0206	22	.01	.01	.00	0.	1		1412	143	.04	.01	.03	1.
1		0212	23	.01	.01	.00	0.	1		1418	144	.03	.01	.03	0.
1		0218	24	.01	.01	.00	0.	1		1424	145	.03	.01	.03	0.
1		0224	25	.01	.01	.00	0.	1		1430	146	.04	.01	.03	1.
1		0230	26	.02	.02	.00	0.	1		1436	147	.03	.01	.03	0.
1		0236	27	.01	.01	.00	0.	1		1442	148	.03	.01	.03	0.
1		0242	28	.01	.01	.00	0.	1		1448	149	.02	.00	.02	0.
1		0248	29	.01	.01	.00	0.	1		1454	150	.03	.01	.03	0.
1		0254	30	.01	.01	.00	0.	1		1500	151	.03	.01	.03	0.
1		0300	31	.01	.01	.00	0.	1		1506	152	.03	.01	.03	0.
1		0306	32	.01	.01	.00	0.	1		1512	153	.02	.00	.02	0.
1		0312	33	.02	.02	.00	0.	1		1518	154	.03	.01	.03	0.
1		0318	34	.01	.01	.00	0.	1		1524	155	.02	.00	.02	0.
1		0324	35	.01	.01	.00	0.	1		1530	156	.02	.00	.02	0.
1		0330	36	.01	.01	.00	0.	1		1536	157	.03	.01	.03	0.
1		0336	37	.01	.01	.00	0.	1		1542	158	.02	.00	.02	0.
1		0342	38	.02	.02	.00	0.	1		1548	159	.02	.00	.02	0.
1		0348	39	.01	.01	.00	0.	1		1554	160	.02	.00	.02	0.
1		0354	40	.01	.01	.00	0.	1		1600	161	.02	.00	.02	0.
1		0400	41	.01	.01	.00	0.	1		1606	162	.02	.00	.02	0.
1		0406	42	.02	.02	.00	0.	1		1612	163	.02	.00	.02	0.
1		0412	43	.01	.01	.00	0.	1		1618	164	.02	.00	.02	0.
1		0418	44	.01	.01	.00	0.	1		1624	165	.02	.00	.02	0.
1		0424	45	.02	.02	.00	0.	1		1630	166	.02	.00	.01	0.
1		0430	46	.01	.01	.00	0.	1		1636	167	.02	.00	.02	0.
1		0436	47	.01	.01	.00	0.	1		1642	168	.02	.00	.02	0.
1		0442	48	.02	.02	.00	0.	1		1648	169	.02	.00	.01	0.
1		0448	49	.01	.01	.00	0.	1		1654	170	.02	.00	.01	0.
1		0454	50	.01	.01	.00	0.	1		1700	171	.01	.00	.01	0.
1		0500	51	.02	.02	.00	0.	1		1706	172	.02	.00	.01	0.
1		0506	52	.01	.01	.00	0.	1		1712	173	.02	.00	.01	0.
1		0512	53	.02	.02	.00	0.	1		1718	174	.02	.00	.01	0.
1		0518	54	.01	.01	.00	0.	1		1724	175	.02	.00	.01	0.
1		0524	55	.02	.02	.00	0.	1		1730	176	.01	.00	.01	0.
1		0530	56	.01	.01	.00	0.	1		1736	177	.02	.00	.01	0.
1		0536	57	.02	.02	.00	0.	1		1742	178	.02	.00	.01	0.
1		0542	58	.01	.01	.00	0.	1		1748	179	.01	.00	.01	0.
1		0548	59	.02	.02	.00	0.	1		1754	180	.02	.00	.01	0.
1		0554	60	.01	.01	.00	0.	1		1800	181	.02	.00	.01	0.
1		0600	61	.02	.02	.00	0.	1		1806	182	.01	.00	.01	0.
1		0606	62	.02	.02	.00	0.	1		1812	183	.02	.00	.01	0.
1		0612	63	.01	.01	.00	0.	1		1818	184	.01	.00	.01	0.
1		0618	64	.02	.02	.00	0.	1		1824	185	.02	.00	.01	0.
1		0624	65	.02	.02	.00	0.	1		1830	186	.01	.00	.01	0.
1		0630	66	.01	.01	.00	0.	1		1836	187	.02	.00	.01	0.
1		0636	67	.02	.02	.00	0.	1		1842	188	.01	.00	.01	0.
1		0642	68	.02	.02	.00	0.	1		1848	189	.02	.00	.01	0.
1		0648	69	.01	.01	.00	0.	1		1854	190	.01	.00	.01	0.
1		0654	70	.02	.02	.00	0.	1		1900	191	.02	.00	.01	0.
1		0700	71	.02	.02	.00	0.	1		1906	192	.01	.00	.01	0.
1		0706	72	.02	.02	.00	0.	1		1912	193	.01	.00	.01	0.
1		0712	73	.02	.02	.00	0.	1		1918	194	.02	.00	.01	0.
1		0718	74	.02	.02	.00	0.	1		1924	195	.01	.00	.01	0.
1		0724	75	.02	.02	.00	0.	1		1930	196	.02	.00	.01	0.
1		0730	76	.02	.02	.00	0.	1		1936	197	.01	.00	.01	0.
1		0736	77	.02	.02	.00	0.	1		1942	198	.01	.00	.01	0.
1		0742	78	.02	.02	.00	0.	1		1948	199	.02	.00	.01	0.
1		0748	79	.02	.02	.00	0.	1		1954	200	.01	.00	.01	0.
1		0754	80	.02	.02	.00	0.	1		2000	201	.01	.00	.01	0.
1		0800	81	.02	.02	.00	0.	1		2006	202	.01	.00	.01	0.
1		0806	82	.02	.02	.00	0.	1		2012	203	.02	.00	.01	0.
1		0812	83	.02	.02	.00	0.	1		2018	204	.01	.00	.01	0.
1		0818	84	.02	.02	.00	0.	1		2024	205	.01	.00	.01	0.
1		0824	85	.02	.02	.00	0.	1		2030	206	.01	.00	.01	0.
1		0830	86	.02	.02	.00	0.	1		2036	207	.02	.00	.01	0.
1		0836	87	.03	.03	.00	0.	1		2042	208	.01	.00	.01	0.
1		0842	88	.02	.02	.00	0.	1		2048	209	.01	.00	.01	0.
1		0848	89	.02	.02	.00	0.	1		2054	210	.01	.00	.01	0.
1		0854	90	.03	.03	.00	0.	1		2100	211	.01	.00	.01	0.
1		0900	91	.03	.03	.00	0.	1		2106	212	.02	.00	.01	0.
1		0906	92	.02	.02	.00	0.	1		2112	213	.01	.00	.01	0.
1		0912	93	.03	.03	.01	0.	1		2118	214	.01	.00	.01	0.
1		0918	94	.03	.03	.01	0.	1		2124	215	.01	.00	.01	0.

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1	0924	95	.03	.03	.01	0.	*	1	2130	216	.01	.00	.01	0.
1	0930	96	.03	.03	.01	0.	*	1	2136	217	.01	.00	.01	0.
1	0936	97	.03	.03	.01	0.	*	1	2142	218	.01	.00	.01	0.
1	0942	98	.04	.03	.01	0.	*	1	2148	219	.01	.00	.01	0.
1	0948	99	.03	.02	.01	0.	*	1	2154	220	.01	.00	.01	0.
1	0954	100	.04	.03	.01	0.	*	1	2200	221	.02	.00	.01	0.
1	1000	101	.03	.02	.01	0.	*	1	2206	222	.01	.00	.01	0.
1	1006	102	.04	.03	.01	0.	*	1	2212	223	.01	.00	.01	0.
1	1012	103	.04	.03	.01	0.	*	1	2218	224	.01	.00	.01	0.
1	1018	104	.05	.03	.01	0.	*	1	2224	225	.01	.00	.01	0.
1	1024	105	.04	.03	.01	0.	*	1	2230	226	.01	.00	.01	0.
1	1030	106	.05	.03	.02	0.	*	1	2236	227	.01	.00	.01	0.
1	1036	107	.05	.03	.02	0.	*	1	2242	228	.01	.00	.01	0.
1	1042	108	.05	.03	.02	0.	*	1	2248	229	.01	.00	.01	0.
1	1048	109	.06	.04	.02	0.	*	1	2254	230	.01	.00	.01	0.
1	1054	110	.06	.03	.02	0.	*	1	2300	231	.01	.00	.01	0.
1	1100	111	.06	.04	.03	0.	*	1	2306	232	.01	.00	.01	0.
1	1106	112	.06	.04	.03	0.	*	1	2312	233	.01	.00	.01	0.
1	1112	113	.06	.04	.03	0.	*	1	2318	234	.01	.00	.01	0.
1	1118	114	.08	.05	.03	1.	*	1	2324	235	.01	.00	.01	0.
1	1124	115	.09	.05	.04	1.	*	1	2330	236	.01	.00	.01	0.
1	1130	116	.09	.05	.04	1.	*	1	2336	237	.01	.00	.01	0.
1	1136	117	.11	.06	.05	1.	*	1	2342	238	.01	.00	.01	0.
1	1142	118	.13	.06	.07	1.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.28	.13	.15	2.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.42	.17	.25	4.	*	2	0000	241	.01	.00	.01	0.
1	1200	121	.67	.23	.44	7.	*							0.

TOTAL RAINFALL = 8.00, TOTAL LOSS = 3.42, TOTAL EXCESS = 4.58

PEAK FLOW (CFS)	TIME (HR)	(CFS)	6-HR (INCHES) (AC-FT)	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.00-HR
8.	12.10		1. 3.731	0. 4.574	0. 4.574	0. 4.574
			1. 1.	1. 1.	1. 1.	1. 1.

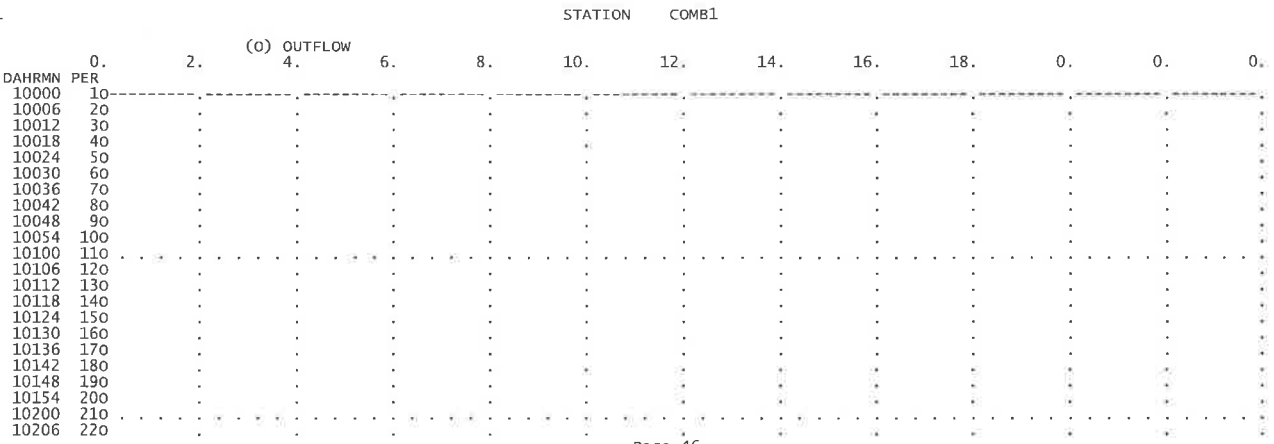
CUMULATIVE AREA = .00 SQ MI

DAHRMN PER	STATION SUB B2								(L) PRECIP.	(X) EXCESS
	0.	1.	2.	3.	4.	5.	6.	7.			8.
10000	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10006	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10012	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10018	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10024	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10030	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10036	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10042	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10048	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10054	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10100	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10106	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10112	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10118	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10124	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10130	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10136	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10142	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10148	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10154	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10200	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10212	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10218	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10224	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10230	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10236	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10242	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10248	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10254	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10300	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10306	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10312	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10318	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10324	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10330	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10336	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10342	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10348	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10354	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10406	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10412	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10418	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10424	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10430	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10436	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10442	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10448	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10454	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10506	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10512	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10518	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10524	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10530	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10536	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

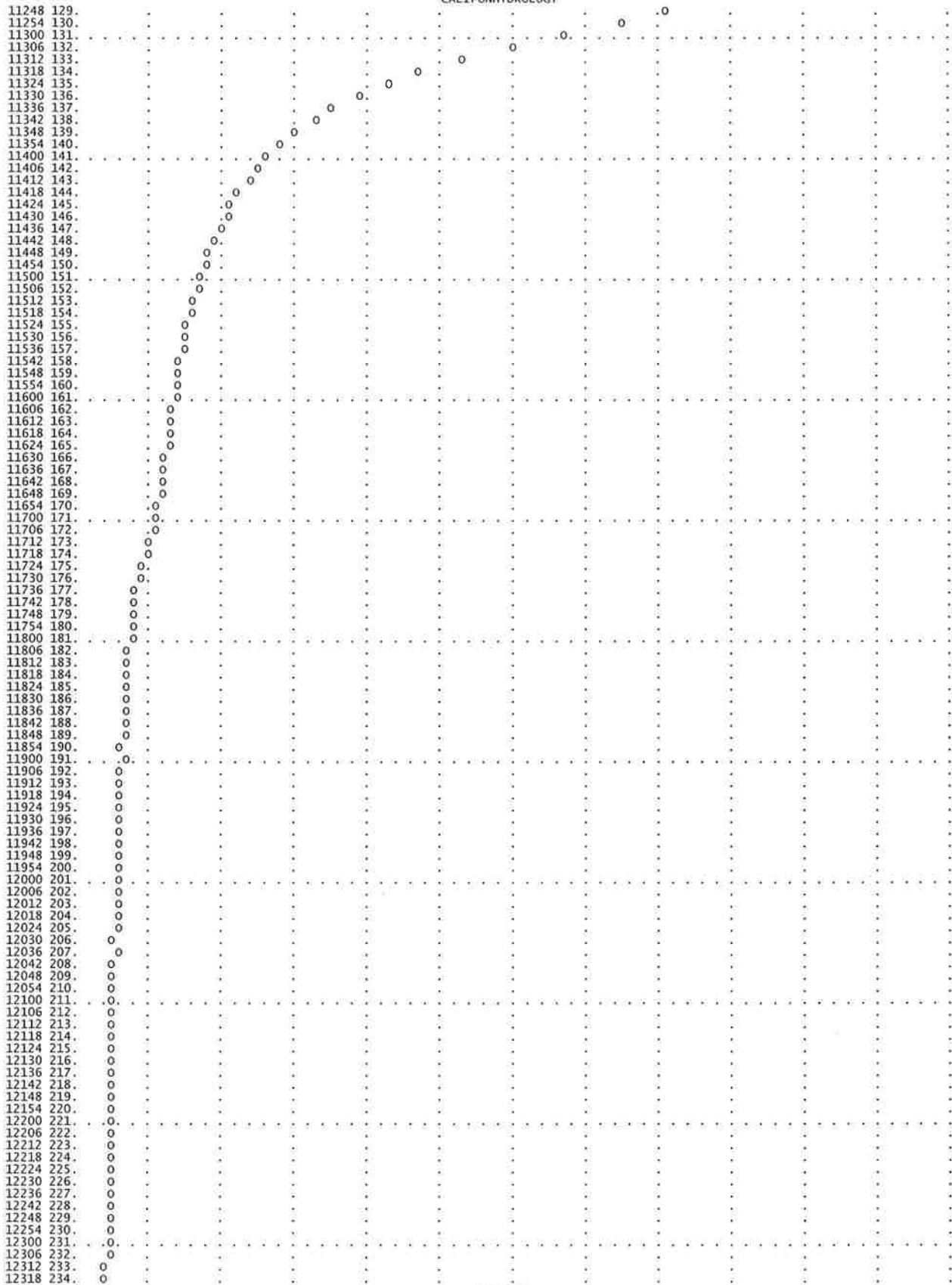
CALIFONHYDROLOGY

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	
1		0000	1	0.	*	1		0606	62	0.	*	1		1212	123	7.	*	1		1818	184	1.	*	
1		0006	2	0.	*	1		0612	63	0.	*	1		1218	124	10.	*	1		1824	185	1.	*	
1		0012	3	0.	*	1		0618	64	0.	*	1		1224	125	12.	*	1		1830	186	1.	*	
1		0018	4	0.	*	1		0624	65	0.	*	1		1230	126	15.	*	1		1836	187	1.	*	
1		0024	5	0.	*	1		0630	66	0.	*	1		1236	127	16.	*	1		1842	188	1.	*	
1		0030	6	0.	*	1		0636	67	0.	*	1		1242	128	17.	*	1		1848	189	1.	*	
1		0036	7	0.	*	1		0642	68	0.	*	1		1248	129	16.	*	1		1854	190	1.	*	
1		0042	8	0.	*	1		0648	69	0.	*	1		1254	130	15.	*	1		1900	191	1.	*	
1		0048	9	0.	*	1		0654	70	0.	*	1		1300	131	13.	*	1		1906	192	1.	*	
1		0054	10	0.	*	1		0700	71	0.	*	1		1306	132	12.	*	1		1912	193	1.	*	
1		0100	11	0.	*	1		0706	72	0.	*	1		1312	133	11.	*	1		1918	194	1.	*	
1		0106	12	0.	*	1		0712	73	0.	*	1		1318	134	9.	*	1		1924	195	1.	*	
1		0112	13	0.	*	1		0718	74	0.	*	1		1324	135	9.	*	1		1930	196	1.	*	
1		0118	14	0.	*	1		0724	75	0.	*	1		1330	136	8.	*	1		1936	197	1.	*	
1		0124	15	0.	*	1		0730	76	0.	*	1		1336	137	7.	*	1		1942	198	1.	*	
1		0130	16	0.	*	1		0736	77	0.	*	1		1342	138	7.	*	1		1948	199	1.	*	
1		0136	17	0.	*	1		0742	78	0.	*	1		1348	139	6.	*	1		1954	200	1.	*	
1		0142	18	0.	*	1		0748	79	0.	*	1		1354	140	6.	*	1		2000	201	1.	*	
1		0148	19	0.	*	1		0754	80	0.	*	1		1400	141	5.	*	1		2006	202	1.	*	
1		0154	20	0.	*	1		0800	81	0.	*	1		1406	142	5.	*	1		2012	203	1.	*	
1		0200	21	0.	*	1		0806	82	0.	*	1		1412	143	5.	*	1		2018	204	1.	*	
1		0206	22	0.	*	1		0812	83	0.	*	1		1418	144	4.	*	1		2024	205	1.	*	
1		0212	23	0.	*	1		0818	84	0.	*	1		1424	145	4.	*	1		2030	206	1.	*	
1		0218	24	0.	*	1		0824	85	0.	*	1		1430	146	4.	*	1		2036	207	1.	*	
1		0224	25	0.	*	1		0830	86	0.	*	1		1436	147	4.	*	1		2042	208	1.	*	
1		0230	26	0.	*	1		0836	87	0.	*	1		1442	148	4.	*	1		2048	209	1.	*	
1		0236	27	0.	*	1		0842	88	0.	*	1		1448	149	4.	*	1		2054	210	1.	*	
1		0242	28	0.	*	1		0848	89	0.	*	1		1454	150	4.	*	1		2100	211	1.	*	
1		0248	29	0.	*	1		0854	90	0.	*	1		1500	151	3.	*	1		2106	212	1.	*	
1		0254	30	0.	*	1		0900	91	0.	*	1		1506	152	3.	*	1		2112	213	1.	*	
1		0300	31	0.	*	1		0906	92	0.	*	1		1512	153	3.	*	1		2118	214	1.	*	
1		0306	32	0.	*	1		0912	93	0.	*	1		1518	154	3.	*	1		2124	215	1.	*	
1		0312	33	0.	*	1		0918	94	0.	*	1		1524	155	3.	*	1		2130	216	1.	*	
1		0318	34	0.	*	1		0924	95	0.	*	1		1530	156	3.	*	1		2136	217	1.	*	
1		0324	35	0.	*	1		0930	96	0.	*	1		1536	157	3.	*	1		2142	218	1.	*	
1		0330	36	0.	*	1		0936	97	0.	*	1		1542	158	3.	*	1		2148	219	1.	*	
1		0336	37	0.	*	1		0942	98	0.	*	1		1548	159	3.	*	1		2154	220	1.	*	
1		0342	38	0.	*	1		0948	99	0.	*	1		1554	160	3.	*	1		2200	221	1.	*	
1		0348	39	0.	*	1		0954	100	0.	*	1		1600	161	3.	*	1		2206	222	1.	*	
1		0354	40	0.	*	1		1000	101	0.	*	1		1606	162	3.	*	1		2212	223	1.	*	
1		0400	41	0.	*	1		1006	102	0.	*	1		1612	163	3.	*	1		2218	224	1.	*	
1		0406	42	0.	*	1		1012	103	0.	*	1		1618	164	3.	*	1		2224	225	1.	*	
1		0412	43	0.	*	1		1018	104	0.	*	1		1624	165	3.	*	1		2230	226	1.	*	
1		0418	44	0.	*	1		1024	105	0.	*	1		1630	166	2.	*	1		2236	227	1.	*	
1		0424	45	0.	*	1		1030	106	0.	*	1		1636	167	2.	*	1		2242	228	1.	*	
1		0430	46	0.	*	1		1036	107	0.	*	1		1642	168	2.	*	1		2248	229	1.	*	
1		0436	47	0.	*	1		1042	108	0.	*	1		1648	169	2.	*	1		2254	230	1.	*	
1		0442	48	0.	*	1		1048	109	0.	*	1		1654	170	2.	*	1		2300	231	1.	*	
1		0448	49	0.	*	1		1054	110	0.	*	1		1700	171	2.	*	1		2306	232	1.	*	
1		0454	50	0.	*	1		1100	111	0.	*	1		1706	172	2.	*	1		2312	233	1.	*	
1		0500	51	0.	*	1		1106	112	0.	*	1		1712	173	2.	*	1		2318	234	1.	*	
1		0506	52	0.	*	1		1112	113	0.	*	1		1718	174	2.	*	1		2324	235	1.	*	
1		0512	53	0.	*	1		1118	114	0.	*	1		1724	175	2.	*	1		2330	236	1.	*	
1		0518	54	0.	*	1		1124	115	0.	*	1		1730	176	2.	*	1		2336	237	1.	*	
1		0524	55	0.	*	1		1130	116	0.	*	1		1736	177	2.	*	1		2342	238	1.	*	
1		0530	56	0.	*	1		1136	117	0.	*	1		1742	178	2.	*	1		2348	239	1.	*	
1		0536	57	0.	*	1		1142	118	0.	*	1		1748	179	2.	*	1		2354	240	1.	*	
1		0542	58	0.	*	1		1148	119	1.	*	1		1754	180	2.	*	1		0000	241	1.	*	
1		0548	59	0.	*	1		1154	120	2.	*	1		1800	181	2.	*	1						
1		0554	60	0.	*	1		1200	121	4.	*	1		1806	182	1.	*	1						
1		0600	61	0.	*	1		1206	122	6.	*	1		1812	183	1.	*	1						

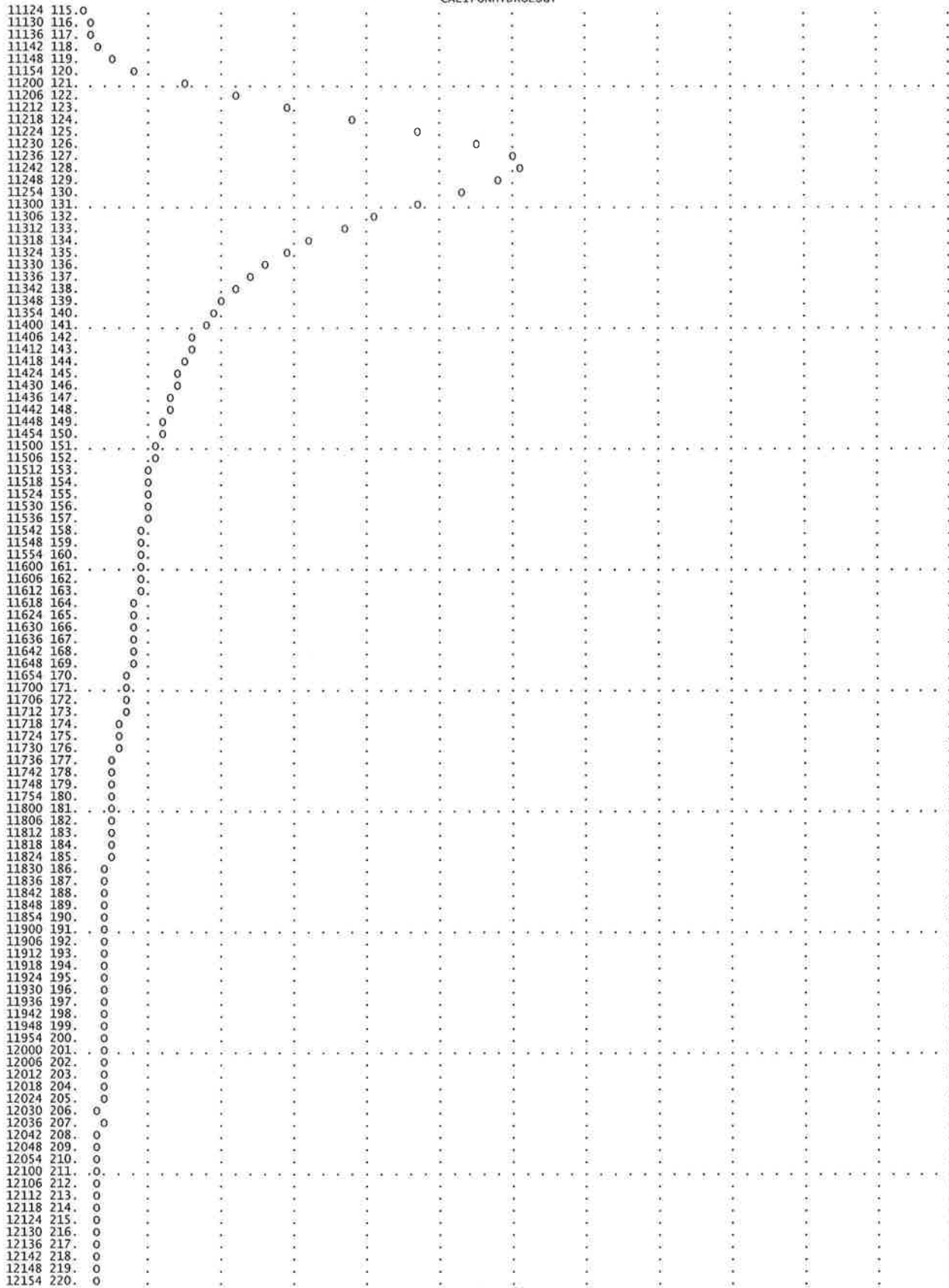
PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
(CFS)	(HR)	(CFS)	24-HR	72-HR
17.	12.70	.946	1.153	1.153
		3.	3.	3.
CUMULATIVE AREA =		.05 SQ MI		



CALIFONHYDROLOGY



CALIFONHYDROLOGY

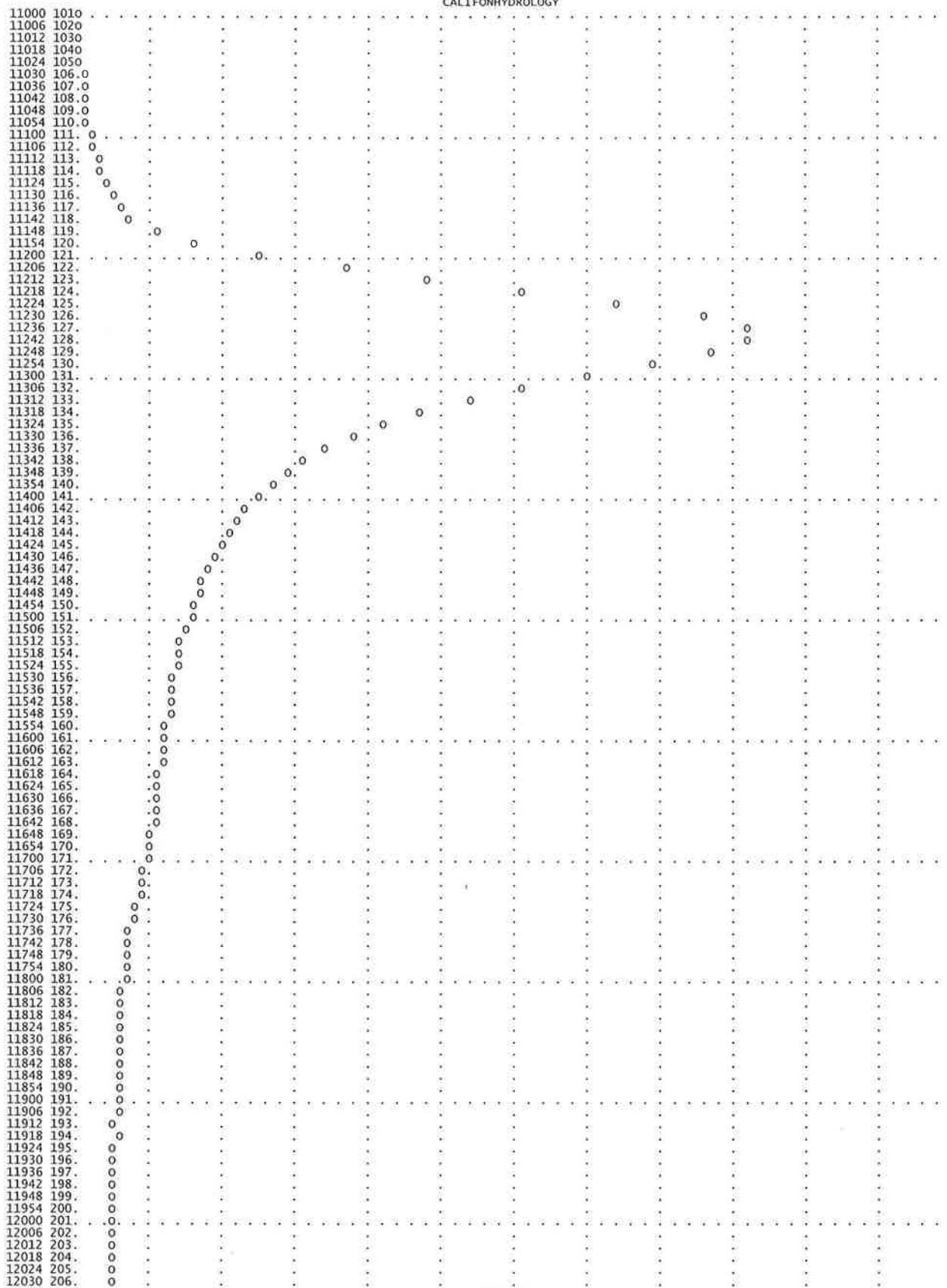


CALIFONHYDROLOGY

1

	0.	4.	(0) OUTFLOW 8.	12.	16.	20.	24.	28.	32.	36.	40.	0.	0.
DAHRMN PER													
10000	10												
10006	20												
10012	30												
10018	40												
10024	50												
10030	60												
10036	70												
10042	80												
10048	90												
10054	100												
10100	110												
10106	120												
10112	130												
10118	140												
10124	150												
10130	160												
10136	170												
10142	180												
10148	190												
10154	200												
10200	210												
10206	220												
10212	230												
10218	240												
10224	250												
10230	260												
10236	270												
10242	280												
10248	290												
10254	300												
10300	310												
10306	320												
10312	330												
10318	340												
10324	350												
10330	360												
10336	370												
10342	380												
10348	390												
10354	400												
10400	410												
10406	420												
10412	430												
10418	440												
10424	450												
10430	460												
10436	470												
10442	480												
10448	490												
10454	500												
10500	510												
10506	520												
10512	530												
10518	540												
10524	550												
10530	560												
10536	570												
10542	580												
10548	590												
10554	600												
10600	610												
10606	620												
10612	630												
10618	640												
10624	650												
10630	660												
10636	670												
10642	680												
10648	690												
10654	700												
10700	710												
10706	720												
10712	730												
10718	740												
10724	750												
10730	760												
10736	770												
10742	780												
10748	790												
10754	800												
10800	810												
10806	820												
10812	830												
10818	840												
10824	850												
10830	860												
10836	870												
10842	880												
10848	890												
10854	900												
10900	910												
10906	920												
10912	930												
10918	940												
10924	950												
10930	960												
10936	970												
10942	980												
10948	990												
10954	1000												

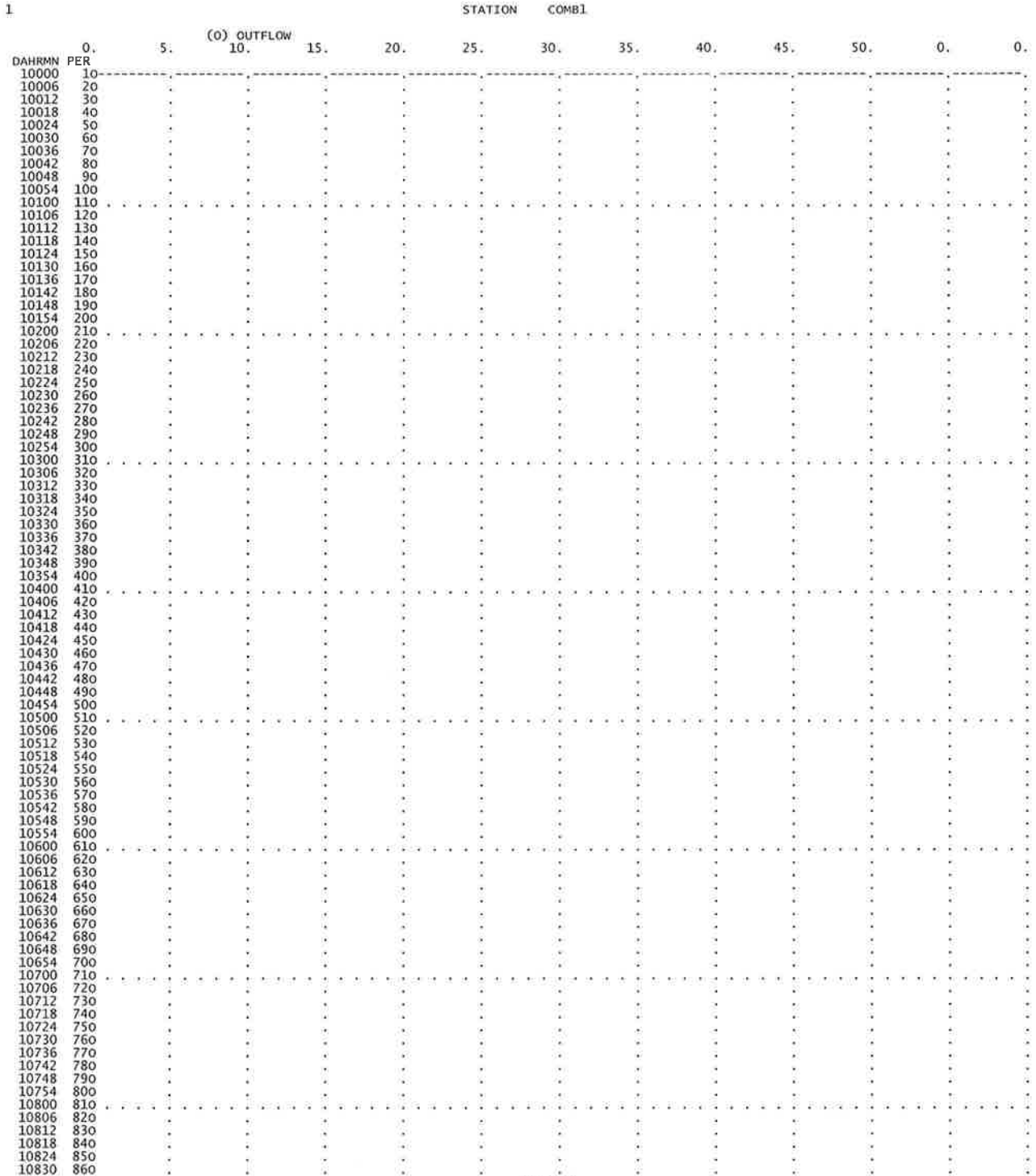
CALIFONHYDROLOGY



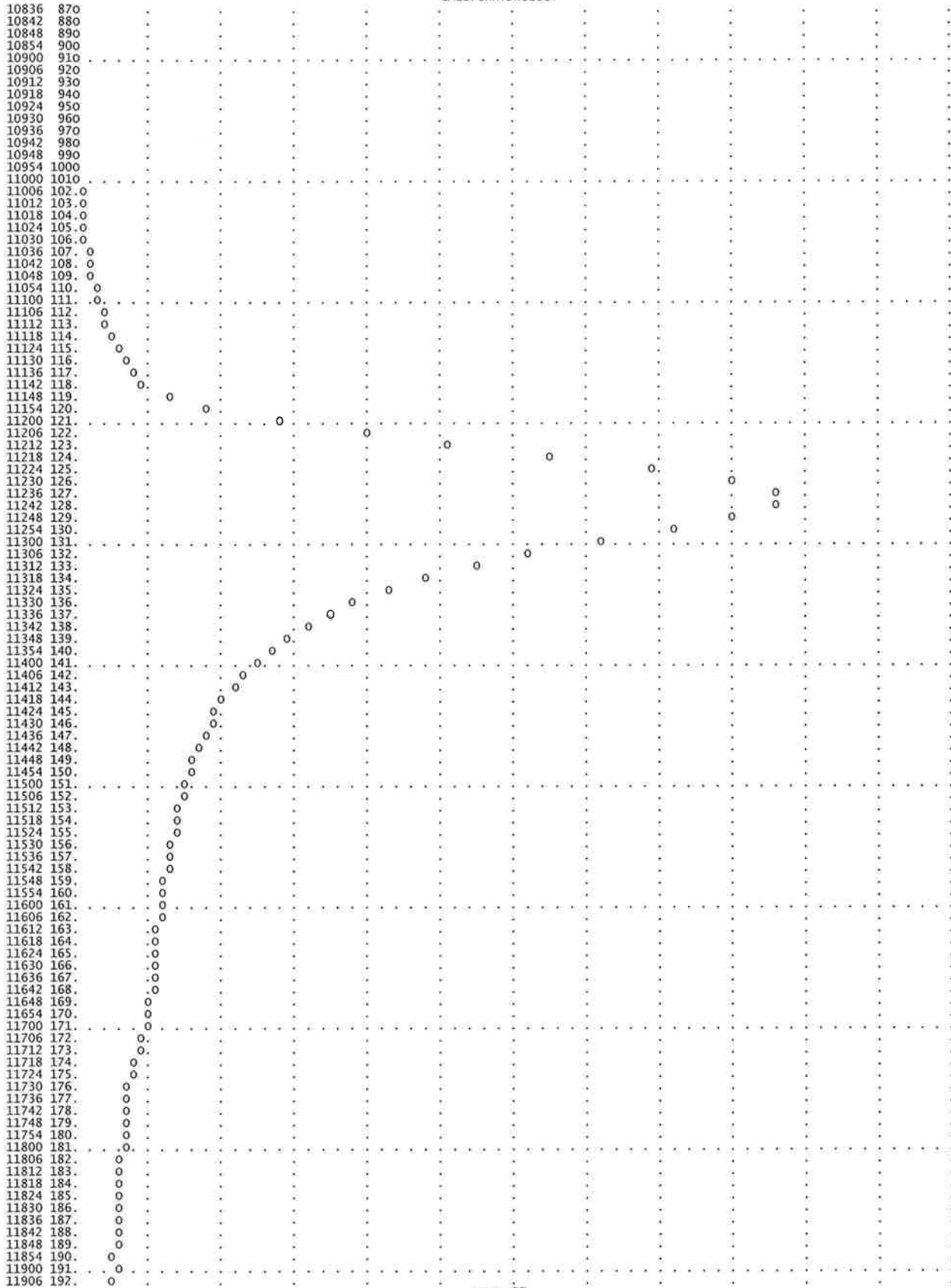
CALIFONHYDROLOGY

1 0554 60 0. * 1 1200 121 14. * 1 1806 182 3. *
 1 0600 61 0. * 1 1206 122 20. * 1 1812 183 3. *

PEAK FLOW TIME MAXIMUM AVERAGE FLOW
 + (CFS) (HR) 6-HR 24-HR 72-HR 24.00-HR
 + 48. 12.60 (CFS) 14. 4. 4. 4.
 (INCHES) 2.487 3.006 3.006 3.006
 (AC-FT) 7. 8. 8. 8.
 CUMULATIVE AREA = .05 SQ MI



CALIFONHYDROLOGY



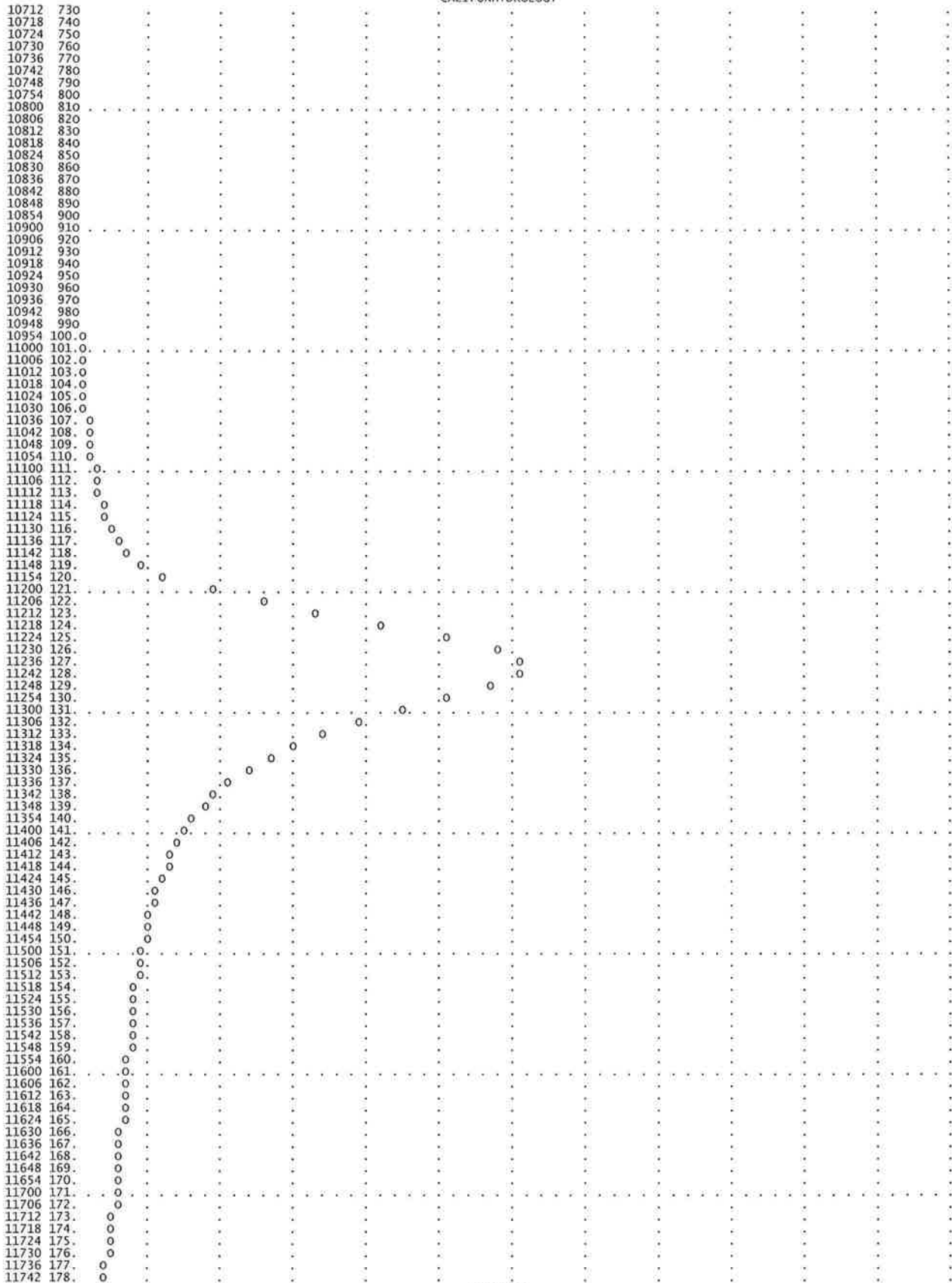
CALIFONHYDROLOGY

1	0430	46	0.	*	1	1036	107	2.	*	1	1642	168	6.	*	1	2248	229	2.
1	0436	47	0.	*	1	1042	108	2.	*	1	1648	169	6.	*	1	2254	230	2.
1	0442	48	0.	*	1	1048	109	2.	*	1	1654	170	6.	*	1	2300	231	2.
1	0448	49	0.	*	1	1054	110	2.	*	1	1700	171	6.	*	1	2306	232	2.
1	0454	50	0.	*	1	1100	111	3.	*	1	1706	172	6.	*	1	2312	233	2.
1	0500	51	0.	*	1	1106	112	3.	*	1	1712	173	5.	*	1	2318	234	2.
1	0506	52	0.	*	1	1112	113	3.	*	1	1718	174	5.	*	1	2324	235	2.
1	0512	53	0.	*	1	1118	114	4.	*	1	1724	175	5.	*	1	2330	236	2.
1	0518	54	0.	*	1	1124	115	4.	*	1	1730	176	5.	*	1	2336	237	2.
1	0524	55	0.	*	1	1130	116	5.	*	1	1736	177	4.	*	1	2342	238	2.
1	0530	56	0.	*	1	1136	117	6.	*	1	1742	178	4.	*	1	2348	239	2.
1	0536	57	0.	*	1	1142	118	7.	*	1	1748	179	4.	*	1	2354	240	2.
1	0542	58	0.	*	1	1148	119	9.	*	1	1754	180	4.	*	2	0000	241	2.
1	0548	59	0.	*	1	1154	120	12.	*	1	1800	181	4.	*				
1	0554	60	0.	*	1	1200	121	19.	*	1	1806	182	4.	*				
1	0600	61	0.	*	1	1206	122	26.	*	1	1812	183	4.	*				

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR (INCHES)	AVERAGE FLOW 72-HR (AC-FT)	24.00-HR (CFS)
61.	12.60	18.	3.121	5. 11.	5. 11.
CUMULATIVE AREA =			.05 SQ MI		

DAHRMN PER	(O) OUTFLOW												
	0.	10.	20.	30.	40.	50.	60.	70.	0.	0.	0.	0.	0.
10000	10												
10006	20												
10012	30												
10018	40												
10024	50												
10030	60												
10036	70												
10042	80												
10048	90												
10054	100												
10100	110												
10106	120												
10112	130												
10118	140												
10124	150												
10130	160												
10136	170												
10142	180												
10148	190												
10154	200												
10200	210												
10206	220												
10212	230												
10218	240												
10224	250												
10230	260												
10236	270												
10242	280												
10248	290												
10254	300												
10300	310												
10306	320												
10312	330												
10318	340												
10324	350												
10330	360												
10336	370												
10342	380												
10348	390												
10354	400												
10400	410												
10406	420												
10412	430												
10418	440												
10424	450												
10430	460												
10436	470												
10442	480												
10448	490												
10454	500												
10500	510												
10506	520												
10512	530												
10518	540												
10524	550												
10530	560												
10536	570												
10542	580												
10548	590												
10554	600												
10600	610												
10606	620												
10612	630												
10618	640												
10624	650												
10630	660												
10636	670												
10642	680												
10648	690												
10654	700												
10700	710												
10706	720												

CALIFONHYDROLOGY



CALIFONHYDROLOGY

1	0724	75	.02	.01	.00	0.	1	1930	196	.02	.00	.01	0.
1	0730	76	.02	.02	.00	0.	1	1936	197	.01	.00	.01	0.
1	0736	77	.02	.02	.00	0.	1	1942	198	.01	.00	.01	0.
1	0742	78	.02	.02	.00	0.	1	1948	199	.02	.00	.01	0.
1	0748	79	.02	.02	.00	0.	1	1954	200	.01	.00	.01	0.
1	0754	80	.02	.02	.00	0.	1	2000	201	.01	.00	.01	0.
1	0800	81	.02	.02	.00	0.	1	2006	202	.01	.00	.01	0.
1	0806	82	.02	.02	.00	0.	1	2012	203	.02	.00	.01	0.
1	0812	83	.02	.02	.00	0.	1	2018	204	.01	.00	.01	0.
1	0818	84	.02	.02	.01	0.	1	2024	205	.01	.00	.01	0.
1	0824	85	.02	.02	.01	0.	1	2030	206	.01	.00	.01	0.
1	0830	86	.02	.02	.01	0.	1	2036	207	.02	.00	.01	0.
1	0836	87	.03	.02	.01	0.	1	2042	208	.01	.00	.01	0.
1	0842	88	.02	.02	.01	0.	1	2048	209	.01	.00	.01	0.
1	0848	89	.02	.02	.01	0.	1	2054	210	.01	.00	.01	0.
1	0854	90	.03	.02	.01	0.	1	2100	211	.01	.00	.01	0.
1	0900	91	.03	.02	.01	0.	1	2106	212	.02	.00	.01	0.
1	0906	92	.02	.02	.01	0.	1	2112	213	.01	.00	.01	0.
1	0912	93	.03	.02	.01	0.	1	2118	214	.01	.00	.01	0.
1	0918	94	.03	.02	.01	0.	1	2124	215	.01	.00	.01	0.
1	0924	95	.03	.02	.01	0.	1	2130	216	.01	.00	.01	0.
1	0930	96	.03	.02	.01	0.	1	2136	217	.01	.00	.01	0.
1	0936	97	.03	.02	.01	0.	1	2142	218	.01	.00	.01	0.
1	0942	98	.04	.03	.01	0.	1	2148	219	.01	.00	.01	0.
1	0948	99	.03	.02	.01	0.	1	2154	220	.01	.00	.01	0.
1	0954	100	.04	.02	.02	0.	1	2200	221	.02	.00	.01	0.
1	1000	101	.03	.02	.01	0.	1	2206	222	.01	.00	.01	0.
1	1006	102	.04	.02	.02	0.	1	2212	223	.01	.00	.01	0.
1	1012	103	.04	.02	.02	0.	1	2218	224	.01	.00	.01	0.
1	1018	104	.05	.03	.02	0.	1	2224	225	.01	.00	.01	0.
1	1024	105	.04	.02	.02	0.	1	2230	226	.01	.00	.01	0.
1	1030	106	.05	.03	.02	0.	1	2236	227	.01	.00	.01	0.
1	1036	107	.05	.02	.02	0.	1	2242	228	.01	.00	.01	0.
1	1042	108	.05	.02	.02	0.	1	2248	229	.01	.00	.01	0.
1	1048	109	.06	.03	.03	0.	1	2254	230	.01	.00	.01	0.
1	1054	110	.06	.03	.03	0.	1	2300	231	.01	.00	.01	0.
1	1100	111	.06	.03	.03	0.	1	2306	232	.01	.00	.01	0.
1	1106	112	.06	.03	.03	0.	1	2312	233	.01	.00	.01	0.
1	1112	113	.06	.03	.04	0.	1	2318	234	.01	.00	.01	0.
1	1118	114	.08	.03	.05	1.	1	2324	235	.01	.00	.01	0.
1	1124	115	.09	.04	.05	1.	1	2330	236	.01	.00	.01	0.
1	1130	116	.09	.04	.05	1.	1	2336	237	.01	.00	.01	0.
1	1136	117	.11	.04	.07	1.	1	2342	238	.01	.00	.01	0.
1	1142	118	.13	.05	.08	1.	1	2348	239	.00	.00	.00	0.
1	1148	119	.28	.09	.19	1.	1	2354	240	.00	.00	.00	0.
1	1154	120	.42	.12	.30	2.	2	0000	241	.01	.00	.01	0.
1	1200	121	.67	.16	.51	4.							

TOTAL RAINFALL = 8.00, TOTAL LOSS = 2.73, TOTAL EXCESS = 5.27

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	24-HR (CFS)	72-HR (CFS)	24.00-HR (CFS)
5.27	12.10	1.240	0.267	0.267	0.267
		(INCHES)			
		(AC-FT)			

CUMULATIVE AREA = .00 SQ MI

HYDROGRAPH AT STATION SUB C
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	0000	1	.00	.00	.00	0.	0.	1	1206	122	.36	.14	.22	2.	
1	0006	2	.00	.00	.00	0.	0.	1	1212	123	.23	.08	.15	2.	
1	0012	3	.00	.00	.00	0.	0.	1	1218	124	.15	.05	.10	2.	
1	0018	4	.00	.00	.00	0.	0.	1	1224	125	.07	.02	.05	1.	
1	0024	5	.00	.00	.00	0.	0.	1	1230	126	.06	.02	.04	1.	
1	0030	6	.00	.00	.00	0.	0.	1	1236	127	.05	.02	.04	0.	
1	0036	7	.00	.00	.00	0.	0.	1	1242	128	.05	.01	.03	0.	
1	0042	8	.00	.00	.00	0.	0.	1	1248	129	.04	.01	.03	0.	
1	0048	9	.00	.00	.00	0.	0.	1	1254	130	.04	.01	.03	0.	
1	0054	10	.00	.00	.00	0.	0.	1	1300	131	.03	.01	.02	0.	
1	0100	11	.00	.00	.00	0.	0.	1	1306	132	.03	.01	.02	0.	
1	0106	12	.00	.00	.00	0.	0.	1	1312	133	.03	.01	.02	0.	
1	0112	13	.00	.00	.00	0.	0.	1	1318	134	.03	.01	.02	0.	
1	0118	14	.00	.00	.00	0.	0.	1	1324	135	.03	.01	.02	0.	
1	0124	15	.00	.00	.00	0.	0.	1	1330	136	.03	.01	.02	0.	
1	0130	16	.00	.00	.00	0.	0.	1	1336	137	.02	.01	.02	0.	
1	0136	17	.00	.00	.00	0.	0.	1	1342	138	.03	.01	.02	0.	
1	0142	18	.00	.00	.00	0.	0.	1	1348	139	.02	.01	.02	0.	
1	0148	19	.00	.00	.00	0.	0.	1	1354	140	.02	.01	.02	0.	
1	0154	20	.00	.00	.00	0.	0.	1	1400	141	.02	.01	.02	0.	
1	0200	21	.00	.00	.00	0.	0.	1	1406	142	.02	.01	.02	0.	
1	0206	22	.00	.00	.00	0.	0.	1	1412	143	.02	.01	.02	0.	
1	0212	23	.00	.00	.00	0.	0.	1	1418	144	.02	.00	.01	0.	
1	0218	24	.00	.00	.00	0.	0.	1	1424	145	.02	.00	.01	0.	
1	0224	25	.00	.00	.00	0.	0.	1	1430	146	.02	.01	.02	0.	
1	0230	26	.01	.01	.00	0.	0.	1	1436	147	.02	.00	.01	0.	
1	0236	27	.00	.00	.00	0.	0.	1	1442	148	.02	.00	.01	0.	
1	0242	28	.00	.00	.00	0.	0.	1	1448	149	.01	.00	.01	0.	
1	0248	29	.00	.00	.00	0.	0.	1	1454	150	.02	.00	.01	0.	
1	0254	30	.00	.00	.00	0.	0.	1	1500	151	.02	.00	.01	0.	
1	0300	31	.00	.00	.00	0.	0.	1	1506	152	.02	.00	.01	0.	
1	0306	32	.00	.00	.00	0.	0.	1	1512	153	.01	.00	.01	0.	
1	0312	33	.01	.01	.00	0.	0.	1	1518	154	.02	.00	.01	0.	
1	0318	34	.00	.00	.00	0.	0.	1	1524	155	.01	.00	.01	0.	

CALIFONHYDROLOGY														
1	0324	35	.00	.00	.00	0.	*	1	1530	156	.01	.00	.01	0.
1	0330	36	.00	.00	.00	0.	*	1	1536	157	.02	.00	.01	0.
1	0336	37	.00	.00	.00	0.	*	1	1542	158	.01	.00	.01	0.
1	0342	38	.01	.01	.00	0.	*	1	1548	159	.01	.00	.01	0.
1	0348	39	.00	.00	.00	0.	*	1	1554	160	.01	.00	.01	0.
1	0354	40	.00	.00	.00	0.	*	1	1600	161	.01	.00	.01	0.
1	0400	41	.00	.00	.00	0.	*	1	1606	162	.01	.00	.01	0.
1	0406	42	.01	.01	.00	0.	*	1	1612	163	.01	.00	.01	0.
1	0412	43	.00	.00	.00	0.	*	1	1618	164	.01	.00	.01	0.
1	0418	44	.00	.00	.00	0.	*	1	1624	165	.01	.00	.01	0.
1	0424	45	.01	.01	.00	0.	*	1	1630	166	.01	.00	.01	0.
1	0430	46	.00	.00	.00	0.	*	1	1636	167	.01	.00	.01	0.
1	0436	47	.00	.00	.00	0.	*	1	1642	168	.01	.00	.01	0.
1	0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	0.
1	0448	49	.00	.00	.00	0.	*	1	1654	170	.01	.00	.01	0.
1	0454	50	.00	.00	.00	0.	*	1	1700	171	.00	.00	.00	0.
1	0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	0.
1	0506	52	.00	.00	.00	0.	*	1	1712	173	.01	.00	.01	0.
1	0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	0.
1	0518	54	.00	.00	.00	0.	*	1	1724	175	.01	.00	.01	0.
1	0524	55	.01	.01	.00	0.	*	1	1730	176	.00	.00	.00	0.
1	0530	56	.00	.00	.00	0.	*	1	1736	177	.01	.00	.01	0.
1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	0.
1	0542	58	.00	.00	.00	0.	*	1	1748	179	.00	.00	.00	0.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	0.
1	0554	60	.00	.00	.00	0.	*	1	1800	181	.01	.00	.01	0.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.00	.00	.00	0.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	0.
1	0612	63	.00	.00	.00	0.	*	1	1818	184	.00	.00	.00	0.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	0.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.00	.00	.00	0.
1	0630	66	.00	.00	.00	0.	*	1	1836	187	.01	.00	.01	0.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.00	.00	.00	0.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	0.
1	0648	69	.00	.00	.00	0.	*	1	1854	190	.00	.00	.00	0.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	0.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.00	.00	.00	0.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.00	.00	.00	0.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	0.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.00	.00	.00	0.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	0.
1	0730	76	.01	.01	.00	0.	*	1	1936	197	.00	.00	.00	0.
1	0736	77	.01	.01	.00	0.	*	1	1942	198	.00	.00	.00	0.
1	0742	78	.01	.01	.00	0.	*	1	1948	199	.01	.00	.01	0.
1	0748	79	.01	.01	.00	0.	*	1	1954	200	.00	.00	.00	0.
1	0754	80	.01	.01	.00	0.	*	1	2000	201	.00	.00	.00	0.
1	0800	81	.01	.01	.00	0.	*	1	2006	202	.00	.00	.00	0.
1	0806	82	.01	.01	.00	0.	*	1	2012	203	.01	.00	.01	0.
1	0812	83	.01	.01	.00	0.	*	1	2018	204	.00	.00	.00	0.
1	0818	84	.01	.01	.00	0.	*	1	2024	205	.00	.00	.00	0.
1	0824	85	.01	.01	.00	0.	*	1	2030	206	.00	.00	.00	0.
1	0830	86	.01	.01	.00	0.	*	1	2036	207	.01	.00	.01	0.
1	0836	87	.02	.02	.00	0.	*	1	2042	208	.00	.00	.00	0.
1	0842	88	.01	.01	.00	0.	*	1	2048	209	.00	.00	.00	0.
1	0848	89	.01	.01	.00	0.	*	1	2054	210	.00	.00	.00	0.
1	0854	90	.02	.02	.00	0.	*	1	2100	211	.00	.00	.00	0.
1	0900	91	.02	.02	.00	0.	*	1	2106	212	.01	.00	.01	0.
1	0906	92	.01	.01	.00	0.	*	1	2112	213	.00	.00	.00	0.
1	0912	93	.02	.02	.00	0.	*	1	2118	214	.00	.00	.00	0.
1	0918	94	.02	.02	.00	0.	*	1	2124	215	.00	.00	.00	0.
1	0924	95	.02	.02	.00	0.	*	1	2130	216	.00	.00	.00	0.
1	0930	96	.02	.02	.00	0.	*	1	2136	217	.00	.00	.00	0.
1	0936	97	.02	.02	.00	0.	*	1	2142	218	.00	.00	.00	0.
1	0942	98	.02	.02	.00	0.	*	1	2148	219	.00	.00	.00	0.
1	0948	99	.02	.02	.00	0.	*	1	2154	220	.00	.00	.00	0.
1	0954	100	.02	.02	.00	0.	*	1	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.00	0.	*	1	2206	222	.00	.00	.00	0.
1	1006	102	.02	.02	.00	0.	*	1	2212	223	.00	.00	.00	0.
1	1012	103	.02	.02	.00	0.	*	1	2218	224	.00	.00	.00	0.
1	1018	104	.03	.02	.00	0.	*	1	2224	225	.00	.00	.00	0.
1	1024	105	.02	.02	.00	0.	*	1	2230	226	.00	.00	.00	0.
1	1030	106	.03	.02	.00	0.	*	1	2236	227	.00	.00	.00	0.
1	1036	107	.03	.02	.01	0.	*	1	2242	228	.00	.00	.00	0.
1	1042	108	.03	.02	.01	0.	*	1	2248	229	.00	.00	.00	0.
1	1048	109	.03	.02	.01	0.	*	1	2254	230	.00	.00	.00	0.
1	1054	110	.03	.02	.01	0.	*	1	2300	231	.00	.00	.00	0.
1	1100	111	.03	.03	.01	0.	*	1	2306	232	.00	.00	.00	0.
1	1106	112	.03	.03	.01	0.	*	1	2312	233	.00	.00	.00	0.
1	1112	113	.03	.02	.01	0.	*	1	2318	234	.00	.00	.00	0.
1	1118	114	.04	.03	.01	0.	*	1	2324	235	.00	.00	.00	0.
1	1124	115	.05	.03	.01	0.	*	1	2330	236	.00	.00	.00	0.
1	1130	116	.05	.03	.02	0.	*	1	2336	237	.00	.00	.00	0.
1	1136	117	.06	.04	.02	0.	*	1	2342	238	.00	.00	.00	0.
1	1142	118	.07	.04	.03	0.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.15	.09	.06	0.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.23	.12	.10	1.	*	2	0000	241	.00	.00	.00	0.
1	1200	121	.36	.17	.19	1.	*							

TOTAL RAINFALL = 4.30, TOTAL LOSS = 2.25, TOTAL EXCESS = 2.05

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	24-HR (CFS)	72-HR (CFS)	24.00-HR (CFS)
+	2.	12.10	0.	0.	0.
+			1.687	2.046	2.046
			(INCHES)		
			0.	0.	0.

CUMULATIVE AREA = .00 SQ MI

STATION	SUB C	(O) OUTFLOW										
1		.0	.4	.8	1.2	1.6	2.0	2.4	.0	.0	.0	.0

CALIFONHYDROLOGY

DAHRMN	PER	.0	.0	.0	.0	.0	.0	.0	.0	.4	.3	(L) PRECIP, .2	(X) EXCESS .1	.0
10000	10													
10006	20													
10012	30													
10018	40													
10024	50													
10030	60													
10036	70													
10042	80													
10048	90													
10054	100													
10100	110													
10106	120													
10112	130													
10118	140													
10124	150													
10130	160													
10136	170													
10142	180													
10148	190													
10154	200													
10200	210													
10206	220													
10212	230													
10218	240													
10224	250													
10230	260													
10236	270													
10242	280													
10248	290													
10254	300													
10300	310													
10306	320													
10312	330													
10318	340													
10324	350													
10330	360													
10336	370													
10342	380													
10348	390													
10354	400													
10400	410													
10406	420													
10412	430													
10418	440													
10424	450													
10430	460													
10436	470													
10442	480													
10448	490													
10454	500													
10500	510													
10506	520													
10512	530													
10518	540													
10524	550													
10530	560													
10536	570													
10542	580													
10548	590													
10554	600													
10600	610													
10606	620													
10612	630													
10618	640													
10624	650													
10630	660													
10636	670													
10642	680													
10648	690													
10654	700													
10700	710													
10706	720													
10712	730													
10718	740													
10724	750													
10730	760													
10736	770													
10742	780													
10748	790													
10754	800													
10800	810													
10806	820													
10812	830													
10818	840													
10824	850													
10830	860													
10836	870													
10842	880													
10848	890													
10854	900													
10900	910													
10906	920													
10912	930													
10918	940													
10924	950													
10930	960													
10936	970													
10942	980													
10948	990													
10954	100.0													
11000	101.0													
11006	102.0													
11012	103.0													

CALIFONHYDROLOGY

12054	210.0
12100	211.0
12106	212.0
12112	213.0
12118	214.0
12124	215.0
12130	216.0
12136	217.0
12142	218.0
12148	219.0
12154	220.0
12200	221.0
12206	222.0
12212	223.0
12218	224.0
12224	225.0
12230	226.0
12236	227.0
12242	228.0
12248	229.0
12254	230.0
12300	231.0
12306	232.0
12312	233.0
12318	234.0
12324	235.0
12330	236.0
12336	237.0
12342	238.0
12348	239.0
12354	240.0
20000	241.0

1

HYDROGRAPH AT STATION SUB C
PLAN 1, RATIO = .63

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.42	.14	.28	3.
1		0006	2	.01	.01	.00	0.	1		1212	123	.27	.08	.19	2.
1		0012	3	.01	.01	.00	0.	1		1218	124	.17	.05	.13	2.
1		0018	4	.00	.00	.00	0.	1		1224	125	.08	.02	.06	1.
1		0024	5	.01	.01	.00	0.	1		1230	126	.07	.02	.05	1.
1		0030	6	.00	.00	.00	0.	1		1236	127	.06	.02	.04	1.
1		0036	7	.01	.01	.00	0.	1		1242	128	.06	.01	.04	1.
1		0042	8	.01	.01	.00	0.	1		1248	129	.05	.01	.03	0.
1		0048	9	.01	.01	.00	0.	1		1254	130	.04	.01	.03	0.
1		0054	10	.00	.00	.00	0.	1		1300	131	.04	.01	.03	0.
1		0100	11	.01	.01	.00	0.	1		1306	132	.04	.01	.03	0.
1		0106	12	.01	.01	.00	0.	1		1312	133	.04	.01	.03	0.
1		0112	13	.01	.01	.00	0.	1		1318	134	.03	.01	.02	0.
1		0118	14	.01	.01	.00	0.	1		1324	135	.03	.01	.03	0.
1		0124	15	.01	.01	.00	0.	1		1330	136	.03	.01	.02	0.
1		0130	16	.00	.00	.00	0.	1		1336	137	.02	.01	.02	0.
1		0136	17	.01	.01	.00	0.	1		1342	138	.03	.01	.02	0.
1		0142	18	.01	.01	.00	0.	1		1348	139	.02	.01	.02	0.
1		0148	19	.00	.00	.00	0.	1		1354	140	.02	.01	.02	0.
1		0154	20	.01	.01	.00	0.	1		1400	141	.02	.01	.02	0.
1		0200	21	.01	.01	.00	0.	1		1406	142	.02	.01	.02	0.
1		0206	22	.01	.01	.00	0.	1		1412	143	.02	.01	.02	0.
1		0212	23	.01	.01	.00	0.	1		1418	144	.02	.00	.02	0.
1		0218	24	.01	.01	.00	0.	1		1424	145	.02	.00	.02	0.
1		0224	25	.01	.01	.00	0.	1		1430	146	.02	.01	.02	0.
1		0230	26	.01	.01	.00	0.	1		1436	147	.02	.00	.02	0.
1		0236	27	.01	.01	.00	0.	1		1442	148	.02	.00	.02	0.
1		0242	28	.01	.01	.00	0.	1		1448	149	.02	.00	.01	0.
1		0248	29	.00	.00	.00	0.	1		1454	150	.02	.00	.02	0.
1		0254	30	.01	.01	.00	0.	1		1500	151	.02	.00	.02	0.
1		0300	31	.01	.01	.00	0.	1		1506	152	.02	.00	.02	0.
1		0306	32	.01	.01	.00	0.	1		1512	153	.02	.00	.01	0.
1		0312	33	.01	.01	.00	0.	1		1518	154	.02	.00	.02	0.
1		0318	34	.00	.00	.00	0.	1		1524	155	.01	.00	.01	0.
1		0324	35	.00	.00	.00	0.	1		1530	156	.02	.00	.01	0.
1		0330	36	.01	.01	.00	0.	1		1536	157	.02	.00	.02	0.
1		0336	37	.00	.00	.00	0.	1		1542	158	.01	.00	.01	0.
1		0342	38	.01	.01	.00	0.	1		1548	159	.02	.00	.01	0.
1		0348	39	.01	.01	.00	0.	1		1554	160	.02	.00	.01	0.
1		0354	40	.00	.00	.00	0.	1		1600	161	.01	.00	.01	0.
1		0400	41	.01	.01	.00	0.	1		1606	162	.02	.00	.01	0.
1		0406	42	.01	.01	.00	0.	1		1612	163	.02	.00	.01	0.
1		0412	43	.00	.00	.00	0.	1		1618	164	.01	.00	.01	0.
1		0418	44	.00	.00	.00	0.	1		1624	165	.02	.00	.01	0.
1		0424	45	.01	.01	.00	0.	1		1630	166	.01	.00	.01	0.
1		0430	46	.01	.01	.00	0.	1		1636	167	.02	.00	.01	0.
1		0436	47	.00	.00	.00	0.	1		1642	168	.02	.00	.01	0.
1		0442	48	.01	.01	.00	0.	1		1648	169	.01	.00	.01	0.
1		0448	49	.01	.01	.00	0.	1		1654	170	.01	.00	.01	0.
1		0454	50	.00	.00	.00	0.	1		1700	171	.00	.00	.00	0.
1		0500	51	.01	.01	.00	0.	1		1706	172	.01	.00	.01	0.
1		0506	52	.00	.00	.00	0.	1		1712	173	.01	.00	.01	0.
1		0512	53	.01	.01	.00	0.	1		1718	174	.01	.00	.01	0.
1		0518	54	.01	.01	.00	0.	1		1724	175	.01	.00	.01	0.
1		0524	55	.01	.01	.00	0.	1		1730	176	.00	.00	.00	0.
1		0530	56	.01	.01	.00	0.	1		1736	177	.01	.00	.01	0.
1		0536	57	.01	.01	.00	0.	1		1742	178	.01	.00	.01	0.
1		0542	58	.01	.01	.00	0.	1		1748	179	.00	.00	.00	0.
1		0548	59	.01	.01	.00	0.	1		1754	180	.01	.00	.01	0.
1		0554	60	.01	.01	.00	0.	1		1800	181	.01	.00	.01	0.
1		0600	61	.01	.01	.00	0.	1		1806	182	.00	.00	.00	0.
1		0606	62	.01	.01	.00	0.	1		1812	183	.01	.00	.01	0.
1		0612	63	.01	.01	.00	0.	1		1818	184	.01	.00	.00	0.

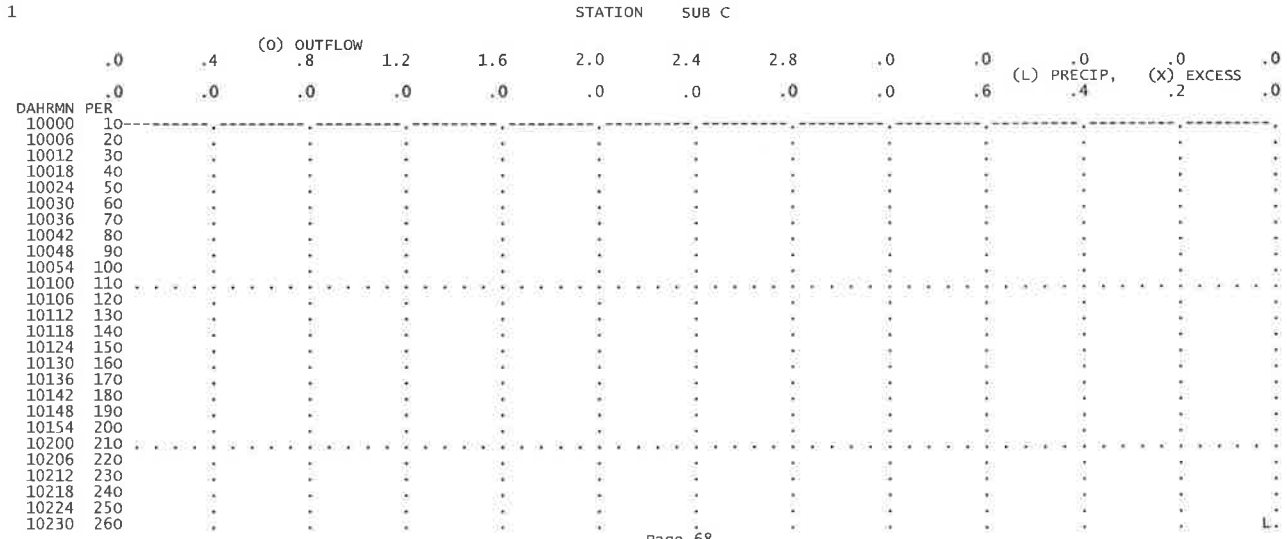
CALIFONHYDROLOGY

1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	0.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.00	.00	.00	0.
1	0630	66	.00	.00	.00	0.	*	1	1836	187	.01	.00	.01	0.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.00	.00	.00	0.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	0.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.00	.00	.00	0.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	0.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.00	.00	.00	0.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.00	.00	.00	0.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	0.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.00	.00	.00	0.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	0.
1	0730	76	.01	.01	.00	0.	*	1	1936	197	.01	.00	.00	0.
1	0736	77	.01	.01	.00	0.	*	1	1942	198	.00	.00	.00	0.
1	0742	78	.01	.01	.00	0.	*	1	1948	199	.01	.00	.01	0.
1	0748	79	.01	.01	.00	0.	*	1	1954	200	.00	.00	.00	0.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.00	0.
1	0800	81	.01	.01	.00	0.	*	1	2006	202	.00	.00	.00	0.
1	0806	82	.01	.01	.00	0.	*	1	2012	203	.01	.00	.01	0.
1	0812	83	.01	.01	.00	0.	*	1	2018	204	.01	.00	.00	0.
1	0818	84	.01	.01	.00	0.	*	1	2024	205	.00	.00	.00	0.
1	0824	85	.02	.01	.00	0.	*	1	2030	206	.00	.00	.00	0.
1	0830	86	.01	.01	.00	0.	*	1	2036	207	.01	.00	.01	0.
1	0836	87	.02	.02	.00	0.	*	1	2042	208	.01	.00	.00	0.
1	0842	88	.01	.01	.00	0.	*	1	2048	209	.00	.00	.00	0.
1	0848	89	.02	.01	.00	0.	*	1	2054	210	.00	.00	.00	0.
1	0854	90	.02	.02	.00	0.	*	1	2100	211	.00	.00	.00	0.
1	0900	91	.02	.02	.00	0.	*	1	2106	212	.01	.00	.01	0.
1	0906	92	.01	.01	.00	0.	*	1	2112	213	.00	.00	.00	0.
1	0912	93	.02	.02	.00	0.	*	1	2118	214	.00	.00	.00	0.
1	0918	94	.02	.02	.00	0.	*	1	2124	215	.00	.00	.00	0.
1	0924	95	.02	.02	.00	0.	*	1	2130	216	.01	.00	.00	0.
1	0930	96	.02	.02	.00	0.	*	1	2136	217	.00	.00	.00	0.
1	0936	97	.02	.02	.00	0.	*	1	2142	218	.00	.00	.00	0.
1	0942	98	.02	.02	.00	0.	*	1	2148	219	.00	.00	.00	0.
1	0948	99	.02	.02	.00	0.	*	1	2154	220	.00	.00	.00	0.
1	0954	100	.02	.02	.00	0.	*	1	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.00	0.	*	1	2206	222	.00	.00	.00	0.
1	1006	102	.03	.02	.01	0.	*	1	2212	223	.00	.00	.00	0.
1	1012	103	.02	.02	.01	0.	*	1	2218	224	.01	.00	.00	0.
1	1018	104	.03	.02	.01	0.	*	1	2224	225	.00	.00	.00	0.
1	1024	105	.02	.02	.01	0.	*	1	2230	226	.00	.00	.00	0.
1	1030	106	.03	.02	.01	0.	*	1	2236	227	.00	.00	.00	0.
1	1036	107	.03	.02	.01	0.	*	1	2242	228	.00	.00	.00	0.
1	1042	108	.03	.02	.01	0.	*	1	2248	229	.01	.00	.00	0.
1	1048	109	.03	.02	.01	0.	*	1	2254	230	.00	.00	.00	0.
1	1054	110	.03	.02	.01	0.	*	1	2300	231	.00	.00	.00	0.
1	1100	111	.04	.03	.01	0.	*	1	2306	232	.00	.00	.00	0.
1	1106	112	.04	.03	.01	0.	*	1	2312	233	.00	.00	.00	0.
1	1112	113	.04	.03	.01	0.	*	1	2318	234	.01	.00	.00	0.
1	1118	114	.05	.03	.02	0.	*	1	2324	235	.00	.00	.00	0.
1	1124	115	.06	.03	.02	0.	*	1	2330	236	.00	.00	.00	0.
1	1130	116	.06	.03	.02	0.	*	1	2336	237	.00	.00	.00	0.
1	1136	117	.07	.04	.03	0.	*	1	2342	238	.01	.00	.00	0.
1	1142	118	.08	.04	.04	0.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.17	.09	.08	1.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.27	.13	.14	1.	*	2	0000	241	.00	.00	.00	0.
1	1200	121	.42	.17	.25	2.	*							

TOTAL RAINFALL = 5.00, TOTAL LOSS = 2.38, TOTAL EXCESS = 2.62

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW		24.00-HR
(CFS)	(HR)	(CFS)	24-HR	72-HR	
+ 3.	12.10	0.	0.	0.	0.
		(INCHES)	2.619	2.619	2.619
		(AC-FT)	0.	0.	0.

CUMULATIVE AREA = .00 SQ MI



CALIFONHYDROLOGY

12348 239.0
12354 240.0
20000 241.0

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HYDROGRAPH AT STATION SUB C
PLAN 1, RATIO = .76

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.51	.14	.37	4.
1		0006	2	.01	.01	.00	0.	1		1212	123	.33	.08	.25	3.
1		0012	3	.01	.01	.00	0.	1		1218	124	.21	.05	.17	3.
1		0018	4	.01	.01	.00	0.	1		1224	125	.10	.02	.08	2.
1		0024	5	.01	.01	.00	0.	1		1230	126	.08	.02	.06	1.
1		0030	6	.01	.01	.00	0.	1		1236	127	.07	.01	.06	1.
1		0036	7	.01	.01	.00	0.	1		1242	128	.07	.01	.05	1.
1		0042	8	.01	.01	.00	0.	1		1248	129	.05	.01	.04	1.
1		0048	9	.01	.01	.00	0.	1		1254	130	.05	.01	.04	1.
1		0054	10	.01	.01	.00	0.	1		1300	131	.05	.01	.04	0.
1		0100	11	.01	.01	.00	0.	1		1306	132	.04	.01	.03	0.
1		0106	12	.01	.01	.00	0.	1		1312	133	.05	.01	.04	0.
1		0112	13	.01	.01	.00	0.	1		1318	134	.04	.01	.03	0.
1		0118	14	.01	.01	.00	0.	1		1324	135	.04	.01	.04	0.
1		0124	15	.01	.01	.00	0.	1		1330	136	.04	.01	.03	0.
1		0130	16	.01	.01	.00	0.	1		1336	137	.03	.01	.03	0.
1		0136	17	.01	.01	.00	0.	1		1342	138	.04	.01	.03	0.
1		0142	18	.01	.01	.00	0.	1		1348	139	.03	.01	.03	0.
1		0148	19	.01	.01	.00	0.	1		1354	140	.03	.01	.03	0.
1		0154	20	.01	.01	.00	0.	1		1400	141	.03	.01	.03	0.
1		0200	21	.01	.01	.00	0.	1		1406	142	.03	.01	.03	0.
1		0206	22	.01	.01	.00	0.	1		1412	143	.03	.00	.03	0.
1		0212	23	.01	.01	.00	0.	1		1418	144	.02	.00	.02	0.
1		0218	24	.01	.01	.00	0.	1		1424	145	.02	.00	.02	0.
1		0224	25	.01	.01	.00	0.	1		1430	146	.03	.00	.03	0.
1		0230	26	.01	.01	.00	0.	1		1436	147	.02	.00	.02	0.
1		0236	27	.01	.01	.00	0.	1		1442	148	.02	.00	.02	0.
1		0242	28	.01	.01	.00	0.	1		1448	149	.02	.00	.02	0.
1		0248	29	.01	.01	.00	0.	1		1454	150	.02	.00	.02	0.
1		0254	30	.01	.01	.00	0.	1		1500	151	.02	.00	.02	0.
1		0300	31	.01	.01	.00	0.	1		1506	152	.02	.00	.02	0.
1		0306	32	.01	.01	.00	0.	1		1512	153	.02	.00	.02	0.
1		0312	33	.01	.01	.00	0.	1		1518	154	.02	.00	.02	0.
1		0318	34	.01	.01	.00	0.	1		1524	155	.02	.00	.02	0.
1		0324	35	.01	.01	.00	0.	1		1530	156	.02	.00	.02	0.
1		0330	36	.01	.01	.00	0.	1		1536	157	.02	.00	.02	0.
1		0336	37	.01	.01	.00	0.	1		1542	158	.02	.00	.02	0.
1		0342	38	.01	.01	.00	0.	1		1548	159	.02	.00	.02	0.
1		0348	39	.01	.01	.00	0.	1		1554	160	.02	.00	.02	0.
1		0354	40	.01	.01	.00	0.	1		1600	161	.02	.00	.02	0.
1		0400	41	.01	.01	.00	0.	1		1606	162	.02	.00	.02	0.
1		0406	42	.01	.01	.00	0.	1		1612	163	.02	.00	.02	0.
1		0412	43	.01	.01	.00	0.	1		1618	164	.02	.00	.02	0.
1		0418	44	.01	.01	.00	0.	1		1624	165	.02	.00	.02	0.
1		0424	45	.01	.01	.00	0.	1		1630	166	.01	.00	.01	0.
1		0430	46	.01	.01	.00	0.	1		1636	167	.02	.00	.02	0.
1		0436	47	.01	.01	.00	0.	1		1642	168	.02	.00	.02	0.
1		0442	48	.01	.01	.00	0.	1		1648	169	.01	.00	.01	0.
1		0448	49	.01	.01	.00	0.	1		1654	170	.01	.00	.01	0.
1		0454	50	.01	.01	.00	0.	1		1700	171	.01	.00	.01	0.
1		0500	51	.01	.01	.00	0.	1		1706	172	.01	.00	.01	0.
1		0506	52	.01	.01	.00	0.	1		1712	173	.01	.00	.01	0.
1		0512	53	.01	.01	.00	0.	1		1718	174	.01	.00	.01	0.
1		0518	54	.01	.01	.00	0.	1		1724	175	.01	.00	.01	0.
1		0524	55	.01	.01	.00	0.	1		1730	176	.01	.00	.01	0.
1		0530	56	.01	.01	.00	0.	1		1736	177	.01	.00	.01	0.
1		0536	57	.01	.01	.00	0.	1		1742	178	.01	.00	.01	0.
1		0542	58	.01	.01	.00	0.	1		1748	179	.01	.00	.01	0.
1		0548	59	.01	.01	.00	0.	1		1754	180	.01	.00	.01	0.
1		0554	60	.01	.01	.00	0.	1		1800	181	.01	.00	.01	0.
1		0600	61	.01	.01	.00	0.	1		1806	182	.01	.00	.01	0.
1		0606	62	.01	.01	.00	0.	1		1812	183	.01	.00	.01	0.
1		0612	63	.01	.01	.00	0.	1		1818	184	.01	.00	.01	0.
1		0618	64	.01	.01	.00	0.	1		1824	185	.01	.00	.01	0.
1		0624	65	.01	.01	.00	0.	1		1830	186	.01	.00	.01	0.
1		0630	66	.01	.01	.00	0.	1		1836	187	.01	.00	.01	0.
1		0636	67	.01	.01	.00	0.	1		1842	188	.01	.00	.01	0.
1		0642	68	.01	.01	.00	0.	1		1848	189	.01	.00	.01	0.
1		0648	69	.01	.01	.00	0.	1		1854	190	.01	.00	.01	0.
1		0654	70	.01	.01	.00	0.	1		1900	191	.01	.00	.01	0.
1		0700	71	.01	.01	.00	0.	1		1906	192	.01	.00	.01	0.
1		0706	72	.01	.01	.00	0.	1		1912	193	.01	.00	.01	0.
1		0712	73	.01	.01	.00	0.	1		1918	194	.01	.00	.01	0.
1		0718	74	.01	.01	.00	0.	1		1924	195	.01	.00	.01	0.
1		0724	75	.01	.01	.00	0.	1		1930	196	.01	.00	.01	0.
1		0730	76	.02	.02	.00	0.	1		1936	197	.01	.00	.01	0.
1		0736	77	.02	.02	.00	0.	1		1942	198	.01	.00	.01	0.
1		0742	78	.02	.02	.00	0.	1		1948	199	.01	.00	.01	0.
1		0748	79	.02	.02	.00	0.	1		1954	200	.01	.00	.01	0.
1		0754	80	.02	.02	.00	0.	1		2000	201	.01	.00	.01	0.
1		0800	81	.02	.02	.00	0.	1		2006	202	.01	.00	.01	0.
1		0806	82	.02	.02	.00	0.	1		2012	203	.01	.00	.01	0.
1		0812	83	.02	.02	.00	0.	1		2018	204	.01	.00	.01	0.
1		0818	84	.02	.02	.00	0.	1		2024	205	.01	.00	.01	0.
1		0824	85	.02	.02	.00	0.	1		2030	206	.01	.00	.01	0.
1		0830	86	.02	.02	.00	0.	1		2036	207	.01	.00	.01	0.
1		0836	87	.02	.02	.00	0.	1		2042	208	.01	.00	.01	0.
1		0842	88	.02	.02	.00	0.	1		2048	209	.01	.00	.01	0.
1		0848	89	.02	.02	.00	0.	1		2054	210	.01	.00	.01	0.
1		0854	90	.02	.02	.00	0.	1		2100	211	.01	.00	.01	0.
1		0900	91	.02	.02	.00	0.	1		2106	212	.01	.00	.01	0.
1		0906	92	.02	.01	.00	0.	1		2112	213	.01	.00	.01	0.

CALIFONHYDROLOGY														
1	0912	93	.02	.02	.00	0.	*	1	2118	214	.01	.00	.01	0.
1	0918	94	.02	.02	.00	0.	*	1	2124	215	.01	.00	.01	0.
1	0924	95	.02	.02	.01	0.	*	1	2130	216	.01	.00	.01	0.
1	0930	96	.02	.02	.01	0.	*	1	2136	217	.01	.00	.01	0.
1	0936	97	.02	.02	.01	0.	*	1	2142	218	.01	.00	.01	0.
1	0942	98	.03	.02	.01	0.	*	1	2148	219	.01	.00	.01	0.
1	0948	99	.02	.02	.01	0.	*	1	2154	220	.01	.00	.01	0.
1	0954	100	.03	.02	.01	0.	*	1	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.01	0.	*	1	2206	222	.01	.00	.01	0.
1	1006	102	.03	.02	.01	0.	*	1	2212	223	.01	.00	.01	0.
1	1012	103	.03	.02	.01	0.	*	1	2218	224	.01	.00	.01	0.
1	1018	104	.04	.02	.01	0.	*	1	2224	225	.01	.00	.01	0.
1	1024	105	.03	.02	.01	0.	*	1	2230	226	.01	.00	.01	0.
1	1030	106	.04	.02	.01	0.	*	1	2236	227	.01	.00	.01	0.
1	1036	107	.04	.02	.01	0.	*	1	2242	228	.01	.00	.01	0.
1	1042	108	.04	.02	.01	0.	*	1	2248	229	.01	.00	.01	0.
1	1048	109	.04	.03	.02	0.	*	1	2254	230	.01	.00	.01	0.
1	1054	110	.04	.03	.02	0.	*	1	2300	231	.01	.00	.01	0.
1	1100	111	.05	.03	.02	0.	*	1	2306	232	.01	.00	.01	0.
1	1106	112	.05	.03	.02	0.	*	1	2312	233	.01	.00	.01	0.
1	1112	113	.05	.03	.02	0.	*	1	2318	234	.01	.00	.01	0.
1	1118	114	.06	.03	.03	0.	*	1	2324	235	.01	.00	.01	0.
1	1124	115	.07	.04	.03	0.	*	1	2330	236	.01	.00	.01	0.
1	1130	116	.07	.03	.03	0.	*	1	2336	237	.01	.00	.01	0.
1	1136	117	.09	.04	.04	0.	*	1	2342	238	.01	.00	.01	0.
1	1142	118	.10	.05	.05	0.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.21	.09	.12	1.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.32	.13	.20	2.	*	2	0000	241	.01	.00	.01	0.
1	1200	121	.51	.17	.34	3.	*	*						

TOTAL RAINFALL = 6.10, TOTAL LOSS = 2.53, TOTAL EXCESS = 3.57

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	24.00-HR
4.	12.10	1.	0.	0.	0.
		(INCHES)	2.900	3.561	3.561
		(AC-FT)	0.	0.	0.

CUMULATIVE AREA = .00 SQ MI

DAHRMN PER	STATION	SUB C	(O) OUTFLOW										(L) PRECIP.	(X) EXCESS
			.0	.4	.8	1.2	1.6	2.0	2.4	2.8	3.2	3.6		
10000	10		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10006	20		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10012	30		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10018	40		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10024	50		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10030	60		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10036	70		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10042	80		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10048	90		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10054	100		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10100	110		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10106	120		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10112	130		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10118	140		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10124	150		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10130	160		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10136	170		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10142	180		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10148	190		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10154	200		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10200	210		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10206	220		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10212	230		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10218	240		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10224	250		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10230	260		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10236	270		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10242	280		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10248	290		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10254	300		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10300	310		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10306	320		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10312	330		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10318	340		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10324	350		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10330	360		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10336	370		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10342	380		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10348	390		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10354	400		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10400	410		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10406	420		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10412	430		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10418	440		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10424	450		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10430	460		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10436	470		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10442	480		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10448	490		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10454	500		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10500	510		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10506	520		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10512	530		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10518	540		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10524	550		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0

CALIFONHYDROLOGY

1	0130	16	.01	.01	.00	0.	1	1336	137	.03	.01	.03	0.
1	0136	17	.01	.01	.00	0.	1	1342	138	.04	.01	.04	0.
1	0142	18	.01	.01	.00	0.	1	1348	139	.03	.00	.03	0.
1	0148	19	.01	.01	.00	0.	1	1354	140	.03	.00	.03	0.
1	0154	20	.01	.01	.00	0.	1	1400	141	.03	.00	.03	0.
1	0200	21	.01	.01	.00	0.	1	1406	142	.03	.00	.03	0.
1	0206	22	.01	.01	.00	0.	1	1412	143	.03	.00	.03	0.
1	0212	23	.01	.01	.00	0.	1	1418	144	.03	.00	.02	0.
1	0218	24	.01	.01	.00	0.	1	1424	145	.03	.00	.02	0.
1	0224	25	.01	.01	.00	0.	1	1430	146	.03	.00	.03	0.
1	0230	26	.01	.01	.00	0.	1	1436	147	.03	.00	.02	0.
1	0236	27	.01	.01	.00	0.	1	1442	148	.03	.00	.02	0.
1	0242	28	.01	.01	.00	0.	1	1448	149	.02	.00	.02	0.
1	0248	29	.01	.01	.00	0.	1	1454	150	.03	.00	.02	0.
1	0254	30	.01	.01	.00	0.	1	1500	151	.03	.00	.02	0.
1	0300	31	.01	.01	.00	0.	1	1506	152	.03	.00	.02	0.
1	0306	32	.01	.01	.00	0.	1	1512	153	.02	.00	.02	0.
1	0312	33	.01	.01	.00	0.	1	1518	154	.03	.00	.02	0.
1	0318	34	.01	.01	.00	0.	1	1524	155	.02	.00	.02	0.
1	0324	35	.01	.01	.00	0.	1	1530	156	.02	.00	.02	0.
1	0330	36	.01	.01	.00	0.	1	1536	157	.03	.00	.02	0.
1	0336	37	.01	.01	.00	0.	1	1542	158	.02	.00	.02	0.
1	0342	38	.01	.01	.00	0.	1	1548	159	.02	.00	.02	0.
1	0348	39	.01	.01	.00	0.	1	1554	160	.02	.00	.02	0.
1	0354	40	.01	.01	.00	0.	1	1600	161	.02	.00	.02	0.
1	0400	41	.01	.01	.00	0.	1	1606	162	.02	.00	.02	0.
1	0406	42	.01	.01	.00	0.	1	1612	163	.02	.00	.02	0.
1	0412	43	.01	.01	.00	0.	1	1618	164	.02	.00	.02	0.
1	0418	44	.01	.01	.00	0.	1	1624	165	.02	.00	.02	0.
1	0424	45	.01	.01	.00	0.	1	1630	166	.01	.00	.01	0.
1	0430	46	.01	.01	.00	0.	1	1636	167	.02	.00	.02	0.
1	0436	47	.01	.01	.00	0.	1	1642	168	.02	.00	.02	0.
1	0442	48	.01	.01	.00	0.	1	1648	169	.01	.00	.01	0.
1	0448	49	.01	.01	.00	0.	1	1654	170	.01	.00	.01	0.
1	0454	50	.01	.01	.00	0.	1	1700	171	.01	.00	.01	0.
1	0500	51	.01	.01	.00	0.	1	1706	172	.01	.00	.01	0.
1	0506	52	.01	.01	.00	0.	1	1712	173	.01	.00	.01	0.
1	0512	53	.01	.01	.00	0.	1	1718	174	.01	.00	.01	0.
1	0518	54	.01	.01	.00	0.	1	1724	175	.01	.00	.01	0.
1	0524	55	.01	.01	.00	0.	1	1730	176	.01	.00	.01	0.
1	0530	56	.01	.01	.00	0.	1	1736	177	.01	.00	.01	0.
1	0536	57	.01	.01	.00	0.	1	1742	178	.01	.00	.01	0.
1	0542	58	.01	.01	.00	0.	1	1748	179	.01	.00	.01	0.
1	0548	59	.01	.01	.00	0.	1	1754	180	.01	.00	.01	0.
1	0554	60	.01	.01	.00	0.	1	1800	181	.01	.00	.01	0.
1	0600	61	.01	.01	.00	0.	1	1806	182	.01	.00	.01	0.
1	0606	62	.01	.01	.00	0.	1	1812	183	.01	.00	.01	0.
1	0612	63	.01	.01	.00	0.	1	1818	184	.01	.00	.01	0.
1	0618	64	.01	.01	.00	0.	1	1824	185	.01	.00	.01	0.
1	0624	65	.01	.01	.00	0.	1	1830	186	.01	.00	.01	0.
1	0630	66	.01	.01	.00	0.	1	1836	187	.01	.00	.01	0.
1	0636	67	.01	.01	.00	0.	1	1842	188	.01	.00	.01	0.
1	0642	68	.01	.01	.00	0.	1	1848	189	.01	.00	.01	0.
1	0648	69	.01	.01	.00	0.	1	1854	190	.01	.00	.01	0.
1	0654	70	.01	.01	.00	0.	1	1900	191	.01	.00	.01	0.
1	0700	71	.01	.01	.00	0.	1	1906	192	.01	.00	.01	0.
1	0706	72	.01	.01	.00	0.	1	1912	193	.01	.00	.01	0.
1	0712	73	.01	.01	.00	0.	1	1918	194	.01	.00	.01	0.
1	0718	74	.01	.01	.00	0.	1	1924	195	.01	.00	.01	0.
1	0724	75	.01	.01	.00	0.	1	1930	196	.01	.00	.01	0.
1	0730	76	.02	.02	.00	0.	1	1936	197	.01	.00	.01	0.
1	0736	77	.02	.02	.00	0.	1	1942	198	.01	.00	.01	0.
1	0742	78	.02	.02	.00	0.	1	1948	199	.01	.00	.01	0.
1	0748	79	.02	.02	.00	0.	1	1954	200	.01	.00	.01	0.
1	0754	80	.02	.02	.00	0.	1	2000	201	.01	.00	.01	0.
1	0800	81	.02	.02	.00	0.	1	2006	202	.01	.00	.01	0.
1	0806	82	.02	.02	.00	0.	1	2012	203	.01	.00	.01	0.
1	0812	83	.02	.02	.00	0.	1	2018	204	.01	.00	.01	0.
1	0818	84	.02	.02	.00	0.	1	2024	205	.01	.00	.01	0.
1	0824	85	.02	.02	.00	0.	1	2030	206	.01	.00	.01	0.
1	0830	86	.02	.02	.00	0.	1	2036	207	.01	.00	.01	0.
1	0836	87	.03	.02	.01	0.	1	2042	208	.01	.00	.01	0.
1	0842	88	.02	.02	.00	0.	1	2048	209	.01	.00	.01	0.
1	0848	89	.02	.02	.00	0.	1	2054	210	.01	.00	.01	0.
1	0854	90	.03	.02	.01	0.	1	2100	211	.01	.00	.01	0.
1	0900	91	.03	.02	.01	0.	1	2106	212	.01	.00	.01	0.
1	0906	92	.02	.02	.01	0.	1	2112	213	.01	.00	.01	0.
1	0912	93	.03	.02	.01	0.	1	2118	214	.01	.00	.01	0.
1	0918	94	.03	.02	.01	0.	1	2124	215	.01	.00	.01	0.
1	0924	95	.03	.02	.01	0.	1	2130	216	.01	.00	.01	0.
1	0930	96	.03	.02	.01	0.	1	2136	217	.01	.00	.01	0.
1	0936	97	.03	.02	.01	0.	1	2142	218	.01	.00	.01	0.
1	0942	98	.03	.02	.01	0.	1	2148	219	.01	.00	.01	0.
1	0948	99	.03	.02	.01	0.	1	2154	220	.01	.00	.01	0.
1	0954	100	.03	.02	.01	0.	1	2200	221	.01	.00	.01	0.
1	1000	101	.03	.02	.01	0.	1	2206	222	.01	.00	.01	0.
1	1006	102	.04	.02	.01	0.	1	2212	223	.01	.00	.01	0.
1	1012	103	.03	.02	.01	0.	1	2218	224	.01	.00	.01	0.
1	1018	104	.04	.03	.02	0.	1	2224	225	.01	.00	.01	0.
1	1024	105	.03	.02	.01	0.	1	2230	226	.01	.00	.01	0.
1	1030	106	.04	.02	.02	0.	1	2236	227	.01	.00	.01	0.
1	1036	107	.04	.02	.02	0.	1	2242	228	.01	.00	.01	0.
1	1042	108	.04	.02	.02	0.	1	2248	229	.01	.00	.01	0.
1	1048	109	.05	.03	.02	0.	1	2254	230	.01	.00	.01	0.
1	1054	110	.05	.03	.02	0.	1	2300	231	.01	.00	.01	0.
1	1100	111	.06	.03	.03	0.	1	2306	232	.01	.00	.01	0.
1	1106	112	.06	.03	.03	0.	1	2312	233	.01	.00	.01	0.
1	1112	113	.06	.03	.03	0.	1	2318	234	.01	.00	.01	0.
1	1118	114	.07	.03	.04	0.	1	2324	235	.01	.00	.01	0.
1	1124	115	.08	.04	.04	0.	1	2330	236	.01	.00	.01	0.
1	1130	116	.08	.03	.04	0.	1	2336	237	.01	.00	.01	0.
1	1136	117	.10	.04	.06	1.	1	2342	238	.01	.00	.01	0.
1	1142	118	.11	.05	.07	1.	1	2348	239	.00	.00	.00	0.
1	1148	119	.24	.09	.15	1.	1	2354	240	.00	.00	.00	0.
1	1154	120	.37	.13	.24	2.	2	0000	241	.01	.00	.01	0.
1	1200	121	.59	.17	.42	3.	3.						

CALIFONHYDROLOGY

TOTAL RAINFALL = 7.00, TOTAL LOSS = 2.63, TOTAL EXCESS = 4.37

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)	(CFS)		(INCHES)			
+ 4.	12.10	3.529	1.	0.	4.359	0.	0.
		(AC-FT)	0.	0.	0.	4.359	0.

CUMULATIVE AREA = .00 SQ MI

1

DAHRMN PER	(O) OUTFLOW										(L) PRECIP.	(X) EXCESS	
	.0	.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5			
10000	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0
10006	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10012	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10018	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10024	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10030	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10036	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10042	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10048	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10054	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10100	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10106	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10112	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10118	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10124	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10130	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10136	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10142	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10148	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10154	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10200	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10206	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10212	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10218	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10224	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10230	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10236	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10242	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10248	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10254	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10300	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10306	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10312	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10318	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10324	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10330	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10336	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10342	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10348	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10354	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10400	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10406	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10412	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10418	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10424	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10430	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10436	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10442	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10448	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10454	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10500	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10506	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10512	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10518	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10524	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10530	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10536	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10542	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10548	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10554	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10600	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10606	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10612	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10618	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10624	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10630	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10636	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10642	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10648	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10654	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10700	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10706	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10712	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10718	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10724	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10730	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10736	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10742	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10748	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10754	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10800	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10806	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10812	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10818	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALIFONHYDROLOGY

11900	191.	0
11906	192.	0
11912	193.	0
11918	194.	0
11924	195.	0
11930	196.	0
11936	197.	0
11942	198.	0
11948	199.	0
11954	200.	0
12000	201.	0
12006	202.	0
12012	203.	0
12018	204.	0
12024	205.	0
12030	206.	0
12036	207.	0
12042	208.	0
12048	209.	0
12054	210.	0
12100	211.	0
12106	212.	0
12112	213.	0
12118	214.	0
12124	215.	0
12130	216.	0
12136	217.	0
12142	218.	0
12148	219.	0
12154	220.	0
12200	221.	0
12206	222.	0
12212	223.	0
12218	224.	0
12224	225.	0
12230	226.	0
12236	227.	0
12242	228.	0
12248	229.	0
12254	230.	0
12300	231.	0
12306	232.	0
12312	233.	0
12318	234.	0
12324	235.	0
12330	236.	0
12336	237.	0
12342	238.	0
12348	239.	0
12354	240.	0
20000	241.	0

1

HYDROGRAPH AT STATION SUB C
PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1	1206	122		.67	.13	.54	5.
1		0006	2	.01	.01	.00	0.	1	1212	123		.43	.07	.36	5.
1		0012	3	.01	.01	.00	0.	1	1218	124		.28	.04	.24	4.
1		0018	4	.01	.01	.00	0.	1	1224	125		.13	.02	.11	2.
1		0024	5	.01	.01	.00	0.	1	1230	126		.10	.01	.09	1.
1		0030	6	.01	.01	.00	0.	1	1236	127		.10	.01	.08	1.
1		0036	7	.01	.01	.00	0.	1	1242	128		.09	.01	.08	1.
1		0042	8	.01	.01	.00	0.	1	1248	129		.07	.01	.06	1.
1		0048	9	.01	.01	.00	0.	1	1254	130		.07	.01	.06	1.
1		0054	10	.01	.01	.00	0.	1	1300	131		.06	.01	.06	1.
1		0100	11	.01	.01	.00	0.	1	1306	132		.06	.01	.05	1.
1		0106	12	.01	.01	.00	0.	1	1312	133		.06	.01	.06	1.
1		0112	13	.01	.01	.00	0.	1	1318	134		.05	.01	.04	1.
1		0118	14	.01	.01	.00	0.	1	1324	135		.06	.01	.05	1.
1		0124	15	.01	.01	.00	0.	1	1330	136		.05	.01	.04	1.
1		0130	16	.01	.01	.00	0.	1	1336	137		.04	.00	.04	0.
1		0136	17	.01	.01	.00	0.	1	1342	138		.05	.01	.04	0.
1		0142	18	.01	.01	.00	0.	1	1348	139		.04	.00	.04	0.
1		0148	19	.01	.01	.00	0.	1	1354	140		.04	.00	.04	0.
1		0154	20	.01	.01	.00	0.	1	1400	141		.04	.00	.04	0.
1		0200	21	.01	.01	.00	0.	1	1406	142		.04	.00	.04	0.
1		0206	22	.01	.01	.00	0.	1	1412	143		.04	.00	.04	0.
1		0212	23	.01	.01	.00	0.	1	1418	144		.03	.00	.03	0.
1		0218	24	.01	.01	.00	0.	1	1424	145		.03	.00	.03	0.
1		0224	25	.01	.01	.00	0.	1	1430	146		.04	.00	.04	0.
1		0230	26	.02	.02	.00	0.	1	1436	147		.03	.00	.03	0.
1		0236	27	.01	.01	.00	0.	1	1442	148		.03	.00	.03	0.
1		0242	28	.01	.01	.00	0.	1	1448	149		.02	.00	.02	0.
1		0248	29	.01	.01	.00	0.	1	1454	150		.03	.00	.03	0.
1		0254	30	.01	.01	.00	0.	1	1500	151		.03	.00	.03	0.
1		0300	31	.01	.01	.00	0.	1	1506	152		.03	.00	.03	0.
1		0306	32	.01	.01	.00	0.	1	1512	153		.02	.00	.02	0.
1		0312	33	.02	.02	.00	0.	1	1518	154		.03	.00	.03	0.
1		0318	34	.01	.01	.00	0.	1	1524	155		.02	.00	.02	0.
1		0324	35	.01	.01	.00	0.	1	1530	156		.02	.00	.02	0.
1		0330	36	.01	.01	.00	0.	1	1536	157		.03	.00	.03	0.
1		0336	37	.01	.01	.00	0.	1	1542	158		.02	.00	.02	0.
1		0342	38	.02	.02	.00	0.	1	1548	159		.02	.00	.02	0.
1		0348	39	.01	.01	.00	0.	1	1554	160		.02	.00	.02	0.
1		0354	40	.01	.01	.00	0.	1	1600	161		.02	.00	.02	0.
1		0400	41	.01	.01	.00	0.	1	1606	162		.02	.00	.02	0.
1		0406	42	.02	.02	.00	0.	1	1612	163		.02	.00	.02	0.
1		0412	43	.01	.01	.00	0.	1	1618	164		.02	.00	.02	0.
1		0418	44	.01	.01	.00	0.	1	1624	165		.02	.00	.02	0.

CALIFONHYDROLOGY

1	0054	10	.01	.01	.00	0.	1	1300	131	.06	.01	.05	3.
1	0100	11	.01	.01	.00	0.	1	1306	132	.06	.01	.05	2.
1	0106	12	.01	.01	.00	0.	1	1312	133	.06	.01	.05	2.
1	0112	13	.01	.01	.00	0.	1	1318	134	.05	.01	.04	2.
1	0118	14	.01	.01	.00	0.	1	1324	135	.06	.01	.05	2.
1	0124	15	.01	.01	.00	0.	1	1330	136	.05	.01	.04	2.
1	0130	16	.01	.01	.00	0.	1	1336	137	.04	.01	.03	2.
1	0136	17	.01	.01	.00	0.	1	1342	138	.05	.01	.04	2.
1	0142	18	.01	.01	.00	0.	1	1348	139	.04	.01	.03	2.
1	0148	19	.01	.01	.00	0.	1	1354	140	.04	.01	.03	1.
1	0154	20	.01	.01	.00	0.	1	1400	141	.04	.01	.03	1.
1	0200	21	.01	.01	.00	0.	1	1406	142	.04	.01	.03	1.
1	0206	22	.01	.01	.00	0.	1	1412	143	.04	.01	.03	1.
1	0212	23	.01	.01	.00	0.	1	1418	144	.03	.01	.03	1.
1	0218	24	.01	.01	.00	0.	1	1424	145	.03	.01	.03	1.
1	0224	25	.01	.01	.00	0.	1	1430	146	.04	.01	.03	1.
1	0230	26	.02	.02	.00	0.	1	1436	147	.03	.01	.03	1.
1	0236	27	.01	.01	.00	0.	1	1442	148	.03	.01	.03	1.
1	0242	28	.01	.01	.00	0.	1	1448	149	.02	.00	.02	1.
1	0248	29	.01	.01	.00	0.	1	1454	150	.03	.01	.03	1.
1	0254	30	.01	.01	.00	0.	1	1500	151	.03	.01	.03	1.
1	0300	31	.01	.01	.00	0.	1	1506	152	.03	.01	.03	1.
1	0306	32	.01	.01	.00	0.	1	1512	153	.02	.00	.02	1.
1	0312	33	.02	.02	.00	0.	1	1518	154	.03	.01	.03	1.
1	0318	34	.01	.01	.00	0.	1	1524	155	.02	.00	.02	1.
1	0324	35	.01	.01	.00	0.	1	1530	156	.02	.00	.02	1.
1	0330	36	.01	.01	.00	0.	1	1536	157	.03	.01	.03	1.
1	0336	37	.01	.01	.00	0.	1	1542	158	.02	.00	.02	1.
1	0342	38	.02	.02	.00	0.	1	1548	159	.02	.00	.02	1.
1	0348	39	.01	.01	.00	0.	1	1554	160	.02	.00	.02	1.
1	0354	40	.01	.01	.00	0.	1	1600	161	.02	.00	.02	1.
1	0400	41	.01	.01	.00	0.	1	1606	162	.02	.00	.02	1.
1	0406	42	.02	.02	.00	0.	1	1612	163	.02	.00	.02	1.
1	0412	43	.01	.01	.00	0.	1	1618	164	.02	.00	.02	1.
1	0418	44	.01	.01	.00	0.	1	1624	165	.02	.00	.02	1.
1	0424	45	.02	.02	.00	0.	1	1630	166	.02	.00	.01	1.
1	0430	46	.01	.01	.00	0.	1	1636	167	.02	.00	.02	1.
1	0436	47	.01	.01	.00	0.	1	1642	168	.02	.00	.02	1.
1	0442	48	.02	.02	.00	0.	1	1648	169	.02	.00	.01	1.
1	0448	49	.01	.01	.00	0.	1	1654	170	.02	.00	.01	1.
1	0454	50	.01	.01	.00	0.	1	1700	171	.01	.00	.01	1.
1	0500	51	.02	.02	.00	0.	1	1706	172	.02	.00	.01	0.
1	0506	52	.01	.01	.00	0.	1	1712	173	.02	.00	.01	0.
1	0512	53	.02	.02	.00	0.	1	1718	174	.02	.00	.01	1.
1	0518	54	.01	.01	.00	0.	1	1724	175	.02	.00	.01	1.
1	0524	55	.02	.02	.00	0.	1	1730	176	.01	.00	.01	1.
1	0530	56	.01	.01	.00	0.	1	1736	177	.02	.00	.01	0.
1	0536	57	.02	.02	.00	0.	1	1742	178	.02	.00	.01	0.
1	0542	58	.01	.01	.00	0.	1	1748	179	.01	.00	.01	0.
1	0548	59	.02	.02	.00	0.	1	1754	180	.02	.00	.01	0.
1	0554	60	.01	.01	.00	0.	1	1800	181	.02	.00	.01	0.
1	0600	61	.02	.02	.00	0.	1	1806	182	.01	.00	.01	0.
1	0606	62	.02	.02	.00	0.	1	1812	183	.02	.00	.01	0.
1	0612	63	.01	.01	.00	0.	1	1818	184	.01	.00	.01	0.
1	0618	64	.02	.02	.00	0.	1	1824	185	.02	.00	.01	0.
1	0624	65	.02	.02	.00	0.	1	1830	186	.01	.00	.01	0.
1	0630	66	.01	.01	.00	0.	1	1836	187	.02	.00	.01	0.
1	0636	67	.02	.02	.00	0.	1	1842	188	.01	.00	.01	0.
1	0642	68	.02	.02	.00	0.	1	1848	189	.02	.00	.01	0.
1	0648	69	.01	.01	.00	0.	1	1854	190	.01	.00	.01	0.
1	0654	70	.02	.02	.00	0.	1	1900	191	.02	.00	.01	0.
1	0700	71	.02	.02	.00	0.	1	1906	192	.01	.00	.01	0.
1	0706	72	.02	.02	.00	0.	1	1912	193	.01	.00	.01	0.
1	0712	73	.02	.02	.00	0.	1	1918	194	.02	.00	.01	0.
1	0718	74	.02	.02	.00	0.	1	1924	195	.01	.00	.01	0.
1	0724	75	.02	.02	.00	0.	1	1930	196	.02	.00	.01	0.
1	0730	76	.02	.02	.00	0.	1	1936	197	.01	.00	.01	0.
1	0736	77	.02	.02	.00	0.	1	1942	198	.01	.00	.01	0.
1	0742	78	.02	.02	.00	0.	1	1948	199	.02	.00	.01	0.
1	0748	79	.02	.02	.00	0.	1	1954	200	.01	.00	.01	0.
1	0754	80	.02	.02	.00	0.	1	2000	201	.01	.00	.01	0.
1	0800	81	.02	.02	.00	0.	1	2006	202	.01	.00	.01	0.
1	0806	82	.02	.02	.00	0.	1	2012	203	.02	.00	.01	0.
1	0812	83	.02	.02	.00	0.	1	2018	204	.01	.00	.01	0.
1	0818	84	.02	.02	.00	0.	1	2024	205	.01	.00	.01	0.
1	0824	85	.02	.02	.00	0.	1	2030	206	.01	.00	.01	0.
1	0830	86	.02	.02	.00	0.	1	2036	207	.02	.00	.01	0.
1	0836	87	.03	.03	.00	0.	1	2042	208	.01	.00	.01	0.
1	0842	88	.02	.02	.00	0.	1	2048	209	.01	.00	.01	0.
1	0848	89	.02	.02	.00	0.	1	2054	210	.01	.00	.01	0.
1	0854	90	.03	.03	.00	0.	1	2100	211	.01	.00	.01	0.
1	0900	91	.03	.03	.00	0.	1	2106	212	.02	.00	.01	0.
1	0906	92	.02	.02	.00	0.	1	2112	213	.01	.00	.01	0.
1	0912	93	.03	.03	.01	0.	1	2118	214	.01	.00	.01	0.
1	0918	94	.03	.03	.01	0.	1	2124	215	.01	.00	.01	0.
1	0924	95	.03	.03	.01	0.	1	2130	216	.01	.00	.01	0.
1	0930	96	.03	.03	.01	0.	1	2136	217	.01	.00	.01	0.
1	0936	97	.03	.03	.01	0.	1	2142	218	.01	.00	.01	0.
1	0942	98	.04	.03	.01	0.	1	2148	219	.01	.00	.01	0.
1	0948	99	.03	.02	.01	0.	1	2154	220	.01	.00	.01	0.
1	0954	100	.04	.03	.01	0.	1	2200	221	.02	.00	.01	0.
1	1000	101	.03	.02	.01	0.	1	2206	222	.01	.00	.01	0.
1	1006	102	.04	.03	.01	0.	1	2212	223	.01	.00	.01	0.
1	1012	103	.04	.03	.01	0.	1	2218	224	.01	.00	.01	0.
1	1018	104	.05	.03	.01	0.	1	2224	225	.01	.00	.01	0.
1	1024	105	.04	.03	.01	1.	1	2230	226	.01	.00	.01	0.
1	1030	106	.05	.03	.02	1.	1	2236	227	.01	.00	.01	0.
1	1036	107	.05	.03	.02	1.	1	2242	228	.01	.00	.01	0.
1	1042	108	.05	.03	.02	1.	1	2248	229	.01	.00	.01	0.
1	1048	109	.06	.04	.02	1.	1	2254	230	.01	.00	.01	0.
1	1054	110	.06	.03	.02	1.	1	2300	231	.01	.00	.01	0.
1	1100	111	.06	.04	.03	1.	1	2306	232	.01	.00	.01	0.
1	1106	112	.06	.04	.03	1.	1	2312	233	.01	.00	.01	0.
1	1112	113	.06	.04	.03	1.	1	2318	234	.01	.00	.01	0.
1	1118	114	.08	.05	.03	1.	1	2324	235	.01	.00	.01	0.
1	1124	115	.09	.05	.04	1.	1	2330	236	.01	.00	.01	0.

CALIFONHYDROLOGY														
1	1130	116	.09	.05	.04	1.	*	1	2336	237	.01	.00	.01	0.
1	1136	117	.11	.06	.05	2.	*	1	2342	238	.01	.00	.01	0.
1	1142	118	.13	.06	.07	2.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.28	.13	.15	3.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.42	.17	.25	5.	*	2	0000	241	.01	.00	.01	0.
1	1200	121	.67	.23	.44	9.	*							

TOTAL RAINFALL = 8.00, TOTAL LOSS = 3.42, TOTAL EXCESS = 4.58

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
(CFS)	(HR)	(CFS)	24-HR	72-HR
+	15.	12.20	3.729	4.567
		(INCHES)	1.	1.
		(AC-FT)	2.	2.

CUMULATIVE AREA = .01 SQ MI

HYDROGRAPH AT STATION SUB D
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	*	1	1206	122	.36	.19	.17	4.	
1		0006	2	.00	.00	.00	0.	*	1	1212	123	.23	.11	.12	5.	
1		0012	3	.00	.00	.00	0.	*	1	1218	124	.15	.07	.08	5.	
1		0018	4	.00	.00	.00	0.	*	1	1224	125	.07	.03	.04	4.	
1		0024	5	.00	.00	.00	0.	*	1	1230	126	.06	.02	.03	3.	
1		0030	6	.00	.00	.00	0.	*	1	1236	127	.05	.02	.03	2.	
1		0036	7	.00	.00	.00	0.	*	1	1242	128	.05	.02	.03	2.	
1		0042	8	.00	.00	.00	0.	*	1	1248	129	.04	.02	.02	1.	
1		0048	9	.00	.00	.00	0.	*	1	1254	130	.04	.02	.02	1.	
1		0054	10	.00	.00	.00	0.	*	1	1300	131	.03	.01	.02	1.	
1		0100	11	.00	.00	.00	0.	*	1	1306	132	.03	.01	.02	1.	
1		0106	12	.00	.00	.00	0.	*	1	1312	133	.03	.01	.02	1.	
1		0112	13	.00	.00	.00	0.	*	1	1318	134	.03	.01	.02	1.	
1		0118	14	.00	.00	.00	0.	*	1	1324	135	.03	.01	.02	1.	
1		0124	15	.00	.00	.00	0.	*	1	1330	136	.03	.01	.02	1.	
1		0130	16	.00	.00	.00	0.	*	1	1336	137	.02	.01	.01	1.	
1		0136	17	.00	.00	.00	0.	*	1	1342	138	.03	.01	.02	1.	
1		0142	18	.00	.00	.00	0.	*	1	1348	139	.02	.01	.01	1.	
1		0148	19	.00	.00	.00	0.	*	1	1354	140	.02	.01	.01	1.	
1		0154	20	.00	.00	.00	0.	*	1	1400	141	.02	.01	.01	1.	
1		0200	21	.00	.00	.00	0.	*	1	1406	142	.02	.01	.01	1.	
1		0206	22	.00	.00	.00	0.	*	1	1412	143	.02	.01	.01	1.	
1		0212	23	.00	.00	.00	0.	*	1	1418	144	.02	.01	.01	1.	
1		0218	24	.00	.00	.00	0.	*	1	1424	145	.02	.01	.01	1.	
1		0224	25	.00	.00	.00	0.	*	1	1430	146	.02	.01	.01	0.	
1		0230	26	.01	.01	.00	0.	*	1	1436	147	.02	.01	.01	1.	
1		0236	27	.00	.00	.00	0.	*	1	1442	148	.02	.01	.01	0.	
1		0242	28	.00	.00	.00	0.	*	1	1448	149	.01	.00	.01	0.	
1		0248	29	.00	.00	.00	0.	*	1	1454	150	.02	.01	.01	0.	
1		0254	30	.00	.00	.00	0.	*	1	1500	151	.02	.01	.01	0.	
1		0300	31	.00	.00	.00	0.	*	1	1506	152	.02	.01	.01	0.	
1		0306	32	.00	.00	.00	0.	*	1	1512	153	.01	.00	.01	0.	
1		0312	33	.01	.01	.00	0.	*	1	1518	154	.02	.01	.01	0.	
1		0318	34	.00	.00	.00	0.	*	1	1524	155	.01	.00	.01	0.	
1		0324	35	.00	.00	.00	0.	*	1	1530	156	.01	.00	.01	0.	
1		0330	36	.00	.00	.00	0.	*	1	1536	157	.02	.01	.01	0.	
1		0336	37	.00	.00	.00	0.	*	1	1542	158	.01	.00	.01	0.	
1		0342	38	.01	.01	.00	0.	*	1	1548	159	.01	.00	.01	0.	
1		0348	39	.00	.00	.00	0.	*	1	1554	160	.01	.00	.01	0.	
1		0354	40	.00	.00	.00	0.	*	1	1600	161	.01	.00	.01	0.	
1		0400	41	.00	.00	.00	0.	*	1	1606	162	.01	.00	.01	0.	
1		0406	42	.01	.01	.00	0.	*	1	1612	163	.01	.00	.01	0.	
1		0412	43	.00	.00	.00	0.	*	1	1618	164	.01	.00	.01	0.	
1		0418	44	.00	.00	.00	0.	*	1	1624	165	.01	.00	.01	0.	
1		0424	45	.01	.01	.00	0.	*	1	1630	166	.01	.00	.01	0.	
1		0430	46	.00	.00	.00	0.	*	1	1636	167	.01	.00	.01	0.	
1		0436	47	.00	.00	.00	0.	*	1	1642	168	.01	.00	.01	0.	
1		0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	0.	
1		0448	49	.00	.00	.00	0.	*	1	1654	170	.01	.00	.01	0.	
1		0454	50	.00	.00	.00	0.	*	1	1700	171	.00	.00	.00	0.	
1		0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	0.	
1		0506	52	.00	.00	.00	0.	*	1	1712	173	.01	.00	.01	0.	
1		0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	0.	
1		0518	54	.00	.00	.00	0.	*	1	1724	175	.01	.00	.01	0.	
1		0524	55	.01	.01	.00	0.	*	1	1730	176	.00	.00	.00	0.	
1		0530	56	.00	.00	.00	0.	*	1	1736	177	.01	.00	.01	0.	
1		0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	0.	
1		0542	58	.00	.00	.00	0.	*	1	1748	179	.00	.00	.00	0.	
1		0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	0.	
1		0554	60	.00	.00	.00	0.	*	1	1800	181	.01	.00	.01	0.	
1		0600	61	.01	.01	.00	0.	*	1	1806	182	.00	.00	.00	0.	
1		0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	0.	
1		0612	63	.00	.00	.00	0.	*	1	1818	184	.00	.00	.00	0.	
1		0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	0.	
1		0624	65	.01	.01	.00	0.	*	1	1830	186	.00	.00	.00	0.	
1		0630	66	.00	.00	.00	0.	*	1	1836	187	.01	.00	.01	0.	
1		0636	67	.01	.01	.00	0.	*	1	1842	188	.00	.00	.00	0.	
1		0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	0.	
1		0648	69	.00	.00	.00	0.	*	1	1854	190	.00	.00	.00	0.	
1		0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	0.	
1		0700	71	.01	.01	.00	0.	*	1	1906	192	.00	.00	.00	0.	
1		0706	72	.01	.01	.00	0.	*	1	1912	193	.00	.00	.00	0.	
1		0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	0.	
1		0718	74	.01	.01	.00	0.	*	1	1924	195	.00	.00	.00	0.	
1		0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	0.	

CALIFONHYDROLOGY

1	0730	76	.01	.01	.00	0.	1	1936	197	.00	.00	.00	0.	
1	0736	77	.01	.01	.00	0.	*	1	1942	198	.00	.00	.00	0.
1	0742	78	.01	.01	.00	0.	*	1	1948	199	.01	.00	.01	0.
1	0748	79	.01	.01	.00	0.	*	1	1954	200	.00	.00	.00	0.
1	0754	80	.01	.01	.00	0.	*	1	2000	201	.00	.00	.00	0.
1	0800	81	.01	.01	.00	0.	*	1	2006	202	.00	.00	.00	0.
1	0806	82	.01	.01	.00	0.	*	1	2012	203	.01	.00	.01	0.
1	0812	83	.01	.01	.00	0.	*	1	2018	204	.00	.00	.00	0.
1	0818	84	.01	.01	.00	0.	*	1	2024	205	.00	.00	.00	0.
1	0824	85	.01	.01	.00	0.	*	1	2030	206	.00	.00	.00	0.
1	0830	86	.01	.01	.00	0.	*	1	2036	207	.01	.00	.01	0.
1	0836	87	.02	.02	.00	0.	*	1	2042	208	.00	.00	.00	0.
1	0842	88	.01	.01	.00	0.	*	1	2048	209	.00	.00	.00	0.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.00	.00	.00	0.
1	0854	90	.02	.02	.00	0.	*	1	2100	211	.00	.00	.00	0.
1	0900	91	.02	.02	.00	0.	*	1	2106	212	.01	.00	.01	0.
1	0906	92	.01	.01	.00	0.	*	1	2112	213	.00	.00	.00	0.
1	0912	93	.02	.02	.00	0.	*	1	2118	214	.00	.00	.00	0.
1	0918	94	.02	.02	.00	0.	*	1	2124	215	.00	.00	.00	0.
1	0924	95	.02	.02	.00	0.	*	1	2130	216	.00	.00	.00	0.
1	0930	96	.02	.02	.00	0.	*	1	2136	217	.00	.00	.00	0.
1	0936	97	.02	.02	.00	0.	*	1	2142	218	.00	.00	.00	0.
1	0942	98	.02	.02	.00	0.	*	1	2148	219	.00	.00	.00	0.
1	0948	99	.02	.02	.00	0.	*	1	2154	220	.00	.00	.00	0.
1	0954	100	.02	.02	.00	0.	*	1	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.00	0.	*	1	2206	222	.00	.00	.00	0.
1	1006	102	.02	.02	.00	0.	*	1	2212	223	.00	.00	.00	0.
1	1012	103	.02	.02	.00	0.	*	1	2218	224	.00	.00	.00	0.
1	1018	104	.03	.03	.00	0.	*	1	2224	225	.00	.00	.00	0.
1	1024	105	.02	.02	.00	0.	*	1	2230	226	.00	.00	.00	0.
1	1030	106	.03	.02	.00	0.	*	1	2236	227	.00	.00	.00	0.
1	1036	107	.03	.02	.00	0.	*	1	2242	228	.00	.00	.00	0.
1	1042	108	.03	.02	.00	0.	*	1	2248	229	.00	.00	.00	0.
1	1048	109	.03	.03	.00	0.	*	1	2254	230	.00	.00	.00	0.
1	1054	110	.03	.03	.00	0.	*	1	2300	231	.00	.00	.00	0.
1	1100	111	.03	.03	.00	0.	*	1	2306	232	.00	.00	.00	0.
1	1106	112	.03	.03	.00	0.	*	1	2312	233	.00	.00	.00	0.
1	1112	113	.03	.03	.00	0.	*	1	2318	234	.00	.00	.00	0.
1	1118	114	.04	.04	.01	0.	*	1	2324	235	.00	.00	.00	0.
1	1124	115	.05	.04	.01	0.	*	1	2330	236	.00	.00	.00	0.
1	1130	116	.05	.04	.01	0.	*	1	2336	237	.00	.00	.00	0.
1	1136	117	.06	.05	.01	0.	*	1	2342	238	.00	.00	.00	0.
1	1142	118	.07	.05	.02	0.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.15	.11	.04	1.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.23	.16	.07	1.	*	2	0000	241	.00	.00	.00	0.
1	1200	121	.36	.22	.14	2.	*							0.

TOTAL RAINFALL = 4.30, TOTAL LOSS = 2.70, TOTAL EXCESS = 1.60

PEAK FLOW (CFS)	TIME (HR)	5-HR (CFS)	24-HR MAXIMUM AVERAGE FLOW (INCHES) (AC-FT)	72-HR (CFS)	24.00-HR (CFS)
5.	12.20	1.	1.324	0.	0.
		0.	1.	1.598	1.598

CUMULATIVE AREA = .01 SQ MI

DAHRMN PER	STATION	SUB D	0.	1.	2.	3.	4.	5.	6.	0.	0.	0.	0.	0.
			(O) OUTFLOW									(L) PRECIP.	(X) EXCESS	
10000	10		.0	.0	.0	.0	.0	.0	.0	.0	.4	.3	.2	.1
10006	20													
10012	30													
10018	40													
10024	50													
10030	60													
10036	70													
10042	80													
10048	90													
10054	100													
10100	110													
10106	120													
10112	130													
10118	140													
10124	150													
10130	160													
10136	170													
10142	180													
10148	190													
10154	200													
10200	210													
10206	220													
10212	230													
10218	240													
10224	250													
10230	260													
10236	270													
10242	280													
10248	290													
10254	300													
10300	310													
10306	320													
10312	330													
10318	340													
10324	350													
10330	360													
10336	370													
10342	380													

				CALIFONHYDROLOGY													
DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q
1		0000	1	.00	.00	.00	0.		1		1206	122	.42	.20	.22	6.	
1		0006	2	.01	.01	.00	0.		1		1212	123	.27	.11	.16	7.	
1		0012	3	.01	.01	.00	0.		1		1218	124	.17	.07	.11	7.	
1		0018	4	.00	.00	.00	0.		1		1224	125	.08	.03	.05	5.	
1		0024	5	.01	.01	.00	0.		1		1230	126	.07	.02	.04	4.	
1		0030	6	.00	.00	.00	0.		1		1236	127	.06	.02	.04	3.	
1		0036	7	.01	.01	.00	0.		1		1242	128	.06	.02	.04	2.	
1		0042	8	.01	.01	.00	0.		1		1248	129	.05	.02	.03	2.	
1		0048	9	.01	.01	.00	0.		1		1254	130	.04	.02	.03	1.	
1		0054	10	.00	.00	.00	0.		1		1300	131	.04	.01	.03	1.	
1		0100	11	.01	.01	.00	0.		1		1306	132	.04	.01	.02	1.	
1		0106	12	.01	.01	.00	0.		1		1312	133	.04	.01	.03	1.	
1		0112	13	.01	.01	.00	0.		1		1318	134	.03	.01	.02	1.	
1		0118	14	.01	.01	.00	0.		1		1324	135	.03	.01	.02	1.	
1		0124	15	.01	.01	.00	0.		1		1330	136	.03	.01	.02	1.	
1		0130	16	.00	.00	.00	0.		1		1336	137	.02	.01	.02	1.	
1		0136	17	.01	.01	.00	0.		1		1342	138	.03	.01	.02	1.	
1		0142	18	.01	.01	.00	0.		1		1348	139	.02	.01	.02	1.	
1		0148	19	.00	.00	.00	0.		1		1354	140	.02	.01	.02	1.	
1		0154	20	.01	.01	.00	0.		1		1400	141	.02	.01	.02	1.	
1		0200	21	.01	.01	.00	0.		1		1406	142	.02	.01	.02	1.	
1		0206	22	.01	.01	.00	0.		1		1412	143	.02	.01	.02	1.	
1		0212	23	.01	.01	.00	0.		1		1418	144	.02	.01	.01	1.	
1		0218	24	.01	.01	.00	0.		1		1424	145	.02	.01	.01	1.	
1		0224	25	.01	.01	.00	0.		1		1430	146	.02	.01	.02	1.	
1		0230	26	.01	.01	.00	0.		1		1436	147	.02	.01	.01	1.	
1		0236	27	.01	.01	.00	0.		1		1442	148	.02	.01	.01	1.	
1		0242	28	.01	.01	.00	0.		1		1448	149	.02	.00	.01	1.	
1		0248	29	.00	.00	.00	0.		1		1454	150	.02	.01	.01	1.	
1		0254	30	.01	.01	.00	0.		1		1500	151	.02	.01	.01	1.	
1		0300	31	.01	.01	.00	0.		1		1506	152	.02	.01	.01	1.	
1		0306	32	.01	.01	.00	0.		1		1512	153	.02	.00	.01	1.	
1		0312	33	.01	.01	.00	0.		1		1518	154	.02	.01	.01	1.	
1		0318	34	.00	.00	.00	0.		1		1524	155	.01	.00	.01	1.	
1		0324	35	.00	.00	.00	0.		1		1530	156	.02	.00	.01	0.	
1		0330	36	.01	.01	.00	0.		1		1536	157	.02	.01	.01	0.	
1		0336	37	.00	.00	.00	0.		1		1542	158	.01	.00	.01	0.	
1		0342	38	.01	.01	.00	0.		1		1548	159	.02	.00	.01	0.	
1		0348	39	.01	.01	.00	0.		1		1554	160	.02	.00	.01	0.	
1		0354	40	.00	.00	.00	0.		1		1600	161	.01	.00	.01	0.	
1		0400	41	.01	.01	.00	0.		1		1606	162	.02	.00	.01	0.	
1		0406	42	.01	.01	.00	0.		1		1612	163	.02	.00	.01	0.	
1		0412	43	.00	.00	.00	0.		1		1618	164	.01	.00	.01	0.	
1		0418	44	.00	.00	.00	0.		1		1624	165	.02	.00	.01	0.	
1		0424	45	.01	.01	.00	0.		1		1630	166	.01	.00	.01	0.	
1		0430	46	.01	.01	.00	0.		1		1636	167	.02	.00	.01	0.	
1		0436	47	.00	.00	.00	0.		1		1642	168	.02	.00	.01	0.	
1		0442	48	.01	.01	.00	0.		1		1648	169	.01	.00	.01	0.	
1		0448	49	.01	.01	.00	0.		1		1654	170	.01	.00	.01	0.	
1		0454	50	.00	.00	.00	0.		1		1700	171	.00	.00	.00	0.	
1		0500	51	.01	.01	.00	0.		1		1706	172	.01	.00	.01	0.	
1		0506	52	.00	.00	.00	0.		1		1712	173	.01	.00	.01	0.	
1		0512	53	.01	.01	.00	0.		1		1718	174	.01	.00	.01	0.	
1		0518	54	.01	.01	.00	0.		1		1724	175	.01	.00	.01	0.	
1		0524	55	.01	.01	.00	0.		1		1730	176	.00	.00	.00	0.	
1		0530	56	.01	.01	.00	0.		1		1736	177	.01	.00	.01	0.	
1		0536	57	.01	.01	.00	0.		1		1742	178	.01	.00	.01	0.	
1		0542	58	.01	.01	.00	0.		1		1748	179	.00	.00	.00	0.	
1		0548	59	.01	.01	.00	0.		1		1754	180	.01	.00	.01	0.	
1		0554	60	.01	.01	.00	0.		1		1800	181	.01	.00	.01	0.	
1		0600	61	.01	.01	.00	0.		1		1806	182	.00	.00	.00	0.	
1		0606	62	.01	.01	.00	0.		1		1812	183	.01	.00	.01	0.	
1		0612	63	.01	.01	.00	0.		1		1818	184	.01	.00	.00	0.	
1		0618	64	.01	.01	.00	0.		1		1824	185	.01	.00	.01	0.	
1		0624	65	.01	.01	.00	0.		1		1830	186	.00	.00	.00	0.	
1		0630	66	.00	.00	.00	0.		1		1836	187	.01	.00	.01	0.	
1		0636	67	.01	.01	.00	0.		1		1842	188	.00	.00	.00	0.	
1		0642	68	.01	.01	.00	0.		1		1848	189	.01	.00	.01	0.	
1		0648	69	.01	.01	.00	0.		1		1854	190	.00	.00	.00	0.	
1		0654	70	.01	.01	.00	0.		1		1900	191	.01	.00	.01	0.	
1		0700	71	.01	.01	.00	0.		1		1906	192	.00	.00	.00	0.	
1		0706	72	.01	.01	.00	0.		1		1912	193	.00	.00	.00	0.	
1		0712	73	.01	.01	.00	0.		1		1918	194	.01	.00	.01	0.	
1		0718	74	.01	.01	.00	0.		1		1924	195	.00	.00	.00	0.	
1		0724	75	.01	.01	.00	0.		1		1930	196	.01	.00	.01	0.	
1		0730	76	.01	.01	.00	0.		1		1936	197	.01	.00	.00	0.	
1		0736	77	.01	.01	.00	0.		1		1942	198	.00	.00	.00	0.	
1		0742	78	.01	.01	.00	0.		1		1948	199	.01	.00	.01	0.	
1		0748	79	.01	.01	.00	0.		1		1954	200	.00	.00	.00	0.	
1		0754	80	.02	.02	.00	0.		1		2000	201	.01	.00	.00	0.	
1		0800	81	.01	.01	.00	0.		1		2006	202	.00	.00	.00	0.	
1		0806	82	.01	.01	.00	0.		1		2012	203	.01	.00	.01	0.	
1		0812	83	.01	.01	.00	0.		1		2018	204	.01	.00	.00	0.	
1		0818	84	.01	.01	.00	0.		1		2024	205	.00	.00	.00	0.	
1		0824	85	.02	.02	.00	0.		1		2030	206	.00	.00	.00	0.	
1		0830	86	.01	.01	.00	0.		1		2036	207	.01	.00	.01	0.	
1		0836	87	.02	.02	.00	0.		1		2042	208	.01	.00	.00	0.	
1		0842	88	.01	.01	.00	0.		1		2048	209	.00	.00	.00	0.	
1		0848	89	.02	.02	.00	0.		1		2054	210	.00	.00	.00	0.	
1		0854	90	.02	.02	.00	0.		1		2100	211	.00	.00	.00	0.	
1		0900	91	.02	.02	.00	0.		1		2106	212	.01	.00	.01	0.	
1		0906	92	.01	.01	.00	0.		1		2112	213	.00	.00	.00	0.	
1		0912	93	.02	.02	.00	0.		1		2118	214	.00	.00	.00	0.	
1		0918	94	.02	.02	.00	0.		1		2124	215	.00	.00	.00	0.	
1		0924	95	.02	.02	.00	0.		1		2130	216	.01	.00	.00	0.	
1		0930	96	.02	.02	.00	0.		1		2136	217	.00	.00	.00	0.	
1		0936	97	.02	.02	.00	0.		1		2142	218	.00	.00	.00	0.	
1		0942	98	.02	.02	.00	0.		1		2148	219	.00	.00	.00	0.	
1		0948	99	.02	.02	.00	0.		1		2154	220	.00	.00	.00	0.	
1		0954	100	.02	.02	.00	0.		1		2200	221	.01	.00	.01	0.	
1		1000	101	.02	.02	.00	0.		1		2206	222	.00	.00	.00	0.	
1		1006	102	.03	.02	.00	0.										

CALIFONHYDROLOGY

1	1024	105	.02	.02	.00	0.	1	2230	226	.00	.00	.00	0.
1	1030	106	.03	.03	.00	0.	1	2236	227	.00	.00	.00	0.
1	1036	107	.03	.03	.00	0.	1	2242	228	.00	.00	.00	0.
1	1042	108	.03	.03	.00	0.	1	2248	229	.01	.00	.00	0.
1	1048	109	.03	.03	.01	0.	1	2300	230	.00	.00	.00	0.
1	1054	110	.03	.03	.01	0.	1	2306	231	.00	.00	.00	0.
1	1100	111	.04	.03	.01	0.	1	2312	232	.00	.00	.00	0.
1	1106	112	.04	.03	.01	0.	1	2318	233	.01	.00	.00	0.
1	1112	113	.04	.03	.01	0.	1	2324	234	.00	.00	.00	0.
1	1118	114	.05	.04	.01	0.	1	2330	235	.00	.00	.00	0.
1	1124	115	.06	.04	.01	0.	1	2336	236	.00	.00	.00	0.
1	1130	116	.06	.04	.01	0.	1	2342	237	.01	.00	.00	0.
1	1136	117	.07	.05	.02	1.	1	2348	238	.00	.00	.00	0.
1	1142	118	.08	.06	.02	1.	1	2354	239	.00	.00	.00	0.
1	1148	119	.17	.12	.06	1.	1	0000	240	.00	.00	.00	0.
1	1154	120	.27	.16	.10	2.	2		241	.00	.00	.00	0.
1	1200	121	.42	.23	.19	4.							0.

TOTAL RAINFALL = 5.00, TOTAL LOSS = 2.88, TOTAL EXCESS = 2.12

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	24-HR MAXIMUM AVERAGE FLOW	72-HR MAXIMUM AVERAGE FLOW	24.00-HR
7.	12.20	1.745	0.	0.	0.
		(INCHES) (AC-FT)	1.	2.110	2.110
			1.	1.	1.

CUMULATIVE AREA = .01 SQ MI

DAHRMN PER	STATION										SUB D	(L) PRECIP.	(X) EXCESS	
	0.	1.	2.	3.	4.	5.	6.	7.	0.	0.				
10000	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10006	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10012	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10018	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10024	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10030	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10036	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10042	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10048	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10054	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10100	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10106	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10112	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10118	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10124	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10130	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10136	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10142	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10148	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10154	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10200	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10212	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10218	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10224	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10230	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10236	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10242	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10248	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10254	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10300	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10306	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10312	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10318	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10324	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10330	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10336	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10342	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10348	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10354	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10406	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10412	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10418	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10424	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10430	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10436	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10442	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10448	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10454	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10506	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10512	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10518	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10524	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10530	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10536	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10542	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10548	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10554	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10600	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10606	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10612	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10618	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10624	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10630	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10636	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

CALIFONHYDROLOGY

1	0242	28	.01	.01	.00	0.	*	1	1448	149	.02	.00	.01	1.
1	0248	29	.01	.01	.00	0.	*	1	1454	150	.02	.01	.02	1.
1	0254	30	.01	.01	.00	0.	*	1	1500	151	.02	.01	.02	1.
1	0300	31	.01	.01	.00	0.	*	1	1506	152	.02	.01	.02	1.
1	0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.00	.01	1.
1	0312	33	.01	.01	.00	0.	*	1	1518	154	.02	.01	.02	1.
1	0318	34	.01	.01	.00	0.	*	1	1524	155	.02	.00	.01	1.
1	0324	35	.01	.01	.00	0.	*	1	1530	156	.02	.00	.01	1.
1	0330	36	.01	.01	.00	0.	*	1	1536	157	.02	.01	.02	1.
1	0336	37	.01	.01	.00	0.	*	1	1542	158	.02	.00	.01	1.
1	0342	38	.01	.01	.00	0.	*	1	1548	159	.02	.00	.01	1.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.00	.01	1.
1	0354	40	.01	.01	.00	0.	*	1	1600	161	.02	.00	.01	1.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.00	.01	1.
1	0406	42	.01	.01	.00	0.	*	1	1612	163	.02	.00	.01	1.
1	0412	43	.01	.01	.00	0.	*	1	1618	164	.02	.00	.01	1.
1	0418	44	.01	.01	.00	0.	*	1	1624	165	.02	.00	.01	1.
1	0424	45	.01	.01	.00	0.	*	1	1630	166	.01	.00	.01	1.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.00	.01	1.
1	0436	47	.01	.01	.00	0.	*	1	1642	168	.02	.00	.01	1.
1	0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	1.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.01	.00	.01	0.
1	0454	50	.01	.01	.00	0.	*	1	1700	171	.01	.00	.00	0.
1	0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	0.
1	0506	52	.01	.01	.00	0.	*	1	1712	173	.01	.00	.01	0.
1	0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	0.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.01	.00	.01	0.
1	0524	55	.01	.01	.00	0.	*	1	1730	176	.01	.00	.00	0.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.01	.00	.01	0.
1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	0.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.00	0.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	0.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.01	.00	.01	0.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.01	.00	.00	0.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	0.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.00	0.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	0.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.01	.00	.00	0.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.01	.00	.01	0.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.01	.00	.00	0.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	0.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.00	0.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	0.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.01	.00	.00	0.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.01	.00	.00	0.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	0.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.01	.00	.00	0.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	0.
1	0730	76	.02	.02	.00	0.	*	1	1936	197	.01	.00	.00	0.
1	0736	77	.02	.02	.00	0.	*	1	1942	198	.01	.00	.00	0.
1	0742	78	.02	.02	.00	0.	*	1	1948	199	.01	.00	.01	0.
1	0748	79	.02	.02	.00	0.	*	1	1954	200	.01	.00	.00	0.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.00	0.
1	0800	81	.02	.02	.00	0.	*	1	2006	202	.01	.00	.00	0.
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.01	.00	.01	0.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.00	0.
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.00	0.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.00	0.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.01	.00	.01	0.
1	0836	87	.02	.02	.00	0.	*	1	2042	208	.01	.00	.00	0.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.00	0.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.00	0.
1	0854	90	.02	.02	.00	0.	*	1	2100	211	.01	.00	.00	0.
1	0900	91	.02	.02	.00	0.	*	1	2106	212	.01	.00	.01	0.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.00	0.
1	0912	93	.02	.02	.00	0.	*	1	2118	214	.01	.00	.00	0.
1	0918	94	.02	.02	.00	0.	*	1	2124	215	.01	.00	.00	0.
1	0924	95	.02	.02	.00	0.	*	1	2130	216	.01	.00	.00	0.
1	0930	96	.02	.02	.00	0.	*	1	2136	217	.01	.00	.00	0.
1	0936	97	.02	.02	.00	0.	*	1	2142	218	.01	.00	.00	0.
1	0942	98	.03	.03	.00	0.	*	1	2148	219	.01	.00	.00	0.
1	0948	99	.02	.02	.00	0.	*	1	2154	220	.01	.00	.00	0.
1	0954	100	.03	.03	.00	0.	*	1	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.00	0.	*	1	2206	222	.01	.00	.00	0.
1	1006	102	.03	.03	.00	0.	*	1	2212	223	.01	.00	.00	0.
1	1012	103	.03	.03	.00	0.	*	1	2218	224	.01	.00	.00	0.
1	1018	104	.04	.03	.01	0.	*	1	2224	225	.01	.00	.00	0.
1	1024	105	.03	.02	.01	0.	*	1	2230	226	.01	.00	.00	0.
1	1030	106	.04	.03	.01	0.	*	1	2236	227	.01	.00	.00	0.
1	1036	107	.04	.03	.01	0.	*	1	2242	228	.01	.00	.00	0.
1	1042	108	.04	.03	.01	0.	*	1	2248	229	.01	.00	.00	0.
1	1048	109	.04	.03	.01	0.	*	1	2254	230	.01	.00	.00	0.
1	1054	110	.04	.03	.01	0.	*	1	2300	231	.01	.00	.00	0.
1	1100	111	.05	.04	.01	0.	*	1	2306	232	.01	.00	.00	0.
1	1106	112	.05	.04	.01	0.	*	1	2312	233	.01	.00	.00	0.
1	1112	113	.05	.03	.01	1.	*	1	2318	234	.01	.00	.00	0.
1	1118	114	.06	.04	.02	1.	*	1	2324	235	.01	.00	.00	0.
1	1124	115	.07	.05	.02	1.	*	1	2330	236	.01	.00	.00	0.
1	1130	116	.07	.04	.02	1.	*	1	2336	237	.01	.00	.00	0.
1	1136	117	.09	.05	.03	1.	*	1	2342	238	.01	.00	.00	0.
1	1142	118	.10	.06	.04	1.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.21	.12	.09	2.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.32	.17	.15	3.	*	2	0000	241	.01	.00	.00	0.
1	1200	121	.51	.23	.28	5.	*							

TOTAL RAINFALL = 6.10, TOTAL LOSS = 3.12, TOTAL EXCESS = 2.98

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
(CFS)	(HR)	(CFS)	24-HR	72-HR
+ 10,	12.20	2.448	1.2971	1.2971
		(INCHES)	1.	1.
		(AC-FT)	1.	1.

CALIFONHYDROLOGY

CUMULATIVE AREA = .01 SQ MI

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DAHRMN	PER	0.	2.	(O) 4.	6.	8.	10.	0.	0.	0.	0.	(L) 0.	0.	(X) 0.	0.
		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	PRECIP.	.4	EXCESS	.2
10000	10														
10006	20														
10012	30														
10018	40														
10024	50														
10030	60														
10036	70														
10042	80														
10048	90														
10054	100														
10100	110														
10106	120														
10112	130														
10118	140														
10124	150														
10130	160														
10136	170														
10142	180														
10148	190														
10154	200														
10200	210														
10206	220														
10212	230														
10218	240														
10224	250														
10230	260														
10236	270														
10242	280														
10248	290														
10254	300														
10300	310														
10306	320														
10312	330														
10318	340														
10324	350														
10330	360														
10336	370														
10342	380														
10348	390														
10354	400														
10400	410														
10406	420														
10412	430														
10418	440														
10424	450														
10430	460														
10436	470														
10442	480														
10448	490														
10454	500														
10500	510														
10506	520														
10512	530														
10518	540														
10524	550														
10530	560														
10536	570														
10542	580														
10548	590														
10554	600														
10600	610														
10606	620														
10612	630														
10618	640														
10624	650														
10630	660														
10636	670														
10642	680														
10648	690														
10654	700														
10700	710														
10706	720														
10712	730														
10718	740														
10724	750														
10730	760														
10736	770														
10742	780														
10748	790														
10754	800														
10800	810														
10806	820														
10812	830														
10818	840														
10824	850														
10830	860														
10836	870														
10842	880														
10848	890														
10854	900														
10900	910														
10906	920														
10912	930														
10918	940														
10924	950														
10930	960														

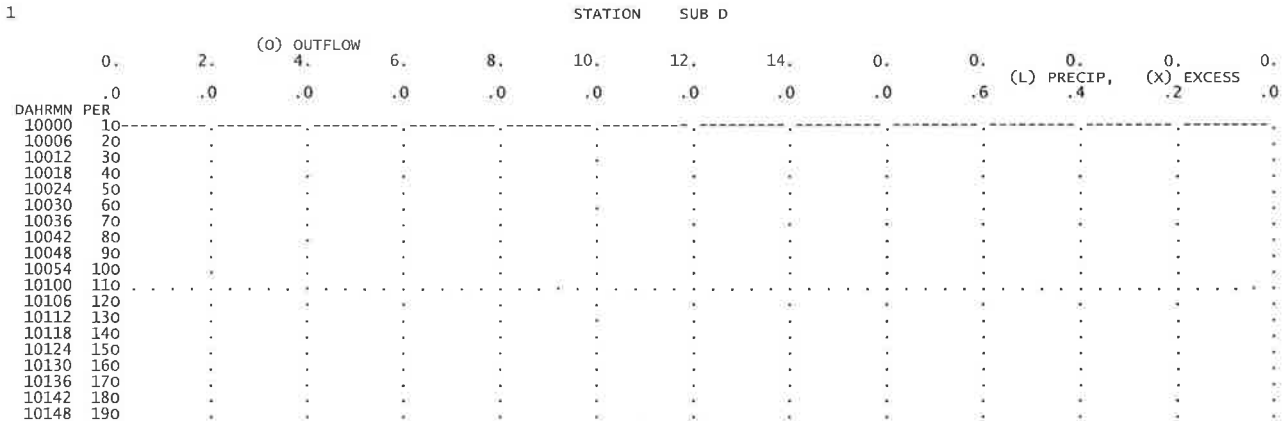
CALIFONHYDROLOGY

1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	0.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.01	0.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	0.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.01	.00	.01	0.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.01	.00	.01	0.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	0.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.01	0.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	0.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.01	.00	.01	0.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.01	.00	.01	0.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.01	.00	.01	0.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	0.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.01	0.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	0.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.01	.00	.01	0.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.01	.00	.01	0.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	0.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.01	.00	.01	0.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	0.
1	0730	76	.02	.02	.00	0.	*	1	1936	197	.01	.00	.01	0.
1	0736	77	.02	.02	.00	0.	*	1	1942	198	.01	.00	.01	0.
1	0742	78	.02	.02	.00	0.	*	1	1948	199	.01	.00	.01	0.
1	0748	79	.02	.02	.00	0.	*	1	1954	200	.01	.00	.01	0.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.01	0.
1	0800	81	.02	.02	.00	0.	*	1	2006	202	.01	.00	.01	0.
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.01	.00	.01	0.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.01	0.
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.01	0.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.01	0.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.01	.00	.01	0.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	0.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	0.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	0.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	0.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.01	.00	.01	0.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	0.
1	0912	93	.03	.02	.00	0.	*	1	2118	214	.01	.00	.01	0.
1	0918	94	.03	.02	.00	0.	*	1	2124	215	.01	.00	.01	0.
1	0924	95	.03	.02	.00	0.	*	1	2130	216	.01	.00	.01	0.
1	0930	96	.03	.02	.00	0.	*	1	2136	217	.01	.00	.01	0.
1	0936	97	.03	.02	.00	0.	*	1	2142	218	.01	.00	.01	0.
1	0942	98	.03	.03	.01	0.	*	1	2148	219	.01	.00	.01	0.
1	0948	99	.03	.02	.01	0.	*	1	2154	220	.01	.00	.01	0.
1	0954	100	.03	.03	.01	0.	*	1	2200	221	.01	.00	.01	0.
1	1000	101	.03	.02	.01	0.	*	1	2206	222	.01	.00	.01	0.
1	1006	102	.04	.03	.01	0.	*	1	2212	223	.01	.00	.01	0.
1	1012	103	.03	.03	.01	0.	*	1	2218	224	.01	.00	.01	0.
1	1018	104	.04	.03	.01	0.	*	1	2224	225	.01	.00	.01	0.
1	1024	105	.03	.03	.01	0.	*	1	2230	226	.01	.00	.01	0.
1	1030	106	.04	.03	.01	0.	*	1	2236	227	.01	.00	.01	0.
1	1036	107	.04	.03	.01	0.	*	1	2242	228	.01	.00	.01	0.
1	1042	108	.04	.03	.01	0.	*	1	2248	229	.01	.00	.01	0.
1	1048	109	.05	.03	.01	0.	*	1	2254	230	.01	.00	.01	0.
1	1054	110	.05	.03	.02	1.	*	1	2300	231	.01	.00	.01	0.
1	1100	111	.06	.04	.02	1.	*	1	2306	232	.01	.00	.01	0.
1	1106	112	.06	.04	.02	1.	*	1	2312	233	.01	.00	.01	0.
1	1112	113	.06	.04	.02	1.	*	1	2318	234	.01	.00	.01	0.
1	1118	114	.07	.04	.03	1.	*	1	2324	235	.01	.00	.01	0.
1	1124	115	.08	.05	.03	1.	*	1	2330	236	.01	.00	.01	0.
1	1130	116	.08	.05	.03	1.	*	1	2336	237	.01	.00	.01	0.
1	1136	117	.10	.06	.04	1.	*	1	2342	238	.01	.00	.01	0.
1	1142	118	.11	.06	.05	2.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.24	.13	.12	2.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.37	.17	.20	4.	*	2	0000	241	.01	.00	.01	0.
1	1200	121	.59	.23	.35	7.	*							

TOTAL RAINFALL = 7.00, TOTAL LOSS = 3.28, TOTAL EXCESS = 3.72

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM (INCHES) (AC-FT)	AVERAGE FLOW 24-HR	72-HR	24.00-HR
13.	12.20	2.	3.047	1.	1.	1.
			1.	3.713	3.713	3.713
				1.	1.	1.

CUMULATIVE AREA = .01 SQ MI



CALIFONHYDROLOGY

12306 232.0
 12312 233.0
 12318 234.0
 12324 235.0
 12330 236.0
 12336 237.0
 12342 238.0
 12348 239.0
 12354 240.0
 20000 241.0

1

HYDROGRAPH AT STATION SUB D
 PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.67	.19	.48	13.
1		0006	2	.01	.01	.00	0.	1		1212	123	.43	.11	.32	15.
1		0012	3	.01	.01	.00	0.	1		1218	124	.28	.06	.22	14.
1		0018	4	.01	.01	.00	0.	1		1224	125	.13	.03	.10	11.
1		0024	5	.01	.01	.00	0.	1		1230	126	.10	.02	.08	8.
1		0030	6	.01	.01	.00	0.	1		1236	127	.10	.02	.08	5.
1		0036	7	.01	.01	.00	0.	1		1242	128	.09	.02	.07	4.
1		0042	8	.01	.01	.00	0.	1		1248	129	.07	.01	.06	3.
1		0048	9	.01	.01	.00	0.	1		1254	130	.07	.01	.06	3.
1		0054	10	.01	.01	.00	0.	1		1300	131	.06	.01	.05	3.
1		0100	11	.01	.01	.00	0.	1		1306	132	.06	.01	.05	2.
1		0106	12	.01	.01	.00	0.	1		1312	133	.06	.01	.05	2.
1		0112	13	.01	.01	.00	0.	1		1318	134	.05	.01	.04	2.
1		0118	14	.01	.01	.00	0.	1		1324	135	.06	.01	.05	2.
1		0124	15	.01	.01	.00	0.	1		1330	136	.05	.01	.04	2.
1		0130	16	.01	.01	.00	0.	1		1336	137	.04	.01	.03	2.
1		0136	17	.01	.01	.00	0.	1		1342	138	.05	.01	.04	2.
1		0142	18	.01	.01	.00	0.	1		1348	139	.04	.01	.03	2.
1		0148	19	.01	.01	.00	0.	1		1354	140	.04	.01	.03	1.
1		0154	20	.01	.01	.00	0.	1		1400	141	.04	.01	.03	1.
1		0200	21	.01	.01	.00	0.	1		1406	142	.04	.01	.03	1.
1		0206	22	.01	.01	.00	0.	1		1412	143	.04	.01	.03	1.
1		0212	23	.01	.01	.00	0.	1		1418	144	.03	.01	.03	1.
1		0218	24	.01	.01	.00	0.	1		1424	145	.03	.01	.03	1.
1		0224	25	.01	.01	.00	0.	1		1430	146	.04	.01	.03	1.
1		0230	26	.02	.02	.00	0.	1		1436	147	.03	.01	.03	1.
1		0236	27	.01	.01	.00	0.	1		1442	148	.03	.01	.03	1.
1		0242	28	.01	.01	.00	0.	1		1448	149	.02	.00	.02	1.
1		0248	29	.01	.01	.00	0.	1		1454	150	.03	.01	.03	1.
1		0254	30	.01	.01	.00	0.	1		1500	151	.03	.01	.03	1.
1		0300	31	.01	.01	.00	0.	1		1506	152	.03	.01	.03	1.
1		0306	32	.01	.01	.00	0.	1		1512	153	.02	.00	.02	1.
1		0312	33	.02	.02	.00	0.	1		1518	154	.03	.01	.03	1.
1		0318	34	.01	.01	.00	0.	1		1524	155	.02	.00	.02	1.
1		0324	35	.01	.01	.00	0.	1		1530	156	.02	.00	.02	1.
1		0330	36	.01	.01	.00	0.	1		1536	157	.03	.01	.03	1.
1		0336	37	.01	.01	.00	0.	1		1542	158	.02	.00	.02	1.
1		0342	38	.02	.02	.00	0.	1		1548	159	.02	.00	.02	1.
1		0348	39	.01	.01	.00	0.	1		1554	160	.02	.00	.02	1.
1		0354	40	.01	.01	.00	0.	1		1600	161	.02	.00	.02	1.
1		0400	41	.01	.01	.00	0.	1		1606	162	.02	.00	.02	1.
1		0406	42	.02	.02	.00	0.	1		1612	163	.02	.00	.02	1.
1		0412	43	.01	.01	.00	0.	1		1618	164	.02	.00	.02	1.
1		0418	44	.01	.01	.00	0.	1		1624	165	.02	.00	.02	1.
1		0424	45	.02	.02	.00	0.	1		1630	166	.02	.00	.01	1.
1		0430	46	.01	.01	.00	0.	1		1636	167	.02	.00	.02	1.
1		0436	47	.01	.01	.00	0.	1		1642	168	.02	.00	.02	1.
1		0442	48	.02	.02	.00	0.	1		1648	169	.02	.00	.01	1.
1		0448	49	.01	.01	.00	0.	1		1654	170	.02	.00	.01	1.
1		0454	50	.01	.01	.00	0.	1		1700	171	.01	.00	.01	1.
1		0500	51	.02	.02	.00	0.	1		1706	172	.02	.00	.01	0.
1		0506	52	.01	.01	.00	0.	1		1712	173	.02	.00	.01	0.
1		0512	53	.02	.02	.00	0.	1		1718	174	.02	.00	.01	1.
1		0518	54	.01	.01	.00	0.	1		1724	175	.02	.00	.01	1.
1		0524	55	.02	.02	.00	0.	1		1730	176	.01	.00	.01	1.
1		0530	56	.01	.01	.00	0.	1		1736	177	.02	.00	.01	0.
1		0536	57	.02	.02	.00	0.	1		1742	178	.02	.00	.01	0.
1		0542	58	.01	.01	.00	0.	1		1748	179	.01	.00	.01	0.
1		0548	59	.02	.02	.00	0.	1		1754	180	.02	.00	.01	0.
1		0554	60	.01	.01	.00	0.	1		1800	181	.02	.00	.01	0.
1		0600	61	.02	.02	.00	0.	1		1806	182	.01	.00	.01	0.
1		0606	62	.02	.02	.00	0.	1		1812	183	.02	.00	.01	0.
1		0612	63	.01	.01	.00	0.	1		1818	184	.01	.00	.01	0.
1		0618	64	.02	.02	.00	0.	1		1824	185	.02	.00	.01	0.
1		0624	65	.02	.02	.00	0.	1		1830	186	.01	.00	.01	0.
1		0630	66	.01	.01	.00	0.	1		1836	187	.02	.00	.01	0.
1		0636	67	.02	.02	.00	0.	1		1842	188	.01	.00	.01	0.
1		0642	68	.02	.02	.00	0.	1		1848	189	.02	.00	.01	0.
1		0648	69	.01	.01	.00	0.	1		1854	190	.01	.00	.01	0.
1		0654	70	.02	.02	.00	0.	1		1900	191	.02	.00	.01	0.
1		0700	71	.02	.02	.00	0.	1		1906	192	.01	.00	.01	0.
1		0706	72	.02	.02	.00	0.	1		1912	193	.01	.00	.01	0.
1		0712	73	.02	.02	.00	0.	1		1918	194	.02	.00	.01	0.
1		0718	74	.02	.02	.00	0.	1		1924	195	.01	.00	.01	0.
1		0724	75	.02	.02	.00	0.	1		1930	196	.02	.00	.01	0.
1		0730	76	.02	.02	.00	0.	1		1936	197	.01	.00	.01	0.
1		0736	77	.02	.02	.00	0.	1		1942	198	.01	.00	.01	0.
1		0742	78	.02	.02	.00	0.	1		1948	199	.02	.00	.01	0.
1		0748	79	.02	.02	.00	0.	1		1954	200	.01	.00	.01	0.
1		0754	80	.02	.02	.00	0.	1		2000	201	.01	.00	.01	0.
1		0800	81	.02	.02	.00	0.	1		2006	202	.01	.00	.01	0.
1		0806	82	.02	.02	.00	0.	1		2012	203	.02	.00	.01	0.
1		0812	83	.02	.02	.00	0.	1		2018	204	.01	.00	.01	0.
1		0818	84	.02	.02	.00	0.	1		2024	205	.01	.00	.01	0.
1		0824	85	.02	.02	.00	0.	1		2030	206	.01	.00	.01	0.

