APPENDIX D - Hydromodification Susceptibility Documentation Report and Mapping: Santa Margarita River

- Restoration and Rehabilitation Opportunities in the Santa Margarita River Watershed (refer to Appendix D)

SEE ATTACHMENT

Hydromodification Susceptibility Documentation Report and Mapping

Santa Margarita River

June 2013

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Riverside County Copermittees

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1 INTRODUCTION

This documentation report is part of the larger study for the Riverside County Flood Control and Water Conservation District (District) to develop a Hydromodification Management Plan (HMP) as required by the current Riverside County San Diego Region Municipal Separate Storm Sewer System (MS4) Permit Order No. R9-2010-0016, NPDES No. CAS 0108766 (MS4 Permit). This report specifically deals with the Santa Margarita Region (SMR), also known as the Santa Margarita Hydrologic Unit, within Riverside County and includes the expansion of existing SMR maps. The updated maps provide information on the channels and streams within the SMR with the goal of identifying those segments of existing stream channels that may be vulnerable to development impacts as required by the MS4 Permit. The report also identifies areas with the potential for restoration or rehabilitation.

1.1 Background

According to *Surface Water Ambient Monitoring Program (SWAMP) Report on the Santa Margarita Hydrologic Unit*, by the Southern California Coastal Water Research Project (SCCWRP, 2007), the Santa Margarita River is one of the largest unregulated rivers in Southern California. The watershed is also one of the least developed in Southern California, where approximately 74% of the 750-square mile watershed is within Riverside County. Only three cities: Murrieta, Wildomar, and Temecula are within the Riverside County portion of the watershed. Because the watershed eventually outlets into the Pacific Ocean through San Diego County, the entire watershed is under the jurisdiction of the San Diego Regional Water Quality Board (SDRWQCB) and the San Diego Region MS4 Permit.

The San Diego Region MS4 Permit identifies that the District and cities within the SMR (Copermittees) shall develop and implement a Hydromodification Management Plan (HMP) to address the entire Permit Area (see Figure 1). The District is the Principal Copermittee for coordination of compliance with the MS4 Permit and is engaged in developing the components of the HMP on behalf of the Copermittees. The SDRWQCB jurisdiction area covers the southern portion of Riverside County. The other portions of Riverside County are under the jurisdiction of the Santa Ana Regional Water Quality Control Board (SARWQCB) and the Colorado River Basin Regional Water Quality Control Board (CRBRWQCB).

According to Section F.1.h of the MS4 Permit, the objective of the HMP is to manage increases in runoff discharge rates and durations from all Priority Development Projects (PDPs). The HMP must be incorporated into the Standard Stormwater Management Plan (SSMP) and implemented by each Copermittee so that estimated post-project runoff discharge rates and durations must not exceed predevelopment discharge rates and durations for a range of runoff flows.

The Permit defines PDPs as:

(a) All new PDPs that fall under the following categories or locations:
    a. A project that creates 10,000 square feet or more of impervious surfaces;
    b. Automotive repair shops;
    c. Restaurants;
    d. All hillside development greater than 5,000 square feet;

e. Development located within or directly discharging to Environmentally Sensitive Areas;
f. Impervious parking lots 5,000 square feet or more and potentially exposed to runoff;
g. Streets, roads, highways and freeways of 5,000 square feet or more of impervious surface; and
h. Retail gasoline outlets.

(b) Redevelopment projects that create, add or replace at least 5,000 square feet of impervious surfaces; or
(c) A project that results in the disturbance of one acre or more of land.

1.2 Hydromodification

Hydromodification refers to changes in the magnitude and frequency of stream flows due to urbanization and the resulting impacts on receiving channels, such as erosion, sedimentation, and potentially degradation of in-stream habitat. The degree to which a channel will erode or aggrade is a function of the increase or decrease in work (shear stress), the resistance of the channel bed and bank materials – including vegetation (critical shear stress), the change in sediment delivery, and the geomorphic condition (soil lithology) of the channel.

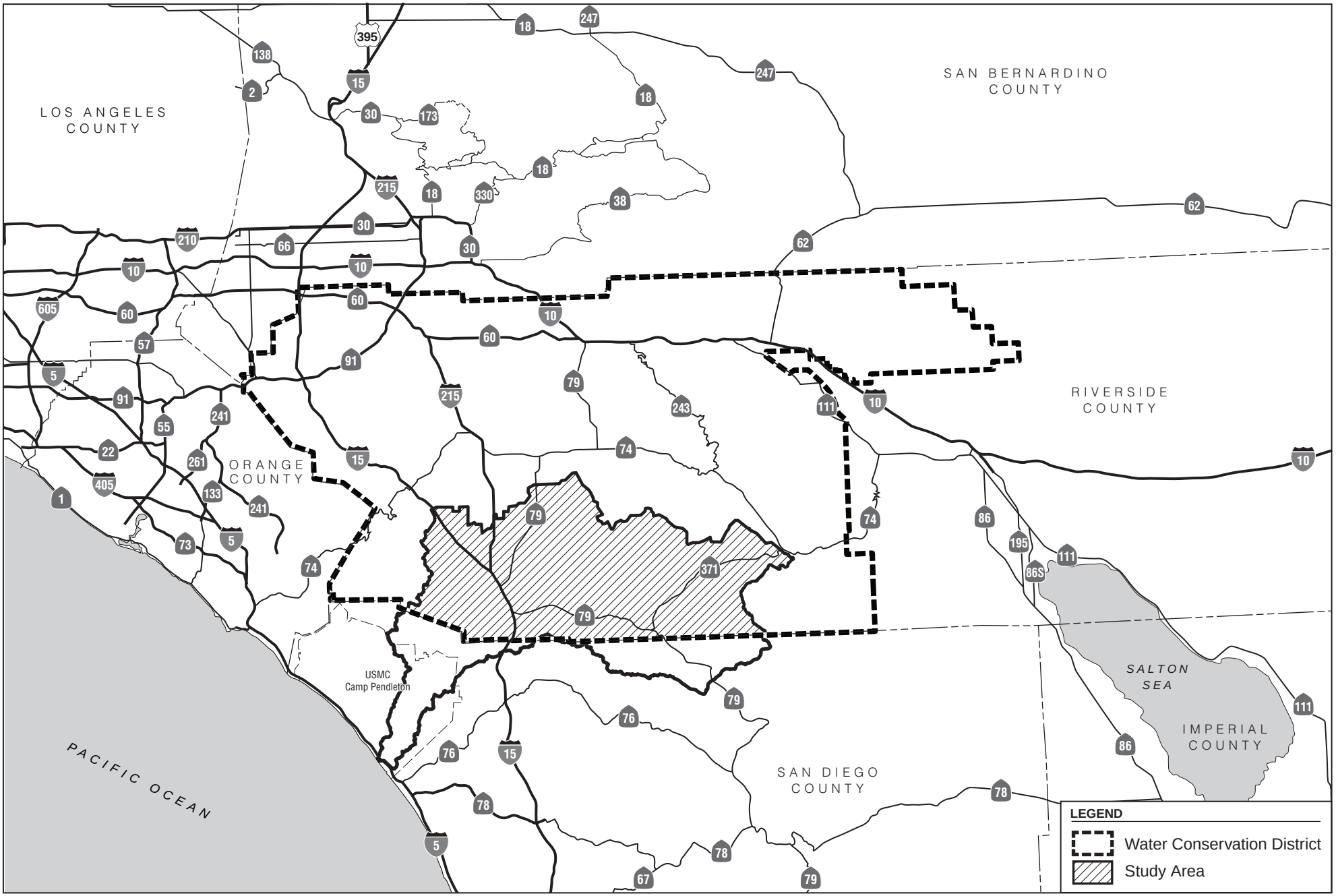
Critical shear stress is the shear stress threshold above which motion of bed material load is initiated. Only the flows that generate shear stress in excess of the critical shear stress of the bank and bed materials cause significant movement of bed material. Urbanization increases the discharge rate, amount and timing of runoff, and associated shear stress exerted on the channel by stream flows and can trigger erosion in the form of incision (channel downcutting), widening (bank erosion), or both. Depths that generate shear below critical shear stress levels have little or no effect on the channel stability.

Where receiving stream channels are already unstable, hydromodification management can be thought of as a method to avoid accelerating or exacerbating existing problems. Where receiving stream channels are in a state of dynamic equilibrium, hydromodification management may prevent the onset of erosion, sedimentation, lateral bank migration, or impacts to in-stream vegetation.

The Permit contains certain requirements that strongly influence the methodology chosen in development of the HMP. The Permit requires the Copermittees to develop an HMP for all PDPs (with certain exemptions) and develop a performance standard including a geomorphically significant flow range that ensures the geomorphic stability within the channel. Supporting analyses must be based on continuous hydrologic simulation modeling. Similarly, the loss of sediment supply due to the development must be considered.

According to Section F.1.h.4 of the Permit, each Copermittee has the discretion to exempt a Priority Development Project from hydromodification management where the project:

(a) Discharges stormwater runoff into underground storm drains discharging directly to water storage reservoirs and lakes;



HYDROMODIFICATION SUSCEPTIBILITY DOCUMENTATION REPORT AND MAPPING
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Location Map

not to scale

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3/1/13 JN 130181-19125 MAS

Figure 1

(b) Discharges stormwater runoff into conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs and lakes; or

(c) Discharges stormwater runoff into other areas identified in the HMP as acceptable to not need to meet the requirements of Section F.1.h by the San Diego Water Board Executive Officer.

1.3 Goals and Objectives

The goal of this study was to conduct a screening level analysis to identify and map stream channel segments that may be vulnerable to hydromodification and cause a hydrologic condition of concern (HCOC). The purpose of mapping the susceptible stream channel segments was to develop a comprehensive map of the MS4 Permit area to assist the District, Copermittees, and project proponents to determine whether or not a project will drain to a potentially susceptible stream channel segment and may be required to provide hydromodification management.

Additionally, this study identifies areas within the Santa Margarita Hydrologic Unit (SMHU) for potential opportunities to restore or rehabilitate stream channels with historic hydromodification of receiving waters that are tributary to documented low or very low Index of Biotic Integrity (IBI) scores for Hydrologic Response Unit (HRU) and Geomorphic Landscape Unit (GLU) analyses.

The study was divided into eleven tasks:

1. Research and data collection;
2. Delineate and map existing stream channel segments;
3. Define and categorize groups of existing stream channel segments based on common characteristics;
4. Verify groups using provided data and site visits;
5. Identify possible exemptions under Section F.1.h.1.4.c;
6. Conduct Susceptibility Assessment of the stream channels to identify segments that may be susceptible to hydromodification;
7. Delineate and map existing hydrology watershed boundaries to stream channel segments that may be susceptible to hydromodification;
8. Create the comprehensive Hydromodification Applicability Map of the MS4 Permit area;
9. Identify locations of documented Low or Very Low IBI scores;
10. Identify areas within SMHU for potential opportunities to restore or rehabilitate stream channels; and
11. Conduct GIS-based Hydrologic Response Units/Geomorphic Landscape Units (HRU/GLU) analysis of the identified areas from Task 10.

This report documents the methodologies used to determine whether an existing stream channel segment may be susceptible to hydromodification due to a PDP. It discusses the delineation of the existing stream channel segments and the watershed areas, potential areas for

restoration or rehabilitation, and the HRU/GLU analysis. It also provides two maps: Existing Stream Channel Delineation Map and HCOC Applicability Map.

2 EXISTING CHANNEL DELINEATION MAP

This section discusses how the existing stream channels were delineated. It also discusses the grouping system used for the stream channel segments and provides the Existing Stream Channel Delineation Map, see Map 1.

2.1 Research and Data Collection

Data requests were provided to the Copermittees (see Table 1) to assist in the collection of background data needed for the delineation of existing channels. The information collected from the Copermittees included: aerial photographs, topography, as-built plans, Geographic Information System (GIS) databases, drainage studies, Federal Emergency Management Agency (FEMA) floodplain studies, and more. The data provided by the Copermittees was reviewed and verified for accuracy.

Table 1: Copermittees

Principal Copermittee	RCFC&WCD (District)
Copermittees	City of Murrieta City of Temecula City of Wildomar County of Riverside

2.2 Delineation of Existing Stream Channels

The goal of this task was to delineate all regional stream channels (above and below ground) within the Permit Area. Local stream channels were also mapped if it was found pertinent to determining if a subwatershed drained to a stream channel segment potentially vulnerable to hydromodification.

The existing stream channels were predominately delineated using the District's GIS shapefile called: RCFC_FACILITIES_LINE. This shapefile provided GIS linework for all District above and below ground stream channels.

Additional stream channels were delineated using GIS shapefiles provided by the Copermittees and National Hydrography Dataset (NHD). This additional data was used to fill in gaps found in heavily urbanized and natural areas.

The shapefiles were verified through an investigation of as-built plans and aerial photography. Some stream channel delineations were added solely based on the aerial photography investigation. Any stream channel delineations in question were verified by site visits.

2.3 Existing Stream Channel Groups

To complete the initial mapping, the existing stream channels were categorized into five groups to better describe the individual stream channel segments by common traits. The groups matched the methodologies used in other parts of Riverside County and are described below:

1. **Engineered, Fully Hardened and Maintained (EFHM):** This group includes constructed facilities that are fully armored (e.g. concrete, soil cement, rock rip rap,

etc.) on three sides and verified by as-builts, aerial photographs and/or a site visit. This group includes piped and boxed stream channel segments. The facility must also be maintained and designed based on an engineering criteria (e.g. a specific storm event.)

2. **Engineered, Partially Hardened and Maintained (EPHM):** This group includes constructed facilities that have some armoring (e.g. concrete, soil cement, rock rip rap, turf reinforcing mats, etc.) on less than three sides and verified by as-builts, aerial photographs and/or a site visit. The armoring can include bank and/or invert lining that has been placed based on engineering criteria. The facility must also be maintained.

3. **Engineered, Earthen and Maintained (EEM):** This group includes constructed facilities that do not contain armoring but have been engineered to be stable systems and are verified by as-builts. The facility must also be maintained. This group is intended to be channel segments constructed for flood conveyance, which generally have a design capacity in excess of a 10-year storm event.

4. **Not Engineered and Earthen (NEE):** This group includes natural and constructed facilities that are modified by anthropogenic activities, which may include floodplain encroachments by development, culverts, bridges, privately owned bank and/or invert stabilization (such as rip-rap or other forms of bank protection, roads, etc.) and other man-made modifications to the channel system that are not necessarily continuous or designed to meet any specific engineering standard, but have modified the natural hydrologic characteristics of the facility. The improvements may or may not be maintained.

5. **Natural (NAT):** This group includes stream channel facilities that are in a natural state, where the geometry has not been modified. The stream channel facility may or may not be maintained.

2.4 Categorization of Existing Stream Channel Groups

A desktop study was conducted to categorize each individual stream channel segment into one of the above groups. The desktop study included an examination of as-built plans and aerial photography. The segments that were in question were field verified. Field verification included visiting an accessible location along the segment of stream channel. Photographs and notes were taken in regards to the stream channel segment condition and armoring.

Any stream channel facilities that could not be accessed and/or were still in question were discussed and verified with the Copermittee with jurisdictional responsibility for the facility.

3 SUSCEPTIBILITY ASSESSMENT

This section discusses the susceptibility to hydromodification of the existing stream channels and how they fit within the requirements of Section F.1.h of the Permit.

3.1 Channel Susceptibility

Sections F.1.h.4.a and F.1.h.4.b specify that a Copermittee has the discretion to not require hydromodification management if a PDP is directly tributary to a conveyance channel that is an underground storm drain (fully concrete lined) or whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs and lakes. Section F.1.h.4.c provides the option to identify other criteria that would allow the Copermittees the same discretion.

The five existing channel groups discussed in Section 2 of this report were combined into the two categories: Not Susceptible and Susceptible. The criteria used to determine the categories is similar to that used in other areas of Riverside County and Southern California and are shown below:

1. Not Susceptible

    a. EFHM – The risk for adverse impacts caused by hydromodification is insignificant due to the armoring of the stream channel segment and the engineered design which would prevent erosion and degradation of the channel.
    b. EPHM - The risk for adverse impacts caused by hydromodification is very low due to the partial armoring of the stream channel segment and the engineered design which would significantly lower the risk of erosion and degradation of the channel.
    c. EEM - The risk for adverse impacts caused by hydromodification is low due to the engineered design of the stream channel segment which would lower the risk of erosion and degradation of the channel.

2. Susceptible

    a. NEE – It cannot be verified that the stream channel segment could handle the changes in runoff volume and duration associated with PDPs without degradation. The risk for adverse impacts caused by hydromodification is potentially significant. Future technical studies could determine the level of risk of hydromodification in individual stream channel segments.
    b. NAT –The risk for adverse impacts caused by hydromodification is potentially significant. The level of risk may be determined through future technical studies.

3.2 Adequate Sump

An Adequate Sump can be defined as a large river, reservoir or basin that provides significant regional flood protection for the downstream watershed areas and mitigates flows such that any PDP upstream will not cause a significant change in the downstream flow conditions.

Both Vail Lake and Skinner Lake result in a major reduction of peak flows in all storm events. According to the PWA report, "for the watershed as a whole, compared with "natural conditions" there is a compensating effect on peak flood flows between the increased runoff from existing and future development and the storage effect of the large reservoirs. Those streams on which the reservoirs are located show large decreases in existing/future flows compared with natural conditions." For that reason, Vail Lake and Skinner Lake can be classified as "water storage reservoirs or lakes" and this study would categorize them as Adequate Sumps.

The Copermittees reserve the right to add additional facilities if they are identified to meet the above definition of an Adequate Sump. In the future, additional updates to the associated maps may be required in order to reflect the identification of additional Adequate Sumps.

3.2.1 Large Rivers

As the size of a watershed increases, the potential for a PDP to cause an HCOC within the watershed decreases. Therefore large rivers are less likely to be susceptible to hydromodification and can be defined as an Adequate Sump, however, the definition of a "large river" is subjective. For the purposes of this assessment, the team sought a simplified and repeatable method for defining "large rivers". The threshold used is described in the County of San Diego HMP, dated January 13, 2011, which states on Page 6-5 that "potential river reaches that would be exempt from hydromodification criteria include only those reaches for which the contributing drainage area exceeds 100 square miles and which have a 100-year design flow in excess of 20,000 cfs."

In order to determine which stream channels would constitute large rivers, the following sources were investigated:

- Federal Emergency Management Agency (FEMA), *Flood Insurance Study: Riverside County, California and Incorporated Areas*, dated August 2008.
- Philip Williams & Associates (PWA), *Santa Margarita Watershed Study: Hydrology and Watershed Processes*, dated October 26, 1998.

The PWA report was found to be the most recent and thorough hydrology study for the SMR Watershed as a whole. PWA utilized the HEC-1 hydrology modeling program and ran analysis of three different conditions: natural, existing, and ultimate. A total of 60 different analyses were run on the watershed due to the three conditions, multiple storm events, and the assumed condition of Vail and Skinner Lake. The flow rates cited in this report were taken from the "existing conditions with historic Dec-Apr Mean Storage for Vail and Skinner Lakes (24 hour storm duration and Santa Margarita scale precipitation)" from the PWA report (see Appendix A and B). It was believed that this condition best modeled the "typical" 100-year storm event at each of the concentration points.

The stream channel segments listed in Table 2 were identified to meet the drainage area and flow rate criteria. The location at which the stream channel exceeds the criteria is also listed.

They are classified as not susceptible stream channels for the purposes of determining which watershed areas may be subject to the HCOC requirements.

Table 2: Large Rivers within Riverside County

River Name	Concentration Point	Hydrology Node	Drainage Area	100-year Flowrate
		(#)	(sq. mi)	(cfs)
Murrieta Creek	Below Warm Springs Creek	61	121	29,120
Temecula Creek	Vail Outflow	Vail	317	41,474
Santa Margarita River	At Origin	41	589	62,513

The potential susceptibility to hydromodification of each of the mapped stream channel segments is indicated on Map 2: HCOC Applicability Map. This susceptibility assessment provides the foundation for the HCOC Applicability Assessment.

4 APPLICABILITY CRITERIA

This section describes the HCOC applicability criteria and discusses the methodology for determining watershed areas where HCOC requirements may be applicable. The results of the HCOC Applicability Assessment are used to develop a comprehensive map of the MS4 Permit area which identifies those areas that are tributary to potentially susceptible stream channel segments and where runoff from PDPs may cause a HCOC. The HCOC Applicability Map (see Map 2) provides a delineation of the potentially susceptible stream channel segments and the watershed areas that are applicable to the HCOC requirements.

4.1 Delineation of Existing Hydrology Watershed Boundaries

The existing hydrology watershed boundaries were predominately delineated using the NHD GIS shapefile called: NHDArea, provided by the District. This shapefile provided GIS linework for the entire Santa Margarita River Watershed. The NHD data was verified and updated using: Master Plans of Drainage, previous drainage studies, GIS data provided by the Copermittees (drainage areas and local system storm drain data), USGS topography, and Intermap topography.

The watershed boundaries were simplified using the collected data to delineate those areas tributary to stream channel segments that are potentially susceptible to hydromodification.

4.2 HCOC Applicability Map

The Permit Area has been divided into two different watershed areas: Applicable and Not Applicable. The Not Applicable watershed areas would potentially be excluded from the HCOC requirements. PDPs in the "applicable areas" shall continue to determine applicability in accordance with the HCOC requirements in Section F.1.h of the MS4 Permit.

- Applicable Watershed Areas – Watershed areas that drain to susceptible stream channels, where future PDPs may adversely impact downstream erosion, sedimentation, or stream habitat by increasing the volume and/or duration of storm runoff. This includes watershed areas tributary to:
    - Not-Engineered, Earthen Stream Channels (NEE); and
    - Natural Stream Channels (NAT).

    - PDPs that are located within an Applicable Watershed Area should reference the HMP or SSMP for the specific qualifying criteria to meet the HCOC requirements.

- Not Applicable Watershed Areas – Watershed areas that drain directly to an Adequate Sump (e.g. Vail Lake and Skinner Lake) or Large River (see Section 3.2.1) via a drainage facility that is not susceptible to hydromodification. This includes watershed areas tributary to:
    - Engineered, Fully Hardened and Maintained Drainage Facilities (EFHM);
    - Engineered, Partial Hardened and Maintained Drainage Facilities (EPHM); and

- Engineered, Earthen and Maintained Drainage Facilities (EEM).

- For PDPs in a Not Applicable watershed area, if the site does not drain directly to a mapped stream channel, then the project must show that all downstream conveyance channels to the mapped segment are not susceptible facilities. Refer to the HMP or SSMP for the specific qualifying criteria to meet the HCOC requirements.

5 RESTORATION AND REHABILITATION

The following subsections discuss the Hydrologic Response Units (HRU) and Geomorphic Landscape Units (GLU) analyses and the conclusion derived from the analyses.

5.1 Low or Very Low IBI Scores

According to the *Surface Water Ambient Monitoring Program (SWAMP) Report on the Santa Margarita Hydrologic Unit* (SCCWRP, 2007), "biological health varied widely across the watershed. The thresholds for bioassessment samples were based on a benthic macroinvertebrate IBI that was developed specifically for Southern California. The results of the IBI produces a measure of impairment with scores from 0 to 100, where 0 represents the poorest health and 100 the best health. Scores below 40 were considered poor and scores below 20 were considered very poor."

Using aerial photographs and SWAMP, multiple locations within the SMHU were found to have low or very low IBI scores but only three were found to be within or immediately downstream of the study area. All other locations were outside of Riverside County.

See Table 3 and Figure 2 for the locations with low or very low (poor or very poor) IBI scores that were utilized within this study.

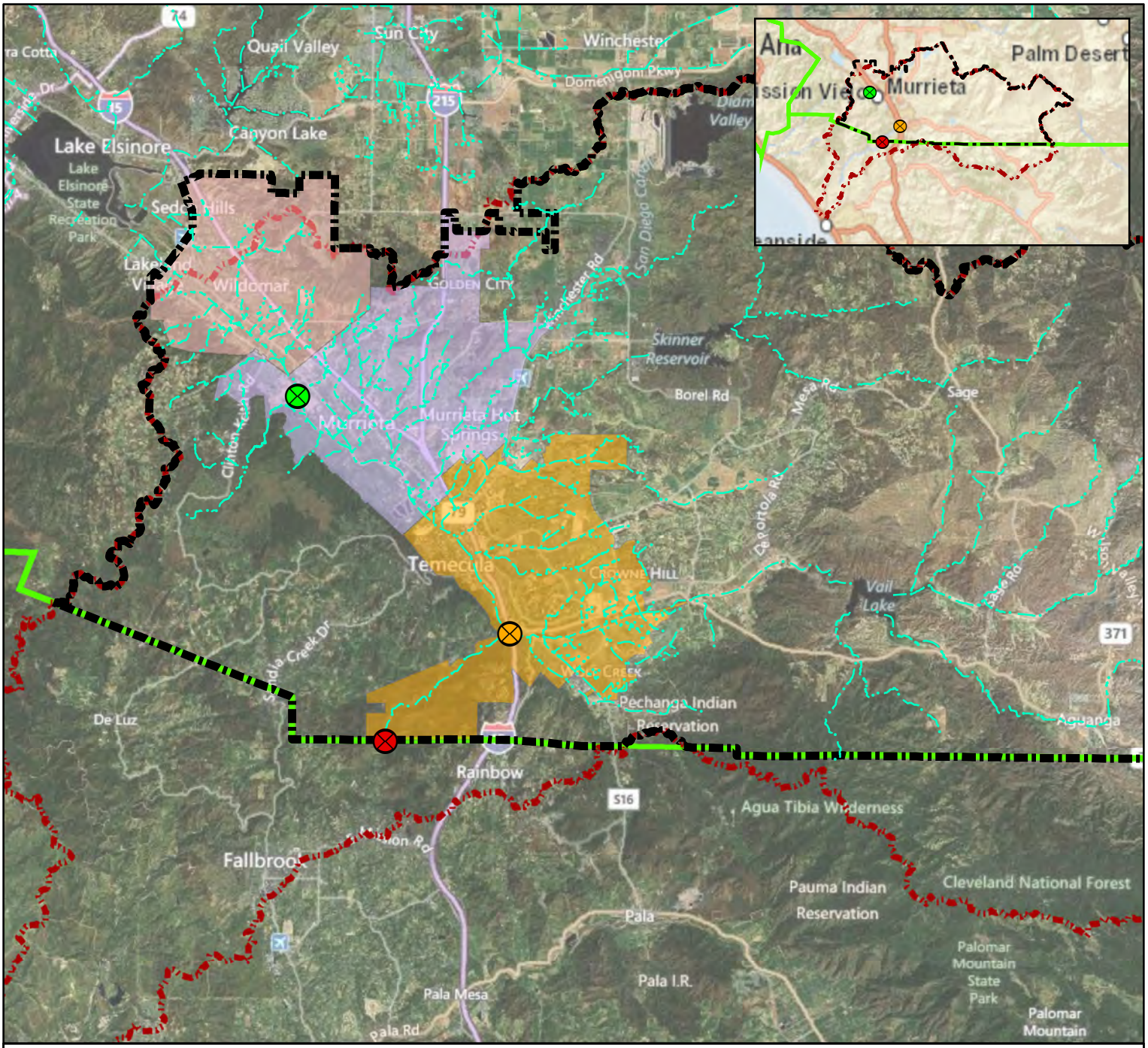
Table 3: Low or Very Low IBI Scores

River Name*	Concentration Point	Site Number within SWAMP report	Lowest IBI Score*
Murrieta Creek	Above Warm Springs Creek	2	Very Poor
Temecula Creek	At Interstate 15	11	Very Poor
Santa Margarita River	Willow Glen Drive	10	Poor

*The definition of poor or very poor IBI scores is equivalent to the low or very low IBI scores described within the Permit.

5.2 HRU/GLU Analysis

In March 2010, the Southern California Coastal Water Research Project (SCCWRP) developed *Technical Report 605 – Hydromodification Screening Tools: GIS-based Catchment Analyses of Potential Changes in Runoff and Sediment Discharge* (Technical Report 605). According to Technical Report 605, "although straightforward in intent, hydromodification management is difficult in practice. Shifts in the flow of water and sediment, and the resulting imbalance in sediment supply and capacity can lead to changes in channel planform and cross-section via wide variety of mechanisms. Channel response can vary based on factors such as boundary material, valley shape and slope, presence of in-stream or streamside vegetation, or catchment properties. [Technical Report 605] is the first report of three that outline a process and provide tools aimed at addressing the decision node associated with assessing channel susceptibility. It outlines a process for evaluating potential change to stream channels resulting from watershed-scale changes in runoff and sediment yield."



Legend

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location
- Streams
- Study Area
- Santa Margarita Watershed
- County Boundary
- City of Murrieta
- City of Temecula
- City of Wildomar

0 1.5 3 6 Miles

N

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Riverside County Flood Control and Water Conservation District
Hydromodification Susceptibility Mapping: Progress Report for SMR

IBI Score Locations

Figure 2

SCCWRP ran HRU/GLU analyses on 17 locations where the channels were "examined from a geomorphic perspective" and the tributary watersheds were both developed and undeveloped. Unlike SCCWRP, this study was only interested in analyzing developed watersheds to determine what potentially caused the channel impacts and which hydromodification management methods would best suit each individual location. Due to this, only a couple of locations were analyzed.

Two locations, Temecula Creek and Murrieta Creek-Line G, were chosen because they were found to be examples of different types of hydromodification impacts. Murrieta Creek Line-G is a classic example of hydromodification with development on naturally high sediment yield areas, while Temecula Creek is an example of why a local or onsite based approach to hydromodification is not always appropriate due to the influence of Vail Lake. Both locations exhibits signs of impacts from hydromodification (e.g. degradation, head cutting, separation from existing floodplain). The following subsections discuss the background of the HRU/GLU analysis and the conclusions of the two analyses.

5.2.1 Hydrologic Response Units (HRU) Background

Technical Report 605 states that, "HRUs has become a well-established approach for condensing the near-infinite variability of a natural watershed into a tractable number of different elements. The normal procedure for developing HRUs is to identify presumptively similar rainfall-runoff characteristics across a watershed by combining spatially distributed climate, geology, soils, land use, and topographic data into areas that are approximately homogeneous in their hydrologic properties. To simplify the complexity, generally HRU analyses consists of using imperviousness as a surrogate for the relative magnitude of hydrologic impacts due to the availability of classified land cover data and because landcover is the most important landscape-scale driver of downslope physical changes."

According to the *Technical Report 667: Hydromodification Assessment and Management in California* (Technical Report 667) by SCCWRP April 2012, "urbanization of a watershed can drastically increase the frequency, duration, and magnitude of small and moderate flow events by factors of 10 or more. "

5.2.2 Geomorphic Landscape Units (GLU) Background

According to Technical Report 605, "many of the same physical properties that determine the hydrologic response of the watershed also determine the magnitude of sediment production from those same areas. The three properties that were determined to exert the greatest influence on the variability on sediment-production rates were: geology types, hillslope gradient, and land cover. The GLU analysis consists of grouping each of the datasets into a limited number of categories based on their influence to sediment production and combining the data within GIS to determine the areas with the highest sediment-delivery potential." Each category was provided a rank (low, medium, high or very high) relative to their potential for sediment production. Based on this rank, a number value was provided for the GLU analysis so that the watershed could be broken up into a grid. Each grid cell covers an area of 100-feet by 100-feet and has a GLU value that ranges from 3 to 10, with 3 having the lowest and 10 having the highest potential for sediment production.

Tables 4 thru 6 show the categories used for each of the datasets.