CALIFONHYDROLOGY														
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.02	.00	.01	0.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	0.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	0.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	0.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	0.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.02	.00	.01	0.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	0.
1	0912	93	.03	.03	.01	0.	*	1	2118	214	.01	.00	.01	0.
1	0918	94	.03	.03	.01	0.	*	1	2124	215	.01	.00	.01	0.
1	0924	95	.03	.03	.01	0.	*	1	2130	216	.01	.00	.01	0.
1	0930	96	.03	.03	.01	0.	*	1	2136	217	.01	.00	.01	0.
1	0936	97	.03	.03	.01	0.	*	1	2142	218	.01	.00	.01	0.
1	0942	98	.04	.03	.01	0.	*	1	2148	219	.01	.00	.01	0.
1	0948	99	.03	.02	.01	0.	*	1	2154	220	.01	.00	.01	0.
1	0954	100	.04	.03	.01	0.	*	1	2200	221	.02	.00	.01	0.
1	1000	101	.03	.02	.01	0.	*	1	2206	222	.01	.00	.01	0.
1	1006	102	.04	.03	.01	0.	*	1	2212	223	.01	.00	.01	0.
1	1012	103	.04	.03	.01	0.	*	1	2218	224	.01	.00	.01	0.
1	1018	104	.05	.03	.01	0.	*	1	2224	225	.01	.00	.01	0.
1	1024	105	.04	.03	.01	1.	*	1	2230	226	.01	.00	.01	0.
1	1030	106	.05	.03	.02	1.	*	1	2236	227	.01	.00	.01	0.
1	1036	107	.05	.03	.02	1.	*	1	2242	228	.01	.00	.01	0.
1	1042	108	.05	.03	.02	1.	*	1	2248	229	.01	.00	.01	0.
1	1048	109	.06	.04	.02	1.	*	1	2254	230	.01	.00	.01	0.
1	1054	110	.06	.03	.02	1.	*	1	2300	231	.01	.00	.01	0.
1	1100	111	.06	.04	.03	1.	*	1	2306	232	.01	.00	.01	0.
1	1106	112	.06	.04	.03	1.	*	1	2312	233	.01	.00	.01	0.
1	1112	113	.06	.04	.03	1.	*	1	2318	234	.01	.00	.01	0.
1	1118	114	.08	.05	.03	1.	*	1	2324	235	.01	.00	.01	0.
1	1124	115	.09	.05	.04	1.	*	1	2330	236	.01	.00	.01	0.
1	1130	116	.09	.05	.04	1.	*	1	2336	237	.01	.00	.01	0.
1	1136	117	.11	.06	.05	2.	*	1	2342	238	.01	.00	.01	0.
1	1142	118	.13	.06	.07	2.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.28	.13	.15	3.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.42	.17	.25	5.	*	2	0000	241	.01	.00	.01	0.
1	1200	121	.67	.23	.44	9.	*							

TOTAL RAINFALL = 8.00, TOTAL LOSS = 3.42, TOTAL EXCESS = 4.58

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.00-HR
(CFS)	(HR)	(CFS)	(INCHES)	(AC-FT)	
15.	12.20	3.729	4.567	4.567	4.567
		1.	2.	2.	2.

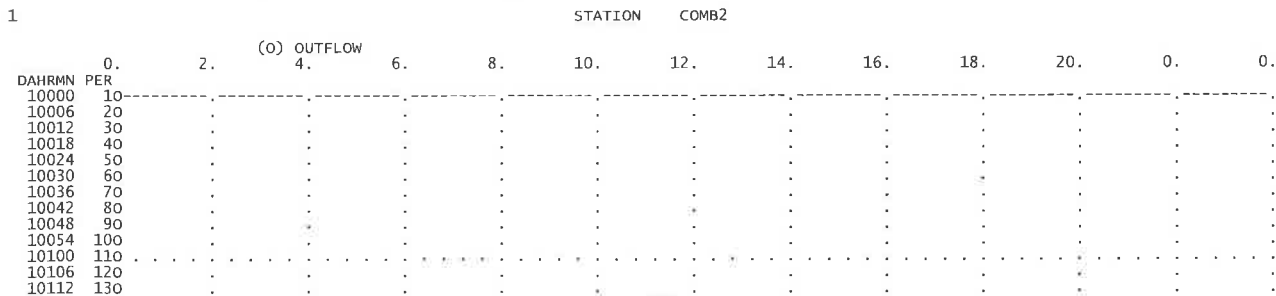
CUMULATIVE AREA = .01 SQ MI

DAHRMN PER	STATION										SUB D	(L) PRECIP,	(X) EXCESS	
	0.	2.	4.	6.	8.	10.	12.	14.	16.	18.				
10000	10													
10006	20													
10012	30													
10018	40													
10024	50													
10030	60													
10036	70													
10042	80													
10048	90													
10054	100													
10100	110													
10106	120													
10112	130													
10118	140													
10124	150													
10130	160													
10136	170													
10142	180													
10148	190													
10154	200													
10200	210													
10206	220													
10212	230													
10218	240													
10224	250													
10230	260													
10236	270													
10242	280													
10248	290													
10254	300													
10300	310													
10306	320													
10312	330													
10318	340													
10324	350													
10330	360													
10336	370													
10342	380													
10348	390													
10354	400													
10400	410													
10406	420													
10412	430													
10418	440													
10424	450													
10430	460													
10436	470													
10442	480													

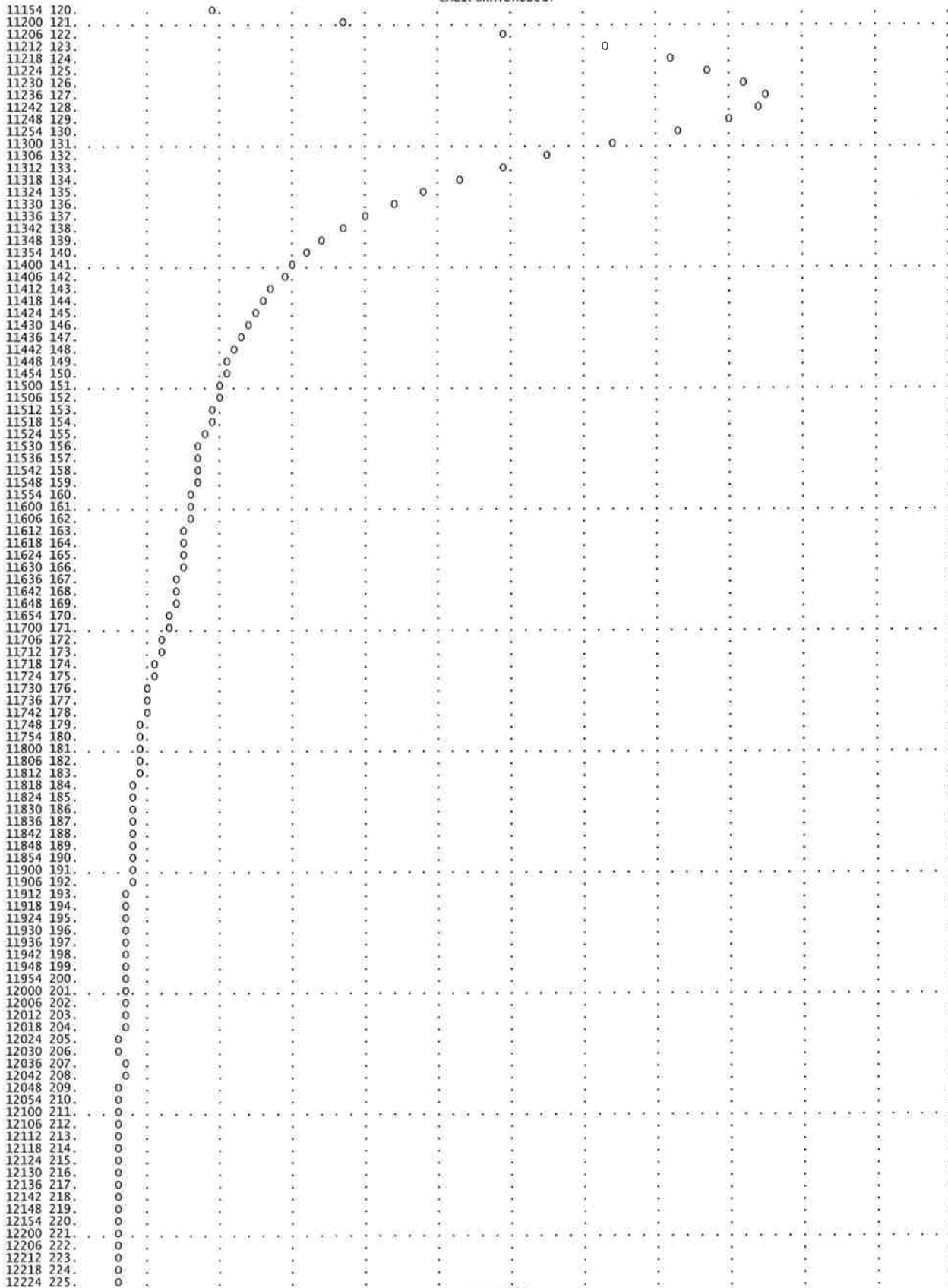
HYDROGRAPH AT STATION COMB2
SUM OF 3 HYDROGRAPHS
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	
1		0000	1	0.	*	1		0606	62	0.	*	1		1212	123	15.	*	1		1818	184	2.	*	
1		0006	2	0.	*	1		0612	63	0.	*	1		1218	124	16.	*	1		1824	185	2.	*	
1		0012	3	0.	*	1		0618	64	0.	*	1		1224	125	17.	*	1		1830	186	2.	*	
1		0018	4	0.	*	1		0624	65	0.	*	1		1230	126	18.	*	1		1836	187	2.	*	
1		0024	5	0.	*	1		0630	66	0.	*	1		1236	127	19.	*	1		1842	188	2.	*	
1		0030	6	0.	*	1		0636	67	0.	*	1		1242	128	19.	*	1		1848	189	2.	*	
1		0036	7	0.	*	1		0642	68	0.	*	1		1248	129	18.	*	1		1854	190	2.	*	
1		0042	8	0.	*	1		0648	69	0.	*	1		1254	130	17.	*	1		1900	191	2.	*	
1		0048	9	0.	*	1		0654	70	0.	*	1		1300	131	15.	*	1		1906	192	2.	*	
1		0054	10	0.	*	1		0700	71	0.	*	1		1306	132	13.	*	1		1912	193	1.	*	
1		0100	11	0.	*	1		0706	72	0.	*	1		1312	133	12.	*	1		1918	194	1.	*	
1		0106	12	0.	*	1		0712	73	0.	*	1		1318	134	11.	*	1		1924	195	1.	*	
1		0112	13	0.	*	1		0718	74	0.	*	1		1324	135	10.	*	1		1930	196	1.	*	
1		0118	14	0.	*	1		0724	75	0.	*	1		1330	136	9.	*	1		1936	197	1.	*	
1		0124	15	0.	*	1		0730	76	0.	*	1		1336	137	8.	*	1		1942	198	1.	*	
1		0130	16	0.	*	1		0736	77	0.	*	1		1342	138	7.	*	1		1948	199	1.	*	
1		0136	17	0.	*	1		0742	78	0.	*	1		1348	139	7.	*	1		1954	200	1.	*	
1		0142	18	0.	*	1		0748	79	0.	*	1		1354	140	6.	*	1		2000	201	1.	*	
1		0148	19	0.	*	1		0754	80	0.	*	1		1400	141	6.	*	1		2006	202	1.	*	
1		0154	20	0.	*	1		0800	81	0.	*	1		1406	142	6.	*	1		2012	203	1.	*	
1		0200	21	0.	*	1		0806	82	0.	*	1		1412	143	5.	*	1		2018	204	1.	*	
1		0206	22	0.	*	1		0812	83	0.	*	1		1418	144	5.	*	1		2024	205	1.	*	
1		0212	23	0.	*	1		0818	84	0.	*	1		1424	145	5.	*	1		2030	206	1.	*	
1		0218	24	0.	*	1		0824	85	0.	*	1		1430	146	5.	*	1		2036	207	1.	*	
1		0224	25	0.	*	1		0830	86	0.	*	1		1436	147	5.	*	1		2042	208	1.	*	
1		0230	26	0.	*	1		0836	87	0.	*	1		1442	148	4.	*	1		2048	209	1.	*	
1		0236	27	0.	*	1		0842	88	0.	*	1		1448	149	4.	*	1		2054	210	1.	*	
1		0242	28	0.	*	1		0848	89	0.	*	1		1454	150	4.	*	1		2100	211	1.	*	
1		0248	29	0.	*	1		0854	90	0.	*	1		1500	151	4.	*	1		2106	212	1.	*	
1		0254	30	0.	*	1		0900	91	0.	*	1		1506	152	4.	*	1		2112	213	1.	*	
1		0300	31	0.	*	1		0906	92	0.	*	1		1512	153	4.	*	1		2118	214	1.	*	
1		0306	32	0.	*	1		0912	93	0.	*	1		1518	154	4.	*	1		2124	215	1.	*	
1		0312	33	0.	*	1		0918	94	0.	*	1		1524	155	4.	*	1		2130	216	1.	*	
1		0318	34	0.	*	1		0924	95	0.	*	1		1530	156	3.	*	1		2136	217	1.	*	
1		0324	35	0.	*	1		0930	96	0.	*	1		1536	157	3.	*	1		2142	218	1.	*	
1		0330	36	0.	*	1		0936	97	0.	*	1		1542	158	3.	*	1		2148	219	1.	*	
1		0336	37	0.	*	1		0942	98	0.	*	1		1548	159	3.	*	1		2154	220	1.	*	
1		0342	38	0.	*	1		0948	99	0.	*	1		1554	160	3.	*	1		2200	221	1.	*	
1		0348	39	0.	*	1		0954	100	0.	*	1		1600	161	3.	*	1		2206	222	1.	*	
1		0354	40	0.	*	1		1000	101	0.	*	1		1606	162	3.	*	1		2212	223	1.	*	
1		0400	41	0.	*	1		1006	102	0.	*	1		1612	163	3.	*	1		2218	224	1.	*	
1		0406	42	0.	*	1		1012	103	0.	*	1		1618	164	3.	*	1		2224	225	1.	*	
1		0412	43	0.	*	1		1018	104	0.	*	1		1624	165	3.	*	1		2230	226	1.	*	
1		0418	44	0.	*	1		1024	105	0.	*	1		1630	166	3.	*	1		2236	227	1.	*	
1		0424	45	0.	*	1		1030	106	0.	*	1		1636	167	3.	*	1		2242	228	1.	*	
1		0430	46	0.	*	1		1036	107	0.	*	1		1642	168	3.	*	1		2248	229	1.	*	
1		0436	47	0.	*	1		1042	108	0.	*	1		1648	169	3.	*	1		2254	230	1.	*	
1		0442	48	0.	*	1		1048	109	0.	*	1		1654	170	3.	*	1		2300	231	1.	*	
1		0448	49	0.	*	1		1054	110	0.	*	1		1700	171	3.	*	1		2306	232	1.	*	
1		0454	50	0.	*	1		1100	111	0.	*	1		1706	172	2.	*	1		2312	233	1.	*	
1		0500	51	0.	*	1		1106	112	0.	*	1		1712	173	2.	*	1		2318	234	1.	*	
1		0506	52	0.	*	1		1112	113	0.	*	1		1718	174	2.	*	1		2324	235	1.	*	
1		0512	53	0.	*	1		1118	114	0.	*	1		1724	175	2.	*	1		2330	236	1.	*	
1		0518	54	0.	*	1		1124	115	1.	*	1		1730	176	2.	*	1		2336	237	1.	*	
1		0524	55	0.	*	1		1130	116	1.	*	1		1736	177	2.	*	1		2342	238	1.	*	
1		0530	56	0.	*	1		1136	117	1.	*	1		1742	178	2.	*	1		2348	239	1.	*	
1		0536	57	0.	*	1		1142	118	1.	*	1		1748	179	2.	*	1		2354	240	1.	*	
1		0542	58	0.	*	1		1148	119	2.	*	1		1754	180	2.	*	1		0000	241	1.	*	
1		0548	59	0.	*	1		1154	120	4.	*	1		1800	181	2.	*	1						
1		0554	60	0.	*	1		1200	121	7.	*	1		1806	182	2.	*	1						
1		0600	61	0.	*	1		1206	122	12.	*	1		1812	183	2.	*	1						

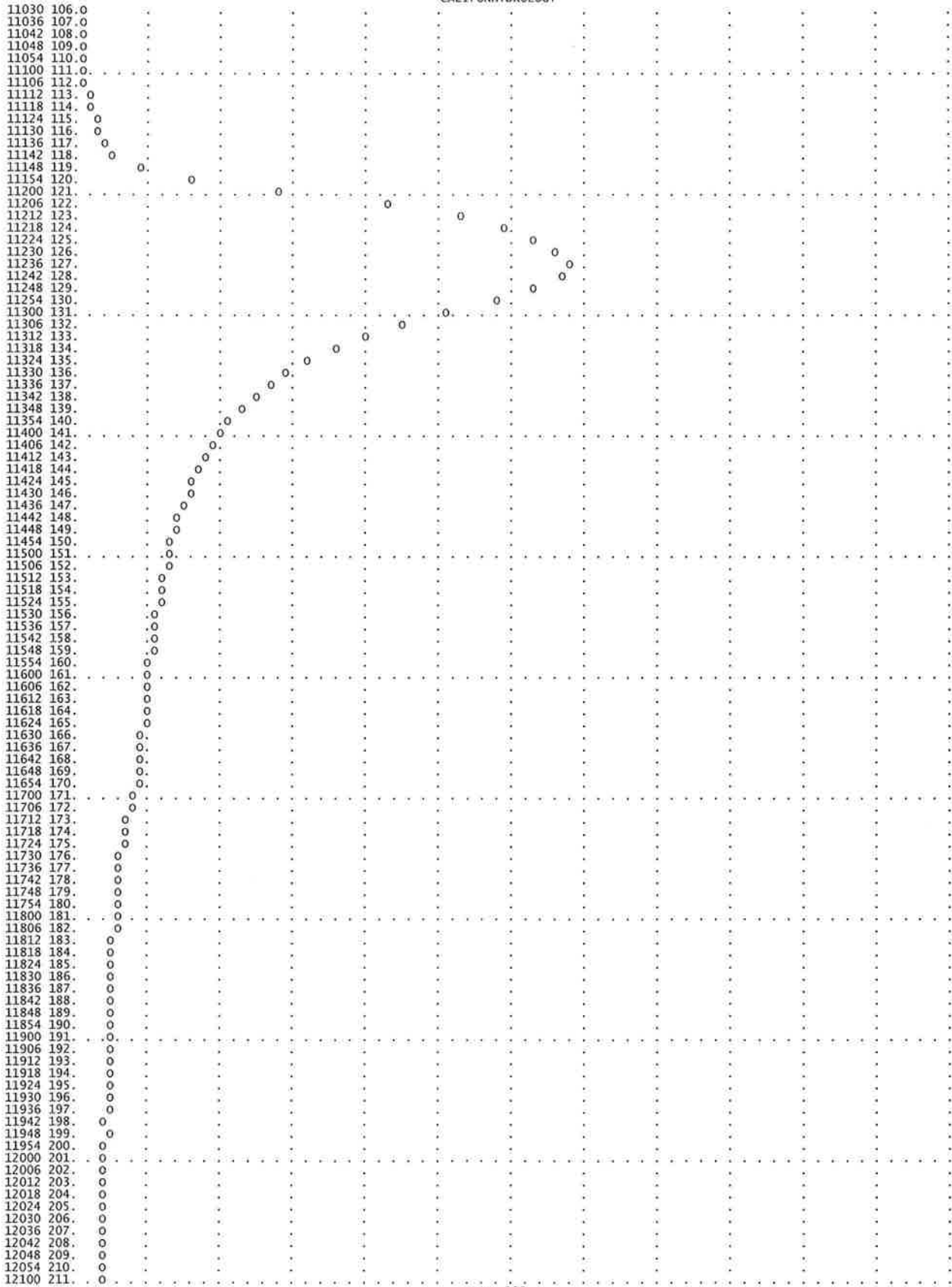
PEAK FLOW	TIME		MAXIMUM	AVERAGE FLOW		
(CFS)	(HR)	(CFS)	6-HR	24-HR	72-HR	24.00-HR
+	19.	12.60	7.	2.	2.	2.
+			1.002	1.224	1.224	1.224
		(INCHES)	3.	4.	4.	4.
		(AC-FT)				
CUMULATIVE AREA =			.06 SQ MI			



CALIFONHYDROLOGY



CALIFONHYDROLOGY

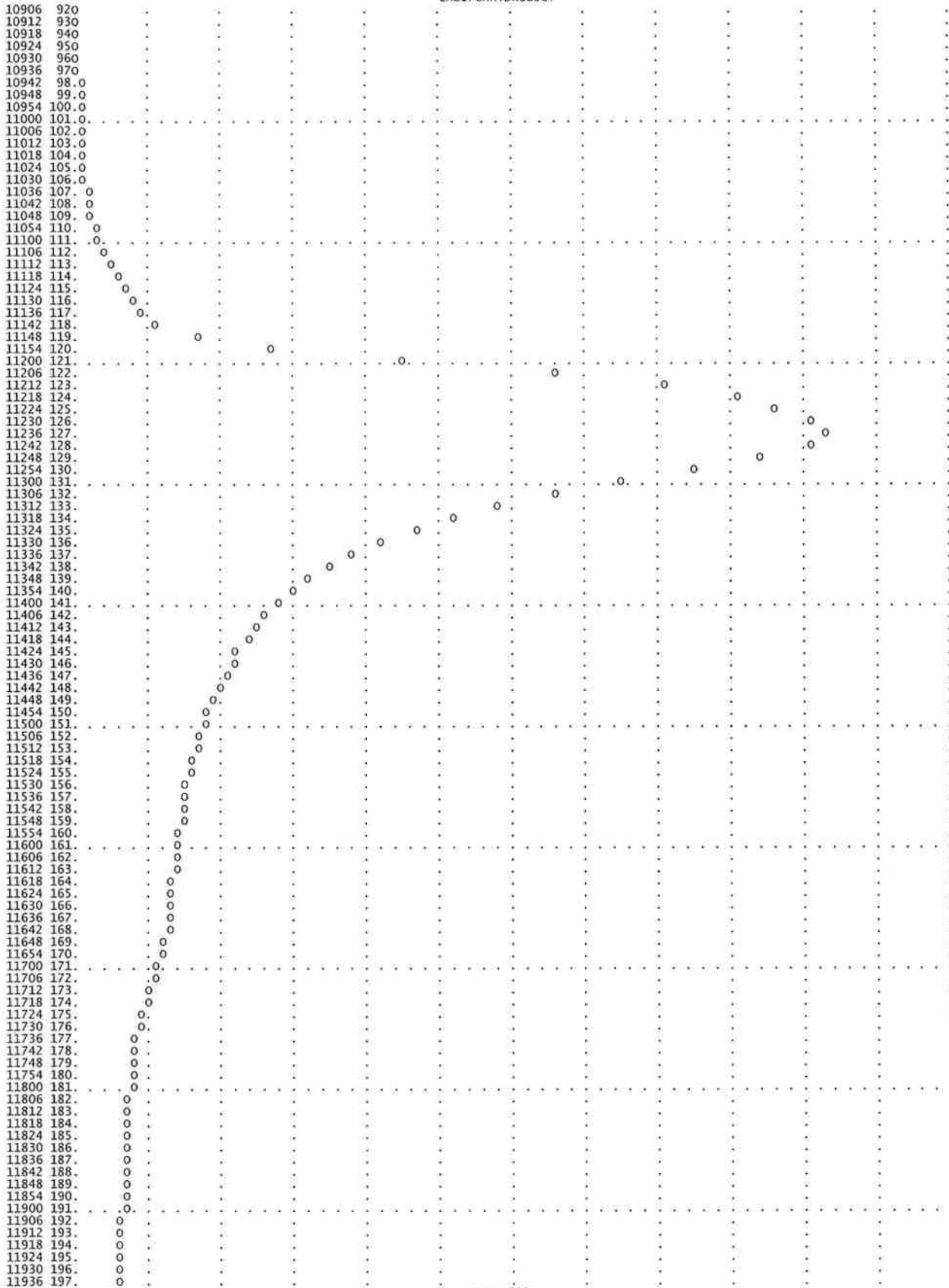


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PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM (INCHES) (AC-FT)	AVERAGE 24-HR 8.	FLOW 72-HR 8.	24.00-HR 8.
41.	12.60	13.	2.012	4.	2.440	2.440
			CUMULATIVE AREA = .06 SQ MI			

1	STATION	COMB2	0.	4.	8.	12.	16.	20.	24.	28.	32.	36.	40.	44.	0.
DAHRMN	PER	(O) OUTFLOW													
10000	10														
10006	20														
10012	30														
10018	40														
10024	50														
10030	60														
10036	70														
10042	80														
10048	90														
10054	100														
10100	110														
10106	120														
10112	130														
10118	140														
10124	150														
10130	160														
10136	170														
10142	180														
10148	190														
10154	200														
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10318	340														
10324	350														
10330	360														
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10342	380														
10348	390														
10354	400														
10400	410														
10406	420														
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10424	450														
10430	460														
10436	470														
10442	480														
10448	490														
10454	500														
10500	510														
10506	520														
10512	530														
10518	540														
10524	550														
10530	560														
10536	570														
10542	580														
10548	590														
10554	600														
10600	610														
10606	620														
10612	630														
10618	640														
10624	650														
10630	660														
10636	670														
10642	680														
10648	690														
10654	700														
10700	710														
10706	720														
10712	730														
10718	740														
10724	750														
10730	760														
10736	770														
10742	780														
10748	790														
10754	800														
10800	810														
10806	820														
10812	830														
10818	840														
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10836	870														
10842	880														
10848	890														
10854	900														
10900	910														

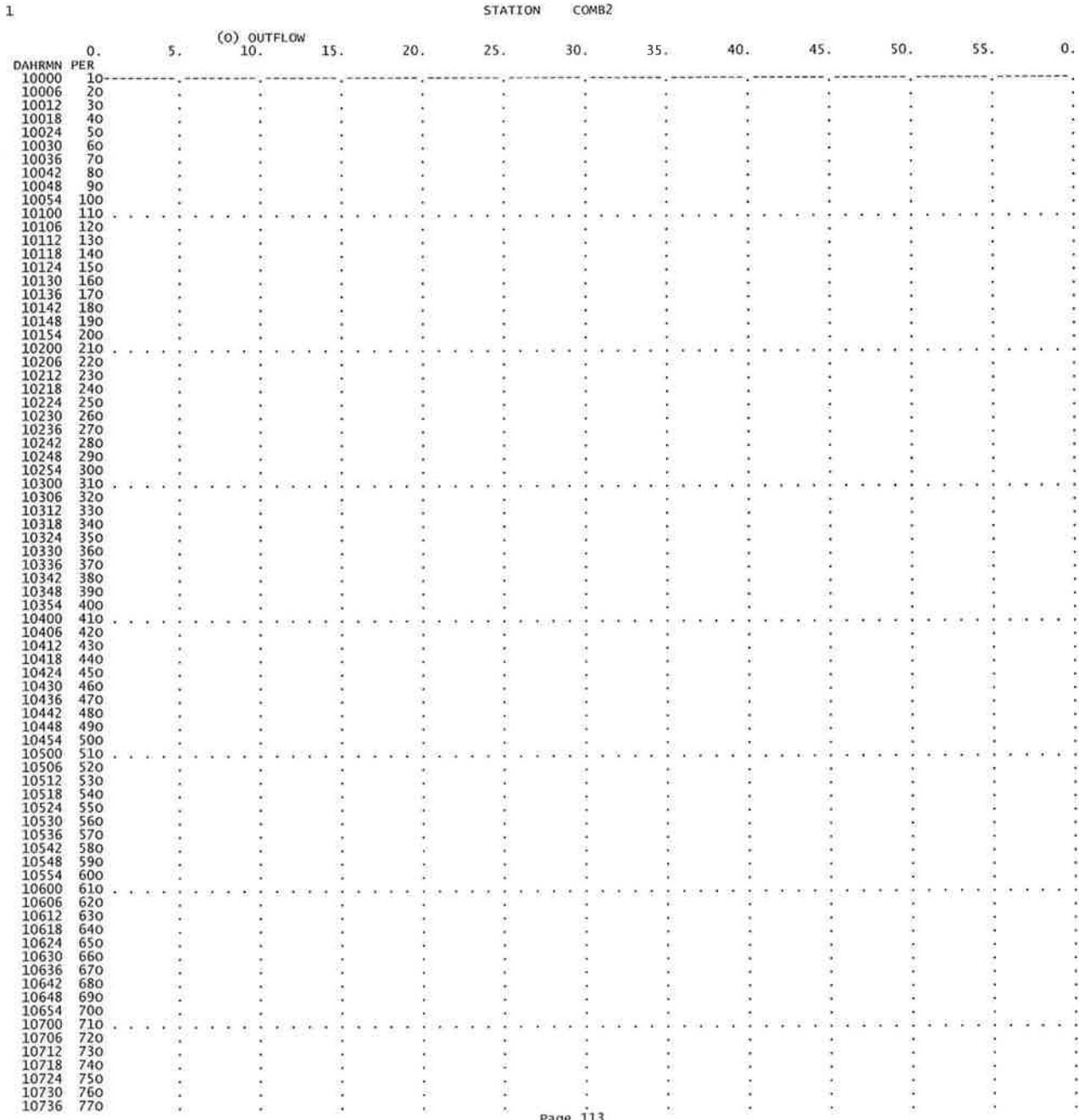
CALIFONHYDROLOGY



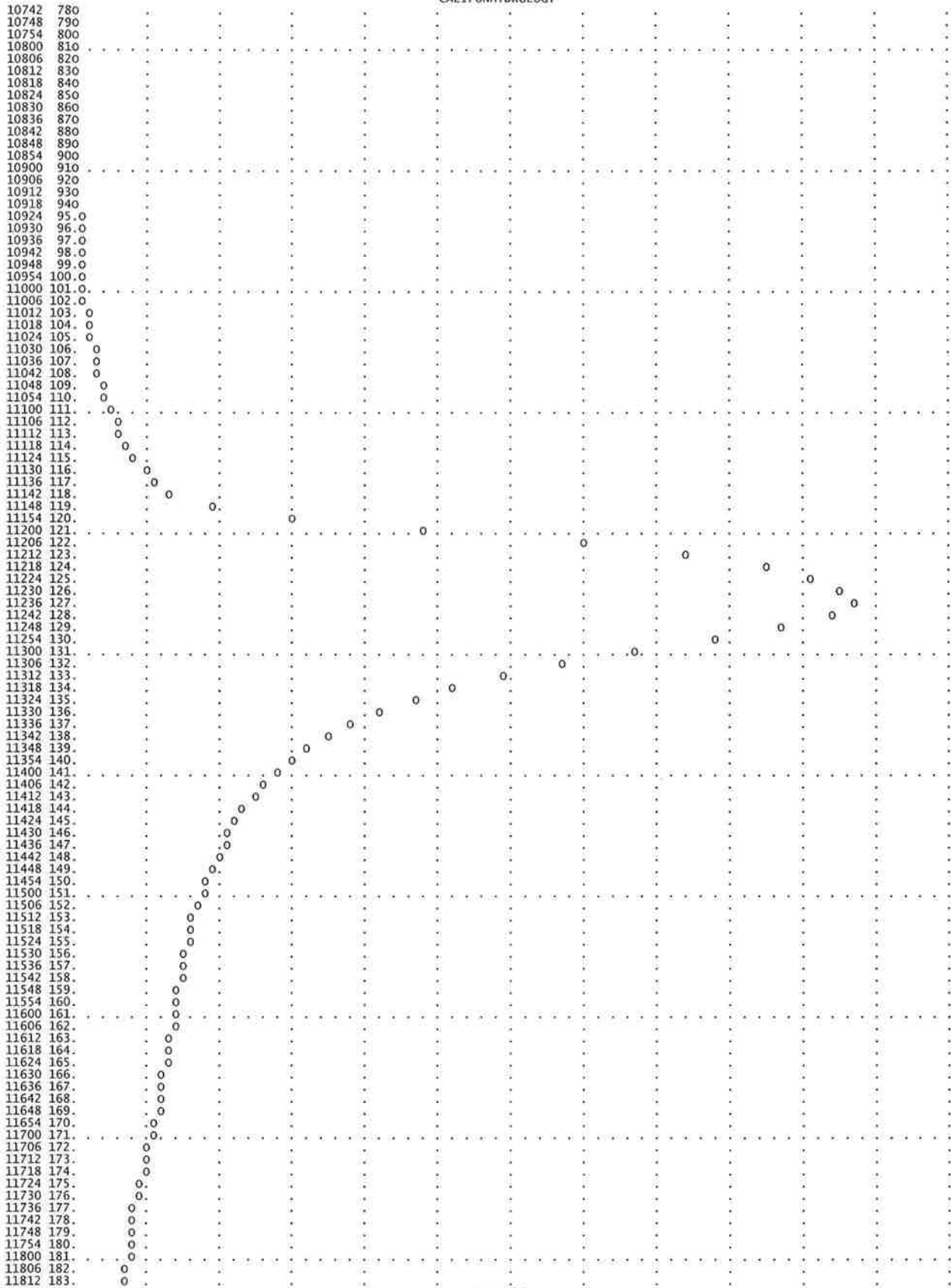
CALIFONHYDROLOGY

1	0500	51	0.	*	1	1106	112	3.	*	1	1712	173	5.	*	1	2318	234	2.
1	0506	52	0.	*	1	1112	113	3.	*	1	1718	174	5.	*	1	2324	235	2.
1	0512	53	0.	*	1	1118	114	4.	*	1	1724	175	5.	*	1	2330	236	2.
1	0518	54	0.	*	1	1124	115	4.	*	1	1730	176	4.	*	1	2336	237	2.
1	0524	55	0.	*	1	1130	116	5.	*	1	1736	177	4.	*	1	2342	238	2.
1	0530	56	0.	*	1	1136	117	6.	*	1	1742	178	4.	*	1	2348	239	2.
1	0536	57	0.	*	1	1142	118	7.	*	1	1748	179	4.	*	1	2354	240	2.
1	0542	58	0.	*	1	1148	119	10.	*	1	1754	180	4.	*	2	0000	241	2.
1	0548	59	0.	*	1	1154	120	15.	*	1	1800	181	4.	*				
1	0554	60	0.	*	1	1200	121	24.	*	1	1806	182	4.	*				
1	0600	61	0.	*	1	1206	122	35.	*	1	1812	183	4.	*				

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR	AVERAGE 72-HR	24.00-HR
53.	12.60	17.	5.	5.	5.
		2.566	3.117	3.117	3.117
		8.	10.	10.	10.
		CUMULATIVE AREA = .06 SQ MI			

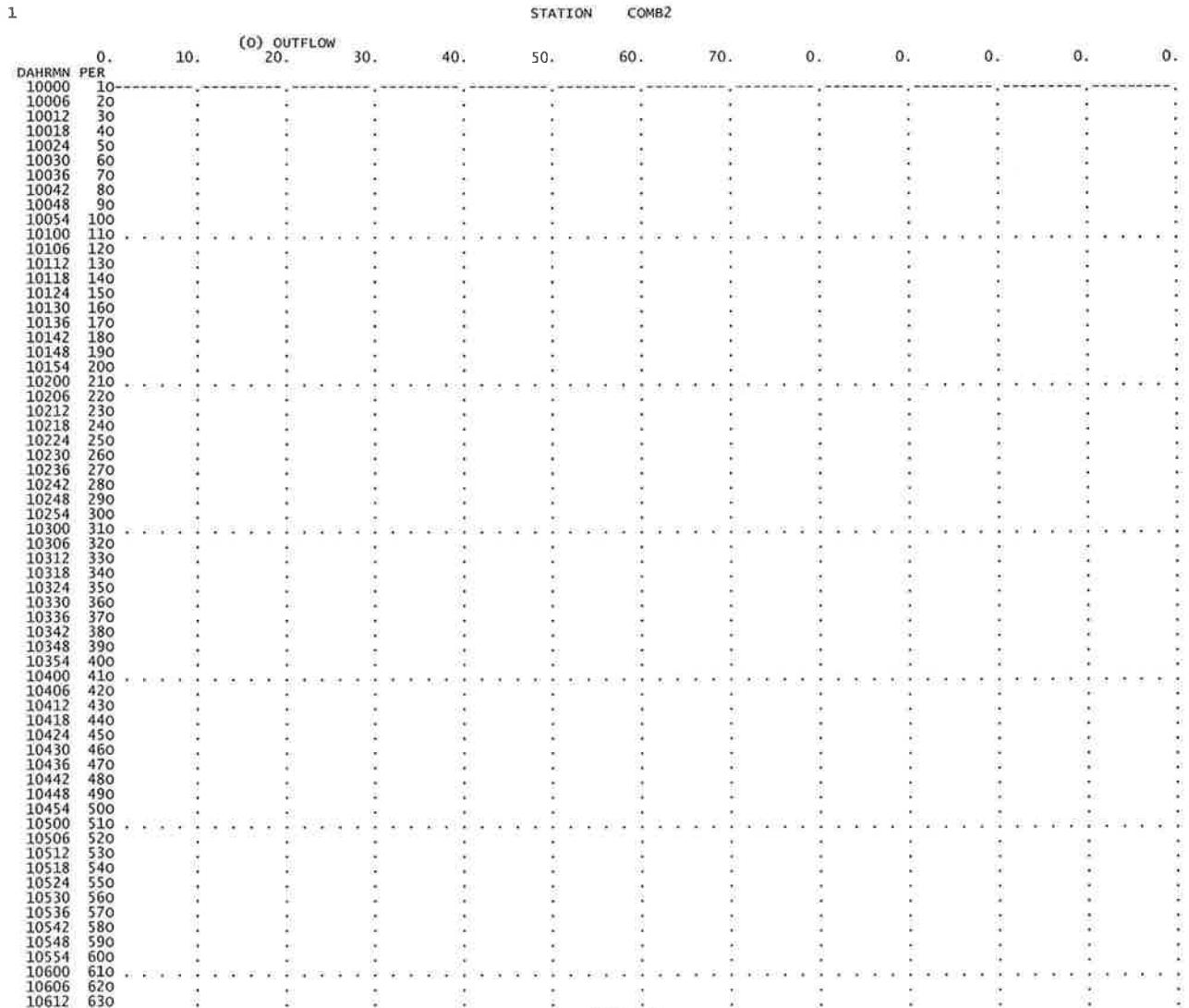


CALIFONHYDROLOGY

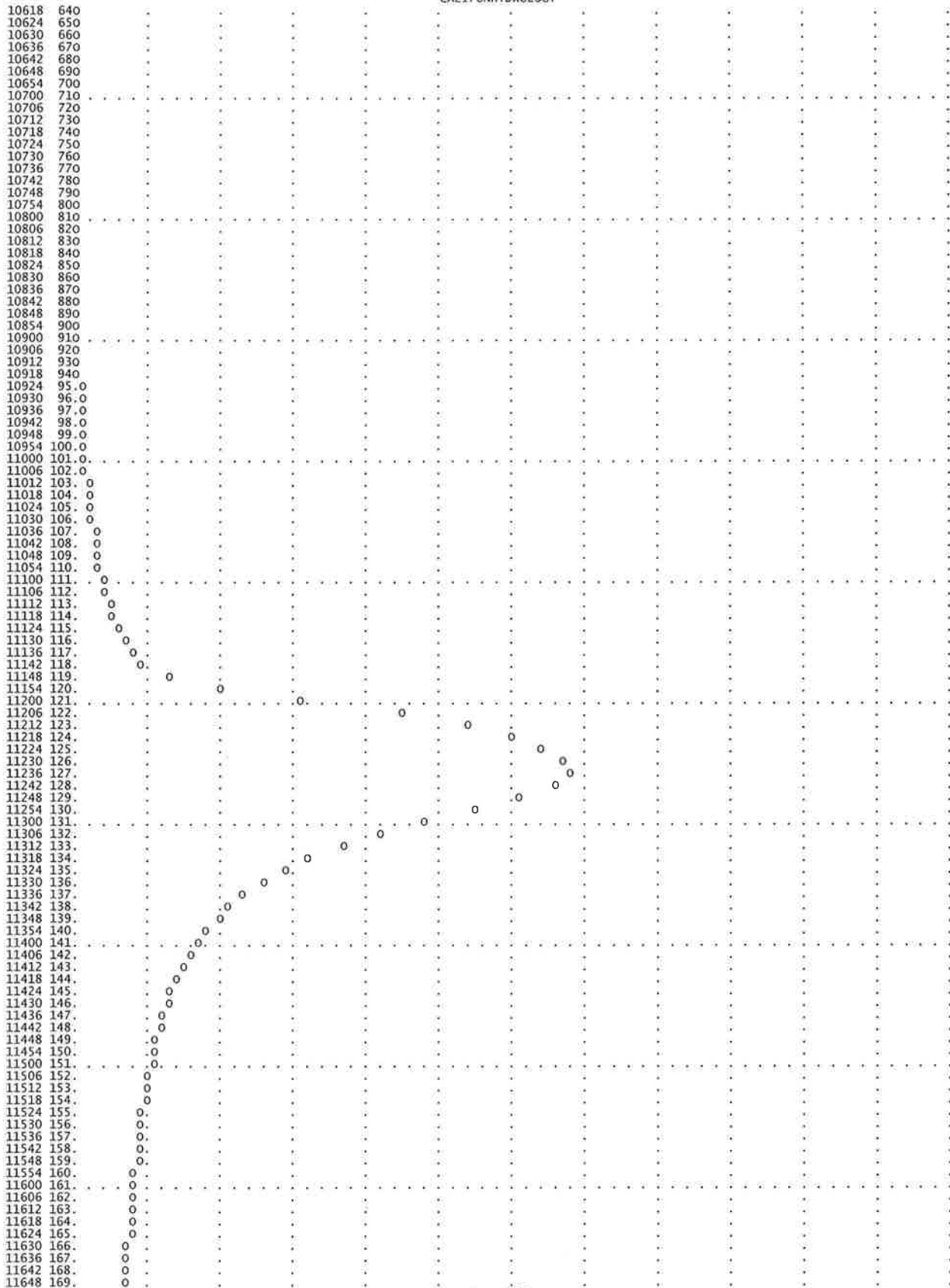


CALIFONHYDROLOGY																		
1	0336	37	0.	*	1	0942	98	1.	*	1	1548	159	9.	*	1	2154	220	3.
1	0342	38	0.	*	1	0948	99	1.	*	1	1554	160	8.	*	1	2200	221	3.
1	0348	39	0.	*	1	0954	100	1.	*	1	1600	161	8.	*	1	2206	222	3.
1	0354	40	0.	*	1	1000	101	1.	*	1	1606	162	8.	*	1	2212	223	3.
1	0400	41	0.	*	1	1006	102	1.	*	1	1612	163	8.	*	1	2218	224	3.
1	0406	42	0.	*	1	1012	103	2.	*	1	1618	164	8.	*	1	2224	225	3.
1	0412	43	0.	*	1	1018	104	2.	*	1	1624	165	8.	*	1	2230	226	3.
1	0418	44	0.	*	1	1024	105	2.	*	1	1630	166	7.	*	1	2236	227	3.
1	0424	45	0.	*	1	1030	106	2.	*	1	1636	167	7.	*	1	2242	228	3.
1	0430	46	0.	*	1	1036	107	3.	*	1	1642	168	7.	*	1	2248	229	3.
1	0436	47	0.	*	1	1042	108	3.	*	1	1648	169	7.	*	1	2254	230	3.
1	0442	48	0.	*	1	1048	109	3.	*	1	1654	170	7.	*	1	2300	231	3.
1	0448	49	0.	*	1	1054	110	3.	*	1	1700	171	6.	*	1	2306	232	3.
1	0454	50	0.	*	1	1100	111	4.	*	1	1706	172	6.	*	1	2312	233	3.
1	0500	51	0.	*	1	1106	112	4.	*	1	1712	173	6.	*	1	2318	234	3.
1	0506	52	0.	*	1	1112	113	5.	*	1	1718	174	6.	*	1	2324	235	3.
1	0512	53	0.	*	1	1118	114	5.	*	1	1724	175	6.	*	1	2330	236	3.
1	0518	54	0.	*	1	1124	115	6.	*	1	1730	176	5.	*	1	2336	237	3.
1	0524	55	0.	*	1	1130	116	7.	*	1	1736	177	5.	*	1	2342	238	3.
1	0530	56	0.	*	1	1136	117	8.	*	1	1742	178	5.	*	1	2348	239	2.
1	0536	57	0.	*	1	1142	118	9.	*	1	1748	179	5.	*	1	2354	240	2.
1	0542	58	0.	*	1	1148	119	13.	*	1	1754	180	5.	*	2	0000	241	2.
1	0548	59	0.	*	1	1154	120	20.	*	1	1800	181	5.	*				
1	0554	60	0.	*	1	1200	121	31.	*	1	1806	182	4.	*				
1	0600	61	0.	*	1	1206	122	45.	*	1	1812	183	4.	*				

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.00-HR
68.	12.60	21.	6.	6.	6.
		(INCHES)	3.905	3.905	3.905
		(AC-FT)	10.	13.	13.
CUMULATIVE AREA =		.06 SQ MI			



CALIFONHYDROLOGY



CALIFONHYDROLOGY

11654	170.	0
11700	171.	0
11706	172.	0
11712	173.	0
11718	174.	0
11724	175.	0
11730	176.	0
11736	177.	0
11742	178.	0
11748	179.	0
11754	180.	0
11800	181.	0
11806	182.	0
11812	183.	0
11818	184.	0
11824	185.	0
11830	186.	0
11836	187.	0
11842	188.	0
11848	189.	0
11854	190.	0
11900	191.	0
11906	192.	0
11912	193.	0
11918	194.	0
11924	195.	0
11930	196.	0
11936	197.	0
11942	198.	0
11948	199.	0
11954	200.	0
12000	201.	0
12006	202.	0
12012	203.	0
12018	204.	0
12024	205.	0
12030	206.	0
12036	207.	0
12042	208.	0
12048	209.	0
12054	210.	0
12100	211.	0
12106	212.	0
12112	213.	0
12118	214.	0
12124	215.	0
12130	216.	0
12136	217.	0
12142	218.	0
12148	219.	0
12154	220.	0
12200	221.	0
12206	222.	0
12212	223.	0
12218	224.	0
12224	225.	0
12230	226.	0
12236	227.	0
12242	228.	0
12248	229.	0
12254	230.	0
12300	231.	0
12306	232.	0
12312	233.	0
12318	234.	0
12324	235.	0
12330	236.	0
12336	237.	0
12342	238.	0
12348	239.	0
12354	240.	0
20000	241.	0

1

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*          *
106 KK    *  C2TOE  *
*          *
*****
    
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108 KO      OUTPUT CONTROL VARIABLES
            IPRNT      2  PRINT CONTROL
            IPLOT      2  PLOT CONTROL
            QSCAL      0.  HYDROGRAPH PLOT SCALE
    
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HYDROGRAPH ROUTING DATA
109 RT      TATUM OR STRADDLE-STAGGER ROUTING
            NSTPS      0  NUMBER OF TATUM STEPS
            NSTDL      0  NUMBER OF ORDINATES TO BE AVERAGED
            LAG        2  NUMBER OF INTERVALS TO LAG HYDROGRAPH
    
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HYDROGRAPH AT STATION  C2TOE
PLAN 1,  RATIO =  .54
    
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CALIFONHYDROLOGY

12342 238. I
 12348 239. IO
 12354 240. IO
 20000 241. I

1

HYDROGRAPH AT STATION C2TOE
 PLAN 1, RATIO = .63

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1	0606	62	0.	1	1212	123	11.	1	1818	184	2.			
1		0006	2	0.	1	0612	63	0.	1	1218	124	17.	1	1824	185	2.			
1		0012	3	0.	1	0618	64	0.	1	1224	125	21.	1	1830	186	2.			
1		0018	4	0.	1	0624	65	0.	1	1230	126	24.	1	1836	187	2.			
1		0024	5	0.	1	0630	66	0.	1	1236	127	25.	1	1842	188	2.			
1		0030	6	0.	1	0636	67	0.	1	1242	128	26.	1	1848	189	2.			
1		0036	7	0.	1	0642	68	0.	1	1248	129	27.	1	1854	190	2.			
1		0042	8	0.	1	0648	69	0.	1	1254	130	27.	1	1900	191	2.			
1		0048	9	0.	1	0654	70	0.	1	1300	131	25.	1	1906	192	2.			
1		0054	10	0.	1	0700	71	0.	1	1306	132	23.	1	1912	193	2.			
1		0100	11	0.	1	0706	72	0.	1	1312	133	20.	1	1918	194	2.			
1		0106	12	0.	1	0712	73	0.	1	1318	134	18.	1	1924	195	2.			
1		0112	13	0.	1	0718	74	0.	1	1324	135	16.	1	1930	196	2.			
1		0118	14	0.	1	0724	75	0.	1	1330	136	14.	1	1936	197	2.			
1		0124	15	0.	1	0730	76	0.	1	1336	137	13.	1	1942	198	2.			
1		0130	16	0.	1	0736	77	0.	1	1342	138	12.	1	1948	199	2.			
1		0136	17	0.	1	0742	78	0.	1	1348	139	11.	1	1954	200	2.			
1		0142	18	0.	1	0748	79	0.	1	1354	140	10.	1	2000	201	2.			
1		0148	19	0.	1	0754	80	0.	1	1400	141	9.	1	2006	202	2.			
1		0154	20	0.	1	0800	81	0.	1	1406	142	8.	1	2012	203	2.			
1		0200	21	0.	1	0806	82	0.	1	1412	143	8.	1	2018	204	2.			
1		0206	22	0.	1	0812	83	0.	1	1418	144	8.	1	2024	205	2.			
1		0212	23	0.	1	0818	84	0.	1	1424	145	7.	1	2030	206	2.			
1		0218	24	0.	1	0824	85	0.	1	1430	146	7.	1	2036	207	2.			
1		0224	25	0.	1	0830	86	0.	1	1436	147	6.	1	2042	208	2.			
1		0230	26	0.	1	0836	87	0.	1	1442	148	6.	1	2048	209	2.			
1		0236	27	0.	1	0842	88	0.	1	1448	149	6.	1	2054	210	2.			
1		0242	28	0.	1	0848	89	0.	1	1454	150	6.	1	2100	211	2.			
1		0248	29	0.	1	0854	90	0.	1	1500	151	6.	1	2106	212	2.			
1		0254	30	0.	1	0900	91	0.	1	1506	152	5.	1	2112	213	2.			
1		0300	31	0.	1	0906	92	0.	1	1512	153	5.	1	2118	214	2.			
1		0306	32	0.	1	0912	93	0.	1	1518	154	5.	1	2124	215	2.			
1		0312	33	0.	1	0918	94	0.	1	1524	155	5.	1	2130	216	2.			
1		0318	34	0.	1	0924	95	0.	1	1530	156	5.	1	2136	217	2.			
1		0324	35	0.	1	0930	96	0.	1	1536	157	5.	1	2142	218	2.			
1		0330	36	0.	1	0936	97	0.	1	1542	158	5.	1	2148	219	2.			
1		0336	37	0.	1	0942	98	0.	1	1548	159	5.	1	2154	220	1.			
1		0342	38	0.	1	0948	99	0.	1	1554	160	4.	1	2200	221	1.			
1		0348	39	0.	1	0954	100	0.	1	1600	161	4.	1	2206	222	1.			
1		0354	40	0.	1	1000	101	0.	1	1606	162	4.	1	2212	223	1.			
1		0400	41	0.	1	1006	102	0.	1	1612	163	4.	1	2218	224	1.			
1		0406	42	0.	1	1012	103	0.	1	1618	164	4.	1	2224	225	1.			
1		0412	43	0.	1	1018	104	0.	1	1624	165	4.	1	2230	226	1.			
1		0418	44	0.	1	1024	105	0.	1	1630	166	4.	1	2236	227	1.			
1		0424	45	0.	1	1030	106	0.	1	1636	167	4.	1	2242	228	1.			
1		0430	46	0.	1	1036	107	0.	1	1642	168	4.	1	2248	229	1.			
1		0436	47	0.	1	1042	108	0.	1	1648	169	4.	1	2254	230	1.			
1		0442	48	0.	1	1048	109	0.	1	1654	170	4.	1	2300	231	1.			
1		0448	49	0.	1	1054	110	0.	1	1700	171	4.	1	2306	232	1.			
1		0454	50	0.	1	1100	111	0.	1	1706	172	3.	1	2312	233	1.			
1		0500	51	0.	1	1106	112	0.	1	1712	173	3.	1	2318	234	1.			
1		0506	52	0.	1	1112	113	0.	1	1718	174	3.	1	2324	235	1.			
1		0512	53	0.	1	1118	114	1.	1	1724	175	3.	1	2330	236	1.			
1		0518	54	0.	1	1124	115	1.	1	1730	176	3.	1	2336	237	1.			
1		0524	55	0.	1	1130	116	1.	1	1736	177	3.	1	2342	238	1.			
1		0530	56	0.	1	1136	117	1.	1	1742	178	3.	1	2348	239	1.			
1		0536	57	0.	1	1142	118	1.	1	1748	179	3.	1	2354	240	1.			
1		0542	58	0.	1	1148	119	2.	1	1754	180	2.	2	0000	241	1.			
1		0548	59	0.	1	1154	120	2.	1	1800	181	2.	2						
1		0554	60	0.	1	1200	121	4.	1	1806	182	2.	2						
1		0600	61	0.	1	1206	122	6.	1	1812	183	2.	2						

1

PEAK FLOW	TIME	6-HR	MAXIMUM	AVERAGE	24.00-HR
(CFS)	(HR)	(CFS)	24-HR	72-HR	
27.	12.80	9.	3.	3.	3.
		1.375	1.665	1.665	1.665
		(INCHES)	4.	5.	5.
		(AC-FT)			
CUMULATIVE AREA =		.06 SQ MI			

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DAHRMN	PER	(I) INFLOW	(O) OUTFLOW	STATION	C2TOE							
		8.	12.	16.	20.	24.	28.	0.	0.	0.	0.	0.
10000	1I											
10006	2I											
10012	3I											
10018	4I											
10024	5I											
10030	6I											
10036	7I											
10042	8I											
10048	9I											
10054	10I											
10100	11I											
10106	12I											

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12224	225	I
12230	226	I
12236	227	I
12242	228	I
12248	229	I
12254	230	IO
12300	231	IO
12306	232	I
12312	233	I
12318	234	I
12324	235	I
12330	236	I
12336	237	I
12342	238	I
12348	239	I
12354	240	I
20000	241	I

1

HYDROGRAPH AT STATION C2TOE
PLAN 1, RATIO = .76

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	
1		0000	1	0.	1		0606	62	0.	1		1212	123	18.	1		1818	184	3.	
1		0006	2	0.	1		0612	63	0.	1		1218	124	27.	1		1824	185	3.	
1		0012	3	0.	1		0618	64	0.	1		1224	125	32.	1		1830	186	3.	
1		0018	4	0.	1		0624	65	0.	1		1230	126	36.	1		1836	187	3.	
1		0024	5	0.	1		0630	66	0.	1		1236	127	39.	1		1842	188	3.	
1		0030	6	0.	1		0636	67	0.	1		1242	128	40.	1		1848	189	3.	
1		0036	7	0.	1		0642	68	0.	1		1248	129	41.	1		1854	190	3.	
1		0042	8	0.	1		0648	69	0.	1		1254	130	40.	1		1900	191	3.	
1		0048	9	0.	1		0654	70	0.	1		1300	131	38.	1		1906	192	3.	
1		0054	10	0.	1		0700	71	0.	1		1306	132	34.	1		1912	193	3.	
1		0100	11	0.	1		0706	72	0.	1		1312	133	30.	1		1918	194	3.	
1		0106	12	0.	1		0712	73	0.	1		1318	134	26.	1		1924	195	3.	
1		0112	13	0.	1		0718	74	0.	1		1324	135	23.	1		1930	196	3.	
1		0118	14	0.	1		0724	75	0.	1		1330	136	21.	1		1936	197	3.	
1		0124	15	0.	1		0730	76	0.	1		1336	137	19.	1		1942	198	3.	
1		0130	16	0.	1		0736	77	0.	1		1342	138	17.	1		1948	199	3.	
1		0136	17	0.	1		0742	78	0.	1		1348	139	15.	1		1954	200	2.	
1		0142	18	0.	1		0748	79	0.	1		1354	140	14.	1		2000	201	2.	
1		0148	19	0.	1		0754	80	0.	1		1400	141	13.	1		2006	202	2.	
1		0154	20	0.	1		0800	81	0.	1		1406	142	12.	1		2012	203	2.	
1		0200	21	0.	1		0806	82	0.	1		1412	143	11.	1		2018	204	2.	
1		0206	22	0.	1		0812	83	0.	1		1418	144	11.	1		2024	205	2.	
1		0212	23	0.	1		0818	84	0.	1		1424	145	10.	1		2030	206	2.	
1		0218	24	0.	1		0824	85	0.	1		1430	146	9.	1		2036	207	2.	
1		0224	25	0.	1		0830	86	0.	1		1436	147	9.	1		2042	208	2.	
1		0230	26	0.	1		0836	87	0.	1		1442	148	9.	1		2048	209	2.	
1		0236	27	0.	1		0842	88	0.	1		1448	149	8.	1		2054	210	2.	
1		0242	28	0.	1		0848	89	0.	1		1454	150	8.	1		2100	211	2.	
1		0248	29	0.	1		0854	90	0.	1		1500	151	8.	1		2106	212	2.	
1		0254	30	0.	1		0900	91	0.	1		1506	152	7.	1		2112	213	2.	
1		0300	31	0.	1		0906	92	0.	1		1512	153	7.	1		2118	214	2.	
1		0306	32	0.	1		0912	93	0.	1		1518	154	7.	1		2124	215	2.	
1		0312	33	0.	1		0918	94	0.	1		1524	155	7.	1		2130	216	2.	
1		0318	34	0.	1		0924	95	0.	1		1530	156	7.	1		2136	217	2.	
1		0324	35	0.	1		0930	96	0.	1		1536	157	6.	1		2142	218	2.	
1		0330	36	0.	1		0936	97	0.	1		1542	158	6.	1		2148	219	2.	
1		0336	37	0.	1		0942	98	0.	1		1548	159	6.	1		2154	220	2.	
1		0342	38	0.	1		0948	99	0.	1		1554	160	6.	1		2200	221	2.	
1		0348	39	0.	1		0954	100	0.	1		1600	161	6.	1		2206	222	2.	
1		0354	40	0.	1		1000	101	0.	1		1606	162	6.	1		2212	223	2.	
1		0400	41	0.	1		1006	102	0.	1		1612	163	6.	1		2218	224	2.	
1		0406	42	0.	1		1012	103	0.	1		1618	164	6.	1		2224	225	2.	
1		0412	43	0.	1		1018	104	0.	1		1624	165	5.	1		2230	226	2.	
1		0418	44	0.	1		1024	105	0.	1		1630	166	5.	1		2236	227	2.	
1		0424	45	0.	1		1030	106	0.	1		1636	167	5.	1		2242	228	2.	
1		0430	46	0.	1		1036	107	0.	1		1642	168	5.	1		2248	229	2.	
1		0436	47	0.	1		1042	108	1.	1		1648	169	5.	1		2254	230	2.	
1		0442	48	0.	1		1048	109	1.	1		1654	170	5.	1		2300	231	2.	
1		0448	49	0.	1		1054	110	1.	1		1700	171	5.	1		2306	232	2.	
1		0454	50	0.	1		1100	111	1.	1		1706	172	5.	1		2312	233	2.	
1		0500	51	0.	1		1106	112	1.	1		1712	173	4.	1		2318	234	2.	
1		0506	52	0.	1		1112	113	1.	1		1718	174	4.	1		2324	235	2.	
1		0512	53	0.	1		1118	114	2.	1		1724	175	4.	1		2330	236	2.	
1		0518	54	0.	1		1124	115	2.	1		1730	176	4.	1		2336	237	2.	
1		0524	55	0.	1		1130	116	2.	1		1736	177	4.	1		2342	238	2.	
1		0530	56	0.	1		1136	117	3.	1		1742	178	4.	1		2348	239	2.	
1		0536	57	0.	1		1142	118	3.	1		1748	179	3.	1		2354	240	2.	
1		0542	58	0.	1		1148	119	4.	1		1754	180	3.	1	2	0000	241	2.	
1		0548	59	0.	1		1154	120	5.	1		1800	181	3.	1					
1		0554	60	0.	1		1200	121	7.	1		1806	182	3.	1					
1		0600	61	0.	1		1206	122	11.	1		1812	183	3.	1					

1

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.00-HR
41.	12.80	13.	4.	4.	4.
		2.012	2.432	2.432	2.432
		(INCHES)	7.	8.	8.
		(AC-FT)			
CUMULATIVE AREA =		.06 SQ MI			

1

STATION		C2TOE										
(I) INFLOW	(O) OUTFLOW	25.	30.	35.	40.	45.	0.	0.	0.			
0.	5.	10.	15.	20.	25.	30.	35.	40.	45.	0.	0.	0.

CALIFONHYDROLOGY

DAHRMN	PER
10000	1I
10006	2I
10012	3I
10018	4I
10024	5I
10030	6I
10036	7I
10042	8I
10048	9I
10054	10I
10100	11I
10106	12I
10112	13I
10118	14I
10124	15I
10130	16I
10136	17I
10142	18I
10148	19I
10154	20I
10200	21I
10206	22I
10212	23I
10218	24I
10224	25I
10230	26I
10236	27I
10242	28I
10248	29I
10254	30I
10300	31I
10306	32I
10312	33I
10318	34I
10324	35I
10330	36I
10336	37I
10342	38I
10348	39I
10354	40I
10400	41I
10406	42I
10412	43I
10418	44I
10424	45I
10430	46I
10436	47I
10442	48I
10448	49I
10454	50I
10500	51I
10506	52I
10512	53I
10518	54I
10524	55I
10530	56I
10536	57I
10542	58I
10548	59I
10554	60I
10600	61I
10606	62I
10612	63I
10618	64I
10624	65I
10630	66I
10636	67I
10642	68I
10648	69I
10654	70I
10700	71I
10706	72I
10712	73I
10718	74I
10724	75I
10730	76I
10736	77I
10742	78I
10748	79I
10754	80I
10800	81I
10806	82I
10812	83I
10818	84I
10824	85I
10830	86I
10836	87I
10842	88I
10848	89I
10854	90I
10900	91I
10906	92I
10912	93I
10918	94I
10924	95I
10930	96I
10936	97I
10942	98I
10948	99I
10954	1000I
11000	1010I
11006	102.I
11012	103.I
11018	104.I
11024	105.I

			6-HR	24-HR	CALIFONHYDROLOGY	
					72-HR	24.00-HR
+	(CFS)	(HR)	(CFS)			
+	53.	12.80	17.	5.	5.	5.
			(INCHES)	3.106	3.106	3.106
			(AC-FT)	10.	10.	10.

CUMULATIVE AREA = .06 SQ MI

1		STATION C2TOE										
		(I) INFLOW,	(O) OUTFLOW									
		20.	30.	40.	50.	60.	0.	0.	0.	0.	0.	0.
DAHRMN	PER	0.	10.	20.	30.	40.	50.	60.	0.	0.	0.	0.
10000	1I											
10006	2I											
10012	3I											
10018	4I											
10024	5I											
10030	6I											
10036	7I											
10042	8I											
10048	9I											
10054	10I											
10100	11I											
10106	12I											
10112	13I											
10118	14I											
10124	15I											
10130	16I											
10136	17I											
10142	18I											
10148	19I											
10154	20I											
10200	21I											
10206	22I											
10212	23I											
10218	24I											
10224	25I											
10230	26I											
10236	27I											
10242	28I											
10248	29I											
10254	30I											
10300	31I											
10306	32I											
10312	33I											
10318	34I											
10324	35I											
10330	36I											
10336	37I											
10342	38I											
10348	39I											
10354	40I											
10400	41I											
10406	42I											
10412	43I											
10418	44I											
10424	45I											
10430	46I											
10436	47I											
10442	48I											
10448	49I											
10454	50I											
10500	51I											
10506	52I											
10512	53I											
10518	54I											
10524	55I											
10530	56I											
10536	57I											
10542	58I											
10548	59I											
10554	60I											
10600	61I											
10606	62I											
10612	63I											
10618	64I											
10624	65I											
10630	66I											
10636	67I											
10642	68I											
10648	69I											
10654	70I											
10700	71I											
10706	72I											
10712	73I											
10718	74I											
10724	75I											
10730	76I											
10736	77I											
10742	78I											
10748	79I											
10754	80I											
10800	81I											
10806	82I											
10812	83I											
10818	84I											
10824	85I											
10830	86I											
10836	87I											
10842	88I											
10848	89I											
10854	90I											
10900	91I											
10906	92I											

CALIFONHYDROLOGY

11948	199	I
11954	200	I
12000	201	I
12006	202	I
12012	203	I
12018	204	I
12024	205	I
12030	206	I
12036	207	I
12042	208	I
12048	209	I
12054	210	I
12100	211	I
12106	212	I
12112	213	I
12118	214	I
12124	215	I
12130	216	IO
12136	217	IO
12142	218	I
12148	219	I
12154	220	I
12200	221	I
12206	222	I
12212	223	I
12218	224	I
12224	225	I
12230	226	I
12236	227	I
12242	228	I
12248	229	I
12254	230	I
12300	231	I
12306	232	I
12312	233	I
12318	234	I
12324	235	I
12330	236	I
12336	237	I
12342	238	I
12348	239	I
12354	240	I
20000	241	I

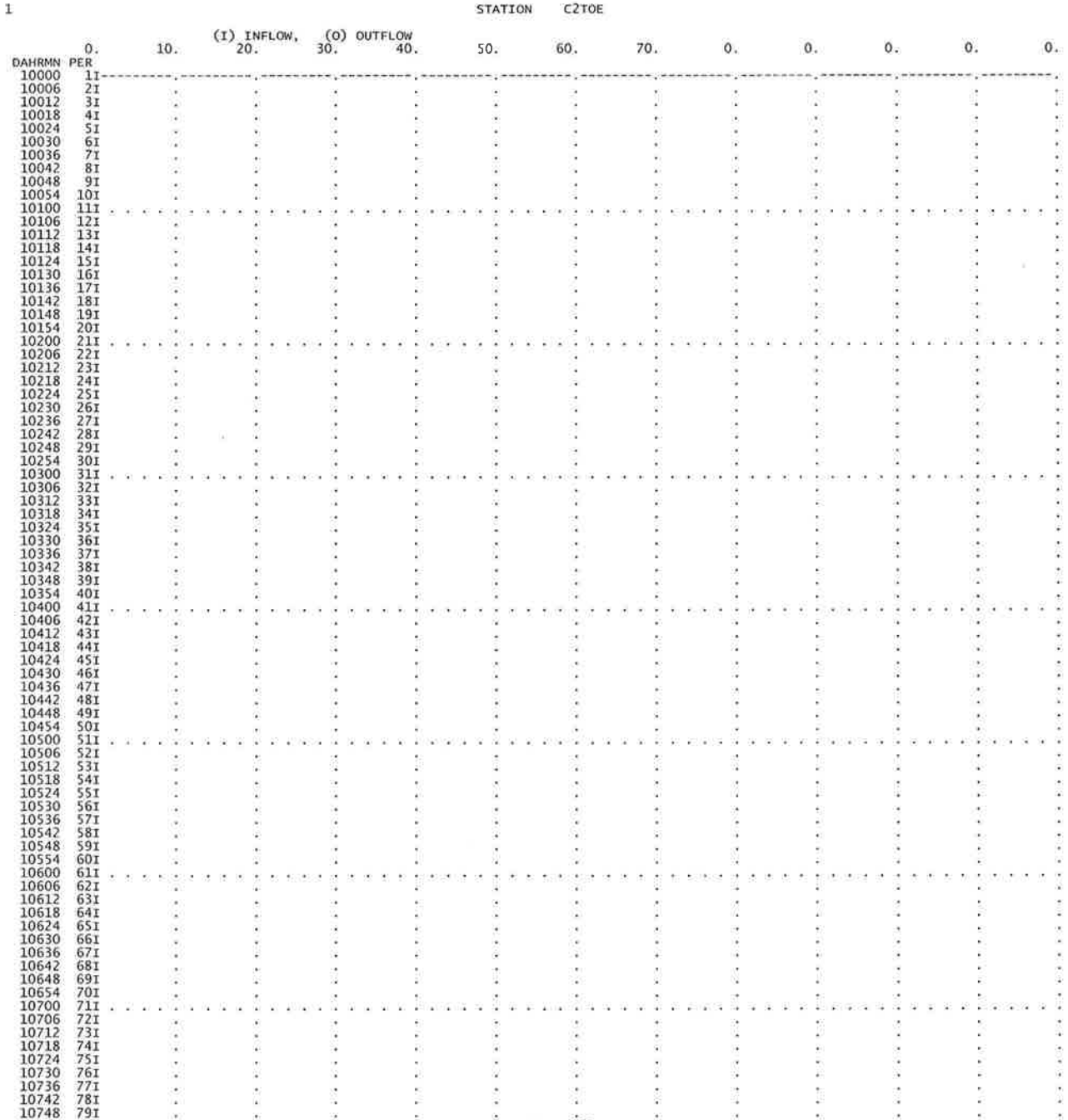
1

HYDROGRAPH AT STATION C2TOE
PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1		0606	62	0.	1		1212	123	31.	1		1818	184	4.
1		0006	2	0.	1		0612	63	0.	1		1218	124	45.	1		1824	185	4.
1		0012	3	0.	1		0618	64	0.	1		1224	125	54.	1		1830	186	4.
1		0018	4	0.	1		0624	65	0.	1		1230	126	60.	1		1836	187	4.
1		0024	5	0.	1		0630	66	0.	1		1236	127	64.	1		1842	188	4.
1		0030	6	0.	1		0636	67	0.	1		1242	128	67.	1		1848	189	4.
1		0036	7	0.	1		0642	68	0.	1		1248	129	68.	1		1854	190	4.
1		0042	8	0.	1		0648	69	0.	1		1254	130	66.	1		1900	191	4.
1		0048	9	0.	1		0654	70	0.	1		1300	131	61.	1		1906	192	4.
1		0054	10	0.	1		0700	71	0.	1		1306	132	55.	1		1912	193	4.
1		0100	11	0.	1		0706	72	0.	1		1312	133	48.	1		1918	194	4.
1		0106	12	0.	1		0712	73	0.	1		1318	134	42.	1		1924	195	4.
1		0112	13	0.	1		0718	74	0.	1		1324	135	37.	1		1930	196	4.
1		0118	14	0.	1		0724	75	0.	1		1330	136	32.	1		1936	197	4.
1		0124	15	0.	1		0730	76	0.	1		1336	137	29.	1		1942	198	4.
1		0130	16	0.	1		0736	77	0.	1		1342	138	26.	1		1948	199	4.
1		0136	17	0.	1		0742	78	0.	1		1348	139	23.	1		1954	200	3.
1		0142	18	0.	1		0748	79	0.	1		1354	140	21.	1		2000	201	4.
1		0148	19	0.	1		0754	80	0.	1		1400	141	20.	1		2006	202	4.
1		0154	20	0.	1		0800	81	0.	1		1406	142	18.	1		2012	203	3.
1		0200	21	0.	1		0806	82	0.	1		1412	143	17.	1		2018	204	3.
1		0206	22	0.	1		0812	83	0.	1		1418	144	16.	1		2024	205	3.
1		0212	23	0.	1		0818	84	0.	1		1424	145	15.	1		2030	206	3.
1		0218	24	0.	1		0824	85	0.	1		1430	146	14.	1		2036	207	3.
1		0224	25	0.	1		0830	86	0.	1		1436	147	13.	1		2042	208	3.
1		0230	26	0.	1		0836	87	0.	1		1442	148	13.	1		2048	209	3.
1		0236	27	0.	1		0842	88	0.	1		1448	149	12.	1		2054	210	3.
1		0242	28	0.	1		0848	89	0.	1		1454	150	12.	1		2100	211	3.
1		0248	29	0.	1		0854	90	0.	1		1500	151	11.	1		2106	212	3.
1		0254	30	0.	1		0900	91	0.	1		1506	152	11.	1		2112	213	3.
1		0300	31	0.	1		0906	92	0.	1		1512	153	11.	1		2118	214	3.
1		0306	32	0.	1		0912	93	0.	1		1518	154	10.	1		2124	215	3.
1		0312	33	0.	1		0918	94	0.	1		1524	155	10.	1		2130	216	3.
1		0318	34	0.	1		0924	95	0.	1		1530	156	10.	1		2136	217	3.
1		0324	35	0.	1		0930	96	0.	1		1536	157	9.	1		2142	218	3.
1		0330	36	0.	1		0936	97	1.	1		1542	158	9.	1		2148	219	3.
1		0336	37	0.	1		0942	98	1.	1		1548	159	9.	1		2154	220	3.
1		0342	38	0.	1		0948	99	1.	1		1554	160	9.	1		2200	221	3.
1		0348	39	0.	1		0954	100	1.	1		1600	161	9.	1		2206	222	3.
1		0354	40	0.	1		1000	101	1.	1		1606	162	8.	1		2212	223	3.
1		0400	41	0.	1		1006	102	1.	1		1612	163	8.	1		2218	224	3.
1		0406	42	0.	1		1012	103	1.	1		1618	164	8.	1		2224	225	3.
1		0412	43	0.	1		1018	104	1.	1		1624	165	8.	1		2230	226	3.
1		0418	44	0.	1		1024	105	2.	1		1630	166	8.	1		2236	227	3.
1		0424	45	0.	1		1030	106	2.	1		1636	167	8.	1		2242	228	3.
1		0430	46	0.	1		1036	107	2.	1		1642	168	7.	1		2248	229	3.
1		0436	47	0.	1		1042	108	2.	1		1648	169	7.	1		2254	230	3.
1		0442	48	0.	1		1048	109	3.	1		1654	170	7.	1		2300	231	3.
1		0448	49	0.	1		1054	110	3.	1		1700	171	7.	1		2306	232	3.
1		0454	50	0.	1		1100	111	3.	1		1706	172	7.	1		2312	233	3.
1		0500	51	0.	1		1106	112	3.	1		1712	173	6.	1		2318	234	3.
1		0506	52	0.	1		1112	113	4.	1		1718	174	6.	1		2324	235	3.

CALIFONHYDROLOGY																		
1	0512	53	0.	*	1	1118	114	4.	*	1	1724	175	6.	*	1	2330	236	3.
1	0518	54	0.	*	1	1124	115	5.	*	1	1730	176	6.	*	1	2336	237	3.
1	0524	55	0.	*	1	1130	116	5.	*	1	1736	177	6.	*	1	2342	238	3.
1	0530	56	0.	*	1	1136	117	6.	*	1	1742	178	5.	*	1	2348	239	3.
1	0536	57	0.	*	1	1142	118	7.	*	1	1748	179	5.	*	1	2354	240	3.
1	0542	58	0.	*	1	1148	119	8.	*	1	1754	180	5.	*	2	0000	241	2.
1	0548	59	0.	*	1	1154	120	9.	*	1	1800	181	5.	*				
1	0554	60	0.	*	1	1200	121	13.	*	1	1806	182	5.	*				
1	0600	61	0.	*	1	1206	122	20.	*	1	1812	183	5.	*				

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.00-HR
(CFS)	(HR)	(CFS)				
68.	12.80	21.	21.	6.	6.	6.
		(INCHES)	3.207	3.893	3.893	3.893
		(AC-FT)	10.	13.	13.	13.
CUMULATIVE AREA =			.06 SQ MI			



CALIFONHYDROLOGY

.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00

114 LS SCS LOSS RATE
 STRTL .94 INITIAL ABSTRACTION
 CRVNBR 68.00 CURVE NUMBER
 RTIMP .00 PERCENT IMPERVIOUS AREA

115 UD SCS DIMENSIONLESS UNITGRAPH
 TLAG .15 LAG

UNIT HYDROGRAPH
 10 END-OF-PERIOD ORDINATES
 7. 3. 1. 1. 0. 0.

24. 51. 35. 14. 7. 3. 1. 1. 0. 0.

HYDROGRAPH AT STATION SUB E

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	*	1		1206	122	.67	.23	.44	42.
1		0006	2	.01	.01	.00	0.	*	1		1212	123	.43	.13	.30	49.
1		0012	3	.01	.01	.00	0.	*	1		1218	124	.28	.08	.20	44.
1		0018	4	.01	.01	.00	0.	*	1		1224	125	.13	.03	.09	33.
1		0024	5	.01	.01	.00	0.	*	1		1230	126	.10	.03	.08	23.
1		0030	6	.01	.01	.00	0.	*	1		1236	127	.10	.02	.07	16.
1		0036	7	.01	.01	.00	0.	*	1		1242	128	.09	.02	.07	12.
1		0042	8	.01	.01	.00	0.	*	1		1248	129	.07	.02	.05	10.
1		0048	9	.01	.01	.00	0.	*	1		1254	130	.07	.02	.05	9.
1		0054	10	.01	.01	.00	0.	*	1		1300	131	.06	.01	.05	8.
1		0100	11	.01	.01	.00	0.	*	1		1306	132	.06	.01	.04	7.
1		0106	12	.01	.01	.00	0.	*	1		1312	133	.06	.01	.05	7.
1		0112	13	.01	.01	.00	0.	*	1		1318	134	.05	.01	.04	6.
1		0118	14	.01	.01	.00	0.	*	1		1324	135	.06	.01	.04	6.
1		0124	15	.01	.01	.00	0.	*	1		1330	136	.05	.01	.04	6.
1		0130	16	.01	.01	.00	0.	*	1		1336	137	.04	.01	.03	5.
1		0136	17	.01	.01	.00	0.	*	1		1342	138	.05	.01	.04	5.
1		0142	18	.01	.01	.00	0.	*	1		1348	139	.04	.01	.03	5.
1		0148	19	.01	.01	.00	0.	*	1		1354	140	.04	.01	.03	5.
1		0154	20	.01	.01	.00	0.	*	1		1400	141	.04	.01	.03	4.
1		0200	21	.01	.01	.00	0.	*	1		1406	142	.04	.01	.03	4.
1		0206	22	.01	.01	.00	0.	*	1		1412	143	.04	.01	.03	4.
1		0212	23	.01	.01	.00	0.	*	1		1418	144	.03	.01	.03	4.
1		0218	24	.01	.01	.00	0.	*	1		1424	145	.03	.01	.03	4.
1		0224	25	.01	.01	.00	0.	*	1		1430	146	.04	.01	.03	4.
1		0230	26	.02	.02	.00	0.	*	1		1436	147	.03	.01	.03	4.
1		0236	27	.01	.01	.00	0.	*	1		1442	148	.03	.01	.03	4.
1		0242	28	.01	.01	.00	0.	*	1		1448	149	.02	.00	.02	3.
1		0248	29	.01	.01	.00	0.	*	1		1454	150	.03	.01	.03	3.
1		0254	30	.01	.01	.00	0.	*	1		1500	151	.03	.01	.03	3.
1		0300	31	.01	.01	.00	0.	*	1		1506	152	.03	.01	.03	3.
1		0306	32	.01	.01	.00	0.	*	1		1512	153	.02	.00	.02	3.
1		0312	33	.02	.02	.00	0.	*	1		1518	154	.03	.01	.03	3.
1		0318	34	.01	.01	.00	0.	*	1		1524	155	.02	.00	.02	3.
1		0324	35	.01	.01	.00	0.	*	1		1530	156	.02	.00	.02	3.
1		0330	36	.01	.01	.00	0.	*	1		1536	157	.03	.01	.03	3.
1		0336	37	.01	.01	.00	0.	*	1		1542	158	.02	.00	.02	3.
1		0342	38	.02	.02	.00	0.	*	1		1548	159	.02	.00	.02	3.
1		0348	39	.01	.01	.00	0.	*	1		1554	160	.02	.00	.02	3.
1		0354	40	.01	.01	.00	0.	*	1		1600	161	.02	.00	.02	3.
1		0400	41	.01	.01	.00	0.	*	1		1606	162	.02	.00	.02	3.
1		0406	42	.02	.02	.00	0.	*	1		1612	163	.02	.00	.02	3.
1		0412	43	.01	.01	.00	0.	*	1		1618	164	.02	.00	.02	3.
1		0418	44	.01	.01	.00	0.	*	1		1624	165	.02	.00	.02	3.
1		0424	45	.02	.02	.00	0.	*	1		1630	166	.02	.00	.01	3.
1		0430	46	.01	.01	.00	0.	*	1		1636	167	.02	.00	.02	2.
1		0436	47	.01	.01	.00	0.	*	1		1642	168	.02	.00	.02	2.
1		0442	48	.02	.02	.00	0.	*	1		1648	169	.02	.00	.01	2.
1		0448	49	.01	.01	.00	0.	*	1		1654	170	.02	.00	.01	2.
1		0454	50	.01	.01	.00	0.	*	1		1700	171	.01	.00	.01	2.
1		0500	51	.02	.02	.00	0.	*	1		1706	172	.02	.00	.01	2.
1		0506	52	.01	.01	.00	0.	*	1		1712	173	.02	.00	.01	2.
1		0512	53	.02	.02	.00	0.	*	1		1718	174	.02	.00	.01	2.
1		0518	54	.01	.01	.00	0.	*	1		1724	175	.02	.00	.01	2.
1		0524	55	.02	.02	.00	0.	*	1		1730	176	.01	.00	.01	2.
1		0530	56	.01	.01	.00	0.	*	1		1736	177	.02	.00	.01	1.
1		0536	57	.02	.02	.00	0.	*	1		1742	178	.02	.00	.01	2.
1		0542	58	.01	.01	.00	0.	*	1		1748	179	.01	.00	.01	2.
1		0548	59	.02	.02	.00	0.	*	1		1754	180	.02	.00	.01	1.
1		0554	60	.01	.01	.00	0.	*	1		1800	181	.02	.00	.01	2.
1		0600	61	.02	.02	.00	0.	*	1		1806	182	.01	.00	.01	2.
1		0606	62	.02	.02	.00	0.	*	1		1812	183	.02	.00	.01	1.
1		0612	63	.01	.01	.00	0.	*	1		1818	184	.01	.00	.01	1.
1		0618	64	.02	.02	.00	0.	*	1		1824	185	.02	.00	.01	1.
1		0624	65	.02	.02	.00	0.	*	1		1830	186	.01	.00	.01	1.
1		0630	66	.01	.01	.00	0.	*	1		1836	187	.02	.00	.01	1.
1		0636	67	.02	.02	.00	0.	*	1		1842	188	.01	.00	.01	1.
1		0642	68	.02	.02	.00	0.	*	1		1848	189	.02	.00	.01	1.
1		0648	69	.01	.01	.00	0.	*	1		1854	190	.01	.00	.01	1.
1		0654	70	.02	.02	.00	0.	*	1		1900	191	.02	.00	.01	1.
1		0700	71	.02	.02	.00	0.	*	1		1906	192	.01	.00	.01	1.
1		0706	72	.02	.02	.00	0.	*	1		1912	193	.01	.00	.01	1.
1		0712	73	.02	.02	.00	0.	*	1		1918	194	.02	.00	.01	1.
1		0718	74	.02	.02	.00	0.	*	1		1924	195	.01	.00	.01	1.
1		0724	75	.02	.02	.00	0.	*	1		1930	196	.02	.00	.01	1.
1		0730	76	.02	.02	.00	0.	*	1		1936	197	.01	.00	.01	1.
1		0736	77	.02	.02	.00	0.	*	1		1942	198	.01	.00	.01	1.
1		0742	78	.02	.02	.00	0.	*	1		1948	199	.02	.00	.01	1.
1		0748	79	.02	.02	.00	0.	*	1		1954	200	.01	.00	.01	1.
1		0754	80	.02	.02	.00	0.	*	1		2000	201	.01	.00	.01	1.
1		0800	81	.02	.02	.00	0.	*	1		2006	202	.01	.00	.01	1.

CALIFONHYDROLOGY														
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.02	.00	.01	1.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.01	1.
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.01	1.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.01	1.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.02	.00	.01	1.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	1.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	1.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	1.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	1.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.02	.00	.01	1.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	1.
1	0912	93	.03	.03	.00	0.	*	1	2118	214	.01	.00	.01	1.
1	0918	94	.03	.03	.00	0.	*	1	2124	215	.01	.00	.01	1.
1	0924	95	.03	.03	.00	0.	*	1	2130	216	.01	.00	.01	1.
1	0930	96	.03	.03	.00	1.	*	1	2136	217	.01	.00	.01	1.
1	0936	97	.03	.03	.00	1.	*	1	2142	218	.01	.00	.01	1.
1	0942	98	.04	.03	.01	1.	*	1	2148	219	.01	.00	.01	1.
1	0948	99	.03	.03	.01	1.	*	1	2154	220	.01	.00	.01	1.
1	0954	100	.04	.03	.01	1.	*	1	2200	221	.02	.00	.01	1.
1	1000	101	.03	.03	.01	1.	*	1	2206	222	.01	.00	.01	1.
1	1006	102	.04	.03	.01	1.	*	1	2212	223	.01	.00	.01	1.
1	1012	103	.04	.03	.01	1.	*	1	2218	224	.01	.00	.01	1.
1	1018	104	.05	.04	.01	1.	*	1	2224	225	.01	.00	.01	1.
1	1024	105	.04	.03	.01	1.	*	1	2230	226	.01	.00	.01	1.
1	1030	106	.05	.04	.01	1.	*	1	2236	227	.01	.00	.01	1.
1	1036	107	.05	.03	.01	2.	*	1	2242	228	.01	.00	.01	1.
1	1042	108	.05	.03	.01	2.	*	1	2248	229	.01	.00	.01	1.
1	1048	109	.06	.04	.02	2.	*	1	2254	230	.01	.00	.01	1.
1	1054	110	.06	.04	.02	2.	*	1	2300	231	.01	.00	.01	1.
1	1100	111	.06	.04	.02	2.	*	1	2306	232	.01	.00	.01	1.
1	1106	112	.06	.04	.02	3.	*	1	2312	233	.01	.00	.01	1.
1	1112	113	.06	.04	.02	3.	*	1	2318	234	.01	.00	.01	1.
1	1118	114	.08	.05	.03	3.	*	1	2324	235	.01	.00	.01	1.
1	1124	115	.09	.05	.03	4.	*	1	2330	236	.01	.00	.01	1.
1	1130	116	.09	.05	.04	4.	*	1	2336	237	.01	.00	.01	1.
1	1136	117	.11	.06	.05	5.	*	1	2342	238	.01	.00	.01	1.
1	1142	118	.13	.07	.06	6.	*	1	2348	239	.00	.00	.00	1.
1	1148	119	.28	.15	.13	9.	*	1	2354	240	.00	.00	.00	1.
1	1154	120	.42	.20	.23	15.	*	2	0000	241	.01	.00	.01	1.
1	1200	121	.67	.27	.40	27.	*							

TOTAL RAINFALL = 8.00, TOTAL LOSS = 3.76, TOTAL EXCESS = 4.24

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.00-HR
+	(CFS)	(CFS)			
+	49.	12.20	8.	2.	2.
			(INCHES)	4.224	4.224
			(AC-FT)	5.	5.

CUMULATIVE AREA = .02 SQ MI

HYDROGRAPH AT STATION SUB E
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.36	.22	.15	12.
1		0006	2	.00	.00	.00	0.	1		1212	123	.23	.13	.11	15.
1		0012	3	.00	.00	.00	0.	1		1218	124	.15	.08	.07	14.
1		0018	4	.00	.00	.00	0.	1		1224	125	.07	.03	.03	11.
1		0024	5	.00	.00	.00	0.	1		1230	126	.06	.03	.03	8.
1		0030	6	.00	.00	.00	0.	1		1236	127	.05	.02	.03	6.
1		0036	7	.00	.00	.00	0.	1		1242	128	.05	.02	.03	5.
1		0042	8	.00	.00	.00	0.	1		1248	129	.04	.02	.02	4.
1		0048	9	.00	.00	.00	0.	1		1254	130	.04	.02	.02	3.
1		0054	10	.00	.00	.00	0.	1		1300	131	.03	.02	.02	3.
1		0100	11	.00	.00	.00	0.	1		1306	132	.03	.01	.02	3.
1		0106	12	.00	.00	.00	0.	1		1312	133	.03	.02	.02	3.
1		0112	13	.00	.00	.00	0.	1		1318	134	.03	.01	.01	2.
1		0118	14	.00	.00	.00	0.	1		1324	135	.03	.01	.02	2.
1		0124	15	.00	.00	.00	0.	1		1330	136	.03	.01	.01	2.
1		0130	16	.00	.00	.00	0.	1		1336	137	.02	.01	.01	2.
1		0136	17	.00	.00	.00	0.	1		1342	138	.03	.01	.01	2.
1		0142	18	.00	.00	.00	0.	1		1348	139	.02	.01	.01	2.
1		0148	19	.00	.00	.00	0.	1		1354	140	.02	.01	.01	2.
1		0154	20	.00	.00	.00	0.	1		1400	141	.02	.01	.01	2.
1		0200	21	.00	.00	.00	0.	1		1406	142	.02	.01	.01	2.
1		0206	22	.00	.00	.00	0.	1		1412	143	.02	.01	.01	2.
1		0212	23	.00	.00	.00	0.	1		1418	144	.02	.01	.01	2.
1		0218	24	.00	.00	.00	0.	1		1424	145	.02	.01	.01	2.
1		0224	25	.00	.00	.00	0.	1		1430	146	.02	.01	.01	1.
1		0230	26	.01	.01	.00	0.	1		1436	147	.02	.01	.01	2.
1		0236	27	.00	.00	.00	0.	1		1442	148	.02	.01	.01	1.
1		0242	28	.00	.00	.00	0.	1		1448	149	.01	.01	.01	1.
1		0248	29	.00	.00	.00	0.	1		1454	150	.02	.01	.01	1.
1		0254	30	.00	.00	.00	0.	1		1500	151	.02	.01	.01	1.
1		0300	31	.00	.00	.00	0.	1		1506	152	.02	.01	.01	1.
1		0306	32	.00	.00	.00	0.	1		1512	153	.01	.01	.01	1.
1		0312	33	.01	.01	.00	0.	1		1518	154	.02	.01	.01	1.
1		0318	34	.00	.00	.00	0.	1		1524	155	.01	.01	.01	1.
1		0324	35	.00	.00	.00	0.	1		1530	156	.01	.01	.01	1.
1		0330	36	.00	.00	.00	0.	1		1536	157	.02	.01	.01	1.
1		0336	37	.00	.00	.00	0.	1		1542	158	.01	.01	.01	1.
1		0342	38	.01	.01	.00	0.	1		1548	159	.01	.01	.01	1.
1		0348	39	.00	.00	.00	0.	1		1554	160	.01	.01	.01	1.
1		0354	40	.00	.00	.00	0.	1		1600	161	.01	.00	.01	1.
1		0400	41	.00	.00	.00	0.	1		1606	162	.01	.00	.01	1.

CALIFONHYDROLOGY

1	0406	42	.01	.01	.00	0.	1	1612	163	.01	.00	.01	1.
1	0412	43	.00	.00	.00	0.	1	1618	164	.01	.00	.01	1.
1	0418	44	.00	.00	.00	0.	1	1624	165	.01	.00	.01	1.
1	0424	45	.01	.01	.00	0.	1	1630	166	.01	.00	.01	1.
1	0430	46	.00	.00	.00	0.	1	1636	167	.01	.00	.01	1.
1	0436	47	.00	.00	.00	0.	1	1642	168	.01	.00	.01	1.
1	0442	48	.01	.01	.00	0.	1	1648	169	.01	.00	.01	1.
1	0448	49	.00	.00	.00	0.	1	1654	170	.01	.00	.01	1.
1	0454	50	.00	.00	.00	0.	1	1700	171	.00	.00	.00	1.
1	0500	51	.01	.01	.00	0.	1	1706	172	.01	.00	.01	1.
1	0506	52	.00	.00	.00	0.	1	1712	173	.01	.00	.01	1.
1	0512	53	.01	.01	.00	0.	1	1718	174	.01	.00	.01	1.
1	0518	54	.00	.00	.00	0.	1	1724	175	.01	.00	.01	1.
1	0524	55	.01	.01	.00	0.	1	1730	176	.00	.00	.00	1.
1	0530	56	.00	.00	.00	0.	1	1736	177	.01	.00	.01	1.
1	0536	57	.01	.01	.00	0.	1	1742	178	.01	.00	.01	1.
1	0542	58	.00	.00	.00	0.	1	1748	179	.00	.00	.00	1.
1	0548	59	.01	.01	.00	0.	1	1754	180	.01	.00	.01	1.
1	0554	60	.00	.00	.00	0.	1	1800	181	.01	.00	.01	1.
1	0600	61	.01	.01	.00	0.	1	1806	182	.00	.00	.00	1.
1	0606	62	.01	.01	.00	0.	1	1812	183	.01	.00	.01	1.
1	0612	63	.00	.00	.00	0.	1	1818	184	.00	.00	.00	1.
1	0618	64	.01	.01	.00	0.	1	1824	185	.01	.00	.01	1.
1	0624	65	.01	.01	.00	0.	1	1830	186	.00	.00	.00	1.
1	0630	66	.00	.00	.00	0.	1	1836	187	.01	.00	.01	1.
1	0636	67	.01	.01	.00	0.	1	1842	188	.00	.00	.00	1.
1	0642	68	.01	.01	.00	0.	1	1848	189	.01	.00	.01	1.
1	0648	69	.00	.00	.00	0.	1	1854	190	.00	.00	.00	1.
1	0654	70	.01	.01	.00	0.	1	1900	191	.01	.00	.01	1.
1	0700	71	.01	.01	.00	0.	1	1906	192	.00	.00	.00	1.
1	0706	72	.01	.01	.00	0.	1	1912	193	.00	.00	.00	0.
1	0712	73	.01	.01	.00	0.	1	1918	194	.01	.00	.01	0.
1	0718	74	.01	.01	.00	0.	1	1924	195	.00	.00	.00	1.
1	0724	75	.01	.01	.00	0.	1	1930	196	.01	.00	.01	1.
1	0730	76	.01	.01	.00	0.	1	1936	197	.00	.00	.00	1.
1	0736	77	.01	.01	.00	0.	1	1942	198	.00	.00	.00	0.
1	0742	78	.01	.01	.00	0.	1	1948	199	.01	.00	.01	0.
1	0748	79	.01	.01	.00	0.	1	1954	200	.00	.00	.00	1.
1	0754	80	.01	.01	.00	0.	1	2000	201	.00	.00	.00	0.
1	0800	81	.01	.01	.00	0.	1	2006	202	.00	.00	.00	0.
1	0806	82	.01	.01	.00	0.	1	2012	203	.01	.00	.01	0.
1	0812	83	.01	.01	.00	0.	1	2018	204	.00	.00	.00	1.
1	0818	84	.01	.01	.00	0.	1	2024	205	.00	.00	.00	0.
1	0824	85	.01	.01	.00	0.	1	2030	206	.00	.00	.00	0.
1	0830	86	.01	.01	.00	0.	1	2036	207	.01	.00	.01	0.
1	0836	87	.02	.02	.00	0.	1	2042	208	.00	.00	.00	1.
1	0842	88	.01	.01	.00	0.	1	2048	209	.00	.00	.00	0.
1	0848	89	.01	.01	.00	0.	1	2054	210	.00	.00	.00	0.
1	0854	90	.02	.02	.00	0.	1	2100	211	.00	.00	.00	0.
1	0900	91	.02	.02	.00	0.	1	2106	212	.01	.00	.01	0.
1	0906	92	.01	.01	.00	0.	1	2112	213	.00	.00	.00	1.
1	0912	93	.02	.02	.00	0.	1	2118	214	.00	.00	.00	0.
1	0918	94	.02	.02	.00	0.	1	2124	215	.00	.00	.00	0.
1	0924	95	.02	.02	.00	0.	1	2130	216	.00	.00	.00	0.
1	0930	96	.02	.02	.00	0.	1	2136	217	.00	.00	.00	0.
1	0936	97	.02	.02	.00	0.	1	2142	218	.00	.00	.00	0.
1	0942	98	.02	.02	.00	0.	1	2148	219	.00	.00	.00	0.
1	0948	99	.02	.02	.00	0.	1	2154	220	.00	.00	.00	0.
1	0954	100	.02	.02	.00	0.	1	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.00	0.	1	2206	222	.00	.00	.00	1.
1	1006	102	.02	.02	.00	0.	1	2212	223	.00	.00	.00	0.
1	1012	103	.02	.02	.00	0.	1	2218	224	.00	.00	.00	0.
1	1018	104	.03	.03	.00	0.	1	2224	225	.00	.00	.00	0.
1	1024	105	.02	.02	.00	0.	1	2230	226	.00	.00	.00	0.
1	1030	106	.03	.03	.00	0.	1	2236	227	.00	.00	.00	0.
1	1036	107	.03	.03	.00	0.	1	2242	228	.00	.00	.00	0.
1	1042	108	.03	.03	.00	0.	1	2248	229	.00	.00	.00	0.
1	1048	109	.03	.03	.00	0.	1	2254	230	.00	.00	.00	0.
1	1054	110	.03	.03	.00	0.	1	2300	231	.00	.00	.00	0.
1	1100	111	.03	.03	.00	0.	1	2306	232	.00	.00	.00	0.
1	1106	112	.03	.03	.00	0.	1	2312	233	.00	.00	.00	0.
1	1112	113	.03	.03	.00	0.	1	2318	234	.00	.00	.00	0.
1	1118	114	.04	.04	.00	0.	1	2324	235	.00	.00	.00	0.
1	1124	115	.05	.04	.00	0.	1	2330	236	.00	.00	.00	0.
1	1130	116	.05	.04	.01	1.	1	2336	237	.00	.00	.00	0.
1	1136	117	.06	.05	.01	1.	1	2342	238	.00	.00	.00	0.
1	1142	118	.07	.06	.01	1.	1	2348	239	.00	.00	.00	0.
1	1148	119	.15	.12	.03	2.	1	2354	240	.00	.00	.00	0.
1	1154	120	.23	.17	.06	3.	2	0000	241	.00	.00	.00	0.
1	1200	121	.36	.24	.12	7.	2						

TOTAL RAINFALL = 4.30, TOTAL LOSS = 2.90, TOTAL EXCESS = 1.40

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.00-HR
(CFS)	(HR)	(CFS)					
+	15.	12.20	3.	1.	1.	1.	1.
			1.156	1.394	1.394	1.394	1.394
			(INCHES)				
			1.	2.	2.	2.	2.

CUMULATIVE AREA = .02 SQ MI

1													
		(O) OUTFLOW											
	0.	2.	4.	6.	8.	10.	12.	14.	16.	0.	0.	0.	0.
	.0	.0	.0	.0	.0	.0	.0	.0	.4	.3	(L) PRECIP.	.2	(X) EXCESS
												.1	.0
DAHRMN PER	10000	10	20	30	40								
	10006	10	20	30	40								
	10012	10	20	30	40								
	10018	10	20	30	40								

CALIFONHYDROLOGY

12136	217.	0
12142	218.	0
12148	219.	0
12154	220.	0
12200	221.	0
12206	222.	0
12212	223.	0
12218	224.	0
12224	225.	0
12230	226.	0
12236	227.	0
12242	228.	0
12248	229.	0
12254	230.	0
12300	231.	0
12306	232.	0
12312	233.	0
12318	234.	0
12324	235.	0
12330	236.	0
12336	237.	0
12342	238.	0
12348	239.	0
12354	240.	0
20000	241.	0

HYDROGRAPH AT STATION SUB E
PLAN 1, RATIO = .63

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.42	.22	.20	17.
1		0006	2	.01	.01	.00	0.	1		1212	123	.27	.13	.14	21.
1		0012	3	.01	.01	.00	0.	1		1218	124	.17	.08	.10	20.
1		0018	4	.00	.00	.00	0.	1		1224	125	.08	.03	.05	15.
1		0024	5	.01	.01	.00	0.	1		1230	126	.07	.03	.04	11.
1		0030	6	.00	.00	.00	0.	1		1236	127	.06	.02	.04	8.
1		0036	7	.01	.01	.00	0.	1		1242	128	.06	.02	.03	6.
1		0042	8	.01	.01	.00	0.	1		1248	129	.05	.02	.03	5.
1		0048	9	.01	.01	.00	0.	1		1254	130	.04	.02	.03	4.
1		0054	10	.00	.00	.00	0.	1		1300	131	.04	.02	.02	4.
1		0100	11	.01	.01	.00	0.	1		1306	132	.04	.01	.02	4.
1		0106	12	.01	.01	.00	0.	1		1312	133	.04	.02	.02	3.
1		0112	13	.01	.01	.00	0.	1		1318	134	.03	.01	.02	3.
1		0118	14	.01	.01	.00	0.	1		1324	135	.03	.01	.02	3.
1		0124	15	.01	.01	.00	0.	1		1330	136	.03	.01	.02	3.
1		0130	16	.00	.00	.00	0.	1		1336	137	.02	.01	.02	3.
1		0136	17	.01	.01	.00	0.	1		1342	138	.03	.01	.02	2.
1		0142	18	.01	.01	.00	0.	1		1348	139	.02	.01	.02	2.
1		0148	19	.00	.00	.00	0.	1		1354	140	.02	.01	.02	2.
1		0154	20	.01	.01	.00	0.	1		1400	141	.02	.01	.02	2.
1		0200	21	.01	.01	.00	0.	1		1406	142	.02	.01	.02	2.
1		0206	22	.01	.01	.00	0.	1		1412	143	.02	.01	.02	2.
1		0212	23	.01	.01	.00	0.	1		1418	144	.02	.01	.01	2.
1		0218	24	.01	.01	.00	0.	1		1424	145	.02	.01	.01	2.
1		0224	25	.01	.01	.00	0.	1		1430	146	.02	.01	.02	2.
1		0230	26	.01	.01	.00	0.	1		1436	147	.02	.01	.01	2.
1		0236	27	.01	.01	.00	0.	1		1442	148	.02	.01	.01	2.
1		0242	28	.01	.01	.00	0.	1		1448	149	.02	.01	.01	2.
1		0248	29	.00	.00	.00	0.	1		1454	150	.02	.01	.01	2.
1		0254	30	.01	.01	.00	0.	1		1500	151	.02	.01	.01	2.
1		0300	31	.01	.01	.00	0.	1		1506	152	.02	.01	.01	2.
1		0306	32	.01	.01	.00	0.	1		1512	153	.02	.01	.01	2.
1		0312	33	.01	.01	.00	0.	1		1518	154	.02	.01	.01	2.
1		0318	34	.00	.00	.00	0.	1		1524	155	.01	.01	.01	2.
1		0324	35	.00	.00	.00	0.	1		1530	156	.02	.01	.01	2.
1		0330	36	.01	.01	.00	0.	1		1536	157	.02	.01	.01	1.
1		0336	37	.00	.00	.00	0.	1		1542	158	.01	.01	.01	2.
1		0342	38	.01	.01	.00	0.	1		1548	159	.02	.00	.01	1.
1		0348	39	.01	.01	.00	0.	1		1554	160	.02	.00	.01	1.
1		0354	40	.00	.00	.00	0.	1		1600	161	.01	.00	.01	1.
1		0400	41	.01	.01	.00	0.	1		1606	162	.02	.00	.01	1.
1		0406	42	.01	.01	.00	0.	1		1612	163	.02	.00	.01	1.
1		0412	43	.00	.00	.00	0.	1		1618	164	.01	.00	.01	1.
1		0418	44	.00	.00	.00	0.	1		1624	165	.02	.00	.01	1.
1		0424	45	.01	.01	.00	0.	1		1630	166	.01	.00	.01	1.
1		0430	46	.01	.01	.00	0.	1		1636	167	.02	.00	.01	1.
1		0436	47	.00	.00	.00	0.	1		1642	168	.02	.00	.01	1.
1		0442	48	.01	.01	.00	0.	1		1648	169	.01	.00	.01	1.
1		0448	49	.01	.01	.00	0.	1		1654	170	.01	.00	.01	1.
1		0454	50	.00	.00	.00	0.	1		1700	171	.00	.00	.00	1.
1		0500	51	.01	.01	.00	0.	1		1706	172	.01	.00	.01	1.
1		0506	52	.00	.00	.00	0.	1		1712	173	.01	.00	.01	1.
1		0512	53	.01	.01	.00	0.	1		1718	174	.01	.00	.01	1.
1		0518	54	.01	.01	.00	0.	1		1724	175	.01	.00	.01	1.
1		0524	55	.01	.01	.00	0.	1		1730	176	.00	.00	.00	1.
1		0530	56	.01	.01	.00	0.	1		1736	177	.01	.00	.01	1.
1		0536	57	.01	.01	.00	0.	1		1742	178	.01	.00	.01	1.
1		0542	58	.01	.01	.00	0.	1		1748	179	.00	.00	.00	1.
1		0548	59	.01	.01	.00	0.	1		1754	180	.01	.00	.01	1.
1		0554	60	.01	.01	.00	0.	1		1800	181	.01	.00	.01	1.
1		0600	61	.01	.01	.00	0.	1		1806	182	.00	.00	.00	1.
1		0606	62	.01	.01	.00	0.	1		1812	183	.01	.00	.01	1.
1		0612	63	.01	.01	.00	0.	1		1818	184	.01	.00	.00	1.
1		0618	64	.01	.01	.00	0.	1		1824	185	.01	.00	.01	1.
1		0624	65	.01	.01	.00	0.	1		1830	186	.00	.00	.00	1.
1		0630	66	.00	.00	.00	0.	1		1836	187	.01	.00	.01	1.
1		0636	67	.01	.01	.00	0.	1		1842	188	.00	.00	.00	1.
1		0642	68	.01	.01	.00	0.	1		1848	189	.01	.00	.01	1.
1		0648	69	.01	.01	.00	0.	1		1854	190	.00	.00	.00	1.
1		0654	70	.01	.01	.00	0.	1		1900	191	.01	.00	.01	1.

CALIFONHYDROLOGY

1	0700	71	.01	.01	.00	0.	*	1	1906	192	.00	.00	.00	1.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.00	.00	.00	1.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	1.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.00	.00	.00	1.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	1.
1	0730	76	.01	.01	.00	0.	*	1	1936	197	.01	.00	.00	1.
1	0736	77	.01	.01	.00	0.	*	1	1942	198	.00	.00	.00	1.
1	0742	78	.01	.01	.00	0.	*	1	1948	199	.01	.00	.01	1.
1	0748	79	.01	.01	.00	0.	*	1	1954	200	.00	.00	.00	1.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.00	1.
1	0800	81	.01	.01	.00	0.	*	1	2006	202	.00	.00	.00	1.
1	0806	82	.01	.01	.00	0.	*	1	2012	203	.01	.00	.01	1.
1	0812	83	.01	.01	.00	0.	*	1	2018	204	.01	.00	.00	1.
1	0818	84	.01	.01	.00	0.	*	1	2024	205	.00	.00	.00	1.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.00	.00	.00	1.
1	0830	86	.01	.01	.00	0.	*	1	2036	207	.01	.00	.01	1.
1	0836	87	.02	.02	.00	0.	*	1	2042	208	.01	.00	.00	1.
1	0842	88	.01	.01	.00	0.	*	1	2048	209	.00	.00	.00	1.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.00	.00	.00	1.
1	0854	90	.02	.02	.00	0.	*	1	2100	211	.00	.00	.00	1.
1	0900	91	.02	.02	.00	0.	*	1	2106	212	.01	.00	.01	1.
1	0906	92	.01	.01	.00	0.	*	1	2112	213	.00	.00	.00	1.
1	0912	93	.02	.02	.00	0.	*	1	2118	214	.00	.00	.00	1.
1	0918	94	.02	.02	.00	0.	*	1	2124	215	.00	.00	.00	1.
1	0924	95	.02	.02	.00	0.	*	1	2130	216	.01	.00	.00	1.
1	0930	96	.02	.02	.00	0.	*	1	2136	217	.00	.00	.00	0.
1	0936	97	.02	.02	.00	0.	*	1	2142	218	.00	.00	.00	0.
1	0942	98	.02	.02	.00	0.	*	1	2148	219	.00	.00	.00	0.
1	0948	99	.02	.02	.00	0.	*	1	2154	220	.00	.00	.00	0.
1	0954	100	.02	.02	.00	0.	*	1	2200	221	.01	.00	.01	1.
1	1000	101	.02	.02	.00	0.	*	1	2206	222	.00	.00	.00	1.
1	1006	102	.03	.03	.00	0.	*	1	2212	223	.00	.00	.00	1.
1	1012	103	.02	.02	.00	0.	*	1	2218	224	.01	.00	.00	1.
1	1018	104	.03	.03	.00	0.	*	1	2224	225	.00	.00	.00	1.
1	1024	105	.02	.02	.00	0.	*	1	2230	226	.00	.00	.00	0.
1	1030	106	.03	.03	.00	0.	*	1	2236	227	.00	.00	.00	0.
1	1036	107	.03	.03	.00	0.	*	1	2242	228	.00	.00	.00	0.
1	1042	108	.03	.03	.00	0.	*	1	2248	229	.01	.00	.00	0.
1	1048	109	.03	.03	.00	0.	*	1	2254	230	.00	.00	.00	0.
1	1054	110	.03	.03	.00	0.	*	1	2300	231	.00	.00	.00	0.
1	1100	111	.04	.04	.00	0.	*	1	2306	232	.00	.00	.00	0.
1	1106	112	.04	.03	.01	1.	*	1	2312	233	.00	.00	.00	0.
1	1112	113	.04	.03	.01	1.	*	1	2318	234	.01	.00	.00	0.
1	1118	114	.05	.04	.01	1.	*	1	2324	235	.00	.00	.00	0.
1	1124	115	.06	.05	.01	1.	*	1	2330	236	.00	.00	.00	0.
1	1130	116	.06	.04	.01	1.	*	1	2336	237	.00	.00	.00	0.
1	1136	117	.07	.06	.01	1.	*	1	2342	238	.01	.00	.00	0.
1	1142	118	.08	.06	.02	2.	*	1	2348	239	.00	.00	.00	0.
1	1148	119	.17	.13	.05	3.	*	1	2354	240	.00	.00	.00	0.
1	1154	120	.27	.18	.09	5.	*	2	0000	241	.00	.00	.00	0.
1	1200	121	.42	.25	.17	10.	*							

TOTAL RAINFALL = 5.00, TOTAL LOSS = 3.12, TOTAL EXCESS = 1.88

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR	AVERAGE FLOW 72-HR	24.00-HR
21.	12.20	4.	1.	1.	1.
		(INCHES) 1.552	1.874	1.874	1.874
		(AC-FT) 2.	2.	2.	2.

CUMULATIVE AREA = .02 SQ MI

1	STATION	SUB E	0.	4.	8.	12.	16.	20.	24.	0.	0.	0.	0.	0.
DAHRMN PER	(O) OUTFLOW		(L) PRECIP.	(X) EXCESS										
10000	10		.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.4	.2
10006	20													
10012	30													
10018	40													
10024	50													
10030	60													
10036	70													
10042	80													
10048	90													
10054	100													
10100	110													
10106	120													
10112	130													
10118	140													
10124	150													
10130	160													
10136	170													
10142	180													
10148	190													
10154	200													
10200	210													
10206	220													
10212	230													
10218	240													
10224	250													
10230	260													
10236	270													
10242	280													
10248	290													
10254	300													
10300	310													
10306	320													
10312	330													

CALIFONHYDROLOGY
 HYDROGRAPH AT STATION SUB E
 PLAN 1, RATIO = .76

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.51	.23	.29	26.
1		0006	2	.01	.01	.00	0.	1		1212	123	.33	.13	.20	31.
1		0012	3	.01	.01	.00	0.	1		1218	124	.21	.08	.14	28.
1		0018	4	.01	.01	.00	0.	1		1224	125	.10	.03	.06	22.
1		0024	5	.01	.01	.00	0.	1		1230	126	.08	.03	.05	15.
1		0030	6	.01	.01	.00	0.	1		1236	127	.07	.02	.05	10.
1		0036	7	.01	.01	.00	0.	1		1242	128	.07	.02	.04	8.
1		0042	8	.01	.01	.00	0.	1		1248	129	.05	.02	.04	7.
1		0048	9	.01	.01	.00	0.	1		1254	130	.05	.02	.04	6.
1		0054	10	.01	.01	.00	0.	1		1300	131	.05	.02	.03	5.
1		0100	11	.01	.01	.00	0.	1		1306	132	.04	.01	.03	5.
1		0106	12	.01	.01	.00	0.	1		1312	133	.05	.02	.03	4.
1		0112	13	.01	.01	.00	0.	1		1318	134	.04	.01	.03	4.
1		0118	14	.01	.01	.00	0.	1		1324	135	.04	.01	.03	4.
1		0124	15	.01	.01	.00	0.	1		1330	136	.04	.01	.03	4.
1		0130	16	.01	.01	.00	0.	1		1336	137	.03	.01	.02	4.
1		0136	17	.01	.01	.00	0.	1		1342	138	.04	.01	.03	3.
1		0142	18	.01	.01	.00	0.	1		1348	139	.03	.01	.02	3.
1		0148	19	.01	.01	.00	0.	1		1354	140	.03	.01	.02	3.
1		0154	20	.01	.01	.00	0.	1		1400	141	.03	.01	.02	3.
1		0200	21	.01	.01	.00	0.	1		1406	142	.03	.01	.02	3.
1		0206	22	.01	.01	.00	0.	1		1412	143	.03	.01	.02	3.
1		0212	23	.01	.01	.00	0.	1		1418	144	.02	.01	.02	3.
1		0218	24	.01	.01	.00	0.	1		1424	145	.02	.01	.02	3.
1		0224	25	.01	.01	.00	0.	1		1430	146	.03	.01	.02	3.
1		0230	26	.01	.01	.00	0.	1		1436	147	.02	.01	.02	3.
1		0236	27	.01	.01	.00	0.	1		1442	148	.02	.01	.02	3.
1		0242	28	.01	.01	.00	0.	1		1448	149	.02	.01	.01	2.
1		0248	29	.01	.01	.00	0.	1		1454	150	.02	.01	.02	2.
1		0254	30	.01	.01	.00	0.	1		1500	151	.02	.01	.02	2.
1		0300	31	.01	.01	.00	0.	1		1506	152	.02	.01	.02	2.
1		0306	32	.01	.01	.00	0.	1		1512	153	.02	.01	.01	2.
1		0312	33	.01	.01	.00	0.	1		1518	154	.02	.01	.02	2.
1		0318	34	.01	.01	.00	0.	1		1524	155	.02	.00	.01	2.
1		0324	35	.01	.01	.00	0.	1		1530	156	.02	.00	.01	2.
1		0330	36	.01	.01	.00	0.	1		1536	157	.02	.01	.02	2.
1		0336	37	.01	.01	.00	0.	1		1542	158	.02	.00	.01	2.
1		0342	38	.01	.01	.00	0.	1		1548	159	.02	.00	.01	2.
1		0348	39	.01	.01	.00	0.	1		1554	160	.02	.00	.01	2.
1		0354	40	.01	.01	.00	0.	1		1600	161	.02	.00	.01	2.
1		0400	41	.01	.01	.00	0.	1		1606	162	.02	.00	.01	2.
1		0406	42	.01	.01	.00	0.	1		1612	163	.02	.00	.01	2.
1		0412	43	.01	.01	.00	0.	1		1618	164	.02	.00	.01	2.
1		0418	44	.01	.01	.00	0.	1		1624	165	.02	.00	.01	2.
1		0424	45	.01	.01	.00	0.	1		1630	166	.01	.00	.01	2.
1		0430	46	.01	.01	.00	0.	1		1636	167	.02	.00	.01	2.
1		0436	47	.01	.01	.00	0.	1		1642	168	.02	.00	.01	2.
1		0442	48	.01	.01	.00	0.	1		1648	169	.01	.00	.01	2.
1		0448	49	.01	.01	.00	0.	1		1654	170	.01	.00	.01	1.
1		0454	50	.01	.01	.00	0.	1		1700	171	.01	.00	.00	1.
1		0500	51	.01	.01	.00	0.	1		1706	172	.01	.00	.01	1.
1		0506	52	.01	.01	.00	0.	1		1712	173	.01	.00	.01	1.
1		0512	53	.01	.01	.00	0.	1		1718	174	.01	.00	.01	1.
1		0518	54	.01	.01	.00	0.	1		1724	175	.01	.00	.01	1.
1		0524	55	.01	.01	.00	0.	1		1730	176	.01	.00	.00	1.
1		0530	56	.01	.01	.00	0.	1		1736	177	.01	.00	.01	1.
1		0536	57	.01	.01	.00	0.	1		1742	178	.01	.00	.01	1.
1		0542	58	.01	.01	.00	0.	1		1748	179	.01	.00	.00	1.
1		0548	59	.01	.01	.00	0.	1		1754	180	.01	.00	.01	1.
1		0554	60	.01	.01	.00	0.	1		1800	181	.01	.00	.01	1.
1		0600	61	.01	.01	.00	0.	1		1806	182	.01	.00	.00	1.
1		0606	62	.01	.01	.00	0.	1		1812	183	.01	.00	.01	1.
1		0612	63	.01	.01	.00	0.	1		1818	184	.01	.00	.00	1.
1		0618	64	.01	.01	.00	0.	1		1824	185	.01	.00	.01	1.
1		0624	65	.01	.01	.00	0.	1		1830	186	.01	.00	.00	1.
1		0630	66	.01	.01	.00	0.	1		1836	187	.01	.00	.01	1.
1		0636	67	.01	.01	.00	0.	1		1842	188	.01	.00	.00	1.
1		0642	68	.01	.01	.00	0.	1		1848	189	.01	.00	.01	1.
1		0648	69	.01	.01	.00	0.	1		1854	190	.01	.00	.00	1.
1		0654	70	.01	.01	.00	0.	1		1900	191	.01	.00	.01	1.
1		0700	71	.01	.01	.00	0.	1		1906	192	.01	.00	.00	1.
1		0706	72	.01	.01	.00	0.	1		1912	193	.01	.00	.00	1.
1		0712	73	.01	.01	.00	0.	1		1918	194	.01	.00	.01	1.
1		0718	74	.01	.01	.00	0.	1		1924	195	.01	.00	.00	1.
1		0724	75	.01	.01	.00	0.	1		1930	196	.01	.00	.01	1.
1		0730	76	.02	.02	.00	0.	1		1936	197	.01	.00	.00	1.
1		0736	77	.02	.02	.00	0.	1		1942	198	.01	.00	.00	1.
1		0742	78	.02	.02	.00	0.	1		1948	199	.01	.00	.01	1.
1		0748	79	.02	.02	.00	0.	1		1954	200	.01	.00	.00	1.
1		0754	80	.02	.02	.00	0.	1		2000	201	.01	.00	.00	1.
1		0800	81	.02	.02	.00	0.	1		2006	202	.01	.00	.00	1.
1		0806	82	.02	.02	.00	0.	1		2012	203	.01	.00	.01	1.
1		0812	83	.02	.02	.00	0.	1		2018	204	.01	.00	.00	1.
1		0818	84	.02	.02	.00	0.	1		2024	205	.01	.00	.00	1.
1		0824	85	.02	.02	.00	0.	1		2030	206	.01	.00	.00	1.
1		0830	86	.02	.02	.00	0.	1		2036	207	.01	.00	.01	1.
1		0836	87	.02	.02	.00	0.	1		2042	208	.01	.00	.00	1.
1		0842	88	.02	.02	.00	0.	1		2048	209	.01	.00	.00	1.
1		0848	89	.02	.02	.00	0.	1		2054	210	.01	.00	.00	1.
1		0854	90	.02	.02	.00	0.	1		2100	211	.01	.00	.00	1.
1		0900	91	.02	.02	.00	0.	1		2106	212	.01	.00	.01	1.
1		0906	92	.02	.02	.00	0.	1		2112	213	.01	.00	.00	1.
1		0912	93	.02	.02	.00	0.	1		2118	214	.01	.00	.00	1.
1		0918	94	.02	.02	.00	0.	1		2124	215	.01	.00	.00	1.
1		0924	95	.02	.02	.00	0.	1		2130	216	.01	.00	.00	1.
1		0930	96	.02	.02	.00	0.	1		2136	217	.01	.00	.00	1.
1		0936	97	.02	.02	.00	0.	1		2142	218	.01	.00	.00	1.
1		0942	98	.03	.03	.00	0.	1		2148	219	.01	.00	.00	1.
1		0948	99	.02	.02	.00	0.	1		2154	220	.01	.00	.00	1.

CALIFONHYDROLOGY														
1	0954	100	.03	.03	.00	0.	*	1	2200	221	-.01	.00	-.01	1.
1	1000	101	.02	.02	.00	0.	*	1	2206	222	-.01	.00	-.00	1.
1	1006	102	.03	.03	.00	0.	*	1	2212	223	-.01	.00	-.00	1.
1	1012	103	.03	.03	.00	0.	*	1	2218	224	-.01	.00	-.00	1.
1	1018	104	.04	.03	.00	0.	*	1	2224	225	-.01	.00	-.00	1.
1	1024	105	.03	.03	.00	0.	*	1	2230	226	-.01	.00	-.00	1.
1	1030	106	.04	.03	.00	1.	*	1	2236	227	-.01	.00	-.00	1.
1	1036	107	.04	.03	.01	1.	*	1	2242	228	-.01	.00	-.00	1.
1	1042	108	.04	.03	.01	1.	*	1	2248	229	-.01	.00	-.00	1.
1	1048	109	.04	.04	.01	1.	*	1	2254	230	-.01	.00	-.00	1.
1	1054	110	.04	.03	.01	1.	*	1	2300	231	-.01	.00	-.00	1.
1	1100	111	.05	.04	.01	1.	*	1	2306	232	-.01	.00	-.00	1.
1	1106	112	.05	.04	.01	1.	*	1	2312	233	-.01	.00	-.00	1.
1	1112	113	.06	.04	.01	1.	*	1	2318	234	-.01	.00	-.00	1.
1	1118	114	.06	.05	.01	2.	*	1	2324	235	-.01	.00	-.00	1.
1	1124	115	.07	.05	.02	2.	*	1	2330	236	-.01	.00	-.00	1.
1	1130	116	.07	.05	.02	2.	*	1	2336	237	-.01	.00	-.00	1.
1	1136	117	.09	.06	.03	3.	*	1	2342	238	-.01	.00	-.00	1.
1	1142	118	.10	.07	.03	3.	*	1	2348	239	-.00	.00	-.00	1.
1	1148	119	.21	.14	.08	5.	*	1	2354	240	-.00	.00	-.00	0.
1	1154	120	.32	.19	.13	9.	*	2	0000	241	-.01	.00	-.00	0.
1	1200	121	.51	.26	.25	16.	*							

TOTAL RAINFALL = 6.10, TOTAL LOSS = 3.40, TOTAL EXCESS = 2.70

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.00-HR
(CFS)	(HR)	(CFS)	(INCHES)	(AC-FT)	
31.	12.20	5.	2.223	3.	2.690

CUMULATIVE AREA = .02 SQ MI

DAHRMN PER	STATION SUB E										(L) PRECIP.	(X) EXCESS	
	0.	4.	8.	12.	16.	20.	24.	28.	32.	0.			
10000	10										.6	0.	0.
10006	20												
10012	30												
10018	40												
10024	50												
10030	60												
10036	70												
10042	80												
10048	90												
10054	100												
10100	110												
10106	120												
10112	130												
10118	140												
10124	150												
10130	160												
10136	170												
10142	180												
10148	190												
10154	200												
10200	210												
10206	220												
10212	230												
10218	240												
10224	250												
10230	260												
10236	270												L.
10242	280												
10248	290												
10254	300												
10300	310												
10306	320												
10312	330												L.
10318	340												
10324	350												
10330	360												
10336	370												
10342	380												L.
10348	390												
10354	400												
10400	410												
10406	420												L.
10412	430												
10418	440												
10424	450												L.
10430	460												
10436	470												
10442	480												L.
10448	490												
10454	500												
10500	510												L.
10506	520												
10512	530												L.
10518	540												
10524	550												L.
10530	560												
10536	570												L.
10542	580												
10548	590												L.
10554	600												
10600	610												L.
10606	620												L.

CALIFONHYDROLOGY

1	0212	23	.01	.01	.00	0.	*	1	1418	144	.03	.01	.02	3.
1	0218	24	.01	.01	.00	0.	*	1	1424	145	.03	.01	.02	3.
1	0224	25	.01	.01	.00	0.	*	1	1430	146	.03	.01	.03	3.
1	0230	26	.01	.01	.00	0.	*	1	1436	147	.03	.01	.02	3.
1	0236	27	.01	.01	.00	0.	*	1	1442	148	.03	.01	.02	3.
1	0242	28	.01	.01	.00	0.	*	1	1448	149	.02	.00	.02	3.
1	0248	29	.01	.01	.00	0.	*	1	1454	150	.03	.01	.02	3.
1	0254	30	.01	.01	.00	0.	*	1	1500	151	.03	.01	.02	3.
1	0300	31	.01	.01	.00	0.	*	1	1506	152	.03	.01	.02	3.
1	0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.00	.02	3.
1	0312	33	.01	.01	.00	0.	*	1	1518	154	.03	.01	.02	3.
1	0318	34	.01	.01	.00	0.	*	1	1524	155	.02	.00	.02	3.
1	0324	35	.01	.01	.00	0.	*	1	1530	156	.02	.00	.02	2.
1	0330	36	.01	.01	.00	0.	*	1	1536	157	.03	.01	.02	2.
1	0336	37	.01	.01	.00	0.	*	1	1542	158	.02	.00	.02	3.
1	0342	38	.01	.01	.00	0.	*	1	1548	159	.02	.00	.02	2.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.00	.02	2.
1	0354	40	.01	.01	.00	0.	*	1	1600	161	.02	.00	.02	2.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.00	.02	2.
1	0406	42	.01	.01	.00	0.	*	1	1612	163	.02	.00	.02	2.
1	0412	43	.01	.01	.00	0.	*	1	1618	164	.02	.00	.02	2.
1	0418	44	.01	.01	.00	0.	*	1	1624	165	.02	.00	.02	2.
1	0424	45	.01	.01	.00	0.	*	1	1630	166	.01	.00	.01	2.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.00	.02	2.
1	0436	47	.01	.01	.00	0.	*	1	1642	168	.02	.00	.02	2.
1	0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	2.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.01	.00	.01	2.
1	0454	50	.01	.01	.00	0.	*	1	1700	171	.01	.00	.01	1.
1	0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	1.
1	0506	52	.01	.01	.00	0.	*	1	1712	173	.01	.00	.01	1.
1	0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	1.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.01	.00	.01	1.
1	0524	55	.01	.01	.00	0.	*	1	1730	176	.01	.00	.01	1.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.01	.00	.01	1.
1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	1.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.01	1.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	1.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.01	.00	.01	1.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.01	.00	.01	1.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	1.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.01	1.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	1.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.01	.00	.01	1.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.01	.00	.01	1.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.01	.00	.01	1.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	1.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.01	1.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	1.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.01	.00	.01	1.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.01	.00	.01	1.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	1.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.01	.00	.01	1.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	1.
1	0730	76	.02	.02	.00	0.	*	1	1936	197	.01	.00	.01	1.
1	0736	77	.02	.02	.00	0.	*	1	1942	198	.01	.00	.01	1.
1	0742	78	.02	.02	.00	0.	*	1	1948	199	.01	.00	.01	1.
1	0748	79	.02	.02	.00	0.	*	1	1954	200	.01	.00	.01	1.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.01	1.
1	0800	81	.02	.02	.00	0.	*	1	2006	202	.01	.00	.01	1.
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.01	.00	.01	1.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.01	1.
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.01	1.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.01	1.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.01	.00	.01	1.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	1.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	1.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	1.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	1.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.01	.00	.01	1.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	1.
1	0912	93	.03	.03	.00	0.	*	1	2118	214	.01	.00	.01	1.
1	0918	94	.03	.03	.00	0.	*	1	2124	215	.01	.00	.01	1.
1	0924	95	.03	.03	.00	0.	*	1	2130	216	.01	.00	.01	1.
1	0930	96	.03	.03	.00	0.	*	1	2136	217	.01	.00	.01	1.
1	0936	97	.03	.03	.00	0.	*	1	2142	218	.01	.00	.01	1.
1	0942	98	.03	.03	.00	0.	*	1	2148	219	.01	.00	.01	1.
1	0948	99	.03	.02	.00	0.	*	1	2154	220	.01	.00	.01	1.
1	0954	100	.03	.03	.00	0.	*	1	2200	221	.01	.00	.01	1.
1	1000	101	.03	.02	.00	1.	*	1	2206	222	.01	.00	.01	1.
1	1006	102	.04	.03	.01	1.	*	1	2212	223	.01	.00	.01	1.
1	1012	103	.03	.03	.01	1.	*	1	2218	224	.01	.00	.01	1.
1	1018	104	.04	.03	.01	1.	*	1	2224	225	.01	.00	.01	1.
1	1024	105	.03	.03	.01	1.	*	1	2230	226	.01	.00	.01	1.
1	1030	106	.04	.03	.01	1.	*	1	2236	227	.01	.00	.01	1.
1	1036	107	.04	.03	.01	1.	*	1	2242	228	.01	.00	.01	1.
1	1042	108	.04	.03	.01	1.	*	1	2248	229	.01	.00	.01	1.
1	1048	109	.05	.04	.01	1.	*	1	2254	230	.01	.00	.01	1.
1	1054	110	.05	.04	.01	1.	*	1	2300	231	.01	.00	.01	1.
1	1100	111	.06	.04	.01	2.	*	1	2306	232	.01	.00	.01	1.
1	1106	112	.06	.04	.02	2.	*	1	2312	233	.01	.00	.01	1.
1	1112	113	.06	.04	.02	2.	*	1	2318	234	.01	.00	.01	1.
1	1118	114	.07	.05	.02	2.	*	1	2324	235	.01	.00	.01	1.
1	1124	115	.08	.05	.03	3.	*	1	2330	236	.01	.00	.01	1.
1	1130	116	.08	.05	.03	3.	*	1	2336	237	.01	.00	.01	1.
1	1136	117	.10	.06	.04	4.	*	1	2342	238	.01	.00	.01	1.
1	1142	118	.11	.07	.04	4.	*	1	2348	239	.00	.00	.00	1.
1	1148	119	.24	.14	.10	7.	*	1	2354	240	.00	.00	.00	1.
1	1154	120	.37	.20	.18	12.	*	2	0000	241	.01	.00	.01	1.
1	1200	121	.59	.27	.32	21.	*							

TOTAL RAINFALL = 7.00, TOTAL LOSS = 3.59, TOTAL EXCESS = 3.41

PEAK FLOW TIME 6-HR MAXIMUM AVERAGE FLOW 24-HR 72-HR 24,00-HR
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CALIFONHYDROLOGY

+ (CFS) (HR)
 + 39. 12.20
 (CFS)
 (INCHES) 2.803 6. 2. 2. 2.
 (AC-FT) 3. 3.401 4. 3.401 4.
 CUMULATIVE AREA = .02 SQ MI

DAHRMN PER	STATION										SUB E	
	0.	5.	(O) 10.	15.	20.	25.	30.	35.	40.	0.	0.	0.
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	(L) PRECIP. .4	(X) EXCESS .2
10000	10											
10006	20											
10012	30											
10018	40											
10024	50											
10030	60											
10036	70											
10042	80											
10048	90											
10054	100											
10100	110											
10106	120											
10112	130											
10118	140											
10124	150											
10130	160											
10136	170											
10142	180											
10148	190											
10154	200											
10200	210											
10206	220											
10212	230											
10218	240											
10224	250											
10230	260											
10236	270											
10242	280											
10248	290											
10254	300											
10300	310											
10306	320											
10312	330											
10318	340											
10324	350											
10330	360											
10336	370											
10342	380											
10348	390											
10354	400											
10400	410											
10406	420											
10412	430											
10418	440											
10424	450											
10430	460											
10436	470											
10442	480											
10448	490											
10454	500											
10500	510											
10506	520											
10512	530											
10518	540											
10524	550											
10530	560											
10536	570											
10542	580											
10548	590											
10554	600											
10600	610											
10606	620											
10612	630											
10618	640											
10624	650											
10630	660											
10636	670											
10642	680											
10648	690											
10654	700											
10700	710											
10706	720											
10712	730											
10718	740											
10724	750											
10730	760											
10736	770											
10742	780											
10748	790											
10754	800											
10800	810											
10806	820											
10812	830											
10818	840											
10824	850											
10830	860											
10836	870											
10842	880											
10848	890											
10854	900											
10900	910											

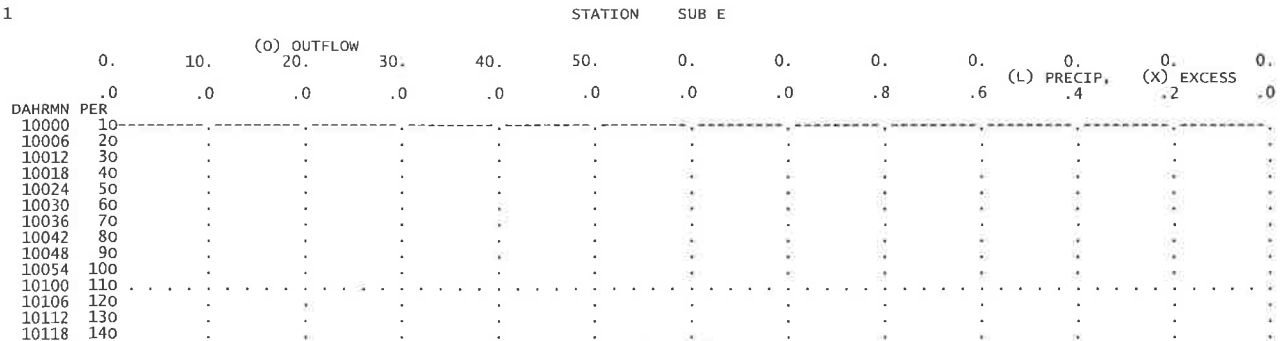
CALIFONHYDROLOGY

1	0506	52	.01	.01	.00	0.	*	1	1712	173	.02	.00	.01	2.
1	0512	53	.02	.02	.00	0.	*	1	1718	174	.02	.00	.01	2.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.02	.00	.01	2.
1	0524	55	.02	.02	.00	0.	*	1	1730	176	.01	.00	.01	2.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.02	.00	.01	1.
1	0536	57	.02	.02	.00	0.	*	1	1742	178	.02	.00	.01	2.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.01	2.
1	0548	59	.02	.02	.00	0.	*	1	1754	180	.02	.00	.01	1.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.02	.00	.01	2.
1	0600	61	.02	.02	.00	0.	*	1	1806	182	.01	.00	.01	2.
1	0606	62	.02	.02	.00	0.	*	1	1812	183	.02	.00	.01	1.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.01	1.
1	0618	64	.02	.02	.00	0.	*	1	1824	185	.02	.00	.01	1.
1	0624	65	.02	.02	.00	0.	*	1	1830	186	.01	.00	.01	1.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.02	.00	.01	1.
1	0636	67	.02	.02	.00	0.	*	1	1842	188	.01	.00	.01	1.
1	0642	68	.02	.02	.00	0.	*	1	1848	189	.02	.00	.01	1.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.01	1.
1	0654	70	.02	.02	.00	0.	*	1	1900	191	.02	.00	.01	1.
1	0700	71	.02	.02	.00	0.	*	1	1906	192	.01	.00	.01	1.
1	0706	72	.02	.02	.00	0.	*	1	1912	193	.01	.00	.01	1.
1	0712	73	.02	.02	.00	0.	*	1	1918	194	.02	.00	.01	1.
1	0718	74	.02	.02	.00	0.	*	1	1924	195	.01	.00	.01	1.
1	0724	75	.02	.02	.00	0.	*	1	1930	196	.02	.00	.01	1.
1	0730	76	.02	.02	.00	0.	*	1	1936	197	.01	.00	.01	1.
1	0736	77	.02	.02	.00	0.	*	1	1942	198	.01	.00	.01	1.
1	0742	78	.02	.02	.00	0.	*	1	1948	199	.02	.00	.01	1.
1	0748	79	.02	.02	.00	0.	*	1	1954	200	.01	.00	.01	1.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.01	1.
1	0800	81	.02	.02	.00	0.	*	1	2006	202	.01	.00	.01	1.
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.02	.00	.01	1.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.01	1.
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.01	1.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.01	1.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.02	.00	.01	1.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	1.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	1.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	1.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	1.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.02	.00	.01	1.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	1.
1	0912	93	.03	.03	.00	0.	*	1	2118	214	.01	.00	.01	1.
1	0918	94	.03	.03	.00	0.	*	1	2124	215	.01	.00	.01	1.
1	0924	95	.03	.03	.00	0.	*	1	2130	216	.01	.00	.01	1.
1	0930	96	.03	.03	.00	1.	*	1	2136	217	.01	.00	.01	1.
1	0936	97	.03	.03	.00	1.	*	1	2142	218	.01	.00	.01	1.
1	0942	98	.04	.03	.01	1.	*	1	2148	219	.01	.00	.01	1.
1	0948	99	.03	.03	.01	1.	*	1	2154	220	.01	.00	.01	1.
1	0954	100	.04	.03	.01	1.	*	1	2200	221	.02	.00	.01	1.
1	1000	101	.03	.03	.01	1.	*	1	2206	222	.01	.00	.01	1.
1	1006	102	.04	.03	.01	1.	*	1	2212	223	.01	.00	.01	1.
1	1012	103	.04	.03	.01	1.	*	1	2218	224	.01	.00	.01	1.
1	1018	104	.05	.04	.01	1.	*	1	2224	225	.01	.00	.01	1.
1	1024	105	.04	.03	.01	1.	*	1	2230	226	.01	.00	.01	1.
1	1030	106	.05	.04	.01	1.	*	1	2236	227	.01	.00	.01	1.
1	1036	107	.05	.03	.01	2.	*	1	2242	228	.01	.00	.01	1.
1	1042	108	.05	.03	.01	2.	*	1	2248	229	.01	.00	.01	1.
1	1048	109	.06	.04	.02	2.	*	1	2254	230	.01	.00	.01	1.
1	1054	110	.06	.04	.02	2.	*	1	2300	231	.01	.00	.01	1.
1	1100	111	.06	.04	.02	2.	*	1	2306	232	.01	.00	.01	1.
1	1106	112	.06	.04	.02	3.	*	1	2312	233	.01	.00	.01	1.
1	1112	113	.06	.04	.02	3.	*	1	2318	234	.01	.00	.01	1.
1	1118	114	.08	.05	.03	3.	*	1	2324	235	.01	.00	.01	1.
1	1124	115	.09	.05	.03	4.	*	1	2330	236	.01	.00	.01	1.
1	1130	116	.09	.05	.04	4.	*	1	2336	237	.01	.00	.01	1.
1	1136	117	.11	.06	.05	5.	*	1	2342	238	.01	.00	.01	1.
1	1142	118	.13	.07	.06	6.	*	1	2348	239	.00	.00	.00	1.
1	1148	119	.28	.15	.13	9.	*	1	2354	240	.00	.00	.00	1.
1	1154	120	.42	.20	.23	15.	*	2	0000	241	.01	.00	.01	1.
1	1200	121	.67	.27	.40	27.	*							

TOTAL RAINFALL = 8.00, TOTAL LOSS = 3.76, TOTAL EXCESS = 4.24

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.00-HR
+	(CFS)	(HR)	(CFS)			
+	49.	12.20	8.	2.	2.	2.
			(INCHES)	4.224	4.224	4.224
			(AC-FT)	4.	5.	5.

CUMULATIVE AREA = .02 SQ MI



CALIFONHYDROLOGY

12236 227.0
 12242 228.0
 12248 229.0
 12254 230.0
 12300 231.0
 12306 232.0
 12312 233.0
 12318 234.0
 12324 235.0
 12330 236.0
 12336 237.0
 12342 238.0
 12348 239.0
 12354 240.0
 20000 241.0

1

116 KK *****
 * COMB3 * COMBINE FLOWS FROM COMB2 & SUB E

118 KO OUTPUT CONTROL VARIABLES
 IPRNT 2 PRINT CONTROL
 IPLOT 2 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

119 HC HYDROGRAPH COMBINATION
 ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION COMB3
 SUM OF 2 HYDROGRAPHS
 PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1		0606	62	0.	1		1212	123	23.	1		1818	184	2.
1		0006	2	0.	1		0612	63	0.	1		1218	124	26.	1		1824	185	2.
1		0012	3	0.	1		0618	64	0.	1		1224	125	26.	1		1830	186	2.
1		0018	4	0.	1		0624	65	0.	1		1230	126	24.	1		1836	187	2.
1		0024	5	0.	1		0630	66	0.	1		1236	127	23.	1		1842	188	2.
1		0030	6	0.	1		0636	67	0.	1		1242	128	23.	1		1848	189	2.
1		0036	7	0.	1		0642	68	0.	1		1248	129	23.	1		1854	190	2.
1		0042	8	0.	1		0648	69	0.	1		1254	130	22.	1		1900	191	2.
1		0048	9	0.	1		0654	70	0.	1		1300	131	21.	1		1906	192	2.
1		0054	10	0.	1		0700	71	0.	1		1306	132	19.	1		1912	193	2.
1		0100	11	0.	1		0706	72	0.	1		1312	133	17.	1		1918	194	2.
1		0106	12	0.	1		0712	73	0.	1		1318	134	16.	1		1924	195	2.
1		0112	13	0.	1		0718	74	0.	1		1324	135	14.	1		1930	196	2.
1		0118	14	0.	1		0724	75	0.	1		1330	136	13.	1		1936	197	2.
1		0124	15	0.	1		0730	76	0.	1		1336	137	12.	1		1942	198	2.
1		0130	16	0.	1		0736	77	0.	1		1342	138	11.	1		1948	199	2.
1		0136	17	0.	1		0742	78	0.	1		1348	139	10.	1		1954	200	2.
1		0142	18	0.	1		0748	79	0.	1		1354	140	9.	1		2000	201	2.
1		0148	19	0.	1		0754	80	0.	1		1400	141	9.	1		2006	202	2.
1		0154	20	0.	1		0800	81	0.	1		1406	142	8.	1		2012	203	2.
1		0200	21	0.	1		0806	82	0.	1		1412	143	8.	1		2018	204	2.
1		0206	22	0.	1		0812	83	0.	1		1418	144	7.	1		2024	205	2.
1		0212	23	0.	1		0818	84	0.	1		1424	145	7.	1		2030	206	2.
1		0218	24	0.	1		0824	85	0.	1		1430	146	7.	1		2036	207	2.
1		0224	25	0.	1		0830	86	0.	1		1436	147	6.	1		2042	208	2.
1		0230	26	0.	1		0836	87	0.	1		1442	148	6.	1		2048	209	2.
1		0236	27	0.	1		0842	88	0.	1		1448	149	6.	1		2054	210	2.
1		0242	28	0.	1		0848	89	0.	1		1454	150	6.	1		2100	211	2.
1		0248	29	0.	1		0854	90	0.	1		1500	151	6.	1		2106	212	2.
1		0254	30	0.	1		0900	91	0.	1		1506	152	5.	1		2112	213	2.
1		0300	31	0.	1		0906	92	0.	1		1512	153	5.	1		2118	214	2.
1		0306	32	0.	1		0912	93	0.	1		1518	154	5.	1		2124	215	2.
1		0312	33	0.	1		0918	94	0.	1		1524	155	5.	1		2130	216	2.
1		0318	34	0.	1		0924	95	0.	1		1530	156	5.	1		2136	217	2.
1		0324	35	0.	1		0930	96	0.	1		1536	157	5.	1		2142	218	2.
1		0330	36	0.	1		0936	97	0.	1		1542	158	5.	1		2148	219	2.
1		0336	37	0.	1		0942	98	0.	1		1548	159	5.	1		2154	220	2.
1		0342	38	0.	1		0948	99	0.	1		1554	160	5.	1		2200	221	2.
1		0348	39	0.	1		0954	100	0.	1		1600	161	4.	1		2206	222	2.
1		0354	40	0.	1		1000	101	0.	1		1606	162	4.	1		2212	223	2.
1		0400	41	0.	1		1006	102	0.	1		1612	163	4.	1		2218	224	2.
1		0406	42	0.	1		1012	103	0.	1		1618	164	4.	1		2224	225	2.
1		0412	43	0.	1		1018	104	0.	1		1624	165	4.	1		2230	226	2.
1		0418	44	0.	1		1024	105	0.	1		1630	166	4.	1		2236	227	2.
1		0424	45	0.	1		1030	106	0.	1		1636	167	4.	1		2242	228	2.
1		0430	46	0.	1		1036	107	0.	1		1642	168	4.	1		2248	229	2.
1		0436	47	0.	1		1042	108	0.	1		1648	169	4.	1		2254	230	2.
1		0442	48	0.	1		1048	109	0.	1		1654	170	4.	1		2300	231	1.
1		0448	49	0.	1		1054	110	0.	1		1700	171	3.	1		2306	232	1.
1		0454	50	0.	1		1100	111	0.	1		1706	172	3.	1		2312	233	1.
1		0500	51	0.	1		1106	112	0.	1		1712	173	3.	1		2318	234	1.
1		0506	52	0.	1		1112	113	0.	1		1718	174	3.	1		2324	235	1.
1		0512	53	0.	1		1118	114	1.	1		1724	175	3.	1		2330	236	1.
1		0518	54	0.	1		1124	115	1.	1		1730	176	3.	1		2336	237	1.
1		0524	55	0.	1		1130	116	1.	1		1736	177	3.	1		2342	238	1.
1		0530	56	0.	1		1136	117	1.	1		1742	178	3.	1		2348	239	1.
1		0536	57	0.	1		1142	118	2.	1		1748	179	3.	1		2354	240	1.
1		0542	58	0.	1		1148	119	3.	1		1754	180	3.	1		0000	241	1.

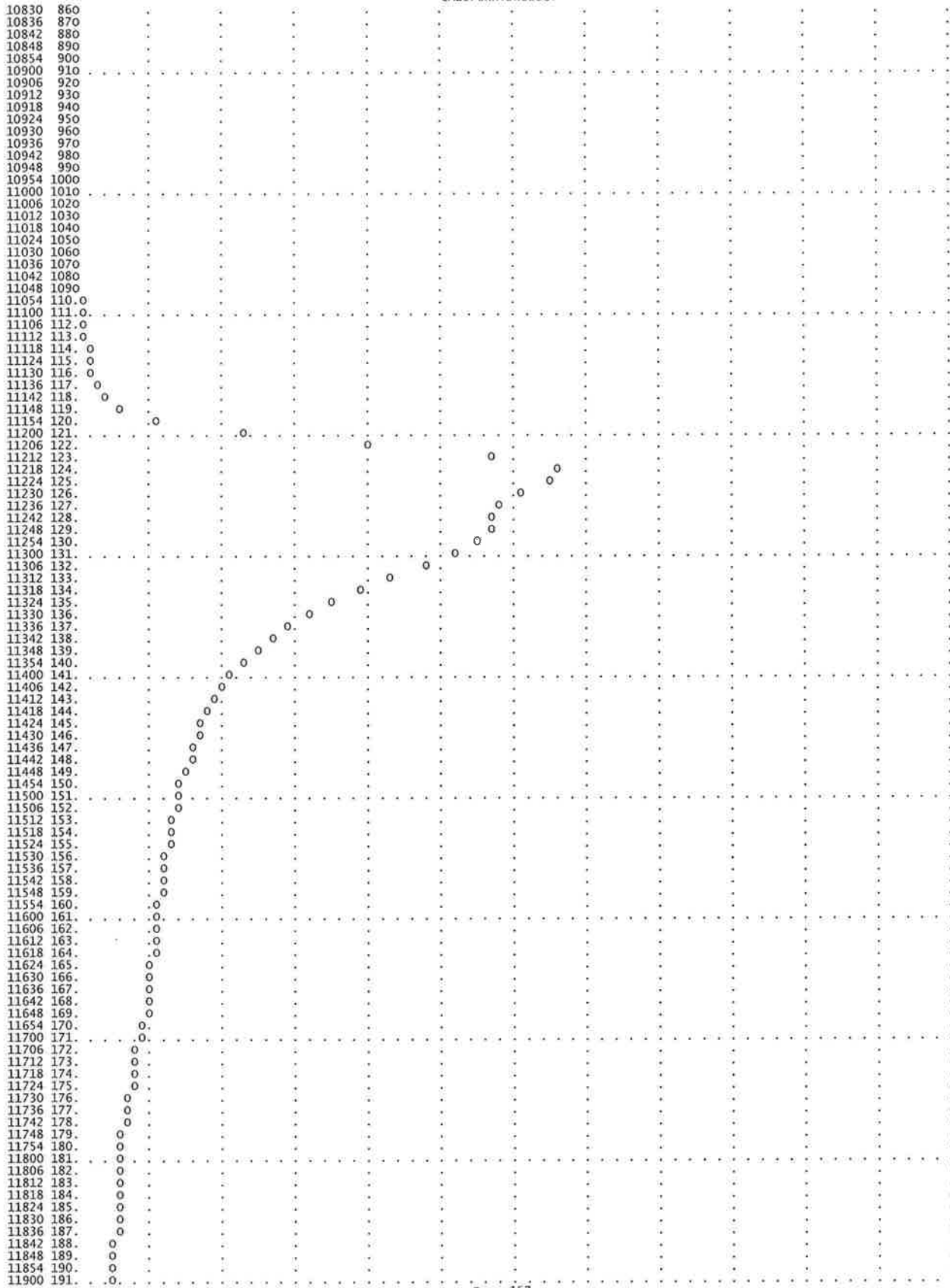
CALIFONHYDROLOGY														
1	0548	59	0.	*	1	1154	120	5.	*	1	1800	181	2.	*
1	0554	60	0.	*	1	1200	121	9.	*	1	1806	182	2.	*
1	0600	61	0.	*	1	1206	122	16.	*	1	1812	183	2.	*

PEAK FLOW (CFS)	TIME (HR)	(CFS)	6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.00-HR
26.	12.30	9.	1.037	3.	3.	3.
		(INCHES)	5.	1.264	1.264	1.264
		(AC-FT)		6.	6.	6.

CUMULATIVE AREA = .08 SQ MI

1	STATION	COMB3	0.	4.	8.	12.	16.	20.	24.	28.	0.	0.	0.	0.	0.
(O) OUTFLOW	DAHRMN PER		0.	4.	8.	12.	16.	20.	24.	28.	0.	0.	0.	0.	0.
10000	10														
10006	20														
10012	30														
10018	40														
10024	50														
10030	60														
10036	70														
10042	80														
10048	90														
10054	100														
10100	110														
10106	120														
10112	130														
10118	140														
10124	150														
10130	160														
10136	170														
10142	180														
10148	190														
10154	200														
10200	210														
10206	220														
10212	230														
10218	240														
10224	250														
10230	260														
10236	270														
10242	280														
10248	290														
10254	300														
10300	310														
10306	320														
10312	330														
10318	340														
10324	350														
10330	360														
10336	370														
10342	380														
10348	390														
10354	400														
10400	410														
10406	420														
10412	430														
10418	440														
10424	450														
10430	460														
10436	470														
10442	480														
10448	490														
10454	500														
10500	510														
10506	520														
10512	530														
10518	540														
10524	550														
10530	560														
10536	570														
10542	580														
10548	590														
10554	600														
10600	610														
10606	620														
10612	630														
10618	640														
10624	650														
10630	660														
10636	670														
10642	680														
10648	690														
10654	700														
10700	710														
10706	720														
10712	730														
10718	740														
10724	750														
10730	760														
10736	770														
10742	780														
10748	790														
10754	800														
10800	810														
10806	820														
10812	830														
10818	840														
10824	850														

CALIFONHYDROLOGY



CALIFONHYDROLOGY

1	0424	45	0.	*	1	1030	106	0.	*	1	1636	167	5.	*	1	2242	228	2.
1	0430	46	0.	*	1	1036	107	0.	*	1	1642	168	5.	*	1	2248	229	2.
1	0436	47	0.	*	1	1042	108	0.	*	1	1648	169	5.	*	1	2254	230	2.
1	0442	48	0.	*	1	1048	109	1.	*	1	1654	170	5.	*	1	2300	231	2.
1	0448	49	0.	*	1	1054	110	1.	*	1	1700	171	4.	*	1	2306	232	2.
1	0454	50	0.	*	1	1100	111	1.	*	1	1706	172	4.	*	1	2312	233	2.
1	0500	51	0.	*	1	1106	112	1.	*	1	1712	173	4.	*	1	2318	234	2.
1	0506	52	0.	*	1	1112	113	1.	*	1	1718	174	4.	*	1	2324	235	2.
1	0512	53	0.	*	1	1118	114	1.	*	1	1724	175	4.	*	1	2330	236	2.
1	0518	54	0.	*	1	1124	115	2.	*	1	1730	176	4.	*	1	2336	237	2.
1	0524	55	0.	*	1	1130	116	2.	*	1	1736	177	4.	*	1	2342	238	2.
1	0530	56	0.	*	1	1136	117	2.	*	1	1742	178	3.	*	1	2348	239	2.
1	0536	57	0.	*	1	1142	118	3.	*	1	1748	179	3.	*	1	2354	240	2.
1	0542	58	0.	*	1	1148	119	5.	*	1	1754	180	3.	*	2	0000	241	2.
1	0548	59	0.	*	1	1154	120	8.	*	1	1800	181	3.	*				2.
1	0554	60	0.	*	1	1200	121	14.	*	1	1806	182	3.	*				2.
1	0600	61	0.	*	1	1206	122	23.	*	1	1812	183	3.	*				2.

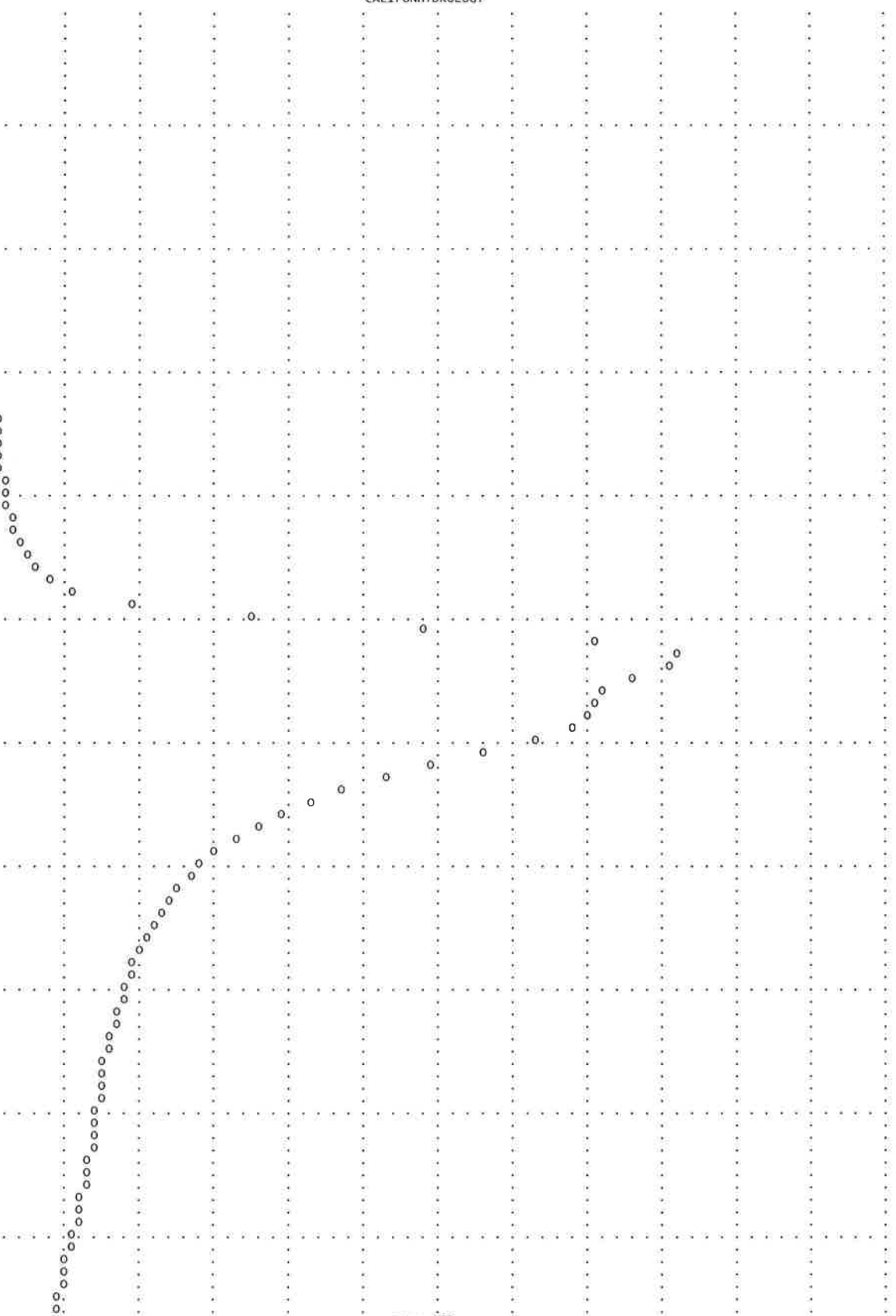
PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
(CFS)	(HR)	(CFS)		24-HR	72-HR
37.	12.30	12.	1.415	4.	4.
		(INCHES)	6.	1.718	1.718
		(AC-FT)		8.	8.

CUMULATIVE AREA = .08 SQ MI

1	STATION	COMB3	0.	4.	8.	12.	16.	20.	24.	28.	32.	36.	40.	0.	0.
DAHRMN	0.														
PER	10														
10000	20														
10006	30														
10012	40														
10018	50														
10024	60														
10030	70														
10036	80														
10042	90														
10048	100														
10054	110														
10100	120														
10106	130														
10112	140														
10118	150														
10124	160														
10130	170														
10136	180														
10142	190														
10148	200														
10154	210														
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10254	310														
10300	320														
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10312	340														
10318	350														
10324	360														
10330	370														
10336	380														
10342	390														
10348	400														
10354	410														
10400	420														
10406	430														
10412	440														
10418	450														
10424	460														
10430	470														
10436	480														
10442	490														
10448	500														
10454	510														
10500	520														
10506	530														
10512	540														
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10524	560														
10530	570														
10536	580														
10542	590														
10548	600														
10554	610														
10600	620														
10606	630														
10612	640														
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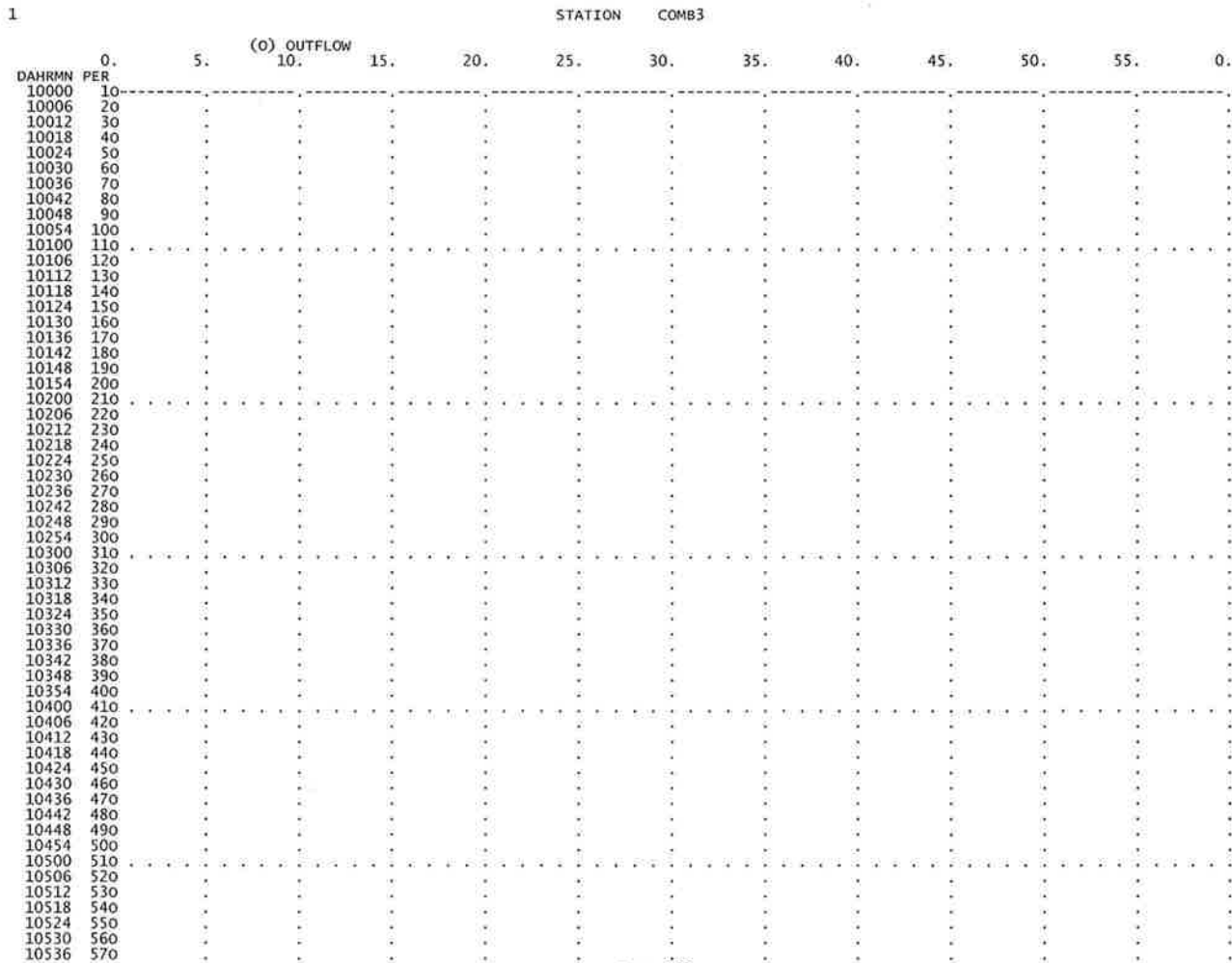
CALIFONHYDROLOGY

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 10848 890
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 10930 960
 10936 970
 10942 980
 10948 990
 10954 1000
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 11006 1020
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 11118 114.
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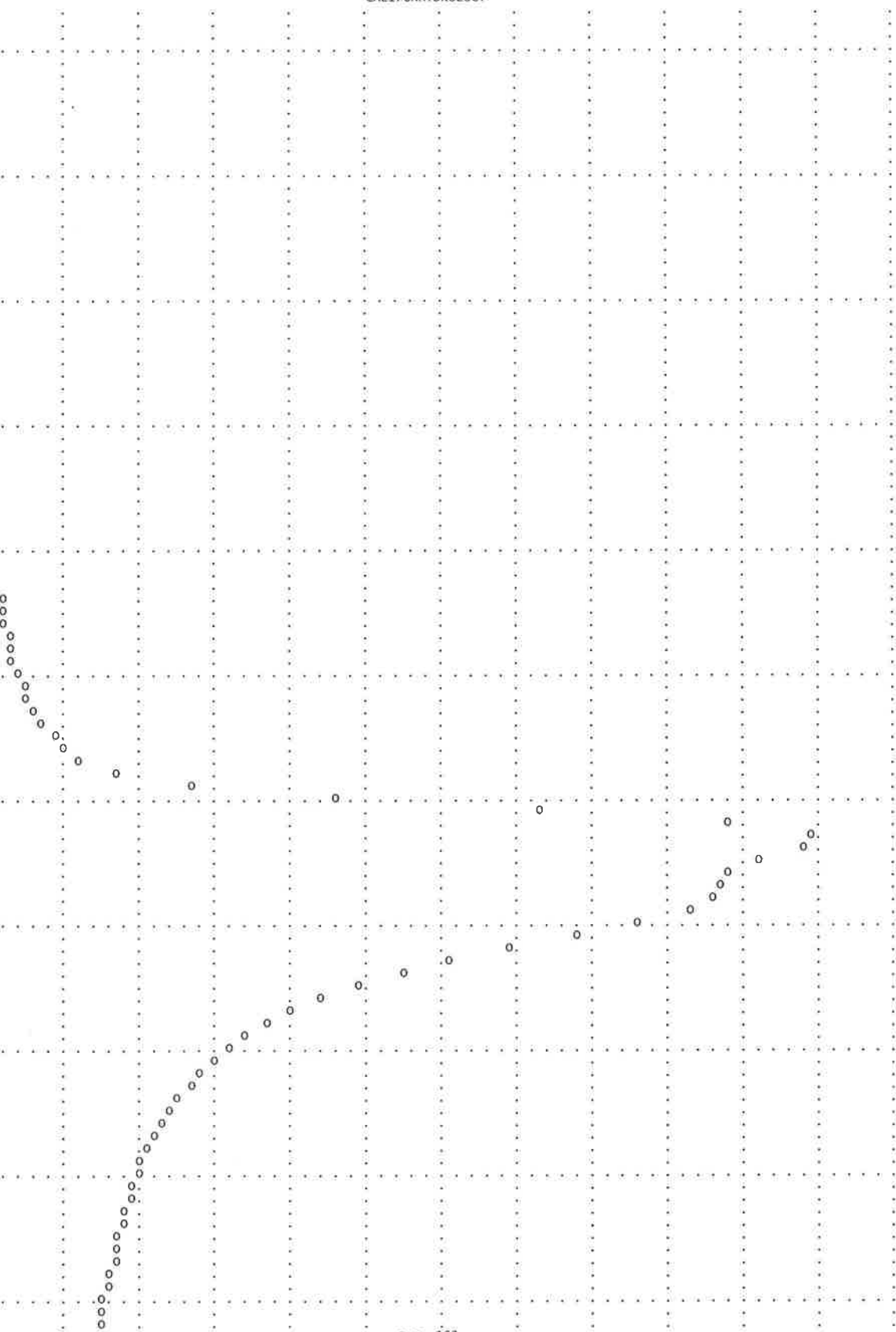
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1	0300	31	0.	*	1	0906	92	0.	*	1	1512	153	9.	*	1	2118	214	3.
1	0306	32	0.	*	1	0912	93	0.	*	1	1518	154	9.	*	1	2124	215	3.
1	0312	33	0.	*	1	0918	94	0.	*	1	1524	155	9.	*	1	2130	216	3.
1	0318	34	0.	*	1	0924	95	0.	*	1	1530	156	9.	*	1	2136	217	3.
1	0324	35	0.	*	1	0930	96	0.	*	1	1536	157	8.	*	1	2142	218	3.
1	0330	36	0.	*	1	0936	97	0.	*	1	1542	158	8.	*	1	2148	219	3.
1	0336	37	0.	*	1	0942	98	0.	*	1	1548	159	8.	*	1	2154	220	3.
1	0342	38	0.	*	1	0948	99	0.	*	1	1554	160	8.	*	1	2200	221	3.
1	0348	39	0.	*	1	0954	100	0.	*	1	1600	161	8.	*	1	2206	222	3.
1	0354	40	0.	*	1	1000	101	0.	*	1	1606	162	8.	*	1	2212	223	3.
1	0400	41	0.	*	1	1006	102	1.	*	1	1612	163	7.	*	1	2218	224	3.
1	0406	42	0.	*	1	1012	103	1.	*	1	1618	164	7.	*	1	2224	225	3.
1	0412	43	0.	*	1	1018	104	1.	*	1	1624	165	7.	*	1	2230	226	3.
1	0418	44	0.	*	1	1024	105	1.	*	1	1630	166	7.	*	1	2236	227	3.
1	0424	45	0.	*	1	1030	106	1.	*	1	1636	167	7.	*	1	2242	228	3.
1	0430	46	0.	*	1	1036	107	1.	*	1	1642	168	7.	*	1	2248	229	3.
1	0436	47	0.	*	1	1042	108	1.	*	1	1648	169	7.	*	1	2254	230	3.
1	0442	48	0.	*	1	1048	109	1.	*	1	1654	170	6.	*	1	2300	231	3.
1	0448	49	0.	*	1	1054	110	2.	*	1	1700	171	6.	*	1	2306	232	2.
1	0454	50	0.	*	1	1100	111	2.	*	1	1706	172	6.	*	1	2312	233	2.
1	0500	51	0.	*	1	1106	112	2.	*	1	1712	173	5.	*	1	2318	234	2.
1	0506	52	0.	*	1	1112	113	3.	*	1	1718	174	5.	*	1	2324	235	2.
1	0512	53	0.	*	1	1118	114	3.	*	1	1724	175	5.	*	1	2330	236	2.
1	0518	54	0.	*	1	1124	115	4.	*	1	1730	176	5.	*	1	2336	237	2.
1	0524	55	0.	*	1	1130	116	4.	*	1	1736	177	5.	*	1	2342	238	2.
1	0530	56	0.	*	1	1136	117	5.	*	1	1742	178	5.	*	1	2348	239	2.
1	0536	57	0.	*	1	1142	118	5.	*	1	1748	179	4.	*	1	2354	240	2.
1	0542	58	0.	*	1	1148	119	9.	*	1	1754	180	4.	*	2	0000	241	2.
1	0548	59	0.	*	1	1154	120	13.	*	1	1800	181	4.	*				2.
1	0554	60	0.	*	1	1200	121	23.	*	1	1806	182	4.	*				2.
1	0600	61	0.	*	1	1206	122	36.	*	1	1812	183	4.	*				2.

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
(CFS)	(HR)			24-HR	72-HR
55.	12.30	(CFS)	18.	6.	6.
		(INCHES)	2.059	2.498	2.498
		(AC-FT)	9.	11.	11.
CUMULATIVE AREA =			.08 SQ MI		



CALIFONHYDROLOGY

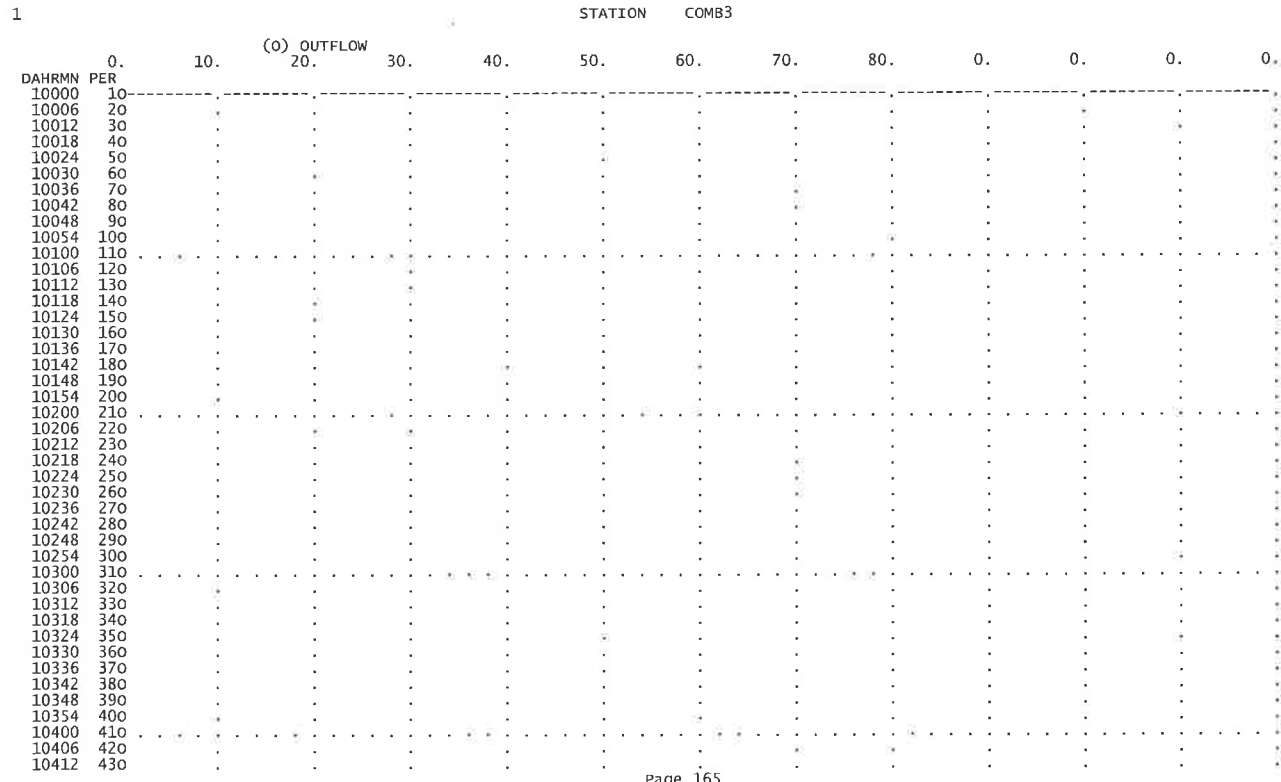
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 10700 710
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 10748 790
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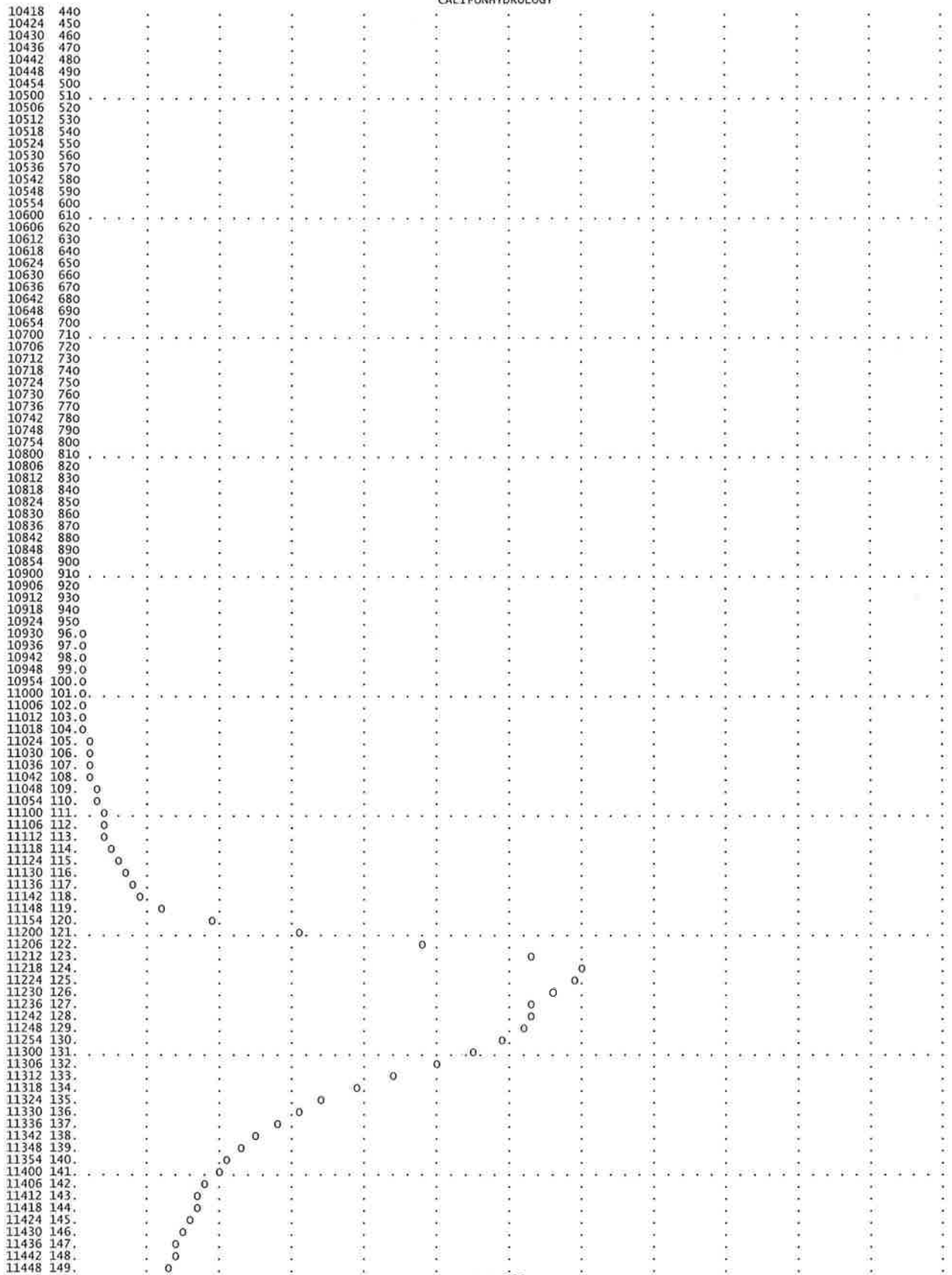
CALIFONHYDROLOGY

1	0136	17	0.	*	1	0742	78	0.	*	1	1348	139	23.	*	1	1954	200	4.
1	0142	18	0.	*	1	0748	79	0.	*	1	1354	140	21.	*	1	2000	201	4.
1	0148	19	0.	*	1	0754	80	0.	*	1	1400	141	20.	*	1	2006	202	4.
1	0154	20	0.	*	1	0800	81	0.	*	1	1406	142	18.	*	1	2012	203	4.
1	0200	21	0.	*	1	0806	82	0.	*	1	1412	143	17.	*	1	2018	204	4.
1	0206	22	0.	*	1	0812	83	0.	*	1	1418	144	17.	*	1	2024	205	4.
1	0212	23	0.	*	1	0818	84	0.	*	1	1424	145	16.	*	1	2030	206	4.
1	0218	24	0.	*	1	0824	85	0.	*	1	1430	146	15.	*	1	2036	207	4.
1	0224	25	0.	*	1	0830	86	0.	*	1	1436	147	14.	*	1	2042	208	4.
1	0230	26	0.	*	1	0836	87	0.	*	1	1442	148	14.	*	1	2048	209	4.
1	0236	27	0.	*	1	0842	88	0.	*	1	1448	149	13.	*	1	2054	210	4.
1	0242	28	0.	*	1	0848	89	0.	*	1	1454	150	13.	*	1	2100	211	3.
1	0248	29	0.	*	1	0854	90	0.	*	1	1500	151	12.	*	1	2106	212	4.
1	0254	30	0.	*	1	0900	91	0.	*	1	1506	152	12.	*	1	2112	213	4.
1	0300	31	0.	*	1	0906	92	0.	*	1	1512	153	12.	*	1	2118	214	4.
1	0306	32	0.	*	1	0912	93	0.	*	1	1518	154	11.	*	1	2124	215	3.
1	0312	33	0.	*	1	0918	94	0.	*	1	1524	155	11.	*	1	2130	216	3.
1	0318	34	0.	*	1	0924	95	0.	*	1	1530	156	11.	*	1	2136	217	3.
1	0324	35	0.	*	1	0930	96	1.	*	1	1536	157	10.	*	1	2142	218	3.
1	0330	36	0.	*	1	0936	97	1.	*	1	1542	158	10.	*	1	2148	219	3.
1	0336	37	0.	*	1	0942	98	1.	*	1	1548	159	10.	*	1	2154	220	3.
1	0342	38	0.	*	1	0948	99	1.	*	1	1554	160	10.	*	1	2200	221	3.
1	0348	39	0.	*	1	0954	100	1.	*	1	1600	161	9.	*	1	2206	222	3.
1	0354	40	0.	*	1	1000	101	1.	*	1	1606	162	9.	*	1	2212	223	3.
1	0400	41	0.	*	1	1006	102	1.	*	1	1612	163	9.	*	1	2218	224	3.
1	0406	42	0.	*	1	1012	103	1.	*	1	1618	164	9.	*	1	2224	225	3.
1	0412	43	0.	*	1	1018	104	1.	*	1	1624	165	9.	*	1	2230	226	3.
1	0418	44	0.	*	1	1024	105	2.	*	1	1630	166	9.	*	1	2236	227	3.
1	0424	45	0.	*	1	1030	106	2.	*	1	1636	167	8.	*	1	2242	228	3.
1	0430	46	0.	*	1	1036	107	2.	*	1	1642	168	8.	*	1	2248	229	3.
1	0436	47	0.	*	1	1042	108	2.	*	1	1648	169	8.	*	1	2254	230	3.
1	0442	48	0.	*	1	1048	109	3.	*	1	1654	170	8.	*	1	2300	231	3.
1	0448	49	0.	*	1	1054	110	3.	*	1	1700	171	7.	*	1	2306	232	3.
1	0454	50	0.	*	1	1100	111	4.	*	1	1706	172	7.	*	1	2312	233	3.
1	0500	51	0.	*	1	1106	112	4.	*	1	1712	173	7.	*	1	2318	234	3.
1	0506	52	0.	*	1	1112	113	4.	*	1	1718	174	7.	*	1	2324	235	3.
1	0512	53	0.	*	1	1118	114	5.	*	1	1724	175	6.	*	1	2330	236	3.
1	0518	54	0.	*	1	1124	115	6.	*	1	1730	176	6.	*	1	2336	237	3.
1	0524	55	0.	*	1	1130	116	7.	*	1	1736	177	6.	*	1	2342	238	3.
1	0530	56	0.	*	1	1136	117	8.	*	1	1742	178	6.	*	1	2348	239	3.
1	0536	57	0.	*	1	1142	118	9.	*	1	1748	179	5.	*	1	2354	240	3.
1	0542	58	0.	*	1	1148	119	12.	*	1	1754	180	5.	*	2	0000	241	3.
1	0548	59	0.	*	1	1154	120	19.	*	1	1800	181	5.	*	*	*	*	3.
1	0554	60	0.	*	1	1200	121	31.	*	1	1806	182	5.	*	*	*	*	3.
1	0600	61	0.	*	1	1206	122	48.	*	1	1812	183	5.	*	*	*	*	3.

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR	AVERAGE FLOW 72-HR	24.00-HR
70.	12.30	23. 2.617 11.	7. 3.182 14.	7. 3.182 14.	7. 3.182 14.
CUMULATIVE AREA =			.08 SQ MI		



CALIFONHYDROLOGY



CALIFONHYDROLOGY

11454	150.	0
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11506	152.	
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11518	154.	
11524	155.	
11530	156.	
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11542	158.	
11548	159.	
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11606	162.	
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11630	166.	
11636	167.	
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11648	169.	
11654	170.	
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11724	175.	
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11924	195.	
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11936	197.	
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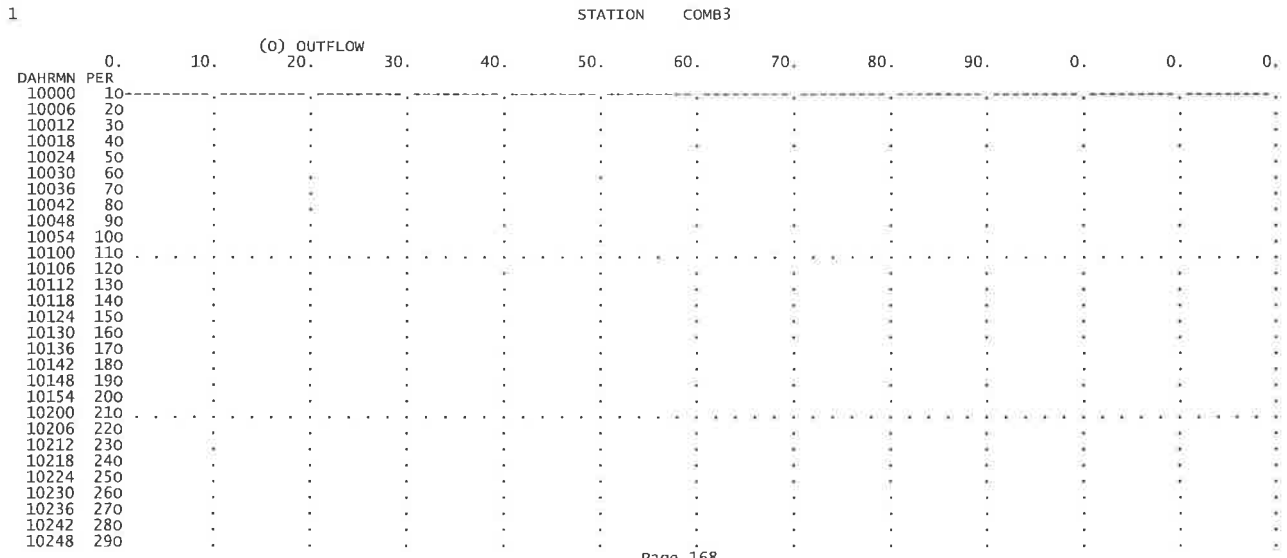
HYDROGRAPH AT STATION COMB3
 SUM OF 2 HYDROGRAPHS
 PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	0606	62	0.	*	1	1212	123	80.	*	1	1818	184	6.	*
1	0006	2	0.	*	1	0612	63	0.	*	1	1218	124	88.	*	1	1824	185	6.	*

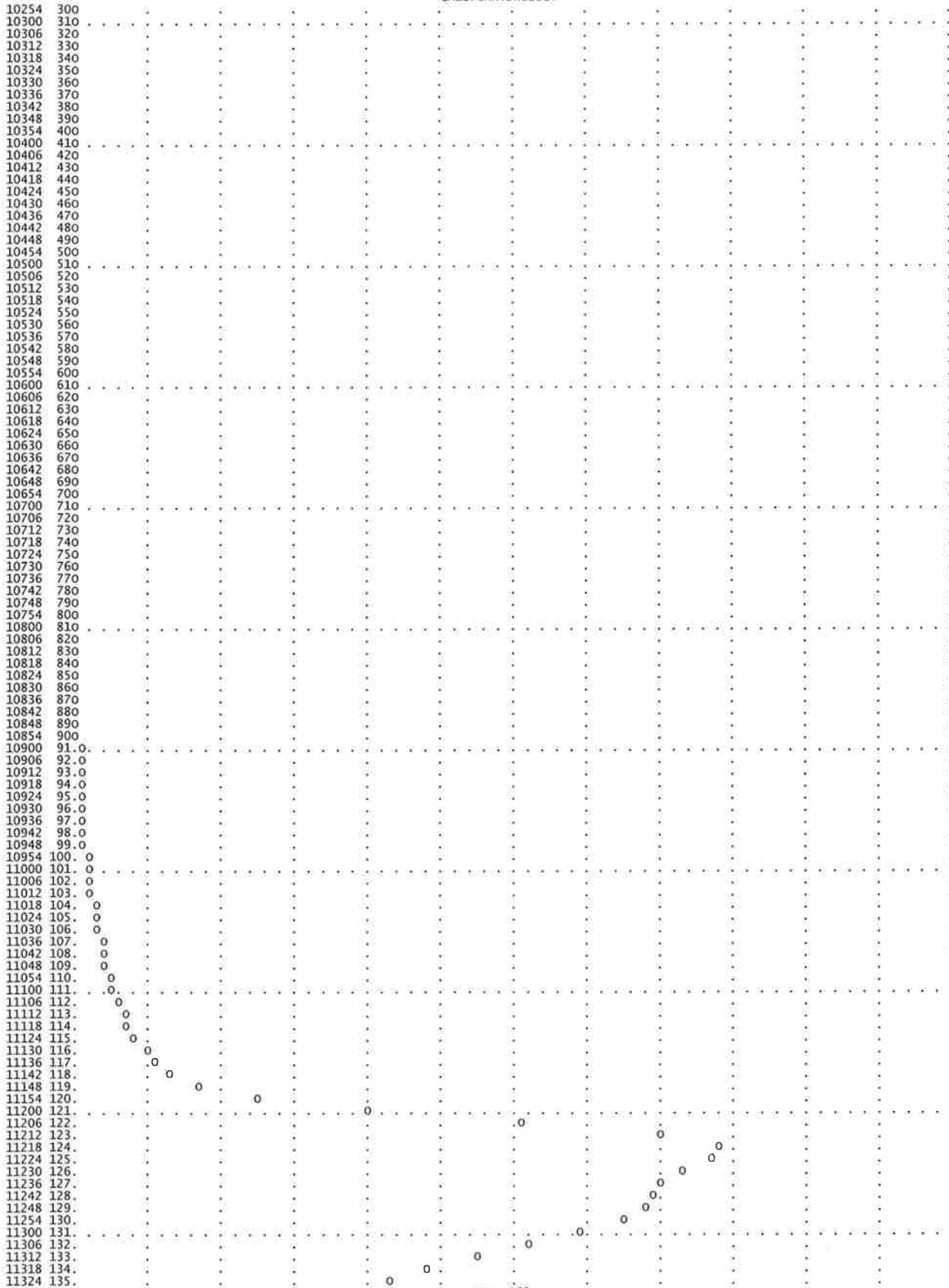
CALIFONHYDROLOGY																		
1	0012	3	0.	*	1	0618	64	0.	*	1	1224	125	87.	*	1	1830	186	6.
1	0018	4	0.	*	1	0624	65	0.	*	1	1230	126	83.	*	1	1836	187	6.
1	0024	5	0.	*	1	0630	66	0.	*	1	1236	127	80.	*	1	1842	188	5.
1	0030	6	0.	*	1	0636	67	0.	*	1	1242	128	79.	*	1	1848	189	5.
1	0036	7	0.	*	1	0642	68	0.	*	1	1248	129	78.	*	1	1854	190	5.
1	0042	8	0.	*	1	0648	69	0.	*	1	1254	130	75.	*	1	1900	191	5.
1	0048	9	0.	*	1	0654	70	0.	*	1	1300	131	69.	*	1	1906	192	5.
1	0054	10	0.	*	1	0700	71	0.	*	1	1306	132	62.	*	1	1912	193	5.
1	0100	11	0.	*	1	0706	72	0.	*	1	1312	133	55.	*	1	1918	194	5.
1	0106	12	0.	*	1	0712	73	0.	*	1	1318	134	48.	*	1	1924	195	5.
1	0112	13	0.	*	1	0718	74	0.	*	1	1324	135	43.	*	1	1930	196	5.
1	0118	14	0.	*	1	0724	75	0.	*	1	1330	136	38.	*	1	1936	197	5.
1	0124	15	0.	*	1	0730	76	0.	*	1	1336	137	34.	*	1	1942	198	5.
1	0130	16	0.	*	1	0736	77	0.	*	1	1342	138	31.	*	1	1948	199	5.
1	0136	17	0.	*	1	0742	78	0.	*	1	1348	139	28.	*	1	1954	200	5.
1	0142	18	0.	*	1	0748	79	0.	*	1	1354	140	26.	*	1	2000	201	5.
1	0148	19	0.	*	1	0754	80	0.	*	1	1400	141	24.	*	1	2006	202	5.
1	0154	20	0.	*	1	0800	81	0.	*	1	1406	142	23.	*	1	2012	203	5.
1	0200	21	0.	*	1	0806	82	0.	*	1	1412	143	21.	*	1	2018	204	5.
1	0206	22	0.	*	1	0812	83	0.	*	1	1418	144	20.	*	1	2024	205	5.
1	0212	23	0.	*	1	0818	84	0.	*	1	1424	145	19.	*	1	2030	206	4.
1	0218	24	0.	*	1	0824	85	0.	*	1	1430	146	18.	*	1	2036	207	4.
1	0224	25	0.	*	1	0830	86	0.	*	1	1436	147	17.	*	1	2042	208	4.
1	0230	26	0.	*	1	0836	87	0.	*	1	1442	148	17.	*	1	2048	209	4.
1	0236	27	0.	*	1	0842	88	0.	*	1	1448	149	16.	*	1	2054	210	4.
1	0242	28	0.	*	1	0848	89	0.	*	1	1454	150	15.	*	1	2100	211	4.
1	0248	29	0.	*	1	0854	90	0.	*	1	1500	151	15.	*	1	2106	212	4.
1	0254	30	0.	*	1	0900	91	1.	*	1	1506	152	14.	*	1	2112	213	4.
1	0300	31	0.	*	1	0906	92	1.	*	1	1512	153	14.	*	1	2118	214	4.
1	0306	32	0.	*	1	0912	93	1.	*	1	1518	154	13.	*	1	2124	215	4.
1	0312	33	0.	*	1	0918	94	1.	*	1	1524	155	13.	*	1	2130	216	4.
1	0318	34	0.	*	1	0924	95	1.	*	1	1530	156	13.	*	1	2136	217	4.
1	0324	35	0.	*	1	0930	96	1.	*	1	1536	157	12.	*	1	2142	218	4.
1	0330	36	0.	*	1	0936	97	1.	*	1	1542	158	12.	*	1	2148	219	4.
1	0336	37	0.	*	1	0942	98	1.	*	1	1548	159	12.	*	1	2154	220	4.
1	0342	38	0.	*	1	0948	99	1.	*	1	1554	160	12.	*	1	2200	221	4.
1	0348	39	0.	*	1	0954	100	2.	*	1	1600	161	11.	*	1	2206	222	4.
1	0354	40	0.	*	1	1000	101	2.	*	1	1606	162	11.	*	1	2212	223	4.
1	0400	41	0.	*	1	1006	102	2.	*	1	1612	163	11.	*	1	2218	224	4.
1	0406	42	0.	*	1	1012	103	2.	*	1	1618	164	11.	*	1	2224	225	4.
1	0412	43	0.	*	1	1018	104	3.	*	1	1624	165	11.	*	1	2230	226	4.
1	0418	44	0.	*	1	1024	105	3.	*	1	1630	166	10.	*	1	2236	227	4.
1	0424	45	0.	*	1	1030	106	3.	*	1	1636	167	10.	*	1	2242	228	4.
1	0430	46	0.	*	1	1036	107	4.	*	1	1642	168	10.	*	1	2248	229	4.
1	0436	47	0.	*	1	1042	108	4.	*	1	1648	169	10.	*	1	2254	230	4.
1	0442	48	0.	*	1	1048	109	4.	*	1	1654	170	9.	*	1	2300	231	4.
1	0448	49	0.	*	1	1054	110	5.	*	1	1700	171	9.	*	1	2306	232	4.
1	0454	50	0.	*	1	1100	111	5.	*	1	1706	172	8.	*	1	2312	233	4.
1	0500	51	0.	*	1	1106	112	6.	*	1	1712	173	8.	*	1	2318	234	4.
1	0506	52	0.	*	1	1112	113	7.	*	1	1718	174	8.	*	1	2324	235	4.
1	0512	53	0.	*	1	1118	114	7.	*	1	1724	175	8.	*	1	2330	236	4.
1	0518	54	0.	*	1	1124	115	8.	*	1	1730	176	7.	*	1	2336	237	3.
1	0524	55	0.	*	1	1130	116	10.	*	1	1736	177	7.	*	1	2342	238	3.
1	0530	56	0.	*	1	1136	117	11.	*	1	1742	178	7.	*	1	2348	239	3.
1	0536	57	0.	*	1	1142	118	13.	*	1	1748	179	7.	*	1	2354	240	3.
1	0542	58	0.	*	1	1148	119	17.	*	1	1754	180	6.	*	2	0000	241	3.
1	0548	59	0.	*	1	1154	120	25.	*	1	1800	181	6.	*	*	*	*	*
1	0554	60	0.	*	1	1200	121	40.	*	1	1806	182	6.	*	*	*	*	*
1	0600	61	0.	*	1	1206	122	61.	*	1	1812	183	6.	*	*	*	*	*

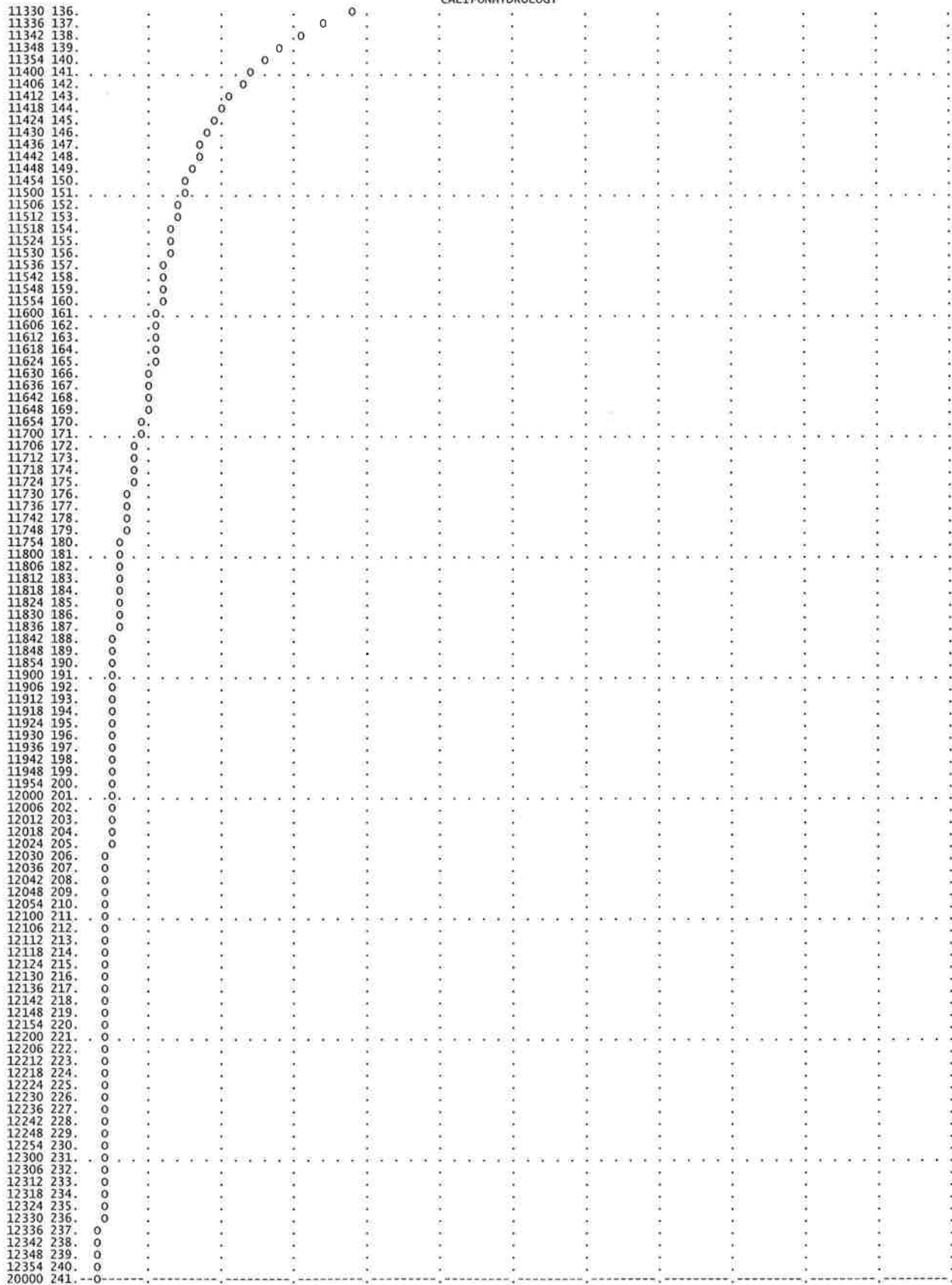
PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.00-HR
88.	12.30	29.	9.	9.	9.
		(INCHES)	3,263	3,978	3,978
		(AC-FT)	14.	17.	17.

CUMULATIVE AREA = .08 SQ MI



CALIFONHYDROLOGY





CALIFONHYDROLOGY

1	0254	30	.01	.01	.00	0.	*	1	1500	151	.03	.00	.03	21.
1	0300	31	.01	.01	.00	0.	*	1	1506	152	.03	.00	.03	21.
1	0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.00	.02	20.
1	0312	33	.02	.02	.00	0.	*	1	1518	154	.03	.00	.03	20.
1	0318	34	.01	.01	.00	0.	*	1	1524	155	.02	.00	.02	20.
1	0324	35	.01	.01	.00	0.	*	1	1530	156	.02	.00	.02	19.
1	0330	36	.01	.01	.00	0.	*	1	1536	157	.03	.00	.03	19.
1	0336	37	.01	.01	.00	0.	*	1	1542	158	.02	.00	.02	18.
1	0342	38	.02	.02	.00	0.	*	1	1548	159	.02	.00	.02	18.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.00	.02	17.
1	0354	40	.01	.01	.00	0.	*	1	1600	161	.02	.00	.02	17.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.00	.02	17.
1	0406	42	.02	.02	.00	0.	*	1	1612	163	.02	.00	.02	16.
1	0412	43	.01	.01	.00	0.	*	1	1618	164	.02	.00	.02	16.
1	0418	44	.01	.01	.00	0.	*	1	1624	165	.02	.00	.02	16.
1	0424	45	.02	.02	.00	0.	*	1	1630	166	.02	.00	.01	16.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.00	.02	15.
1	0436	47	.01	.01	.00	0.	*	1	1642	168	.02	.00	.02	15.
1	0442	48	.02	.02	.00	0.	*	1	1648	169	.02	.00	.01	15.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.02	.00	.01	14.
1	0454	50	.01	.01	.00	0.	*	1	1700	171	.01	.00	.01	14.
1	0500	51	.02	.02	.00	0.	*	1	1706	172	.02	.00	.01	13.
1	0506	52	.01	.01	.00	0.	*	1	1712	173	.02	.00	.01	12.
1	0512	53	.02	.02	.00	0.	*	1	1718	174	.02	.00	.01	11.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.02	.00	.01	11.
1	0524	55	.02	.02	.00	0.	*	1	1730	176	.01	.00	.01	10.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.02	.00	.01	10.
1	0536	57	.02	.02	.00	0.	*	1	1742	178	.02	.00	.01	10.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.01	9.
1	0548	59	.02	.02	.00	0.	*	1	1754	180	.02	.00	.01	9.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.02	.00	.01	9.
1	0600	61	.02	.02	.00	0.	*	1	1806	182	.01	.00	.01	9.
1	0606	62	.02	.02	.00	0.	*	1	1812	183	.02	.00	.01	9.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.01	9.
1	0618	64	.02	.02	.00	0.	*	1	1824	185	.02	.00	.01	8.
1	0624	65	.02	.02	.00	0.	*	1	1830	186	.01	.00	.01	8.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.02	.00	.01	8.
1	0636	67	.02	.02	.00	0.	*	1	1842	188	.01	.00	.01	8.
1	0642	68	.02	.02	.00	0.	*	1	1848	189	.02	.00	.01	8.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.01	8.
1	0654	70	.02	.02	.00	0.	*	1	1900	191	.02	.00	.01	8.
1	0700	71	.02	.01	.00	0.	*	1	1906	192	.01	.00	.01	8.
1	0706	72	.02	.01	.00	0.	*	1	1912	193	.01	.00	.01	8.
1	0712	73	.02	.01	.00	0.	*	1	1918	194	.02	.00	.01	8.
1	0718	74	.02	.01	.00	1.	*	1	1924	195	.01	.00	.01	7.
1	0724	75	.02	.01	.00	1.	*	1	1930	196	.02	.00	.01	7.
1	0730	76	.02	.02	.00	1.	*	1	1936	197	.01	.00	.01	7.
1	0736	77	.02	.02	.00	1.	*	1	1942	198	.01	.00	.01	7.
1	0742	78	.02	.02	.00	1.	*	1	1948	199	.02	.00	.01	7.
1	0748	79	.02	.02	.00	1.	*	1	1954	200	.01	.00	.01	7.
1	0754	80	.02	.02	.00	2.	*	1	2000	201	.01	.00	.01	7.
1	0800	81	.02	.02	.00	2.	*	1	2006	202	.01	.00	.01	7.
1	0806	82	.02	.02	.00	2.	*	1	2012	203	.02	.00	.01	7.
1	0812	83	.02	.02	.00	2.	*	1	2018	204	.01	.00	.01	7.
1	0818	84	.02	.02	.01	3.	*	1	2024	205	.01	.00	.01	7.
1	0824	85	.02	.02	.01	3.	*	1	2030	206	.01	.00	.01	7.
1	0830	86	.02	.02	.01	3.	*	1	2036	207	.02	.00	.01	7.
1	0836	87	.03	.02	.01	3.	*	1	2042	208	.01	.00	.01	6.
1	0842	88	.02	.02	.01	3.	*	1	2048	209	.01	.00	.01	7.
1	0848	89	.02	.02	.01	4.	*	1	2054	210	.01	.00	.01	6.
1	0854	90	.03	.02	.01	4.	*	1	2100	211	.01	.00	.01	6.
1	0900	91	.03	.02	.01	4.	*	1	2106	212	.02	.00	.01	6.
1	0906	92	.02	.02	.01	5.	*	1	2112	213	.01	.00	.01	6.
1	0912	93	.03	.02	.01	5.	*	1	2118	214	.01	.00	.01	6.
1	0918	94	.03	.02	.01	5.	*	1	2124	215	.01	.00	.01	6.
1	0924	95	.03	.02	.01	6.	*	1	2130	216	.01	.00	.01	6.
1	0930	96	.03	.02	.01	6.	*	1	2136	217	.01	.00	.01	6.
1	0936	97	.03	.02	.01	6.	*	1	2142	218	.01	.00	.01	6.
1	0942	98	.04	.03	.01	7.	*	1	2148	219	.01	.00	.01	6.
1	0948	99	.03	.02	.01	7.	*	1	2154	220	.01	.00	.01	6.
1	0954	100	.04	.02	.02	8.	*	1	2200	221	.02	.00	.01	6.
1	1000	101	.03	.02	.01	8.	*	1	2206	222	.01	.00	.01	6.
1	1006	102	.04	.02	.02	9.	*	1	2212	223	.01	.00	.01	6.
1	1012	103	.04	.02	.02	9.	*	1	2218	224	.01	.00	.01	6.
1	1018	104	.05	.03	.02	10.	*	1	2224	225	.01	.00	.01	6.
1	1024	105	.04	.02	.02	10.	*	1	2230	226	.01	.00	.01	6.
1	1030	106	.05	.03	.02	11.	*	1	2236	227	.01	.00	.01	6.
1	1036	107	.05	.02	.02	12.	*	1	2242	228	.01	.00	.01	6.
1	1042	108	.05	.02	.02	13.	*	1	2248	229	.01	.00	.01	5.
1	1048	109	.06	.03	.03	14.	*	1	2254	230	.01	.00	.01	5.
1	1054	110	.06	.03	.03	14.	*	1	2300	231	.01	.00	.01	5.
1	1100	111	.06	.03	.03	16.	*	1	2306	232	.01	.00	.01	5.
1	1106	112	.06	.03	.03	17.	*	1	2312	233	.01	.00	.01	5.
1	1112	113	.06	.03	.04	18.	*	1	2318	234	.01	.00	.01	5.
1	1118	114	.08	.03	.05	20.	*	1	2324	235	.01	.00	.01	5.
1	1124	115	.09	.04	.05	22.	*	1	2330	236	.01	.00	.01	5.
1	1130	116	.09	.04	.05	24.	*	1	2336	237	.01	.00	.01	5.
1	1136	117	.11	.04	.07	26.	*	1	2342	238	.01	.00	.01	5.
1	1142	118	.13	.05	.08	30.	*	1	2348	239	.00	.00	.00	5.
1	1148	119	.28	.09	.19	35.	*	1	2354	240	.00	.00	.00	5.
1	1154	120	.42	.12	.30	44.	*	2	0000	241	.01	.00	.01	5.
1	1200	121	.67	.16	.51	64.	*							

TOTAL RAINFALL = 8.00, TOTAL LOSS = 2.73, TOTAL EXCESS = 5.27

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
(CFS)	(HR)	(CFS)	24-HR	72-HR
+ 213.	12.50	50.	15.	15.
		(INCHES)	5.239	5.239
		(AC-FT)	31.	31.

CUMULATIVE AREA = .11 SQ MI

CALIFONHYDROLOGY

HYDROGRAPH AT STATION SUB A
 PLAN 1, RATIO = .54

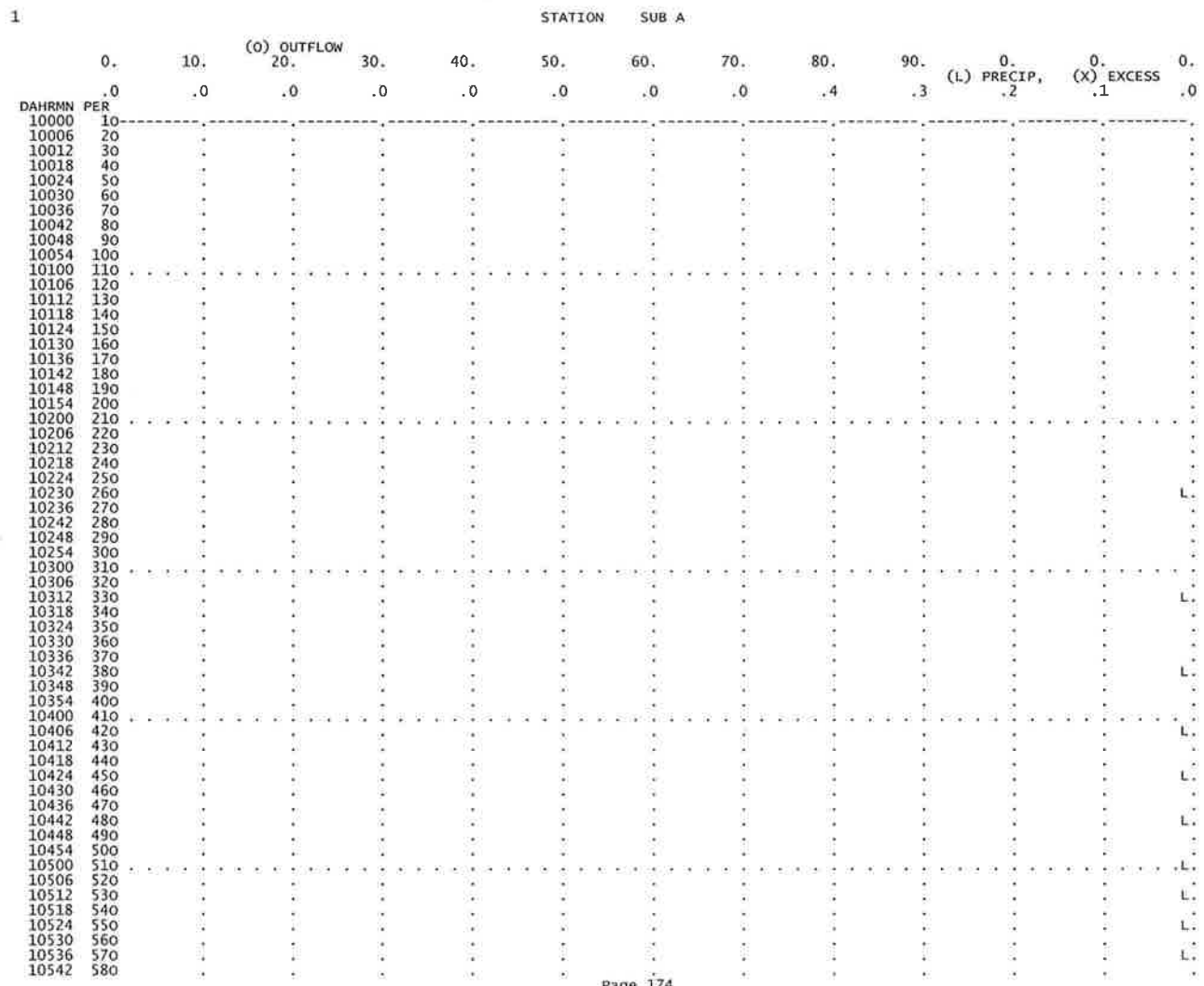
DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.36	.14	.22	32.
1		0006	2	.00	.00	.00	0.	1		1212	123	.23	.08	.15	49.
1		0012	3	.00	.00	.00	0.	1		1218	124	.15	.05	.10	66.
1		0018	4	.00	.00	.00	0.	1		1224	125	.07	.02	.05	78.
1		0024	5	.00	.00	.00	0.	1		1230	126	.06	.02	.04	83.
1		0030	6	.00	.00	.00	0.	1		1236	127	.05	.02	.04	79.
1		0036	7	.00	.00	.00	0.	1		1242	128	.05	.01	.03	70.
1		0042	8	.00	.00	.00	0.	1		1248	129	.04	.01	.03	60.
1		0048	9	.00	.00	.00	0.	1		1254	130	.04	.01	.03	50.
1		0054	10	.00	.00	.00	0.	1		1300	131	.03	.01	.02	42.
1		0100	11	.00	.00	.00	0.	1		1306	132	.03	.01	.02	36.
1		0106	12	.00	.00	.00	0.	1		1312	133	.03	.01	.02	31.
1		0112	13	.00	.00	.00	0.	1		1318	134	.03	.01	.02	27.
1		0118	14	.00	.00	.00	0.	1		1324	135	.03	.01	.02	24.
1		0124	15	.00	.00	.00	0.	1		1330	136	.03	.01	.02	22.
1		0130	16	.00	.00	.00	0.	1		1336	137	.02	.01	.02	20.
1		0136	17	.00	.00	.00	0.	1		1342	138	.03	.01	.02	18.
1		0142	18	.00	.00	.00	0.	1		1348	139	.02	.01	.02	17.
1		0148	19	.00	.00	.00	0.	1		1354	140	.02	.01	.02	15.
1		0154	20	.00	.00	.00	0.	1		1400	141	.02	.01	.02	15.
1		0200	21	.00	.00	.00	0.	1		1406	142	.02	.01	.02	14.
1		0206	22	.00	.00	.00	0.	1		1412	143	.02	.01	.02	13.
1		0212	23	.00	.00	.00	0.	1		1418	144	.02	.00	.01	12.
1		0218	24	.00	.00	.00	0.	1		1424	145	.02	.00	.01	12.
1		0224	25	.00	.00	.00	0.	1		1430	146	.02	.01	.02	11.
1		0230	26	.01	.01	.00	0.	1		1436	147	.02	.00	.01	11.
1		0236	27	.00	.00	.00	0.	1		1442	148	.02	.00	.01	11.
1		0242	28	.00	.00	.00	0.	1		1448	149	.01	.00	.01	10.
1		0248	29	.00	.00	.00	0.	1		1454	150	.02	.00	.01	10.
1		0254	30	.00	.00	.00	0.	1		1500	151	.02	.00	.01	10.
1		0300	31	.00	.00	.00	0.	1		1506	152	.02	.00	.01	9.
1		0306	32	.00	.00	.00	0.	1		1512	153	.01	.00	.01	9.
1		0312	33	.01	.01	.00	0.	1		1518	154	.02	.00	.01	9.
1		0318	34	.00	.00	.00	0.	1		1524	155	.01	.00	.01	9.
1		0324	35	.00	.00	.00	0.	1		1530	156	.01	.00	.01	9.
1		0330	36	.00	.00	.00	0.	1		1536	157	.02	.00	.01	8.
1		0336	37	.00	.00	.00	0.	1		1542	158	.01	.00	.01	8.
1		0342	38	.01	.01	.00	0.	1		1548	159	.01	.00	.01	8.
1		0348	39	.00	.00	.00	0.	1		1554	160	.01	.00	.01	8.
1		0354	40	.00	.00	.00	0.	1		1600	161	.01	.00	.01	8.
1		0400	41	.00	.00	.00	0.	1		1606	162	.01	.00	.01	8.
1		0406	42	.01	.01	.00	0.	1		1612	163	.01	.00	.01	7.
1		0412	43	.00	.00	.00	0.	1		1618	164	.01	.00	.01	7.
1		0418	44	.00	.00	.00	0.	1		1624	165	.01	.00	.01	7.
1		0424	45	.01	.01	.00	0.	1		1630	166	.01	.00	.01	7.
1		0430	46	.00	.00	.00	0.	1		1636	167	.01	.00	.01	7.
1		0436	47	.00	.00	.00	0.	1		1642	168	.01	.00	.01	7.
1		0442	48	.01	.01	.00	0.	1		1648	169	.01	.00	.01	7.
1		0448	49	.00	.00	.00	0.	1		1654	170	.01	.00	.01	7.
1		0454	50	.00	.00	.00	0.	1		1700	171	.00	.00	.00	6.
1		0500	51	.01	.01	.00	0.	1		1706	172	.01	.00	.01	6.
1		0506	52	.00	.00	.00	0.	1		1712	173	.01	.00	.01	5.
1		0512	53	.01	.01	.00	0.	1		1718	174	.01	.00	.01	5.
1		0518	54	.00	.00	.00	0.	1		1724	175	.01	.00	.01	5.
1		0524	55	.01	.01	.00	0.	1		1730	176	.00	.00	.00	5.
1		0530	56	.00	.00	.00	0.	1		1736	177	.01	.00	.01	5.
1		0536	57	.01	.01	.00	0.	1		1742	178	.01	.00	.01	4.
1		0542	58	.00	.00	.00	0.	1		1748	179	.00	.00	.00	4.
1		0548	59	.01	.01	.00	0.	1		1754	180	.01	.00	.01	4.
1		0554	60	.00	.00	.00	0.	1		1800	181	.01	.00	.01	4.
1		0600	61	.01	.01	.00	0.	1		1806	182	.00	.00	.00	4.
1		0606	62	.01	.01	.00	0.	1		1812	183	.01	.00	.01	4.
1		0612	63	.00	.00	.00	0.	1		1818	184	.00	.00	.00	4.
1		0618	64	.01	.01	.00	0.	1		1824	185	.01	.00	.01	4.
1		0624	65	.01	.01	.00	0.	1		1830	186	.00	.00	.00	4.
1		0630	66	.00	.00	.00	0.	1		1836	187	.01	.00	.01	4.
1		0636	67	.01	.01	.00	0.	1		1842	188	.00	.00	.00	4.
1		0642	68	.01	.01	.00	0.	1		1848	189	.01	.00	.01	4.
1		0648	69	.00	.00	.00	0.	1		1854	190	.00	.00	.00	4.
1		0654	70	.01	.01	.00	0.	1		1900	191	.01	.00	.01	4.
1		0700	71	.01	.01	.00	0.	1		1906	192	.00	.00	.00	4.
1		0706	72	.01	.01	.00	0.	1		1912	193	.00	.00	.00	4.
1		0712	73	.01	.01	.00	0.	1		1918	194	.01	.00	.01	4.
1		0718	74	.01	.01	.00	0.	1		1924	195	.00	.00	.00	3.
1		0724	75	.01	.01	.00	0.	1		1930	196	.01	.00	.01	3.
1		0730	76	.01	.01	.00	0.	1		1936	197	.00	.00	.00	3.
1		0736	77	.01	.01	.00	0.	1		1942	198	.00	.00	.00	3.
1		0742	78	.01	.01	.00	0.	1		1948	199	.01	.00	.01	3.
1		0748	79	.01	.01	.00	0.	1		1954	200	.00	.00	.00	3.
1		0754	80	.01	.01	.00	0.	1		2000	201	.00	.00	.00	3.
1		0800	81	.01	.01	.00	0.	1		2006	202	.00	.00	.00	3.
1		0806	82	.01	.01	.00	0.	1		2012	203	.01	.00	.01	3.
1		0812	83	.01	.01	.00	0.	1		2018	204	.00	.00	.00	3.
1		0818	84	.01	.01	.00	0.	1		2024	205	.00	.00	.00	3.
1		0824	85	.01	.01	.00	0.	1		2030	206	.00	.00	.00	3.
1		0830	86	.01	.01	.00	0.	1		2036	207	.01	.00	.01	3.
1		0836	87	.02	.02	.00	0.	1		2042	208	.00	.00	.00	3.
1		0842	88	.01	.01	.00	0.	1		2048	209	.00	.00	.00	3.
1		0848	89	.01	.01	.00	0.	1		2054	210	.00	.00	.00	3.
1		0854	90	.02	.02	.00	0.	1		2100	211	.00	.00	.00	3.
1		0900	91	.02	.02	.00	0.	1		2106	212	.01	.00	.01	3.
1		0906	92	.01	.01	.00	0.	1		2112	213	.00	.00	.00	3.
1		0912	93	.02	.02	.00	0.	1		2118	214	.00	.00	.00	3.
1		0918	94	.02	.02	.00	0.	1		2124	215	.00	.00	.00	3.
1		0924	95	.02	.02	.00	0.	1		2130	216	.00	.00	.00	3.

CALIFONHYDROLOGY														
1	0930	96	.02	.02	.00	0.	*	1	2136	217	.00	.00	.00	3.
1	0936	97	.02	.02	.00	0.	*	1	2142	218	.00	.00	.00	3.
1	0942	98	.02	.02	.00	0.	*	1	2148	219	.00	.00	.00	3.
1	0948	99	.02	.02	.00	1.	*	1	2154	220	.00	.00	.00	3.
1	0954	100	.02	.02	.00	1.	*	1	2200	221	.01	.00	.01	3.
1	1000	101	.02	.02	.00	1.	*	1	2206	222	.00	.00	.00	3.
1	1006	102	.02	.02	.00	1.	*	1	2212	223	.00	.00	.00	3.
1	1012	103	.02	.02	.00	1.	*	1	2218	224	.00	.00	.00	3.
1	1018	104	.03	.02	.00	1.	*	1	2224	225	.00	.00	.00	3.
1	1024	105	.02	.02	.00	2.	*	1	2230	226	.00	.00	.00	3.
1	1030	106	.03	.02	.00	2.	*	1	2236	227	.00	.00	.00	3.
1	1036	107	.03	.02	.01	2.	*	1	2242	228	.00	.00	.00	3.
1	1042	108	.03	.02	.01	2.	*	1	2248	229	.00	.00	.00	3.
1	1048	109	.03	.02	.01	3.	*	1	2254	230	.00	.00	.00	3.
1	1054	110	.03	.02	.01	3.	*	1	2300	231	.00	.00	.00	2.
1	1100	111	.03	.03	.01	3.	*	1	2306	232	.00	.00	.00	2.
1	1106	112	.03	.03	.01	4.	*	1	2312	233	.00	.00	.00	2.
1	1112	113	.03	.02	.01	4.	*	1	2318	234	.00	.00	.00	2.
1	1118	114	.04	.03	.01	5.	*	1	2324	235	.00	.00	.00	2.
1	1124	115	.05	.03	.01	5.	*	1	2330	236	.00	.00	.00	2.
1	1130	116	.05	.03	.02	6.	*	1	2336	237	.00	.00	.00	2.
1	1136	117	.06	.04	.02	7.	*	1	2342	238	.00	.00	.00	2.
1	1142	118	.07	.04	.03	8.	*	1	2348	239	.00	.00	.00	2.
1	1148	119	.15	.09	.06	10.	*	1	2354	240	.00	.00	.00	2.
1	1154	120	.23	.12	.10	13.	*	2	0000	241	.00	.00	.00	2.
1	1200	121	.36	.17	.19	20.	*							

TOTAL RAINFALL = 4.30, TOTAL LOSS = 2.25, TOTAL EXCESS = 2.05

PEAK FLOW	TIME	6-HR	24-HR	72-HR	24.00-HR
(CFS)	(HR)	(CFS)	(INCHES)	(AC-FT)	
83.	12.50	20.	1.680	10.	
		6.	2.033	12.	
		6.	2.033	12.	
		6.	2.033	12.	

CUMULATIVE AREA = .11 SQ MI



CALIFONHYDROLOGY

1	0148	19	.00	.00	.00	0.	*	1	1354	140	.02	.01	.02	19.
1	0154	20	.01	.01	.00	0.	*	1	1400	141	.02	.01	.02	18.
1	0200	21	.01	.01	.00	0.	*	1	1406	142	.02	.01	.02	17.
1	0206	22	.01	.01	.00	0.	*	1	1412	143	.02	.01	.02	16.
1	0212	23	.01	.01	.00	0.	*	1	1418	144	.02	.00	.02	15.
1	0218	24	.01	.01	.00	0.	*	1	1424	145	.02	.00	.02	15.
1	0224	25	.01	.01	.00	0.	*	1	1430	146	.02	.01	.02	14.
1	0230	26	.01	.01	.00	0.	*	1	1436	147	.02	.00	.02	14.
1	0236	27	.01	.01	.00	0.	*	1	1442	148	.02	.00	.02	13.
1	0242	28	.01	.01	.00	0.	*	1	1448	149	.02	.00	.01	13.
1	0248	29	.00	.00	.00	0.	*	1	1454	150	.02	.00	.02	12.
1	0254	30	.01	.01	.00	0.	*	1	1500	151	.02	.00	.02	12.
1	0300	31	.01	.01	.00	0.	*	1	1506	152	.02	.00	.02	12.
1	0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.00	.01	11.
1	0312	33	.01	.01	.00	0.	*	1	1518	154	.02	.00	.02	11.
1	0318	34	.00	.00	.00	0.	*	1	1524	155	.01	.00	.01	11.
1	0324	35	.00	.00	.00	0.	*	1	1530	156	.02	.00	.01	11.
1	0330	36	.01	.01	.00	0.	*	1	1536	157	.02	.00	.02	10.
1	0336	37	.00	.00	.00	0.	*	1	1542	158	.01	.00	.01	10.
1	0342	38	.01	.01	.00	0.	*	1	1548	159	.02	.00	.01	10.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.00	.01	10.
1	0354	40	.00	.00	.00	0.	*	1	1600	161	.01	.00	.01	10.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.00	.01	9.
1	0406	42	.01	.01	.00	0.	*	1	1612	163	.02	.00	.01	9.
1	0412	43	.00	.00	.00	0.	*	1	1618	164	.01	.00	.01	9.
1	0418	44	.00	.00	.00	0.	*	1	1624	165	.02	.00	.01	9.
1	0424	45	.01	.01	.00	0.	*	1	1630	166	.01	.00	.01	9.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.00	.01	9.
1	0436	47	.00	.00	.00	0.	*	1	1642	168	.02	.00	.01	8.
1	0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	8.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.01	.00	.01	8.
1	0454	50	.00	.00	.00	0.	*	1	1700	171	.00	.00	.00	8.
1	0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	7.
1	0506	52	.00	.00	.00	0.	*	1	1712	173	.01	.00	.01	7.
1	0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	6.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.01	.00	.01	6.
1	0524	55	.01	.01	.00	0.	*	1	1730	176	.00	.00	.00	6.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.01	.00	.01	6.
1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	5.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.00	.00	.00	5.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	5.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.01	.00	.01	5.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.00	.00	.00	5.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	5.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.00	5.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	5.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.00	.00	.00	5.
1	0630	66	.00	.00	.00	0.	*	1	1836	187	.01	.00	.01	5.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.00	.00	.00	5.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	4.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.00	.00	.00	4.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	4.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.00	.00	.00	4.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.00	.00	.00	4.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	4.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.00	.00	.00	4.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	4.
1	0730	76	.01	.01	.00	0.	*	1	1936	197	.01	.00	.00	4.
1	0736	77	.01	.01	.00	0.	*	1	1942	198	.00	.00	.00	4.
1	0742	78	.01	.01	.00	0.	*	1	1948	199	.01	.00	.01	4.
1	0748	79	.01	.01	.00	0.	*	1	1954	200	.00	.00	.00	4.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.00	4.
1	0800	81	.01	.01	.00	0.	*	1	2006	202	.00	.00	.00	4.
1	0806	82	.01	.01	.00	0.	*	1	2012	203	.01	.00	.01	4.
1	0812	83	.01	.01	.00	0.	*	1	2018	204	.01	.00	.00	4.
1	0818	84	.01	.01	.00	0.	*	1	2024	205	.00	.00	.00	4.
1	0824	85	.02	.01	.00	0.	*	1	2030	206	.00	.00	.00	4.
1	0830	86	.01	.01	.00	0.	*	1	2036	207	.01	.00	.01	4.
1	0836	87	.02	.02	.00	0.	*	1	2042	208	.01	.00	.00	4.
1	0842	88	.01	.01	.00	0.	*	1	2048	209	.00	.00	.00	4.
1	0848	89	.02	.01	.00	0.	*	1	2054	210	.00	.00	.00	4.
1	0854	90	.02	.02	.00	0.	*	1	2100	211	.00	.00	.00	4.
1	0900	91	.02	.02	.00	0.	*	1	2106	212	.01	.00	.01	4.
1	0906	92	.01	.01	.00	1.	*	1	2112	213	.00	.00	.00	4.
1	0912	93	.02	.02	.00	1.	*	1	2118	214	.00	.00	.00	4.
1	0918	94	.02	.02	.00	1.	*	1	2124	215	.00	.00	.00	4.
1	0924	95	.02	.02	.00	1.	*	1	2130	216	.01	.00	.00	4.
1	0930	96	.02	.02	.00	1.	*	1	2136	217	.00	.00	.00	3.
1	0936	97	.02	.02	.00	1.	*	1	2142	218	.00	.00	.00	3.
1	0942	98	.02	.02	.00	1.	*	1	2148	219	.00	.00	.00	3.
1	0948	99	.02	.02	.00	2.	*	1	2154	220	.00	.00	.00	3.
1	0954	100	.02	.02	.00	2.	*	1	2200	221	.01	.00	.01	3.
1	1000	101	.02	.02	.00	2.	*	1	2206	222	.00	.00	.00	3.
1	1006	102	.03	.02	.01	2.	*	1	2212	223	.00	.00	.00	3.
1	1012	103	.02	.02	.01	2.	*	1	2218	224	.01	.00	.00	3.
1	1018	104	.03	.02	.01	3.	*	1	2224	225	.00	.00	.00	3.
1	1024	105	.02	.02	.01	3.	*	1	2230	226	.00	.00	.00	3.
1	1030	106	.03	.02	.01	3.	*	1	2236	227	.00	.00	.00	3.
1	1036	107	.03	.02	.01	4.	*	1	2242	228	.00	.00	.00	3.
1	1042	108	.03	.02	.01	4.	*	1	2248	229	.01	.00	.00	3.
1	1048	109	.03	.02	.01	4.	*	1	2254	230	.00	.00	.00	3.
1	1054	110	.03	.02	.01	5.	*	1	2300	231	.00	.00	.00	3.
1	1100	111	.04	.03	.01	5.	*	1	2306	232	.00	.00	.00	3.
1	1106	112	.04	.03	.01	6.	*	1	2312	233	.00	.00	.00	3.
1	1112	113	.04	.03	.01	6.	*	1	2318	234	.01	.00	.00	3.
1	1118	114	.05	.03	.02	7.	*	1	2324	235	.00	.00	.00	3.
1	1124	115	.06	.03	.02	8.	*	1	2330	236	.00	.00	.00	3.
1	1130	116	.06	.03	.02	9.	*	1	2336	237	.00	.00	.00	3.
1	1136	117	.07	.04	.03	10.	*	1	2342	238	.01	.00	.00	3.
1	1142	118	.08	.04	.03	12.	*	1	2348	239	.00	.00	.00	3.
1	1148	119	.17	.09	.08	14.	*	1	2354	240	.00	.00	.00	3.
1	1154	120	.27	.13	.14	19.	*	2	0000	241	.00	.00	.00	3.
1	1200	121	.42	.17	.25	28.	*							

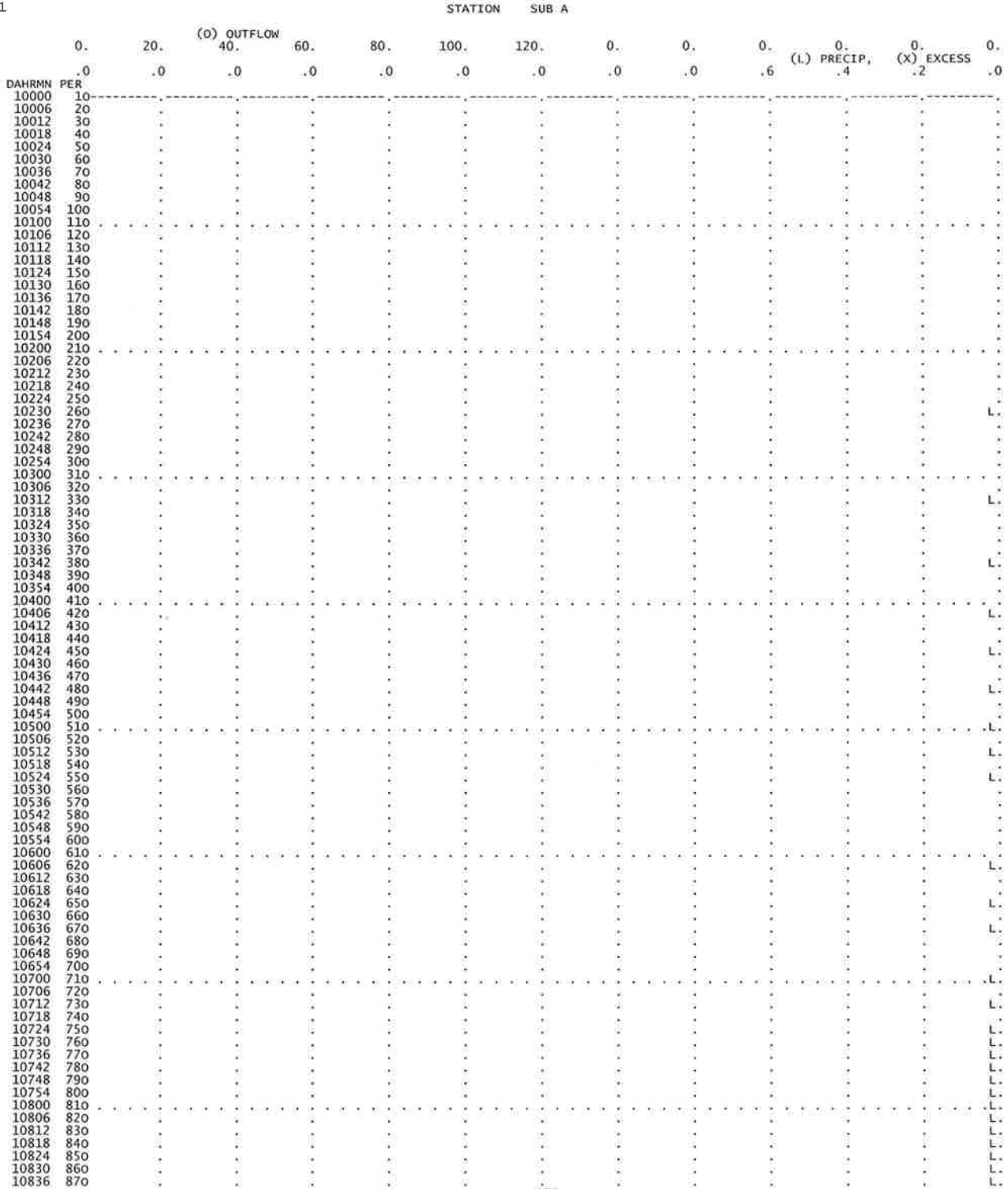
CALIFONHYDROLOGY

TOTAL RAINFALL = 5.00, TOTAL LOSS = 2.38, TOTAL EXCESS = 2.62

PEAK FLOW (CFS)	TIME (HR)	(CFS)	6-HR (INCHES)	MAXIMUM 24-HR 15.	AVERAGE FLOW 72-HR 15.	24.00-HR 15.
106.	12.50	25.	2.142	8.	2.603	8.
		(AC-FT)	13.	15.	2.603	15.

CUMULATIVE AREA = .11 SQ MI

1



CALIFONHYDROLOGY

11918	194.0
11924	195.0
11930	196.0
11936	197.0
11942	198.0
11948	199.0
11954	200.0
12000	201.0
12006	202.0
12012	203.0
12018	204.0
12024	205.0
12030	206.0
12036	207.0
12042	208.0
12048	209.0
12054	210.0
12100	211.0
12106	212.0
12112	213.0
12118	214.0
12124	215.0
12130	216.0
12136	217.0
12142	218.0
12148	219.0
12154	220.0
12200	221.0
12206	222.0
12212	223.0
12218	224.0
12224	225.0
12230	226.0
12236	227.0
12242	228.0
12248	229.0
12254	230.0
12300	231.0
12306	232.0
12312	233.0
12318	234.0
12324	235.0
12330	236.0
12336	237.0
12342	238.0
12348	239.0
12354	240.0
20000	241.0

HYDROGRAPH AT STATION SUB A
PLAN 1, RATIO = .76

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q
1		0000	1	.00	.00	.00	0.		1		1206	122	.51	.14	.37		62.
1		0006	2	.01	.01	.00	0.		1		1212	123	.33	.08	.25		90.
1		0012	3	.01	.01	.00	0.		1		1218	124	.21	.05	.17		119.
1		0018	4	.01	.01	.00	0.		1		1224	125	.10	.02	.08		139.
1		0024	5	.01	.01	.00	0.		1		1230	126	.08	.02	.06		145.
1		0030	6	.01	.01	.00	0.		1		1236	127	.07	.01	.06		137.
1		0036	7	.01	.01	.00	0.		1		1242	128	.07	.01	.05		121.
1		0042	8	.01	.01	.00	0.		1		1248	129	.05	.01	.04		102.
1		0048	9	.01	.01	.00	0.		1		1254	130	.05	.01	.04		85.
1		0054	10	.01	.01	.00	0.		1		1300	131	.05	.01	.04		71.
1		0100	11	.01	.01	.00	0.		1		1306	132	.04	.01	.03		60.
1		0106	12	.01	.01	.00	0.		1		1312	133	.05	.01	.04		51.
1		0112	13	.01	.01	.00	0.		1		1318	134	.04	.01	.03		45.
1		0118	14	.01	.01	.00	0.		1		1324	135	.04	.01	.04		40.
1		0124	15	.01	.01	.00	0.		1		1330	136	.04	.01	.03		35.
1		0130	16	.01	.01	.00	0.		1		1336	137	.03	.01	.03		32.
1		0136	17	.01	.01	.00	0.		1		1342	138	.04	.01	.03		29.
1		0142	18	.01	.01	.00	0.		1		1348	139	.03	.01	.03		27.
1		0148	19	.01	.01	.00	0.		1		1354	140	.03	.01	.03		25.
1		0154	20	.01	.01	.00	0.		1		1400	141	.03	.01	.03		23.
1		0200	21	.01	.01	.00	0.		1		1406	142	.03	.01	.03		22.
1		0206	22	.01	.01	.00	0.		1		1412	143	.03	.00	.03		21.
1		0212	23	.01	.01	.00	0.		1		1418	144	.02	.00	.02		20.
1		0218	24	.01	.01	.00	0.		1		1424	145	.02	.00	.02		19.
1		0224	25	.01	.01	.00	0.		1		1430	146	.03	.00	.03		18.
1		0230	26	.01	.01	.00	0.		1		1436	147	.02	.00	.02		18.
1		0236	27	.01	.01	.00	0.		1		1442	148	.02	.00	.02		17.
1		0242	28	.01	.01	.00	0.		1		1448	149	.02	.00	.02		17.
1		0248	29	.01	.01	.00	0.		1		1454	150	.02	.00	.02		16.
1		0254	30	.01	.01	.00	0.		1		1500	151	.02	.00	.02		15.
1		0300	31	.01	.01	.00	0.		1		1506	152	.02	.00	.02		15.
1		0306	32	.01	.01	.00	0.		1		1512	153	.02	.00	.02		15.
1		0312	33	.01	.01	.00	0.		1		1518	154	.02	.00	.02		14.
1		0318	34	.01	.01	.00	0.		1		1524	155	.02	.00	.02		14.
1		0324	35	.01	.01	.00	0.		1		1530	156	.02	.00	.02		14.
1		0330	36	.01	.01	.00	0.		1		1536	157	.02	.00	.02		13.
1		0336	37	.01	.01	.00	0.		1		1542	158	.02	.00	.02		13.
1		0342	38	.01	.01	.00	0.		1		1548	159	.02	.00	.02		13.
1		0348	39	.01	.01	.00	0.		1		1554	160	.02	.00	.02		13.
1		0354	40	.01	.01	.00	0.		1		1600	161	.02	.00	.02		12.
1		0400	41	.01	.01	.00	0.		1		1606	162	.02	.00	.02		12.
1		0406	42	.01	.01	.00	0.		1		1612	163	.02	.00	.02		12.
1		0412	43	.01	.01	.00	0.		1		1618	164	.02	.00	.02		12.
1		0418	44	.01	.01	.00	0.		1		1624	165	.02	.00	.02		11.
1		0424	45	.01	.01	.00	0.		1		1630	166	.01	.00	.01		11.
1		0430	46	.01	.01	.00	0.		1		1636	167	.02	.00	.02		11.
1		0436	47	.01	.01	.00	0.		1		1642	168	.02	.00	.02		11.

CALIFONHYDROLOGY

1	0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	11.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.01	.00	.01	10.
1	0454	50	.01	.01	.00	0.	*	1	1700	171	.01	.00	.01	10.
1	0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	9.
1	0506	52	.01	.01	.00	0.	*	1	1712	173	.01	.00	.01	9.
1	0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	8.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.01	.00	.01	8.
1	0524	55	.01	.01	.00	0.	*	1	1730	176	.01	.00	.01	7.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.01	.00	.01	7.
1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	7.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.01	7.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	7.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.01	.00	.01	7.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.01	.00	.01	6.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	6.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.01	6.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	6.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.01	.00	.01	6.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.01	.00	.01	6.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.01	.00	.01	6.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	6.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.01	6.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	6.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.01	.00	.01	6.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.01	.00	.01	6.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	5.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.01	.00	.01	5.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	5.
1	0730	76	.02	.02	.00	0.	*	1	1936	197	.01	.00	.01	5.
1	0736	77	.02	.02	.00	0.	*	1	1942	198	.01	.00	.01	5.
1	0742	78	.02	.02	.00	0.	*	1	1948	199	.01	.00	.01	5.
1	0748	79	.02	.02	.00	0.	*	1	1954	200	.01	.00	.01	5.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.01	5.
1	0800	81	.02	.02	.00	0.	*	1	2006	202	.01	.00	.01	5.
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.01	.00	.01	5.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.01	5.
1	0818	84	.02	.02	.00	1.	*	1	2024	205	.01	.00	.01	5.
1	0824	85	.02	.02	.00	1.	*	1	2030	206	.01	.00	.01	5.
1	0830	86	.02	.02	.00	1.	*	1	2036	207	.01	.00	.01	5.
1	0836	87	.02	.02	.00	1.	*	1	2042	208	.01	.00	.01	5.
1	0842	88	.02	.02	.00	1.	*	1	2048	209	.01	.00	.01	5.
1	0848	89	.02	.02	.00	1.	*	1	2054	210	.01	.00	.01	5.
1	0854	90	.02	.02	.00	1.	*	1	2100	211	.01	.00	.01	5.
1	0900	91	.02	.02	.00	2.	*	1	2106	212	.01	.00	.01	5.
1	0906	92	.02	.01	.00	2.	*	1	2112	213	.01	.00	.01	5.
1	0912	93	.02	.02	.00	2.	*	1	2118	214	.01	.00	.01	5.
1	0918	94	.02	.02	.00	2.	*	1	2124	215	.01	.00	.01	5.
1	0924	95	.02	.02	.01	2.	*	1	2130	216	.01	.00	.01	5.
1	0930	96	.02	.02	.01	3.	*	1	2136	217	.01	.00	.01	4.
1	0936	97	.02	.02	.01	3.	*	1	2142	218	.01	.00	.01	4.
1	0942	98	.03	.02	.01	3.	*	1	2148	219	.01	.00	.01	4.
1	0948	99	.02	.02	.01	3.	*	1	2154	220	.01	.00	.01	4.
1	0954	100	.03	.02	.01	4.	*	1	2200	221	.01	.00	.01	4.
1	1000	101	.02	.02	.01	4.	*	1	2206	222	.01	.00	.01	4.
1	1006	102	.03	.02	.01	4.	*	1	2212	223	.01	.00	.01	4.
1	1012	103	.03	.02	.01	5.	*	1	2218	224	.01	.00	.01	4.
1	1018	104	.04	.02	.01	5.	*	1	2224	225	.01	.00	.01	4.
1	1024	105	.03	.02	.01	5.	*	1	2230	226	.01	.00	.01	4.
1	1030	106	.04	.02	.01	6.	*	1	2236	227	.01	.00	.01	4.
1	1036	107	.04	.02	.01	6.	*	1	2242	228	.01	.00	.01	4.
1	1042	108	.04	.02	.01	7.	*	1	2248	229	.01	.00	.01	4.
1	1048	109	.04	.03	.02	7.	*	1	2254	230	.01	.00	.01	4.
1	1054	110	.04	.03	.02	8.	*	1	2300	231	.01	.00	.01	4.
1	1100	111	.05	.03	.02	9.	*	1	2306	232	.01	.00	.01	4.
1	1106	112	.05	.03	.02	10.	*	1	2312	233	.01	.00	.01	4.
1	1112	113	.05	.03	.02	10.	*	1	2318	234	.01	.00	.01	4.
1	1118	114	.06	.03	.03	11.	*	1	2324	235	.01	.00	.01	4.
1	1124	115	.07	.04	.03	13.	*	1	2330	236	.01	.00	.01	4.
1	1130	116	.07	.03	.03	14.	*	1	2336	237	.01	.00	.01	4.
1	1136	117	.09	.04	.04	16.	*	1	2342	238	.01	.00	.01	4.
1	1142	118	.10	.05	.05	18.	*	1	2348	239	.00	.00	.00	4.
1	1148	119	.21	.09	.12	21.	*	1	2354	240	.00	.00	.00	4.
1	1154	120	.32	.13	.20	28.	*	2	0000	241	.01	.00	.01	3.
1	1200	121	.51	.17	.34	40.	*							

TOTAL RAINFALL = 6.10, TOTAL LOSS = 2.53, TOTAL EXCESS = 3.57

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR	AVERAGE FLOW 72-HR	24.00-HR
+ 145.	12.50	34.	10.	10.	10.
		(INCHES) 2.893	3.541	3.541	3.541
		(AC-FT) 17.	21.	21.	21.

CUMULATIVE AREA = .11 SQ MI

DAHRMN PER	STATION	SUB A	(O) OUTFLOW	(L) PRECIP.	(X) EXCESS
0.	0.	0.	0.	0.	0.
.0	20.	.0	.0	.6	.0
10000 10	-----	-----	-----	-----	-----
10006 20	.	.	.	.	.
10012 30	.	.	.	.	.
10018 40	.	.	.	.	.
10024 50	.	.	.	.	.
10030 60	.	.	.	.	.
10036 70	.	.	.	.	.
10042 80	.	.	.	.	.
10048 90	.	.	.	.	.
10054 100	.	.	.	.	.

CALIFONHYDROLOGY

12212	223.	0
12218	224.	0
12224	225.	0
12230	226.	0
12236	227.	0
12242	228.	0
12248	229.	0
12254	230.	0
12300	231.	0
12306	232.	0
12312	233.	0
12318	234.	0
12324	235.	0
12330	236.	0
12336	237.	0
12342	238.	0
12348	239.	0
12354	240.	0
20000	241.	0

1

HYDROGRAPH AT STATION SUB A
PLAN 1, RATIO = .88

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.59	.14	.45	78.
1		0006	2	.01	.01	.00	0.	1		1212	123	.38	.08	.30	112.
1		0012	3	.01	.01	.00	0.	1		1218	124	.24	.04	.20	147.
1		0018	4	.01	.01	.00	0.	1		1224	125	.11	.02	.09	171.
1		0024	5	.01	.01	.00	0.	1		1230	126	.09	.02	.08	177.
1		0030	6	.01	.01	.00	0.	1		1236	127	.08	.01	.07	167.
1		0036	7	.01	.01	.00	0.	1		1242	128	.08	.01	.06	146.
1		0042	8	.01	.01	.00	0.	1		1248	129	.06	.01	.05	123.
1		0048	9	.01	.01	.00	0.	1		1254	130	.06	.01	.05	102.
1		0054	10	.01	.01	.00	0.	1		1300	131	.06	.01	.05	85.
1		0100	11	.01	.01	.00	0.	1		1306	132	.05	.01	.04	72.
1		0106	12	.01	.01	.00	0.	1		1312	133	.06	.01	.05	62.
1		0112	13	.01	.01	.00	0.	1		1318	134	.04	.01	.04	54.
1		0118	14	.01	.01	.00	0.	1		1324	135	.05	.01	.04	47.
1		0124	15	.01	.01	.00	0.	1		1330	136	.04	.01	.04	42.
1		0130	16	.01	.01	.00	0.	1		1336	137	.03	.01	.03	38.
1		0136	17	.01	.01	.00	0.	1		1342	138	.04	.01	.04	35.
1		0142	18	.01	.01	.00	0.	1		1348	139	.03	.00	.03	32.
1		0148	19	.01	.01	.00	0.	1		1354	140	.03	.00	.03	30.
1		0154	20	.01	.01	.00	0.	1		1400	141	.03	.00	.03	28.
1		0200	21	.01	.01	.00	0.	1		1406	142	.03	.00	.03	26.
1		0206	22	.01	.01	.00	0.	1		1412	143	.03	.00	.03	25.
1		0212	23	.01	.01	.00	0.	1		1418	144	.03	.00	.02	24.
1		0218	24	.01	.01	.00	0.	1		1424	145	.03	.00	.02	23.
1		0224	25	.01	.01	.00	0.	1		1430	146	.03	.00	.03	22.
1		0230	26	.01	.01	.00	0.	1		1436	147	.03	.00	.02	21.
1		0236	27	.01	.01	.00	0.	1		1442	148	.03	.00	.02	20.
1		0242	28	.01	.01	.00	0.	1		1448	149	.02	.00	.02	20.
1		0248	29	.01	.01	.00	0.	1		1454	150	.03	.00	.02	19.
1		0254	30	.01	.01	.00	0.	1		1500	151	.03	.00	.02	18.
1		0300	31	.01	.01	.00	0.	1		1506	152	.03	.00	.02	18.
1		0306	32	.01	.01	.00	0.	1		1512	153	.02	.00	.02	17.
1		0312	33	.01	.01	.00	0.	1		1518	154	.03	.00	.02	17.
1		0318	34	.01	.01	.00	0.	1		1524	155	.02	.00	.02	17.
1		0324	35	.01	.01	.00	0.	1		1530	156	.02	.00	.02	16.
1		0330	36	.01	.01	.00	0.	1		1536	157	.03	.00	.02	16.
1		0336	37	.01	.01	.00	0.	1		1542	158	.02	.00	.02	15.
1		0342	38	.01	.01	.00	0.	1		1548	159	.02	.00	.02	15.
1		0348	39	.01	.01	.00	0.	1		1554	160	.02	.00	.02	15.
1		0354	40	.01	.01	.00	0.	1		1600	161	.02	.00	.02	15.
1		0400	41	.01	.01	.00	0.	1		1606	162	.02	.00	.02	14.
1		0406	42	.01	.01	.00	0.	1		1612	163	.02	.00	.02	14.
1		0412	43	.01	.01	.00	0.	1		1618	164	.02	.00	.02	14.
1		0418	44	.01	.01	.00	0.	1		1624	165	.02	.00	.02	14.
1		0424	45	.01	.01	.00	0.	1		1630	166	.01	.00	.01	13.
1		0430	46	.01	.01	.00	0.	1		1636	167	.02	.00	.02	13.
1		0436	47	.01	.01	.00	0.	1		1642	168	.02	.00	.02	13.
1		0442	48	.01	.01	.00	0.	1		1648	169	.01	.00	.01	12.
1		0448	49	.01	.01	.00	0.	1		1654	170	.01	.00	.01	12.
1		0454	50	.01	.01	.00	0.	1		1700	171	.01	.00	.01	12.
1		0500	51	.01	.01	.00	0.	1		1706	172	.01	.00	.01	11.
1		0506	52	.01	.01	.00	0.	1		1712	173	.01	.00	.01	10.
1		0512	53	.01	.01	.00	0.	1		1718	174	.01	.00	.01	10.
1		0518	54	.01	.01	.00	0.	1		1724	175	.01	.00	.01	9.
1		0524	55	.01	.01	.00	0.	1		1730	176	.01	.00	.01	9.
1		0530	56	.01	.01	.00	0.	1		1736	177	.01	.00	.01	9.
1		0536	57	.01	.01	.00	0.	1		1742	178	.01	.00	.01	8.
1		0542	58	.01	.01	.00	0.	1		1748	179	.01	.00	.01	8.
1		0548	59	.01	.01	.00	0.	1		1754	180	.01	.00	.01	8.
1		0554	60	.01	.01	.00	0.	1		1800	181	.01	.00	.01	8.
1		0600	61	.01	.01	.00	0.	1		1806	182	.01	.00	.01	8.
1		0606	62	.01	.01	.00	0.	1		1812	183	.01	.00	.01	8.
1		0612	63	.01	.01	.00	0.	1		1818	184	.01	.00	.01	7.
1		0618	64	.01	.01	.00	0.	1		1824	185	.01	.00	.01	7.
1		0624	65	.01	.01	.00	0.	1		1830	186	.01	.00	.01	7.
1		0630	66	.01	.01	.00	0.	1		1836	187	.01	.00	.01	7.
1		0636	67	.01	.01	.00	0.	1		1842	188	.01	.00	.01	7.
1		0642	68	.01	.01	.00	0.	1		1848	189	.01	.00	.01	7.
1		0648	69	.01	.01	.00	0.	1		1854	190	.01	.00	.01	7.
1		0654	70	.01	.01	.00	0.	1		1900	191	.01	.00	.01	7.
1		0700	71	.01	.01	.00	0.	1		1906	192	.01	.00	.01	7.
1		0706	72	.01	.01	.00	0.	1		1912	193	.01	.00	.01	7.
1		0712	73	.01	.01	.00	0.	1		1918	194	.01	.00	.01	6.
1		0718	74	.01	.01	.00	0.	1		1924	195	.01	.00	.01	6.
1		0724	75	.01	.01	.00	0.	1		1930	196	.01	.00	.01	6.
1		0730	76	.02	.02	.00	0.	1		1936	197	.01	.00	.01	6.

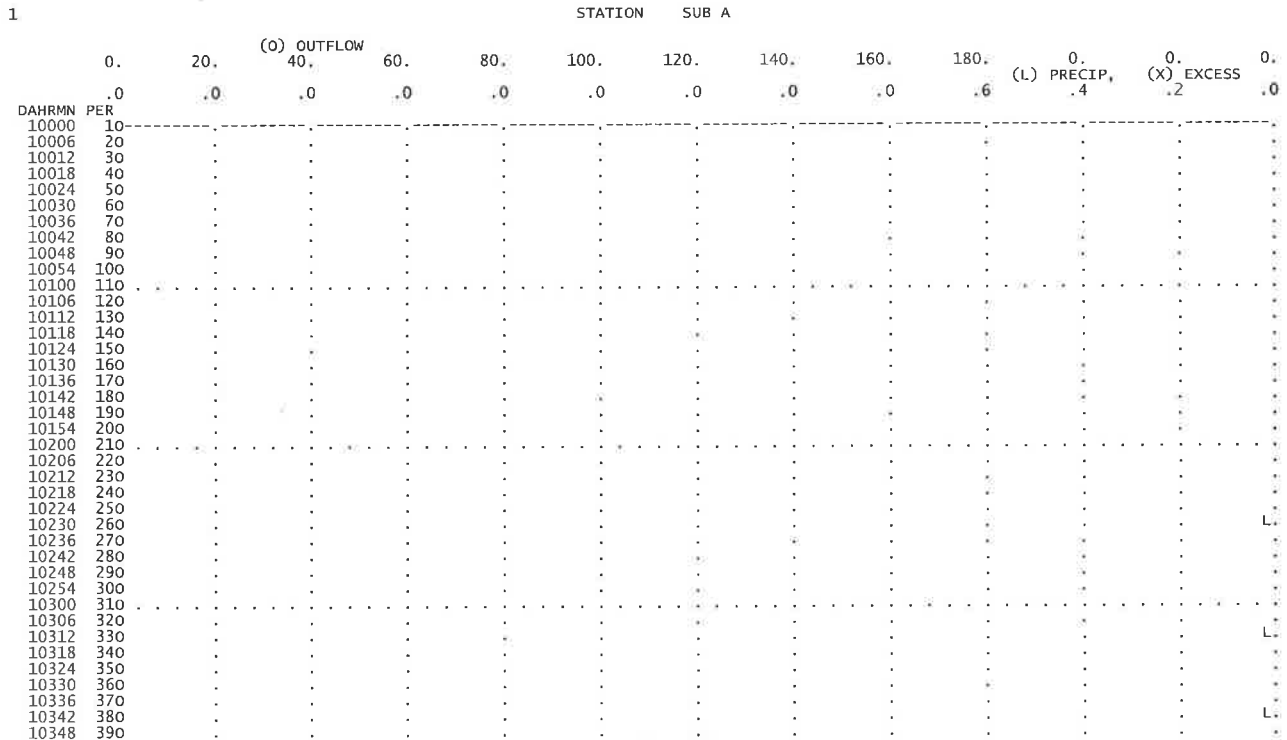
CALIFONHYDROLOGY

1	0736	77	.02	.02	.00	0.	1	1942	198	.01	.00	.01	6.
1	0742	78	.02	.02	.00	0.	1	1948	199	.01	.00	.01	6.
1	0748	79	.02	.02	.00	1.	1	1954	200	.01	.00	.01	6.
1	0754	80	.02	.02	.00	1.	1	2000	201	.01	.00	.01	6.
1	0800	81	.02	.02	.00	1.	1	2006	202	.01	.00	.01	6.
1	0806	82	.02	.02	.00	1.	1	2012	203	.01	.00	.01	6.
1	0812	83	.02	.02	.00	1.	1	2018	204	.01	.00	.01	6.
1	0818	84	.02	.02	.00	1.	1	2024	205	.01	.00	.01	6.
1	0824	85	.02	.02	.00	2.	1	2030	206	.01	.00	.01	6.
1	0830	86	.02	.02	.00	2.	1	2036	207	.01	.00	.01	6.
1	0836	87	.03	.02	.01	2.	1	2042	208	.01	.00	.01	6.
1	0842	88	.02	.02	.00	2.	1	2048	209	.01	.00	.01	6.
1	0848	89	.02	.02	.00	2.	1	2054	210	.01	.00	.01	6.
1	0854	90	.03	.02	.01	3.	1	2100	211	.01	.00	.01	5.
1	0900	91	.03	.02	.01	3.	1	2106	212	.01	.00	.01	5.
1	0906	92	.02	.02	.01	3.	1	2112	213	.01	.00	.01	5.
1	0912	93	.03	.02	.01	3.	1	2118	214	.01	.00	.01	5.
1	0918	94	.03	.02	.01	4.	1	2124	215	.01	.00	.01	5.
1	0924	95	.03	.02	.01	4.	1	2130	216	.01	.00	.01	5.
1	0930	96	.03	.02	.01	4.	1	2136	217	.01	.00	.01	5.
1	0936	97	.03	.02	.01	4.	1	2142	218	.01	.00	.01	5.
1	0942	98	.03	.02	.01	5.	1	2148	219	.01	.00	.01	5.
1	0948	99	.03	.02	.01	5.	1	2154	220	.01	.00	.01	5.
1	0954	100	.03	.02	.01	6.	1	2200	221	.01	.00	.01	5.
1	1000	101	.03	.02	.01	6.	1	2206	222	.01	.00	.01	5.
1	1006	102	.04	.02	.01	6.	1	2212	223	.01	.00	.01	5.
1	1012	103	.03	.02	.01	7.	1	2218	224	.01	.00	.01	5.
1	1018	104	.04	.02	.02	7.	1	2224	225	.01	.00	.01	5.
1	1024	105	.03	.02	.01	8.	1	2230	226	.01	.00	.01	5.
1	1030	106	.04	.02	.02	8.	1	2236	227	.01	.00	.01	5.
1	1036	107	.04	.02	.02	9.	1	2242	228	.01	.00	.01	5.
1	1042	108	.04	.02	.02	10.	1	2248	229	.01	.00	.01	5.
1	1048	109	.05	.03	.02	10.	1	2254	230	.01	.00	.01	5.
1	1054	110	.06	.03	.03	11.	1	2300	231	.01	.00	.01	5.
1	1100	111	.06	.03	.03	12.	1	2306	232	.01	.00	.01	5.
1	1106	112	.06	.03	.03	13.	1	2312	233	.01	.00	.01	5.
1	1112	113	.06	.03	.03	14.	1	2318	234	.01	.00	.01	4.
1	1118	114	.07	.03	.04	15.	1	2324	235	.01	.00	.01	4.
1	1124	115	.08	.04	.04	17.	1	2330	236	.01	.00	.01	4.
1	1130	116	.08	.03	.04	18.	1	2336	237	.01	.00	.01	4.
1	1136	117	.10	.04	.06	21.	1	2342	238	.01	.00	.01	4.
1	1142	118	.11	.05	.07	23.	1	2348	239	.00	.00	.00	4.
1	1148	119	.24	.09	.15	28.	1	2354	240	.00	.00	.00	4.
1	1154	120	.37	.13	.24	35.	2	0000	241	.01	.00	.01	4.
1	1200	121	.59	.17	.42	51.							

TOTAL RAINFALL = 7.00, TOTAL LOSS = 2.63, TOTAL EXCESS = 4.37

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
(CFS)	(HR)	(CFS)		24-HR	72-HR
+ 177.	12.50	42.	13.	13.	13.
		(INCHES)	4.336	4.336	4.336
		(AC-FT)	21.	25.	25.

CUMULATIVE AREA = .11 SQ MI



CALIFONHYDROLOGY

1	0000	1	.00	.00	.00	0.	*	1	1206	122	.67	.13	.54	95.
1	0006	2	.01	.01	.00	0.	*	1	1212	123	.43	.07	.36	137.
1	0012	3	.01	.01	.00	0.	*	1	1218	124	.28	.04	.24	179.
1	0018	4	.01	.01	.00	0.	*	1	1224	125	.13	.02	.11	206.
1	0024	5	.01	.01	.00	0.	*	1	1230	126	.10	.01	.09	213.
1	0030	6	.01	.01	.00	0.	*	1	1236	127	.10	.01	.08	200.
1	0036	7	.01	.01	.00	0.	*	1	1242	128	.09	.01	.08	175.
1	0042	8	.01	.01	.00	0.	*	1	1248	129	.07	.01	.06	147.
1	0048	9	.01	.01	.00	0.	*	1	1254	130	.07	.01	.06	122.
1	0054	10	.01	.01	.00	0.	*	1	1300	131	.06	.01	.06	102.
1	0100	11	.01	.01	.00	0.	*	1	1306	132	.06	.01	.05	86.
1	0106	12	.01	.01	.00	0.	*	1	1312	133	.06	.01	.06	74.
1	0112	13	.01	.01	.00	0.	*	1	1318	134	.05	.01	.04	64.
1	0118	14	.01	.01	.00	0.	*	1	1324	135	.06	.01	.05	56.
1	0124	15	.01	.01	.00	0.	*	1	1330	136	.05	.01	.04	50.
1	0130	16	.01	.01	.00	0.	*	1	1336	137	.04	.00	.04	45.
1	0136	17	.01	.01	.00	0.	*	1	1342	138	.05	.01	.04	41.
1	0142	18	.01	.01	.00	0.	*	1	1348	139	.04	.00	.04	38.
1	0148	19	.01	.01	.00	0.	*	1	1354	140	.04	.00	.04	35.
1	0154	20	.01	.01	.00	0.	*	1	1400	141	.04	.00	.04	33.
1	0200	21	.01	.01	.00	0.	*	1	1406	142	.04	.00	.04	31.
1	0206	22	.01	.01	.00	0.	*	1	1412	143	.04	.00	.04	29.
1	0212	23	.01	.01	.00	0.	*	1	1418	144	.03	.00	.03	28.
1	0218	24	.01	.01	.00	0.	*	1	1424	145	.03	.00	.03	27.
1	0224	25	.01	.01	.00	0.	*	1	1430	146	.04	.00	.04	26.
1	0230	26	.02	.02	.00	0.	*	1	1436	147	.03	.00	.03	25.
1	0236	27	.01	.01	.00	0.	*	1	1442	148	.03	.00	.03	24.
1	0242	28	.01	.01	.00	0.	*	1	1448	149	.02	.00	.02	23.
1	0248	29	.01	.01	.00	0.	*	1	1454	150	.03	.00	.03	22.
1	0254	30	.01	.01	.00	0.	*	1	1500	151	.03	.00	.03	21.
1	0300	31	.01	.01	.00	0.	*	1	1506	152	.03	.00	.03	21.
1	0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.00	.02	20.
1	0312	33	.02	.02	.00	0.	*	1	1518	154	.03	.00	.03	20.
1	0318	34	.01	.01	.00	0.	*	1	1524	155	.02	.00	.02	20.
1	0324	35	.01	.01	.00	0.	*	1	1530	156	.02	.00	.02	19.
1	0330	36	.01	.01	.00	0.	*	1	1536	157	.03	.00	.03	19.
1	0336	37	.01	.01	.00	0.	*	1	1542	158	.02	.00	.02	18.
1	0342	38	.02	.02	.00	0.	*	1	1548	159	.02	.00	.02	18.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.00	.02	17.
1	0354	40	.01	.01	.00	0.	*	1	1600	161	.02	.00	.02	17.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.00	.02	17.
1	0406	42	.02	.02	.00	0.	*	1	1612	163	.02	.00	.02	16.
1	0412	43	.01	.01	.00	0.	*	1	1618	164	.02	.00	.02	16.
1	0418	44	.01	.01	.00	0.	*	1	1624	165	.02	.00	.02	16.
1	0424	45	.02	.02	.00	0.	*	1	1630	166	.02	.00	.01	16.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.00	.02	15.
1	0436	47	.01	.01	.00	0.	*	1	1642	168	.02	.00	.02	15.
1	0442	48	.02	.02	.00	0.	*	1	1648	169	.02	.00	.01	15.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.02	.00	.01	14.
1	0454	50	.01	.01	.00	0.	*	1	1700	171	.01	.00	.01	14.
1	0500	51	.02	.02	.00	0.	*	1	1706	172	.02	.00	.01	13.
1	0506	52	.01	.01	.00	0.	*	1	1712	173	.02	.00	.01	12.
1	0512	53	.02	.02	.00	0.	*	1	1718	174	.02	.00	.01	11.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.02	.00	.01	11.
1	0524	55	.02	.02	.00	0.	*	1	1730	176	.01	.00	.01	10.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.02	.00	.01	10.
1	0536	57	.02	.02	.00	0.	*	1	1742	178	.02	.00	.01	10.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.01	9.
1	0548	59	.02	.02	.00	0.	*	1	1754	180	.02	.00	.01	9.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.02	.00	.01	9.
1	0600	61	.02	.02	.00	0.	*	1	1806	182	.01	.00	.01	9.
1	0606	62	.02	.02	.00	0.	*	1	1812	183	.02	.00	.01	9.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.01	9.
1	0618	64	.02	.02	.00	0.	*	1	1824	185	.02	.00	.01	8.
1	0624	65	.02	.02	.00	0.	*	1	1830	186	.01	.00	.01	8.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.02	.00	.01	8.
1	0636	67	.02	.02	.00	0.	*	1	1842	188	.01	.00	.01	8.
1	0642	68	.02	.02	.00	0.	*	1	1848	189	.02	.00	.01	8.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.01	8.
1	0654	70	.02	.02	.00	0.	*	1	1900	191	.02	.00	.01	8.
1	0700	71	.02	.01	.00	0.	*	1	1906	192	.01	.00	.01	8.
1	0706	72	.02	.01	.00	0.	*	1	1912	193	.01	.00	.01	8.
1	0712	73	.02	.01	.00	0.	*	1	1918	194	.02	.00	.01	8.
1	0718	74	.02	.01	.00	1.	*	1	1924	195	.01	.00	.01	7.
1	0724	75	.02	.01	.00	1.	*	1	1930	196	.02	.00	.01	7.
1	0730	76	.02	.02	.00	1.	*	1	1936	197	.01	.00	.01	7.
1	0736	77	.02	.02	.00	1.	*	1	1942	198	.01	.00	.01	7.
1	0742	78	.02	.02	.00	1.	*	1	1948	199	.02	.00	.01	7.
1	0748	79	.02	.02	.00	1.	*	1	1954	200	.01	.00	.01	7.
1	0754	80	.02	.02	.00	2.	*	1	2000	201	.01	.00	.01	7.
1	0800	81	.02	.02	.00	2.	*	1	2006	202	.01	.00	.01	7.
1	0806	82	.02	.02	.00	2.	*	1	2012	203	.02	.00	.01	7.
1	0812	83	.02	.02	.00	2.	*	1	2018	204	.01	.00	.01	7.
1	0818	84	.02	.02	.01	3.	*	1	2024	205	.01	.00	.01	7.
1	0824	85	.02	.02	.01	3.	*	1	2030	206	.01	.00	.01	7.
1	0830	86	.02	.02	.01	3.	*	1	2036	207	.02	.00	.01	7.
1	0836	87	.03	.02	.01	3.	*	1	2042	208	.01	.00	.01	6.
1	0842	88	.02	.02	.01	3.	*	1	2048	209	.01	.00	.01	7.
1	0848	89	.02	.02	.01	4.	*	1	2054	210	.01	.00	.01	6.
1	0854	90	.03	.02	.01	4.	*	1	2100	211	.01	.00	.01	6.
1	0900	91	.03	.02	.01	4.	*	1	2106	212	.02	.00	.01	6.
1	0906	92	.02	.02	.01	5.	*	1	2112	213	.01	.00	.01	6.
1	0912	93	.03	.02	.01	5.	*	1	2118	214	.01	.00	.01	6.
1	0918	94	.03	.02	.01	5.	*	1	2124	215	.01	.00	.01	6.
1	0924	95	.03	.02	.01	6.	*	1	2130	216	.01	.00	.01	6.
1	0930	96	.03	.02	.01	6.	*	1	2136	217	.01	.00	.01	6.
1	0936	97	.03	.02	.01	6.	*	1	2142	218	.01	.00	.01	6.
1	0942	98	.04	.03	.01	7.	*	1	2148	219	.01	.00	.01	6.
1	0948	99	.03	.02	.01	7.	*	1	2154	220	.01	.00	.01	6.
1	0954	100	.04	.02	.02	8.	*	1	2200	221	.02	.00	.01	6.
1	1000	101	.03	.02	.01	8.	*	1	2206	222	.01	.00	.01	6.
1	1006	102	.04	.02	.02	9.	*	1	2212	223	.01	.00	.01	6.
1	1012	103	.04	.02	.02	9.	*	1	2218	224	.01	.00	.01	6.
1	1018	104	.05	.03	.02	10.	*	1	2224	225	.01	.00	.01	6.
1	1024	105	.04	.02	.02	10.	*	1	2230	226	.01	.00	.01	6.

CALIFONHYDROLOGY														
1	1030	106	.05	.03	.02	11.	*	1	2236	227	.01	.00	.01	6.
1	1036	107	.05	.02	.02	12.	*	1	2242	228	.01	.00	.01	6.
1	1042	108	.05	.02	.02	13.	*	1	2248	229	.01	.00	.01	5.
1	1048	109	.06	.03	.03	14.	*	1	2254	230	.01	.00	.01	5.
1	1054	110	.06	.03	.03	14.	*	1	2300	231	.01	.00	.01	5.
1	1100	111	.06	.03	.03	16.	*	1	2306	232	.01	.00	.01	5.
1	1106	112	.06	.03	.03	17.	*	1	2312	233	.01	.00	.01	5.
1	1112	113	.06	.03	.04	18.	*	1	2318	234	.01	.00	.01	5.
1	1118	114	.08	.03	.05	20.	*	1	2324	235	.01	.00	.01	5.
1	1124	115	.09	.04	.05	22.	*	1	2330	236	.01	.00	.01	5.
1	1130	116	.09	.04	.05	24.	*	1	2336	237	.01	.00	.01	5.
1	1136	117	.11	.04	.07	26.	*	1	2342	238	.01	.00	.01	5.
1	1142	118	.13	.05	.08	30.	*	1	2348	239	.00	.00	.00	5.
1	1148	119	.28	.09	.19	35.	*	1	2354	240	.00	.00	.00	5.
1	1154	120	.42	.12	.30	44.	*	2	0000	241	.01	.00	.01	5.
1	1200	121	.67	.16	.51	64.	*							

TOTAL RAINFALL = 8.00, TOTAL LOSS = 2.73, TOTAL EXCESS = 5.27

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.00-HR
(CFS)	(HR)	(CFS)	(CFS)	(CFS)	(CFS)	(CFS)
213.	12.50	50.	15.	15.	15.	15.
		(INCHES)	4.232	5.239	5.239	5.239
		(AC-FT)	25.	31.	31.	31.
CUMULATIVE AREA =		.11 SQ MI				

DAHRMN PER	STATION SUB A								(L) PRECIP.	(X) EXCESS
	0.	40.	80.	120.	160.	200.	240.	0.		
10000	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10006	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10012	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10018	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10024	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10030	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10036	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10042	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10048	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10054	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10100	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10106	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10112	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10118	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10124	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10130	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10136	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10142	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10148	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10154	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10200	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10206	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10212	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10218	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10224	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10230	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10236	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10242	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10248	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10254	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10300	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10306	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10312	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10318	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10324	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10330	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10336	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10342	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10348	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10354	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10400	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10406	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10412	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10418	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10424	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10430	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10436	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10442	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10448	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10454	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10500	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10506	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10512	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10518	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10524	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10530	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10536	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10542	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10548	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10554	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10600	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10606	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10612	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10618	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10624	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10630	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10636	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10642	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

CALIFONHYDROLOGY

1	0018	4	0.	*	1	0624	65	0.	*	1	1230	126	49.	*	1	1836	187	4.
1	0024	5	0.	*	1	0630	66	0.	*	1	1236	127	66.	*	1	1842	188	4.
1	0030	6	0.	*	1	0636	67	0.	*	1	1242	128	78.	*	1	1848	189	4.
1	0036	7	0.	*	1	0642	68	0.	*	1	1248	129	83.	*	1	1854	190	4.
1	0042	8	0.	*	1	0648	69	0.	*	1	1254	130	79.	*	1	1900	191	4.
1	0048	9	0.	*	1	0654	70	0.	*	1	1300	131	70.	*	1	1906	192	4.
1	0054	10	0.	*	1	0700	71	0.	*	1	1306	132	60.	*	1	1912	193	4.
1	0100	11	0.	*	1	0706	72	0.	*	1	1312	133	50.	*	1	1918	194	4.
1	0106	12	0.	*	1	0712	73	0.	*	1	1318	134	42.	*	1	1924	195	4.
1	0112	13	0.	*	1	0718	74	0.	*	1	1324	135	36.	*	1	1930	196	4.
1	0118	14	0.	*	1	0724	75	0.	*	1	1330	136	31.	*	1	1936	197	4.
1	0124	15	0.	*	1	0730	76	0.	*	1	1336	137	27.	*	1	1942	198	3.
1	0130	16	0.	*	1	0736	77	0.	*	1	1342	138	24.	*	1	1948	199	3.
1	0136	17	0.	*	1	0742	78	0.	*	1	1348	139	22.	*	1	1954	200	3.
1	0142	18	0.	*	1	0748	79	0.	*	1	1354	140	20.	*	1	2000	201	3.
1	0148	19	0.	*	1	0754	80	0.	*	1	1400	141	18.	*	1	2006	202	3.
1	0154	20	0.	*	1	0800	81	0.	*	1	1406	142	17.	*	1	2012	203	3.
1	0200	21	0.	*	1	0806	82	0.	*	1	1412	143	15.	*	1	2018	204	3.
1	0206	22	0.	*	1	0812	83	0.	*	1	1418	144	15.	*	1	2024	205	3.
1	0212	23	0.	*	1	0818	84	0.	*	1	1424	145	14.	*	1	2030	206	3.
1	0218	24	0.	*	1	0824	85	0.	*	1	1430	146	13.	*	1	2036	207	3.
1	0224	25	0.	*	1	0830	86	0.	*	1	1436	147	12.	*	1	2042	208	3.
1	0230	26	0.	*	1	0836	87	0.	*	1	1442	148	12.	*	1	2048	209	3.
1	0236	27	0.	*	1	0842	88	0.	*	1	1448	149	11.	*	1	2054	210	3.
1	0242	28	0.	*	1	0848	89	0.	*	1	1454	150	11.	*	1	2100	211	3.
1	0248	29	0.	*	1	0854	90	0.	*	1	1500	151	11.	*	1	2106	212	3.
1	0254	30	0.	*	1	0900	91	0.	*	1	1506	152	10.	*	1	2112	213	3.
1	0300	31	0.	*	1	0906	92	0.	*	1	1512	153	10.	*	1	2118	214	3.
1	0306	32	0.	*	1	0912	93	0.	*	1	1518	154	10.	*	1	2124	215	3.
1	0312	33	0.	*	1	0918	94	0.	*	1	1524	155	9.	*	1	2130	216	3.
1	0318	34	0.	*	1	0924	95	0.	*	1	1530	156	9.	*	1	2136	217	3.
1	0324	35	0.	*	1	0930	96	0.	*	1	1536	157	9.	*	1	2142	218	3.
1	0330	36	0.	*	1	0936	97	0.	*	1	1542	158	9.	*	1	2148	219	3.
1	0336	37	0.	*	1	0942	98	0.	*	1	1548	159	9.	*	1	2154	220	3.
1	0342	38	0.	*	1	0948	99	0.	*	1	1554	160	8.	*	1	2200	221	3.
1	0348	39	0.	*	1	0954	100	0.	*	1	1600	161	8.	*	1	2206	222	3.
1	0354	40	0.	*	1	1000	101	0.	*	1	1606	162	8.	*	1	2212	223	3.
1	0400	41	0.	*	1	1006	102	1.	*	1	1612	163	8.	*	1	2218	224	3.
1	0406	42	0.	*	1	1012	103	1.	*	1	1618	164	8.	*	1	2224	225	3.
1	0412	43	0.	*	1	1018	104	1.	*	1	1624	165	8.	*	1	2230	226	3.
1	0418	44	0.	*	1	1024	105	1.	*	1	1630	166	7.	*	1	2236	227	3.
1	0424	45	0.	*	1	1030	106	1.	*	1	1636	167	7.	*	1	2242	228	3.
1	0430	46	0.	*	1	1036	107	1.	*	1	1642	168	7.	*	1	2248	229	3.
1	0436	47	0.	*	1	1042	108	2.	*	1	1648	169	7.	*	1	2254	230	3.
1	0442	48	0.	*	1	1048	109	2.	*	1	1654	170	7.	*	1	2300	231	3.
1	0448	49	0.	*	1	1054	110	2.	*	1	1700	171	7.	*	1	2306	232	3.
1	0454	50	0.	*	1	1100	111	2.	*	1	1706	172	7.	*	1	2312	233	3.
1	0500	51	0.	*	1	1106	112	3.	*	1	1712	173	7.	*	1	2318	234	2.
1	0506	52	0.	*	1	1112	113	3.	*	1	1718	174	6.	*	1	2324	235	2.
1	0512	53	0.	*	1	1118	114	3.	*	1	1724	175	6.	*	1	2330	236	2.
1	0518	54	0.	*	1	1124	115	4.	*	1	1730	176	5.	*	1	2336	237	2.
1	0524	55	0.	*	1	1130	116	4.	*	1	1736	177	5.	*	1	2342	238	2.
1	0530	56	0.	*	1	1136	117	5.	*	1	1742	178	5.	*	1	2348	239	2.
1	0536	57	0.	*	1	1142	118	5.	*	1	1748	179	5.	*	1	2354	240	2.
1	0542	58	0.	*	1	1148	119	6.	*	1	1754	180	5.	*	2	0000	241	2.
1	0548	59	0.	*	1	1154	120	7.	*	1	1800	181	4.	*	*	*	*	2.
1	0554	60	0.	*	1	1200	121	8.	*	1	1806	182	4.	*	*	*	*	2.
1	0600	61	0.	*	1	1206	122	10.	*	1	1812	183	4.	*	*	*	*	2.

PEAK FLOW	TIME	6-HR	MAXIMUM	AVERAGE	24.00-HR
(CFS)	(HR)		24-HR	72-HR	
83.	12.80	20.	6.	6.	6.
		(INCHES)	2.023	2.023	2.023
		(AC-FT)	10.	12.	12.

CUMULATIVE AREA = .11 SQ MI

STATION	A	TO	F
DAHRMN	0.	10.	0.
PER	20.	30.	40.
11			
10000			
10006			
10012			
10018			
10024			
10030			
10036			
10042			
10048			
10054			
10100			
10106			
10112			
10118			
10124			
10130			
10136			
10142			
10148			
10154			
10200			
10206			
10212			
10218			
10224			
10230			
10236			
10242			
10248			
10254			

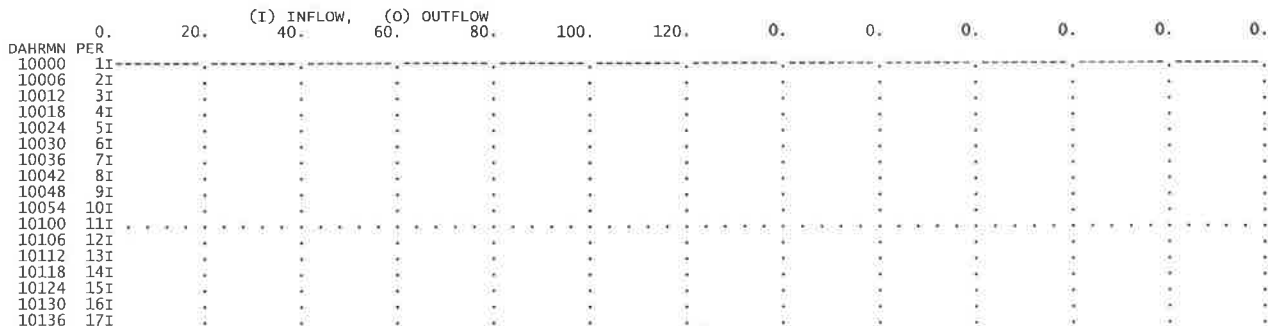
CALIFONHYDROLOGY

HYDROGRAPH AT STATION A TO F
PLAN 1, RATIO = .63

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	
1		0000	1	0.	1		0606	62	0.	1		1212	123	19.	1		1818	184	5.	
1		0006	2	0.	1		0612	63	0.	1		1218	124	28.	1		1824	185	5.	
1		0012	3	0.	1		0618	64	0.	1		1224	125	43.	1		1830	186	5.	
1		0018	4	0.	1		0624	65	0.	1		1230	126	65.	1		1836	187	5.	
1		0024	5	0.	1		0630	66	0.	1		1236	127	86.	1		1842	188	5.	
1		0030	6	0.	1		0636	67	0.	1		1242	128	101.	1		1848	189	5.	
1		0036	7	0.	1		0642	68	0.	1		1248	129	106.	1		1854	190	5.	
1		0042	8	0.	1		0648	69	0.	1		1254	130	101.	1		1900	191	5.	
1		0048	9	0.	1		0654	70	0.	1		1300	131	89.	1		1906	192	4.	
1		0054	10	0.	1		0700	71	0.	1		1306	132	76.	1		1912	193	4.	
1		0100	11	0.	1		0706	72	0.	1		1312	133	63.	1		1918	194	4.	
1		0106	12	0.	1		0712	73	0.	1		1318	134	53.	1		1924	195	4.	
1		0112	13	0.	1		0718	74	0.	1		1324	135	45.	1		1930	196	4.	
1		0118	14	0.	1		0724	75	0.	1		1330	136	39.	1		1936	197	4.	
1		0124	15	0.	1		0730	76	0.	1		1336	137	34.	1		1942	198	4.	
1		0130	16	0.	1		0736	77	0.	1		1342	138	30.	1		1948	199	4.	
1		0136	17	0.	1		0742	78	0.	1		1348	139	27.	1		1954	200	4.	
1		0142	18	0.	1		0748	79	0.	1		1354	140	24.	1		2000	201	4.	
1		0148	19	0.	1		0754	80	0.	1		1400	141	22.	1		2006	202	4.	
1		0154	20	0.	1		0800	81	0.	1		1406	142	21.	1		2012	203	4.	
1		0200	21	0.	1		0806	82	0.	1		1412	143	19.	1		2018	204	4.	
1		0206	22	0.	1		0812	83	0.	1		1418	144	18.	1		2024	205	4.	
1		0212	23	0.	1		0818	84	0.	1		1424	145	17.	1		2030	206	4.	
1		0218	24	0.	1		0824	85	0.	1		1430	146	16.	1		2036	207	4.	
1		0224	25	0.	1		0830	86	0.	1		1436	147	15.	1		2042	208	4.	
1		0230	26	0.	1		0836	87	0.	1		1442	148	15.	1		2048	209	4.	
1		0236	27	0.	1		0842	88	0.	1		1448	149	14.	1		2054	210	4.	
1		0242	28	0.	1		0848	89	0.	1		1454	150	14.	1		2100	211	4.	
1		0248	29	0.	1		0854	90	0.	1		1500	151	13.	1		2106	212	4.	
1		0254	30	0.	1		0900	91	0.	1		1506	152	13.	1		2112	213	4.	
1		0300	31	0.	1		0906	92	0.	1		1512	153	12.	1		2118	214	4.	
1		0306	32	0.	1		0912	93	0.	1		1518	154	12.	1		2124	215	4.	
1		0312	33	0.	1		0918	94	0.	1		1524	155	12.	1		2130	216	4.	
1		0318	34	0.	1		0924	95	1.	1		1530	156	11.	1		2136	217	4.	
1		0324	35	0.	1		0930	96	1.	1		1536	157	11.	1		2142	218	4.	
1		0330	36	0.	1		0936	97	1.	1		1542	158	11.	1		2148	219	4.	
1		0336	37	0.	1		0942	98	1.	1		1548	159	11.	1		2154	220	3.	
1		0342	38	0.	1		0948	99	1.	1		1554	160	10.	1		2200	221	3.	
1		0348	39	0.	1		0954	100	1.	1		1600	161	10.	1		2206	222	3.	
1		0354	40	0.	1		1000	101	1.	1		1606	162	10.	1		2212	223	3.	
1		0400	41	0.	1		1006	102	2.	1		1612	163	10.	1		2218	224	3.	
1		0406	42	0.	1		1012	103	2.	1		1618	164	10.	1		2224	225	3.	
1		0412	43	0.	1		1018	104	2.	1		1624	165	9.	1		2230	226	3.	
1		0418	44	0.	1		1024	105	2.	1		1630	166	9.	1		2236	227	3.	
1		0424	45	0.	1		1030	106	2.	1		1636	167	9.	1		2242	228	3.	
1		0430	46	0.	1		1036	107	3.	1		1642	168	9.	1		2248	229	3.	
1		0436	47	0.	1		1042	108	3.	1		1648	169	9.	1		2254	230	3.	
1		0442	48	0.	1		1048	109	3.	1		1654	170	9.	1		2300	231	3.	
1		0448	49	0.	1		1054	110	4.	1		1700	171	8.	1		2306	232	3.	
1		0454	50	0.	1		1100	111	4.	1		1706	172	8.	1		2312	233	3.	
1		0500	51	0.	1		1106	112	4.	1		1712	173	8.	1		2318	234	3.	
1		0506	52	0.	1		1112	113	5.	1		1718	174	8.	1		2324	235	3.	
1		0512	53	0.	1		1118	114	5.	1		1724	175	7.	1		2330	236	3.	
1		0518	54	0.	1		1124	115	6.	1		1730	176	7.	1		2336	237	3.	
1		0524	55	0.	1		1130	116	6.	1		1736	177	6.	1		2342	238	3.	
1		0530	56	0.	1		1136	117	7.	1		1742	178	6.	1		2348	239	3.	
1		0536	57	0.	1		1142	118	8.	1		1748	179	6.	1		2354	240	3.	
1		0542	58	0.	1		1148	119	9.	1		1754	180	6.	1		0000	241	3.	
1		0548	59	0.	1		1154	120	10.	1		1800	181	5.	1					
1		0554	60	0.	1		1200	121	12.	1		1806	182	5.	1					
1		0600	61	0.	1		1206	122	14.	1		1812	183	5.	1					

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
(CFS)	(HR)	(CFS)		24-HR	72-HR
106.	12.80	25.	8.	8.	8.
		(INCHES)	2.142	2.591	2.591
		(AC-FT)	13.	15.	15.
CUMULATIVE AREA =			.11 SQ MI		

1 STATION A TO F



CALIFONHYDROLOGY

12254 230. I
 12300 231. I
 12306 232. I
 12312 233. IO
 12318 234. IO
 12324 235. IO
 12330 236. I
 12336 237. I
 12342 238. I
 12348 239. I
 12354 240. I
 20000 241. I

HYDROGRAPH AT STATION A TO F
 PLAN 1, RATIO = .76

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	
1		0000	1	0.	1		0606	62	0.	1		1212	123	28.	1		1818	184	7.	
1		0006	2	0.	1		0612	63	0.	1		1218	124	40.	1		1824	185	6.	
1		0012	3	0.	1		0618	64	0.	1		1224	125	62.	1		1830	186	6.	
1		0018	4	0.	1		0624	65	0.	1		1230	126	90.	1		1836	187	6.	
1		0024	5	0.	1		0630	66	0.	1		1236	127	119.	1		1842	188	6.	
1		0030	6	0.	1		0636	67	0.	1		1242	128	139.	1		1848	189	6.	
1		0036	7	0.	1		0642	68	0.	1		1248	129	145.	1		1854	190	6.	
1		0042	8	0.	1		0648	69	0.	1		1254	130	137.	1		1900	191	6.	
1		0048	9	0.	1		0654	70	0.	1		1300	131	121.	1		1906	192	6.	
1		0054	10	0.	1		0700	71	0.	1		1306	132	102.	1		1912	193	6.	
1		0100	11	0.	1		0706	72	0.	1		1312	133	85.	1		1918	194	6.	
1		0106	12	0.	1		0712	73	0.	1		1318	134	71.	1		1924	195	6.	
1		0112	13	0.	1		0718	74	0.	1		1324	135	60.	1		1930	196	6.	
1		0118	14	0.	1		0724	75	0.	1		1330	136	51.	1		1936	197	5.	
1		0124	15	0.	1		0730	76	0.	1		1336	137	45.	1		1942	198	5.	
1		0130	16	0.	1		0736	77	0.	1		1342	138	40.	1		1948	199	5.	
1		0136	17	0.	1		0742	78	0.	1		1348	139	35.	1		1954	200	5.	
1		0142	18	0.	1		0748	79	0.	1		1354	140	32.	1		2000	201	5.	
1		0148	19	0.	1		0754	80	0.	1		1400	141	29.	1		2006	202	5.	
1		0154	20	0.	1		0800	81	0.	1		1406	142	27.	1		2012	203	5.	
1		0200	21	0.	1		0806	82	0.	1		1412	143	25.	1		2018	204	5.	
1		0206	22	0.	1		0812	83	0.	1		1418	144	23.	1		2024	205	5.	
1		0212	23	0.	1		0818	84	0.	1		1424	145	22.	1		2030	206	5.	
1		0218	24	0.	1		0824	85	0.	1		1430	146	21.	1		2036	207	5.	
1		0224	25	0.	1		0830	86	0.	1		1436	147	20.	1		2042	208	5.	
1		0230	26	0.	1		0836	87	1.	1		1442	148	19.	1		2048	209	5.	
1		0236	27	0.	1		0842	88	1.	1		1448	149	18.	1		2054	210	5.	
1		0242	28	0.	1		0848	89	1.	1		1454	150	18.	1		2100	211	5.	
1		0248	29	0.	1		0854	90	1.	1		1500	151	17.	1		2106	212	5.	
1		0254	30	0.	1		0900	91	1.	1		1506	152	17.	1		2112	213	5.	
1		0300	31	0.	1		0906	92	1.	1		1512	153	16.	1		2118	214	5.	
1		0306	32	0.	1		0912	93	1.	1		1518	154	15.	1		2124	215	5.	
1		0312	33	0.	1		0918	94	2.	1		1524	155	15.	1		2130	216	5.	
1		0318	34	0.	1		0924	95	2.	1		1530	156	15.	1		2136	217	5.	
1		0324	35	0.	1		0930	96	2.	1		1536	157	14.	1		2142	218	5.	
1		0330	36	0.	1		0936	97	2.	1		1542	158	14.	1		2148	219	5.	
1		0336	37	0.	1		0942	98	2.	1		1548	159	14.	1		2154	220	4.	
1		0342	38	0.	1		0948	99	3.	1		1554	160	13.	1		2200	221	4.	
1		0348	39	0.	1		0954	100	3.	1		1600	161	13.	1		2206	222	4.	
1		0354	40	0.	1		1000	101	3.	1		1606	162	13.	1		2212	223	4.	
1		0400	41	0.	1		1006	102	3.	1		1612	163	13.	1		2218	224	4.	
1		0406	42	0.	1		1012	103	4.	1		1618	164	12.	1		2224	225	4.	
1		0412	43	0.	1		1018	104	4.	1		1624	165	12.	1		2230	226	4.	
1		0418	44	0.	1		1024	105	4.	1		1630	166	12.	1		2236	227	4.	
1		0424	45	0.	1		1030	106	5.	1		1636	167	12.	1		2242	228	4.	
1		0430	46	0.	1		1036	107	5.	1		1642	168	11.	1		2248	229	4.	
1		0436	47	0.	1		1042	108	5.	1		1648	169	11.	1		2254	230	4.	
1		0442	48	0.	1		1048	109	6.	1		1654	170	11.	1		2300	231	4.	
1		0448	49	0.	1		1054	110	6.	1		1700	171	11.	1		2306	232	4.	
1		0454	50	0.	1		1100	111	7.	1		1706	172	11.	1		2312	233	4.	
1		0500	51	0.	1		1106	112	7.	1		1712	173	10.	1		2318	234	4.	
1		0506	52	0.	1		1112	113	8.	1		1718	174	10.	1		2324	235	4.	
1		0512	53	0.	1		1118	114	9.	1		1724	175	9.	1		2330	236	4.	
1		0518	54	0.	1		1124	115	10.	1		1730	176	9.	1		2336	237	4.	
1		0524	55	0.	1		1130	116	10.	1		1736	177	8.	1		2342	238	4.	
1		0530	56	0.	1		1136	117	11.	1		1742	178	8.	1		2348	239	4.	
1		0536	57	0.	1		1142	118	13.	1		1748	179	7.	1		2354	240	4.	
1		0542	58	0.	1		1148	119	14.	1		1754	180	7.	2		0000	241	4.	
1		0548	59	0.	1		1154	120	16.	1		1800	181	7.						
1		0554	60	0.	1		1200	121	18.	1		1806	182	7.						
1		0600	61	0.	1		1206	122	21.	1		1812	183	7.						

PEAK FLOW TIME
 + (CFS) (HR)
 + 145. 12.80
 (INCHES) 34. 10. 10. 10.
 (AC-FT) 2.893 3.525 3.525 3.525
 17. 21. 21. 21.
 CUMULATIVE AREA = .11 SQ MI

1

DAHRMN PER	(I) INFLOW,	(O) OUTFLOW	STATION	A TO F
	40.	60.	80.	100. 120. 140. 160. 0. 0. 0. 0.
10000 11				
10006 21				
10012 31				
10018 41				

CALIFONHYDROLOGY

12136 217. I
 12142 218. I
 12148 219. I
 12154 220. I
 12200 221. I
 12206 222. I
 12212 223. I
 12218 224. I
 12224 225. I
 12230 226. I
 12236 227. I
 12242 228. I
 12248 229. I
 12254 230. I
 12300 231. I
 12306 232. I
 12312 233. I
 12318 234. I
 12324 235. I
 12330 236. I
 12336 237. I
 12342 238. I
 12348 239. I
 12354 240. I
 20000 241. I

1

HYDROGRAPH AT STATION A TO F
 PLAN 1, RATIO = .88

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	
1		0000	1	0.	*	1		0606	62	0.	*	1		1212	123	35.	*	1		1818	184	8.	
1		0006	2	0.	*	1		0612	63	0.	*	1		1218	124	51.	*	1		1824	185	8.	
1		0012	3	0.	*	1		0618	64	0.	*	1		1224	125	78.	*	1		1830	186	8.	
1		0018	4	0.	*	1		0624	65	0.	*	1		1230	126	112.	*	1		1836	187	7.	
1		0024	5	0.	*	1		0630	66	0.	*	1		1236	127	147.	*	1		1842	188	7.	
1		0030	6	0.	*	1		0636	67	0.	*	1		1242	128	171.	*	1		1848	189	7.	
1		0036	7	0.	*	1		0642	68	0.	*	1		1248	129	177.	*	1		1854	190	7.	
1		0042	8	0.	*	1		0648	69	0.	*	1		1254	130	167.	*	1		1900	191	7.	
1		0048	9	0.	*	1		0654	70	0.	*	1		1300	131	146.	*	1		1906	192	7.	
1		0054	10	0.	*	1		0700	71	0.	*	1		1306	132	123.	*	1		1912	193	7.	
1		0100	11	0.	*	1		0706	72	0.	*	1		1312	133	102.	*	1		1918	194	7.	
1		0106	12	0.	*	1		0712	73	0.	*	1		1318	134	85.	*	1		1924	195	7.	
1		0112	13	0.	*	1		0718	74	0.	*	1		1324	135	72.	*	1		1930	196	7.	
1		0118	14	0.	*	1		0724	75	0.	*	1		1330	136	62.	*	1		1936	197	6.	
1		0124	15	0.	*	1		0730	76	0.	*	1		1336	137	54.	*	1		1942	198	6.	
1		0130	16	0.	*	1		0736	77	0.	*	1		1342	138	47.	*	1		1948	199	6.	
1		0136	17	0.	*	1		0742	78	0.	*	1		1348	139	42.	*	1		1954	200	6.	
1		0142	18	0.	*	1		0748	79	0.	*	1		1354	140	38.	*	1		2000	201	6.	
1		0148	19	0.	*	1		0754	80	0.	*	1		1400	141	35.	*	1		2006	202	6.	
1		0154	20	0.	*	1		0800	81	0.	*	1		1406	142	32.	*	1		2012	203	6.	
1		0200	21	0.	*	1		0806	82	1.	*	1		1412	143	30.	*	1		2018	204	6.	
1		0206	22	0.	*	1		0812	83	1.	*	1		1418	144	28.	*	1		2024	205	6.	
1		0212	23	0.	*	1		0818	84	1.	*	1		1424	145	26.	*	1		2030	206	6.	
1		0218	24	0.	*	1		0824	85	1.	*	1		1430	146	25.	*	1		2036	207	6.	
1		0224	25	0.	*	1		0830	86	1.	*	1		1436	147	24.	*	1		2042	208	6.	
1		0230	26	0.	*	1		0836	87	1.	*	1		1442	148	23.	*	1		2048	209	6.	
1		0236	27	0.	*	1		0842	88	2.	*	1		1448	149	22.	*	1		2054	210	6.	
1		0242	28	0.	*	1		0848	89	2.	*	1		1454	150	21.	*	1		2100	211	6.	
1		0248	29	0.	*	1		0854	90	2.	*	1		1500	151	20.	*	1		2106	212	6.	
1		0254	30	0.	*	1		0900	91	2.	*	1		1506	152	20.	*	1		2112	213	6.	
1		0300	31	0.	*	1		0906	92	2.	*	1		1512	153	19.	*	1		2118	214	5.	
1		0306	32	0.	*	1		0912	93	3.	*	1		1518	154	18.	*	1		2124	215	5.	
1		0312	33	0.	*	1		0918	94	3.	*	1		1524	155	18.	*	1		2130	216	5.	
1		0318	34	0.	*	1		0924	95	3.	*	1		1530	156	17.	*	1		2136	217	5.	
1		0324	35	0.	*	1		0930	96	3.	*	1		1536	157	17.	*	1		2142	218	5.	
1		0330	36	0.	*	1		0936	97	4.	*	1		1542	158	17.	*	1		2148	219	5.	
1		0336	37	0.	*	1		0942	98	4.	*	1		1548	159	16.	*	1		2154	220	5.	
1		0342	38	0.	*	1		0948	99	4.	*	1		1554	160	16.	*	1		2200	221	5.	
1		0348	39	0.	*	1		0954	100	4.	*	1		1600	161	15.	*	1		2206	222	5.	
1		0354	40	0.	*	1		1000	101	5.	*	1		1606	162	15.	*	1		2212	223	5.	
1		0400	41	0.	*	1		1006	102	5.	*	1		1612	163	15.	*	1		2218	224	5.	
1		0406	42	0.	*	1		1012	103	6.	*	1		1618	164	15.	*	1		2224	225	5.	
1		0412	43	0.	*	1		1018	104	6.	*	1		1624	165	14.	*	1		2230	226	5.	
1		0418	44	0.	*	1		1024	105	6.	*	1		1630	166	14.	*	1		2236	227	5.	
1		0424	45	0.	*	1		1030	106	7.	*	1		1636	167	14.	*	1		2242	228	5.	
1		0430	46	0.	*	1		1036	107	7.	*	1		1642	168	14.	*	1		2248	229	5.	
1		0436	47	0.	*	1		1042	108	8.	*	1		1648	169	13.	*	1		2254	230	5.	
1		0442	48	0.	*	1		1048	109	8.	*	1		1654	170	13.	*	1		2300	231	5.	
1		0448	49	0.	*	1		1054	110	9.	*	1		1700	171	13.	*	1		2306	232	5.	
1		0454	50	0.	*	1		1100	111	10.	*	1		1706	172	12.	*	1		2312	233	5.	
1		0500	51	0.	*	1		1106	112	10.	*	1		1712	173	12.	*	1		2318	234	5.	
1		0506	52	0.	*	1		1112	113	11.	*	1		1718	174	12.	*	1		2324	235	5.	
1		0512	53	0.	*	1		1118	114	12.	*	1		1724	175	11.	*	1		2330	236	5.	
1		0518	54	0.	*	1		1124	115	13.	*	1		1730	176	10.	*	1		2336	237	4.	
1		0524	55	0.	*	1		1130	116	14.	*	1		1736	177	10.	*	1		2342	238	4.	
1		0530	56	0.	*	1		1136	117	15.	*	1		1742	178	9.	*	1		2348	239	4.	
1		0536	57	0.	*	1		1142	118	17.	*	1		1748	179	9.	*	1		2354	240	4.	
1		0542	58	0.	*	1		1148	119	18.	*	1		1754	180	9.	*	2		0000	241	4.	
1		0548	59	0.	*	1		1154	120	21.	*	1		1800	181	8.	*						
1		0554	60	0.	*	1		1200	121	23.	*	1		1806	182	8.	*						
1		0600	61	0.	*	1		1206	122	28.	*	1		1812	183	8.	*						

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.00-HR
177.	12.80	42.	13.	13.	13.
		3,523	4,317	4,317	4,317

(AC-FT) 21. 25. CALIFONHYDROLOGY 25.
 CUMULATIVE AREA = .11 SQ MI

1

		STATION A TO F											
		(I) INFLOW,	(O) OUTFLOW										
DAHRMN	PER	40.	60.	80.	100.	120.	140.	160.	180.	0.	0.	0.	
10000	11I												
10006	21I												
10012	31I												
10018	41I												
10024	51I												
10030	61I												
10036	71I												
10042	81I												
10048	91I												
10054	101I												
10100	111I												
10106	121I												
10112	131I												
10118	141I												
10124	151I												
10130	161I												
10136	171I												
10142	181I												
10148	191I												
10154	201I												
10200	211I												
10206	221I												
10212	231I												
10218	241I												
10224	251I												
10230	261I												
10236	271I												
10242	281I												
10248	291I												
10254	301I												
10300	311I												
10306	321I												
10312	331I												
10318	341I												
10324	351I												
10330	361I												
10336	371I												
10342	381I												
10348	391I												
10354	401I												
10400	411I												
10406	421I												
10412	431I												
10418	441I												
10424	451I												
10430	461I												
10436	471I												
10442	481I												
10448	491I												
10454	501I												
10500	511I												
10506	521I												
10512	531I												
10518	541I												
10524	551I												
10530	561I												
10536	571I												
10542	581I												
10548	591I												
10554	601I												
10600	611I												
10606	621I												
10612	631I												
10618	641I												
10624	651I												
10630	661I												
10636	671I												
10642	681I												
10648	691I												
10654	701I												
10700	711I												
10706	721I												
10712	731I												
10718	741I												
10724	751I												
10730	761I												
10736	771I												
10742	781I												
10748	791I												
10754	801I												
10800	811I												
10806	820I												
10812	830I												
10818	840I												
10824	85. I												
10830	86. I												
10836	87. I												
10842	88. I												
10848	89. I												
10854	90. I												
10900	91. I												
10906	92. OI												
10912	93. OI												
10918	94. OI												
10924	95. I												
10930	96. I												
10936	97. I												

CALIFONHYDROLOGY

12018	204.	I
12024	205.	I
12030	206.	I
12036	207.	I
12042	208.	I
12048	209.	I
12054	210.	I
12100	211.	I
12106	212.	I
12112	213.	I
12118	214.	I
12124	215.	I
12130	216.	I
12136	217.	I
12142	218.	I
12148	219.	IO
12154	220.	IO
12200	221.	IO
12206	222.	I
12212	223.	OI
12218	224.	OI
12224	225.	OI
12230	226.	I
12236	227.	IO
12242	228.	IO
12248	229.	IO
12254	230.	I
12300	231.	I
12306	232.	I
12312	233.	I
12318	234.	I
12324	235.	I
12330	236.	I
12336	237.	I
12342	238.	I
12348	239.	I
12354	240.	I
20000	241.	I

1

HYDROGRAPH AT STATION A TO F
PLAN 1, RATIO = 1.00

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1		0606	62	0.	1		1212	123	44.	1		1818	184	9.
1		0006	2	0.	1		0612	63	0.	1		1218	124	64.	1		1824	185	9.
1		0012	3	0.	1		0618	64	0.	1		1224	125	95.	1		1830	186	9.
1		0018	4	0.	1		0624	65	0.	1		1230	126	137.	1		1836	187	9.
1		0024	5	0.	1		0630	66	0.	1		1236	127	179.	1		1842	188	8.
1		0030	6	0.	1		0636	67	0.	1		1242	128	206.	1		1848	189	8.
1		0036	7	0.	1		0642	68	0.	1		1248	129	213.	1		1854	190	8.
1		0042	8	0.	1		0648	69	0.	1		1254	130	200.	1		1900	191	8.
1		0048	9	0.	1		0654	70	0.	1		1300	131	175.	1		1906	192	8.
1		0054	10	0.	1		0700	71	0.	1		1306	132	147.	1		1912	193	8.
1		0100	11	0.	1		0706	72	0.	1		1312	133	122.	1		1918	194	8.
1		0106	12	0.	1		0712	73	0.	1		1318	134	102.	1		1924	195	8.
1		0112	13	0.	1		0718	74	0.	1		1324	135	86.	1		1930	196	8.
1		0118	14	0.	1		0724	75	0.	1		1330	136	74.	1		1936	197	8.
1		0124	15	0.	1		0730	76	0.	1		1336	137	64.	1		1942	198	7.
1		0130	16	0.	1		0736	77	1.	1		1342	138	56.	1		1948	199	7.
1		0136	17	0.	1		0742	78	1.	1		1348	139	50.	1		1954	200	7.
1		0142	18	0.	1		0748	79	1.	1		1354	140	45.	1		2000	201	7.
1		0148	19	0.	1		0754	80	1.	1		1400	141	41.	1		2006	202	7.
1		0154	20	0.	1		0800	81	1.	1		1406	142	38.	1		2012	203	7.
1		0200	21	0.	1		0806	82	1.	1		1412	143	35.	1		2018	204	7.
1		0206	22	0.	1		0812	83	2.	1		1418	144	33.	1		2024	205	7.
1		0212	23	0.	1		0818	84	2.	1		1424	145	31.	1		2030	206	7.
1		0218	24	0.	1		0824	85	2.	1		1430	146	29.	1		2036	207	7.
1		0224	25	0.	1		0830	86	2.	1		1436	147	28.	1		2042	208	7.
1		0230	26	0.	1		0836	87	3.	1		1442	148	27.	1		2048	209	7.
1		0236	27	0.	1		0842	88	3.	1		1448	149	26.	1		2054	210	7.
1		0242	28	0.	1		0848	89	3.	1		1454	150	25.	1		2100	211	6.
1		0248	29	0.	1		0854	90	3.	1		1500	151	24.	1		2106	212	7.
1		0254	30	0.	1		0900	91	3.	1		1506	152	23.	1		2112	213	6.
1		0300	31	0.	1		0906	92	4.	1		1512	153	22.	1		2118	214	6.
1		0306	32	0.	1		0912	93	4.	1		1518	154	21.	1		2124	215	6.
1		0312	33	0.	1		0918	94	4.	1		1524	155	21.	1		2130	216	6.
1		0318	34	0.	1		0924	95	5.	1		1530	156	20.	1		2136	217	6.
1		0324	35	0.	1		0930	96	5.	1		1536	157	20.	1		2142	218	6.
1		0330	36	0.	1		0936	97	5.	1		1542	158	20.	1		2148	219	6.
1		0336	37	0.	1		0942	98	6.	1		1548	159	19.	1		2154	220	6.
1		0342	38	0.	1		0948	99	6.	1		1554	160	19.	1		2200	221	6.
1		0348	39	0.	1		0954	100	6.	1		1600	161	18.	1		2206	222	6.
1		0354	40	0.	1		1000	101	7.	1		1606	162	18.	1		2212	223	6.
1		0400	41	0.	1		1006	102	7.	1		1612	163	17.	1		2218	224	6.
1		0406	42	0.	1		1012	103	8.	1		1618	164	17.	1		2224	225	6.
1		0412	43	0.	1		1018	104	8.	1		1624	165	17.	1		2230	226	6.
1		0418	44	0.	1		1024	105	9.	1		1630	166	16.	1		2236	227	6.
1		0424	45	0.	1		1030	106	9.	1		1636	167	16.	1		2242	228	6.
1		0430	46	0.	1		1036	107	10.	1		1642	168	16.	1		2248	229	6.
1		0436	47	0.	1		1042	108	10.	1		1648	169	16.	1		2254	230	6.
1		0442	48	0.	1		1048	109	11.	1		1654	170	15.	1		2300	231	6.
1		0448	49	0.	1		1054	110	12.	1		1700	171	15.	1		2306	232	5.
1		0454	50	0.	1		1100	111	13.	1		1706	172	15.	1		2312	233	5.
1		0500	51	0.	1		1106	112	14.	1		1712	173	14.	1		2318	234	5.
1		0506	52	0.	1		1112	113	14.	1		1718	174	14.	1		2324	235	5.
1		0512	53	0.	1		1118	114	16.	1		1724	175	13.	1		2330	236	5.
1		0518	54	0.	1		1124	115	17.	1		1730	176	12.	1		2336	237	5.
1		0524	55	0.	1		1130	116	18.	1		1736	177	11.	1		2342	238	5.
1		0530	56	0.	1		1136	117	20.	1		1742	178	11.	1		2348	239	5.
1		0536	57	0.	1		1142	118	22.	1		1748	179	10.	1		2354	240	5.

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1	0542	58	0.	*	1	1148	119	24.	*	1	1754	180	10.	*	2	0000	241	5.
1	0548	59	0.	*	1	1154	120	26.	*	1	1800	181	10.	*				
1	0554	60	0.	*	1	1200	121	30.	*	1	1806	182	9.	*				
1	0600	61	0.	*	1	1206	122	35.	*	1	1812	183	9.	*				

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)	(CFS)				
+ 213.	12.80	50.	15.	15.	15.	
		(INCHES)	4.232	5.218	5.218	5.218
		(AC-FT)	25.	31.	31.	31.

CUMULATIVE AREA = .11 SQ MI

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DAHRMN PER	STATION A TO F										
	0.	40.	(I) INFLOW, 80.	(O) OUTFLOW, 120.	160.	200.	240.	0.	0.	0.	0.
10000	11I										
10006	21I										
10012	31I										
10018	41I										
10024	51I										
10030	61I										
10036	71I										
10042	81I										
10048	91I										
10054	10I										
10100	11I										
10106	12I										
10112	13I										
10118	14I										
10124	15I										
10130	16I										
10136	17I										
10142	18I										
10148	19I										
10154	20I										
10200	21I										
10206	22I										
10212	23I										
10218	24I										
10224	25I										
10230	26I										
10236	27I										
10242	28I										
10248	29I										
10254	30I										
10300	31I										
10306	32I										
10312	33I										
10318	34I										
10324	35I										
10330	36I										
10336	37I										
10342	38I										
10348	39I										
10354	40I										
10400	41I										
10406	42I										
10412	43I										
10418	44I										
10424	45I										
10430	46I										
10436	47I										
10442	48I										
10448	49I										
10454	50I										
10500	51I										
10506	52I										
10512	53I										
10518	54I										
10524	55I										
10530	56I										
10536	57I										
10542	58I										
10548	59I										
10554	60I										
10600	61I										
10606	62I										
10612	63I										
10618	64I										
10624	65I										
10630	66I										
10636	67I										
10642	68I										
10648	69I										
10654	70I										
10700	71I										
10706	72I										
10712	73I										
10718	74I										
10724	75I										
10730	76I										
10736	77I										
10742	78I										
10748	79I										
10754	80I										
10800	81I										
10806	82OI										
10812	83OI										
10818	84OI										

CRVNB 66.00 CURVE NUMBER
 RTIMP .00 PERCENT IMPERVIOUS AREA

CALIFONHYDROLOGY

141 UD SCS DIMENSIONLESS UNITGRAPH
 TLAG .26 LAG

UNIT HYDROGRAPH
 15 END-OF-PERIOD ORDINATES
 8. 26. 36. 31. 19. 11. 7. 4. 2. 1.
 1. 0. 0. 0. 0. 0. 0. 0. 0. 0.

HYDROGRAPH AT STATION SUB F

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q
1		0000	1	.00	.00	.00	0.		1		1206	122	.67	.25	.42		26.
1		0006	2	.01	.01	.00	0.		1		1212	123	.43	.14	.29		37.
1		0012	3	.01	.01	.00	0.		1		1218	124	.28	.08	.20		42.
1		0018	4	.01	.01	.00	0.		1		1224	125	.13	.04	.09		40.
1		0024	5	.01	.01	.00	0.		1		1230	126	.10	.03	.07		33.
1		0030	6	.01	.01	.00	0.		1		1236	127	.10	.03	.07		26.
1		0036	7	.01	.01	.00	0.		1		1242	128	.09	.02	.06		20.
1		0042	8	.01	.01	.00	0.		1		1248	129	.07	.02	.05		16.
1		0048	9	.01	.01	.00	0.		1		1254	130	.07	.02	.05		13.
1		0054	10	.01	.01	.00	0.		1		1300	131	.06	.02	.05		11.
1		0100	11	.01	.01	.00	0.		1		1306	132	.06	.01	.04		9.
1		0106	12	.01	.01	.00	0.		1		1312	133	.06	.02	.05		8.
1		0112	13	.01	.01	.00	0.		1		1318	134	.05	.01	.04		8.
1		0118	14	.01	.01	.00	0.		1		1324	135	.06	.01	.04		7.
1		0124	15	.01	.01	.00	0.		1		1330	136	.05	.01	.04		7.
1		0130	16	.01	.01	.00	0.		1		1336	137	.04	.01	.03		6.
1		0136	17	.01	.01	.00	0.		1		1342	138	.05	.01	.04		6.
1		0142	18	.01	.01	.00	0.		1		1348	139	.04	.01	.03		5.
1		0148	19	.01	.01	.00	0.		1		1354	140	.04	.01	.03		5.
1		0154	20	.01	.01	.00	0.		1		1400	141	.04	.01	.03		5.
1		0200	21	.01	.01	.00	0.		1		1406	142	.04	.01	.03		5.
1		0206	22	.01	.01	.00	0.		1		1412	143	.04	.01	.03		5.
1		0212	23	.01	.01	.00	0.		1		1418	144	.03	.01	.02		5.
1		0218	24	.01	.01	.00	0.		1		1424	145	.03	.01	.02		4.
1		0224	25	.01	.01	.00	0.		1		1430	146	.04	.01	.03		4.
1		0230	26	.02	.02	.00	0.		1		1436	147	.03	.01	.02		4.
1		0236	27	.01	.01	.00	0.		1		1442	148	.03	.01	.02		4.
1		0242	28	.01	.01	.00	0.		1		1448	149	.02	.01	.02		4.
1		0248	29	.01	.01	.00	0.		1		1454	150	.03	.01	.02		4.
1		0254	30	.01	.01	.00	0.		1		1500	151	.03	.01	.02		4.
1		0300	31	.01	.01	.00	0.		1		1506	152	.03	.01	.02		4.
1		0306	32	.01	.01	.00	0.		1		1512	153	.02	.01	.02		4.
1		0312	33	.02	.02	.00	0.		1		1518	154	.03	.01	.03		3.
1		0318	34	.01	.01	.00	0.		1		1524	155	.02	.01	.02		3.
1		0324	35	.01	.01	.00	0.		1		1530	156	.02	.01	.02		3.
1		0330	36	.01	.01	.00	0.		1		1536	157	.03	.01	.03		3.
1		0336	37	.01	.01	.00	0.		1		1542	158	.02	.01	.02		3.
1		0342	38	.02	.02	.00	0.		1		1548	159	.02	.01	.02		3.
1		0348	39	.01	.01	.00	0.		1		1554	160	.02	.01	.02		3.
1		0354	40	.01	.01	.00	0.		1		1600	161	.02	.01	.02		3.
1		0400	41	.01	.01	.00	0.		1		1606	162	.02	.01	.02		3.
1		0406	42	.02	.02	.00	0.		1		1612	163	.02	.01	.02		3.
1		0412	43	.01	.01	.00	0.		1		1618	164	.02	.01	.02		3.
1		0418	44	.01	.01	.00	0.		1		1624	165	.02	.00	.02		3.
1		0424	45	.02	.02	.00	0.		1		1630	166	.02	.00	.01		3.
1		0430	46	.01	.01	.00	0.		1		1636	167	.02	.00	.02		3.
1		0436	47	.01	.01	.00	0.		1		1642	168	.02	.00	.02		3.
1		0442	48	.02	.02	.00	0.		1		1648	169	.02	.00	.01		3.
1		0448	49	.01	.01	.00	0.		1		1654	170	.02	.00	.01		2.
1		0454	50	.01	.01	.00	0.		1		1700	171	.01	.00	.01		2.
1		0500	51	.02	.02	.00	0.		1		1706	172	.02	.00	.01		2.
1		0506	52	.01	.01	.00	0.		1		1712	173	.02	.00	.01		2.
1		0512	53	.02	.02	.00	0.		1		1718	174	.02	.00	.01		2.
1		0518	54	.01	.01	.00	0.		1		1724	175	.02	.00	.01		2.
1		0524	55	.02	.02	.00	0.		1		1730	176	.01	.00	.01		2.
1		0530	56	.01	.01	.00	0.		1		1736	177	.02	.00	.01		2.
1		0536	57	.02	.02	.00	0.		1		1742	178	.02	.00	.01		2.
1		0542	58	.01	.01	.00	0.		1		1748	179	.01	.00	.01		2.
1		0548	59	.02	.02	.00	0.		1		1754	180	.02	.00	.01		2.
1		0554	60	.01	.01	.00	0.		1		1800	181	.02	.00	.01		2.
1		0600	61	.02	.02	.00	0.		1		1806	182	.01	.00	.01		2.
1		0606	62	.02	.02	.00	0.		1		1812	183	.02	.00	.01		2.
1		0612	63	.01	.01	.00	0.		1		1818	184	.01	.00	.01		2.
1		0618	64	.02	.02	.00	0.		1		1824	185	.02	.00	.01		1.
1		0624	65	.02	.02	.00	0.		1		1830	186	.01	.00	.01		1.
1		0630	66	.01	.01	.00	0.		1		1836	187	.02	.00	.01		1.
1		0636	67	.02	.02	.00	0.		1		1842	188	.01	.00	.01		1.
1		0642	68	.02	.02	.00	0.		1		1848	189	.02	.00	.01		1.
1		0648	69	.01	.01	.00	0.		1		1854	190	.01	.00	.01		1.
1		0654	70	.02	.02	.00	0.		1		1900	191	.02	.00	.01		1.
1		0700	71	.02	.02	.00	0.		1		1906	192	.01	.00	.01		1.
1		0706	72	.02	.02	.00	0.		1		1912	193	.01	.00	.01		1.
1		0712	73	.02	.02	.00	0.		1		1918	194	.02	.00	.01		1.
1		0718	74	.02	.02	.00	0.		1		1924	195	.01	.00	.01		1.
1		0724	75	.02	.02	.00	0.		1		1930	196	.02	.00	.01		1.
1		0730	76	.02	.02	.00	0.		1		1936	197	.01	.00	.01		1.
1		0736	77	.02	.02	.00	0.		1		1942	198	.01	.00	.01		1.
1		0742	78	.02	.02	.00	0.		1		1948	199	.02	.00	.01		1.
1		0748	79	.02	.02	.00	0.		1		1954	200	.01	.00	.01		1.
1		0754	80	.02	.02	.00	0.		1		2000	201	.01	.00	.01		1.
1		0800	81	.02	.02	.00	0.		1		2006	202	.01	.00	.01		1.
1		0806	82	.02	.02	.00	0.		1		2012	203	.02	.00	.01		1.
1		0812	83	.02	.02	.00	0.		1		2018	204	.01	.00	.01		1.
1		0818	84	.02	.02	.00	0.		1		2024	205	.01	.00	.01		1.
1		0824	85	.02	.02	.00	0.		1		2030	206	.01	.00	.01		1.

CALIFONHYDROLOGY

1	0830	86	.02	.02	.00	0.	*	1	2036	207	.02	.00	.01	1.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	1.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	1.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	1.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	1.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.02	.00	.01	1.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	1.
1	0912	93	.03	.03	.00	0.	*	1	2118	214	.01	.00	.01	1.
1	0918	94	.03	.03	.00	0.	*	1	2124	215	.01	.00	.01	1.
1	0924	95	.03	.03	.00	0.	*	1	2130	216	.01	.00	.01	1.
1	0930	96	.03	.03	.00	0.	*	1	2136	217	.01	.00	.01	1.
1	0936	97	.03	.03	.00	0.	*	1	2142	218	.01	.00	.01	1.
1	0942	98	.04	.03	.01	0.	*	1	2148	219	.01	.00	.01	1.
1	0948	99	.03	.03	.00	1.	*	1	2154	220	.01	.00	.01	1.
1	0954	100	.04	.03	.01	1.	*	1	2200	221	.02	.00	.01	1.
1	1000	101	.03	.03	.01	1.	*	1	2206	222	.01	.00	.01	1.
1	1006	102	.04	.03	.01	1.	*	1	2212	223	.01	.00	.01	1.
1	1012	103	.04	.03	.01	1.	*	1	2218	224	.01	.00	.01	1.
1	1018	104	.05	.04	.01	1.	*	1	2224	225	.01	.00	.01	1.
1	1024	105	.04	.03	.01	1.	*	1	2230	226	.01	.00	.01	1.
1	1030	106	.05	.04	.01	1.	*	1	2236	227	.01	.00	.01	1.
1	1036	107	.05	.04	.01	1.	*	1	2242	228	.01	.00	.01	1.
1	1042	108	.05	.04	.01	1.	*	1	2248	229	.01	.00	.01	1.
1	1048	109	.06	.04	.01	1.	*	1	2254	230	.01	.00	.01	1.
1	1054	110	.06	.04	.02	2.	*	1	2300	231	.01	.00	.01	1.
1	1100	111	.06	.05	.02	2.	*	1	2306	232	.01	.00	.01	1.
1	1106	112	.06	.04	.02	2.	*	1	2312	233	.01	.00	.01	1.
1	1112	113	.06	.04	.02	2.	*	1	2318	234	.01	.00	.01	1.
1	1118	114	.08	.05	.03	3.	*	1	2324	235	.01	.00	.01	1.
1	1124	115	.09	.06	.03	3.	*	1	2330	236	.01	.00	.01	1.
1	1130	116	.09	.06	.03	3.	*	1	2336	237	.01	.00	.01	1.
1	1136	117	.11	.07	.04	4.	*	1	2342	238	.01	.00	.01	1.
1	1142	118	.13	.08	.05	5.	*	1	2348	239	.00	.00	.00	1.
1	1148	119	.28	.16	.12	6.	*	1	2354	240	.00	.00	.00	1.
1	1154	120	.42	.22	.21	9.	*	2	0000	241	.01	.00	.01	1.
1	1200	121	.67	.29	.38	16.	*							

TOTAL RAINFALL = 8.00, TOTAL LOSS = 3.99, TOTAL EXCESS = 4.01

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.00-HR
(CFS)	(HR)	(CFS)			
42.	12.30	8.	2.	2.	2.
		(INCHES)	3.286	3.990	3.990
		(AC-FT)	4.	5.	5.
CUMULATIVE AREA =		.02 SQ MI			

HYDROGRAPH AT STATION SUB F
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.	1		1206	122	.36	.23	.13	6.
1		0006	2	.00	.00	.00	0.	1		1212	123	.23	.14	.10	10.
1		0012	3	.00	.00	.00	0.	1		1218	124	.15	.08	.07	12.
1		0018	4	.00	.00	.00	0.	1		1224	125	.07	.04	.03	12.
1		0024	5	.00	.00	.00	0.	1		1230	126	.06	.03	.03	11.
1		0030	6	.00	.00	.00	0.	1		1236	127	.05	.03	.02	8.
1		0036	7	.00	.00	.00	0.	1		1242	128	.05	.02	.02	7.
1		0042	8	.00	.00	.00	0.	1		1248	129	.04	.02	.02	5.
1		0048	9	.00	.00	.00	0.	1		1254	130	.04	.02	.02	4.
1		0054	10	.00	.00	.00	0.	1		1300	131	.03	.02	.02	4.
1		0100	11	.00	.00	.00	0.	1		1306	132	.03	.01	.02	3.
1		0106	12	.00	.00	.00	0.	1		1312	133	.03	.02	.02	3.
1		0112	13	.00	.00	.00	0.	1		1318	134	.03	.01	.01	3.
1		0118	14	.00	.00	.00	0.	1		1324	135	.03	.01	.02	3.
1		0124	15	.00	.00	.00	0.	1		1330	136	.03	.01	.01	2.
1		0130	16	.00	.00	.00	0.	1		1336	137	.02	.01	.01	2.
1		0136	17	.00	.00	.00	0.	1		1342	138	.03	.01	.01	2.
1		0142	18	.00	.00	.00	0.	1		1348	139	.02	.01	.01	2.
1		0148	19	.00	.00	.00	0.	1		1354	140	.02	.01	.01	2.
1		0154	20	.00	.00	.00	0.	1		1400	141	.02	.01	.01	2.
1		0200	21	.00	.00	.00	0.	1		1406	142	.02	.01	.01	2.
1		0206	22	.00	.00	.00	0.	1		1412	143	.02	.01	.01	2.
1		0212	23	.00	.00	.00	0.	1		1418	144	.02	.01	.01	2.
1		0218	24	.00	.00	.00	0.	1		1424	145	.02	.01	.01	2.
1		0224	25	.00	.00	.00	0.	1		1430	146	.02	.01	.01	2.
1		0230	26	.01	.01	.00	0.	1		1436	147	.02	.01	.01	2.
1		0236	27	.00	.00	.00	0.	1		1442	148	.02	.01	.01	2.
1		0242	28	.00	.00	.00	0.	1		1448	149	.01	.01	.01	1.
1		0248	29	.00	.00	.00	0.	1		1454	150	.02	.01	.01	1.
1		0254	30	.00	.00	.00	0.	1		1500	151	.02	.01	.01	1.
1		0300	31	.00	.00	.00	0.	1		1506	152	.02	.01	.01	1.
1		0306	32	.00	.00	.00	0.	1		1512	153	.01	.01	.01	1.
1		0312	33	.01	.01	.00	0.	1		1518	154	.02	.01	.01	1.
1		0318	34	.00	.00	.00	0.	1		1524	155	.01	.01	.01	1.
1		0324	35	.00	.00	.00	0.	1		1530	156	.01	.01	.01	1.
1		0330	36	.00	.00	.00	0.	1		1536	157	.02	.01	.01	1.
1		0336	37	.00	.00	.00	0.	1		1542	158	.01	.01	.01	1.
1		0342	38	.01	.01	.00	0.	1		1548	159	.01	.01	.01	1.
1		0348	39	.00	.00	.00	0.	1		1554	160	.01	.01	.01	1.
1		0354	40	.00	.00	.00	0.	1		1600	161	.01	.01	.01	1.
1		0400	41	.00	.00	.00	0.	1		1606	162	.01	.01	.01	1.
1		0406	42	.01	.01	.00	0.	1		1612	163	.01	.01	.01	1.
1		0412	43	.00	.00	.00	0.	1		1618	164	.01	.01	.01	1.
1		0418	44	.00	.00	.00	0.	1		1624	165	.01	.01	.01	1.
1		0424	45	.01	.01	.00	0.	1		1630	166	.01	.00	.01	1.