Table 4: Geology Types

Geology Classification (Rock Type)	Description	Potential for Sediment Production	GLU Value
gr-m	Granite and metamorphic rocks	Low	1
m	Undivided pre-cenozoic metasedimentary and metavolcanic rocks		
grMz	Mesozoic granite, quartz monzonite, granodiorite, and quartz diorite		
gb	Gabbro and dark dioritic rocks		
J	Shale, sandstone, minor conglomerate, chert, slate, limestone	Medium	2
Q	Aluvium	High	3
QPc	Pliocene and/or Pleistocne sandstone, shale and gravel deposits		

*From NRCS, Geologic Map of California, 2000.

Table 5: Land Cover

Land Cover Type	Potential for Sediment Production	GLU Value
Unconsolidated Shore	Low	1
Water		
High Intensity Developed		
Low Intensity Developed		
Medium Intensity Developed		
Cultivated	Medium	2
Pasture/Hay		
Developed Open Space		
Deciduous Forest	High	3
Evergreen Forest		
Mixed Forest		
Palustrine Emergent Wetland		
Palustrine Forested Wetland		
Bare Land	Very High	4
Grassland		
Palustrine Scrub/Shrub Wetland		
Scrub/Shrub		

*From National Land Cover Database, 2006 (NLCD 2006)

Table 6: Hillslope Gradient

Slope	Potential for Sediment Production	GLU Value
Less than 10%	Low	1
10% to 20%	Medium	2
Greater than 20%	High	3

*100-ft x 100-ft Grid created from USGS Topography

5.2.3 Temecula Creek

As discussed in Section 5.1, a very low IBI score was found along Temecula Creek near the Interstate 15 over-crossing and the watershed tributary to the channel was analyzed, see Figure 3 for the site location. This specific location was analyzed because the watershed contains Vail Lake, which has had an impact on the hydrologic and sediment-production characteristics of the watershed.

5.2.3.1 Temecula Creek HRU Analysis

Due to the significant influence of Vail Lake on the hydrologic characteristics of the watershed, land cover by itself would not provide enough information to determine the changes in runoff from natural to existing conditions and the impacts caused by hydromodification. For this reason, the PWA report was used to determine the hydrologic changes that have occurred since "natural" conditions.

According to PWA, "Vail [Lake] results in [a] major reduction of peak flows for all events" (See Table 7). When looking at the Santa Margarita watershed as a whole, "those streams on which reservoirs are located (including Temecula Creek) show large decreases in existing/future flows compared with natural conditions, while the stream systems without reservoirs show significant flow increases related to the level of development." While the latter portion of the statement is considered more of a "typical" form of hydromodification, the former shows that with the existence of Vail Lake, the hydrologic characteristics of the watershed potentially have permenantly changed and it may not be possible restore the channel to "natural" conditions.

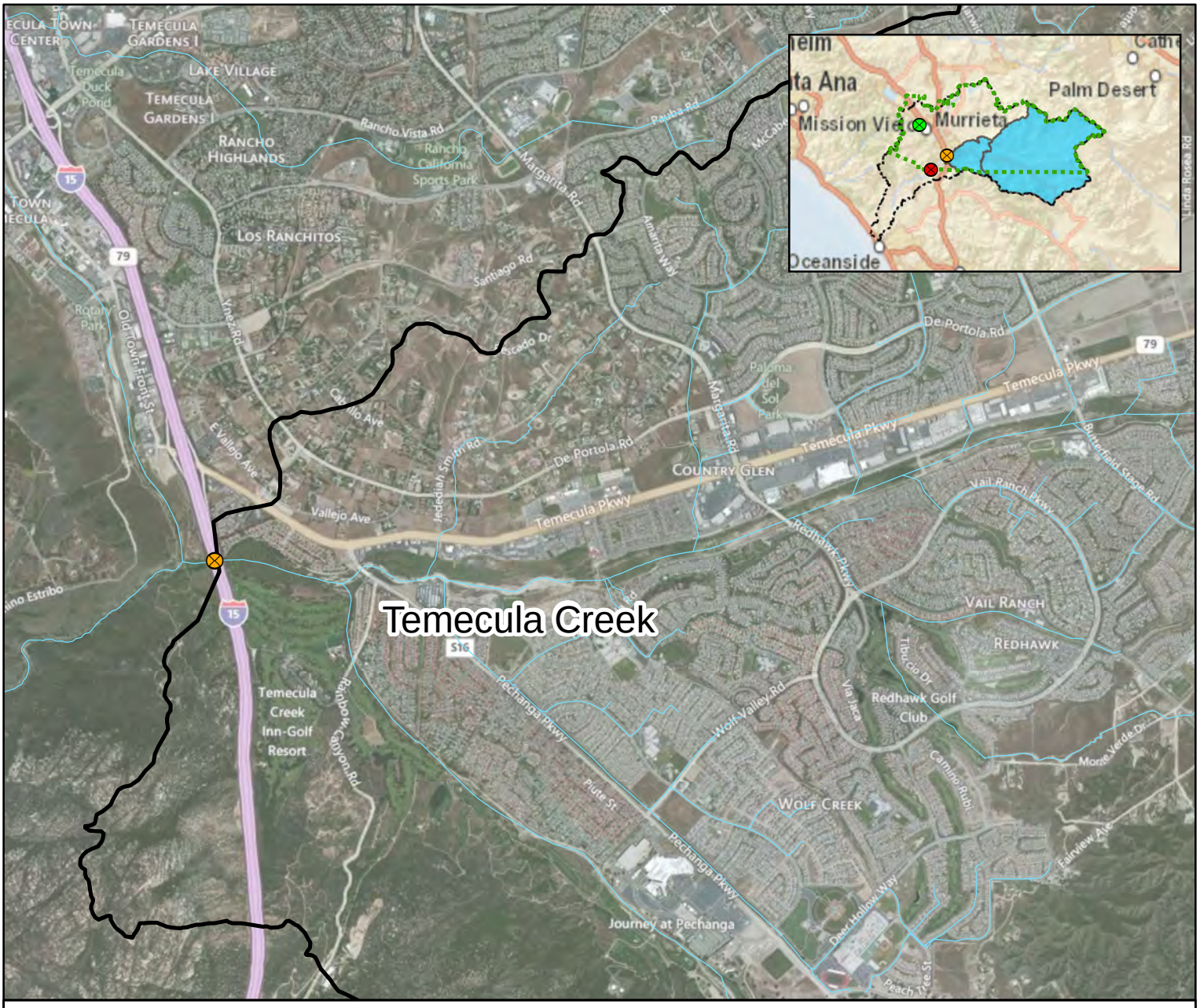
Table 7: Temecula Creek Flow Rates

Condition	2-Year Storm Event (cfs)	10-year Storm Event (cfs)	100-year Storm Event (cfs)
Natural	7,616	22,458	50,979
Existing Conditions	1,023	4,903	44,917

*From the PWA report

5.2.3.2 Temecula Creek GLU Analysis

The GLU analysis consisted of analyzing the three datasets (geology types, land cover and hillslope gradient) based on the categories shown in Section 5.2.2, see Figures 4 thru 6. From the categories the entire watershed was broken up based on susceptibility to sedimentation (potential for sediment production), see Figure 7. Figure 8 shows the assumed susceptibility



Legend

Poor Index of Biotic Integrity (IBI) Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location
- Project Site Watershed
- Streams
- Santa Margarita Watershed
- Study Area

N

0 0.25 0.5 1 Miles

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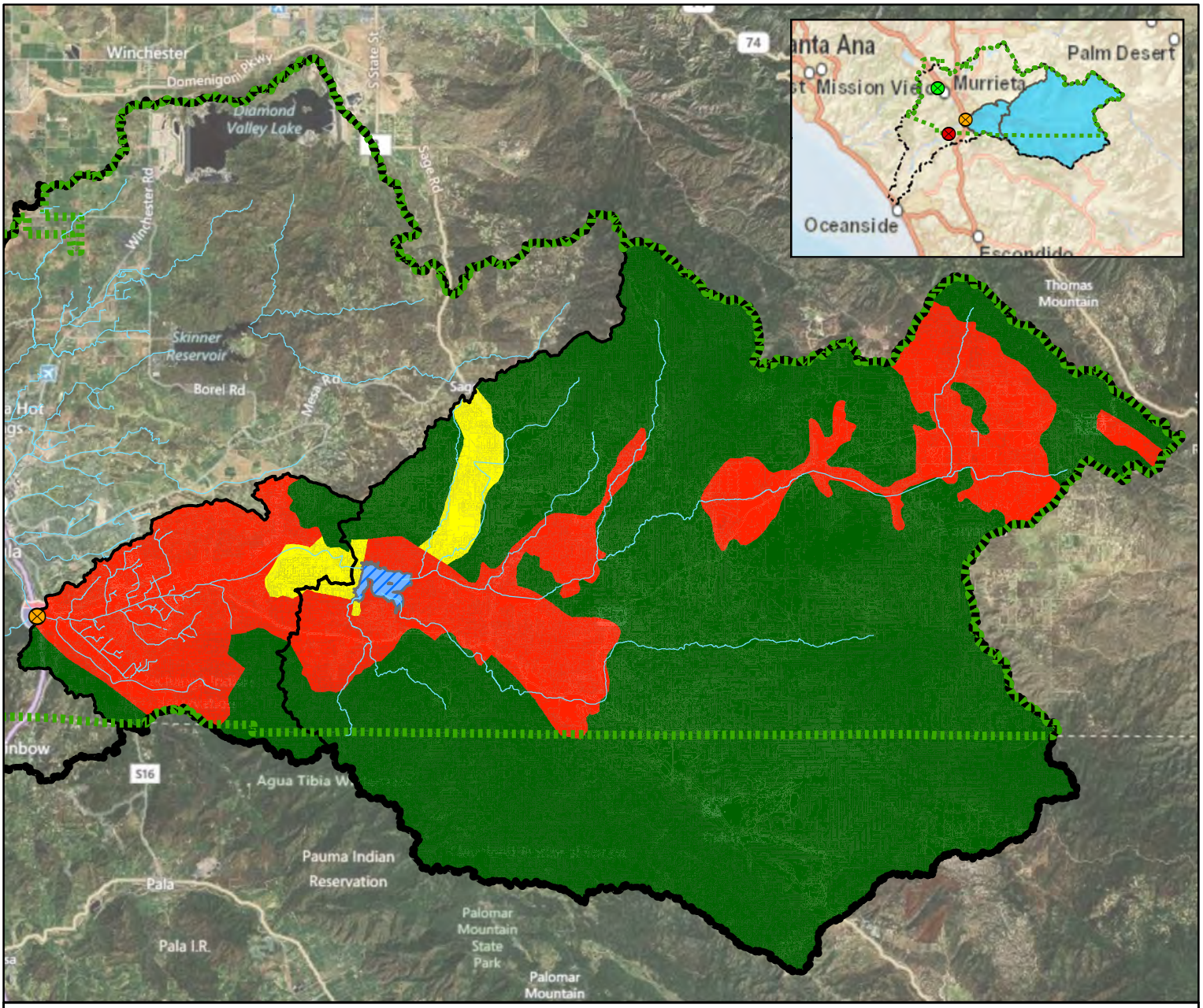
Hydromodification Susceptibility Mapping - Santa Margarita River

Temecula Creek HRU/GLU Analysis - Site Location

Figure 3



Legend

Geology Susceptibility to Sedimentation

Existing Conditions

- Low
- Medium
- High

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location

- Streams
- Vail Lake
- Santa Margarita Watershed
- Project Site Watershed
- Study Area

N

0 1.5 3 6 Miles

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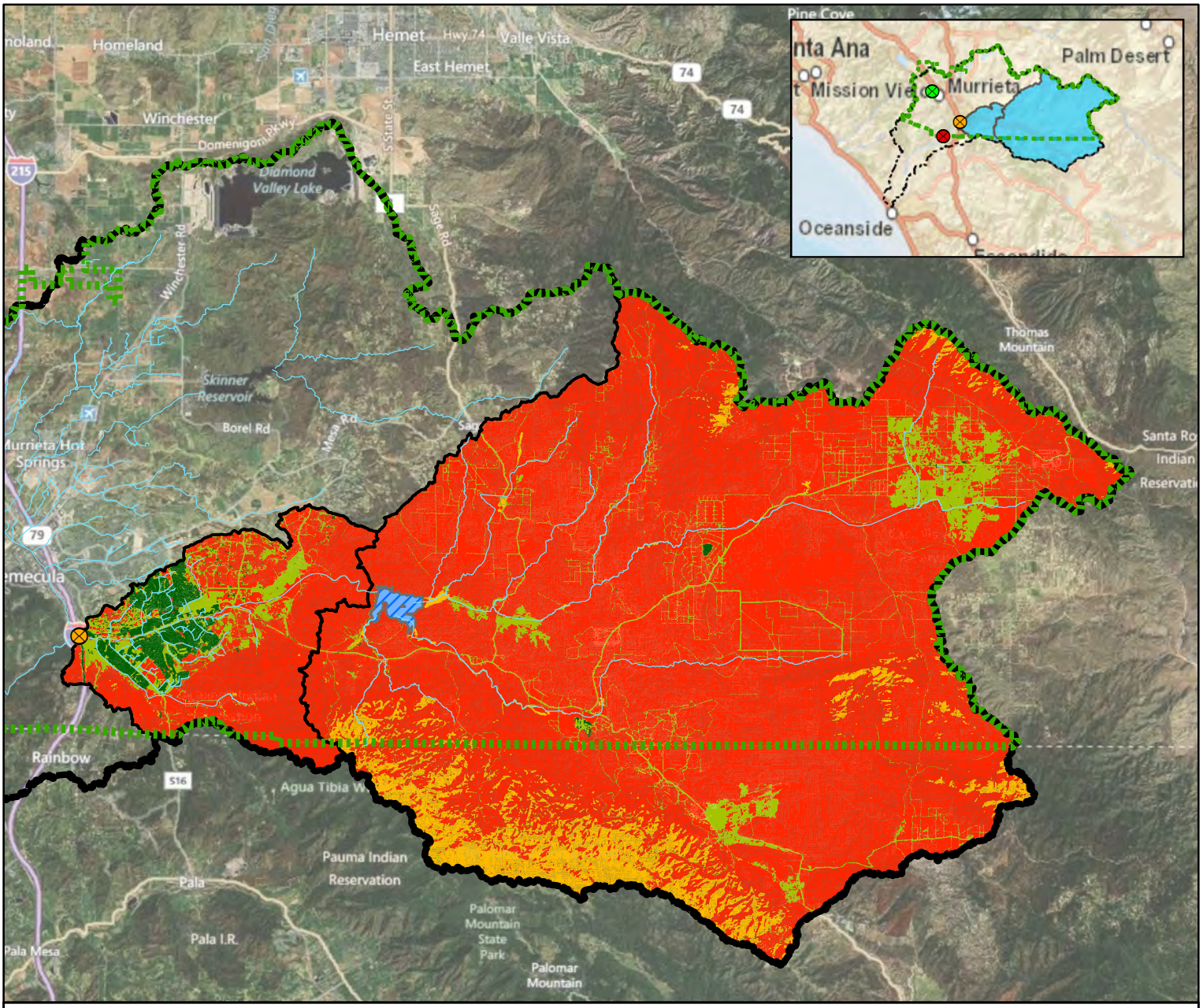
Hydromodification Susceptibility Mapping - Santa Margarita River

Temecula Creek HRU/GLU Analysis - Geology Types

Figure 4



Legend

N

0 1.5 3 6 Miles

Land Cover Susceptibility to Sedimentation

Existing Conditions

- Low
- Medium
- High
- Very High

- Streams
- Vail Lake
- Project Site Watershed
- Santa Margarita Watershed
- Study Area

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location

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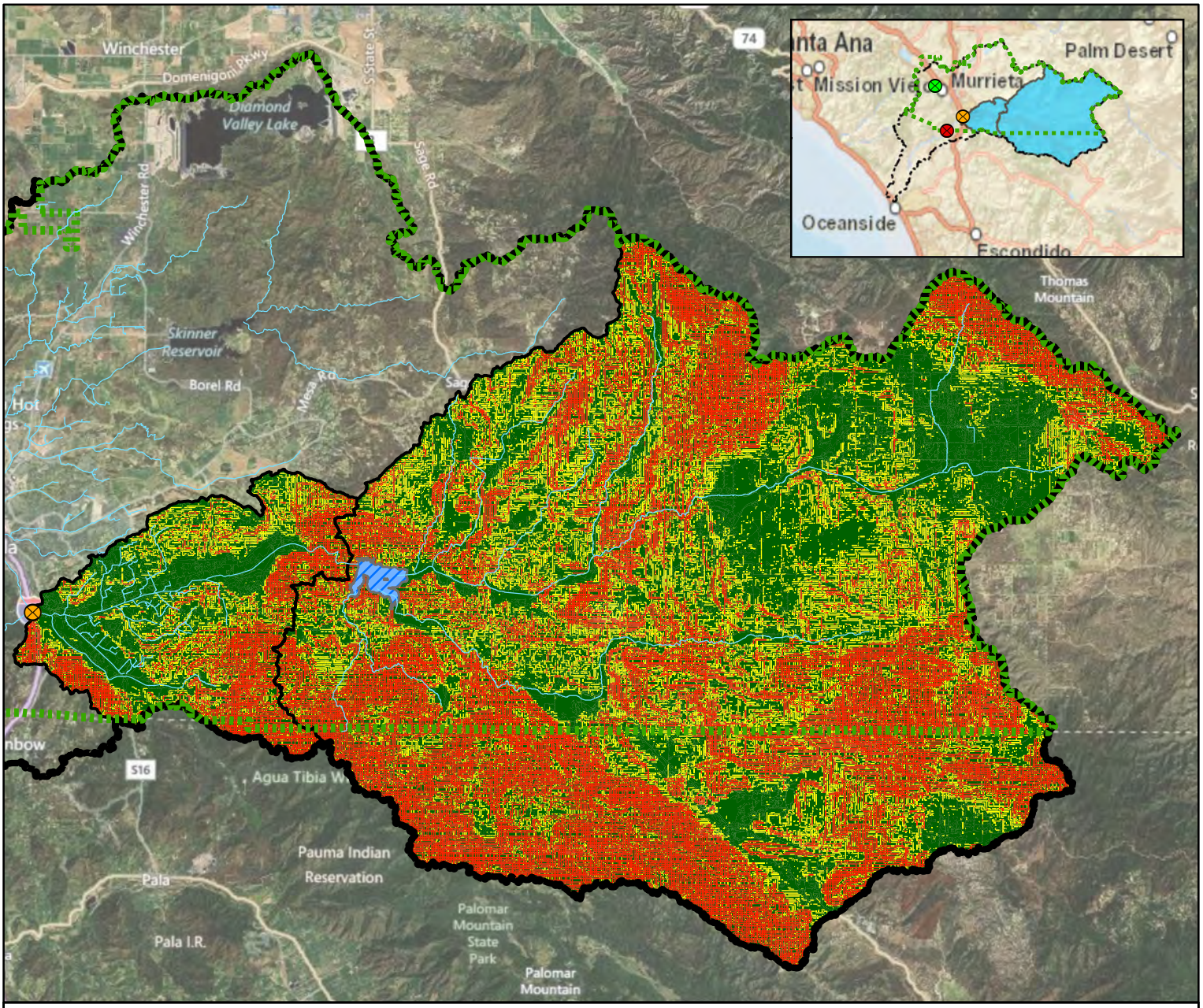
Hydromodification Susceptibility Mapping - Santa Margarita River

Temecula Creek HRU/GLU Analysis - Land Cover

Figure 5



Legend

Slope Susceptibility to Sedimentation
Existing Conditions

- Low
- Medium
- High

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location

- Streams
- Vail Lake
- Project Site Watershed
- Santa Margarita Watershed
- Study Area

N

0 1.5 3 6 Miles

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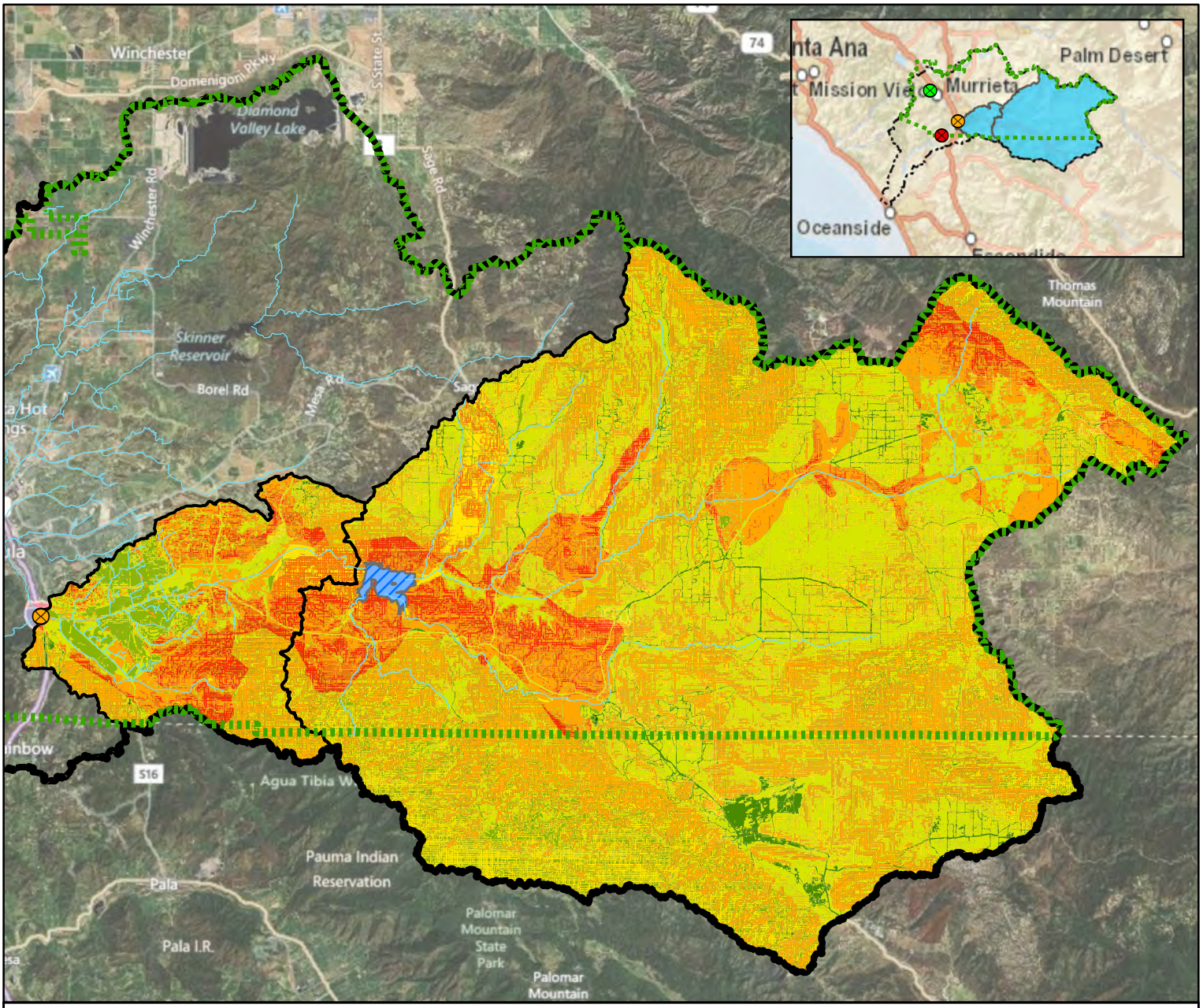
Hydromodification Susceptibility Mapping: Santa Margarita River

Temecula Creek HRU/GLU Analysis - Hillslope Gradient

Figure 6



Legend

GLU Analysis Value

Existing Conditions

- 3 - Lowest Susceptibility
- 4
- 5
- 6
- 7
- 8
- 9
- 10 - Highest Susceptibility

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location

- Project Site Watershed
- Santa Margarita Watershed
- Study Area

- Streams
- Vail Lake

N

0 1.5 3 6 Miles

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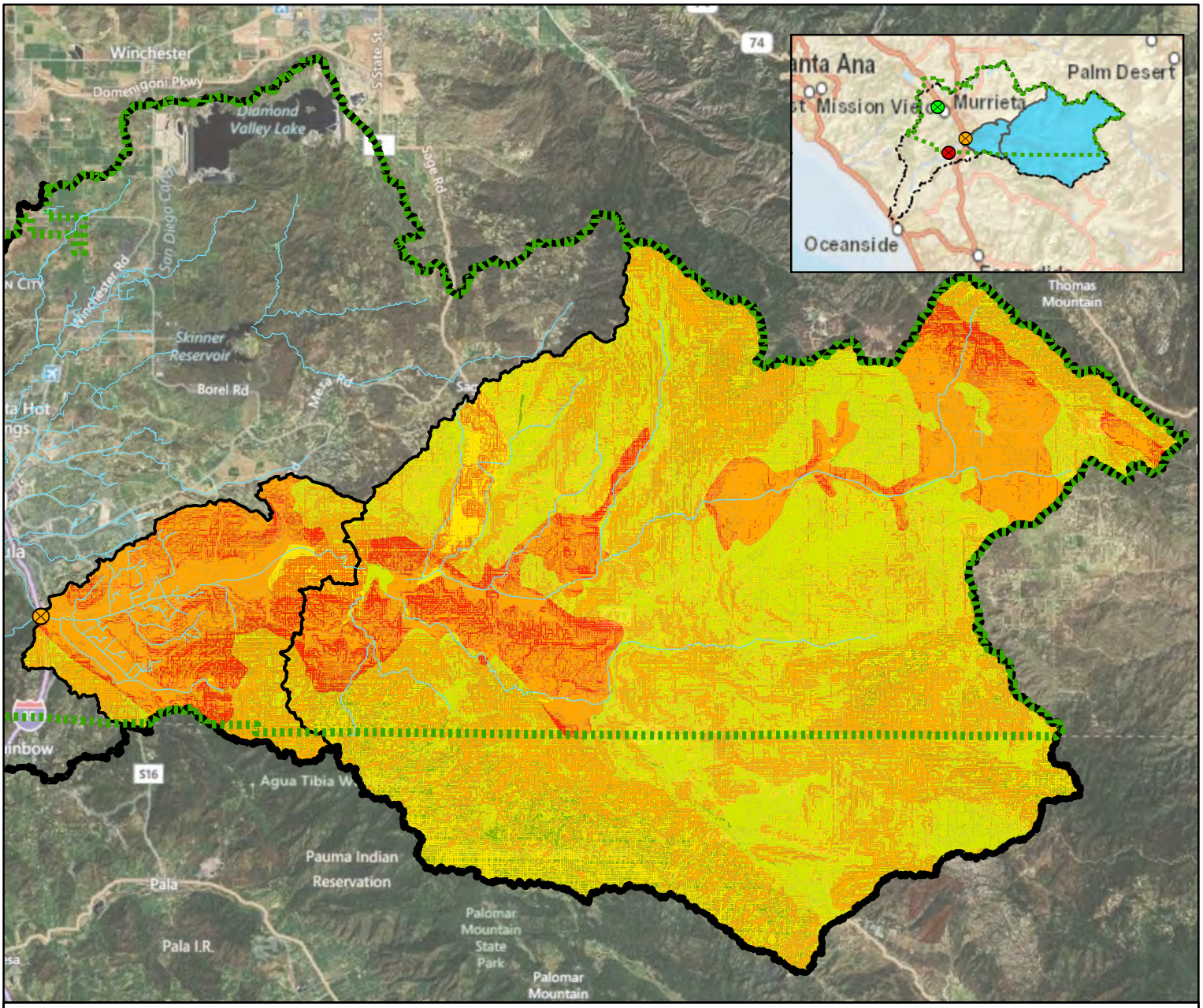
Hydromodification Susceptibility Mapping - Santa Margarita River

Temecula Creek HRU/GLU Analysis

Figure 7



Legend

GLU Value (Susceptibility to Sedimentation)

- 3 - Lowest Susceptibilty
- 4
- 5
- 6
- 7
- 8
- 9
- 10 - Highest Susceptibilty

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location
- Streams
- Project Site Watershed
- Santa Margarita Watershed
- Study Area

N

0 1.5 3 6 Miles

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Hydromodification Susceptibility Mapping - Santa Margarita River

Temecula Creek HRU/GLU Analysis - Natural Conditions

Figure 8

to sedimentation for the "natural" conditions, where all low or medium Land Cover areas were converted to Very High. Very High was picked as the default because most developable/developed land is located within grasslands or shrub areas.

The Geology Types analysis shows most of the erodible land is located adjacent to or downstream of Vail Lake. The upper reaches of the watershed consist of harder rock and has a lower susceptibility of sedimentation.

The Hillslope Gradient analysis shows that the steepest area-averaged slopes are generally on the perimeter of the watershed, with some flatter area-averaged slopes (0-10%) located at the most eastern and western reaches of the watershed. The western reaches may have been influenced by development.

The Land Cover analysis shows that approximately 22% of the watershed is located downstream of Vail Lake that also includes a major portion of the developed land within the watershed. The watershed is prominently made up of grasslands, shrubs and bareland, especially in the upper reaches.

The GLU analysis shows that the areas of the highest potential sediment production (GLU value 10), is predominately located around Vail Lake. A little over half of that area is directly tributary to Vail Lake and would not continue to the downstream Temecula Creek. The lowest sediment production is located in developed areas or in the upper reaches of the watershed where agricultural land uses are located on flat slopes.

When comparing Figures 7 and 8, it can be seen that existing development is located on areas that were historically high sediment producing. Additionally, based on slopes and accessibility, most of the future development will occur in existing regions of medium (GLU value 7) to very high (GLU value 10) sediment production. This along, with the influence of Vail Lake, is the cause of the change to sediment supplied to Temecula Creek.

5.2.3.3 Temecula Creek HRU/GLU Analysis Conclusion

Temecula Creek is an example of why a watershed-wide approach is required to determine the causes of hydromodification impacts and potential management approaches. Instead of restoring the channel to the "natural processes and characteristics of [the] stream," "different management goals are probably appropriate…at varying stages of development and varying degrees of adjustment."

5.2.4 Murrieta Creek–Line G

As discussed in Section 5.1, a very low IBI score was found along Murrieta Creek, downstream of Warm Springs Channel. Murrieta Creek-Line G is directly tributary to Murrieta Creek and the very low IBI score. See Figure 9 for the site location. This specific location was analyzed because the watershed has experienced a significant amount of development and Murrieta Creek-Line G shows signs of erosion in the form of vertical degradation, see Figure 9.

Figure 9: Murrieta Creek–Line G Vertical Degradation

5.2.4.1 Murrieta Creek–Line G HRU Analysis

For this location, only the Land Cover analysis was utilized because there was no detailed hydrology for this watershed. The Land Cover analysis shows that a majority of the watershed has been changed from "natural" conditions, with approximately one-third being developed. Since the watershed is not influenced or tributary to a basin/reservoir, it can be assumed that the "stream system [would] show significant flow increases related to the level of development" (PWA, 1998).

5.2.4.2 Murrieta Creek–Line G GLU Analysis

The GLU analysis consisted of analyzing the three datasets (geology types, land cover and hillslope gradient) based on the categories shown in Section 5.2.2, see Figures 10 thru 12. From the categories the entire watershed was broken up based on susceptibility to sedimentation (potential for sediment production), see Figure 13. Figure 14 shows the assumed susceptibility to sedimentation for the "natural" conditions, where all low or medium Land Cover areas were converted to Very High. Very High was picked as the default because most developable/developed land is located within grasslands or shrub areas.