CALIFONHYDROLOGY

1	0430	46	.00	.00	.00	0.	1636	167	.01	.01	.01	1.
1	0436	47	.00	.00	.00	0.	1642	168	.01	.01	.01	1.
1	0442	48	.01	.01	.00	0.	1648	169	.01	.00	.01	1.
1	0448	49	.00	.00	.00	0.	1654	170	.01	.00	.01	1.
1	0454	50	.00	.00	.00	0.	1700	171	.00	.00	.00	1.
1	0500	51	.01	.01	.00	0.	1706	172	.01	.00	.01	1.
1	0506	52	.00	.00	.00	0.	1712	173	.01	.00	.01	1.
1	0512	53	.01	.01	.00	0.	1718	174	.01	.00	.01	1.
1	0518	54	.00	.00	.00	0.	1724	175	.01	.00	.01	1.
1	0524	55	.01	.01	.00	0.	1730	176	.00	.00	.00	1.
1	0530	56	.00	.00	.00	0.	1736	177	.01	.00	.01	1.
1	0536	57	.01	.01	.00	0.	1742	178	.01	.00	.01	1.
1	0542	58	.00	.00	.00	0.	1748	179	.00	.00	.00	1.
1	0548	59	.01	.01	.00	0.	1754	180	.01	.00	.01	1.
1	0554	60	.00	.00	.00	0.	1800	181	.01	.00	.01	1.
1	0600	61	.01	.01	.00	0.	1806	182	.00	.00	.00	1.
1	0606	62	.01	.01	.00	0.	1812	183	.01	.00	.01	1.
1	0612	63	.00	.00	.00	0.	1818	184	.00	.00	.00	1.
1	0618	64	.01	.01	.00	0.	1824	185	.01	.00	.01	1.
1	0624	65	.01	.01	.00	0.	1830	186	.00	.00	.00	1.
1	0630	66	.00	.00	.00	0.	1836	187	.01	.00	.01	1.
1	0636	67	.01	.01	.00	0.	1842	188	.00	.00	.00	1.
1	0642	68	.01	.01	.00	0.	1848	189	.01	.00	.01	1.
1	0648	69	.00	.00	.00	0.	1854	190	.00	.00	.00	1.
1	0654	70	.01	.01	.00	0.	1900	191	.01	.00	.01	1.
1	0700	71	.01	.01	.00	0.	1906	192	.00	.00	.00	1.
1	0706	72	.01	.01	.00	0.	1912	193	.00	.00	.00	1.
1	0712	73	.01	.01	.00	0.	1918	194	.01	.00	.01	1.
1	0718	74	.01	.01	.00	0.	1924	195	.00	.00	.00	1.
1	0724	75	.01	.01	.00	0.	1930	196	.01	.00	.01	1.
1	0730	76	.01	.01	.00	0.	1936	197	.00	.00	.00	1.
1	0736	77	.01	.01	.00	0.	1942	198	.00	.00	.00	1.
1	0742	78	.01	.01	.00	0.	1948	199	.01	.00	.01	1.
1	0748	79	.01	.01	.00	0.	1954	200	.00	.00	.00	1.
1	0754	80	.01	.01	.00	0.	2000	201	.00	.00	.00	1.
1	0800	81	.01	.01	.00	0.	2006	202	.00	.00	.00	0.
1	0806	82	.01	.01	.00	0.	2012	203	.01	.00	.01	0.
1	0812	83	.01	.01	.00	0.	2018	204	.00	.00	.00	0.
1	0818	84	.01	.01	.00	0.	2024	205	.00	.00	.00	1.
1	0824	85	.01	.01	.00	0.	2030	206	.00	.00	.00	0.
1	0830	86	.01	.01	.00	0.	2036	207	.01	.00	.01	0.
1	0836	87	.02	.02	.00	0.	2042	208	.00	.00	.00	0.
1	0842	88	.01	.01	.00	0.	2048	209	.00	.00	.00	1.
1	0848	89	.01	.01	.00	0.	2054	210	.00	.00	.00	0.
1	0854	90	.02	.02	.00	0.	2100	211	.00	.00	.00	0.
1	0900	91	.02	.02	.00	0.	2106	212	.01	.00	.01	0.
1	0906	92	.01	.01	.00	0.	2112	213	.00	.00	.00	0.
1	0912	93	.02	.02	.00	0.	2118	214	.00	.00	.00	0.
1	0918	94	.02	.02	.00	0.	2124	215	.00	.00	.00	0.
1	0924	95	.02	.02	.00	0.	2130	216	.00	.00	.00	0.
1	0930	96	.02	.02	.00	0.	2136	217	.00	.00	.00	0.
1	0936	97	.02	.02	.00	0.	2142	218	.00	.00	.00	0.
1	0942	98	.02	.02	.00	0.	2148	219	.00	.00	.00	0.
1	0948	99	.02	.02	.00	0.	2154	220	.00	.00	.00	0.
1	0954	100	.02	.02	.00	0.	2200	221	.01	.00	.01	0.
1	1000	101	.02	.02	.00	0.	2206	222	.00	.00	.00	0.
1	1006	102	.02	.02	.00	0.	2212	223	.00	.00	.00	0.
1	1012	103	.02	.02	.00	0.	2218	224	.00	.00	.00	0.
1	1018	104	.03	.03	.00	0.	2224	225	.00	.00	.00	0.
1	1024	105	.02	.02	.00	0.	2230	226	.00	.00	.00	0.
1	1030	106	.03	.03	.00	0.	2236	227	.00	.00	.00	0.
1	1036	107	.03	.03	.00	0.	2242	228	.00	.00	.00	0.
1	1042	108	.03	.03	.00	0.	2248	229	.00	.00	.00	0.
1	1048	109	.03	.03	.00	0.	2254	230	.00	.00	.00	0.
1	1054	110	.03	.03	.00	0.	2300	231	.00	.00	.00	0.
1	1100	111	.03	.03	.00	0.	2306	232	.00	.00	.00	0.
1	1106	112	.03	.03	.00	0.	2312	233	.00	.00	.00	0.
1	1112	113	.03	.03	.00	0.	2318	234	.00	.00	.00	0.
1	1118	114	.04	.04	.00	0.	2324	235	.00	.00	.00	0.
1	1124	115	.05	.04	.00	0.	2330	236	.00	.00	.00	0.
1	1130	116	.05	.04	.00	0.	2336	237	.00	.00	.00	0.
1	1136	117	.06	.05	.01	0.	2342	238	.00	.00	.00	0.
1	1142	118	.07	.06	.01	1.	2348	239	.00	.00	.00	0.
1	1148	119	.15	.13	.02	1.	2354	240	.00	.00	.00	0.
1	1154	120	.23	.18	.05	2.	0000	241	.00	.00	.00	0.
1	1200	121	.36	.26	.10	3.						

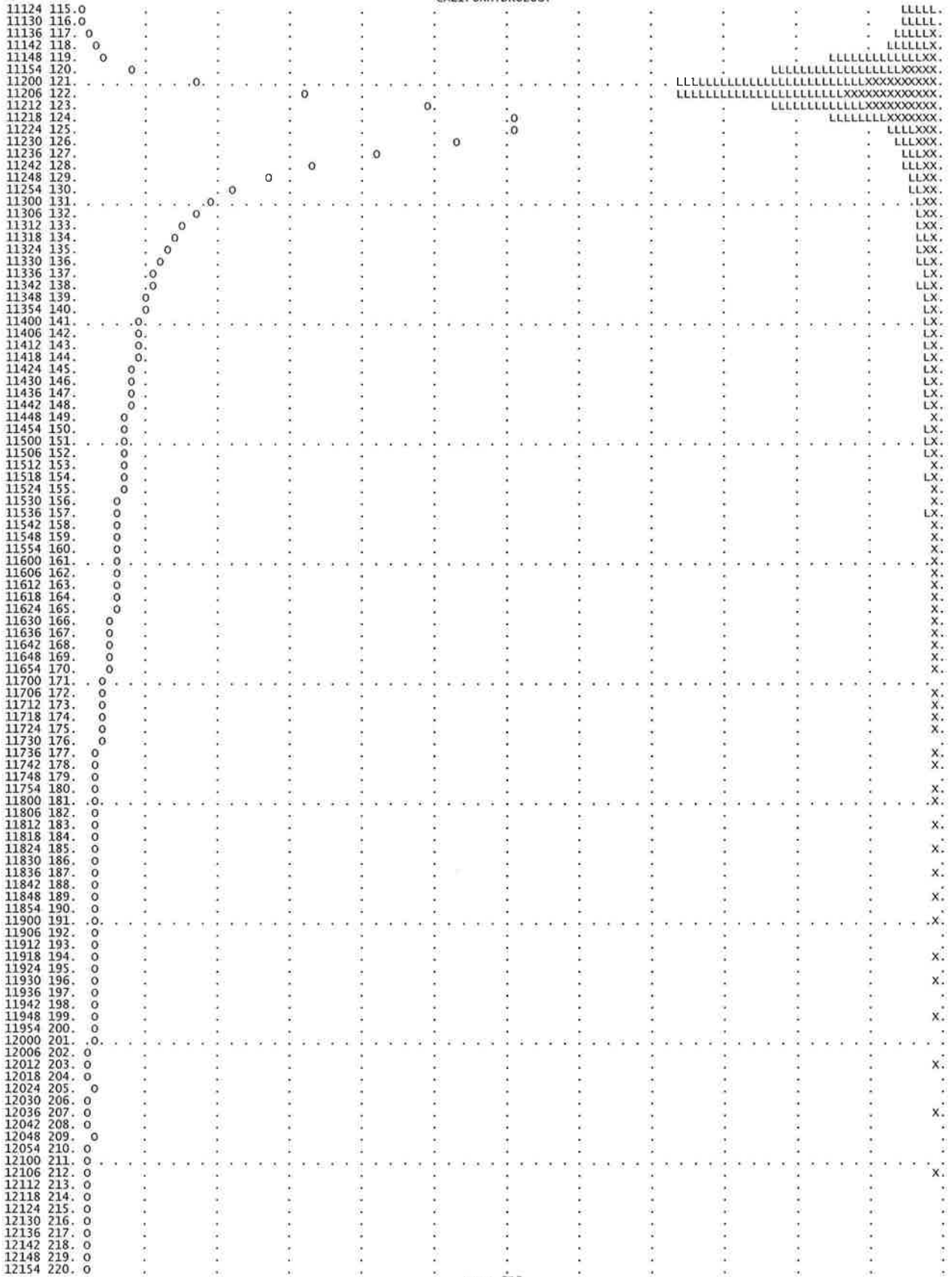
TOTAL RAINFALL = 4.30, TOTAL LOSS = 3.03, TOTAL EXCESS = 1.27

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24-00-HR
(CFS)	(HR)	(CFS)	24-HR	72-HR
+	12.	12.40	3.	1.
			1.046	1.262
			(INCHES)	1.262
			(AC-FT)	2.

CUMULATIVE AREA = .02 SQ MI

1													
		(O) OUTFLOW											
	0.	2.	4.	6.	8.	10.	12.	14.	0.	0.	(L) PRECIP,	0.	(X) EXCESS
	.0	.0	.0	.0	.0	.0	.0	.0	.4	.3	.2	.1	.0
DAHRMN PER	10												
10000	20												
10006	30												
10012	40												
10018	50												
10024	60												
10030	70												
10036	80												
10042													

CALIFONHYDROLOGY

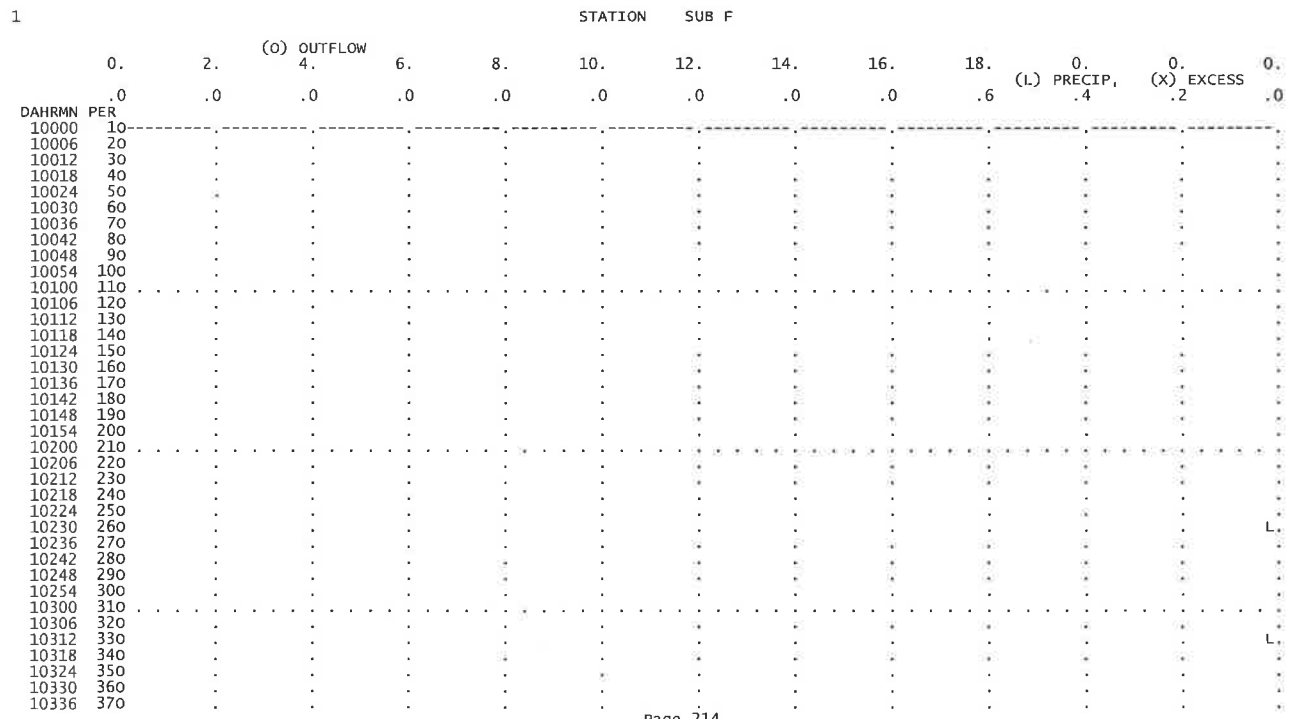


CALIFONHYDROLOGY													
1	0724	75	.01	.01	.00	0.	1	1930	196	.01	.00	.01	1.
1	0730	76	.01	.01	.00	0.	1	1936	197	.01	.00	.00	1.
1	0736	77	.01	.01	.00	0.	1	1942	198	.00	.00	.00	1.
1	0742	78	.01	.01	.00	0.	1	1948	199	.01	.00	.01	1.
1	0748	79	.01	.01	.00	0.	1	1954	200	.00	.00	.00	1.
1	0754	80	.02	.02	.00	0.	1	2000	201	.01	.00	.00	1.
1	0800	81	.01	.01	.00	0.	1	2006	202	.00	.00	.00	1.
1	0806	82	.01	.01	.00	0.	1	2012	203	.01	.00	.01	1.
1	0812	83	.01	.01	.00	0.	1	2018	204	.01	.00	.00	1.
1	0818	84	.01	.01	.00	0.	1	2024	205	.00	.00	.00	1.
1	0824	85	.02	.02	.00	0.	1	2030	206	.00	.00	.00	1.
1	0830	86	.01	.01	.00	0.	1	2036	207	.01	.00	.01	1.
1	0836	87	.02	.02	.00	0.	1	2042	208	.01	.00	.00	1.
1	0842	88	.01	.01	.00	0.	1	2048	209	.00	.00	.00	1.
1	0848	89	.02	.02	.00	0.	1	2054	210	.00	.00	.00	1.
1	0854	90	.02	.02	.00	0.	1	2100	211	.00	.00	.00	1.
1	0900	91	.02	.02	.00	0.	1	2106	212	.01	.00	.01	1.
1	0906	92	.01	.01	.00	0.	1	2112	213	.00	.00	.00	1.
1	0912	93	.02	.02	.00	0.	1	2118	214	.00	.00	.00	1.
1	0918	94	.02	.02	.00	0.	1	2124	215	.00	.00	.00	1.
1	0924	95	.02	.02	.00	0.	1	2130	216	.01	.00	.00	1.
1	0930	96	.02	.02	.00	0.	1	2136	217	.00	.00	.00	1.
1	0936	97	.02	.02	.00	0.	1	2142	218	.00	.00	.00	1.
1	0942	98	.02	.02	.00	0.	1	2148	219	.00	.00	.00	1.
1	0948	99	.02	.02	.00	0.	1	2154	220	.00	.00	.00	1.
1	0954	100	.02	.02	.00	0.	1	2200	221	.01	.00	.01	1.
1	1000	101	.02	.02	.00	0.	1	2206	222	.00	.00	.00	1.
1	1006	102	.03	.03	.00	0.	1	2212	223	.00	.00	.00	1.
1	1012	103	.02	.02	.00	0.	1	2218	224	.01	.00	.00	1.
1	1018	104	.03	.03	.00	0.	1	2224	225	.00	.00	.00	1.
1	1024	105	.02	.02	.00	0.	1	2230	226	.00	.00	.00	1.
1	1030	106	.03	.03	.00	0.	1	2236	227	.00	.00	.00	1.
1	1036	107	.03	.03	.00	0.	1	2242	228	.00	.00	.00	1.
1	1042	108	.03	.03	.00	0.	1	2248	229	.01	.00	.00	1.
1	1048	109	.03	.03	.00	0.	1	2254	230	.00	.00	.00	1.
1	1054	110	.03	.03	.00	0.	1	2300	231	.00	.00	.00	1.
1	1100	111	.04	.04	.00	0.	1	2306	232	.00	.00	.00	0.
1	1106	112	.04	.04	.00	0.	1	2312	233	.00	.00	.00	0.
1	1112	113	.04	.04	.00	0.	1	2318	234	.01	.00	.00	0.
1	1118	114	.05	.04	.01	0.	1	2324	235	.00	.00	.00	0.
1	1124	115	.06	.05	.01	1.	1	2330	236	.00	.00	.00	0.
1	1130	116	.06	.05	.01	1.	1	2336	237	.00	.00	.00	0.
1	1136	117	.07	.06	.01	1.	1	2342	238	.01	.00	.00	0.
1	1142	118	.08	.06	.02	1.	1	2348	239	.00	.00	.00	0.
1	1148	119	.17	.14	.04	2.	1	2354	240	.00	.00	.00	0.
1	1154	120	.27	.19	.07	3.	2	0000	241	.00	.00	.00	0.
1	1200	121	.42	.27	.15	5.	2						

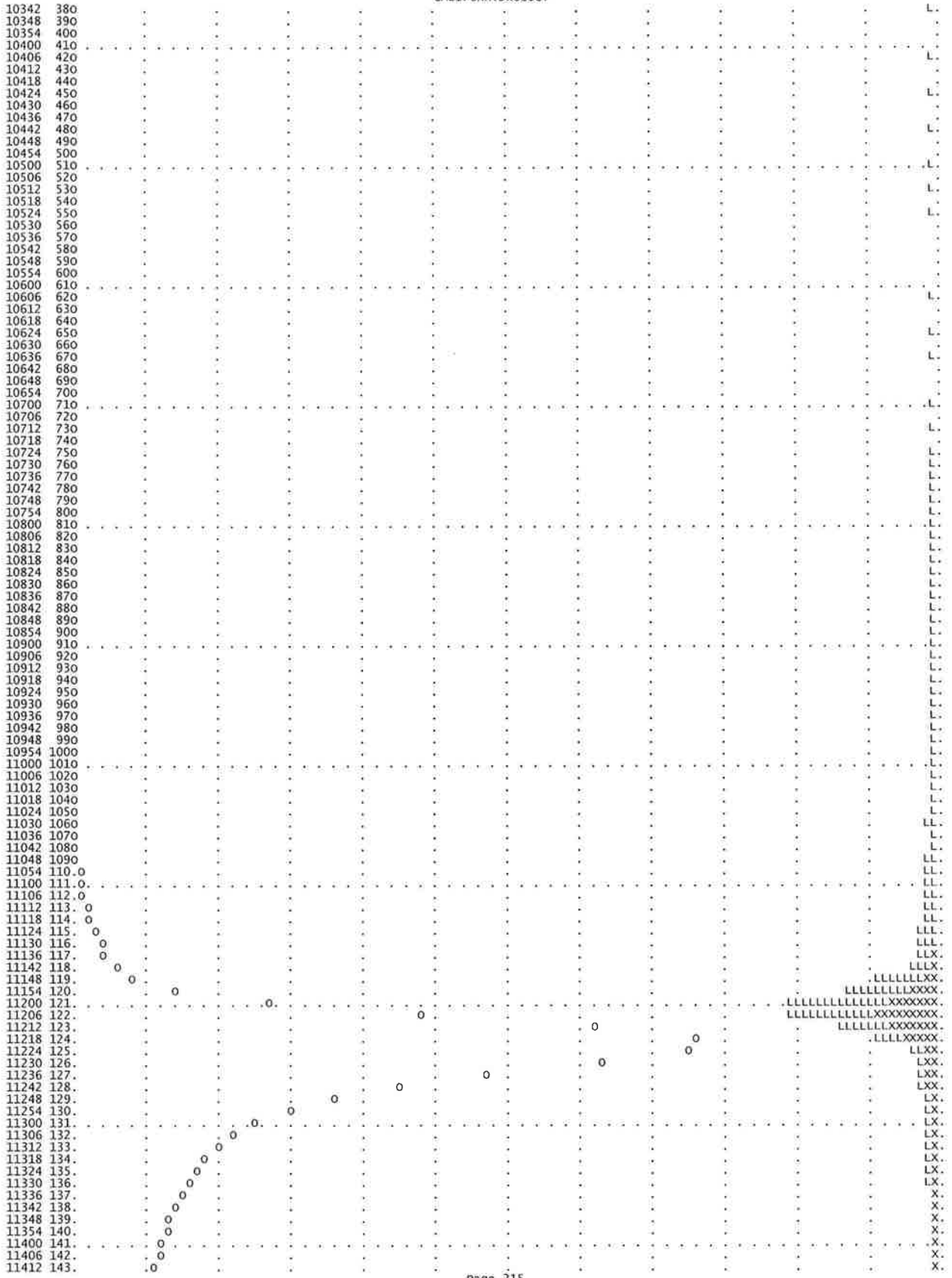
TOTAL RAINFALL = 5.00, TOTAL LOSS = 3.27, TOTAL EXCESS = 1.73

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR (INCHES)	AVERAGE FLOW 72-HR (AC-FT)	24.00-HR (AC-FT)
17.	12.30	3.	1.426	1.718	1.718
		2.	2.	2.	2.

CUMULATIVE AREA = .02 SQ MI



CALIFONHYDROLOGY



CALIFONHYDROLOGY

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q
1		0000	1	.00	.00	.00	0.		1		1206	122	.51	.25	.27	15.	
1		0006	2	.01	.01	.00	0.		1		1212	123	.33	.14	.19	22.	
1		0012	3	.01	.01	.00	0.		1		1218	124	.21	.09	.13	26.	
1		0018	4	.01	.01	.00	0.		1		1224	125	.10	.04	.06	25.	
1		0024	5	.01	.01	.00	0.		1		1230	126	.08	.03	.05	21.	
1		0030	6	.01	.01	.00	0.		1		1236	127	.07	.03	.05	17.	
1		0036	7	.01	.01	.00	0.		1		1242	128	.07	.02	.04	13.	
1		0042	8	.01	.01	.00	0.		1		1248	129	.05	.02	.04	10.	
1		0048	9	.01	.01	.00	0.		1		1254	130	.05	.02	.04	8.	
1		0054	10	.01	.01	.00	0.		1		1300	131	.05	.02	.03	7.	
1		0100	11	.01	.01	.00	0.		1		1306	132	.04	.01	.03	6.	
1		0106	12	.01	.01	.00	0.		1		1312	133	.05	.02	.03	6.	
1		0112	13	.01	.01	.00	0.		1		1318	134	.04	.01	.03	5.	
1		0118	14	.01	.01	.00	0.		1		1324	135	.04	.01	.02	5.	
1		0124	15	.01	.01	.00	0.		1		1330	136	.04	.01	.02	4.	
1		0130	16	.01	.01	.00	0.		1		1336	137	.03	.01	.02	4.	
1		0136	17	.01	.01	.00	0.		1		1342	138	.04	.01	.02	4.	
1		0142	18	.01	.01	.00	0.		1		1348	139	.03	.01	.02	4.	
1		0148	19	.01	.01	.00	0.		1		1354	140	.03	.01	.02	3.	
1		0154	20	.01	.01	.00	0.		1		1400	141	.03	.01	.02	3.	
1		0200	21	.01	.01	.00	0.		1		1406	142	.03	.01	.02	3.	
1		0206	22	.01	.01	.00	0.		1		1412	143	.03	.01	.02	3.	
1		0212	23	.01	.01	.00	0.		1		1418	144	.02	.01	.02	3.	
1		0218	24	.01	.01	.00	0.		1		1424	145	.02	.01	.02	3.	
1		0224	25	.01	.01	.00	0.		1		1430	146	.03	.01	.02	3.	
1		0230	26	.01	.01	.00	0.		1		1436	147	.02	.01	.02	3.	
1		0236	27	.01	.01	.00	0.		1		1442	148	.02	.01	.02	3.	
1		0242	28	.01	.01	.00	0.		1		1448	149	.02	.01	.01	3.	
1		0248	29	.01	.01	.00	0.		1		1454	150	.02	.01	.02	2.	
1		0254	30	.01	.01	.00	0.		1		1500	151	.02	.01	.02	2.	
1		0300	31	.01	.01	.00	0.		1		1506	152	.02	.01	.01	2.	
1		0306	32	.01	.01	.00	0.		1		1512	153	.02	.01	.02	2.	
1		0312	33	.01	.01	.00	0.		1		1518	154	.02	.01	.01	2.	
1		0318	34	.01	.01	.00	0.		1		1524	155	.02	.01	.01	2.	
1		0324	35	.01	.01	.00	0.		1		1530	156	.02	.01	.01	2.	
1		0330	36	.01	.01	.00	0.		1		1536	157	.02	.01	.02	2.	
1		0336	37	.01	.01	.00	0.		1		1542	158	.02	.01	.01	2.	
1		0342	38	.01	.01	.00	0.		1		1548	159	.02	.01	.01	2.	
1		0348	39	.01	.01	.00	0.		1		1554	160	.02	.01	.01	2.	
1		0354	40	.01	.01	.00	0.		1		1600	161	.02	.01	.01	2.	
1		0400	41	.01	.01	.00	0.		1		1606	162	.02	.01	.01	2.	
1		0406	42	.01	.01	.00	0.		1		1612	163	.02	.01	.01	2.	
1		0412	43	.01	.01	.00	0.		1		1618	164	.02	.01	.01	2.	
1		0418	44	.01	.01	.00	0.		1		1624	165	.02	.01	.01	2.	
1		0424	45	.01	.01	.00	0.		1		1630	166	.01	.00	.01	2.	
1		0430	46	.01	.01	.00	0.		1		1636	167	.02	.01	.01	2.	
1		0436	47	.01	.01	.00	0.		1		1642	168	.02	.01	.01	2.	
1		0442	48	.01	.01	.00	0.		1		1648	169	.01	.00	.01	2.	
1		0448	49	.01	.01	.00	0.		1		1654	170	.01	.00	.01	2.	
1		0454	50	.01	.01	.00	0.		1		1700	171	.01	.00	.00	2.	
1		0500	51	.01	.01	.00	0.		1		1706	172	.01	.00	.01	1.	
1		0506	52	.01	.01	.00	0.		1		1712	173	.01	.00	.01	1.	
1		0512	53	.01	.01	.00	0.		1		1718	174	.01	.00	.01	1.	
1		0518	54	.01	.01	.00	0.		1		1724	175	.01	.00	.01	1.	
1		0524	55	.01	.01	.00	0.		1		1730	176	.01	.00	.00	1.	
1		0530	56	.01	.01	.00	0.		1		1736	177	.01	.00	.01	1.	
1		0536	57	.01	.01	.00	0.		1		1742	178	.01	.00	.01	1.	
1		0542	58	.01	.01	.00	0.		1		1748	179	.01	.00	.00	1.	
1		0548	59	.01	.01	.00	0.		1		1754	180	.01	.00	.01	1.	
1		0554	60	.01	.01	.00	0.		1		1800	181	.01	.00	.01	1.	
1		0600	61	.01	.01	.00	0.		1		1806	182	.01	.00	.00	1.	
1		0606	62	.01	.01	.00	0.		1		1812	183	.01	.00	.01	1.	
1		0612	63	.01	.01	.00	0.		1		1818	184	.01	.00	.00	1.	
1		0618	64	.01	.01	.00	0.		1		1824	185	.01	.00	.01	1.	
1		0624	65	.01	.01	.00	0.		1		1830	186	.01	.00	.00	1.	
1		0630	66	.01	.01	.00	0.		1		1836	187	.01	.00	.01	1.	
1		0636	67	.01	.01	.00	0.		1		1842	188	.01	.00	.00	1.	
1		0642	68	.01	.01	.00	0.		1		1848	189	.01	.00	.01	1.	
1		0648	69	.01	.01	.00	0.		1		1854	190	.01	.00	.00	1.	
1		0654	70	.01	.01	.00	0.		1		1900	191	.01	.00	.01	1.	
1		0700	71	.01	.01	.00	0.		1		1906	192	.01	.00	.00	1.	
1		0706	72	.01	.01	.00	0.		1		1912	193	.01	.00	.00	1.	
1		0712	73	.01	.01	.00	0.		1		1918	194	.01	.00	.01	1.	
1		0718	74	.01	.01	.00	0.		1		1924	195	.01	.00	.00	1.	
1		0724	75	.01	.01	.00	0.		1		1930	196	.01	.00	.01	1.	
1		0730	76	.02	.02	.00	0.		1		1936	197	.01	.00	.00	1.	
1		0736	77	.02	.02	.00	0.		1		1942	198	.01	.00	.00	1.	
1		0742	78	.02	.02	.00	0.		1		1948	199	.01	.00	.01	1.	
1		0748	79	.02	.02	.00	0.		1		1954	200	.01	.00	.00	1.	
1		0754	80	.02	.02	.00	0.		1		2000	201	.01	.00	.00	1.	
1		0800	81	.02	.02	.00	0.		1		2006	202	.01	.00	.00	1.	
1		0806	82	.02	.02	.00	0.		1		2012	203	.01	.00	.01	1.	
1		0812	83	.02	.02	.00	0.		1		2018	204	.01	.00	.00	1.	
1		0818	84	.02	.02	.00	0.		1		2024	205	.01	.00	.00	1.	
1		0824	85	.02	.02	.00	0.		1		2030	206	.01	.00	.00	1.	
1		0830	86	.02	.02	.00	0.		1		2036	207	.01	.00	.01	1.	
1		0836	87	.02	.02	.00	0.		1		2042	208	.01	.00	.00	1.	
1		0842	88	.02	.02	.00	0.		1		2048	209	.01	.00	.00	1.	
1		0848	89	.02	.02	.00	0.		1		2054	210	.01	.00	.00	1.	
1		0854	90	.02	.02	.00	0.		1		2100	211	.01	.00	.00	1.	
1		0900	91	.02	.02	.00	0.		1		2106	212	.01	.00	.01	1.	
1		0906	92	.02	.02	.00	0.		1		2112	213	.01	.00	.00	1.	
1		0912	93	.02	.02	.00	0.		1		2118	214	.01	.00	.00	1.	
1		0918	94	.02	.02	.00	0.		1		2124	215	.01	.00	.00	1.	
1		0924	95	.02	.02	.00	0.		1		2130	216	.01	.00	.00	1.	
1		0930	96	.02	.02	.00	0.		1		2136	217	.01	.00	.00	1.	
1		0936	97	.02	.02	.00	0.		1		2142	218	.01	.00	.00	1.	
1		0942	98	.03	.03	.00	0.		1		2148	219	.01	.00	.00	1.	
1		0948	99	.02	.02	.00	0.		1		2154	220	.01	.00	.00	1.	
1		0954	100	.03	.03	.00	0.		1		2200	221	.01	.00	.01	1.	
1		1000	101	.02	.02	.00	0.		1		2206	222	.01	.00	.00	1.	
1		1006	102	.03	.03	.00	0.		1		2212	223	.01	.00	.00	1.	
1		1012	103	.03	.03	.00	0.		1		2218	224	.01	.00	.00	1.	

CALIFONHYDROLOGY														
1	1018	104	.04	.03	.00	0.	*	1	2224	225	.01	.00	.00	1.
1	1024	105	.03	.03	.00	0.	*	1	2230	226	.01	.00	.00	1.
1	1030	106	.04	.03	.00	0.	*	1	2236	227	.01	.00	.00	1.
1	1036	107	.04	.03	.00	0.	*	1	2242	228	.01	.00	.00	1.
1	1042	108	.04	.03	.00	0.	*	1	2248	229	.01	.00	.00	1.
1	1048	109	.04	.04	.01	1.	*	1	2254	230	.01	.00	.00	1.
1	1054	110	.04	.04	.01	1.	*	1	2300	231	.01	.00	.00	1.
1	1100	111	.05	.04	.01	1.	*	1	2306	232	.01	.00	.00	1.
1	1106	112	.05	.04	.01	1.	*	1	2312	233	.01	.00	.00	1.
1	1112	113	.05	.04	.01	1.	*	1	2318	234	.01	.00	.00	1.
1	1118	114	.06	.05	.01	1.	*	1	2324	235	.01	.00	.00	1.
1	1124	115	.07	.05	.01	1.	*	1	2330	236	.01	.00	.00	1.
1	1130	116	.07	.05	.02	2.	*	1	2336	237	.01	.00	.00	1.
1	1136	117	.09	.06	.02	2.	*	1	2342	238	.01	.00	.00	1.
1	1142	118	.10	.07	.03	2.	*	1	2348	239	.00	.00	.00	1.
1	1148	119	.21	.15	.07	3.	*	1	2354	240	.00	.00	.00	1.
1	1154	120	.32	.20	.12	5.	*	2	0000	241	.01	.00	.00	1.
1	1200	121	.51	.28	.23	9.	*							

TOTAL RAINFALL = 6.10, TOTAL LOSS = 3.59, TOTAL EXCESS = 2.51

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR	AVERAGE 72-HR	24.00-HR
26.	12.30	5.	2.	2.	2.
		(INCHES) 2.073	2.502	2.502	2.502
		(AC-FT) 3.	3.	3.	3.
CUMULATIVE AREA =		.02 SQ MI			

DAHRMN PER	STATION										SUB F	(L) PRECIP.	(X) EXCESS	
	0.	4.	(O) OUTFLOW 8.	12.	16.	20.	24.	28.	0.	0.				
10000	10	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.4	.2	.0
10006	20	.	.	.	.	.	.	.	.	.	.	.	.	.
10012	30	.	.	.	.	.	.	.	.	.	.	.	.	.
10018	40	.	.	.	.	.	.	.	.	.	.	.	.	.
10024	50	.	.	.	.	.	.	.	.	.	.	.	.	.
10030	60	.	.	.	.	.	.	.	.	.	.	.	.	.
10036	70	.	.	.	.	.	.	.	.	.	.	.	.	.
10042	80	.	.	.	.	.	.	.	.	.	.	.	.	.
10048	90	.	.	.	.	.	.	.	.	.	.	.	.	.
10054	100	.	.	.	.	.	.	.	.	.	.	.	.	.
10100	110	.	.	.	.	.	.	.	.	.	.	.	.	.
10106	120	.	.	.	.	.	.	.	.	.	.	.	.	.
10112	130	.	.	.	.	.	.	.	.	.	.	.	.	.
10118	140	.	.	.	.	.	.	.	.	.	.	.	.	.
10124	150	.	.	.	.	.	.	.	.	.	.	.	.	.
10130	160	.	.	.	.	.	.	.	.	.	.	.	.	.
10136	170	.	.	.	.	.	.	.	.	.	.	.	.	.
10142	180	.	.	.	.	.	.	.	.	.	.	.	.	.
10148	190	.	.	.	.	.	.	.	.	.	.	.	.	.
10154	200	.	.	.	.	.	.	.	.	.	.	.	.	.
10200	210	.	.	.	.	.	.	.	.	.	.	.	.	.
10206	220	.	.	.	.	.	.	.	.	.	.	.	.	.
10212	230	.	.	.	.	.	.	.	.	.	.	.	.	.
10218	240	.	.	.	.	.	.	.	.	.	.	.	.	.
10224	250	.	.	.	.	.	.	.	.	.	.	.	.	.
10230	260	.	.	.	.	.	.	.	.	.	.	.	.	.
10236	270	.	.	.	.	.	.	.	.	.	.	.	.	.
10242	280	.	.	.	.	.	.	.	.	.	.	.	.	.
10248	290	.	.	.	.	.	.	.	.	.	.	.	.	.
10254	300	.	.	.	.	.	.	.	.	.	.	.	.	.
10300	310	.	.	.	.	.	.	.	.	.	.	.	.	.
10306	320	.	.	.	.	.	.	.	.	.	.	.	.	.
10312	330	.	.	.	.	.	.	.	.	.	.	.	.	.
10318	340	.	.	.	.	.	.	.	.	.	.	.	.	.
10324	350	.	.	.	.	.	.	.	.	.	.	.	.	.
10330	360	.	.	.	.	.	.	.	.	.	.	.	.	.
10336	370	.	.	.	.	.	.	.	.	.	.	.	.	.
10342	380	.	.	.	.	.	.	.	.	.	.	.	.	.
10348	390	.	.	.	.	.	.	.	.	.	.	.	.	.
10354	400	.	.	.	.	.	.	.	.	.	.	.	.	.
10400	410	.	.	.	.	.	.	.	.	.	.	.	.	.
10406	420	.	.	.	.	.	.	.	.	.	.	.	.	.
10412	430	.	.	.	.	.	.	.	.	.	.	.	.	.
10418	440	.	.	.	.	.	.	.	.	.	.	.	.	.
10424	450	.	.	.	.	.	.	.	.	.	.	.	.	.
10430	460	.	.	.	.	.	.	.	.	.	.	.	.	.
10436	470	.	.	.	.	.	.	.	.	.	.	.	.	.
10442	480	.	.	.	.	.	.	.	.	.	.	.	.	.
10448	490	.	.	.	.	.	.	.	.	.	.	.	.	.
10454	500	.	.	.	.	.	.	.	.	.	.	.	.	.
10500	510	.	.	.	.	.	.	.	.	.	.	.	.	.
10506	520	.	.	.	.	.	.	.	.	.	.	.	.	.
10512	530	.	.	.	.	.	.	.	.	.	.	.	.	.
10518	540	.	.	.	.	.	.	.	.	.	.	.	.	.
10524	550	.	.	.	.	.	.	.	.	.	.	.	.	.
10530	560	.	.	.	.	.	.	.	.	.	.	.	.	.
10536	570	.	.	.	.	.	.	.	.	.	.	.	.	.
10542	580	.	.	.	.	.	.	.	.	.	.	.	.	.
10548	590	.	.	.	.	.	.	.	.	.	.	.	.	.
10554	600	.	.	.	.	.	.	.	.	.	.	.	.	.
10600	610	.	.	.	.	.	.	.	.	.	.	.	.	.
10606	620	.	.	.	.	.	.	.	.	.	.	.	.	.
10612	630	.	.	.	.	.	.	.	.	.	.	.	.	.
10618	640	.	.	.	.	.	.	.	.	.	.	.	.	.
10624	650	.	.	.	.	.	.	.	.	.	.	.	.	.
10630	660	.	.	.	.	.	.	.	.	.	.	.	.	.

CALIFONHYDROLOGY

1	0236	27	.01	.01	.00	0.	*	1	1442	148	.03	.01	.02	3.
1	0242	28	.01	.01	.00	0.	*	1	1448	149	.02	.01	.02	3.
1	0248	29	.01	.01	.00	0.	*	1	1454	150	.03	.01	.02	3.
1	0254	30	.01	.01	.00	0.	*	1	1500	151	.03	.01	.02	3.
1	0300	31	.01	.01	.00	0.	*	1	1506	152	.03	.01	.02	3.
1	0306	32	.01	.01	.00	0.	*	1	1512	153	.02	.01	.02	3.
1	0312	33	.01	.01	.00	0.	*	1	1518	154	.03	.01	.02	3.
1	0318	34	.01	.01	.00	0.	*	1	1524	155	.02	.01	.02	3.
1	0324	35	.01	.01	.00	0.	*	1	1530	156	.02	.01	.02	3.
1	0330	36	.01	.01	.00	0.	*	1	1536	157	.03	.01	.02	3.
1	0336	37	.01	.01	.00	0.	*	1	1542	158	.02	.01	.02	3.
1	0342	38	.01	.01	.00	0.	*	1	1548	159	.02	.01	.02	3.
1	0348	39	.01	.01	.00	0.	*	1	1554	160	.02	.01	.02	3.
1	0354	40	.01	.01	.00	0.	*	1	1600	161	.02	.01	.02	2.
1	0400	41	.01	.01	.00	0.	*	1	1606	162	.02	.01	.02	2.
1	0406	42	.01	.01	.00	0.	*	1	1612	163	.02	.01	.02	2.
1	0412	43	.01	.01	.00	0.	*	1	1618	164	.02	.01	.02	2.
1	0418	44	.01	.01	.00	0.	*	1	1624	165	.02	.01	.02	2.
1	0424	45	.01	.01	.00	0.	*	1	1630	166	.01	.00	.01	2.
1	0430	46	.01	.01	.00	0.	*	1	1636	167	.02	.01	.02	2.
1	0436	47	.01	.01	.00	0.	*	1	1642	168	.02	.01	.02	2.
1	0442	48	.01	.01	.00	0.	*	1	1648	169	.01	.00	.01	2.
1	0448	49	.01	.01	.00	0.	*	1	1654	170	.01	.00	.01	2.
1	0454	50	.01	.01	.00	0.	*	1	1700	171	.01	.00	.01	2.
1	0500	51	.01	.01	.00	0.	*	1	1706	172	.01	.00	.01	2.
1	0506	52	.01	.01	.00	0.	*	1	1712	173	.01	.00	.01	1.
1	0512	53	.01	.01	.00	0.	*	1	1718	174	.01	.00	.01	1.
1	0518	54	.01	.01	.00	0.	*	1	1724	175	.01	.00	.01	2.
1	0524	55	.01	.01	.00	0.	*	1	1730	176	.01	.00	.01	1.
1	0530	56	.01	.01	.00	0.	*	1	1736	177	.01	.00	.01	1.
1	0536	57	.01	.01	.00	0.	*	1	1742	178	.01	.00	.01	1.
1	0542	58	.01	.01	.00	0.	*	1	1748	179	.01	.00	.01	1.
1	0548	59	.01	.01	.00	0.	*	1	1754	180	.01	.00	.01	1.
1	0554	60	.01	.01	.00	0.	*	1	1800	181	.01	.00	.01	1.
1	0600	61	.01	.01	.00	0.	*	1	1806	182	.01	.00	.01	1.
1	0606	62	.01	.01	.00	0.	*	1	1812	183	.01	.00	.01	1.
1	0612	63	.01	.01	.00	0.	*	1	1818	184	.01	.00	.01	1.
1	0618	64	.01	.01	.00	0.	*	1	1824	185	.01	.00	.01	1.
1	0624	65	.01	.01	.00	0.	*	1	1830	186	.01	.00	.01	1.
1	0630	66	.01	.01	.00	0.	*	1	1836	187	.01	.00	.01	1.
1	0636	67	.01	.01	.00	0.	*	1	1842	188	.01	.00	.01	1.
1	0642	68	.01	.01	.00	0.	*	1	1848	189	.01	.00	.01	1.
1	0648	69	.01	.01	.00	0.	*	1	1854	190	.01	.00	.01	1.
1	0654	70	.01	.01	.00	0.	*	1	1900	191	.01	.00	.01	1.
1	0700	71	.01	.01	.00	0.	*	1	1906	192	.01	.00	.01	1.
1	0706	72	.01	.01	.00	0.	*	1	1912	193	.01	.00	.01	1.
1	0712	73	.01	.01	.00	0.	*	1	1918	194	.01	.00	.01	1.
1	0718	74	.01	.01	.00	0.	*	1	1924	195	.01	.00	.01	1.
1	0724	75	.01	.01	.00	0.	*	1	1930	196	.01	.00	.01	1.
1	0730	76	.02	.02	.00	0.	*	1	1936	197	.01	.00	.01	1.
1	0736	77	.02	.02	.00	0.	*	1	1942	198	.01	.00	.01	1.
1	0742	78	.02	.02	.00	0.	*	1	1948	199	.01	.00	.01	1.
1	0748	79	.02	.02	.00	0.	*	1	1954	200	.01	.00	.01	1.
1	0754	80	.02	.02	.00	0.	*	1	2000	201	.01	.00	.01	1.
1	0800	81	.02	.02	.00	0.	*	1	2006	202	.01	.00	.01	1.
1	0806	82	.02	.02	.00	0.	*	1	2012	203	.01	.00	.01	1.
1	0812	83	.02	.02	.00	0.	*	1	2018	204	.01	.00	.01	1.
1	0818	84	.02	.02	.00	0.	*	1	2024	205	.01	.00	.01	1.
1	0824	85	.02	.02	.00	0.	*	1	2030	206	.01	.00	.01	1.
1	0830	86	.02	.02	.00	0.	*	1	2036	207	.01	.00	.01	1.
1	0836	87	.03	.03	.00	0.	*	1	2042	208	.01	.00	.01	1.
1	0842	88	.02	.02	.00	0.	*	1	2048	209	.01	.00	.01	1.
1	0848	89	.02	.02	.00	0.	*	1	2054	210	.01	.00	.01	1.
1	0854	90	.03	.03	.00	0.	*	1	2100	211	.01	.00	.01	1.
1	0900	91	.03	.03	.00	0.	*	1	2106	212	.01	.00	.01	1.
1	0906	92	.02	.02	.00	0.	*	1	2112	213	.01	.00	.01	1.
1	0912	93	.03	.03	.00	0.	*	1	2118	214	.01	.00	.01	1.
1	0918	94	.03	.03	.00	0.	*	1	2124	215	.01	.00	.01	1.
1	0924	95	.03	.03	.00	0.	*	1	2130	216	.01	.00	.01	1.
1	0930	96	.03	.03	.00	0.	*	1	2136	217	.01	.00	.01	1.
1	0936	97	.03	.03	.00	0.	*	1	2142	218	.01	.00	.01	1.
1	0942	98	.03	.03	.00	0.	*	1	2148	219	.01	.00	.01	1.
1	0948	99	.03	.03	.00	0.	*	1	2154	220	.01	.00	.01	1.
1	0954	100	.03	.03	.00	0.	*	1	2200	221	.01	.00	.01	1.
1	1000	101	.03	.03	.00	0.	*	1	2206	222	.01	.00	.01	1.
1	1006	102	.04	.03	.00	0.	*	1	2212	223	.01	.00	.01	1.
1	1012	103	.03	.03	.00	0.	*	1	2218	224	.01	.00	.01	1.
1	1018	104	.04	.04	.01	0.	*	1	2224	225	.01	.00	.01	1.
1	1024	105	.03	.03	.01	1.	*	1	2230	226	.01	.00	.01	1.
1	1030	106	.04	.04	.01	1.	*	1	2236	227	.01	.00	.01	1.
1	1036	107	.04	.03	.01	1.	*	1	2242	228	.01	.00	.01	1.
1	1042	108	.04	.03	.01	1.	*	1	2248	229	.01	.00	.01	1.
1	1048	109	.05	.04	.01	1.	*	1	2254	230	.01	.00	.01	1.
1	1054	110	.05	.04	.01	1.	*	1	2300	231	.01	.00	.01	1.
1	1100	111	.06	.04	.01	1.	*	1	2306	232	.01	.00	.01	1.
1	1106	112	.06	.04	.01	1.	*	1	2312	233	.01	.00	.01	1.
1	1112	113	.06	.04	.01	2.	*	1	2318	234	.01	.00	.01	1.
1	1118	114	.07	.05	.02	2.	*	1	2324	235	.01	.00	.01	1.
1	1124	115	.08	.06	.02	2.	*	1	2330	236	.01	.00	.01	1.
1	1130	116	.08	.05	.02	2.	*	1	2336	237	.01	.00	.01	1.
1	1136	117	.10	.07	.03	3.	*	1	2342	238	.01	.00	.01	1.
1	1142	118	.11	.07	.04	3.	*	1	2348	239	.00	.00	.00	1.
1	1148	119	.24	.15	.09	4.	*	1	2354	240	.00	.00	.00	1.
1	1154	120	.37	.21	.16	7.	*	2	0000	241	.01	.00	.01	1.
1	1200	121	.59	.29	.30	12.	*							

TOTAL RAINFALL = 7.00, TOTAL LOSS = 3.80, TOTAL EXCESS = 3.20

PEAK FLOW	TIME	6-HR	MAXIMUM AVERAGE FLOW	24.00-HR
(CFS)	(HR)	(CFS)	24-HR	72-HR
+ 33.	12.30	6.	2.	2.
		(INCHES)	3.189	3.189

(AC-FT) 3. 4. CALIFONHYDROLOGY 4.
 CUMULATIVE AREA = .02 SQ MI

1

DAHRMN PER	STATION SUB F										(L) PRECIP.	(X) EXCESS	0.	
	0.	4.	(O) OUTFLOW 8.	12.	16.	20.	24.	28.	32.	36.				
10000	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.6	.4	.2	.0
10006														
10012														
10018														
10024														
10030														
10036														
10042														
10048														
10054														
10100														
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10200														
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10236														
10242														
10248														
10254														
10300														
10306														
10312														
10318														
10324														
10330														
10336														
10342														
10348														
10354														
10400														
10406														
10412														
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10654														
10700														
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10754														
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10806														
10812														
10818														
10824														
10830														
10836														
10842														
10848														
10854														
10900														
10906														
10912														
10918														
10924														

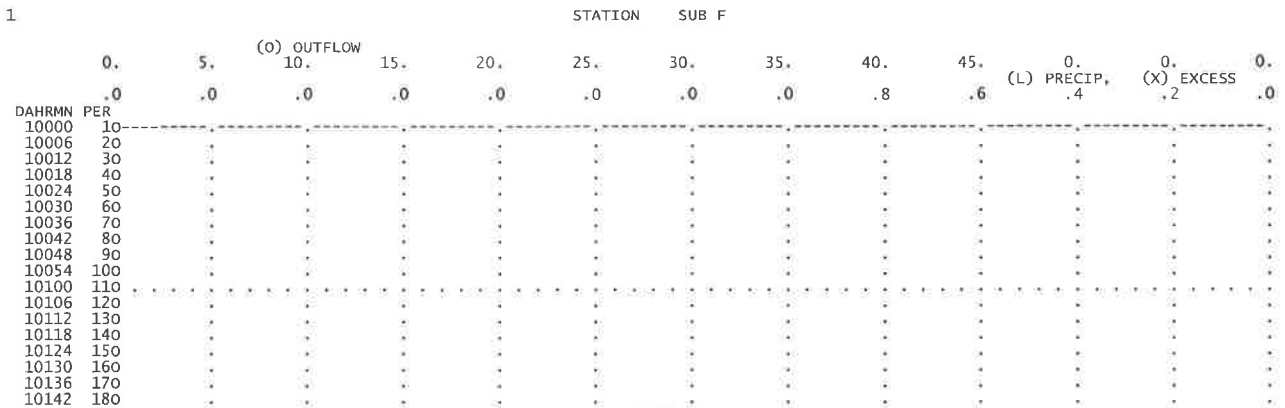
CALIFONHYDROLOGY

1	0530	56	.01	.01	.00	0.	1736	177	.02	.00	.01	2.
1	0536	57	.02	.02	.00	0.	1742	178	.02	.00	.01	2.
1	0542	58	.01	.01	.00	0.	1748	179	.01	.00	.01	2.
1	0548	59	.02	.02	.00	0.	1754	180	.02	.00	.01	2.
1	0554	60	.01	.01	.00	0.	1800	181	.02	.00	.01	2.
1	0600	61	.02	.02	.00	0.	1806	182	.01	.00	.01	2.
1	0606	62	.02	.02	.00	0.	1812	183	.02	.00	.01	2.
1	0612	63	.01	.01	.00	0.	1818	184	.01	.00	.01	2.
1	0618	64	.02	.02	.00	0.	1824	185	.02	.00	.01	1.
1	0624	65	.02	.02	.00	0.	1830	186	.01	.00	.01	1.
1	0630	66	.01	.01	.00	0.	1836	187	.02	.00	.01	1.
1	0636	67	.02	.02	.00	0.	1842	188	.01	.00	.01	1.
1	0642	68	.02	.02	.00	0.	1848	189	.02	.00	.01	1.
1	0648	69	.01	.01	.00	0.	1854	190	.01	.00	.01	1.
1	0654	70	.02	.02	.00	0.	1900	191	.02	.00	.01	1.
1	0700	71	.02	.02	.00	0.	1906	192	.01	.00	.01	1.
1	0706	72	.02	.02	.00	0.	1912	193	.01	.00	.01	1.
1	0712	73	.02	.02	.00	0.	1918	194	.02	.00	.01	1.
1	0718	74	.02	.02	.00	0.	1924	195	.01	.00	.01	1.
1	0724	75	.02	.02	.00	0.	1930	196	.02	.00	.01	1.
1	0730	76	.02	.02	.00	0.	1936	197	.01	.00	.01	1.
1	0736	77	.02	.02	.00	0.	1942	198	.01	.00	.01	1.
1	0742	78	.02	.02	.00	0.	1948	199	.02	.00	.01	1.
1	0748	79	.02	.02	.00	0.	1954	200	.01	.00	.01	1.
1	0754	80	.02	.02	.00	0.	2000	201	.01	.00	.01	1.
1	0800	81	.02	.02	.00	0.	2006	202	.01	.00	.01	1.
1	0806	82	.02	.02	.00	0.	2012	203	.02	.00	.01	1.
1	0812	83	.02	.02	.00	0.	2018	204	.01	.00	.01	1.
1	0818	84	.02	.02	.00	0.	2024	205	.01	.00	.01	1.
1	0824	85	.02	.02	.00	0.	2030	206	.01	.00	.01	1.
1	0830	86	.02	.02	.00	0.	2036	207	.02	.00	.01	1.
1	0836	87	.03	.03	.00	0.	2042	208	.01	.00	.01	1.
1	0842	88	.02	.02	.00	0.	2048	209	.01	.00	.01	1.
1	0848	89	.02	.02	.00	0.	2054	210	.01	.00	.01	1.
1	0854	90	.03	.03	.00	0.	2100	211	.01	.00	.01	1.
1	0900	91	.03	.03	.00	0.	2106	212	.02	.00	.01	1.
1	0906	92	.02	.02	.00	0.	2112	213	.01	.00	.01	1.
1	0912	93	.03	.03	.00	0.	2118	214	.01	.00	.01	1.
1	0918	94	.03	.03	.00	0.	2124	215	.01	.00	.01	1.
1	0924	95	.03	.03	.00	0.	2130	216	.01	.00	.01	1.
1	0930	96	.03	.03	.00	0.	2136	217	.01	.00	.01	1.
1	0936	97	.03	.03	.00	0.	2142	218	.01	.00	.01	1.
1	0942	98	.04	.03	.01	0.	2148	219	.01	.00	.01	1.
1	0948	99	.03	.03	.00	1.	2154	220	.01	.00	.01	1.
1	0954	100	.04	.03	.01	1.	2200	221	.02	.00	.01	1.
1	1000	101	.03	.03	.01	1.	2206	222	.01	.00	.01	1.
1	1006	102	.04	.03	.01	1.	2212	223	.01	.00	.01	1.
1	1012	103	.04	.03	.01	1.	2218	224	.01	.00	.01	1.
1	1018	104	.05	.04	.01	1.	2224	225	.01	.00	.01	1.
1	1024	105	.04	.03	.01	1.	2230	226	.01	.00	.01	1.
1	1030	106	.05	.04	.01	1.	2236	227	.01	.00	.01	1.
1	1036	107	.05	.04	.01	1.	2242	228	.01	.00	.01	1.
1	1042	108	.05	.04	.01	1.	2248	229	.01	.00	.01	1.
1	1048	109	.06	.04	.01	1.	2254	230	.01	.00	.01	1.
1	1054	110	.06	.04	.02	2.	2300	231	.01	.00	.01	1.
1	1100	111	.06	.05	.02	2.	2306	232	.01	.00	.01	1.
1	1106	112	.06	.04	.02	2.	2312	233	.01	.00	.01	1.
1	1112	113	.06	.04	.02	2.	2318	234	.01	.00	.01	1.
1	1118	114	.08	.05	.03	3.	2324	235	.01	.00	.01	1.
1	1124	115	.09	.06	.03	3.	2330	236	.01	.00	.01	1.
1	1130	116	.09	.06	.03	3.	2336	237	.01	.00	.01	1.
1	1136	117	.11	.07	.04	4.	2342	238	.01	.00	.01	1.
1	1142	118	.13	.08	.05	5.	2348	239	.00	.00	.00	1.
1	1148	119	.28	.16	.12	6.	2354	240	.00	.00	.00	1.
1	1154	120	.42	.22	.21	9.	0000	241	.01	.00	.01	1.
1	1200	121	.67	.29	.38	16.						

TOTAL RAINFALL = 8.00, TOTAL LOSS = 3.99, TOTAL EXCESS = 4.01

PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR	AVERAGE 24-HR	72-HR	24.00-HR
42.	12.30	8.	2.	2.	2.	2.
		(INCHES) 3.286	3.990	3.990	3.990	3.990
		(AC-FT) 4.	5.	5.	5.	5.

CUMULATIVE AREA = .02 SQ MI



CALIFONHYDROLOGY

12300 231. 0
 12306 232. 0
 12312 233. 0
 12318 234. 0
 12324 235. 0
 12330 236. 0
 12336 237. 0
 12342 238. 0
 12348 239. 0
 12354 240. 0
 20000 241. 0

1

 *
 142 KK COMB4 * COMBINE FLOWS FROM SUB A & SUB F
 *

144 KO OUTPUT CONTROL VARIABLES
 IPRNT 2 PRINT CONTROL
 IPLOT 2 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

145 HC HYDROGRAPH COMBINATION
 ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION COMB4
 SUM OF 2 HYDROGRAPHS
 PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	
1		0000	1	0.	1		0606	62	0.	1		1212	123	23.	1		1818	184	5.	
1		0006	2	0.	1		0612	63	0.	1		1218	124	32.	1		1824	185	5.	
1		0012	3	0.	1		0618	64	0.	1		1224	125	45.	1		1830	186	5.	
1		0018	4	0.	1		0624	65	0.	1		1230	126	59.	1		1836	187	5.	
1		0024	5	0.	1		0630	66	0.	1		1236	127	74.	1		1842	188	4.	
1		0030	6	0.	1		0636	67	0.	1		1242	128	85.	1		1848	189	4.	
1		0036	7	0.	1		0642	68	0.	1		1248	129	88.	1		1854	190	4.	
1		0042	8	0.	1		0648	69	0.	1		1254	130	83.	1		1900	191	4.	
1		0048	9	0.	1		0654	70	0.	1		1300	131	74.	1		1906	192	4.	
1		0054	10	0.	1		0700	71	0.	1		1306	132	63.	1		1912	193	4.	
1		0100	11	0.	1		0706	72	0.	1		1312	133	53.	1		1918	194	4.	
1		0106	12	0.	1		0712	73	0.	1		1318	134	45.	1		1924	195	4.	
1		0112	13	0.	1		0718	74	0.	1		1324	135	38.	1		1930	196	4.	
1		0118	14	0.	1		0724	75	0.	1		1330	136	33.	1		1936	197	4.	
1		0124	15	0.	1		0730	76	0.	1		1336	137	29.	1		1942	198	4.	
1		0130	16	0.	1		0736	77	0.	1		1342	138	26.	1		1948	199	4.	
1		0136	17	0.	1		0742	78	0.	1		1348	139	24.	1		1954	200	4.	
1		0142	18	0.	1		0748	79	0.	1		1354	140	22.	1		2000	201	4.	
1		0148	19	0.	1		0754	80	0.	1		1400	141	20.	1		2006	202	4.	
1		0154	20	0.	1		0800	81	0.	1		1406	142	18.	1		2012	203	4.	
1		0200	21	0.	1		0806	82	0.	1		1412	143	17.	1		2018	204	4.	
1		0206	22	0.	1		0812	83	0.	1		1418	144	16.	1		2024	205	4.	
1		0212	23	0.	1		0818	84	0.	1		1424	145	15.	1		2030	206	4.	
1		0218	24	0.	1		0824	85	0.	1		1430	146	15.	1		2036	207	4.	
1		0224	25	0.	1		0830	86	0.	1		1436	147	14.	1		2042	208	4.	
1		0230	26	0.	1		0836	87	0.	1		1442	148	13.	1		2048	209	4.	
1		0236	27	0.	1		0842	88	0.	1		1448	149	13.	1		2054	210	4.	
1		0242	28	0.	1		0848	89	0.	1		1454	150	12.	1		2100	211	3.	
1		0248	29	0.	1		0854	90	0.	1		1500	151	12.	1		2106	212	3.	
1		0254	30	0.	1		0900	91	0.	1		1506	152	12.	1		2112	213	4.	
1		0300	31	0.	1		0906	92	0.	1		1512	153	11.	1		2118	214	3.	
1		0306	32	0.	1		0912	93	0.	1		1518	154	11.	1		2124	215	3.	
1		0312	33	0.	1		0918	94	0.	1		1524	155	11.	1		2130	216	3.	
1		0318	34	0.	1		0924	95	0.	1		1530	156	10.	1		2136	217	3.	
1		0324	35	0.	1		0930	96	0.	1		1536	157	10.	1		2142	218	3.	
1		0330	36	0.	1		0936	97	0.	1		1542	158	10.	1		2148	219	3.	
1		0336	37	0.	1		0942	98	0.	1		1548	159	10.	1		2154	220	3.	
1		0342	38	0.	1		0948	99	0.	1		1554	160	10.	1		2200	221	3.	
1		0348	39	0.	1		0954	100	0.	1		1600	161	9.	1		2206	222	3.	
1		0354	40	0.	1		1000	101	0.	1		1606	162	9.	1		2212	223	3.	
1		0400	41	0.	1		1006	102	1.	1		1612	163	9.	1		2218	224	3.	
1		0406	42	0.	1		1012	103	1.	1		1618	164	9.	1		2224	225	3.	
1		0412	43	0.	1		1018	104	1.	1		1624	165	9.	1		2230	226	3.	
1		0418	44	0.	1		1024	105	1.	1		1630	166	9.	1		2236	227	3.	
1		0424	45	0.	1		1030	106	1.	1		1636	167	8.	1		2242	228	3.	
1		0430	46	0.	1		1036	107	1.	1		1642	168	8.	1		2248	229	3.	
1		0436	47	0.	1		1042	108	2.	1		1648	169	8.	1		2254	230	3.	
1		0442	48	0.	1		1048	109	2.	1		1654	170	8.	1		2300	231	3.	
1		0448	49	0.	1		1054	110	2.	1		1700	171	8.	1		2306	232	3.	
1		0454	50	0.	1		1100	111	2.	1		1706	172	7.	1		2312	233	3.	
1		0500	51	0.	1		1106	112	3.	1		1712	173	7.	1		2318	234	3.	
1		0506	52	0.	1		1112	113	3.	1		1718	174	7.	1		2324	235	3.	
1		0512	53	0.	1		1118	114	3.	1		1724	175	7.	1		2330	236	3.	
1		0518	54	0.	1		1124	115	4.	1		1730	176	6.	1		2336	237	3.	
1		0524	55	0.	1		1130	116	4.	1		1736	177	6.	1		2342	238	3.	
1		0530	56	0.	1		1136	117	5.	1		1742	178	6.	1		2348	239	3.	
1		0536	57	0.	1		1142	118	6.	1		1748	179	5.	1		2354	240	3.	
1		0542	58	0.	1		1148	119	7.	1		1754	180	5.	1		0000	241	3.	
1		0548	59	0.	1		1154	120	9.	1		1800	181	5.	1					
1		0554	60	0.	1		1200	121	11.	1		1806	182	5.	1					
1		0600	61	0.	1		1206	122	16.	1		1812	183	5.	1					

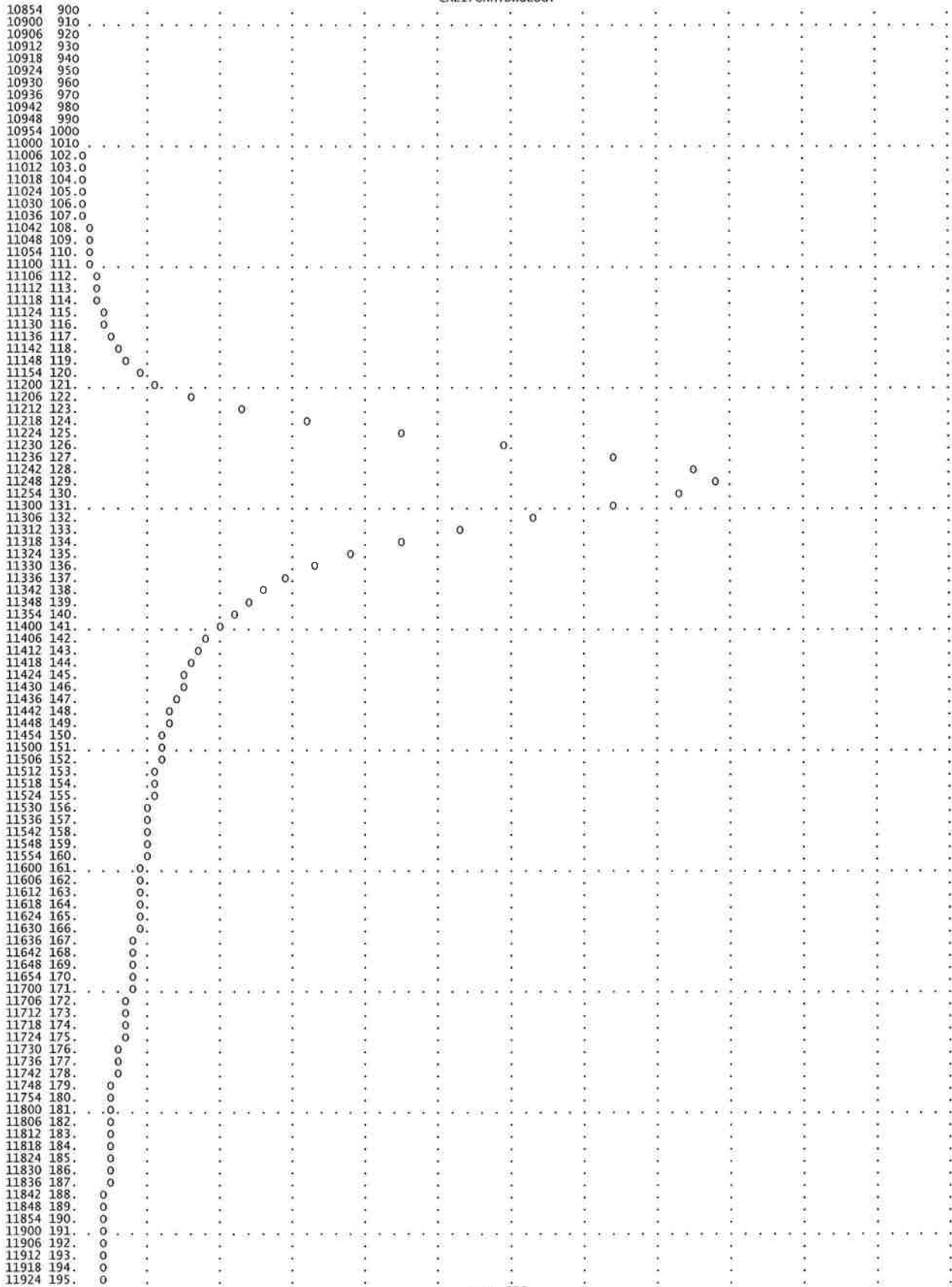
CALIFONHYDROLOGY

PEAK FLOW TIME
 + (CFS) (HR)
 + 88. 12.80
 (CFS)
 (INCHES) 22. 7. 7. 7.
 (AC-FT) 1.571 1.892 1.892 1.892
 11. 13. 13. 13.
 CUMULATIVE AREA = .13 SQ MI

1 STATION COMB4

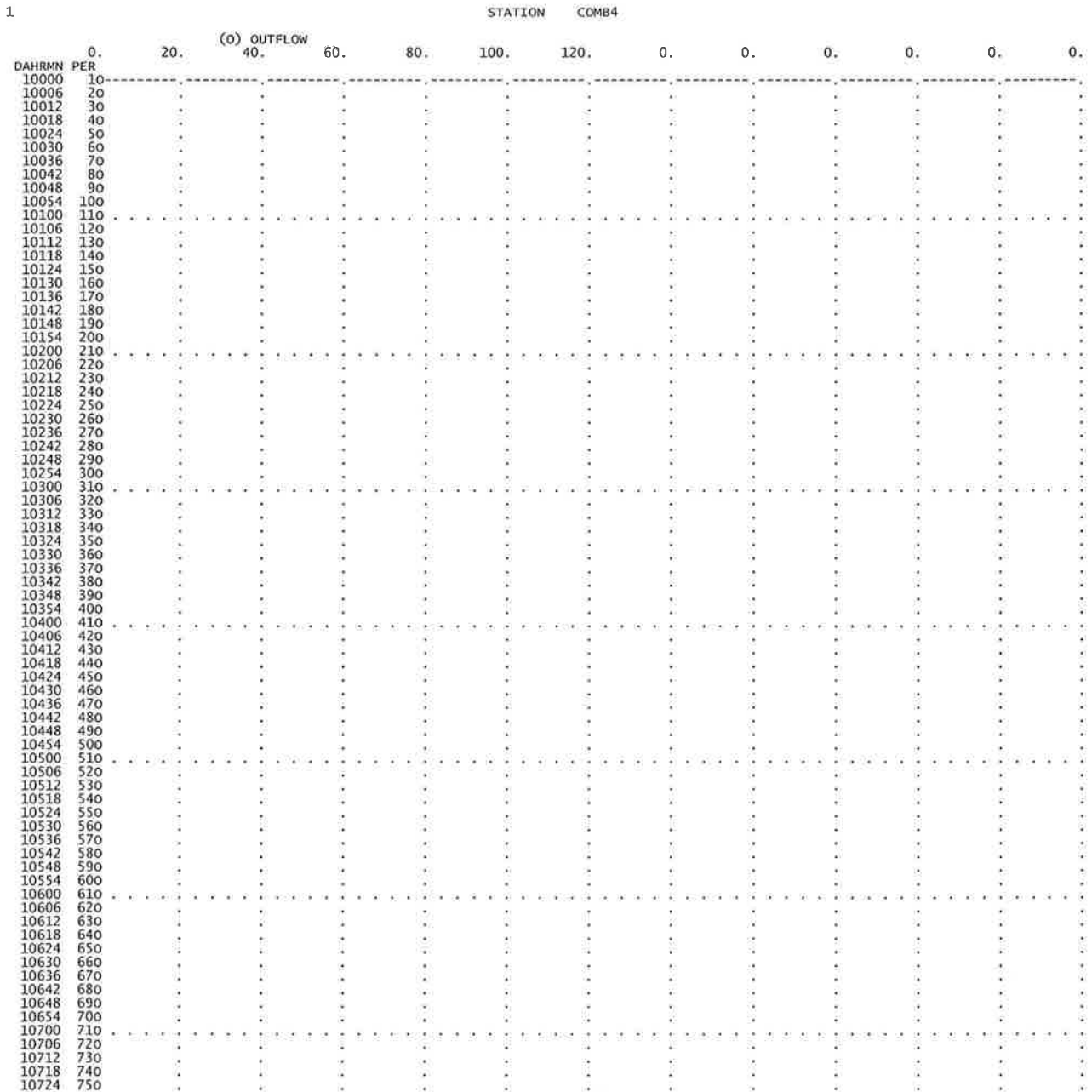
DAHRMN PER	0.	10.	(O) OUTFLOW 20.	30.	40.	50.	60.	70.	80.	90.	0.	0.	0.
10000	10												
10006	20												
10012	30												
10018	40												
10024	50												
10030	60												
10036	70												
10042	80												
10048	90												
10054	100												
10100	110												
10106	120												
10112	130												
10118	140												
10124	150												
10130	160												
10136	170												
10142	180												
10148	190												
10154	200												
10200	210												
10206	220												
10212	230												
10218	240												
10224	250												
10230	260												
10236	270												
10242	280												
10248	290												
10254	300												
10300	310												
10306	320												
10312	330												
10318	340												
10324	350												
10330	360												
10336	370												
10342	380												
10348	390												
10354	400												
10400	410												
10406	420												
10412	430												
10418	440												
10424	450												
10430	460												
10436	470												
10442	480												
10448	490												
10454	500												
10500	510												
10506	520												
10512	530												
10518	540												
10524	550												
10530	560												
10536	570												
10542	580												
10548	590												
10554	600												
10600	610												
10606	620												
10612	630												
10618	640												
10624	650												
10630	660												
10636	670												
10642	680												
10648	690												
10654	700												
10700	710												
10706	720												
10712	730												
10718	740												
10724	750												
10730	760												
10736	770												
10742	780												
10748	790												
10754	800												
10800	810												
10806	820												
10812	830												
10818	840												
10824	850												
10830	860												
10836	870												
10842	880												
10848	890												

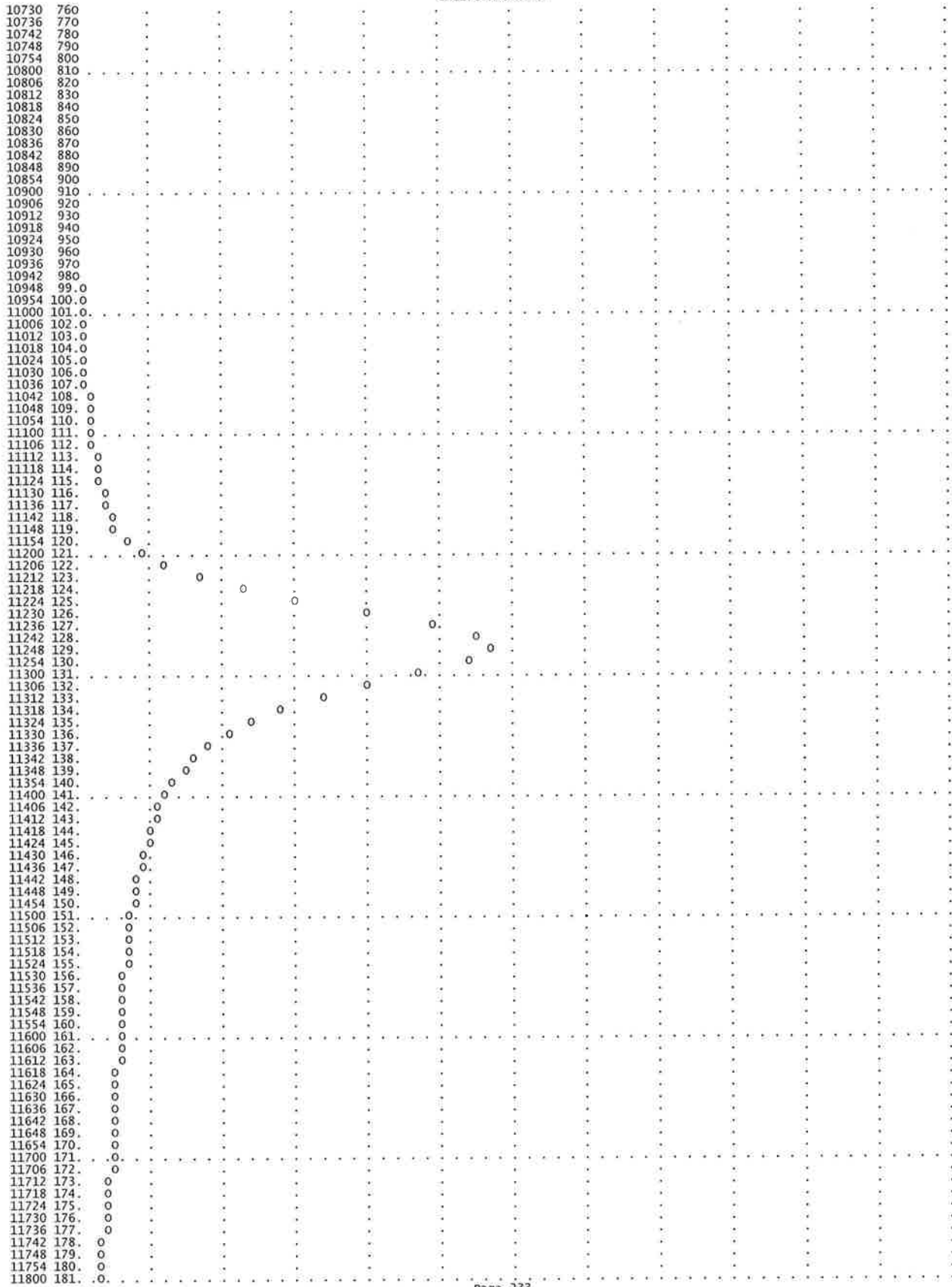
CALIFONHYDROLOGY



CALIFORNIA HYDROLOGY																		
1	0448	49	0.	*	1	1054	110	4.	*	1	1700	171	10.	*	1	2306	232	4.
1	0454	50	0.	*	1	1100	111	4.	*	1	1706	172	9.	*	1	2312	233	4.
1	0500	51	0.	*	1	1106	112	5.	*	1	1712	173	9.	*	1	2318	234	4.
1	0506	52	0.	*	1	1112	113	5.	*	1	1718	174	9.	*	1	2324	235	4.
1	0512	53	0.	*	1	1118	114	6.	*	1	1724	175	8.	*	1	2330	236	3.
1	0518	54	0.	*	1	1124	115	6.	*	1	1730	176	8.	*	1	2336	237	3.
1	0524	55	0.	*	1	1130	116	7.	*	1	1736	177	7.	*	1	2342	238	3.
1	0530	56	0.	*	1	1136	117	8.	*	1	1742	178	7.	*	1	2348	239	3.
1	0536	57	0.	*	1	1142	118	9.	*	1	1748	179	7.	*	1	2354	240	3.
1	0542	58	0.	*	1	1148	119	11.	*	1	1754	180	6.	*	2	0000	241	3.
1	0548	59	0.	*	1	1154	120	13.	*	1	1800	181	6.	*				
1	0554	60	0.	*	1	1200	121	17.	*	1	1806	182	6.	*				
1	0600	61	0.	*	1	1206	122	24.	*	1	1812	183	6.	*				

PEAK FLOW	TIME	6-HR	MAXIMUM	AVERAGE	FLOW	24.00-HR
(CFS)	(HR)		24-HR	72-HR		
113.	12.80	29.	9.	9.	9.	
		(INCHES)	2.441	2.441	2.441	
		(AC-FT)	14.	17.	17.	
CUMULATIVE AREA =		.13 SQ MI				





CALIFONHYDROLOGY

11806	182.	0
11812	183.	0
11818	184.	0
11824	185.	0
11830	186.	0
11836	187.	0
11842	188.	0
11848	189.	0
11854	190.	0
11900	191.	0
11906	192.	0
11912	193.	0
11918	194.	0
11924	195.	0
11930	196.	0
11936	197.	0
11942	198.	0
11948	199.	0
11954	200.	0
12000	201.	0
12006	202.	0
12012	203.	0
12018	204.	0
12024	205.	0
12030	206.	0
12036	207.	0
12042	208.	0
12048	209.	0
12054	210.	0
12100	211.	0
12106	212.	0
12112	213.	0
12118	214.	0
12124	215.	0
12130	216.	0
12136	217.	0
12142	218.	0
12148	219.	0
12154	220.	0
12200	221.	0
12206	222.	0
12212	223.	0
12218	224.	0
12224	225.	0
12230	226.	0
12236	227.	0
12242	228.	0
12248	229.	0
12254	230.	0
12300	231.	0
12306	232.	0
12312	233.	0
12318	234.	0
12324	235.	0
12330	236.	0
12336	237.	0
12342	238.	0
12348	239.	0
12354	240.	0
20000	241.	0

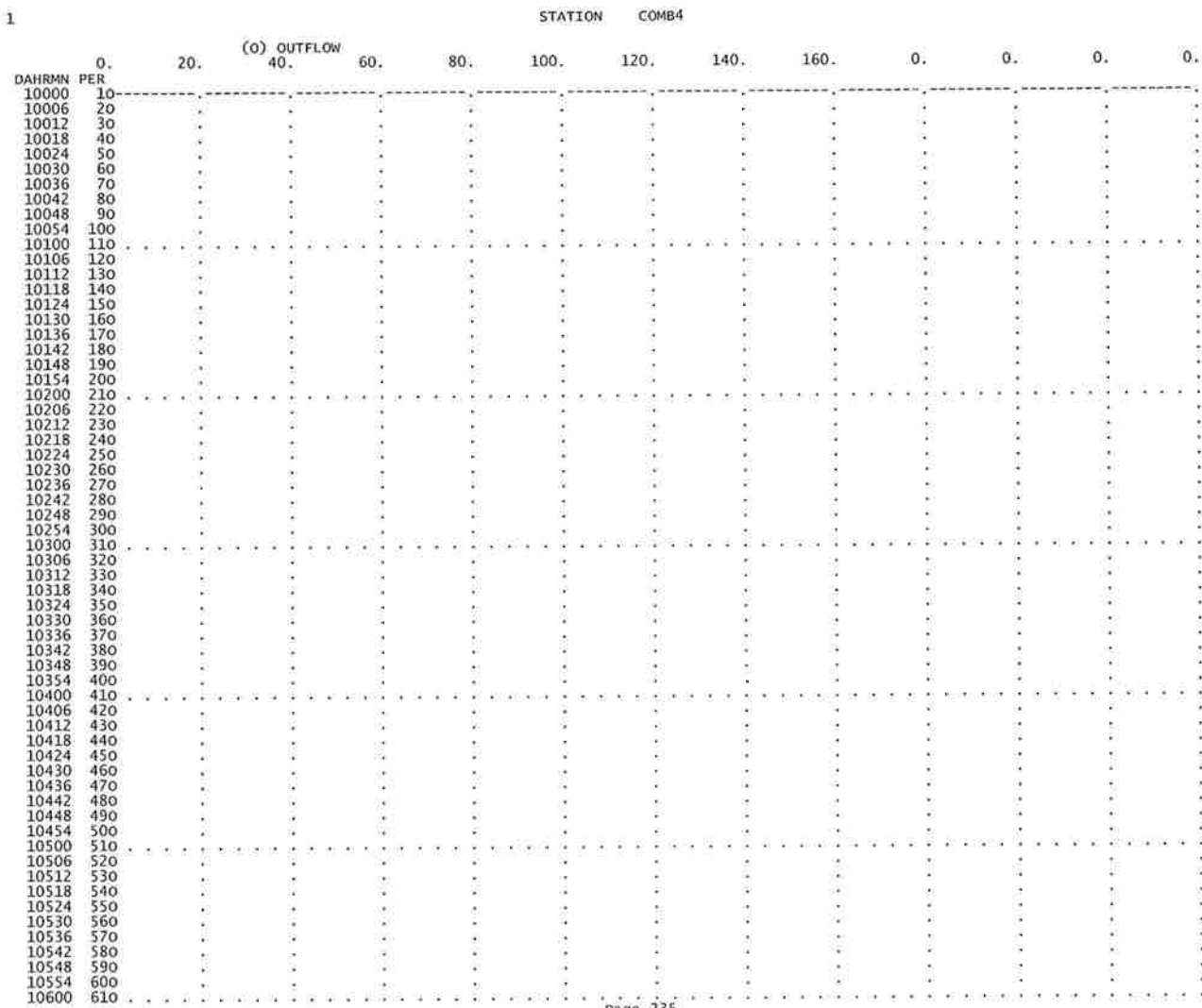
1

HYDROGRAPH AT STATION COMB4
 SUM OF 2 HYDROGRAPHS
 PLAN 1, RATIO = .76

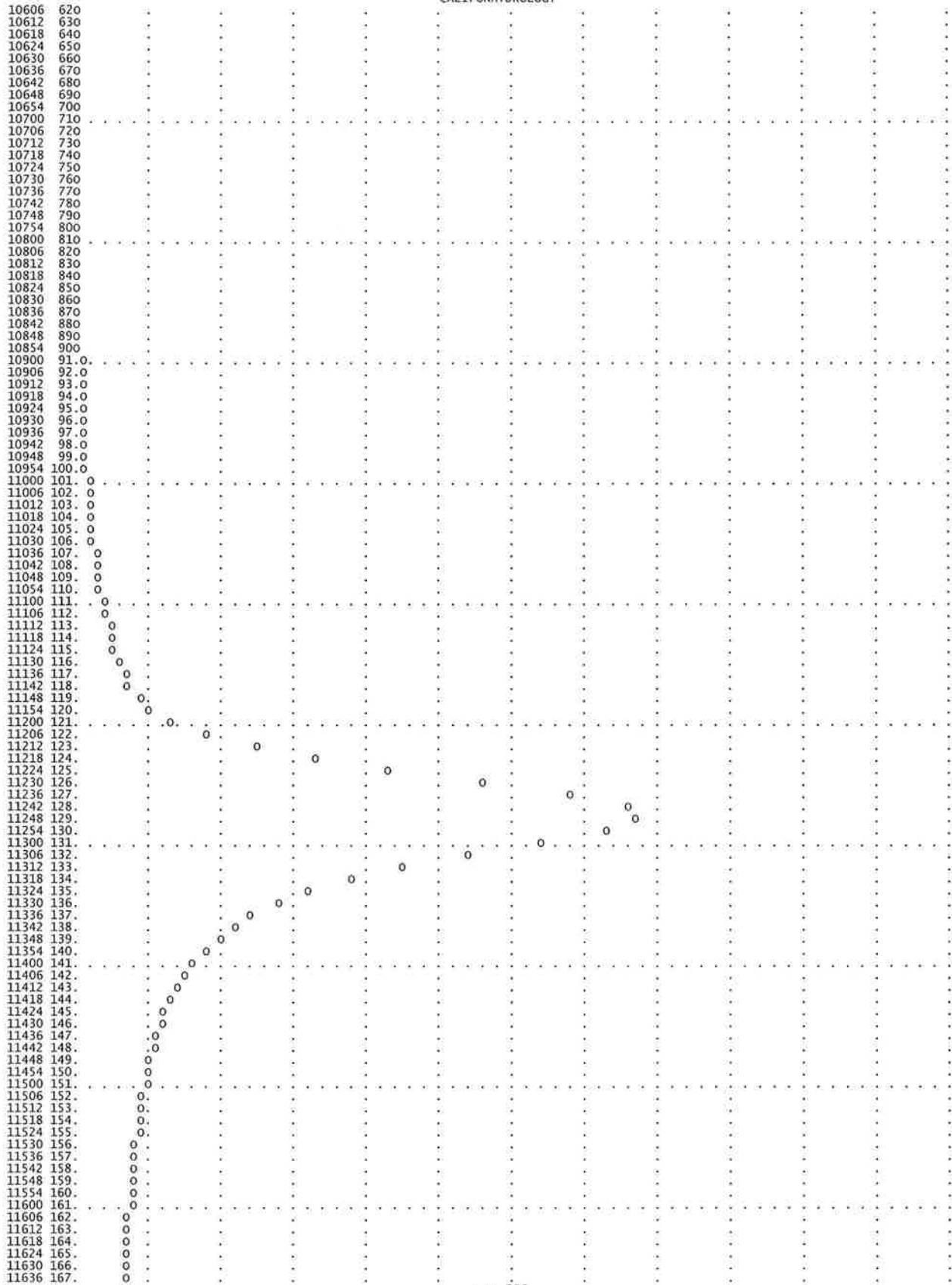
DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1	0606	62	0.	1	1212	123	50.	1	1818	184	8.			
1		0006	2	0.	1	0612	63	0.	1	1218	124	66.	1	1824	185	7.			
1		0012	3	0.	1	0618	64	0.	1	1224	125	87.	1	1830	186	7.			
1		0018	4	0.	1	0624	65	0.	1	1230	126	112.	1	1836	187	7.			
1		0024	5	0.	1	0630	66	0.	1	1236	127	136.	1	1842	188	7.			
1		0030	6	0.	1	0636	67	0.	1	1242	128	152.	1	1848	189	7.			
1		0036	7	0.	1	0642	68	0.	1	1248	129	155.	1	1854	190	7.			
1		0042	8	0.	1	0648	69	0.	1	1254	130	145.	1	1900	191	7.			
1		0048	9	0.	1	0654	70	0.	1	1300	131	128.	1	1906	192	7.			
1		0054	10	0.	1	0700	71	0.	1	1306	132	108.	1	1912	193	7.			
1		0100	11	0.	1	0706	72	0.	1	1312	133	90.	1	1918	194	7.			
1		0106	12	0.	1	0712	73	0.	1	1318	134	76.	1	1924	195	7.			
1		0112	13	0.	1	0718	74	0.	1	1324	135	65.	1	1930	196	7.			
1		0118	14	0.	1	0724	75	0.	1	1330	136	56.	1	1936	197	6.			
1		0124	15	0.	1	0730	76	0.	1	1336	137	49.	1	1942	198	6.			
1		0130	16	0.	1	0736	77	0.	1	1342	138	43.	1	1948	199	6.			
1		0136	17	0.	1	0742	78	0.	1	1348	139	39.	1	1954	200	6.			
1		0142	18	0.	1	0748	79	0.	1	1354	140	36.	1	2000	201	6.			
1		0148	19	0.	1	0754	80	0.	1	1400	141	33.	1	2006	202	6.			
1		0154	20	0.	1	0800	81	0.	1	1406	142	30.	1	2012	203	6.			
1		0200	21	0.	1	0806	82	0.	1	1412	143	28.	1	2018	204	6.			
1		0206	22	0.	1	0812	83	0.	1	1418	144	26.	1	2024	205	6.			
1		0212	23	0.	1	0818	84	0.	1	1424	145	25.	1	2030	206	6.			
1		0218	24	0.	1	0824	85	0.	1	1430	146	24.	1	2036	207	6.			
1		0224	25	0.	1	0830	86	0.	1	1436	147	23.	1	2042	208	6.			
1		0230	26	0.	1	0836	87	1.	1	1442	148	22.	1	2048	209	6.			
1		0236	27	0.	1	0842	88	1.	1	1448	149	21.	1	2054	210	6.			
1		0242	28	0.	1	0848	89	1.	1	1454	150	20.	1	2100	211	5.			
1		0248	29	0.	1	0854	90	1.	1	1500	151	20.	1	2106	212	6.			
1		0254	30	0.	1	0900	91	1.	1	1506	152	19.	1	2112	213	6.			
1		0300	31	0.	1	0906	92	1.	1	1512	153	18.	1	2118	214	5.			
1		0306	32	0.	1	0912	93	1.	1	1518	154	18.	1	2124	215	5.			
1		0312	33	0.	1	0918	94	2.	1	1524	155	17.	1	2130	216	5.			
1		0318	34	0.	1	0924	95	2.	1	1530	156	17.	1	2136	217	5.			

CALIFONHYDROLOGY																		
1	0324	35	0.	*	1	0930	96	2.	*	1	1536	157	16.	*	1	2142	218	5.
1	0330	36	0.	*	1	0936	97	2.	*	1	1542	158	16.	*	1	2148	219	5.
1	0336	37	0.	*	1	0942	98	2.	*	1	1548	159	16.	*	1	2154	220	5.
1	0342	38	0.	*	1	0948	99	3.	*	1	1554	160	15.	*	1	2200	221	5.
1	0348	39	0.	*	1	0954	100	3.	*	1	1600	161	15.	*	1	2206	222	5.
1	0354	40	0.	*	1	1000	101	3.	*	1	1606	162	15.	*	1	2212	223	5.
1	0400	41	0.	*	1	1006	102	4.	*	1	1612	163	15.	*	1	2218	224	5.
1	0406	42	0.	*	1	1012	103	4.	*	1	1618	164	14.	*	1	2224	225	5.
1	0412	43	0.	*	1	1018	104	4.	*	1	1624	165	14.	*	1	2230	226	5.
1	0418	44	0.	*	1	1024	105	5.	*	1	1630	166	14.	*	1	2236	227	5.
1	0424	45	0.	*	1	1030	106	5.	*	1	1636	167	13.	*	1	2242	228	5.
1	0430	46	0.	*	1	1036	107	5.	*	1	1642	168	13.	*	1	2248	229	5.
1	0436	47	0.	*	1	1042	108	6.	*	1	1648	169	13.	*	1	2254	230	5.
1	0442	48	0.	*	1	1048	109	6.	*	1	1654	170	13.	*	1	2300	231	5.
1	0448	49	0.	*	1	1054	110	7.	*	1	1700	171	12.	*	1	2306	232	5.
1	0454	50	0.	*	1	1100	111	8.	*	1	1706	172	12.	*	1	2312	233	5.
1	0500	51	0.	*	1	1106	112	8.	*	1	1712	173	12.	*	1	2318	234	5.
1	0506	52	0.	*	1	1112	113	9.	*	1	1718	174	11.	*	1	2324	235	5.
1	0512	53	0.	*	1	1118	114	10.	*	1	1724	175	11.	*	1	2330	236	4.
1	0518	54	0.	*	1	1124	115	11.	*	1	1730	176	10.	*	1	2336	237	4.
1	0524	55	0.	*	1	1130	116	12.	*	1	1736	177	9.	*	1	2342	238	4.
1	0530	56	0.	*	1	1136	117	13.	*	1	1742	178	9.	*	1	2348	239	4.
1	0536	57	0.	*	1	1142	118	15.	*	1	1748	179	9.	*	1	2354	240	4.
1	0542	58	0.	*	1	1148	119	17.	*	1	1754	180	8.	*	2	0000	241	4.
1	0548	59	0.	*	1	1154	120	21.	*	1	1800	181	8.	*				
1	0554	60	0.	*	1	1200	121	27.	*	1	1806	182	8.	*				
1	0600	61	0.	*	1	1206	122	37.	*	1	1812	183	8.	*				

PEAK FLOW	TIME		6-HR	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)	(CFS)				
+ 155.	12.80	39.	2.752	12.	12.	12.
		(INCHES)	19.	3.349	3.349	3.349
		(AC-FT)		24.	24.	24.
CUMULATIVE AREA =			.13 SQ MI			

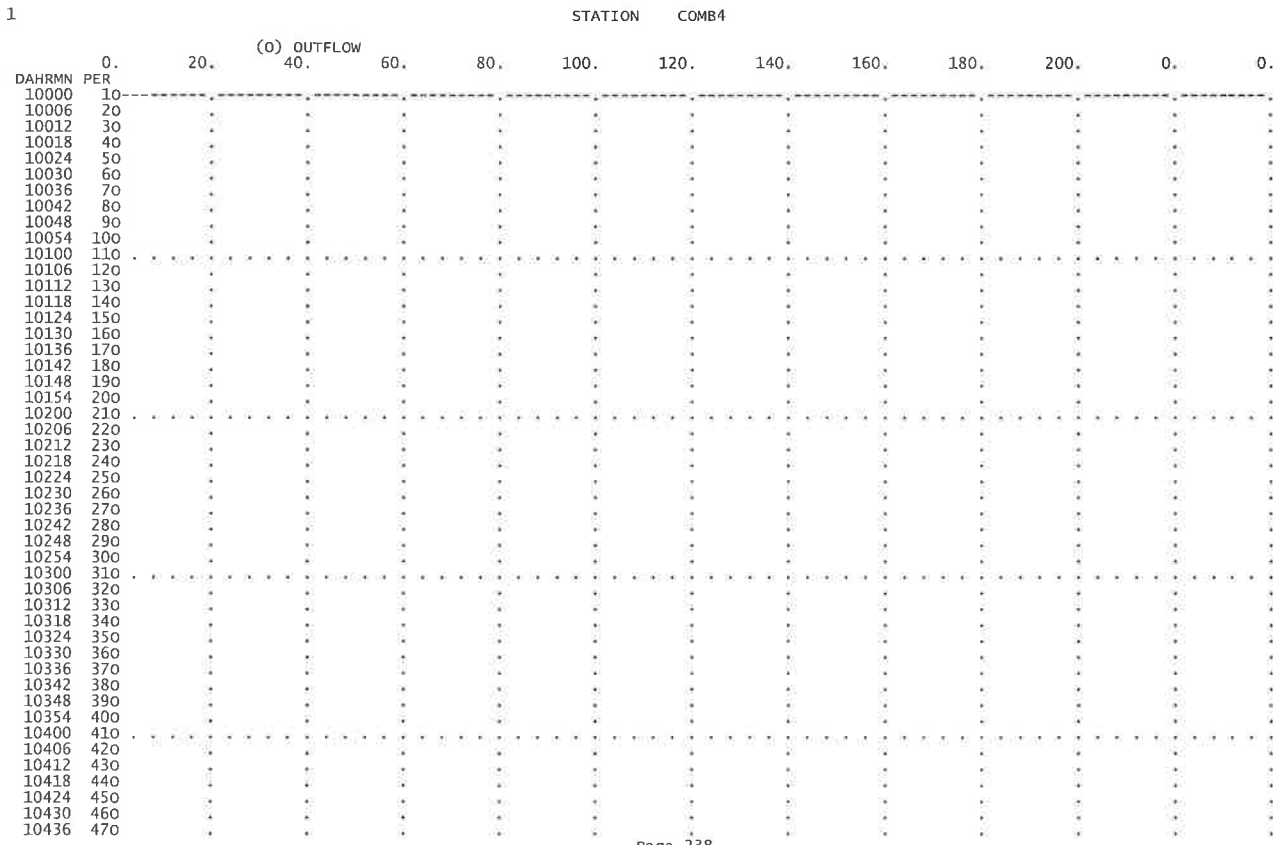


CALIFONHYDROLOGY

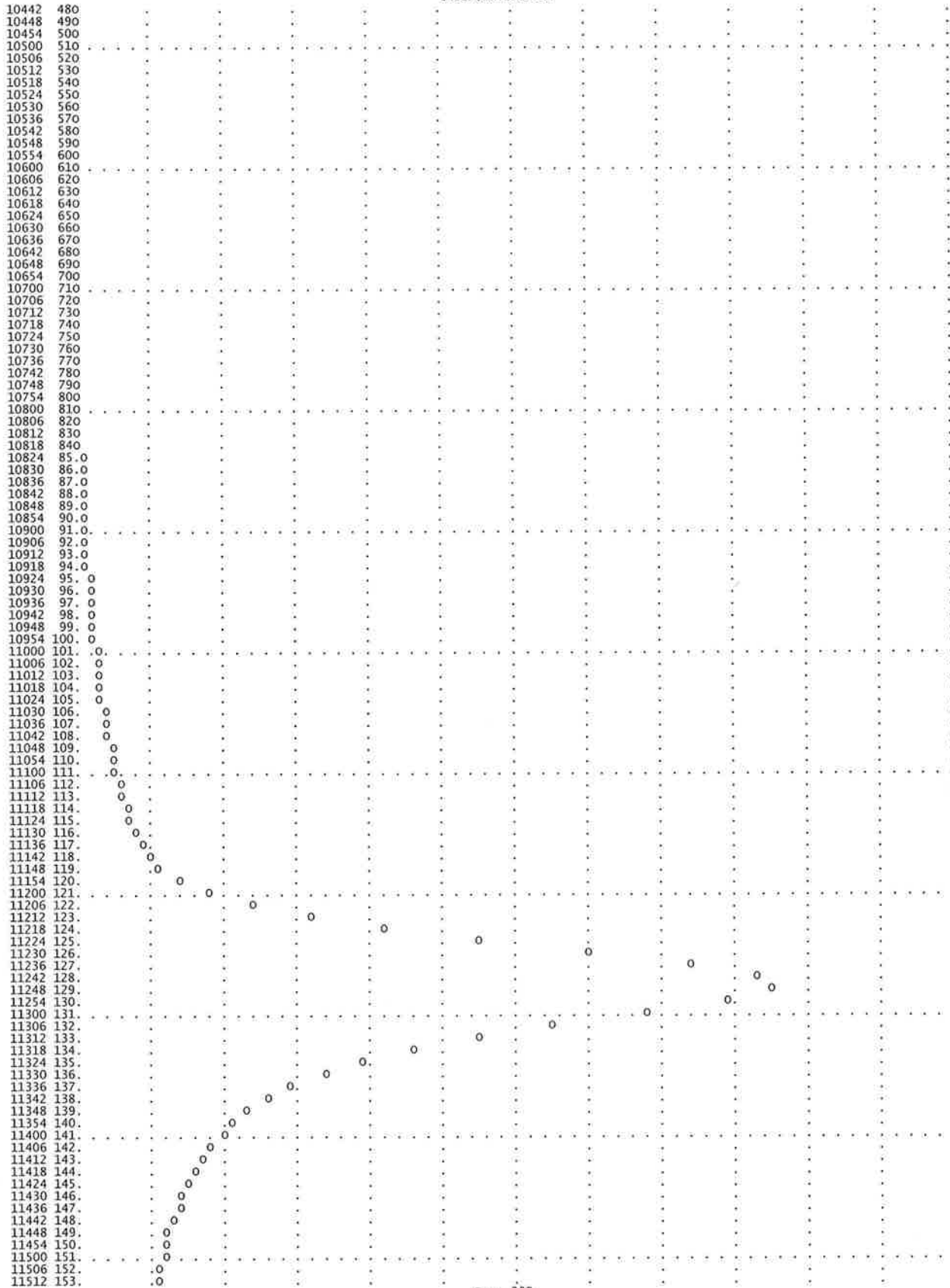


CALIFONHYDROLOGY																		
1	0200	21	0.	*	1	0806	82	1.	*	1	1412	143	34.	*	1	2018	204	7.
1	0206	22	0.	*	1	0812	83	1.	*	1	1418	144	32.	*	1	2024	205	7.
1	0212	23	0.	*	1	0818	84	1.	*	1	1424	145	30.	*	1	2030	206	7.
1	0218	24	0.	*	1	0824	85	1.	*	1	1430	146	28.	*	1	2036	207	7.
1	0224	25	0.	*	1	0830	86	1.	*	1	1436	147	27.	*	1	2042	208	7.
1	0230	26	0.	*	1	0836	87	1.	*	1	1442	148	26.	*	1	2048	209	7.
1	0236	27	0.	*	1	0842	88	2.	*	1	1448	149	25.	*	1	2054	210	7.
1	0242	28	0.	*	1	0848	89	2.	*	1	1454	150	24.	*	1	2100	211	6.
1	0248	29	0.	*	1	0854	90	2.	*	1	1500	151	23.	*	1	2106	212	7.
1	0254	30	0.	*	1	0900	91	2.	*	1	1506	152	23.	*	1	2112	213	7.
1	0300	31	0.	*	1	0906	92	2.	*	1	1512	153	22.	*	1	2118	214	6.
1	0306	32	0.	*	1	0912	93	3.	*	1	1518	154	21.	*	1	2124	215	6.
1	0312	33	0.	*	1	0918	94	3.	*	1	1524	155	21.	*	1	2130	216	6.
1	0318	34	0.	*	1	0924	95	3.	*	1	1530	156	20.	*	1	2136	217	6.
1	0324	35	0.	*	1	0930	96	3.	*	1	1536	157	20.	*	1	2142	218	6.
1	0330	36	0.	*	1	0936	97	4.	*	1	1542	158	19.	*	1	2148	219	6.
1	0336	37	0.	*	1	0942	98	4.	*	1	1548	159	19.	*	1	2154	220	6.
1	0342	38	0.	*	1	0948	99	4.	*	1	1554	160	18.	*	1	2200	221	6.
1	0348	39	0.	*	1	0954	100	5.	*	1	1600	161	18.	*	1	2206	222	6.
1	0354	40	0.	*	1	1000	101	5.	*	1	1606	162	18.	*	1	2212	223	6.
1	0400	41	0.	*	1	1006	102	6.	*	1	1612	163	17.	*	1	2218	224	6.
1	0406	42	0.	*	1	1012	103	6.	*	1	1618	164	17.	*	1	2224	225	6.
1	0412	43	0.	*	1	1018	104	6.	*	1	1624	165	17.	*	1	2230	226	6.
1	0418	44	0.	*	1	1024	105	7.	*	1	1630	166	16.	*	1	2236	227	6.
1	0424	45	0.	*	1	1030	106	7.	*	1	1636	167	16.	*	1	2242	228	6.
1	0430	46	0.	*	1	1036	107	8.	*	1	1642	168	16.	*	1	2248	229	6.
1	0436	47	0.	*	1	1042	108	8.	*	1	1648	169	15.	*	1	2254	230	6.
1	0442	48	0.	*	1	1048	109	9.	*	1	1654	170	15.	*	1	2300	231	6.
1	0448	49	0.	*	1	1054	110	10.	*	1	1700	171	15.	*	1	2306	232	6.
1	0454	50	0.	*	1	1100	111	11.	*	1	1706	172	14.	*	1	2312	233	5.
1	0500	51	0.	*	1	1106	112	12.	*	1	1712	173	14.	*	1	2318	234	5.
1	0506	52	0.	*	1	1112	113	13.	*	1	1718	174	13.	*	1	2324	235	5.
1	0512	53	0.	*	1	1118	114	14.	*	1	1724	175	13.	*	1	2330	236	5.
1	0518	54	0.	*	1	1124	115	15.	*	1	1730	176	12.	*	1	2336	237	5.
1	0524	55	0.	*	1	1130	116	16.	*	1	1736	177	11.	*	1	2342	238	5.
1	0530	56	0.	*	1	1136	117	18.	*	1	1742	178	10.	*	1	2348	239	5.
1	0536	57	0.	*	1	1142	118	20.	*	1	1748	179	10.	*	1	2354	240	5.
1	0542	58	0.	*	1	1148	119	23.	*	1	1754	180	10.	*	2	0000	241	5.
1	0548	59	0.	*	1	1154	120	28.	*	1	1800	181	10.	*				
1	0554	60	0.	*	1	1200	121	35.	*	1	1806	182	9.	*				
1	0600	61	0.	*	1	1206	122	48.	*	1	1812	183	9.	*				

PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.00-HR
(CFS)	(HR)	(CFS)					
189.	12.80	48.	15.	15.	15.		
		(INCHES)	3.370	4.123	4.123	4.123	
		(AC-FT)	24.	29.	29.	29.	
CUMULATIVE AREA =			.13 SQ MI				



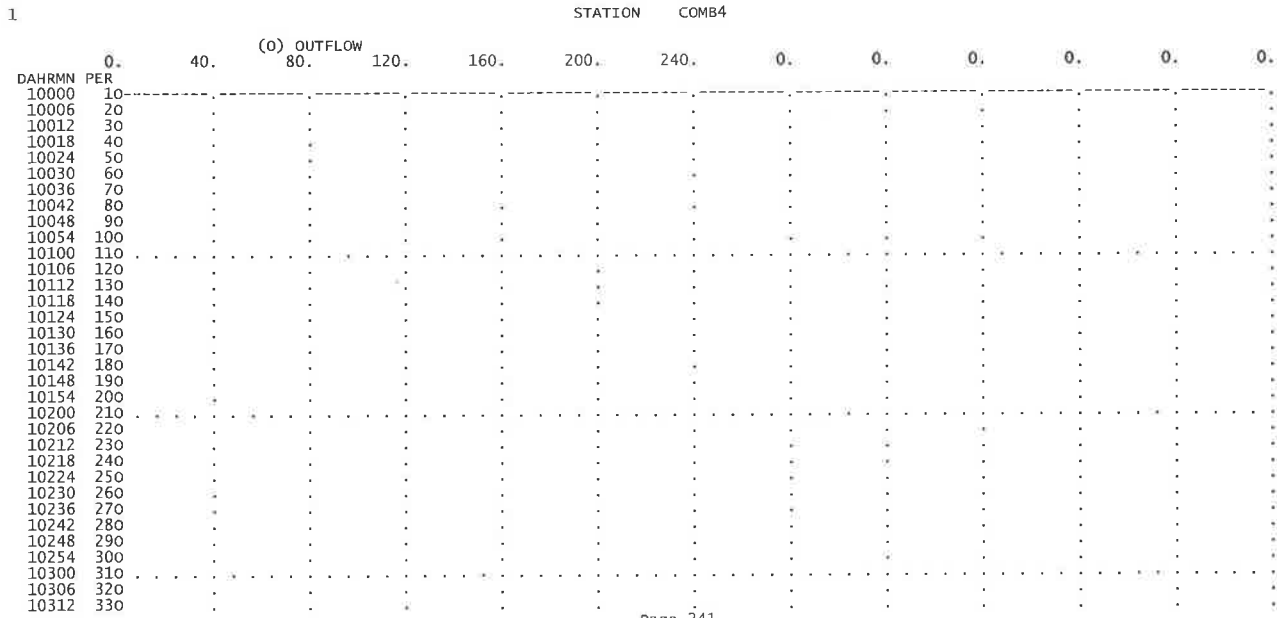
CALIFONHYDROLOGY



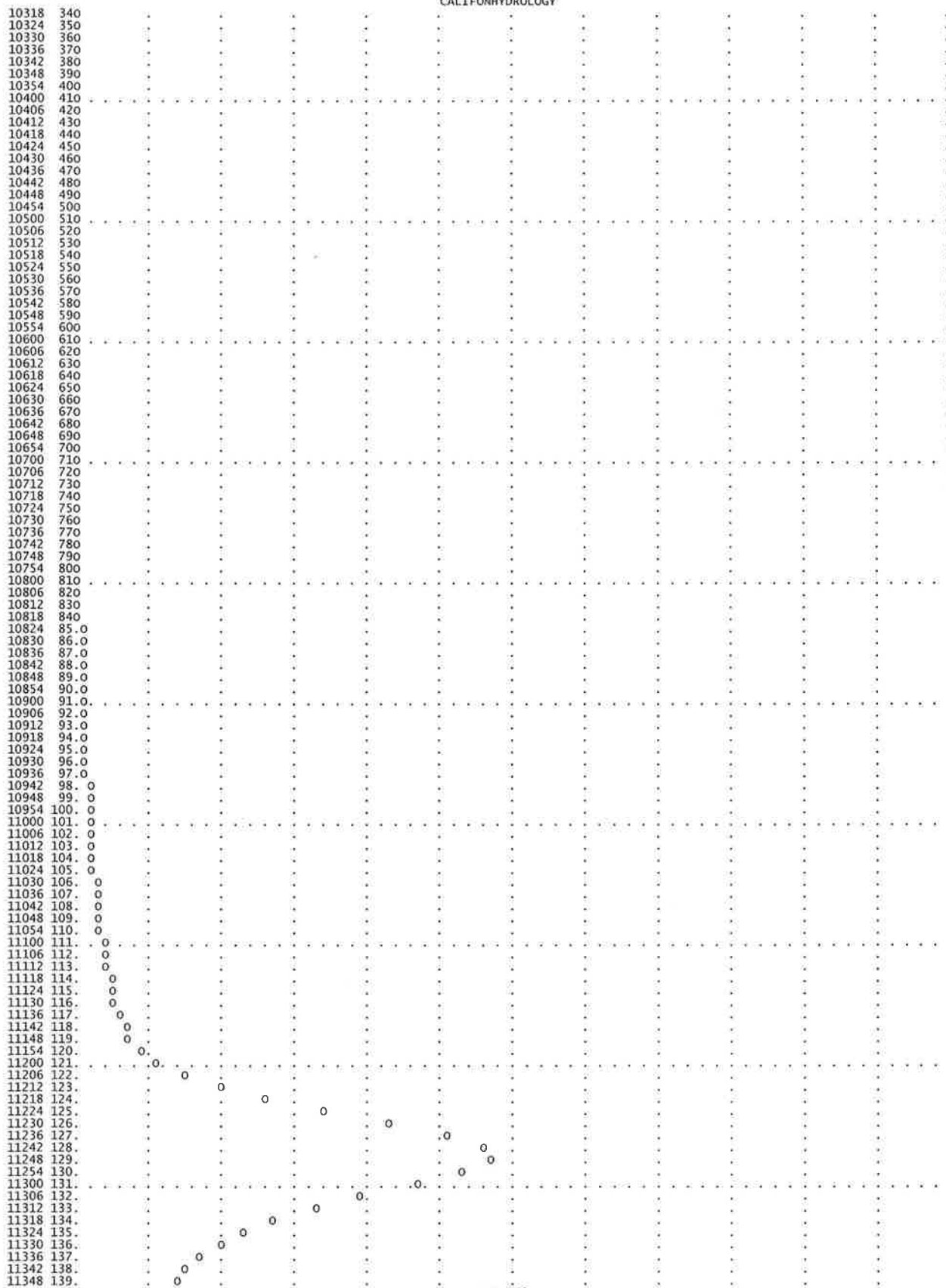
CALIFONHYDROLOGY

1	0036	7	0.	*	1	0642	68	0.	*	1	1248	129	228.	*	1	1854	190	10.
1	0042	8	0.	*	1	0648	69	0.	*	1	1254	130	213.	*	1	1900	191	9.
1	0048	9	0.	*	1	0654	70	0.	*	1	1300	131	186.	*	1	1906	192	9.
1	0054	10	0.	*	1	0700	71	0.	*	1	1306	132	156.	*	1	1912	193	9.
1	0100	11	0.	*	1	0706	72	0.	*	1	1312	133	130.	*	1	1918	194	9.
1	0106	12	0.	*	1	0712	73	0.	*	1	1318	134	109.	*	1	1924	195	9.
1	0112	13	0.	*	1	0718	74	0.	*	1	1324	135	93.	*	1	1930	196	9.
1	0118	14	0.	*	1	0724	75	0.	*	1	1330	136	80.	*	1	1936	197	9.
1	0124	15	0.	*	1	0730	76	0.	*	1	1336	137	70.	*	1	1942	198	9.
1	0130	16	0.	*	1	0736	77	1.	*	1	1342	138	62.	*	1	1948	199	9.
1	0136	17	0.	*	1	0742	78	1.	*	1	1348	139	55.	*	1	1954	200	9.
1	0142	18	0.	*	1	0748	79	1.	*	1	1354	140	50.	*	1	2000	201	9.
1	0148	19	0.	*	1	0754	80	1.	*	1	1400	141	46.	*	1	2006	202	9.
1	0154	20	0.	*	1	0800	81	1.	*	1	1406	142	43.	*	1	2012	203	9.
1	0200	21	0.	*	1	0806	82	1.	*	1	1412	143	40.	*	1	2018	204	8.
1	0206	22	0.	*	1	0812	83	2.	*	1	1418	144	37.	*	1	2024	205	8.
1	0212	23	0.	*	1	0818	84	2.	*	1	1424	145	35.	*	1	2030	206	8.
1	0218	24	0.	*	1	0824	85	2.	*	1	1430	146	33.	*	1	2036	207	8.
1	0224	25	0.	*	1	0830	86	2.	*	1	1436	147	32.	*	1	2042	208	8.
1	0230	26	0.	*	1	0836	87	3.	*	1	1442	148	31.	*	1	2048	209	8.
1	0236	27	0.	*	1	0842	88	3.	*	1	1448	149	29.	*	1	2054	210	8.
1	0242	28	0.	*	1	0848	89	3.	*	1	1454	150	28.	*	1	2100	211	8.
1	0248	29	0.	*	1	0854	90	3.	*	1	1500	151	27.	*	1	2106	212	8.
1	0254	30	0.	*	1	0900	91	4.	*	1	1506	152	27.	*	1	2112	213	8.
1	0300	31	0.	*	1	0906	92	4.	*	1	1512	153	26.	*	1	2118	214	8.
1	0306	32	0.	*	1	0912	93	4.	*	1	1518	154	25.	*	1	2124	215	7.
1	0312	33	0.	*	1	0918	94	5.	*	1	1524	155	24.	*	1	2130	216	7.
1	0318	34	0.	*	1	0924	95	5.	*	1	1530	156	24.	*	1	2136	217	7.
1	0324	35	0.	*	1	0930	96	5.	*	1	1536	157	23.	*	1	2142	218	7.
1	0330	36	0.	*	1	0936	97	6.	*	1	1542	158	23.	*	1	2148	219	7.
1	0336	37	0.	*	1	0942	98	6.	*	1	1548	159	22.	*	1	2154	220	7.
1	0342	38	0.	*	1	0948	99	7.	*	1	1554	160	22.	*	1	2200	221	7.
1	0348	39	0.	*	1	0954	100	7.	*	1	1600	161	21.	*	1	2206	222	7.
1	0354	40	0.	*	1	1000	101	7.	*	1	1606	162	21.	*	1	2212	223	7.
1	0400	41	0.	*	1	1006	102	8.	*	1	1612	163	20.	*	1	2218	224	7.
1	0406	42	0.	*	1	1012	103	8.	*	1	1618	164	20.	*	1	2224	225	7.
1	0412	43	0.	*	1	1018	104	9.	*	1	1624	165	20.	*	1	2230	226	7.
1	0418	44	0.	*	1	1024	105	10.	*	1	1630	166	19.	*	1	2236	227	7.
1	0424	45	0.	*	1	1030	106	10.	*	1	1636	167	19.	*	1	2242	228	7.
1	0430	46	0.	*	1	1036	107	11.	*	1	1642	168	18.	*	1	2248	229	7.
1	0436	47	0.	*	1	1042	108	12.	*	1	1648	169	18.	*	1	2254	230	7.
1	0442	48	0.	*	1	1048	109	13.	*	1	1654	170	18.	*	1	2300	231	7.
1	0448	49	0.	*	1	1054	110	13.	*	1	1700	171	17.	*	1	2306	232	6.
1	0454	50	0.	*	1	1100	111	15.	*	1	1706	172	17.	*	1	2312	233	6.
1	0500	51	0.	*	1	1106	112	16.	*	1	1712	173	16.	*	1	2318	234	6.
1	0506	52	0.	*	1	1112	113	17.	*	1	1718	174	15.	*	1	2324	235	6.
1	0512	53	0.	*	1	1118	114	18.	*	1	1724	175	15.	*	1	2330	236	6.
1	0518	54	0.	*	1	1124	115	20.	*	1	1730	176	14.	*	1	2336	237	6.
1	0524	55	0.	*	1	1130	116	22.	*	1	1736	177	13.	*	1	2342	238	6.
1	0530	56	0.	*	1	1136	117	24.	*	1	1742	178	12.	*	1	2348	239	6.
1	0536	57	0.	*	1	1142	118	26.	*	1	1748	179	12.	*	1	2354	240	6.
1	0542	58	0.	*	1	1148	119	30.	*	1	1754	180	12.	*	2	0000	241	6.
1	0548	59	0.	*	1	1154	120	36.	*	1	1800	181	11.	*				
1	0554	60	0.	*	1	1200	121	45.	*	1	1806	182	11.	*				
1	0600	61	0.	*	1	1206	122	61.	*	1	1812	183	11.	*				

PEAK FLOW (CFS)	TIME (HR)	(CFS)	6-HR	MAXIMUM AVERAGE FLOW 24-HR	72-HR	24.00-HR
228.	12.80	(INCHES) (AC-FT)	58. 29.	18. 35.	18. 35.	18. 35.
CUMULATIVE AREA = .13 SQ MI						



CALIFONHYDROLOGY



CALIFONHYDROLOGY

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*****
*          *
146 KK    * COMB5 *          COMBINE FLOWS FROM COMB3 & COMB4
*          *
*****

148 KO    OUTPUT CONTROL VARIABLES
          IPRNT      2 PRINT CONTROL
          IPLOT      2 PLOT CONTROL
          QSCAL      0 HYDROGRAPH PLOT SCALE

149 HC    HYDROGRAPH COMBINATION
          ICOMP      2 NUMBER OF HYDROGRAPHS TO COMBINE
    
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HYDROGRAPH AT STATION COMB5
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = .54

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	
1		0000	1	0.	1		0606	62	0.	1		1212	123	23.	1		1818	184	5.	
1		0006	2	0.	1		0612	63	0.	1		1218	124	32.	1		1824	185	5.	
1		0012	3	0.	1		0618	64	0.	1		1224	125	45.	1		1830	186	5.	
1		0018	4	0.	1		0624	65	0.	1		1230	126	59.	1		1836	187	5.	
1		0024	5	0.	1		0630	66	0.	1		1236	127	74.	1		1842	188	4.	
1		0030	6	0.	1		0636	67	0.	1		1242	128	85.	1		1848	189	4.	
1		0036	7	0.	1		0642	68	0.	1		1248	129	88.	1		1854	190	4.	
1		0042	8	0.	1		0648	69	0.	1		1254	130	83.	1		1900	191	4.	
1		0048	9	0.	1		0654	70	0.	1		1300	131	74.	1		1906	192	4.	
1		0054	10	0.	1		0700	71	0.	1		1306	132	63.	1		1912	193	4.	
1		0100	11	0.	1		0706	72	0.	1		1312	133	53.	1		1918	194	4.	
1		0106	12	0.	1		0712	73	0.	1		1318	134	45.	1		1924	195	4.	
1		0112	13	0.	1		0718	74	0.	1		1324	135	38.	1		1930	196	4.	
1		0118	14	0.	1		0724	75	0.	1		1330	136	33.	1		1936	197	4.	
1		0124	15	0.	1		0730	76	0.	1		1336	137	29.	1		1942	198	4.	
1		0130	16	0.	1		0736	77	0.	1		1342	138	26.	1		1948	199	4.	
1		0136	17	0.	1		0742	78	0.	1		1348	139	24.	1		1954	200	4.	
1		0142	18	0.	1		0748	79	0.	1		1354	140	22.	1		2000	201	4.	
1		0148	19	0.	1		0754	80	0.	1		1400	141	20.	1		2006	202	4.	
1		0154	20	0.	1		0800	81	0.	1		1406	142	18.	1		2012	203	4.	
1		0200	21	0.	1		0806	82	0.	1		1412	143	17.	1		2018	204	4.	
1		0206	22	0.	1		0812	83	0.	1		1418	144	16.	1		2024	205	4.	
1		0212	23	0.	1		0818	84	0.	1		1424	145	15.	1		2030	206	4.	
1		0218	24	0.	1		0824	85	0.	1		1430	146	15.	1		2036	207	4.	
1		0224	25	0.	1		0830	86	0.	1		1436	147	14.	1		2042	208	4.	
1		0230	26	0.	1		0836	87	0.	1		1442	148	13.	1		2048	209	4.	
1		0236	27	0.	1		0842	88	0.	1		1448	149	13.	1		2054	210	4.	
1		0242	28	0.	1		0848	89	0.	1		1454	150	12.	1		2100	211	3.	
1		0248	29	0.	1		0854	90	0.	1		1500	151	12.	1		2106	212	3.	
1		0254	30	0.	1		0900	91	0.	1		1506	152	12.	1		2112	213	3.	
1		0300	31	0.	1		0906	92	0.	1		1512	153	11.	1		2118	214	3.	
1		0306	32	0.	1		0912	93	0.	1		1518	154	11.	1		2124	215	3.	
1		0312	33	0.	1		0918	94	0.	1		1524	155	11.	1		2130	216	3.	
1		0318	34	0.	1		0924	95	0.	1		1530	156	10.	1		2136	217	3.	
1		0324	35	0.	1		0930	96	0.	1		1536	157	10.	1		2142	218	3.	
1		0330	36	0.	1		0936	97	0.	1		1542	158	10.	1		2148	219	3.	
1		0336	37	0.	1		0942	98	0.	1		1548	159	10.	1		2154	220	3.	
1		0342	38	0.	1		0948	99	0.	1		1554	160	10.	1		2200	221	3.	
1		0348	39	0.	1		0954	100	0.	1		1600	161	9.	1		2206	222	3.	
1		0354	40	0.	1		1000	101	0.	1		1606	162	9.	1		2212	223	3.	
1		0400	41	0.	1		1006	102	1.	1		1612	163	9.	1		2218	224	3.	
1		0406	42	0.	1		1012	103	1.	1		1618	164	9.	1		2224	225	3.	
1		0412	43	0.	1		1018	104	1.	1		1624	165	9.	1		2230	226	3.	
1		0418	44	0.	1		1024	105	1.	1		1630	166	9.	1		2236	227	3.	
1		0424	45	0.	1		1030	106	1.	1		1636	167	8.	1		2242	228	3.	
1		0430	46	0.	1		1036	107	1.	1		1642	168	8.	1		2248	229	3.	
1		0436	47	0.	1		1042	108	2.	1		1648	169	8.	1		2254	230	3.	
1		0442	48	0.	1		1048	109	2.	1		1654	170	8.	1		2300	231	3.	
1		0448	49	0.	1		1054	110	2.	1		1700	171	8.	1		2306	232	3.	
1		0454	50	0.	1		1100	111	2.	1		1706	172	7.	1		2312	233	3.	
1		0500	51	0.	1		1106	112	3.	1		1712	173	7.	1		2318	234	3.	
1		0506	52	0.	1		1112	113	3.	1		1718	174	7.	1		2324	235	3.	
1		0512	53	0.	1		1118	114	3.	1		1724	175	7.	1		2330	236	3.	
1		0518	54	0.	1		1124	115	4.	1		1730	176	6.	1		2336	237	3.	
1		0524	55	0.	1		1130	116	4.	1		1736	177	6.	1		2342	238	3.	
1		0530	56	0.	1		1136	117	5.	1		1742	178	6.	1		2348	239	3.	
1		0536	57	0.	1		1142	118	6.	1		1748	179	5.	1		2354	240	3.	
1		0542	58	0.	1		1148	119	7.	1		1754	180	5.	1		0000	241	3.	
1		0548	59	0.	1		1154	120	9.	1		1800	181	5.	1					
1		0554	60	0.	1		1200	121	11.	1		1806	182	5.	1					
1		0600	61	0.	1		1206	122	16.	1		1812	183	5.	1					

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*****
PEAK FLOW      TIME      MAXIMUM AVERAGE FLOW
+ (CFS)        (HR)      6-HR      24-HR      72-HR      24.00-HR
+ 88.          12.80    (CFS)
                (INCHES)  22.        7.         7.         7.
                (AC-FT)  .970      1.169     1.169     1.169
                CUMULATIVE AREA = .21 SQ MI
    
```

STATION COMB5

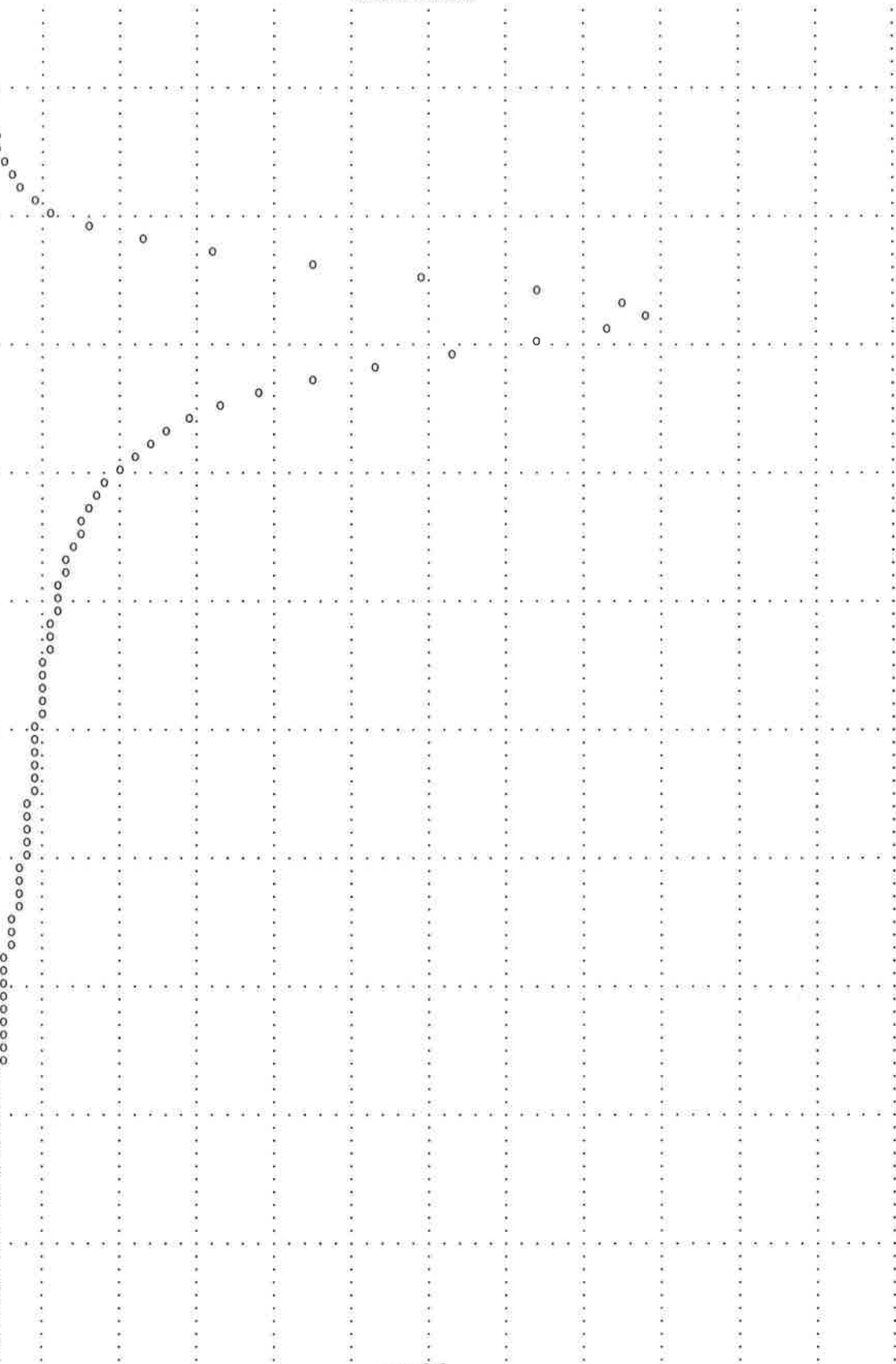
(O) OUTFLOW

CALIFONHYDROLOGY

DAHRMN PER	0.	10.	20.	30.	40.	50.	60.	70.	80.	90.	0.	0.	0.
10000	10												
10006	20												
10012	30												
10018	40												
10024	50												
10030	60												
10036	70												
10042	80												
10048	90												
10054	100												
10100	110												
10106	120												
10112	130												
10118	140												
10124	150												
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10306	320												
10312	330												
10318	340												
10324	350												
10330	360												
10336	370												
10342	380												
10348	390												
10354	400												
10400	410												
10406	420												
10412	430												
10418	440												
10424	450												
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10436	470												
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10748	790												
10754	800												
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10948	990												
10954	1000												
11000	1010												
11006	102.0												
11012	103.0												
11018	104.0												

CALIFONHYDROLOGY

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 12048 209.0
 12054 210.0

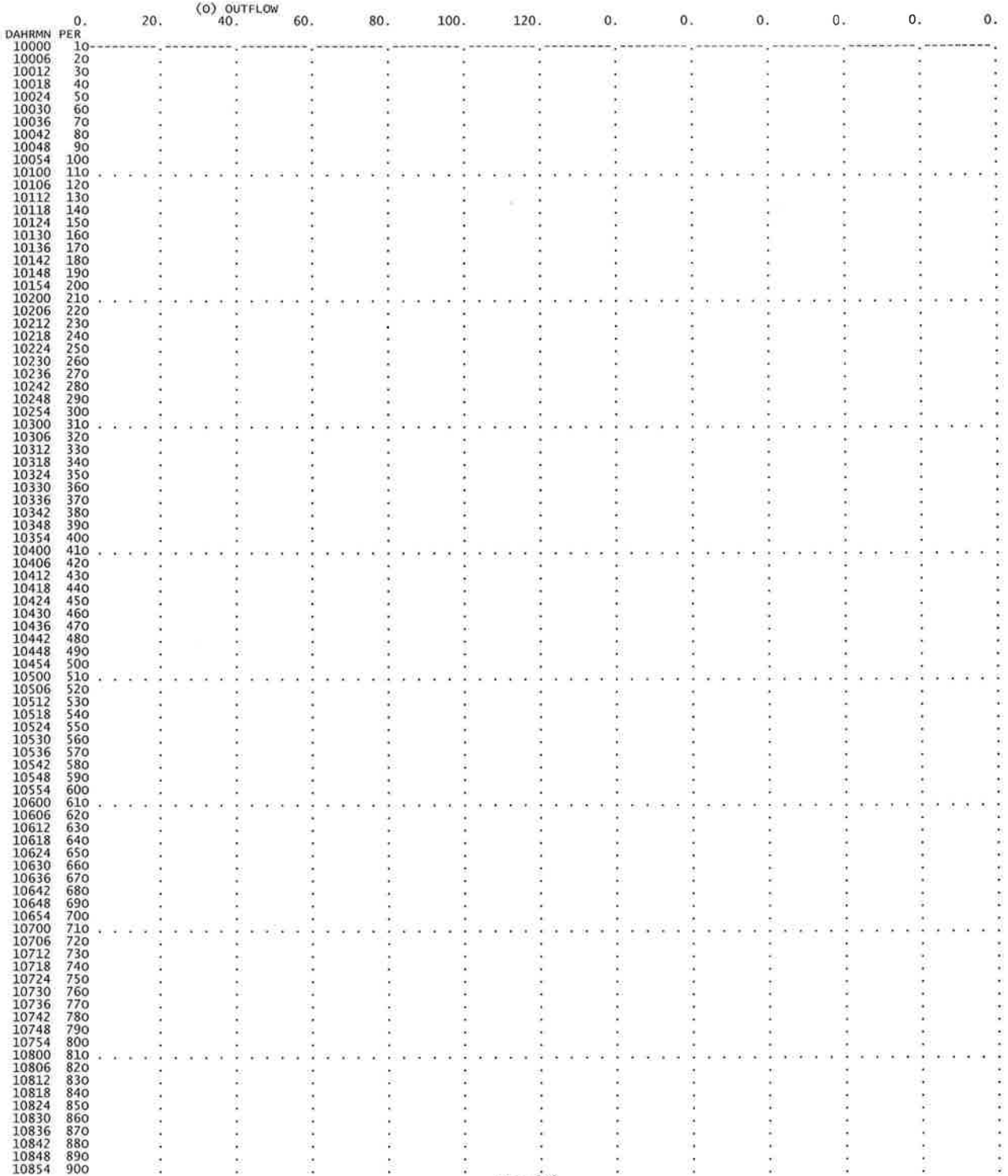


CALIFONHYDROLOGY

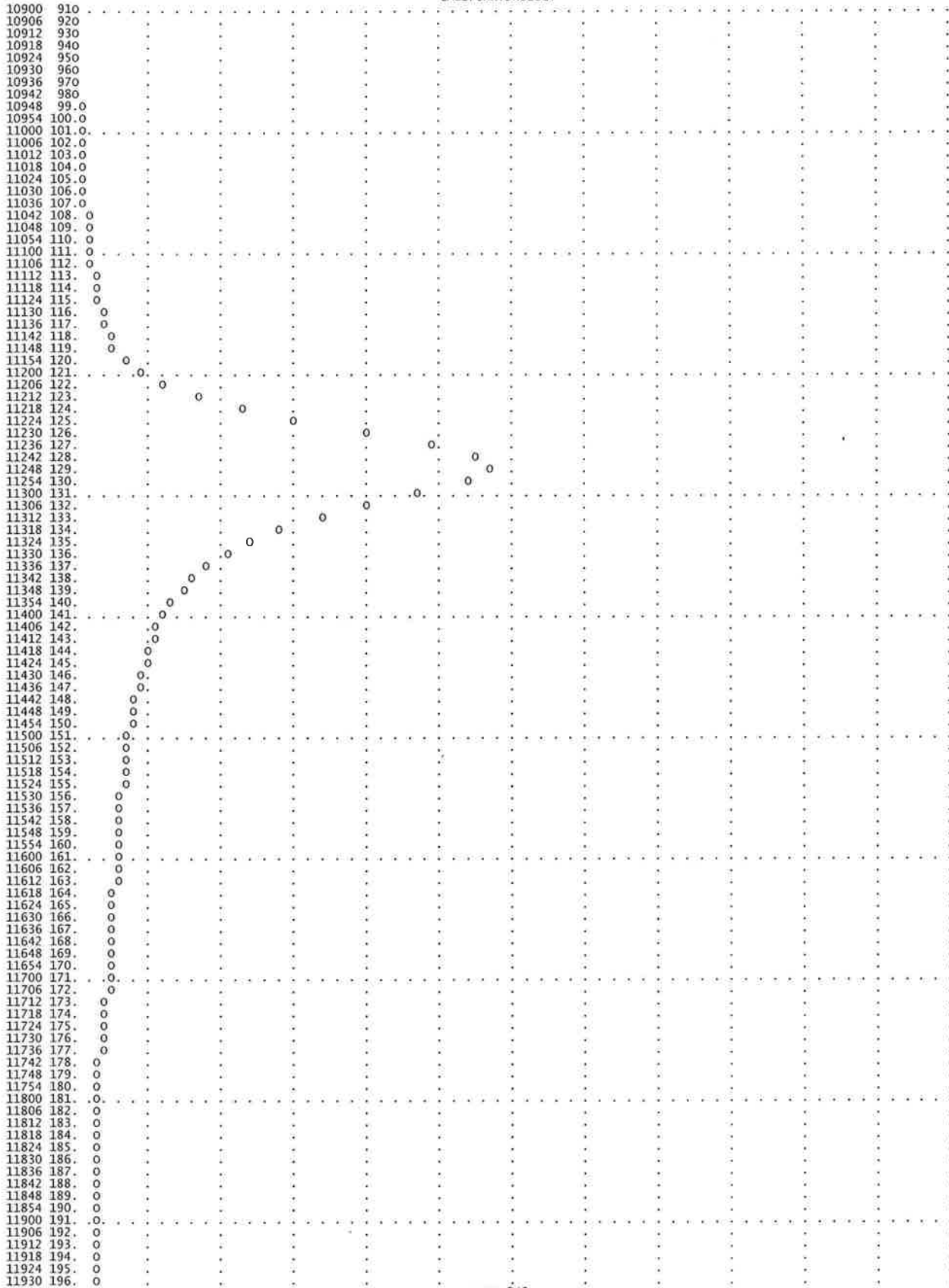
PEAK FLOW	TIME		6-HR	MAXIMUM AVERAGE FLOW	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)	(CFS)					
+ 113.	12.80	(INCHES)	29.	9.	9.	9.	9.
		(AC-FT)	1.247	1.508	1.508	1.508	1.508
			14.	17.	17.	17.	17.
		CUMULATIVE AREA =	.21 SQ MI				

1

STATION COMB5



CALIFONHYDROLOGY



CALIFONHYDROLOGY

11936	197.	0
11942	198.	0
11948	199.	0
11954	200.	0
12000	201.	0
12006	202.	0
12012	203.	0
12018	204.	0
12024	205.	0
12030	206.	0
12036	207.	0
12042	208.	0
12048	209.	0
12054	210.	0
12100	211.	0
12106	212.	0
12112	213.	0
12118	214.	0
12124	215.	0
12130	216.	0
12136	217.	0
12142	218.	0
12148	219.	0
12154	220.	0
12200	221.	0
12206	222.	0
12212	223.	0
12218	224.	0
12224	225.	0
12230	226.	0
12236	227.	0
12242	228.	0
12248	229.	0
12254	230.	0
12300	231.	0
12306	232.	0
12312	233.	0
12318	234.	0
12324	235.	0
12330	236.	0
12336	237.	0
12342	238.	0
12348	239.	0
12354	240.	0
20000	241.	0

1

HYDROGRAPH AT STATION COMB5
 SUM OF 2 HYDROGRAPHS
 PLAN 1, RATIO = .76

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	*	1		0606	62	0.	*	1		1212	123	50.	*	1		1818	184	8.
1		0006	2	0.	*	1		0612	63	0.	*	1		1218	124	66.	*	1		1824	185	7.
1		0012	3	0.	*	1		0618	64	0.	*	1		1224	125	87.	*	1		1830	186	7.
1		0018	4	0.	*	1		0624	65	0.	*	1		1230	126	112.	*	1		1836	187	7.
1		0024	5	0.	*	1		0630	66	0.	*	1		1236	127	136.	*	1		1842	188	7.
1		0030	6	0.	*	1		0636	67	0.	*	1		1242	128	152.	*	1		1848	189	7.
1		0036	7	0.	*	1		0642	68	0.	*	1		1248	129	155.	*	1		1854	190	7.
1		0042	8	0.	*	1		0648	69	0.	*	1		1254	130	145.	*	1		1900	191	7.
1		0048	9	0.	*	1		0654	70	0.	*	1		1300	131	128.	*	1		1906	192	7.
1		0054	10	0.	*	1		0700	71	0.	*	1		1306	132	108.	*	1		1912	193	7.
1		0100	11	0.	*	1		0706	72	0.	*	1		1312	133	90.	*	1		1918	194	7.
1		0106	12	0.	*	1		0712	73	0.	*	1		1318	134	76.	*	1		1924	195	7.
1		0112	13	0.	*	1		0718	74	0.	*	1		1324	135	65.	*	1		1930	196	7.
1		0118	14	0.	*	1		0724	75	0.	*	1		1330	136	56.	*	1		1936	197	6.
1		0124	15	0.	*	1		0730	76	0.	*	1		1336	137	49.	*	1		1942	198	6.
1		0130	16	0.	*	1		0736	77	0.	*	1		1342	138	43.	*	1		1948	199	6.
1		0136	17	0.	*	1		0742	78	0.	*	1		1348	139	39.	*	1		1954	200	6.
1		0142	18	0.	*	1		0748	79	0.	*	1		1354	140	36.	*	1		2000	201	6.
1		0148	19	0.	*	1		0754	80	0.	*	1		1400	141	33.	*	1		2006	202	6.
1		0154	20	0.	*	1		0800	81	0.	*	1		1406	142	30.	*	1		2012	203	6.
1		0200	21	0.	*	1		0806	82	0.	*	1		1412	143	28.	*	1		2018	204	6.
1		0206	22	0.	*	1		0812	83	0.	*	1		1418	144	26.	*	1		2024	205	6.
1		0212	23	0.	*	1		0818	84	0.	*	1		1424	145	25.	*	1		2030	206	6.
1		0218	24	0.	*	1		0824	85	0.	*	1		1430	146	24.	*	1		2036	207	6.
1		0224	25	0.	*	1		0830	86	0.	*	1		1436	147	23.	*	1		2042	208	6.
1		0230	26	0.	*	1		0836	87	1.	*	1		1442	148	22.	*	1		2048	209	6.
1		0236	27	0.	*	1		0842	88	1.	*	1		1448	149	21.	*	1		2054	210	6.
1		0242	28	0.	*	1		0848	89	1.	*	1		1454	150	20.	*	1		2100	211	5.
1		0248	29	0.	*	1		0854	90	1.	*	1		1500	151	20.	*	1		2106	212	6.
1		0254	30	0.	*	1		0900	91	1.	*	1		1506	152	19.	*	1		2112	213	6.
1		0300	31	0.	*	1		0906	92	1.	*	1		1512	153	18.	*	1		2118	214	5.
1		0306	32	0.	*	1		0912	93	1.	*	1		1518	154	18.	*	1		2124	215	5.
1		0312	33	0.	*	1		0918	94	2.	*	1		1524	155	17.	*	1		2130	216	5.
1		0318	34	0.	*	1		0924	95	2.	*	1		1530	156	17.	*	1		2136	217	5.
1		0324	35	0.	*	1		0930	96	2.	*	1		1536	157	16.	*	1		2142	218	5.
1		0330	36	0.	*	1		0936	97	2.	*	1		1542	158	16.	*	1		2148	219	5.
1		0336	37	0.	*	1		0942	98	2.	*	1		1548	159	16.	*	1		2154	220	5.
1		0342	38	0.	*	1		0948	99	3.	*	1		1554	160	15.	*	1		2200	221	5.
1		0348	39	0.	*	1		0954	100	3.	*	1		1600	161	15.	*	1		2206	222	5.
1		0354	40	0.	*	1		1000	101	3.	*	1		1606	162	15.	*	1		2212	223	5.
1		0400	41	0.	*	1		1006	102	4.	*	1		1612	163	15.	*	1		2218	224	5.
1		0406	42	0.	*	1		1012	103	4.	*	1		1618	164	14.	*	1		2224	225	5.
1		0412	43	0.	*	1		1018	104	4.	*	1		1624	165	14.	*	1		2230	226	5.
1		0418	44	0.	*	1		1024	105	5.	*	1		1630	166	14.	*	1		2236	227	5.
1		0424	45	0.	*	1		1030	106	5.	*	1		1636	167	13.	*	1		2242	228	5.
1		0430	46	0.	*	1		1036	107	5.	*	1		1642	168	13.	*	1		2248	229	5.
1		0436	47	0.	*	1		1042	108	6.	*	1		1648	169	13.	*	1		2254	230	5.
1		0442	48	0.	*	1		1048	109	6.	*	1		1654	170	13.	*	1		2300	231	5.
1		0448	49	0.	*	1		1054	110	7.	*	1		1700	171	12.	*	1		2306	232	5.

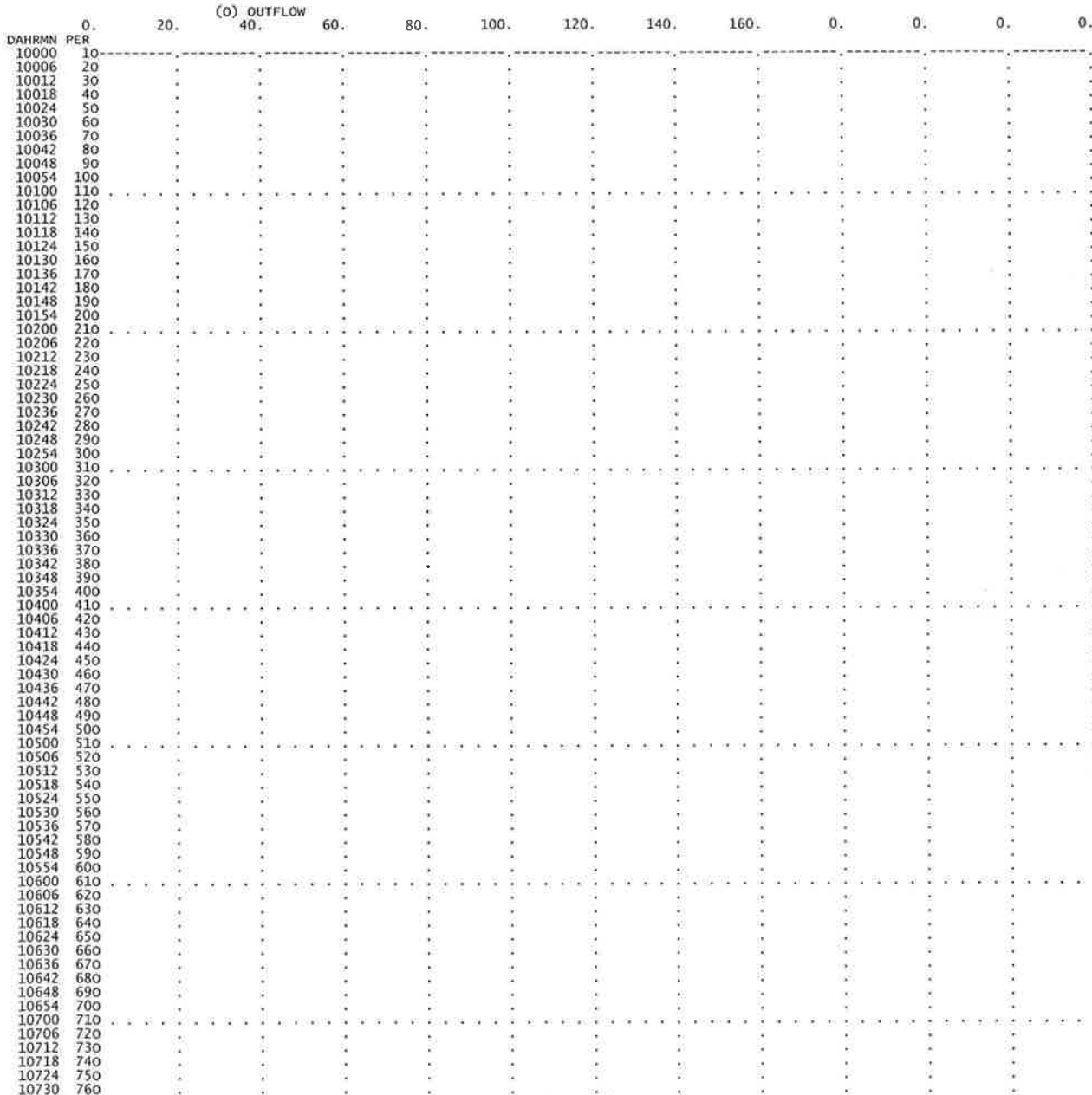
CALIFONHYDROLOGY

1	0454	50	0.	*	1	1100	111	8.	*	1	1706	172	12.	*	1	2312	233	5.
1	0500	51	0.	*	1	1106	112	8.	*	1	1712	173	12.	*	1	2318	234	5.
1	0506	52	0.	*	1	1112	113	9.	*	1	1718	174	11.	*	1	2324	235	5.
1	0512	53	0.	*	1	1118	114	10.	*	1	1724	175	11.	*	1	2330	236	4.
1	0518	54	0.	*	1	1124	115	11.	*	1	1730	176	10.	*	1	2336	237	4.
1	0524	55	0.	*	1	1130	116	12.	*	1	1736	177	9.	*	1	2342	238	4.
1	0530	56	0.	*	1	1136	117	13.	*	1	1742	178	9.	*	1	2348	239	4.
1	0536	57	0.	*	1	1142	118	15.	*	1	1748	179	8.	*	2	0000	241	4.
1	0542	58	0.	*	1	1148	119	17.	*	1	1754	180	8.	*	*	*	*	*
1	0548	59	0.	*	1	1154	120	21.	*	1	1800	181	8.	*	*	*	*	*
1	0554	60	0.	*	1	1200	121	27.	*	1	1806	182	8.	*	*	*	*	*
1	0600	61	0.	*	1	1206	122	37.	*	1	1812	183	8.	*	*	*	*	*

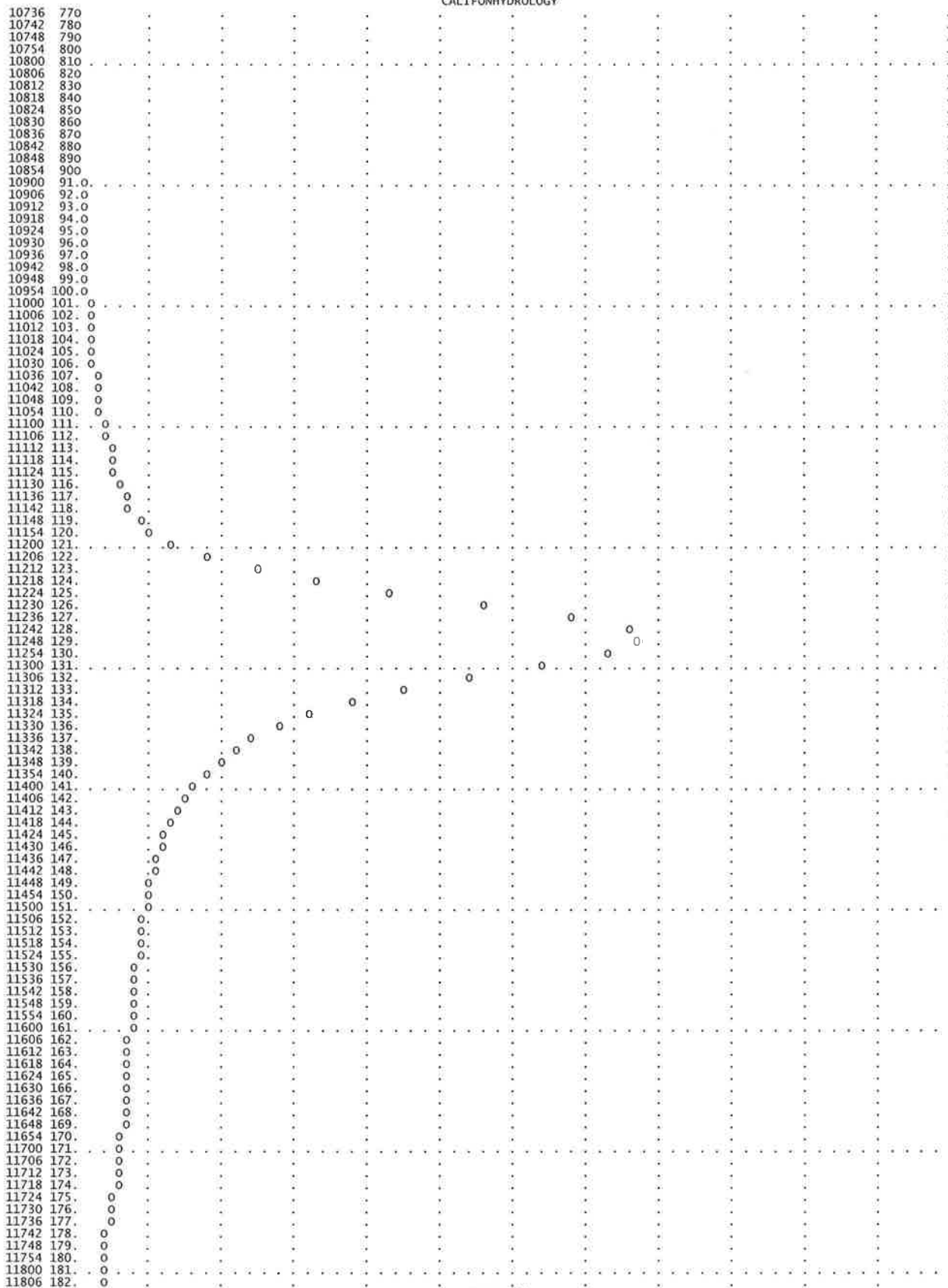
PEAK FLOW (CFS)	TIME (HR)	6-HR (CFS)	MAXIMUM 24-HR	AVERAGE 72-HR	24.00-HR
155.	12.80	39.	12.	12.	12.
		(INCHES) 19.	2.069	2.069	2.069
		(AC-FT)	24.	24.	24.

CUMULATIVE AREA = .21 SQ MI

1 STATION COMB5



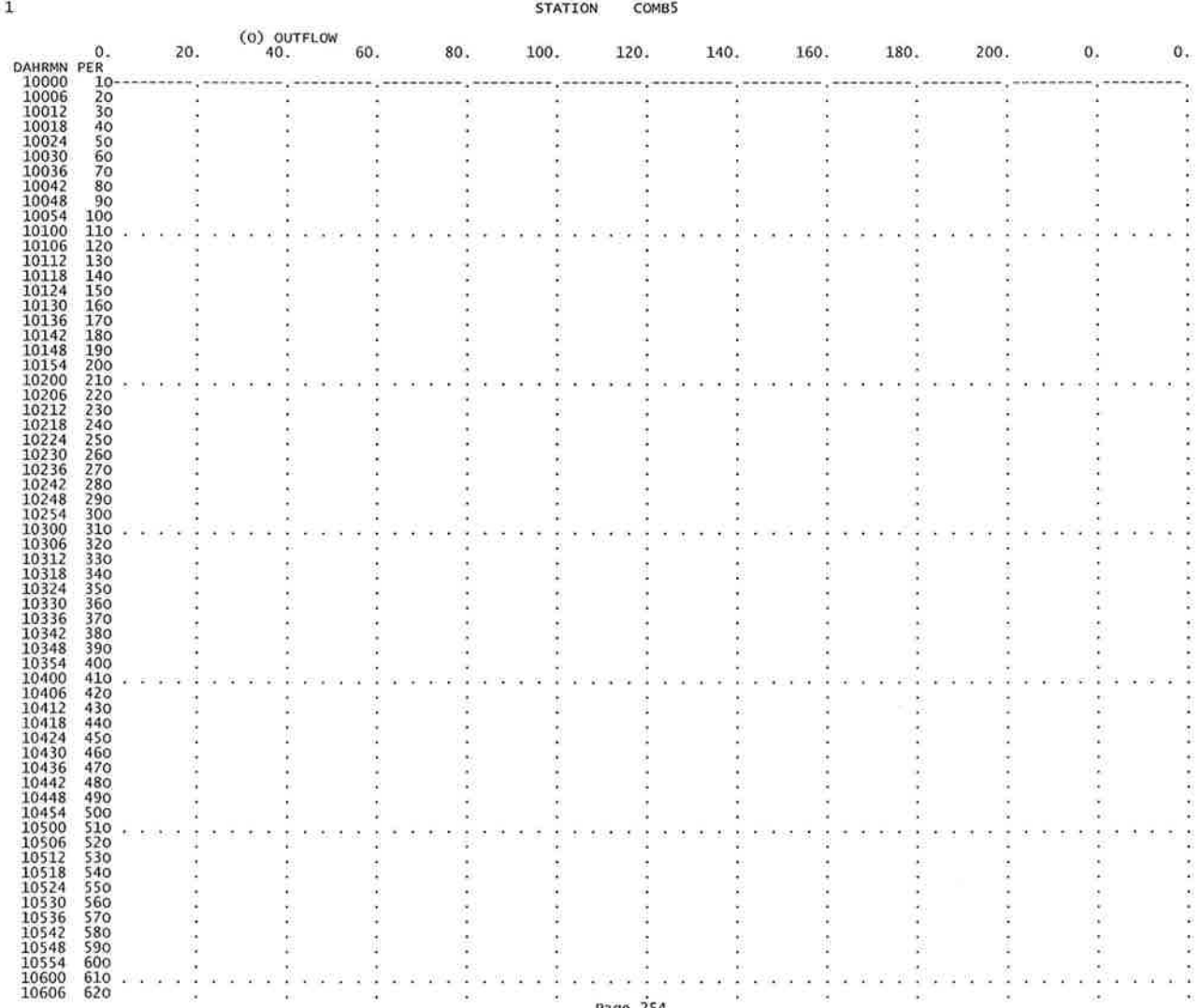
CALIFONHYDROLOGY



10736 770
 10742 780
 10748 790
 10754 800
 10800 810
 10806 820
 10812 830
 10818 840
 10824 850
 10830 860
 10836 870
 10842 880
 10848 890
 10854 900
 10900 91.0
 10906 92.0
 10912 93.0
 10918 94.0
 10924 95.0
 10930 96.0
 10936 97.0
 10942 98.0
 10948 99.0
 10954 100.0
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 11712 173.0
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 11754 180.0
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 11806 182.0

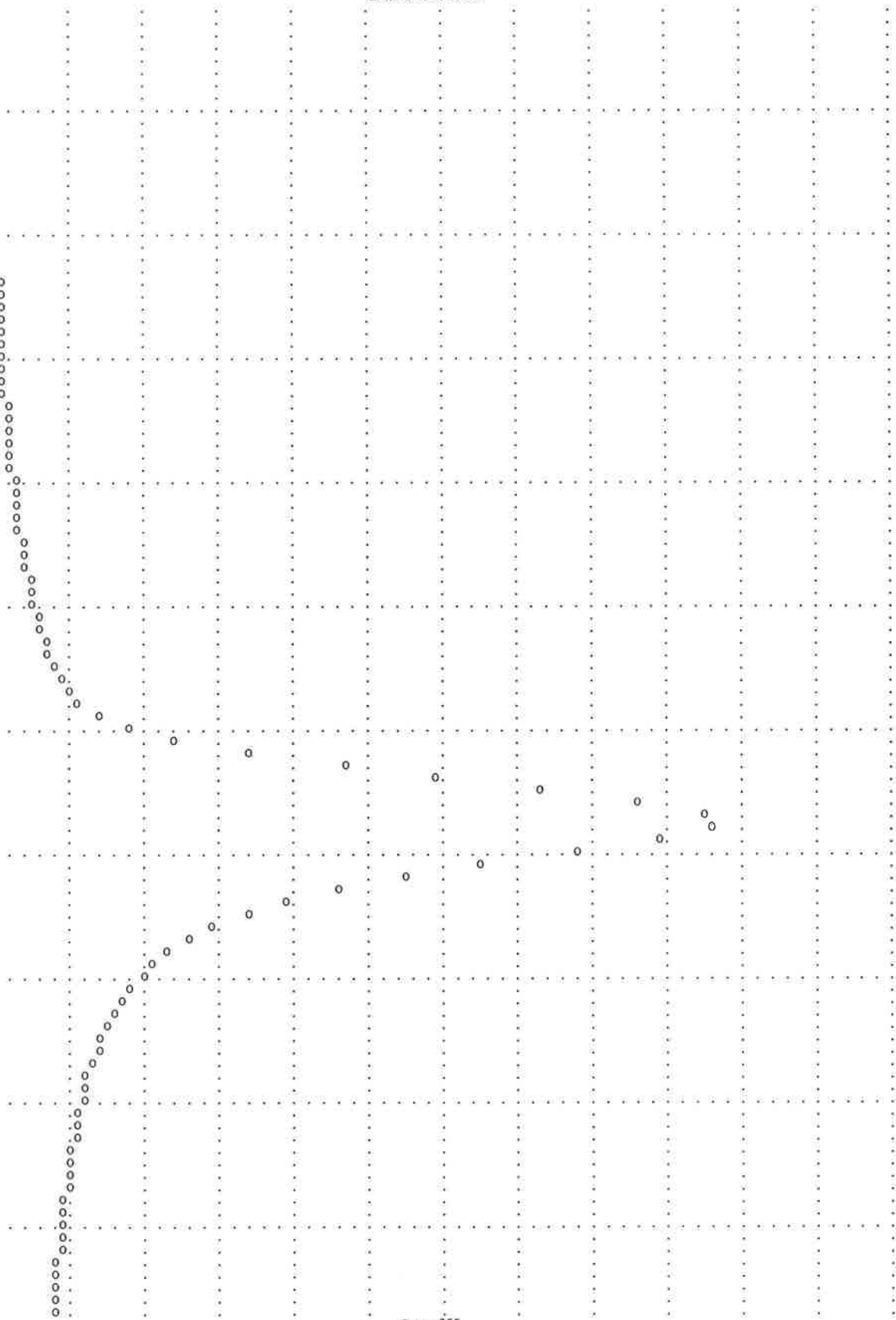
CALIFONHYDROLOGY																		
1	0330	36	0.	*	1	0936	97	4.	*	1	1542	158	19.	*	1	2148	219	6.
1	0336	37	0.	*	1	0942	98	4.	*	1	1548	159	19.	*	1	2154	220	6.
1	0342	38	0.	*	1	0948	99	4.	*	1	1554	160	18.	*	1	2200	221	6.
1	0348	39	0.	*	1	0954	100	5.	*	1	1600	161	18.	*	1	2206	222	6.
1	0354	40	0.	*	1	1000	101	5.	*	1	1606	162	18.	*	1	2212	223	6.
1	0400	41	0.	*	1	1006	102	6.	*	1	1612	163	17.	*	1	2218	224	6.
1	0406	42	0.	*	1	1012	103	6.	*	1	1618	164	17.	*	1	2224	225	6.
1	0412	43	0.	*	1	1018	104	6.	*	1	1624	165	17.	*	1	2230	226	6.
1	0418	44	0.	*	1	1024	105	7.	*	1	1630	166	16.	*	1	2236	227	6.
1	0424	45	0.	*	1	1030	106	7.	*	1	1636	167	16.	*	1	2242	228	6.
1	0430	46	0.	*	1	1036	107	8.	*	1	1642	168	16.	*	1	2248	229	6.
1	0436	47	0.	*	1	1042	108	8.	*	1	1648	169	15.	*	1	2254	230	6.
1	0442	48	0.	*	1	1048	109	9.	*	1	1654	170	15.	*	1	2300	231	6.
1	0448	49	0.	*	1	1054	110	10.	*	1	1700	171	15.	*	1	2306	232	6.
1	0454	50	0.	*	1	1100	111	11.	*	1	1706	172	14.	*	1	2312	233	5.
1	0500	51	0.	*	1	1106	112	12.	*	1	1712	173	14.	*	1	2318	234	5.
1	0506	52	0.	*	1	1112	113	13.	*	1	1718	174	13.	*	1	2324	235	5.
1	0512	53	0.	*	1	1118	114	14.	*	1	1724	175	13.	*	1	2330	236	5.
1	0518	54	0.	*	1	1124	115	15.	*	1	1730	176	12.	*	1	2336	237	5.
1	0524	55	0.	*	1	1130	116	16.	*	1	1736	177	11.	*	1	2342	238	5.
1	0530	56	0.	*	1	1136	117	18.	*	1	1742	178	10.	*	1	2348	239	5.
1	0536	57	0.	*	1	1142	118	20.	*	1	1748	179	10.	*	1	2354	240	5.
1	0542	58	0.	*	1	1148	119	23.	*	1	1754	180	10.	*	2	0000	241	5.
1	0548	59	0.	*	1	1154	120	28.	*	1	1800	181	10.	*				5.
1	0554	60	0.	*	1	1200	121	35.	*	1	1806	182	9.	*				5.
1	0600	61	0.	*	1	1206	122	48.	*	1	1812	183	9.	*				5.

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	24.00-HR
191.	12.80	49.	15.	15.	15.
		2.108	2.573	2.573	2.573
		(INCHES)	29.	29.	29.
		(AC-FT)			
CUMULATIVE AREA =		.21 SQ MI			



CALIFONHYDROLOGY

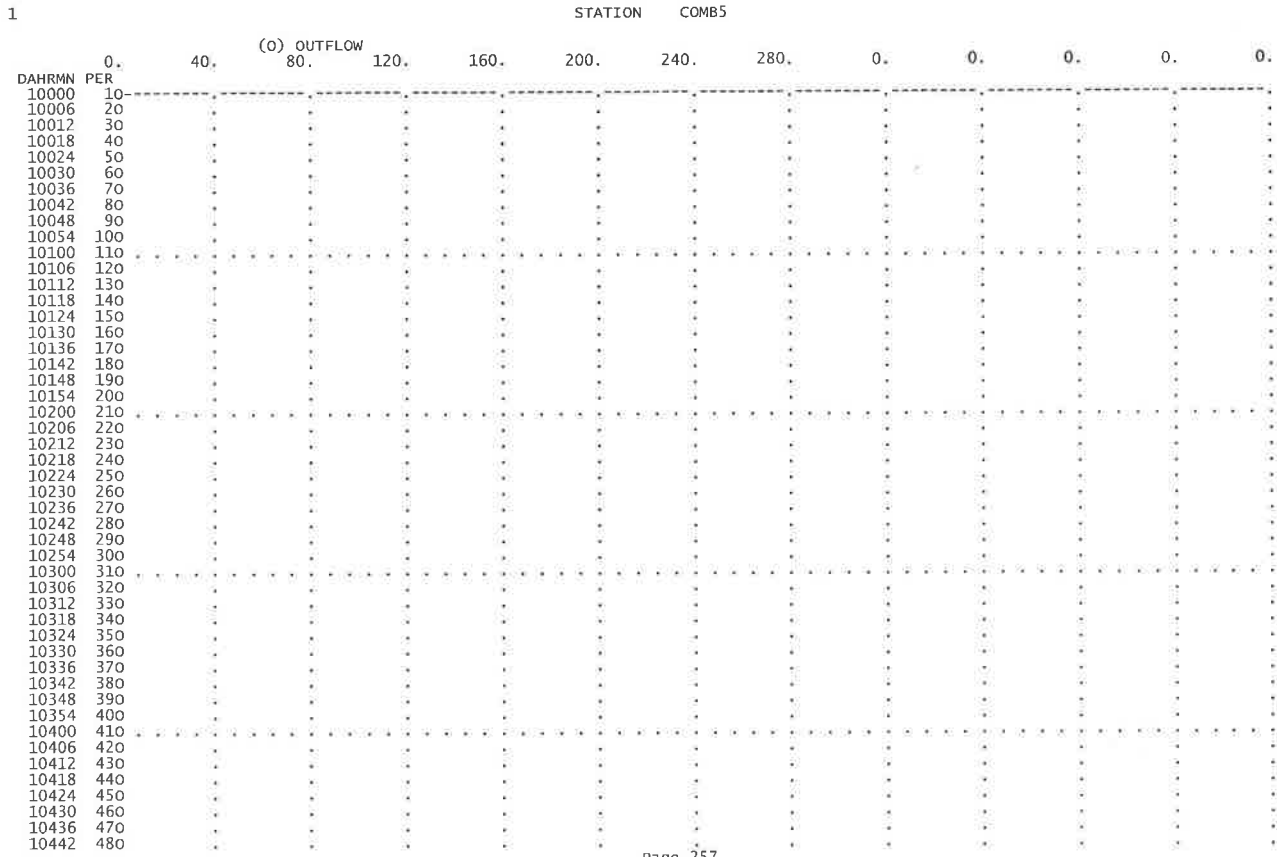
10612 630
 10618 640
 10624 650
 10630 660
 10636 670
 10642 680
 10648 690
 10654 700
 10700 710
 10706 720
 10712 730
 10718 740
 10724 750
 10730 760
 10736 770
 10742 780
 10748 790
 10754 800
 10800 810
 10806 820
 10812 830
 10818 840
 10824 85.0
 10830 86.0
 10836 87.0
 10842 88.0
 10848 89.0
 10854 90.0
 10900 91.0
 10906 92.0
 10912 93.0
 10918 94.0
 10924 95.0
 10930 96.0
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 10942 98.0
 10948 99.0
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 11030 106.0
 11036 107.0
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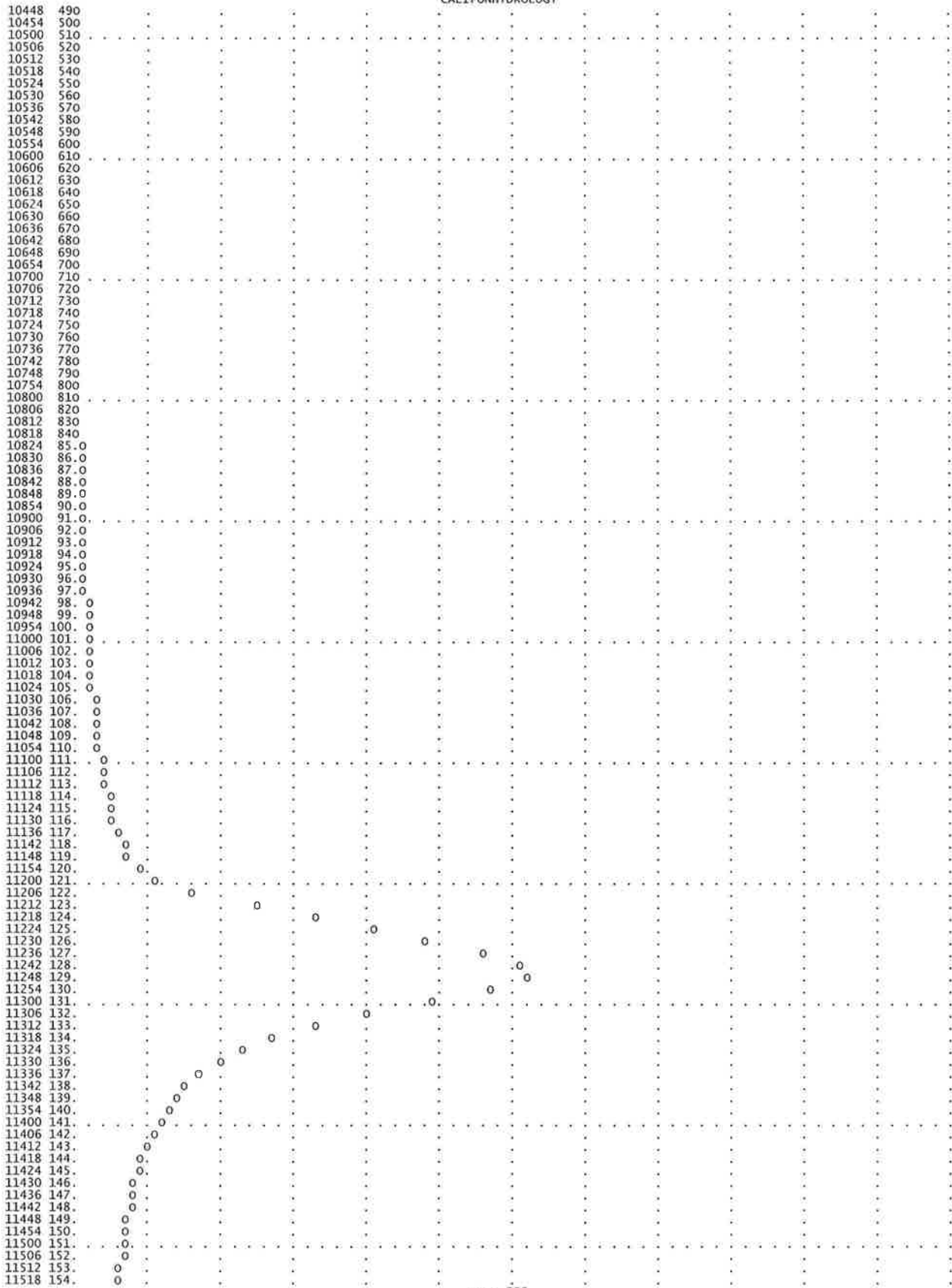
CALIFONHYDROLOGY

1	0206	22	0.	*	1	0812	83	2.	*	1	1418	144	37.	*	1	2024	205	8.
1	0212	23	0.	*	1	0818	84	2.	*	1	1424	145	35.	*	1	2030	206	8.
1	0218	24	0.	*	1	0824	85	2.	*	1	1430	146	33.	*	1	2036	207	8.
1	0224	25	0.	*	1	0830	86	2.	*	1	1436	147	32.	*	1	2042	208	8.
1	0230	26	0.	*	1	0836	87	3.	*	1	1442	148	31.	*	1	2048	209	8.
1	0236	27	0.	*	1	0842	88	3.	*	1	1448	149	29.	*	1	2054	210	8.
1	0242	28	0.	*	1	0848	89	3.	*	1	1454	150	28.	*	1	2100	211	8.
1	0248	29	0.	*	1	0854	90	3.	*	1	1500	151	27.	*	1	2106	212	8.
1	0254	30	0.	*	1	0900	91	4.	*	1	1506	152	27.	*	1	2112	213	8.
1	0300	31	0.	*	1	0906	92	4.	*	1	1512	153	26.	*	1	2118	214	8.
1	0306	32	0.	*	1	0912	93	4.	*	1	1518	154	25.	*	1	2124	215	7.
1	0312	33	0.	*	1	0918	94	5.	*	1	1524	155	24.	*	1	2130	216	7.
1	0318	34	0.	*	1	0924	95	5.	*	1	1530	156	24.	*	1	2136	217	7.
1	0324	35	0.	*	1	0930	96	5.	*	1	1536	157	23.	*	1	2142	218	7.
1	0330	36	0.	*	1	0936	97	6.	*	1	1542	158	23.	*	1	2148	219	7.
1	0336	37	0.	*	1	0942	98	6.	*	1	1548	159	22.	*	1	2154	220	7.
1	0342	38	0.	*	1	0948	99	7.	*	1	1554	160	22.	*	1	2200	221	7.
1	0348	39	0.	*	1	0954	100	7.	*	1	1600	161	21.	*	1	2206	222	7.
1	0354	40	0.	*	1	1000	101	7.	*	1	1606	162	21.	*	1	2212	223	7.
1	0400	41	0.	*	1	1006	102	8.	*	1	1612	163	20.	*	1	2218	224	7.
1	0406	42	0.	*	1	1012	103	9.	*	1	1618	164	20.	*	1	2224	225	7.
1	0412	43	0.	*	1	1018	104	9.	*	1	1624	165	20.	*	1	2230	226	7.
1	0418	44	0.	*	1	1024	105	10.	*	1	1630	166	19.	*	1	2236	227	7.
1	0424	45	0.	*	1	1030	106	10.	*	1	1636	167	19.	*	1	2242	228	7.
1	0430	46	0.	*	1	1036	107	11.	*	1	1642	168	18.	*	1	2248	229	7.
1	0436	47	0.	*	1	1042	108	12.	*	1	1648	169	18.	*	1	2254	230	7.
1	0442	48	0.	*	1	1048	109	13.	*	1	1654	170	18.	*	1	2300	231	7.
1	0448	49	0.	*	1	1054	110	13.	*	1	1700	171	17.	*	1	2306	232	6.
1	0454	50	0.	*	1	1100	111	15.	*	1	1706	172	17.	*	1	2312	233	6.
1	0500	51	0.	*	1	1106	112	16.	*	1	1712	173	16.	*	1	2318	234	6.
1	0506	52	0.	*	1	1112	113	17.	*	1	1718	174	15.	*	1	2324	235	6.
1	0512	53	0.	*	1	1118	114	18.	*	1	1724	175	15.	*	1	2330	236	6.
1	0518	54	0.	*	1	1124	115	20.	*	1	1730	176	14.	*	1	2336	237	6.
1	0524	55	0.	*	1	1130	116	22.	*	1	1736	177	13.	*	1	2342	238	6.
1	0530	56	0.	*	1	1136	117	24.	*	1	1742	178	12.	*	1	2348	239	6.
1	0536	57	0.	*	1	1142	118	26.	*	1	1748	179	12.	*	1	2354	240	6.
1	0542	58	0.	*	1	1148	119	30.	*	1	1754	180	12.	*	2	0000	241	6.
1	0548	59	0.	*	1	1154	120	36.	*	1	1800	181	11.	*				
1	0554	60	0.	*	1	1200	121	45.	*	1	1806	182	11.	*				
1	0600	61	0.	*	1	1206	122	62.	*	1	1812	183	11.	*				

PEAK FLOW	TIME	6-HR	MAXIMUM	AVERAGE	24-HR	72-HR	24.00-HR
+ (CFS)	(HR)	(CFS)					
+ 246.	12.80	61.	19.	19.	19.		
		(INCHES)	3.224	3.224	3.224		
		(AC-FT)	30.	37.	37.		
		CUMULATIVE AREA =		.21 SQ MI			



CALIFONHYDROLOGY



CALIFONHYDROLOGY

+ 2 COMBINED AT	COMB1	.05	1	FLOW TIME	17. 12.70	24. 12.70	37. 12.70	48. 12.60	61. 12.60
+ HYDROGRAPH AT	SUB C	.00	1	FLOW TIME	2. 12.10	3. 12.10	4. 12.10	4. 12.10	5. 12.10
+ HYDROGRAPH AT	SUB D	.01	1	FLOW TIME	5. 12.20	7. 12.20	10. 12.20	13. 12.20	15. 12.20
+ 3 COMBINED AT	COMB2	.06	1	FLOW TIME	19. 12.60	27. 12.60	41. 12.60	53. 12.60	68. 12.60
+ ROUTED TO	C2TOE	.06	1	FLOW TIME	19. 12.80	27. 12.80	41. 12.80	53. 12.80	68. 12.80
+ HYDROGRAPH AT	SUB E	.02	1	FLOW TIME	15. 12.20	21. 12.20	31. 12.20	39. 12.20	49. 12.20
+ 2 COMBINED AT	COMB3	.08	1	FLOW TIME	26. 12.30	37. 12.30	55. 12.30	70. 12.30	88. 12.30
+ DIVERSION TO	DIVERS	.08	1	FLOW TIME	26. 12.30	37. 12.30	55. 12.30	60. 12.20	60. 12.10
+ HYDROGRAPH AT	Div	.08	1	FLOW TIME	0. .00	0. .00	0. .00	10. 12.30	28. 12.30
+ HYDROGRAPH AT	SUB A	.11	1	FLOW TIME	83. 12.50	106. 12.50	145. 12.50	177. 12.50	213. 12.50
+ ROUTED TO	A TO F	.11	1	FLOW TIME	83. 12.80	106. 12.80	145. 12.80	177. 12.80	213. 12.80
+ HYDROGRAPH AT	SUB F	.02	1	FLOW TIME	12. 12.40	17. 12.30	26. 12.30	33. 12.30	42. 12.30
+ 2 COMBINED AT	COMB4	.13	1	FLOW TIME	88. 12.80	113. 12.80	155. 12.80	189. 12.80	228. 12.80
+ 2 COMBINED AT	COMB5	.21	1	FLOW TIME	88. 12.80	113. 12.80	155. 12.80	191. 12.80	246. 12.80

*** NORMAL END OF HEC-1 ***

Appendix D

HEC-RAS Step Backwater Computations Existing Conditions

CalifonFloodplainSt

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

X X XXXXXX XXXX XXXX XX XXXX
X X X X X X X X X X
X X X X X X X X X X
XXXXXXX XXXX X XXX XXXX XXXX XXXX
X X X X X X X X X X
X X X X X X X X X X
X X XXXXXX XXXX X X XXXX

PROJECT DATA
Project Title: CalifonFloodplainStudy
Project File : CalifonFloodplainSt.prj
Run Date and Time: 8/14/2012 10:51:27 PM

Project in English units

PLAN DATA

Plan Title: CalifonFloodplainStudy
Plan File : C:\HEC-RAS_revised Aug 2012\CalifonFloodplainSt.p01

Geometry Title: CalifonStreamGeometry
Geometry File : C:\HEC-RAS_revised Aug 2012\CalifonFloodplainSt.g01

Flow Title : CalifonTribFlows
Flow File : C:\HEC-RAS_revised Aug 2012\CalifonFloodplainSt.f01

Plan Summary Information:

Number of: Cross Sections = 44 Multiple Openings = 0
Culverts = 4 Inline Structures = 0
Bridges = 0 Lateral Structures = 0

Computational Information

Water surface calculation tolerance = 0.01
Critical depth calculation tolerance = 0.01
Maximum number of iterations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: CalifonTribFlows
Flow File : C:\HEC-RAS_revised Aug 2012\CalifonFloodplainSt.f01

Flow Data (cfs)

Table with 8 columns: River, Reach, RS, 5-year flow, 10-year flow, 25-year flow, 50-year flow, 100-year flow. Rows include Unnamed_Trib East_Reach, West_Reach, and Downstream_Reach for various flow durations.

Boundary Conditions

Table with 4 columns: River, Reach, Profile, Upstream, Downstream. Rows show boundary conditions for Unnamed_Trib at 5-year, 10-year, 25-year, 50-year, and 100-year flow durations.

GEOMETRY DATA

Geometry Title: CalifonStreamGeometry
Geometry File : C:\HEC-RAS_revised Aug 2012\CalifonFloodplainSt.g01

Reach Connection Table

Table with 4 columns: River, Reach, Upstream Boundary, Downstream Boundary. Shows connections for Unnamed_Trib East_Reach, West_Reach, and Downstream_Reach to Junction1.

JUNCTION INFORMATION

Name: Junction1

Description: Flow confluence of East & west Reaches
Energy computation Method

Length across Junction	Tributary	Reach	Length	Angle
River	River			
Unnamed_Trib	East_Reach	to Unnamed_Trib	Downstream_Reach	168
Unnamed_Trib	West_Reach	to Unnamed_Trib	Downstream_Reach	110

CROSS SECTION

RIVER: Unnamed_Trib
REACH: East_Reach RS: 1292.07

INPUT

Description:
Station Elevation Data num= 50

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	608.1	4.59	607.47	9.17	606.94	13.76	606.28	18.34	605.23
22.93	602.98	27.52	602.25	32.01	602.39	36.5	602.44	40.99	601.93
45.48	600.95	49.97	600.31	54.46	599.64	58.95	598.76	63.44	597.84
67.93	597.31	72.63	597.25	77.33	596.86	82.03	596.41	86.73	595.96
91.43	595.63	96.13	595.88	98.21	596.41	99.3	596.69	100.82	597.08
105.52	598.1	110.22	599.05	114.92	599.57	119.62	599.75	124.32	600.11
129.02	600.29	134	600.18	138.98	600.3	143.95	600.53	148.93	600.56
153.9	600.53	158.88	601.45	163.85	602.75	168.83	603.93	173.61	604.63
178.39	604.86	183.17	604.95	187.95	605.19	192.73	605.63	197.51	606.09
201.82	606.52	206.14	606.97	210.45	607.22	214.77	607.52	219.08	608.04

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	77.33	.035	99.3	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

77.33	99.3	62.53	53.97	43.69	.1	.3
-------	------	-------	-------	-------	----	----

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 596.46	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.19	* wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 596.26	* Reach Len. (ft)	* 62.53	* 53.97	* 43.69
* Crit W.S. (ft)	* 596.26	* Flow Area (sq ft)	*	* 5.37	*
* E.G. Slope (ft/ft)	* 0.025349	* Area (sq ft)	*	* 5.37	*
* Q Total (cfs)	* 19.00	* Flow (cfs)	*	* 19.00	*
* Top width (ft)	* 14.08	* Top width (ft)	*	* 14.08	*
* Vel Total (ft/s)	* 3.54	* Avg. Vel. (ft/s)	*	* 3.54	*
* Max Chl Dpth (ft)	* 0.63	* Hydr. Depth (ft)	*	* 0.38	*
* Conv. Total (cfs)	* 119.3	* Conv. (cfs)	*	* 119.3	*
* Length wtd. (ft)	* 53.97	* Wetted Per. (ft)	*	* 14.16	*
* Min Ch El (ft)	* 595.63	* Shear (lb/sq ft)	*	* 0.60	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 219.08	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.33	* Cum Volume (acre-ft)	* 0.11	* 0.14	* 0.02
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.05	* 0.32	*

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 596.60	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.23	* wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 596.38	* Reach Len. (ft)	* 62.53	* 53.97	* 43.69
* Crit W.S. (ft)	* 596.38	* Flow Area (sq ft)	*	* 7.03	*
* E.G. Slope (ft/ft)	* 0.024024	* Area (sq ft)	*	* 7.03	*
* Q Total (cfs)	* 27.00	* Flow (cfs)	*	* 27.00	*
* Top width (ft)	* 15.69	* Top width (ft)	*	* 15.69	*
* Vel Total (ft/s)	* 3.84	* Avg. Vel. (ft/s)	*	* 3.84	*
* Max Chl Dpth (ft)	* 0.75	* Hydr. Depth (ft)	*	* 0.45	*
* Conv. Total (cfs)	* 174.2	* Conv. (cfs)	*	* 174.2	*
* Length wtd. (ft)	* 53.97	* Wetted Per. (ft)	*	* 15.79	*
* Min Ch El (ft)	* 595.63	* Shear (lb/sq ft)	*	* 0.67	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 219.08	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.27	* Cum Volume (acre-ft)	* 0.13	* 0.18	* 0.02
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.06	* 0.35	*

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 596.81	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.27	* wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 596.54	* Reach Len. (ft)	* 62.53	* 53.97	* 43.69
* Crit W.S. (ft)	* 596.54	* Flow Area (sq ft)	*	* 9.80	*
* E.G. Slope (ft/ft)	* 0.022130	* Area (sq ft)	*	* 9.80	*
* Q Total (cfs)	* 41.00	* Flow (cfs)	*	* 41.00	*
* Top width (ft)	* 18.04	* Top width (ft)	*	* 18.04	*
* Vel Total (ft/s)	* 4.18	* Avg. Vel. (ft/s)	*	* 4.18	*
* Max Chl Dpth (ft)	* 0.91	* Hydr. Depth (ft)	*	* 0.54	*
* Conv. Total (cfs)	* 275.6	* Conv. (cfs)	*	* 275.6	*
* Length wtd. (ft)	* 53.97	* Wetted Per. (ft)	*	* 18.17	*
* Min Ch El (ft)	* 595.63	* Shear (lb/sq ft)	*	* 0.75	*