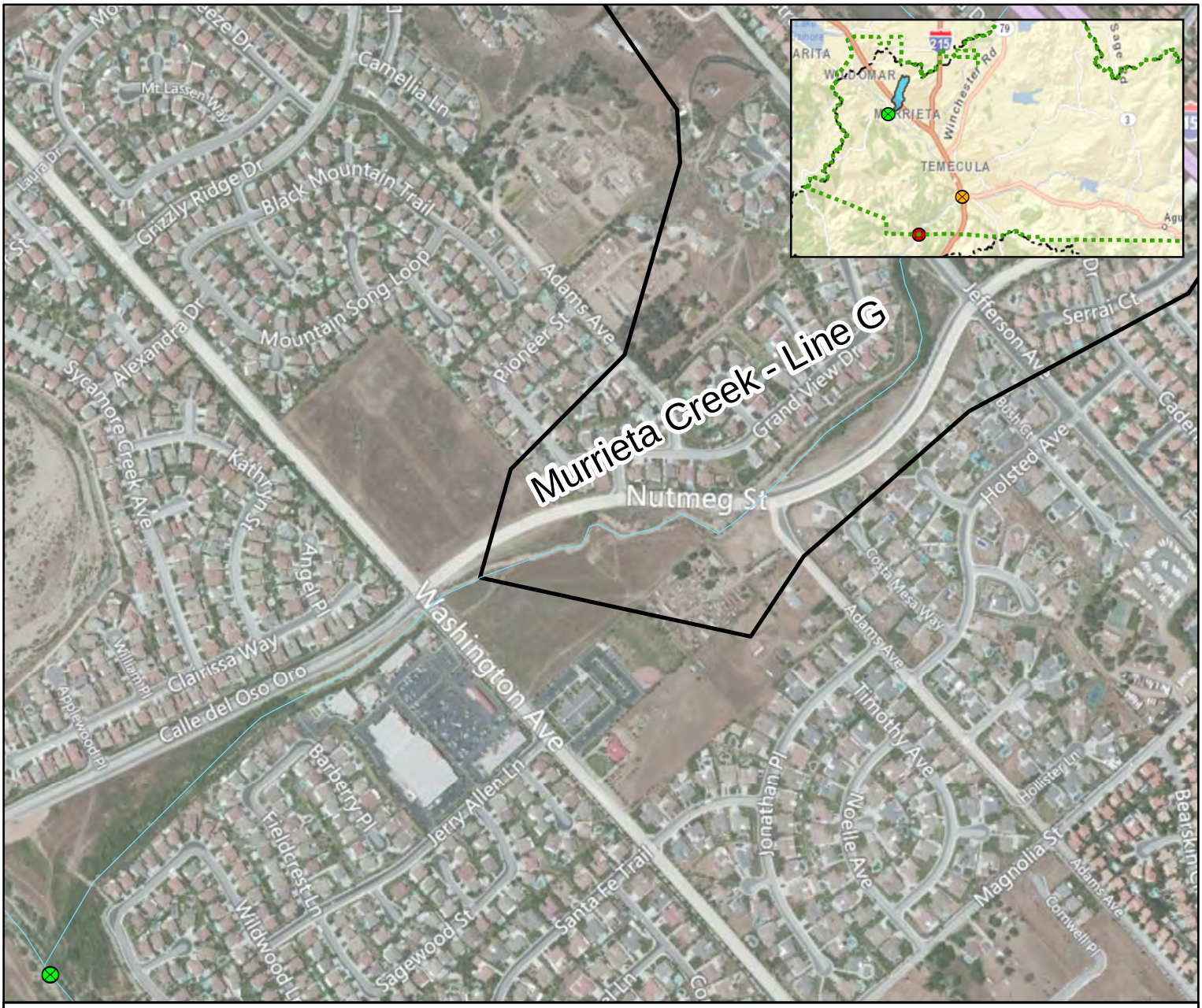
The Geology Types analysis shows that most of the erodible land is located in the lower reaches of the watershed. Only a small portion of the watershed can be considered low susceptibility to sedimentation based geology types and it is located in the upper reaches.

The Hillslope Gradient analysis shows that the steepest slopes are generally located at the upper reaches of the watershed. The watershed is predominately flat, with an area-averaged slope of 0-10%.

The Land Cover analysis shows that the watershed is made up of developed, agriculture and grasslands/shrub land covers. A majority of the watershed has been changed from "natural" conditions, with approximately one-third being developed.

The GLU analysis shows that there are almost no areas with a very high potential for sediment production (GLU value 10). Almost the entire watershed can be considered medium (GLU values 5 thru 8) susceptibility to sedimentation. Additionally, due to the large amount of open or agricultural land, there is still potential for development and a further decrease in sediment production.

When comparing Figures 13 and 14, it can be seen that existing development is located on areas that were historically medium to high sediment producing. Based on the analysis and comparison, the watershed tributary to Murrieta Creek–Line G has had a significant decrease in sediment yield.



Legend

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location
- Streams
- Project Site Watershed
- Santa Margarita Watershed
- Study Area

N

0 300 600 1,200 1,800 Feet

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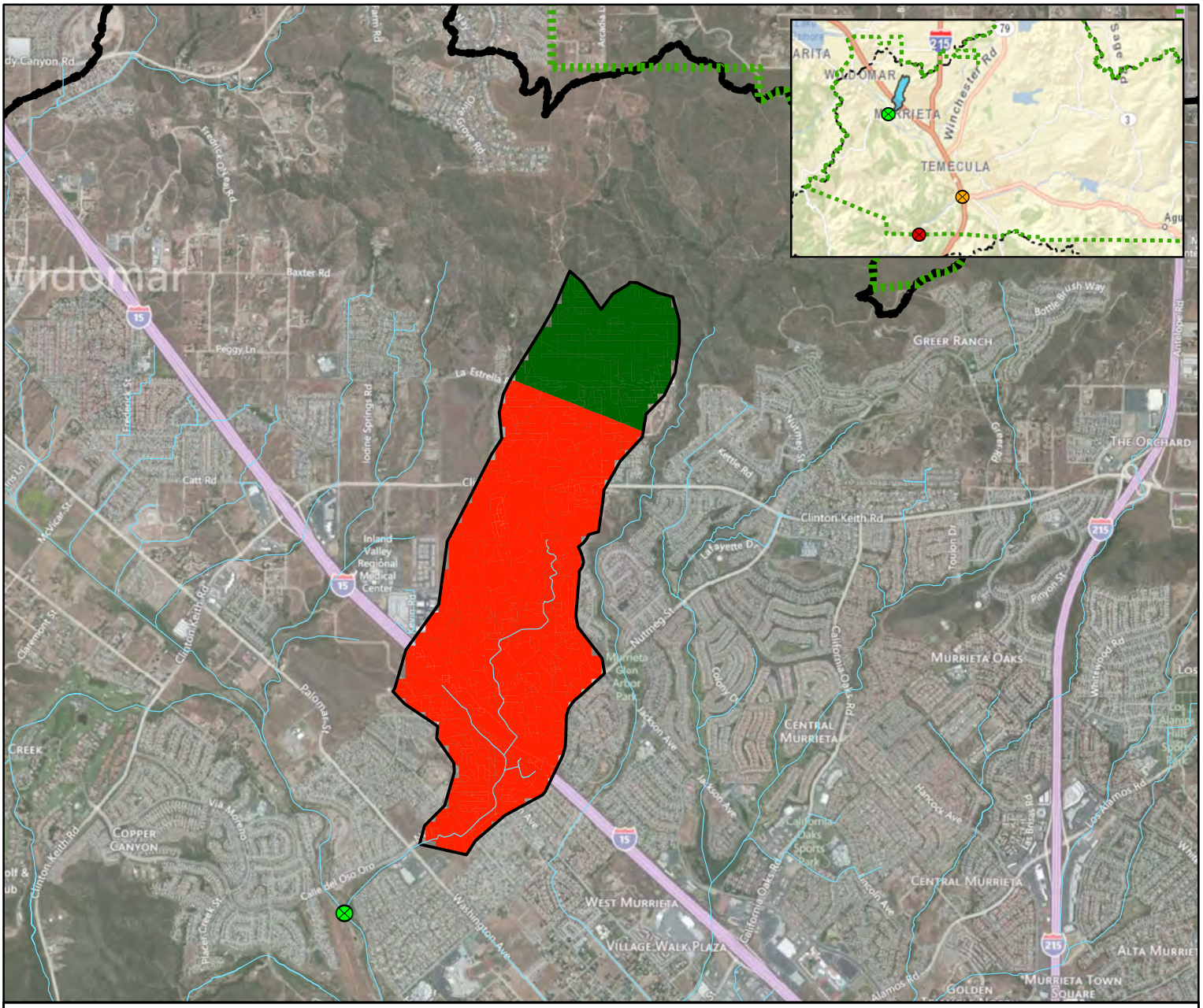
Hydromodification Susceptibility Mapping - Santa Margarita River

Murrieta Line G HRU/GLU Analysis - Site Location

Figure 10



Legend

Geology Susceptibility to Sedimentation

Existing Conditions

- Low
- Medium
- High

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location

N

0 0.25 0.5 1 Miles

- Streams
- Project Site Watershed
- Santa Margarita Watershed
- Study Area

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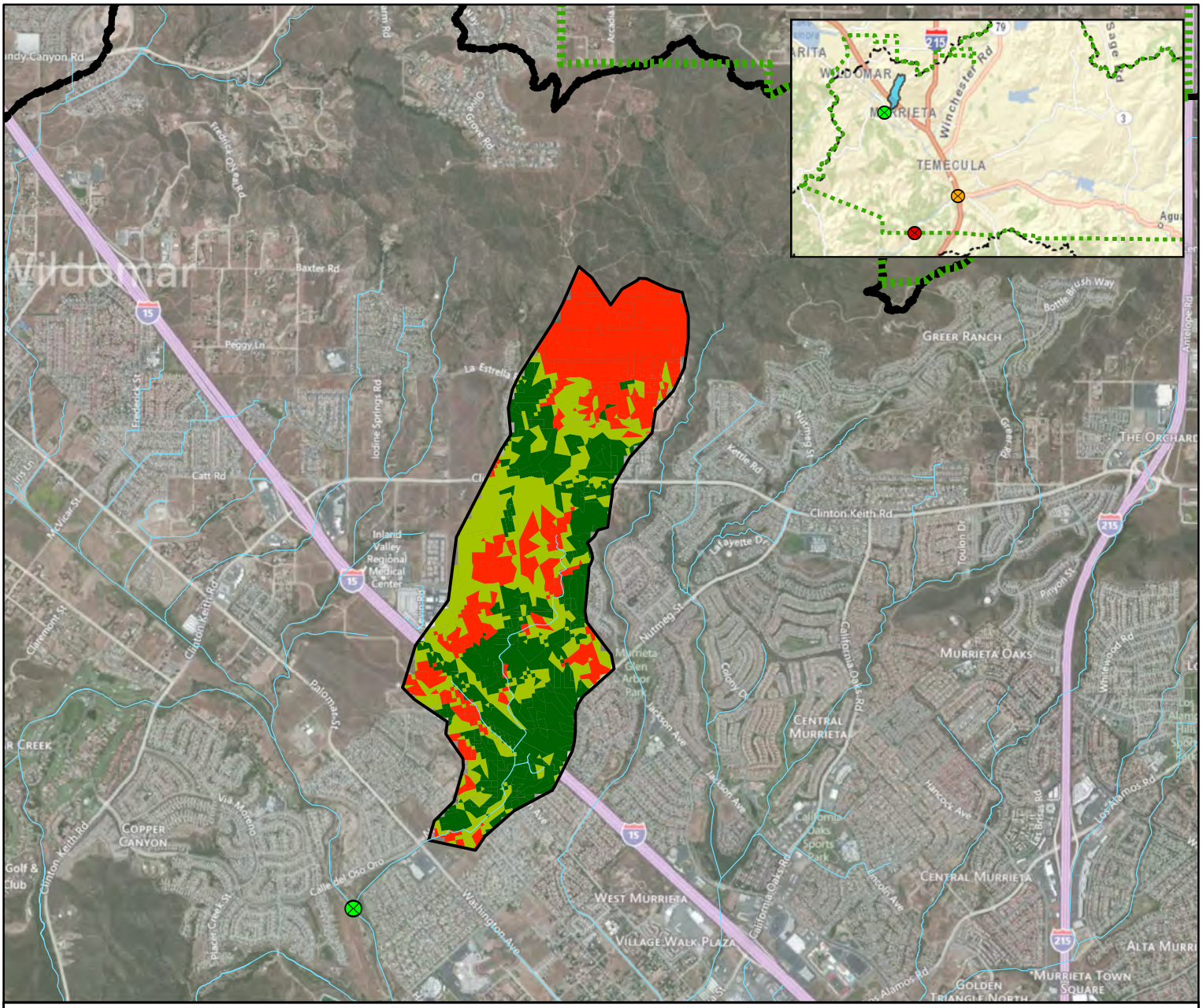
Hydromodification Susceptibility Mapping - Santa Margarita River

Murrieta Line G HRU/GLU Analysis - Geology Types

Figure 11



Legend

Land Cover Susceptibility to Sedimentation
Existing Conditions

- Low
- Medium
- High
- Very High

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location

- Streams
- Project Site Watershed
- Santa Margarita Watershed
- Study Area

N

0 0.25 0.5 1 Miles

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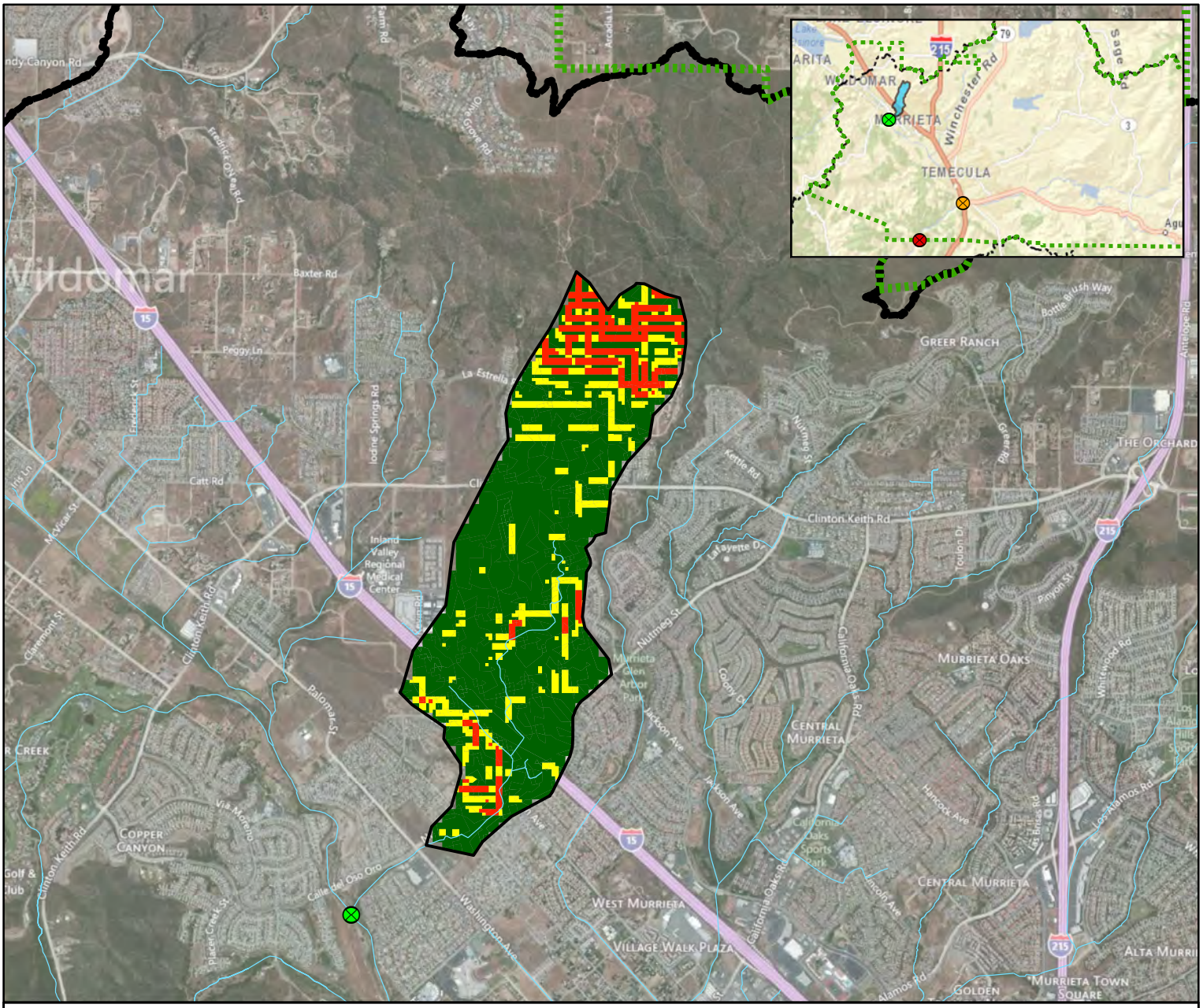
Hydromodification Susceptibility Mapping - Santa Margarita River

Murrieta Line G HRU/GLU Analysis - Land Cover

Figure 12



Legend

Slope Susceptibility to Sedimentation

Existing Conditions

- Low
- Medium
- High

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location

- Streams
- Project Site Watershed
- Santa Margarita Watershed
- Study Area

N

0 0.25 0.5 1 Miles

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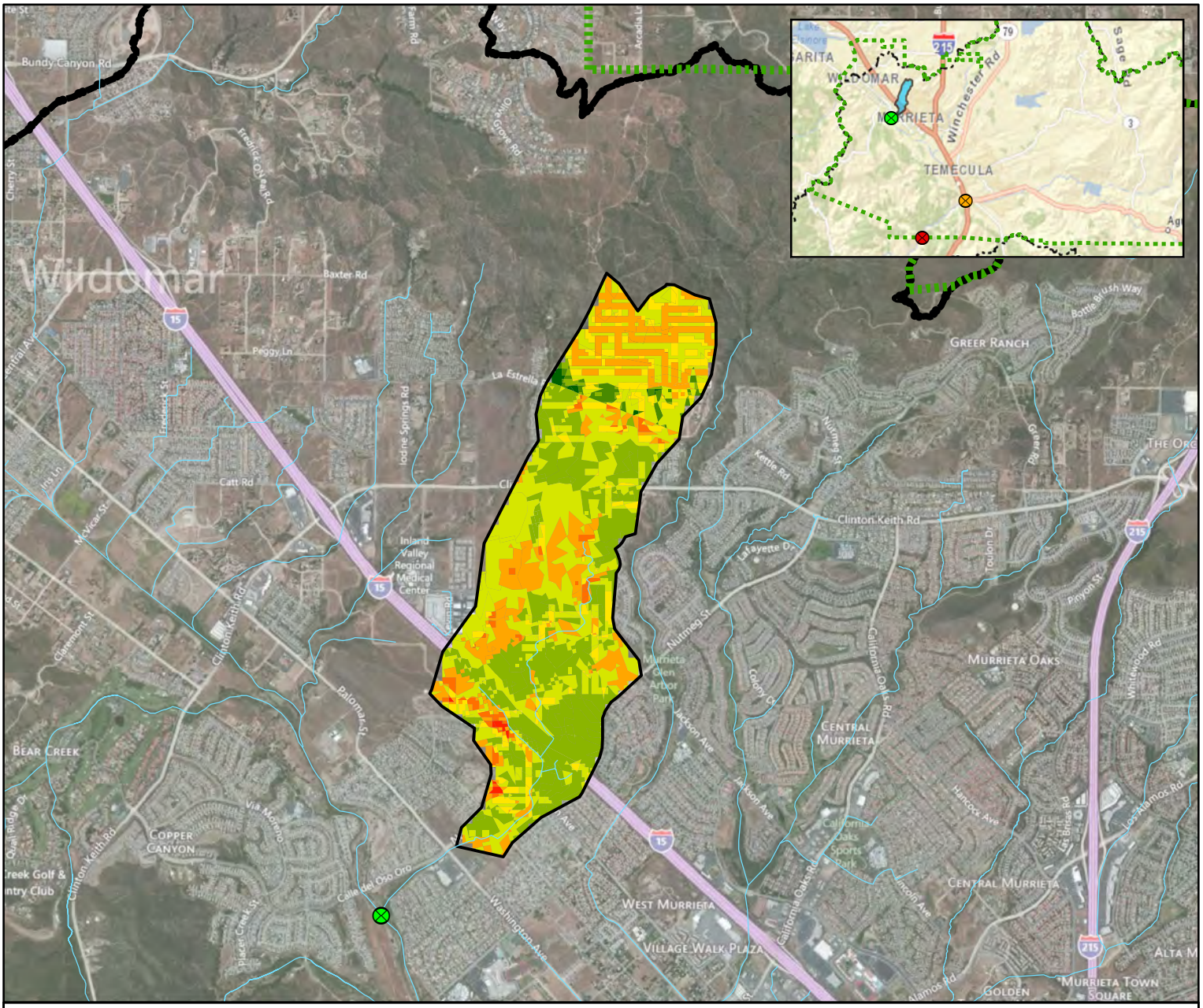
Hydromodification Susceptibility Mapping: Santa Margarita River

Murrieta Line G HRU/GLU Analysis - Hillslope Gradient

Figure 13



Legend

GLU Analysis Value

Existing Conditions

- 3 - Lowest Susceptibility
- 4
- 5
- 6
- 7
- 8
- 9
- 10 - Highest Susceptibility

Poor IBI Scores

- Murrieta Creek Very Poor IBI Score Location
- Santa Margarita River Poor IBI Score Location
- Temecula Creek Very Poor IBI Score Location
- Project Site Watershed
- Santa Margarita Watershed
- Streams
- Study Area

N

0 0.25 0.5 1 Miles

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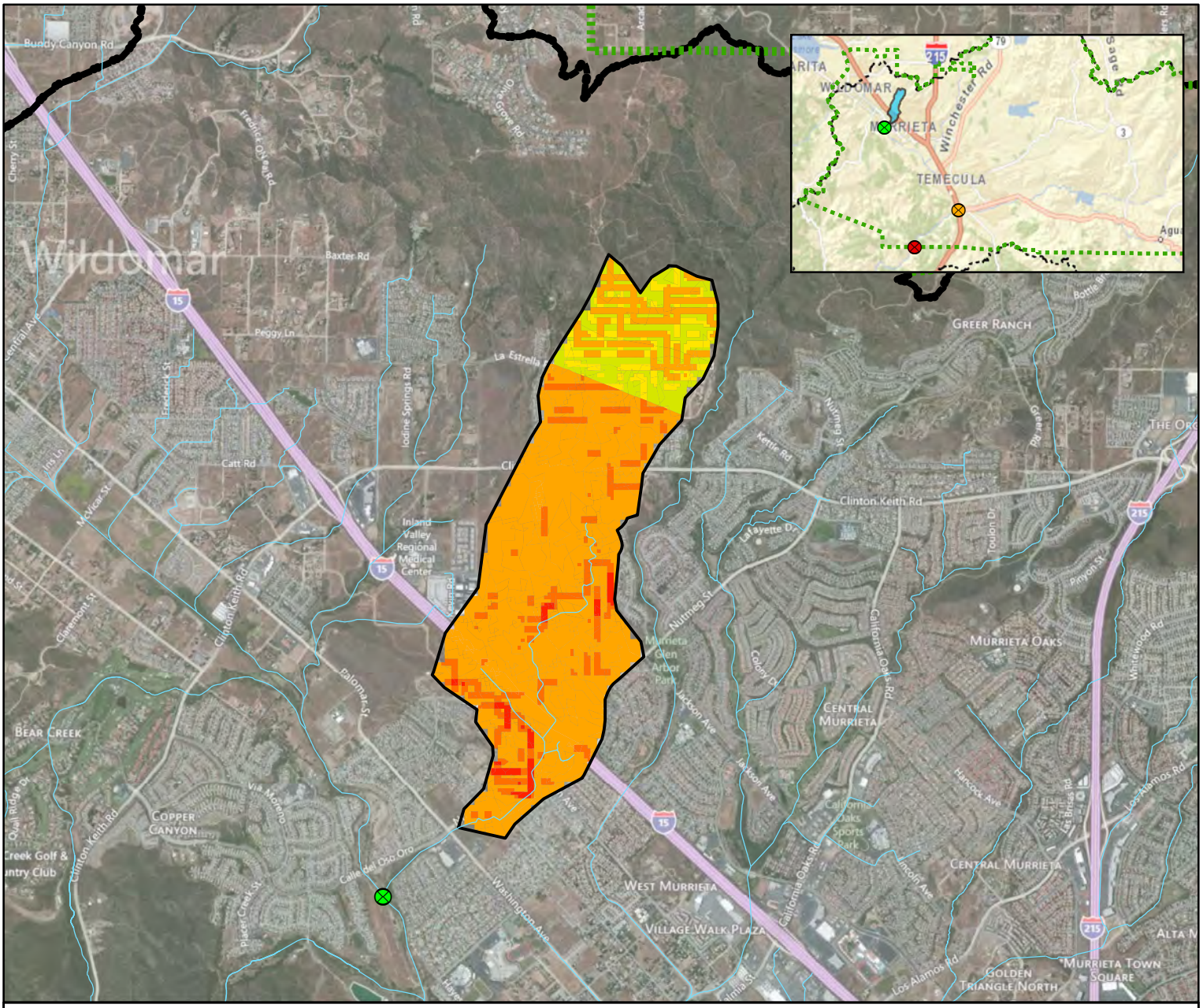
Hydromodification Susceptibility Mapping - Santa Margarita River

Murrieta Line G HRU/GLU Analysis

Figure 14



Legend

GLU Value (Susceptibility to Sedimentation)

- 🟩 3 - Lowest Susceptibility
- 🟩 4
- 🟩 5
- 🟨 6
- 🟨 7
- 🟧 8
- 🟧 9
- 🟥 10 - Highest Susceptibility

Poor IBI Scores

- ⊗ Murrieta Creek Very Poor IBI Score Location
- ⊗ Santa Margarita River Poor IBI Score Location
- ⊗ Temecula Creek Very Poor IBI Score Location
- — Streams
- ☐ Project Site Watershed
- ☐ Santa Margarita Watershed
- ▨ Study Area

N

0 0.25 0.5 1 Miles

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Hydromodification Susceptibility Mapping - Santa Margarita River

Temecula Creek HRU/GLU Analysis - Natural Conditions

Figure 15

5.2.4.3 Murrieta Creek–Line G HRU/GLU Analysis Conclusion

Since a large portion of the watershed is already developed and the channel has been impacted, the preferred method for hydromodification management would be a watershed wide strategy. Technical Report 667 states "management strategies should be tailored to meet the objectives, desired conditions, and constraints of the specific channel reach being addressed. Objectives for specific stream reaches may include: protect, restore, or manage as a new channel form". Murrieta Creek – Line G most likely falls under the third management strategy, manage as a new channel form. This could include: onsite rehabilitation, some individual based hydromodification management, and reconnecting upstream sediment sources, while allowing the stream to reach a new equilibrium.

6 REFERENCES

Federal Emergency Management Agency (FEMA), August 28, 2008. *Flood Insurance Study: Riverside County, California and Incorporated Areas.*

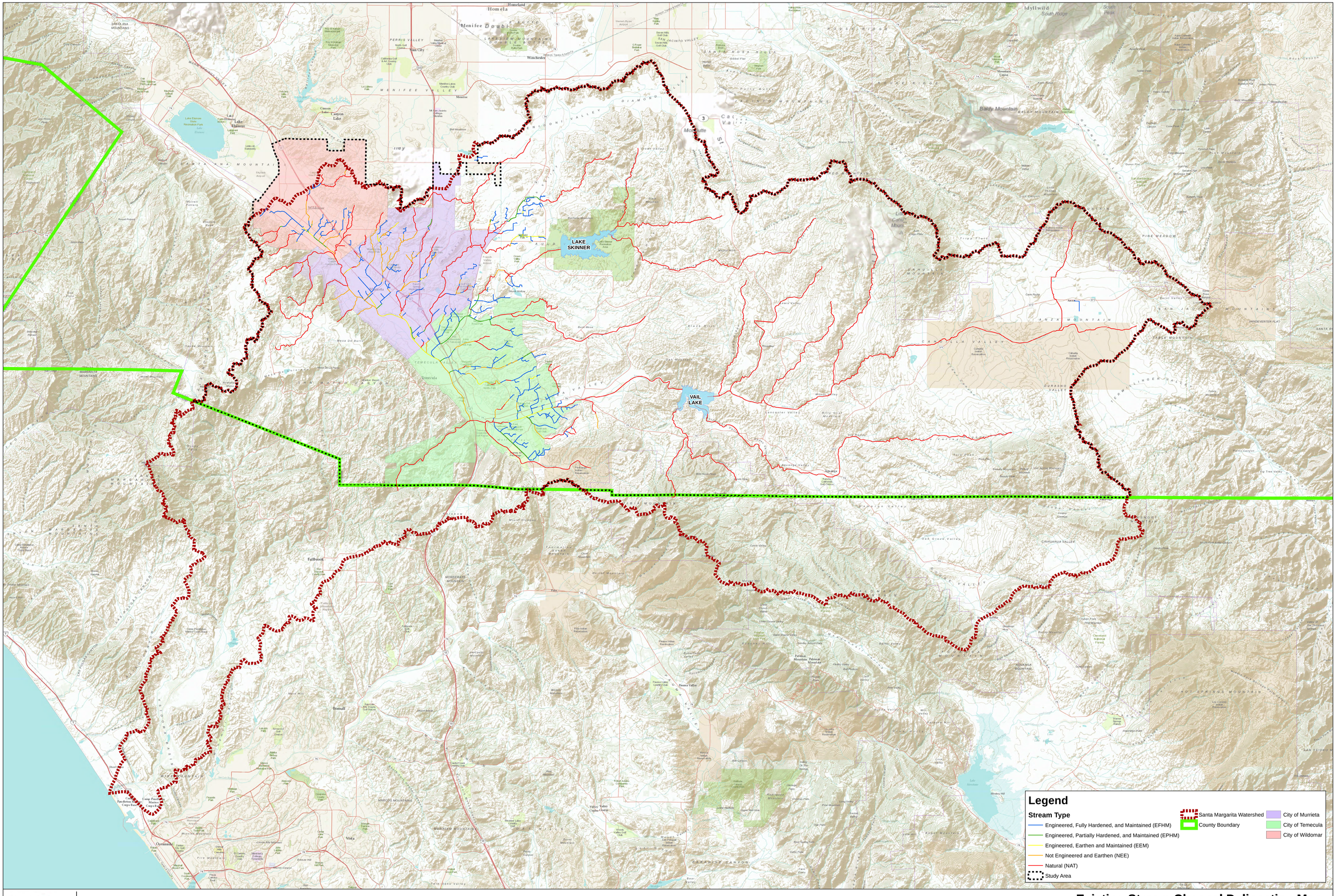
Philip Williams & Associates (PWA), October 26, 1998. *Santa Margarita Watershed Study: Hydrology and Watershed Processes.*

Southern California Coastal Water Research Project (SCCWRP), April 2012. *Technical Report 667: Hydromodification Assesment and Management in California.*

Southern California Coastal Water Research Project (SCCWRP), March 2010. *Technical Report 605: Hydromodification Screening Tools: GIS-Based Catchment Analyses of Potential Changes in Runoff and Sediment Discharge.*

Southern California Coastal Water Research Project (SCCWRP), July 2007. *Surface Water Ambient Monitoring Program (SWAMP) Report on the Santa Margarita Hydrologic Unit.*

MAP 1



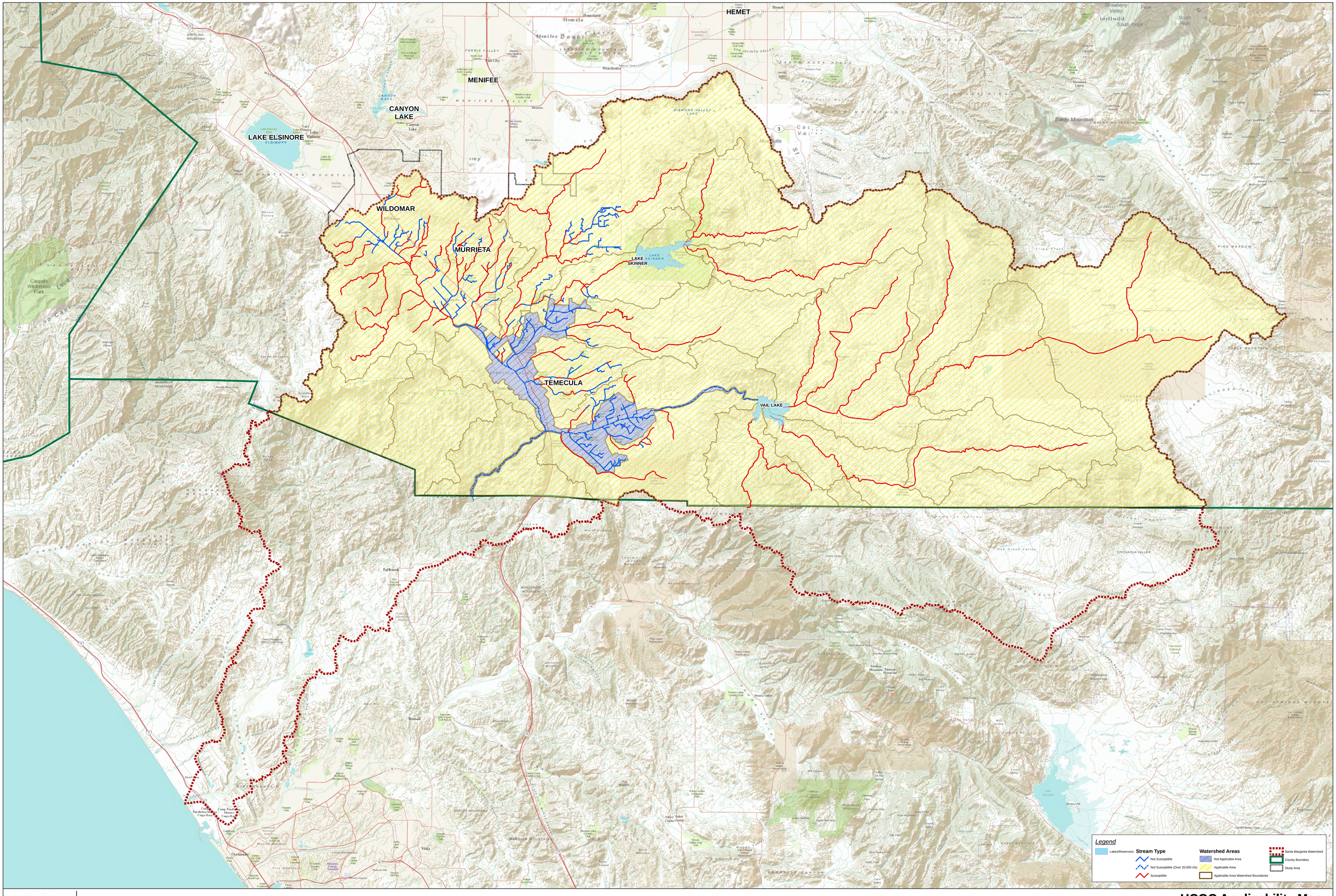
Existing Stream Channel Delineation Map

Hydromodification Susceptibility Documentation Report and Mapping
Riverside County Flood Control and Water Conservation District

Santa Margarita Region - Map 1

Map Document: (M:\Models\2018\SDR\SCH\CD_HCOC_Overall_Large_SDR.mxd mxd - RVC - 1/9/2019

MAP 2



HCOC Applicability Map

Hydromodification Susceptibility Documentation Report and Mapping
Riverside County Flood Control and Water Conservation District

Santa Margarita Region - Map 2

Map Document: (M:\Mitdata\2160520\PCFWCD_Hydromodification_Large_5000.mxd mxd - RVC - 1/9/2012

APPENDIX A

Sample File Input (Run 42)

42.ih1

```
IDSanta Margarita Watershed
IT    30                    120
IO     0       0
KKNode26
KM
KO                                    22
BA 50.52
KM SANTA MARGARITA STORMS
PB  1.61
IN    15
PI 0.027   0.031   0.034   0.035   0.039   0.039   0.039   0.040   0.042   0.043
PI 0.045   0.048   0.052   0.059   0.069   0.076   0.087   0.100   0.111   0.122
PI 0.171   0.233   0.055   0.016
LS           76.4
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  953.   1172.   1481.   2075.   2104.   3231.   3927.   6496.  10406.   4971.
UI 3858.   2366.   2228.   2042.   1914.   1510.   1318.   1300.   1128.   1047.
UI  971.    893.    726.    708.    650.    637.    529.    529.    437.    386.
UI  386.    344.    231.    231.    231.    231.    231.    119.     49.     49.
UI  49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3
UI  49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3
UI  49.3    49.3    49.3    40.6
KKSkinne
KM
KO                                    22
RS     1    STOR   43800
SV     0   22284   23921   25559   27331   29104   30949   32866   34783   43800
SV 44072   44616   45160   45568   45840   46520   47900   49300   50667   52000
SQ     0      .1      .2      .3      .4      .5      .6      .7      .8     1.2
SQ    65     365     820    1250    1495    2250    4400    7125   10250   13750
KK14
KM
KO                                    22
RD 33528   .0095     .04            TRAP     200       5
KKNode2
KM
KO                                    22
BA   8.1
KM SANTA MARGARITA STORMS
PB  1.39
IN    15
PI 0.024   0.026   0.029   0.031   0.033   0.033   0.033   0.035   0.036   0.038
PI 0.039   0.042   0.044   0.050   0.060   0.065   0.075   0.086   0.096   0.104
PI 0.147   0.202   0.047   0.014
LS           77.6
KM UHG FROM VALLEY S-GRAPH
UI  260.    381.    555.    812.    990.   1129.   1059.    804.    553.    459.
UI  359.    297.    260.    215.    199.    169.    151.    139.    119.    112.
UI  99.0    96.1    87.3    87.3    71.7    69.0    69.0    57.4    55.0    55.0
UI  54.6    43.7    43.7    43.7    43.7    40.1    28.8    28.8    28.8    28.8
UI  28.8    28.8    28.8    14.3    14.2    14.2    14.2    14.2    14.2    14.2
UI  14.2    14.2    14.2    14.2    14.2    14.2    14.2    10.2
KKNode6
KM
KO                                    22
BA 27.55
KM SANTA MARGARITA STORMS
PB  1.46
IN    15
PI 0.025   0.028   0.031   0.032   0.035   0.035   0.035   0.036   0.038   0.039
PI 0.041   0.044   0.047   0.053   0.063   0.069   0.079   0.091   0.101   0.110
PI 0.155   0.212   0.050   0.015
LS           75.1
KM UHG FROM VALLEY S-GRAPH
UI  491.    581.    742.    929.   1158.   1485.   1727.   1964.   2154.   2235.
UI 1977.   2201.   1682.   1436.   1076.    982.    896.    736.    674.    589.
UI  588.    491.    452.    421.    396.    389.    327.    327.    286.    281.
UI  265.    236.    236.    222.    196.    196.    196.    180.    173.    173.
UI  173.    151.    137.    137.    137.    137.    125.    109.    109.    109.
UI  109.    109.    109.     88.     87.     87.     87.     87.     87.     87.
UI  86.6    65.6    57.2    57.2    57.2    57.2    57.2    57.2    57.2    57.2
UI  57.2    57.2    57.2    48.8    28.2    28.2    28.2    28.2    28.2    28.2
UI  28.2    28.2    28.2    28.2    28.2    28.2    28.2    28.2    28.2    28.2
UI  28.2    28.2    28.2    28.2    28.2    28.2    28.2    28.2    26.1
KKNode73
KM
KO                                    22
KO     3
KK13
KM
KO                                    22
KD  7762   .0025     .04            TRAP     200       5
KKNode31
KM
KO                                    22
BA  2.65
KM SANTA MARGARITA STORMS
PB  1.37
IN    15
PI 0.023   0.026   0.029   0.030   0.033   0.033   0.033   0.034   0.036   0.037
PI 0.038   0.041   0.044   0.049   0.059   0.064   0.074   0.085   0.095   0.103
PI 0.145   0.199   0.047   0.014
```

42.ih1

```
LS          77.4
KM UHG FROM VALLEY S-GRAPH
UI  161.    299.    505.    601.    449.    266.    183.    144.    111.     91.
UI  74.3    63.0    53.4    48.3    43.5    37.3    33.2    29.7    28.2    23.6
UI  23.6    20.9    15.6    15.6    15.6    15.6     8.1     7.7     7.7     7.7
UI   7.7     7.7     7.7     7.7     7.4
KKNode71
KM
KO                                    22
HC     2
KK12
KM
KO                                    22
RD  6019   .0044     .04            TRAP     200       5
KKNode9
KM
KO                                    22
BA  2.52
KM SANTA MARGARITA STORMS
PB  1.42
IN    15
PI 0.024   0.027   0.030   0.031   0.034   0.034   0.034   0.035   0.037   0.038
PI 0.040   0.043   0.045   0.051   0.061   0.067   0.077   0.088   0.098   0.106
PI 0.151   0.206   0.048   0.014
LS          75.5
KM UHG FROM VALLEY S-GRAPH
UI  187.    387.    613.    596.    339.    212.    156.    119.     92.     75.
UI  62.0    54.5    47.8    41.1    34.4    32.7    27.3    26.0    23.2    17.2
UI  17.2    17.2    12.6     8.5     8.5     8.5     8.5     8.5     8.5     8.5
UI   1.4
KKNode70
KM
KO                                    22
HC     2
KKNode27
KM
KO                                    22
BA 16.92
KM SANTA MARGARITA STORMS
PB  1.48
IN    15
PI 0.025   0.028   0.031   0.033   0.036   0.036   0.036   0.037   0.038   0.040
PI 0.041   0.044   0.047   0.053   0.064   0.070   0.080   0.092   0.102   0.111
PI 0.157   0.215   0.050   0.015
LS          81.9
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  411.    571.    838.    927.   1463.   2148.   4296.   1997.   1445.    943.
UI  880.    773.    590.    560.    482.    441.    386.    319.    296.    280.
UI  234.    228.    168.    167.    143.     99.     99.     99.     99.     25.
UI  21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2
UI  21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2    12.5
KK17
KM
KO                                    22
RD 55334   .0039     .04            TRAP     200       5
KKNode1
KM
KO                                    22
BA 22.37
KM SANTA MARGARITA STORMS
PB  1.37
IN    15
PI 0.023   0.026   0.029   0.030   0.033   0.033   0.033   0.034   0.036   0.037
PI 0.038   0.041   0.044   0.049   0.059   0.064   0.074   0.085   0.095   0.103
PI 0.145   0.199   0.047   0.014
LS          77.7
KM UHG FROM VALLEY S-GRAPH
UI  958.   1567.   2498.   3394.   3836.   3421.   2176.   1593.   1187.    984.
UI  785.    696.    574.    493.    427.    383.    345.    314.    304.    248.
UI  241.    217.    192.    192.    173.    152.    152.    152.    117.    101.
UI  101.    101.    101.    101.     53.     50.     50.     50.     50.     50.
UI  49.5    49.5    49.5    49.5    49.5    35.3
KKNode3
KM
KO                                    22
BA  18.4
KM SANTA MARGARITA STORMS
PB  1.37
IN    15
PI 0.023   0.026   0.029   0.030   0.033   0.033   0.033   0.034   0.036   0.037
PI 0.038   0.041   0.044   0.049   0.059   0.064   0.074   0.085   0.095   0.103
PI 0.145   0.199   0.047   0.014
LS          78.9
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  644.   1005.   1367.   2169.   5078.   3567.   1871.   1346.   1148.    846.
UI  756.    647.    538.    443.    408.    333.    282.    243.    183.    145.
UI  145.    107.     31.     31.     31.     31.     31.     31.     31.     31.
UI  31.0    31.0    31.0    31.0    31.0    31.0    30.6
KKNode66
KM
KO                                    22
HC     3
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42.ih1

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KK16
KM
KO                                      22
RD 32736   .0069     .04            TRAP     200       5
KKNode4
KM
KO                                      22
BA  5.69
KM SANTA MARGARITA STORMS
PB  1.48
IN    15
PI 0.025   0.028   0.031   0.033   0.036   0.036   0.036   0.037   0.038   0.040
PI 0.041   0.044   0.047   0.053   0.064   0.070   0.080   0.092   0.102   0.111
PI 0.157   0.215   0.050   0.015
LS          78.7
KM UHG FROM VALLEY S-GRAPH
UI  278.    488.    807.   1030.   1079.    729.    476.    344.    279.    220.
UI  187.    155.    133.    116.     98.     91.     87.     70.     68.     58.
UI  54.5    53.9    43.3    43.3    43.3    33.5    28.6    28.6    28.6    28.6
UI  20.9    14.1    14.1    14.1    14.1    14.1    14.1    14.1    14.1    14.1
UI  12.6
KKNode75
KM
KO                                      22
HC     2
KKNode33
KM
KO                                      22
BA 18.46
KM SANTA MARGARITA STORMS
PB  2.14
IN    15
PI 0.036   0.041   0.045   0.047   0.051   0.051   0.051   0.054   0.056   0.058
PI 0.060   0.064   0.068   0.077   0.092   0.101   0.116   0.133   0.148   0.161
PI 0.227   0.310   0.073   0.021
LS          77.2
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI 1631.   3501.   8638.   3253.   2017.   1416.    995.    747.    534.    341.
UI  270.     62.     62.     62.     62.     62.     62.     62.     40.
KK19
KM
KO                                      22
RD  8818    .006    .035            TRAP      50       2
KKNode32
KM
KO                                      22
BA  8.74
KM SANTA MARGARITA STORMS
PB  2.08
IN    15
PI 0.035   0.040   0.044   0.046   0.050   0.050   0.050   0.052   0.054   0.056
PI 0.058   0.062   0.067   0.075   0.089   0.098   0.112   0.129   0.144   0.156
PI 0.220   0.302   0.071   0.021
LS          76.7
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  361.    604.    887.   1636.   2757.   1122.    729.    607.    451.    384.
UI  324.    256.    224.    186.    151.    132.     84.     79.     77.     17.
UI  16.8    16.8    16.8    16.8    16.8    16.8    16.8    16.8    16.8    16.8
UI  16.8    16.8     6.4
KKNode64
KM
KO                                      22
HC     2
KK18
KM
KO                                      22
RD 31786   .0029    .035            TRAP      50       2
KKNode5
KM
KO                                      22
BA 30.47
KM SANTA MARGARITA STORMS
PB  1.75
IN    15
PI 0.030   0.033   0.037   0.038   0.042   0.042   0.042   0.044   0.045   0.047
PI 0.049   0.052   0.056   0.063   0.075   0.082   0.095   0.108   0.121   0.131
PI 0.186   0.254   0.060   0.018
LS          79.3
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  761.   1076.   1558.   1803.   2776.   4638.   7461.   3337.   2379.   1742.
UI 1621.   1285.   1057.    991.    853.    771.    667.    570.    521.    477.
UI  423.    357.    308.    306.    184.    184.    184.    184.     75.     39.
UI  39.3    39.3    39.3    39.3    39.3    39.3    39.3    39.3    39.3    39.3
UI  39.3    39.3    39.3    39.3    39.3    39.3    39.3    39.3     9.0
KKNode76
KM
KO                                      22
HC     2
KKNode61
KM
KO                                      22
HC     2
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KK15
KM
KO                                      22
RD   845   .0018    .035            TRAP      50       2
KKNode10
KM
KO                                      22
BA  0.18
KM SANTA MARGARITA STORMS
PB  1.45
IN    15
PI 0.025   0.028   0.030   0.032   0.035   0.035   0.035   0.036   0.038   0.039
PI 0.041   0.044   0.046   0.052   0.062   0.068   0.078   0.090   0.100   0.109
PI 0.154   0.210   0.049   0.015
LS           77.8
KM UHG FROM VALLEY S-GRAPH
UI  140.     52.     19.     10.      6.      3.      2.
KKNode59
KM
KO                                      22
HC     3
KK11
KM
KO                                      22
RD 11722   .0022    .035            TRAP      50       2
KKNode29
KM
KO                                      22
BA  3.94
KM SANTA MARGARITA STORMS
PB  1.38
IN    15
PI 0.023   0.026   0.029   0.030   0.033   0.033   0.033   0.034   0.036   0.037
PI 0.039   0.041   0.044   0.050   0.059   0.065   0.075   0.086   0.095   0.104
PI 0.146   0.200   0.047   0.014
LS           84.7
KM UHG FROM VALLEY S-GRAPH
UI  303.    635.   1011.    906.    514.    321.    237.    182.    143.    116.
UI  94.7    84.3    71.4    64.0    52.4    50.3    41.6    41.6    31.0    27.5
UI  27.5    26.7    13.5    13.5    13.5    13.5    13.5    13.5    13.5     6.1
KK10
KM
KO                                      22
RD  3168   .0062    .035            TRAP      50       2
KKNode34
KM
KO                                      22
BA  2.05
KM SANTA MARGARITA STORMS
PB  1.40
IN    15
PI 0.024   0.027   0.029   0.031   0.034   0.034   0.034   0.035   0.036   0.038
PI 0.039   0.042   0.045   0.050   0.060   0.066   0.076   0.087   0.097   0.105
PI 0.148   0.203   0.048   0.014
LS           84.3
KM UHG FROM VALLEY S-GRAPH
UI  214.    499.    656.    367.    206.    140.    104.     78.     62.     53.
UI  42.4    36.0    32.6    26.6    25.3    17.6    17.6    16.4     8.7     8.7
UI   8.7     8.7     8.7     8.4
KKNode53
KM
KO                                      22
HC     3
KK9
KM
KO                                      22
RD 10085   .0029    .035            TRAP      50       2
KKNode13
KM
KO                                      22
BA  6.71
KM SANTA MARGARITA STORMS
PB  1.40
IN    15
PI 0.024   0.027   0.029   0.031   0.034   0.034   0.034   0.035   0.036   0.038
PI 0.039   0.042   0.045   0.050   0.060   0.066   0.076   0.087   0.097   0.105
PI 0.148   0.203   0.048   0.014
LS           82.6
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  427.    801.   1851.   2314.    813.    610.    445.    350.    255.    211.
UI  157.    114.     84.     56.     18.     18.     18.     18.     18.     18.
UI  18.0    18.0    18.0     3.4
KKNode74
KM
KO                                      22
HC     2
KKNode22
KM
KO                                      22
BA 38.15
KM SANTA MARGARITA STORMS
PB  2.11
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IN    15
PI 0.036   0.040   0.044   0.046   0.051   0.051   0.051   0.053   0.055   0.057
PI 0.059   0.063   0.068   0.076   0.091   0.099   0.114   0.131   0.146   0.158
PI 0.224   0.306   0.072   0.021
LS          75.2
KM UHG FROM MOUNTAIN S-GRAPH
UI 1440.   1908.   2832.   4066.   5346.   3903.   2933.   2447.   1865.   1414.
UI 1251.   1227.   1028.    952.    888.    782.    782.    699.    625.    571.
UI  558.    521.    496.    447.    443.    417.    417.    356.    338.    338.
UI  287.    278.    278.    268.    245.    245.    245.    237.    219.    219.
UI  219.    219.    197.    192.    192.    192.    192.    172.    162.    162.
UI  162.    162.    162.    138.    124.    124.    124.    124.    124.    124.
UI  124.    101.     90.     90.     90.     90.     90.     90.     90.     90.
UI  90.0    90.0    47.3    32.7    32.7    32.7    32.7    32.7    32.7    32.7
UI  32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7
UI  32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7
UI  32.7    32.7    10.5
KKNode24
KM
KO                                      22
BA 19.81
KM SANTA MARGARITA STORMS
PB  2.06
IN    15
PI 0.035   0.039   0.043   0.045   0.049   0.049   0.049   0.052   0.054   0.056
PI 0.058   0.062   0.066   0.074   0.089   0.097   0.111   0.128   0.142   0.154
PI 0.218   0.299   0.070   0.021
LS          73.9
KM UHG FROM MOUNTAIN S-GRAPH
UI 1418.   2549.   4368.   3069.   2046.   1313.   1102.    889.    776.    691.
UI  589.    512.    469.    415.    385.    368.    299.    283.    246.    239.
UI  217.    217.    197.    194.    189.    170.    170.    164.    144.    144.
UI  144.    121.    110.    110.    110.    109.     80.     80.     80.     80.
UI  79.6    79.6    50.2    29.0    29.0    29.0    29.0    29.0    29.0    29.0
UI  29.0    29.0    29.0    29.0    29.0    29.0    29.0    29.0    29.0    29.0
UI   2.1
KKNode52
KM
KO                                      22
HC     2
KK7
KM
KO                                      22
RD 35482   .0205    .050            TRAP      40       3
KKNode18
KM
KO                                      22
BA 22.18
KM SANTA MARGARITA STORMS
PB  1.94
IN    15
PI 0.033   0.037   0.041   0.043   0.047   0.047   0.047   0.049   0.050   0.052
PI 0.054   0.058   0.062   0.070   0.083   0.091   0.105   0.120   0.134   0.146
PI 0.206   0.281   0.066   0.019
LS          76.4
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  580.    838.   1190.   1487.   2169.   4021.   5185.   2413.   1422.   1261.
UI 1160.    846.    789.    682.    613.    538.    434.    405.    375.    321.
UI  279.    234.    230.    140.    140.    140.    140.     35.     30.     30.
UI  29.9    29.9    29.9    29.9    29.9    29.9    29.9    29.9    29.9    29.9
UI  29.9    29.9    29.9    29.9    29.9    29.9     5.3
KKNode20
KM
KO                                      22
BA 18.04
KM SANTA MARGARITA STORMS
PB  1.97
IN    15
PI 0.033   0.037   0.041   0.043   0.047   0.047   0.047   0.049   0.051   0.053
PI 0.055   0.059   0.063   0.071   0.085   0.093   0.106   0.122   0.136   0.148
PI 0.209   0.286   0.067   0.020
LS          74.5
KM UHG FROM MOUNTAIN S-GRAPH
UI  935.   1521.   2468.   3176.   2164.   1551.   1122.    813.    775.    639.
UI  581.    506.    496.    399.    368.    345.    325.    283.    275.    265.
UI  229.    214.    194.    176.    176.    158.    156.    156.    141.    139.
UI  139.    130.    122.    122.    122.    108.    103.    103.    103.     97.
UI  78.6    78.6    78.6    78.6    78.6    71.8    57.1    57.1    57.1    57.1
UI  57.1    57.1    57.1    51.1    20.8    20.8    20.8    20.8    20.8    20.8
UI  20.8    20.8    20.8    20.8    20.8    20.8    20.8    20.8    20.8    20.8
UI  20.8    20.8    20.8    20.8    20.8    20.8     5.0
KKNode50
KM
KO                                      22
HC     3
KK6
KM
KO                                      22
RD 41976    .012     .05            TRAP      60       3
KKNode7
KM
KO                                      22
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BA  24.6
KM SANTA MARGARITA STORMS
PB  1.95
IN    15
PI 0.033   0.037   0.041   0.043   0.047   0.047   0.047   0.049   0.051   0.053
PI 0.055   0.059   0.062   0.070   0.084   0.092   0.105   0.121   0.135   0.146
PI 0.207   0.283   0.066   0.020
LS          77.6
KM UHG FROM MOUNTAIN S-GRAPH
UI  995.   1342.   2049.   3059.   3501.   2428.   1838.   1506.   1112.    860.
UI  860.    737.    663.    614.    539.    537.    471.    425.    391.    374.
UI  358.    320.    307.    293.    287.    262.    232.    232.    202.    191.
UI  191.    182.    169.    169.    169.    157.    151.    151.    151.    143.
UI  132.    132.    132.    132.    119.    112.    112.    112.    112.    112.
UI  86.3    85.1    85.1    85.1    85.1    85.1    85.1    73.5    61.9    61.9
UI  61.9    61.9    61.9    61.9    61.9    61.9    61.9    52.4    22.5    22.5
UI  22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5
UI  22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5
UI  22.5    22.5    22.5    22.5    22.5    21.5
KKNode8
KM
KO                                      22
BA 88.44
KM SANTA MARGARITA STORMS
PB  1.93
IN    15
PI 0.033   0.037   0.041   0.042   0.046   0.046   0.046   0.048   0.050   0.052
PI 0.054   0.058   0.062   0.069   0.083   0.091   0.104   0.120   0.133   0.145
PI 0.205   0.280   0.066   0.019
LS          72.4
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI 1288.   1396.   1757.   2120.   2950.   2588.   3547.   4749.   4958.   7878.
UI12770.  12282.   6233.   5129.   4035.   2951.   2896.   2761.   2683.   2280.
UI 1915.   1757.   1757.   1621.   1486.   1384.   1326.   1208.   1105.    966.
UI  961.    878.    878.    803.    716.    716.    662.    522.    522.    522.
UI  522.    331.    312.    312.    312.    312.    312.    312.    167.     67.
UI  66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6
UI  66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6
UI  66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6
UI  66.6    66.6    43.5
KKNode49
KM
KO                                      22
HC    2
KK8
KM
KO                                      22
RD 46358   .0154     .05            TRAP      60       3
KKNode12
KM
KO                                      22
BA 42.32
KM SANTA MARGARITA STORMS
PB  1.69
IN    15
PI 0.029   0.032   0.035   0.037   0.041   0.041   0.041   0.042   0.044   0.046
PI 0.047   0.051   0.054   0.061   0.073   0.079   0.091   0.105   0.117   0.127
PI 0.179   0.245   0.057   0.017
LS          74.4
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI 1020.   1410.   2080.   2273.   3611.   5291.  10582.   5159.   3691.   2342.
UI 2186.   1974.   1479.   1391.   1219.   1104.    973.    816.    744.    696.
UI  601.    567.    442.    414.    385.    247.    247.    247.    247.    101.
UI  52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8
UI  52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8    49.6
KKNode14
KM
KO                                      22
BA 23.58
KM SANTA MARGARITA STORMS
PB  2.05
IN    15
PI 0.035   0.039   0.043   0.045   0.049   0.049   0.049   0.051   0.053   0.055
PI 0.057   0.061   0.066   0.074   0.088   0.096   0.111   0.127   0.141   0.154
PI 0.217   0.297   0.070   0.020
LS          69.2
KM UHG FROM MOUNTAIN S-GRAPH
UI 1391.   2325.   3933.   4193.   2586.   1937.   1279.   1139.    941.    839.
UI  727.    692.    566.    518.    479.    433.    404.    380.    343.    308.
UI  278.    253.    249.    223.    223.    214.    200.    200.    191.    175.
UI  175.    175.    151.    148.    148.    148.    121.    113.    113.    113.
UI  113.    101.     82.     82.     82.     82.     82.     82.     82.     33.
UI  29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8
UI  29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8    13.8
KKNode15
KM
KO                                      22
BA   1.0
KM SANTA MARGARITA STORMS
PB  1.55
IN    15
PI 0.026   0.029   0.033   0.034   0.037   0.037   0.037   0.039   0.040   0.042
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PI 0.043   0.046   0.050   0.056   0.067   0.073   0.084   0.096   0.107   0.116
PI 0.164   0.225   0.053   0.015
LS          80.4
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  246.    640.    195.    102.     57.     26.      6.      6.      6.      6.
KKNode17
KM
KO                                   22
BA  38.5
KM SANTA MARGARITA STORMS
PB  2.07
IN    15
PI 0.035   0.039   0.043   0.046   0.050   0.050   0.050   0.052   0.054   0.056
PI 0.058   0.062   0.066   0.075   0.089   0.097   0.112   0.128   0.143   0.155
PI 0.219   0.300   0.070   0.021
LS          71.7
KM UHG FROM MOUNTAIN S-GRAPH
UI 1474.   1961.   2928.   4314.   5339.   3911.   2943.   2458.   1847.   1406.
UI 1279.   1221.   1038.    961.    886.    799.    799.    678.    628.    581.
UI  557.    533.    485.    457.    443.    426.    416.    346.    346.    330.
UI  284.    284.    284.    259.    251.    251.    251.    230.    224.    224.
UI  224.    214.    197.    197.    197.    197.    187.    166.    166.    166.
UI  166.    166.    153.    127.    127.    127.    127.    127.    127.    127.
UI  110.     92.     92.     92.     92.     92.     92.     92.     92.     92.
UI  92.0    51.3    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5
UI  33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5
UI  33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5
UI  32.7
KKNode45
KM
KO                                   22
HC     6
KKVail
KM
KO                                   22
RS     1    STOR   51000
SV     0   51000   52100   53200   54300   55400   56500   62571   65000
SQ     0       1    1000    3500    7000   11000   16000   50000   67500
KK5
KM
KO                                   22
RD 60984   .0066     .04            TRAP     380       2
KKNode28
KM
KO                                   22
BA 29.36
KM SANTA MARGARITA STORMS
PB  1.59
IN    15
PI 0.027   0.030   0.033   0.035   0.038   0.038   0.038   0.040   0.041   0.043
PI 0.045   0.048   0.051   0.057   0.068   0.075   0.086   0.099   0.110   0.119
PI 0.169   0.231   0.054   0.016
LS          73.0
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  569.    708.    896.   1244.   1333.   1996.   2569.   4002.   5982.   2612.
UI 2173.   1323.   1269.   1220.   1045.    831.    776.    735.    648.    610.
UI  538.    477.    427.    398.    388.    331.    316.    282.    231.    231.
UI  219.    138.    138.    138.    138.    138.     71.     29.     29.     29.
UI  29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
UI  29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
UI  29.4    29.4     3.3
KKNode30
KM
KO                                   22
BA 16.19
KM SANTA MARGARITA STORMS
PB  1.95
IN    15
PI 0.033   0.037   0.041   0.043   0.047   0.047   0.047   0.049   0.051   0.053
PI 0.055   0.059   0.062   0.070   0.084   0.092   0.105   0.121   0.135   0.146
PI 0.207   0.283   0.066   0.020
LS          69.6
KM UHG FROM MOUNTAIN S-GRAPH
UI  681.    926.   1473.   2175.   2292.   1564.   1189.    938.    682.    586.
UI  562.    474.    436.    394.    367.    353.    293.    273.    262.    244.
UI  227.    209.    203.    195.    182.    159.    159.    138.    130.    130.
UI  122.    115.    115.    115.    104.    103.    103.    103.     92.     90.
UI  90.2    90.2    87.5    76.2    76.2    76.2    76.2    76.2    63.3    58.1
UI  58.1    58.1    58.1    58.1    58.1    49.9    42.2    42.2    42.2    42.2
UI  42.2    42.2    42.2    42.2    42.2    25.6    15.4    15.4    15.4    15.4
UI  15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4
UI  15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4
UI  15.4    15.4     9.1
KKNode43
KM
KO                                   22
HC     3
KK4
KM
KO                                   22
RD  4435   .0044    .035            TRAP     115       2.5
KKNode11
```