```

* Alpha * 1.00 * Stream Power (lb/ft s) * 219.08 * 0.00 * 0.00 *
* Frctn Loss (ft) * 1.18 * Cum Volume (acre-ft) * 0.15 * 0.24 * 0.02 *
* C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.09 * 0.41 * 0.00 *
*****

```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

```

CROSS SECTION OUTPUT Profile #50-year flow
*****
* E.G. Elev (ft) * 596.96 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.31 * wt. n-Val. * 0.035 * 0.035 *
* W.S. Elev (ft) * 596.65 * Reach Len. (ft) * 62.53 * 53.97 * 43.69 *
* Crit W.S. (ft) * 596.65 * Flow Area (sq ft) * 11.89 * 11.89 *
* E.G. Slope (ft/ft) * 0.021708 * Area (sq ft) * 53.00 * 53.00 *
* Q Total (cfs) * 53.00 * Flow (cfs) * 19.64 * 19.64 *
* Top Width (ft) * 19.64 * Top Width (ft) * 4.46 * 4.46 *
* Vel Total (ft/s) * 4.46 * Avg. Vel. (ft/s) * 0.61 * 0.61 *
* Max Chl Dpth (ft) * 1.02 * Hydr. Depth (ft) * 359.7 * 359.7 *
* Conv. Total (cfs) * 53.97 * Conv. (cfs) * 19.78 * 19.78 *
* Length wtd. (ft) * 53.97 * Wetted Per. (ft) * 0.81 * 0.81 *
* Min Ch El (ft) * 595.63 * Shear (lb/sq ft) * 219.08 * 0.00 * 0.00 *
* Alpha * 1.00 * Stream Power (lb/ft s) * 0.18 * 0.31 * 0.03 *
* Frctn Loss (ft) * 1.15 * Cum Volume (acre-ft) * 0.10 * 0.48 * 0.02 *
* C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.10 * 0.48 * 0.02 *
*****

```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

```

CROSS SECTION OUTPUT Profile #100-year flow
*****
* E.G. Elev (ft) * 597.12 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.35 * wt. n-Val. * 0.035 * 0.035 *
* W.S. Elev (ft) * 596.77 * Reach Len. (ft) * 62.53 * 53.97 * 43.69 *
* Crit W.S. (ft) * 596.77 * Flow Area (sq ft) * 14.36 * 14.36 *
* E.G. Slope (ft/ft) * 0.020915 * Area (sq ft) * 68.00 * 68.00 *
* Q Total (cfs) * 68.00 * Flow (cfs) * 21.05 * 21.05 *
* Top Width (ft) * 21.37 * Top Width (ft) * 4.73 * 4.73 *
* Vel Total (ft/s) * 4.73 * Avg. Vel. (ft/s) * 0.68 * 0.68 *
* Max Chl Dpth (ft) * 1.14 * Hydr. Depth (ft) * 470.2 * 470.2 *
* Conv. Total (cfs) * 53.97 * Conv. (cfs) * 21.21 * 21.21 *
* Length wtd. (ft) * 53.97 * Wetted Per. (ft) * 0.88 * 0.88 *
* Min Ch El (ft) * 595.63 * Shear (lb/sq ft) * 219.08 * 0.00 * 0.00 *
* Alpha * 1.00 * Stream Power (lb/ft s) * 0.20 * 0.38 * 0.03 *
* Frctn Loss (ft) * 1.11 * Cum Volume (acre-ft) * 0.11 * 0.52 * 0.04 *
* C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.11 * 0.52 * 0.04 *
*****

```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: East_Reach RS: 1238.105

INPUT

Description:
Station Elevation Data num= 47

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	598.76	4.85	598.2	9.69	597.62	14.54	597.04	19.38	596.46
24.23	595.84	29.07	595.43	33.92	595.04	38.77	594.63	43.61	594.25
48.46	593.99	53.3	593.82	58.15	593.32	62.99	592.63	67.84	591.88
72.68	591.46	77.52	591.32	82.35	591.21	87.18	591.01	92.01	590.33
96.84	589.02	97.02	589.02	98.38	589.01	101.67	588.98	106.5	589.71
111.34	590.26	116.17	590.86	121	591.39	125.83	591.91	130.71	592.58
135.59	593.32	140.46	594.42	145.34	595.87	150.22	596.94	155.1	597.73
159.97	597.93	164.85	597.89	169.6	598.15	174.35	598.36	179.09	598.32
183.84	598.62	188.59	599.85	192.42	600.93	196.25	601.82	200.08	602.61
204.62	603.27	209.16	603.73						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	92.01	.035	111.34	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
92.01 111.34 127.59 128.29 125.21 .1 .3

```

CROSS SECTION OUTPUT Profile #5-year flow
*****
* E.G. Elev (ft) * 589.84 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.22 * wt. n-Val. * 0.035 * 0.035 *
* W.S. Elev (ft) * 589.62 * Reach Len. (ft) * 127.59 * 128.29 * 125.21 *
* Crit W.S. (ft) * 589.62 * Flow Area (sq ft) * 5.00 * 5.00 *
* E.G. Slope (ft/ft) * 0.023982 * Area (sq ft) * 19.00 * 19.00 *
* Q Total (cfs) * 19.00 * Flow (cfs) * 11.28 * 11.28 *
* Top Width (ft) * 11.28 * Top Width (ft) *

```

CalifonFloodplainSt

* Vel Total (ft/s)	* 3.80	* Avg. Vel. (ft/s)	* 3.80		
* Max Chl Dpth (ft)	* 0.64	* Hydr. Depth (ft)	* 0.44		
* Conv. Total (cfs)	* 122.7	* Conv. (cfs)	* 122.7		
* Length Wtd. (ft)	* 128.29	* Wetted Per. (ft)	* 11.40		
* Min Ch El (ft)	* 588.98	* Shear (lb/sq ft)	* 0.66		
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 209.16	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.14	* Cum Volume (acre-ft)	* 0.11	* 0.13	* 0.02
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.05	* 0.30	

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 590.01	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.26	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 589.75	* Reach Len. (ft)	* 127.59	* 128.29	* 125.21
* Crit W.S. (ft)	* 589.75	* Flow Area (sq ft)		* 6.57	
* E.G. Slope (ft/ft)	* 0.022948	* Area (sq ft)		* 6.57	
* Q Total (cfs)	* 27.00	* Flow (cfs)		* 27.00	
* Top width (ft)	* 12.71	* Top width (ft)		* 12.71	
* Vel Total (ft/s)	* 4.11	* Avg. Vel. (ft/s)		* 4.11	
* Max Chl Dpth (ft)	* 0.77	* Hydr. Depth (ft)		* 0.52	
* Conv. Total (cfs)	* 178.2	* Conv. (cfs)		* 178.2	
* Length Wtd. (ft)	* 128.29	* Wetted Per. (ft)		* 12.87	
* Min Ch El (ft)	* 588.98	* Shear (lb/sq ft)		* 0.73	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 209.16	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.98	* Cum Volume (acre-ft)	* 0.13	* 0.17	* 0.02
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.06	* 0.34	

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 590.25	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.31	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 589.94	* Reach Len. (ft)	* 127.59	* 128.29	* 125.21
* Crit W.S. (ft)	* 589.94	* Flow Area (sq ft)		* 9.18	
* E.G. Slope (ft/ft)	* 0.021755	* Area (sq ft)		* 9.18	
* Q Total (cfs)	* 41.00	* Flow (cfs)		* 41.00	
* Top width (ft)	* 15.06	* Top width (ft)		* 15.06	
* Vel Total (ft/s)	* 4.46	* Avg. Vel. (ft/s)		* 4.46	
* Max Chl Dpth (ft)	* 0.96	* Hydr. Depth (ft)		* 0.61	
* Conv. Total (cfs)	* 278.0	* Conv. (cfs)		* 278.0	
* Length Wtd. (ft)	* 128.29	* Wetted Per. (ft)		* 15.25	
* Min Ch El (ft)	* 588.98	* Shear (lb/sq ft)		* 0.82	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 209.16	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.84	* Cum Volume (acre-ft)	* 0.15	* 0.23	* 0.02
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.09	* 0.39	* 0.00

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 590.41	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.34	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 590.07	* Reach Len. (ft)	* 127.59	* 128.29	* 125.21
* Crit W.S. (ft)	* 590.07	* Flow Area (sq ft)		* 11.28	
* E.G. Slope (ft/ft)	* 0.021055	* Area (sq ft)		* 11.28	
* Q Total (cfs)	* 53.00	* Flow (cfs)		* 53.00	
* Top width (ft)	* 16.71	* Top width (ft)		* 16.71	
* Vel Total (ft/s)	* 4.70	* Avg. Vel. (ft/s)		* 4.70	
* Max Chl Dpth (ft)	* 1.09	* Hydr. Depth (ft)		* 0.67	
* Conv. Total (cfs)	* 365.3	* Conv. (cfs)		* 365.3	
* Length Wtd. (ft)	* 128.29	* Wetted Per. (ft)		* 16.92	
* Min Ch El (ft)	* 588.98	* Shear (lb/sq ft)		* 0.88	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 209.16	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.75	* Cum Volume (acre-ft)	* 0.18	* 0.29	* 0.03
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.10	* 0.46	* 0.02

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 590.59	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.38	* Wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 590.21	* Reach Len. (ft)	* 127.59	* 128.29	* 125.21
* Crit W.S. (ft)	* 590.21	* Flow Area (sq ft)		* 13.79	
* E.G. Slope (ft/ft)	* 0.020285	* Area (sq ft)		* 13.79	

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* Q Total (cfs)	* 68.00	* Flow (cfs)	* 68.00	*	*
* Top Width (ft)	* 18.49	* Top Width (ft)	* 18.49	*	*
* Vel Total (ft/s)	* 4.93	* Avg. vel. (ft/s)	* 4.93	*	*
* Max Chl Dpth (ft)	* 1.23	* Hydr. Depth (ft)	* 0.75	*	*
* Conv. Total (cfs)	* 477.4	* Conv. (cfs)	* 477.4	*	*
* Length Wtd. (ft)	* 128.29	* Wetted Per. (ft)	* 18.74	*	*
* Min Ch El (ft)	* 588.98	* Shear (lb/sq ft)	* 0.93	*	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 209.16	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.65	* Cum Volume (acre-ft)	* 0.20	* 0.37	* 0.03
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.11	* 0.50	* 0.04

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: East_Reach RS: 1109.812

INPUT

Description:

Station	Elevation	Data	num=	54	Sta	Elev	Sta	Elev	Sta	Elev
0	587.31	4.81	586.97	9.63	586.61	14.44	586.2	19.25	585.67	
24.06	585.17	28.88	584.57	33.69	584.1	38.5	583.51	43.32	583.01	
48.13	582.45	52.94	581.74	57.82	581.33	62.7	581.2	67.58	581.12	
72.46	581.09	77.34	580.88	82.22	580.53	87.1	580.2	91.98	579.91	
96.45	580.06	100.92	580.14	105.39	580.21	109.86	579.92	111.08	579.83	
112.35	579.73	114.32	579.58	118.79	578.73	123.26	578.89	127.73	579.18	
132.2	579.71	136.73	580.49	141.27	581.02	145.8	581.68	150.33	582.26	
154.87	582.58	159.4	582.92	163.94	583.12	168.14	583.09	172.34	583.4	
176.55	583.74	180.75	584.04	184.95	584.38	189.15	584.64	193.52	585.05	
197.89	585.74	202.26	586.07	206.62	586.28	210.99	586.6	215.36	586.93	
219.32	587.23	223.28	587.76	227.25	588.48	231.21	589.22			

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	111.08	.035	132.2	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	111.08	132.2		112.3	110.99	.1	.3

CROSS SECTION OUTPUT Profile #5-year flow

E.G. Elev (ft)	* 579.57	Element	* Left OB	Channel	* Right OB
* Vel Head (ft)	* 0.19	* wt. n-Val.	* 112.30	* 0.035	* 110.93
* W.S. Elev (ft)	* 579.38	* Reach Len. (ft)	* 112.30	* 110.99	* 110.93
* Crit W.S. (ft)	* 579.38	* Flow Area (sq ft)	* 5.39	* 5.39	* 5.39
* E.G. slope (ft/ft)	* 0.024918	* Area (sq ft)	* 19.00	* 19.00	* 19.00
* Q Total (cfs)	* 19.00	* Flow (cfs)	* 14.07	* 14.07	* 14.07
* Top Width (ft)	* 14.07	* Top width (ft)	* 3.52	* 3.52	* 3.52
* Vel Total (ft/s)	* 3.52	* Avg. vel. (ft/s)	* 0.65	* 0.38	* 0.38
* Max Chl Dpth (ft)	* 0.65	* Hydr. Depth (ft)	* 120.4	* 120.4	* 120.4
* Conv. Total (cfs)	* 120.4	* Conv. (cfs)	* 14.15	* 14.15	* 14.15
* Length Wtd. (ft)	* 110.99	* wetted Per. (ft)	* 578.73	* 0.59	* 0.59
* Min Ch El (ft)	* 578.73	* Shear (lb/sq ft)	* 1.00	* 0.00	* 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 231.21	* 0.12	* 0.02
* Frctn Loss (ft)	* 2.71	* Cum Volume (acre-ft)	* 0.11	* 0.12	* 0.02
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.05	* 0.27	* 0.27

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

E.G. Elev (ft)	* 579.72	Element	* Left OB	Channel	* Right OB
* Vel Head (ft)	* 0.23	* wt. n-Val.	* 112.30	* 0.035	* 110.93
* W.S. Elev (ft)	* 579.49	* Reach Len. (ft)	* 112.30	* 110.99	* 110.93
* Crit W.S. (ft)	* 579.49	* Flow Area (sq ft)	* 7.07	* 7.07	* 7.07
* E.G. slope (ft/ft)	* 0.023509	* Area (sq ft)	* 27.00	* 27.00	* 27.00
* Q Total (cfs)	* 27.00	* Flow (cfs)	* 15.61	* 15.61	* 15.61
* Top Width (ft)	* 15.61	* Top width (ft)	* 3.82	* 3.82	* 3.82
* Vel Total (ft/s)	* 3.82	* Avg. vel. (ft/s)	* 0.76	* 0.45	* 0.45
* Max Chl Dpth (ft)	* 0.76	* Hydr. Depth (ft)	* 176.1	* 176.1	* 176.1
* Conv. Total (cfs)	* 176.1	* Conv. (cfs)	* 110.99	* 15.71	* 15.71
* Length Wtd. (ft)	* 110.99	* wetted Per. (ft)	* 578.73	* 0.66	* 0.66
* Min Ch El (ft)	* 578.73	* Shear (lb/sq ft)	* 1.00	* 0.00	* 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 231.21	* 0.15	* 0.02
* Frctn Loss (ft)	* 2.57	* Cum Volume (acre-ft)	* 0.13	* 0.15	* 0.02
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.06	* 0.29	* 0.29

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

CalifonFloodplainSt

* E.G. Elev (ft)	* 579.93	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.27	* wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 579.66	* Reach Len. (ft)	* 112.30	* 110.99	* 110.93
* Crit W.S. (ft)	* 579.66	* Flow Area (sq ft)	*	* 9.84	*
* E.G. Slope (ft/ft)	* 0.022493	* Area (sq ft)	*	* 9.84	*
* Q Total (cfs)	* 41.00	* Flow (cfs)	*	* 41.00	*
* Top width (ft)	* 18.49	* Top width (ft)	*	* 18.49	*
* Vel Total (ft/s)	* 4.16	* Avg. Vel. (ft/s)	*	* 4.16	*
* Max Chl Dpth (ft)	* 0.93	* Hydr. Depth (ft)	*	* 0.53	*
* Conv. Total (cfs)	* 273.4	* Conv. (cfs)	*	* 273.4	*
* Length wtd. (ft)	* 110.99	* wetted Per. (ft)	*	* 18.61	*
* Min Ch El (ft)	* 578.73	* Shear (lb/sq ft)	*	* 0.74	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 231.21	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.43	* Cum Volume (acre-ft)	* 0.15	* 0.20	* 0.02
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.09	* 0.34	* 0.00

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 580.07	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.30	* wt. n-Val.	*	* 0.035	* 0.080
* W.S. Elev (ft)	* 579.77	* Reach Len. (ft)	* 112.30	* 110.99	* 110.93
* Crit W.S. (ft)	* 579.77	* Flow Area (sq ft)	*	* 12.04	* 0.01
* E.G. Slope (ft/ft)	* 0.021847	* Area (sq ft)	*	* 12.04	* 0.01
* Q Total (cfs)	* 53.00	* Flow (cfs)	*	* 53.00	* 0.00
* Top width (ft)	* 20.73	* Top width (ft)	*	* 20.38	* 0.36
* Vel Total (ft/s)	* 4.40	* Avg. Vel. (ft/s)	*	* 4.40	* 0.27
* Max Chl Dpth (ft)	* 1.04	* Hydr. Depth (ft)	*	* 0.59	* 0.03
* Conv. Total (cfs)	* 358.6	* Conv. (cfs)	*	* 358.6	* 0.0
* Length wtd. (ft)	* 110.99	* wetted Per. (ft)	*	* 20.51	* 0.36
* Min Ch El (ft)	* 578.73	* Shear (lb/sq ft)	*	* 0.80	* 0.04
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 231.21	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.30	* Cum Volume (acre-ft)	* 0.18	* 0.26	* 0.03
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.10	* 0.40	* 0.02

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 580.23	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.35	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 579.88	* Reach Len. (ft)	* 112.30	* 110.99	* 110.93
* Crit W.S. (ft)	* 579.88	* Flow Area (sq ft)	* 0.02	* 14.33	* 0.08
* E.G. Slope (ft/ft)	* 0.021089	* Area (sq ft)	* 0.02	* 14.33	* 0.08
* Q Total (cfs)	* 68.00	* Flow (cfs)	* 0.00	* 67.95	* 0.04
* Top width (ft)	* 22.80	* Top width (ft)	* 0.69	* 21.12	* 0.99
* Vel Total (ft/s)	* 4.71	* Avg. Vel. (ft/s)	* 0.23	* 4.74	* 0.52
* Max Chl Dpth (ft)	* 1.15	* Hydr. Depth (ft)	* 0.03	* 0.68	* 0.09
* Conv. Total (cfs)	* 468.2	* Conv. (cfs)	* 0.0	* 467.9	* 0.3
* Length wtd. (ft)	* 110.99	* wetted Per. (ft)	* 0.69	* 21.25	* 1.01
* Min Ch El (ft)	* 578.73	* Shear (lb/sq ft)	* 0.03	* 0.89	* 0.11
* Alpha	* 1.01	* Stream Power (lb/ft s)	* 231.21	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.21	* Cum Volume (acre-ft)	* 0.20	* 0.33	* 0.03
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.11	* 0.44	* 0.04

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: East_Reach RS: 998.8233

INPUT

Description:
 Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	572.88	4.56	572.52	9.12	572.16	13.67	571.5	18.23	570.88
22.79	570.42	27.35	569.87	31.91	569.83	36.47	569.67	41.16	569.48
45.85	569.23	50.54	569.17	55.23	569.21	59.92	569.41	64.61	569.54
69.3	569.89	74	570.15	78.69	570.24	83.38	570.28	88.07	570.36
92.76	570.57	97.45	570.68	102.14	570.18	106.73	569.57	111.33	568.79
113.75	568.53	115.2	568.38	115.92	568.3	120.51	567.33	125.1	567.07
129.62	568.04	134.14	569.12	138.66	569.98	143.18	570.72	147.7	571.39
152.35	571.89	157	572.47	161.65	572.98	165.83	573.33	170.01	573.82
174.19	574.31	178.37	574.81	182.55	575.2	186.51	575.98	190.47	576.55
194.42	576.96								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	113.75	.035	129.62	.08

CalifonFloodplainSt

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 113.75 129.62 106.16 103.3 106.29 .1 .3

CROSS SECTION OUTPUT Profile #5-year flow

	*	*	*	*	*	*
E.G. Elev (ft)	568.07	Element	Left OB	Channel	Right OB	*
Vel Head (ft)	0.24	Wt. n-Val.	*	0.035	*	*
W.S. Elev (ft)	567.83	Reach Len. (ft)	106.16	103.30	106.29	*
Crit W.S. (ft)	567.83	Flow Area (sq ft)	*	4.88	*	*
E.G. Slope (ft/ft)	0.023931	Area (sq ft)	*	19.00	*	*
Q Total (cfs)	19.00	Flow (cfs)	*	10.54	*	*
Top Width (ft)	10.54	Top width (ft)	*	3.89	*	*
Vel Total (ft/s)	3.89	Avg. Vel. (ft/s)	*	0.46	*	*
Max Chl Dpth (ft)	0.76	Hydr. Depth (ft)	*	122.8	*	*
Conv. Total (cfs)	122.8	Conv. (cfs)	*	10.68	*	*
Length Wtd. (ft)	103.30	Wetted Per. (ft)	*	0.68	*	*
Min Ch El (ft)	567.07	Shear (lb/sq ft)	*	0.00	0.00	*
Alpha	1.00	Stream Power (lb/ft s)	194.42	0.10	0.02	*
Frctn Loss (ft)	2.49	Cum Volume (acre-ft)	0.11	0.24	*	*
C & E Loss (ft)	0.00	Cum SA (acres)	0.05	*	*	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

	*	*	*	*	*	*
E.G. Elev (ft)	568.25	Element	Left OB	Channel	Right OB	*
Vel Head (ft)	0.28	Wt. n-Val.	*	0.035	*	*
W.S. Elev (ft)	567.97	Reach Len. (ft)	106.16	103.30	106.29	*
Crit W.S. (ft)	567.97	Flow Area (sq ft)	*	6.41	*	*
E.G. Slope (ft/ft)	0.022731	Area (sq ft)	*	6.41	*	*
Q Total (cfs)	27.00	Flow (cfs)	*	11.83	*	*
Top Width (ft)	11.83	Top width (ft)	*	4.21	*	*
Vel Total (ft/s)	4.21	Avg. Vel. (ft/s)	*	0.54	*	*
Max Chl Dpth (ft)	0.90	Hydr. Depth (ft)	*	179.1	*	*
Conv. Total (cfs)	179.1	Conv. (cfs)	*	12.00	*	*
Length Wtd. (ft)	103.30	Wetted Per. (ft)	*	0.76	*	*
Min Ch El (ft)	567.07	Shear (lb/sq ft)	*	0.00	0.00	*
Alpha	1.00	Stream Power (lb/ft s)	194.42	0.13	0.02	*
Frctn Loss (ft)	2.37	Cum Volume (acre-ft)	0.13	0.26	*	*
C & E Loss (ft)	0.01	Cum SA (acres)	0.06	*	*	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

	*	*	*	*	*	*
E.G. Elev (ft)	568.50	Element	Left OB	Channel	Right OB	*
Vel Head (ft)	0.34	Wt. n-Val.	*	0.035	0.080	*
W.S. Elev (ft)	568.16	Reach Len. (ft)	106.16	103.30	106.29	*
Crit W.S. (ft)	568.16	Flow Area (sq ft)	*	8.73	0.03	*
E.G. Slope (ft/ft)	0.021261	Area (sq ft)	*	8.73	0.03	*
Q Total (cfs)	41.00	Flow (cfs)	*	40.99	0.01	*
Top Width (ft)	13.51	Top width (ft)	*	13.02	0.49	*
Vel Total (ft/s)	4.68	Avg. Vel. (ft/s)	*	4.69	0.40	*
Max Chl Dpth (ft)	1.09	Hydr. Depth (ft)	*	0.67	0.06	*
Conv. Total (cfs)	281.2	Conv. (cfs)	*	281.1	0.1	*
Length Wtd. (ft)	103.30	Wetted Per. (ft)	*	13.22	0.50	*
Min Ch El (ft)	567.07	Shear (lb/sq ft)	*	0.88	0.08	*
Alpha	1.01	Stream Power (lb/ft s)	194.42	0.00	0.00	*
Frctn Loss (ft)	2.22	Cum Volume (acre-ft)	0.15	0.18	0.02	*
C & E Loss (ft)	0.01	Cum SA (acres)	0.09	0.30	0.00	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

	*	*	*	*	*	*
E.G. Elev (ft)	568.68	Element	Left OB	Channel	Right OB	*
Vel Head (ft)	0.39	Wt. n-Val.	*	0.035	0.080	*
W.S. Elev (ft)	568.30	Reach Len. (ft)	106.16	103.30	106.29	*
Crit W.S. (ft)	568.30	Flow Area (sq ft)	*	10.62	0.14	*
E.G. Slope (ft/ft)	0.019742	Area (sq ft)	*	10.62	0.14	*
Q Total (cfs)	53.00	Flow (cfs)	*	52.91	0.09	*
Top Width (ft)	14.77	Top width (ft)	*	13.69	1.08	*
Vel Total (ft/s)	4.93	Avg. Vel. (ft/s)	*	4.98	0.65	*
Max Chl Dpth (ft)	1.23	Hydr. Depth (ft)	*	0.78	0.13	*
Conv. Total (cfs)	377.2	Conv. (cfs)	*	376.6	0.6	*
Length Wtd. (ft)	103.30	Wetted Per. (ft)	*	13.90	1.11	*
Min Ch El (ft)	567.07	Shear (lb/sq ft)	*	0.94	0.15	*
Alpha	1.02	Stream Power (lb/ft s)	194.42	0.00	0.00	*
Frctn Loss (ft)	2.08	Cum Volume (acre-ft)	0.18	0.23	0.03	*
C & E Loss (ft)	0.01	Cum SA (acres)	0.10	0.36	0.02	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

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Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

Element	Left OB	Channel	Right OB
E.G. Elev (ft)	568.88		
Vel Head (ft)	0.42	0.035	0.080
W.S. Elev (ft)	568.47	103.30	106.29
Crit W.S. (ft)	568.47	13.03	0.38
E.G. Slope (ft/ft)	0.018783	13.03	0.38
Q Total (cfs)	68.00	67.66	0.34
Top width (ft)	17.03	15.25	1.78
Vel Total (ft/s)	5.07	5.19	0.89
Max Chl Dpth (ft)	1.40	0.85	0.21
Conv. Total (cfs)	496.2	493.7	2.5
Length wtd. (ft)	103.31	15.47	1.83
Min Ch El (ft)	567.07	0.99	0.24
Alpha	1.04	0.00	0.00
Frctn Loss (ft)	2.00	0.20	0.03
C & E Loss (ft)	0.01	0.10	0.04

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: East_Reach RS: 895.5209

INPUT

Description: Station Elevation Data num= 42

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	563.58	4.3	563.38	8.59	563.15	12.89	562.86	17.19	562.46
21.48	562.06	25.78	561.72	30.08	561.31	34.94	561.13	39.81	560.8
44.68	560.47	49.55	560.09	54.21	559.75	58.88	558.61	63.54	557.62
67.43	557.71	68.21	557.73	69.18	557.87	72.87	558.43	77.54	559.45
81.3	560.48	85.06	561.13	88.82	561.28	92.58	561.41	97.18	561.51
101.77	561.65	106.36	561.75	110.95	561.74	115.54	561.93	120.14	561.98
125.06	561.85	129.99	561.89	134.92	561.92	139.85	562.03	144.78	562.13
149.7	562.18	154.63	562.36	159.57	563.1	164.5	563.67	169.43	563.79
174.37	564.34	179.3	565.23						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	54.21	.035	77.54	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

54.21	77.54	101.5	98.35	98.55	.1	.3
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CROSS SECTION OUTPUT Profile #5-year flow

Element	Left OB	Channel	Right OB
E.G. Elev (ft)	558.52		
Vel Head (ft)	0.22	0.035	
W.S. Elev (ft)	558.29	101.50	98.55
Crit W.S. (ft)	558.29	5.04	
E.G. Slope (ft/ft)	0.024370	5.04	
Q Total (cfs)	19.00	19.00	
Top width (ft)	11.61	11.61	
Vel Total (ft/s)	3.77	3.77	
Max Chl Dpth (ft)	0.67	0.43	
Conv. Total (cfs)	121.7	121.7	
Length wtd. (ft)	98.35	11.72	
Min Ch El (ft)	557.62	0.65	
Alpha	1.00	0.00	0.00
Frctn Loss (ft)	2.41	0.11	0.09
C & E Loss (ft)	0.01	0.05	0.21

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

Element	Left OB	Channel	Right OB
E.G. Elev (ft)	558.68		
Vel Head (ft)	0.26	0.035	
W.S. Elev (ft)	558.42	101.50	98.55
Crit W.S. (ft)	558.42	6.62	
E.G. Slope (ft/ft)	0.023193	6.62	
Q Total (cfs)	27.00	27.00	
Top width (ft)	13.05	13.05	
Vel Total (ft/s)	4.08	4.08	
Max Chl Dpth (ft)	0.80	0.51	
Conv. Total (cfs)	177.3	177.3	
Length wtd. (ft)	98.35	13.19	
Min Ch El (ft)	557.62	0.73	
Alpha	1.00	0.00	0.00
Frctn Loss (ft)	2.26	0.13	0.12
C & E Loss (ft)	0.01	0.06	0.23

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 warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

```
*****
* E.G. Elev (ft)      * 558.92 * Element      * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.32  * Wt. n-Val.  *         * 0.035  *         *
* W.S. Elev (ft)     * 558.60 * Reach Len. (ft) * 101.50 * 98.35  * 98.55  *
* Crit W.S. (ft)     * 558.60 * Flow Area (sq ft) *         * 9.10   *         *
* E.G. Slope (ft/ft) * 0.021752 * Area (sq ft) *         * 9.10   *         *
* Q Total (cfs)      * 41.00  * Flow (cfs)    *         * 41.00  *         *
* Top Width (ft)     * 14.73  * Top Width (ft) *         * 14.73  *         *
* Vel Total (ft/s)   * 4.51   * Avg. Vel. (ft/s) *         * 4.51   *         *
* Max Chl Dpth (ft) * 0.98   * Hydr. Depth (ft) *         * 0.62   *         *
* Conv. Total (cfs)  * 278.0  * Conv. (cfs)    *         * 278.0  *         *
* Length wtd. (ft)  * 98.35  * Wetted Per. (ft) *         * 14.90  *         *
* Min Ch El (ft)    * 557.62 * Shear (lb/sq ft) *         * 0.83   *         *
* Alpha             * 1.00   * Stream Power (lb/ft s) * 179.30 * 0.00   * 0.00   *
* Frctn Loss (ft)  * 2.16  * Cum Volume (acre-ft) *         * 0.15   * 0.16   * 0.02   *
* C & E Loss (ft)  * 0.01  * Cum SA (acres) *         * 0.09   * 0.26   *         *
*****
```

 warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

```
*****
* E.G. Elev (ft)      * 559.09 * Element      * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.35  * Wt. n-Val.  *         * 0.035  *         *
* W.S. Elev (ft)     * 558.73 * Reach Len. (ft) * 101.50 * 98.35  * 98.55  *
* Crit W.S. (ft)     * 558.73 * Flow Area (sq ft) *         * 11.14  *         *
* E.G. Slope (ft/ft) * 0.020524 * Area (sq ft) *         * 11.14  *         *
* Q Total (cfs)      * 53.00  * Flow (cfs)    *         * 53.00  *         *
* Top Width (ft)     * 15.89  * Top Width (ft) *         * 15.89  *         *
* Vel Total (ft/s)   * 4.76   * Avg. Vel. (ft/s) *         * 4.76   *         *
* Max Chl Dpth (ft) * 1.11   * Hydr. Depth (ft) *         * 0.70   *         *
* Conv. Total (cfs)  * 370.0  * Conv. (cfs)    *         * 370.0  *         *
* Length wtd. (ft)  * 98.35  * Wetted Per. (ft) *         * 16.10  *         *
* Min Ch El (ft)    * 557.62 * Shear (lb/sq ft) *         * 0.89   *         *
* Alpha             * 1.00   * Stream Power (lb/ft s) * 179.30 * 0.00   * 0.00   *
* Frctn Loss (ft)  * 2.08  * Cum Volume (acre-ft) *         * 0.18   * 0.21   * 0.03   *
* C & E Loss (ft)  * 0.00  * Cum SA (acres) *         * 0.10   * 0.33   * 0.02   *
*****
```

 warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

```
*****
* E.G. Elev (ft)      * 559.27 * Element      * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.40  * Wt. n-Val.  *         * 0.035  *         *
* W.S. Elev (ft)     * 558.87 * Reach Len. (ft) * 101.50 * 98.35  * 98.55  *
* Crit W.S. (ft)     * 558.87 * Flow Area (sq ft) *         * 13.45  *         *
* E.G. Slope (ft/ft) * 0.019899 * Area (sq ft) *         * 13.45  *         *
* Q Total (cfs)      * 68.00  * Flow (cfs)    *         * 68.00  *         *
* Top Width (ft)     * 17.11  * Top Width (ft) *         * 17.11  *         *
* Vel Total (ft/s)   * 5.06   * Avg. Vel. (ft/s) *         * 5.06   *         *
* Max Chl Dpth (ft) * 1.25   * Hydr. Depth (ft) *         * 0.79   *         *
* Conv. Total (cfs)  * 482.1  * Conv. (cfs)    *         * 482.1  *         *
* Length wtd. (ft)  * 98.35  * Wetted Per. (ft) *         * 17.34  *         *
* Min Ch El (ft)    * 557.62 * Shear (lb/sq ft) *         * 0.96   *         *
* Alpha             * 1.00   * Stream Power (lb/ft s) * 179.30 * 0.00   * 0.00   *
* Frctn Loss (ft)  * 1.95  * Cum Volume (acre-ft) *         * 0.20   * 0.26   * 0.03   *
* C & E Loss (ft)  * 0.01  * Cum SA (acres) *         * 0.10   * 0.35   * 0.03   *
*****
```

 warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: East_Reach RS: 797.1697

INPUT

Description:
 Station Elevation Data num= 37

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	554.97	4.38	554.71	8.76	554.15	13.13	553.56	17.51	552.88
21.89	552.14	26.27	551.28	30.64	550.35	35.02	549.6	39.76	548.59
44.51	548.39	49.25	549.72	53.99	551.12	58.73	551.94	63.59	551.98
68.45	551.38	73.31	548.45	77.43	547.13	78.17	546.89	79.11	546.95

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 83.03 547.23 87.89 547.43 91.69 547.94 95.49 548.93 99.29 549.82
 103.09 550.68 107.65 551.59 112.21 552.21 116.77 552.52 121.33 553.11
 125.9 553.43 130.47 554.06 135.03 554.62 139.6 555.05 143.89 555.48
 148.18 555.95 152.47 556.07

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .08 73.31 .035 95.49 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 73.31 95.49 88.84 92.57 96.42 .1 .3
 Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 63.56 552.03 F

CROSS SECTION OUTPUT Profile #5-year flow

 * E.G. Elev (ft) * 547.83 * Element * Left OB * Channel * Right OB *
 * Vel Head (ft) * 0.20 * wt. n-Val. * * 0.035 * *
 * W.S. Elev (ft) * 547.64 * Reach Len. (ft) * 88.84 * 92.57 * 96.42 *
 * Crit W.S. (ft) * 547.64 * Flow Area (sq ft) * * 5.35 * *
 * E.G. Slope (ft/ft) * 0.024615 * Area (sq ft) * * 5.35 * *
 * Q Total (cfs) * 19.00 * Flow (cfs) * * 19.00 * *
 * Top width (ft) * 13.60 * Top width (ft) * * 13.60 * *
 * Vel Total (ft/s) * 3.55 * Avg. Vel. (ft/s) * * 3.55 * *
 * Max Chl Dpth (ft) * 0.75 * Hydr. Depth (ft) * * 0.39 * *
 * Conv. Total (cfs) * 121.1 * Conv. (cfs) * * 121.1 * *
 * Length wtd. (ft) * 92.57 * Wetted Per. (ft) * * 13.74 * *
 * Min Ch El (ft) * 546.89 * Shear (lb/sq ft) * * 0.60 * *
 * Alpha * 1.00 * Stream Power (lb/ft s) * 152.47 * 0.00 * 0.00 *
 * Frctn Loss (ft) * 2.21 * Cum Volume (acre-ft) * 0.11 * 0.08 * 0.02 *
 * C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.05 * 0.18 * *

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #10-year flow

 * E.G. Elev (ft) * 547.99 * Element * Left OB * Channel * Right OB *
 * Vel Head (ft) * 0.23 * wt. n-Val. * * 0.035 * *
 * W.S. Elev (ft) * 547.75 * Reach Len. (ft) * 88.84 * 92.57 * 96.42 *
 * Crit W.S. (ft) * 547.75 * Flow Area (sq ft) * * 6.99 * *
 * E.G. Slope (ft/ft) * 0.022849 * Area (sq ft) * * 6.99 * *
 * Q Total (cfs) * 27.00 * Flow (cfs) * * 27.00 * *
 * Top width (ft) * 14.82 * Top width (ft) * * 14.82 * *
 * Vel Total (ft/s) * 3.86 * Avg. Vel. (ft/s) * * 3.86 * *
 * Max Chl Dpth (ft) * 0.86 * Hydr. Depth (ft) * * 0.47 * *
 * Conv. Total (cfs) * 178.6 * Conv. (cfs) * * 178.6 * *
 * Length wtd. (ft) * 92.57 * Wetted Per. (ft) * * 14.99 * *
 * Min Ch El (ft) * 546.89 * Shear (lb/sq ft) * * 0.67 * *
 * Alpha * 1.00 * Stream Power (lb/ft s) * 152.47 * 0.00 * 0.00 *
 * Frctn Loss (ft) * 2.05 * Cum Volume (acre-ft) * 0.13 * 0.10 * 0.02 *
 * C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.06 * 0.20 * *

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #25-year flow

 * E.G. Elev (ft) * 548.20 * Element * Left OB * Channel * Right OB *
 * Vel Head (ft) * 0.29 * wt. n-Val. * * 0.035 * *
 * W.S. Elev (ft) * 547.91 * Reach Len. (ft) * 88.84 * 92.57 * 96.42 *
 * Crit W.S. (ft) * 547.91 * Flow Area (sq ft) * * 9.47 * *
 * E.G. Slope (ft/ft) * 0.022140 * Area (sq ft) * * 9.47 * *
 * Q Total (cfs) * 41.00 * Flow (cfs) * * 41.00 * *
 * Top width (ft) * 16.49 * Top width (ft) * * 16.49 * *
 * Vel Total (ft/s) * 4.33 * Avg. Vel. (ft/s) * * 4.33 * *
 * Max Chl Dpth (ft) * 1.02 * Hydr. Depth (ft) * * 0.57 * *
 * Conv. Total (cfs) * 275.5 * Conv. (cfs) * * 275.5 * *
 * Length wtd. (ft) * 92.57 * Wetted Per. (ft) * * 16.70 * *
 * Min Ch El (ft) * 546.89 * Shear (lb/sq ft) * * 0.78 * *
 * Alpha * 1.00 * Stream Power (lb/ft s) * 152.47 * 0.00 * 0.00 *
 * Frctn Loss (ft) * 1.98 * Cum Volume (acre-ft) * 0.15 * 0.14 * 0.02 *
 * C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.09 * 0.23 * *

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #50-year flow

 * E.G. Elev (ft) * 548.36 * Element * Left OB * Channel * Right OB *
 * Vel Head (ft) * 0.34 * wt. n-Val. * * 0.035 * *
 * W.S. Elev (ft) * 548.02 * Reach Len. (ft) * 88.84 * 92.57 * 96.42 *
 * Crit W.S. (ft) * 548.02 * Flow Area (sq ft) * * 11.33 * *

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* E.G. slope (ft/ft) *0.021809 * Area (sq ft) * 11.33 *
* Q Total (cfs) * 53.00 * Flow (cfs) * 53.00 *
* Top width (ft) * 17.36 * Top width (ft) * 17.36 *
* Vel Total (ft/s) * 4.68 * Avg. Vel. (ft/s) * 4.68 *
* Max Chl Dpth (ft) * 1.13 * Hydr. Depth (ft) * 0.65 *
* Conv. Total (cfs) * 358.9 * Conv. (cfs) * 358.9 *
* Length wtd. (ft) * 92.57 * Wetted Per. (ft) * 17.60 *
* Min Ch El (ft) * 546.89 * Shear (lb/sq ft) * 0.88 *
* Alpha * 1.00 * Stream Power (lb/ft s) * 152.47 * 0.00 * 0.00 *
* Frctn Loss (ft) * 1.95 * Cum Volume (acre-ft) * 0.18 * 0.18 * 0.03 *
* C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.10 * 0.29 * 0.02 *

```

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.

warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

```

CROSS SECTION OUTPUT Profile #100-year flow
*****
* E.G. Elev (ft) * 548.54 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.37 * Wt. n-Val. * * 0.035 *
* W.S. Elev (ft) * 548.16 * Reach Len. (ft) * 88.84 * 92.57 * 96.42 *
* Crit W.S. (ft) * 548.16 * Flow Area (sq ft) * * 13.86 *
* E.G. Slope (ft/ft) *0.019805 * Area (sq ft) * * 13.86 *
* Q Total (cfs) * 68.00 * Flow (cfs) * * 68.00 *
* Top width (ft) * 18.34 * Top width (ft) * * 18.34 *
* Vel Total (ft/s) * 4.91 * Avg. Vel. (ft/s) * * 4.91 *
* Max Chl Dpth (ft) * 1.27 * Hydr. Depth (ft) * * 0.76 *
* Conv. Total (cfs) * 483.2 * Conv. (cfs) * * 483.2 *
* Length wtd. (ft) * 92.57 * Wetted Per. (ft) * * 18.62 *
* Min Ch El (ft) * 546.89 * Shear (lb/sq ft) * * 0.92 *
* Alpha * 1.00 * Stream Power (lb/ft s) * 152.47 * 0.00 * 0.00 *
* Frctn Loss (ft) * 1.82 * Cum Volume (acre-ft) * 0.20 * 0.23 * 0.03 *
* C & E Loss (ft) * 0.01 * Cum SA (acres) * 0.10 * 0.31 * 0.03 *

```

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.

warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: East_Reach RS: 704.597

INPUT

Description:

Station	Elevation	Data	num=	40			
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	544.87	3.91	544.56	7.82	544.33	11.73	543.97
20.56	543.03	25.47	542.68	30.39	542.22	35.3	541.88
43.75	541.23	47.97	540.87	52.19	540.69	56.42	541.03
65.64	543.22	70.25	543.82	74.86	543.97	79.47	543.53
89.33	540.99	94.26	539.18	99.19	538.47	99.3	538.49
104.12	539.23	109.05	540.47	113.98	541.33	118.55	542.19
127.71	543.1	132.69	543.2	137.67	543.2	142.66	543.14
152.17	543.65	156.69	544.36	161.22	545.17	164.3	546.32

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	89.33	.035	113.98	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

Sta L	Sta R	Elev	Permanent
89.33	113.98	544.07	F

```

CROSS SECTION OUTPUT Profile #5-year flow
*****
* E.G. Elev (ft) * 539.56 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.23 * Wt. n-Val. * * 0.035 *
* W.S. Elev (ft) * 539.34 * Reach Len. (ft) * 106.51 * 105.58 * 104.43 *
* Crit W.S. (ft) * 539.34 * Flow Area (sq ft) * * 4.96 *
* E.G. Slope (ft/ft) *0.023112 * Area (sq ft) * * 4.96 *
* Q Total (cfs) * 19.00 * Flow (cfs) * * 19.00 *
* Top width (ft) * 10.70 * Top width (ft) * * 10.70 *
* Vel Total (ft/s) * 3.83 * Avg. Vel. (ft/s) * * 3.83 *
* Max Chl Dpth (ft) * 0.86 * Hydr. Depth (ft) * * 0.46 *
* Conv. Total (cfs) * 125.0 * Conv. (cfs) * * 125.0 *
* Length wtd. (ft) * 105.58 * Wetted Per. (ft) * * 10.85 *
* Min Ch El (ft) * 538.47 * Shear (lb/sq ft) * * 0.66 *
* Alpha * 1.00 * Stream Power (lb/ft s) * 167.38 * 0.00 * 0.00 *
* Frctn Loss (ft) * 2.48 * Cum Volume (acre-ft) * 0.11 * 0.07 * 0.02 *
* C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.05 * 0.15 *

```

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.

warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #10-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 539.74			
* Vel Head (ft)	* 0.27		* 0.035	
* W.S. Elev (ft)	* 539.47	* Reach Len. (ft)	* 106.51	* 105.58
* Crit w.s. (ft)	* 539.47	* Flow Area (sq ft)		* 6.48
* E.G. Slope (ft/ft)	* 0.021399	* Area (sq ft)		* 6.48
* Q Total (cfs)	* 27.00	* Flow (cfs)		* 27.00
* Top width (ft)	* 11.61	* Top width (ft)		* 11.61
* Vel Total (ft/s)	* 4.16	* Avg. vel. (ft/s)		* 4.16
* Max Chl Dpth (ft)	* 1.00	* Hydr. Depth (ft)		* 0.56
* Conv. Total (cfs)	* 184.6	* Conv. (cfs)		* 184.6
* Length wtd. (ft)	* 105.58	* wetted Per. (ft)		* 11.80
* Min Ch El (ft)	* 538.47	* Shear (lb/sq ft)		* 0.73
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 167.38	* 0.00
* Frctn Loss (ft)	* 2.29	* Cum Volume (acre-ft)	* 0.13	* 0.09
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.06	* 0.17

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #25-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 540.00			
* Vel Head (ft)	* 0.34		* 0.035	
* W.S. Elev (ft)	* 539.66	* Reach Len. (ft)	* 106.51	* 105.58
* Crit w.s. (ft)	* 539.66	* Flow Area (sq ft)		* 8.78
* E.G. Slope (ft/ft)	* 0.020646	* Area (sq ft)		* 8.78
* Q Total (cfs)	* 41.00	* Flow (cfs)		* 41.00
* Top width (ft)	* 12.87	* Top width (ft)		* 12.87
* Vel Total (ft/s)	* 4.67	* Avg. vel. (ft/s)		* 4.67
* Max Chl Dpth (ft)	* 1.19	* Hydr. Depth (ft)		* 0.68
* Conv. Total (cfs)	* 285.3	* Conv. (cfs)		* 285.3
* Length wtd. (ft)	* 105.58	* wetted Per. (ft)		* 13.12
* Min Ch El (ft)	* 538.47	* Shear (lb/sq ft)		* 0.86
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 167.38	* 0.00
* Frctn Loss (ft)	* 2.20	* Cum Volume (acre-ft)	* 0.15	* 0.12
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.09	* 0.20

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #50-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 540.18			
* Vel Head (ft)	* 0.39		* 0.035	
* W.S. Elev (ft)	* 539.80	* Reach Len. (ft)	* 106.51	* 105.58
* Crit w.s. (ft)	* 539.80	* Flow Area (sq ft)		* 10.59
* E.G. Slope (ft/ft)	* 0.020281	* Area (sq ft)		* 10.59
* Q Total (cfs)	* 53.00	* Flow (cfs)		* 53.00
* Top width (ft)	* 13.78	* Top width (ft)		* 13.78
* Vel Total (ft/s)	* 5.00	* Avg. vel. (ft/s)		* 5.00
* Max Chl Dpth (ft)	* 1.33	* Hydr. Depth (ft)		* 0.77
* Conv. Total (cfs)	* 372.2	* Conv. (cfs)		* 372.2
* Length wtd. (ft)	* 105.58	* wetted Per. (ft)		* 14.07
* Min Ch El (ft)	* 538.47	* Shear (lb/sq ft)		* 0.95
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 167.38	* 0.00
* Frctn Loss (ft)	* 2.13	* Cum Volume (acre-ft)	* 0.18	* 0.16
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.10	* 0.26

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #100-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 540.39			
* Vel Head (ft)	* 0.44		* 0.035	
* W.S. Elev (ft)	* 539.95	* Reach Len. (ft)	* 106.51	* 105.58
* Crit w.s. (ft)	* 539.95	* Flow Area (sq ft)		* 12.85
* E.G. Slope (ft/ft)	* 0.019414	* Area (sq ft)		* 12.85
* Q Total (cfs)	* 68.00	* Flow (cfs)		* 68.00
* Top width (ft)	* 14.84	* Top width (ft)		* 14.84
* Vel Total (ft/s)	* 5.29	* Avg. vel. (ft/s)		* 5.29
* Max Chl Dpth (ft)	* 1.48	* Hydr. Depth (ft)		* 0.87
* Conv. Total (cfs)	* 488.0	* Conv. (cfs)		* 488.0
* Length wtd. (ft)	* 105.58	* wetted Per. (ft)		* 15.17
* Min Ch El (ft)	* 538.47	* Shear (lb/sq ft)		* 1.03
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 167.38	* 0.00
* Frctn Loss (ft)	* 2.07	* Cum Volume (acre-ft)	* 0.20	* 0.20
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.10	* 0.28

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warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: East_Reach RS: 599.0162

INPUT

Description:
 Station Elevation Data num= 38

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	531.58	4.06	530.95	8.13	530.22	12.19	529.69	16.25	528.85
20.06	527.98	23.88	527.05	27.69	526.39	32.1	526.05	36.5	526.99
40.91	528.06	45.32	529.1	49.72	529.77	54.13	529.91	58.56	529.99
62.98	529.82	67.41	529.01	71.84	527.74	74.75	527.54	76.27	527.44
76.37	527.46	80.7	528.17	85.12	528.83	89.55	529.09	93.62	529.67
97.69	530.11	101.76	530.88	105.83	530.91	109.9	531.15	113.92	531.71
117.94	532.35	121.95	533	126.67	534.14	131.39	534.21	136.11	534.65
140.83	534.7	145.6	534.98	150.38	535.59				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	67.41	.035	85.12	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
0	58.62	530.08	F

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 528.44	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.23	* Wt. n-Val.	* 0.035	* 0.035	* 0.035
* W.S. Elev (ft)	* 528.21	* Reach Len. (ft)	* 96.22	* 97.47	* 91.93
* Crit w.s. (ft)	* 528.21	* Flow Area (sq ft)	* 4.92	* 4.92	* 4.92
* E.G. slope (ft/ft)	* 0.023932	* Area (sq ft)	* 27.70	* 4.92	* 4.92
* Q Total (cfs)	* 19.00	* Flow (cfs)	* 19.00	* 19.00	* 19.00
* Top width (ft)	* 33.24	* Top width (ft)	* 22.48	* 10.75	* 10.75
* Vel Total (ft/s)	* 3.86	* Avg. Vel. (ft/s)	* 3.86	* 3.86	* 3.86
* Max Chl Dpth (ft)	* 2.16	* Hydr. depth (ft)	* 0.46	* 0.46	* 0.46
* Conv. Total (cfs)	* 122.8	* Conv. (cfs)	* 122.8	* 122.8	* 122.8
* Length Wtd. (ft)	* 97.47	* Wetted Per. (ft)	* 10.89	* 10.89	* 10.89
* Min Ch El (ft)	* 527.44	* Shear (lb/sq ft)	* 0.67	* 0.67	* 0.67
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 150.38	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.34	* Cum Volume (acre-ft)	* 0.08	* 0.06	* 0.02
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.02	* 0.13	* 0.13

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 528.61	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.26	* Wt. n-Val.	* 0.035	* 0.035	* 0.035
* W.S. Elev (ft)	* 528.35	* Reach Len. (ft)	* 96.22	* 97.47	* 91.93
* Crit w.s. (ft)	* 528.35	* Flow Area (sq ft)	* 6.56	* 6.56	* 6.56
* E.G. slope (ft/ft)	* 0.021935	* Area (sq ft)	* 31.00	* 6.56	* 6.56
* Q Total (cfs)	* 27.00	* Flow (cfs)	* 27.00	* 27.00	* 27.00
* Top width (ft)	* 35.93	* Top width (ft)	* 23.72	* 12.21	* 12.21
* Vel Total (ft/s)	* 4.12	* Avg. Vel. (ft/s)	* 4.12	* 4.12	* 4.12
* Max Chl Dpth (ft)	* 2.30	* Hydr. depth (ft)	* 0.54	* 0.54	* 0.54
* Conv. Total (cfs)	* 182.3	* Conv. (cfs)	* 182.3	* 182.3	* 182.3
* Length Wtd. (ft)	* 97.47	* Wetted Per. (ft)	* 12.38	* 12.38	* 12.38
* Min Ch El (ft)	* 527.44	* Shear (lb/sq ft)	* 0.73	* 0.73	* 0.73
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 150.38	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.17	* Cum Volume (acre-ft)	* 0.09	* 0.07	* 0.02
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.03	* 0.14	* 0.14

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 528.86	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.32	* Wt. n-Val.	* 0.035	* 0.035	* 0.035
* W.S. Elev (ft)	* 528.54	* Reach Len. (ft)	* 96.22	* 97.47	* 91.93
* Crit w.s. (ft)	* 528.54	* Flow Area (sq ft)	* 9.05	* 9.05	* 9.05
* E.G. slope (ft/ft)	* 0.021024	* Area (sq ft)	* 35.65	* 9.05	* 9.05
* Q Total (cfs)	* 41.00	* Flow (cfs)	* 41.00	* 41.00	* 41.00

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* Top Width (ft)      * 39.49 * Top width (ft)      CalifonFloodplainSt * 14.14 *
* Vel Total (ft/s)   * 4.53 * Avg. Vel. (ft/s)   * 25.35 * 4.53 *
* Max Chl Dpth (ft)  * 2.49 * Hydr. Depth (ft)   * * 0.64 *
* Conv. Total (cfs)  * 282.8 * Conv. (cfs)        * * 282.8 *
* Length Wtd. (ft)   * 97.45 * Wetted Per. (ft)   * * 14.35 *
* Min Ch El (ft)     * 527.44 * Shear (lb/sq ft)   * * 0.83 *
* Alpha              * 1.00 * Stream Power (lb/ft s) 150.38 * 0.00 * 0.00
* Frctn Loss (ft)    * 1.91 * Cum Volume (acre-ft) * 0.11 * 0.10 * 0.02
* C & E Loss (ft)    * 0.02 * Cum SA (acres)      * 0.05 * 0.16 *
*****

```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

```

CROSS SECTION OUTPUT Profile #50-year flow
*****
* E.G. Elev (ft)      * 529.03 * Element              * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.35  * Wt. n-Val.          * * 0.035 *
* W.S. Elev (ft)     * 528.68 * Reach Len. (ft)     * 96.22 * 97.47 * 91.93
* Crit w.s. (ft)     * 528.68 * Flow Area (sq ft)   * * 11.12 *
* E.G. Slope (ft/ft) * 0.020125 * Area (sq ft)        * 39.26 * 11.12 *
* Q Total (cfs)      * 53.00 * Flow (cfs)          * * 53.00 *
* Top Width (ft)     * 42.10 * Top width (ft)      * 26.55 * 15.56 *
* Vel Total (ft/s)   * 4.77 * Avg. Vel. (ft/s)    * * 4.77 *
* Max Chl Dpth (ft)  * 2.63 * Hydr. Depth (ft)    * * 0.71 *
* Conv. Total (cfs)  * 373.6 * Conv. (cfs)         * * 373.6 *
* Length Wtd. (ft)   * 97.43 * Wetted Per. (ft)    * * 15.80 *
* Min Ch El (ft)     * 527.44 * Shear (lb/sq ft)    * * 0.88 *
* Alpha              * 1.00 * Stream Power (lb/ft s) 150.38 * 0.00 * 0.00
* Frctn Loss (ft)    * 1.85 * Cum Volume (acre-ft) * 0.13 * 0.13 * 0.03
* C & E Loss (ft)    * 0.03 * Cum SA (acres)      * 0.06 * 0.22 * 0.02
*****

```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

```

CROSS SECTION OUTPUT Profile #100-year flow
*****
* E.G. Elev (ft)      * 529.22 * Element              * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.40  * Wt. n-Val.          * * 0.035 *
* W.S. Elev (ft)     * 528.82 * Reach Len. (ft)     * 96.22 * 97.47 * 91.93
* Crit w.s. (ft)     * 528.82 * Flow Area (sq ft)   * * 13.45 *
* E.G. Slope (ft/ft) * 0.019809 * Area (sq ft)        * 43.15 * 13.45 *
* Q Total (cfs)      * 68.00 * Flow (cfs)          * * 68.00 *
* Top Width (ft)     * 44.80 * Top width (ft)      * 27.78 * 17.02 *
* Vel Total (ft/s)   * 5.06 * Avg. Vel. (ft/s)    * * 5.06 *
* Max Chl Dpth (ft)  * 2.77 * Hydr. Depth (ft)    * * 0.79 *
* Conv. Total (cfs)  * 483.1 * Conv. (cfs)         * * 483.1 *
* Length Wtd. (ft)   * 97.41 * Wetted Per. (ft)    * * 17.29 *
* Min Ch El (ft)     * 527.44 * Shear (lb/sq ft)    * * 0.96 *
* Alpha              * 1.00 * Stream Power (lb/ft s) 150.38 * 0.00 * 0.00
* Frctn Loss (ft)    * 1.86 * Cum Volume (acre-ft) * 0.15 * 0.17 * 0.03
* C & E Loss (ft)    * 0.03 * Cum SA (acres)      * 0.07 * 0.24 * 0.03
*****

```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: East_Reach RS: 501.542

INPUT

Description:

Station Elevation Data		num= 40	
Sta	Elev	Sta	Elev
0	522.26	4.35	521.56
21.75	517.73	26.1	516.77
44.53	516.59	49.14	516.26
64.63	516.95	66.43	517.28
79	518.67	83.09	519.62
99.71	520.35	104.08	520.35
121.59	521.02	125.94	521.23
143.34	521.79	147.69	522.09

Manning's n Values num= 3

Sta	n Val	Sta	n Val
0	.08	44.53	.035
		62.5	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
44.53 62.5 87.71 88.13 91.91 .1 .3

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CROSS SECTION OUTPUT Profile #5-year flow

		Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 516.31	* Element			
* Vel Head (ft)	* 0.24	* Wt. n-Val.		0.035	
* W.S. Elev (ft)	* 516.08	* Reach Len. (ft)	87.71	88.13	91.91
* Crit W.S. (ft)	* 516.08	* Flow Area (sq ft)		4.87	
* E.G. Slope (ft/ft)	* 0.024142	* Area (sq ft)		4.87	
* Q Total (cfs)	* 19.00	* Flow (cfs)		19.00	
* Top width (ft)	* 10.56	* Top width (ft)		10.56	
* Vel Total (ft/s)	* 3.90	* Avg. Vel. (ft/s)		3.90	
* Max Chl Dpth (ft)	* 0.81	* Hydr. Depth (ft)		0.46	
* Conv. Total (cfs)	* 122.3	* Conv. (cfs)		122.3	
* Length Wtd. (ft)	* 88.13	* Wetted Per. (ft)		10.72	
* Min Ch El (ft)	* 515.27	* Shear (lb/sq ft)		0.68	
* Alpha	* 1.00	* Stream Power (lb/ft s)	159.16	0.00	0.00
* Frctn Loss (ft)	* 2.12	* Cum Volume (acre-ft)	0.04	0.05	0.02
* C & E Loss (ft)	* 0.00	* Cum SA (acres)		0.10	

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

		Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 516.49	* Element			
* Vel Head (ft)	* 0.27	* Wt. n-Val.	0.080	0.035	
* W.S. Elev (ft)	* 516.22	* Reach Len. (ft)	87.71	88.13	91.91
* Crit W.S. (ft)	* 516.22	* Flow Area (sq ft)	0.01	6.45	
* E.G. Slope (ft/ft)	* 0.022619	* Area (sq ft)	0.03	6.45	
* Q Total (cfs)	* 27.00	* Flow (cfs)	0.00	27.00	
* Top width (ft)	* 13.70	* Top width (ft)	1.74	11.96	
* Vel Total (ft/s)	* 4.18	* Avg. Vel. (ft/s)	0.11	4.18	
* Max Chl Dpth (ft)	* 0.95	* Hydr. Depth (ft)	0.0	0.54	
* Conv. Total (cfs)	* 179.5	* Conv. (cfs)	0.0	179.5	
* Length Wtd. (ft)	* 88.13	* Wetted Per. (ft)	1.74	12.16	
* Min Ch El (ft)	* 515.27	* Shear (lb/sq ft)	0.01	0.75	
* Alpha	* 1.00	* Stream Power (lb/ft s)	159.16	0.00	0.00
* Frctn Loss (ft)	* 2.01	* Cum Volume (acre-ft)	0.05	0.06	0.02
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	0.00	0.11	

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

		Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 516.70	* Element			
* Vel Head (ft)	* 0.25	* Wt. n-Val.	0.080	0.035	
* W.S. Elev (ft)	* 516.45	* Reach Len. (ft)	87.71	88.13	91.91
* Crit W.S. (ft)	* 516.45	* Flow Area (sq ft)	2.04	9.61	
* E.G. Slope (ft/ft)	* 0.018287	* Area (sq ft)	2.04	9.61	
* Q Total (cfs)	* 41.00	* Flow (cfs)	1.51	39.49	
* Top width (ft)	* 28.38	* Top width (ft)	12.77	15.61	
* Vel Total (ft/s)	* 3.52	* Avg. Vel. (ft/s)	0.74	4.11	
* Max Chl Dpth (ft)	* 1.18	* Hydr. Depth (ft)	0.16	0.62	
* Conv. Total (cfs)	* 303.2	* Conv. (cfs)	11.2	292.0	
* Length Wtd. (ft)	* 88.12	* Wetted Per. (ft)	12.79	15.86	
* Min Ch El (ft)	* 515.27	* Shear (lb/sq ft)	0.18	0.69	
* Alpha	* 1.32	* Stream Power (lb/ft s)	159.16	0.00	0.00
* Frctn Loss (ft)	* 1.75	* Cum Volume (acre-ft)	0.07	0.08	0.02
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	0.01	0.13	

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

		Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 516.83	* Element			
* Vel Head (ft)	* 0.26	* Wt. n-Val.	0.080	0.035	
* W.S. Elev (ft)	* 516.57	* Reach Len. (ft)	87.71	88.13	91.91
* Crit W.S. (ft)	* 516.57	* Flow Area (sq ft)	3.77	11.59	
* E.G. Slope (ft/ft)	* 0.018029	* Area (sq ft)	3.77	11.59	0.00
* Q Total (cfs)	* 53.00	* Flow (cfs)	3.56	49.44	
* Top width (ft)	* 33.82	* Top width (ft)	16.14	17.64	0.04
* Vel Total (ft/s)	* 3.45	* Avg. Vel. (ft/s)	0.94	4.27	
* Max Chl Dpth (ft)	* 1.30	* Hydr. Depth (ft)	0.23	0.66	
* Conv. Total (cfs)	* 394.7	* Conv. (cfs)	26.5	368.2	
* Length Wtd. (ft)	* 88.12	* Wetted Per. (ft)	16.16	17.91	
* Min Ch El (ft)	* 515.27	* Shear (lb/sq ft)	0.26	0.73	
* Alpha	* 1.43	* Stream Power (lb/ft s)	159.16	0.00	0.00
* Frctn Loss (ft)	* 1.70	* Cum Volume (acre-ft)	0.08	0.11	0.03
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	0.02	0.18	0.02

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.

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warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 516.97	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.31	* Wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 516.66	* Reach Len. (ft)	* 87.71	* 88.13	* 91.91
* Crit W.S. (ft)	* 516.66	* Flow Area (sq ft)	* 5.37	* 13.28	* 0.03
* E.G. Slope (ft/ft)	* 0.018363	* Area (sq ft)	* 5.37	* 13.28	* 0.03
* Q Total (cfs)	* 68.00	* Flow (cfs)	* 6.15	* 61.84	* 0.01
* Top Width (ft)	* 35.96	* Top width (ft)	* 17.44	* 17.97	* 0.55
* Vel Total (ft/s)	* 3.64	* Avg. vel. (ft/s)	* 1.15	* 4.66	* 0.34
* Max Chl Dpth (ft)	* 1.39	* Hydr. Depth (ft)	* 0.31	* 0.74	* 0.05
* Conv. Total (cfs)	* 501.8	* Conv. (cfs)	* 45.4	* 456.4	* 0.1
* Length wtd. (ft)	* 88.11	* Wetted Per. (ft)	* 17.47	* 18.24	* 0.56
* Min Ch El (ft)	* 515.27	* Shear (lb/sq ft)	* 0.35	* 0.83	* 0.06
* Alpha	* 1.50	* Stream Power (lb/ft s)	* 159.16	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.71	* Cum Volume (acre-ft)	* 0.10	* 0.14	* 0.03
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.02	* 0.20	* 0.03

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: East_Reach RS: 413.4141

INPUT

Description:

Station	Elevation	Data	num=	53	Sta	Elev	Sta	Elev	Sta	Elev
0	517.35	4.97	516.89	9.94	516.36	14.91	516.2	19.88	516.05	
24.85	515.62	29.19	515.44	33.52	515.35	37.85	515.22	42.19	515.12	
46.52	514.95	50.86	514.86	55.02	515.01	59.18	515.28	63.34	515.1	
67.5	515.01	72.13	514.86	76.75	515.43	81.38	515.11	86.01	515.19	
90.46	514.88	94.91	515.09	99.35	515.2	103.8	515.44	108.25	515.19	
112.93	514.64	117.61	512.43	122.29	510.21	126.97	509.17	127.21	509.18	
129.34	509.24	131.65	509.31	136.33	510.1	141.01	510.49	145.92	510.54	
150.83	510.72	155.74	510.77	160.65	511.21	164.89	511.64	169.12	512.23	
173.36	512.92	177.59	513.26	181.82	513.67	186.06	513.9	190.24	514.02	
194.43	513.92	198.61	513.84	202.8	514.08	206.98	514.51	211.72	514.66	
216.46	514.54	221.2	514.54	225.24	514.74					

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	122.29	.035	141.01	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

122.29	141.01	122.18	116.5	106.66	.1	.3
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CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 510.10	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.23	* Wt. n-Val.	* 0.035	* 0.035	* 0.035
* W.S. Elev (ft)	* 509.87	* Reach Len. (ft)	* 122.18	* 116.50	* 106.66
* Crit W.S. (ft)	* 509.87	* Flow Area (sq ft)	* 4.98	* 4.98	* 4.98
* E.G. Slope (ft/ft)	* 0.023966	* Area (sq ft)	* 4.98	* 4.98	* 4.98
* Q Total (cfs)	* 19.00	* Flow (cfs)	* 19.00	* 19.00	* 19.00
* Top Width (ft)	* 11.15	* Top width (ft)	* 11.15	* 11.15	* 11.15
* Vel Total (ft/s)	* 3.81	* Avg. vel. (ft/s)	* 3.81	* 3.81	* 3.81
* Max Chl Dpth (ft)	* 0.70	* Hydr. Depth (ft)	* 0.45	* 0.45	* 0.45
* Conv. Total (cfs)	* 122.7	* Conv. (cfs)	* 122.7	* 122.7	* 122.7
* Length wtd. (ft)	* 116.50	* Wetted Per. (ft)	* 11.28	* 11.28	* 11.28
* Min Ch El (ft)	* 509.17	* Shear (lb/sq ft)	* 0.66	* 0.66	* 0.66
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 225.24	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.75	* Cum Volume (acre-ft)	* 0.04	* 0.04	* 0.02
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.08	* 0.08	* 0.08

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 510.27	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.27	* Wt. n-Val.	* 0.035	* 0.035	* 0.035
* W.S. Elev (ft)	* 510.00	* Reach Len. (ft)	* 122.18	* 116.50	* 106.66
* Crit W.S. (ft)	* 510.00	* Flow Area (sq ft)	* 6.53	* 6.53	* 6.53
* E.G. Slope (ft/ft)	* 0.022979	* Area (sq ft)	* 6.53	* 6.53	* 6.53
* Q Total (cfs)	* 27.00	* Flow (cfs)	* 27.00	* 27.00	* 27.00
* Top Width (ft)	* 12.51	* Top width (ft)	* 12.51	* 12.51	* 12.51
* Vel Total (ft/s)	* 4.14	* Avg. vel. (ft/s)	* 4.14	* 4.14	* 4.14
* Max Chl Dpth (ft)	* 0.83	* Hydr. Depth (ft)	* 0.52	* 0.52	* 0.52
* Conv. Total (cfs)	* 178.1	* Conv. (cfs)	* 178.1	* 178.1	* 178.1
* Length wtd. (ft)	* 116.50	* Wetted Per. (ft)	* 12.66	* 12.66	* 12.66
* Min Ch El (ft)	* 509.17	* Shear (lb/sq ft)	* 0.74	* 0.74	* 0.74
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 225.24	* 0.00	* 0.00

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* Frctn Loss (ft) * 2.74 * Cum Volume (acre-ft) * 0.05 * 0.04 * 0.02 *
 * C & E Loss (ft) * 0.02 * Cum SA (acres) * 0.09 * 0.09 * *

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

 * E.G. Elev (ft) * 510.50 * Element * Left OB * Channel * Right OB *
 * Vel Head (ft) * 0.31 * Wt. n-Val. * * 0.035 * *
 * W.S. Elev (ft) * 510.20 * Reach Len. (ft) * 122.18 * 116.50 * 106.66 *
 * Crit W.S. (ft) * 510.20 * Flow Area (sq ft) * * 9.20 * *
 * E.G. Slope (ft/ft) * 0.021769 * Area (sq ft) * * 41.00 * *
 * Q Total (cfs) * 41.00 * Flow (cfs) * * 15.13 * *
 * Top Width (ft) * 15.13 * Top width (ft) * * 4.46 * *
 * Vel Total (ft/s) * 4.46 * Avg. Vel. (ft/s) * * 0.61 * *
 * Max Chl Dpth (ft) * 1.03 * Hydr. Depth (ft) * * 277.9 * *
 * Conv. Total (cfs) * 277.9 * Conv. (cfs) * * 15.32 * *
 * Length wtd. (ft) * 116.50 * Wetted Per. (ft) * * 0.82 * *
 * Min Ch El (ft) * 509.17 * Shear (lb/sq ft) * * 0.00 * 0.00 *
 * Alpha * 1.00 * Stream Power (lb/ft s) * 225.24 * 0.06 * 0.02 *
 * Frctn Loss (ft) * 2.65 * Cum Volume (acre-ft) * 0.07 * 0.06 * *
 * C & E Loss (ft) * 0.02 * Cum SA (acres) * * 0.10 * *

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

 * E.G. Elev (ft) * 510.67 * Element * Left OB * Channel * Right OB *
 * Vel Head (ft) * 0.34 * Wt. n-Val. * 0.080 * 0.035 * *
 * W.S. Elev (ft) * 510.33 * Reach Len. (ft) * 122.18 * 116.50 * 106.66 *
 * Crit W.S. (ft) * 510.33 * Flow Area (sq ft) * 0.02 * 11.34 * *
 * E.G. Slope (ft/ft) * 0.020800 * Area (sq ft) * 0.02 * 11.34 * *
 * Q Total (cfs) * 53.00 * Flow (cfs) * 0.01 * 52.99 * *
 * Top Width (ft) * 17.05 * Top width (ft) * 0.25 * 16.80 * *
 * Vel Total (ft/s) * 4.67 * Avg. Vel. (ft/s) * 0.38 * 4.67 * *
 * Max Chl Dpth (ft) * 1.16 * Hydr. Depth (ft) * 0.06 * 0.67 * *
 * Conv. Total (cfs) * 367.5 * Conv. (cfs) * 0.0 * 367.4 * *
 * Length wtd. (ft) * 116.50 * Wetted Per. (ft) * 0.28 * 16.99 * *
 * Min Ch El (ft) * 509.17 * Shear (lb/sq ft) * 0.07 * 0.87 * *
 * Alpha * 1.00 * Stream Power (lb/ft s) * 225.24 * 0.00 * 0.00 *
 * Frctn Loss (ft) * 2.55 * Cum Volume (acre-ft) * 0.08 * 0.08 * 0.03 *
 * C & E Loss (ft) * 0.03 * Cum SA (acres) * 0.00 * 0.15 * 0.02 *

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

 * E.G. Elev (ft) * 510.85 * Element * Left OB * Channel * Right OB *
 * Vel Head (ft) * 0.38 * Wt. n-Val. * 0.080 * 0.035 * *
 * W.S. Elev (ft) * 510.47 * Reach Len. (ft) * 122.18 * 116.50 * 106.66 *
 * Crit W.S. (ft) * 510.47 * Flow Area (sq ft) * 0.07 * 13.72 * *
 * E.G. Slope (ft/ft) * 0.020443 * Area (sq ft) * 0.07 * 13.72 * *
 * Q Total (cfs) * 68.00 * Flow (cfs) * 0.04 * 67.96 * *
 * Top Width (ft) * 18.96 * Top width (ft) * 0.54 * 18.43 * *
 * Vel Total (ft/s) * 4.93 * Avg. Vel. (ft/s) * 0.63 * 4.95 * *
 * Max Chl Dpth (ft) * 1.30 * Hydr. Depth (ft) * 0.13 * 0.74 * *
 * Conv. Total (cfs) * 475.6 * Conv. (cfs) * 0.3 * 475.3 * *
 * Length wtd. (ft) * 116.46 * Wetted Per. (ft) * 0.60 * 18.62 * *
 * Min Ch El (ft) * 509.17 * Shear (lb/sq ft) * 0.15 * 0.94 * *
 * Alpha * 1.01 * Stream Power (lb/ft s) * 225.24 * 0.00 * 0.00 *
 * Frctn Loss (ft) * 2.39 * Cum Volume (acre-ft) * 0.09 * 0.11 * 0.03 *
 * C & E Loss (ft) * 0.04 * Cum SA (acres) * 0.00 * 0.16 * 0.03 *

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: East_Reach RS: 296.9181

INPUT

Description:
 Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	508.84	4.68	508.5	9.37	508.34	14.05	508.24	18.74	508.17
23.42	508.15	28.1	508.2	32.79	508.37	37.47	508.17	42.26	507.92

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47.05	507.72	51.84	507.49	56.63	507.34	61.42	506.93	66.21	506.05
71	506.09	75.78	505.84	80.71	505.36	85.64	504.79	90.57	504.36
95.5	504.11	100.43	503.82	101.44	503.87	103.86	504	105.36	504.08
110.29	504.65	115.22	504.74	119.88	504.94	124.54	504.71	129.21	504.75
133.87	505.02	138.53	505.08	143.19	505.33	147.85	505.28	152.51	505.23
157.11	505.49	161.72	505.83	166.32	506.28	170.93	506.92	175.53	507.21
180.14	507.45	184.86	507.85	189.57	508.34	194.29	509.01	199.01	509.95

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .08 85.64 .035 115.22 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 85.64 115.22 100.47 128.8 133.29 .1 .3

CROSS SECTION OUTPUT Profile #5-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 504.58	* Element	*	*	*
* Vel Head (ft)	* 0.15	* wt. n-Val.	*	* 0.035	*
* w.s. Elev (ft)	* 504.43	* Reach Len. (ft)	* 100.47	* 128.80	* 133.29
* Crit w.s. (ft)	* 504.42	* Flow Area (sq ft)	*	* 6.15	*
* E.G. Slope (ft/ft)	* 0.023239	* Area (sq ft)	*	* 6.15	*
* Q Total (cfs)	* 19.00	* Flow (cfs)	*	* 19.00	*
* Top width (ft)	* 18.58	* Top width (ft)	*	* 18.58	*
* Vel Total (ft/s)	* 3.09	* Avg. Vel. (ft/s)	*	* 3.09	*
* Max Chl Dpth (ft)	* 0.61	* Hydr. Depth (ft)	*	* 0.33	*
* Conv. Total (cfs)	* 124.6	* Conv. (cfs)	*	* 124.6	*
* Length wtd. (ft)	* 128.80	* wetted Per. (ft)	*	* 18.62	*
* Min Ch El (ft)	* 503.82	* Shear (lb/sq ft)	*	* 0.48	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 199.01	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.03	* Cum Volume (acre-ft)	* 0.04	* 0.02	* 0.02
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	*	* 0.04	*

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #10-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 504.70	* Element	*	*	*
* Vel Head (ft)	* 0.19	* wt. n-Val.	*	* 0.035	*
* w.s. Elev (ft)	* 504.51	* Reach Len. (ft)	* 100.47	* 128.80	* 133.29
* Crit w.s. (ft)	* 504.50	* Flow Area (sq ft)	*	* 7.77	*
* E.G. Slope (ft/ft)	* 0.024121	* Area (sq ft)	*	* 7.77	*
* Q Total (cfs)	* 27.00	* Flow (cfs)	*	* 27.00	*
* Top width (ft)	* 20.26	* Top width (ft)	*	* 20.26	*
* Vel Total (ft/s)	* 3.47	* Avg. Vel. (ft/s)	*	* 3.47	*
* Max Chl Dpth (ft)	* 0.69	* Hydr. Depth (ft)	*	* 0.38	*
* Conv. Total (cfs)	* 173.8	* Conv. (cfs)	*	* 173.8	*
* Length wtd. (ft)	* 128.80	* wetted Per. (ft)	*	* 20.31	*
* Min Ch El (ft)	* 503.82	* Shear (lb/sq ft)	*	* 0.58	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 199.01	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.13	* Cum Volume (acre-ft)	* 0.05	* 0.03	* 0.02
* C & E Loss (ft)	* 0.05	* Cum SA (acres)	*	* 0.05	*

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #25-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 504.88	* Element	*	*	*
* Vel Head (ft)	* 0.24	* wt. n-Val.	*	* 0.035	*
* w.s. Elev (ft)	* 504.64	* Reach Len. (ft)	* 100.47	* 128.80	* 133.29
* Crit w.s. (ft)	* 504.64	* Flow Area (sq ft)	*	* 10.51	*
* E.G. Slope (ft/ft)	* 0.023813	* Area (sq ft)	*	* 10.51	*
* Q Total (cfs)	* 41.00	* Flow (cfs)	*	* 41.00	*
* Top width (ft)	* 22.82	* Top width (ft)	*	* 22.82	*
* Vel Total (ft/s)	* 3.90	* Avg. Vel. (ft/s)	*	* 3.90	*
* Max Chl Dpth (ft)	* 0.82	* Hydr. Depth (ft)	*	* 0.46	*
* Conv. Total (cfs)	* 265.7	* Conv. (cfs)	*	* 265.7	*
* Length wtd. (ft)	* 128.80	* wetted Per. (ft)	*	* 22.89	*
* Min Ch El (ft)	* 503.82	* Shear (lb/sq ft)	*	* 0.68	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 199.01	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.08	* Cum Volume (acre-ft)	* 0.07	* 0.03	* 0.02
* C & E Loss (ft)	* 0.07	* Cum SA (acres)	*	* 0.05	*

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 504.99	* Element	*	*	*
* Vel Head (ft)	* 0.23	* wt. n-Val.	*	* 0.035	* 0.080
* w.s. Elev (ft)	* 504.76	* Reach Len. (ft)	* 100.47	* 128.80	* 133.29
* Crit w.s. (ft)	* 504.76	* Flow Area (sq ft)	*	* 13.67	* 0.17
* E.G. Slope (ft/ft)	* 0.022993	* Area (sq ft)	*	* 13.67	* 0.17
* Q Total (cfs)	* 53.00	* Flow (cfs)	*	* 52.96	* 0.04
* Top width (ft)	* 35.51	* Top width (ft)	*	* 29.23	* 6.28
* Vel Total (ft/s)	* 3.83	* Avg. Vel. (ft/s)	*	* 3.87	* 0.26
* Max Chl Dpth (ft)	* 0.94	* Hydr. Depth (ft)	*	* 0.47	* 0.03
* Conv. Total (cfs)	* 349.5	* Conv. (cfs)	*	* 349.2	* 0.3
* Length wtd. (ft)	* 128.80	* wetted Per. (ft)	*	* 29.30	* 6.28

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* Min Ch El (ft)      * 503.82 * Shear (lb/sq ft)      * 0.67 * 0.04 *
* Alpha              * 1.02  * Stream Power (lb/ft s) * 199.01 * 0.00 *
* Frctn Loss (ft)   * 3.12  * Cum Volume (acre-ft)  * 0.08  * 0.05 *
* C & E Loss (ft)   * 0.05  * Cum SA (acres)        * 0.09  * 0.01 *
*****

```

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
warning: Divided flow computed for this cross-section.
warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

```

CROSS SECTION OUTPUT Profile #100-year flow
*****
* E.G. Elev (ft)      * 505.11 * Element              * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.26  * Wt. n-Val.           * 0.080  * 0.035  * 0.080  *
* W.S. Elev (ft)     * 504.85 * Reach Len. (ft)     * 100.47 * 128.80 * 133.29 *
* Crit W.S. (ft)     * 504.85 * Flow Area (sq ft)   * 0.02  * 16.42  * 1.01  *
* E.G. Slope (ft/ft) * 0.020617 * Area (sq ft)       * 0.02  * 16.42  * 1.01  *
* Q Total (cfs)       * 68.00 * Flow (cfs)          * 0.00  * 67.46  * 0.53  *
* Top Width (ft)     * 42.05 * Top Width (ft)      * 0.54  * 29.58  * 11.93 *
* Vel Total (ft/s)   * 3.90  * Avg. Vel. (ft/s)    * 0.26  * 4.11  * 0.52  *
* Max Chl Dpth (ft)  * 1.03  * Hydr. Depth (ft)    * 0.03  * 0.55  * 0.08  *
* Conv. Total (cfs)  * 473.6 * Conv. (cfs)         * 0.0  * 469.9  * 3.7  *
* Length Wtd. (ft)  * 128.82 * Wetted Per. (ft)    * 0.54  * 29.65  * 11.94 *
* Min Ch El (ft)    * 503.82 * Shear (lb/sq ft)    * 0.04  * 0.71  * 0.11  *
* Alpha              * 1.10  * Stream Power (lb/ft s) * 199.01 * 0.00  * 0.00  *
* Frctn Loss (ft)   * 2.91  * Cum Volume (acre-ft) * 0.09  * 0.07  * 0.03  *
* C & E Loss (ft)   * 0.04  * Cum SA (acres)      * 0.00  * 0.10  * 0.02  *
*****

```

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
warning: Divided flow computed for this cross-section.
warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: East_Reach RS: 168.1203

INPUT

```

Description:
Station Elevation Data num= 58
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
0 505.34 4.42 505.01 8.84 504.67 13.27 504.16 17.69 504.98
22.11 505.05 26.53 504.38 30.96 503.99 35.38 504.2 39.73 503.99
44.09 503.64 48.44 503.34 51.63 503.21 52.8 503.17 53.24 503.14
57.15 502.85 61.73 502.81 66.3 502.88 70.87 502.69 75.45 502.59
80.02 502.54 84.59 502.17 89.17 501.93 93.9 501.92 98.63 501.96
103.36 502.2 108.09 502.49 112.83 502.49 117.56 502.41 122.29 502.32
127.02 502.09 131.75 502.11 136.48 501.99 141.22 501.78 145.89 501.63
150.56 501.56 155.23 501.47 159.9 501.41 164.57 501.5 169.24 501.66
173.91 501.72 178.75 501.92 183.6 502.16 188.45 502.39 193.3 502.7
198.15 502.79 203 502.79 207.95 502.87 212.89 503 217.83 503.17
222.78 503.33 227.72 503.54 231.74 503.73 235.76 503.99 239.78 504.32
243.8 504.89 247.91 505.92 252.03 506.92

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Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
*****
0 .08 136.48 .035 178.75 .08

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Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
136.48 178.75 69.55 168.12 65.04 .1 .3

```

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CROSS SECTION OUTPUT Profile #5-year flow
*****
* E.G. Elev (ft)      * 501.51 * Element              * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.02  * Wt. n-Val.           * 168.00 * 0.035  * 168.00 *
* W.S. Elev (ft)     * 501.50 * Reach Len. (ft)     * 0.02  * 16.42  * 1.01  *
* Crit W.S. (ft)     * 501.50 * Flow Area (sq ft)   * 0.02  * 16.42  * 1.01  *
* E.G. Slope (ft/ft) * 0.039674 * Area (sq ft)       * 0.02  * 16.42  * 1.01  *
* Q Total (cfs)       * 0.50  * Flow (cfs)          * 0.00  * 0.50  * 0.50  *
* Top Width (ft)     * 10.46 * Top Width (ft)      * 0.54  * 10.46  * 1.01  *
* Vel Total (ft/s)   * 1.07  * Avg. Vel. (ft/s)    * 0.26  * 1.07  * 0.52  *
* Max Chl Dpth (ft)  * 0.09  * Hydr. Depth (ft)    * 0.03  * 0.55  * 0.08  *
* Conv. Total (cfs)  * 2.5  * Conv. (cfs)         * 0.0  * 2.5  * 3.7  *
* Length Wtd. (ft)  * 168.00 * Wetted Per. (ft)    * 0.54  * 10.46  * 11.94 *
* Min Ch El (ft)    * 501.41 * Shear (lb/sq ft)    * 0.04  * 0.71  * 0.11  *
* Alpha              * 1.00  * Stream Power (lb/ft s) * 252.03 * 0.00  * 0.00  *
* Frctn Loss (ft)   * 1.82  * Cum Volume (acre-ft) * 0.04  * 0.01  * 0.02  *
* C & E Loss (ft)   * 0.01  * Cum SA (acres)      * 0.00  * 0.10  * 0.02  *
*****

```

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

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CROSS SECTION OUTPUT Profile #10-year flow

		Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 501.51	* Element	*	*	*
* Vel Head (ft)	* 0.02	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 501.50	* Reach Len. (ft)	* 168.00	* 168.00	* 168.00
* Crit W.S. (ft)	* 501.50	* Flow Area (sq ft)	*	* 0.47	*
* E.G. Slope (ft/ft)	* 0.039674	* Area (sq ft)	*	* 0.47	*
* Q Total (cfs)	* 0.50	* Flow (cfs)	*	* 0.50	*
* Top Width (ft)	* 10.46	* Top width (ft)	*	* 10.46	*
* Vel Total (ft/s)	* 1.07	* Avg. Vel. (ft/s)	*	* 1.07	*
* Max Chl Dpth (ft)	* 0.09	* Hydr. Depth (ft)	*	* 0.04	*
* Conv. Total (cfs)	* 2.5	* Conv. (cfs)	*	* 2.5	*
* Length wtd. (ft)	* 168.00	* Wetted Per. (ft)	*	* 10.46	*
* Min Ch El (ft)	* 501.41	* Shear (lb/sq ft)	*	* 0.11	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 252.03	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.30	* Cum Volume (acre-ft)	* 0.05	* 0.01	* 0.02
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	*	*	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

		Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 501.51	* Element	*	*	*
* Vel Head (ft)	* 0.02	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 501.50	* Reach Len. (ft)	* 168.00	* 168.00	* 168.00
* Crit W.S. (ft)	* 501.50	* Flow Area (sq ft)	*	* 0.47	*
* E.G. Slope (ft/ft)	* 0.039674	* Area (sq ft)	*	* 0.47	*
* Q Total (cfs)	* 0.50	* Flow (cfs)	*	* 0.50	*
* Top Width (ft)	* 10.46	* Top width (ft)	*	* 10.46	*
* Vel Total (ft/s)	* 1.07	* Avg. Vel. (ft/s)	*	* 1.07	*
* Max Chl Dpth (ft)	* 0.09	* Hydr. Depth (ft)	*	* 0.04	*
* Conv. Total (cfs)	* 2.5	* Conv. (cfs)	*	* 2.5	*
* Length wtd. (ft)	* 168.00	* Wetted Per. (ft)	*	* 10.46	*
* Min Ch El (ft)	* 501.41	* Shear (lb/sq ft)	*	* 0.11	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 252.03	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.95	* Cum Volume (acre-ft)	* 0.07	* 0.01	* 0.02
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	*	*	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

		Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 501.78	* Element	*	*	*
* Vel Head (ft)	* 0.08	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 501.70	* Reach Len. (ft)	* 168.00	* 168.00	* 168.00
* Crit W.S. (ft)	* 501.70	* Flow Area (sq ft)	*	* 4.49	*
* E.G. Slope (ft/ft)	* 0.033085	* Area (sq ft)	*	* 4.49	*
* Q Total (cfs)	* 10.00	* Flow (cfs)	*	* 10.00	*
* Top Width (ft)	* 28.93	* Top width (ft)	*	* 28.93	*
* Vel Total (ft/s)	* 2.23	* Avg. Vel. (ft/s)	*	* 2.23	*
* Max Chl Dpth (ft)	* 0.29	* Hydr. Depth (ft)	*	* 0.16	*
* Conv. Total (cfs)	* 55.0	* Conv. (cfs)	*	* 55.0	*
* Length wtd. (ft)	* 168.00	* Wetted Per. (ft)	*	* 28.93	*
* Min Ch El (ft)	* 501.41	* Shear (lb/sq ft)	*	* 0.32	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 252.03	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.64	* Cum Volume (acre-ft)	* 0.08	* 0.02	* 0.03
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	*	*	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

		Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 501.99	* Element	*	*	*
* Vel Head (ft)	* 0.13	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 501.85	* Reach Len. (ft)	* 168.00	* 168.00	* 168.00
* Crit W.S. (ft)	* 501.85	* Flow Area (sq ft)	*	* 9.63	*
* E.G. Slope (ft/ft)	* 0.028855	* Area (sq ft)	*	* 9.63	*
* Q Total (cfs)	* 28.00	* Flow (cfs)	*	* 28.00	*
* Top Width (ft)	* 37.63	* Top width (ft)	*	* 37.63	*
* Vel Total (ft/s)	* 2.91	* Avg. Vel. (ft/s)	*	* 2.91	*
* Max Chl Dpth (ft)	* 0.44	* Hydr. Depth (ft)	*	* 0.26	*
* Conv. Total (cfs)	* 164.8	* Conv. (cfs)	*	* 164.8	*
* Length wtd. (ft)	* 168.00	* Wetted Per. (ft)	*	* 37.64	*
* Min Ch El (ft)	* 501.41	* Shear (lb/sq ft)	*	* 0.46	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 252.03	* 0.00	* 0.00
* Frctn Loss (ft)	* 4.38	* Cum Volume (acre-ft)	* 0.09	* 0.03	* 0.03
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	*	*	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: West_Reach RS: 2088.37

INPUT

Description:

Station Elevation Data		num= 56		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	745.89	4.9	745.38	9.8	744.89	14.7	744.17	19.6	743.44
24.5	742.61	29.4	741.92	34.3	741.05	39.2	739.75	44.11	738.67
49.01	737.56	53.91	736.58	58.81	735.88	63.71	734.95	68.61	734.13
73.51	733.55	78.41	733.09	83.31	732.91	88.21	732.95	93.11	732.62
98.01	731.53	102.91	730.28	107.81	729.29	112.71	728.92	117.62	728.3
118.52	728.28	121.94	728.19	122.52	728.17	127.42	728.7	132.32	730.3
137.22	731.93	142.12	732.7	147.02	732.84	151.92	732.87	156.82	733.06
161.72	733.38	166.62	734.41	171.52	736.22	176.42	738.3	181.32	740.45
186.22	742.11	191.12	743.69	196.02	745.1	200.93	745.75	205.83	746.04
210.73	746.88	215.63	747.57	220.13	748.13	224.63	748.66	229.13	749.2
233.63	749.68	238.13	750.51	242.64	751.61	247.14	753.2	251.64	754.85
256.14	755.96								

Manning's n Values		num= 3		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val
0	.08	102.91	.035	132.32	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.	
	102.91	132.32		124.04	131.14	134.32	.1	.3

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 729.79	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.38	* wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 729.41	* Reach Len. (ft)	* 124.04	* 131.14	* 134.32
* Crit W.S. (ft)	* 729.41	* Flow Area (sq ft)		* 16.71	
* E.G. slope (ft/ft)	* 0.020435	* Area (sq ft)		* 16.71	
* Q Total (cfs)	* 83.00	* Flow (cfs)		* 83.00	
* Top width (ft)	* 22.37	* Top width (ft)		* 22.37	
* Vel Total (ft/s)	* 4.97	* Avg. vel. (ft/s)		* 4.97	
* Max Chl Dpth (ft)	* 1.24	* Hydr. Depth (ft)		* 0.75	
* Conv. Total (cfs)	* 580.6	* Conv. (cfs)		* 580.6	
* Length wtd. (ft)	* 130.92	* Wetted Per. (ft)		* 22.57	
* Min Ch El (ft)	* 728.17	* Shear (lb/sq ft)		* 0.94	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 256.14	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.35	* Cum Volume (acre-ft)	* 0.05	* 0.78	* 1.02
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.06	* 0.94	* 0.49

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 729.99	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.44	* wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 729.55	* Reach Len. (ft)	* 124.04	* 131.14	* 134.32
* Crit W.S. (ft)	* 729.55	* Flow Area (sq ft)		* 20.02	
* E.G. slope (ft/ft)	* 0.019553	* Area (sq ft)		* 20.02	
* Q Total (cfs)	* 106.00	* Flow (cfs)		* 106.00	
* Top width (ft)	* 23.52	* Top width (ft)		* 23.52	
* Vel Total (ft/s)	* 4.59	* Avg. vel. (ft/s)		* 4.59	
* Max Chl Dpth (ft)	* 1.38	* Hydr. Depth (ft)		* 0.85	
* Conv. Total (cfs)	* 758.1	* Conv. (cfs)		* 758.1	
* Length wtd. (ft)	* 130.81	* Wetted Per. (ft)		* 23.77	
* Min Ch El (ft)	* 728.17	* Shear (lb/sq ft)		* 1.03	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 256.14	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.26	* Cum Volume (acre-ft)	* 0.06	* 0.94	* 1.11
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.09	* 1.00	* 0.54

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 730.28	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.51	* wt. n-Val.		* 0.035	
* W.S. Elev (ft)	* 729.77	* Reach Len. (ft)	* 124.04	* 131.14	* 134.32
* Crit W.S. (ft)	* 729.77	* Flow Area (sq ft)		* 25.27	
* E.G. slope (ft/ft)	* 0.018542	* Area (sq ft)		* 25.27	
* Q Total (cfs)	* 145.00	* Flow (cfs)		* 145.00	
* Top width (ft)	* 25.24	* Top width (ft)		* 25.24	
* Vel Total (ft/s)	* 5.74	* Avg. vel. (ft/s)		* 5.74	
* Max Chl Dpth (ft)	* 1.60	* Hydr. Depth (ft)		* 1.00	
* Conv. Total (cfs)	* 1064.8	* Conv. (cfs)		* 1064.8	
* Length wtd. (ft)	* 130.67	* Wetted Per. (ft)		* 25.55	
* Min Ch El (ft)	* 728.17	* Shear (lb/sq ft)		* 1.14	
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 256.14	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.18	* Cum Volume (acre-ft)	* 0.09	* 1.19	* 1.25
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.14	* 1.07	* 0.67

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Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 730.49	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.56	* wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 729.93	* Reach Len. (ft)	* 124.04	* 131.14	* 134.32
* Crit W.S. (ft)	* 729.93	* Flow Area (sq ft)	*	* 29.35	*
* E.G. Slope (ft/ft)	* 0.017927	* Area (sq ft)	*	* 29.35	*
* Q Total (cfs)	* 177.00	* Flow (cfs)	*	* 177.00	*
* Top width (ft)	* 26.51	* Top width (ft)	*	* 26.51	*
* Vel Total (ft/s)	* 6.03	* Avg. Vel. (ft/s)	*	* 6.03	*
* Max Chl Dpth (ft)	* 1.76	* Hydr. Depth (ft)	*	* 1.11	*
* Conv. Total (cfs)	* 1321.9	* Conv. (cfs)	*	* 1321.9	*
* Length wtd. (ft)	* 130.60	* Wetted Per. (ft)	*	* 26.85	*
* Min Ch El (ft)	* 728.17	* Shear (lb/sq ft)	*	* 1.22	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 256.14	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.15	* Cum Volume (acre-ft)	* 0.12	* 1.39	* 1.37
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.17	* 1.12	* 0.74

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 730.71	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.61	* wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 730.09	* Reach Len. (ft)	* 124.04	* 131.14	* 134.32
* Crit W.S. (ft)	* 730.09	* Flow Area (sq ft)	*	* 33.88	*
* E.G. Slope (ft/ft)	* 0.017195	* Area (sq ft)	*	* 33.88	*
* Q Total (cfs)	* 213.00	* Flow (cfs)	*	* 213.00	*
* Top width (ft)	* 27.84	* Top width (ft)	*	* 27.84	*
* Vel Total (ft/s)	* 6.29	* Avg. Vel. (ft/s)	*	* 6.29	*
* Max Chl Dpth (ft)	* 1.92	* Hydr. Depth (ft)	*	* 1.22	*
* Conv. Total (cfs)	* 1624.4	* Conv. (cfs)	*	* 1624.4	*
* Length wtd. (ft)	* 130.53	* Wetted Per. (ft)	*	* 28.23	*
* Min Ch El (ft)	* 728.17	* Shear (lb/sq ft)	*	* 1.29	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 256.14	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.06	* Cum Volume (acre-ft)	* 0.16	* 1.59	* 1.51
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	* 0.22	* 1.14	* 0.82

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: west_Reach RS: 1957.225

INPUT

Description:

Station	Elevation	Data	num=	59							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	730.7	4.85	729.72	9.69	728.9	14.54	727.74	19.39	726.67		
24.24	725.09	29.08	723.47	33.93	722.31	38.78	721.24	43.63	720.18		
48.47	719.47	53.32	718.58	58.17	717.55	63.02	716.72	67.86	715.94		
72.71	714.93	77.56	713.66	82.4	712.16	87.29	710.94	92.17	709.46		
97.05	707.97	101.93	706.91	106.81	706.58	111.69	706.43	116.58	706.39		
121.46	706.53	126.34	706.82	131.22	706.22	135.76	705.28	136.1	705.21		
138.73	705.39	140.98	705.54	145.87	706.81	150.75	707.75	155.63	708.28		
160.51	708.39	165.39	708.48	170.27	708.67	175.16	708.93	180.04	709.18		
184.92	709.97	189.8	711.9	194.68	714.36	199.57	715.68	204.45	716.11		
209.33	716.28	214.21	716.49	219.09	716.84	223.97	717.56	228.86	718.33		
233.74	719.36	238.62	720.67	243.5	721.88	248.38	722.79	253.26	723.35		
258.15	724.43	263.03	726.19	267.91	727.92	272.79	729.34				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	126.34	.035	145.87	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 126.34 145.87 112.25 142.15 161.69 .1 .3

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 707.11	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.33	* wt. n-Val.	*	* 0.080	* 0.035
* W.S. Elev (ft)	* 706.78	* Reach Len. (ft)	* 112.25	* 142.15	* 161.69
* Crit W.S. (ft)	* 706.78	* Flow Area (sq ft)	*	* 5.57	* 16.32
* E.G. Slope (ft/ft)	* 0.015890	* Area (sq ft)	*	* 5.57	* 16.32
* Q Total (cfs)	* 83.00	* Flow (cfs)	*	* 5.24	* 77.76
* Top width (ft)	* 40.98	* Top width (ft)	*	* 21.87	* 19.11
* Vel Total (ft/s)	* 3.79	* Avg. Vel. (ft/s)	*	* 0.94	* 4.77
* Max Chl Dpth (ft)	* 1.57	* Hydr. Depth (ft)	*	* 0.25	* 0.85

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* Conv. Total (cfs)	* 658.4	* Conv. (cfs)	* 41.6	* 616.9	*	*
* Length Wtd. (ft)	* 141.21	* wetted Per. (ft)	* 21.89	* 19.42	*	*
* Min Ch El (ft)	* 705.21	* Shear (lb/sq ft)	* 0.25	* 0.83	*	*
* Alpha	* 1.48	* Stream Power (lb/ft s)	* 272.79	* 0.00	* 0.00	*
* Frctn Loss (ft)	* 2.47	* Cum Volume (acre-ft)	* 0.04	* 0.73	* 1.02	*
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.03	* 0.88	* 0.49	*

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: Divided flow computed for this cross-section.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 707.28	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.37	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 706.91	* Reach Len. (ft)	* 112.25	* 142.15	* 161.69
* Crit W.S. (ft)	* 706.91	* Flow Area (sq ft)	* 8.64	* 18.87	* 0.03
* E.G. Slope (ft/ft)	* 0.015373	* Area (sq ft)	* 9.94	* 96.05	* 0.01
* Q Total (cfs)	* 106.00	* Flow (cfs)	* 24.42	* 19.53	* 0.53
* Top width (ft)	* 44.49	* Top width (ft)	* 1.15	* 5.09	* 0.31
* Vel Total (ft/s)	* 3.85	* Avg. Vel. (ft/s)	* 0.35	* 0.97	* 0.05
* Max Chl Dpth (ft)	* 1.70	* Hydr. Depth (ft)	* 80.2	* 774.7	* 0.1
* Conv. Total (cfs)	* 854.9	* Conv. (cfs)	* 24.45	* 19.84	* 0.54
* Length Wtd. (ft)	* 140.75	* wetted Per. (ft)	* 24.45	* 0.91	* 0.05
* Min Ch El (ft)	* 705.21	* Shear (lb/sq ft)	* 0.34	* 0.00	* 0.00
* Alpha	* 1.59	* Stream Power (lb/ft s)	* 272.79	* 0.88	* 1.11
* Frctn Loss (ft)	* 2.36	* Cum Volume (acre-ft)	* 0.05	* 0.94	* 0.54
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.05	* 0.94	* 0.54

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 707.52	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.43	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 707.09	* Reach Len. (ft)	* 112.25	* 142.15	* 161.69
* Crit W.S. (ft)	* 707.09	* Flow Area (sq ft)	* 13.00	* 22.30	* 0.20
* E.G. Slope (ft/ft)	* 0.015123	* Area (sq ft)	* 13.00	* 22.30	* 0.20
* Q Total (cfs)	* 145.00	* Flow (cfs)	* 19.05	* 125.83	* 0.12
* Top width (ft)	* 46.21	* Top width (ft)	* 25.23	* 19.53	* 1.44
* Vel Total (ft/s)	* 4.09	* Avg. Vel. (ft/s)	* 1.47	* 5.64	* 0.61
* Max Chl Dpth (ft)	* 1.88	* Hydr. Depth (ft)	* 0.52	* 1.14	* 0.14
* Conv. Total (cfs)	* 1179.1	* Conv. (cfs)	* 154.9	* 1023.2	* 1.0
* Length Wtd. (ft)	* 140.20	* wetted Per. (ft)	* 25.27	* 19.84	* 1.47
* Min Ch El (ft)	* 705.21	* Shear (lb/sq ft)	* 0.49	* 1.06	* 0.13
* Alpha	* 1.67	* Stream Power (lb/ft s)	* 272.79	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.25	* Cum Volume (acre-ft)	* 0.07	* 1.12	* 1.25
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.10	* 1.01	* 0.66

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 707.70	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.49	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 707.21	* Reach Len. (ft)	* 112.25	* 142.15	* 161.69
* Crit W.S. (ft)	* 707.21	* Flow Area (sq ft)	* 16.18	* 24.74	* 0.42
* E.G. Slope (ft/ft)	* 0.015125	* Area (sq ft)	* 16.18	* 24.74	* 0.42
* Q Total (cfs)	* 177.00	* Flow (cfs)	* 27.05	* 149.62	* 0.33
* Top width (ft)	* 47.43	* Top width (ft)	* 25.81	* 19.53	* 2.09
* Vel Total (ft/s)	* 4.28	* Avg. Vel. (ft/s)	* 1.67	* 6.05	* 0.78
* Max Chl Dpth (ft)	* 2.00	* Hydr. Depth (ft)	* 0.63	* 1.27	* 0.20
* Conv. Total (cfs)	* 1439.2	* Conv. (cfs)	* 219.9	* 1216.6	* 2.7
* Length Wtd. (ft)	* 139.89	* wetted Per. (ft)	* 25.86	* 19.84	* 2.13
* Min Ch El (ft)	* 705.21	* Shear (lb/sq ft)	* 0.59	* 1.18	* 0.19
* Alpha	* 1.71	* Stream Power (lb/ft s)	* 272.79	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.19	* Cum Volume (acre-ft)	* 0.10	* 1.31	* 1.37
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.14	* 1.05	* 0.73

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 707.88	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.53	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 707.36	* Reach Len. (ft)	* 112.25	* 142.15	* 161.69
* Crit W.S. (ft)	* 707.36	* Flow Area (sq ft)	* 19.96	* 27.56	* 0.78
* E.G. Slope (ft/ft)	* 0.014497	* Area (sq ft)	* 19.96	* 27.56	* 0.78
* Q Total (cfs)	* 213.00	* Flow (cfs)	* 36.91	* 175.36	* 0.73

		CalifonFloodplainSt	
* Top Width (ft)	48.84	* Top Width (ft)	26.47 * 19.53
* Vel Total (ft/s)	4.41	* Avg. Vel. (ft/s)	1.85 * 6.36
* Max Chl Dpth (ft)	2.15	* Hydr. Depth (ft)	0.75 * 1.41
* Conv. Total (cfs)	1769.1	* Conv. (cfs)	306.6 * 1456.5
* Length wtd. (ft)	139.61	* Wetted Per. (ft)	26.54 * 19.84
* Min Ch El (ft)	705.21	* Shear (lb/sq ft)	0.68 * 1.26
* Alpha	1.74	* Stream Power (lb/ft s)	272.79 * 0.00
* Frctn Loss (ft)	2.08	* Cum Volume (acre-ft)	0.13 * 1.50
* C & E Loss (ft)	0.02	* Cum SA (acres)	0.18 * 1.07

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: West_Reach RS: 1815.076

INPUT

Description:

Station	Elevation	Data	num=	66	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	705.82	4.84	704.87	9.67	703.82	14.51	702.61	19.34	701.56			
24.18	700.37	29.01	699.62	33.85	698.69	38.68	697.69	43.52	697.07			
48.35	696.25	53.19	695.07	58.03	693.63	62.86	692.18	67.7	690.52			
72.53	688.58	77.37	686.42	82.2	685.14	86.01	684.91	87.04	684.85			
89.4	684.99	91.87	685.14	96.79	686.3	101.72	687.8	106.64	688.64			
111.56	688.82	116.48	688.86	121.4	688.51	126.32	687.82	131.24	687.34			
136.16	686.84	141.08	686.15	146	685.4	150.92	684.59	155.84	684.19			
160.77	684.29	165.69	684.38	170.61	684.6	175.53	684.34	180.45	683.92			
185.37	683.23	190.29	682.81	195.21	682.66	200.01	682.96	204.81	683.46			
209.61	683.74	214.41	683.75	219.21	683.38	224.01	682.94	228.81	682.47			
233.61	682.73	238.41	682.9	243.21	683.29	248.01	684.16	252.81	685.26			
257.62	686.05	262.42	686.48	267.22	686.63	272.02	687.08	276.82	687.44			
281.62	687.82	286.42	687.99	291.22	688.35	296.02	688.95	300.82	689.44			
305.62	690											

Manning's n	Val	num=	3
0	.08	77.37	.035
		96.79	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	77.37	96.79	128.86	156.63	148.33	.1	.3	

Ineffective Flow	num=	1
Sta L	Sta R	Elev
111.82	305.62	688.95

CROSS SECTION OUTPUT Profile #5-year flow

E.G. Elev (ft)	686.61	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.44	wt. n-Val.		0.035	
w.s. Elev (ft)	686.17	Reach Len. (ft)	128.86	156.63	148.33
Crit w.s. (ft)	686.17	Flow Area (sq ft)		15.59	
E.G. Slope (ft/ft)	*0.019305	Area (sq ft)		15.59	273.85
Q Total (cfs)	83.00	Flow (cfs)		83.00	
Top width (ft)	135.90	Top width (ft)		17.91	117.99
Vel Total (ft/s)	5.32	Avg. Vel. (ft/s)		5.32	
Max Chl Dpth (ft)	3.70	Hydr. Depth (ft)		0.87	
Conv. Total (cfs)	597.4	Conv. (cfs)		597.4	
Length wtd. (ft)	156.63	Wetted Per. (ft)		18.18	
Min Ch El (ft)	684.85	Shear (lb/sq ft)		1.03	
Alpha	1.00	Stream Power (lb/ft s)	305.62	0.00	0.00
Frctn Loss (ft)	3.13	Cum Volume (acre-ft)	0.03	0.68	0.51
C & E Loss (ft)	0.03	Cum SA (acres)	0.01	0.82	0.27

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #10-year flow

E.G. Elev (ft)	686.83	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.49	wt. n-Val.		0.035	0.000
w.s. Elev (ft)	686.34	Reach Len. (ft)	128.86	156.63	148.33
Crit w.s. (ft)	686.34	Flow Area (sq ft)		18.84	0.00
E.G. Slope (ft/ft)	*0.018298	Area (sq ft)		18.84	294.78
Q Total (cfs)	106.00	Flow (cfs)		106.00	0.00
Top width (ft)	140.46	Top width (ft)		19.13	121.33
Vel Total (ft/s)	5.62	Avg. Vel. (ft/s)		5.63	0.19
Max Chl Dpth (ft)	3.87	Hydr. Depth (ft)		0.99	0.02
Conv. Total (cfs)	783.6	Conv. (cfs)		783.6	0.0
Length wtd. (ft)	156.63	Wetted Per. (ft)		19.44	0.15
Min Ch El (ft)	684.85	Shear (lb/sq ft)		1.11	
Alpha	1.00	Stream Power (lb/ft s)	305.62	0.00	0.00
Frctn Loss (ft)	3.01	Cum Volume (acre-ft)	0.04	0.82	0.57
C & E Loss (ft)	0.03	Cum SA (acres)	0.02	0.87	0.31

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

CalifonFloodplainSt

Warning: Divided flow computed for this cross-section.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #25-year flow

	*	Element	*	Left OB	*	Channel	*	Right OB	*
* E.G. Elev (ft)	*	687.17	*	0.080	*	0.035	*	0.080	*
* Vel Head (ft)	*	0.60	*	128.86	*	156.63	*	148.33	*
* W.S. Elev (ft)	*	686.58	*	0.03	*	23.36	*	0.13	*
* Crit W.S. (ft)	*	686.58	*	0.03	*	23.36	*	323.73	*
* E.G. Slope (ft/ft)	*	0.017062	*	0.01	*	144.91	*	0.08	*
* Q Total (cfs)	*	145.00	*	0.35	*	19.42	*	128.37	*
* Top Width (ft)	*	148.14	*	0.42	*	6.20	*	0.63	*
* Vel Total (ft/s)	*	6.17	*	0.08	*	1.20	*	0.14	*
* Max Chl Dpth (ft)	*	4.11	*	0.1	*	1109.4	*	0.6	*
* Conv. Total (cfs)	*	1110.1	*	0.38	*	19.74	*	0.95	*
* Length Wtd. (ft)	*	156.62	*	0.08	*	1.26	*	0.14	*
* Min Ch El (ft)	*	684.85	*	0.08	*	1.26	*	0.14	*
* Alpha	*	1.01	*	305.62	*	0.00	*	0.00	*
* Frctn Loss (ft)	*	2.79	*	0.06	*	1.04	*	0.65	*
* C & E Loss (ft)	*	0.05	*	0.07	*	0.94	*	0.42	*

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: Divided flow computed for this cross-section.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #50-year flow

	*	Element	*	Left OB	*	Channel	*	Right OB	*
* E.G. Elev (ft)	*	687.43	*	0.080	*	0.035	*	0.080	*
* Vel Head (ft)	*	0.68	*	128.86	*	156.63	*	148.33	*
* W.S. Elev (ft)	*	686.75	*	0.12	*	26.73	*	0.33	*
* Crit W.S. (ft)	*	686.75	*	0.12	*	26.73	*	346.52	*
* E.G. Slope (ft/ft)	*	0.016170	*	0.08	*	176.64	*	0.28	*
* Q Total (cfs)	*	177.00	*	0.74	*	19.42	*	133.18	*
* Top Width (ft)	*	153.34	*	0.67	*	6.61	*	0.85	*
* Vel Total (ft/s)	*	6.51	*	0.16	*	1.38	*	0.22	*
* Max Chl Dpth (ft)	*	4.28	*	0.6	*	1389.1	*	2.2	*
* Conv. Total (cfs)	*	1391.9	*	0.81	*	19.74	*	1.55	*
* Length Wtd. (ft)	*	156.60	*	0.15	*	1.37	*	0.22	*
* Min Ch El (ft)	*	684.85	*	0.08	*	1.22	*	0.73	*
* Alpha	*	1.03	*	305.62	*	0.00	*	0.00	*
* Frctn Loss (ft)	*	2.66	*	0.08	*	1.22	*	0.73	*
* C & E Loss (ft)	*	0.05	*	0.10	*	0.98	*	0.48	*

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: Divided flow computed for this cross-section.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION OUTPUT Profile #100-year flow

	*	Element	*	Left OB	*	Channel	*	Right OB	*
* E.G. Elev (ft)	*	687.69	*	0.080	*	0.035	*	0.080	*
* Vel Head (ft)	*	0.76	*	128.86	*	156.63	*	148.33	*
* W.S. Elev (ft)	*	686.93	*	0.29	*	30.28	*	0.66	*
* Crit W.S. (ft)	*	686.93	*	0.29	*	30.28	*	371.20	*
* E.G. Slope (ft/ft)	*	0.015386	*	0.26	*	212.06	*	0.68	*
* Q Total (cfs)	*	213.00	*	1.15	*	19.42	*	137.28	*
* Top Width (ft)	*	157.85	*	0.87	*	7.00	*	1.04	*
* Vel Total (ft/s)	*	6.82	*	0.26	*	1.56	*	0.32	*
* Max Chl Dpth (ft)	*	4.46	*	2.1	*	1709.6	*	5.5	*
* Conv. Total (cfs)	*	1717.2	*	1.26	*	19.74	*	2.17	*
* Length Wtd. (ft)	*	156.57	*	0.22	*	1.47	*	0.29	*
* Min Ch El (ft)	*	684.85	*	0.08	*	1.22	*	0.73	*
* Alpha	*	1.05	*	305.62	*	0.00	*	0.00	*
* Frctn Loss (ft)	*	2.53	*	0.10	*	1.41	*	0.82	*
* C & E Loss (ft)	*	0.07	*	0.15	*	1.00	*	0.56	*

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: Divided flow computed for this cross-section.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: west_Reach RS: 1658.443

INPUT

Description:
 Station Elevation Data num= 88
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

CalifonFloodplainSt										
0	701.94	4.95	698.64	9.91	696.53	14.86	694.39	19.82	692.37	
24.77	690.98	29.72	689.42	34.68	688.13	39.63	686.54	44.58	684.94	
49.54	682.96	54.49	680.81	59.45	678.85	64.4	676.67	69.35	674.77	
74.25	673.74	79.14	672.25	84.03	670.02	88.93	667.98	93.82	666.49	
98.71	665.08	103.61	663.97	108.5	663.21	113.39	662.15	118.29	661.1	
123.18	660.14	128.07	659.11	132.97	657.64	137.86	655.81	142.75	653.88	
147.65	652.1	148.45	652.06	151.65	651.9	152.54	651.86	157.44	652.61	
162.33	652.2	167.22	651.5	172.12	650.7	177.01	650.31	181.9	649.3	
186.89	649.33	191.87	649.64	196.86	650.15	201.84	650.57	206.83	650.94	
211.82	651.38	216.8	651.72	221.79	652.03	226.77	652.35	231.76	652.56	
236.74	652.89	241.73	653.23	246.72	653.69	251.7	654.25	256.69	654.71	
261.67	655.15	266.66	655.83	271.64	656.29	276.63	656.8	281.61	657.25	
286.6	657.56	291.59	657.95	296.57	658.54	301.56	659.04	306.54	659.68	
311.53	660.27	316.51	661.01	321.5	661.35	326.49	661.85	331.47	662.75	
336.46	663.1	341.44	662.64	346.43	662.12	351.41	662.19	356.4	662.39	
361.38	662.7	366.37	663.28	371.36	664.82	376.34	666.26	381.33	666.97	
386.31	667.72	391.3	668.35	396.28	668.74	401.27	669.03	406.26	669.4	
411.24	669.87	416.23	670.3	421.21	670.71					

Manning's n values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .08 167.22 .035 201.84 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 167.22 201.84 166.53 159.61 159.37 .1 .3

CROSS SECTION OUTPUT Profile #5-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 650.82	* Element	*	*	*
* Vel Head (ft)	* 0.35	* wt. n-Val.	*	* 0.035	*
* w.s. Elev (ft)	* 650.47	* Reach Len. (ft)	* 166.53	* 159.61	* 159.37
* Crit w.s. (ft)	* 650.47	* Flow Area (sq ft)	*	* 17.56	*
* E.G. Slope (ft/ft)	* 0.020726	* Area (sq ft)	*	* 17.56	*
* Q Total (cfs)	* 83.00	* Flow (cfs)	*	* 83.00	*
* Top width (ft)	* 25.65	* Top width (ft)	*	* 25.65	*
* Vel Total (ft/s)	* 4.73	* Avg. Vel. (ft/s)	*	* 4.73	*
* Max Chl Dpth (ft)	* 1.17	* Hydr. Depth (ft)	*	* 0.68	*
* Conv. Total (cfs)	* 576.5	* Conv. (cfs)	*	* 576.5	*
* Length wtd. (ft)	* 159.61	* Wetted Per. (ft)	*	* 25.81	*
* Min Ch El (ft)	* 649.30	* Shear (lb/sq ft)	*	* 0.88	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 421.21	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.16	* Cum Volume (acre-ft)	* 0.03	* 0.62	* 0.05
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.01	* 0.74	* 0.07

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 650.99	* Element	*	*	*
* Vel Head (ft)	* 0.38	* wt. n-Val.	*	* 0.035	* 0.080
* w.s. Elev (ft)	* 650.61	* Reach Len. (ft)	* 166.53	* 159.61	* 159.37
* Crit w.s. (ft)	* 650.61	* Flow Area (sq ft)	*	* 21.41	* 0.01
* E.G. Slope (ft/ft)	* 0.020172	* Area (sq ft)	*	* 21.41	* 0.01
* Q Total (cfs)	* 106.00	* Flow (cfs)	*	* 106.00	* 0.00
* Top width (ft)	* 29.16	* Top width (ft)	*	* 28.61	* 0.55
* Vel Total (ft/s)	* 4.95	* Avg. Vel. (ft/s)	*	* 4.95	* 0.20
* Max Chl Dpth (ft)	* 1.31	* Hydr. Depth (ft)	*	* 0.75	* 0.02
* Conv. Total (cfs)	* 746.3	* Conv. (cfs)	*	* 746.3	* 0.0
* Length wtd. (ft)	* 159.61	* Wetted Per. (ft)	*	* 28.77	* 0.56
* Min Ch El (ft)	* 649.30	* Shear (lb/sq ft)	*	* 0.94	* 0.03
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 421.21	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.05	* Cum Volume (acre-ft)	* 0.04	* 0.75	* 0.06
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.02	* 0.79	* 0.11

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 651.25	* Element	*	*	*
* Vel Head (ft)	* 0.44	* wt. n-Val.	*	* 0.035	* 0.080
* w.s. Elev (ft)	* 650.80	* Reach Len. (ft)	* 166.53	* 159.61	* 159.37
* Crit w.s. (ft)	* 650.80	* Flow Area (sq ft)	*	* 27.06	* 0.36
* E.G. Slope (ft/ft)	* 0.018642	* Area (sq ft)	*	* 27.06	* 0.36
* Q Total (cfs)	* 145.00	* Flow (cfs)	*	* 144.78	* 0.22
* Top width (ft)	* 33.47	* Top width (ft)	*	* 30.34	* 3.13
* Vel Total (ft/s)	* 5.29	* Avg. Vel. (ft/s)	*	* 5.35	* 0.60
* Max Chl Dpth (ft)	* 1.50	* Hydr. Depth (ft)	*	* 0.89	* 0.12
* Conv. Total (cfs)	* 1062.0	* Conv. (cfs)	*	* 1060.4	* 1.6
* Length wtd. (ft)	* 159.61	* Wetted Per. (ft)	*	* 30.52	* 3.14
* Min Ch El (ft)	* 649.30	* Shear (lb/sq ft)	*	* 1.03	* 0.13
* Alpha	* 1.02	* Stream Power (lb/ft s)	* 421.21	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.87	* Cum Volume (acre-ft)	* 0.06	* 0.95	* 0.10
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.07	* 0.85	* 0.20

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

	*	*	*	*	*	*
E.G. Elev (ft)	651.43	Element	Left OB	Channel	Right OB	*
Vel Head (ft)	0.49	Wt. n-Val.		0.035	0.080	*
W.S. Elev (ft)	650.94	Reach Len. (ft)	166.53	159.61	159.37	*
Crit W.S. (ft)	650.94	Flow Area (sq ft)		31.17	0.90	*
E.G. Slope (ft/ft)	0.017891	Area (sq ft)		31.17	0.90	*
Q Total (cfs)	177.00	Flow (cfs)		176.28	0.72	*
Top Width (ft)	36.09	Top width (ft)		31.16	4.93	*
Vel Total (ft/s)	5.52	Avg. Vel. (ft/s)		5.66	0.80	*
Max Chl Dpth (ft)	1.64	Hydr. Depth (ft)		1.00	0.18	*
Conv. Total (cfs)	1323.3	Conv. (cfs)		1317.9	5.4	*
Length wtd. (ft)	159.61	Wetted Per. (ft)		31.35	4.94	*
Min Ch El (ft)	649.30	Shear (lb/sq ft)		1.11	0.20	*
Alpha	1.05	Stream Power (lb/ft s)	421.21	0.00	0.00	*
Frctn Loss (ft)	2.78	Cum Volume (acre-ft)	0.08	1.12	0.14	*
C & E Loss (ft)	0.02	Cum SA (acres)	0.10	0.89	0.25	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

	*	*	*	*	*	*
E.G. Elev (ft)	651.62	Element	Left OB	Channel	Right OB	*
Vel Head (ft)	0.54	Wt. n-Val.		0.035	0.080	*
W.S. Elev (ft)	651.08	Reach Len. (ft)	166.53	159.61	159.37	*
Crit W.S. (ft)	651.08	Flow Area (sq ft)		35.71	1.73	*
E.G. Slope (ft/ft)	0.016945	Area (sq ft)		35.71	1.73	*
Q Total (cfs)	213.00	Flow (cfs)		211.29	1.71	*
Top Width (ft)	38.61	Top width (ft)		32.04	6.57	*
Vel Total (ft/s)	5.69	Avg. Vel. (ft/s)		5.92	0.99	*
Max Chl Dpth (ft)	1.78	Hydr. Depth (ft)		1.11	0.26	*
Conv. Total (cfs)	1636.3	Conv. (cfs)		1623.1	13.2	*
Length wtd. (ft)	159.61	Wetted Per. (ft)		32.25	6.59	*
Min Ch El (ft)	649.30	Shear (lb/sq ft)		1.17	0.28	*
Alpha	1.07	Stream Power (lb/ft s)	421.21	0.00	0.00	*
Frctn Loss (ft)	2.69	Cum Volume (acre-ft)	0.10	1.29	0.18	*
C & E Loss (ft)	0.03	Cum SA (acres)	0.15	0.91	0.31	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: West_Reach RS: 1498.833

INPUT

Description:
Station Elevation Data num= 109

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	637.08	4.71	636.06	9.41	635.22	14.12	634.31	18.83	633.21
23.53	632.03	28.24	631.1	32.95	630.5	37.66	629.32	42.36	628.04
47.07	627.14	51.78	626.35	56.48	625.71	61.19	625.38	65.9	625.09
70.6	625.02	75.31	624.21	104.02	623.76	84.96	623.3	89.9	623.25
94.85	623.42	99.79	623.56	104.73	623.36	109.68	623.04	114.62	622.66
119.56	622.04	134.51	621.37	129.45	620.8	134.39	620.2	139.34	619.57
144.28	618.9	149.15	618.55	154.03	618.23	158.9	618.24	163.78	617.32
168.44	615	168.65	614.89	172.16	614.78	173.53	614.73	178.4	615.99
183.28	617.29	188.15	618.23	193.03	619.28	197.9	619.86	202.78	620.29
207.65	620.61	212.53	620.86	217.4	620.9	222.28	620.7	227.15	620.51
232.03	620.79	236.9	621.11	241.78	621.43	246.71	621.92	251.63	622.41
256.56	622.79	261.49	623.22	266.42	623.54	271.35	623.78	276.28	624.21
281.21	624.34	286.14	624.44	291.07	624.71	296	625.08	300.92	625.51
305.85	625.72	310.78	625.93	315.71	626.18	320.64	626.41	325.57	626.58
330.5	626.74	335.43	626.87	340.36	626.95	345.28	626.99	350.21	626.96
355.14	626.93	360.07	626.93	365	626.92	369.93	627.09	374.86	627.4
379.79	627.74	384.72	628.16	389.65	628.62	394.57	628.88	399.5	629.03
404.43	629.42	409.36	629.58	414.29	629.97	419.22	630.35	424.15	630.51
429.08	630.63	434.01	630.75	438.93	630.89	443.86	631.12	448.79	631.44
453.49	633.99	458.18	632.55	462.88	633.08	467.57	633.56	472.27	634.09
476.97	634.62	481.66	634.99	486.36	635.67	491.05	636.16	495.75	636.67
500.44	637.09	505.14	637.37	509.83	637.68	514.53	638.01		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	158.9	.035	183.28	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	158.9	183.28		106.67	102.4	91.15	.1	.3

CROSS SECTION OUTPUT Profile #5-year flow

	*	*	*	*	*	*
E.G. Elev (ft)	616.85	Element	Left OB	Channel	Right OB	*
Vel Head (ft)	0.52	Wt. n-Val.		0.035		*
W.S. Elev (ft)	616.32	Reach Len. (ft)	106.67	102.40	91.15	*
Crit W.S. (ft)	616.32	Flow Area (sq ft)		14.30		*
E.G. Slope (ft/ft)	0.018883	Area (sq ft)		14.30		*
Q Total (cfs)	83.00	Flow (cfs)		83.00		*

		CalifonFloodplainSt			
* Top Width (ft)	* 13.86	* Top Width (ft)	* 13.86	*	*
* Vel Total (ft/s)	* 5.81	* Avg. vel. (ft/s)	* 5.81	*	*
* Max Chl Dpth (ft)	* 1.59	* Hydr. Depth (ft)	* 1.03	*	*
* Conv. Total (cfs)	* 604.0	* Conv. (cfs)	* 604.0	*	*
* Length wtd. (ft)	* 102.40	* Wetted Per. (ft)	* 14.40	*	*
* Min Ch El (ft)	* 614.73	* Shear (lb/sq ft)	* 1.17	*	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 514.53	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.93	* Cum Volume (acre-ft)	* 0.03	* 0.56	* 0.05
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.01	* 0.67	* 0.07

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 617.11	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.58	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 616.53	* Reach Len. (ft)	* 106.67	* 102.40	* 91.15
* Crit w.s. (ft)	* 616.53	* Flow Area (sq ft)	*	* 17.36	*
* E.G. Slope (ft/ft)	* 0.018086	* Area (sq ft)	*	* 17.36	*
* Q Total (cfs)	* 106.00	* Flow (cfs)	*	* 106.00	*
* Top width (ft)	* 15.08	* Top width (ft)	*	* 15.08	*
* Vel Total (ft/s)	* 6.11	* Avg. vel. (ft/s)	*	* 6.11	*
* Max Chl Dpth (ft)	* 1.80	* Hydr. Depth (ft)	*	* 1.15	*
* Conv. Total (cfs)	* 788.2	* Conv. (cfs)	*	* 788.2	*
* Length wtd. (ft)	* 102.40	* Wetted Per. (ft)	*	* 15.70	*
* Min Ch El (ft)	* 614.73	* Shear (lb/sq ft)	*	* 1.25	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 514.53	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.85	* Cum Volume (acre-ft)	* 0.04	* 0.67	* 0.06
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.02	* 0.71	* 0.10

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 617.50	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.66	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 616.83	* Reach Len. (ft)	* 106.67	* 102.40	* 91.15
* Crit w.s. (ft)	* 616.83	* Flow Area (sq ft)	*	* 22.16	*
* E.G. Slope (ft/ft)	* 0.017405	* Area (sq ft)	*	* 22.16	*
* Q Total (cfs)	* 145.00	* Flow (cfs)	*	* 145.00	*
* Top width (ft)	* 16.81	* Top width (ft)	*	* 16.81	*
* Vel Total (ft/s)	* 6.54	* Avg. vel. (ft/s)	*	* 6.54	*
* Max Chl Dpth (ft)	* 2.10	* Hydr. Depth (ft)	*	* 1.32	*
* Conv. Total (cfs)	* 1099.1	* Conv. (cfs)	*	* 1099.1	*
* Length wtd. (ft)	* 102.40	* Wetted Per. (ft)	*	* 17.54	*
* Min Ch El (ft)	* 614.73	* Shear (lb/sq ft)	*	* 1.37	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 514.53	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.78	* Cum Volume (acre-ft)	* 0.06	* 0.86	* 0.10
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.07	* 0.77	* 0.19

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 617.77	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.72	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 617.05	* Reach Len. (ft)	* 106.67	* 102.40	* 91.15
* Crit w.s. (ft)	* 617.05	* Flow Area (sq ft)	*	* 25.90	*
* E.G. Slope (ft/ft)	* 0.016969	* Area (sq ft)	*	* 25.90	*
* Q Total (cfs)	* 177.00	* Flow (cfs)	*	* 177.00	*
* Top width (ft)	* 18.05	* Top width (ft)	*	* 18.05	*
* Vel Total (ft/s)	* 6.83	* Avg. vel. (ft/s)	*	* 6.83	*
* Max Chl Dpth (ft)	* 2.32	* Hydr. Depth (ft)	*	* 1.44	*
* Conv. Total (cfs)	* 1358.8	* Conv. (cfs)	*	* 1358.8	*
* Length wtd. (ft)	* 102.40	* Wetted Per. (ft)	*	* 18.86	*
* Min Ch El (ft)	* 614.73	* Shear (lb/sq ft)	*	* 1.45	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 514.53	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.74	* Cum Volume (acre-ft)	* 0.08	* 1.01	* 0.14
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.10	* 0.80	* 0.24

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 618.05	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.79	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 617.26	* Reach Len. (ft)	* 106.67	* 102.40	* 91.15
* Crit w.s. (ft)	* 617.26	* Flow Area (sq ft)	*	* 29.86	*

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CalifonFloodplainSt
* E.G. Slope (ft/ft) * 0.016715 * Area (sq ft) * 29.86 *
* Q Total (cfs) * 213.00 * Flow (cfs) * 213.00 *
* Top Width (ft) * 19.27 * Top Width (ft) * 19.27 *
* Vel Total (ft/s) * 7.13 * Avg. Vel. (ft/s) * 7.13 *
* Max Chl Dpth (ft) * 2.53 * Hydr. Depth (ft) * 1.55 *
* Conv. Total (cfs) * 1647.5 * Conv. (cfs) * 1647.5 *
* Length Wtd. (ft) * 102.40 * Wetted Per. (ft) * 20.16 *
* Min Ch El (ft) * 614.73 * Shear (lb/sq ft) * 1.55 *
* Alpha * 1.00 * Stream Power (lb/ft s) * 514.53 * 0.00 * 0.00 *
* Frctn Loss (ft) * 1.71 * Cum Volume (acre-ft) * 0.10 * 1.17 * 0.18 *
* C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.15 * 0.81 * 0.30 *
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Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

Warning: during the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: West_Reach RS: 1396.434

INPUT

Description:

Station	Elevation	Data	num=	103	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	617.78	4.97	617.68	9.93	616.46	14.9	614.38	19.86	612.07			
24.83	610.6	29.79	610.29	34.76	610.2	39.72	610.11	44.69	610.05			
49.65	610.02	54.62	610	59.59	609.92	64.55	609.76	69.52	609.77			
74.48	609.91	79.45	609.85	84.41	609.77	89.38	609.51	94.34	609.65			
99.31	609.76	104.27	609.71	109.24	609.55	114.2	609.33	119.17	609.09			
124.14	608.87	129.1	608.13	134.07	607.32	139.03	606.9	144	606.82			
148.96	606.63	153.93	606.47	158.89	606.62	163.86	606.66	168.82	606.11			
173.79	605.73	178.76	605.86	183.72	605.73	188.69	605.8	193.65	605.69			
198.51	605.56	203.37	605.14	208.23	604.73	213.09	604.77	217.95	604.81			
222.82	604.43	227.68	604.38	232.54	604.45	237.4	603.22	242.26	601.59			
244.52	600.93	247.12	600.18	248.63	600.2	251.98	600.24	256.84	602.41			
261.7	604.45	266.56	605.38	271.42	605.86	276.28	606.3	281.14	606.68			
286	606.79	290.91	606.94	295.82	607.08	300.73	607.22	305.64	607.32			
310.54	607.45	315.45	607.54	320.36	607.61	325.27	607.53	330.18	607.56			
335.08	607.68	339.99	607.96	344.9	608.2	349.81	608.44	354.71	608.71			
359.62	609.03	364.53	609.35	369.44	609.45	374.35	610.03	379.25	610.07			
384.16	610.03	389.07	610.23	393.98	610.61	398.89	611.07	403.79	611.48			
408.7	611.74	413.61	612.01	418.52	612.44	423.43	613.06	428.33	613.77			
433.24	614.28	438.15	614.65	443.06	614.89	448.03	615.34	453	615.84			
457.97	616.18	462.94	616.35	467.91	616.7	472.89	617.17	477.86	617.72			
482.83	618.24	487.8	618.7	492.77	619.08							

Manning's n Values num= 3

Sta	n Val	Sta	n Val
0	.08	232.54	.035
		261.7	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 232.54 261.7 44.71 63.74 73.16 .3 .5

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 602.27	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.53	* Wt. n-Val.	* 44.71	* 63.74	* 73.16
* W.S. Elev (ft)	* 601.74	* Reach Len. (ft)		* 14.19	
* Crit W.S. (ft)	* 601.74	* Flow Area (sq ft)		* 14.19	
* E.G. Slope (ft/ft)	* 0.018814	* Area (sq ft)		* 83.00	
* Q Total (cfs)	* 83.00	* Flow (cfs)		* 13.54	
* Top Width (ft)	* 13.54	* Top Width (ft)		* 5.85	
* Vel Total (ft/s)	* 5.85	* Avg. Vel. (ft/s)		* 1.05	
* Max Chl Dpth (ft)	* 1.56	* Hydr. Depth (ft)		* 605.1	
* Conv. Total (cfs)	* 605.1	* Conv. (cfs)		* 14.09	
* Length Wtd. (ft)	* 63.70	* Wetted Per. (ft)		* 1.18	
* Min Ch El (ft)	* 600.18	* Shear (lb/sq ft)		* 492.77	* 0.00 * 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)		* 0.03	* 0.52 * 0.05
* Frctn Loss (ft)	* 0.11	* Cum Volume (acre-ft)		* 0.01	* 0.63 * 0.07
* C & E Loss (ft)	* 0.23	* Cum SA (acres)			

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

Warning: during the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 602.55	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.59	* Wt. n-Val.	* 44.71	* 63.74	* 73.16
* W.S. Elev (ft)	* 601.95	* Reach Len. (ft)		* 17.17	
* Crit W.S. (ft)	* 601.95	* Flow Area (sq ft)		* 17.17	
* E.G. Slope (ft/ft)	* 0.018095	* Area (sq ft)		* 106.00	
* Q Total (cfs)	* 106.00	* Flow (cfs)		* 14.64	
* Top Width (ft)	* 14.64	* Top Width (ft)		* 6.17	
* Vel Total (ft/s)	* 6.17	* Avg. Vel. (ft/s)		* 1.17	
* Max Chl Dpth (ft)	* 1.77	* Hydr. Depth (ft)		* 788.0	
* Conv. Total (cfs)	* 788.0	* Conv. (cfs)		* 15.27	
* Length Wtd. (ft)	* 63.71	* Wetted Per. (ft)		* 1.27	
* Min Ch El (ft)	* 600.18	* Shear (lb/sq ft)		* 492.77	* 0.00 * 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)			

CalifonFloodplainst

* Frctn Loss (ft) * 0.10 * Cum Volume (acre-ft) * 0.04 * 0.63 * 0.06 *
 * C & E Loss (ft) * 0.25 * Cum SA (acres) * 0.02 * 0.67 * 0.10 *

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 602.94			
* Vel Head (ft)	* 0.68		* 0.035	
* W.S. Elev (ft)	* 602.26	* 44.71	* 63.74	* 73.16
* Crit w.s. (ft)	* 602.26		* 21.91	
* E.G. Slope (ft/ft)	* 0.017305		* 21.91	
* Q Total (cfs)	* 145.00		* 145.00	
* Top width (ft)	* 16.25		* 16.25	
* Vel Total (ft/s)	* 6.62		* 6.62	
* Max Chl Dpth (ft)	* 2.08		* 1.35	
* Conv. Total (cfs)	* 1102.3		* 1102.3	
* Length Wtd. (ft)	* 63.69		* 16.99	
* Min Ch El (ft)	* 600.18		* 1.39	
* Alpha	* 1.00	* 492.77	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.10	* 0.06	* 0.81	* 0.10
* C & E Loss (ft)	* 0.28	* 0.07	* 0.73	* 0.19

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 603.22			
* Vel Head (ft)	* 0.75		* 0.035	
* W.S. Elev (ft)	* 602.48	* 44.71	* 63.74	* 73.16
* Crit w.s. (ft)	* 602.48		* 25.54	
* E.G. Slope (ft/ft)	* 0.016973		* 25.54	
* Q Total (cfs)	* 177.00		* 177.00	
* Top width (ft)	* 17.38		* 17.38	
* Vel Total (ft/s)	* 6.93		* 6.93	
* Max Chl Dpth (ft)	* 2.30		* 1.47	
* Conv. Total (cfs)	* 1358.6		* 1358.6	
* Length Wtd. (ft)	* 63.75		* 18.21	
* Min Ch El (ft)	* 600.18		* 1.49	
* Alpha	* 1.00	* 492.77	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.12	* 0.08	* 0.95	* 0.14
* C & E Loss (ft)	* 0.30	* 0.10	* 0.76	* 0.24

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 603.51			
* Vel Head (ft)	* 0.81		* 0.035	
* W.S. Elev (ft)	* 602.70	* 44.71	* 63.74	* 73.16
* Crit w.s. (ft)	* 602.70		* 29.51	
* E.G. Slope (ft/ft)	* 0.016604		* 29.51	
* Q Total (cfs)	* 213.00		* 213.00	
* Top width (ft)	* 18.57		* 18.57	
* Vel Total (ft/s)	* 7.22		* 7.22	
* Max Chl Dpth (ft)	* 2.52		* 1.59	
* Conv. Total (cfs)	* 1653.0		* 1653.0	
* Length Wtd. (ft)	* 63.79		* 19.47	
* Min Ch El (ft)	* 600.18		* 1.57	
* Alpha	* 1.00	* 492.77	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.14	* 0.10	* 1.10	* 0.18
* C & E Loss (ft)	* 0.31	* 0.15	* 0.77	* 0.30

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

CalifonFloodplainSt

RIVER: Unnamed_Trib
 REACH: West_Reach RS: 1332.697

INPUT

Description:

Station Elevation Data		num= 82		Sta Elev		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	606.54	4.88	606.4	9.76	606.19	14.64	605.5	19.52	604.68		
24.4	603.9	29.28	603.22	34.16	602.91	39.04	602.65	43.92	602.58		
48.8	602.53	53.68	602.49	58.56	602.48	63.44	602.39	68.31	602.44		
73.19	602.51	78.07	602.61	82.95	602.62	87.83	602.53	92.71	602.37		
97.59	601.95	102.47	601.54	107.35	601.78	112.23	602.03	117.11	602.15		
121.99	602.01	126.87	601.66	131.75	600.87	136.63	599.65	141.51	598.3		
146.39	597.28	151.27	596.94	156.15	596.63	161.03	595.46	165.91	594.4		
165.91	593.96	166.71	592	168.21	590	169.71	588	175.21	588		
177.21	590	179.21	592	180.26	593.81	184.86	593.69	189.81	593.76		
194.76	593.84	199.71	594.16	204.66	594.96	209.61	595.65	214.56	596.21		
219.51	596.95	224.46	597.54	229.41	598.05	234.36	598.31	239.21	598.43		
244.06	598.57	248.9	598.67	253.75	598.81	258.59	598.93	263.44	599.01		
268.28	599.28	273.13	599.76	277.98	600.22	282.82	600.64	287.67	600.96		
292.51	601.16	297.36	601.47	302.2	601.91	307.05	602.44	311.9	602.77		
316.74	603.12	321.59	603.42	326.43	603.85	331.28	604.2	336.12	604.42		
340.97	604.69	345.82	604.97	350.66	605.19	355.51	605.34	360.35	605.6		
365.2	605.86	370.04	605.97								

Manning's n Values		num= 3		Sta n Val		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.08	168.21	.035	177.21	.08		

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.	
	168.21	177.21		32.12	27.49	13.18		.3	.5	
Ineffective Flow	num= 2									
Sta L	Sta R	Elev	Permanent							
0	166.7	593	F							
178	370.04	593	F							

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 592.39	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.08	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 592.31	* Reach Len. (ft)	* 32.12	* 27.49	* 13.18
* Crit w.s. (ft)	* 589.75	* Flow Area (sq ft)	* 1.97	* 35.28	* 1.51
* E.G. Slope (ft/ft)	* 0.000611	* Area (sq ft)	* 1.98	* 35.28	* 2.65
* Q Total (cfs)	* 83.00	* Flow (cfs)	* 0.76	* 81.39	* 0.85
* Top width (ft)	* 12.81	* Top width (ft)	* 1.63	* 9.00	* 2.18
* Vel Total (ft/s)	* 2.14	* Avg. vel. (ft/s)	* 0.39	* 2.31	* 0.56
* Max Chl Dpth (ft)	* 4.31	* Hydr. Depth (ft)	* 1.30	* 3.92	* 1.91
* Conv. Total (cfs)	* 3357.3	* Conv. (cfs)	* 30.9	* 3292.1	* 34.4
* Length wtd. (ft)	* 27.49	* Wetted Per. (ft)	* 2.53	* 10.83	* 1.12
* Min Ch El (ft)	* 588.00	* Shear (lb/sq ft)	* 0.03	* 0.12	* 0.05
* Alpha	* 1.14	* Stream Power (lb/ft s)	* 370.04	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.03	* 0.49	* 0.05
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.00	* 0.62	* 0.07

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 593.17	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.09	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 593.08	* Reach Len. (ft)	* 32.12	* 27.49	* 13.18
* Crit w.s. (ft)	* 590.02	* Flow Area (sq ft)	* 3.36	* 42.21	* 4.50
* E.G. Slope (ft/ft)	* 0.000534	* Area (sq ft)	* 3.36	* 42.21	* 4.50
* Q Total (cfs)	* 106.00	* Flow (cfs)	* 1.36	* 102.58	* 2.06
* Top width (ft)	* 13.57	* Top width (ft)	* 1.94	* 9.00	* 2.63
* Vel Total (ft/s)	* 2.12	* Avg. vel. (ft/s)	* 0.40	* 2.43	* 0.46
* Max Chl Dpth (ft)	* 5.08	* Hydr. Depth (ft)	* 1.73	* 4.69	* 1.71
* Conv. Total (cfs)	* 4586.5	* Conv. (cfs)	* 58.8	* 4438.6	* 89.1
* Length wtd. (ft)	* 27.49	* Wetted Per. (ft)	* 3.67	* 10.83	* 4.08
* Min Ch El (ft)	* 588.00	* Shear (lb/sq ft)	* 0.03	* 0.13	* 0.04
* Alpha	* 1.28	* Stream Power (lb/ft s)	* 370.04	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.04	* 0.59	* 0.06
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.02	* 0.65	* 0.10

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 594.18	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.11	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 594.07	* Reach Len. (ft)	* 32.12	* 27.49	* 13.18
* Crit w.s. (ft)	* 590.39	* Flow Area (sq ft)	* 5.49	* 51.11	* 12.23
* E.G. Slope (ft/ft)	* 0.000519	* Area (sq ft)	* 5.49	* 51.11	* 12.23
* Q Total (cfs)	* 145.00	* Flow (cfs)	* 2.48	* 139.12	* 3.40
* Top width (ft)	* 32.72	* Top width (ft)	* 2.65	* 9.00	* 21.07
* Vel Total (ft/s)	* 2.11	* Avg. vel. (ft/s)	* 0.45	* 2.72	* 0.28
* Max Chl Dpth (ft)	* 6.07	* Hydr. Depth (ft)	* 2.07	* 5.68	* 0.58
* Conv. Total (cfs)	* 6362.9	* Conv. (cfs)	* 108.8	* 6104.8	* 149.4
* Length wtd. (ft)	* 27.49	* Wetted Per. (ft)	* 4.98	* 10.83	* 22.95
* Min Ch El (ft)	* 588.00	* Shear (lb/sq ft)	* 0.04	* 0.15	* 0.02
* Alpha	* 1.60	* Stream Power (lb/ft s)	* 370.04	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.05	* 0.76	* 0.09
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.07	* 0.71	* 0.18

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 594.46	* Element	* Left OB	* Channel	* Right OB
------------------	----------	-----------	-----------	-----------	------------

		CalifonFloodplainSt	
* Vel Head (ft)	* 0.14	* wt. n-val.	* 0.080 * 0.035
* W.S. Elev (ft)	* 594.32	* Reach Len. (ft)	* 32.12 * 27.49
* Crit W.S. (ft)	* 590.69	* Flow Area (sq ft)	* 6.26 * 53.37
* E.G. Slope (ft/ft)	* 0.000649	* Area (sq ft)	* 6.26 * 53.37
* Q Total (cfs)	* 177.00	* Flow (cfs)	* 3.10 * 167.19
* Top width (ft)	* 35.94	* Top width (ft)	* 3.46 * 9.00
* Vel Total (ft/s)	* 2.28	* Avg. Vel. (ft/s)	* 0.50 * 3.13
* Max Chl Dpth (ft)	* 6.32	* Hydr. Depth (ft)	* 1.81 * 5.93
* Conv. Total (cfs)	* 6946.2	* Conv. (cfs)	* 121.7 * 6561.2
* Length wtd. (ft)	* 27.49	* Wetted Per. (ft)	* 5.84 * 10.83
* Min Ch El (ft)	* 588.00	* Shear (lb/sq ft)	* 0.04 * 0.20
* Alpha	* 1.78	* Stream Power (lb/ft s)	* 370.04 * 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.07 * 0.89
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.10 * 0.74

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #100-year flow

		Left OB		Channel		Right OB	
* E.G. Elev (ft)	* 594.67	* Element	* 0.080	* 0.035	* 0.080	* 0.035	* 0.080
* Vel Head (ft)	* 0.19	* wt. n-val.	* 0.080	* 0.035	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 594.48	* Reach Len. (ft)	* 32.12	* 27.49	* 32.12	* 27.49	* 32.12
* Crit W.S. (ft)	* 591.00	* Flow Area (sq ft)	* 6.86	* 54.82	* 6.86	* 54.82	* 6.86
* E.G. Slope (ft/ft)	* 0.000840	* Area (sq ft)	* 6.86	* 54.82	* 6.86	* 54.82	* 6.86
* Q Total (cfs)	* 213.00	* Flow (cfs)	* 3.87	* 198.83	* 3.87	* 198.83	* 3.87
* Top width (ft)	* 37.47	* Top width (ft)	* 3.99	* 9.00	* 3.99	* 9.00	* 3.99
* Vel Total (ft/s)	* 2.55	* Avg. Vel. (ft/s)	* 0.56	* 3.63	* 0.56	* 3.63	* 0.56
* Max Chl Dpth (ft)	* 6.48	* Hydr. Depth (ft)	* 1.72	* 6.09	* 1.72	* 6.09	* 1.72
* Conv. Total (cfs)	* 7350.5	* Conv. (cfs)	* 133.6	* 6861.5	* 133.6	* 6861.5	* 133.6
* Length wtd. (ft)	* 27.49	* Wetted Per. (ft)	* 6.38	* 10.83	* 6.38	* 10.83	* 6.38
* Min Ch El (ft)	* 588.00	* Shear (lb/sq ft)	* 0.06	* 0.27	* 0.06	* 0.27	* 0.06
* Alpha	* 1.89	* Stream Power (lb/ft s)	* 370.04	* 0.00	* 370.04	* 0.00	* 370.04
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.10	* 1.04	* 0.10	* 1.04	* 0.10
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.14	* 0.75	* 0.14	* 0.75	* 0.14

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CULVERT

RIVER: Unnamed_Trib
 REACH: West_Reach RS: 1318.95

INPUT

Description: Driveway just upstream and off of Academy Street
 Distance from upstream XS = 10
 Deck/Roadway width = 14
 Weir Coefficient = 2.6
 Upstream Deck/Roadway Coordinates

num=	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
161.03	594		164.48	594		165.91	594								
166.71	594		168.21	594		169.71	594								
175.21	594		177.21	594		179.21	594								
180.26	594		184.86	594		189.81	594								
194.76	594		199.71	594		204.66	594								
209.61	594														

Upstream Bridge Cross Section Data

Station Elevation Data		num=		82					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	606.54	4.88	606.4	9.76	606.19	14.64	605.5	19.52	604.68
24.4	603.9	29.28	603.22	34.16	602.91	39.04	602.65	43.92	602.58
48.8	602.53	53.68	602.49	58.56	602.48	63.44	602.39	68.31	602.44
73.19	602.51	78.07	602.61	82.95	602.62	87.83	602.53	92.71	602.37
97.59	601.95	102.47	601.54	107.35	601.78	112.23	602.03	117.11	602.15
121.99	602.01	126.87	601.66	131.75	600.87	136.63	599.65	141.51	598.3
146.39	597.28	151.27	596.94	156.15	596.63	161.03	595.46	164.48	594.4
165.91	593.96	166.71	592	168.21	590	169.71	588	175.21	588
177.21	590	179.21	592	180.26	593.81	184.86	593.69	189.81	593.76
194.76	593.84	199.71	594.16	204.66	594.96	209.61	595.65	214.56	596.21
219.51	596.95	224.46	597.54	229.41	598.05	234.36	598.31	239.21	598.43
244.06	598.57	248.9	598.67	253.75	598.81	258.59	598.93	263.44	599.01
268.28	599.28	273.13	599.76	277.98	600.22	282.82	600.64	287.67	600.96
292.51	601.16	297.36	601.47	302.2	601.91	307.05	602.44	311.9	602.77
316.74	603.12	321.59	603.42	326.43	603.85	331.28	604.2	336.12	604.42
340.97	604.69	345.82	604.97	350.66	605.19	355.51	605.34	360.35	605.6
365.2	605.86	370.04	605.97						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	168.21	.035	177.21	.08

Bank Sta: Left Right Coeff Contr. Expan.

Left	Right	Coeff	Contr.	Expan.
168.21	177.21		.3	.5

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	166.7	593	F
178	370.04	593	F

Downstream Deck/Roadway Coordinates

num=	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
230.42	594		235.27	594		240.12	594			
240.14	594		243.68	594		244.97	594			
249.82	594		252.82	594		255.32	594			
263.32	594		266.27	594		270.38	594			
275.06	594		279.74	594		284.42	594			
289.09	594		293.77	594		298.45	594			
303.13	594									

Downstream Bridge Cross Section Data

Station Elevation Data		num= 95		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	604.38	4.87	604.31	9.75	604.29	14.62	603.65	19.49	603.28
24.37	602.95	29.24	602.58	34.11	602.43	38.99	602.27	43.86	601.99
48.73	601.62	53.61	601.34	58.48	601.21	63.35	600.94	68.23	600.42
73.1	599.73	77.97	598.79	82.85	597.97	87.72	597.58	92.6	597.35
97.47	597.3	102.34	597.21	107.22	597.28	112.17	597.19	117.13	596.95
122.09	597.22	127.05	597.63	132.01	597.51	136.97	597.71	141.93	597.28
146.89	597.63	151.85	597.4	156.8	597.5	161.76	597.5	166.72	597.64
171.68	597.57	176.64	597.29	181.6	597.24	186.56	597.33	191.52	597.42
196.47	597.56	201.32	597.24	206.17	596.92	211.02	596.37	215.87	595.97
220.72	595.53	225.57	595.23	230.42	594.86	235.27	594.26	240.12	593.46
240.14	593.46	243.68	592.76	244.97	592.51	249.82	591.65	252.82	588
255.32	586.82	263.32	586.82	266.27	592.04	270.38	592.27	275.06	592.38
279.74	592.47	284.42	592.56	289.09	592.85	293.77	593.48	298.45	594.01
303.13	594.59	308.04	595.05	312.96	595.51	317.88	595.88	322.79	596.06
327.71	596.03	332.62	596.39	337.54	596.68	342.46	597.28	347.37	597.67
352.29	597.97	357.2	598.36	362.12	598.8	367.04	599.24	371.95	599.62
376.87	600.05	381.79	600.46	386.7	600.92	391.62	601.35	396.53	601.59
401.45	601.78	406.37	601.95	411.28	601.99	416.2	602.11	421.11	602.32
426.03	602.36	430.95	602.41	435.86	602.54	440.78	602.78	445.7	602.79

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	249.82	.035	266.27	.08

Bank Sta: Left Right Coeff Contr. Expan.

Left	Right	Coeff	Contr.	Expan.
249.82	266.27		.3	.5

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	248.63	592.47	F
268.28	445.7	592.47	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span
Culvert #1	Box	5	4
FHWA chart # 8 - flared wingwalls			
FHWA Scale # 3 - wingwall flared 0 deg. (sides extended straight)			
Solution Criteria = Highest U.S. EG			
Culvert Upstrm Dist	Length	Top n	Bottom n
10	14	.013	.035
Upstream Elevation = 588	Centerline Station = 172.46		
Downstream Elevation = 586.82	Centerline Station = 259.32		

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef Exit Loss Coef

10 14 .013 .035 0 .7 1

CULVERT OUTPUT Profile #5-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 83.00	* Culv Full Len (ft)	*
* # Barrels	* 1	* Culv Vel Us (ft/s)	* 8.74
* Q Barrel (cfs)	* 83.00	* Culv Vel Ds (ft/s)	* 12.67
* E.G. US. (ft)	* 592.39	* Culv Inv El Up (ft)	* 588.00
* W.S. US. (ft)	* 592.31	* Culv Inv El Dn (ft)	* 586.82
* E.G. DS (ft)	* 588.95	* Culv Frctn Ls (ft)	* 0.61
* W.S. DS (ft)	* 588.65	* Culv Exit Loss (ft)	* 2.00
* Delta EG (ft)	* 3.44	* Culv Entr Loss (ft)	* 0.83
* Delta WS (ft)	* 3.66	* Q Weir (cfs)	*
* E.G. IC (ft)	* 591.83	* Weir Sta Lft (ft)	*
* E.G. OC (ft)	* 592.39	* Weir Sta Rgt (ft)	*
* Culvert Control	* outlet	* Weir Submerg	*
* Culv WS Inlet (ft)	* 590.37	* Weir Max Depth (ft)	*
* Culv WS outlet (ft)	* 588.46	* Weir Avg Depth (ft)	*
* Culv Nml Depth (ft)	* 1.45	* Weir Flow Area (sq ft)	*
* Culv Crt Depth (ft)	* 2.37	* Min El Weir Flow (ft)	* 594.01

Warning: Since the culvert has supercritical flow, the program should be run in mixed flow in order to check if the cross section downstream of the culvert has supercritical flow
 Note: The flow in the culvert is entirely supercritical.

CULVERT OUTPUT Profile #10-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 106.00	* Culv Full Len (ft)	*
* # Barrels	* 1	* Culv Vel Us (ft/s)	* 9.48
* Q Barrel (cfs)	* 106.00	* Culv Vel Ds (ft/s)	* 13.52
* E.G. US. (ft)	* 593.17	* Culv Inv El Up (ft)	* 588.00
* W.S. US. (ft)	* 593.08	* Culv Inv El Dn (ft)	* 586.82
* E.G. DS (ft)	* 589.75	* Culv Frctn Ls (ft)	* 0.57
* W.S. DS (ft)	* 589.56	* Culv Exit Loss (ft)	* 1.87
* Delta EG (ft)	* 3.42	* Culv Entr Loss (ft)	* 0.98
* Delta WS (ft)	* 3.51	* Q Weir (cfs)	*
* E.G. IC (ft)	* 592.56	* Weir Sta Lft (ft)	*
* E.G. OC (ft)	* 593.17	* Weir Sta Rgt (ft)	*
* Culvert Control	* outlet	* Weir Submerg	*
* Culv WS Inlet (ft)	* 590.79	* Weir Max Depth (ft)	*
* Culv WS outlet (ft)	* 588.78	* Weir Avg Depth (ft)	*
* Culv Nml Depth (ft)	* 1.70	* Weir Flow Area (sq ft)	*
* Culv Crt Depth (ft)	* 2.79	* Min El Weir Flow (ft)	* 594.01

Warning: Since the culvert has supercritical flow, the program should be run in mixed flow in order to check if the cross section downstream of the culvert has supercritical flow
 Note: The flow in the culvert is entirely supercritical.

CULVERT OUTPUT Profile #25-year flow Culv Group: Culvert #1