42.ih1

```
KM
KO                                        22
BA  1.88
KM SANTA MARGARITA STORMS
PB  1.51
IN    15
PI 0.026   0.029   0.032   0.033   0.036   0.036   0.036   0.038   0.039   0.041
PI 0.042   0.045   0.049   0.054   0.065   0.071   0.082   0.094   0.104   0.113
PI 0.160   0.219   0.051   0.015
LS          80.8
KM UHG FROM MOUNTAIN S-GRAPH
UI  922.    558.    258.    161.    115.     82.     66.     57.     48.     38.
UI 31.9     25.5    18.5     9.3     9.3     9.3     9.3     7.4
KKNode72
KM
KO                                        22
HC     2
KKNode41
KM
KO                                        22
HC     2
KK3
KM
KO                                        22
RD 50424   .0119     .03            TRAP     100     2.0
KKNode16
KM
KO                                        22
BA 32.84
KM SANTA MARGARITA STORMS
PB  1.58
IN    15
PI 0.027   0.030   0.033   0.035   0.038   0.038   0.038   0.040   0.041   0.043
PI 0.044   0.047   0.051   0.057   0.068   0.074   0.085   0.098   0.109   0.119
PI 0.167   0.229   0.054   0.016
LS          78.3
KM UHG FROM MOUNTAIN S-GRAPH
UI 1357.   1838.   2858.   4217.   4714.   3204.   2431.   1954.   1431.   1170.
UI 1157.    960.    884.    810.    731.    731.    596.    560.    532.    493.
UI  477.    418.    415.    390.    390.    320.    316.    301.    260.    260.
UI  260.    229.    229.    229.    222.    205.    205.    205.    201.    180.
UI  180.    180.    180.    166.    152.    152.    152.    152.    152.    119.
UI  116.    116.    116.    116.    116.    116.     97.     84.     84.     84.
UI  84.2    84.2    84.2    84.2    84.2    84.2    55.9    30.6    30.6    30.6
UI  30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6
UI  30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6
UI  30.6    30.6    30.6    30.6     4.0
KKNode21
KM
KO                                        22
BA 21.59
KM SANTA MARGARITA STORMS
PB  1.53
IN    15
PI 0.026   0.029   0.032   0.034   0.037   0.037   0.037   0.038   0.040   0.041
PI 0.043   0.046   0.049   0.055   0.066   0.072   0.083   0.095   0.106   0.115
PI 0.162   0.222   0.052   0.015
LS          83.9
KM UHG FROM MOUNTAIN S-GRAPH
UI  638.    785.   1013.   1415.   1947.   2552.   1889.   1501.   1235.   1102.
UI  867.    706.    566.    566.    553.    472.    437.    414.    389.    354.
UI  354.    343.    283.    278.    257.    257.    236.    236.    214.    202.
UI  202.    190.    189.    189.    155.    153.    153.    144.    126.    126.
UI  126.    126.    113.    111.    111.    111.    111.    101.     99.     99.
UI  99.3    99.3    96.1    87.1    87.1    87.1    87.1    87.1    87.1    75.3
UI  73.5    73.5    73.5    73.5    73.5    73.5    68.5    56.1    56.1    56.1
UI  56.1    56.1    56.1    56.1    56.1    56.1    50.7    40.7    40.7    40.7
UI  40.7    40.7    40.7    40.7    40.7    40.7    40.7    40.7    40.7    40.7
UI  23.2    14.8    14.8    14.8    14.8    14.8    14.8    14.8    14.8    14.8
UI  14.8    14.8    14.8    14.8    14.8    14.8    14.8    14.8    14.8    14.8
UI  14.8    14.8    14.8    14.8    14.8    14.8    14.8    14.8    14.8    14.8
UI  14.8    14.8    14.8    14.8    14.8    14.8    14.8    13.5
KKNode39
KM
KO                                        22
HC     3
KK2
KM
KO                                        22
RD 39283   .0061     .04            TRAP     100     2.5
KKNode19
KM
KO                                        22
BA 47.79
KM SANTA MARGARITA STORMS
PB  1.79
IN    15
PI 0.030   0.034   0.038   0.039   0.043   0.043   0.043   0.045   0.047   0.048
PI 0.050   0.054   0.057   0.064   0.077   0.084   0.097   0.111   0.124   0.134
PI 0.190   0.260   0.061   0.018
LS          75.0
KM UHG FROM MOUNTAIN S-GRAPH
```

42.ih1

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UI 1248.   1464.   1870.   2630.   3267.   4151.   4973.   3740.   2826.   2435.
UI 2240.   1776.   1486.   1205.   1122.   1122.   1046.    929.    863.    822.
UI  789.    701.    701.    701.    617.    561.    540.    510.    510.    468.
UI  467.    444.    401.    401.    393.    374.    374.    374.    305.    303.
UI  303.    303.    254.    249.    249.    249.    249.    221.    220.    220.
UI  220.    220.    212.    197.    197.    197.    197.    197.    195.    173.
UI  173.    173.    173.    173.    173.    173.    147.    146.    146.    146.
UI  146.    146.    146.    146.    129.    111.    111.    111.    111.    111.
UI  111.    111.    111.    111.    111.     99.     81.     81.     81.     81.
UI 80.7    80.7    80.7    80.7    80.7    80.7    80.7    80.7    80.7    80.7
UI 74.9    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
UI 29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
UI 29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
UI 29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
UI 29.4    29.4    25.5
KKNode23
KM
KO                                  22
BA 10.58
KM SANTA MARGARITA STORMS
PB  1.47
IN    15
PI 0.025   0.029   0.031   0.033   0.035   0.035   0.035   0.037   0.039   0.040
PI 0.041   0.044   0.047   0.053   0.063   0.069   0.079   0.091   0.101   0.110
PI 0.156   0.213   0.050   0.015
LS          69.2
KM UHG FROM MOUNTAIN S-GRAPH
UI  483.    619.   1007.   1488.   1475.   1001.    780.    590.    436.    390.
UI  362.    310.    285.    254.    244.    221.    194.    177.    170.    162.
UI  143.    139.    131.    130.    111.    105.    102.     87.     87.     86.
UI 76.5    76.5    76.5    72.7    68.4    68.4    68.4    64.4    60.0    60.0
UI 60.0    60.0    51.3    50.6    50.6    50.6    50.6    44.2    38.6    38.6
UI 38.6    38.6    38.6    38.6    33.7    28.1    28.1    28.1    28.1    28.1
UI 28.1    28.1    28.1    28.1    15.0    10.2    10.2    10.2    10.2    10.2
UI 10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2
UI 10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2
UI 10.2     0.0
KKNode36
KM
KO                                  22
HC     3
KK1
KM
KO                                  22
RD 69010   0.002     .04           TRAP     150       5
KKNode25
KM
KO                                  22
BA 43.88
KM SANTA MARGARITA STORMS
PB  1.42
IN    15
PI 0.024   0.027   0.030   0.031   0.034   0.034   0.034   0.035   0.037   0.038
PI 0.040   0.043   0.045   0.051   0.061   0.067   0.077   0.088   0.098   0.106
PI 0.151   0.206   0.048   0.014
LS          74.7
KM UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
UI  467.    467.    565.    637.    750.    912.   1058.    900.   1194.   1508.
UI 1751.   1751.   2549.   3194.   4742.   5300.   2521.   2110.   1806.   1767.
UI 1081.   1113.   1051.   1001.   1001.    962.    873.    701.    675.    637.
UI  637.    637.    554.    539.    510.    500.    470.    438.    438.    360.
UI  350.    350.    329.    318.    318.    312.    259.    259.    259.    259.
UI  207.    189.    189.    189.    189.    189.    131.    113.    113.    113.
UI  113.    113.    113.    113.    113.    113.     47.     24.     24.     24.
UI 24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2
UI 24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2
UI 24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2
UI 24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2
UI 24.2    24.2    24.2     2.8
KKNode35
KM
KO                                  22
HC     2
ZZ
```

APPENDIX B

Sample File Output (Run 42)

```
**************************************
*                                    *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*            SEPTEMBER 1990          *
*             VERSION 4.0            *
*                                    *
*  RUN DATE  12/17/1997  TIME  14:17:50*
*                                    *
**************************************
```


```
**************************************
*                                    *
*    U.S. ARMY CORPS OF ENGINEERS    *
*    HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET         *
*       DAVIS, CALIFORNIA 95616      *
*           (916) 756-1104           *
*                                    *
**************************************
```


```
X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X        XXXXX  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

1 HEC-1 INPUT PAGE 1

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

  1           ID  Santa Margarita Watershed
  2           IT      30                  120
  3           IO       0       0

  4           KK  Node26
  5           KM
  6           KO                                      22
  7           BA   50.52
  8           KM   SANTA MARGARITA STORMS
  9           PB    6.27
 10           IN      15
 11           PI   0.013   0.019   0.019   0.025   0.019   0.019   0.019   0.025   0.025   0.025
 12           PI   0.031   0.031   0.031   0.031   0.031   0.038   0.038   0.044   0.044   0.050
 13           PI   0.038   0.044   0.050   0.050   0.056   0.056   0.063   0.063   0.063   0.069
 14           PI   0.075   0.082   0.094   0.094   0.100   0.107   0.119   0.125   0.132   0.138
 15           PI   0.094   0.094   0.125   0.125   0.119   0.119   0.107   0.113   0.157   0.163
 16           PI   0.176   0.182   0.213   0.213   0.144   0.144   0.169   0.163   0.163   0.157
 17           PI   0.150   0.144   0.119   0.119   0.025   0.025   0.019   0.019   0.031   0.031
 18           PI   0.031   0.025   0.025   0.025   0.019   0.013   0.019   0.025   0.019   0.013
 19           PI   0.019   0.019   0.019   0.013   0.019   0.013   0.019   0.013   0.019   0.013
 20           PI   0.013   0.013   0.013   0.013   0.013   0.013
 21           LS           76.4
 22           KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
 23           UI    953.   1172.   1481.   2075.   2104.   3231.   3827.   6496.  10406.   4971.
 24           UI   3858.   2366.   2228.   2042.   1914.   1510.   1318.   1300.   1128.   1047.
 25           UI    971.    893.    726.    708.    650.    637.    529.    529.    437.    386.
 26           UI    386.    344.    231.    231.    231.    231.    231.    119.     49.     49.
 27           UI   49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3
 28           UI   49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3    49.3
 29           UI   49.3    49.3    49.3    40.6

 30           KK  Skinne
 31           KM
 32           KO                                      22
 33           RS       1    STOR   36609
 34           SV       0   22284   23921   25559   27331   29104   30949   32866   34783   43800
 35           SV   44072   44616   45160   45568   45840   46520   47900   49300   50667   52000
 36           SQ       0      .1      .2      .3      .4      .5      .6      .7      .8     1.2
 37           SQ      65     365     820    1250    1495    2250    4400    7125   10250   13750

 38           KK  14
 39           KM
 40           KO                                      22
 41           RD   33528   .0095     .04            TRAP     200       5

 42           KK  Node2
 43           KM
 44           KO                                      22
 45           BA     8.1
 46           KM   SANTA MARGARITA STORMS
 47           PB    4.87
 48           IN      15
 49           PI   0.010   0.015   0.015   0.019   0.015   0.015   0.015   0.019   0.019   0.019
 50           PI   0.024   0.024   0.024   0.024   0.024   0.029   0.029   0.034   0.034   0.039
```

```
                                                                                                                                    
  51  PI   0.029   0.034   0.039   0.039   0.044   0.044   0.049   0.049   0.049   0.054
1                                        HEC-1 INPUT                                                                 PAGE  2
LINE  ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
  52  PI   0.058   0.063   0.073   0.073   0.078   0.083   0.093   0.097   0.102   0.107
  53  PI   0.073   0.073   0.097   0.097   0.093   0.093   0.083   0.088   0.122   0.127
  54  PI   0.136   0.141   0.166   0.166   0.112   0.112   0.131   0.127   0.127   0.122
  55  PI   0.117   0.112   0.093   0.093   0.019   0.019   0.015   0.015   0.024   0.024
  56  PI   0.024   0.019   0.019   0.019   0.015   0.010   0.015   0.019   0.015   0.010
  57  PI   0.015   0.015   0.015   0.010   0.015   0.010   0.015   0.010   0.015   0.010
  58  PI   0.010   0.010   0.010   0.010   0.010   0.010
  59  LS             77.6
  60  KM   UHG FROM VALLEY S-GRAPH
  61  UI    260.    381.    555.    812.    990.   1129.   1059.    804.    553.    459.
  62  UI    359.    297.    260.    215.    199.    169.    151.    139.    119.    112.
  63  UI   99.0    96.1    87.3    87.3    71.7    69.0    69.0    57.4    55.0    55.0
  64  UI   54.6    43.7    43.7    43.7    43.7    40.1    28.8    28.8    28.8    28.8
  65  UI   28.8    28.8    28.8    14.3    14.2    14.2    14.2    14.2    14.2    14.2
  66  UI   14.2    14.2    14.2    14.2    14.2    14.2    14.2    10.2
  67  KK  Node6
  68  KM
  69  KO                                      22
  70  BA   27.55
  71  KM   SANTA MARGARITA STORMS
  72  PB    5.14
  73  IN      15
  74  PI   0.010   0.015   0.015   0.021   0.015   0.015   0.015   0.021   0.021   0.021
  75  PI   0.026   0.026   0.026   0.026   0.026   0.031   0.031   0.036   0.036   0.041
  76  PI   0.031   0.036   0.041   0.041   0.046   0.046   0.051   0.051   0.051   0.057
  77  PI   0.062   0.067   0.077   0.077   0.082   0.087   0.098   0.103   0.108   0.113
  78  PI   0.077   0.077   0.103   0.103   0.098   0.098   0.087   0.093   0.128   0.134
  79  PI   0.144   0.149   0.175   0.175   0.118   0.118   0.139   0.134   0.134   0.128
  80  PI   0.123   0.118   0.098   0.098   0.021   0.021   0.015   0.015   0.026   0.026
  81  PI   0.026   0.021   0.021   0.021   0.015   0.010   0.015   0.021   0.015   0.010
  82  PI   0.015   0.015   0.015   0.010   0.015   0.010   0.015   0.010   0.015   0.010
  83  PI   0.010   0.010   0.010   0.010   0.010   0.010
  84  LS             75.1
  85  KM   UHG FROM VALLEY S-GRAPH
  86  UI    491.    581.    742.    929.   1158.   1485.   1727.   1964.   2154.   2235.
  87  UI   1977.   2201.   1682.   1436.   1076.    982.    896.    736.    674.    589.
  88  UI    588.    491.    452.    421.    396.    389.    327.    327.    286.    281.
  89  UI    265.    236.    236.    222.    196.    196.    196.    180.    173.    173.
  90  UI    173.    151.    137.    137.    137.    137.    125.    109.    109.    109.
  91  UI    109.    109.    109.     88.     87.     87.     87.     87.     87.     87.
  92  UI   86.6    65.6    57.2    57.2    57.2    57.2    57.2    57.2    57.2    57.2
  93  UI   57.2    57.2    57.2    48.8    28.2    28.2    28.2    28.2    28.2    28.2
  94  UI   28.2    28.2    28.2    28.2    28.2    28.2    28.2    28.2    28.2    28.2
  95  UI   28.2    28.2    28.2    28.2    28.2    28.2    28.2    28.2    26.1
  96  KK  Node73
  97  KM
  98  KO                                      22
  99  HC       3
1                                        HEC-1 INPUT                                                                 PAGE  3
LINE  ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
 100  KK  13
 101  KM
 102  KO                                      22
 103  RD    7762   .0025     .04            TRAP     200       5
 104  KK  Node31
 105  KM
 106  KO                                      22
 107  BA    2.65
 108  KM   SANTA MARGARITA STORMS
 109  PB    4.91
 110  IN      15
 111  PI   0.010   0.015   0.015   0.020   0.015   0.015   0.015   0.020   0.020   0.020
 112  PI   0.025   0.025   0.025   0.025   0.025   0.029   0.029   0.034   0.034   0.039
 113  PI   0.029   0.034   0.039   0.039   0.044   0.044   0.049   0.049   0.049   0.054
 114  PI   0.059   0.064   0.074   0.074   0.079   0.083   0.093   0.098   0.103   0.108
 115  PI   0.074   0.074   0.098   0.098   0.093   0.093   0.083   0.088   0.123   0.128
 116  PI   0.137   0.142   0.167   0.167   0.113   0.113   0.133   0.128   0.128   0.123
 117  PI   0.118   0.113   0.093   0.093   0.020   0.020   0.015   0.015   0.025   0.025
 118  PI   0.025   0.020   0.020   0.020   0.015   0.010   0.015   0.020   0.015   0.010
 119  PI   0.015   0.015   0.015   0.010   0.015   0.010   0.015   0.010   0.015   0.010
 120  PI   0.010   0.010   0.010   0.010   0.010   0.010
 121  LS             77.4
 122  KM   UHG FROM VALLEY S-GRAPH
 123  UI    161.    299.    505.    601.    448.    266.    183.    144.    111.     91.
 124  UI   74.3    63.0    53.4    48.3    43.5    37.3    33.2    29.7    28.2    23.6
 125  UI   23.6    20.9    15.6    15.6    15.6    15.6     8.1     7.7     7.7     7.7
 126  UI    7.7     7.7     7.7     7.7     7.4
 127  KK  Node71
 128  KM
 129  KO                                      22
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 130          HC       2

 131          KK  12
 132          KM
 133          KO                                        22
 134          RD    6019    .0044      .04             TRAP      200        5

 135          KK  Node9
 136          KM
 137          KO                                        22
 138          BA    2.52
 139          KM   SANTA MARGARITA STORMS
 140          PB    4.47
 141          IN      15
 142          PI   0.009   0.013   0.013   0.018   0.013   0.013   0.013   0.018   0.018   0.018
 143          PI   0.022   0.022   0.022   0.022   0.022   0.027   0.027   0.031   0.031   0.036
 144          PI   0.027   0.031   0.036   0.036   0.040   0.040   0.045   0.045   0.045   0.049
 145          PI   0.054   0.058   0.067   0.067   0.072   0.076   0.085   0.089   0.094   0.098
 146          PI   0.067   0.067   0.089   0.089   0.085   0.085   0.076   0.080   0.112   0.116
 147          PI   0.125   0.130   0.152   0.152   0.103   0.103   0.121   0.116   0.116   0.112
 148          PI   0.107   0.103   0.085   0.085   0.018   0.018   0.013   0.013   0.022   0.022
 149          PI   0.022   0.018   0.018   0.018   0.013   0.009   0.013   0.018   0.013   0.009
1                                              HEC-1 INPUT                                        PAGE  4

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

 150          PI   0.013   0.013   0.013   0.009   0.013   0.009   0.013   0.009   0.013   0.009
 151          PI   0.009   0.009   0.009   0.009   0.009   0.009
 152          LS            75.5
 153          KM   UHG FROM VALLEY S-GRAPH
 154          UI    187.    387.    613.    596.    339.    212.    156.    119.     92.     75.
 155          UI    62.0    54.5    47.8    41.1    34.4    32.7    27.3    26.0    23.2    17.2
 156          UI    17.2    17.2    12.6     8.5     8.5     8.5     8.5     8.5     8.5     8.5
 157          UI     1.4

 158          KK  Node70
 159          KM
 160          KO                                        22
 161          HC       2

 162          KK  Node27
 163          KM
 164          KO                                        22
 165          BA   16.92
 166          KM   SANTA MARGARITA STORMS
 167          PB    5.29
 168          IN      15
 169          PI   0.011   0.016   0.016   0.021   0.016   0.016   0.016   0.021   0.021   0.021
 170          PI   0.026   0.026   0.026   0.026   0.026   0.032   0.032   0.037   0.037   0.042
 171          PI   0.032   0.037   0.042   0.042   0.048   0.048   0.053   0.053   0.053   0.058
 172          PI   0.063   0.069   0.079   0.079   0.085   0.090   0.101   0.106   0.111   0.116
 173          PI   0.079   0.079   0.106   0.106   0.101   0.101   0.090   0.095   0.132   0.138
 174          PI   0.148   0.153   0.180   0.180   0.122   0.122   0.143   0.138   0.138   0.132
 175          PI   0.127   0.122   0.101   0.101   0.021   0.021   0.016   0.016   0.026   0.026
 176          PI   0.026   0.021   0.021   0.021   0.016   0.011   0.016   0.021   0.016   0.011
 177          PI   0.016   0.016   0.016   0.011   0.016   0.011   0.016   0.011   0.016   0.011
 178          PI   0.011   0.011   0.011   0.011   0.011   0.011
 179          LS            81.9
 180          KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
 181          UI    411.    571.    838.    927.   1463.   2148.   4296.   1997.   1445.    943.
 182          UI    880.    773.    590.    560.    482.    441.    386.    319.    296.    280.
 183          UI    234.    228.    168.    167.    143.     99.     99.     99.     99.     25.
 184          UI   21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2
 185          UI   21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2    21.2    12.5

 186          KK  17
 187          KM
 188          KO                                        22
 189          RD   55334   .0039      .04             TRAP      200        5

 190          KK  Node1
 191          KM
 192          KO                                        22
 193          BA   22.37
 194          KM   SANTA MARGARITA STORMS
 195          PB    4.11
 196          IN      15
 197          PI   0.008   0.012   0.012   0.016   0.012   0.012   0.012   0.016   0.016   0.016
 198          PI   0.021   0.021   0.021   0.021   0.021   0.025   0.025   0.029   0.029   0.033
 199          PI   0.025   0.029   0.033   0.033   0.037   0.037   0.041   0.041   0.041   0.045
 200          PI   0.049   0.053   0.062   0.062   0.066   0.070   0.078   0.082   0.086   0.090
1                                              HEC-1 INPUT                                        PAGE  5

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

 201          PI   0.062   0.062   0.082   0.082   0.078   0.078   0.070   0.074   0.103   0.107
 202          PI   0.115   0.119   0.140   0.140   0.095   0.095   0.111   0.107   0.107   0.103
 203          PI   0.099   0.095   0.078   0.078   0.016   0.016   0.012   0.012   0.021   0.021
 204          PI   0.021   0.016   0.016   0.016   0.012   0.008   0.012   0.016   0.012   0.008
 205          PI   0.012   0.012   0.012   0.008   0.012   0.008   0.012   0.008   0.012   0.008
 206          PI   0.008   0.008   0.008   0.008   0.008   0.008
 207          LS            77.7
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 208          KM   UHG FROM VALLEY S-GRAPH
 209          UI    958.   1567.   2498.   3394.   3836.   3421.   2176.   1593.   1187.    984.
 210          UI    785.    696.    574.    493.    427.    383.    345.    314.    304.    248.
 211          UI    241.    217.    192.    192.    173.    152.    152.    152.    117.    101.
 212          UI    101.    101.    101.    101.     53.     50.     50.     50.     50.
 213          UI   49.5    49.5    49.5    49.5    49.5    35.3

 214          KK  Node3
 215          KM
 216          KO                                      22
 217          BA    18.4
 218          KM   SANTA MARGARITA STORMS
 219          PB   4.75
 220          IN     15
 221          PI  0.009   0.014   0.014   0.019   0.014   0.014   0.014   0.019   0.019   0.019
 222          PI  0.024   0.024   0.024   0.024   0.024   0.029   0.029   0.033   0.033   0.038
 223          PI  0.029   0.033   0.038   0.038   0.043   0.043   0.047   0.047   0.047   0.052
 224          PI  0.057   0.062   0.071   0.071   0.076   0.081   0.090   0.095   0.100   0.105
 225          PI  0.071   0.071   0.095   0.095   0.090   0.090   0.081   0.085   0.119   0.123
 226          PI  0.133   0.138   0.162   0.162   0.109   0.109   0.128   0.123   0.123   0.119
 227          PI  0.114   0.109   0.090   0.090   0.019   0.019   0.014   0.014   0.024   0.024
 228          PI  0.024   0.019   0.019   0.019   0.014   0.009   0.014   0.019   0.014   0.009
 229          PI  0.014   0.014   0.014   0.009   0.014   0.009   0.014   0.009   0.014   0.009
 230          PI  0.009   0.009   0.009   0.009   0.009   0.009
 231          LS            78.9
 232          KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
 233          UI    644.   1005.   1367.   2169.   5078.   3567.   1871.   1346.   1148.    846.
 234          UI    756.    647.    538.    443.    408.    333.    282.    243.    183.    145.
 235          UI    145.    107.     31.     31.     31.     31.     31.     31.     31.     31.
 236          UI   31.0    31.0    31.0    31.0    31.0    31.0    30.6

 237          KK  Node66
 238          KM
 239          KO                                      22
 240          HC       3

 241          KK  16
 242          KM
 243          KO                                      22
 244          RD  32736   .0069     .04            TRAP     200       5

 245          KK  Node4
 246          KM
 247          KO                                      22
 248          BA    5.69
 249          KM   SANTA MARGARITA STORMS
 250          PB    4.47
 251          IN      15
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LINE          ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

 252          PI  0.009   0.013   0.013   0.018   0.013   0.013   0.013   0.018   0.018   0.018
 253          PI  0.022   0.022   0.022   0.022   0.022   0.027   0.027   0.031   0.031   0.036
 254          PI  0.027   0.031   0.036   0.036   0.040   0.040   0.045   0.045   0.045   0.049
 255          PI  0.054   0.058   0.067   0.067   0.072   0.076   0.085   0.089   0.094   0.098
 256          PI  0.067   0.067   0.089   0.089   0.085   0.085   0.076   0.080   0.112   0.116
 257          PI  0.125   0.130   0.152   0.152   0.103   0.103   0.121   0.116   0.116   0.112
 258          PI  0.107   0.103   0.085   0.085   0.018   0.018   0.013   0.013   0.022   0.022
 259          PI  0.022   0.018   0.018   0.018   0.013   0.009   0.013   0.018   0.013   0.009
 260          PI  0.013   0.013   0.013   0.009   0.013   0.009   0.013   0.009   0.013   0.009
 261          PI  0.009   0.009   0.009   0.009   0.009   0.009
 262          LS            78.7
 263          KM   UHG FROM VALLEY S-GRAPH
 264          UI    278.    488.    807.   1030.   1079.    729.    476.    344.    279.    220.
 265          UI    187.    155.    133.    116.     98.     91.     87.     70.     68.     58.
 266          UI    54.5    53.9    43.3    43.3    43.3    33.5    28.6    28.6    28.6    28.6
 267          UI    20.9    14.1    14.1    14.1    14.1    14.1    14.1    14.1    14.1    14.1
 268          UI    12.6

 269          KK  Node75
 270          KM
 271          KO                                      22
 272          HC       2

 273          KK  Node33
 274          KM
 275          KO                                      22
 276          BA   18.46
 277          KM   SANTA MARGARITA STORMS
 278          PB    7.84
 279          IN      15
 280          PI  0.016   0.024   0.024   0.031   0.024   0.024   0.024   0.031   0.031   0.031
 281          PI  0.039   0.039   0.039   0.039   0.039   0.047   0.047   0.055   0.055   0.063
 282          PI  0.047   0.055   0.063   0.063   0.071   0.071   0.078   0.078   0.078   0.086
 283          PI  0.094   0.102   0.118   0.118   0.125   0.133   0.149   0.157   0.165   0.172
 284          PI  0.118   0.118   0.157   0.157   0.149   0.149   0.133   0.141   0.196   0.204
 285          PI  0.220   0.227   0.267   0.267   0.180   0.180   0.212   0.204   0.204   0.196
 286          PI  0.188   0.180   0.149   0.149   0.031   0.031   0.024   0.024   0.039   0.039
 287          PI  0.039   0.031   0.031   0.031   0.024   0.016   0.024   0.031   0.024   0.016
 288          PI  0.024   0.024   0.024   0.016   0.024   0.016   0.024   0.016   0.024   0.016
 289          PI  0.016   0.016   0.016   0.016   0.016   0.016
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290          LS           77.2
291          KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
292          UI   1631.   3501.   8638.   3253.   2017.   1416.    995.    747.    534.    341.
293          UI    270.     62.     62.     62.     62.     62.     62.     62.     40.

294          KK  19
295          KM
296          KO                                      22
297          RD    8818    .006    .035            TRAP      50       2
1                                        HEC-1 INPUT                                        PAGE  7

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

298          KK  Node32
299          KM
300          KO                                      22
301          BA    8.74
302          KM   SANTA MARGARITA STORMS
303          PB    7.33
304          IN      15
305          PI   0.015   0.022   0.022   0.029   0.022   0.022   0.022   0.029   0.029   0.029
306          PI   0.037   0.037   0.037   0.037   0.037   0.044   0.044   0.051   0.051   0.059
307          PI   0.044   0.051   0.059   0.059   0.066   0.066   0.073   0.073   0.073   0.081
308          PI   0.088   0.095   0.110   0.110   0.117   0.125   0.139   0.147   0.154   0.161
309          PI   0.110   0.110   0.147   0.147   0.139   0.139   0.125   0.132   0.183   0.191
310          PI   0.205   0.213   0.249   0.249   0.169   0.169   0.198   0.191   0.191   0.183
311          PI   0.176   0.169   0.139   0.139   0.029   0.029   0.022   0.022   0.037   0.037
312          PI   0.037   0.029   0.029   0.029   0.022   0.015   0.022   0.029   0.022   0.015
313          PI   0.022   0.022   0.022   0.015   0.022   0.015   0.022   0.015   0.022   0.015
314          PI   0.015   0.015   0.015   0.015   0.015   0.015
315          LS           76.7
316          KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
317          UI    361.    604.    887.   1636.   2757.   1122.    729.    607.    451.    384.
318          UI    324.    256.    224.    186.    151.    132.     84.     79.     77.     17.
319          UI   16.8    16.8    16.8    16.8    16.8    16.8    16.8    16.8    16.8    16.8
320          UI   16.8    16.8     6.4

321          KK  Node64
322          KM
323          KO                                      22
324          HC       2

325          KK  18
326          KM
327          KO                                      22
328          RD   31786   .0029    .035            TRAP      50       2

329          KK  Node5
330          KM
331          KO                                      22
332          BA   30.47
333          KM   SANTA MARGARITA STORMS
334          PB    5.88
335          IN      15
336          PI   0.012   0.018   0.018   0.024   0.018   0.018   0.018   0.024   0.024   0.024
337          PI   0.029   0.029   0.029   0.029   0.029   0.035   0.035   0.041   0.041   0.047
338          PI   0.035   0.041   0.047   0.047   0.053   0.053   0.059   0.059   0.059   0.065
339          PI   0.071   0.076   0.088   0.088   0.094   0.100   0.112   0.118   0.123   0.129
340          PI   0.088   0.088   0.118   0.118   0.112   0.112   0.100   0.106   0.147   0.153
341          PI   0.165   0.171   0.200   0.200   0.135   0.135   0.159   0.153   0.153   0.147
342          PI   0.141   0.135   0.112   0.112   0.024   0.024   0.018   0.018   0.029   0.029
343          PI   0.029   0.024   0.024   0.024   0.018   0.012   0.018   0.024   0.018   0.012
344          PI   0.018   0.018   0.018   0.012   0.018   0.012   0.018   0.012   0.018   0.012
345          PI   0.012   0.012   0.012   0.012   0.012   0.012
346          LS           79.3
347          KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
348          UI    761.   1076.   1558.   1803.   2776.   4638.   7461.   3337.   2379.   1742.
1                                        HEC-1 INPUT                                        PAGE  8

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

349          UI   1621.   1285.   1057.    991.    853.    771.    667.    570.    521.    477.
350          UI    423.    357.    308.    306.    184.    184.    184.    184.     75.     39.
351          UI   39.3    39.3    39.3    39.3    39.3    39.3    39.3    39.3    39.3    39.3
352          UI   39.3    39.3    39.3    39.3    39.3    39.3    39.3    39.3     9.0

353          KK  Node76
354          KM
355          KO                                      22
356          HC       2

357          KK  Node61
358          KM
359          KO                                      22
360          HC       2

361          KK  15
362          KM
363          KO                                      22
364          RD     845   .0018    .035            TRAP      50       2
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 365          KK  Node10
 366          KM
 367          KO                                      22
 368          BA    0.18
 369          KM   SANTA MARGARITA STORMS
 370          PB    4.57
 371          IN      15
 372          PI   0.009   0.014   0.014   0.018   0.014   0.014   0.014   0.018   0.018   0.018
 373          PI   0.023   0.023   0.023   0.023   0.023   0.027   0.027   0.032   0.032   0.037
 374          PI   0.027   0.032   0.037   0.037   0.041   0.041   0.046   0.046   0.046   0.050
 375          PI   0.055   0.059   0.069   0.069   0.073   0.078   0.087   0.091   0.096   0.101
 376          PI   0.069   0.069   0.091   0.091   0.087   0.087   0.078   0.082   0.114   0.119
 377          PI   0.128   0.133   0.155   0.155   0.105   0.105   0.123   0.119   0.119   0.114
 378          PI   0.110   0.105   0.087   0.087   0.018   0.018   0.014   0.014   0.023   0.023
 379          PI   0.023   0.018   0.018   0.018   0.014   0.009   0.014   0.018   0.014   0.009
 380          PI   0.014   0.014   0.014   0.009   0.014   0.009   0.014   0.009   0.014   0.009
 381          PI   0.009   0.009   0.009   0.009   0.009   0.009
 382          LS            77.8
 383          KM   UHG FROM VALLEY S-GRAPH
 384          UI    140.     52.     19.     10.      6.      3.      2.