```

*****
* Q Culv Group (cfs) * 138.56 * Culv Full Len (ft) *
* # Barrels * 1 * Culv Vel US (ft/s) * 10.37 *
* Q Barrel (cfs) * 138.56 * Culv Vel DS (ft/s) * 14.50 *
* E.G. US. (ft) * 594.18 * Culv Inv El Up (ft) * 588.00 *
* W.S. US. (ft) * 594.07 * Culv Inv El Dn (ft) * 586.82 *
* E.G. DS (ft) * 591.05 * Culv Frctn Ls (ft) * 0.54 *
* W.S. DS (ft) * 590.92 * Culv Exit Loss (ft) * 1.42 *
* Delta EG (ft) * 3.13 * Culv Entr Loss (ft) * 1.17 *
* Delta WS (ft) * 3.15 * Q Weir (cfs) * 6.44 *
* E.G. IC (ft) * 593.51 * Weir Sta Lft (ft) * 165.20 *
* E.G. OC (ft) * 594.18 * Weir Sta Rgt (ft) * 199.83 *
* Culvert Control * Outlet * Weir Submerg * 0.00 *
* Culv WS Inlet (ft) * 591.34 * Weir Max Depth (ft) * 0.18 *
* Culv WS Outlet (ft) * 589.21 * Weir Avg Depth (ft) * 0.17 *
* Culv Nml Depth (ft) * 2.01 * Weir Flow Area (sq ft) * 5.93 *
* Culv Crt Depth (ft) * 3.34 * Min El Weir Flow (ft) * 594.01 *
*****

```

Warning: during the culvert inlet control computations, the program could not balance the culvert/weir flow. The reported inlet energy grade answer may not be valid.
 Note: The flow in the culvert is entirely supercritical.

CULVERT OUTPUT Profile #50-year flow Culv Group: Culvert #1

```

*****
* Q Culv Group (cfs) * 148.28 * Culv Full Len (ft) * 1.70 *
* # Barrels * 1 * Culv Vel US (ft/s) * 10.61 *
* Q Barrel (cfs) * 148.28 * Culv Vel DS (ft/s) * 7.41 *
* E.G. US. (ft) * 594.47 * Culv Inv El Up (ft) * 588.00 *
* W.S. US. (ft) * 594.32 * Culv Inv El Dn (ft) * 586.82 *
* E.G. DS (ft) * 592.06 * Culv Frctn Ls (ft) * 0.44 *
* W.S. DS (ft) * 591.95 * Culv Exit Loss (ft) * 0.74 *
* Delta EG (ft) * 2.40 * Culv Entr Loss (ft) * 1.22 *
* Delta WS (ft) * 2.37 * Q Weir (cfs) * 28.72 *
* E.G. IC (ft) * 594.30 * Weir Sta Lft (ft) * 164.25 *
* E.G. OC (ft) * 594.47 * Weir Sta Rgt (ft) * 201.63 *
* Culvert Control * Outlet * Weir Submerg * 0.00 *
* Culv WS Inlet (ft) * 591.49 * Weir Max Depth (ft) * 0.47 *
* Culv WS Outlet (ft) * 591.82 * Weir Avg Depth (ft) * 0.44 *
* Culv Nml Depth (ft) * 2.11 * Weir Flow Area (sq ft) * 16.41 *
* Culv Crt Depth (ft) * 3.49 * Min El Weir Flow (ft) * 594.01 *
*****

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Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.

CULVERT OUTPUT Profile #100-year flow Culv Group: Culvert #1

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*****
* Q Culv Group (cfs) * 163.44 * Culv Full Len (ft) * 10.37 *
* # Barrels * 1 * Culv Vel US (ft/s) * 9.16 *
* Q Barrel (cfs) * 163.44 * Culv Vel DS (ft/s) * 8.17 *
* E.G. US. (ft) * 594.68 * Culv Inv El Up (ft) * 588.00 *
* W.S. US. (ft) * 594.48 * Culv Inv El Dn (ft) * 586.82 *
* E.G. DS (ft) * 592.71 * Culv Frctn Ls (ft) * 0.13 *
* W.S. DS (ft) * 592.60 * Culv Exit Loss (ft) * 0.92 *
* Delta EG (ft) * 1.96 * Culv Entr Loss (ft) * 0.91 *
* Delta WS (ft) * 1.88 * Q Weir (cfs) * 49.56 *
* E.G. IC (ft) * 594.62 * Weir Sta Lft (ft) * 163.61 *
* E.G. OC (ft) * 594.68 * Weir Sta Rgt (ft) * 202.84 *
* Culvert Control * Outlet * Weir Submerg * 0.00 *
* Culv WS Inlet (ft) * 592.46 * Weir Max Depth (ft) * 0.67 *
* Culv WS Outlet (ft) * 591.82 * Weir Avg Depth (ft) * 0.61 *
* Culv Nml Depth (ft) * 2.25 * Weir Flow Area (sq ft) * 23.91 *
* Culv Crt Depth (ft) * 3.73 * Min El Weir Flow (ft) * 594.01 *
*****

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CROSS SECTION

RIVER: Unnamed_Trib
 REACH: West_Reach RS: 1305.207

INPUT Description:

Station	Elevation	Data	num=	95	Sta	Elev	Sta	Elev	Sta	Elev
0	604.38	4.87	604.31	9.75	604.29	14.62	603.65	19.49	603.28	
24.37	602.95	29.24	602.58	34.11	602.43	38.99	602.27	43.86	601.99	
48.73	601.62	53.61	601.34	58.48	601.21	63.35	600.94	68.23	600.42	
73.1	599.73	77.97	598.79	82.85	597.97	87.72	597.58	92.6	597.35	
97.47	597.3	102.34	597.21	107.22	597.28	112.17	597.19	117.13	596.95	
122.09	597.22	127.05	597.63	132.01	597.51	136.97	597.71	141.93	597.28	
146.89	597.63	151.85	597.4	156.8	597.5	161.76	597.5	166.72	597.64	
171.68	597.57	176.64	597.29	181.6	597.24	186.56	597.33	191.52	597.42	
196.47	597.56	201.32	597.24	206.17	596.92	211.02	596.37	215.87	595.97	
220.72	595.53	225.57	595.23	230.42	594.86	235.27	594.26	240.12	593.46	
240.14	593.46	243.68	592.76	244.97	592.51	249.82	591.65	252.82	588	
255.32	586.82	263.32	586.82	266.27	592.04	270.38	592.27	275.06	592.38	
279.74	592.47	284.42	592.56	289.09	592.85	293.77	593.48	298.45	594.01	
303.13	594.59	308.04	595.05	312.96	595.51	317.88	595.88	322.79	596.06	
327.71	596.03	332.62	596.39	337.54	596.68	342.46	597.28	347.37	597.67	
352.29	597.97	357.2	598.36	362.12	598.8	367.04	599.24	371.95	599.62	
376.87	600.05	381.79	600.46	386.7	600.92	391.62	601.35	396.53	601.59	
401.45	601.78	406.37	601.95	411.28	601.99	416.2	602.11	421.11	602.32	
426.03	602.36	430.95	602.41	435.86	602.54	440.78	602.78	445.7	602.79	

Manning's n values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	249.82	.035	266.27	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 249.82 266.27 28.34 11.91 12.11 .3 .5
 Ineffective Flow num= 2

califonFloodplainSt

Sta L Sta R Elev Permanent
 0 248.63 592.47 F
 268.28 445.7 592.47 F

CROSS SECTION OUTPUT Profile #5-year flow

Element	Left OB	Channel	Right OB
E.G. Elev (ft)	588.95		
Vel Head (ft)	0.30	0.035	
W.S. Elev (ft)	588.65	11.91	12.11
Crit W.S. (ft)	588.20	18.86	
E.G. Slope (ft/ft)	0.007024	18.86	
Q Total (cfs)	83.00	83.00	
Top width (ft)	12.07	12.07	
Vel Total (ft/s)	4.40	4.40	
Max Chl Dpth (ft)	1.83	1.56	
Conv. Total (cfs)	990.3	990.3	
Length wtd. (ft)	11.91	13.71	
Min Ch El (ft)	586.82	0.60	
Alpha	1.00	0.00	0.00
Frctn Loss (ft)	0.02	0.47	0.05
C & E Loss (ft)	0.11	0.61	0.07

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #10-year flow

Element	Left OB	Channel	Right OB
E.G. Elev (ft)	589.75		
Vel Head (ft)	0.19	0.035	
W.S. Elev (ft)	589.56	11.91	12.11
Crit W.S. (ft)	588.41	30.48	
E.G. Slope (ft/ft)	0.002828	30.48	
Q Total (cfs)	106.00	106.00	
Top width (ft)	13.34	13.34	
Vel Total (ft/s)	3.48	3.48	
Max Chl Dpth (ft)	2.74	2.29	
Conv. Total (cfs)	1993.2	1993.2	
Length wtd. (ft)	11.92	15.94	
Min Ch El (ft)	586.82	0.34	
Alpha	1.00	0.00	0.00
Frctn Loss (ft)	0.01	0.04	0.06
C & E Loss (ft)	0.06	0.57	0.10

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #25-year flow

Element	Left OB	Channel	Right OB
E.G. Elev (ft)	591.05		
Vel Head (ft)	0.13	0.035	
W.S. Elev (ft)	590.92	11.91	12.11
Crit W.S. (ft)	588.73	49.84	
E.G. Slope (ft/ft)	0.001322	49.84	
Q Total (cfs)	145.00	145.00	
Top width (ft)	15.22	15.22	
Vel Total (ft/s)	2.91	2.91	
Max Chl Dpth (ft)	4.10	3.27	
Conv. Total (cfs)	3988.4	3988.4	
Length wtd. (ft)	11.92	19.25	
Min Ch El (ft)	586.82	0.21	
Alpha	1.00	0.00	0.00
Frctn Loss (ft)	0.01	0.05	0.09
C & E Loss (ft)	0.03	0.70	0.17

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #50-year flow

Element	Left OB	Channel	Right OB
E.G. Elev (ft)	592.06		
Vel Head (ft)	0.11	0.080	
W.S. Elev (ft)	591.95	11.91	12.11
Crit W.S. (ft)	588.99	66.20	
E.G. Slope (ft/ft)	0.000878	66.20	
Q Total (cfs)	177.00	176.96	
Top width (ft)	18.09	16.40	
Vel Total (ft/s)	2.66	2.67	
Max Chl Dpth (ft)	5.13	4.04	
Conv. Total (cfs)	5971.8	5970.4	
Length wtd. (ft)	12.14	21.38	
Min Ch El (ft)	586.82	0.17	
Alpha	1.01	0.00	0.00
Frctn Loss (ft)	0.01	0.07	0.12
C & E Loss (ft)	0.03	0.73	0.22

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #100-year flow

Element	Left OB	Channel	Right OB
E.G. Elev (ft)	592.71		
Vel Head (ft)	0.12	0.035	0.080
W.S. Elev (ft)	592.60	11.91	12.11
Crit W.S. (ft)	589.24	76.82	4.27
E.G. Slope (ft/ft)	0.000768	76.82	4.27
Q Total (cfs)	213.00	211.40	0.82
Top width (ft)	40.47	16.45	18.73
Vel Total (ft/s)	2.55	2.75	0.19

		CalifonFloodplainSt	
* Max Chl Dpth (ft)	* 5.78	* Hydr. Depth (ft)	* 0.48 * 4.67 *
* Conv. Total (cfs)	* 7684.6	* Conv. (cfs)	* 28.3 * 7626.7 *
* Length wtd. (ft)	* 12.32	* Wetted Per. (ft)	* 5.38 * 21.49 *
* Min Ch El (ft)	* 586.82	* Shear (lb/sq ft)	* 0.02 * 0.17 *
* Alpha	* 1.16	* Stream Power (lb/ft s)	* 445.70 * 0.00 *
* Frctn Loss (ft)	* 0.00	* Cum Volume (acre-ft)	* 0.10 * 0.99 *
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	* 0.14 * 0.74 *

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: West_Reach RS: 1293_297

INPUT

Description:

Station	Elevation	Data	num=	99	Sta	Elev	Sta	Elev	Sta	Elev
0	601.99	4.96	601.8	9.93	600.57	14.89	599.07	19.85	598.18	
24.82	597.82	29.78	597.43	34.74	597.2	39.7	596.65	44.67	596.26	
49.63	596	54.59	596.08	59.56	596.28	64.52	596.32	69.48	596.21	
74.45	595.9	79.41	595.6	84.37	595.34	89.33	595.14	94.3	595.17	
99.26	595.3	104.22	595.44	109.19	595.31	114.15	594.96	119.11	594.72	
124.08	594.52	129.04	594.34	134	594.2	138.96	594.07	143.93	594.03	
148.89	593.81	153.85	593.57	158.82	593.56	163.78	593.63	168.74	593.61	
173.71	593.65	178.67	593.63	183.63	593.55	188.6	593.35	193.56	593.42	
198.52	593.26	203.48	593.43	207.26	593.19	211.03	593.01	214.8	592.94	
218.57	592.94	223.09	592.79	227.61	592.45	232.12	591.65	236.64	591.06	
239.04	590.91	241.16	590.78	242.8	590.73	245.68	590.64	247.18	588	
250.28	586	251.78	584	253.78	584	255.88	586	261.88	588	
264	590.83	268.6	591.05	273.2	591.2	277.8	591.43	282.4	591.63	
287.3	591.71	292.2	591.98	297.11	592.42	302.01	592.99	306.91	593.38	
311.82	593.73	316.72	594.21	321.62	594.6	326.53	595	331.43	595.38	
336.33	595.75	341.24	596.15	346.14	596.66	351.04	597.14	355.95	597.61	
360.85	597.98	365.75	598.18	370.66	598.37	375.56	598.64	380.46	598.94	
385.37	599.27	390.27	599.62	395.17	599.83	400.08	599.76	404.98	599.58	
409.88	599.55	414.79	599.68	419.69	599.82	424.59	599.9	429.5	600.07	
434.4	600.19	439.3	600.12	444.21	600.11	449.11	600.32			

Manning's n	Values	num=	3
Sta	n Val	Sta	n Val
0	.08	247.18	.035
		261.88	.08

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	247.18	261.88		51.56	42.78	26.92		.3	.5
Ineffective Flow			num=	2					
Sta L	Sta R	Elev	Permanent						
0	247	591	F						
260	449.11	591	F						

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 588.82	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.08	* wt. n-val.	* 0.080	* 0.035	*
* w.s. Elev (ft)	* 588.74	* Reach Len. (ft)	* 51.56	* 42.78	* 26.92
* Crit w.s. (ft)	* 586.65	* Flow Area (sq ft)	* 0.10	* 36.77	*
* E.G. Slope (ft/ft)	* 0.000888	* Area (sq ft)	* 0.15	* 38.74	* 0.20
* Q Total (cfs)	* 83.00	* Flow (cfs)	* 0.03	* 82.97	*
* Top width (ft)	* 15.67	* Top width (ft)	* 0.42	* 14.70	* 0.55
* Vel Total (ft/s)	* 2.25	* Avg. Vel. (ft/s)	* 0.24	* 2.26	*
* Max Chl Dpth (ft)	* 4.74	* Hydr. Depth (ft)	* 0.58	* 2.87	*
* Conv. Total (cfs)	* 2785.3	* Conv. (cfs)	* 0.8	* 2784.5	*
* Length wtd. (ft)	* 42.78	* Wetted Per. (ft)	* 0.36	* 15.43	*
* Min Ch El (ft)	* 584.00	* Shear (lb/sq ft)	* 0.02	* 0.13	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 449.11	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.03	* 0.47	* 0.05
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.00	* 0.61	* 0.07

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 589.68	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.08	* wt. n-val.	* 0.080	* 0.035	*
* w.s. Elev (ft)	* 589.61	* Reach Len. (ft)	* 51.56	* 42.78	* 26.92
* Crit w.s. (ft)	* 586.96	* Flow Area (sq ft)	* 0.26	* 47.91	*
* E.G. Slope (ft/ft)	* 0.000598	* Area (sq ft)	* 0.73	* 51.52	* 0.97
* Q Total (cfs)	* 106.00	* Flow (cfs)	* 0.09	* 105.91	*
* Top width (ft)	* 16.82	* Top width (ft)	* 0.91	* 14.70	* 1.20
* Vel Total (ft/s)	* 2.20	* Avg. Vel. (ft/s)	* 0.36	* 2.21	*
* Max Chl Dpth (ft)	* 5.61	* Hydr. Depth (ft)	* 1.45	* 3.74	*
* Conv. Total (cfs)	* 4333.2	* Conv. (cfs)	* 3.9	* 4329.3	*
* Length wtd. (ft)	* 42.78	* Wetted Per. (ft)	* 0.36	* 15.43	*
* Min Ch El (ft)	* 584.00	* Shear (lb/sq ft)	* 0.03	* 0.12	*
* Alpha	* 1.01	* Stream Power (lb/ft s)	* 449.11	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.04	* 0.56	* 0.06
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.02	* 0.64	* 0.10

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 591.02	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.08	* wt. n-val.	* 0.080	* 0.035	*
* w.s. Elev (ft)	* 590.94	* Reach Len. (ft)	* 51.56	* 42.78	* 26.92
* Crit w.s. (ft)	* 587.39	* Flow Area (sq ft)	* 0.50	* 65.00	*
* E.G. Slope (ft/ft)	* 0.000405	* Area (sq ft)	* 3.67	* 71.11	* 3.36

CalifonFloodplainst					
* Q Total (cfs)	* 145.00	* Flow (cfs)	* 0.23	* 144.77	*
* Top width (ft)	* 27.73	* Top Width (ft)	* 8.62	* 14.70	* 4.41
* Vel Total (ft/s)	* 2.21	* Avg. Vel. (ft/s)	* 0.46	* 2.23	*
* Max Chl Dpth (ft)	* 6.94	* Hydr. Depth (ft)	* 2.78	* 5.07	*
* Conv. Total (cfs)	* 7208.4	* Conv. (cfs)	* 11.5	* 7196.9	*
* Length Wtd. (ft)	* 42.78	* Wetted Per. (ft)	* 0.36	* 15.43	*
* Min Ch El (ft)	* 584.00	* Shear (lb/sq ft)	* 0.03	* 0.11	*
* Alpha	* 1.01	* Stream Power (lb/ft s)	* 449.11	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.05	* 0.72	* 0.09
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.06	* 0.70	* 0.17

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #50-year flow					
* E.G. Elev (ft)	* 592.03	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.06	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 591.97	* Reach Len. (ft)	* 51.56	* 42.78	* 26.92
* Crit W.S. (ft)	* 587.65	* Flow Area (sq ft)	* 17.53	* 86.30	* 21.25
* E.G. Slope (ft/ft)	* 0.000247	* Area (sq ft)	* 17.53	* 86.30	* 21.25
* Q Total (cfs)	* 177.00	* Flow (cfs)	* 4.94	* 167.31	* 4.75
* Top width (ft)	* 61.77	* Top Width (ft)	* 16.88	* 14.70	* 30.19
* Vel Total (ft/s)	* 1.42	* Avg. Vel. (ft/s)	* 0.28	* 1.94	* 0.22
* Max Chl Dpth (ft)	* 7.97	* Hydr. Depth (ft)	* 1.04	* 5.87	* 0.70
* Conv. Total (cfs)	* 11266.9	* Conv. (cfs)	* 314.3	* 10650.0	* 302.7
* Length Wtd. (ft)	* 42.78	* Wetted Per. (ft)	* 18.49	* 17.41	* 31.63
* Min Ch El (ft)	* 584.00	* Shear (lb/sq ft)	* 0.01	* 0.08	* 0.01
* Alpha	* 1.78	* Stream Power (lb/ft s)	* 449.11	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.07	* 0.84	* 0.12
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.09	* 0.73	* 0.21

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #100-year flow					
* E.G. Elev (ft)	* 592.68	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.05	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 592.62	* Reach Len. (ft)	* 51.56	* 42.78	* 26.92
* Crit W.S. (ft)	* 587.91	* Flow Area (sq ft)	* 29.80	* 95.85	* 43.18
* E.G. Slope (ft/ft)	* 0.000225	* Area (sq ft)	* 29.80	* 95.85	* 43.18
* Q Total (cfs)	* 213.00	* Flow (cfs)	* 9.72	* 190.28	* 13.00
* Top width (ft)	* 73.53	* Top Width (ft)	* 21.86	* 14.70	* 36.97
* Vel Total (ft/s)	* 1.26	* Avg. Vel. (ft/s)	* 0.33	* 1.99	* 0.30
* Max Chl Dpth (ft)	* 8.62	* Hydr. Depth (ft)	* 1.36	* 6.52	* 1.17
* Conv. Total (cfs)	* 14199.5	* Conv. (cfs)	* 647.9	* 12684.8	* 866.7
* Length Wtd. (ft)	* 42.78	* Wetted Per. (ft)	* 23.52	* 17.41	* 38.44
* Min Ch El (ft)	* 584.00	* Shear (lb/sq ft)	* 0.02	* 0.08	* 0.02
* Alpha	* 2.22	* Stream Power (lb/ft s)	* 449.11	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.09	* 0.97	* 0.15
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.13	* 0.74	* 0.26

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CULVERT

RIVER: Unnamed_Trib
 REACH: west_Reach RS: 1271.9

INPUT

Description: Academy Street
 Distance from Upstream XS = 8
 Deck/Roadway width = 25
 Weir coefficient = 2.6
 Upstream Deck/Roadway Coordinates

num= 23					
Sta	Hi	Cord	Lo	Cord	Sta
218.57	592.5	223.09	592.5	227.61	592.5
232.12	592.5	236.64	592.5	239.04	592.5
241.16	592.5	242.8	592.5	245.68	592.5
247.18	592.5	250.28	592.5	251.78	592.5
253.78	592.5	255.88	592.5	261.88	592.5
264	592.5	268.6	592.5	273.2	592.5
277.8	592.5	282.4	592.5	287.3	592.5
292.2	592.5	297.11	592.5		

Upstream Bridge Cross Section Data Station Elevation Data num= 99									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	601.99	4.96	601.8	9.93	600.57	14.89	599.07	19.85	598.18
24.82	597.82	29.78	597.43	34.74	597.2	39.7	596.65	44.67	596.26
49.63	596	54.59	596.08	59.56	596.28	64.52	596.32	69.48	596.21
74.45	595.9	79.41	595.6	84.37	595.34	89.33	595.14	94.3	595.17
99.26	595.3	104.22	595.44	109.19	595.31	114.15	594.96	119.11	594.72
124.08	594.52	129.04	594.34	134	594.2	138.96	594.07	143.93	594.03
148.89	593.81	153.85	593.57	158.82	593.56	163.78	593.63	168.74	593.61
173.71	593.65	178.67	593.63	183.63	593.55	188.6	593.35	193.56	593.42
198.52	593.26	203.48	593.43	207.26	593.19	211.03	593.01	214.8	592.94
218.57	592.94	223.09	592.79	227.61	592.45	232.12	591.65	236.64	591.06
239.04	590.91	241.16	590.78	242.8	590.73	245.68	590.64	247.18	588
250.28	586	251.78	584	253.78	584	255.88	586	261.88	588
264	590.83	268.6	591.05	273.2	591.2	277.8	591.43	282.4	591.63
287.3	591.71	292.2	591.98	297.11	592.42	302.01	592.99	306.91	593.38
311.82	593.73	316.72	594.21	321.62	594.6	326.53	595	331.43	595.38
336.33	595.75	341.24	596.15	346.14	596.66	351.04	597.14	355.95	597.61
360.85	597.98	365.75	598.18	370.66	598.37	375.56	598.64	380.46	598.94
385.37	599.27	390.27	599.62	395.17	599.83	400.08	599.76	404.98	599.58
409.88	599.55	414.79	599.68	419.69	599.82	424.59	599.9	429.5	600.07
434.4	600.19	439.3	600.12	444.21	600.11	449.11	600.32		

Manning's n values num= 3

CalifonFloodplainSt

Sta n Val Sta n Val Sta n Val

 0 .08 247.18 .035 261.88 .08

Bank Sta: Left Right Coeff Contr. Expan.
 247.18 261.88 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 247 591 F
 260 449.11 591 F

Downstream Deck/Roadway Coordinates
 num= 31
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 176.89 589 181.8 589 186.71 589
 191.63 589 196.54 589 201.46 589
 206.37 589 211.28 589 216.2 589
 221.11 589 226.02 589 230.94 589
 235.81 589 240.69 589 245.56 589
 250.44 589 255.31 589 260.19 589
 260.26 589 264.62 589 265.06 589
 269.94 589 270 589 274.5 589
 274.82 589 279.69 589 284.57 589
 289.44 589 294.32 589 299.19 589
 304.07 589

Downstream Bridge Cross Section Data
 Station Elevation Data num= 100
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 596.67 4.91 595.9 9.83 595.22 14.74 594.82 19.65 594.63
 24.57 594.37 29.48 593.97 34.39 593.69 39.31 594.07 44.22 593.72
 49.14 593.41 54.05 593.2 58.96 593.05 63.88 592.87 68.79 592.66
 73.7 592.51 78.62 592.24 83.53 591.95 88.44 591.77 93.36 591.74
 98.27 591.52 103.18 591.29 108.1 591.03 113.01 590.65 117.93 590.41
 122.84 590.21 127.75 590.17 132.67 589.97 137.58 589.81 142.49 589.64
 147.41 589.76 152.32 590.05 157.23 590.13 162.15 590.2 167.06 590
 171.97 589.85 176.89 589.59 181.8 588.51 186.71 587.31 191.63 586.82
 196.54 586.78 201.46 586.75 206.37 586.73 211.28 586.69 216.2 586.53
 221.11 586.52 226.02 586.43 230.94 586.41 235.81 586.71 240.69 586.89
 245.56 587.12 250.44 587.19 255.31 587.12 260.19 586.61 260.26 586.57
 264.62 584.69 265.06 584.5 269.94 582.13 270 580.15 274.5 580.2
 274.82 583.5 279.69 585.9 284.57 587.72 289.44 588.82 294.32 589.08
 299.19 589.44 304.07 589.47 308.94 589.82 313.82 590.27 318.69 591.01
 323.57 591.4 328.45 591.58 333.32 591.62 338.2 591.64 343.08 592.01
 347.96 592.43 352.84 592.68 357.71 593.11 362.59 593.59 367.47 594.03
 372.35 594.4 377.23 594.79 382.1 595.19 386.98 595.54 391.86 595.88
 396.74 596.23 401.62 596.52 406.5 596.69 411.37 596.9 416.25 597.22
 421.13 597.35 426.01 597.35 430.89 597.49 435.76 597.77 440.64 598.06
 445.52 598.18 450.4 598.19 455.28 598.09 460.15 597.9 465.03 598.22

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .08 265.06 .035 274.82 .08

Bank Sta: Left Right Coeff Contr. Expan.
 265.06 274.82 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 265 588 F
 280 465.03 588 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span
 Culvert #1 Box 7 3
 FHWA Chart # 8 - flared wingwalls
 FHWA Scale # 1 - wingwall flared 30 to 75 deg.
 Solution Criteria = Highest U.S. EG
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef Exit Loss Coef
 8 25 .013 .035 0 .4 1
 Upstream Elevation = 583.93
 Centerline Station = 252.78
 Downstream Elevation = 580.15
 Centerline Station = 272.25

CULVERT OUTPUT Profile #5-year flow Culv Group: Culvert #1

 * Q Culv Group (cfs) * 83.00 * Culv Full Len (ft) *
 * # Barrels * 1 * Culv Vel US (ft/s) * 9.62 *
 * Q Barrel (cfs) * 83.00 * Culv Vel DS (ft/s) * 17.08 *
 * E.G. US. (ft) * 588.82 * Culv Inv El Up (ft) * 583.93 *
 * W.S. US. (ft) * 588.74 * Culv Inv El Dn (ft) * 580.15 *
 * E.G. DS (ft) * 583.39 * Culv Frctn Ls (ft) * 1.94 *
 * W.S. DS (ft) * 582.41 * Culv Exit Loss (ft) * 2.91 *
 * Delta EG (ft) * 5.43 * Culv Entr Loss (ft) * 0.58 *
 * Delta WS (ft) * 6.32 * Q Weir (cfs) *
 * E.G. IC (ft) * 587.98 * Weir Sta Lft (ft) *
 * E.G. OC (ft) * 588.82 * Weir Sta Rgt (ft) *
 * Culvert Control * Outlet * Weir Submerg *
 * Culv WS Inlet (ft) * 586.81 * Weir Max Depth (ft) *
 * Culv WS Outlet (ft) * 581.77 * Weir Avg Depth (ft) *
 * Culv Nml Depth (ft) * 1.47 * Weir Flow Area (sq ft) *
 * Culv Crt Depth (ft) * 2.88 * Min El weir Flow (ft) * 592.43 *

Warning: Since the culvert has supercritical flow, the program should be run in mixed flow in order to check if the cross section downstream of the culvert has supercritical flow.
 Note: The flow in the culvert is entirely supercritical.

CULVERT OUTPUT Profile #10-year flow Culv Group: Culvert #1

Q Culv Group (cfs)	106.00	Culv Full Len (ft)	
# Barrels	1	Culv Vel US (ft/s)	10.44
Q Barrel (cfs)	106.00	Culv Vel DS (ft/s)	18.14
E.G. US. (ft)	589.68	Culv Inv El Up (ft)	583.93
W.S. US. (ft)	589.61	Culv Inv El Dn (ft)	580.15
E.G. DS (ft)	583.88	Culv Frctn Ls (ft)	1.80
W.S. DS (ft)	582.84	Culv Exit Loss (ft)	3.33
Delta EG (ft)	5.80	Culv Entr Loss (ft)	0.68
Delta WS (ft)	6.77	Q Weir (cfs)	
E.G. IC (ft)	588.82	Weir Sta Lft (ft)	
E.G. OC (ft)	589.68	Weir Sta Rgt (ft)	
Culvert Control	Outlet	Weir Submerg	
Culv WS Inlet (ft)	587.31	Weir Max Depth (ft)	
Culv WS Outlet (ft)	582.10	Weir Avg Depth (ft)	
Culv Nml Depth (ft)	1.72	Weir Flow Area (sq ft)	
Culv Crt Depth (ft)	3.38	Min El Weir Flow (ft)	592.43

Warning: Since the culvert has supercritical flow, the program should be run in mixed flow in order to check if the cross section downstream of the culvert has supercritical flow.
 Note: The flow in the culvert is entirely supercritical.

CULVERT OUTPUT Profile #25-year flow Culv Group: Culvert #1

Q Culv Group (cfs)	145.00	Culv Full Len (ft)	
# Barrels	1	Culv Vel US (ft/s)	11.59
Q Barrel (cfs)	145.00	Culv Vel DS (ft/s)	19.52
E.G. US. (ft)	591.02	Culv Inv El Up (ft)	583.93
W.S. US. (ft)	590.94	Culv Inv El Dn (ft)	580.15
E.G. DS (ft)	584.56	Culv Frctn Ls (ft)	1.65
W.S. DS (ft)	583.43	Culv Exit Loss (ft)	3.98
Delta EG (ft)	6.46	Culv Entr Loss (ft)	0.83
Delta WS (ft)	7.51	Q Weir (cfs)	
E.G. IC (ft)	590.13	Weir Sta Lft (ft)	
E.G. OC (ft)	591.02	Weir Sta Rgt (ft)	
Culvert Control	Outlet	Weir Submerg	
Culv WS Inlet (ft)	588.10	Weir Max Depth (ft)	
Culv WS Outlet (ft)	582.63	Weir Avg Depth (ft)	
Culv Nml Depth (ft)	2.12	Weir Flow Area (sq ft)	
Culv Crt Depth (ft)	4.17	Min El Weir Flow (ft)	592.43

Warning: Since the culvert has supercritical flow, the program should be run in mixed flow in order to check if the cross section downstream of the culvert has supercritical flow.
 Note: The flow in the culvert is entirely supercritical.

CULVERT OUTPUT Profile #50-year flow Culv Group: Culvert #1

Q Culv Group (cfs)	177.00	Culv Full Len (ft)	
# Barrels	1	Culv Vel US (ft/s)	12.39
Q Barrel (cfs)	177.00	Culv Vel DS (ft/s)	20.41
E.G. US. (ft)	592.03	Culv Inv El Up (ft)	583.93
W.S. US. (ft)	591.97	Culv Inv El Dn (ft)	580.15
E.G. DS (ft)	585.02	Culv Frctn Ls (ft)	1.57
W.S. DS (ft)	583.83	Culv Exit Loss (ft)	4.49
Delta EG (ft)	7.01	Culv Entr Loss (ft)	0.95
Delta WS (ft)	8.14	Q Weir (cfs)	
E.G. IC (ft)	591.12	Weir Sta Lft (ft)	
E.G. OC (ft)	592.03	Weir Sta Rgt (ft)	
Culvert Control	Outlet	Weir Submerg	
Culv WS Inlet (ft)	588.69	Weir Max Depth (ft)	
Culv WS Outlet (ft)	583.04	Weir Avg Depth (ft)	
Culv Nml Depth (ft)	2.43	Weir Flow Area (sq ft)	
Culv Crt Depth (ft)	4.76	Min El Weir Flow (ft)	592.43

Warning: Since the culvert has supercritical flow, the program should be run in mixed flow in order to check if the cross section downstream of the culvert has supercritical flow.
 Note: The flow in the culvert is entirely supercritical.

CULVERT OUTPUT Profile #100-year flow Culv Group: Culvert #1

Q Culv Group (cfs)	198.70	Culv Full Len (ft)	
# Barrels	1	Culv Vel US (ft/s)	12.87
Q Barrel (cfs)	198.70	Culv Vel DS (ft/s)	20.94
E.G. US. (ft)	592.68	Culv Inv El Up (ft)	583.93
W.S. US. (ft)	592.62	Culv Inv El Dn (ft)	580.15
E.G. DS (ft)	585.47	Culv Frctn Ls (ft)	1.53
W.S. DS (ft)	584.23	Culv Exit Loss (ft)	4.65
Delta EG (ft)	7.21	Culv Entr Loss (ft)	1.03
Delta WS (ft)	8.39	Q Weir (cfs)	14.30
E.G. IC (ft)	591.88	Weir Sta Lft (ft)	224.56
E.G. OC (ft)	592.68	Weir Sta Rgt (ft)	299.34
Culvert Control	Outlet	Weir Submerg	0.00
Culv WS Inlet (ft)	589.08	Weir Max Depth (ft)	0.26
Culv WS Outlet (ft)	583.31	Weir Avg Depth (ft)	0.18
Culv Nml Depth (ft)	2.62	Weir Flow Area (sq ft)	13.09
Culv Crt Depth (ft)	5.15	Min El Weir Flow (ft)	592.43

Warning: Since the culvert has supercritical flow, the program should be run in mixed flow in order to check if the cross section downstream of the culvert has supercritical flow.
 Note: The flow in the culvert is entirely supercritical.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: West_Reach RS: 1250.517

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INPUT

Description:

Station Elevation Data		num= 100		Sta Elev		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	596.67	4.91	595.9	9.83	595.22	14.74	594.82	19.65	594.63		
24.57	594.37	29.48	593.97	34.39	593.69	39.31	594.07	44.22	593.72		
49.14	593.41	54.05	593.2	58.96	593.05	63.88	592.87	68.79	592.66		
73.7	592.51	78.62	592.24	83.53	591.95	88.44	591.77	93.36	591.74		
98.27	591.52	103.18	591.29	108.1	591.03	113.01	590.65	117.93	590.41		
122.84	590.21	127.75	590.17	132.67	589.97	137.58	589.81	142.49	589.64		
147.41	589.76	152.32	590.05	157.23	590.13	162.15	590.2	167.06	590		
171.97	589.85	176.89	589.59	181.8	588.51	186.71	587.31	191.63	586.82		
196.54	586.78	201.46	586.75	206.37	586.73	211.28	586.69	216.2	586.53		
221.11	586.52	226.02	586.43	230.94	586.41	235.81	586.71	240.69	586.89		
245.56	587.12	250.44	587.19	255.31	587.12	260.19	586.61	260.26	586.57		
264.62	584.69	265.06	584.5	269.94	582.13	270	580.15	274.5	580.2		
274.82	583.5	279.69	585.9	284.57	587.72	289.44	588.82	294.32	589.08		
299.19	589.44	304.07	589.47	308.94	589.82	313.82	590.27	318.69	591.01		
323.57	591.4	328.45	591.58	333.32	591.62	338.2	591.64	343.08	592.01		
347.96	592.43	352.84	592.68	357.71	593.11	362.59	593.59	367.47	594.03		
372.35	594.4	377.23	594.79	382.1	595.19	386.98	595.54	391.86	595.88		
396.74	596.23	401.62	596.52	406.5	596.69	411.37	596.9	416.25	597.22		
421.13	597.35	426.01	597.35	430.89	597.49	435.76	597.77	440.64	598.06		
445.52	598.18	450.4	598.19	455.28	598.09	460.15	597.9	465.03	598.22		

Manning's n Values		num= 3		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val
0	.08	265.06	.035	274.82	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	265.06	274.82		85.08	91.69	.3	.5

Ineffective Flow		num= 2		Sta L Sta R Elev Permanent	
Sta L	Sta R	Elev	Permanent		
0	265	588	F		
280	465.03	588	F		

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 583.39	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.98	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 582.41	* Reach Len. (ft)	* 85.08	* 85.12	* 91.69
* Crit w.s. (ft)	* 582.41	* Flow Area (sq ft)	*	* 10.47	*
* E.G. Slope (ft/ft)	* 0.030027	* Area (sq ft)	*	* 10.47	*
* Q Total (cfs)	* 83.00	* Flow (cfs)	*	* 83.00	*
* Top width (ft)	* 5.36	* Top width (ft)	*	* 5.36	*
* Vel Total (ft/s)	* 7.93	* Avg. Vel. (ft/s)	*	* 7.93	*
* Max Chl Dpth (ft)	* 2.26	* Hydr. Depth (ft)	*	* 1.95	*
* Conv. Total (cfs)	* 479.0	* Conv. (cfs)	*	* 479.0	*
* Length Wtd. (ft)	* 85.12	* Wetted Per. (ft)	*	* 9.35	*
* Min Ch El (ft)	* 580.15	* Shear (lb/sq ft)	*	* 2.10	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 465.03	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.19	* Cum Volume (acre-ft)	* 0.03	* 0.46	* 0.05
* C & E Loss (ft)	* 0.35	* Cum SA (acres)	* 0.00	* 0.60	* 0.07

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 583.88	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.05	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 582.84	* Reach Len. (ft)	* 85.08	* 85.12	* 91.69
* Crit w.s. (ft)	* 582.84	* Flow Area (sq ft)	*	* 12.92	*
* E.G. Slope (ft/ft)	* 0.029195	* Area (sq ft)	*	* 12.92	*
* Q Total (cfs)	* 106.00	* Flow (cfs)	*	* 106.00	*
* Top width (ft)	* 6.27	* Top width (ft)	*	* 6.27	*
* Vel Total (ft/s)	* 8.20	* Avg. Vel. (ft/s)	*	* 8.20	*
* Max Chl Dpth (ft)	* 2.69	* Hydr. Depth (ft)	*	* 2.06	*
* Conv. Total (cfs)	* 620.4	* Conv. (cfs)	*	* 620.4	*
* Length Wtd. (ft)	* 85.12	* Wetted Per. (ft)	*	* 10.74	*
* Min Ch El (ft)	* 580.15	* Shear (lb/sq ft)	*	* 2.19	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 465.03	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.09	* Cum Volume (acre-ft)	* 0.04	* 0.55	* 0.06
* C & E Loss (ft)	* 0.36	* Cum SA (acres)	* 0.02	* 0.63	* 0.10

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 584.56	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.12	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 583.43	* Reach Len. (ft)	* 85.08	* 85.12	* 91.69
* Crit w.s. (ft)	* 583.43	* Flow Area (sq ft)	*	* 17.05	*
* E.G. Slope (ft/ft)	* 0.027123	* Area (sq ft)	*	* 17.05	*
* Q Total (cfs)	* 145.00	* Flow (cfs)	*	* 145.00	*
* Top width (ft)	* 7.56	* Top width (ft)	*	* 7.56	*
* Vel Total (ft/s)	* 8.50	* Avg. Vel. (ft/s)	*	* 8.50	*

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* Max Chl Dpth (ft)	* 3.28	* Hydr. Depth (ft)	* 2.26	*	*
* Conv. Total (cfs)	* 880.4	* Conv. (cfs)	* 880.4	*	*
* Length wtd. (ft)	* 85.13	* Wetted Per. (ft)	* 12.71	*	*
* Min Ch El (ft)	* 580.15	* Shear (lb/sq ft)	* 2.27	*	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 465.03	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.89	* Cum Volume (acre-ft)	* 0.05	* 0.70	* 0.09
* C & E Loss (ft)	* 0.36	* Cum SA (acres)	* 0.06	* 0.69	* 0.17

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: during the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 585.02	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.18	* Wt. n-Val.	* 85.08	* 0.035	* 0.080
* W.S. Elev (ft)	* 583.83	* Reach Len. (ft)	*	* 85.12	* 91.69
* Crit W.S. (ft)	* 583.83	* Flow Area (sq ft)	*	* 20.26	* 0.11
* E.G. Slope (ft/ft)	* 0.025111	* Area (sq ft)	*	* 20.26	* 0.11
* Q Total (cfs)	* 177.00	* Flow (cfs)	*	* 176.91	* 0.09
* Top width (ft)	* 9.07	* Top width (ft)	*	* 8.39	* 0.68
* Vel Total (ft/s)	* 8.69	* Avg. vel. (ft/s)	*	* 8.73	* 0.83
* Max Chl Dpth (ft)	* 3.68	* Hydr. Depth (ft)	*	* 2.41	* 0.17
* Conv. Total (cfs)	* 1117.0	* Conv. (cfs)	*	* 1116.4	* 0.6
* Length wtd. (ft)	* 85.13	* Wetted Per. (ft)	*	* 13.70	* 0.76
* Min Ch El (ft)	* 580.15	* Shear (lb/sq ft)	*	* 2.32	* 0.24
* Alpha	* 1.01	* Stream Power (lb/ft s)	* 465.03	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.72	* Cum Volume (acre-ft)	* 0.07	* 0.81	* 0.12
* C & E Loss (ft)	* 0.38	* Cum SA (acres)	* 0.08	* 0.72	* 0.20

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: during the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 585.47	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 1.24	* Wt. n-Val.	* 85.08	* 0.035	* 0.080
* W.S. Elev (ft)	* 584.23	* Reach Len. (ft)	*	* 85.12	* 91.69
* Crit W.S. (ft)	* 584.23	* Flow Area (sq ft)	*	* 23.74	* 0.54
* E.G. Slope (ft/ft)	* 0.023207	* Area (sq ft)	*	* 23.74	* 0.54
* Q Total (cfs)	* 213.00	* Flow (cfs)	*	* 212.27	* 0.73
* Top width (ft)	* 10.69	* Top width (ft)	*	* 9.21	* 1.48
* Vel Total (ft/s)	* 8.77	* Avg. vel. (ft/s)	*	* 8.94	* 1.34
* Max Chl Dpth (ft)	* 4.08	* Hydr. Depth (ft)	*	* 2.58	* 0.37
* Conv. Total (cfs)	* 1398.2	* Conv. (cfs)	*	* 1393.4	* 4.8
* Length wtd. (ft)	* 85.13	* Wetted Per. (ft)	*	* 14.61	* 1.65
* Min Ch El (ft)	* 580.15	* Shear (lb/sq ft)	*	* 2.36	* 0.47
* Alpha	* 1.04	* Stream Power (lb/ft s)	* 465.03	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.58	* Cum Volume (acre-ft)	* 0.09	* 0.92	* 0.15
* C & E Loss (ft)	* 0.39	* Cum SA (acres)	* 0.12	* 0.73	* 0.25

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: during the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTIQN

RIVER: Unnamed_Trib
 REACH: West_Reach RS: 1165.394

INPUT

Description:
 Station Elevation Data num= 87

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	585.01	4.99	584.19	9.98	583.68	14.97	582.92	19.96	582.42
24.96	581.84	29.95	581.25	34.94	580.75	39.93	580.24	44.92	579.83
49.91	579.39	54.9	579.03	59.89	579.08	64.89	579.34	69.88	579.31
74.87	579.27	79.86	579.22	84.85	579.21	89.84	579.57	94.83	580.15
99.82	580.28	104.81	580.39	109.81	580.48	114.8	580.53	119.79	580.67
124.78	580.74	129.77	580.6	134.76	580.37	139.75	580.32	144.74	580.14
149.74	579.59	154.73	578.66	159.72	577.65	164.71	576.6	169.7	575.72
174.66	575.81	179.61	575.97	184.57	575.57	189.53	575.17	194.49	575.19
199.45	575	204.4	574.7	209.36	574.62	214.32	574.88	219.28	575.5
224.23	576.27	229.19	576.52	232.83	576.14	234.15	576.01	236.94	576.03
239.11	576.05	244.06	577.38	249.02	579.37	253.98	580.77	258.94	581.54
263.89	582	268.85	582.38	273.81	582.97	278.77	583.57	283.72	584
288.68	584.45	293.64	584.91	298.6	585.37	303.55	585.83	308.51	586.22
313.47	585.92	318.43	585.58	323.38	585.25	328.34	585.13	333.3	585.16
338.26	585.22	343.21	585.41	348.17	585.8	353.13	585.95	358.09	585.93
363.04	586.1	368	586.36	372.96	586.69	377.92	586.81	382.87	587.04
387.83	586.97	392.79	587.01	397.75	587.18	402.7	587.52	407.66	587.82
412.62	588.11	417.58	588.42						

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Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .08 184.57 .035 219.28 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan,
 184.57 219.28 74.72 75.68 65.45 .3 .5

CROSS SECTION OUTPUT Profile #5-year flow

	Left OB	Channel	Right OB
* E.G. Elev (ft)	575.86		
* Vel Head (ft)	0.29		
* W.S. Elev (ft)	575.57	74.72	75.68
* Crit W.S. (ft)	575.57		19.37
* E.G. Slope (ft/ft)	0.022244	0.00	19.37
* Q Total (cfs)	83.00		83.00
* Top Width (ft)	35.19	0.02	34.71
* Vel Total (ft/s)	4.28		4.29
* Max Chl Dpth (ft)	0.95		0.56
* Conv. Total (cfs)	556.5		556.5
* Length wtd. (ft)	75.68		34.78
* Min Ch El (ft)	574.62		0.77
* Alpha	1.00	417.58	0.00
* Frctn Loss (ft)	1.67	0.03	0.43
* C & E Loss (ft)	0.00	0.00	0.56

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

	Left OB	Channel	Right OB
* E.G. Elev (ft)	576.01		
* Vel Head (ft)	0.33	0.080	0.035
* W.S. Elev (ft)	575.67	74.72	75.68
* Crit W.S. (ft)	575.67		22.80
* E.G. Slope (ft/ft)	0.021029	0.06	22.80
* Q Total (cfs)	106.00	0.02	105.93
* Top Width (ft)	37.05	1.25	34.71
* Vel Total (ft/s)	4.62	0.37	4.65
* Max Chl Dpth (ft)	1.05	0.05	0.66
* Conv. Total (cfs)	731.0	0.2	730.5
* Length wtd. (ft)	75.67	1.25	34.78
* Min Ch El (ft)	574.62	0.07	0.86
* Alpha	1.01	417.58	0.00
* Frctn Loss (ft)	1.57	0.04	0.51
* C & E Loss (ft)	0.00	0.02	0.59

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

	Left OB	Channel	Right OB
* E.G. Elev (ft)	576.23		
* Vel Head (ft)	0.40	0.080	0.035
* W.S. Elev (ft)	575.84	74.72	75.68
* Crit W.S. (ft)	575.84		28.53
* E.G. Slope (ft/ft)	0.018472	0.84	28.53
* Q Total (cfs)	145.00	0.44	144.28
* Top Width (ft)	46.57	9.71	34.71
* Vel Total (ft/s)	4.88	0.53	5.06
* Max Chl Dpth (ft)	1.22	0.09	0.82
* Conv. Total (cfs)	1066.9	3.3	1061.6
* Length wtd. (ft)	75.60	9.73	34.78
* Min Ch El (ft)	574.62	0.10	0.95
* Alpha	1.07	417.58	0.00
* Frctn Loss (ft)	1.32	0.05	0.65
* C & E Loss (ft)	0.02	0.05	0.65

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: Divided flow computed for this cross-section.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

	Left OB	Channel	Right OB
* E.G. Elev (ft)	576.39		
* Vel Head (ft)	0.43	0.080	0.035
* W.S. Elev (ft)	575.97	74.72	75.68
* Crit W.S. (ft)	575.97		33.08
* E.G. Slope (ft/ft)	0.016524	2.53	33.08
* Q Total (cfs)	177.00	1.78	174.59
* Top Width (ft)	53.84	16.13	34.71
* Vel Total (ft/s)	4.87	0.70	5.28
* Max Chl Dpth (ft)	1.35	0.16	0.95
* Conv. Total (cfs)	1376.9	13.9	1358.2
* Length wtd. (ft)	75.53	16.17	34.78
* Min Ch El (ft)	574.62	0.16	0.98
* Alpha	1.16	417.58	0.00

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* Frctn Loss (ft) * 1.20 * Cum Volume (acre-ft) * 0.06 * 0.76 * 0.12 *
 * C & E Loss (ft) * 0.02 * Cum SA (acres) * 0.07 * 0.67 * 0.20 *

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: Divided flow computed for this cross-section.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 576.56	* 0.080	* 0.035	* 0.080
* Vel Head (ft)	* 0.46	* wt. n-Val.	* 74.72	* 65.45
* W.S. Elev (ft)	* 576.10	* Reach Len. (ft)	* 4.68	* 1.52
* Crit W.S. (ft)	* 576.10	* Flow Area (sq ft)	* 4.68	* 37.58
* E.G. Slope (ft/ft)	* 0.015210	* Area (sq ft)	* 4.53	* 207.17
* Q Total (cfs)	* 213.00	* Flow (cfs)	* 17.00	* 34.71
* Top Width (ft)	* 61.56	* Top Width (ft)	* 0.97	* 5.51
* Vel Total (ft/s)	* 4.86	* Avg. Vel. (ft/s)	* 0.28	* 1.08
* Max Chl Dpth (ft)	* 1.48	* Hydr. Depth (ft)	* 36.8	* 1679.8
* Conv. Total (cfs)	* 1727.1	* Conv. (cfs)	* 17.06	* 34.78
* Length Wtd. (ft)	* 75.45	* wetted Per. (ft)	* 0.26	* 1.03
* Min Ch El (ft)	* 574.62	* Shear (lb/sq ft)	* 417.58	* 0.00
* Alpha	* 1.25	* Stream Power (lb/ft s)	* 0.08	* 0.86
* Frctn Loss (ft)	* 1.12	* Cum Volume (acre-ft)	* 0.10	* 0.68
* C & E Loss (ft)	* 0.02	* Cum SA (acres)		

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: Divided flow computed for this cross-section.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: West_Reach RS: 1089.717

INPUT

Description:
 Station Elevation Data num= 113

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	581.73	4.93	581.41	9.86	581.02	14.79	580.71	19.71	580.48
24.64	580.48	29.57	580.34	34.5	579.86	39.43	579.39	44.36	579.15
49.29	578.67	54.21	578.22	59.14	578.14	64.07	577.74	69	577.19
73.93	576.83	78.86	576.74	83.79	576.61	88.71	576.15	93.64	575.38
98.57	573.85	103.5	571.54	108.43	570.78	113.36	570.78	118.29	570.91
123.22	571	128.14	571	133.07	570.87	138	570.62	142.93	570.57
147.86	570.89	152.79	571.08	157.72	571.06	162.64	571.45	167.57	571.36
172.5	571.18	177.43	571.39	182.36	571.18	187.29	570.82	192.22	570.61
197.14	570.36	202.07	570.22	207	570.46	211.93	570.44	216.86	570.22
221.79	569.98	226.76	570.2	231.74	570.55	236.71	570.42	241.68	569.91
246.66	569.43	251.63	569.26	256.61	569.22	261.58	569.12	266.56	568.89
271.53	568.56	276.5	568.32	281.48	568.24	286.45	568.26	291.43	568.47
296.28	568.99	301.13	569.29	305.99	569.62	310.84	569.78	315.69	569.7
320.55	569.27	325.4	569.15	330.26	569.51	335.11	570.33	339.96	571.13
344.82	572.05	349.67	572.6	354.52	572.6	359.38	572.31	364.23	571.59
366.49	571.35	369.09	571.07	370.04	571.24	373.94	571.95	378.79	573.11
383.65	573.88	388.5	574.51	393.35	574.83	398.21	575.07	403.06	575.27
407.95	575.4	412.77	575.65	417.74	575.95	422.71	576.24	427.68	576.36
432.65	576.55	437.62	576.9	442.59	577.17	447.56	577.45	452.53	577.64
457.5	577.86	462.47	578.08	467.44	578.22	472.41	578.92	477.39	578.8
482.36	578.67	487.33	579	492.3	579.86	497.27	580.98	502.24	581.08
507.09	581.16	511.94	580.78	516.8	580.69	521.65	581.46	526.5	581.77
531.35	582.37	536.21	582.73	541.06	582.7				

Manning's n Values num= 3

Sta	n Val	Sta	n Val
0	.08	261.58	.035
		296.28	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 261.58 296.28 139.15 217.17 205.01 .1 .3

CROSS SECTION OUTPUT Profile #5-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 569.38	* 0.035	* 0.035	* 0.080
* Vel Head (ft)	* 0.28	* wt. n-Val.	* 139.15	* 205.01
* W.S. Elev (ft)	* 569.10	* Reach Len. (ft)	* 19.38	* 0.10
* Crit W.S. (ft)	* 569.10	* Flow Area (sq ft)	* 19.38	* 0.10
* E.G. Slope (ft/ft)	* 0.021784	* Area (sq ft)	* 82.96	* 0.04
* Q Total (cfs)	* 83.00	* Flow (cfs)	* 34.26	* 1.78
* Top Width (ft)	* 36.04	* Top Width (ft)	* 4.28	* 0.40
* Vel Total (ft/s)	* 4.26	* Avg. Vel. (ft/s)	* 0.57	* 0.05
* Max Chl Dpth (ft)	* 0.86	* Hydr. Depth (ft)	* 562.1	* 0.3
* Conv. Total (cfs)	* 562.4	* Conv. (cfs)	* 34.32	* 1.78
* Length Wtd. (ft)	* 217.06	* wetted Per. (ft)	* 0.77	* 0.07
* Min Ch El (ft)	* 568.24	* Shear (lb/sq ft)	* 541.06	* 0.00
* Alpha	* 1.01	* Stream Power (lb/ft s)	* 0.03	* 0.39
* Frctn Loss (ft)	* 4.61	* Cum Volume (acre-ft)	* 0.00	* 0.50
* C & E Loss (ft)	* 0.00	* Cum SA (acres)		

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
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need for additional cross sections.

warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

	*	*	*	*	*
* E.G. Elev (ft)	* 569.53	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.33	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 569.20	* Reach Len. (ft)	* 139.15	* 217.17	* 205.01
* Crit w.s. (ft)	* 569.20	* Flow Area (sq ft)	* 0.17	* 22.95	* 0.44
* E.G. Slope (ft/ft)	* 0.020457	* Area (sq ft)	* 0.17	* 22.95	* 0.44
* Q Total (cfs)	* 106.00	* Flow (cfs)	* 0.05	* 105.71	* 0.24
* Top width (ft)	* 45.13	* Top width (ft)	* 4.13	* 34.70	* 6.30
* Vel Total (ft/s)	* 4.50	* Avg. vel. (ft/s)	* 0.32	* 4.61	* 0.53
* Max Chl Dpth (ft)	* 0.96	* Hydr. Depth (ft)	* 0.04	* 0.66	* 0.07
* Conv. Total (cfs)	* 741.1	* Conv. (cfs)	* 0.4	* 739.1	* 1.7
* Length wtd. (ft)	* 216.93	* Wetted Per. (ft)	* 4.13	* 34.75	* 6.31
* Min Ch El (ft)	* 568.24	* Shear (lb/sq ft)	* 0.05	* 0.84	* 0.09
* Alpha	* 1.05	* Stream Power (lb/ft s)	* 541.06	* 0.00	* 0.00
* Frctn Loss (ft)	* 4.27	* Cum Volume (acre-ft)	* 0.04	* 0.47	* 0.06
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.01	* 0.53	* 0.09

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

warning: Divided flow computed for this cross-section.

warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

	*	*	*	*	*
* E.G. Elev (ft)	* 569.74	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.36	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 569.38	* Reach Len. (ft)	* 139.15	* 217.17	* 205.01
* Crit w.s. (ft)	* 569.38	* Flow Area (sq ft)	* 1.98	* 29.17	* 2.51
* E.G. Slope (ft/ft)	* 0.016576	* Area (sq ft)	* 1.98	* 29.17	* 2.51
* Q Total (cfs)	* 145.00	* Flow (cfs)	* 1.32	* 141.87	* 1.81
* Top width (ft)	* 63.68	* Top width (ft)	* 13.52	* 34.70	* 15.46
* Vel Total (ft/s)	* 4.31	* Avg. vel. (ft/s)	* 0.66	* 4.86	* 0.72
* Max Chl Dpth (ft)	* 1.14	* Hydr. Depth (ft)	* 0.15	* 0.84	* 0.16
* Conv. Total (cfs)	* 1126.2	* Conv. (cfs)	* 10.2	* 1101.9	* 14.1
* Length wtd. (ft)	* 216.38	* Wetted Per. (ft)	* 13.52	* 34.75	* 15.49
* Min Ch El (ft)	* 568.24	* Shear (lb/sq ft)	* 0.15	* 0.87	* 0.17
* Alpha	* 1.25	* Stream Power (lb/ft s)	* 541.06	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.70	* Cum Volume (acre-ft)	* 0.05	* 0.60	* 0.09
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.03	* 0.59	* 0.16

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

warning: Divided flow computed for this cross-section.

warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

	*	*	*	*	*
* E.G. Elev (ft)	* 569.89	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.39	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 569.50	* Reach Len. (ft)	* 139.15	* 217.17	* 205.01
* Crit w.s. (ft)	* 569.50	* Flow Area (sq ft)	* 3.76	* 33.33	* 4.64
* E.G. Slope (ft/ft)	* 0.015198	* Area (sq ft)	* 3.76	* 33.33	* 4.64
* Q Total (cfs)	* 177.00	* Flow (cfs)	* 3.33	* 169.66	* 4.01
* Top width (ft)	* 70.57	* Top width (ft)	* 15.67	* 34.70	* 20.20
* Vel Total (ft/s)	* 4.24	* Avg. vel. (ft/s)	* 0.88	* 5.09	* 0.86
* Max Chl Dpth (ft)	* 1.26	* Hydr. Depth (ft)	* 0.24	* 0.96	* 0.23
* Conv. Total (cfs)	* 1435.8	* Conv. (cfs)	* 27.0	* 1376.2	* 32.6
* Length wtd. (ft)	* 215.83	* Wetted Per. (ft)	* 15.68	* 34.75	* 20.24
* Min Ch El (ft)	* 568.24	* Shear (lb/sq ft)	* 0.23	* 0.91	* 0.22
* Alpha	* 1.38	* Stream Power (lb/ft s)	* 541.06	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.46	* Cum Volume (acre-ft)	* 0.06	* 0.70	* 0.11
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.04	* 0.61	* 0.18

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

warning: Divided flow computed for this cross-section.

warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

	*	*	*	*	*
* E.G. Elev (ft)	* 570.04	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.42	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 569.62	* Reach Len. (ft)	* 139.15	* 217.17	* 205.01
* Crit w.s. (ft)	* 569.62	* Flow Area (sq ft)	* 5.63	* 37.32	* 7.19
* E.G. Slope (ft/ft)	* 0.014452	* Area (sq ft)	* 5.63	* 37.32	* 7.19
* Q Total (cfs)	* 213.00	* Flow (cfs)	* 6.05	* 199.75	* 7.19
* Top width (ft)	* 75.49	* Top width (ft)	* 16.86	* 34.70	* 23.93
* Vel Total (ft/s)	* 4.25	* Avg. vel. (ft/s)	* 1.07	* 5.35	* 1.00
* Max Chl Dpth (ft)	* 1.38	* Hydr. Depth (ft)	* 0.33	* 1.08	* 0.30
* Conv. Total (cfs)	* 1771.8	* Conv. (cfs)	* 50.4	* 1661.6	* 59.8
* Length wtd. (ft)	* 215.28	* Wetted Per. (ft)	* 16.87	* 34.75	* 23.99
* Min Ch El (ft)	* 568.24	* Shear (lb/sq ft)	* 0.30	* 0.97	* 0.27
* Alpha	* 1.49	* Stream Power (lb/ft s)	* 541.06	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.31	* Cum Volume (acre-ft)	* 0.08	* 0.80	* 0.14
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.07	* 0.62	* 0.22

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 warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: West_Reach RS: 872.5471

INPUT

Description:
 Station Elevation Data num= 119

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	559.53	4.89	558.73	9.78	557.96	14.67	557.3	19.56	556.68
24.45	556.18	29.34	556.18	34.24	556.73	39.13	557.3	44.02	557.56
48.91	557.77	53.8	558.16	58.69	558.61	63.58	558.98	68.47	559.31
73.36	559.52	78.25	559.56	83.14	559.48	88.03	559.64	92.92	559.44
97.82	559.2	102.71	558.86	107.6	558.47	112.49	558.06	117.38	557.67
122.27	557.42	127.16	557.23	132.05	557.05	136.94	556.98	141.83	556.92
146.72	556.85	151.61	556.81	156.5	556.79	161.4	556.78	166.29	556.74
171.18	556.83	176.07	556.62	181.01	556.03	185.96	555.73	190.9	555.05
195.85	554.04	200.8	553.56	205.74	554.01	210.69	554.28	215.63	554.41
220.58	554.46	225.52	554.09	230.47	553.18	235.42	551.65	240.36	549.48
245.31	548.68	249.16	548.74	250.25	548.82	251.2	548.9	255.2	549.23
260.15	549.63	265.09	549.52	270.04	549.77	274.98	550.13	279.93	549.99
284.87	550.44	289.82	550.66	294.56	550.78	299.31	550.83	304.06	550.53
308.8	550.05	313.55	549.73	318.29	549.79	323.04	550.35	327.78	550.7
332.53	550.81	337.27	550.83	342.02	550.82	346.76	551.03	351.51	551.3
356.25	551.31	361	551.38	365.94	551.95	370.87	552.42	375.81	552.56
380.75	551.91	385.68	551.97	390.62	551.9	395.56	551.7	400.49	551.58
405.43	551.55	410.37	551.93	415.3	552.54	420.24	552.94	425.18	553.91
430.11	554.86	435.05	555.31	439.99	555.72	444.92	556.12	449.86	556.78
454.8	557.3	459.73	557.69	464.67	558.16	469.61	558.73	474.54	559.4
479.48	560.22	484.42	560.95	489.35	561.12	494.29	561.26	499.23	561.81
504.16	562.28	508.99	562.81	513.81	563.33	518.64	563.77	523.46	564.46
528.29	564.95	533.11	565.46	537.93	566.05	542.76	566.75	547.58	567.36
552.41	567.74	557.23	568.21	562.06	568.58	566.88	569.16		

Manning's n values num= 3

Sta	n Val	Sta	n Val
0	.08	240.36	.035
		274.98	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

240.36	274.98	173.53	187.1	150.89	.1	.3
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CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 550.18	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.29	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* w.s. Elev (ft)	* 549.88	* Reach Len. (ft)	* 173.53	* 187.10	* 150.89
* Crit w.s. (ft)	* 549.88	* Flow Area (sq ft)	* 0.19	* 18.89	* 0.81
* E.G. Slope (ft/ft)	* 0.020750	* Area (sq ft)	* 0.19	* 18.89	* 0.81
* Q Total (cfs)	* 83.00	* Flow (cfs)	* 0.16	* 82.36	* 0.48
* Top width (ft)	* 40.02	* Top width (ft)	* 0.92	* 31.26	* 7.85
* Vel Total (ft/s)	* 4.17	* Avg. Vel. (ft/s)	* 0.87	* 4.36	* 0.59
* Max Chl Dpth (ft)	* 1.20	* Hydr. Depth (ft)	* 0.20	* 0.60	* 0.10
* Conv. Total (cfs)	* 576.2	* Conv. (cfs)	* 1.1	* 571.8	* 3.3
* Length wtd. (ft)	* 186.98	* Wetted Per. (ft)	* 1.01	* 31.37	* 7.86
* Min Ch El (ft)	* 548.68	* Shear (lb/sq ft)	* 0.24	* 0.78	* 0.13
* Alpha	* 1.08	* Stream Power (lb/ft s)	* 566.88	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.78	* Cum Volume (acre-ft)	* 0.03	* 0.30	* 0.04
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.00	* 0.33	* 0.05

 warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 550.33	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.32	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* w.s. Elev (ft)	* 550.01	* Reach Len. (ft)	* 173.53	* 187.10	* 150.89
* Crit w.s. (ft)	* 550.01	* Flow Area (sq ft)	* 0.32	* 22.79	* 1.94
* E.G. Slope (ft/ft)	* 0.018988	* Area (sq ft)	* 0.32	* 22.79	* 1.94
* Q Total (cfs)	* 106.00	* Flow (cfs)	* 0.31	* 104.10	* 1.59
* Top width (ft)	* 45.58	* Top width (ft)	* 1.20	* 32.93	* 11.46
* Vel Total (ft/s)	* 4.23	* Avg. Vel. (ft/s)	* 0.99	* 4.57	* 0.82
* Max Chl Dpth (ft)	* 1.33	* Hydr. Depth (ft)	* 0.26	* 0.69	* 0.17
* Conv. Total (cfs)	* 769.2	* Conv. (cfs)	* 2.3	* 755.5	* 11.5
* Length wtd. (ft)	* 186.81	* Wetted Per. (ft)	* 1.31	* 33.04	* 11.48
* Min Ch El (ft)	* 548.68	* Shear (lb/sq ft)	* 0.29	* 0.82	* 0.20
* Alpha	* 1.14	* Stream Power (lb/ft s)	* 566.88	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.55	* Cum Volume (acre-ft)	* 0.04	* 0.36	* 0.05
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.00	* 0.36	* 0.05

 warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
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need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 550.53	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.36	* wt. n-val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 550.17	* Reach Len. (ft)	* 173.53	* 187.10	* 150.89
* Crit w.s. (ft)	* 550.17	* Flow Area (sq ft)	* 0.54	* 28.35	* 4.68
* E.G. Slope (ft/ft)	* 0.017681	* Area (sq ft)	* 0.54	* 28.35	* 4.68
* Q Total (cfs)	* 145.00	* Flow (cfs)	* 0.62	* 139.76	* 4.62
* Top width (ft)	* 57.02	* Top width (ft)	* 1.57	* 34.62	* 20.83
* Vel Total (ft/s)	* 4.32	* Avg. vel. (ft/s)	* 1.15	* 4.93	* 0.99
* Max Chl Dpth (ft)	* 1.49	* Hydr. Depth (ft)	* 0.35	* 0.82	* 0.22
* Conv. Total (cfs)	* 1090.5	* Conv. (cfs)	* 4.7	* 1051.0	* 34.8
* Length Wtd. (ft)	* 186.49	* Wetted Per. (ft)	* 1.72	* 34.74	* 20.88
* Min Ch El (ft)	* 548.68	* Shear (lb/sq ft)	* 0.35	* 0.90	* 0.25
* Alpha	* 1.26	* Stream Power (lb/ft s)	* 566.88	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.34	* Cum Volume (acre-ft)	* 0.05	* 0.46	* 0.07
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.00	* 0.41	* 0.07

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 550.68	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.41	* wt. n-val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 550.28	* Reach Len. (ft)	* 173.53	* 187.10	* 150.89
* Crit w.s. (ft)	* 550.28	* Flow Area (sq ft)	* 0.73	* 32.09	* 7.10
* E.G. Slope (ft/ft)	* 0.016945	* Area (sq ft)	* 0.73	* 32.09	* 7.10
* Q Total (cfs)	* 177.00	* Flow (cfs)	* 0.90	* 168.20	* 7.90
* Top width (ft)	* 60.44	* Top width (ft)	* 1.82	* 34.62	* 24.00
* Vel Total (ft/s)	* 4.43	* Avg. vel. (ft/s)	* 1.24	* 5.24	* 1.11
* Max Chl Dpth (ft)	* 1.60	* Hydr. Depth (ft)	* 0.40	* 0.93	* 0.30
* Conv. Total (cfs)	* 1359.7	* Conv. (cfs)	* 6.9	* 1292.2	* 60.7
* Length Wtd. (ft)	* 186.26	* Wetted Per. (ft)	* 1.98	* 34.74	* 24.06
* Min Ch El (ft)	* 548.68	* Shear (lb/sq ft)	* 0.39	* 0.98	* 0.31
* Alpha	* 1.33	* Stream Power (lb/ft s)	* 566.88	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.21	* Cum Volume (acre-ft)	* 0.05	* 0.53	* 0.08
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.01	* 0.44	* 0.08

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 550.84	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.45	* wt. n-val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 550.39	* Reach Len. (ft)	* 173.53	* 187.10	* 150.89
* Crit w.s. (ft)	* 550.39	* Flow Area (sq ft)	* 0.94	* 35.89	* 9.92
* E.G. Slope (ft/ft)	* 0.016425	* Area (sq ft)	* 0.94	* 35.89	* 9.92
* Q Total (cfs)	* 213.00	* Flow (cfs)	* 1.24	* 199.56	* 12.20
* Top width (ft)	* 64.10	* Top width (ft)	* 2.07	* 34.62	* 27.41
* Vel Total (ft/s)	* 4.56	* Avg. vel. (ft/s)	* 1.33	* 5.56	* 1.23
* Max Chl Dpth (ft)	* 1.71	* Hydr. Depth (ft)	* 0.45	* 1.04	* 0.36
* Conv. Total (cfs)	* 1662.0	* Conv. (cfs)	* 9.7	* 1557.1	* 95.2
* Length Wtd. (ft)	* 186.02	* Wetted Per. (ft)	* 2.26	* 34.74	* 27.49
* Min Ch El (ft)	* 548.68	* Shear (lb/sq ft)	* 0.43	* 1.06	* 0.37
* Alpha	* 1.40	* Stream Power (lb/ft s)	* 566.88	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.11	* Cum Volume (acre-ft)	* 0.07	* 0.61	* 0.10
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.04	* 0.45	* 0.09

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: west_Reach RS: 685.446

INPUT

Description:
 Station Elevation Data num= 116

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	540.33	4.89	540.29	9.77	540.29	14.66	540.21	19.54	540.1
24.43	540.15	29.31	540.34	34.2	540.65	39.09	541.27	43.97	541.87
48.86	541.81	53.74	541.45	58.63	540.76	63.51	539.97	68.4	539.05
73.29	539.11	78.17	538.99	83.06	538.96	87.94	538.97	92.83	538.84
97.71	538.73	102.6	538.77	107.49	538.6	112.37	538.23	117.26	538.09
122.14	537.94	127.03	537.6	131.91	537.07	136.8	537.02	141.69	536.93

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146.57	537.23	151.46	537.59	156.34	537.91	161.23	538.57	166.17	538.43	
171	538.23	175.89	538.13	180.77	538.3	185.66	538.18	190.54	537.71	
195.43	537.4	200.32	537.18	205.2	536.99	210.09	537.1	215.07	537.27	
220.05	537.31	225.02	537.54	230	537.95	234.98	537.79	239.96	537.47	
244.94	537.32	249.92	537.23	254.9	537.03	259.88	536.86	264.86	536.68	
269.84	536.73	274.82	537.02	279.8	536.86	284.78	536.1	289.76	535.04	
294.74	533.56	299.71	531.81	304.69	530.23	306.19	530.14	309.67	529.94	
310.98	530.07	314.65	530.43	319.63	531.14	324.61	531.94	329.59	532.37	
334.57	532.32	339.55	532.25	344.53	532.61	349.51	533.41	354.49	534.59	
359.47	535.58	364.45	536.21	369.43	536.84	374.41	537.24	379.39	537.43	
384.37	538	389.35	538.74	394.33	538.95	399.31	538.8	404.29	538.46	
409.27	538.24	414.26	538.21	419.24	538.26	424.22	538.46	429.2	538.75	
434.18	538.82	439.16	538.28	444.14	537.95	449.12	539.42	454.1	540.2	
459.08	540.36	464.06	540.56	469.04	540.65	474.02	540.73	479	541.13	
483.98	541.27	488.96	541.51	493.94	541.8	498.93	542.09	503.91	542.33	
508.89	542.76	513.87	543.08	518.85	543.45	523.83	543.99	528.81	544.7	
533.79	545.21	538.77	545.49	543.75	545.73	548.73	546.03	553.71	546.3	
558.69	546.73									

Manning's n values num= 3
 Sta n Val Sta n Val

 0 .08 299.71 .035 324.61 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 299.71 324.61 142.56 162 152.69 .1 .3

CROSS SECTION OUTPUT Profile #5-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 531.72	* Element	*	*	*
* Vel Head (ft)	* 0.42	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 531.29	* Reach Len. (ft)	* 142.56	* 162.00	* 152.69
* Crit W.S. (ft)	* 531.29	* Flow Area (sq ft)	*	* 15.95	*
* E.G. slope (ft/ft)	* 0.019656	* Area (sq ft)	*	* 15.95	*
* Q Total (cfs)	* 83.00	* Flow (cfs)	*	* 83.00	*
* Top Width (ft)	* 19.26	* Top width (ft)	*	* 19.26	*
* Vel Total (ft/s)	* 5.20	* Avg. Vel. (ft/s)	*	* 5.20	*
* Max Chl Dpth (ft)	* 1.35	* Hydr. Depth (ft)	*	* 0.83	*
* Conv. Total (cfs)	* 592.0	* Conv. (cfs)	*	* 592.0	*
* Length wtd. (ft)	* 162.00	* Wetted Per. (ft)	*	* 19.52	*
* Min Ch El (ft)	* 529.94	* Shear (lb/sq ft)	*	* 1.00	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 558.69	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.15	* Cum Volume (acre-ft)	* 0.03	* 0.22	* 0.04
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	*	* 0.23	* 0.03

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 531.93	* Element	*	*	*
* Vel Head (ft)	* 0.47	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 531.46	* Reach Len. (ft)	* 142.56	* 162.00	* 152.69
* Crit W.S. (ft)	* 531.46	* Flow Area (sq ft)	*	* 19.26	*
* E.G. slope (ft/ft)	* 0.018980	* Area (sq ft)	*	* 19.26	*
* Q Total (cfs)	* 106.00	* Flow (cfs)	*	* 106.00	*
* Top Width (ft)	* 20.81	* Top width (ft)	*	* 20.81	*
* Vel Total (ft/s)	* 5.50	* Avg. Vel. (ft/s)	*	* 5.50	*
* Max Chl Dpth (ft)	* 1.52	* Hydr. Depth (ft)	*	* 0.93	*
* Conv. Total (cfs)	* 769.4	* Conv. (cfs)	*	* 769.4	*
* Length wtd. (ft)	* 162.00	* Wetted Per. (ft)	*	* 21.11	*
* Min Ch El (ft)	* 529.94	* Shear (lb/sq ft)	*	* 1.08	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 558.69	* 0.00	* 0.00
* Frctn Loss (ft)	* 3.04	* Cum Volume (acre-ft)	* 0.04	* 0.27	* 0.05
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	*	* 0.25	* 0.03

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 532.24	* Element	*	*	*
* Vel Head (ft)	* 0.54	* Wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 531.70	* Reach Len. (ft)	* 142.56	* 162.00	* 152.69
* Crit W.S. (ft)	* 531.70	* Flow Area (sq ft)	*	* 24.55	*
* E.G. slope (ft/ft)	* 0.018174	* Area (sq ft)	*	* 24.55	*
* Q Total (cfs)	* 145.00	* Flow (cfs)	*	* 145.00	*
* Top Width (ft)	* 23.07	* Top width (ft)	*	* 23.07	*
* Vel Total (ft/s)	* 5.91	* Avg. Vel. (ft/s)	*	* 5.91	*
* Max Chl Dpth (ft)	* 1.76	* Hydr. Depth (ft)	*	* 1.06	*
* Conv. Total (cfs)	* 1075.6	* Conv. (cfs)	*	* 1075.6	*
* Length wtd. (ft)	* 162.00	* Wetted Per. (ft)	*	* 23.42	*
* Min Ch El (ft)	* 529.94	* Shear (lb/sq ft)	*	* 1.19	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 558.69	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.93	* Cum Volume (acre-ft)	* 0.04	* 0.34	* 0.06
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	*	* 0.29	* 0.03

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 532.47	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.59	* wt. n-Val.	* 0.001	* 0.035	*
* W.S. Elev (ft)	* 531.87	* Reach Len. (ft)	* 142.56	* 162.00	* 152.69
* Crit W.S. (ft)	* 531.87	* Flow Area (sq ft)	* 0.01	* 28.63	*
* E.G. Slope (ft/ft)	* 0.017569	* Area (sq ft)	* 0.01	* 28.63	*
* Q Total (cfs)	* 177.00	* Flow (cfs)	* 0.00	* 177.00	*
* Top width (ft)	* 24.65	* Top Width (ft)	* 0.18	* 24.48	*
* Vel Total (ft/s)	* 6.18	* Avg. vel. (ft/s)	* 0.23	* 6.18	*
* Max Chl Dpth (ft)	* 1.93	* Hydr. Depth (ft)	* 0.03	* 1.17	*
* Conv. Total (cfs)	* 1335.4	* Conv. (cfs)	* 0.0	* 1335.3	*
* Length wtd. (ft)	* 162.00	* Wetted Per. (ft)	* 0.19	* 24.86	*
* Min Ch El (ft)	* 529.94	* Shear (lb/sq ft)	*	* 1.26	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 558.69	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.87	* Cum Volume (acre-ft)	* 0.05	* 0.40	* 0.07
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.01	* 0.31	* 0.04

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 532.69	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.67	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 532.03	* Reach Len. (ft)	* 142.56	* 162.00	* 152.69
* Crit W.S. (ft)	* 532.03	* Flow Area (sq ft)	* 0.07	* 32.50	* 0.04
* E.G. Slope (ft/ft)	* 0.017055	* Area (sq ft)	* 0.07	* 32.50	* 0.04
* Q Total (cfs)	* 213.00	* Flow (cfs)	* 0.04	* 212.95	* 0.01
* Top width (ft)	* 26.54	* Top Width (ft)	* 0.62	* 24.90	* 1.02
* Vel Total (ft/s)	* 6.53	* Avg. vel. (ft/s)	* 0.53	* 6.55	* 0.30
* Max Chl Dpth (ft)	* 2.09	* Hydr. Depth (ft)	* 0.11	* 1.31	* 0.04
* Conv. Total (cfs)	* 1631.0	* Conv. (cfs)	* 0.3	* 1630.6	* 0.1
* Length wtd. (ft)	* 161.99	* Wetted Per. (ft)	* 0.66	* 25.29	* 1.02
* Min Ch El (ft)	* 529.94	* Shear (lb/sq ft)	* 0.11	* 1.37	* 0.05
* Alpha	* 1.01	* Stream Power (lb/ft s)	* 558.69	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.74	* Cum Volume (acre-ft)	* 0.06	* 0.47	* 0.09
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.04	* 0.32	* 0.05

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: west_Reach RS: 523.4422

INPUT

Description:
 Station Elevation Data num= 110

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	528.01	4.89	527.81	9.77	527.44	14.66	526.83	19.54	526.42
24.43	526.38	29.31	526.26	34.2	525.96	39.08	525.45	43.97	525.21
48.85	524.95	53.74	524.74	58.62	524.47	63.51	524.31	68.39	524.06
73.28	523.78	78.16	523.54	83.05	523.55	87.93	523.69	92.82	523.74
97.7	523.84	102.59	523.88	107.47	523.72	112.36	523.71	117.24	523.68
122.13	523.81	127.01	524.04	131.9	523.99	136.78	524.29	141.67	524.67
146.56	524.78	151.44	524.68	156.33	524.64	161.21	525.01	166.1	525.1
170.98	524.73	175.87	524.49	180.75	524.56	185.64	524.26	190.52	523.72
195.39	523.36	200.27	523.22	205.15	522.85	210.03	522.63	214.91	522.02
219.79	521.38	224.67	520.91	229.55	520.45	234.43	520.11	239.31	519.96
244.18	519.92	249.06	519.79	253.94	519.62	258.82	519.39	263.7	519.18
268.58	518.84	273.46	518.03	278.34	517.03	280.02	517.07	283.22	517.13
284	517.48	288.09	519.32	292.97	522.39	297.85	524.33	302.73	524.57
307.61	524.59	312.49	524.49	317.37	524.7	322.25	524.8	327.13	524.86
332.01	524.79	336.88	524.75	341.76	524.94	346.64	525.22	351.51	525.82
356.38	526.28	361.25	526.52	366.12	526.67	370.99	526.8	375.86	526.89
380.73	527	385.6	527.32	390.47	527.59	395.34	528.02	400.21	528.2
405.08	528.26	409.95	528.09	414.82	527.21	419.69	526.44	424.56	526.75
429.43	527.25	434.3	527.82	439.17	528.1	444.04	528.27	448.91	528.54
453.78	528.67	458.65	528.8	463.52	528.71	468.39	528.78	473.26	529.02
478.13	529.22	483	529.24	487.87	529.19	492.74	529.46	497.61	529.73
502.48	530.04	507.35	530.34	512.22	530.38	517.09	530.59	521.96	530.84

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	263.7	.035	288.09	.08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
263.7	288.09	155.73	154.32	143.88	.1		.3

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 519.01	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.48	* wt. n-Val.	*	* 0.035	*
* W.S. Elev (ft)	* 518.54	* Reach Len. (ft)	* 155.73	* 154.32	* 143.88
* Crit W.S. (ft)	* 518.54	* Flow Area (sq ft)	*	* 14.96	*
* E.G. Slope (ft/ft)	* 0.019268	* Area (sq ft)	*	* 14.96	*
* Q Total (cfs)	* 83.00	* Flow (cfs)	*	* 83.00	*

CalifonFloodplainst

* Top width (ft)	* 15.93	* Top width (ft)	* 15.93	*	*
* Vel Total (ft/s)	* 5.55	* Avg. Vel. (ft/s)	* 5.55	*	*
* Max Chl Dpth (ft)	* 1.51	* Hydr. Depth (ft)	* 0.94	*	*
* Conv. Total (cfs)	* 597.9	* Conv. (cfs)	* 597.9	*	*
* Length Wtd. (ft)	* 154.32	* Wetted Per. (ft)	* 16.37	*	*
* Min Ch El (ft)	* 517.03	* Shear (lb/sq ft)	* 1.10	*	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 521.96	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.95	* Cum Volume (acre-ft)	* 0.03	* 0.16	* 0.04
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.16	* 0.16	* 0.03

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 519.26	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.53	* wt. n-Val.	* 155.73	* 154.32	* 143.88
* W.S. Elev (ft)	* 518.73	* Reach Len. (ft)	*	* 18.20	*
* Crit W.S. (ft)	* 518.73	* Flow Area (sq ft)	*	* 18.20	*
* E.G. Slope (ft/ft)	* 0.018587	* Area (sq ft)	*	* 106.00	*
* Q Total (cfs)	* 106.00	* Flow (cfs)	*	* 17.53	*
* Top width (ft)	* 17.53	* Top width (ft)	*	* 5.82	*
* Vel Total (ft/s)	* 5.82	* Avg. Vel. (ft/s)	*	* 1.04	*
* Max Chl Dpth (ft)	* 1.70	* Hydr. Depth (ft)	*	* 777.5	*
* Conv. Total (cfs)	* 777.5	* Conv. (cfs)	*	* 18.03	*
* Length Wtd. (ft)	* 154.32	* Wetted Per. (ft)	*	* 1.17	*
* Min Ch El (ft)	* 517.03	* Shear (lb/sq ft)	* 521.96	* 0.00	* 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 0.04	* 0.20	* 0.05
* Frctn Loss (ft)	* 2.85	* Cum Volume (acre-ft)	*	* 0.18	* 0.03
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	*	*	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 519.60	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.56	* wt. n-Val.	* 155.73	* 154.32	* 143.88
* W.S. Elev (ft)	* 519.04	* Reach Len. (ft)	*	* 24.11	*
* Crit W.S. (ft)	* 519.04	* Flow Area (sq ft)	*	* 24.11	*
* E.G. Slope (ft/ft)	* 0.018039	* Area (sq ft)	*	* 145.00	*
* Q Total (cfs)	* 145.00	* Flow (cfs)	*	* 21.68	*
* Top width (ft)	* 21.68	* Top width (ft)	*	* 6.01	*
* Vel Total (ft/s)	* 6.01	* Avg. Vel. (ft/s)	*	* 1.11	*
* Max Chl Dpth (ft)	* 2.01	* Hydr. Depth (ft)	*	* 1079.6	*
* Conv. Total (cfs)	* 1079.6	* Conv. (cfs)	*	* 22.26	*
* Length Wtd. (ft)	* 154.32	* Wetted Per. (ft)	*	* 1.22	*
* Min Ch El (ft)	* 517.03	* Shear (lb/sq ft)	* 521.96	* 0.00	* 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 0.04	* 0.25	* 0.06
* Frctn Loss (ft)	* 2.76	* Cum Volume (acre-ft)	*	* 0.21	* 0.03
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	*	*	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 519.82	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.60	* wt. n-Val.	* 155.73	* 154.32	* 143.88
* W.S. Elev (ft)	* 519.22	* Reach Len. (ft)	*	* 28.47	*
* Crit W.S. (ft)	* 519.22	* Flow Area (sq ft)	*	* 28.47	*
* E.G. Slope (ft/ft)	* 0.017836	* Area (sq ft)	*	* 177.00	*
* Q Total (cfs)	* 177.00	* Flow (cfs)	*	* 24.18	*
* Top width (ft)	* 25.19	* Top width (ft)	*	* 6.22	*
* Vel Total (ft/s)	* 6.22	* Avg. Vel. (ft/s)	*	* 1.18	*
* Max Chl Dpth (ft)	* 2.19	* Hydr. Depth (ft)	*	* 1325.3	*
* Conv. Total (cfs)	* 1325.3	* Conv. (cfs)	*	* 24.81	*
* Length Wtd. (ft)	* 154.32	* Wetted Per. (ft)	*	* 1.28	*
* Min Ch El (ft)	* 517.03	* Shear (lb/sq ft)	* 521.96	* 0.00	* 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 0.05	* 0.30	* 0.07
* Frctn Loss (ft)	* 2.72	* Cum Volume (acre-ft)	*	* 0.22	* 0.04
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	*	*	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 520.05	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.67	* wt. n-Val.	* 155.73	* 154.32	* 143.88
* W.S. Elev (ft)	* 519.39	* Reach Len. (ft)	*	* 32.48	*
* Crit W.S. (ft)	* 519.39	* Flow Area (sq ft)	*	*	*


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CalifonFloodplainSt
* E.G. Slope (ft/ft) *0.016820 * Area (sq ft) * 0.50 * 32.48 * 0.00 *
* Q Total (cfs) * 213.00 * Flow (cfs) * 0.27 * 212.73 * 0.00 *
* Top Width (ft) * 29.34 * Top Width (ft) * 4.84 * 24.39 * 0.11 *
* Vel Total (ft/s) * 6.46 * Avg. Vel. (ft/s) * 0.53 * 6.55 * 0.23 *
* Max Chl Dpth (ft) * 2.36 * Hydr. Depth (ft) * 0.10 * 1.33 * 0.03 *
* Conv. Total (cfs) * 1642.4 * Conv. (cfs) * 2.1 * 1640.3 * 0.0 *
* Length wtd. (ft) * 154.32 * Wetted Per. (ft) * 4.84 * 25.04 * 0.13 *
* Min Ch El (ft) * 517.03 * Shear (lb/sq ft) * 0.11 * 1.36 * 0.00 *
* Alpha * 1.03 * Stream Power (lb/ft s) * 521.96 * 0.00 * 0.00 *
* Frctn Loss (ft) * 2.52 * Cum Volume (acre-ft) * 0.06 * 0.35 * 0.09 *
* C & E Loss (ft) * 0.01 * Cum SA (acres) * 0.03 * 0.23 * 0.04 *
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warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: West_Reach RS: 369.1193

INPUT

Description:
Station Elevation Data num= 98
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

0	513.26	4.93	513.16	9.86	513.28	14.79	513.41	19.72	513.21
24.65	513.12	29.58	513.28	34.51	513.66	39.45	514.03	44.38	514.23
49.31	514.44	54.24	514.25	59.17	514.42	64.1	515.12	69.03	515.42
73.96	515.23	78.89	515.17	83.82	515.29	88.75	515.07	93.68	514.95
98.61	514.87	103.54	514.76	108.48	514.48	113.41	513.9	118.34	513.48
123.27	512.76	128.2	512.27	133.13	511.73	138.06	511.14	142.99	510.8
147.92	510.74	152.85	510.57	157.78	510.14	162.73	510.08	167.67	510.39
172.61	510.49	177.56	509.92	182.5	509.58	187.44	509.42	192.39	509.5
197.33	509.72	202.27	509.74	207.22	509.63	212.16	509.16	217.1	507.15
221.58	506.64	222.05	506.59	226.23	508.14	226.99	508.43	231.93	509.35
236.88	509.46	241.82	509.49	246.76	509.94	251.7	510.56	256.65	510.92
261.59	511.36	266.53	511.91	271.48	512.4	276.42	512.71	281.36	513.04
286.31	513.37	291.27	513.64	296.22	513.81	301.18	514.07	306.14	514.45
311.09	515.01	316.05	515.52	321.01	515.76	325.97	516.21	330.92	516.28
335.88	516.45	340.84	516.39	345.79	516.38	350.75	515.71	355.71	516.08
360.67	517.16	365.62	517.66	370.58	517.77	375.54	518.13	380.49	518.41
385.45	518.61	390.41	518.94	395.37	518.93	400.32	519.04	405.28	519.09
410.24	519.13	415.19	519.12	420.15	519.07	425.11	519.24	430.07	519.36
435.02	519.73	439.98	519.9	444.94	520.07	449.89	519.97	454.85	520.08
459.81	520.34	464.77	520.64	469.72	521				

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val

0	.08	212.16	.035	231.93	.08
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Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
212.16 231.93 139.15 136.94 124.26 .1 .3

CROSS SECTION OUTPUT Profile #5-year flow

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*****
* E.G. Elev (ft) * 508.95 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.55 * wt. n-Val. * 0.035 *
* w.s. Elev (ft) * 508.40 * Reach Len. (ft) * 139.15 * 136.94 * 124.26 *
* Crit w.s. (ft) * 508.40 * Flow Area (sq ft) * 13.91 *
* E.G. Slope (ft/ft) *0.018948 * Area (sq ft) * 13.91 *
* Q Total (cfs) * 83.00 * Flow (cfs) * 83.00 *
* Top Width (ft) * 12.88 * Top Width (ft) * 12.88 *
* Vel Total (ft/s) * 5.97 * Avg. Vel. (ft/s) * 5.97 *
* Max Chl Dpth (ft) * 1.81 * Hydr. Depth (ft) * 1.08 *
* Conv. Total (cfs) * 603.0 * Conv. (cfs) * 603.0 *
* Length wtd. (ft) * 136.94 * Wetted Per. (ft) * 13.48 *
* Min Ch El (ft) * 506.59 * Shear (lb/sq ft) * 1.22 *
* Alpha * 1.00 * Stream Power (lb/ft s) * 469.72 * 0.00 * 0.00 *
* Frctn Loss (ft) * 2.64 * Cum Volume (acre-ft) * 0.03 * 0.11 * 0.04 *
* C & E Loss (ft) * 0.03 * Cum SA (acres) * 0.11 * 0.03 *
*****

```

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

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*****
* E.G. Elev (ft) * 509.23 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.60 * wt. n-Val. * 0.035 *
* w.s. Elev (ft) * 508.63 * Reach Len. (ft) * 139.15 * 136.94 * 124.26 *
* Crit w.s. (ft) * 508.63 * Flow Area (sq ft) * 17.12 *
* E.G. Slope (ft/ft) *0.018323 * Area (sq ft) * 17.12 *
* Q Total (cfs) * 106.00 * Flow (cfs) * 106.00 *
* Top Width (ft) * 14.63 * Top Width (ft) * 14.63 *
* Vel Total (ft/s) * 6.19 * Avg. Vel. (ft/s) * 6.19 *
* Max Chl Dpth (ft) * 2.04 * Hydr. Depth (ft) * 1.17 *
* Conv. Total (cfs) * 783.1 * Conv. (cfs) * 783.1 *
* Length wtd. (ft) * 136.94 * Wetted Per. (ft) * 15.30 *
* Min Ch El (ft) * 506.59 * Shear (lb/sq ft) * 1.28 *
* Alpha * 1.00 * Stream Power (lb/ft s) * 469.72 * 0.00 * 0.00 *
* Frctn Loss (ft) * 2.54 * Cum Volume (acre-ft) * 0.04 * 0.14 * 0.05 *
* C & E Loss (ft) * 0.03 * Cum SA (acres) * 0.12 * 0.12 * 0.03 *
*****

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Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 509.62	*	*	*
* Vel Head (ft)	* 0.66	* Wt. n-Val.	* 0.035	*
* W.S. Elev (ft)	* 508.95	* Reach Len. (ft)	* 139.15	* 124.26
* Crit W.S. (ft)	* 508.95	* Flow Area (sq ft)	* 22.22	*
* E.G. Slope (ft/ft)	* 0.017719	* Area (sq ft)	* 22.22	*
* Q Total (cfs)	* 145.00	* Flow (cfs)	* 145.00	*
* Top width (ft)	* 17.14	* Top width (ft)	* 17.14	*
* Vel Total (ft/s)	* 6.53	* Avg. vel. (ft/s)	* 6.53	*
* Max Chl Dpth (ft)	* 2.36	* Hydr. Depth (ft)	* 1.30	*
* Conv. Total (cfs)	* 1089.3	* Conv. (cfs)	* 1089.3	*
* Length wtd. (ft)	* 136.94	* Wetted Per. (ft)	* 17.91	*
* Min Ch El (ft)	* 506.59	* Shear (lb/sq ft)	* 1.37	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 469.72	* 0.00
* Frctn Loss (ft)	* 2.46	* Cum Volume (acre-ft)	* 0.04	* 0.06
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	* 0.14	* 0.03

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 509.88	*	*	*
* Vel Head (ft)	* 0.71	* Wt. n-Val.	* 0.000	* 0.035
* W.S. Elev (ft)	* 509.17	* Reach Len. (ft)	* 139.15	* 124.26
* Crit W.S. (ft)	* 509.17	* Flow Area (sq ft)	* 0.00	* 26.13
* E.G. Slope (ft/ft)	* 0.017389	* Area (sq ft)	* 0.00	* 26.13
* Q Total (cfs)	* 177.00	* Flow (cfs)	* 0.00	* 177.00
* Top width (ft)	* 18.94	* Top width (ft)	* 0.13	* 18.81
* Vel Total (ft/s)	* 6.77	* Avg. vel. (ft/s)	* 0.08	* 6.77
* Max Chl Dpth (ft)	* 2.58	* Hydr. Depth (ft)	* 0.01	* 1.39
* Conv. Total (cfs)	* 1342.2	* Conv. (cfs)	* 0.0	* 1342.2
* Length wtd. (ft)	* 136.94	* Wetted Per. (ft)	* 0.13	* 19.64
* Min Ch El (ft)	* 506.59	* Shear (lb/sq ft)	* 1.44	*
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 469.72	* 0.00
* Frctn Loss (ft)	* 2.43	* Cum Volume (acre-ft)	* 0.05	* 0.07
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	* 0.00	* 0.15

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	* 510.15	*	*	*
* Vel Head (ft)	* 0.75	* Wt. n-Val.	* 0.080	* 0.035
* W.S. Elev (ft)	* 509.40	* Reach Len. (ft)	* 139.15	* 124.26
* Crit W.S. (ft)	* 509.40	* Flow Area (sq ft)	* 0.31	* 30.61
* E.G. Slope (ft/ft)	* 0.015834	* Area (sq ft)	* 0.31	* 30.61
* Q Total (cfs)	* 213.00	* Flow (cfs)	* 0.18	* 212.81
* Top width (ft)	* 24.69	* Top width (ft)	* 2.55	* 19.77
* Vel Total (ft/s)	* 6.88	* Avg. vel. (ft/s)	* 0.57	* 6.95
* Max Chl Dpth (ft)	* 2.81	* Hydr. Depth (ft)	* 0.12	* 1.55
* Conv. Total (cfs)	* 1692.7	* Conv. (cfs)	* 1.4	* 1691.2
* Length wtd. (ft)	* 136.94	* Wetted Per. (ft)	* 2.56	* 20.61
* Min Ch El (ft)	* 506.59	* Shear (lb/sq ft)	* 0.12	* 1.47
* Alpha	* 1.02	* Stream Power (lb/ft s)	* 469.72	* 0.00
* Frctn Loss (ft)	* 2.26	* Cum Volume (acre-ft)	* 0.06	* 0.23
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	* 0.01	* 0.15

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: west_Reach RS: 232.1771

INPUT Description:

Station	Elevation	Data	num=	102	Sta	Elev	Sta	Elev	Sta	Elev
0	505.18	4.89	505.14	9.78	505.05	14.67	505.09	19.56	505.67	
24.46	506.55	29.35	507.08	34.24	507.25	39.13	507.29	44.02	507.29	
48.91	507.23	53.8	507.17	58.69	507.15	63.58	507.2	68.47	507.16	
73.37	506.28	78.26	506.23	83.15	505.76	88.04	505.45	92.93	505.72	
97.82	506.04	102.71	506.32	107.6	506.41	112.49	505.93	117.38	505.31	

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122.28	504.72	127.17	504.46	132.06	504.03	136.95	503.61	141.84	503.43
146.73	503.34	151.62	503.27	156.51	503.25	161.4	503.23	166.29	503.43
171.19	503.52	176.08	503.51	180.97	503.41	185.86	502.99	190.75	502.8
195.64	502.41	200.53	501.97	205.32	501.76	210.11	501.86	214.89	501.65
219.68	501.19	224.47	500.69	229.26	499.85	233.39	499.16	234.04	499.06
236.4	499.25	238.83	499.44	243.62	500.89	248.41	501.68	253.19	502.56
257.98	502.77	262.77	502.94	267.55	502.99	272.34	502.55	277.13	502.73
281.92	503.69	286.7	504.06	291.49	503.28	296.28	502.91	301.07	503.16
305.85	504.02	310.8	504.76	315.76	505.26	320.71	505.93	325.66	506.31
330.61	506.89	335.56	507.24	340.51	507.48	345.46	507.77	350.41	508.08
355.36	508.6	360.31	508.83	365.26	508.88	370.21	509.03	375.16	509.28
380.11	509.77	385.06	510.08	390.01	510.37	394.96	510.72	399.92	511.03
404.87	511.41	409.82	511.69	414.77	511.99	419.72	512.11	424.67	512.23
429.62	512.5	434.57	512.82	439.52	513.01	444.47	513.13	449.42	513.41
454.37	513.51	459.32	513.67	464.27	513.69	469.22	513.72	474.17	513.96
479.12	514.18	484.08	514.43						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	219.68	.035	248.41	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	219.68	248.41		120.64	122.04	104.9	.1	.3

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 501.03	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.45	* Wt. n-Val.	* 120.64	* 122.04	* 104.90
* W.S. Elev (ft)	* 500.58	* Reach Len. (ft)		* 15.40	
* Crit W.S. (ft)	* 500.58	* Flow Area (sq ft)		* 15.40	
* E.G. Slope (ft/ft)	* 0.019559	* Area (sq ft)		* 83.00	
* Q Total (cfs)	* 83.00	* Flow (cfs)		* 17.48	
* Top width (ft)	* 17.48	* Top width (ft)		* 5.39	
* Vel Total (ft/s)	* 5.39	* Avg. vel. (ft/s)		* 0.88	
* Max Chl Dpth (ft)	* 1.52	* Hydr. depth (ft)		* 593.5	
* Conv. Total (cfs)	* 593.5	* Conv. (cfs)		* 17.80	
* Length wtd. (ft)	* 119.73	* Wetted Per. (ft)		* 1.06	
* Min Ch El (ft)	* 499.06	* Shear (lb/sq ft)		* 484.08	* 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 484.08	* 0.07	* 0.04
* Frctn Loss (ft)	* 2.73	* Cum Volume (acre-ft)	* 0.03	* 0.06	* 0.03
* C & E Loss (ft)	* 0.06	* Cum SA (acres)			

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 501.26	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.49	* Wt. n-Val.	* 120.64	* 122.04	* 104.90
* W.S. Elev (ft)	* 500.77	* Reach Len. (ft)		* 18.87	
* Crit W.S. (ft)	* 500.77	* Flow Area (sq ft)		* 18.87	
* E.G. Slope (ft/ft)	* 0.018720	* Area (sq ft)		* 106.00	
* Q Total (cfs)	* 106.00	* Flow (cfs)		* 19.48	
* Top width (ft)	* 19.48	* Top width (ft)		* 5.62	
* Vel Total (ft/s)	* 5.62	* Avg. vel. (ft/s)		* 0.97	
* Max Chl Dpth (ft)	* 1.71	* Hydr. depth (ft)		* 774.7	
* Conv. Total (cfs)	* 774.7	* Conv. (cfs)		* 19.84	
* Length wtd. (ft)	* 119.65	* Wetted Per. (ft)		* 1.11	
* Min Ch El (ft)	* 499.06	* Shear (lb/sq ft)		* 484.08	* 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 484.08	* 0.08	* 0.05
* Frctn Loss (ft)	* 2.64	* Cum Volume (acre-ft)	* 0.04	* 0.07	* 0.03
* C & E Loss (ft)	* 0.06	* Cum SA (acres)			

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 501.58	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.54	* Wt. n-Val.	* 120.64	* 122.04	* 104.90
* W.S. Elev (ft)	* 501.04	* Reach Len. (ft)		* 24.69	
* Crit W.S. (ft)	* 501.04	* Flow Area (sq ft)		* 24.69	
* E.G. Slope (ft/ft)	* 0.018235	* Area (sq ft)		* 145.00	
* Q Total (cfs)	* 145.00	* Flow (cfs)		* 23.41	
* Top width (ft)	* 23.41	* Top width (ft)		* 5.87	
* Vel Total (ft/s)	* 5.87	* Avg. vel. (ft/s)		* 1.05	
* Max Chl Dpth (ft)	* 1.98	* Hydr. depth (ft)		* 1073.8	
* Conv. Total (cfs)	* 1073.8	* Conv. (cfs)		* 23.80	
* Length wtd. (ft)	* 119.58	* Wetted Per. (ft)		* 1.18	
* Min Ch El (ft)	* 499.06	* Shear (lb/sq ft)		* 484.08	* 0.00
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 484.08	* 0.10	* 0.06
* Frctn Loss (ft)	* 2.66	* Cum Volume (acre-ft)	* 0.04	* 0.07	* 0.03
* C & E Loss (ft)	* 0.05	* Cum SA (acres)			

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

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CROSS SECTION OUTPUT Profile #50-year Flow

Parameter	Value	Element	Left OB	Channel	Right OB
E.G. Elev (ft)	501.79				
Vel Head (ft)	0.58	Wt. n-Val.	0.000	0.035	
W.S. Elev (ft)	501.22	Reach Len. (ft)	120.64	122.04	104.90
Crit W.S. (ft)	501.22	Flow Area (sq ft)	0.00	29.03	
E.G. Slope (ft/ft)	0.018105	Area (sq ft)	0.00	29.03	
Q Total (cfs)	177.00	Flow (cfs)	0.00	177.00	
Top Width (ft)	26.17	Top Width (ft)	0.26	25.91	
Vel Total (ft/s)	6.10	Avg. vel. (ft/s)	0.13	6.10	
Max Chl Dpth (ft)	2.16	Hydr. Depth (ft)	0.01	1.12	
Conv. Total (cfs)	1315.4	Conv. (cfs)	0.0	1315.4	
Length Wtd. (ft)	119.58	Wetted Per. (ft)	0.26	26.33	
Min Ch El (ft)	499.06	Shear (lb/sq ft)		1.25	
Alpha	1.00	Stream Power (lb/ft s)	484.08	0.00	0.00
Frctn Loss (ft)	2.39	Cum Volume (acre-ft)	0.05	0.11	0.07
C & E Loss (ft)	0.06	Cum SA (acres)	0.00	0.08	0.04

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

Parameter	Value	Element	Left OB	Channel	Right OB
E.G. Elev (ft)	502.01				
Vel Head (ft)	0.63	Wt. n-Val.	0.080	0.035	
W.S. Elev (ft)	501.38	Reach Len. (ft)	120.64	122.04	104.90
Crit W.S. (ft)	501.38	Flow Area (sq ft)	0.19	33.43	
E.G. Slope (ft/ft)	0.017228	Area (sq ft)	0.19	33.43	
Q Total (cfs)	213.00	Flow (cfs)	0.10	212.90	
Top Width (ft)	28.91	Top Width (ft)	1.99	26.92	
Vel Total (ft/s)	6.34	Avg. vel. (ft/s)	0.51	6.37	
Max Chl Dpth (ft)	2.32	Hydr. Depth (ft)	0.10	1.24	
Conv. Total (cfs)	1622.8	Conv. (cfs)	0.7	1622.0	
Length Wtd. (ft)	119.58	Wetted Per. (ft)	2.00	27.35	
Min Ch El (ft)	499.06	Shear (lb/sq ft)	0.10	1.31	
Alpha	1.01	Stream Power (lb/ft s)	484.08	0.00	0.00
Frctn Loss (ft)	2.11	Cum Volume (acre-ft)	0.06	0.13	0.09
C & E Loss (ft)	0.07	Cum SA (acres)	0.01	0.08	0.04

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: west_Reach RS: 110.1391

INPUT Description:

Station	Elevation	Data	num=	104	Sta	Elev	Sta	Elev	Sta	Elev
0	500.04	4.97	499.87	9.93	499.74	14.9	499.68	19.86	499.63	
24.83	499.74	29.79	499.77	34.76	499.92	39.72	500.12	44.69	500.25	
49.65	500.48	54.62	500.74	59.58	500.98	64.55	501.08	69.52	501.14	
74.48	501.28	79.45	501.45	84.41	501.45	89.38	501.2	94.34	501.12	
99.31	500.86	104.27	500.43	109.24	499.28	114.2	498.44	119.17	498.3	
124.13	498.23	129.1	498.22	134.07	498.33	139.03	498.45	144	498.51	
148.96	498.62	153.93	498.53	158.89	498.49	163.86	498.4	168.82	498.23	
173.79	498.11	178.75	498	183.72	497.82	188.68	497.59	193.65	497.41	
198.62	497.22	203.58	496.98	208.55	497.03	213.51	496.95	218.45	497.06	
223.38	497.22	228.32	497.7	233.26	498.16	238.2	497.73	243.13	497.39	
248.07	497.4	253.01	497.49	257.94	497.15	262.88	496.87	267.82	496.77	
272.75	496.81	277.69	496.51	282.63	496.1	287.56	495.68	290.63	495.61	
297.5	495.56	297.44	495.11	298.44	495.09	302.37	495.01	307.31	495.25	
312.25	495.44	317.18	495.42	322.12	495.36	327.06	495.3	331.99	495.28	
336.93	495.56	341.87	496.29	346.8	497.12	351.74	497.69	356.68	497.75	
361.62	498.54	366.55	499.03	371.4	499.48	376.25	499.84	381.1	500.27	
385.95	500.63	390.8	501	395.65	501.67	400.5	501.99	405.35	502.14	
410.2	502.36	415.05	502.69	419.9	503.08	424.75	503.53	429.6	503.77	
434.45	504.3	439.3	504.6	444.15	504.96	449	505.49	453.85	505.87	
458.7	506.22	463.55	506.47	468.4	506.94	473.25	507.15	478.1	507.21	
482.95	507.36	487.8	507.6	492.65	507.83	497.5	508.13			

Manning's n values	num=	3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.08	282.63	.035	312.25	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 282.63 312.25 49.64 99.47 45.57 .1 .3

CROSS SECTION OUTPUT Profile #5-year flow

Parameter	Value	Element	Left OB	Channel	Right OB
E.G. Elev (ft)	496.12				
Vel Head (ft)	0.25	Wt. n-Val.		0.035	0.080
W.S. Elev (ft)	495.87	Reach Len. (ft)	110.00	110.00	110.00
Crit W.S. (ft)	495.87	Flow Area (sq ft)		14.29	12.58
E.G. Slope (ft/ft)	0.026692	Area (sq ft)		14.29	12.58
Q Total (cfs)	88.00	Flow (cfs)		64.93	23.07
Top Width (ft)	53.68	Top Width (ft)		26.91	26.77
Vel Total (ft/s)	3.27	Avg. vel. (ft/s)		4.54	1.83
Max Chl Dpth (ft)	0.86	Hydr. Depth (ft)		0.53	0.47

CalifonFloodplainSt

* Conv. Total (cfs)	* 538.6	* Conv. (cfs)	* 397.4	* 141.2
* Length wtd. (ft)	* 110.00	* wetted Per. (ft)	* 26.95	* 26.80
* Min Ch El (ft)	* 495.01	* Shear (lb/sq ft)	* 0.88	* 0.78
* Alpha	* 1.50	* Stream Power (lb/ft s)	* 497.50	* 0.00
* Frctn Loss (ft)	* 1.77	* Cum Volume (acre-ft)	* 0.03	* 0.03
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	*	*

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 496.25	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.29	* wt. n-Val.	* 0.035	* 0.080	*
* W.S. Elev (ft)	* 495.96	* Reach Len. (ft)	* 110.00	* 110.00	* 110.00
* Crit W.S. (ft)	* 495.96	* Flow Area (sq ft)	* 16.88	* 15.14	*
* E.G. Slope (ft/ft)	* 0.026069	* Area (sq ft)	* 16.88	* 15.14	*
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 82.46	* 30.54	*
* Top width (ft)	* 55.42	* Top width (ft)	* 28.01	* 27.41	*
* Vel Total (ft/s)	* 3.53	* Avg. Vel. (ft/s)	* 4.89	* 2.02	*
* Max Chl Dpth (ft)	* 0.95	* Hydr. Depth (ft)	* 0.60	* 0.55	*
* Conv. Total (cfs)	* 699.9	* Conv. (cfs)	* 510.7	* 189.2	*
* Length wtd. (ft)	* 110.00	* wetted Per. (ft)	* 28.06	* 27.45	*
* Min Ch El (ft)	* 495.01	* Shear (lb/sq ft)	* 0.98	* 0.90	*
* Alpha	* 1.49	* Stream Power (lb/ft s)	* 497.50	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.02	* Cum Volume (acre-ft)	* 0.04	* 0.03	* 0.03
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	*	*	*

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 496.45	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.36	* wt. n-Val.	* 0.035	* 0.080	*
* W.S. Elev (ft)	* 496.09	* Reach Len. (ft)	* 110.00	* 110.00	* 110.00
* Crit W.S. (ft)	* 496.09	* Flow Area (sq ft)	* 20.42	* 18.57	*
* E.G. Slope (ft/ft)	* 0.027270	* Area (sq ft)	* 20.42	* 18.57	*
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 111.99	* 43.01	*
* Top width (ft)	* 57.70	* Top width (ft)	* 29.46	* 28.24	*
* Vel Total (ft/s)	* 3.98	* Avg. Vel. (ft/s)	* 5.48	* 2.32	*
* Max Chl Dpth (ft)	* 1.08	* Hydr. Depth (ft)	* 0.69	* 0.66	*
* Conv. Total (cfs)	* 938.6	* Conv. (cfs)	* 678.2	* 260.5	*
* Length wtd. (ft)	* 110.00	* wetted Per. (ft)	* 29.51	* 28.29	*
* Min Ch El (ft)	* 495.01	* Shear (lb/sq ft)	* 1.18	* 1.12	*
* Alpha	* 1.47	* Stream Power (lb/ft s)	* 497.50	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.38	* Cum Volume (acre-ft)	* 0.04	* 0.03	* 0.04
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	*	*	*

Warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 496.60	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.37	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 496.23	* Reach Len. (ft)	* 110.00	* 110.00	* 110.00
* Crit W.S. (ft)	* 496.19	* Flow Area (sq ft)	* 0.09	* 24.54	* 22.56
* E.G. Slope (ft/ft)	* 0.022120	* Area (sq ft)	* 0.09	* 24.54	* 22.56
* Q Total (cfs)	* 189.00	* Flow (cfs)	* 0.04	* 136.52	* 52.43
* Top width (ft)	* 60.32	* Top width (ft)	* 1.51	* 29.62	* 29.18
* Vel Total (ft/s)	* 4.00	* Avg. Vel. (ft/s)	* 0.44	* 5.56	* 2.32
* Max Chl Dpth (ft)	* 1.22	* Hydr. Depth (ft)	* 0.06	* 0.83	* 0.77
* Conv. Total (cfs)	* 1270.8	* Conv. (cfs)	* 0.3	* 918.0	* 352.6
* Length wtd. (ft)	* 110.00	* wetted Per. (ft)	* 1.52	* 29.67	* 29.24
* Min Ch El (ft)	* 495.01	* Shear (lb/sq ft)	* 0.09	* 1.14	* 1.07
* Alpha	* 1.49	* Stream Power (lb/ft s)	* 497.50	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.38	* Cum Volume (acre-ft)	* 0.05	* 0.04	* 0.05
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	*	*	*

Warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 496.76	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.38	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 496.38	* Reach Len. (ft)	* 110.00	* 110.00	* 110.00
* Crit W.S. (ft)	* 496.30	* Flow Area (sq ft)	* 0.48	* 29.15	* 27.18
* E.G. Slope (ft/ft)	* 0.018081	* Area (sq ft)	* 0.48	* 29.15	* 27.18
* Q Total (cfs)	* 228.00	* Flow (cfs)	* 0.32	* 164.44	* 63.24
* Top width (ft)	* 63.17	* Top width (ft)	* 3.39	* 29.62	* 30.16
* Vel Total (ft/s)	* 4.01	* Avg. Vel. (ft/s)	* 0.67	* 5.64	* 2.33
* Max Chl Dpth (ft)	* 1.37	* Hydr. Depth (ft)	* 0.14	* 0.98	* 0.90
* Conv. Total (cfs)	* 1695.6	* Conv. (cfs)	* 2.4	* 1222.9	* 470.3
* Length wtd. (ft)	* 110.00	* wetted Per. (ft)	* 3.40	* 29.67	* 30.23
* Min Ch El (ft)	* 495.01	* Shear (lb/sq ft)	* 0.16	* 1.11	* 1.01
* Alpha	* 1.52	* Stream Power (lb/ft s)	* 497.50	* 0.00	* 0.00
* Frctn Loss (ft)	* 2.37	* Cum Volume (acre-ft)	* 0.06	* 0.05	* 0.05
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	*	*	*

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Warning: The energy loss was greater than 1.0 ft (0.3 m) between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: Downstream_Reach RS: 508.2322

INPUT

Description:

Station	Elevation	Data	num=	64	Station	Elevation	Station	Elevation	Station	Elevation
0	497.7	4.67	497.7	9.33	497.42	14	496.42	18.67	494.85	
23.33	493.87	28	493.66	32.67	493.56	37.33	493.17	42	493.11	
46.66	492.96	51.33	492.99	55.56	493.27	59.78	494.01	64	494.96	
68.23	495.55	72.45	495.26	76.67	494.19	81.3	492.95	85.93	491.55	
89.81	491.38	89.81	489.43	90.56	489.43	91.31	489.43	91.31	491.38	
92.45	491.8	95.18	492.4	95.99	492.57	99.81	493.4	104.44	494.02	
109.07	494.41	113.69	494.32	118.32	494.31	123.05	494.6	127.78	494.77	
132.52	494.78	137.25	494.83	141.98	495.02	146.71	495.34	151.44	495.3	
156.17	495.61	160.74	496.11	165.31	496.44	169.88	496.92	174.45	497.61	
179.02	498.12	183.59	498.06	188.16	497.81	192.88	497.64	197.6	497.42	
202.32	497.52	207.05	497.49	211.77	497.24	216.49	496.91	221.21	496.75	
225.93	496.89	230.66	496.93	235.38	497.12	240.1	497.76	244.82	498.36	
249.55	498.63	254.27	498.85	258.99	499.01	263.71	499.17			

Manning's n	Values	num=	3	Station	n Val	Station	n Val	Station	n Val
0	.08	89.81	.035	91.31	.08				

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	89.81	91.31		13.07	14.27	15.75	.1		.3

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 493.66	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.15	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 493.51	* Reach Len. (ft)	* 13.07	* 14.27	* 15.75
* Crit W.S. (ft)		* Flow Area (sq ft)	* 23.26	* 6.12	* 8.92
* E.G. Slope (ft/ft)	* 0.010787	* Area (sq ft)	* 23.26	* 6.12	* 8.92
* Q Total (cfs)	* 88.00	* Flow (cfs)	* 42.25	* 29.34	* 16.41
* Top Width (ft)	* 45.09	* Top width (ft)	* 34.27	* 1.50	* 9.32
* Vel Total (ft/s)	* 2.30	* Avg. vel. (ft/s)	* 1.82	* 4.79	* 1.84
* Max Chl Dpth (ft)	* 4.08	* Hydr. Depth (ft)	* 0.68	* 4.08	* 0.96
* Conv. Total (cfs)	* 847.3	* Conv. (cfs)	* 406.8	* 282.5	* 158.0
* Length wtd. (ft)	* 14.00	* wetted Per. (ft)	* 34.60	* 5.40	* 9.58
* Min Ch El (ft)	* 489.43	* Shear (lb/sq ft)	* 0.45	* 0.76	* 0.63
* Alpha	* 1.87	* Stream Power (lb/ft s)	* 263.71	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.20	* Cum Volume (acre-ft)	* 0.10	* 0.26	* 0.03
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.39	* 0.10	* 0.10

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 493.82	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.19	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 493.63	* Reach Len. (ft)	* 13.07	* 14.27	* 15.75
* Crit W.S. (ft)		* Flow Area (sq ft)	* 27.74	* 6.30	* 10.12
* E.G. Slope (ft/ft)	* 0.013632	* Area (sq ft)	* 27.74	* 6.30	* 10.12
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 56.92	* 34.65	* 21.42
* Top Width (ft)	* 51.19	* Top width (ft)	* 39.44	* 1.50	* 10.24
* Vel Total (ft/s)	* 2.56	* Avg. vel. (ft/s)	* 2.05	* 5.50	* 2.12
* Max Chl Dpth (ft)	* 4.20	* Hydr. Depth (ft)	* 0.70	* 4.20	* 0.99
* Conv. Total (cfs)	* 967.8	* Conv. (cfs)	* 487.5	* 296.8	* 183.5
* Length wtd. (ft)	* 13.96	* wetted Per. (ft)	* 39.81	* 5.40	* 10.50
* Min Ch El (ft)	* 489.43	* Shear (lb/sq ft)	* 0.59	* 0.99	* 0.82
* Alpha	* 1.87	* Stream Power (lb/ft s)	* 263.71	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.24	* Cum Volume (acre-ft)	* 0.13	* 0.33	* 0.04
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.43	* 0.11	* 0.15

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 494.04	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.24	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 493.80	* Reach Len. (ft)	* 13.07	* 14.27	* 15.75
* Crit W.S. (ft)		* Flow Area (sq ft)	* 34.99	* 6.56	* 11.97
* E.G. Slope (ft/ft)	* 0.017521	* Area (sq ft)	* 34.99	* 6.56	* 11.97
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 83.29	* 41.97	* 29.75
* Top Width (ft)	* 58.49	* Top width (ft)	* 45.48	* 1.50	* 11.51
* Vel Total (ft/s)	* 2.90	* Avg. vel. (ft/s)	* 2.38	* 6.40	* 2.48
* Max Chl Dpth (ft)	* 4.37	* Hydr. Depth (ft)	* 0.77	* 4.37	* 1.04
* Conv. Total (cfs)	* 1171.0	* Conv. (cfs)	* 629.2	* 317.1	* 224.7
* Length wtd. (ft)	* 13.92	* wetted Per. (ft)	* 45.88	* 5.40	* 11.78
* Min Ch El (ft)	* 489.43	* Shear (lb/sq ft)	* 0.83	* 1.33	* 1.11
* Alpha	* 1.83	* Stream Power (lb/ft s)	* 263.71	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.30	* Cum Volume (acre-ft)	* 0.18	* 0.45	* 0.08
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.48	* 0.11	* 0.20

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 494.19	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.29	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 493.90	* Reach Len. (ft)	* 13.07	* 14.27	* 15.75
* Crit W.S. (ft)		* Flow Area (sq ft)	* 39.63	* 6.71	* 13.14
* E.G. Slope (ft/ft)	* 0.021255	* Area (sq ft)	* 39.63	* 6.71	* 13.14

```

* Q Total (cfs) * 191.00 * Flow (cfs) * 106.27 * 47.98 * 36.75 *
* Top width (ft) * 61.80 * Top width (ft) * 48.05 * 1.50 * 12.25 *
* Vel Total (ft/s) * 3.21 * Avg. vel. (ft/s) * 2.68 * 7.15 * 2.80 *
* Max Chl Dpth (ft) * 4.47 * Hydr. Depth (ft) * 0.82 * 4.47 * 1.07 *
* Conv. Total (cfs) * 1310.1 * Conv. (cfs) * 728.9 * 329.1 * 252.1 *
* Length wtd. (ft) * 13.86 * wetted Per. (ft) * 48.48 * 5.40 * 12.53 *
* Min Ch El (ft) * 489.43 * Shear (lb/sq ft) * 1.08 * 1.65 * 1.39 *
* Alpha * 1.78 * Stream Power (lb/ft s) * 263.71 * 0.00 * 0.00 *
* Frctn Loss (ft) * 0.33 * Cum Volume (acre-ft) * 0.23 * 0.54 * 0.11 *
* C & E Loss (ft) * 0.00 * Cum SA (acres) * 0.51 * 0.11 * 0.24 *

```

Warning: Divided flow computed for this cross-section.

```

CROSS SECTION OUTPUT Profile #100-year flow
*****
* E.G. Elev (ft) * 494.38 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.34 * wt. n-Val. * 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft) * 494.04 * Reach Len. (ft) * 13.07 * 14.27 * 15.75 *
* Crit w.s. (ft) * * Flow Area (sq ft) * 46.36 * 6.91 * 14.90 *
* E.G. Slope (ft/ft) * 0.025787 * Area (sq ft) * 46.36 * 6.91 * 14.90 *
* Q Total (cfs) * 246.00 * Flow (cfs) * 143.31 * 55.58 * 47.11 *
* Top width (ft) * 64.82 * Top width (ft) * 49.96 * 1.50 * 13.36 *
* Vel Total (ft/s) * 3.61 * Avg. vel. (ft/s) * 3.09 * 8.04 * 3.16 *
* Max Chl Dpth (ft) * 4.61 * Hydr. Depth (ft) * 0.93 * 4.61 * 1.12 *
* Conv. Total (cfs) * 1531.9 * Conv. (cfs) * 892.4 * 346.1 * 293.4 *
* Length wtd. (ft) * 13.86 * wetted Per. (ft) * 50.43 * 5.40 * 13.65 *
* Min Ch El (ft) * 489.43 * Shear (lb/sq ft) * 1.48 * 2.06 * 1.76 *
* Alpha * 1.70 * Stream Power (lb/ft s) * 263.71 * 0.00 * 0.00 *
* Frctn Loss (ft) * 0.39 * Cum Volume (acre-ft) * 0.28 * 0.67 * 0.15 *
* C & E Loss (ft) * 0.01 * Cum SA (acres) * 0.54 * 0.11 * 0.28 *

```

Warning: Divided flow computed for this cross-section.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: Downstream_Reach RS: 493.9474

INPUT

```

Description:
Station Elevation Data num= 76
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
0 495 4.91 495.18 9.82 495.21 14.72 495.43 19.63 495.25
24.54 494.93 29.45 495.29 34.36 495.25 39.26 495.41 44.17 495.25
49.08 494.86 53.99 494.78 58.9 494.97 63.8 494.84 68.71 494.44
73.62 493.82 78.53 493.34 83.29 493.16 88.04 493 92.8 492.72
97.56 492.61 102.32 492.73 107.08 492.8 111.84 492.85 116.6 492.88
121.36 492.76 126.12 493.06 130.87 494.01 135.63 494.53 140.36 493.4
145.08 492.21 148.95 491.86 148.95 489.56 149.8 489.56 150.65 489.56
150.65 491.86 154.52 492.24 155.01 492.31 159.24 492.85 163.96 493.09
168.68 493.27 173.51 493.43 178.35 493.47 183.18 493.45 188.01 493.44
192.84 493.46 197.67 493.57 202.51 493.73 207.34 493.9 212.17 494.08
216.97 494.27 221.77 494.51 226.57 494.86 231.38 495.29 236.18 495.59
240.98 495.88 245.78 495.88 250.58 495.32 255.38 495.08 260.18 495.45
265.01 495.48 269.83 495.81 274.65 495.8 279.47 495.95 284.3 496.13
289.12 496.1 293.94 496.44 298.76 496.99 303.59 497.3 308.41 497.15
313.12 497.33 317.84 498.03 322.56 498.57 327.27 498.87 331.99 498.93
336.71 498.95

```

```

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
*****
0 .08 148.95 .035 150.65 .08

```

```

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
148.95 150.65 16.96 16.28 16.13 .1 .3

```

```

CROSS SECTION OUTPUT Profile #5-year flow
*****
* E.G. Elev (ft) * 493.45 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.25 * wt. n-Val. * 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft) * 493.20 * Reach Len. (ft) * 16.96 * 16.28 * 16.13 *
* Crit w.s. (ft) * 493.20 * Flow Area (sq ft) * 22.59 * 6.19 * 8.82 *
* E.G. Slope (ft/ft) * 0.019814 * Area (sq ft) * 22.59 * 6.19 * 8.82 *
* Q Total (cfs) * 88.00 * Flow (cfs) * 36.11 * 36.60 * 15.30 *
* Top width (ft) * 70.48 * Top width (ft) * 52.50 * 1.70 * 16.28 *
* Vel Total (ft/s) * 2.34 * Avg. vel. (ft/s) * 1.60 * 5.91 * 1.73 *
* Max Chl Dpth (ft) * 3.64 * Hydr. Depth (ft) * 0.43 * 3.64 * 0.54 *
* Conv. Total (cfs) * 625.2 * Conv. (cfs) * 256.5 * 260.0 * 108.7 *
* Length wtd. (ft) * 16.59 * wetted Per. (ft) * 52.68 * 6.30 * 16.35 *
* Min Ch El (ft) * 489.56 * Shear (lb/sq ft) * 0.53 * 1.22 * 0.67 *
* Alpha * 2.94 * Stream Power (lb/ft s) * 336.71 * 0.00 * 0.00 *
* Frctn Loss (ft) * 0.37 * Cum Volume (acre-ft) * 0.09 * 0.26 * 0.03 *
* C & E Loss (ft) * 0.01 * Cum SA (acres) * 0.38 * 0.10 * 0.10 *

```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

```

CROSS SECTION OUTPUT Profile #10-year flow
*****
* E.G. Elev (ft) * 493.57 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.27 * wt. n-Val. * 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft) * 493.30 * Reach Len. (ft) * 16.96 * 16.28 * 16.13 *
* Crit w.s. (ft) * 493.30 * Flow Area (sq ft) * 28.09 * 6.37 * 10.61 *
* E.G. Slope (ft/ft) * 0.022698 * Area (sq ft) * 28.09 * 6.37 * 10.61 *

```

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* Q Total (cfs)	* 113.00	* Flow (cfs)	* 51.97	* 41.00	* 20.03
* Top width (ft)	* 76.86	* Top width (ft)	* 56.09	* 1.70	* 19.07
* Vel Total (ft/s)	* 2.51	* Avg. Vel. (ft/s)	* 1.85	* 6.44	* 1.89
* Max Chl Dpth (ft)	* 3.74	* Hydr. Depth (ft)	* 0.50	* 3.74	* 0.56
* Conv. Total (cfs)	* 750.0	* Conv. (cfs)	* 345.0	* 272.1	* 133.0
* Length wtd. (ft)	* 16.62	* Wetted Per. (ft)	* 56.29	* 6.30	* 19.14
* Min Ch El (ft)	* 489.56	* Shear (lb/sq ft)	* 0.71	* 1.43	* 0.79
* Alpha	* 2.74	* Stream Power (lb/ft s)	* 336.71	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.40	* Cum Volume (acre-ft)	* 0.12	* 0.33	* 0.04
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.41	* 0.11	* 0.15

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 493.73	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.30	* Wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 493.43	* Reach Len. (ft)	* 16.96	* 16.28	* 16.13
* Crit W.S. (ft)	* 493.43	* Flow Area (sq ft)	* 35.33	* 6.58	* 13.24
* E.G. slope (ft/ft)	* 0.027357	* Area (sq ft)	* 35.33	* 6.58	* 13.24
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 79.25	* 47.55	* 28.20
* Top width (ft)	* 83.63	* Top width (ft)	* 59.07	* 1.70	* 22.86
* Vel Total (ft/s)	* 2.81	* Avg. Vel. (ft/s)	* 2.24	* 7.23	* 2.13
* Max Chl Dpth (ft)	* 3.87	* Hydr. Depth (ft)	* 0.60	* 3.87	* 0.58
* Conv. Total (cfs)	* 937.1	* Conv. (cfs)	* 479.2	* 287.5	* 170.5
* Length wtd. (ft)	* 16.64	* Wetted Per. (ft)	* 59.31	* 6.30	* 22.93
* Min Ch El (ft)	* 489.56	* Shear (lb/sq ft)	* 1.02	* 1.78	* 0.99
* Alpha	* 2.46	* Stream Power (lb/ft s)	* 336.71	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.45	* Cum Volume (acre-ft)	* 0.17	* 0.45	* 0.08
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	* 0.46	* 0.11	* 0.19

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 493.86	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.28	* Wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 493.58	* Reach Len. (ft)	* 16.96	* 16.28	* 16.13
* Crit W.S. (ft)	* 493.58	* Flow Area (sq ft)	* 44.15	* 6.83	* 19.27
* E.G. slope (ft/ft)	* 0.026793	* Area (sq ft)	* 44.15	* 6.83	* 19.27
* Q Total (cfs)	* 191.00	* Flow (cfs)	* 108.75	* 50.05	* 32.20
* Top width (ft)	* 110.79	* Top width (ft)	* 61.90	* 1.70	* 47.19
* Vel Total (ft/s)	* 2.72	* Avg. Vel. (ft/s)	* 2.46	* 7.33	* 1.67
* Max Chl Dpth (ft)	* 4.02	* Hydr. Depth (ft)	* 0.71	* 4.02	* 0.41
* Conv. Total (cfs)	* 1166.9	* Conv. (cfs)	* 664.4	* 305.8	* 196.7
* Length wtd. (ft)	* 16.67	* Wetted Per. (ft)	* 62.18	* 6.30	* 47.26
* Min Ch El (ft)	* 489.56	* Shear (lb/sq ft)	* 1.19	* 1.81	* 0.68
* Alpha	* 2.44	* Stream Power (lb/ft s)	* 336.71	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.52	* Cum Volume (acre-ft)	* 0.21	* 0.54	* 0.10
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.50	* 0.11	* 0.23

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 493.98	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.30	* Wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 493.68	* Reach Len. (ft)	* 16.96	* 16.28	* 16.13
* Crit W.S. (ft)	* 493.68	* Flow Area (sq ft)	* 50.65	* 7.00	* 24.30
* E.G. slope (ft/ft)	* 0.030448	* Area (sq ft)	* 50.65	* 7.00	* 24.30
* Q Total (cfs)	* 246.00	* Flow (cfs)	* 141.90	* 55.66	* 48.45
* Top width (ft)	* 115.93	* Top width (ft)	* 63.91	* 1.70	* 50.32
* Vel Total (ft/s)	* 3.00	* Avg. Vel. (ft/s)	* 2.80	* 7.95	* 1.99
* Max Chl Dpth (ft)	* 4.12	* Hydr. Depth (ft)	* 0.79	* 4.12	* 0.48
* Conv. Total (cfs)	* 1409.8	* Conv. (cfs)	* 813.2	* 319.0	* 277.6
* Length wtd. (ft)	* 16.68	* Wetted Per. (ft)	* 64.21	* 6.30	* 50.39
* Min Ch El (ft)	* 489.56	* Shear (lb/sq ft)	* 1.50	* 2.11	* 0.92
* Alpha	* 2.18	* Stream Power (lb/ft s)	* 336.71	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.54	* Cum Volume (acre-ft)	* 0.27	* 0.66	* 0.14
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.52	* 0.11	* 0.27

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: Divided flow computed for this cross-section.
 warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

CalifonFloodplainSt

RIVER: Unnamed_Trib
 REACH: Downstream_Reach RS: 477.6732

INPUT

Description:

Station	Elevation	Data	num=	86	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	494.82	4.77	494.6	9.55	494.15	14.32	493.76	19.1	493.67			
23.87	493.77	28.65	493.9	33.42	493.96	38.2	493.91	42.97	493.9			
47.75	493.98	52.52	494.1	57.29	494.19	62.07	494.11	66.84	493.8			
71.62	493.75	76.39	493.68	81.17	493.26	85.94	493.21	90.72	493.05			
95.49	492.89	100.27	492.81	105.04	492.41	110.04	492.22	115.03	492.31			
120.03	492.2	125.02	491.96	130.02	491.67	135.02	491.53	140.01	491.68			
145.01	491.94	150	492.06	155	491.91	159.99	491.78	164.99	491.64			
169.97	491.72	174.94	491.9	179.92	491.88	182.78	491.72	184.89	491.61			
187.23	491.55	189.87	491.48	193.99	491.45	193.99	489.15	194.84	489.15			
195.69	489.15	195.69	491.45	199.82	491.55	204.79	491.88	209.77	492.18			
214.74	492.11	219.72	492.12	224.69	492.32	229.67	492.73	234.64	493.15			
239.62	493.32	244.59	493.43	249.57	493.58	254.54	493.73	259.51	493.91			
264.48	494.04	269.44	493.77	274.41	493.52	279.38	493.77	284.35	494.15			
289.32	494.31	294.29	494.34	299.26	494.53	304.23	494.93	308.96	495.26			
313.7	495.41	318.44	495.47	323.17	495.56	327.91	495.7	332.65	495.78			
337.38	495.98	342.12	496.44	346.86	496.75	351.59	496.87	356.33	497.01			
361.07	497.25	365.8	497.72	370.69	497.92	375.57	497.66	380.45	497.29			
385.33	497.23											

Manning's n	Values	num=	3
Sta	n Val	Sta	n Val
0	.08	193.99	.035
		195.69	.08

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	193.99	195.69		55.19	49.11	44.92		.1	.3

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 492.40	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.22	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 492.18	* Reach Len. (ft)	* 55.19	* 49.11	* 44.92
* Crit W.S. (ft)	* 492.18	* Flow Area (sq ft)	* 30.13	* 5.16	* 6.49
* E.G. Slope (ft/ft)	* 0.025769	* Area (sq ft)	* 30.13	* 5.16	* 6.49
* Q Total (cfs)	* 88.00	* Flow (cfs)	* 49.50	* 30.75	* 7.75
* Top width (ft)	* 100.91	* Top width (ft)	* 73.61	* 1.70	* 25.60
* Vel Total (ft/s)	* 2.11	* Avg. Vel. (ft/s)	* 1.64	* 5.96	* 1.19
* Max Chl Dpth (ft)	* 3.03	* Hydr. Depth (ft)	* 0.41	* 3.03	* 0.25
* Conv. Total (cfs)	* 548.2	* Conv. (cfs)	* 308.4	* 191.5	* 48.3
* Length Wtd. (ft)	* 51.96	* Wetted Per. (ft)	* 73.66	* 6.30	* 25.62
* Min Ch El (ft)	* 489.15	* Shear (lb/sq ft)	* 0.66	* 1.32	* 0.41
* Alpha	* 3.17	* Stream Power (lb/ft s)	* 385.33	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.29	* Cum Volume (acre-ft)	* 0.08	* 0.25	* 0.02
* C & E Loss (ft)	* 0.01	* Cum SA (acres)	* 0.36	* 0.10	* 0.09

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 492.48	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.20	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 492.27	* Reach Len. (ft)	* 55.19	* 49.11	* 44.92
* Crit W.S. (ft)	* 492.27	* Flow Area (sq ft)	* 37.06	* 5.31	* 8.91
* E.G. Slope (ft/ft)	* 0.026205	* Area (sq ft)	* 37.06	* 5.31	* 8.91
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 67.91	* 32.57	* 12.53
* Top width (ft)	* 111.26	* Top width (ft)	* 81.71	* 1.70	* 27.85
* Vel Total (ft/s)	* 2.20	* Avg. Vel. (ft/s)	* 1.83	* 6.13	* 1.41
* Max Chl Dpth (ft)	* 3.12	* Hydr. Depth (ft)	* 0.45	* 3.12	* 0.32
* Conv. Total (cfs)	* 698.0	* Conv. (cfs)	* 419.5	* 201.2	* 77.4
* Length Wtd. (ft)	* 52.18	* Wetted Per. (ft)	* 81.75	* 6.30	* 27.88
* Min Ch El (ft)	* 489.15	* Shear (lb/sq ft)	* 0.74	* 1.38	* 0.52
* Alpha	* 2.69	* Stream Power (lb/ft s)	* 385.33	* 0.00	* 0.00
* Frctn Loss (ft)	* 1.41	* Cum Volume (acre-ft)	* 0.10	* 0.33	* 0.04
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.39	* 0.11	* 0.14

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: Divided flow computed for this cross-section.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 492.59	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.19	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 492.41	* Reach Len. (ft)	* 55.19	* 49.11	* 44.92
* Crit W.S. (ft)	* 492.41	* Flow Area (sq ft)	* 48.79	* 5.54	* 12.86
* E.G. Slope (ft/ft)	* 0.026150	* Area (sq ft)	* 48.79	* 5.54	* 12.86
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 98.19	* 34.91	* 21.90
* Top width (ft)	* 120.71	* Top width (ft)	* 88.93	* 1.70	* 30.08
* Vel Total (ft/s)	* 2.31	* Avg. Vel. (ft/s)	* 2.01	* 6.30	* 1.70
* Max Chl Dpth (ft)	* 3.26	* Hydr. Depth (ft)	* 0.55	* 3.26	* 0.43
* Conv. Total (cfs)	* 958.5	* Conv. (cfs)	* 607.2	* 215.9	* 135.4
* Length Wtd. (ft)	* 52.55	* Wetted Per. (ft)	* 88.98	* 6.30	* 30.11
* Min Ch El (ft)	* 489.15	* Shear (lb/sq ft)	* 0.90	* 1.44	* 0.70

CalifonFloodplainSt

```
* Alpha * 2.24 * Stream Power (lb/ft s) * 385.33 * 0.00 * 0.00 *
* Frctn Loss (ft) * 1.19 * Cum Volume (acre-ft) * 0.16 * 0.45 * 0.07 *
* C & E Loss (ft) * 0.02 * Cum SA (acres) * 0.43 * 0.11 * 0.18 *
*****
```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

```
*****
* E.G. Elev (ft) * 492.68 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.26 * Wt. n-Val. * 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft) * 492.43 * Reach Len. (ft) * 55.19 * 49.11 * 44.92 *
* Crit W.S. (ft) * 492.43 * Flow Area (sq ft) * 50.27 * 5.57 * 13.36 *
* E.G. Slope (ft/ft) * 0.036592 * Area (sq ft) * 50.27 * 5.57 * 13.36 *
* Q Total (cfs) * 191.00 * Flow (cfs) * 121.87 * 41.65 * 27.48 *
* Top Width (ft) * 121.12 * Top Width (ft) * 89.14 * 1.70 * 30.28 *
* Vel Total (ft/s) * 2.76 * Avg. Vel. (ft/s) * 2.42 * 7.48 * 2.06 *
* Max Chl Dpth (ft) * 3.28 * Hydr. Depth (ft) * 0.56 * 3.28 * 0.44 *
* Conv. Total (cfs) * 998.5 * Conv. (cfs) * 637.1 * 217.7 * 143.7 *
* Length wtd. (ft) * 52.70 * Wetted Per. (ft) * 89.19 * 6.30 * 30.31 *
* Min Ch El (ft) * 489.15 * Shear (lb/sq ft) * 1.29 * 2.02 * 1.01 *
* Alpha * 2.17 * Stream Power (lb/ft s) * 385.33 * 0.00 * 0.00 *
* Frctn Loss (ft) * 1.18 * Cum Volume (acre-ft) * 0.19 * 0.54 * 0.10 *
* C & E Loss (ft) * 0.05 * Cum SA (acres) * 0.47 * 0.11 * 0.21 *
*****
```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

```
*****
* E.G. Elev (ft) * 492.79 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.23 * Wt. n-Val. * 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft) * 492.55 * Reach Len. (ft) * 55.19 * 49.11 * 44.92 *
* Crit W.S. (ft) * 492.55 * Flow Area (sq ft) * 61.84 * 5.79 * 17.36 *
* E.G. Slope (ft/ft) * 0.033867 * Area (sq ft) * 61.84 * 5.79 * 17.36 *
* Q Total (cfs) * 246.00 * Flow (cfs) * 163.72 * 42.73 * 39.55 *
* Top Width (ft) * 124.22 * Top Width (ft) * 90.67 * 1.70 * 31.85 *
* Vel Total (ft/s) * 2.89 * Avg. Vel. (ft/s) * 2.65 * 7.38 * 2.28 *
* Max Chl Dpth (ft) * 3.40 * Hydr. Depth (ft) * 0.68 * 3.40 * 0.54 *
* Conv. Total (cfs) * 1336.7 * Conv. (cfs) * 889.6 * 232.2 * 214.9 *
* Length wtd. (ft) * 52.82 * Wetted Per. (ft) * 90.73 * 6.30 * 31.88 *
* Min Ch El (ft) * 489.35 * Shear (lb/sq ft) * 1.44 * 1.94 * 1.15 *
* Alpha * 1.79 * Stream Power (lb/ft s) * 385.33 * 0.00 * 0.00 *
* Frctn Loss (ft) * 1.10 * Cum Volume (acre-ft) * 0.25 * 0.66 * 0.14 *
* C & E Loss (ft) * 0.04 * Cum SA (acres) * 0.49 * 0.11 * 0.26 *
*****
```

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: Downstream_Reach RS: 428.4629

INPUT

Description:
 Station Elevation Data num= 59

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	489.92	4.75	490.08	9.51	490.12	14.26	490.25	19.02	490.28
23.77	490.23	28.53	490.08	33.28	489.87	38.03	489.63	42.79	489.56
47.54	489.79	52.3	490.31	57.05	491.07	61.81	491.53	66.56	491.35
71.31	490.86	76.07	490.13	80.82	489.64	85.58	489.57	90.33	489.65
95.09	489.7	99.99	489.7	104.89	489.71	109.79	489.78	114.7	489.58
117.62	489.48	119.6	489.42	120.36	489.4	120.36	486.65	121.11	486.65
121.86	486.65	121.86	489.4	124.5	489.38	129.4	489.56	134.31	490.17
139.21	490.34	144.11	490.48	149.01	490.62	153.92	490.7	158.9	490.85
163.88	491.01	168.86	490.97	173.84	490.88	178.82	490.79	183.8	490.79
188.78	490.86	193.76	490.96	198.75	491.05	203.73	491.14	208.71	491.26
213.69	491.47	218.67	491.6	223.65	491.81	228.63	492.19	233.61	492.34
238.59	492.48	243.58	492.65	248.56	493.08	253.54	493.67		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	120.36	.035	121.86	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 120.36 121.86 49.88 38.43 29.75 .3 .5

CROSS SECTION OUTPUT Profile #5-year flow

```
*****
* E.G. Elev (ft) * 490.31 * Element * Left OB * Channel * Right OB *
*****
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		CalifonFloodplainSt	
* Vel Head (ft)	* 0.17	* wt. n-val.	* 0.080
* W.S. Elev (ft)	* 490.14	* Reach Len. (ft)	* 49.88
* Crit W.S. (ft)	*	* Flow Area (sq ft)	* 29.56
* E.G. Slope (ft/ft)	* 0.023848	* Area (sq ft)	* 29.56
* Q Total (cfs)	* 88.00	* Flow (cfs)	* 47.15
* Top width (ft)	* 92.39	* Top width (ft)	* 78.68
* Vel Total (ft/s)	* 2.12	* Avg. Vel. (ft/s)	* 1.59
* Max Chl Dpth (ft)	* 3.49	* Hydr. Depth (ft)	* 0.38
* Conv. Total (cfs)	* 569.8	* Conv. (cfs)	* 305.3
* Length Wtd. (ft)	* 43.28	* Wetted Per. (ft)	* 78.98
* Min Ch El (ft)	* 486.65	* Shear (lb/sq ft)	* 0.56
* Alpha	* 2.49	* Stream Power (lb/ft s)	* 253.54
* Frctn Loss (ft)	* 0.89	* Cum Volume (acre-ft)	* 0.04
* C & E Loss (ft)	* 0.02	* Cum SA (acres)	* 0.26

warning: Divided flow computed for this cross-section.
warning: The cross-section end points had to be extended vertically for the computed water surface.