 385          KK  Node59
 386          KM
 387          KO                                      22
 388          HC       3

 389          KK  11
 390          KM
 391          KO                                      22
 392          RD   11722   .0022    .035            TRAP      50       2
1                                      HEC-1 INPUT                                          PAGE  9

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

 393          KK  Node29
 394          KM
 395          KO                                      22
 396          BA    3.94
 397          KM   SANTA MARGARITA STORMS
 398          PB    5.14
 399          IN      15
 400          PI   0.010   0.015   0.015   0.021   0.015   0.015   0.015   0.021   0.021   0.021
 401          PI   0.026   0.026   0.026   0.026   0.026   0.031   0.031   0.036   0.036   0.041
 402          PI   0.031   0.036   0.041   0.041   0.046   0.046   0.051   0.051   0.051   0.057
 403          PI   0.062   0.067   0.077   0.077   0.082   0.087   0.098   0.103   0.108   0.113
 404          PI   0.077   0.077   0.103   0.103   0.098   0.098   0.087   0.093   0.128   0.134
 405          PI   0.144   0.149   0.175   0.175   0.118   0.118   0.139   0.134   0.134   0.128
 406          PI   0.123   0.118   0.098   0.098   0.021   0.021   0.015   0.015   0.026   0.026
 407          PI   0.026   0.021   0.021   0.021   0.015   0.010   0.015   0.021   0.015   0.010
 408          PI   0.015   0.015   0.015   0.010   0.015   0.010   0.015   0.010   0.015   0.010
 409          PI   0.010   0.010   0.010   0.010   0.010   0.010
 410          LS            84.7
 411          KM   UHG FROM VALLEY S-GRAPH
 412          UI    303.    635.   1011.    906.    514.    321.    237.    182.    143.    116.
 413          UI   94.7    84.3    71.4    64.0    52.4    50.3    41.6    41.6    31.0    27.5
 414          UI   27.5    26.7    13.5    13.5    13.5    13.5    13.5    13.5    13.5     6.1

 415          KK  10
 416          KM
 417          KO                                      22
 418          RD    3168   .0062    .035            TRAP      50       2

 419          KK  Node34
 420          KM
 421          KO                                      22
 422          BA    2.05
 423          KM   SANTA MARGARITA STORMS
 424          PB    5.67
 425          IN      15
 426          PI   0.011   0.017   0.017   0.023   0.017   0.017   0.017   0.023   0.023   0.023
 427          PI   0.028   0.028   0.028   0.028   0.028   0.034   0.034   0.040   0.040   0.045
 428          PI   0.034   0.040   0.045   0.045   0.051   0.051   0.057   0.057   0.057   0.062
 429          PI   0.068   0.074   0.085   0.085   0.091   0.096   0.108   0.113   0.119   0.125
 430          PI   0.085   0.085   0.113   0.113   0.108   0.108   0.096   0.102   0.142   0.147
 431          PI   0.159   0.164   0.193   0.193   0.130   0.130   0.153   0.147   0.147   0.142
 432          PI   0.136   0.130   0.108   0.108   0.023   0.023   0.017   0.017   0.028   0.028
 433          PI   0.028   0.023   0.023   0.023   0.017   0.011   0.017   0.023   0.017   0.011
 434          PI   0.017   0.017   0.017   0.011   0.017   0.011   0.017   0.011   0.017   0.011
 435          PI   0.011   0.011   0.011   0.011   0.011   0.011
 436          LS            84.3
 437          KM   UHG FROM VALLEY S-GRAPH
 438          UI    214.    499.    656.    367.    206.    140.    104.     78.     62.     53.
 439          UI   42.4    36.0    32.6    26.6    25.3    17.6    17.6    16.4     8.7     8.7
 440          UI    8.7     8.7     8.7     8.4
1                                      HEC-1 INPUT                                          PAGE 10

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

 441          KK  Node53
 442          KM
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443          KO                                        22
444          HC       3
445          KK  9
446          KM
447          KO                                        22
448          RD   10085    .0029     .035              TRAP      50        2
449          KK  Node13
450          KM
451          KO                                        22
452          BA    6.71
453          KM   SANTA MARGARITA STORMS
454          PB    5.78
455          IN      15
456          PI   0.012   0.017   0.017   0.023   0.017   0.017   0.017   0.023   0.023   0.023
457          PI   0.029   0.029   0.029   0.029   0.029   0.035   0.035   0.040   0.040   0.046
458          PI   0.035   0.040   0.046   0.046   0.052   0.052   0.058   0.058   0.058   0.064
459          PI   0.069   0.075   0.087   0.087   0.092   0.098   0.110   0.116   0.121   0.127
460          PI   0.087   0.087   0.116   0.116   0.110   0.110   0.098   0.104   0.145   0.150
461          PI   0.162   0.168   0.197   0.197   0.133   0.133   0.156   0.150   0.150   0.145
462          PI   0.139   0.133   0.110   0.110   0.023   0.023   0.017   0.017   0.029   0.029
463          PI   0.029   0.023   0.023   0.023   0.017   0.012   0.017   0.023   0.017   0.012
464          PI   0.017   0.017   0.017   0.012   0.017   0.012   0.017   0.012   0.017   0.012
465          PI   0.012   0.012   0.012   0.012   0.012   0.012
466          LS            82.6
467          KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
468          UI    427.    801.   1851.   2314.    813.    610.    445.    350.    255.    211.
469          UI    157.    114.     84.     56.     18.     18.     18.     18.     18.     18.
470          UI   18.0    18.0    18.0     3.4
471          KK  Node74
472          KM
473          KO                                        22
474          HC       2
475          KK  Node22
476          KM
477          KO                                        22
478          BA   38.15
479          KM   SANTA MARGARITA STORMS
480          PB    8.08
481          IN      15
482          PI   0.016   0.024   0.024   0.032   0.024   0.024   0.024   0.032   0.032   0.032
483          PI   0.040   0.040   0.040   0.040   0.040   0.048   0.048   0.057   0.057   0.065
484          PI   0.048   0.057   0.065   0.065   0.073   0.073   0.081   0.081   0.081   0.089
485          PI   0.097   0.105   0.121   0.121   0.129   0.137   0.154   0.162   0.170   0.178
486          PI   0.121   0.121   0.162   0.162   0.154   0.154   0.137   0.145   0.202   0.210
487          PI   0.226   0.234   0.275   0.275   0.186   0.186   0.218   0.210   0.210   0.202
488          PI   0.194   0.186   0.154   0.154   0.032   0.032   0.024   0.024   0.040   0.040
489          PI   0.040   0.032   0.032   0.032   0.024   0.016   0.024   0.032   0.024   0.016
490          PI   0.024   0.024   0.024   0.016   0.024   0.016   0.024   0.016   0.024   0.016
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
491          PI   0.016   0.016   0.016   0.016   0.016   0.016
492          LS            75.2
493          KM   UHG FROM MOUNTAIN S-GRAPH
494          UI   1440.   1908.   2832.   4066.   5346.   3903.   2933.   2447.   1865.   1414.
495          UI   1251.   1227.   1028.    952.    888.    782.    782.    699.    625.    571.
496          UI    558.    521.    496.    447.    443.    417.    417.    356.    338.    338.
497          UI    287.    278.    278.    268.    245.    245.    245.    237.    219.    219.
498          UI    219.    219.    197.    192.    192.    192.    192.    172.    162.    162.
499          UI    162.    162.    162.    138.    124.    124.    124.    124.    124.    124.
500          UI    124.    101.     90.     90.     90.     90.     90.     90.     90.     90.
501          UI    90.0    90.0    47.3    32.7    32.7    32.7    32.7    32.7    32.7    32.7
502          UI    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7
503          UI    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7    32.7
504          UI    32.7    32.7    10.5
505          KK  Node24
506          KM
507          KO                                        22
508          BA   19.81
509          KM   SANTA MARGARITA STORMS
510          PB    6.68
511          IN      15
512          PI   0.013   0.020   0.020   0.027   0.020   0.020   0.020   0.027   0.027   0.027
513          PI   0.033   0.033   0.033   0.033   0.033   0.040   0.040   0.047   0.047   0.053
514          PI   0.040   0.047   0.053   0.053   0.060   0.060   0.067   0.067   0.067   0.073
515          PI   0.080   0.087   0.100   0.100   0.107   0.114   0.127   0.134   0.140   0.147
516          PI   0.100   0.100   0.134   0.134   0.127   0.127   0.114   0.120   0.167   0.174
517          PI   0.187   0.194   0.227   0.227   0.154   0.154   0.180   0.174   0.174   0.167
518          PI   0.160   0.154   0.127   0.127   0.027   0.027   0.020   0.020   0.033   0.033
519          PI   0.033   0.027   0.027   0.027   0.020   0.013   0.020   0.027   0.020   0.013
520          PI   0.020   0.020   0.020   0.013   0.020   0.013   0.020   0.013   0.020   0.013
521          PI   0.013   0.013   0.013   0.013   0.013   0.013
522          LS            73.9
523          KM   UHG FROM MOUNTAIN S-GRAPH
524          UI   1418.   2549.   4368.   3069.   2046.   1313.   1102.    889.    776.    691.
525          UI    589.    512.    469.    415.    385.    368.    299.    283.    246.    239.
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526  UI    217.   217.   197.   194.   189.   170.   170.   164.   144.   144.
527  UI    144.   121.   110.   110.   110.   109.    80.    80.    80.    80.
528  UI     79.6   79.6   50.2   29.0   29.0   29.0   29.0   29.0   29.0   29.0
529  UI     29.0   29.0   29.0   29.0   29.0   29.0   29.0   29.0   29.0   29.0
530  UI      2.1

531  KK  Node52
532  KM
533  KO                                    22
534  HC       2

535  KK  7
536  KM
537  KO                                    22
538  RD   35482   .0205    .050           TRAP      40       3
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LINE  ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

539  KK  Node18
540  KM
541  KO                                    22
542  BA   22.18
543  KM   SANTA MARGARITA STORMS
544  PB    6.80
545  IN      15
546  PI   0.014   0.020   0.020   0.027   0.020   0.020   0.020   0.027   0.027   0.027
547  PI   0.034   0.034   0.034   0.034   0.034   0.041   0.041   0.048   0.048   0.054
548  PI   0.041   0.048   0.054   0.054   0.061   0.061   0.068   0.068   0.068   0.075
549  PI   0.082   0.088   0.102   0.102   0.109   0.116   0.129   0.136   0.143   0.150
550  PI   0.102   0.102   0.136   0.136   0.129   0.129   0.116   0.122   0.170   0.177
551  PI   0.190   0.197   0.231   0.231   0.156   0.156   0.184   0.177   0.177   0.170
552  PI   0.163   0.156   0.129   0.129   0.027   0.027   0.020   0.020   0.034   0.034
553  PI   0.034   0.027   0.027   0.027   0.020   0.014   0.020   0.027   0.020   0.014
554  PI   0.020   0.020   0.020   0.014   0.020   0.014   0.020   0.014   0.020   0.014
555  PI   0.014   0.014   0.014   0.014   0.014   0.014
556  LS            76.4
557  KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
558  UI    580.    838.   1190.   1487.   2169.   4021.   5185.   2413.   1422.   1261.
559  UI   1160.    846.    789.    682.    613.    538.    434.    405.    375.    321.
560  UI    279.    234.    230.    140.    140.    140.    140.     35.     30.     30.
561  UI     29.9    29.9    29.9    29.9    29.9    29.9    29.9    29.9    29.9    29.9
562  UI     29.9    29.9    29.9    29.9    29.9    29.9     5.3

563  KK  Node20
564  KM
565  KO                                    22
566  BA   18.04
567  KM   SANTA MARGARITA STORMS
568  PB    6.13
569  IN      15
570  PI   0.012   0.018   0.018   0.025   0.018   0.018   0.018   0.025   0.025   0.025
571  PI   0.031   0.031   0.031   0.031   0.031   0.037   0.037   0.043   0.043   0.049
572  PI   0.037   0.043   0.049   0.049   0.055   0.055   0.061   0.061   0.061   0.067
573  PI   0.074   0.080   0.092   0.092   0.098   0.104   0.116   0.123   0.129   0.135
574  PI   0.092   0.092   0.123   0.123   0.116   0.116   0.104   0.110   0.153   0.159
575  PI   0.172   0.178   0.208   0.208   0.141   0.141   0.166   0.159   0.159   0.153
576  PI   0.147   0.141   0.116   0.116   0.025   0.025   0.018   0.018   0.031   0.031
577  PI   0.031   0.025   0.025   0.025   0.018   0.012   0.018   0.025   0.018   0.012
578  PI   0.018   0.018   0.018   0.012   0.018   0.012   0.018   0.012   0.018   0.012
579  PI   0.012   0.012   0.012   0.012   0.012   0.012
580  LS            74.5
581  KM   UHG FROM MOUNTAIN S-GRAPH
582  UI    935.   1521.   2468.   3176.   2164.   1551.   1122.    813.    775.    639.
583  UI    581.    506.    496.    399.    368.    345.    325.    283.    275.    265.
584  UI    229.    214.    194.    176.    176.    158.    156.    156.    141.    139.
585  UI    139.    130.    122.    122.    122.    108.    103.    103.    103.     97.
586  UI   78.6    78.6    78.6    78.6    78.6    71.8    57.1    57.1    57.1    57.1
587  UI   57.1    57.1    57.1    51.1    20.8    20.8    20.8    20.8    20.8    20.8
588  UI   20.8    20.8    20.8    20.8    20.8    20.8    20.8    20.8    20.8    20.8
589  UI   20.8    20.8    20.8    20.8    20.8    20.8     5.0
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LINE  ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

590  KK  Node50
591  KM
592  KO                                    22
593  HC       3

594  KK  6
595  KM
596  KO                                    22
597  RD   41976    .012     .05           TRAP      60       3

598  KK  Node7
599  KM
600  KO                                    22
601  BA    24.6
602  KM   SANTA MARGARITA STORMS
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603  PB    6.74
604  IN      15
605  PI   0.013   0.020   0.020   0.027   0.020   0.020   0.020   0.027   0.027   0.027
606  PI   0.034   0.034   0.034   0.034   0.034   0.040   0.040   0.047   0.047   0.054
607  PI   0.040   0.047   0.054   0.054   0.061   0.061   0.067   0.067   0.067   0.074
608  PI   0.091   0.088   0.101   0.101   0.108   0.115   0.128   0.135   0.142   0.148
609  PI   0.101   0.101   0.135   0.135   0.128   0.128   0.115   0.121   0.169   0.175
610  PI   0.189   0.195   0.229   0.229   0.155   0.155   0.182   0.175   0.175   0.168
611  PI   0.162   0.155   0.128   0.128   0.027   0.027   0.020   0.020   0.034   0.034
612  PI   0.034   0.027   0.027   0.027   0.020   0.013   0.020   0.027   0.020   0.013
613  PI   0.020   0.020   0.020   0.013   0.020   0.013   0.020   0.013   0.020   0.013
614  PI   0.013   0.013   0.013   0.013   0.013   0.013
615  LS          77.6
616  KM   UHG FROM MOUNTAIN S-GRAPH
617  UI    995.   1342.   2049.   3059.   3501.   2428.   1838.   1506.   1112.    860.
618  UI    860.    737.    663.    614.    539.    537.    471.    425.    391.    374.
619  UI    358.    320.    307.    293.    287.    262.    232.    232.    202.    191.
620  UI    191.    182.    169.    169.    169.    157.    151.    151.    151.    143.
621  UI    132.    132.    132.    132.    119.    112.    112.    112.    112.    112.
622  UI    86.3    85.1    85.1    85.1    85.1    85.1    85.1    73.5    61.9    61.9
623  UI    61.9    61.9    61.9    61.9    61.9    61.9    61.9    52.4    22.5    22.5
624  UI    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5
625  UI    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5    22.5
626  UI    22.5    22.5    22.5    22.5    22.5    21.5

627  KK  Node8
628  KM
629  KO                                      22
630  BA   88.44
631  KM   SANTA MARGARITA STORMS
632  PB    6.68
633  IN      15
634  PI   0.013   0.020   0.020   0.027   0.020   0.020   0.020   0.027   0.027   0.027
635  PI   0.033   0.033   0.033   0.033   0.033   0.040   0.040   0.047   0.047   0.053
636  PI   0.040   0.047   0.053   0.053   0.060   0.060   0.067   0.067   0.067   0.073
637  PI   0.080   0.087   0.100   0.100   0.107   0.114   0.127   0.134   0.140   0.147
638  PI   0.100   0.100   0.134   0.134   0.127   0.127   0.114   0.120   0.167   0.174
639  PI   0.187   0.194   0.227   0.227   0.154   0.154   0.180   0.174   0.174   0.167
640  PI   0.160   0.154   0.127   0.127   0.027   0.027   0.020   0.020   0.033   0.033
1                                  HEC-1 INPUT                                  PAGE 14
LINE  ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
641  PI   0.033   0.027   0.027   0.027   0.020   0.013   0.020   0.027   0.020   0.013
642  PI   0.020   0.020   0.020   0.013   0.020   0.013   0.020   0.013   0.020   0.013
643  PI   0.013   0.013   0.013   0.013   0.013   0.013
644  LS          72.4
645  KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
646  UI   1288.   1396.   1757.   2120.   2950.   2588.   3547.   4749.   4958.   7878.
647  UI  12770.  12282.   6233.   5129.   4035.   2951.   2896.   2761.   2683.   2280.
648  UI   1915.   1757.   1757.   1621.   1486.   1384.   1326.   1208.   1105.    966.
649  UI    961.    878.    878.    803.    716.    716.    662.    522.    522.    522.
650  UI    522.    331.    312.    312.    312.    312.    312.    312.    167.     67.
651  UI   66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6
652  UI   66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6
653  UI   66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6    66.6
654  UI   66.6    66.6    43.5

655  KK  Node49
656  KM
657  KO                                      22
658  HC       2

659  KK  8
660  KM
661  KO                                      22
662  RD   46358   .0154     .05            TRAP      60       3

663  KK  Node12
664  KM
665  KO                                      22
666  BA   42.32
667  KM   SANTA MARGARITA STORMS
668  PB    6.61
669  IN      15
670  PI   0.013   0.020   0.020   0.026   0.020   0.020   0.020   0.026   0.026   0.026
671  PI   0.033   0.033   0.033   0.033   0.033   0.040   0.040   0.046   0.046   0.053
672  PI   0.040   0.046   0.053   0.053   0.059   0.059   0.066   0.066   0.066   0.073
673  PI   0.079   0.086   0.099   0.099   0.106   0.112   0.126   0.132   0.139   0.145
674  PI   0.099   0.099   0.132   0.132   0.126   0.126   0.112   0.119   0.165   0.172
675  PI   0.185   0.192   0.225   0.225   0.152   0.152   0.178   0.172   0.172   0.165
676  PI   0.159   0.152   0.126   0.126   0.026   0.026   0.020   0.020   0.033   0.033
677  PI   0.033   0.026   0.026   0.026   0.020   0.013   0.020   0.026   0.020   0.013
678  PI   0.020   0.020   0.020   0.013   0.020   0.013   0.020   0.013   0.020   0.013
679  PI   0.013   0.013   0.013   0.013   0.013   0.013
680  LS          74.4
681  KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
682  UI   1020.   1410.   2080.   2273.   3611.   5291.  10582.   5159.   3691.   2342.
683  UI   2186.   1974.   1479.   1391.   1219.   1104.    973.    816.    744.    696.
684  UI    601.    567.    442.    414.    385.    247.    247.    247.    247.    101.
685  UI   52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8
686  UI   52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8    52.8    49.6
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LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

  687     KK  Node14
  688     KM
  689     KO                                      22
  690     BA   23.58
  691     KM   SANTA MARGARITA STORMS
  692     PB    6.27
  693     IN      15
  694     PI   0.013   0.019   0.019   0.025   0.019   0.019   0.019   0.025   0.025   0.025
  695     PI   0.031   0.031   0.031   0.031   0.031   0.038   0.038   0.044   0.044   0.050
  696     PI   0.038   0.044   0.050   0.050   0.056   0.056   0.063   0.063   0.063   0.069
  697     PI   0.075   0.082   0.094   0.094   0.100   0.107   0.119   0.125   0.132   0.138
  698     PI   0.094   0.094   0.125   0.125   0.119   0.119   0.107   0.113   0.157   0.163
  699     PI   0.176   0.182   0.213   0.213   0.144   0.144   0.169   0.163   0.163   0.157
  700     PI   0.150   0.144   0.119   0.119   0.025   0.025   0.019   0.019   0.031   0.031
  701     PI   0.031   0.025   0.025   0.025   0.019   0.013   0.019   0.025   0.019   0.013
  702     PI   0.019   0.019   0.019   0.013   0.019   0.013   0.019   0.013   0.019   0.013
  703     PI   0.013   0.013   0.013   0.013   0.013   0.013
  704     LS            69.2
  705     KM   UHG FROM MOUNTAIN S-GRAPH
  706     UI   1391.   2325.   3933.   4193.   2586.   1937.   1279.   1139.    941.    839.
  707     UI    727.    692.    566.    518.    479.    433.    404.    380.    343.    308.
  708     UI    278.    253.    249.    223.    223.    214.    200.    200.    191.    175.
  709     UI    175.    175.    151.    148.    148.    148.    121.    113.    113.    113.
  710     UI    113.    101.     82.     82.     82.     82.     82.     82.     82.     33.
  711     UI   29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8
  712     UI   29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8    29.8    13.8

  713     KK  Node15
  714     KM
  715     KO                                      22
  716     BA    1.0
  717     KM   SANTA MARGARITA STORMS
  718     PB    5.18
  719     IN      15
  720     PI   0.010   0.016   0.016   0.021   0.016   0.016   0.016   0.021   0.021   0.021
  721     PI   0.026   0.026   0.026   0.026   0.026   0.031   0.031   0.036   0.036   0.041
  722     PI   0.031   0.036   0.041   0.041   0.047   0.047   0.052   0.052   0.052   0.057
  723     PI   0.062   0.067   0.078   0.078   0.083   0.088   0.098   0.104   0.109   0.114
  724     PI   0.078   0.078   0.104   0.104   0.098   0.098   0.088   0.093   0.130   0.135
  725     PI   0.145   0.150   0.176   0.176   0.119   0.119   0.140   0.135   0.135   0.130
  726     PI   0.124   0.119   0.098   0.098   0.021   0.021   0.016   0.016   0.026   0.026
  727     PI   0.026   0.021   0.021   0.021   0.016   0.010   0.016   0.021   0.016   0.010
  728     PI   0.016   0.016   0.016   0.010   0.016   0.010   0.016   0.010   0.016   0.010
  729     PI   0.010   0.010   0.010   0.010   0.010   0.010
  730     LS            80.4
  731     KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
  732     UI    246.    640.    195.    102.     57.     26.      6.      6.      6.      6.