CROSS SECTION OUTPUT Profile #10-year flow

		Element		Left OB	Channel	Right OB
* E.G. Elev (ft)	* 490.40	* Element	* Left OB	* Channel	* Right OB	*
* Vel Head (ft)	* 0.19	* wt. n-Val.	* 0.080	* 0.035	* 0.080	*
* W.S. Elev (ft)	* 490.21	* Reach Len. (ft)	* 49.88	* 38.43	* 29.75	*
* Crit W.S. (ft)	* 490.19	* Flow Area (sq ft)	* 35.46	* 5.34	* 7.53	*
* E.G. Slope (ft/ft)	* 0.027903	* Area (sq ft)	* 35.46	* 5.34	* 7.53	*
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 65.67	* 31.64	* 15.69	*
* Top width (ft)	* 99.90	* Top width (ft)	* 84.74	* 1.50	* 13.66	*
* Vel Total (ft/s)	* 2.34	* Avg. Vel. (ft/s)	* 1.85	* 5.92	* 2.08	*
* Max Chl Dpth (ft)	* 3.56	* Hydr. Depth (ft)	* 0.42	* 3.56	* 0.55	*
* Conv. Total (cfs)	* 676.5	* Conv. (cfs)	* 393.1	* 189.4	* 93.9	*
* Length Wtd. (ft)	* 43.95	* Wetted Per. (ft)	* 85.12	* 7.00	* 13.70	*
* Min Ch El (ft)	* 486.65	* Shear (lb/sq ft)	* 0.73	* 1.33	* 0.96	*
* Alpha	* 2.27	* Stream Power (lb/ft s)	* 253.54	* 0.00	* 0.00	*
* Frctn Loss (ft)	* 0.91	* Cum Volume (acre-ft)	* 0.06	* 0.32	* 0.03	*
* C & E Loss (ft)	* 0.00	* Cum SA (acres)	* 0.28	* 0.11	* 0.12	*

warning: Divided flow computed for this cross-section.
warning: The cross-section end points had to be extended vertically for the computed water surface.

CROSS SECTION OUTPUT Profile #25-year flow

		Element		Left OB	Channel	Right OB
* E.G. Elev (ft)	* 490.56	* Element	* Left OB	* Channel	* Right OB	*
* Vel Head (ft)	* 0.12	* wt. n-Val.	* 0.080	* 0.035	* 0.080	*
* W.S. Elev (ft)	* 490.44	* Reach Len. (ft)	* 49.88	* 38.43	* 29.75	*
* Crit W.S. (ft)	*	* Flow Area (sq ft)	* 56.83	* 5.68	* 11.33	*
* E.G. Slope (ft/ft)	* 0.019703	* Area (sq ft)	* 56.83	* 5.68	* 11.33	*
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 105.83	* 29.43	* 19.75	*
* Top width (ft)	* 121.54	* Top width (ft)	* 99.36	* 1.50	* 20.68	*
* Vel Total (ft/s)	* 2.10	* Avg. Vel. (ft/s)	* 1.86	* 5.18	* 1.74	*
* Max Chl Dpth (ft)	* 3.79	* Hydr. Depth (ft)	* 0.57	* 3.79	* 0.55	*
* Conv. Total (cfs)	* 1104.2	* Conv. (cfs)	* 753.9	* 209.6	* 140.7	*
* Length Wtd. (ft)	* 44.69	* Wetted Per. (ft)	* 100.00	* 7.00	* 20.72	*
* Min Ch El (ft)	* 486.65	* Shear (lb/sq ft)	* 0.70	* 1.00	* 0.67	*
* Alpha	* 1.78	* Stream Power (lb/ft s)	* 253.54	* 0.00	* 0.00	*
* Frctn Loss (ft)	* 0.89	* Cum Volume (acre-ft)	* 0.09	* 0.44	* 0.06	*
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	* 0.31	* 0.11	* 0.16	*

warning: Divided flow computed for this cross-section.
warning: The cross-section end points had to be extended vertically for the computed water surface.

CROSS SECTION OUTPUT Profile #50-year flow

		Element		Left OB	Channel	Right OB
* E.G. Elev (ft)	* 490.70	* Element	* Left OB	* Channel	* Right OB	*
* Vel Head (ft)	* 0.09	* wt. n-Val.	* 0.080	* 0.035	* 0.080	*
* W.S. Elev (ft)	* 490.61	* Reach Len. (ft)	* 49.88	* 38.43	* 29.75	*
* Crit W.S. (ft)	*	* Flow Area (sq ft)	* 74.07	* 5.94	* 15.39	*
* E.G. Slope (ft/ft)	* 0.015002	* Area (sq ft)	* 74.07	* 5.94	* 15.39	*
* Q Total (cfs)	* 191.00	* Flow (cfs)	* 139.11	* 27.65	* 24.24	*
* Top width (ft)	* 129.74	* Top width (ft)	* 101.55	* 1.50	* 26.69	*
* Vel Total (ft/s)	* 2.00	* Avg. Vel. (ft/s)	* 1.88	* 4.66	* 1.57	*
* Max Chl Dpth (ft)	* 3.96	* Hydr. Depth (ft)	* 0.73	* 3.96	* 0.58	*
* Conv. Total (cfs)	* 1559.4	* Conv. (cfs)	* 1135.8	* 225.7	* 197.9	*
* Length Wtd. (ft)	* 44.97	* Wetted Per. (ft)	* 102.39	* 7.00	* 26.74	*
* Min Ch El (ft)	* 486.65	* Shear (lb/sq ft)	* 0.68	* 0.79	* 0.54	*
* Alpha	* 1.50	* Stream Power (lb/ft s)	* 253.54	* 0.00	* 0.00	*
* Frctn Loss (ft)	* 0.90	* Cum Volume (acre-ft)	* 0.12	* 0.53	* 0.08	*
* C & E Loss (ft)	* 0.07	* Cum SA (acres)	* 0.34	* 0.11	* 0.18	*

warning: Divided flow computed for this cross-section.
warning: The cross-section end points had to be extended vertically for the computed water surface.

CROSS SECTION OUTPUT Profile #100-year flow

		Element		Left OB	Channel	Right OB
* E.G. Elev (ft)	* 490.86	* Element	* Left OB	* Channel	* Right OB	*
* Vel Head (ft)	* 0.09	* wt. n-Val.	* 0.080	* 0.035	* 0.080	*
* W.S. Elev (ft)	* 490.77	* Reach Len. (ft)	* 49.88	* 38.43	* 29.75	*
* Crit W.S. (ft)	*	* Flow Area (sq ft)	* 90.78	* 6.18	* 20.43	*
* E.G. Slope (ft/ft)	* 0.014148	* Area (sq ft)	* 90.78	* 6.18	* 20.43	*
* Q Total (cfs)	* 246.00	* Flow (cfs)	* 185.40	* 28.72	* 31.88	*
* Top width (ft)	* 139.50	* Top width (ft)	* 103.63	* 1.50	* 34.37	*
* Vel Total (ft/s)	* 2.10	* Avg. Vel. (ft/s)	* 2.04	* 4.65	* 1.56	*
* Max Chl Dpth (ft)	* 4.12	* Hydr. Depth (ft)	* 0.88	* 4.12	* 0.59	*
* Conv. Total (cfs)	* 2068.2	* Conv. (cfs)	* 1558.7	* 241.4	* 268.0	*
* Length Wtd. (ft)	* 45.16	* Wetted Per. (ft)	* 104.65	* 7.00	* 34.42	*
* Min Ch El (ft)	* 486.65	* Shear (lb/sq ft)	* 0.77	* 0.78	* 0.52	*
* Alpha	* 1.36	* Stream Power (lb/ft s)	* 253.54	* 0.00	* 0.00	*
* Frctn Loss (ft)	* 0.91	* Cum Volume (acre-ft)	* 0.15	* 0.65	* 0.12	*
* C & E Loss (ft)	* 0.07	* Cum SA (acres)	* 0.37	* 0.11	* 0.22	*

warning: Divided flow computed for this cross-section.
warning: The cross-section end points had to be extended vertically for the computed water surface.

CalifonFloodplainSt

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: Downstream_Reach RS: 389.8977

INPUT

Description:

Station	Elevation	Data	num=	56	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	488.54	4.72	488.54	9.44	488.55	14.16	488.64	18.88	489.01			
23.6	489.6	28.31	489.76	33.03	489.91	37.75	489.72	42.47	489.12			
47.19	488.96	51.91	488.62	56.63	488.6	61.35	488.53	66.07	488.78			
70.79	488.81	75.51	488.8	80.09	488.76	84.68	488.77	88.03	488.77			
88.23	485.1	89.18	485.1	90.13	485.1	90.33	488.77	93.26	488.78			
93.86	488.78	98.45	488.98	103.04	489.1	107.63	489.21	112.22	489.14			
117.04	489.21	121.86	489.39	126.68	489.52	131.5	489.62	136.32	489.93			
141.14	490.29	145.96	490.31	150.78	490.17	155.6	490.22	160.42	490.3			
165.24	490.28	170.06	490.27	174.88	490.37	179.7	490.44	184.52	490.46			
189.34	490.63	194.16	490.84	198.98	491.05	203.8	491.2	208.62	491.46			
213.44	491.83	218.26	492.09	223.08	492.31	227.9	492.49	232.72	492.55			
237.54	492.7											

Manning's n	Values	num=	3	Sta	n Val	Sta	n Val
0	.08	88.03	.035	90.33	.08		

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	88.03	90.33		200.68	205.91	209.36	.3		.5

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 489.40	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.25	* Wt. n-val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 489.15	* Reach Len. (ft)	* 200.68	* 205.91	* 209.36
* Crit W.S. (ft)	* 489.15	* Flow Area (sq ft)	* 27.85	* 8.58	* 3.12
* E.G. Slope (ft/ft)	* 0.017875	* Area (sq ft)	* 27.85	* 8.58	* 3.12
* Q Total (cfs)	* 88.00	* Flow (cfs)	* 38.95	* 46.32	* 2.73
* Top width (ft)	* 84.16	* Top width (ft)	* 65.79	* 2.30	* 16.07
* Vel Total (ft/s)	* 2.23	* Avg. Vel. (ft/s)	* 1.40	* 5.40	* 0.88
* Max Chl Dpth (ft)	* 4.05	* Hydr. Depth (ft)	* 0.42	* 3.73	* 0.19
* Conv. Total (cfs)	* 658.2	* Conv. (cfs)	* 291.3	* 346.4	* 20.4
* Length wtd. (ft)	* 205.91	* Wetted Per. (ft)	* 66.45	* 9.25	* 16.07
* Min Ch El (ft)	* 485.10	* Shear (lb/sq ft)	* 0.47	* 1.04	* 0.22
* Alpha	* 3.28	* Stream Power (lb/ft s)	* 237.54	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.01	* 0.24	* 0.01
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.18	* 0.10	* 0.06

Warning: During subcritical analysis, the water surface upstream of culvert went to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 489.50	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.20	* Wt. n-val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 489.30	* Reach Len. (ft)	* 200.68	* 205.91	* 209.36
* Crit W.S. (ft)	* 489.30	* Flow Area (sq ft)	* 38.13	* 8.93	* 7.01
* E.G. Slope (ft/ft)	* 0.015829	* Area (sq ft)	* 38.13	* 8.93	* 7.01
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 60.06	* 46.61	* 6.33
* Top width (ft)	* 99.72	* Top width (ft)	* 68.22	* 2.30	* 29.20
* Vel Total (ft/s)	* 2.09	* Avg. Vel. (ft/s)	* 1.58	* 5.22	* 0.90
* Max Chl Dpth (ft)	* 4.20	* Hydr. Depth (ft)	* 0.56	* 3.88	* 0.24
* Conv. Total (cfs)	* 898.2	* Conv. (cfs)	* 477.4	* 370.5	* 50.3
* Length wtd. (ft)	* 205.91	* Wetted Per. (ft)	* 69.05	* 9.25	* 29.21
* Min Ch El (ft)	* 485.10	* Shear (lb/sq ft)	* 0.55	* 0.95	* 0.24
* Alpha	* 2.88	* Stream Power (lb/ft s)	* 237.54	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.02	* 0.32	* 0.02
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.19	* 0.10	* 0.10

Warning: During subcritical analysis, the water surface upstream of culvert went to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 489.64	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.23	* Wt. n-val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 489.40	* Reach Len. (ft)	* 200.68	* 205.91	* 209.36
* Crit W.S. (ft)	* 489.40	* Flow Area (sq ft)	* 45.11	* 9.17	* 10.10
* E.G. Slope (ft/ft)	* 0.020055	* Area (sq ft)	* 45.11	* 9.17	* 10.10
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 87.93	* 54.77	* 12.30
* Top width (ft)	* 104.18	* Top width (ft)	* 69.83	* 2.30	* 32.06
* Vel Total (ft/s)	* 2.41	* Avg. Vel. (ft/s)	* 1.95	* 5.98	* 1.22
* Max Chl Dpth (ft)	* 4.30	* Hydr. Depth (ft)	* 0.65	* 3.99	* 0.32
* Conv. Total (cfs)	* 1094.5	* Conv. (cfs)	* 620.9	* 386.7	* 86.9
* Length wtd. (ft)	* 205.91	* Wetted Per. (ft)	* 70.77	* 9.25	* 32.07
* Min Ch El (ft)	* 485.10	* Shear (lb/sq ft)	* 0.80	* 1.24	* 0.39
* Alpha	* 2.57	* Stream Power (lb/ft s)	* 237.54	* 0.00	* 0.00
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.03	* 0.43	* 0.05
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.22	* 0.11	* 0.14

Warning: During subcritical analysis, the water surface upstream of culvert went to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 489.74	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.31	* Wt. n-val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 489.43	* Reach Len. (ft)	* 200.68	* 205.91	* 209.36
* Crit W.S. (ft)	* 489.43	* Flow Area (sq ft)	* 46.91	* 9.22	* 10.94
* E.G. Slope (ft/ft)	* 0.027674	* Area (sq ft)	* 46.91	* 9.22	* 10.94
* Q Total (cfs)	* 191.00	* Flow (cfs)	* 109.79	* 65.03	* 16.18

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* Top Width (ft) * 105.55 * Top Width (ft) * 70.24 * 2.30 * 33.01 *
* Vel Total (ft/s) * 2.85 * Avg. vel. (ft/s) * 2.34 * 7.05 * 1.48 *
* Max Chl Dpth (ft) * 4.33 * Hydr. Depth (ft) * 0.67 * 4.01 * 0.33 *
* Conv. Total (cfs) * 1148.2 * Conv. (cfs) * 660.0 * 390.9 * 97.3 *
* Length Wtd. (ft) * 205.91 * Wetted Per. (ft) * 71.21 * 9.25 * 33.02 *
* Min Ch El (ft) * 485.10 * Shear (lb/sq ft) * 1.14 * 1.72 * 0.57 *
* Alpha * 2.50 * Stream Power (lb/ft s) * 237.54 * 0.00 * 0.00 *
* Frctn Loss (ft) * * Cum Volume (acre-ft) * 0.05 * 0.52 * 0.07 *
* C & E Loss (ft) * * Cum SA (acres) * 0.25 * 0.11 * 0.16 *
*****

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Warning: During subcritical analysis, the water surface upstream of culvert went to critical depth.

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CROSS SECTION OUTPUT Profile #100-year flow
*****
* E.G. Elev (ft) * 489.88 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.34 * wt. n-val. * 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft) * 489.54 * Reach Len. (ft) * 200.68 * 205.91 * 209.36 *
* Crit W.S. (ft) * 489.54 * Flow Area (sq ft) * 54.52 * 9.47 * 14.68 *
* E.G. Slope (ft/ft) * 0.031384 * Area (sq ft) * 54.52 * 9.47 * 14.68 *
* Q Total (cfs) * 246.00 * Flow (cfs) * 147.63 * 72.36 * 26.01 *
* Top Width (ft) * 111.40 * Top Width (ft) * 71.93 * 2.30 * 37.16 *
* Vel Total (ft/s) * 3.13 * Avg. vel. (ft/s) * 2.71 * 7.64 * 1.77 *
* Max Chl Dpth (ft) * 4.44 * Hydr. Depth (ft) * 0.76 * 4.12 * 0.40 *
* Conv. Total (cfs) * 1388.6 * Conv. (cfs) * 833.4 * 408.4 * 146.8 *
* Length Wtd. (ft) * 205.91 * Wetted Per. (ft) * 73.03 * 9.25 * 37.18 *
* Min Ch El (ft) * 485.10 * Shear (lb/sq ft) * 1.46 * 2.01 * 0.77 *
* Alpha * 2.24 * Stream Power (lb/ft s) * 237.54 * 0.00 * 0.00 *
* Frctn Loss (ft) * * Cum Volume (acre-ft) * 0.07 * 0.65 * 0.10 *
* C & E Loss (ft) * * Cum SA (acres) * 0.27 * 0.11 * 0.20 *
*****

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Warning: During subcritical analysis, the water surface upstream of culvert went to critical depth.

CULVERT

RIVER: Unnamed_Trib
REACH: Downstream_Reach RS: 287.04

INPUT

Description: Firehouse/Main Street
Distance from Upstream XS = 11
Deck/Roadway width = 175
Weir Coefficient = 2.6
Upstream Deck/Roadway Coordinates
num= 59

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	488		4.72	488	9.44	488				14.16	488		18.88	488
14.16	488		18.88	488	23.6	488				28.31	488		33.03	488
28.31	488		33.03	488	37.75	488				42.47	488		47.19	488
42.47	488		47.19	488	51.91	488				56.63	488		61.35	488
56.63	488		61.35	488	66.07	488				70.79	488		75.51	488
70.79	488		75.51	488	75.51	493				80.09	493		84.68	493
80.09	493		84.68	493	88.03	498				88.03	498		88.23	498
88.03	498		88.23	498	89.18	498				90.13	498		90.33	498
90.13	498		90.33	498	93.26	498				93.86	498		98.45	498
93.86	498		98.45	498	103.04	498				107.63	498		112.22	498
107.63	498		112.22	498	117.04	498				117.04	489		121.86	489
117.04	489		121.86	489	126.68	489				131.5	489		136.32	489
131.5	489		136.32	489	141.14	489				145.96	489		150.78	489
145.96	489		150.78	489	155.6	489				160.42	489		165.24	489
160.42	489		165.24	489	170.06	489				174.88	489		179.7	489
174.88	489		179.7	489	184.52	489				189.34	489		194.16	489
189.34	489		194.16	489	198.98	489				203.8	489		208.62	489
203.8	489		208.62	489	213.44	489				218.26	489		223.08	489
218.26	489		223.08	489	227.9	489				232.72	489		237.54	489
232.72	489		237.54	489										

Upstream Bridge Cross Section Data

Station	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	488.54	4.72	488.54	9.44	488.55	14.16	488.64	18.88	489.01
23.6	489.6	28.31	489.76	33.03	489.91	37.75	489.72	42.47	489.12
47.19	488.96	51.91	488.62	56.63	488.6	61.35	488.53	66.07	488.78
70.79	488.81	75.51	488.8	80.09	488.76	84.68	488.77	88.03	488.77
88.23	485.1	89.18	485.1	90.13	485.1	90.33	488.77	93.26	488.78
93.86	488.78	98.45	488.98	103.04	489.1	107.63	489.21	112.22	489.14
117.04	489.21	121.86	489.39	126.68	489.52	131.5	489.62	136.32	489.93
141.14	490.29	145.96	490.31	150.78	490.17	155.6	490.22	160.42	490.3
165.24	490.28	170.06	490.27	174.88	490.37	179.7	490.44	184.52	490.46
189.34	490.63	194.16	490.84	198.98	491.05	203.8	491.2	208.62	491.46
213.44	491.83	218.26	492.09	223.08	492.31	227.9	492.49	232.72	492.55
237.54	492.7								

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	88.03	.035	90.33	.08

Bank Sta: Left Right Coeff Contr. Expan.
88.03 90.33 .3 .5

Downstream Deck/Roadway Coordinates

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	486		4.72	486	9.51	486			
14.26	486		19.01	486	23.77	486			
28.52	486		33.27	486	38.02	486			
42.78	486		47.53	486	52.28	486			
57.04	486		61.79	486	66.54	486			
71.29	486		76.05	486	80.8	486			
85.55	486		90.19	486	94.83	486			

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99.46	486	104.1	486	108.73	486
113.37	486	118.01	486	122.64	486
123	486	127.28	486	129	486
131.35	486	131.91	486	136.55	486
141.18	486	145.82	486	150.5	486
155.18	486	159.86	486	164.54	486
169.22	486	173.9	486	178.58	486
183.26	486	187.94	486	192.63	486
197.31	486	201.99	486	206.67	486
211.35	486	216.03	486		

Downstream Bridge Cross Section Data

Station Elevation Data		num= 50		Sta		Elev		Sta		Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	485.99	4.75	486.11	9.51	485.9	14.26	485.92	19.01	486.1		
23.77	486.12	28.52	485.93	33.27	486.01	38.02	486.14	42.78	486.02		
47.53	486.02	52.28	486.11	57.04	486.21	61.79	486.14	66.54	486.23		
71.29	486.18	76.05	486.2	80.8	486.42	85.55	486.34	90.19	486.34		
94.83	486.28	99.46	486.2	104.1	486.09	108.73	485.99	113.37	485.18		
118.01	484.19	122.64	483.41	127.28	482	131.91	480.76	136.55	482		
131.35	484.12	136.01	484.32	140.66	485.81	145.31	486.27	149.96	486.16		
150.5	486.01	155.18	485.86	159.86	486	164.54	486.15	169.22	486.23		
173.9	486.3	178.58	486.47	183.26	486.77	187.94	487.01	192.63	487.43		
197.31	487.98	201.99	488.33	206.67	488.48	211.35	488.54	216.03	488.6		

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	122.64	.035	131.35	.08

Bank Sta: Left Right Coeff Contr. Expan.

Sta L	Sta R	Elev	Permanent	F
0	119	485	F	
132	216.03	485	F	

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span
 Culvert #1 Box 2.2 3.2
 FHWA Chart # 8 - flared wingwalls
 FHWA Scale # 1 - wingwall flared 30 to 75 deg.
 Solution Criteria = Highest U.S. EG
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef Exit Loss Coef
 11 175 .017 .017 0 .4 1
 Upstream Elevation = 485.1
 Centerline Station = 89.18
 Downstream Elevation = 480.76
 Centerline Station = 127.28

CULVERT OUTPUT Profile #5-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 62.56	* Culv Full Len (ft)	* 149.94
* # Barrels	* 1	* Culv Vel US (ft/s)	* 8.89
* Q Barrel (cfs)	* 62.56	* Culv Vel DS (ft/s)	* 8.89
* E.G. US. (ft)	* 489.02	* Culv Inv El Up (ft)	* 485.10
* W.S. US. (ft)	* 489.15	* Culv Inv El Dn (ft)	* 480.76
* E.G. DS (ft)	* 484.31	* Culv Frctn Ls (ft)	* 3.36
* W.S. DS (ft)	* 483.94	* Culv Exit Loss (ft)	* 0.86
* Delta EG (ft)	* 4.71	* Culv Entr Loss (ft)	* 0.49
* Delta WS (ft)	* 5.21	* Q Weir (cfs)	* 25.44
* E.G. IC (ft)	* 489.09	* Weir Sta Lft (ft)	* 0.00
* E.G. OC (ft)	* 489.02	* Weir Sta Rgt (ft)	* 75.51
* Culvert Control	* outlet	* Weir Submerg	* 0.00
* Culv WS Inlet (ft)	* 487.30	* Weir Max Depth (ft)	* 0.48
* Culv WS Outlet (ft)	* 482.96	* Weir Avg Depth (ft)	* 0.33
* Culv Nml Depth (ft)	* 1.64	* Weir Flow Area (sq ft)	* 16.13
* Culv Crd Depth (ft)	* 2.20	* Min El Weir Flow (ft)	* 488.54

Warning: during subcritical analysis, the water surface upstream of culvert went to critical depth.
 Note: culvert critical depth exceeds the height of the culvert.
 Note: During supercritical analysis, the culvert direct step method went to normal depth. The program then assumed normal depth at the outlet.
 Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
 Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.

CULVERT OUTPUT Profile #10-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 62.59	* Culv Full Len (ft)	* 175.00
* # Barrels	* 1	* Culv Vel US (ft/s)	* 8.89
* Q Barrel (cfs)	* 62.59	* Culv Vel DS (ft/s)	* 8.89
* E.G. US. (ft)	* 489.20	* Culv Inv El Up (ft)	* 485.10
* W.S. US. (ft)	* 489.30	* Culv Inv El Dn (ft)	* 480.76
* E.G. DS (ft)	* 484.71	* Culv Frctn Ls (ft)	* 3.20
* W.S. DS (ft)	* 484.27	* Culv Exit Loss (ft)	* 0.79
* Delta EG (ft)	* 4.49	* Culv Entr Loss (ft)	* 0.49
* Delta WS (ft)	* 5.03	* Q Weir (cfs)	* 50.41
* E.G. IC (ft)	* 489.25	* Weir Sta Lft (ft)	* 0.00
* E.G. OC (ft)	* 489.20	* Weir Sta Rgt (ft)	* 117.09
* Culvert Control	* outlet	* Weir Submerg	* 0.00
* Culv WS Inlet (ft)	* 487.30	* Weir Max Depth (ft)	* 0.68
* Culv WS Outlet (ft)	* 482.96	* Weir Avg Depth (ft)	* 0.49
* Culv Nml Depth (ft)	* 1.64	* Weir Flow Area (sq ft)	* 26.46
* Culv Crd Depth (ft)	* 2.20	* Min El Weir Flow (ft)	* 488.54

CalifonFloodplainSt

 warning: During subcritical analysis, the water surface upstream of culvert went to critical depth.
 Note: Culvert critical depth exceeds the height of the culvert.
 Note: During supercritical analysis, the culvert direct step method went to normal depth. The program then assumed normal depth at the outlet.
 Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
 Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.

CULVERT OUTPUT Profile #25-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 61.63	* Culv Full Len (ft)	* 175.00
* # Barrels	* 1	* Culv Vel US (ft/s)	* 8.75
* Q Barrel (cfs)	* 61.63	* Culv Vel DS (ft/s)	* 8.75
* E.G. US. (ft)	* 489.47	* Culv Inv El Up (ft)	* 485.10
* W.S. US. (ft)	* 489.40	* Culv Inv El Dn (ft)	* 480.76
* E.G. DS (ft)	* 485.25	* Culv Frctn Ls (ft)	* 3.11
* W.S. DS (ft)	* 484.70	* Culv Exit Loss (ft)	* 0.63
* Delta EG (ft)	* 4.21	* Culv Entr Loss (ft)	* 0.48
* Delta WS (ft)	* 4.71	* Q weir (cfs)	* 93.72
* E.G. IC (ft)	* 489.48	* Weir Sta Lft (ft)	* 0.00
* E.G. OC (ft)	* 489.47	* Weir Sta Rgt (ft)	* 124.77
* Culvert Control	* Outlet	* Weir Submerg	* 0.00
* Culv WS Inlet (ft)	* 487.30	* Weir Max Depth (ft)	* 0.94
* Culv WS Outlet (ft)	* 482.96	* Weir Avg Depth (ft)	* 0.63
* Culv Nml Depth (ft)	* 1.62	* Weir Flow Area (sq ft)	* 41.83
* Culv Crt Depth (ft)	* 2.20	* Min El Weir Flow (ft)	* 488.54

warning: During subcritical analysis, the water surface upstream of culvert went to critical depth.
 Note: Culvert critical depth exceeds the height of the culvert.
 Note: During supercritical analysis, the culvert direct step method went to normal depth. The program then assumed normal depth at the outlet.
 Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
 Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.

CULVERT OUTPUT Profile #50-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 60.78	* Culv Full Len (ft)	* 175.00
* # Barrels	* 1	* Culv Vel US (ft/s)	* 8.63
* Q Barrel (cfs)	* 60.78	* Culv Vel DS (ft/s)	* 8.63
* E.G. US. (ft)	* 489.65	* Culv Inv El Up (ft)	* 485.10
* W.S. US. (ft)	* 489.43	* Culv Inv El Dn (ft)	* 480.76
* E.G. DS (ft)	* 485.65	* Culv Frctn Ls (ft)	* 3.02
* W.S. DS (ft)	* 485.01	* Culv Exit Loss (ft)	* 0.52
* Delta EG (ft)	* 4.00	* Culv Entr Loss (ft)	* 0.46
* Delta WS (ft)	* 4.42	* Q weir (cfs)	* 130.22
* E.G. IC (ft)	* 489.60	* Weir Sta Lft (ft)	* 0.00
* E.G. OC (ft)	* 489.65	* Weir Sta Rgt (ft)	* 131.79
* Culvert Control	* Outlet	* Weir Submerg	* 0.00
* Culv WS Inlet (ft)	* 487.30	* Weir Max Depth (ft)	* 1.11
* Culv WS Outlet (ft)	* 482.96	* Weir Avg Depth (ft)	* 0.70
* Culv Nml Depth (ft)	* 1.60	* Weir Flow Area (sq ft)	* 53.92
* Culv Crt Depth (ft)	* 2.20	* Min El Weir Flow (ft)	* 488.54

warning: During subcritical analysis, the water surface upstream of culvert went to critical depth.
 Note: Culvert critical depth exceeds the height of the culvert.
 Note: During supercritical analysis, the culvert direct step method went to normal depth. The program then assumed normal depth at the outlet.
 Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
 Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.

CULVERT OUTPUT Profile #100-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 59.24	* Culv Full Len (ft)	* 175.00
* # Barrels	* 1	* Culv Vel US (ft/s)	* 8.41
* Q Barrel (cfs)	* 59.24	* Culv Vel DS (ft/s)	* 8.41
* E.G. US. (ft)	* 489.85	* Culv Inv El Up (ft)	* 485.10
* W.S. US. (ft)	* 489.54	* Culv Inv El Dn (ft)	* 480.76
* E.G. DS (ft)	* 486.19	* Culv Frctn Ls (ft)	* 2.87
* W.S. DS (ft)	* 485.44	* Culv Exit Loss (ft)	* 0.35
* Delta EG (ft)	* 3.66	* Culv Entr Loss (ft)	* 0.44
* Delta WS (ft)	* 4.10	* Q weir (cfs)	* 186.76
* E.G. IC (ft)	* 489.85	* Weir Sta Lft (ft)	* 0.00
* E.G. OC (ft)	* 489.85	* Weir Sta Rgt (ft)	* 135.11
* Culvert Control	* Outlet	* Weir Submerg	* 0.00
* Culv WS Inlet (ft)	* 487.30	* Weir Max Depth (ft)	* 1.32
* Culv WS Outlet (ft)	* 482.96	* Weir Avg Depth (ft)	* 0.79
* Culv Nml Depth (ft)	* 1.62	* Weir Flow Area (sq ft)	* 71.63
* Culv Crt Depth (ft)	* 2.20	* Min El Weir Flow (ft)	* 488.54

warning: During subcritical analysis, the water surface upstream of culvert went to critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: Downstream_Reach RS: 184.1871

INPUT

Description:
 Station Elevation Data num= 50

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	485.99	4.75	486.11	9.51	485.9	14.26	485.92	19.01	486.1
23.77	486.12	28.52	485.93	33.27	486.01	38.02	486.14	42.78	486.02
47.53	486.02	52.28	486.11	57.04	486.21	61.79	486.14	66.54	486.23
71.29	486.18	76.05	486.2	80.8	486.42	85.55	486.34	90.19	486.34
94.83	486.28	99.46	486.2	104.1	486.09	108.73	485.99	113.37	485.18
118.01	484.19	122.64	483.41	123	482	127.28	480.76	129	482
131.35	484.12	131.91	484.32	136.55	485.81	141.18	486.27	145.82	486.16

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150.5	486.01	155.18	485.86	159.86	486	164.54	486.15	169.22	486.23
173.9	486.3	178.58	486.47	183.26	486.77	187.94	487.01	192.63	487.43
197.31	487.98	201.99	488.33	206.67	488.48	211.35	488.54	216.03	488.6

Manning's n values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .08 122.64 .035 131.35 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 122.64 131.35 18.27 19.71 19.65 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 119 485 F
 132 216.03 485 F

CROSS SECTION OUTPUT Profile #5-year flow

E.G. Elev (ft)	484.31	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.37	Wt. n-val.	0.080	0.035	0.080
W.S. Elev (ft)	483.94	Reach Len. (ft)	18.27	19.71	19.65
Crit W.S. (ft)	483.25	Flow Area (sq ft)	0.82	17.86	
E.G. slope (ft/ft)	0.006910	Area (sq ft)	0.82	17.86	
Q Total (cfs)	88.00	Flow (cfs)	0.52	87.48	
Top Width (ft)	11.63	Top width (ft)	3.12	8.51	
Vel Total (ft/s)	4.71	Avg. Vel. (ft/s)	0.63	4.90	
Max Chl Dpth (ft)	3.18	Hydr. depth (ft)	0.26	2.10	
Conv. Total (cfs)	1058.6	Conv. (cfs)	6.2	1052.4	
Length wtd. (ft)	19.70	Wetted Per. (ft)	3.17	10.92	
Min Ch El (ft)	480.76	Shear (lb/sq ft)	0.11	0.71	
Alpha	1.08	Stream Power (lb/ft s)	216.03	0.00	0.00
Frctn Loss (ft)	0.11	Cum Volume (acre-ft)	0.01	0.13	0.01
C & E Loss (ft)	0.05	Cum SA (acres)	0.02	0.07	0.02

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #10-year flow

E.G. Elev (ft)	484.71	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.43	Wt. n-val.	0.080	0.035	0.080
W.S. Elev (ft)	484.27	Reach Len. (ft)	18.27	19.71	19.65
Crit W.S. (ft)	483.56	Flow Area (sq ft)	2.03	20.78	0.03
E.G. slope (ft/ft)	0.006923	Area (sq ft)	2.21	20.78	0.03
Q Total (cfs)	113.00	Flow (cfs)	2.11	110.89	0.01
Top Width (ft)	14.17	Top width (ft)	5.02	8.71	0.43
Vel Total (ft/s)	4.95	Avg. Vel. (ft/s)	1.04	5.34	0.27
Max Chl Dpth (ft)	3.51	Hydr. depth (ft)	0.56	2.39	0.08
Conv. Total (cfs)	1358.1	Conv. (cfs)	25.3	1332.7	0.1
Length wtd. (ft)	19.68	Wetted Per. (ft)	3.69	11.20	0.46
Min Ch El (ft)	480.76	Shear (lb/sq ft)	0.24	0.80	0.03
Alpha	1.14	Stream Power (lb/ft s)	216.03	0.00	0.00
Frctn Loss (ft)	0.11	Cum Volume (acre-ft)	0.02	0.16	0.02
C & E Loss (ft)	0.06	Cum SA (acres)	0.03	0.08	0.03

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #25-year flow

E.G. Elev (ft)	485.25	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.56	Wt. n-val.	0.080	0.035	0.080
W.S. Elev (ft)	484.70	Reach Len. (ft)	18.27	19.71	19.65
Crit W.S. (ft)	484.09	Flow Area (sq ft)	3.56	24.46	0.30
E.G. slope (ft/ft)	0.007287	Area (sq ft)	4.75	24.46	0.49
Q Total (cfs)	155.00	Flow (cfs)	5.52	149.21	0.27
Top Width (ft)	17.44	Top width (ft)	7.00	8.71	1.73
Vel Total (ft/s)	5.47	Avg. Vel. (ft/s)	1.55	6.10	0.91
Max Chl Dpth (ft)	3.94	Hydr. depth (ft)	0.98	2.81	0.46
Conv. Total (cfs)	1815.7	Conv. (cfs)	64.7	1747.9	3.2
Length wtd. (ft)	19.66	Wetted Per. (ft)	3.69	11.20	0.69
Min Ch El (ft)	480.76	Shear (lb/sq ft)	0.44	0.99	0.20
Alpha	1.20	Stream Power (lb/ft s)	216.03	0.00	0.00
Frctn Loss (ft)	0.11	Cum Volume (acre-ft)	0.03	0.21	0.05
C & E Loss (ft)	0.08	Cum SA (acres)	0.04	0.08	0.06

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #50-year flow

E.G. Elev (ft)	485.65	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.64	Wt. n-val.	0.080	0.035	0.080
W.S. Elev (ft)	485.01	Reach Len. (ft)	18.27	19.71	19.65
Crit W.S. (ft)	484.42	Flow Area (sq ft)	7.20	27.21	1.19
E.G. slope (ft/ft)	0.007409	Area (sq ft)	7.20	27.21	1.19
Q Total (cfs)	191.00	Flow (cfs)	10.19	179.75	1.06
Top Width (ft)	19.91	Top width (ft)	8.48	8.71	2.72
Vel Total (ft/s)	5.37	Avg. Vel. (ft/s)	1.42	6.61	0.89
Max Chl Dpth (ft)	4.25	Hydr. depth (ft)	0.85	3.12	0.44
Conv. Total (cfs)	2219.0	Conv. (cfs)	118.4	2088.3	12.3
Length wtd. (ft)	19.64	Wetted Per. (ft)	8.64	11.20	2.86
Min Ch El (ft)	480.76	Shear (lb/sq ft)	0.39	1.12	0.19
Alpha	1.43	Stream Power (lb/ft s)	216.03	0.00	0.00
Frctn Loss (ft)	0.11	Cum Volume (acre-ft)	0.05	0.25	0.07
C & E Loss (ft)	0.09	Cum SA (acres)	0.07	0.08	0.08

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #100-year flow

E.G. Elev (ft)	486.19	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.75	Wt. n-val.	0.080	0.035	0.080
W.S. Elev (ft)	485.44	Reach Len. (ft)	18.27	19.71	19.65
Crit W.S. (ft)	484.84	Flow Area (sq ft)	11.30	30.95	2.64


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* E.G. Slope (ft/ft) *0.007517 * Area (sq ft) CalifonFloodplainSt * 11.30 * 30.95 * 2.64 *
* Q Total (cfs) * 246.00 * Flow (cfs) * 18.57 * 224.34 * 3.09 *
* Top width (ft) * 23.53 * Top width (ft) * 10.76 * 8.71 * 4.05 *
* Vel Total (ft/s) * 5.48 * Avg. Vel. (ft/s) * 1.64 * 7.25 * 1.17 *
* Max Chl Dpth (ft) * 4.68 * Hydr. Depth (ft) * 1.05 * 3.55 * 0.65 *
* Conv. Total (cfs) * 2837.3 * Conv. (cfs) * 214.2 * 2587.4 * 35.6 *
* Length wtd. (ft) * 19.62 * Wetted Per. (ft) * 10.96 * 11.20 * 4.26 *
* Min Ch El (ft) * 480.76 * Shear (lb/sq ft) * 0.48 * 1.30 * 0.29 *
* Alpha * 1.60 * Stream Power (lb/ft s) * 216.03 * 0.00 * 0.00 *
* Frctn Loss (ft) * 0.11 * Cum Volume (acre-ft) * 0.07 * 0.29 * 0.10 *
* C & E Loss (ft) * 0.11 * Cum SA (acres) * 0.08 * 0.08 * 0.10 *
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Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: Downstream_Reach RS: 164.443

INPUT

Description:

Station	Elevation	Data	num=	44	Sta	Elev	Sta	Elev	Sta	Elev
0	485.59	5	485.69	9.99	485.87	14.99	485.86	19.99	485.84	
24.98	485.92	29.98	486.07	34.98	486.1	39.97	486.11	44.97	486.04	
49.97	486.07	54.96	486.17	59.96	486.13	64.96	486.15	69.95	485.98	
74.95	485.74	79.89	485.65	84.82	485.49	89.76	485.33	94.7	485.24	
99.63	484.63	104.57	482.9	106.49	482.51	107.75	481	109.51	480.6	
111.88	482.23	114.45	482.61	119.38	484.56	124.32	484.87	129.26	485.38	
134.19	485.63	139.13	485.5	144.07	485.42	149	485.59	153.85	485.74	
158.69	485.89	163.53	486.05	168.38	486.2	173.22	486.47	178.06	486.97	
182.91	487.63	187.75	488.05	192.59	488.14	197.43	488.11			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	104.57	.035	114.45	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

104.57	114.45	27.9	29.72	31.67	.1	.3
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CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 484.15	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.28	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* w.s. Elev (ft)	* 483.87	* Reach Len. (ft)	* 27.90	* 29.72	* 31.67
* Crit w.s. (ft)	*	* Flow Area (sq ft)	* 1.35	* 19.86	* 2.01
* E.G. Slope (ft/ft)	*0.004755	* Area (sq ft)	* 1.35	* 19.86	* 2.01
* Q Total (cfs)	* 88.00	* Flow (cfs)	* 1.03	* 85.17	* 1.80
* Top width (ft)	* 15.84	* Top width (ft)	* 2.77	* 9.88	* 3.19
* Vel Total (ft/s)	* 3.79	* Avg. Vel. (ft/s)	* 0.76	* 4.29	* 0.90
* Max Chl Dpth (ft)	* 3.27	* Hydr. Depth (ft)	* 0.49	* 2.01	* 0.63
* Conv. Total (cfs)	* 1276.2	* Conv. (cfs)	* 14.9	* 1235.1	* 26.2
* Length wtd. (ft)	* 29.73	* Wetted Per. (ft)	* 2.94	* 11.21	* 3.43
* Min Ch El (ft)	* 480.60	* Shear (lb/sq ft)	* 0.14	* 0.53	* 0.17
* Alpha	* 1.24	* Stream Power (lb/ft s)	* 197.43	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.12	* Cum Volume (acre-ft)	* 0.01	* 0.12	* 0.01
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	* 0.02	* 0.07	* 0.02

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 484.54	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.31	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* w.s. Elev (ft)	* 484.23	* Reach Len. (ft)	* 27.90	* 29.72	* 31.67
* Crit w.s. (ft)	*	* Flow Area (sq ft)	* 2.52	* 23.39	* 3.31
* E.G. Slope (ft/ft)	*0.004382	* Area (sq ft)	* 2.52	* 23.39	* 3.31
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 2.27	* 107.36	* 3.37
* Top width (ft)	* 17.76	* Top width (ft)	* 3.79	* 9.88	* 4.09
* Vel Total (ft/s)	* 3.87	* Avg. Vel. (ft/s)	* 0.90	* 4.59	* 1.02
* Max Chl Dpth (ft)	* 3.63	* Hydr. Depth (ft)	* 0.66	* 2.37	* 0.81
* Conv. Total (cfs)	* 1707.1	* Conv. (cfs)	* 34.3	* 1622.0	* 50.9
* Length wtd. (ft)	* 29.73	* Wetted Per. (ft)	* 4.02	* 11.21	* 4.40
* Min Ch El (ft)	* 480.60	* Shear (lb/sq ft)	* 0.17	* 0.57	* 0.21
* Alpha	* 1.34	* Stream Power (lb/ft s)	* 197.43	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.11	* Cum Volume (acre-ft)	* 0.02	* 0.15	* 0.02
* C & E Loss (ft)	* 0.05	* Cum SA (acres)	* 0.02	* 0.07	* 0.03

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 485.06	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.39	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* w.s. Elev (ft)	* 484.67	* Reach Len. (ft)	* 27.90	* 29.72	* 31.67
* Crit w.s. (ft)	*	* Flow Area (sq ft)	* 4.46	* 27.72	* 5.42
* E.G. Slope (ft/ft)	*0.004507	* Area (sq ft)	* 4.46	* 27.72	* 5.42
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 4.81	* 144.88	* 5.70
* Top width (ft)	* 21.74	* Top width (ft)	* 5.23	* 9.88	* 6.62
* Vel Total (ft/s)	* 4.12	* Avg. Vel. (ft/s)	* 1.08	* 5.21	* 1.05
* Max Chl Dpth (ft)	* 4.07	* Hydr. Depth (ft)	* 0.85	* 2.81	* 0.82
* Conv. Total (cfs)	* 2308.9	* Conv. (cfs)	* 71.7	* 2152.2	* 84.9
* Length wtd. (ft)	* 29.75	* Wetted Per. (ft)	* 5.53	* 11.21	* 7.00
* Min Ch El (ft)	* 480.60	* Shear (lb/sq ft)	* 0.23	* 0.70	* 0.22
* Alpha	* 1.49	* Stream Power (lb/ft s)	* 197.43	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.10	* Cum Volume (acre-ft)	* 0.03	* 0.20	* 0.05
* C & E Loss (ft)	* 0.07	* Cum SA (acres)	* 0.04	* 0.08	* 0.06

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 485.45	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.46	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* w.s. Elev (ft)	* 484.99	* Reach Len. (ft)	* 27.90	* 29.72	* 31.67

CalifonFloodplainst			
* Crit W.S. (ft)	* 0.004617	* Flow Area (sq ft)	* 6.56 * 30.90 * 8.34 *
* E.G. Slope (ft/ft)	* 191.00	* Area (sq ft)	* 6.56 * 30.90 * 8.34 *
* Q Total (cfs)	* 28.73	* Flow (cfs)	* 7.17 * 175.29 * 8.54 *
* Top Width (ft)	* 4.17	* Top Width (ft)	* 7.84 * 9.88 * 11.02 *
* Vel Total (ft/s)	* 4.39	* Avg. Vel. (ft/s)	* 1.09 * 5.67 * 1.02 *
* Max Chl Dpth (ft)	* 2810.9	* Hydr. Depth (ft)	* 0.84 * 3.13 * 0.76 *
* Conv. Total (cfs)	* 29.77	* Conv. (cfs)	* 105.5 * 2579.7 * 125.7 *
* Length Wtd. (ft)	* 480.60	* Wetted Per. (ft)	* 8.15 * 11.21 * 11.40 *
* Min Ch El (ft)	* 1.70	* Shear (lb/sq ft)	* 0.23 * 0.79 * 0.21 *
* Alpha	* 0.09	* Stream Power (lb/ft s)	* 197.43 * 0.00 * 0.00 *
* Frctn Loss (ft)	* 0.09	* Cum Volume (acre-ft)	* 0.04 * 0.23 * 0.07 *
* C & E Loss (ft)	* 0.09	* Cum SA (acres)	* 0.06 * 0.08 * 0.07 *

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 485.97	* Element	* Left OB * Channel * Right OB *
* Vel Head (ft)	* 0.53	* Wt. n-Val.	* 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft)	* 485.43	* Reach Len. (ft)	* 27.90 * 29.72 * 31.67 *
* Crit W.S. (ft)	* 484.49	* Flow Area (sq ft)	* 11.62 * 35.31 * 14.24 *
* E.G. Slope (ft/ft)	* 0.004613	* Area (sq ft)	* 11.62 * 35.31 * 14.24 *
* Q Total (cfs)	* 246.00	* Flow (cfs)	* 10.80 * 218.80 * 16.40 *
* Top Width (ft)	* 45.10	* Top Width (ft)	* 18.03 * 9.88 * 17.19 *
* Vel Total (ft/s)	* 4.02	* Avg. Vel. (ft/s)	* 0.93 * 6.20 * 1.15 *
* Max Chl Dpth (ft)	* 4.83	* Hydr. Depth (ft)	* 0.64 * 3.57 * 0.83 *
* Conv. Total (cfs)	* 3622.0	* Conv. (cfs)	* 158.9 * 3221.5 * 241.5 *
* Length Wtd. (ft)	* 29.83	* Wetted Per. (ft)	* 18.37 * 11.21 * 17.60 *
* Min Ch El (ft)	* 480.60	* Shear (lb/sq ft)	* 0.18 * 0.91 * 0.23 *
* Alpha	* 2.12	* Stream Power (lb/ft s)	* 197.43 * 0.00 * 0.00 *
* Frctn Loss (ft)	* 0.08	* Cum Volume (acre-ft)	* 0.06 * 0.28 * 0.10 *
* C & E Loss (ft)	* 0.12	* Cum SA (acres)	* 0.07 * 0.08 * 0.10 *

Warning: Divided flow computed for this cross-section.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: Downstream_Reach RS: 135.2617

INPUT

Description:

Station Elevation Data num= 25							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
39.32	485.48	44.24	485.4	49.15	484.93	54.07	483.72
58.98	481.58	63.81	480.4	63.9	481.35	68.81	483.22
78.65	484.4	83.56	484.29	88.48	484.44	93.39	484.73
103.22	485.55	108.14	486.16	113.05	486.36	117.97	486.48
127.8	486.45	132.71	486.44	137.63	486.43	142.54	486.48

Manning's n Values num= 3

Sta	n Val	Sta	n Val
39.32	.08	49.15	.035
		73.73	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	49.15	73.73		17.12	135.26	15.26	.1

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 483.99	* Element	* Left OB * Channel * Right OB *
* Vel Head (ft)	* 0.15	* Wt. n-Val.	* 17.12 * 0.035 * 15.26 *
* W.S. Elev (ft)	* 483.84	* Reach Len. (ft)	* 17.12 * 135.26 * 15.26 *
* Crit W.S. (ft)	* 483.84	* Flow Area (sq ft)	* 28.48 * 28.48 * 28.48 *
* E.G. Slope (ft/ft)	* 0.003294	* Area (sq ft)	* 28.48 * 28.48 * 28.48 *
* Q Total (cfs)	* 88.00	* Flow (cfs)	* 88.00 * 88.00 * 88.00 *
* Top Width (ft)	* 18.06	* Top Width (ft)	* 18.06 * 18.06 * 18.06 *
* Vel Total (ft/s)	* 3.09	* Avg. Vel. (ft/s)	* 3.09 * 3.09 * 3.09 *
* Max Chl Dpth (ft)	* 3.44	* Hydr. Depth (ft)	* 1.58 * 1.58 * 1.58 *
* Conv. Total (cfs)	* 1533.3	* Conv. (cfs)	* 1533.3 * 1533.3 * 1533.3 *
* Length Wtd. (ft)	* 134.72	* Wetted Per. (ft)	* 19.94 * 19.94 * 19.94 *
* Min Ch El (ft)	* 480.40	* Shear (lb/sq ft)	* 0.29 * 0.29 * 0.29 *
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 147.46 * 0.00 * 0.00 *
* Frctn Loss (ft)	* 0.95	* Cum Volume (acre-ft)	* 0.01 * 0.11 * 0.01 *
* C & E Loss (ft)	* 0.08	* Cum SA (acres)	* 0.02 * 0.06 * 0.02 *

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m), between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 484.38	* Element	* Left OB * Channel * Right OB *
* Vel Head (ft)	* 0.15	* Wt. n-Val.	* 17.12 * 0.035 * 15.26 *
* W.S. Elev (ft)	* 484.23	* Reach Len. (ft)	* 17.12 * 135.26 * 15.26 *
* Crit W.S. (ft)	* 484.23	* Flow Area (sq ft)	* 36.14 * 36.14 * 36.14 *
* E.G. Slope (ft/ft)	* 0.003033	* Area (sq ft)	* 36.14 * 36.14 * 36.14 *
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 113.00 * 113.00 * 113.00 *
* Top Width (ft)	* 21.39	* Top Width (ft)	* 21.39 * 21.39 * 21.39 *
* Vel Total (ft/s)	* 3.13	* Avg. Vel. (ft/s)	* 3.13 * 3.13 * 3.13 *
* Max Chl Dpth (ft)	* 3.83	* Hydr. Depth (ft)	* 1.69 * 1.69 * 1.69 *
* Conv. Total (cfs)	* 2051.9	* Conv. (cfs)	* 2051.9 * 2051.9 * 2051.9 *
* Length Wtd. (ft)	* 133.78	* Wetted Per. (ft)	* 23.36 * 23.36 * 23.36 *
* Min Ch El (ft)	* 480.40	* Shear (lb/sq ft)	* 0.29 * 0.29 * 0.29 *
* Alpha	* 1.00	* Stream Power (lb/ft s)	* 147.46 * 0.00 * 0.00 *
* Frctn Loss (ft)	* 0.86	* Cum Volume (acre-ft)	* 0.01 * 0.13 * 0.02 *

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* C & E Loss (ft) * 0.08 * Cum SA (acres) * 0.02 * 0.06 * 0.03 *

warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
 This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #25-year flow

```
*****
* E.G. Elev (ft)      * 484.89 * Element          * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.16  * Wt. n-val.      *          * 0.035  * 0.080  *
* W.S. Elev (ft)     * 484.73 * Reach Len. (ft) * 17.12  * 135.26 * 15.26  *
* Crit W.S. (ft)     *          * Flow Area (sq ft) *          * 47.56  * 6.34   *
* E.G. Slope (ft/ft) * 0.002518 * Area (sq ft)    *          * 47.56  * 6.34   *
* Q Total (cfs)      * 155.00 * Flow (cfs)      *          * 152.23 * 2.77   *
* Top Width (ft)     * 43.52  * Top Width (ft)  *          * 23.79  * 19.74  *
* Vel Total (ft/s)   * 2.88  * Avg. Vel. (ft/s) *          * 3.20   * 0.44   *
* Max Chl Dpth (ft) * 4.33  * Hydr. Depth (ft) *          * 2.00   * 0.32   *
* Conv. Total (cfs)  * 3088.8 * Conv. (cfs)     *          * 3033.6 * 55.2   *
* Length Wtd. (ft)  * 126.90 * Wetted Per. (ft) *          * 25.83  * 19.75  *
* Min Ch El (ft)    * 480.40 * Shear (lb/sq ft) *          * 0.29   * 0.05   *
* Alpha             * 1.22  * Stream Power (lb/ft s) * 147.46 * 0.00  * 0.00  *
* Frctn Loss (ft)   * 0.51  * Cum Volume (acre-ft) * 0.03  * 0.17  * 0.05  *
* C & E Loss (ft)   * 0.04  * Cum SA (acres)  * 0.04  * 0.07  * 0.05  *
*****
```

warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
 This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #50-year flow

```
*****
* E.G. Elev (ft)      * 485.27 * Element          * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.15  * Wt. n-val.      *          * 0.035  * 0.080  *
* W.S. Elev (ft)     * 485.11 * Reach Len. (ft) * 17.12  * 135.26 * 15.26  *
* Crit W.S. (ft)     *          * Flow Area (sq ft) *          * 56.78  * 14.93  *
* E.G. Slope (ft/ft) * 0.002080 * Area (sq ft)    *          * 56.78  * 14.93  *
* Q Total (cfs)      * 191.00 * Flow (cfs)      *          * 182.08 * 8.89   *
* Top Width (ft)     * 51.78  * Top Width (ft)  *          * 24.58  * 25.29  *
* Vel Total (ft/s)   * 2.66  * Avg. Vel. (ft/s) *          * 3.21   * 0.60   *
* Max Chl Dpth (ft) * 4.71  * Hydr. Depth (ft) *          * 2.31   * 0.59   *
* Conv. Total (cfs)  * 4188.3 * Conv. (cfs)     *          * 3992.7 * 195.0  *
* Length Wtd. (ft)  * 123.34 * Wetted Per. (ft) *          * 26.64  * 25.31  *
* Min Ch El (ft)    * 480.40 * Shear (lb/sq ft) *          * 0.28   * 0.08   *
* Alpha             * 1.39  * Stream Power (lb/ft s) * 147.46 * 0.00  * 0.00  *
* Frctn Loss (ft)   * 0.44  * Cum Volume (acre-ft) * 0.04  * 0.20  * 0.06  *
* C & E Loss (ft)   * 0.05  * Cum SA (acres)  * 0.06  * 0.07  * 0.06  *
*****
```

warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
 This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #100-year flow

```
*****
* E.G. Elev (ft)      * 485.77 * Element          * Left OB * Channel * Right OB *
* Vel Head (ft)      * 0.15  * Wt. n-val.      *          * 0.035  * 0.080  *
* W.S. Elev (ft)     * 485.63 * Reach Len. (ft) * 17.12  * 135.26 * 15.26  *
* Crit W.S. (ft)     *          * Flow Area (sq ft) *          * 69.38  * 29.15  *
* E.G. Slope (ft/ft) * 0.001609 * Area (sq ft)    *          * 69.38  * 29.15  *
* Q Total (cfs)      * 246.00 * Flow (cfs)      *          * 223.67 * 21.23  *
* Top Width (ft)     * 64.51  * Top Width (ft)  *          * 9.83   * 30.10  *
* Vel Total (ft/s)   * 2.42  * Avg. Vel. (ft/s) *          * 3.22   * 0.73   *
* Max Chl Dpth (ft) * 5.23  * Hydr. Depth (ft) *          * 2.82   * 0.97   *
* Conv. Total (cfs)  * 6132.6 * Conv. (cfs)     *          * 5575.8 * 529.3  *
* Length Wtd. (ft)  * 120.40 * Wetted Per. (ft) *          * 10.00  * 30.16  *
* Min Ch El (ft)    * 480.40 * Shear (lb/sq ft) *          * 0.26   * 0.10   *
* Alpha             * 1.62  * Stream Power (lb/ft s) * 147.46 * 0.00  * 0.00  *
* Frctn Loss (ft)   * 0.40  * Cum Volume (acre-ft) * 0.06  * 0.24  * 0.08  *
* C & E Loss (ft)   * 0.08  * Cum SA (acres)  * 0.06  * 0.07  * 0.08  *
*****
```

warning: The cross-section end points had to be extended vertically for the computed water surface.
 warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
 This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: Downstream_Reach RS: 134.7241

INPUT

Description:

Station	Elevation	Data	num=	46	Sta	Elev	Sta	Elev	Sta	Elev
0	485.53	4.84	485.63	9.68	485.67	14.52	485.68	19.36	485.77	
24.2	485.86	29.03	485.93	33.87	485.94	38.71	485.82	43.55	485.83	
48.39	485.84	53.23	485.91	58.07	486.16	62.91	486.06	67.75	485.87	
72.59	485.64	77.42	485.62	82.26	485.44	87.1	485.31	91.94	485.36	
96.78	485.47	101.17	485.45	106.11	485.04	111.05	483.84	115.49	481.98	
116	481.77	118	480	120.94	478.6	121.34	481.41	125.88	483.04	
130.83	484.28	135.77	484.41	140.71	484.28	145.66	484.4	150.6	484.69	
155.55	485.02	160.49	485.52	165.43	486.14	170.38	486.35	175.32	486.47	
180.26	486.48	185.21	486.45	190.15	486.43	195.09	486.43	200.04	486.48	
204.98	486.61									

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	115.49	.035	121.34	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 115.49 121.34 8.26 17.88 26.53 .1 .3

CROSS SECTION OUTPUT Profile #5-year flow

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	*	482.96	*	Element	*	Left OB	*	Channel	*	Right OB	*
* E.G. Elev (ft)	*	482.96	*	Element	*	Left OB	*	Channel	*	Right OB	*
* Vel Head (ft)	*	0.90	*	Wt. n-Val.	*	0.080	*	0.035	*	0.080	*
* W.S. Elev (ft)	*	482.06	*	Reach Len. (ft)	*	8.26	*	17.88	*	26.53	*
* Crit W.S. (ft)	*	482.06	*	Flow Area (sq ft)	*	0.01	*	11.40	*	0.59	*
* E.G. Slope (ft/ft)	*	0.024804	*	Area (sq ft)	*	0.01	*	11.40	*	0.59	*
* Q Total (cfs)	*	88.00	*	Flow (cfs)	*	0.00	*	87.21	*	0.79	*
* Top width (ft)	*	7.87	*	Top width (ft)	*	0.20	*	5.85	*	1.82	*
* Vel Total (ft/s)	*	7.33	*	Avg. vel. (ft/s)	*	0.33	*	7.65	*	1.33	*
* Max Chl Dpth (ft)	*	3.46	*	Hydr. Depth (ft)	*	0.04	*	1.95	*	0.33	*
* Conv. Total (cfs)	*	558.8	*	Conv. (cfs)	*	0.0	*	553.7	*	5.0	*
* Length wtd. (ft)	*	17.81	*	wetted Per. (ft)	*	0.22	*	9.32	*	1.93	*
* Min Ch El (ft)	*	478.60	*	Shear (lb/sq ft)	*	0.06	*	1.88	*	0.48	*
* Alpha	*	1.08	*	Stream Power (lb/ft s)	*	204.98	*	0.00	*	0.00	*
* Frctn Loss (ft)	*	0.07	*	Cum Volume (acre-ft)	*	0.01	*	0.05	*	0.01	*
* C & E Loss (ft)	*	0.24	*	Cum SA (acres)	*	0.02	*	0.02	*	0.02	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 warning: during the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

	*	483.44	*	Element	*	Left OB	*	Channel	*	Right OB	*
* E.G. Elev (ft)	*	483.44	*	Element	*	Left OB	*	Channel	*	Right OB	*
* Vel Head (ft)	*	0.99	*	Wt. n-Val.	*	0.080	*	0.035	*	0.080	*
* W.S. Elev (ft)	*	482.45	*	Reach Len. (ft)	*	8.26	*	17.88	*	26.53	*
* Crit W.S. (ft)	*	482.45	*	Flow Area (sq ft)	*	0.26	*	13.64	*	1.50	*
* E.G. Slope (ft/ft)	*	0.021770	*	Area (sq ft)	*	0.26	*	13.64	*	1.50	*
* Q Total (cfs)	*	113.00	*	Flow (cfs)	*	0.26	*	110.20	*	2.54	*
* Top width (ft)	*	9.85	*	Top width (ft)	*	1.11	*	5.85	*	2.89	*
* Vel Total (ft/s)	*	7.34	*	Avg. vel. (ft/s)	*	0.98	*	8.08	*	1.70	*
* Max Chl Dpth (ft)	*	3.85	*	Hydr. Depth (ft)	*	0.23	*	2.33	*	0.52	*
* Conv. Total (cfs)	*	765.9	*	Conv. (cfs)	*	1.7	*	746.9	*	17.2	*
* Length wtd. (ft)	*	17.85	*	wetted Per. (ft)	*	1.21	*	9.32	*	3.07	*
* Min Ch El (ft)	*	478.60	*	Shear (lb/sq ft)	*	0.29	*	1.99	*	0.66	*
* Alpha	*	1.18	*	Stream Power (lb/ft s)	*	204.98	*	0.00	*	0.00	*
* Frctn Loss (ft)	*	0.04	*	Cum Volume (acre-ft)	*	0.01	*	0.05	*	0.02	*
* C & E Loss (ft)	*	0.27	*	Cum SA (acres)	*	0.02	*	0.02	*	0.03	*

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 warning: during the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

	*	484.34	*	Element	*	Left OB	*	Channel	*	Right OB	*
* E.G. Elev (ft)	*	484.34	*	Element	*	Left OB	*	Channel	*	Right OB	*
* Vel Head (ft)	*	0.55	*	Wt. n-Val.	*	0.080	*	0.035	*	0.080	*
* W.S. Elev (ft)	*	483.79	*	Reach Len. (ft)	*	8.26	*	17.88	*	26.53	*
* Crit W.S. (ft)	*	483.79	*	Flow Area (sq ft)	*	3.92	*	21.51	*	8.24	*
* E.G. Slope (ft/ft)	*	0.007280	*	Area (sq ft)	*	3.92	*	21.51	*	8.24	*
* Q Total (cfs)	*	155.00	*	Flow (cfs)	*	5.50	*	136.09	*	13.41	*
* Top width (ft)	*	17.71	*	Top width (ft)	*	4.32	*	5.85	*	7.54	*
* Vel Total (ft/s)	*	4.60	*	Avg. vel. (ft/s)	*	1.41	*	6.33	*	1.63	*
* Max Chl Dpth (ft)	*	5.19	*	Hydr. Depth (ft)	*	0.91	*	3.68	*	1.09	*
* Conv. Total (cfs)	*	1816.7	*	Conv. (cfs)	*	64.5	*	1595.0	*	157.1	*
* Length wtd. (ft)	*	18.01	*	wetted Per. (ft)	*	4.69	*	9.32	*	7.92	*
* Min Ch El (ft)	*	478.60	*	Shear (lb/sq ft)	*	0.38	*	1.05	*	0.47	*
* Alpha	*	1.67	*	Stream Power (lb/ft s)	*	204.98	*	0.00	*	0.00	*
* Frctn Loss (ft)	*	0.02	*	Cum Volume (acre-ft)	*	0.03	*	0.07	*	0.04	*
* C & E Loss (ft)	*	0.15	*	Cum SA (acres)	*	0.04	*	0.02	*	0.04	*

warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #50-year flow

	*	484.78	*	Element	*	Left OB	*	Channel	*	Right OB	*
* E.G. Elev (ft)	*	484.78	*	Element	*	Left OB	*	Channel	*	Right OB	*
* Vel Head (ft)	*	0.62	*	Wt. n-Val.	*	0.080	*	0.035	*	0.080	*
* W.S. Elev (ft)	*	484.15	*	Reach Len. (ft)	*	8.26	*	17.88	*	26.53	*
* Crit W.S. (ft)	*	483.41	*	Flow Area (sq ft)	*	5.72	*	23.63	*	11.23	*
* E.G. Slope (ft/ft)	*	0.007529	*	Area (sq ft)	*	5.72	*	23.63	*	11.23	*
* Q Total (cfs)	*	191.00	*	Flow (cfs)	*	8.80	*	161.84	*	20.36	*
* Top width (ft)	*	20.56	*	Top width (ft)	*	5.73	*	5.85	*	8.98	*
* Vel Total (ft/s)	*	4.71	*	Avg. vel. (ft/s)	*	1.54	*	6.85	*	1.81	*
* Max Chl Dpth (ft)	*	5.55	*	Hydr. Depth (ft)	*	1.00	*	4.04	*	1.25	*
* Conv. Total (cfs)	*	2201.2	*	Conv. (cfs)	*	101.4	*	1865.2	*	234.7	*
* Length wtd. (ft)	*	18.01	*	wetted Per. (ft)	*	6.14	*	9.32	*	9.40	*
* Min Ch El (ft)	*	478.60	*	Shear (lb/sq ft)	*	0.44	*	1.19	*	0.56	*
* Alpha	*	1.82	*	Stream Power (lb/ft s)	*	204.98	*	0.00	*	0.00	*
* Frctn Loss (ft)	*	0.02	*	Cum Volume (acre-ft)	*	0.04	*	0.08	*	0.06	*
* C & E Loss (ft)	*	0.16	*	Cum SA (acres)	*	0.06	*	0.02	*	0.05	*

warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
 warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #100-year flow

	*	485.30	*	Element	*	Left OB	*	Channel	*	Right OB	*
* E.G. Elev (ft)	*	485.30	*	Element	*	Left OB	*	Channel	*	Right OB	*
* Vel Head (ft)	*	0.90	*	Wt. n-Val.	*	0.080	*	0.035	*	0.080	*
* W.S. Elev (ft)	*	484.40	*	Reach Len. (ft)	*	8.26	*	17.88	*	26.53	*
* Crit W.S. (ft)	*	483.94	*	Flow Area (sq ft)	*	7.25	*	25.06	*	14.34	*

```

CalifonFloodplainSt
* E.G. Slope (ft/ft) *0.010140 * Area (sq ft) * 7.25 * 25.06 * 14.34 *
* Q Total (cfs) * 246.00 * Flow (cfs) * 13.64 * 207.18 * 25.18 *
* Top width (ft) * 35.92 * Top width (ft) * 6.74 * 5.85 * 23.33 *
* Vel Total (ft/s) * 5.27 * Avg. Vel. (ft/s) * 1.88 * 8.27 * 1.76 *
* Max Chl Dpth (ft) * 5.80 * Hydr. Depth (ft) * 1.08 * 4.28 * 0.61 *
* Conv. Total (cfs) * 2443.0 * Conv. (cfs) * 135.5 * 2057.5 * 250.1 *
* Length wtd. (ft) * 17.83 * Wetted Per. (ft) * 7.18 * 9.32 * 23.77 *
* Min Ch El (ft) * 478.60 * Shear (lb/sq ft) * 0.64 * 1.70 * 0.38 *
* Alpha * 2.09 * Stream Power (lb/ft s) * 204.98 * 0.00 * 0.00 *
* Frctn Loss (ft) * 0.03 * Cum Volume (acre-ft) * 0.06 * 0.09 * 0.08 *
* C & E Loss (ft) * 0.26 * Cum SA (acres) * 0.06 * 0.02 * 0.07 *
*****

```

warning: The energy equation could not be balanced within the specified number of iterations. The program selected the water surface that had the least amount of error between computed and assumed values.
warning: Divided flow computed for this cross-section.
warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: Downstream_Reach RS: 116.8404

INPUT

Description:

```

Station Elevation Data num= 37
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
0 485.45 4.62 485.47 9.23 485.69 13.85 485.99 18.47 486.12
23.08 486.09 27.7 485.76 32.31 485.65 36.93 485.58 41.55 485.53
46.16 485.37 50.78 485.33 55.39 485.29 60.01 485.29 64.7 485.22
69.39 485.2 74.08 484.12 78.77 481.86 82.13 480.95 83.46 480.58
87.48 480.44 88.15 480.41 90 479.1 92.84 478.5 97.53 480.27
102.21 480.92 106.14 481.68 110.95 482.86 115.76 484.12 120.57 484.4
125.38 484.72 130.19 484.89 135 485.23 139.84 485.73 144.68 485.83
149.52 485.93 154.36 486.11

```

```

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
*****
0 .08 88.15 .035 97.53 .08

```

```

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
88.15 97.53 4.92 9.21 19.08 .3 .5

```

CROSS SECTION OUTPUT Profile #5-year flow

```

*****
* E.G. Elev (ft) * 482.09 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.11 * wt. n-Val. * 0.080 * 0.035 * 0.080 *
* w.s. Elev (ft) * 481.98 * Reach Len. (ft) * 4.92 * 9.21 * 19.08 *
* Crit w.s. (ft) * * Flow Area (sq ft) * 10.52 * 25.32 * 9.34 *
* E.G. Slope (ft/ft) *0.001409 * Area (sq ft) * 10.52 * 25.32 * 9.34 *
* Q Total (cfs) * 88.00 * Flow (cfs) * 7.67 * 74.09 * 6.23 *
* Top width (ft) * 28.85 * Top width (ft) * 9.63 * 9.38 * 9.84 *
* Vel Total (ft/s) * 1.95 * Avg. Vel. (ft/s) * 0.73 * 2.93 * 0.67 *
* Max Chl Dpth (ft) * 3.48 * Hydr. Depth (ft) * 1.09 * 2.70 * 0.95 *
* Conv. Total (cfs) * 2344.0 * Conv. (cfs) * 204.4 * 1973.6 * 166.0 *
* Length wtd. (ft) * 9.37 * Wetted Per. (ft) * 9.83 * 10.18 * 9.99 *
* Min Ch El (ft) * 478.50 * Shear (lb/sq ft) * 0.09 * 0.22 * 0.08 *
* Alpha * 1.92 * Stream Power (lb/ft s) * 154.36 * 0.00 * 0.00 *
* Frctn Loss (ft) * 0.02 * Cum Volume (acre-ft) * 0.01 * 0.04 * 0.01 *
* C & E Loss (ft) * 0.02 * Cum SA (acres) * 0.01 * 0.02 * 0.02 *
*****

```

CROSS SECTION OUTPUT Profile #10-year flow

```

*****
* E.G. Elev (ft) * 482.85 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.09 * wt. n-Val. * 0.080 * 0.035 * 0.080 *
* w.s. Elev (ft) * 482.76 * Reach Len. (ft) * 4.92 * 9.21 * 19.08 *
* Crit w.s. (ft) * * Flow Area (sq ft) * 18.70 * 32.67 * 18.30 *
* E.G. Slope (ft/ft) *0.000833 * Area (sq ft) * 18.70 * 32.67 * 18.30 *
* Q Total (cfs) * 113.00 * Flow (cfs) * 13.76 * 87.09 * 12.15 *
* Top width (ft) * 33.67 * Top width (ft) * 11.26 * 9.38 * 13.03 *
* Vel Total (ft/s) * 1.62 * Avg. Vel. (ft/s) * 0.74 * 2.67 * 0.66 *
* Max Chl Dpth (ft) * 4.26 * Hydr. Depth (ft) * 1.66 * 3.48 * 1.40 *
* Conv. Total (cfs) * 3915.6 * Conv. (cfs) * 476.7 * 3017.9 * 421.0 *
* Length wtd. (ft) * 9.55 * Wetted Per. (ft) * 11.64 * 10.18 * 13.28 *
* Min Ch El (ft) * 478.50 * Shear (lb/sq ft) * 0.08 * 0.17 * 0.07 *
* Alpha * 2.13 * Stream Power (lb/ft s) * 154.36 * 0.00 * 0.00 *
* Frctn Loss (ft) * 0.01 * Cum Volume (acre-ft) * 0.01 * 0.04 * 0.01 *
* C & E Loss (ft) * 0.03 * Cum SA (acres) * 0.02 * 0.02 * 0.02 *
*****

```

warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #25-year flow

```

*****
* E.G. Elev (ft) * 484.17 * Element * Left OB * Channel * Right OB *
* Vel Head (ft) * 0.06 * wt. n-Val. * 0.080 * 0.035 * 0.080 *
* w.s. Elev (ft) * 484.11 * Reach Len. (ft) * 4.92 * 9.21 * 19.08 *
* Crit w.s. (ft) * * Flow Area (sq ft) * 35.76 * 45.32 * 39.36 *
* E.G. Slope (ft/ft) *0.000415 * Area (sq ft) * 35.76 * 45.32 * 39.36 *
* Q Total (cfs) * 155.00 * Flow (cfs) * 24.43 * 106.04 * 24.53 *
* Top width (ft) * 41.63 * Top width (ft) * 14.05 * 9.38 * 18.20 *
* Vel Total (ft/s) * 1.29 * Avg. Vel. (ft/s) * 0.68 * 2.34 * 0.62 *
* Max Chl Dpth (ft) * 5.61 * Hydr. Depth (ft) * 2.54 * 4.83 * 2.16 *
* Conv. Total (cfs) * 7608.9 * Conv. (cfs) * 1199.1 * 5205.5 * 1204.3 *
* Length wtd. (ft) * 10.07 * Wetted Per. (ft) * 14.74 * 10.18 * 18.62 *
* Min Ch El (ft) * 478.50 * Shear (lb/sq ft) * 0.06 * 0.12 * 0.05 *
* Alpha * 2.34 * Stream Power (lb/ft s) * 154.36 * 0.00 * 0.00 *
* Frctn Loss (ft) * 0.01 * Cum Volume (acre-ft) * 0.02 * 0.05 * 0.03 *
* C & E Loss (ft) * 0.03 * Cum SA (acres) * 0.03 * 0.02 * 0.04 *

```

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Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #50-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 484.59	* Element	* 0.080	* 0.035	* 0.080
* Vel Head (ft)	* 0.08	* Wt. n-Val.	* 4.92	* 9.21	* 19.08
* W.S. Elev (ft)	* 484.52	* Reach Len. (ft)	* 41.78	* 49.10	* 48.05
* Crit W.S. (ft)	*	* Flow Area (sq ft)	* 41.78	* 49.10	* 48.05
* E.G. Slope (ft/ft)	* 0.000475	* Area (sq ft)	* 31.39	* 129.70	* 29.90
* Q Total (cfs)	* 191.00	* Flow (cfs)	* 15.79	* 9.38	* 24.78
* Top width (ft)	* 49.94	* Top width (ft)	* 0.75	* 2.64	* 0.62
* Vel Total (ft/s)	* 1.37	* Avg. vel. (ft/s)	* 2.65	* 5.23	* 1.94
* Max Chl Dpth (ft)	* 6.02	* Hydr. Depth (ft)	* 1440.1	* 5950.0	* 1371.9
* Conv. Total (cfs)	* 8762.0	* Conv. (cfs)	* 16.52	* 10.18	* 25.21
* Length wtd. (ft)	* 10.14	* Wetted Per. (ft)	* 0.08	* 0.14	* 0.06
* Min Ch El (ft)	* 478.50	* Shear (lb/sq ft)	* 154.36	* 0.00	* 0.00
* Alpha	* 2.59	* Stream Power (lb/ft s)	* 0.04	* 0.06	* 0.04
* Frctn Loss (ft)	* 0.01	* Cum Volume (acre-ft)	* 0.06	* 0.02	* 0.04
* C & E Loss (ft)	* 0.03	* Cum SA (acres)	*	*	*

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #100-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 485.08	* Element	* 0.080	* 0.035	* 0.080
* Vel Head (ft)	* 0.10	* Wt. n-Val.	* 4.92	* 9.21	* 19.08
* W.S. Elev (ft)	* 484.98	* Reach Len. (ft)	* 49.49	* 53.41	* 61.40
* Crit W.S. (ft)	*	* Flow Area (sq ft)	* 49.49	* 53.41	* 61.40
* E.G. Slope (ft/ft)	* 0.000571	* Area (sq ft)	* 42.23	* 163.60	* 40.17
* Q Total (cfs)	* 246.00	* Flow (cfs)	* 17.78	* 9.38	* 33.86
* Top width (ft)	* 61.03	* Top width (ft)	* 0.85	* 3.06	* 0.65
* Vel Total (ft/s)	* 1.50	* Avg. vel. (ft/s)	* 2.78	* 5.69	* 1.81
* Max Chl Dpth (ft)	* 6.48	* Hydr. Depth (ft)	* 1766.9	* 6845.7	* 1681.1
* Conv. Total (cfs)	* 10293.7	* Conv. (cfs)	* 18.57	* 10.18	* 34.31
* Length wtd. (ft)	* 10.24	* Wetted Per. (ft)	* 0.10	* 0.19	* 0.06
* Min Ch El (ft)	* 478.50	* Shear (lb/sq ft)	* 154.36	* 0.00	* 0.00
* Alpha	* 2.87	* Stream Power (lb/ft s)	* 0.05	* 0.08	* 0.05
* Frctn Loss (ft)	* 0.01	* Cum Volume (acre-ft)	* 0.06	* 0.02	* 0.05
* C & E Loss (ft)	* 0.04	* Cum SA (acres)	*	*	*

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: Downstream_Reach RS: 107.6303

INPUT

Description: Upstream section from Columbia Trail

Station	Elevation	Data	num=	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	486.04	4.93	485.82	9.86	485.64	14.79	485.6	19.72	485.55		
24.66	485.4	29.59	485.3	34.52	485.27	39.45	485.28	44.38	485.31		
48.73	485.35	53.21	484.52	57.62	482.79	57.88	481.818	58.8	478.38		
62.03	478.36	65.3	478.39	66.16	481.69	66.75	481.73	71.47	482.34		
72.79	482.6	76.19	483.27	80.91	484.48	85.63	485.24	90.34	485.63		
95.06	485.82	99.78	485.89	104.5	485.82	109.22	485.41				

Manning's n	Values	num=	Sta	n Val	Sta	n Val
0	.08	57.88	.035	66.16	.08	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
57.88	66.16	32.27	36.83	37.82	.3	.5		
Ineffective Flow	num=	2						
Sta L	Sta R	Elev	Permanent					
0	57.59	483.3	F					
68.82	109.22	483.27	F					

CROSS SECTION OUTPUT Profile #5-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 482.06	* Element	* 0.000	* 0.035	* 0.080
* Vel Head (ft)	* 0.18	* Wt. n-Val.	* 32.27	* 36.83	* 37.82
* W.S. Elev (ft)	* 481.88	* Reach Len. (ft)	* 0.00	* 26.01	* 0.19
* Crit W.S. (ft)	* 480.12	* Flow Area (sq ft)	* 0.00	* 26.01	* 0.19
* E.G. Slope (ft/ft)	* 0.002637	* Area (sq ft)	* 0.00	* 87.96	* 0.04
* Q Total (cfs)	* 88.00	* Flow (cfs)	* 0.02	* 8.28	* 1.75
* Top width (ft)	* 10.04	* Top width (ft)	* 0.04	* 3.38	* 0.21
* Vel Total (ft/s)	* 3.36	* Avg. vel. (ft/s)	* 0.03	* 3.14	* 0.11
* Max Chl Dpth (ft)	* 3.52	* Hydr. Depth (ft)	* 0.0	* 1712.9	* 0.8
* Conv. Total (cfs)	* 1713.7	* Conv. (cfs)	* 0.06	* 13.47	* 1.76
* Length wtd. (ft)	* 36.83	* Wetted Per. (ft)	*	* 0.32	* 0.02
* Min Ch El (ft)	* 478.36	* Shear (lb/sq ft)	* 109.22	* 0.00	* 0.00
* Alpha	* 1.01	* Stream Power (lb/ft s)	* 0.01	* 0.03	* 0.01
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.01	* 0.02	* 0.01
* C & E Loss (ft)	*	* Cum SA (acres)	*	*	*

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #10-year flow

			Left OB	Channel	Right OB
* E.G. Elev (ft)	* 482.81	* Element	* 0.080	* 0.035	* 0.080
* Vel Head (ft)	* 0.18	* Wt. n-Val.	* 32.27	* 36.83	* 37.82
* W.S. Elev (ft)	* 482.63	* Reach Len. (ft)	* 0.09	* 32.20	* 2.12
* Crit W.S. (ft)	* 480.42	* Flow Area (sq ft)	*	*	*

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* E.G. Slope (ft/ft)	*0.002079	* Area (sq ft)	* 0.09 * 32.20 * 3.54 *
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 0.02 * 111.45 * 1.54 *
* Top width (ft)	* 15.26	* Top width (ft)	* 0.22 * 8.28 * 6.76 *
* Vel Total (ft/s)	* 3.28	* Avg. Vel. (ft/s)	* 0.19 * 3.46 * 0.72 *
* Max Chl Dpth (ft)	* 4.27	* Hydr. Depth (ft)	* 0.40 * 3.89 * 0.80 *
* Conv. Total (cfs)	* 2478.0	* Conv. (cfs)	* 0.4 * 2444.0 * 33.7 *
* Length wtd. (ft)	* 36.83	* wetted Per. (ft)	* 0.84 * 13.47 * 2.68 *
* Min Ch El (ft)	* 478.36	* Shear (lb/sq ft)	* 0.01 * 0.31 * 0.10 *
* Alpha	* 1.10	* Stream Power (lb/ft s)	* 109.22 * 0.00 * 0.00 *
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.01 * 0.04 * 0.01 *
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.02 * 0.02 * 0.02 *

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #25-year flow

Profile #25-year flow			
* E.G. Elev (ft)	* 484.14	* Element	* Left OB * Channel * Right OB *
* Vel Head (ft)	* 0.15	* wt. n-val.	* 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft)	* 483.99	* Reach Len. (ft)	* 32.27 * 36.83 * 37.82 *
* Crit W.S. (ft)	* 480.89	* Flow Area (sq ft)	* 2.28 * 43.50 * 17.19 *
* E.G. Slope (ft/ft)	*0.001216	* Area (sq ft)	* 2.28 * 43.50 * 17.19 *
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 0.97 * 140.67 * 13.36 *
* Top width (ft)	* 24.44	* Top width (ft)	* 3.32 * 8.28 * 12.84 *
* Vel Total (ft/s)	* 2.46	* Avg. Vel. (ft/s)	* 0.42 * 3.23 * 0.78 *
* Max Chl Dpth (ft)	* 5.63	* Hydr. Depth (ft)	* 0.69 * 5.25 * 1.34 *
* Conv. Total (cfs)	* 4445.6	* Conv. (cfs)	* 27.7 * 4034.6 * 383.3 *
* Length wtd. (ft)	* 36.83	* wetted Per. (ft)	* 4.29 * 13.47 * 13.06 *
* Min Ch El (ft)	* 478.36	* Shear (lb/sq ft)	* 0.04 * 0.25 * 0.10 *
* Alpha	* 1.57	* Stream Power (lb/ft s)	* 109.22 * 0.00 * 0.00 *
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.02 * 0.04 * 0.02 *
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.03 * 0.02 * 0.03 *

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #50-year flow

Profile #50-year flow			
* E.G. Elev (ft)	* 484.55	* Element	* Left OB * Channel * Right OB *
* Vel Head (ft)	* 0.18	* wt. n-val.	* 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft)	* 484.37	* Reach Len. (ft)	* 32.27 * 36.83 * 37.82 *
* Crit W.S. (ft)	* 481.25	* Flow Area (sq ft)	* 3.73 * 46.66 * 22.38 *
* E.G. Slope (ft/ft)	*0.001380	* Area (sq ft)	* 3.73 * 46.66 * 22.38 *
* Q Total (cfs)	* 191.00	* Flow (cfs)	* 2.03 * 168.45 * 20.52 *
* Top width (ft)	* 26.91	* Top width (ft)	* 4.29 * 8.28 * 14.33 *
* Vel Total (ft/s)	* 2.62	* Avg. Vel. (ft/s)	* 0.54 * 3.61 * 0.92 *
* Max Chl Dpth (ft)	* 6.01	* Hydr. Depth (ft)	* 0.87 * 5.64 * 1.56 *
* Conv. Total (cfs)	* 5142.4	* Conv. (cfs)	* 54.6 * 4535.3 * 552.5 *
* Length wtd. (ft)	* 36.83	* wetted Per. (ft)	* 5.34 * 13.47 * 14.60 *
* Min Ch El (ft)	* 478.36	* Shear (lb/sq ft)	* 0.06 * 0.30 * 0.13 *
* Alpha	* 1.68	* Stream Power (lb/ft s)	* 109.22 * 0.00 * 0.00 *
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.03 * 0.05 * 0.03 *
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.05 * 0.02 * 0.04 *

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #100-year flow

Profile #100-year flow			
* E.G. Elev (ft)	* 485.02	* Element	* Left OB * Channel * Right OB *
* Vel Head (ft)	* 0.24	* wt. n-val.	* 0.080 * 0.035 * 0.080 *
* W.S. Elev (ft)	* 484.79	* Reach Len. (ft)	* 32.27 * 36.83 * 37.82 *
* Crit W.S. (ft)	* 481.76	* Flow Area (sq ft)	* 5.82 * 50.08 * 28.74 *
* E.G. Slope (ft/ft)	*0.001706	* Area (sq ft)	* 5.82 * 50.08 * 28.74 *
* Q Total (cfs)	* 246.00	* Flow (cfs)	* 3.88 * 210.78 * 31.34 *
* Top width (ft)	* 31.02	* Top width (ft)	* 6.09 * 8.28 * 16.65 *
* Vel Total (ft/s)	* 2.91	* Avg. Vel. (ft/s)	* 0.67 * 4.21 * 1.09 *
* Max Chl Dpth (ft)	* 6.43	* Hydr. Depth (ft)	* 0.96 * 6.05 * 1.73 *
* Conv. Total (cfs)	* 5955.8	* Conv. (cfs)	* 94.0 * 5103.0 * 758.8 *
* Length wtd. (ft)	* 36.83	* wetted Per. (ft)	* 7.18 * 13.47 * 16.96 *
* Min Ch El (ft)	* 478.36	* Shear (lb/sq ft)	* 0.09 * 0.40 * 0.18 *
* Alpha	* 1.82	* Stream Power (lb/ft s)	* 109.22 * 0.00 * 0.00 *
* Frctn Loss (ft)	*	* Cum Volume (acre-ft)	* 0.05 * 0.07 * 0.03 *
* C & E Loss (ft)	*	* Cum SA (acres)	* 0.06 * 0.02 * 0.04 *

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CULVERT

RIVER: Unnamed_Trib
 REACH: Downstream_Reach RS: 89.2

INPUT

Description: Columbia Trail
 Distance from Upstream XS = 10
 Deck/Roadway width = 10
 Weir Coefficient = 2.6
 Upstream Deck/Roadway Coordinates

num=	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
5	20	484				40	484				60	484			
	80	484				100	484								

Upstream Bridge Cross Section Data

Station Elevation Data num= 29									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	486.04	4.93	485.82	9.86	485.64	14.79	485.6	19.72	485.55
24.66	485.4	29.59	485.3	34.52	485.27	39.45	485.28	44.38	485.31
48.79	485.35	53.21	484.52	57.62	482.79	57.88	481.818	58.8	478.38
62.03	478.36	65.3	478.39	66.16	481.69	66.75	481.73	71.47	482.34
72.79	482.6	76.19	483.27	80.91	484.48	85.63	485.24	90.34	485.63
95.06	485.82	99.78	485.89	104.5	485.82	109.22	485.41		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .08 57.88 .035 66.16 .08

Bank Sta: Left Right Coeff Contr. Expan.
 57.88 66.16 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 57.59 483.3 F
 68.82 109.22 483.27 F

Downstream Deck/Roadway Coordinates
 num= 6
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 0 484 484 20 484 484 40 484 484
 60 484 484 80 484 484 100 484 484

Downstream Bridge Cross Section Data
 Station Elevation Data num= 24
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 483.44 4.73 483.36 9.45 483.14 14.18 482.92 18.9 482.64
 23.63 482.49 28.35 482.41 33.08 482.32 37.8 482.23 42.53 482.04
 47.25 481.69 51.98 481.33 52.35 480.309 53.44 477.3 56.7 477.2
 59.9 477.4 61.1 480.765 61.43 481.69 66.15 482.53 70.25 482.97
 74.36 483 78.46 483.08 82.56 483.16 86.66 482.9

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .08 52.35 .035 61.1 .08

Bank Sta: Left Right Coeff Contr. Expan.
 52.35 61.1 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 52.07 481.96 F
 61.39 86.66 481.96 F

Upstream Embankment side slope = 3 horiz. to 1.0 vertical
 Downstream Embankment side slope = 3 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 weir crest shape = Broad Crested

Number of Culverts = 2

Culvert Name Shape Rise Span
 Culvert #1 Circular 3
 FHWA Chart # 1 - Concrete Pipe Culvert
 FHWA Scale # 3 - Groove end entrance; pipe projecting from fill
 Solution Criteria = Highest U.S. EG
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef Exit Loss Coef
 1 33 .012 .012 0 .2 1
 Upstream Elevation = 478.41
 Centerline Station = 60
 Downstream Elevation = 477.23
 Centerline Station = 54.7

Culvert Name Shape Rise Span
 Culvert #2 Circular 3
 FHWA Chart # 1 - Concrete Pipe Culvert
 FHWA Scale # 3 - Groove end entrance; pipe projecting from fill
 Solution Criteria = Highest U.S. EG
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef Exit Loss Coef
 1 33 .012 .012 0 .2 1
 Upstream Elevation = 478.36
 Centerline Station = 64
 Downstream Elevation = 477.33
 Centerline Station = 58.7

CULVERT OUTPUT Profile #5-year flow Culv Group: Culvert #1

 * Q Culv Group (cfs) * 44.35 * Culv Full Len (ft) * 31.01 *
 * # Barrels * 1 * Culv Vel US (ft/s) * 6.32 *
 * Q Barrel (cfs) * 44.35 * Culv Vel DS (ft/s) * 6.27 *
 * E.G. US. (ft) * 482.06 * Culv Inv El Up (ft) * 478.41 *
 * W.S. US. (ft) * 481.88 * Culv Inv El Dn (ft) * 477.23 *
 * E.G. DS (ft) * 481.35 * Culv Frctn Ls (ft) * 0.12 *
 * W.S. DS (ft) * 481.22 * Culv Exit Loss (ft) * 0.48 *
 * Delta EG (ft) * 0.71 * Culv Entr Loss (ft) * 0.12 *
 * Delta WS (ft) * 0.66 * Q Weir (cfs) * *
 * E.G. IC (ft) * 481.71 * Weir Sta Lft (ft) * *
 * E.G. OC (ft) * 482.08 * Weir Sta Rgt (ft) * *
 * Culvert Control * Outlet * Weir Submerg * *
 * Culv WS Inlet (ft) * 481.33 * Weir Max Depth (ft) * *
 * Culv WS Outlet (ft) * 480.23 * Weir Avg Depth (ft) * *
 * Culv Nml Depth (ft) * 1.17 * Weir Flow Area (sq ft) * *
 * Culv Crt Depth (ft) * 2.17 * Min El Weir Flow (ft) * 484.01 *

CULVERT OUTPUT Profile #10-year flow Culv Group: Culvert #1

 * Q Culv Group (cfs) * 56.28 * Culv Full Len (ft) * 33.00 *
 * # Barrels * 1 * Culv Vel US (ft/s) * 7.96 *
 * Q Barrel (cfs) * 56.28 * Culv Vel DS (ft/s) * 7.96 *
 * E.G. US. (ft) * 482.82 * Culv Inv El Up (ft) * 478.41 *
 * W.S. US. (ft) * 482.63 * Culv Inv El Dn (ft) * 477.23 *
 * E.G. DS (ft) * 481.61 * Culv Frctn Ls (ft) * 0.21 *
 * W.S. DS (ft) * 481.42 * Culv Exit Loss (ft) * 0.80 *
 * Delta EG (ft) * 1.20 * Culv Entr Loss (ft) * 0.20 *

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* Delta WS (ft)	* 1.20	* Q Weir (cfs)	
* E.G. IC (ft)	* 482.44	* Weir Sta Lft (ft)	
* E.G. OC (ft)	* 482.80	* Weir Sta Rgt (ft)	
* Culvert Control	* Outlet	* Weir Submerg	
* Culv WS Inlet (ft)	* 481.41	* Weir Max Depth (ft)	
* Culv WS Outlet (ft)	* 480.23	* Weir Avg Depth (ft)	
* Culv Nml Depth (ft)		* Weir Flow Area (sq ft)	
* Culv Crt Depth (ft)	* 2.43	* Min El Weir Flow (ft)	* 484.01

CULVERT OUTPUT Profile #25-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 75.68	* Culv Full Len (ft)	* 33.00
* # Barrels	* 1	* Culv Vel US (ft/s)	* 10.71
* Q Barrel (cfs)	* 75.68	* Culv Vel DS (ft/s)	* 10.71
* E.G. US. (ft)	* 484.14	* Culv Inv El Up (ft)	* 478.41
* W.S. US. (ft)	* 483.99	* Culv Inv El Dn (ft)	* 477.23
* E.G. DS (ft)	* 481.95	* Culv Frctn Ls (ft)	* 0.37
* W.S. DS (ft)	* 481.64	* Culv Exit Loss (ft)	* 1.47
* Delta EG (ft)	* 2.19	* Culv Entr Loss (ft)	* 0.36
* Delta WS (ft)	* 2.35	* Q Weir (cfs)	* 3.48
* E.G. IC (ft)	* 484.06	* Weir Sta Lft (ft)	* 54.17
* E.G. OC (ft)	* 484.14	* Weir Sta Rgt (ft)	* 79.59
* Culvert Control	* Outlet	* Weir Submerg	* 0.00
* Culv WS Inlet (ft)	* 481.41	* Weir Max Depth (ft)	* 0.14
* Culv WS Outlet (ft)	* 480.23	* Weir Avg Depth (ft)	* 0.14
* Culv Nml Depth (ft)		* Weir Flow Area (sq ft)	* 3.57
* Culv Crt Depth (ft)	* 2.73	* Min El Weir Flow (ft)	* 484.01

CULVERT OUTPUT Profile #50-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 81.40	* Culv Full Len (ft)	* 33.00
* # Barrels	* 1	* Culv Vel US (ft/s)	* 11.52
* Q Barrel (cfs)	* 81.40	* Culv Vel DS (ft/s)	* 11.52
* E.G. US. (ft)	* 484.56	* Culv Inv El Up (ft)	* 478.41
* W.S. US. (ft)	* 484.37	* Culv Inv El Dn (ft)	* 477.23
* E.G. DS (ft)	* 482.14	* Culv Frctn Ls (ft)	* 0.42
* W.S. DS (ft)	* 481.67	* Culv Exit Loss (ft)	* 1.59
* Delta EG (ft)	* 2.42	* Culv Entr Loss (ft)	* 0.41
* Delta WS (ft)	* 2.71	* Q Weir (cfs)	* 28.14
* E.G. IC (ft)	* 484.63	* Weir Sta Lft (ft)	* 53.00
* E.G. OC (ft)	* 484.56	* Weir Sta Rgt (ft)	* 81.41
* Culvert Control	* Outlet	* Weir Submerg	* 0.00
* Culv WS Inlet (ft)	* 481.41	* Weir Max Depth (ft)	* 0.56
* Culv WS Outlet (ft)	* 480.23	* Weir Avg Depth (ft)	* 0.52
* Culv Nml Depth (ft)	* 1.67	* Weir Flow Area (sq ft)	* 14.74
* Culv Crt Depth (ft)	* 2.78	* Min El Weir Flow (ft)	* 484.01

Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
 Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.

CULVERT OUTPUT Profile #100-year flow Culv Group: Culvert #1

* Q Culv Group (cfs)	* 86.35	* Culv Full Len (ft)	* 33.00
* # Barrels	* 1	* Culv Vel US (ft/s)	* 12.22
* Q Barrel (cfs)	* 86.35	* Culv Vel DS (ft/s)	* 12.22
* E.G. US. (ft)	* 485.02	* Culv Inv El Up (ft)	* 478.41
* W.S. US. (ft)	* 484.79	* Culv Inv El Dn (ft)	* 477.23
* E.G. DS (ft)	* 482.51	* Culv Frctn Ls (ft)	* 0.47
* W.S. DS (ft)	* 481.77	* Culv Exit Loss (ft)	* 1.58
* Delta EG (ft)	* 2.51	* Culv Entr Loss (ft)	* 0.46
* Delta WS (ft)	* 3.01	* Q Weir (cfs)	* 73.28
* E.G. IC (ft)	* 485.16	* Weir Sta Lft (ft)	* 50.55
* E.G. OC (ft)	* 485.02	* Weir Sta Rgt (ft)	* 84.26
* Culvert Control	* Outlet	* Weir Submerg	* 0.00
* Culv WS Inlet (ft)	* 481.41	* Weir Max Depth (ft)	* 1.02
* Culv WS Outlet (ft)	* 480.23	* Weir Avg Depth (ft)	* 0.86
* Culv Nml Depth (ft)	* 1.73	* Weir Flow Area (sq ft)	* 29.01
* Culv Crt Depth (ft)	* 3.00	* Min El Weir Flow (ft)	* 484.01

Note: Culvert critical depth exceeds the height of the culvert.
 Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
 Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.

CULVERT OUTPUT Profile #5-year flow Culv Group: Culvert #2

* Q Culv Group (cfs)	* 43.65	* Culv Full Len (ft)	* 32.36
* # Barrels	* 1	* Culv Vel US (ft/s)	* 6.18
* Q Barrel (cfs)	* 43.65	* Culv Vel DS (ft/s)	* 6.17
* E.G. US. (ft)	* 482.06	* Culv Inv El Up (ft)	* 478.36
* W.S. US. (ft)	* 481.88	* Culv Inv El Dn (ft)	* 477.33
* E.G. DS (ft)	* 481.35	* Culv Frctn Ls (ft)	* 0.12
* W.S. DS (ft)	* 481.22	* Culv Exit Loss (ft)	* 0.46
* Delta EG (ft)	* 0.71	* Culv Entr Loss (ft)	* 0.12
* Delta WS (ft)	* 0.66	* Q Weir (cfs)	
* E.G. IC (ft)	* 481.63	* Weir Sta Lft (ft)	
* E.G. OC (ft)	* 482.05	* Weir Sta Rgt (ft)	
* Culvert Control	* Outlet	* Weir Submerg	
* Culv WS Inlet (ft)	* 481.34	* Weir Max Depth (ft)	
* Culv WS Outlet (ft)	* 480.33	* Weir Avg Depth (ft)	
* Culv Nml Depth (ft)	* 1.21	* Weir Flow Area (sq ft)	
* Culv Crt Depth (ft)	* 2.15	* Min El Weir Flow (ft)	* 484.01

CULVERT OUTPUT Profile #10-year flow Culv Group: Culvert #2

* Q Culv Group (cfs)	* 56.72	* Culv Full Len (ft)	* 33.00
* # Barrels	* 1	* Culv Vel US (ft/s)	* 8.02
* Q Barrel (cfs)	* 56.72	* Culv Vel DS (ft/s)	* 8.02
* E.G. US. (ft)	* 482.82	* Culv Inv El Up (ft)	* 478.36
* W.S. US. (ft)	* 482.63	* Culv Inv El Dn (ft)	* 477.33

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* E.G. DS (ft) * 481.61 * Culv Frctn Ls (ft) * 0.19 *
* W.S. DS (ft) * 481.42 * Culv Exit Loss (ft) * 0.81 *
* Delta EG (ft) * 1.20 * Culv Entr Loss (ft) * 0.20 *
* Delta WS (ft) * 1.20 * Q Weir (cfs) * *
* E.G. IC (ft) * 482.42 * Weir Sta Lft (ft) * *
* E.G. OC (ft) * 482.83 * Weir Sta Rgt (ft) * *
* Culvert Control * Outlet * Weir Submerg * *
* Culv WS Inlet (ft) * 481.36 * Weir Max Depth (ft) * *
* Culv WS Outlet (ft) * 480.33 * Weir Avg Depth (ft) * *
* Culv Mnl Depth (ft) * * * Weir Flow Area (sq ft) * *
* Culv Crt Depth (ft) * 2.44 * Min El Weir Flow (ft) * 484.01 *
*****

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CULVERT OUTPUT Profile #25-year flow Culv Group: Culvert #2
*****
* Q Culv Group (cfs) * 75.83 * Culv Full Len (ft) * 33.00 *
* # Barrels * 1 * Culv Vel US (ft/s) * 10.73 *
* Q Barrel (cfs) * 75.83 * Culv Vel DS (ft/s) * 10.73 *
* E.G. US. (ft) * 484.14 * Culv Inv El Up (ft) * 478.36 *
* W.S. US. (ft) * 483.99 * Culv Inv El Dn (ft) * 477.33 *
* E.G. DS (ft) * 481.95 * Culv Frctn Ls (ft) * 0.36 *
* W.S. DS (ft) * 481.64 * Culv Exit Loss (ft) * 1.47 *
* Delta EG (ft) * 2.19 * Culv Entr Loss (ft) * 0.36 *
* Delta WS (ft) * 2.35 * Q Weir (cfs) * 3.48 *
* E.G. IC (ft) * 484.03 * Weir Sta Lft (ft) * 54.17 *
* E.G. OC (ft) * 484.15 * Weir Sta Rgt (ft) * 79.59 *
* Culvert Control * Outlet * Weir Submerg * *
* Culv WS Inlet (ft) * 481.36 * Weir Max Depth (ft) * 0.14 *
* Culv WS Outlet (ft) * 480.33 * Weir Avg Depth (ft) * 0.14 *
* Culv Mnl Depth (ft) * * * Weir Flow Area (sq ft) * 3.57 *
* Culv Crt Depth (ft) * 2.73 * Min El Weir Flow (ft) * 484.01 *
*****

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CULVERT OUTPUT Profile #50-year flow Culv Group: Culvert #2
*****
* Q Culv Group (cfs) * 81.46 * Culv Full Len (ft) * 33.00 *
* # Barrels * 1 * Culv Vel US (ft/s) * 11.52 *
* Q Barrel (cfs) * 81.46 * Culv Vel DS (ft/s) * 11.52 *
* E.G. US. (ft) * 484.56 * Culv Inv El Up (ft) * 478.36 *
* W.S. US. (ft) * 484.37 * Culv Inv El Dn (ft) * 477.33 *
* E.G. DS (ft) * 482.14 * Culv Frctn Ls (ft) * 0.42 *
* W.S. DS (ft) * 481.67 * Culv Exit Loss (ft) * 1.59 *
* Delta EG (ft) * 2.42 * Culv Entr Loss (ft) * 0.41 *
* Delta WS (ft) * 2.71 * Q Weir (cfs) * 28.14 *
* E.G. IC (ft) * 484.59 * Weir Sta Lft (ft) * 53.00 *
* E.G. OC (ft) * 484.56 * Weir Sta Rgt (ft) * 81.41 *
* Culvert Control * Outlet * Weir Submerg * *
* Culv WS Inlet (ft) * 481.36 * Weir Max Depth (ft) * 0.56 *
* Culv WS Outlet (ft) * 480.33 * Weir Avg Depth (ft) * 0.52 *
* Culv Mnl Depth (ft) * 1.74 * Weir Flow Area (sq ft) * 14.74 *
* Culv Crt Depth (ft) * 2.78 * Min El Weir Flow (ft) * 484.01 *
*****

```

Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.

```

CULVERT OUTPUT Profile #100-year flow Culv Group: Culvert #2
*****
* Q Culv Group (cfs) * 86.36 * Culv Full Len (ft) * 33.00 *
* # Barrels * 1 * Culv Vel US (ft/s) * 12.22 *
* Q Barrel (cfs) * 86.36 * Culv Vel DS (ft/s) * 12.22 *
* E.G. US. (ft) * 485.02 * Culv Inv El Up (ft) * 478.36 *
* W.S. US. (ft) * 484.79 * Culv Inv El Dn (ft) * 477.33 *
* E.G. DS (ft) * 482.51 * Culv Frctn Ls (ft) * 0.47 *
* W.S. DS (ft) * 481.77 * Culv Exit Loss (ft) * 1.58 *
* Delta EG (ft) * 2.51 * Culv Entr Loss (ft) * 0.46 *
* Delta WS (ft) * 3.01 * Q Weir (cfs) * 73.28 *
* E.G. IC (ft) * 485.12 * Weir Sta Lft (ft) * 50.55 *
* E.G. OC (ft) * 485.02 * Weir Sta Rgt (ft) * 84.26 *
* Culvert Control * Outlet * Weir Submerg * *
* Culv WS Inlet (ft) * 481.36 * Weir Max Depth (ft) * 1.02 *
* Culv WS Outlet (ft) * 480.33 * Weir Avg Depth (ft) * 0.86 *
* Culv Mnl Depth (ft) * 1.81 * Weir Flow Area (sq ft) * 29.01 *
* Culv Crt Depth (ft) * 3.00 * Min El Weir Flow (ft) * 484.01 *
*****

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Note: Culvert critical depth exceeds the height of the culvert.
Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.

CROSS SECTION

RIVER: Unnamed_Trib
REACH: Downstream_Reach RS: 70.8049

INPUT

Description: Downstream section from Columbia Trail
Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	483.44	4.73	483.36	9.45	483.14	14.18	482.92	18.9	482.64
23.63	482.49	28.35	482.41	33.08	482.32	37.8	482.23	42.53	482.04
47.25	481.69	51.98	481.33	52.35	480.309	53.44	477.3	56.7	477.2
59.9	477.4	61.1	480.765	61.43	481.69	66.15	482.53	70.25	482.97
74.36	483	78.46	483.08	82.56	483.16	86.66	482.9		

Manning's n values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	52.35	.035	61.1	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
52.35 61.1 14.73 14.33 13.59 .3 .5
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Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 52.07 481.96 F
 61.39 86.66 481.96 F

CROSS SECTION OUTPUT Profile #5-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	481.35	0.080	0.035	0.080
* Vel Head (ft)	0.13	0.080	0.035	0.080
* W.S. Elev (ft)	481.22	14.73	14.33	13.59
* Crit w.s. (ft)	479.01	0.15	30.70	0.04
* E.G. Slope (ft/ft)	0.001484	0.15	30.70	0.04
* Q Total (cfs)	88.00	0.03	87.96	0.00
* Top width (ft)	9.24	0.33	8.75	0.16
* Vel Total (ft/s)	2.85	0.23	2.87	0.13
* Max Chl Dpth (ft)	4.02	0.53	3.51	0.23
* Conv. Total (cfs)	2284.3	0.9	2283.3	0.1
* Length wtd. (ft)	14.30	0.82	13.24	0.49
* Min Ch El (ft)	477.20	0.02	0.21	0.01
* Alpha	1.01	86.66	0.00	0.00
* Frctn Loss (ft)	0.05	0.01	0.02	0.01
* C & E Loss (ft)	0.13	0.01	0.01	0.01

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #10-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	481.61	0.080	0.035	0.080
* Vel Head (ft)	0.19	0.080	0.035	0.080
* W.S. Elev (ft)	481.42	14.73	14.33	13.59
* Crit w.s. (ft)	479.32	0.20	32.46	0.08
* E.G. Slope (ft/ft)	0.002030	0.28	32.46	0.08
* Q Total (cfs)	113.00	0.07	112.92	0.01
* Top width (ft)	10.58	1.60	8.75	0.23
* Vel Total (ft/s)	3.45	0.33	3.48	0.19
* Max Chl Dpth (ft)	4.22	0.73	3.71	0.33
* Conv. Total (cfs)	2507.9	1.5	2506.1	0.3
* Length wtd. (ft)	14.29	0.82	13.24	0.70
* Min Ch El (ft)	477.20	0.03	0.31	0.01
* Alpha	1.02	86.66	0.00	0.00
* Frctn Loss (ft)	0.06	0.01	0.02	0.01
* C & E Loss (ft)	0.11	0.02	0.01	0.02

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #25-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	481.95	0.080	0.035	0.080
* Vel Head (ft)	0.32	0.080	0.035	0.080
* W.S. Elev (ft)	481.64	14.73	14.33	13.59
* Crit w.s. (ft)	479.78	0.26	34.36	0.14
* E.G. Slope (ft/ft)	0.003160	0.93	34.36	0.14
* Q Total (cfs)	155.00	0.13	154.83	0.04
* Top width (ft)	13.50	4.44	8.75	0.31
* Vel Total (ft/s)	4.46	0.49	4.51	0.30
* Max Chl Dpth (ft)	4.44	0.94	3.93	0.47
* Conv. Total (cfs)	2757.3	2.3	2754.3	0.7
* Length wtd. (ft)	14.29	0.82	13.24	0.86
* Min Ch El (ft)	477.20	0.06	0.51	0.03
* Alpha	1.02	86.66	0.00	0.00
* Frctn Loss (ft)	0.08	0.02	0.03	0.02
* C & E Loss (ft)	0.08	0.03	0.01	0.02

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #50-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	482.14	0.080	0.035	0.080
* Vel Head (ft)	0.47	0.080	0.035	0.080
* W.S. Elev (ft)	481.67	14.73	14.33	13.59
* Crit w.s. (ft)	480.13	0.27	34.59	0.14
* E.G. Slope (ft/ft)	0.004690	1.06	34.59	0.15
* Q Total (cfs)	191.00	0.17	190.78	0.06
* Top width (ft)	13.87	4.79	8.75	0.32
* Vel Total (ft/s)	5.46	0.61	5.51	0.38
* Max Chl Dpth (ft)	4.47	0.97	3.95	0.50
* Conv. Total (cfs)	2789.1	2.4	2785.9	0.8
* Length wtd. (ft)	14.29	0.82	13.24	0.86
* Min Ch El (ft)	477.20	0.10	0.76	0.05
* Alpha	1.02	86.66	0.00	0.00
* Frctn Loss (ft)	0.09	0.03	0.03	0.03
* C & E Loss (ft)	0.03	0.05	0.01	0.03

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #100-year flow

	Element	Left OB	Channel	Right OB
* E.G. Elev (ft)	482.51	0.080	0.035	0.080
* Vel Head (ft)	0.74	0.080	0.035	0.080
* W.S. Elev (ft)	481.77	14.73	14.33	13.59
* Crit w.s. (ft)	480.62	0.30	35.51	0.17
* E.G. Slope (ft/ft)	0.007127	1.63	35.51	0.20
* Q Total (cfs)	246.00	0.24	245.66	0.09
* Top width (ft)	15.74	6.20	8.75	0.79

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* Vel Total (ft/s)	* 6.84	* Avg. Vel. (ft/s)	* 0.80	* 6.92	* 0.54
* Max Chl Dpth (ft)	* 4.57	* Hydr. Depth (ft)	* 1.08	* 4.06	* 0.60
* Conv. Total (cfs)	* 2913.9	* Conv. (cfs)	* 2.9	* 2909.9	* 1.1
* Length Wtd. (ft)	* 14.29	* Wetted Per. (ft)	* 0.82	* 13.24	* 0.86
* Min Ch El (ft)	* 477.20	* Shear (lb/sq ft)	* 0.16	* 1.19	* 0.09
* Alpha	* 1.02	* Stream Power (lb/ft s)	* 86.66	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.12	* Cum Volume (acre-ft)	* 0.05	* 0.03	* 0.03
* C & E Loss (ft)	* 0.17	* Cum SA (acres)	* 0.05	* 0.01	* 0.03

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: Downstream_Reach RS: 56.47157

INPUT

Description:

Station	Elevation	Data	num=	21	Sta	Elev	Sta	Elev	Sta	Elev
0	481.79	4.87	481.53	9.75	481.49	14.62	481.37	19.49	481.28	
24.37	481.12	29.24	481.05	34.12	480.72	38.99	480.58	43.86	480.36	
48.74	479.97	50	478.5	53.54	477	53.61	479.81	58.48	479.97	
58.56	479.98	63.36	480.35	68.23	480.97	73.1	481.32	77.98	481.41	
82.85	481									

Manning's n	Values	num=	3
Sta	n Val	Sta	n Val
0	.08	48.74	.035
		53.61	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	48.74	53.61		37.32	37.31	.1	.3

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 481.17	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.56	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 480.61	* Reach Len. (ft)	* 37.32	* 37.31	* 38.27
* Crit W.S. (ft)	* 480.61	* Flow Area (sq ft)	* 2.82	* 11.99	* 5.90
* E.G. Slope (ft/ft)	* 0.014680	* Area (sq ft)	* 2.82	* 11.99	* 5.90
* Q Total (cfs)	* 88.00	* Flow (cfs)	* 2.62	* 77.01	* 8.38
* Top Width (ft)	* 27.26	* Top Width (ft)	* 10.63	* 4.87	* 11.76
* Vel Total (ft/s)	* 4.25	* Avg. Vel. (ft/s)	* 0.93	* 6.42	* 1.42
* Max Chl Dpth (ft)	* 3.61	* Hydr. Depth (ft)	* 0.27	* 2.46	* 0.50
* Conv. Total (cfs)	* 726.3	* Conv. (cfs)	* 21.6	* 635.6	* 69.2
* Length Wtd. (ft)	* 37.37	* Wetted Per. (ft)	* 10.65	* 8.59	* 11.79
* Min Ch El (ft)	* 477.00	* Shear (lb/sq ft)	* 0.24	* 1.28	* 0.46
* Alpha	* 2.01	* Stream Power (lb/ft s)	* 82.85	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.20	* Cum Volume (acre-ft)	* 0.01	* 0.01	* 0.00
* C & E Loss (ft)	* 0.12	* Cum SA (acres)	* 0.01	* 0.01	* 0.01

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 481.44	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.57	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 480.87	* Reach Len. (ft)	* 37.32	* 37.31	* 38.27
* Crit W.S. (ft)	* 480.87	* Flow Area (sq ft)	* 6.62	* 13.27	* 9.28
* E.G. Slope (ft/ft)	* 0.014123	* Area (sq ft)	* 6.62	* 13.27	* 9.28
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 7.83	* 89.51	* 15.67
* Top Width (ft)	* 35.53	* Top Width (ft)	* 16.83	* 4.87	* 13.83
* Vel Total (ft/s)	* 3.87	* Avg. Vel. (ft/s)	* 1.18	* 6.74	* 1.69
* Max Chl Dpth (ft)	* 3.87	* Hydr. Depth (ft)	* 0.39	* 2.73	* 0.67
* Conv. Total (cfs)	* 950.9	* Conv. (cfs)	* 65.9	* 753.2	* 131.8
* Length Wtd. (ft)	* 37.40	* Wetted Per. (ft)	* 16.86	* 8.59	* 13.88
* Min Ch El (ft)	* 477.00	* Shear (lb/sq ft)	* 0.35	* 1.36	* 0.59
* Alpha	* 2.43	* Stream Power (lb/ft s)	* 82.85	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.20	* Cum Volume (acre-ft)	* 0.01	* 0.02	* 0.01
* C & E Loss (ft)	* 0.12	* Cum SA (acres)	* 0.02	* 0.01	* 0.01

warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 481.79	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.59	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 481.20	* Reach Len. (ft)	* 37.32	* 37.31	* 38.27
* Crit W.S. (ft)	* 481.20	* Flow Area (sq ft)	* 13.53	* 14.89	* 14.72
* E.G. Slope (ft/ft)	* 0.014089	* Area (sq ft)	* 13.53	* 14.89	* 14.72
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 18.87	* 108.32	* 27.81
* Top Width (ft)	* 51.99	* Top Width (ft)	* 26.87	* 4.87	* 20.25
* Vel Total (ft/s)	* 3.59	* Avg. Vel. (ft/s)	* 1.39	* 7.27	* 1.89
* Max Chl Dpth (ft)	* 4.20	* Hydr. Depth (ft)	* 0.50	* 3.06	* 0.73
* Conv. Total (cfs)	* 1305.9	* Conv. (cfs)	* 159.0	* 912.5	* 234.3
* Length Wtd. (ft)	* 37.44	* Wetted Per. (ft)	* 26.91	* 8.59	* 20.52
* Min Ch El (ft)	* 477.00	* Shear (lb/sq ft)	* 0.44	* 1.52	* 0.63
* Alpha	* 2.93	* Stream Power (lb/ft s)	* 82.85	* 0.00	* 0.00

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* Frctn Loss (ft) * 0.20 * Cum Volume (acre-ft) * 0.02 * 0.02 * 0.01 *
 * C & E Loss (ft) * 0.12 * Cum SA (acres) * 0.03 * 0.01 * 0.02 *

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: Divided flow computed for this cross-section.
 Warning: The cross-section end points had to be extended vertically for the computed water surface.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 482.02	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.42	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 481.60	* Reach Len. (ft)	* 37.32	* 37.31	* 38.27
* Crit W.S. (ft)	* 481.60	* Flow Area (sq ft)	* 27.64	* 16.82	* 25.15
* E.G. Slope (ft/ft)	* 0.010065	* Area (sq ft)	* 27.64	* 16.82	* 25.15
* Q Total (cfs)	* 191.00	* Flow (cfs)	* 37.12	* 112.14	* 41.74
* Top width (ft)	* 79.25	* Top width (ft)	* 45.14	* 4.87	* 29.24
* Vel Total (ft/s)	* 2.74	* Avg. Vel. (ft/s)	* 1.34	* 6.67	* 1.66
* Max Chl Dpth (ft)	* 4.60	* Hydr. Depth (ft)	* 0.61	* 3.45	* 0.86
* Conv. Total (cfs)	* 1903.8	* Conv. (cfs)	* 370.0	* 1117.8	* 416.0
* Length wtd. (ft)	* 37.47	* Wetted Per. (ft)	* 45.18	* 8.59	* 29.93
* Min Ch El (ft)	* 477.00	* Shear (lb/sq ft)	* 0.38	* 1.23	* 0.53
* Alpha	* 3.59	* Stream Power (lb/ft s)	* 82.85	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.18	* Cum Volume (acre-ft)	* 0.03	* 0.02	* 0.02
* C & E Loss (ft)	* 0.06	* Cum SA (acres)	* 0.04	* 0.01	* 0.02

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The cross-section end points had to be extended vertically for the computed water surface.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 482.23	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.41	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 481.82	* Reach Len. (ft)	* 37.32	* 37.31	* 38.27
* Crit W.S. (ft)	* 481.82	* Flow Area (sq ft)	* 38.06	* 17.90	* 31.60
* E.G. Slope (ft/ft)	* 0.010132	* Area (sq ft)	* 38.06	* 17.90	* 31.60
* Q Total (cfs)	* 246.00	* Flow (cfs)	* 60.27	* 124.75	* 60.98
* Top width (ft)	* 82.85	* Top width (ft)	* 48.74	* 4.87	* 29.24
* Vel Total (ft/s)	* 2.81	* Avg. Vel. (ft/s)	* 1.58	* 6.97	* 1.93
* Max Chl Dpth (ft)	* 4.82	* Hydr. Depth (ft)	* 0.78	* 3.68	* 1.08
* Conv. Total (cfs)	* 2443.9	* Conv. (cfs)	* 598.7	* 1239.4	* 605.8
* Length wtd. (ft)	* 37.49	* Wetted Per. (ft)	* 48.81	* 8.59	* 30.15
* Min Ch El (ft)	* 477.00	* Shear (lb/sq ft)	* 0.49	* 1.32	* 0.66
* Alpha	* 3.32	* Stream Power (lb/ft s)	* 82.85	* 0.00	* 0.00
* Frctn Loss (ft)	* 0.18	* Cum Volume (acre-ft)	* 0.04	* 0.02	* 0.03
* C & E Loss (ft)	* 0.06	* Cum SA (acres)	* 0.04	* 0.01	* 0.03

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
 Warning: The cross-section end points had to be extended vertically for the computed water surface.
 Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
 Warning: The cross section had to be extended vertically during the critical depth calculations.
 Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
 Warning: The parabolic search method failed to converge on critical depth. The program will try the cross section slice/secant method to find critical depth.

CROSS SECTION

RIVER: Unnamed_Trib
 REACH: Downstream_Reach RS: 19.15813

INPUT

Description:

Station	Elevation	Data	num=	25	Sta	Elev	Sta	Elev	Sta	Elev
0	481.11	4.87	481.14	9.74	481.03	14.62	481.13	19.49	481.29	
24.36	480.9	29.23	480.77	34.11	480.59	38.98	480.05	43.85	479.6	
48.72	479.44	48.95	479.44	53.36	479.42	53.59	479.42	56	478	
58.47	476.9	63.34	479.57	68.21	479.8	73.08	480.23	77.41	480.51	
81.74	480.66	86.06	480.93	90.39	481.38	94.72	481.49	99.04	481.5	

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	53.36	.035	63.34	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	53.36	63.34		15.03	19.16	.1	.3

CROSS SECTION OUTPUT Profile #5-year flow

* E.G. Elev (ft)	* 480.55	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.16	* wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 480.39	* Reach Len. (ft)	* *	* *	* *
* Crit W.S. (ft)	* 479.58	* Flow Area (sq ft)	* 11.94	* 22.02	* 5.44
* E.G. Slope (ft/ft)	* 0.002710	* Area (sq ft)	* 11.94	* 22.02	* 5.44
* Q Total (cfs)	* 88.00	* Flow (cfs)	* 8.96	* 75.98	* 3.07

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* Top Width (ft)	* 39.61	* Top width (ft)	* 17.43	* 9.98	* 12.19
* Vel Total (ft/s)	* 2.23	* Avg. vel. (ft/s)	* 0.75	* 3.45	* 0.56
* Max Chl Dpth (ft)	* 3.49	* Hydr. Depth (ft)	* 0.68	* 2.21	* 0.45
* Conv. Total (cfs)	* 1690.3	* Conv. (cfs)	* 172.0	* 1459.3	* 58.9
* Length wtd. (ft)		* Wetted Per. (ft)	* 17.48	* 11.29	* 12.22
* Min Ch El (ft)	* 476.90	* Shear (lb/sq ft)	* 0.12	* 0.33	* 0.08
* Alpha	* 2.07	* Stream Power (lb/ft s)	* 99.04	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)			
* C & E Loss (ft)		* Cum SA (acres)			

CROSS SECTION OUTPUT Profile #10-year flow

* E.G. Elev (ft)	* 480.85	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.18	* Wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 480.67	* Reach Len. (ft)			
* Crit W.S. (ft)	* 479.88	* Flow Area (sq ft)	* 17.20	* 24.80	* 9.61
* E.G. Slope (ft/ft)	* 0.002710	* Area (sq ft)	* 17.20	* 24.80	* 9.61
* Q Total (cfs)	* 113.00	* Flow (cfs)	* 14.38	* 92.63	* 5.99
* Top width (ft)	* 49.85	* Top width (ft)	* 21.35	* 9.98	* 18.52
* Vel Total (ft/s)	* 2.19	* Avg. vel. (ft/s)	* 0.84	* 3.74	* 0.62
* Max Chl Dpth (ft)	* 3.77	* Hydr. Depth (ft)	* 0.81	* 2.48	* 0.52
* Conv. Total (cfs)	* 2170.6	* Conv. (cfs)	* 276.0	* 1779.3	* 115.0
* Length wtd. (ft)		* Wetted Per. (ft)	* 21.40	* 11.29	* 18.55
* Min Ch El (ft)	* 476.90	* Shear (lb/sq ft)	* 0.14	* 0.37	* 0.09
* Alpha	* 2.41	* Stream Power (lb/ft s)	* 99.04	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)			
* C & E Loss (ft)		* Cum SA (acres)			

CROSS SECTION OUTPUT Profile #25-year flow

* E.G. Elev (ft)	* 481.24	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.20	* Wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 481.04	* Reach Len. (ft)			
* Crit W.S. (ft)	* 480.23	* Flow Area (sq ft)	* 27.15	* 28.51	* 17.56
* E.G. Slope (ft/ft)	* 0.002715	* Area (sq ft)	* 27.15	* 28.51	* 17.56
* Q Total (cfs)	* 155.00	* Flow (cfs)	* 24.15	* 116.98	* 13.87
* Top width (ft)	* 65.36	* Top width (ft)	* 31.61	* 9.98	* 23.77
* Vel Total (ft/s)	* 2.12	* Avg. vel. (ft/s)	* 0.89	* 4.10	* 0.79
* Max Chl Dpth (ft)	* 4.14	* Hydr. Depth (ft)	* 0.86	* 2.86	* 0.74
* Conv. Total (cfs)	* 2974.8	* Conv. (cfs)	* 463.6	* 2245.0	* 266.2
* Length wtd. (ft)		* Wetted Per. (ft)	* 31.67	* 11.29	* 23.82
* Min Ch El (ft)	* 476.90	* Shear (lb/sq ft)	* 0.15	* 0.43	* 0.12
* Alpha	* 2.88	* Stream Power (lb/ft s)	* 99.04	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)			
* C & E Loss (ft)		* Cum SA (acres)			

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #50-year flow

* E.G. Elev (ft)	* 481.49	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.21	* Wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 481.28	* Reach Len. (ft)			
* Crit W.S. (ft)	* 480.46	* Flow Area (sq ft)	* 38.12	* 30.95	* 23.66
* E.G. Slope (ft/ft)	* 0.002713	* Area (sq ft)	* 38.12	* 30.95	* 23.66
* Q Total (cfs)	* 191.00	* Flow (cfs)	* 35.54	* 134.07	* 21.39
* Top width (ft)	* 89.19	* Top width (ft)	* 53.08	* 9.98	* 26.12
* Vel Total (ft/s)	* 2.06	* Avg. vel. (ft/s)	* 0.93	* 4.33	* 0.90
* Max Chl Dpth (ft)	* 4.38	* Hydr. Depth (ft)	* 0.72	* 3.10	* 0.91
* Conv. Total (cfs)	* 3667.1	* Conv. (cfs)	* 682.4	* 2574.0	* 410.6
* Length wtd. (ft)		* Wetted Per. (ft)	* 53.34	* 11.29	* 26.19
* Min Ch El (ft)	* 476.90	* Shear (lb/sq ft)	* 0.12	* 0.46	* 0.15
* Alpha	* 3.16	* Stream Power (lb/ft s)	* 99.04	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)			
* C & E Loss (ft)		* Cum SA (acres)			

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #100-year flow

* E.G. Elev (ft)	* 481.84	* Element	* Left OB	* Channel	* Right OB
* Vel Head (ft)	* 0.22	* Wt. n-Val.	* 0.080	* 0.035	* 0.080
* W.S. Elev (ft)	* 481.62	* Reach Len. (ft)			
* Crit W.S. (ft)	* 480.74	* Flow Area (sq ft)	* 55.92	* 34.28	* 33.95
* E.G. Slope (ft/ft)	* 0.002712	* Area (sq ft)	* 55.92	* 34.28	* 33.95
* Q Total (cfs)	* 246.00	* Flow (cfs)	* 55.41	* 158.94	* 31.65
* Top width (ft)	* 99.04	* Top width (ft)	* 53.36	* 9.98	* 35.70
* Vel Total (ft/s)	* 1.98	* Avg. vel. (ft/s)	* 0.99	* 4.64	* 0.93
* Max Chl Dpth (ft)	* 4.72	* Hydr. Depth (ft)	* 1.05	* 3.43	* 0.95
* Conv. Total (cfs)	* 4723.4	* Conv. (cfs)	* 1063.9	* 3051.8	* 607.7
* Length wtd. (ft)		* Wetted Per. (ft)	* 53.95	* 11.29	* 35.89
* Min Ch El (ft)	* 476.90	* Shear (lb/sq ft)	* 0.18	* 0.51	* 0.16
* Alpha	* 3.62	* Stream Power (lb/ft s)	* 99.04	* 0.00	* 0.00
* Frctn Loss (ft)		* Cum Volume (acre-ft)			
* C & E Loss (ft)		* Cum SA (acres)			

SUMMARY OF MANNING'S N VALUES

River:Unnamed_Trib

* Reach	* River Sta.	* n1	* n2	* n3
*East_Reach	* 1292.07	* .08*	* .035*	* .08*
*East_Reach	* 1238.105	* .08*	* .035*	* .08*
*East_Reach	* 1109.812	* .08*	* .035*	* .08*
*East_Reach	* 998.8233	* .08*	* .035*	* .08*
*East_Reach	* 895.5209	* .08*	* .035*	* .08*
*East_Reach	* 797.1697	* .08*	* .035*	* .08*
*East_Reach	* 704.597	* .08*	* .035*	* .08*

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*East_Reach	*	599.0162	*	.08*	.035*	.08*
*East_Reach	*	501.542	*	.08*	.035*	.08*
*East_Reach	*	413.4141	*	.08*	.035*	.08*
*East_Reach	*	296.9181	*	.08*	.035*	.08*
*East_Reach	*	168.1203	*	.08*	.035*	.08*
*West_Reach	*	2088.37	*	.08*	.035*	.08*
*West_Reach	*	1957.225	*	.08*	.035*	.08*
*West_Reach	*	1815.076	*	.08*	.035*	.08*
*West_Reach	*	1658.443	*	.08*	.035*	.08*
*West_Reach	*	1498.833	*	.08*	.035*	.08*
*West_Reach	*	1396.434	*	.08*	.035*	.08*
*West_Reach	*	1332.697	*	.08*	.035*	.08*
*West_Reach	*	1318.95	*	*Culvert	*	*
*West_Reach	*	1305.207	*	.08*	.035*	.08*
*West_Reach	*	1293.297	*	.08*	.035*	.08*
*West_Reach	*	1271.9	*	*Culvert	*	*
*West_Reach	*	1250.517	*	.08*	.035*	.08*
*West_Reach	*	1165.394	*	.08*	.035*	.08*
*West_Reach	*	1089.717	*	.08*	.035*	.08*
*West_Reach	*	872.5471	*	.08*	.035*	.08*
*West_Reach	*	685.446	*	.08*	.035*	.08*
*West_Reach	*	523.4422	*	.08*	.035*	.08*
*West_Reach	*	369.1193	*	.08*	.035*	.08*
*West_Reach	*	232.1771	*	.08*	.035*	.08*
*West_Reach	*	110.1391	*	.08*	.035*	.08*
Downstream_Reach	*	508.2322	*	.08*	.035*	.08*
Downstream_Reach	*	493.9474	*	.08*	.035*	.08*
Downstream_Reach	*	477.6732	*	.08*	.035*	.08*
Downstream_Reach	*	428.4629	*	.08*	.035*	.08*
Downstream_Reach	*	389.8977	*	.08*	.035*	.08*
Downstream_Reach	*	287.04	*	*Culvert	*	*
Downstream_Reach	*	184.1871	*	.08*	.035*	.08*
Downstream_Reach	*	164.443	*	.08*	.035*	.08*
Downstream_Reach	*	135.2617	*	.08*	.035*	.08*
Downstream_Reach	*	134.7241	*	.08*	.035*	.08*
Downstream_Reach	*	116.8404	*	.08*	.035*	.08*
Downstream_Reach	*	107.6303	*	.08*	.035*	.08*
Downstream_Reach	*	89.2	*	*Culvert	*	*
Downstream_Reach	*	70.8049	*	.08*	.035*	.08*
Downstream_Reach	*	56.47157	*	.08*	.035*	.08*
Downstream_Reach	*	19.15813	*	.08*	.035*	.08*

SUMMARY OF REACH LENGTHS

River: Unnamed_Trib

* Reach	* River Sta.	* Left	* Channel	* Right
East_Reach	1292.07	62.53	53.97*	43.69*
East_Reach	1238.105	127.59	128.29*	125.21*
East_Reach	1109.812	112.3	110.99*	110.93*
East_Reach	998.8233	106.16	103.3*	106.29*
East_Reach	895.5209	101.5	98.35*	98.55*
East_Reach	797.1697	88.84	92.57*	96.42*
East_Reach	704.597	106.51	105.58*	104.43*
East_Reach	599.0162	96.22	97.47*	91.93*
East_Reach	501.542	87.71	88.13*	91.91*
East_Reach	413.4141	122.18	116.5*	106.66*
East_Reach	296.9181	100.47	128.8*	133.29*
East_Reach	168.1203	69.55	168.12*	65.04*
West_Reach	2088.37	124.04	131.14*	134.32*
West_Reach	1957.225	112.25	142.15*	161.69*
West_Reach	1815.076	128.86	156.63*	148.33*
West_Reach	1658.443	166.53	159.61*	159.37*
West_Reach	1498.833	106.67	102.4*	91.15*
West_Reach	1396.434	44.71	63.74*	73.16*
West_Reach	1332.697	32.12	27.49*	13.18*
*West_Reach	1318.95	*culvert	*	*
West_Reach	1305.207	28.34	11.91*	12.11*
West_Reach	1293.297	51.56	42.78*	26.92*
*West_Reach	1271.9	*culvert	*	*
West_Reach	1250.517	85.08	85.12*	91.69*
West_Reach	1165.394	74.72	75.68*	65.45*
West_Reach	1089.717	139.15	217.17*	205.01*
West_Reach	872.5471	173.53	187.1*	150.89*
West_Reach	685.446	142.56	162*	152.69*
West_Reach	523.4422	155.73	154.32*	143.88*
West_Reach	369.1193	139.15	136.94*	124.26*
West_Reach	232.1771	120.64	122.04*	104.9*
West_Reach	110.1391	49.64	99.47*	45.57*
Downstream_Reach	508.2322	13.07*	14.27*	15.75*
Downstream_Reach	493.9474	16.96*	16.28*	16.13*
Downstream_Reach	477.6732	55.19*	49.11*	44.92*
Downstream_Reach	428.4629	49.88*	38.43*	29.75*
Downstream_Reach	389.8977	200.68*	205.91*	209.36*
Downstream_Reach	287.04	*culvert	*	*
Downstream_Reach	184.1871	18.27*	19.71*	19.65*
Downstream_Reach	164.443	27.9*	29.72*	31.67*
Downstream_Reach	135.2617	17.12*	135.26*	15.26*
Downstream_Reach	134.7241	8.26*	17.88*	26.53*
Downstream_Reach	116.8404	4.92*	9.21*	19.08*
Downstream_Reach	107.6303	32.27*	36.83*	37.82*
Downstream_Reach	89.2	*culvert	*	*
Downstream_Reach	70.8049	14.73*	14.33*	13.59*
Downstream_Reach	56.47157	37.32*	37.31*	38.27*
Downstream_Reach	19.15813	15.03*	19.16*	12.03*

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS

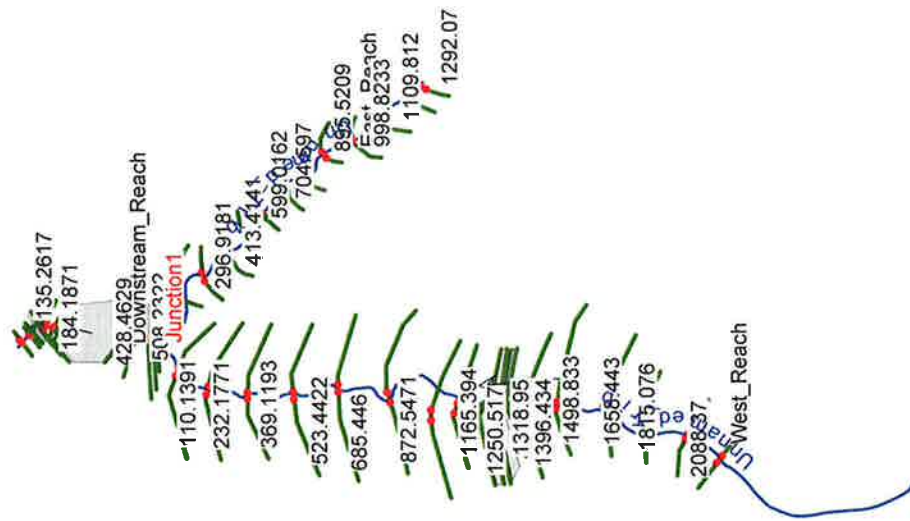
River: Unnamed_Trib

CalifonFloodplainSt

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*****
* Reach * River Sta. * Contr. * Expan. *
*****
*East_Reach * 1292.07 * .1 * .3
*East_Reach * 1238.105 * .1 * .3
*East_Reach * 1109.812 * .1 * .3
*East_Reach * 998.8233 * .1 * .3
*East_Reach * 895.5209 * .1 * .3
*East_Reach * 797.169 * .1 * .3
*East_Reach * 704.597 * .1 * .3
*East_Reach * 599.0162 * .1 * .3
*East_Reach * 501.542 * .1 * .3
*East_Reach * 413.4141 * .1 * .3
*East_Reach * 296.9181 * .1 * .3
*East_Reach * 168.1203 * .1 * .3
*West_Reach * 2088.37 * .1 * .3
*West_Reach * 1957.225 * .1 * .3
*West_Reach * 1815.076 * .1 * .3
*West_Reach * 1658.443 * .1 * .3
*West_Reach * 1498.833 * .1 * .3
*West_Reach * 1396.434 * .3 * .5
*West_Reach * 1332.697 * .3 * .5
*West_Reach * 1318.95 *Culvert * .3 * .5
*West_Reach * 1305.207 * .3 * .5
*West_Reach * 1293.297 * .3 * .5
*West_Reach * 1271.0 *Culvert * .3 * .5
*West_Reach * 1250.517 * .3 * .5
*West_Reach * 1165.394 * .3 * .5
*West_Reach * 1089.717 * .1 * .3
*West_Reach * 872.5471 * .1 * .3
*West_Reach * 685.446 * .1 * .3
*West_Reach * 523.4422 * .1 * .3
*West_Reach * 369.1193 * .1 * .3
*West_Reach * 232.1771 * .1 * .3
*West_Reach * 110.1391 * .1 * .3
*Downstream_Reach * 508.2322 * .1 * .3
*Downstream_Reach * 493.9474 * .1 * .3
*Downstream_Reach * 477.6732 * .1 * .3
*Downstream_Reach * 428.4629 * .3 * .5
*Downstream_Reach * 389.8977 * .3 * .5
*Downstream_Reach * 287.04 *Culvert * .3 * .5
*Downstream_Reach * 184.1871 * .3 * .5
*Downstream_Reach * 164.443 * .1 * .3
*Downstream_Reach * 135.2617 * .1 * .3
*Downstream_Reach * 134.7241 * .1 * .3
*Downstream_Reach * 116.8404 * .3 * .5
*Downstream_Reach * 107.6303 * .3 * .5
*Downstream_Reach * 89.2 *Culvert * .3 * .5
*Downstream_Reach * 70.8049 * .3 * .5
*Downstream_Reach * 56.47157 * .1 * .3
*Downstream_Reach * 19.15813 * .1 * .3
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HEC-RAS Plan, Existing River: Unnamed Trib Reach: West_Reach

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/R)	Vel Chnt (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chi
West_Reach	2088.37	5-year flow	83.0	728.17	729.41	729.41	729.79	0.020435	4.97	16.71	22.37	1.01
West_Reach	2088.37	10-year flow	106.0	728.17	729.55	729.55	729.99	0.019553	5.29	20.02	23.52	1.01
West_Reach	2088.37	25-year flow	145.0	728.17	729.77	729.77	730.28	0.018542	5.74	25.27	25.24	1.01
West_Reach	2088.37	50-year flow	177.0	728.17	729.93	729.93	730.49	0.017927	6.03	29.35	26.51	1.01
West_Reach	2088.37	100-year flow	213.0	728.17	730.09	730.09	730.71	0.017195	6.29	33.86	27.84	1.00
West_Reach	1957.225	5-year flow	83.0	705.21	706.78	706.78	707.11	0.015890	4.77	21.89	40.98	0.91
West_Reach	1957.225	10-year flow	106.0	705.21	706.91	706.91	707.28	0.015373	5.09	27.53	44.49	0.91
West_Reach	1957.225	25-year flow	145.0	705.21	707.09	707.09	707.52	0.015123	5.84	35.49	46.21	0.93
West_Reach	1957.225	50-year flow	177.0	705.21	707.21	707.21	707.70	0.015125	6.05	41.35	47.43	0.95
West_Reach	1957.225	100-year flow	213.0	705.21	707.36	707.36	707.88	0.014497	6.36	48.30	48.84	0.94
West_Reach	1815.076	5-year flow	83.0	684.85	686.17	686.17	686.61	0.019305	5.32	15.59	135.90	1.01
West_Reach	1815.076	10-year flow	106.0	684.85	686.34	686.34	686.83	0.018298	5.63	18.85	140.46	1.00
West_Reach	1815.076	25-year flow	145.0	684.85	686.58	686.58	687.17	0.017062	6.20	23.51	148.14	1.00
West_Reach	1815.076	50-year flow	177.0	684.85	686.75	686.75	687.43	0.016170	6.61	27.19	153.34	0.99
West_Reach	1815.076	100-year flow	213.0	684.85	686.93	686.93	687.69	0.015386	7.00	31.23	157.85	0.99
West_Reach	1658.443	5-year flow	83.0	649.30	650.47	650.47	650.82	0.020726	4.73	17.56	25.65	1.01
West_Reach	1658.443	10-year flow	106.0	649.30	650.61	650.61	650.99	0.020172	4.95	21.42	29.16	1.01
West_Reach	1658.443	25-year flow	145.0	649.30	650.80	650.80	651.25	0.018642	5.35	27.43	33.47	1.00
West_Reach	1658.443	50-year flow	177.0	649.30	650.94	650.94	651.43	0.017891	5.66	32.07	36.09	1.00
West_Reach	1658.443	100-year flow	213.0	649.30	651.08	651.08	651.62	0.016945	5.92	37.44	38.61	0.99
West_Reach	1498.833	5-year flow	83.0	614.73	616.32	616.32	616.85	0.018883	5.81	14.30	13.86	1.01
West_Reach	1498.833	10-year flow	106.0	614.73	616.53	616.53	617.11	0.018086	6.11	17.36	15.08	1.00
West_Reach	1498.833	25-year flow	145.0	614.73	616.83	616.83	617.50	0.017405	6.54	22.16	16.81	1.00
West_Reach	1498.833	50-year flow	177.0	614.73	617.05	617.05	617.77	0.016989	6.83	25.90	18.05	1.01
West_Reach	1498.833	100-year flow	213.0	614.73	617.26	617.26	618.05	0.016715	7.13	29.86	19.27	1.01
West_Reach	1396.434	5-year flow	83.0	600.18	601.74	601.74	602.27	0.018814	5.85	14.19	13.54	1.01
West_Reach	1396.434	10-year flow	106.0	600.18	601.95	601.95	602.55	0.018095	6.17	17.17	14.84	1.01
West_Reach	1396.434	25-year flow	145.0	600.18	602.26	602.26	602.94	0.017305	6.62	21.91	16.25	1.00
West_Reach	1396.434	50-year flow	177.0	600.18	602.48	602.48	603.22	0.016973	6.93	25.54	17.38	1.01
West_Reach	1396.434	100-year flow	213.0	600.18	602.70	602.70	603.51	0.016604	7.22	29.51	18.57	1.01
West_Reach	1332.697	5-year flow	83.0	588.00	592.31	589.75	592.39	0.000611	2.31	38.76	12.81	0.21
West_Reach	1332.697	10-year flow	106.0	588.00	593.08	590.02	593.17	0.000534	2.43	50.06	13.57	0.20
West_Reach	1332.697	25-year flow	145.0	588.00	594.07	590.39	594.18	0.000519	2.72	68.83	32.72	0.20
West_Reach	1332.697	50-year flow	177.0	588.00	594.32	590.69	594.46	0.000649	3.13	77.51	35.94	0.23
West_Reach	1332.697	100-year flow	213.0	588.00	594.48	591.00	594.67	0.000640	3.63	83.44	37.47	0.26
West_Reach	1318.95		Culvert									
West_Reach	1305.207	5-year flow	83.0	586.82	588.65	588.20	589.95	0.007024	4.40	18.86	12.07	0.62
West_Reach	1305.207	10-year flow	106.0	586.82	589.56	588.41	589.75	0.002828	3.48	30.48	13.34	0.41
West_Reach	1305.207	25-year flow	145.0	586.82	590.92	588.73	591.05	0.001322	2.91	49.84	15.22	0.28
West_Reach	1305.207	50-year flow	177.0	586.82	591.95	588.99	592.06	0.000879	2.67	66.43	18.09	0.23
West_Reach	1305.207	100-year flow	213.0	586.82	592.60	589.24	592.71	0.000768	2.75	83.62	40.47	0.22
West_Reach	1293.297	5-year flow	83.0	584.00	588.74	586.85	588.82	0.000888	2.26	36.87	15.67	0.23
West_Reach	1293.297	10-year flow	106.0	584.00	589.61	586.96	589.68	0.000598	2.21	48.17	16.82	0.20
West_Reach	1293.297	25-year flow	145.0	584.00	590.94	587.39	591.02	0.000405	2.23	65.50	27.73	0.17
West_Reach	1293.297	50-year flow	177.0	584.00	591.97	587.65	592.03	0.000247	1.94	125.08	61.77	0.14
West_Reach	1293.297	100-year flow	213.0	584.00	592.62	587.91	592.68	0.000225	1.99	168.82	73.53	0.14
West_Reach	1271.9		Culvert									
West_Reach	1250.517	5-year flow	83.0	580.15	582.41	582.41	583.39	0.030027	7.93	10.47	5.36	1.00
West_Reach	1250.517	10-year flow	106.0	580.15	582.84	582.84	583.88	0.029195	8.20	12.92	6.27	1.01
West_Reach	1250.517	25-year flow	145.0	580.15	583.43	583.43	584.56	0.027123	8.50	17.05	7.56	1.00
West_Reach	1250.517	50-year flow	177.0	580.15	583.83	583.83	585.02	0.025111	8.73	20.37	9.07	0.99
West_Reach	1250.517	100-year flow	213.0	580.15	584.23	584.23	585.47	0.023207	8.94	24.26	10.69	0.98
West_Reach	1165.394	5-year flow	83.0	574.62	575.57	575.57	575.86	0.022244	4.29	19.38	35.19	1.01
West_Reach	1165.394	10-year flow	106.0	574.62	575.67	575.67	576.01	0.021029	4.65	22.96	37.05	1.01
West_Reach	1165.394	25-year flow	145.0	574.62	575.84	575.84	576.23	0.018472	5.06	29.73	46.57	0.98
West_Reach	1165.394	50-year flow	177.0	574.62	575.97	575.97	576.39	0.016524	5.28	36.31	53.84	0.95
West_Reach	1165.394	100-year flow	213.0	574.62	576.10	576.10	576.56	0.015210	5.51	43.78	61.56	0.93
West_Reach	1089.717	5-year flow	83.0	568.24	569.10	569.10	569.38	0.021784	4.28	19.48	36.04	1.00
West_Reach	1089.717	10-year flow	106.0	568.24	569.20	569.20	569.53	0.020457	4.61	23.57	45.13	1.00
West_Reach	1089.717	25-year flow	145.0	568.24	569.38	569.38	569.74	0.016576	4.86	33.66	63.68	0.93
West_Reach	1089.717	50-year flow	177.0	568.24	569.50	569.50	569.89	0.015198	5.09	41.74	70.57	0.92
West_Reach	1089.717	100-year flow	213.0	568.24	569.62	569.62	570.04	0.014452	5.35	50.14	75.49	0.91
West_Reach	872.5471	5-year flow	83.0	548.68	549.88	549.88	550.18	0.020750	4.36	19.68	40.02	0.99
West_Reach	872.5471	10-year flow	106.0	548.68	550.01	550.01	550.33	0.018988	4.57	25.05	45.58	0.97
West_Reach	872.5471	25-year flow	145.0	548.68	550.17	550.17	550.53	0.017681	4.93	33.57	57.02	0.96
West_Reach	872.5471	50-year flow	177.0	548.68	550.28	550.28	550.68	0.016945	5.24	39.92	60.44	0.96
West_Reach	872.5471	100-year flow	213.0	548.68	550.39	550.39	550.84	0.016425	5.56	46.75	64.10	0.96

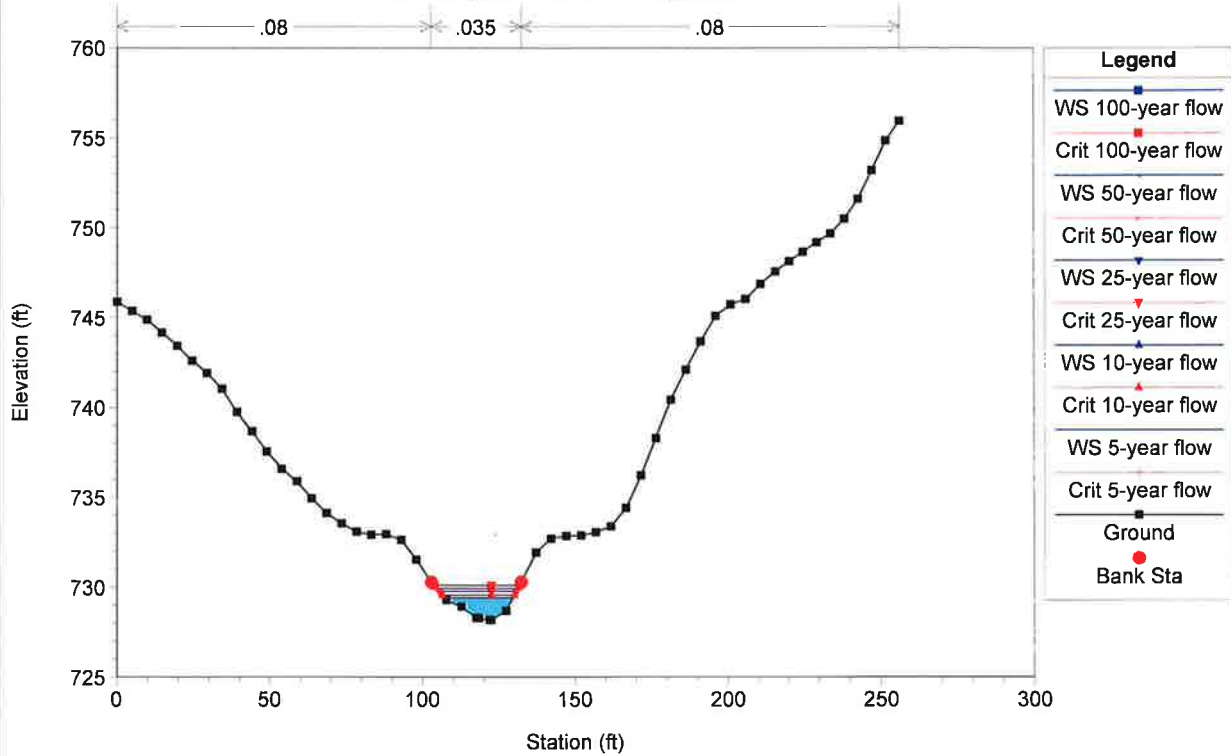
HEC-RAS Plan: Existing River: Unnamed_Trib Reach: West_Reach (Continued)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
West_Reach	885.446	5-year flow	83.0	529.94	531.29	531.29	531.72	0.019556	5.20	15.95	19.28	1.01
West_Reach	885.446	10-year flow	106.0	529.94	531.46	531.46	531.93	0.018980	5.50	19.26	20.81	1.01
West_Reach	885.446	25-year flow	145.0	529.94	531.70	531.70	532.24	0.018174	5.91	24.55	23.07	1.01
West_Reach	885.446	50-year flow	177.0	529.94	531.87	531.87	532.47	0.017569	6.18	28.64	24.85	1.01
West_Reach	885.446	100-year flow	213.0	529.94	532.03	532.03	532.69	0.017055	6.55	32.61	26.54	1.01
West_Reach	523.4422	5-year flow	83.0	517.03	518.54	518.54	519.01	0.019288	5.55	14.96	15.93	1.01
West_Reach	523.4422	10-year flow	106.0	517.03	518.73	518.73	519.26	0.018587	5.82	18.20	17.53	1.01
West_Reach	523.4422	25-year flow	145.0	517.03	519.04	519.04	519.80	0.018039	6.01	24.11	21.88	1.00
West_Reach	523.4422	50-year flow	177.0	517.03	519.22	519.22	519.82	0.017836	6.22	28.50	25.19	1.01
West_Reach	523.4422	100-year flow	213.0	517.03	519.39	519.39	520.05	0.016820	6.55	32.99	29.34	1.00
West_Reach	369.1193	5-year flow	83.0	506.59	508.40	508.40	508.95	0.018948	5.97	13.91	12.88	1.01
West_Reach	369.1193	10-year flow	106.0	506.59	508.63	508.63	509.23	0.018323	6.19	17.12	14.63	1.01
West_Reach	369.1193	25-year flow	145.0	506.59	508.95	508.95	509.62	0.017719	6.53	22.22	17.14	1.01
West_Reach	369.1193	50-year flow	177.0	506.59	509.17	509.17	509.88	0.017389	6.77	26.13	18.94	1.01
West_Reach	369.1193	100-year flow	213.0	506.59	509.40	509.40	510.15	0.015834	6.95	30.98	24.69	0.98
West_Reach	232.1771	5-year flow	83.0	499.06	500.58	500.58	501.03	0.019559	5.39	15.40	17.48	1.01
West_Reach	232.1771	10-year flow	106.0	499.06	500.77	500.77	501.26	0.018720	5.62	18.87	19.48	1.01
West_Reach	232.1771	25-year flow	145.0	499.06	501.04	501.04	501.58	0.018235	5.87	24.69	23.41	1.01
West_Reach	232.1771	50-year flow	177.0	499.06	501.22	501.22	501.79	0.018105	6.10	29.04	26.17	1.02
West_Reach	232.1771	100-year flow	213.0	499.06	501.38	501.38	502.01	0.017228	6.37	33.62	28.91	1.01
West_Reach	110.1391	5-year flow	88.0	495.01	495.87	495.87	496.12	0.026692	4.54	26.87	53.68	1.10
West_Reach	110.1391	10-year flow	113.0	495.01	495.96	495.96	496.25	0.026069	4.89	32.02	55.42	1.11
West_Reach	110.1391	25-year flow	155.0	495.01	496.09	496.09	496.45	0.027270	5.48	38.99	57.70	1.16
West_Reach	110.1391	50-year flow	189.0	495.01	496.23	496.19	496.60	0.022120	5.56	47.20	60.32	1.08
West_Reach	110.1391	100-year flow	228.0	495.01	496.38	496.30	496.76	0.018081	5.64	56.81	63.17	1.00

CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

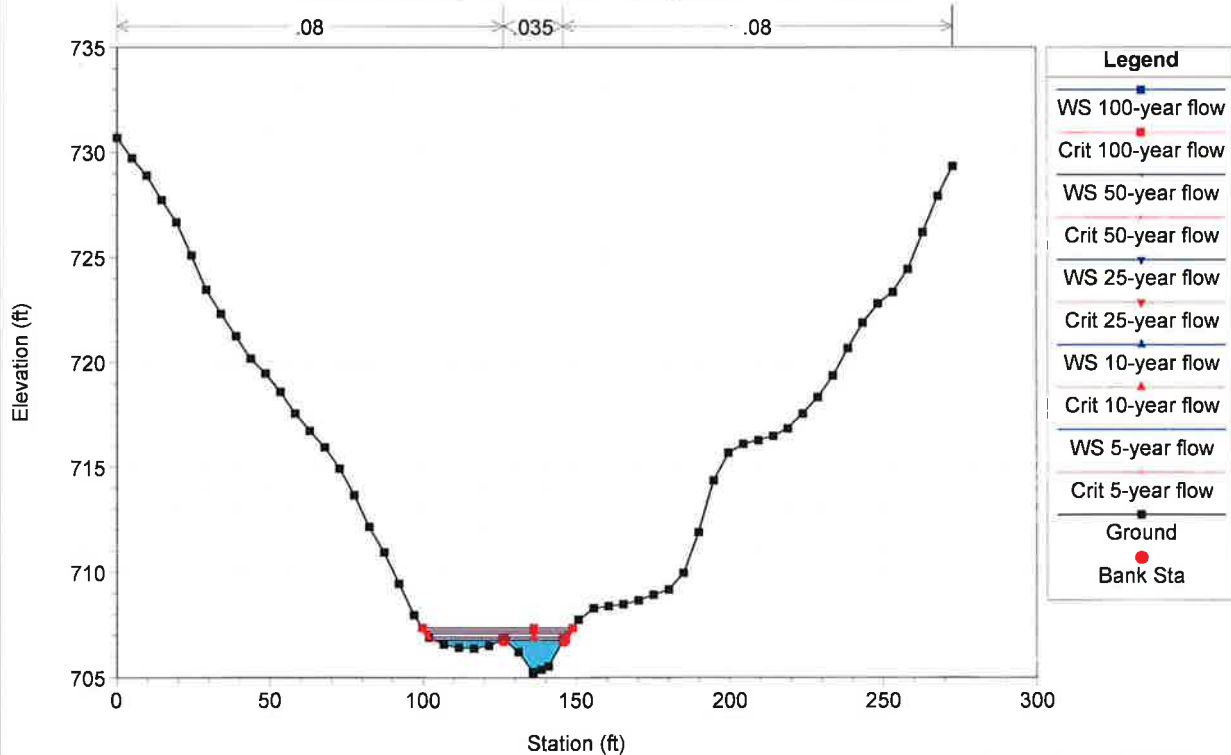
River = Unnamed_Trib Reach = West_Reach RS = 2088.37



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

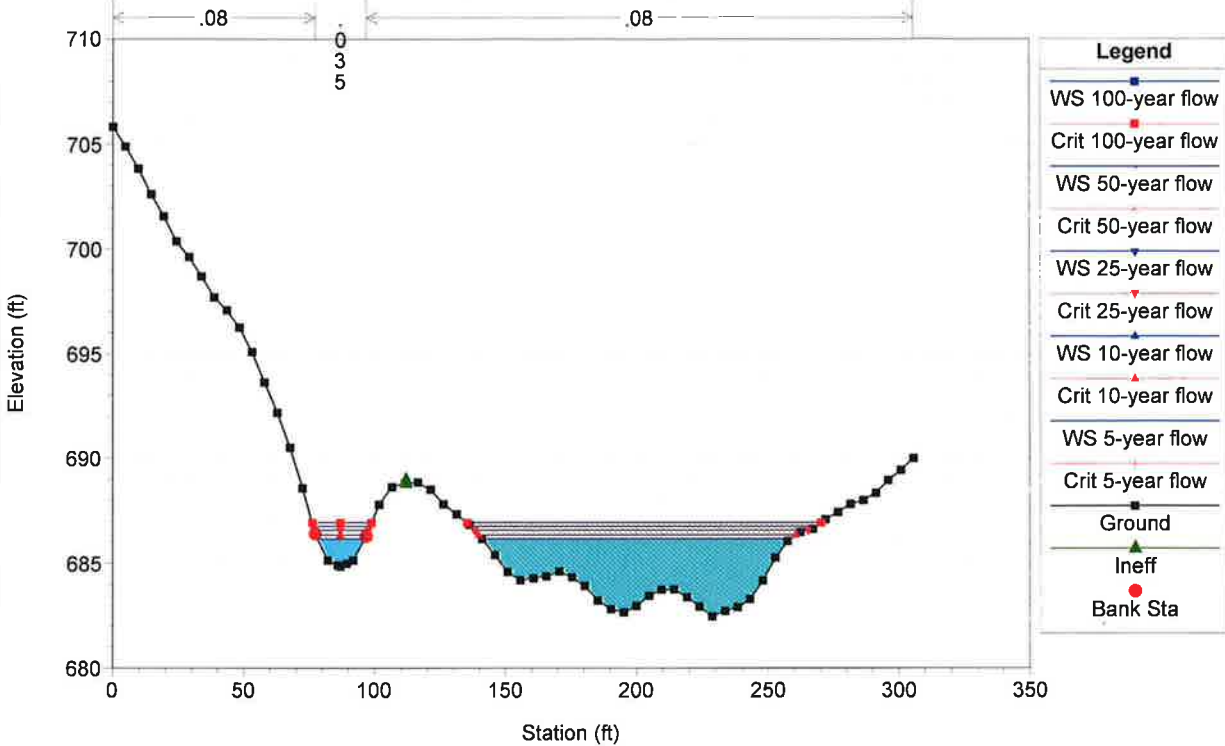
River = Unnamed_Trib Reach = West_Reach RS = 1957.225