  733     KK  Node17
  734     KM
  735     KO                                      22
  736     BA    38.5
  737     KM   SANTA MARGARITA STORMS
  738     PB    6.93
```



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

  739     IN      15
  740     PI   0.014   0.021   0.021   0.028   0.021   0.021   0.021   0.028   0.028   0.028
  741     PI   0.035   0.035   0.035   0.035   0.035   0.042   0.042   0.049   0.049   0.055
  742     PI   0.042   0.049   0.055   0.055   0.062   0.062   0.069   0.069   0.069   0.076
  743     PI   0.083   0.090   0.104   0.104   0.111   0.118   0.132   0.139   0.146   0.152
  744     PI   0.104   0.104   0.139   0.139   0.132   0.132   0.118   0.125   0.173   0.180
  745     PI   0.194   0.201   0.236   0.236   0.159   0.159   0.187   0.180   0.180   0.173
  746     PI   0.166   0.159   0.132   0.132   0.028   0.028   0.021   0.021   0.035   0.035
  747     PI   0.035   0.028   0.028   0.028   0.021   0.014   0.021   0.028   0.021   0.014
  748     PI   0.021   0.021   0.021   0.014   0.021   0.014   0.021   0.014   0.021   0.014
  749     PI   0.014   0.014   0.014   0.014   0.014   0.014
  750     LS            71.7
  751     KM   UHG FROM MOUNTAIN S-GRAPH
  752     UI   1474.   1961.   2928.   4314.   5339.   3911.   2943.   2458.   1847.   1406.
  753     UI   1279.   1221.   1038.    961.    886.    799.    799.    678.    628.    581.
  754     UI    557.    533.    485.    457.    443.    426.    416.    346.    346.    330.
  755     UI    284.    284.    284.    259.    251.    251.    251.    230.    224.    224.
  756     UI    224.    214.    197.    197.    197.    197.    187.    166.    166.    166.
  757     UI    166.    166.    153.    127.    127.    127.    127.    127.    127.    127.
  758     UI    110.     92.     92.     92.     92.     92.     92.     92.     92.     92.
  759     UI    92.0    51.3    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5
  760     UI    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5
  761     UI    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5
  762     UI    32.7

  763     KK  Node45
  764     KM
  765     KO                                      22
  766     HC       6
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 767          KK  Vail
 768          KM
 769          KO                                        22
 770          RS       1    STOR   28985
 771          SV       0   51000   52100   53200   54300   55400   56500   62571   65000
 772          SQ       0       1    1000    3500    7000   11000   16000   50000   67500

 773          KK  5
 774          KM
 775          KO                                        22
 776          RD   60984   .0066     .04            TRAP      380       2

 777          KK  Node28
 778          KM
 779          KO                                        22
 780          BA   29.36
 781          KM   SANTA MARGARITA STORMS
 782          PB    4.85
 783          IN      15
 784          PI   0.010   0.015   0.015   0.019   0.015   0.015   0.015   0.019   0.019   0.019
 785          PI   0.024   0.024   0.024   0.024   0.024   0.029   0.029   0.034   0.034   0.039
 786          PI   0.029   0.034   0.039   0.039   0.044   0.044   0.048   0.048   0.048   0.053
 787          PI   0.058   0.063   0.073   0.073   0.078   0.082   0.092   0.097   0.102   0.107
 788          PI   0.073   0.073   0.097   0.097   0.092   0.092   0.082   0.087   0.121   0.126
 789          PI   0.136   0.141   0.165   0.165   0.112   0.112   0.131   0.126   0.126   0.121
1                                              HEC-1 INPUT                                        PAGE 17
     LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 790          PI   0.116   0.112   0.092   0.092   0.019   0.019   0.015   0.015   0.024   0.024
 791          PI   0.024   0.019   0.019   0.019   0.015   0.010   0.015   0.019   0.015   0.010
 792          PI   0.015   0.015   0.015   0.010   0.015   0.010   0.015   0.010   0.015   0.010
 793          PI   0.010   0.010   0.010   0.010   0.010   0.010
 794          LS            73.0
 795          KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
 796          UI    569.    708.    896.   1244.   1333.   1996.   2569.   4002.   5982.   2612.
 797          UI   2173.   1323.   1269.   1220.   1045.    831.    776.    735.    648.    610.
 798          UI    538.    477.    427.    398.    388.    331.    316.    282.    231.    231.
 799          UI    219.    138.    138.    138.    138.    138.     71.     29.     29.     29.
 800          UI   29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
 801          UI   29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
 802          UI   29.4    29.4     3.3

 803          KK  Node30
 804          KM
 805          KO                                        22
 806          BA   16.19
 807          KM   SANTA MARGARITA STORMS
 808          PB    7.04
 809          IN      15
 810          PI   0.014   0.021   0.021   0.028   0.021   0.021   0.021   0.028   0.028   0.028
 811          PI   0.035   0.035   0.035   0.035   0.035   0.042   0.042   0.049   0.049   0.056
 812          PI   0.042   0.049   0.056   0.056   0.063   0.063   0.070   0.070   0.070   0.077
 813          PI   0.084   0.092   0.106   0.106   0.113   0.120   0.134   0.141   0.148   0.155
 814          PI   0.106   0.106   0.141   0.141   0.134   0.134   0.120   0.127   0.176   0.183
 815          PI   0.197   0.204   0.239   0.239   0.162   0.162   0.190   0.183   0.183   0.176
 816          PI   0.169   0.162   0.134   0.134   0.028   0.028   0.021   0.021   0.035   0.035
 817          PI   0.035   0.028   0.028   0.028   0.021   0.014   0.021   0.028   0.021   0.014
 818          PI   0.021   0.021   0.021   0.014   0.021   0.014   0.021   0.014   0.021   0.014
 819          PI   0.014   0.014   0.014   0.014   0.014   0.014
 820          LS            69.6
 821          KM   UHG FROM MOUNTAIN S-GRAPH
 822          UI    681.    926.   1473.   2175.   2292.   1564.   1189.    938.    682.    586.
 823          UI    562.    474.    436.    394.    367.    353.    293.    273.    262.    244.
 824          UI    227.    209.    203.    195.    182.    159.    159.    138.    130.    130.
 825          UI    122.    115.    115.    115.    104.    103.    103.    103.     92.     90.
 826          UI   90.2    90.2    87.5    76.2    76.2    76.2    76.2    76.2    63.3    58.1
 827          UI   58.1    58.1    58.1    58.1    58.1    49.9    42.2    42.2    42.2    42.2
 828          UI   42.2    42.2    42.2    42.2    42.2    25.6    15.4    15.4    15.4    15.4
 829          UI   15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4
 830          UI   15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4    15.4
 831          UI   15.4    15.4     9.1

 832          KK  Node43
 833          KM
 834          KO                                        22
 835          HC       3

 836          KK  4
 837          KM
 838          KO                                        22
 839          RD    4435   .0044    .035            TRAP      115      2.5
1                                              HEC-1 INPUT                                        PAGE 18
     LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 840          KK  Node11
 841          KM
 842          KO                                        22
 843          BA    1.88
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844          KM   SANTA MARGARITA STORMS
845          PB    7.37
846          IN      15
847          PI   0.015   0.022   0.022   0.029   0.022   0.022   0.022   0.029   0.029   0.029
848          PI   0.037   0.037   0.037   0.037   0.037   0.044   0.044   0.052   0.052   0.059
849          PI   0.044   0.052   0.059   0.059   0.066   0.066   0.074   0.074   0.074   0.081
850          PI   0.088   0.096   0.111   0.111   0.118   0.125   0.140   0.147   0.155   0.162
851          PI   0.111   0.111   0.147   0.147   0.140   0.140   0.125   0.133   0.184   0.192
852          PI   0.206   0.214   0.251   0.251   0.170   0.170   0.199   0.192   0.192   0.184
853          PI   0.177   0.170   0.140   0.140   0.029   0.029   0.022   0.022   0.037   0.037
854          PI   0.037   0.029   0.029   0.029   0.022   0.015   0.022   0.029   0.022   0.015
855          PI   0.022   0.022   0.022   0.015   0.022   0.015   0.022   0.015   0.022   0.015
856          PI   0.015   0.015   0.015   0.015   0.015   0.015
857          LS           80.8
858          KM   UHG FROM MOUNTAIN S-GRAPH
859          UI    922.    558.    258.    161.    115.     82.     66.     57.     48.     38.
860          UI   31.9    25.5    18.5     9.3     9.3     9.3     9.3     7.4

861          KK  Node72
862          KM
863          KO                                    22
864          HC       2

865          KK  Node41
866          KM
867          KO                                    22
868          HC       2

869          KK  3
870          KM
871          KO                                    22
872          RD   50424   .0119     .03            TRAP     100     2.0

873          KK  Node16
874          KM
875          KO                                    22
876          BA   32.84
877          KM   SANTA MARGARITA STORMS
878          PB    6.23
879          IN      15
880          PI   0.012   0.019   0.019   0.025   0.019   0.019   0.019   0.025   0.025   0.025
881          PI   0.031   0.031   0.031   0.031   0.031   0.037   0.037   0.044   0.044   0.050
882          PI   0.037   0.044   0.050   0.050   0.056   0.056   0.062   0.062   0.062   0.069
883          PI   0.075   0.081   0.093   0.093   0.100   0.106   0.118   0.125   0.131   0.137
884          PI   0.093   0.093   0.125   0.125   0.118   0.118   0.106   0.112   0.156   0.162
885          PI   0.174   0.181   0.212   0.212   0.143   0.143   0.168   0.162   0.162   0.156
886          PI   0.150   0.143   0.118   0.118   0.025   0.025   0.019   0.019   0.031   0.031
887          PI   0.031   0.025   0.025   0.025   0.019   0.012   0.019   0.025   0.019   0.012
888          PI   0.019   0.019   0.019   0.012   0.019   0.012   0.019   0.012   0.019   0.012
889          PI   0.012   0.012   0.012   0.012   0.012   0.012
1                                    HEC-1 INPUT                                          PAGE 19

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

890          LS           78.3
891          KM   UHG FROM MOUNTAIN S-GRAPH
892          UI   1357.   1838.   2858.   4217.   4714.   3204.   2431.   1954.   1431.   1170.
893          UI   1157.    960.    884.    810.    731.    731.    596.    560.    532.    493.
894          UI    477.    418.    415.    390.    390.    320.    316.    301.    260.    260.
895          UI    260.    229.    229.    229.    222.    205.    205.    205.    201.    180.
896          UI    180.    180.    180.    166.    152.    152.    152.    152.    152.    119.
897          UI    116.    116.    116.    116.    116.    116.     97.     84.     84.     84.
898          UI    84.2    84.2    84.2    84.2    84.2    84.2    55.9    30.6    30.6    30.6
899          UI    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6
900          UI    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6    30.6
901          UI    30.6    30.6    30.6    30.6     4.0

902          KK  Node21
903          KM
904          KO                                    22
905          BA   21.59
906          KM   SANTA MARGARITA STORMS
907          PB    4.76
908          IN      15
909          PI   0.010   0.014   0.014   0.019   0.014   0.014   0.014   0.019   0.019   0.019
910          PI   0.024   0.024   0.024   0.024   0.024   0.029   0.029   0.033   0.033   0.038
911          PI   0.029   0.033   0.038   0.038   0.043   0.043   0.048   0.048   0.048   0.052
912          PI   0.057   0.062   0.071   0.071   0.076   0.081   0.090   0.095   0.100   0.105
913          PI   0.071   0.071   0.095   0.095   0.090   0.090   0.081   0.086   0.119   0.124
914          PI   0.133   0.138   0.162   0.162   0.109   0.109   0.129   0.124   0.124   0.119
915          PI   0.114   0.109   0.090   0.090   0.019   0.019   0.014   0.014   0.024   0.024
916          PI   0.024   0.019   0.019   0.019   0.014   0.010   0.014   0.019   0.014   0.010
917          PI   0.014   0.014   0.014   0.010   0.014   0.010   0.014   0.010   0.014   0.010
918          PI   0.010   0.010   0.010   0.010   0.010   0.010
919          LS           83.9
920          KM   UHG FROM MOUNTAIN S-GRAPH
921          UI    638.    785.   1013.   1415.   1947.   2552.   1889.   1501.   1235.   1102.
922          UI    867.    706.    566.    566.    553.    472.    437.    414.    389.    354.
923          UI    354.    343.    283.    278.    257.    257.    236.    236.    214.    202.
924          UI    202.    190.    189.    189.    155.    153.    153.    144.    126.    126.
925          UI    126.    126.    113.    111.    111.    111.    111.    101.     99.     99.
926          UI   99.3    99.3    96.1    87.1    87.1    87.1    87.1    87.1    87.1    75.3
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927   UI    73.5   73.5   73.5   73.5   73.5   73.5   68.5   56.1   56.1   56.1
928   UI    56.1   56.1   56.1   56.1   56.1   56.1   50.7   40.7   40.7   40.7
929   UI    40.7   40.7   40.7   40.7   40.7   40.7   40.7   40.7   40.7   40.7
930   UI    23.2   14.8   14.8   14.8   14.8   14.8   14.8   14.8   14.8   14.8
931   UI    14.8   14.8   14.8   14.8   14.8   14.8   14.8   14.8   14.8   14.8
932   UI    14.8   14.8   14.8   14.8   14.8   14.8   14.8   14.8   14.8   14.8
933   UI    14.8   14.8   14.8   14.8   14.8   14.8   14.8   13.5

934   KK  Node39
935   KM
936   KO                                          22
937   HC       3
1                                  HEC-1 INPUT                                  PAGE 20
LINE  ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

938   KK  2
939   KM
940   KO                                          22
941   RD   39283   .0061     .04            TRAP     100      2.5

942   KK  Node19
943   KM
944   KO                                          22
945   BA   47.79
946   KM   SANTA MARGARITA STORMS
947   PB    5.23
948   IN      15
949   PI   0.010   0.016   0.016   0.021   0.016   0.016   0.016   0.021   0.021   0.021
950   PI   0.026   0.026   0.026   0.026   0.026   0.031   0.031   0.037   0.037   0.042
951   PI   0.031   0.037   0.042   0.042   0.047   0.047   0.052   0.052   0.052   0.058
952   PI   0.063   0.068   0.078   0.078   0.084   0.089   0.099   0.105   0.110   0.115
953   PI   0.078   0.078   0.105   0.105   0.099   0.099   0.089   0.094   0.131   0.136
954   PI   0.146   0.152   0.178   0.178   0.120   0.120   0.141   0.136   0.136   0.131
955   PI   0.126   0.120   0.099   0.099   0.021   0.021   0.016   0.016   0.026   0.026
956   PI   0.026   0.021   0.021   0.021   0.016   0.010   0.016   0.021   0.016   0.010
957   PI   0.016   0.016   0.016   0.010   0.016   0.010   0.016   0.010   0.016   0.010
958   PI   0.010   0.010   0.010   0.010   0.010   0.010
959   LS           75.0
960   KM   UHG FROM MOUNTAIN S-GRAPH
961   UI   1248.   1464.   1870.   2630.   3267.   4151.   4973.   3740.   2826.   2435.
962   UI   2240.   1776.   1486.   1205.   1122.   1122.   1046.    929.    863.    822.
963   UI    789.    701.    701.    701.    617.    561.    540.    510.    510.    468.
964   UI    467.    444.    401.    401.    393.    374.    374.    374.    305.    303.
965   UI    303.    303.    254.    249.    249.    249.    249.    221.    220.    220.
966   UI    220.    220.    212.    197.    197.    197.    197.    197.    195.    173.
967   UI    173.    173.    173.    173.    173.    173.    147.    146.    146.    146.
968   UI    146.    146.    146.    146.    129.    111.    111.    111.    111.    111.
969   UI    111.    111.    111.    111.    111.     99.     81.     81.     81.     81.
970   UI   80.7    80.7    80.7    80.7    80.7    80.7    80.7    80.7    80.7    80.7
971   UI   74.9    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
972   UI   29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
973   UI   29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
974   UI   29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4    29.4
975   UI   29.4    29.4    25.5

976   KK  Node23
977   KM
978   KO                                          22
979   BA   10.58
980   KM   SANTA MARGARITA STORMS
981   PB    4.38
982   IN      15
983   PI   0.009   0.013   0.013   0.018   0.013   0.013   0.013   0.018   0.018   0.018
984   PI   0.022   0.022   0.022   0.022   0.022   0.026   0.026   0.031   0.031   0.035
985   PI   0.026   0.031   0.035   0.035   0.039   0.039   0.044   0.044   0.044   0.048
986   PI   0.053   0.057   0.066   0.066   0.070   0.074   0.083   0.088   0.092   0.096
987   PI   0.066   0.066   0.088   0.088   0.083   0.083   0.074   0.079   0.110   0.114
988   PI   0.123   0.127   0.149   0.149   0.101   0.101   0.118   0.114   0.114   0.110
989   PI   0.105   0.101   0.083   0.083   0.018   0.018   0.013   0.013   0.022   0.022
1                                  HEC-1 INPUT                                  PAGE 21
LINE  ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

990   PI   0.022   0.018   0.018   0.018   0.013   0.009   0.013   0.018   0.013   0.009
991   PI   0.013   0.013   0.013   0.009   0.013   0.009   0.013   0.009   0.013   0.009
992   PI   0.009   0.009   0.009   0.009   0.009   0.009
993   LS           69.2
994   KM   UHG FROM MOUNTAIN S-GRAPH
995   UI    453.    619.   1007.   1488.   1475.   1001.    780.    590.    436.    390.
996   UI    362.    310.    285.    254.    244.    221.    194.    177.    170.    162.
997   UI    143.    139.    131.    130.    111.    105.    102.     87.     87.     86.
998   UI   76.5    76.5    76.5    72.7    68.4    68.4    68.4    64.4    60.0    60.0
999   UI   60.0    60.0    51.3    50.6    50.6    50.6    50.6    44.2    38.6    38.6
1000  UI   38.6    38.6    38.6    38.6    33.7    28.1    28.1    28.1    28.1    28.1
1001  UI   28.1    28.1    28.1    28.1    15.0    10.2    10.2    10.2    10.2    10.2
1002  UI   10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2
1003  UI   10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2    10.2
1004  UI   10.2     0.0

1005  KK  Node36
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          1006          KM
          1007          KO                                        22
          1008          HC       3

          1009          KK  1
          1010          KM
          1011          KO                                        22
          1012          RD   69010   0.002     .04              TRAP      150        5

          1013          KK  Node25
          1014          KM
          1015          KO                                        22
          1016          BA   43.88
          1017          KM   SANTA MARGARITA STORMS
          1018          PB    4.33
          1019          IN      15
          1020          PI   0.009   0.013   0.013   0.017   0.013   0.013   0.013   0.017   0.017   0.017
          1021          PI   0.022   0.022   0.022   0.022   0.022   0.026   0.026   0.030   0.030   0.035
          1022          PI   0.026   0.030   0.035   0.035   0.039   0.039   0.043   0.043   0.043   0.048
          1023          PI   0.052   0.056   0.065   0.065   0.069   0.074   0.082   0.087   0.091   0.095
          1024          PI   0.065   0.065   0.087   0.087   0.082   0.082   0.074   0.078   0.108   0.113
          1025          PI   0.121   0.126   0.147   0.147   0.100   0.100   0.117   0.113   0.113   0.108
          1026          PI   0.104   0.100   0.082   0.082   0.017   0.017   0.013   0.013   0.022   0.022
          1027          PI   0.022   0.017   0.017   0.017   0.013   0.009   0.013   0.017   0.013   0.009
          1028          PI   0.013   0.013   0.013   0.009   0.013   0.009   0.013   0.009   0.013   0.009
          1029          PI   0.009   0.009   0.009   0.009   0.009   0.009
          1030          LS            74.7
          1031          KM   UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH
          1032          UI    467.    467.    565.    637.    750.    912.   1058.    900.   1194.   1508.
          1033          UI   1751.   1751.   2549.   3194.   4742.   5300.   2521.   2110.   1806.   1767.
          1034          UI   1081.   1113.   1051.   1001.   1001.    962.    873.    701.    675.    637.
          1035          UI    637.    637.    554.    539.    510.    500.    470.    438.    438.    360.
          1036          UI    350.    350.    329.    318.    318.    312.    259.    259.    259.    259.
          1037          UI    207.    189.    189.    189.    189.    189.    131.    113.    113.    113.
          1038          UI    113.    113.    113.    113.    113.    113.     47.     24.     24.     24.
          1039          UI   24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2
          1040          UI   24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2
          1041          UI   24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2
1                                                  HEC-1 INPUT                                        PAGE 22
          LINE          ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

          1042          UI   24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2    24.2
          1043          UI   24.2    24.2    24.2     2.8

          1044          KK  Node35
          1045          KM
          1046          KO                                        22
 *** WARNING *** ZZ-CARD MISSING
          1047          HC       2
          1048          ZZ
1*****************************************
 *                                       *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
 *            SEPTEMBER 1990             *
 *             VERSION 4.0               *
 *                                       *
 *  RUN DATE  12/17/1997  TIME  14:17:50 *
 *                                       *
 *****************************************

 *****************************************
 *                                       *
 *    U.S. ARMY CORPS OF ENGINEERS       *
 *    HYDROLOGIC ENGINEERING CENTER      *
 *          609 SECOND STREET            *
 *       DAVIS, CALIFORNIA 95616         *
 *           (916) 756-1104              *
 *                                       *
 *****************************************

                        Santa Margarita Watershed

   3 IO          OUTPUT CONTROL VARIABLES
                       IPRNT          0  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL         0.  HYDROGRAPH PLOT SCALE

     IT          HYDROGRAPH TIME DATA
                        NMIN         30  MINUTES IN COMPUTATION INTERVAL
                       IDATE      1    0  STARTING DATE
                       ITIME        0000  STARTING TIME
                          NQ         120  NUMBER OF HYDROGRAPH ORDINATES
                      NDDATE      3    0  ENDING DATE
                      NDTIME        1130  ENDING TIME
                       ICENT          19  CENTURY MARK

                    COMPUTATION INTERVAL      .50 HOURS
                         TOTAL TIME BASE    59.50 HOURS

          ENGLISH UNITS
               DRAINAGE AREA         SQUARE MILES
               PRECIPITATION DEPTH   INCHES
               LENGTH, ELEVATION     FEET
               FLOW                  CUBIC FEET PER SECOND
               STORAGE VOLUME        ACRE-FEET
               SURFACE AREA          ACRES
               TEMPERATURE           DEGREES FAHRENHEIT
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

              **************
              *            *
   4 KK       *   Node26   *
              *            *
              **************


   6 KO          OUTPUT CONTROL VARIABLES
                       IPRNT          0  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                        IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                       ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                       ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                      TIMINT       .500  TIME INTERVAL IN HOURS

                            SANTA MARGARITA STORMS

  10 IN          TIME DATA FOR INPUT TIME SERIES
                       JXMIN         15  TIME INTERVAL IN MINUTES
                      JXDATE      1   0  STARTING DATE
                      JXTIME          0  STARTING TIME
                            UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

               SUBBASIN RUNOFF DATA

   7 BA          SUBBASIN CHARACTERISTICS
                       TAREA      50.52  SUBBASIN AREA

                 PRECIPITATION DATA

   9 PB                STORM       6.27  BASIN TOTAL PRECIPITATION

  11 PI            INCREMENTAL PRECIPITATION PATTERN
                       .03        .04        .04        .04        .05        .06        .06        .07        .08        .09
                       .08        .10        .11        .13        .13        .16        .19        .21        .24        .27
                       .19        .25        .24        .22        .32        .36        .43        .29        .33        .32
                       .29        .24        .05        .04        .06        .06        .05        .03        .04        .03
                       .04        .03        .03        .03        .03        .03        .03        .03

  21 LS          SCS LOSS RATE
                       STRTL        .62  INITIAL ABSTRACTION
                      CRVNBR      76.40  CURVE NUMBER
                       RTIMP        .00  PERCENT IMPERVIOUS AREA

  22 UI          INPUT UNITGRAPH,  64 ORDINATES,  VOLUME = 1.00
                    953.0    1172.0    1481.0    2075.0    2104.0    3231.0    3827.0    6496.0   10406.0    4971.0
                   3858.0    2366.0    2228.0    2042.0    1914.0    1510.0    1318.0    1300.0    1128.0    1047.0
                    971.0     893.0     726.0     708.0     650.0     637.0     529.0     529.0     437.0     386.0
                    386.0     344.0     231.0     231.0     231.0     231.0     231.0     119.0      49.0      49.0
                     49.3      49.3      49.3      49.3      49.3      49.3      49.3      49.3      49.3      49.3
                     49.3      49.3      49.3      49.3      49.3      49.3      49.3      49.3      49.3      49.3
                     49.3      49.3      49.3      40.6

                                                                             ***
*********************************************************************************************************************************

                                                            HYDROGRAPH AT STATION    Node26

*********************************************************************************************************************************
                                                                          *
   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.                  *      2     0600   61      .00     .00     .00       1251.
    1     0030    2      .03     .03     .00          0.                  *      2     0630   62      .00     .00     .00       1118.
    1     0100    3      .04     .04     .00          0.                  *      2     0700   63      .00     .00     .00        995.
    1     0130    4      .04     .04     .00          0.                  *      2     0730   64      .00     .00     .00        868.
    1     0200    5      .04     .04     .00          0.                  *      2     0800   65      .00     .00     .00        756.
    1     0230    6      .05     .05     .00          0.                  *      2     0830   66      .00     .00     .00        672.
    1     0300    7      .06     .06     .00          0.                  *      2     0900   67      .00     .00     .00        596.
    1     0330    8      .06     .06     .00          0.                  *      2     0930   68      .00     .00     .00        519.
    1     0400    9      .07     .07     .00          0.                  *      2     1000   69      .00     .00     .00        448.
    1     0430   10      .08     .08     .00          0.                  *      2     1030   70      .00     .00     .00        387.
    1     0500   11      .09     .09     .00          0.                  *      2     1100   71      .00     .00     .00        350.
    1     0530   12      .08     .08     .00          1.                  *      2     1130   72      .00     .00     .00        329.
    1     0600   13      .10     .09     .01          6.                  *      2     1200   73      .00     .00     .00        308.
    1     0630   14      .11     .10     .01         20.                  *      2     1230   74      .00     .00     .00        287.
    1     0700   15      .13     .10     .02         46.                  *      2     1300   75      .00     .00     .00        269.
    1     0730   16      .13     .10     .03         88.                  *      2     1330   76      .00     .00     .00        255.
    1     0800   17      .16     .11     .05        154.                  *      2     1400   77      .00     .00     .00        241.
    1     0830   18      .19     .12     .07        257.                  *      2     1430   78      .00     .00     .00        229.
    1     0900   19      .21     .12     .09        407.                  *      2     1500   79      .00     .00     .00        219.
    1     0930   20      .24     .13     .12        635.                  *      2     1530   80      .00     .00     .00        208.
    1     1000   21      .27     .13     .14        968.                  *      2     1600   81      .00     .00     .00        198.
```

1	1030	22	.19	.08	.11	1341.	*	2	1630	82	.00	.00	.00	190.
1	1100	23	.25	.10	.15	1823.	*	2	1700	83	.00	.00	.00	180.
1	1130	24	.24	.08	.15	2364.	*	2	1730	84	.00	.00	.00	170.
1	1200	25	.22	.07	.15	2984.	*	2	1800	85	.00	.00	.00	159.
1	1230	26	.32	.09	.23	3777.	*	2	1830	86	.00	.00	.00	149.
1	1300	27	.36	.09	.26	4610.	*	2	1900	87	.00	.00	.00	140.
1	1330	28	.43	.10	.33	5596.	*	2	1930	88	.00	.00	.00	132.
1	1400	29	.29	.06	.23	6376.	*	2	2000	89	.00	.00	.00	124.
1	1430	30	.33	.06	.27	6967.	*	2	2030	90	.00	.00	.00	113.
1	1500	31	.32	.06	.26	7936.	*	2	2100	91	.00	.00	.00	99.
1	1530	32	.29	.05	.25	8654.	*	2	2130	92	.00	.00	.00	84.
1	1600	33	.24	.04	.20	9597.	*	2	2200	93	.00	.00	.00	72.
1	1630	34	.05	.01	.04	10642.	*	2	2230	94	.00	.00	.00	59.
1	1700	35	.04	.01	.03	11484.	*	2	2300	95	.00	.00	.00	46.
1	1730	36	.06	.01	.05	11952.	*	2	2330	96	.00	.00	.00	34.
1	1800	37	.06	.01	.05	11512.	*	3	0000	97	.00	.00	.00	26.
1	1830	38	.05	.01	.04	11527.	*	3	0030	98	.00	.00	.00	24.
1	1900	39	.03	.00	.03	11019.	*	3	0100	99	.00	.00	.00	22.
1	1930	40	.04	.01	.04	10317.	*	3	0130	100	.00	.00	.00	19.
1	2000	41	.03	.00	.03	9007.	*	3	0200	101	.00	.00	.00	17.
1	2030	42	.04	.00	.03	7281.	*	3	0230	102	.00	.00	.00	15.
1	2100	43	.03	.00	.03	6466.	*	3	0300	103	.00	.00	.00	13.
1	2130	44	.03	.00	.03	6000.	*	3	0330	104	.00	.00	.00	12.
1	2200	45	.03	.00	.03	5628.	*	3	0400	105	.00	.00	.00	10.
1	2230	46	.03	.00	.03	5209.	*	3	0430	106	.00	.00	.00	9.
1	2300	47	.03	.00	.02	4792.	*	3	0500	107	.00	.00	.00	7.
1	2330	48	.03	.00	.02	4501.	*	3	0530	108	.00	.00	.00	6.
2	0000	49	.03	.00	.02	4200.	*	3	0600	109	.00	.00	.00	4.
2	0030	50	.00	.00	.00	3973.	*	3	0630	110	.00	.00	.00	3.
2	0100	51	.00	.00	.00	3702.	*	3	0700	111	.00	.00	.00	2.
2	0130	52	.00	.00	.00	3462.	*	3	0730	112	.00	.00	.00	1.
2	0200	53	.00	.00	.00	3225.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	2990.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	2723.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	2487.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	2205.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	1837.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	1598.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	1399.	*	3	1130	120	.00	.00	.00	0.
							*							

****

TOTAL RAINFALL = 6.27, TOTAL LOSS = 2.62, TOTAL EXCESS = 3.65

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
11952.	17.50		10064.	4812.	2002.	2002.
		(INCHES)	1.852	3.542	3.653	3.653
		(AC-FT)	4991.	9544.	9842.	9842.

CUMULATIVE AREA = 50.52 SQ MI

*** ***

30 KK

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**************
*            *
*    Skinne  *
*            *
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32 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

33 RS STORAGE ROUTING

NSTPS	1	NUMBER OF SUBREACHES
ITYP	STOR	TYPE OF INITIAL CONDITION
RSVRIC	36609.00	INITIAL CONDITION
X	.00	WORKING R AND D COEFFICIENT

34 SV STORAGE	.0	22284.0	23921.0	25559.0	27331.0	29104.0	30949.0	32866.0	34783.0	43800.0
	44072.0	44616.0	45160.0	45568.0	45840.0	46520.0	47900.0	49300.0	50667.0	52000.0
36 SQ DISCHARGE	0.	0.	0.	0.	0.	1.	1.	1.	1.	1.
	65.	365.	820.	1250.	1495.	2250.	4400.	7125.	10250.	13750.

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HYDROGRAPH AT STATION Skinne

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE
1		0000	1	1.	36609.00	1		2000	41	1.	42705.03	2		1600	81	753.	45079.58
1		0030	2	1.	36608.96	1		2030	42	1.	43041.52	2		1630	82	734.	45056.88
1		0100	3	1.	36608.93	1		2100	43	1.	43325.48	2		1700	83	715.	45034.59
1		0130	4	1.	36608.89	1		2130	44	1.	43583.00	2		1730	84	697.	45012.64
1		0200	5	1.	36608.86	1		2200	45	7.	43823.09	2		1800	85	679.	44991.01
1		0230	6	1.	36608.82	1		2230	46	59.	44045.64	2		1830	86	661.	44969.69
1		0300	7	1.	36608.78	1		2300	47	162.	44247.70	2		1900	87	643.	44948.70
1		0330	8	1.	36608.75	1		2330	48	263.	44430.93	2		1930	88	626.	44928.09
1		0400	9	1.	36608.71	2		0000	49	355.	44597.93	2		2000	89	609.	44907.86
1		0430	10	1.	36608.67	2		0030	50	477.	44749.61	2		2030	90	592.	44887.93
1		0500	11	1.	36608.64	2		0100	51	591.	44886.13	2		2100	91	576.	44868.16
1		0530	12	1.	36608.61	2		0130	52	693.	45007.62	2		2130	92	559.	44848.48
1		0600	13	1.	36608.71	2		0200	53	783.	45115.31	2		2200	93	543.	44828.91
1		0630	14	1.	36609.20	2		0230	54	872.	45209.54	2		2230	94	527.	44809.51
1		0700	15	1.	36610.52	2		0300	55	957.	45289.78	2		2300	95	511.	44790.24
1		0730	16	1.	36613.23	2		0330	56	1027.	45356.43	2		2330	96	495.	44771.12
1		0800	17	1.	36618.18	2		0400	57	1083.	45409.77	3		0000	97	479.	44752.23
1		0830	18	1.	36626.63	2		0430	58	1123.	45447.68	3		0030	98	464.	44733.78
1		0900	19	1.	36640.32	2		0500	59	1149.	45471.71	3		0100	99	449.	44715.87
1		0930	20	1.	36661.81	2		0530	60	1163.	45485.87	3		0130	100	434.	44698.48
1		1000	21	1.	36694.89	2		0600	61	1170.	45492.40	3		0200	101	420.	44681.58
1		1030	22	1.	36742.56	2		0630	62	1171.	45492.96	3		0230	102	406.	44665.17
1		1100	23	1.	36807.90	2		0700	63	1166.	45488.33	3		0300	103	393.	44649.25
1		1130	24	1.	36894.38	2		0730	64	1156.	45478.85	3		0330	104	380.	44633.80
1		1200	25	1.	37004.85	2		0800	65	1141.	45464.93	3		0400	105	367.	44618.81
1		1230	26	1.	37144.50	2		0830	66	1123.	45447.64	3		0430	106	358.	44604.20
1		1300	27	1.	37317.74	2		0900	67	1102.	45427.87	3		0500	107	351.	44589.87
1		1330	28	1.	37528.55	2		0930	68	1079.	45405.82	3		0530	108	343.	44575.82
1		1400	29	1.	37775.87	2		1000	69	1054.	45381.73	3		0600	109	335.	44562.02
1		1430	30	1.	38051.53	2		1030	70	1027.	45355.98	3		0630	110	328.	44548.48
1		1500	31	1.	38359.40	2		1100	71	998.	45329.36	3		0700	111	320.	44535.20
1		1530	32	1.	38702.12	2		1130	72	970.	45302.70	3		0730	112	313.	44522.17
1		1600	33	1.	39079.17	2		1200	73	943.	45276.33	3		0800	113	306.	44509.39
1		1630	34	1.	39497.30	2		1230	74	915.	45250.25	3		0830	114	299.	44496.88
1		1700	35	1.	39954.41	2		1300	75	888.	45224.48	3		0900	115	293.	44484.65
1		1730	36	1.	40438.59	2		1330	76	861.	45199.16	3		0930	116	286.	44472.70
1		1800	37	1.	40923.34	2		1400	77	835.	45174.36	3		1000	117	280.	44461.01
1		1830	38	1.	41399.29	2		1430	78	812.	45150.04	3		1030	118	273.	44449.59
1		1900	39	1.	41865.06	2		1500	79	792.	45126.17	3		1100	119	267.	44438.43
1		1930	40	1.	42305.82	2		1530	80	772.	45102.69	3		1130	120	261.	44427.51

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
1171.	30.50		1134.	839.	412.	412.
		(INCHES)	.209	.618	.751	.751
		(AC-FT)	563.	1665.	2024.	2024.

PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
			6-HR	24-HR	72-HR	59.50-HR
(AC-FT)	(HR)					
45493.	30.50		45458.	45156.	42459.	42459.

CUMULATIVE AREA = 50.52 SQ MI

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38 KK 14

40 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

41 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	33528.	CHANNEL LENGTH
S	.0095	SLOPE
N	.040	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	200.00	BOTTOM WIDTH OR DIAMETER
Z	5.00	SIDE SLOPE

***

COMPUTED MUSKINGUM-CUNGE PARAMETERS

ELEMENT	ALPHA	M	COMPUTATION TIME STEP DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.14	1.61	30.00	4789.71	1172.33	1920.00	.73	5.21
INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL								
MAIN	.14	1.61	30.00		1172.33	1920.00	.73	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2029E+04 EXCESS= .0000E+00 OUTFLOW= .1960E+04 BASIN STORAGE= .8543E+02 PERCENT ERROR= -.8

HYDROGRAPH AT STATION 14

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	1.	2		0600	61	1133.	2		2100	91	634.
1		0030	2	1.	1		1530	32	1.	2		0630	62	1151.	2		2130	92	618.
1		0100	3	1.	1		1600	33	1.	2		0700	63	1169.	2		2200	93	601.
1		0130	4	1.	1		1630	34	1.	2		0730	64	1169.	2		2230	94	585.
1		0200	5	1.	1		1700	35	1.	2		0800	65	1172.	2		2300	95	570.
1		0230	6	1.	1		1730	36	1.	2		0830	66	1163.	2		2330	96	554.
1		0300	7	1.	1		1800	37	1.	2		0900	67	1154.	3		0000	97	538.
1		0330	8	1.	1		1830	38	1.	2		0930	68	1137.	3		0030	98	523.
1		0400	9	1.	1		1900	39	1.	2		1000	69	1119.	3		0100	99	507.
1		0430	10	1.	1		1930	40	1.	2		1030	70	1098.	3		0130	100	492.
1		0500	11	1.	1		2000	41	1.	2		1100	71	1075.	3		0200	101	477.
1		0530	12	1.	1		2030	42	1.	2		1130	72	1050.	3		0230	102	462.
1		0600	13	1.	1		2100	43	1.	2		1200	73	1024.	3		0300	103	448.
1		0630	14	1.	1		2130	44	1.	2		1230	74	996.	3		0330	104	434.
1		0700	15	1.	1		2200	45	1.	2		1300	75	969.	3		0400	105	421.
1		0730	16	1.	1		2230	46	1.	2		1330	76	942.	3		0430	106	408.
1		0800	17	1.	1		2300	47	1.	2		1400	77	916.	3		0500	107	395.
1		0830	18	1.	1		2330	48	1.	2		1430	78	889.	3		0530	108	383.
1		0900	19	1.	2		0000	49	1.	2		1500	79	864.	3		0600	109	371.
1		0930	20	1.	2		0030	50	1.	2		1530	80	839.	3		0630	110	361.
1		1000	21	1.	2		0100	51	1.	2		1600	81	815.	3		0700	111	353.
1		1030	22	1.	2		0130	52	3.	2		1630	82	795.	3		0730	112	346.
1		1100	23	1.	2		0200	53	128.	2		1700	83	776.	3		0800	113	339.
1		1130	24	1.	2		0230	54	597.	2		1730	84	758.	3		0830	114	331.
1		1200	25	1.	2		0300	55	593.	2		1800	85	739.	3		0900	115	324.
1		1230	26	1.	2		0330	56	802.	2		1830	86	721.	3		0930	116	317.
1		1300	27	1.	2		0400	57	845.	2		1900	87	703.	3		1000	117	310.
1		1330	28	1.	2		0430	58	963.	2		1930	88	685.	3		1030	118	303.
1		1400	29	1.	2		0500	59	1036.	2		2000	89	668.	3		1100	119	297.
1		1430	30	1.	2		0530	60	1089.	2		2030	90	651.	3		1130	120	290.