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

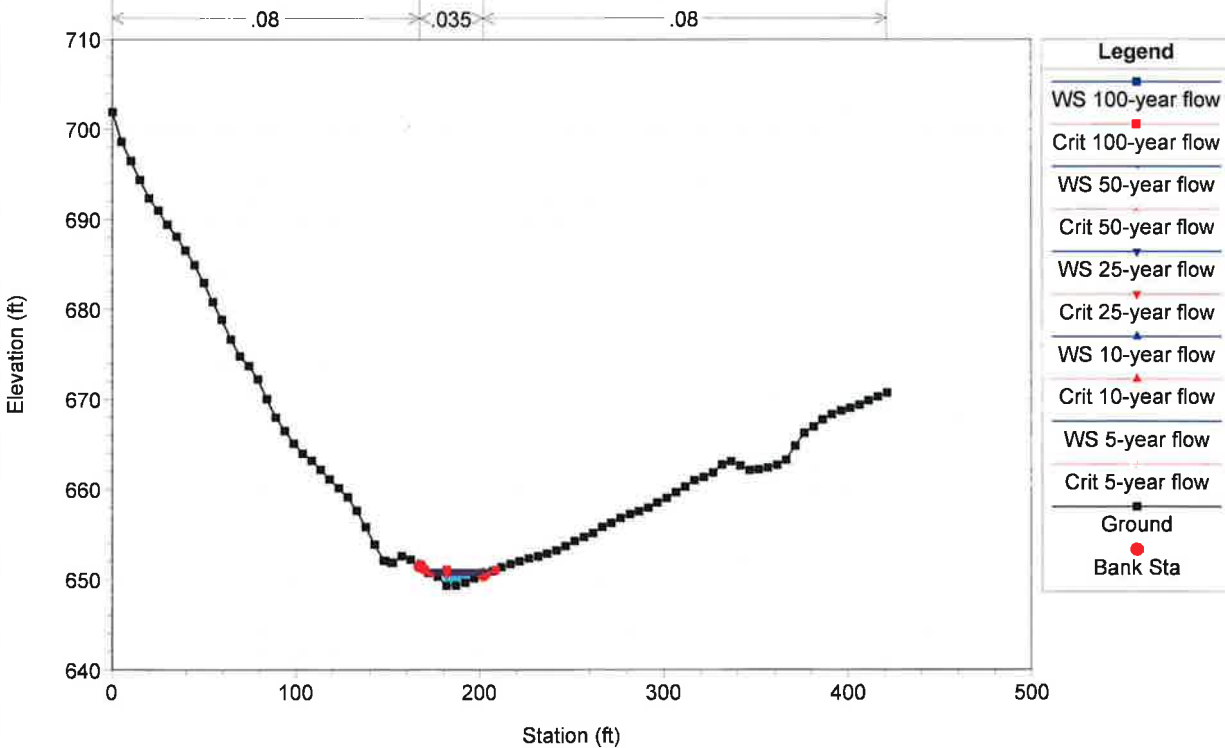
River = Unnamed_Trib Reach = West_Reach RS = 1815.076



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

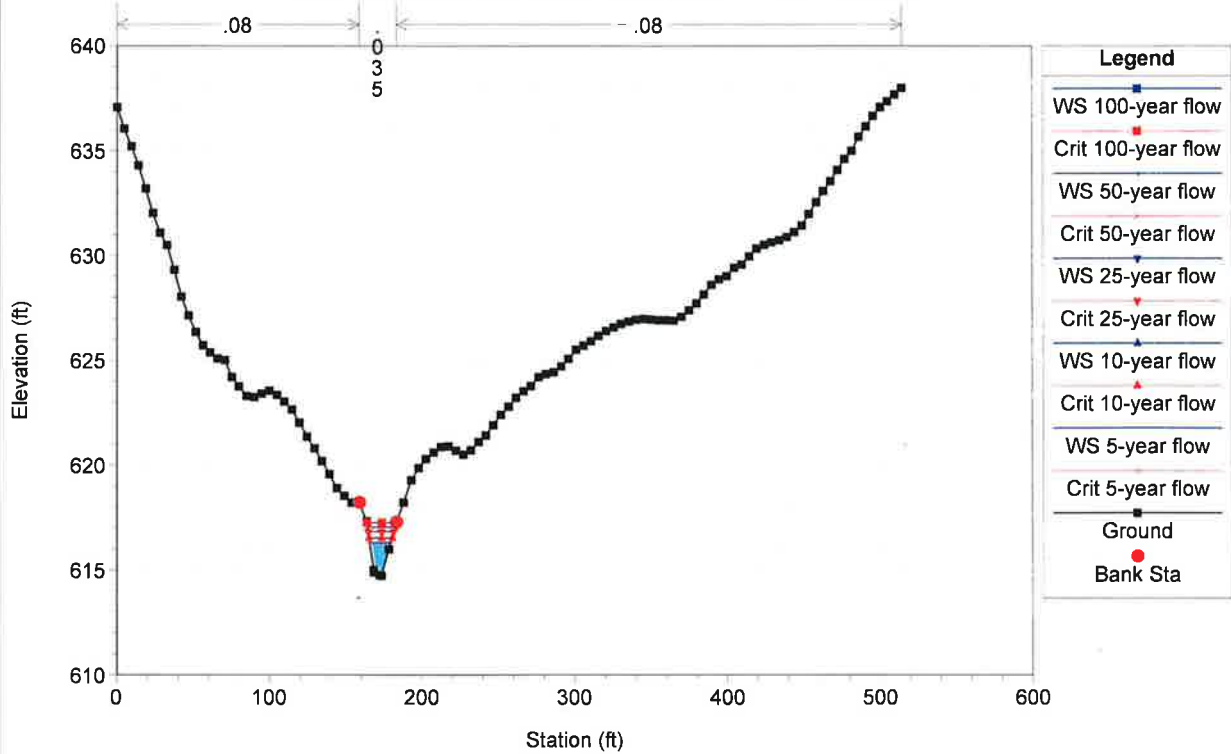
River = Unnamed_Trib Reach = West_Reach RS = 1658.443



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

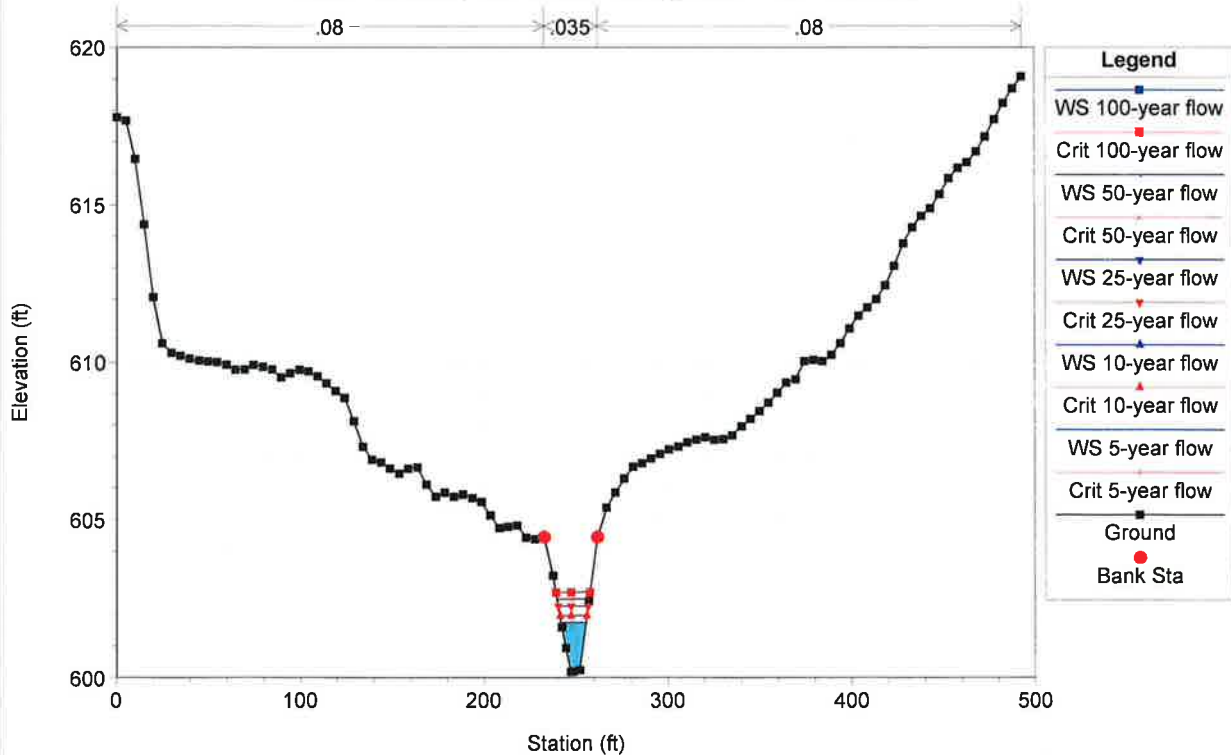
River = Unnamed_Trib Reach = West_Reach RS = 1498.833



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

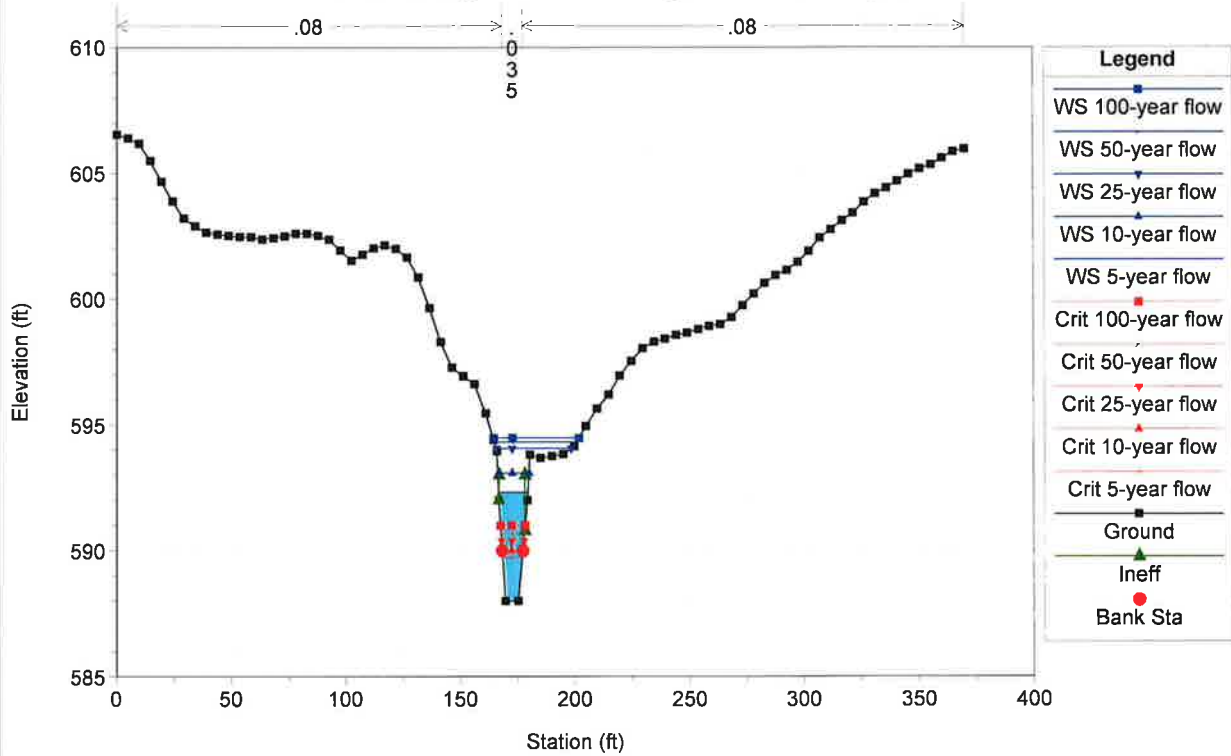
River = Unnamed_Trib Reach = West_Reach RS = 1396.434



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

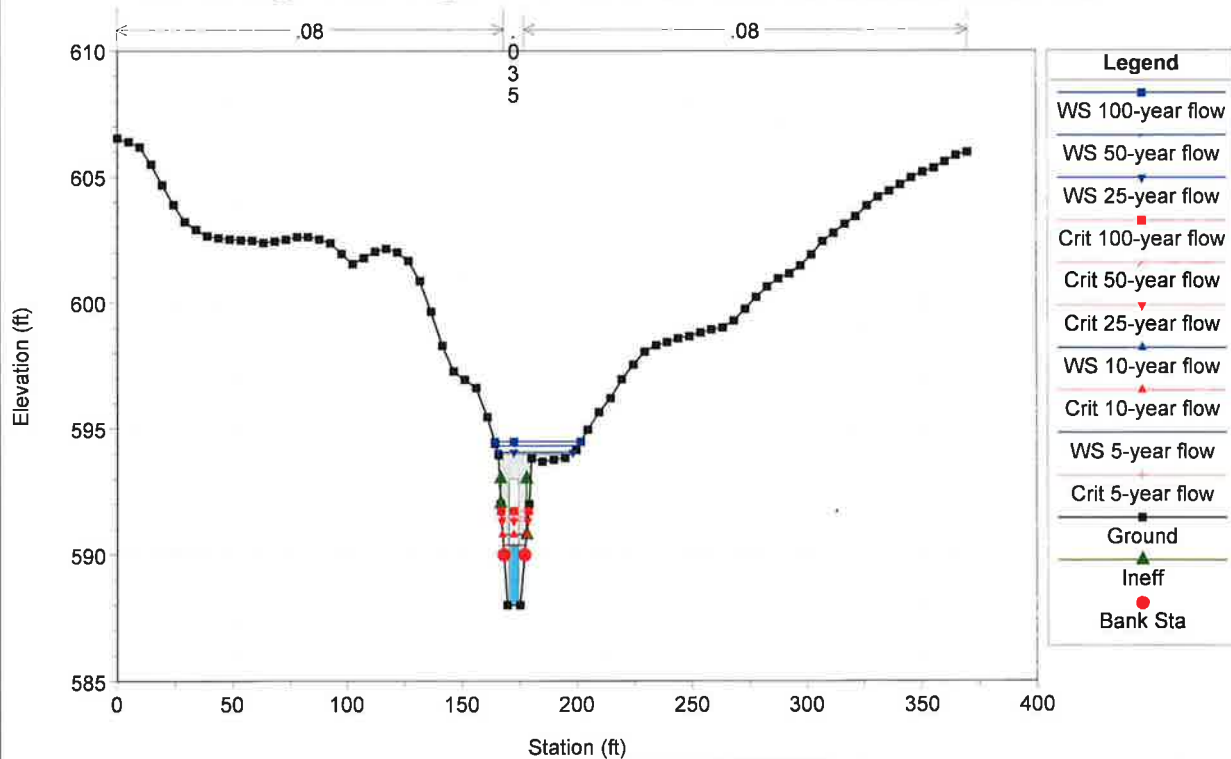
River = Unnamed_Trib Reach = West_Reach RS = 1332.697



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

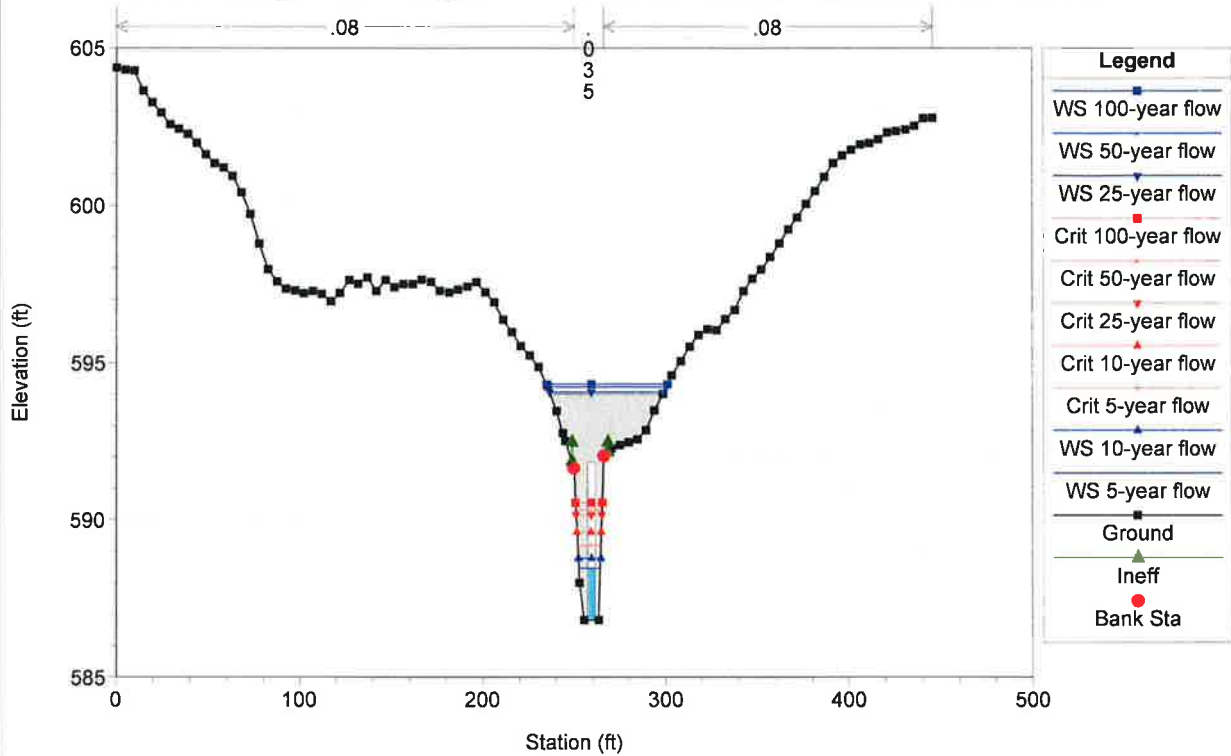
River = Unnamed_Trib Reach = West_Reach RS = 1318.95 Culv Driveway just upstream and off of Academy Street



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

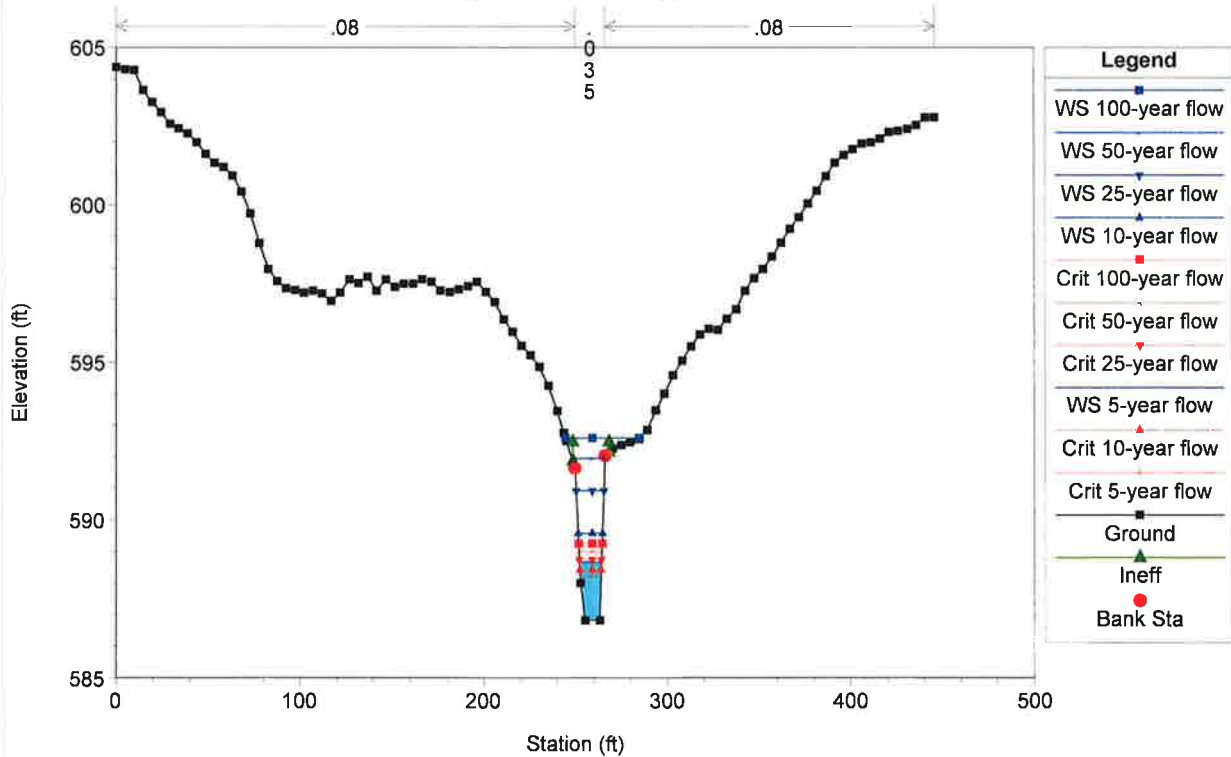
River = Unnamed_Trib Reach = West_Reach RS = 1318.95 Culv Driveway just upstream and off of Academy Street



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

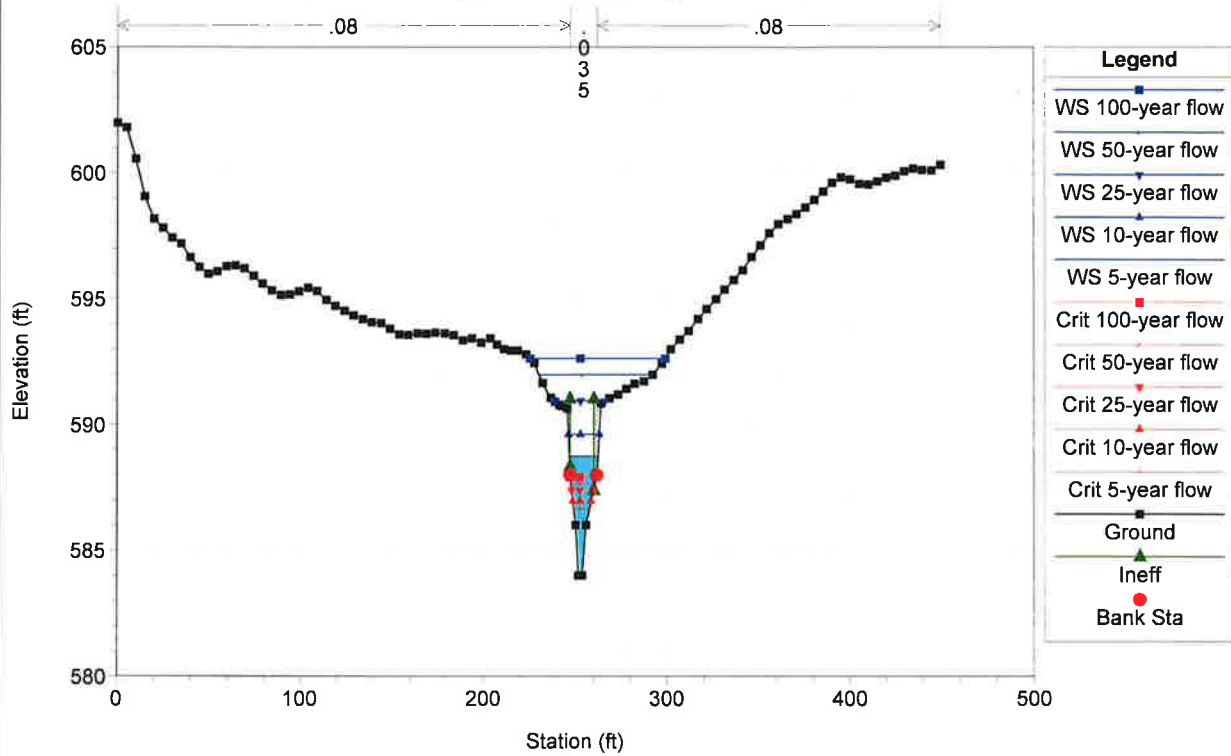
River = Unnamed_Trib Reach = West_Reach RS = 1305.207



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

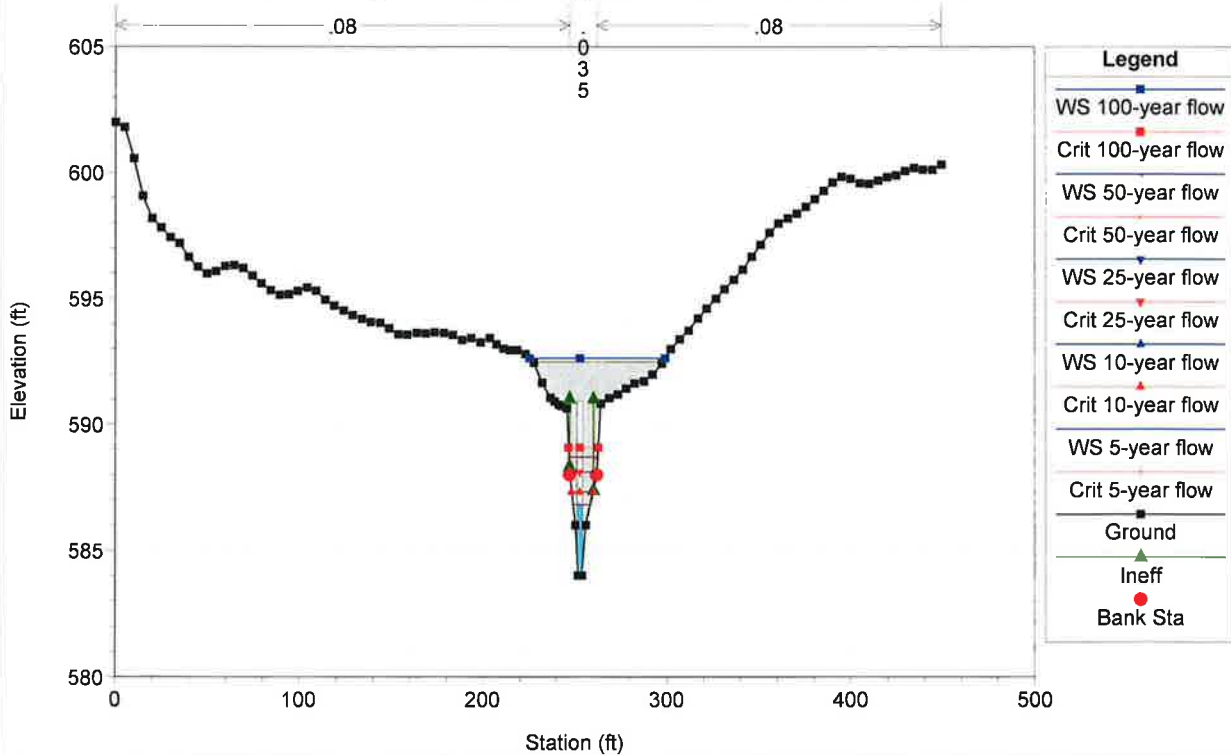
River = Unnamed_Trib Reach = West_Reach RS = 1293.297



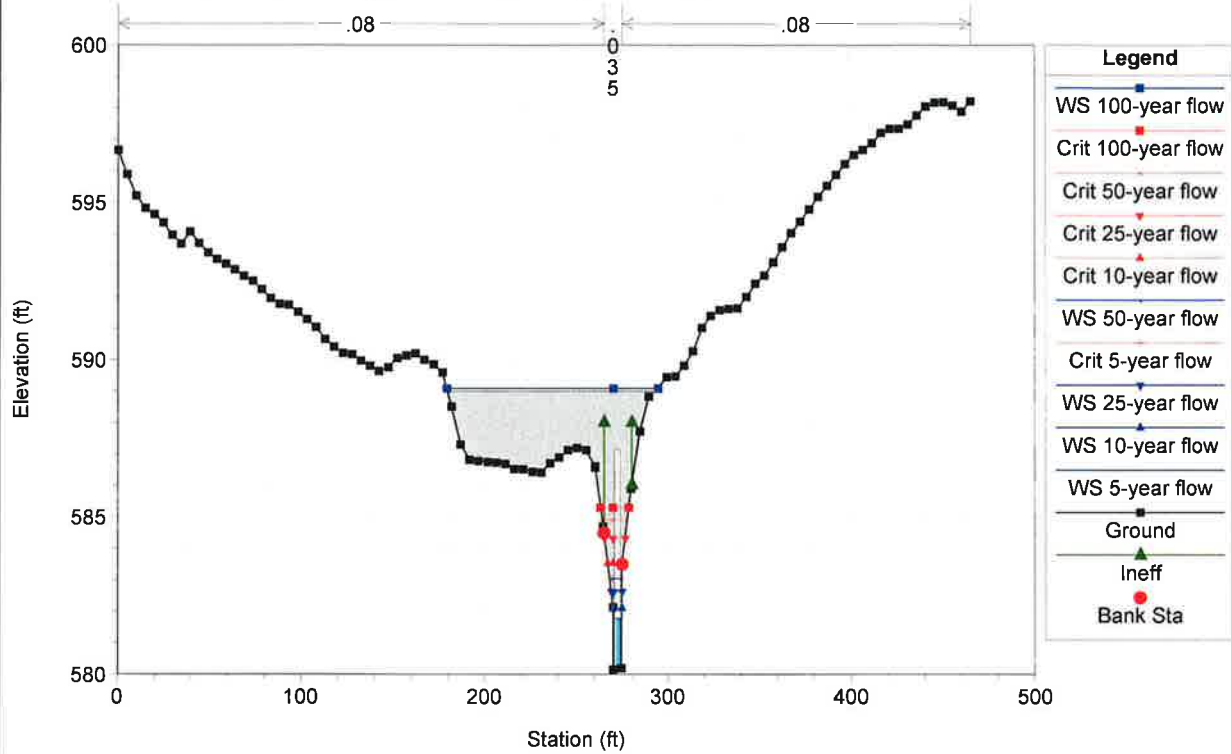
CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

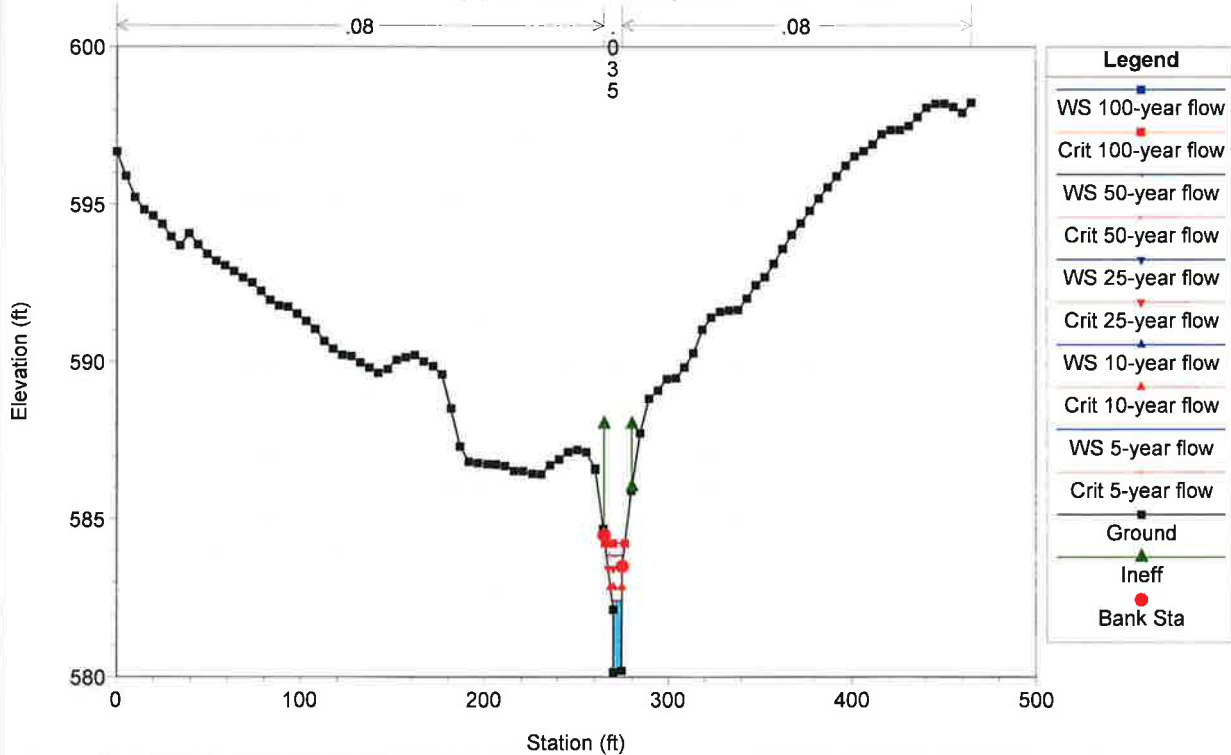
River = Unnamed_Trib Reach = West_Reach RS = 1271.9 Culv Academy Street



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012
 Geom: CalifonStreamGeometry
 River = Unnamed_Trib Reach = West_Reach RS = 1271.9 Culv Academy Street



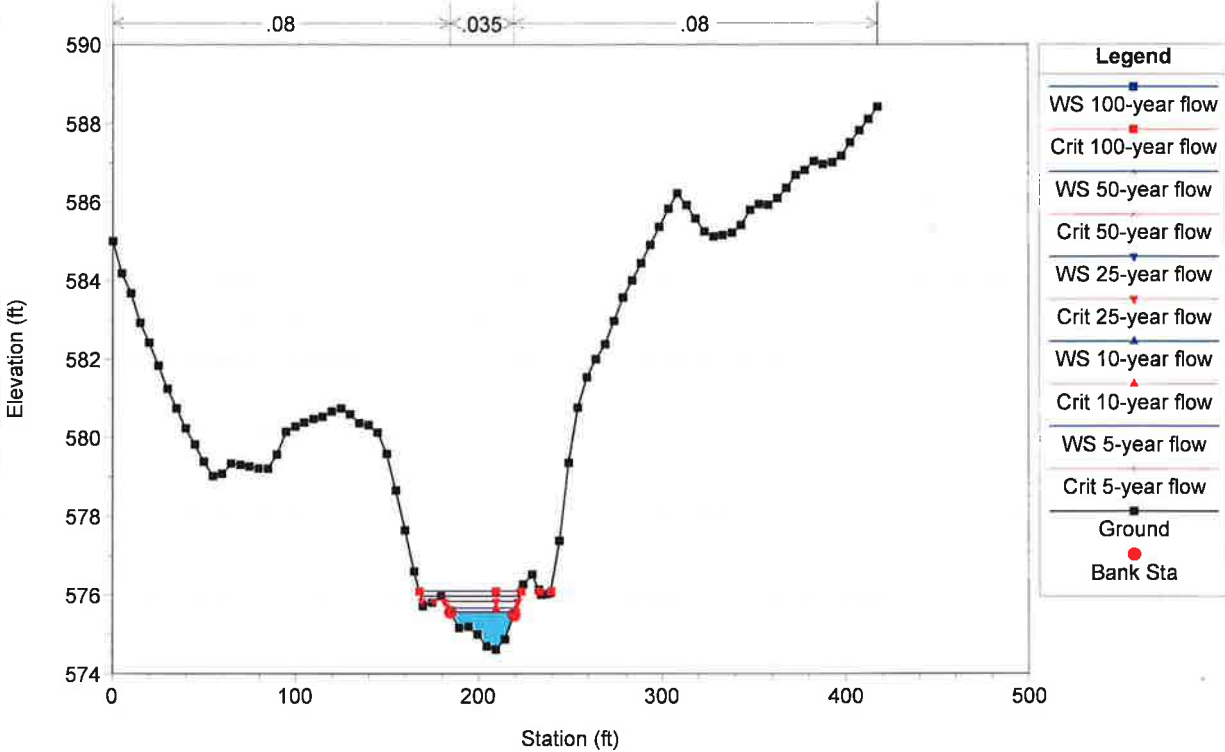
CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012
 Geom: CalifonStreamGeometry
 River = Unnamed_Trib Reach = West_Reach RS = 1250.517



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

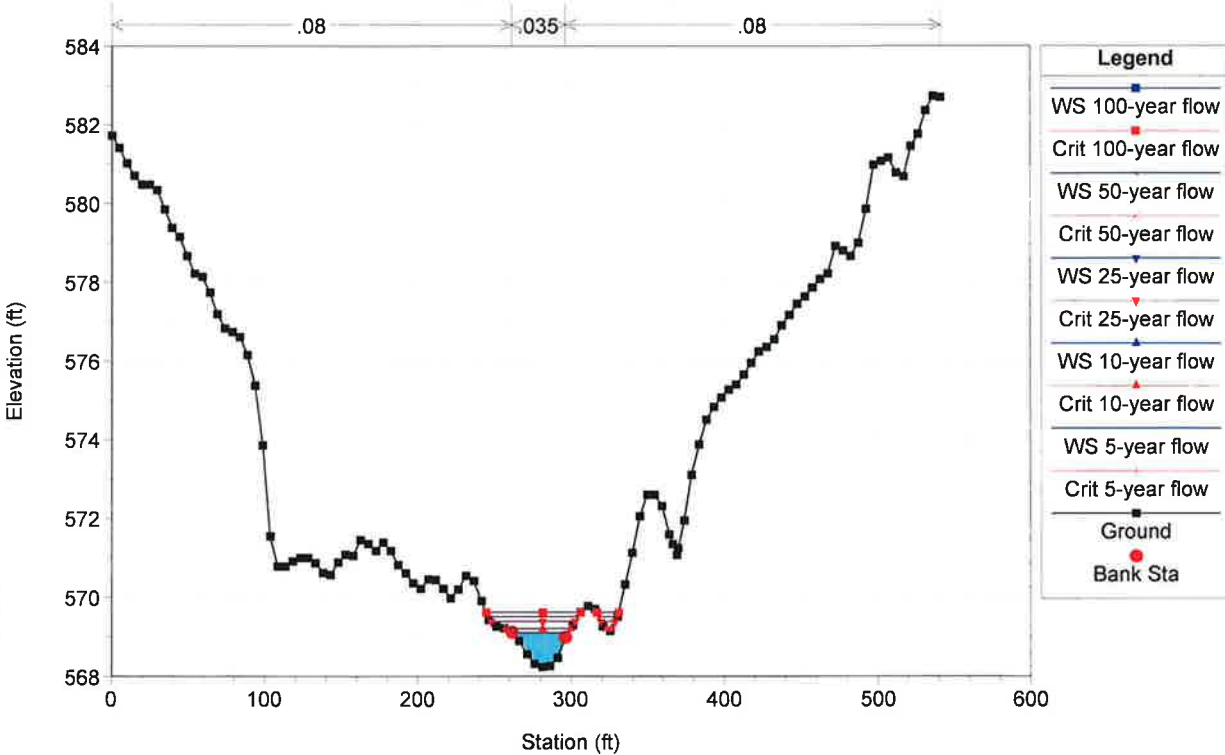
River = Unnamed_Trib Reach = West_Reach RS = 1165.394



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

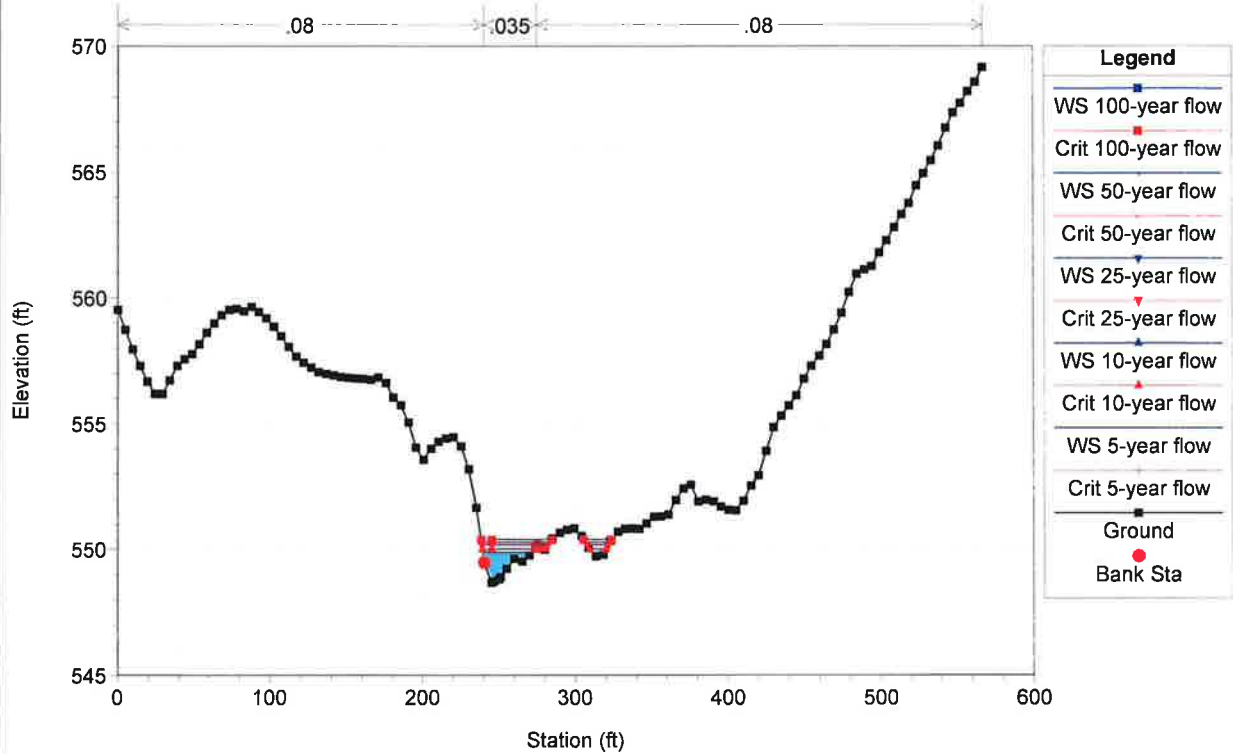
River = Unnamed_Trib Reach = West_Reach RS = 1089.717



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

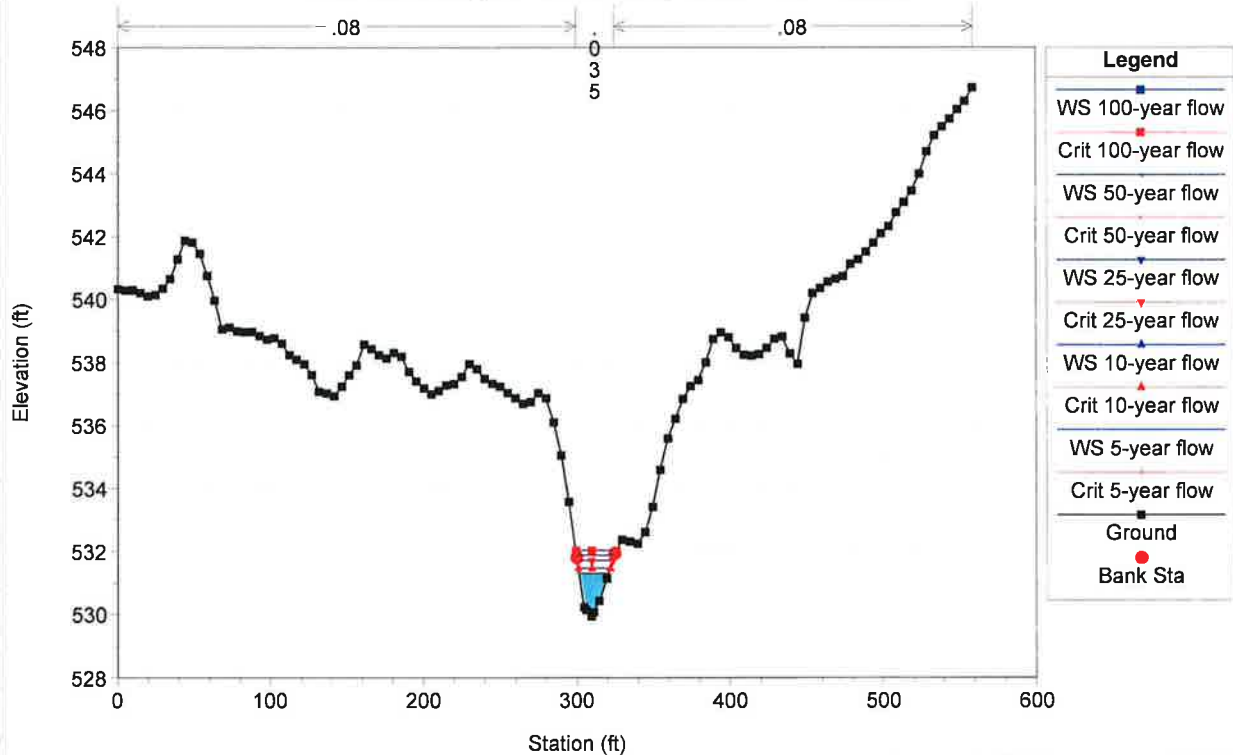
River = Unnamed_Trib Reach = West_Reach RS = 872.5471



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

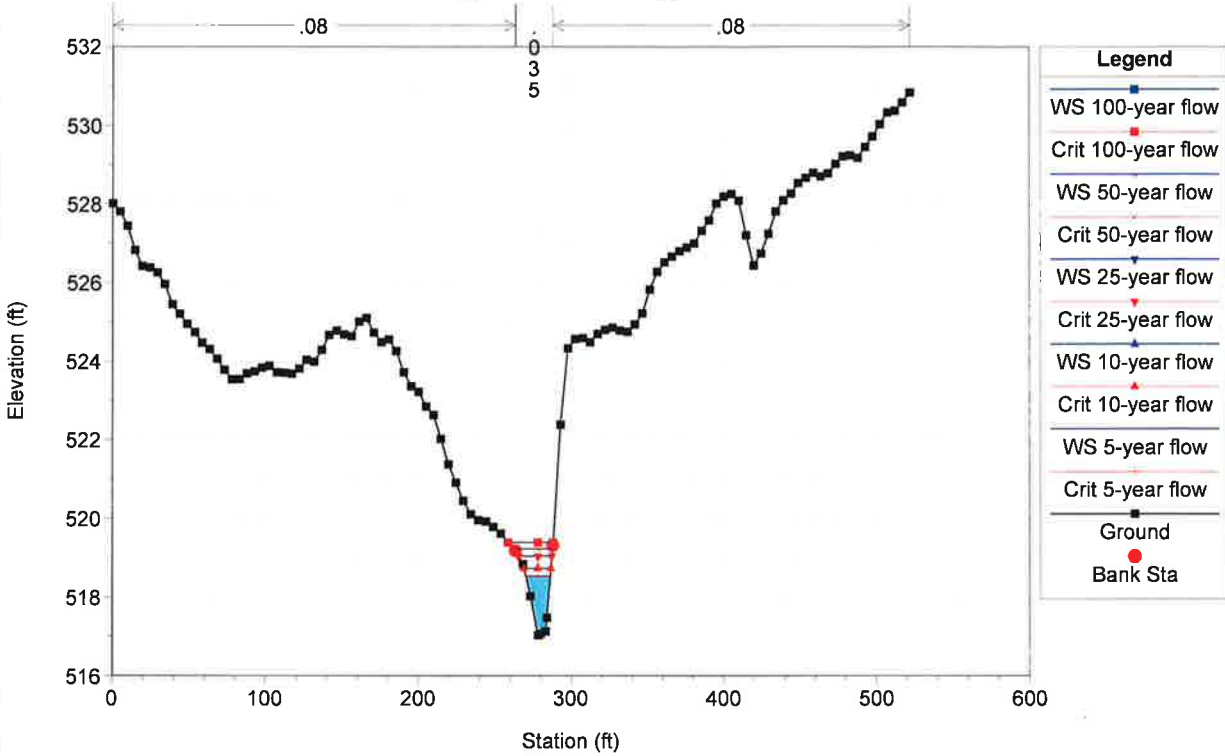
River = Unnamed_Trib Reach = West_Reach RS = 685.446



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

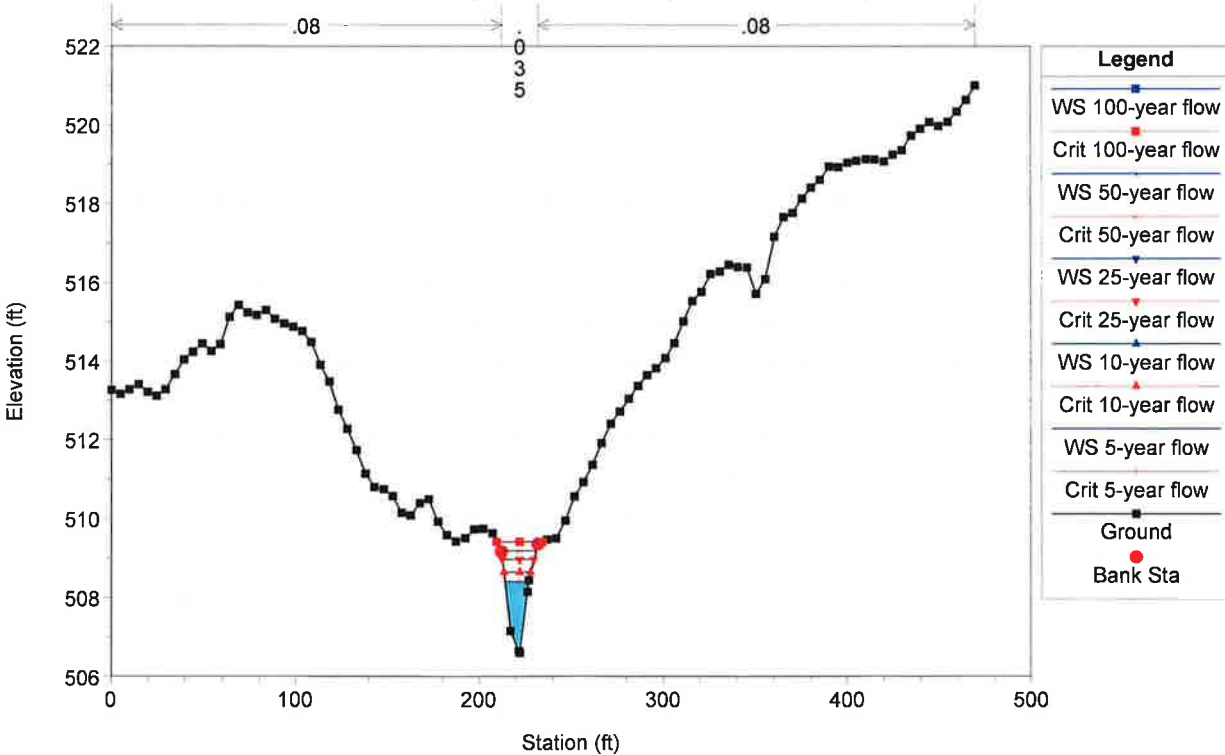
River = Unnamed_Trib Reach = West_Reach RS = 523.4422



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

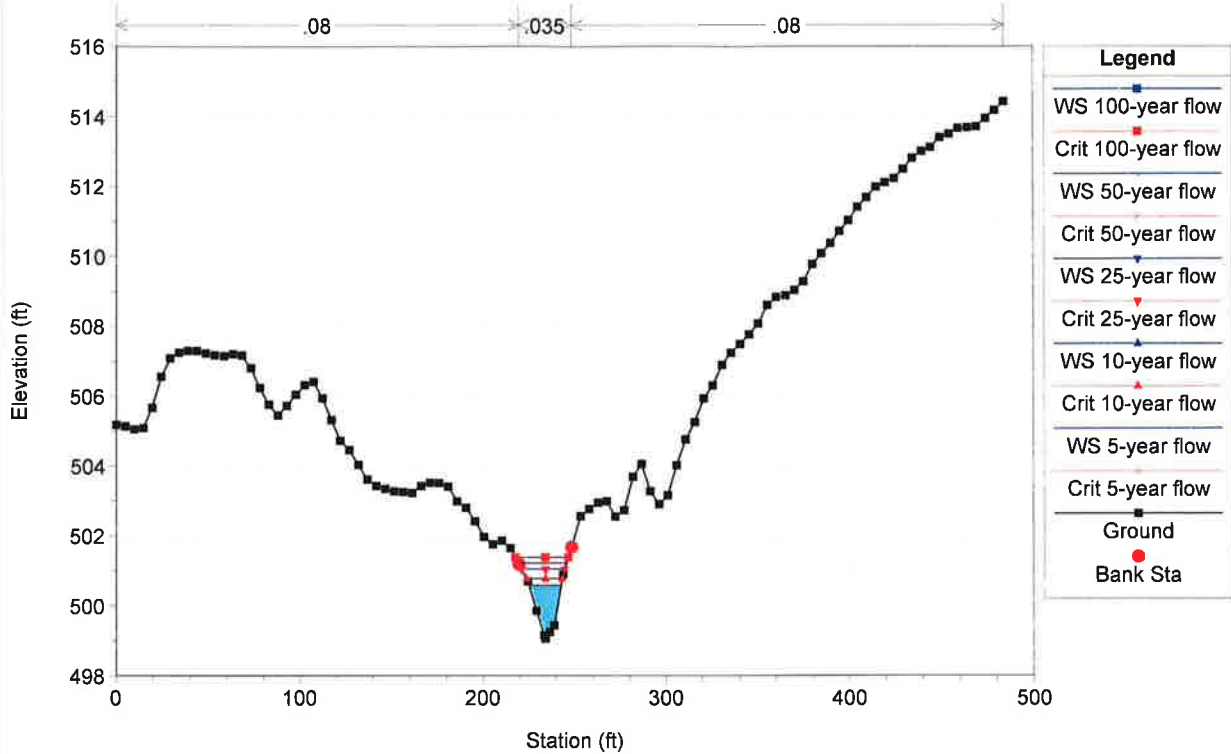
River = Unnamed_Trib Reach = West_Reach RS = 369.1193



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

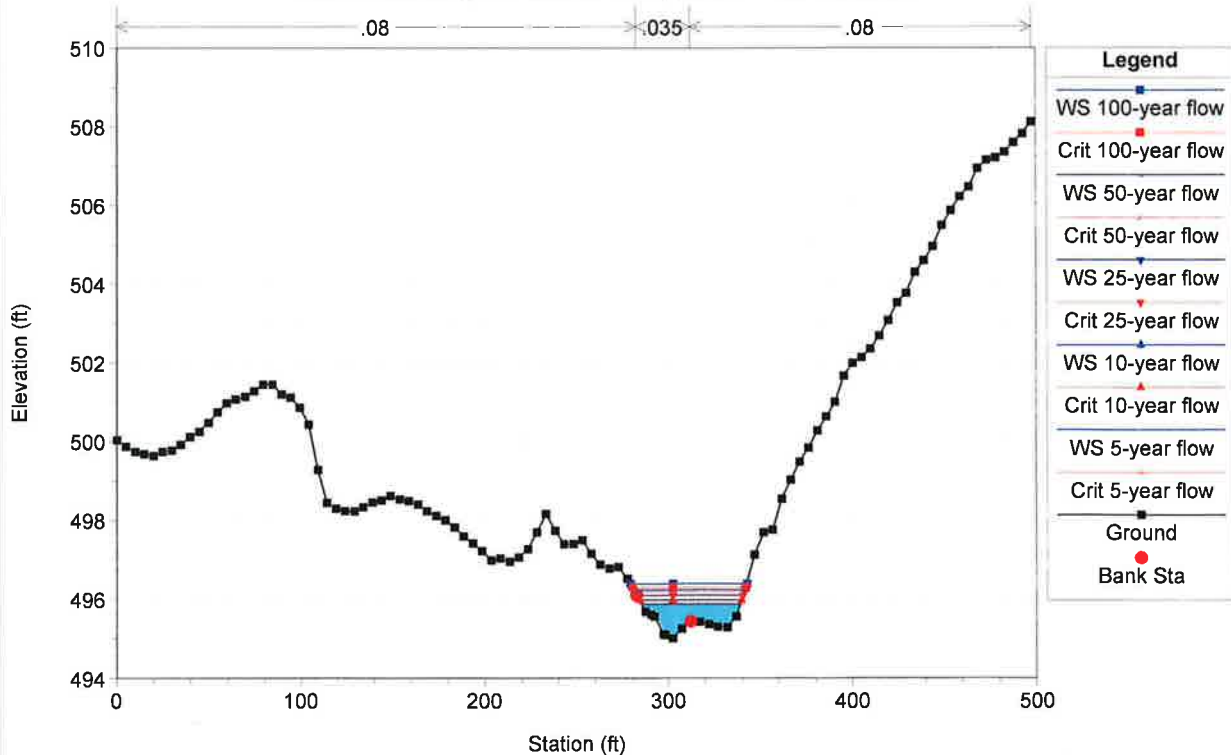
River = Unnamed_Trib Reach = West_Reach RS = 232.1771



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

River = Unnamed_Trib Reach = West_Reach RS = 110.1391



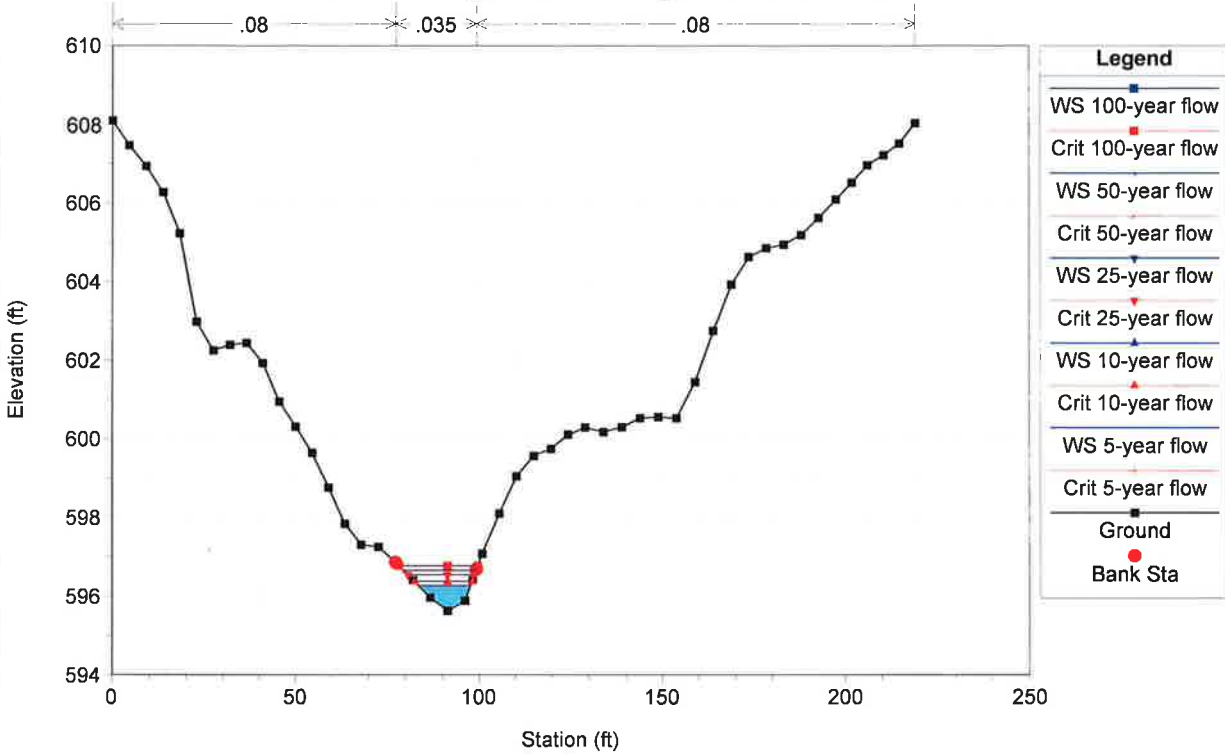
HEC-RAS Plan: Existing River: Unnamed_Trib Reach: East_Reach

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
East_Reach	1292.07	5-year flow	19.0	595.63	596.26	596.26	596.46	0.025349	3.54	5.37	14.08	1.01
East_Reach	1292.07	10-year flow	27.0	595.63	596.38	596.38	596.60	0.024024	3.84	7.03	15.69	1.01
East_Reach	1292.07	25-year flow	41.0	595.63	596.54	596.54	596.81	0.022130	4.18	9.80	18.04	1.00
East_Reach	1292.07	50-year flow	53.0	595.63	596.65	596.65	596.96	0.021708	4.46	11.89	19.64	1.01
East_Reach	1292.07	100-year flow	68.0	595.63	596.77	596.77	597.12	0.020915	4.73	14.38	21.37	1.01
East_Reach	1238.105	5-year flow	19.0	588.98	589.62	589.62	589.84	0.023982	3.80	5.00	11.28	1.00
East_Reach	1238.105	10-year flow	27.0	588.98	589.75	589.75	590.01	0.022948	4.11	6.57	12.71	1.01
East_Reach	1238.105	25-year flow	41.0	588.98	589.94	589.94	590.25	0.021755	4.46	9.18	15.06	1.01
East_Reach	1238.105	50-year flow	53.0	588.98	590.07	590.07	590.41	0.021055	4.70	11.28	16.71	1.01
East_Reach	1238.105	100-year flow	68.0	588.98	590.21	590.21	590.59	0.020285	4.93	13.79	18.49	1.01
East_Reach	1109.812	5-year flow	19.0	578.73	579.38	579.38	579.57	0.024918	3.52	5.39	14.07	1.00
East_Reach	1109.812	10-year flow	27.0	578.73	579.49	579.49	579.72	0.023509	3.82	7.07	15.61	1.00
East_Reach	1109.812	25-year flow	41.0	578.73	579.66	579.66	579.93	0.022493	4.16	9.84	18.49	1.01
East_Reach	1109.812	50-year flow	53.0	578.73	579.77	579.77	580.07	0.021847	4.40	12.05	20.73	1.01
East_Reach	1109.812	100-year flow	68.0	578.73	579.88	579.88	580.23	0.021089	4.74	14.43	22.80	1.01
East_Reach	998.8233	5-year flow	19.0	567.07	567.83	567.83	568.07	0.023931	3.89	4.88	10.54	1.01
East_Reach	998.8233	10-year flow	27.0	567.07	567.97	567.97	568.25	0.022731	4.21	6.41	11.83	1.01
East_Reach	998.8233	25-year flow	41.0	567.07	568.16	568.16	568.50	0.021261	4.69	8.76	13.51	1.01
East_Reach	998.8233	50-year flow	53.0	567.07	568.30	568.30	568.68	0.019742	4.98	10.76	14.77	1.00
East_Reach	998.8233	100-year flow	68.0	567.07	568.47	568.47	568.88	0.018783	5.19	13.41	17.03	0.99
East_Reach	895.5209	5-year flow	19.0	557.62	558.29	558.29	558.52	0.024370	3.77	5.04	11.61	1.01
East_Reach	895.5209	10-year flow	27.0	557.62	558.42	558.42	558.68	0.023193	4.08	6.62	13.05	1.01
East_Reach	895.5209	25-year flow	41.0	557.62	558.60	558.60	558.92	0.021752	4.51	9.10	14.73	1.01
East_Reach	895.5209	50-year flow	53.0	557.62	558.73	558.73	559.09	0.020524	4.76	11.14	15.89	1.00
East_Reach	895.5209	100-year flow	68.0	557.62	558.87	558.87	559.27	0.019699	5.06	13.45	17.11	1.00
East_Reach	797.1697	5-year flow	19.0	546.89	547.64	547.64	547.83	0.024615	3.55	5.35	13.60	1.00
East_Reach	797.1697	10-year flow	27.0	546.89	547.75	547.75	547.99	0.022849	3.86	6.99	14.82	0.99
East_Reach	797.1697	25-year flow	41.0	546.89	547.91	547.91	548.20	0.022140	4.33	9.47	16.49	1.01
East_Reach	797.1697	50-year flow	53.0	546.89	548.02	548.02	548.36	0.021809	4.68	11.33	17.36	1.02
East_Reach	797.1697	100-year flow	68.0	546.89	548.16	548.16	548.54	0.019805	4.91	13.86	18.34	0.99
East_Reach	704.597	5-year flow	19.0	538.47	539.34	539.34	539.56	0.023112	3.83	4.96	10.70	0.99
East_Reach	704.597	10-year flow	27.0	538.47	539.47	539.47	539.74	0.021399	4.16	6.48	11.61	0.98
East_Reach	704.597	25-year flow	41.0	538.47	539.66	539.66	540.00	0.020646	4.67	8.78	12.87	1.00
East_Reach	704.597	50-year flow	53.0	538.47	539.80	539.80	540.16	0.020281	5.00	10.59	13.78	1.01
East_Reach	704.597	100-year flow	68.0	538.47	539.95	539.95	540.39	0.019414	5.29	12.85	14.84	1.00
East_Reach	599.0162	5-year flow	19.0	527.44	528.21	528.21	528.44	0.023932	3.86	4.92	33.24	1.01
East_Reach	599.0162	10-year flow	27.0	527.44	528.35	528.35	528.61	0.021935	4.12	6.56	35.93	0.99
East_Reach	599.0162	25-year flow	41.0	527.44	528.54	528.54	528.86	0.021024	4.53	9.05	39.49	1.00
East_Reach	599.0162	50-year flow	53.0	527.44	528.68	528.68	529.03	0.020125	4.77	11.12	42.10	0.99
East_Reach	599.0162	100-year flow	68.0	527.44	528.82	528.82	529.22	0.019809	5.06	13.45	44.80	1.00
East_Reach	501.542	5-year flow	19.0	515.27	516.08	516.08	516.31	0.024142	3.90	4.87	10.56	1.01
East_Reach	501.542	10-year flow	27.0	515.27	516.22	516.22	516.49	0.022619	4.18	6.47	13.70	1.00
East_Reach	501.542	25-year flow	41.0	515.27	516.45	516.45	516.70	0.018287	4.11	11.65	28.38	0.92
East_Reach	501.542	50-year flow	53.0	515.27	516.57	516.57	516.83	0.018029	4.27	15.36	33.82	0.93
East_Reach	501.542	100-year flow	68.0	515.27	516.66	516.66	516.97	0.018363	4.66	16.67	35.96	0.95
East_Reach	413.4141	5-year flow	19.0	509.17	509.87	509.87	510.10	0.023966	3.81	4.98	11.15	1.01
East_Reach	413.4141	10-year flow	27.0	509.17	510.00	510.00	510.27	0.022979	4.14	6.53	12.51	1.01
East_Reach	413.4141	25-year flow	41.0	509.17	510.20	510.20	510.50	0.021769	4.46	9.20	15.13	1.01
East_Reach	413.4141	50-year flow	53.0	509.17	510.33	510.33	510.67	0.020800	4.67	11.35	17.05	1.00
East_Reach	413.4141	100-year flow	68.0	509.17	510.47	510.47	510.85	0.020443	4.95	13.79	18.96	1.01
East_Reach	296.9181	5-year flow	19.0	503.82	504.43	504.42	504.58	0.023239	3.09	6.15	18.58	0.95
East_Reach	296.9181	10-year flow	27.0	503.82	504.51	504.50	504.70	0.024121	3.47	7.77	20.26	0.99
East_Reach	296.9181	25-year flow	41.0	503.82	504.64	504.64	504.88	0.023813	3.90	10.51	22.82	1.01
East_Reach	296.9181	50-year flow	53.0	503.82	504.76	504.76	504.99	0.022993	3.87	13.84	35.51	1.00
East_Reach	296.9181	100-year flow	68.0	503.82	504.85	504.85	505.11	0.020617	4.11	17.44	42.05	0.97
East_Reach	168.1203	5-year flow	0.5	501.41	501.50	501.50	501.51	0.039674	1.07	0.47	10.46	0.89
East_Reach	168.1203	10-year flow	0.5	501.41	501.50	501.50	501.51	0.039674	1.07	0.47	10.46	0.89
East_Reach	168.1203	25-year flow	0.5	501.41	501.50	501.50	501.51	0.039674	1.07	0.47	10.46	0.89
East_Reach	168.1203	50-year flow	10.0	501.41	501.70	501.70	501.78	0.033085	2.23	4.49	28.93	1.00
East_Reach	168.1203	100-year flow	28.0	501.41	501.85	501.85	501.99	0.028855	2.91	9.63	37.63	1.01

CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

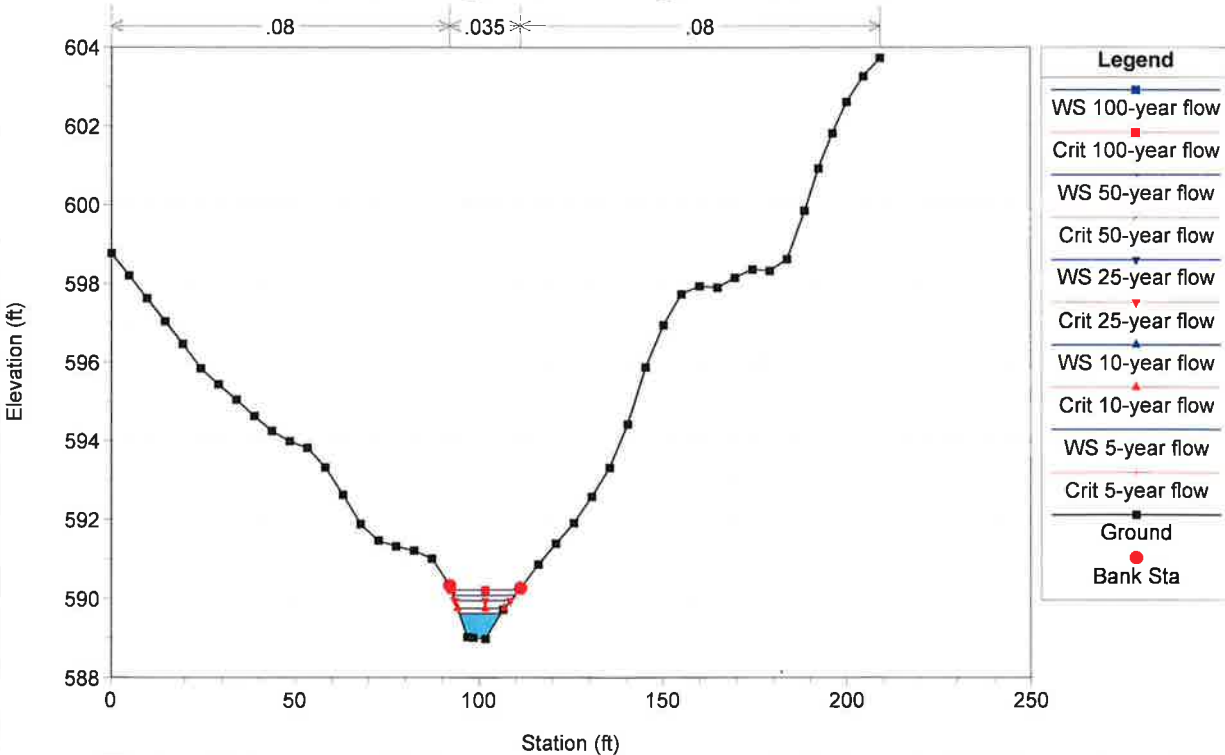
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

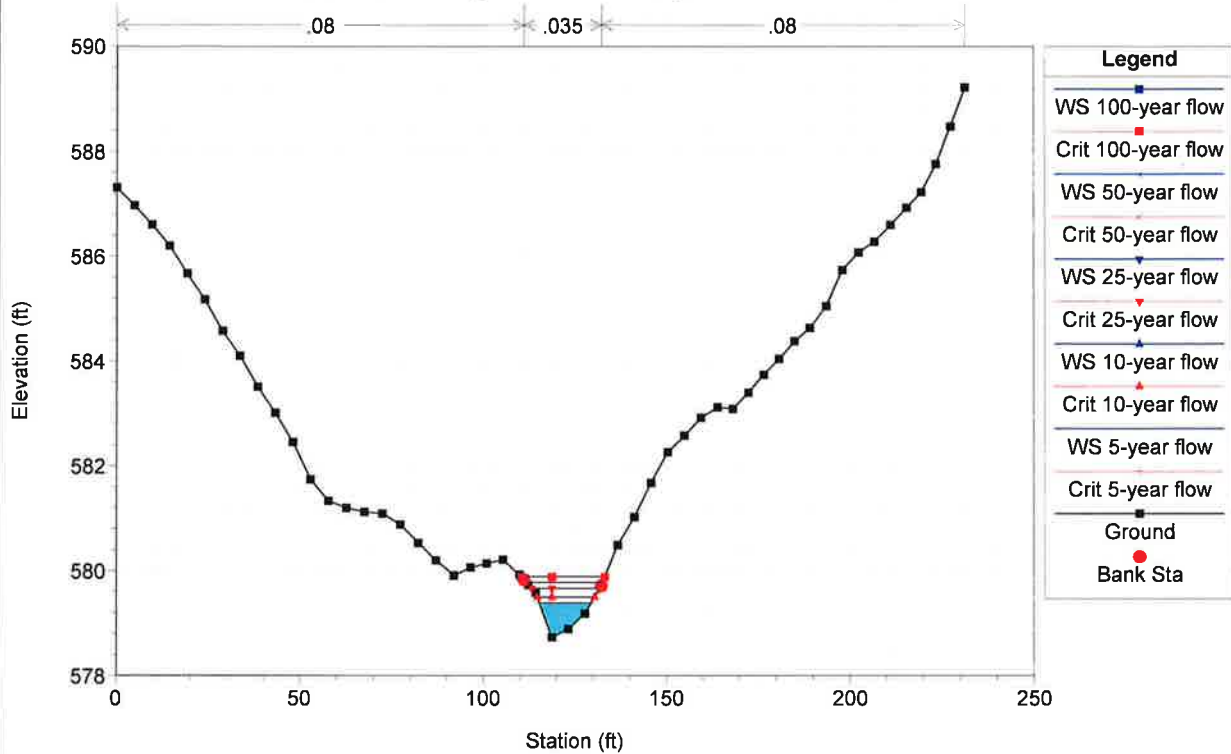
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

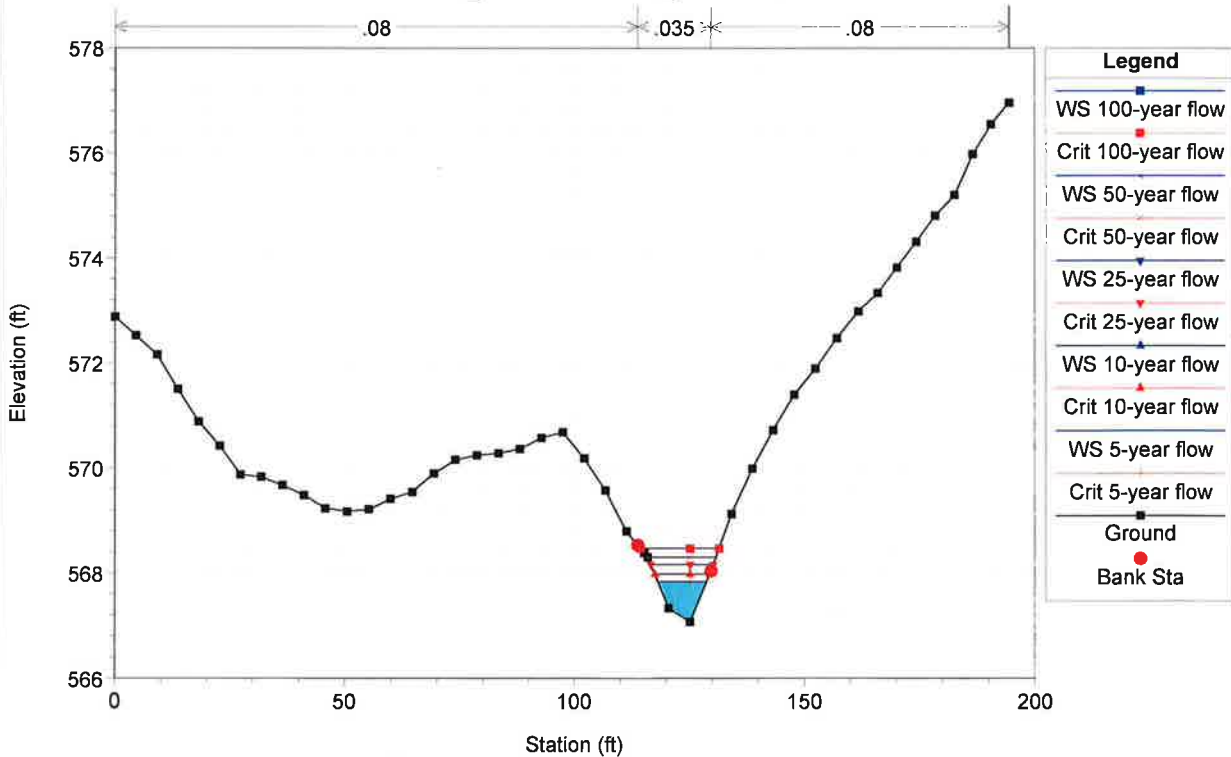
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

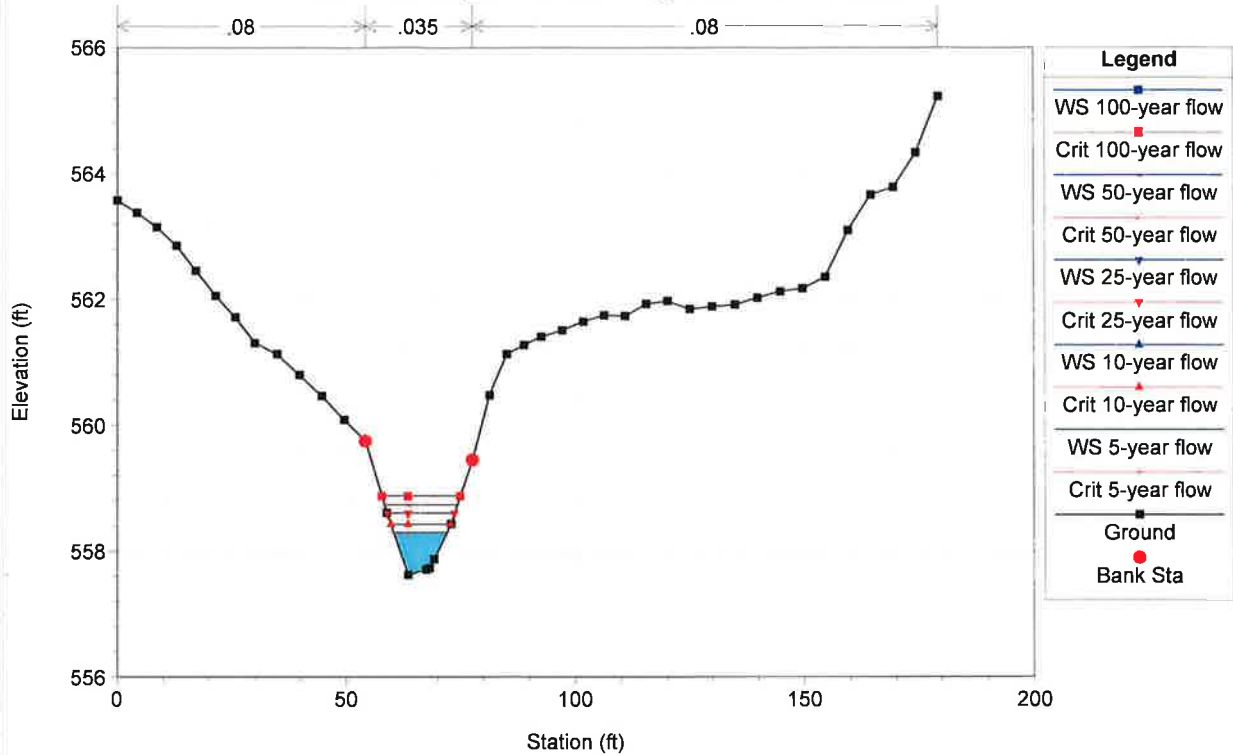
River = Unnamed_Trib Reach = East_Reach RS = 998.8233



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

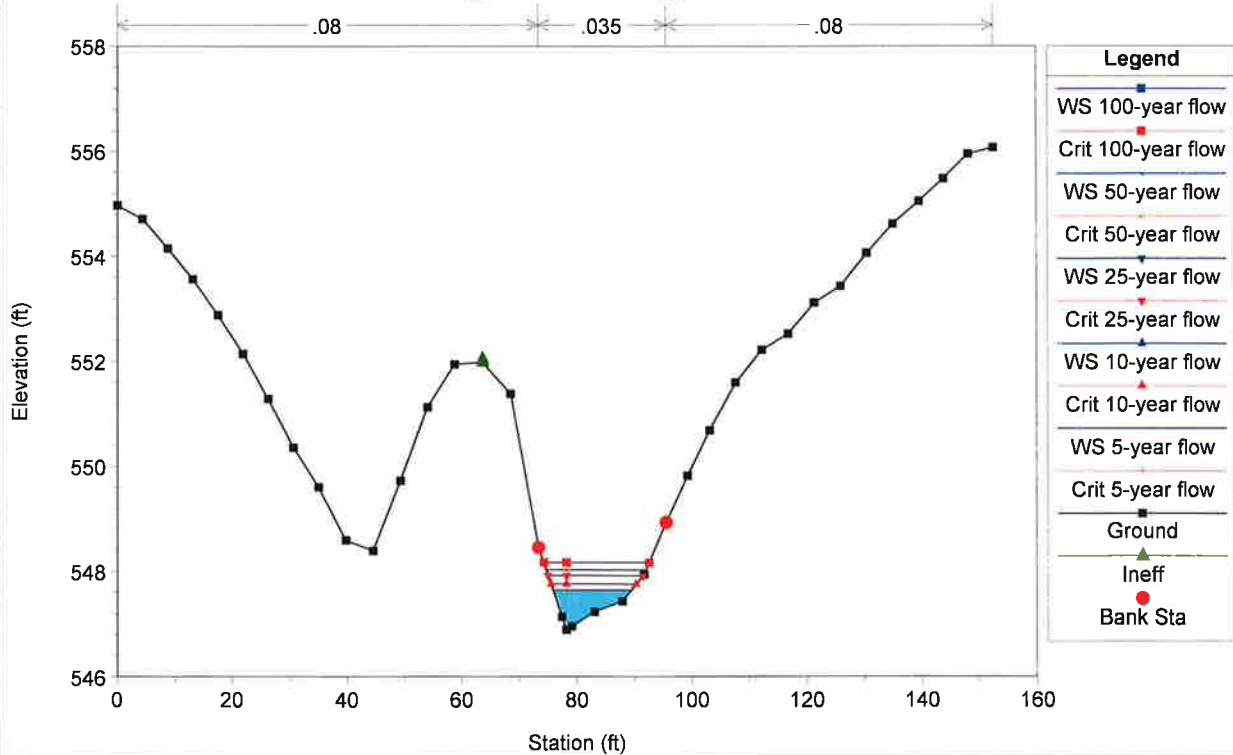
River = Unnamed_Trib Reach = East_Reach RS = 895.5209



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

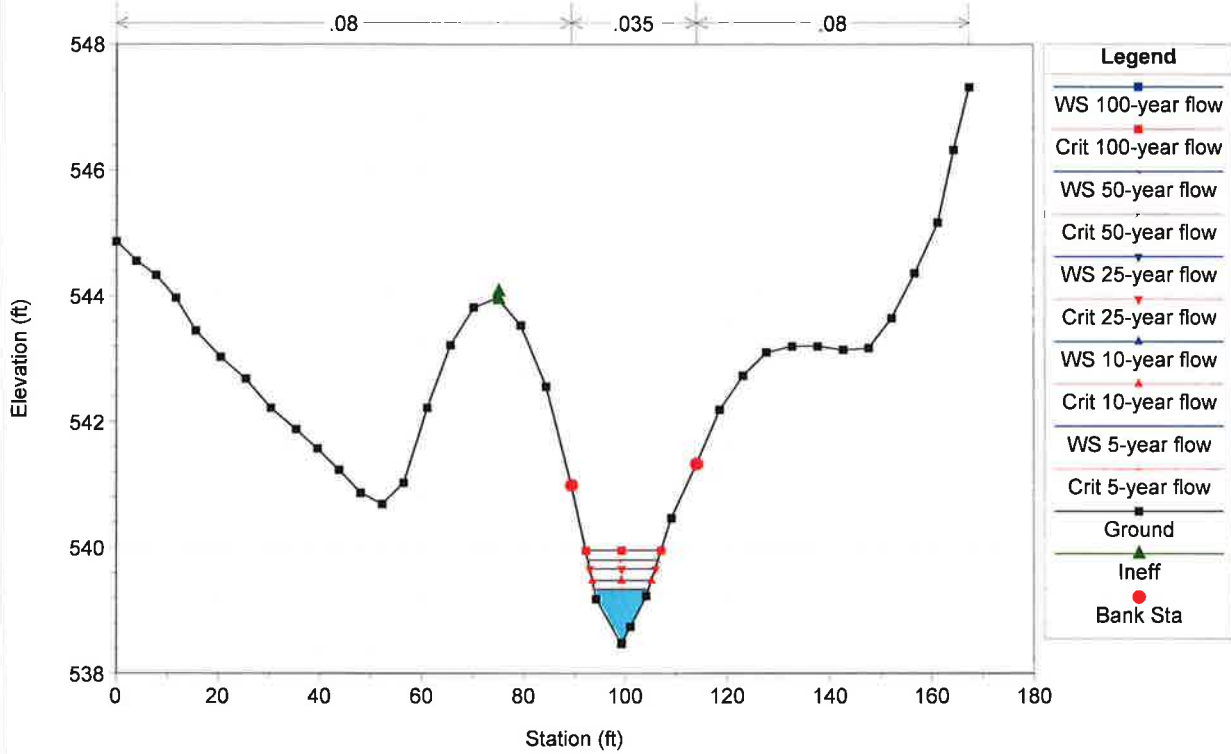
River = Unnamed_Trib Reach = East_Reach RS = 797.1697



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

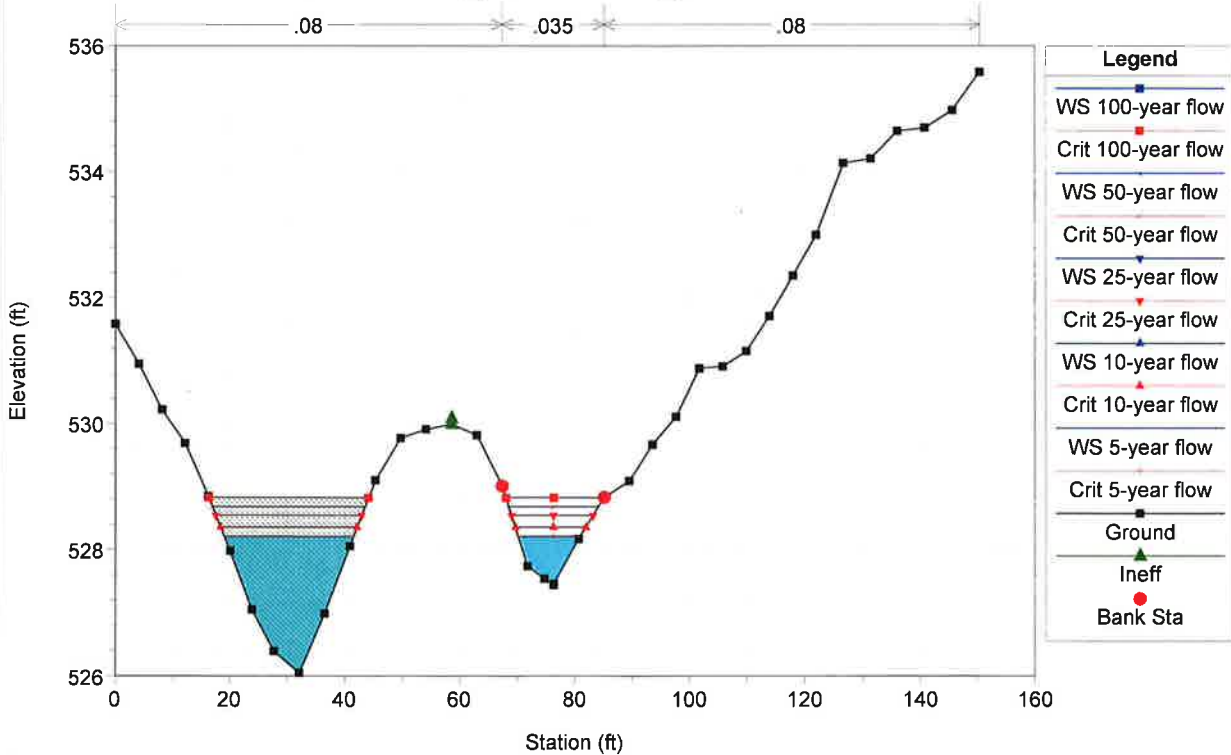
River = Unnamed_Trib Reach = East_Reach RS = 704.597



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

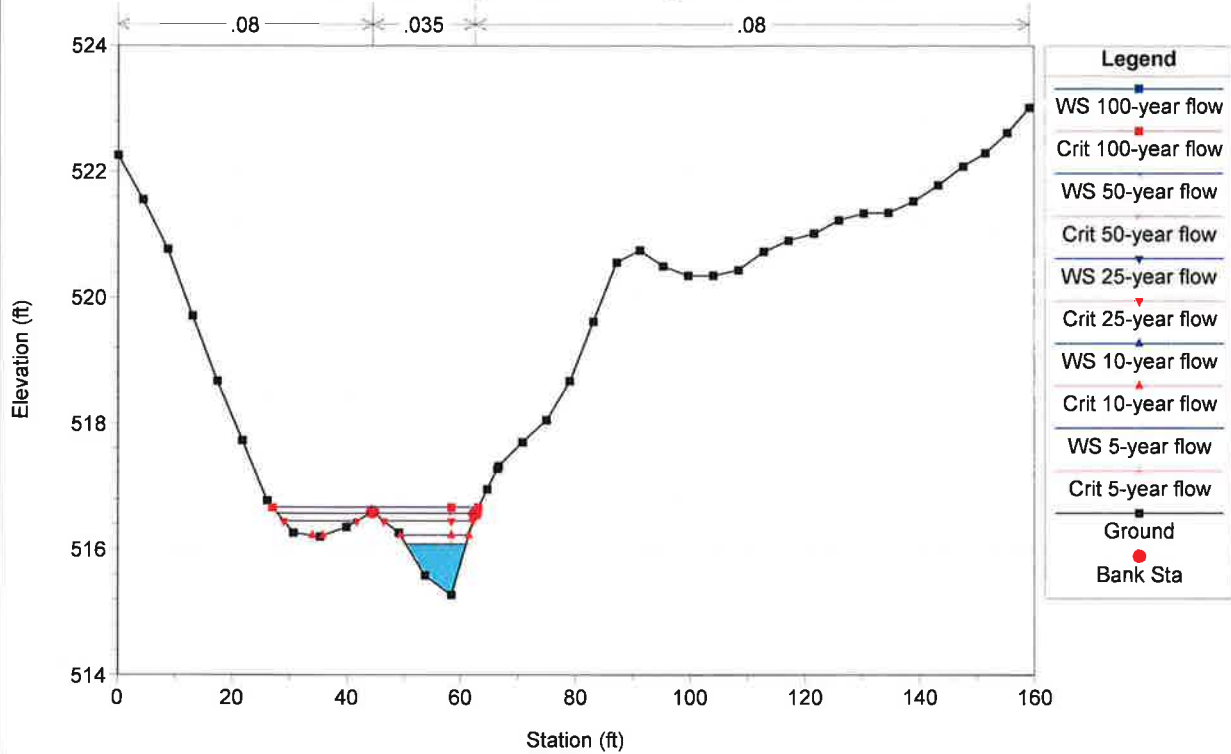
River = Unnamed_Trib Reach = East_Reach RS = 599.0162



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

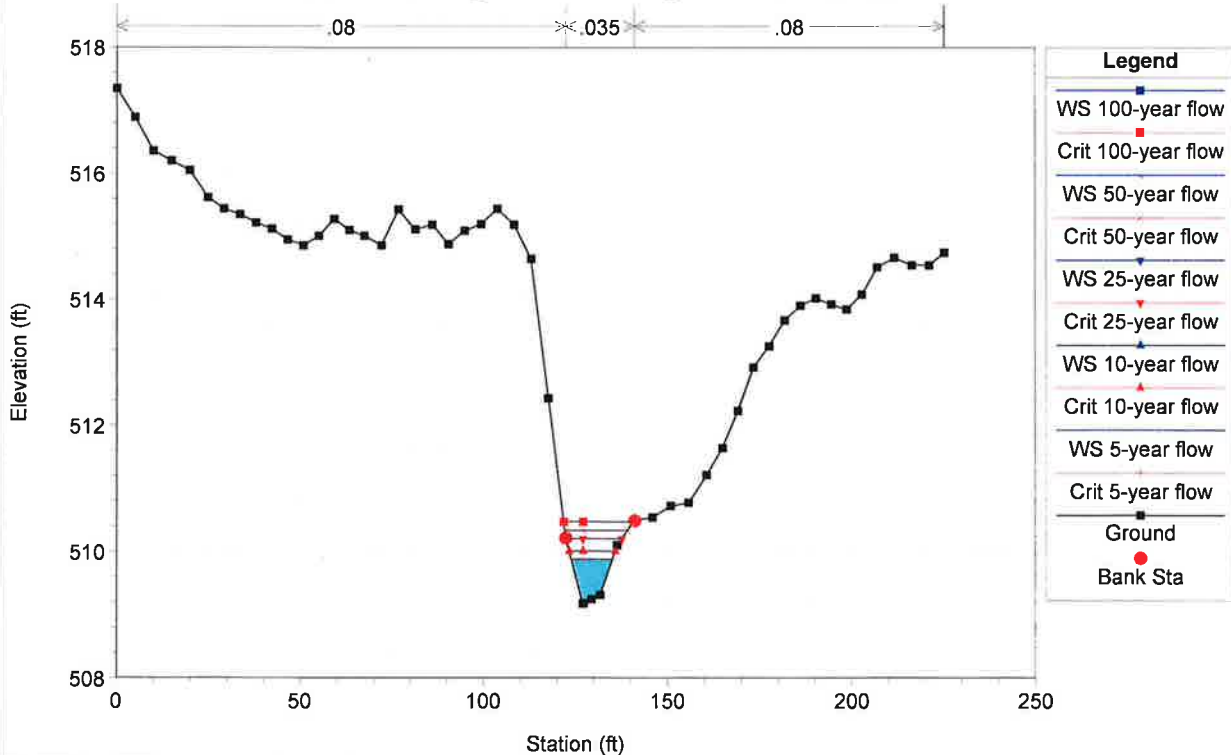
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

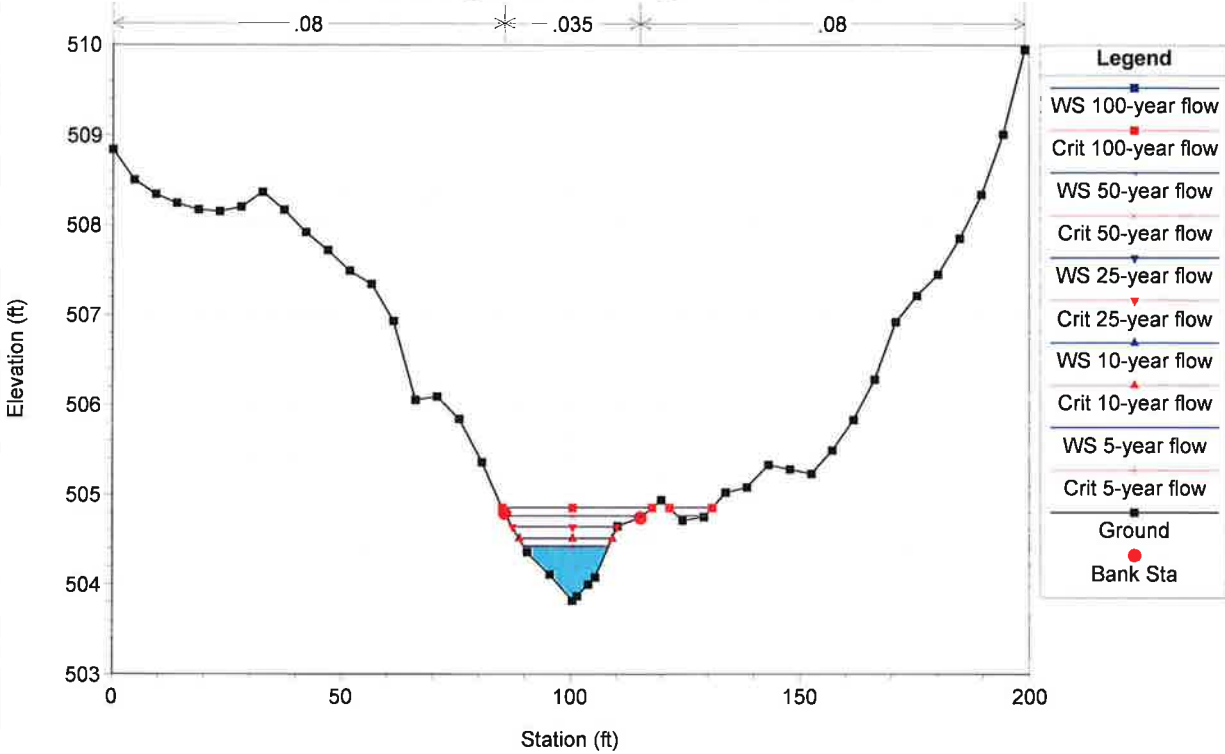
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

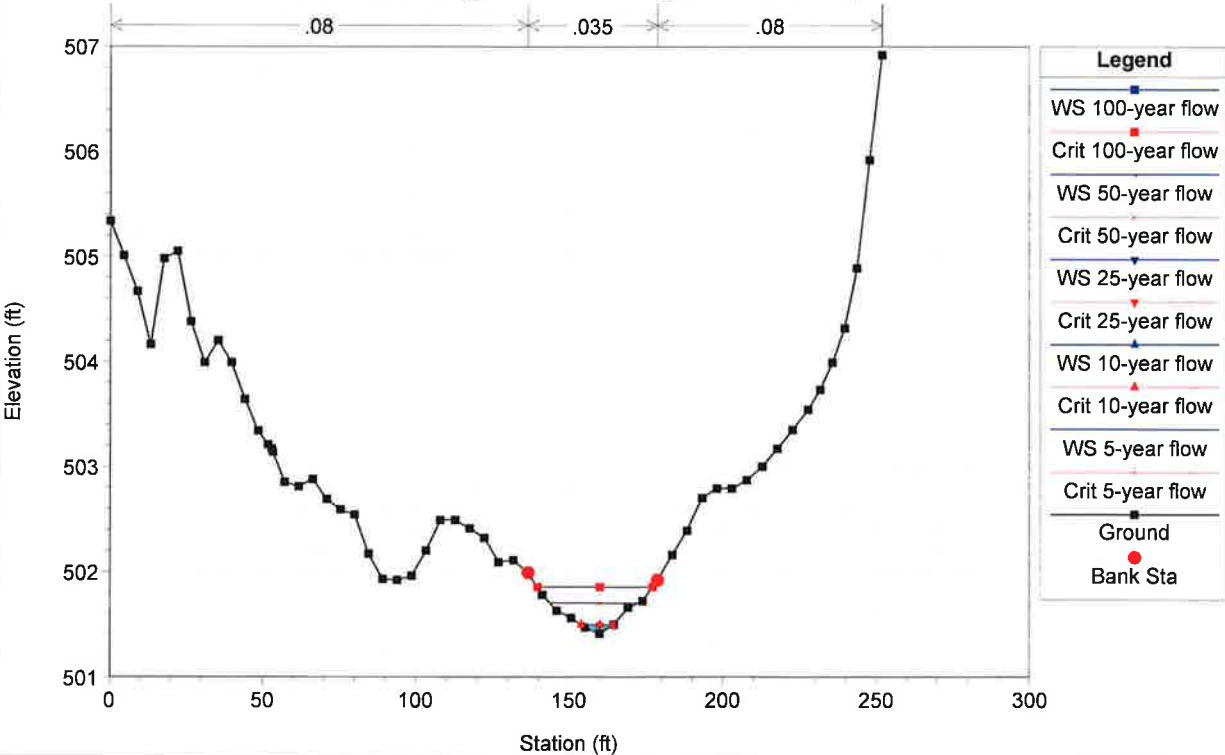
River = Unnamed_Trib Reach = East_Reach RS = 296.9181



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

River = Unnamed_Trib Reach = East_Reach RS = 168.1203



HEC-RAS Plan: Existing River: Unnamed_Trib Reach: Downstream_Reach

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude #	Chl
Downstream_Reach	508.2322	5-year flow	88.0	489.43	493.51		493.66	0.010787	4.79	38.31	45.09		0.42
Downstream_Reach	508.2322	10-year flow	113.0	489.43	493.63		493.82	0.013632	5.50	44.17	51.19		0.47
Downstream_Reach	508.2322	25-year flow	155.0	489.43	493.80		494.04	0.017521	6.40	53.52	58.49		0.54
Downstream_Reach	508.2322	50-year flow	191.0	489.43	493.90		494.19	0.021255	7.15	59.48	61.80		0.60
Downstream_Reach	508.2322	100-year flow	246.0	489.43	494.04		494.38	0.025787	8.04	68.18	64.82		0.66
Downstream_Reach	493.9474	5-year flow	88.0	489.56	493.20	493.20	493.45	0.019814	5.91	37.61	70.48		0.55
Downstream_Reach	493.9474	10-year flow	113.0	489.56	493.30	493.30	493.57	0.022698	6.44	45.08	76.86		0.59
Downstream_Reach	493.9474	25-year flow	155.0	489.56	493.43	493.43	493.73	0.027357	7.23	55.15	83.63		0.65
Downstream_Reach	493.9474	50-year flow	191.0	489.56	493.58	493.58	493.86	0.026793	7.33	70.24	110.79		0.64
Downstream_Reach	493.9474	100-year flow	246.0	489.56	493.68	493.68	493.98	0.030448	7.95	81.95	115.93		0.69
Downstream_Reach	477.6732	5-year flow	88.0	489.15	492.18	492.18	492.40	0.025769	5.96	41.78	100.91		0.60
Downstream_Reach	477.6732	10-year flow	113.0	489.15	492.27	492.27	492.48	0.026205	6.13	51.29	111.26		0.61
Downstream_Reach	477.6732	25-year flow	155.0	489.15	492.41	492.41	492.59	0.026150	6.30	67.19	120.71		0.62
Downstream_Reach	477.6732	50-year flow	191.0	489.15	492.43	492.43	492.68	0.036592	7.48	69.19	121.12		0.73
Downstream_Reach	477.6732	100-year flow	246.0	489.15	492.55	492.55	492.79	0.033867	7.38	84.98	124.22		0.71
Downstream_Reach	428.4629	5-year flow	88.0	486.65	490.14		490.31	0.023848	5.40	41.41	92.39		0.51
Downstream_Reach	428.4629	10-year flow	113.0	486.65	490.21	490.19	490.40	0.027903	5.92	48.34	99.90		0.55
Downstream_Reach	428.4629	25-year flow	155.0	486.65	490.44		490.58	0.019703	5.18	73.83	121.54		0.47
Downstream_Reach	428.4629	50-year flow	191.0	486.65	490.61		490.70	0.015002	4.68	95.40	129.74		0.41
Downstream_Reach	428.4629	100-year flow	246.0	486.65	490.77		490.86	0.014148	4.65	117.39	139.50		0.40
Downstream_Reach	389.8977	5-year flow	88.0	485.10	489.15	489.15	489.40	0.017875	5.40	39.54	84.16		0.49
Downstream_Reach	389.8977	10-year flow	113.0	485.10	489.30	489.30	489.50	0.015829	5.22	54.07	99.72		0.47
Downstream_Reach	389.8977	25-year flow	155.0	485.10	489.40	489.40	489.64	0.020055	5.88	64.38	104.18		0.53
Downstream_Reach	389.8977	50-year flow	191.0	485.10	489.43	489.43	489.74	0.027674	7.05	67.08	105.55		0.62
Downstream_Reach	389.8977	100-year flow	246.0	485.10	489.54	489.54	489.88	0.031384	7.64	78.67	111.40		0.66
Downstream_Reach	287.04												
Downstream_Reach	184.1871	5-year flow	88.0	480.76	483.94	483.25	484.31	0.006910	4.90	18.68	11.63		0.60
Downstream_Reach	184.1871	10-year flow	113.0	480.76	484.27	483.56	484.71	0.006923	5.34	22.85	14.17		0.61
Downstream_Reach	184.1871	25-year flow	155.0	480.76	484.70	484.09	485.25	0.007287	6.10	28.32	17.44		0.64
Downstream_Reach	184.1871	50-year flow	191.0	480.76	485.01	484.42	485.65	0.007409	6.61	35.60	19.91		0.66
Downstream_Reach	184.1871	100-year flow	246.0	480.76	485.44	484.84	486.19	0.007517	7.25	44.88	23.53		0.68
Downstream_Reach	164.443	5-year flow	88.0	480.60	483.87		484.15	0.004755	4.29	23.22	15.84		0.53
Downstream_Reach	164.443	10-year flow	113.0	480.60	484.23		484.54	0.004382	4.59	29.22	17.78		0.53
Downstream_Reach	164.443	25-year flow	155.0	480.60	484.87		485.06	0.004507	5.21	37.59	21.74		0.55
Downstream_Reach	164.443	50-year flow	191.0	480.60	484.99		485.45	0.004617	5.67	45.80	28.73		0.57
Downstream_Reach	164.443	100-year flow	246.0	480.60	485.43	484.49	485.97	0.004613	6.20	61.16	45.10		0.58
Downstream_Reach	135.2617	5-year flow	88.0	480.40	483.84		483.99	0.003294	3.09	28.48	18.06		0.43
Downstream_Reach	135.2617	10-year flow	113.0	480.40	484.23		484.38	0.003033	3.13	36.14	21.39		0.42
Downstream_Reach	135.2617	25-year flow	155.0	480.40	484.73		484.89	0.002518	3.20	53.90	43.52		0.40
Downstream_Reach	135.2617	50-year flow	191.0	480.40	485.11		485.27	0.002080	3.21	71.89	51.78		0.37
Downstream_Reach	135.2617	100-year flow	246.0	480.40	485.63		485.77	0.001609	3.22	101.71	64.51		0.34
Downstream_Reach	134.7241	5-year flow	88.0	478.60	482.06	482.06	482.96	0.024804	7.65	12.00	7.87		0.97
Downstream_Reach	134.7241	10-year flow	113.0	478.60	482.45	482.45	483.44	0.021770	8.08	15.40	9.85		0.93
Downstream_Reach	134.7241	25-year flow	155.0	478.60	483.79		484.34	0.007280	6.33	33.86	17.71		0.58
Downstream_Reach	134.7241	50-year flow	191.0	478.60	484.15	483.41	484.78	0.007529	6.85	40.57	20.56		0.60
Downstream_Reach	134.7241	100-year flow	246.0	478.60	484.40	483.94	485.30	0.010140	8.27	46.64	35.92		0.70
Downstream_Reach	116.8404	5-year flow	88.0	478.50	481.98		482.09	0.001409	2.93	45.19	28.85		0.31
Downstream_Reach	116.8404	10-year flow	113.0	478.50	482.76		482.85	0.000833	2.67	69.68	33.67		0.25
Downstream_Reach	116.8404	25-year flow	155.0	478.50	484.11		484.17	0.000415	2.34	120.44	41.63		0.19
Downstream_Reach	116.8404	50-year flow	191.0	478.50	484.52		484.59	0.000475	2.64	138.93	49.94		0.20
Downstream_Reach	116.8404	100-year flow	246.0	478.50	484.98		485.08	0.000571	3.06	164.30	61.03		0.23
Downstream_Reach	107.6303	5-year flow	88.0	478.36	481.88	480.12	482.06	0.002637	3.38	28.20	10.04		0.34
Downstream_Reach	107.6303	10-year flow	113.0	478.36	482.63	480.42	482.81	0.002079	3.46	34.41	15.28		0.31
Downstream_Reach	107.6303	25-year flow	155.0	478.36	483.99	480.89	484.14	0.001216	3.23	62.96	24.44		0.25
Downstream_Reach	107.6303	50-year flow	191.0	478.36	484.37	481.25	484.55	0.001380	3.81	72.77	28.91		0.27
Downstream_Reach	107.6303	100-year flow	246.0	478.36	484.79	481.76	485.02	0.001706	4.21	84.64	31.02		0.30
Downstream_Reach	89.2												
Downstream_Reach	70.8049	5-year flow	88.0	477.20	481.22	479.01	481.35	0.001484	2.87	30.89	9.24		0.27
Downstream_Reach	70.8049	10-year flow	113.0	477.20	481.42	479.32	481.61	0.002030	3.48	32.75	10.58		0.32
Downstream_Reach	70.8049	25-year flow	155.0	477.20	481.64	479.78	481.95	0.003160	4.51	34.76	13.50		0.40
Downstream_Reach	70.8049	50-year flow	191.0	477.20	481.67	480.13	482.14	0.004690	5.51	35.01	13.87		0.49
Downstream_Reach	70.8049	100-year flow	246.0	477.20	481.77	480.62	482.51	0.007127	6.92	35.98	15.74		0.61
Downstream_Reach	56.47157	5-year flow	88.0	477.00	480.61	480.61	481.17	0.014680	6.42	20.71	27.26		0.72
Downstream_Reach	56.47157	10-year flow	113.0	477.00	480.87	480.87	481.44	0.014123	6.74	29.17	35.53		0.72
Downstream_Reach	56.47157	25-year flow	155.0	477.00	481.20	481.20	481.79	0.014089	7.27	43.15	51.99		0.73
Downstream_Reach	56.47157	50-year flow	191.0	477.00	481.60	481.60	482.02	0.010085	6.87	69.81	79.25		0.63
Downstream_Reach	56.47157	100-year flow	246.0	477.00	481.82	481.82	482.23	0.010132	6.97	87.56	82.85		0.64
Downstream_Reach	19.15813	5-year flow	88.0	476.90	480.39	479.58	480.55	0.002710	3.45	39.40	39.61		0.41
Downstream_Reach	19.15813	10-year flow	113.0	476.90	480.67	479.88	480.85	0.002710	3.74	51.61	49.85		0.42
Downstream_Reach	19.15813	25-year flow	155.0	476.90	481.04	480.23	481.24	0.002715	4.10	73.22	65.38		0.43

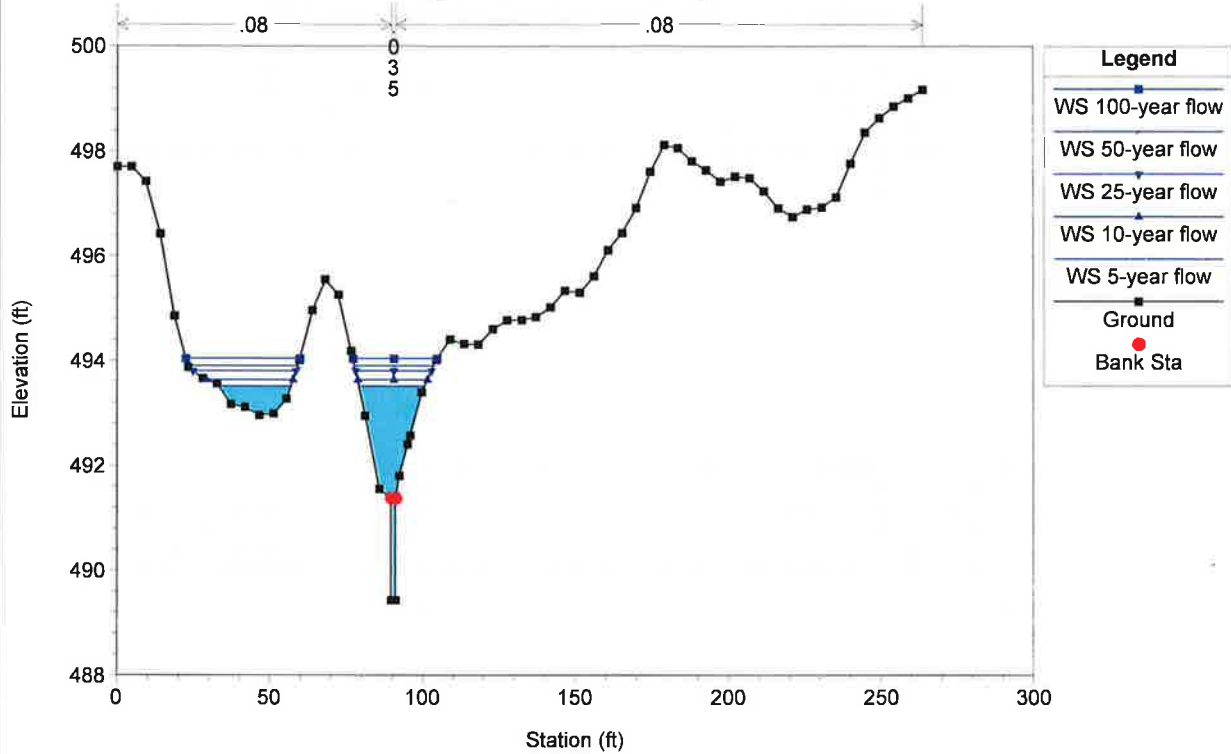
HEC-RAS Plan: Existing River: Unnamed_Trib Reach: Downstream_Reach (Continued)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Downstream_Reach	19.15813	50-year flow	191.0	476.90	481.28	480.46	481.49	0.002713	4.33	92.73	89.19	0.43
Downstream_Reach	19.15813	100-year flow	246.0	476.90	481.62	480.74	481.84	0.002712	4.64	124.15	99.04	0.44

CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

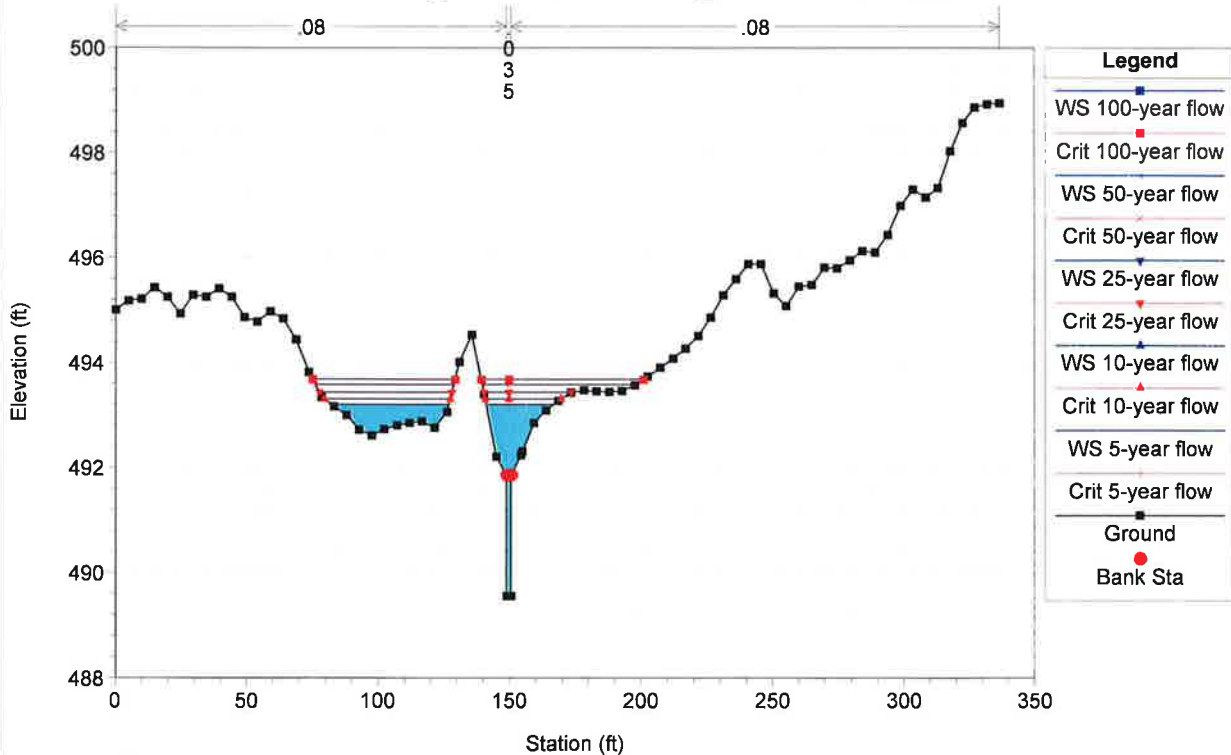
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

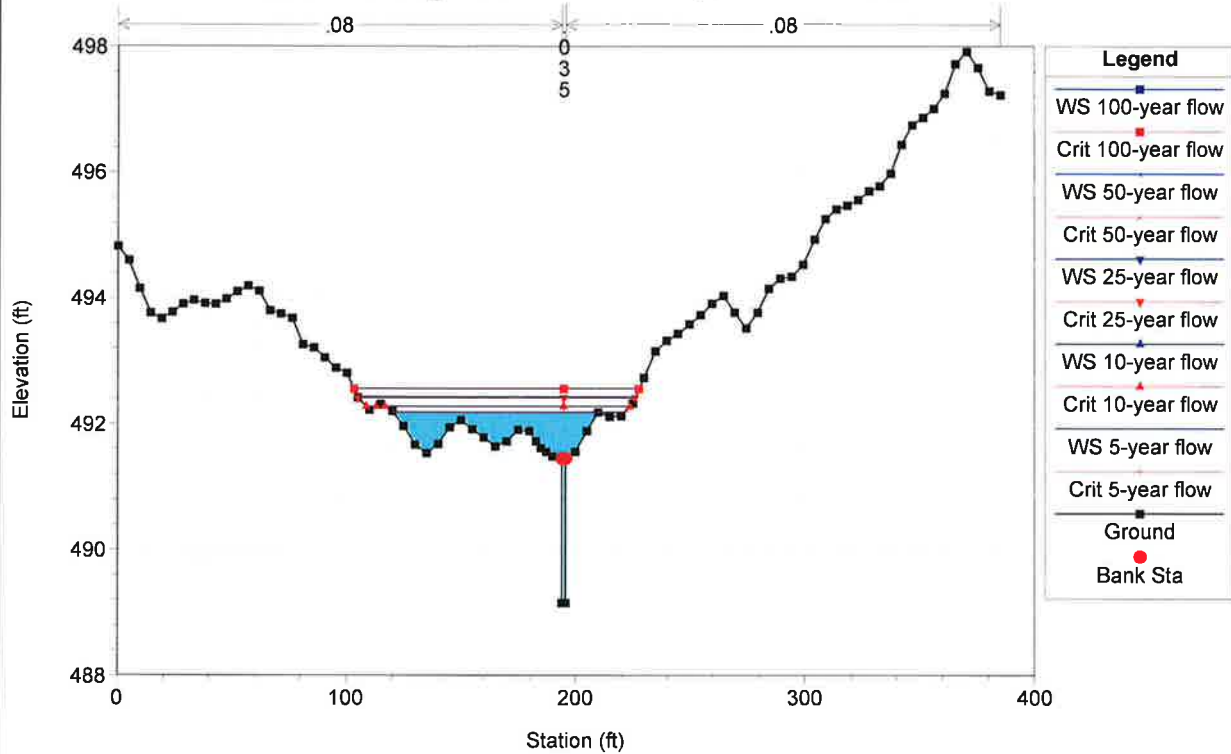
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

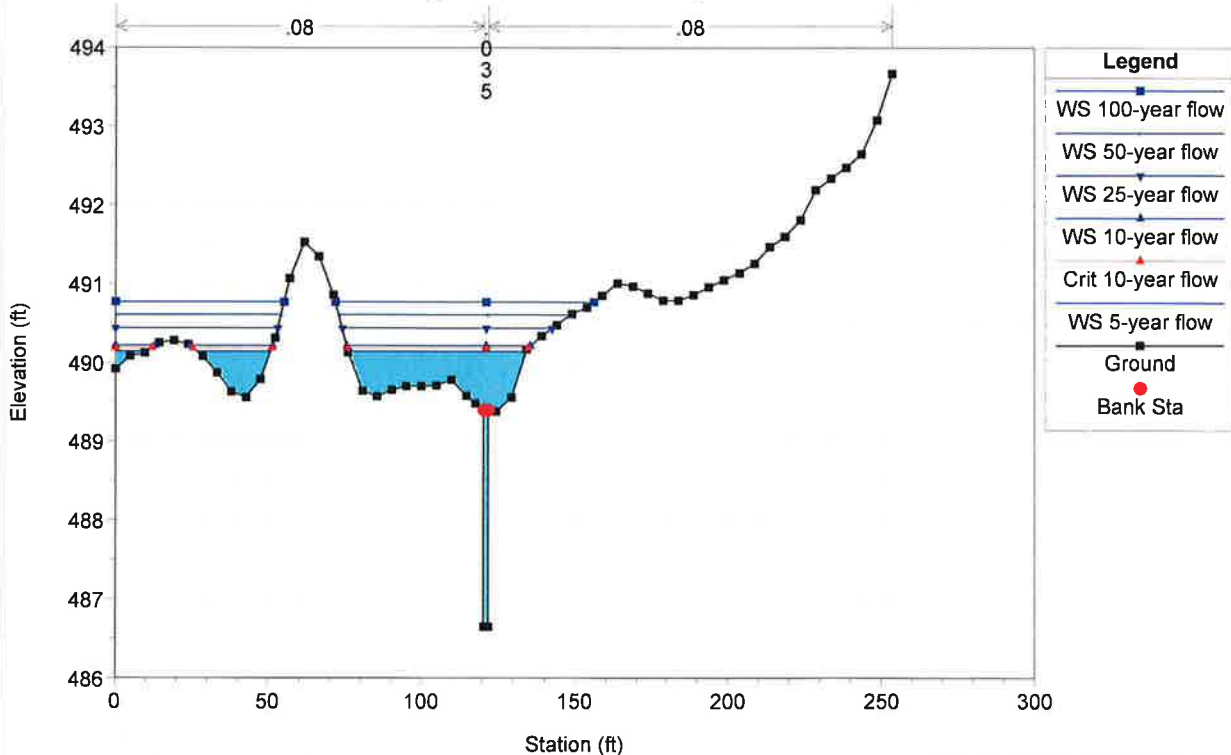
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

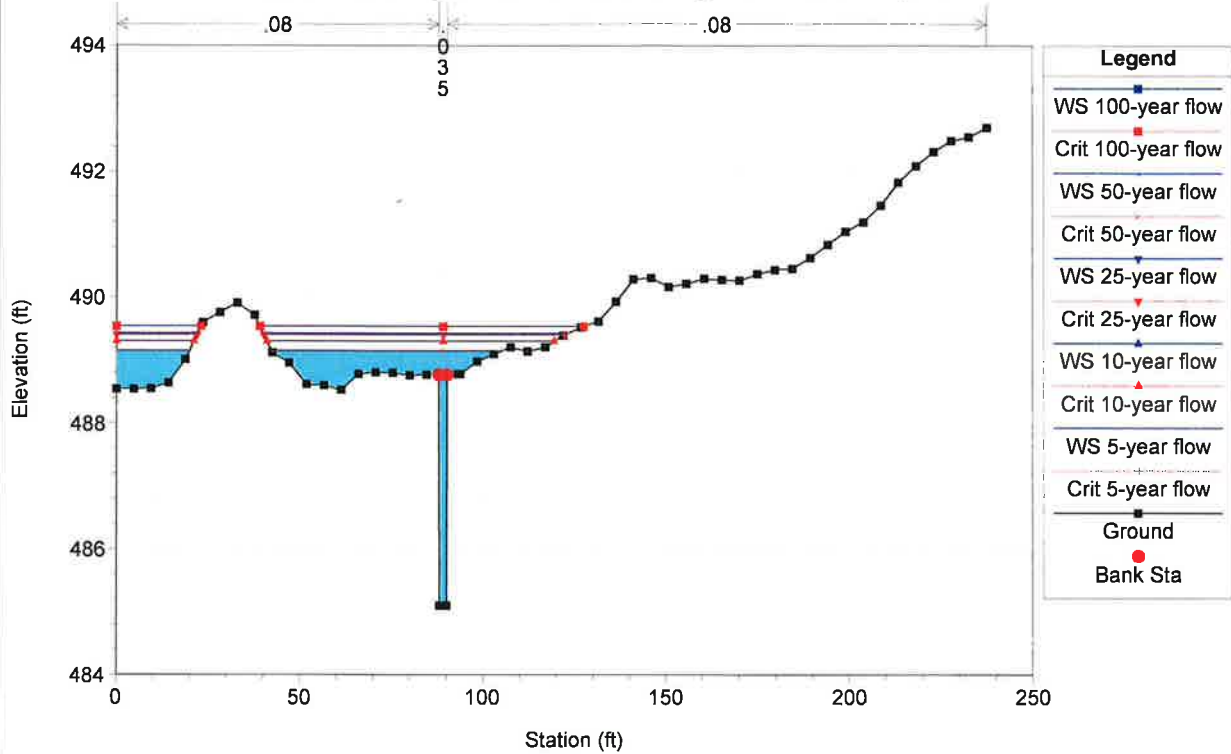
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

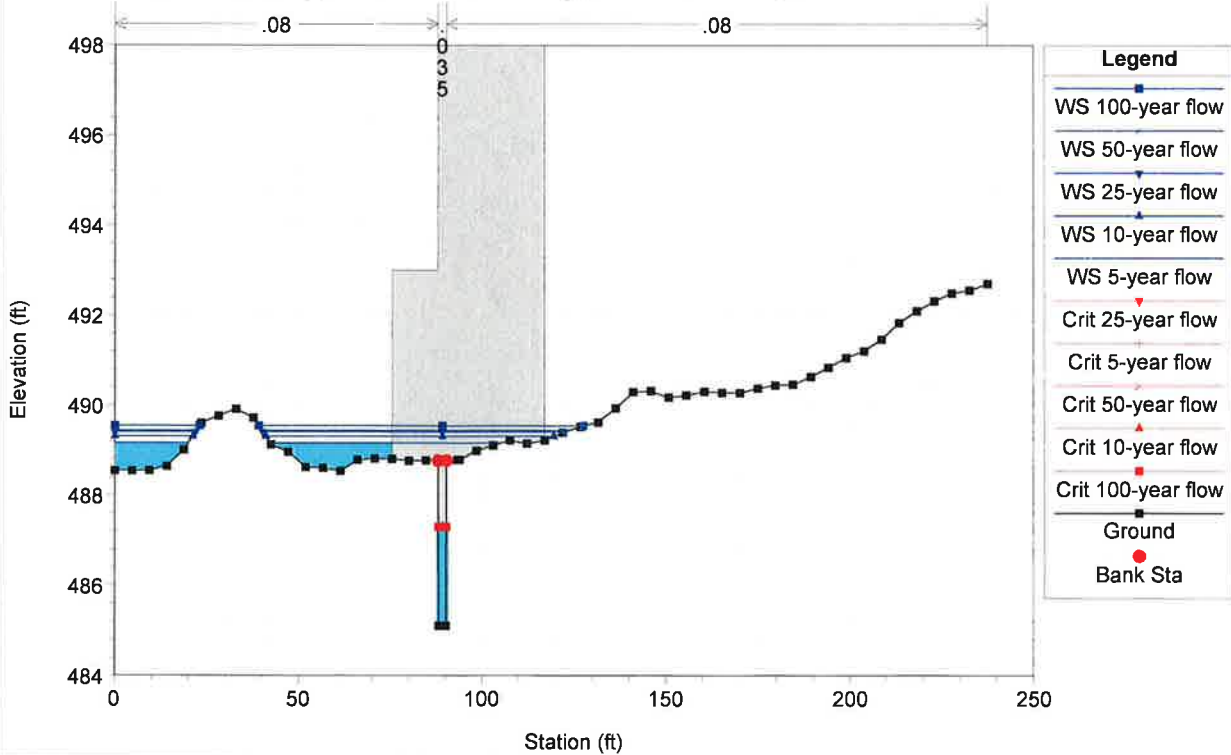
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CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

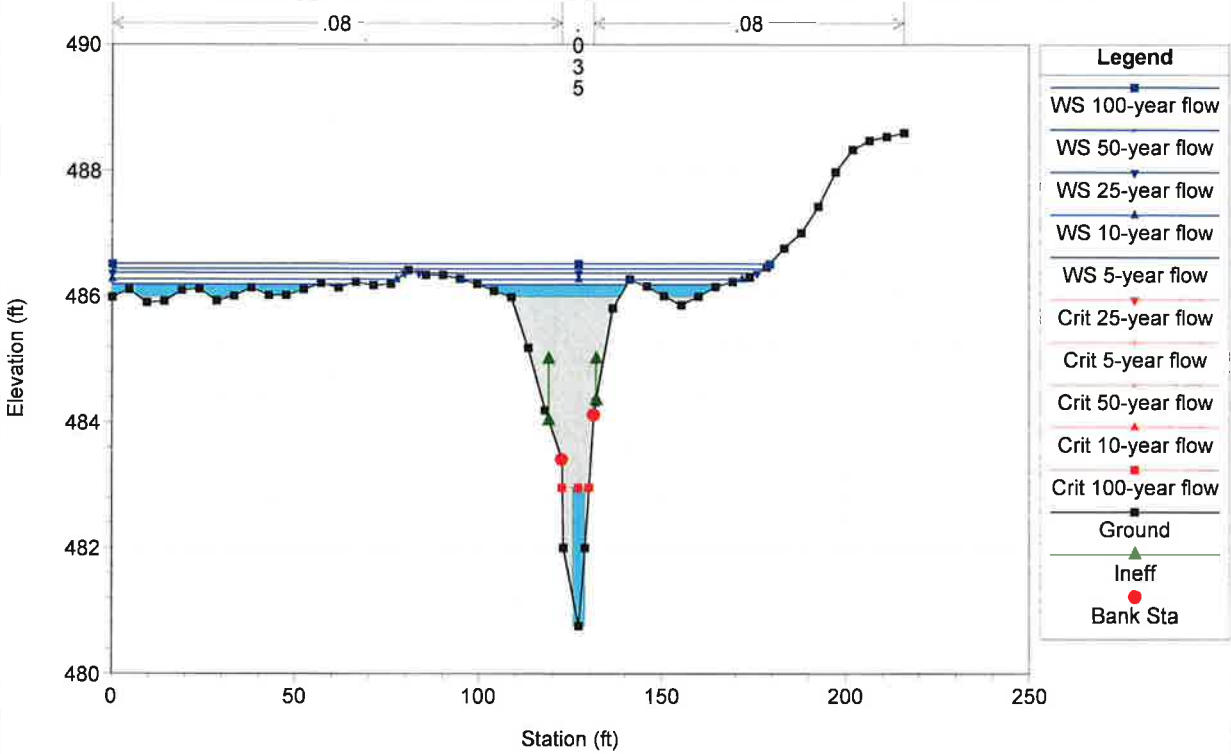
River = Unnamed_Trib Reach = Downstream_Reach RS = 287.04 Culv Firehouse/Main Street



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

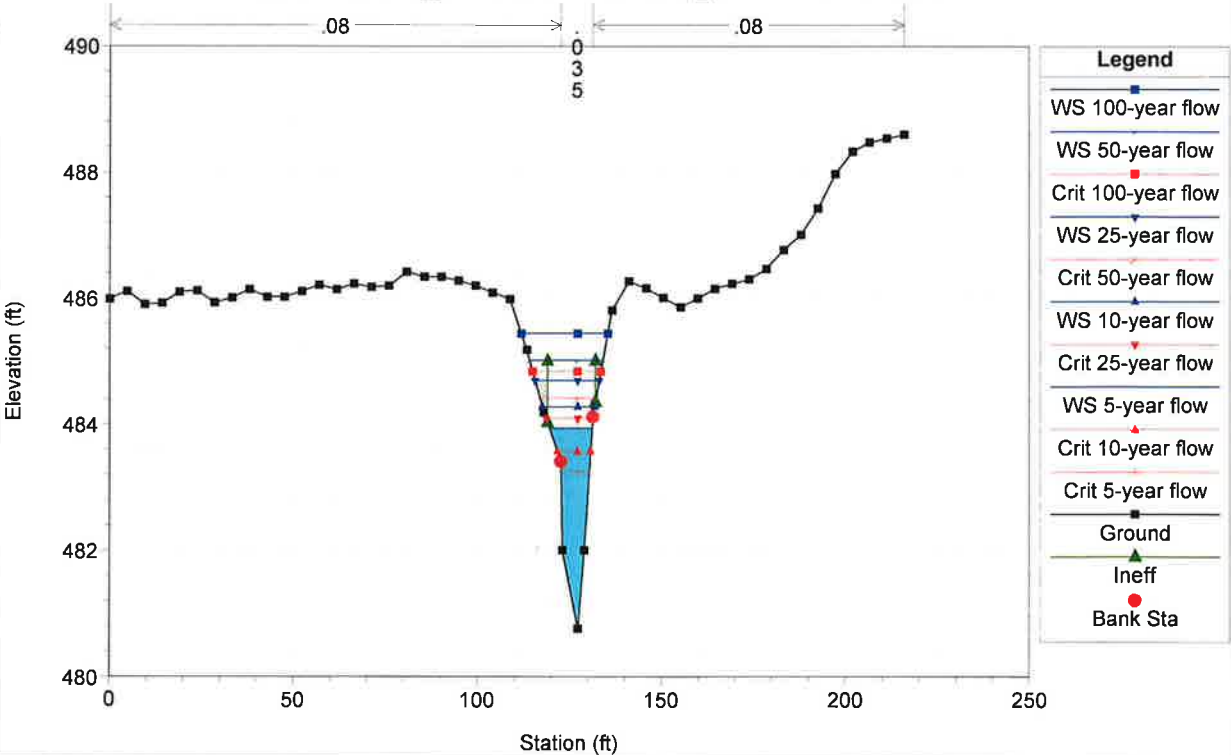
River = Unnamed_Trib Reach = Downstream_Reach RS = 287.04 Culv Firehouse/Main Street



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

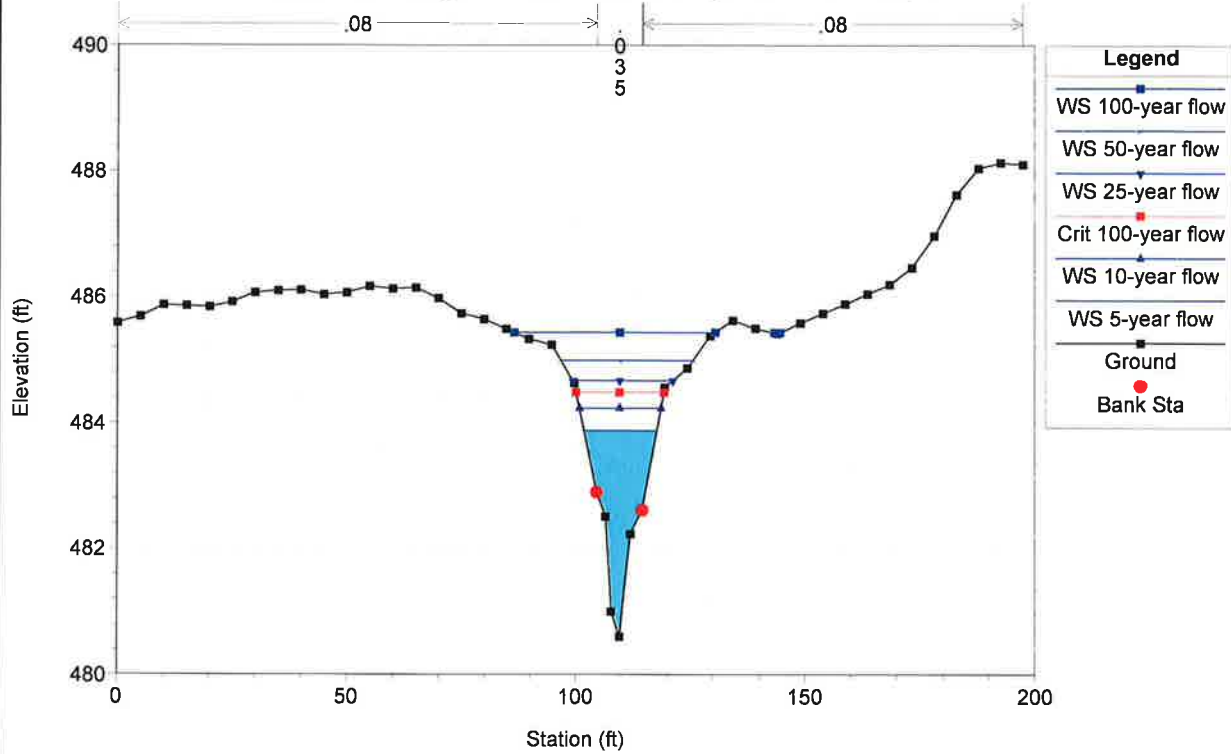
River = Unnamed_Trib Reach = Downstream_Reach RS = 184.1871



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

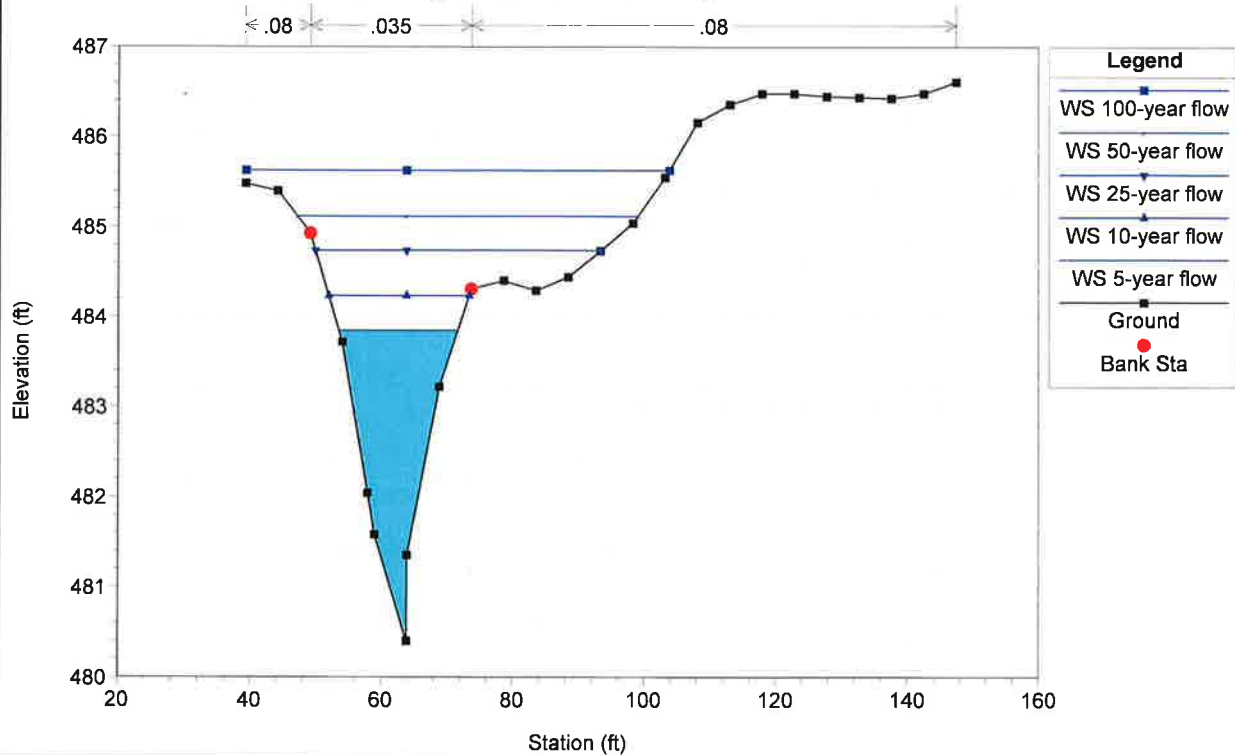
River = Unnamed_Trib Reach = Downstream_Reach RS = 164.443



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

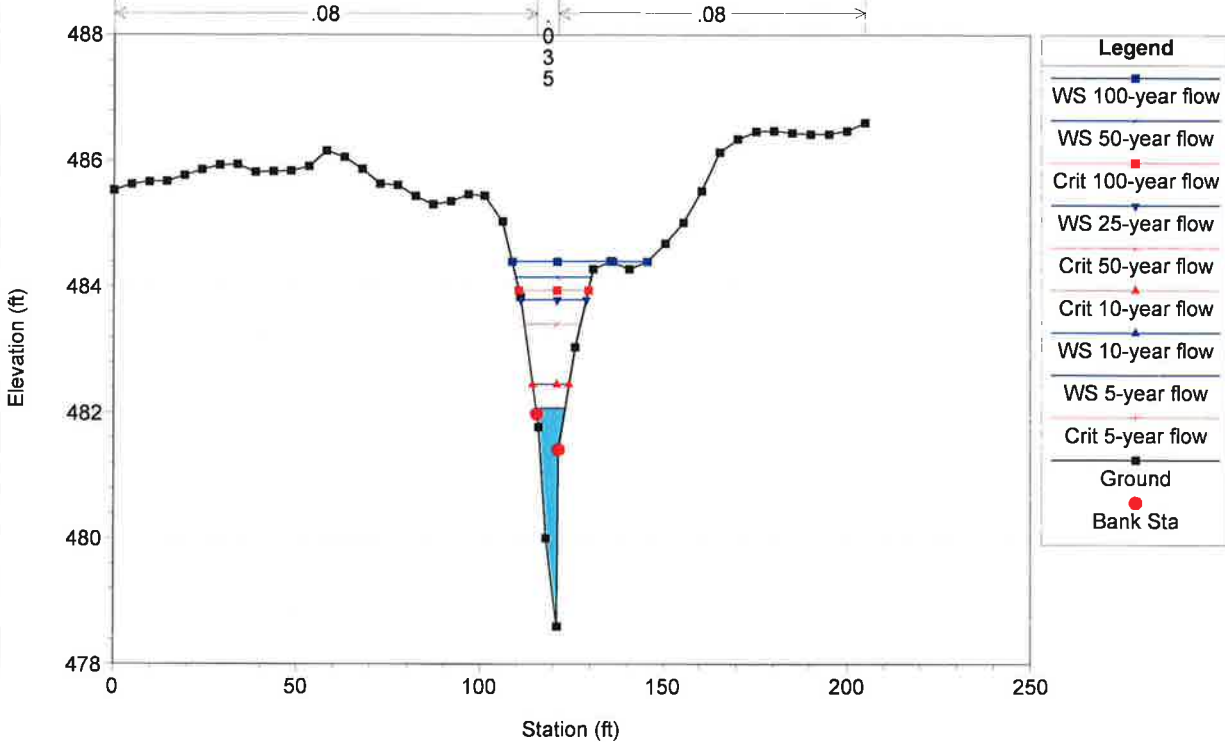
River = Unnamed_Trib Reach = Downstream_Reach RS = 135.2617



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

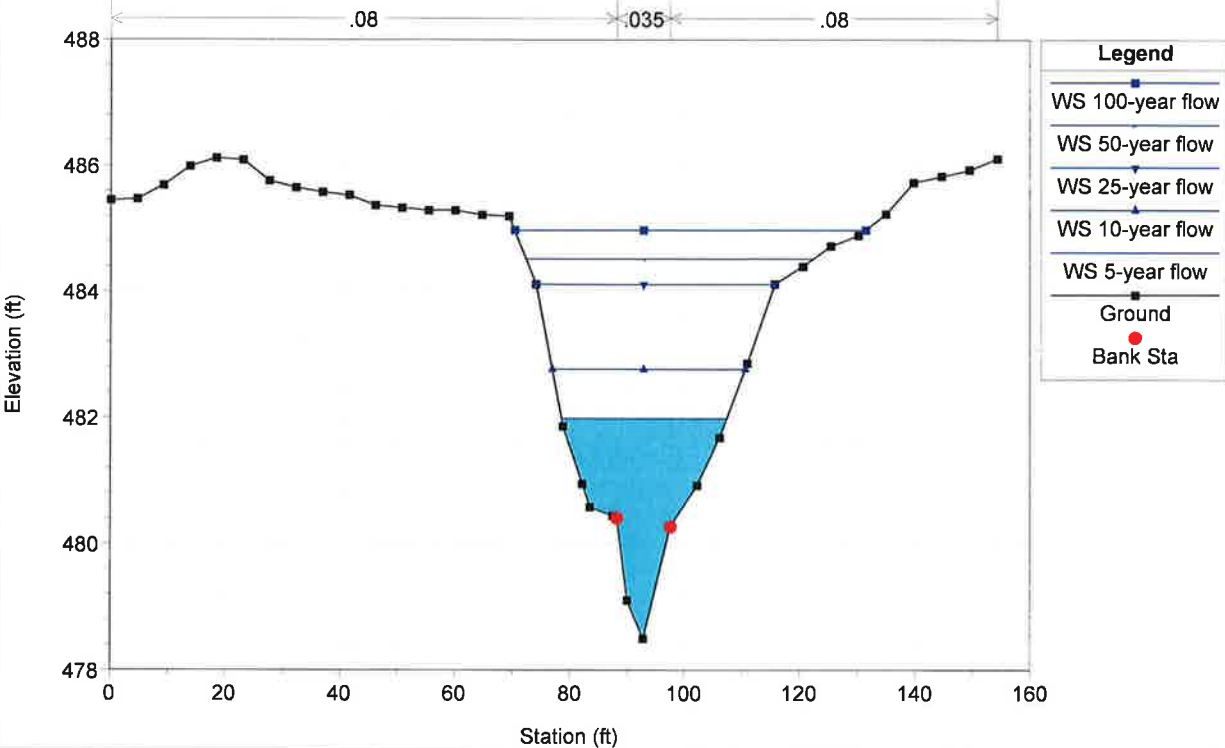
River = Unnamed_Trib Reach = Downstream_Reach RS = 134.7241



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

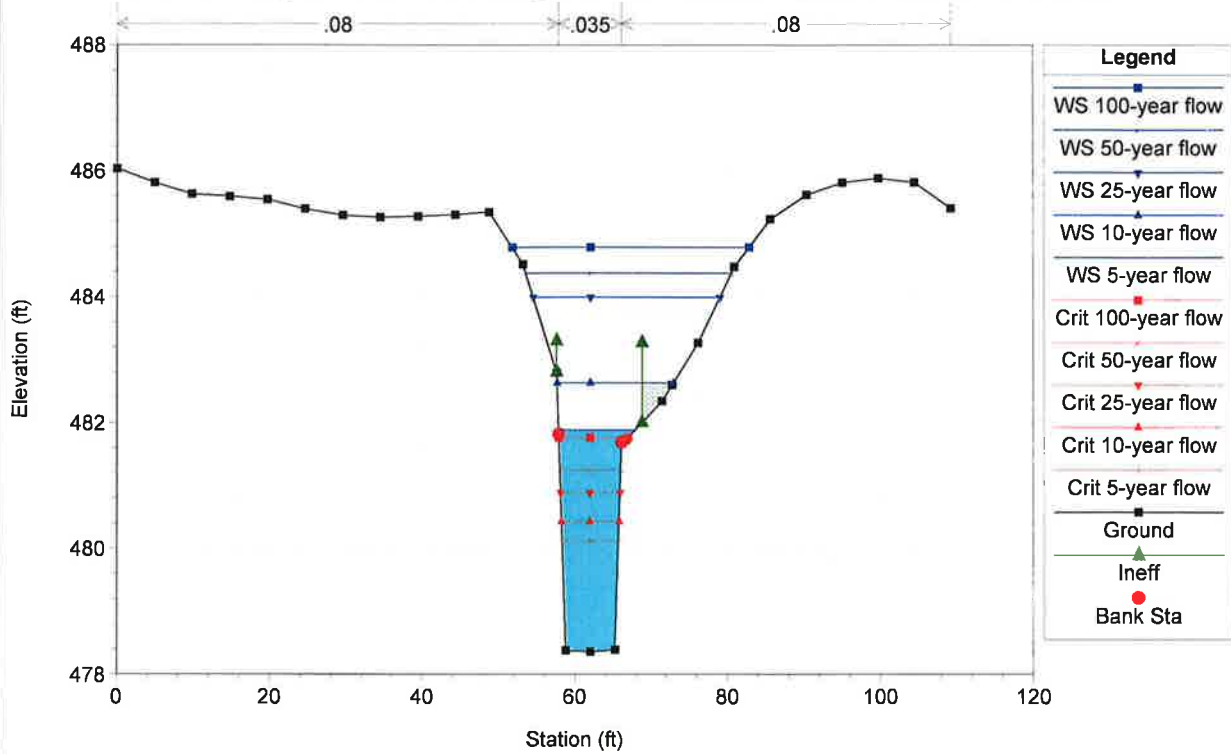
River = Unnamed_Trib Reach = Downstream_Reach RS = 116.8404



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

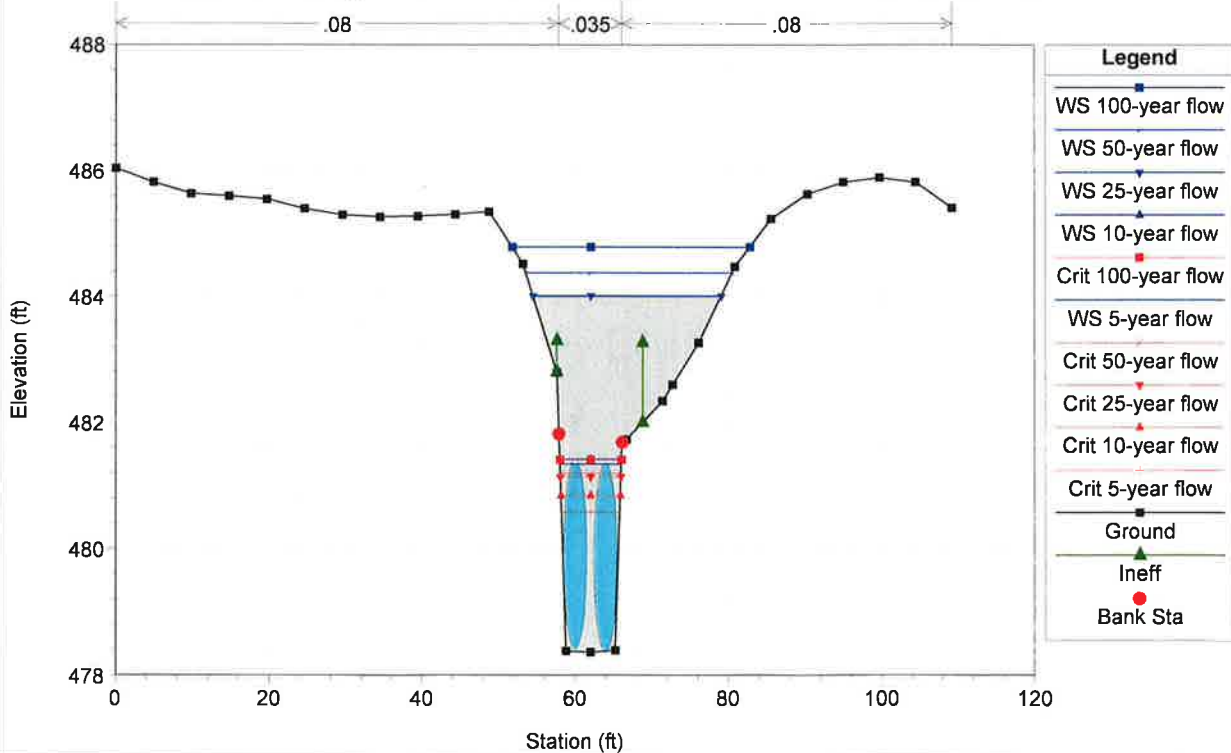
River = Unnamed_Trib Reach = Downstream_Reach RS = 107.6303 Upstream section from Columbia Trail

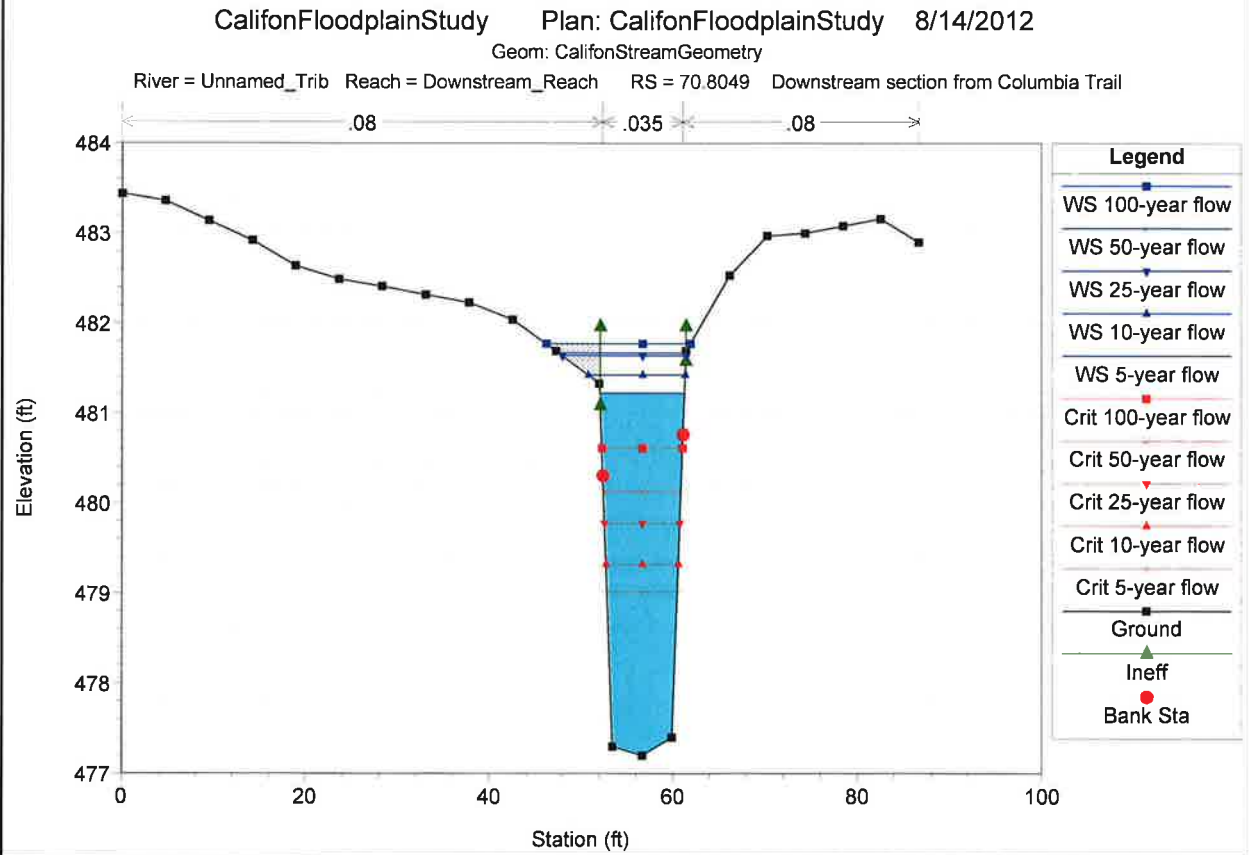
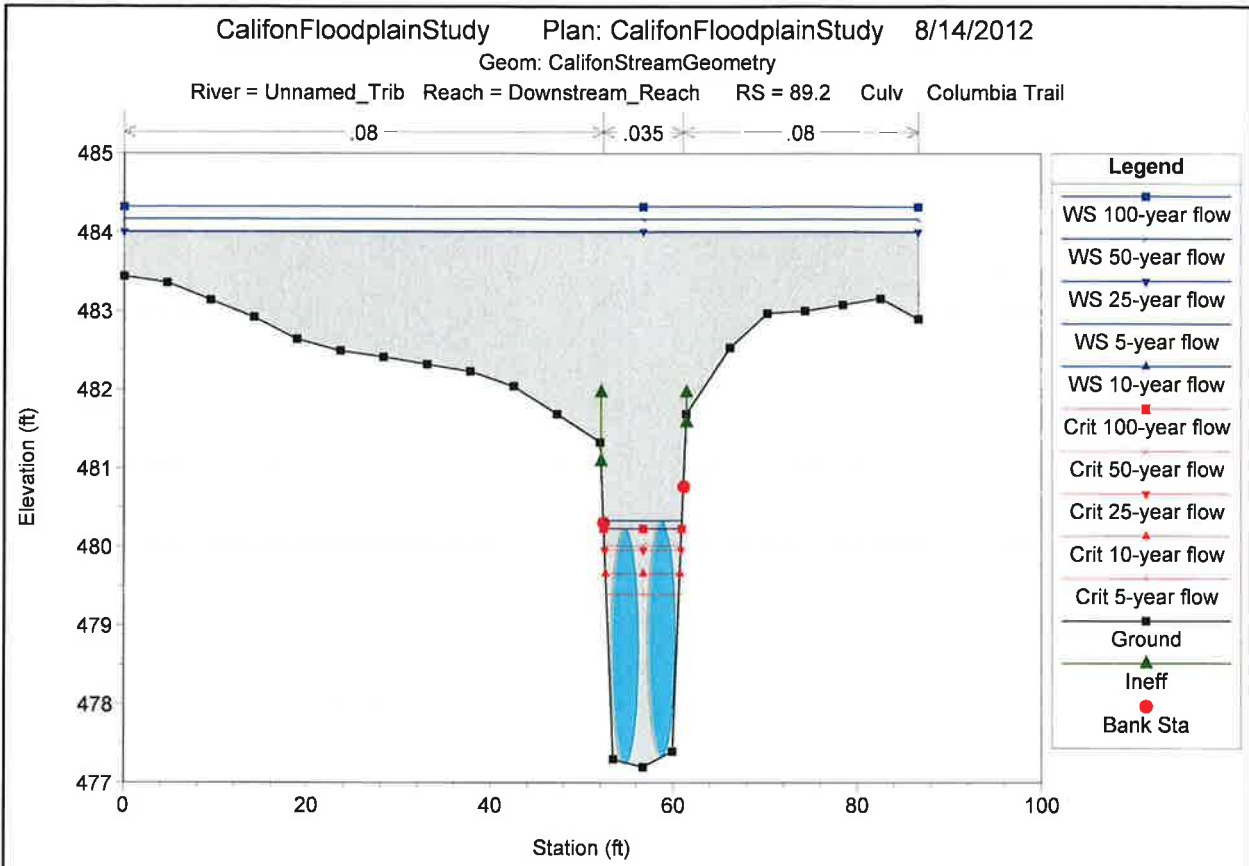


CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

River = Unnamed_Trib Reach = Downstream_Reach RS = 89.2 Culv Columbia Trail

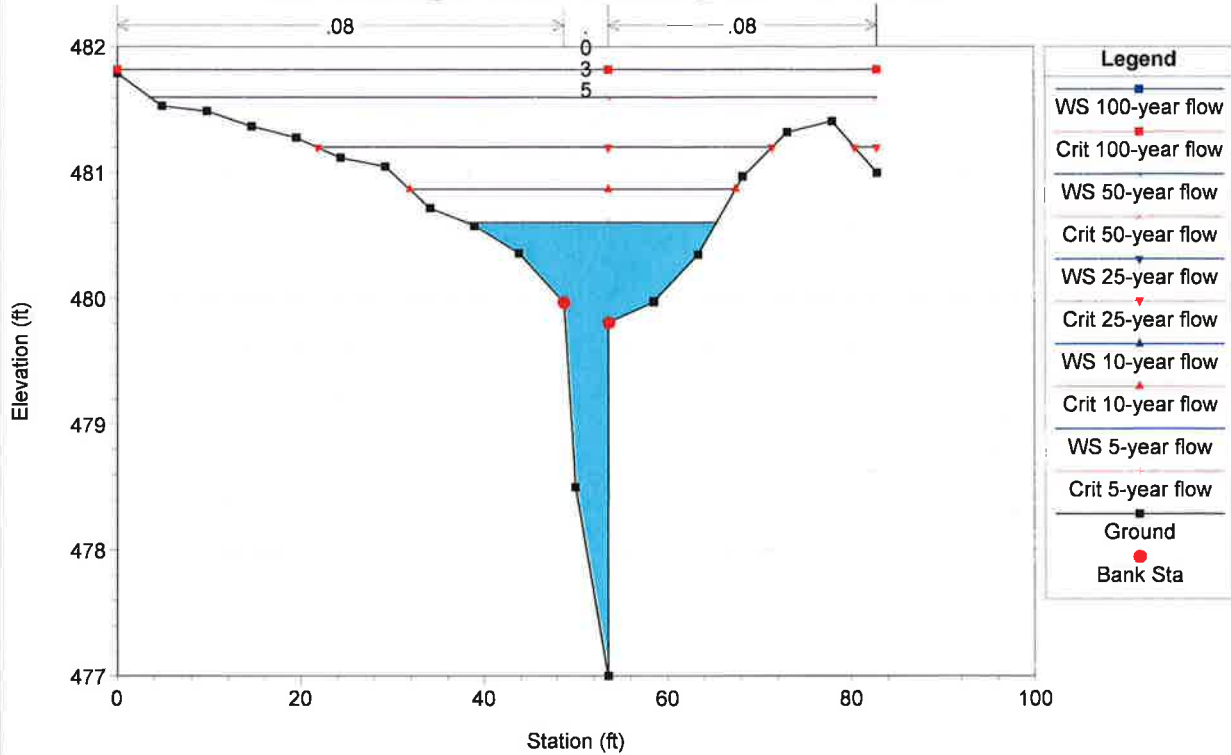




CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

River = Unnamed_Trib Reach = Downstream_Reach RS = 56.47157



CalifonFloodplainStudy Plan: CalifonFloodplainStudy 8/14/2012

Geom: CalifonStreamGeometry

River = Unnamed_Trib Reach = Downstream_Reach RS = 19.15813