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
		(CFS)				
1172.	32.00		1134.	839.	397.	397.
		(INCHES)	.209	.618	.725	.725
		(AC-FT)	562.	1665.	1954.	1954.

CUMULATIVE AREA = 50.52 SQ MI

42 KK Node2

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44 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

48 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM VALLEY S-GRAPH

SUBBASIN RUNOFF DATA

45 BA SUBBASIN CHARACTERISTICS

TAREA	8.10	SUBBASIN AREA

PRECIPITATION DATA

47 PB

STORM	4.87	BASIN TOTAL PRECIPITATION

49 PI INCREMENTAL PRECIPITATION PATTERN

.02	.03	.03	.03	.04	.05	.05	.05	.06	.07
.06	.08	.09	.10	.10	.12	.15	.16	.19	.21
.15	.19	.19	.17	.25	.28	.33	.22	.26	.25
.23	.19	.04	.03	.05	.04	.04	.03	.03	.03
.03	.03	.03	.03	.03	.02	.02	.02		

59 LS SCS LOSS RATE

STRTL	.58	INITIAL ABSTRACTION
CRVNBR	77.60	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

60 UI INPUT UNITGRAPH, 58 ORDINATES, VOLUME = 1.00

260.0	381.0	555.0	812.0	990.0	1129.0	1059.0	804.0	553.0	459.0
359.0	297.0	260.0	215.0	199.0	169.0	151.0	139.0	119.0	112.0
99.0	96.1	87.3	87.3	71.7	69.0	69.0	57.4	55.0	55.0
54.6	43.7	43.7	43.7	43.7	40.1	28.8	28.8	28.8	28.8
28.8	28.8	28.8	14.3	14.2	14.2	14.2	14.2	14.2	14.2
14.2	14.2	14.2	14.2	14.2	14.2	14.2	10.2		

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HYDROGRAPH AT STATION Node2

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.	2		0600	61	.00	.00	.00	133.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	123.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	114.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	104.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	98.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	91.
1		0300	7	.05	.05	.00	0.	2		0900	67	.00	.00	.00	85.
1		0330	8	.05	.05	.00	0.	2		0930	68	.00	.00	.00	79.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	73.
1		0430	10	.06	.06	.00	0.	2		1030	70	.00	.00	.00	69.
1		0500	11	.07	.07	.00	0.	2		1100	71	.00	.00	.00	64.
1		0530	12	.06	.06	.00	0.	2		1130	72	.00	.00	.00	60.
1		0600	13	.08	.08	.00	0.	2		1200	73	.00	.00	.00	56.
1		0630	14	.09	.08	.00	1.	2		1230	74	.00	.00	.00	52.
1		0700	15	.10	.09	.01	4.	2		1300	75	.00	.00	.00	48.
1		0730	16	.10	.09	.02	9.	2		1330	76	.00	.00	.00	44.
1		0800	17	.12	.10	.03	20.	2		1400	77	.00	.00	.00	42.
1		0830	18	.15	.11	.04	39.	2		1430	78	.00	.00	.00	40.
1		0900	19	.16	.11	.05	68.	2		1500	79	.00	.00	.00	38.
1		0930	20	.19	.12	.07	111.	2		1530	80	.00	.00	.00	36.
1		1000	21	.21	.11	.09	169.	2		1600	81	.00	.00	.00	33.
1		1030	22	.15	.07	.07	233.	2		1630	82	.00	.00	.00	31.
1		1100	23	.19	.09	.10	311.	2		1700	83	.00	.00	.00	29.
1		1130	24	.19	.08	.11	395.	2		1730	84	.00	.00	.00	26.
1		1200	25	.17	.07	.10	477.	2		1800	85	.00	.00	.00	23.
1		1230	26	.25	.09	.16	569.	2		1830	86	.00	.00	.00	19.
1		1300	27	.28	.09	.19	665.	2		1900	87	.00	.00	.00	16.
1		1330	28	.33	.09	.24	778.	2		1930	88	.00	.00	.00	13.
1		1400	29	.22	.06	.17	891.	2		2000	89	.00	.00	.00	10.
1		1430	30	.26	.06	.20	1019.	2		2030	90	.00	.00	.00	8.
1		1500	31	.25	.05	.19	1152.	2		2100	91	.00	.00	.00	6.
1		1530	32	.23	.05	.18	1273.	2		2130	92	.00	.00	.00	5.

1	1600	33	.19	.04	.15	1366.	*	2	2200	93	.00	.00	.00	5.
1	1630	34	.04	.01	.03	1389.	*	2	2230	94	.00	.00	.00	4.
1	1700	35	.03	.01	.02	1370.	*	2	2300	95	.00	.00	.00	4.
1	1730	36	.05	.01	.04	1315.	*	2	2330	96	.00	.00	.00	3.
1	1800	37	.04	.01	.04	1220.	*	3	0000	97	.00	.00	.00	3.
1	1830	38	.04	.01	.03	1089.	*	3	0030	98	.00	.00	.00	2.
1	1900	39	.02	.00	.02	942.	*	3	0100	99	.00	.00	.00	2.
1	1930	40	.03	.01	.03	813.	*	3	0130	100	.00	.00	.00	2.
1	2000	41	.02	.00	.02	716.	*	3	0200	101	.00	.00	.00	2.
1	2030	42	.03	.01	.02	651.	*	3	0230	102	.00	.00	.00	1.
1	2100	43	.02	.00	.02	593.	*	3	0300	103	.00	.00	.00	1.
1	2130	44	.02	.00	.02	544.	*	3	0330	104	.00	.00	.00	1.
1	2200	45	.02	.00	.02	505.	*	3	0400	105	.00	.00	.00	0.
1	2230	46	.02	.00	.02	472.	*	3	0430	106	.00	.00	.00	0.
1	2300	47	.02	.00	.02	444.	*	3	0500	107	.00	.00	.00	0.
1	2330	48	.02	.00	.02	418.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.02	.00	.02	397.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	372.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	348.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	322.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	294.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	265.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	235.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	208.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	186.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	169.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	155.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	143.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 4.87, TOTAL LOSS = 2.30, TOTAL EXCESS = 2.57

	PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
				6-HR	24-HR	72-HR	59.50-HR
+	(CFS)	(HR)					
			(CFS)				
+	1389.	16.50		1152.	536.	225.	225.
			(INCHES)	1.322	2.460	2.565	2.565
			(AC-FT)	571.	1063.	1108.	1108.

CUMULATIVE AREA = 8.10 SQ MI

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          *            *
 67 KK    *    Node6   *
          *            *
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69 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

73 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM VALLEY S-GRAPH

SUBBASIN RUNOFF DATA

70 BA SUBBASIN CHARACTERISTICS

TAREA	27.55	SUBBASIN AREA

PRECIPITATION DATA

72 PB

STORM	5.14	BASIN TOTAL PRECIPITATION

74 PI INCREMENTAL PRECIPITATION PATTERN

.02	.04	.03	.04	.04	.05	.05	.06	.07	.08
.07	.08	.09	.10	.11	.13	.15	.17	.20	.22
.15	.21	.20	.18	.26	.29	.35	.24	.27	.26
.24	.20	.04	.03	.05	.05	.04	.03	.04	.03
.03	.03	.03	.03	.03	.02	.02	.02		

84 LS SCS LOSS RATE

STRTL	.66	INITIAL ABSTRACTION

CRVNBR 75.10 CURVE NUMBER
RTIMP .00 PERCENT IMPERVIOUS AREA

85 UI INPUT UNITGRAPH, 99 ORDINATES, VOLUME = 1.00

491.0	581.0	742.0	929.0	1158.0	1485.0	1727.0	1964.0	2154.0	2235.0
1977.0	2201.0	1682.0	1436.0	1076.0	982.0	896.0	736.0	674.0	589.0
588.0	491.0	452.0	421.0	396.0	389.0	327.0	327.0	286.0	281.0
265.0	236.0	236.0	222.0	196.0	196.0	196.0	180.0	173.0	173.0
173.0	151.0	137.0	137.0	137.0	137.0	125.0	109.0	109.0	109.0
109.0	109.0	109.0	88.0	87.0	87.0	87.0	87.0	87.0	87.0
86.6	65.6	57.2	57.2	57.2	57.2	57.2	57.2	57.2	57.2
57.2	57.2	57.2	48.8	28.2	28.2	28.2	28.2	28.2	28.2
28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2
28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2	26.1

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HYDROGRAPH AT STATION Node6

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.	2		0600	61	.00	.00	.00	722.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	670.
1		0100	3	.04	.04	.00	0.	2		0700	63	.00	.00	.00	625.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	587.
1		0200	5	.04	.04	.00	0.	2		0800	65	.00	.00	.00	553.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	523.
1		0300	7	.05	.05	.00	0.	2		0900	67	.00	.00	.00	496.
1		0330	8	.05	.05	.00	0.	2		0930	68	.00	.00	.00	472.
1		0400	9	.06	.06	.00	0.	2		1000	69	.00	.00	.00	448.
1		0430	10	.07	.07	.00	0.	2		1030	70	.00	.00	.00	426.
1		0500	11	.08	.08	.00	0.	2		1100	71	.00	.00	.00	407.
1		0530	12	.07	.07	.00	0.	2		1130	72	.00	.00	.00	389.
1		0600	13	.08	.08	.00	0.	2		1200	73	.00	.00	.00	371.
1		0630	14	.09	.09	.00	0.	2		1230	74	.00	.00	.00	352.
1		0700	15	.10	.10	.01	3.	2		1300	75	.00	.00	.00	337.
1		0730	16	.11	.10	.01	10.	2		1330	76	.00	.00	.00	325.
1		0800	17	.13	.11	.02	23.	2		1400	77	.00	.00	.00	313.
1		0830	18	.15	.12	.04	46.	2		1430	78	.00	.00	.00	301.
1		0900	19	.17	.12	.05	81.	2		1500	79	.00	.00	.00	288.
1		0930	20	.20	.13	.07	136.	2		1530	80	.00	.00	.00	277.
1		1000	21	.22	.13	.09	213.	2		1600	81	.00	.00	.00	267.
1		1030	22	.15	.08	.07	297.	2		1630	82	.00	.00	.00	258.
1		1100	23	.21	.10	.10	415.	2		1700	83	.00	.00	.00	248.
1		1130	24	.20	.09	.11	555.	2		1730	84	.00	.00	.00	239.
1		1200	25	.18	.08	.10	714.	2		1800	85	.00	.00	.00	230.
1		1230	26	.26	.10	.16	921.	2		1830	86	.00	.00	.00	222.
1		1300	27	.29	.10	.19	1158.	2		1900	87	.00	.00	.00	215.
1		1330	28	.35	.11	.24	1441.	2		1930	88	.00	.00	.00	207.
1		1400	29	.24	.07	.17	1708.	2		2000	89	.00	.00	.00	198.
1		1430	30	.27	.07	.20	2002.	2		2030	90	.00	.00	.00	190.
1		1500	31	.26	.06	.20	2310.	2		2100	91	.00	.00	.00	182.
1		1530	32	.24	.05	.19	2629.	2		2130	92	.00	.00	.00	174.
1		1600	33	.20	.04	.15	2919.	2		2200	93	.00	.00	.00	166.
1		1630	34	.04	.01	.03	3158.	2		2230	94	.00	.00	.00	158.
1		1700	35	.03	.01	.02	3364.	2		2300	95	.00	.00	.00	152.
1		1730	36	.05	.01	.04	3526.	2		2330	96	.00	.00	.00	148.
1		1800	37	.05	.01	.04	3638.	3		0000	97	.00	.00	.00	144.
1		1830	38	.04	.01	.03	3662.	3		0030	98	.00	.00	.00	139.
1		1900	39	.03	.00	.02	3629.	3		0100	99	.00	.00	.00	134.
1		1930	40	.04	.01	.03	3473.	3		0130	100	.00	.00	.00	128.
1		2000	41	.03	.00	.02	3289.	3		0200	101	.00	.00	.00	121.
1		2030	42	.03	.01	.02	3051.	3		0230	102	.00	.00	.00	114.
1		2100	43	.03	.00	.02	2806.	3		0300	103	.00	.00	.00	108.
1		2130	44	.03	.00	.02	2567.	3		0330	104	.00	.00	.00	101.
1		2200	45	.03	.00	.02	2307.	3		0400	105	.00	.00	.00	95.
1		2230	46	.03	.00	.02	2111.	3		0430	106	.00	.00	.00	89.
1		2300	47	.02	.00	.02	1950.	3		0500	107	.00	.00	.00	85.
1		2330	48	.02	.00	.02	1826.	3		0530	108	.00	.00	.00	84.
2		0000	49	.02	.00	.02	1706.	3		0600	109	.00	.00	.00	83.
2		0030	50	.00	.00	.00	1588.	3		0630	110	.00	.00	.00	81.
2		0100	51	.00	.00	.00	1496.	3		0700	111	.00	.00	.00	80.
2		0130	52	.00	.00	.00	1404.	3		0730	112	.00	.00	.00	79.
2		0200	53	.00	.00	.00	1324.	3		0800	113	.00	.00	.00	78.
2		0230	54	.00	.00	.00	1233.	3		0830	114	.00	.00	.00	77.
2		0300	55	.00	.00	.00	1156.	3		0900	115	.00	.00	.00	76.
2		0330	56	.00	.00	.00	1079.	3		0930	116	.00	.00	.00	75.
2		0400	57	.00	.00	.00	1002.	3		1000	117	.00	.00	.00	73.
2		0430	58	.00	.00	.00	925.	3		1030	118	.00	.00	.00	71.
2		0500	59	.00	.00	.00	849.	3		1100	119	.00	.00	.00	69.
2		0530	60	.00	.00	.00	787.	3		1130	120	.00	.00	.00	65.

TOTAL RAINFALL = 5.14, TOTAL LOSS = 2.57, TOTAL EXCESS = 2.57

PEAK FLOW TIME MAXIMUM AVERAGE FLOW
6-HR 24-HR 72-HR 59.50-HR

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+    (CFS)        (HR)
                    (CFS)
+     3662.      18.50                3259.        1692.         763.          763.
                (INCHES)               1.100        2.283        2.555         2.555
                 (AC-FT)              1616.        3355.        3754.         3754.

                CUMULATIVE AREA =    27.55 SQ MI
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            *            *
  96 KK     *    Node73  *
            *            *
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  98 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          0  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .500  TIME INTERVAL IN HOURS

  99 HC          HYDROGRAPH COMBINATION
                      ICOMP          3  NUMBER OF HYDROGRAPHS TO COMBINE
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HYDROGRAPH AT STATION Node73
SUM OF 3 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	3463.	2		0600	61	1987.	2		2100	91	822.
1		0030	2	1.	1		1530	32	3903.	2		0630	62	1944.	2		2130	92	797.
1		0100	3	1.	1		1600	33	4286.	2		0700	63	1907.	2		2200	93	772.
1		0130	4	1.	1		1630	34	4548.	2		0730	64	1859.	2		2230	94	747.
1		0200	5	1.	1		1700	35	4735.	2		0800	65	1823.	2		2300	95	725.
1		0230	6	1.	1		1730	36	4842.	2		0830	66	1776.	2		2330	96	705.
1		0300	7	1.	1		1800	37	4859.	2		0900	67	1734.	3		0000	97	685.
1		0330	8	1.	1		1830	38	4753.	2		0930	68	1688.	3		0030	98	664.
1		0400	9	1.	1		1900	39	4572.	2		1000	69	1641.	3		0100	99	644.
1		0430	10	1.	1		1930	40	4286.	2		1030	70	1593.	3		0130	100	622.
1		0500	11	1.	1		2000	41	4006.	2		1100	71	1546.	3		0200	101	600.
1		0530	12	1.	1		2030	42	3703.	2		1130	72	1499.	3		0230	102	577.
1		0600	13	1.	1		2100	43	3400.	2		1200	73	1450.	3		0300	103	557.
1		0630	14	2.	1		2130	44	3112.	2		1230	74	1400.	3		0330	104	536.
1		0700	15	8.	1		2200	45	2813.	2		1300	75	1354.	3		0400	105	516.
1		0730	16	20.	1		2230	46	2584.	2		1330	76	1312.	3		0430	106	497.
1		0800	17	44.	1		2300	47	2395.	2		1400	77	1271.	3		0500	107	480.
1		0830	18	86.	1		2330	48	2245.	2		1430	78	1230.	3		0530	108	466.
1		0900	19	150.	2		0000	49	2104.	2		1500	79	1190.	3		0600	109	453.
1		0930	20	248.	2		0030	50	1961.	2		1530	80	1152.	3		0630	110	442.
1		1000	21	383.	2		0100	51	1846.	2		1600	81	1116.	3		0700	111	432.
1		1030	22	531.	2		0130	52	1728.	2		1630	82	1084.	3		0730	112	425.
1		1100	23	727.	2		0200	53	1746.	2		1700	83	1053.	3		0800	113	417.
1		1130	24	951.	2		0230	54	2095.	2		1730	84	1023.	3		0830	114	408.
1		1200	25	1192.	2		0300	55	1984.	2		1800	85	991.	3		0900	115	400.
1		1230	26	1491.	2		0330	56	2089.	2		1830	86	961.	3		0930	116	392.
1		1300	27	1824.	2		0400	57	2033.	2		1900	87	934.	3		1000	117	383.
1		1330	28	2220.	2		0430	58	2057.	2		1930	88	906.	3		1030	118	375.
1		1400	29	2600.	2		0500	59	2039.	2		2000	89	877.	3		1100	119	365.
1		1430	30	3022.	2		0530	60	2019.	2		2030	90	849.	3		1130	120	356.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
4859.	18.00		4327.	2620.	1386.	1386.
		(INCHES)	.467	1.131	1.483	1.483
		(AC-FT)	2146.	5197.	6816.	6816.

CUMULATIVE AREA = 86.17 SQ MI

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          *            *
100 KK    *     13     *
          *            *
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102 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

103 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	7762.	CHANNEL LENGTH
S	.0025	SLOPE
N	.040	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	200.00	BOTTOM WIDTH OR DIAMETER
Z	5.00	SIDE SLOPE

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COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.07	1.61	21.91	3881.00	4847.54	1095.53	1.48	5.90
INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL								
MAIN	.07	1.61	30.00		4847.47	1080.00	1.48	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6811E+04 EXCESS= .0000E+00 OUTFLOW= .6786E+04 BASIN STORAGE= .3596E+02 PERCENT ERROR= -.2

HYDROGRAPH AT STATION 13

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	3172.	2		0600	61	2012.	2		2100	91	851.
1		0030	2	1.	1		1530	32	3624.	2		0630	62	1978.	2		2130	92	825.
1		0100	3	1.	1		1600	33	4051.	2		0700	63	1937.	2		2200	93	800.
1		0130	4	1.	1		1630	34	4395.	2		0730	64	1897.	2		2230	94	775.
1		0200	5	1.	1		1700	35	4623.	2		0800	65	1854.	2		2300	95	751.
1		0230	6	1.	1		1730	36	4781.	2		0830	66	1814.	2		2330	96	729.
1		0300	7	1.	1		1800	37	4847.	2		0900	67	1769.	3		0000	97	709.
1		0330	8	1.	1		1830	38	4806.	2		0930	68	1726.	3		0030	98	688.
1		0400	9	1.	1		1900	39	4676.	2		1000	69	1680.	3		0100	99	668.
1		0430	10	1.	1		1930	40	4454.	2		1030	70	1634.	3		0130	100	648.
1		0500	11	1.	1		2000	41	4171.	2		1100	71	1586.	3		0200	101	627.
1		0530	12	1.	1		2030	42	3890.	2		1130	72	1540.	3		0230	102	605.
1		0600	13	1.	1		2100	43	3591.	2		1200	73	1493.	3		0300	103	583.
1		0630	14	1.	1		2130	44	3300.	2		1230	74	1444.	3		0330	104	562.
1		0700	15	1.	1		2200	45	3015.	2		1300	75	1396.	3		0400	105	542.
1		0730	16	3.	1		2230	46	2749.	2		1330	76	1351.	3		0430	106	522.
1		0800	17	10.	1		2300	47	2533.	2		1400	77	1308.	3		0500	107	503.
1		0830	18	26.	1		2330	48	2356.	2		1430	78	1268.	3		0530	108	486.
1		0900	19	56.	2		0000	49	2212.	2		1500	79	1228.	3		0600	109	471.
1		0930	20	107.	2		0030	50	2072.	2		1530	80	1188.	3		0630	110	458.
1		1000	21	190.	2		0100	51	1940.	2		1600	81	1151.	3		0700	111	446.
1		1030	22	310.	2		0130	52	1825.	2		1630	82	1116.	3		0730	112	436.
1		1100	23	481.	2		0200	53	1746.	2		1700	83	1084.	3		0800	113	428.
1		1130	24	694.	2		0230	54	1832.	2		1730	84	1053.	3		0830	114	420.
1		1200	25	942.	2		0300	55	2046.	2		1800	85	1023.	3		0900	115	412.
1		1230	26	1215.	2		0330	56	2026.	2		1830	86	992.	3		0930	116	404.
1		1300	27	1538.	2		0400	57	2062.	2		1900	87	963.	3		1000	117	396.
1		1330	28	1906.	2		0430	58	2040.	2		1930	88	935.	3		1030	118	387.
1		1400	29	2315.	2		0500	59	2049.	2		2000	89	908.	3		1100	119	379.
1		1430	30	2729.	2		0530	60	2034.	2		2030	90	879.	3		1130	120	376.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 4847.	18.00		4312.	2619.	1381.	1381.
		(INCHES)	.465	1.130	1.478	1.478
		(AC-FT)	2138.	5194.	6792.	6792.

CUMULATIVE AREA = 86.17 SQ MI

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              *            *
104 KK        *    Node31  *
              *            *
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106 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

110 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM VALLEY S-GRAPH

SUBBASIN RUNOFF DATA

107 BA SUBBASIN CHARACTERISTICS

TAREA	2.65	SUBBASIN AREA

PRECIPITATION DATA

109 PB

STORM	4.91	BASIN TOTAL PRECIPITATION

111 PI INCREMENTAL PRECIPITATION PATTERN

.02	.04	.03	.04	.04	.05	.05	.05	.06	.07
.06	.08	.09	.10	.10	.12	.15	.16	.19	.21
.15	.20	.19	.17	.25	.28	.33	.23	.26	.25
.23	.19	.04	.03	.05	.05	.04	.03	.03	.03
.03	.03	.03	.03	.03	.02	.02	.02		

121 LS SCS LOSS RATE

STRTL	.58	INITIAL ABSTRACTION
CRVNBR	77.40	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

122 UI INPUT UNITGRAPH, 35 ORDINATES, VOLUME = 1.00

161.0	299.0	505.0	601.0	448.0	266.0	183.0	144.0	111.0	91.0
74.3	63.0	53.4	48.3	43.5	37.3	33.2	29.7	28.2	23.6
23.6	20.9	15.6	15.6	15.6	15.6	8.1	7.7	7.7	7.7
7.7	7.7	7.7	7.7	7.4					

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HYDROGRAPH AT STATION Node31

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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.	2		0600	61	.00	.00	.00	19.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	17.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	14.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	12.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	10.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	8.
1		0300	7	.05	.05	.00	0.	2		0900	67	.00	.00	.00	6.
1		0330	8	.05	.05	.00	0.	2		0930	68	.00	.00	.00	4.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	4.
1		0430	10	.06	.06	.00	0.	2		1030	70	.00	.00	.00	3.
1		0500	11	.07	.07	.00	0.	2		1100	71	.00	.00	.00	3.
1		0530	12	.06	.06	.00	0.	2		1130	72	.00	.00	.00	2.
1		0600	13	.08	.08	.00	0.	2		1200	73	.00	.00	.00	2.

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          1    0630   14     .09      .08      .00          1.        *     2    1230   74     .00     .00     .00          2.
          1    0700   15     .10      .09      .01          2.        *     2    1300   75     .00     .00     .00          1.
          1    0730   16     .10      .09      .02          7.        *     2    1330   76     .00     .00     .00          1.
          1    0800   17     .12      .10      .03         15.        *     2    1400   77     .00     .00     .00          1.
          1    0830   18     .15      .11      .04         29.        *     2    1430   78     .00     .00     .00          1.
          1    0900   19     .16      .11      .05         48.        *     2    1500   79     .00     .00     .00          1.
          1    0930   20     .19      .12      .07         73.        *     2    1530   80     .00     .00     .00          1.
          1    1000   21     .21      .12      .10        106.        *     2    1600   81     .00     .00     .00          0.
          1    1030   22     .15      .07      .07        139.        *     2    1630   82     .00     .00     .00          0.
          1    1100   23     .20      .09      .11        175.        *     2    1700   83     .00     .00     .00          0.
          1    1130   24     .19      .08      .11        205.        *     2    1730   84     .00     .00     .00          0.
          1    1200   25     .17      .07      .10        229.        *     2    1800   85     .00     .00     .00          0.
          1    1230   26     .25      .09      .16        263.        *     2    1830   86     .00     .00     .00          0.
          1    1300   27     .28      .09      .19        303.        *     2    1900   87     .00     .00     .00          0.
          1    1330   28     .33      .10      .24        360.        *     2    1930   88     .00     .00     .00          0.
          1    1400   29     .23      .06      .17        421.        *     2    2000   89     .00     .00     .00          0.
          1    1430   30     .26      .06      .20        480.        *     2    2030   90     .00     .00     .00          0.
          1    1500   31     .25      .06      .20        516.        *     2    2100   91     .00     .00     .00          0.
          1    1530   32     .23      .05      .18        532.        *     2    2130   92     .00     .00     .00          0.
          1    1600   33     .19      .04      .15        540.        *     2    2200   93     .00     .00     .00          0.
          1    1630   34     .04      .01      .03        522.        *     2    2230   94     .00     .00     .00          0.
          1    1700   35     .03      .01      .02        475.        *     2    2300   95     .00     .00     .00          0.
          1    1730   36     .05      .01      .04        401.        *     2    2330   96     .00     .00     .00          0.
          1    1800   37     .04      .01      .04        322.        *     3    0000   97     .00     .00     .00          0.
          1    1830   38     .04      .01      .03        267.        *     3    0030   98     .00     .00     .00          0.
          1    1900   39     .02      .00      .02        236.        *     3    0100   99     .00     .00     .00          0.
          1    1930   40     .03      .01      .03        213.        *     3    0130  100     .00     .00     .00          0.
          1    2000   41     .02      .00      .02        191.        *     3    0200  101     .00     .00     .00          0.
          1    2030   42     .03      .01      .02        173.        *     3    0230  102     .00     .00     .00          0.
          1    2100   43     .02      .00      .02        159.        *     3    0300  103     .00     .00     .00          0.
          1    2130   44     .02      .00      .02        148.        *     3    0330  104     .00     .00     .00          0.
          1    2200   45     .02      .00      .02        138.        *     3    0400  105     .00     .00     .00          0.
          1    2230   46     .02      .00      .02        130.        *     3    0430  106     .00     .00     .00          0.
          1    2300   47     .02      .00      .02        122.        *     3    0500  107     .00     .00     .00          0.
          1    2330   48     .02      .00      .02        115.        *     3    0530  108     .00     .00     .00          0.
          2    0000   49     .02      .00      .02        108.        *     3    0600  109     .00     .00     .00          0.
          2    0030   50     .00      .00      .00         98.        *     3    0630  110     .00     .00     .00          0.
          2    0100   51     .00      .00      .00         88.        *     3    0700  111     .00     .00     .00          0.
          2    0130   52     .00      .00      .00         75.        *     3    0730  112     .00     .00     .00          0.
          2    0200   53     .00      .00      .00         61.        *     3    0800  113     .00     .00     .00          0.
          2    0230   54     .00      .00      .00         50.        *     3    0830  114     .00     .00     .00          0.
          2    0300   55     .00      .00      .00         42.        *     3    0900  115     .00     .00     .00          0.
          2    0330   56     .00      .00      .00         37.        *     3    0930  116     .00     .00     .00          0.
          2    0400   57     .00      .00      .00         32.        *     3    1000  117     .00     .00     .00          0.
          2    0430   58     .00      .00      .00         28.        *     3    1030  118     .00     .00     .00          0.
          2    0500   59     .00      .00      .00         24.        *     3    1100  119     .00     .00     .00          0.
          2    0530   60     .00      .00      .00         22.        *     3    1130  120     .00     .00     .00          0.
                                                                      *
*******************************************************************************************************************************

    TOTAL RAINFALL =    4.91, TOTAL LOSS =    2.33, TOTAL EXCESS =    2.58

  PEAK FLOW      TIME                           MAXIMUM AVERAGE FLOW
                                       6-HR         24-HR        72-HR      59.50-HR
+   (CFS)        (HR)
                               (CFS)
+     540.      16.00                  428.          183.          74.           74.
                            (INCHES)  1.502         2.564        2.582         2.582
                             (AC-FT)   212.          362.         365.          365.

                            CUMULATIVE AREA =    2.65 SQ MI


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


                  **************
                  *            *
  127 KK          *   Node71   *
                  *            *
                  **************


  129 KO           OUTPUT CONTROL VARIABLES
                         IPRNT          0  PRINT CONTROL
                         IPLOT          0  PLOT CONTROL
                         QSCAL         0.  HYDROGRAPH PLOT SCALE
                         IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                          IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                         ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                         ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                        TIMINT       .500  TIME INTERVAL IN HOURS


  130 HC           HYDROGRAPH COMBINATION
                         ICOMP          2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                                     ***
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HYDROGRAPH AT STATION Node71
SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	3688.	2		0600	61	2032.	2		2100	91	851.
1		0030	2	1.	1		1530	32	4156.	2		0630	62	1995.	2		2130	92	825.
1		0100	3	1.	1		1600	33	4591.	2		0700	63	1951.	2		2200	93	800.
1		0130	4	1.	1		1630	34	4917.	2		0730	64	1909.	2		2230	94	775.
1		0200	5	1.	1		1700	35	5099.	2		0800	65	1863.	2		2300	95	751.
1		0230	6	1.	1		1730	36	5181.	2		0830	66	1822.	2		2330	96	729.
1		0300	7	1.	1		1800	37	5169.	2		0900	67	1775.	3		0000	97	709.
1		0330	8	1.	1		1830	38	5073.	2		0930	68	1730.	3		0030	98	688.
1		0400	9	1.	1		1900	39	4912.	2		1000	69	1684.	3		0100	99	668.
1		0430	10	1.	1		1930	40	4668.	2		1030	70	1637.	3		0130	100	648.
1		0500	11	1.	1		2000	41	4362.	2		1100	71	1589.	3		0200	101	627.
1		0530	12	1.	1		2030	42	4062.	2		1130	72	1542.	3		0230	102	605.
1		0600	13	1.	1		2100	43	3750.	2		1200	73	1495.	3		0300	103	583.
1		0630	14	1.	1		2130	44	3447.	2		1230	74	1446.	3		0330	104	562.
1		0700	15	4.	1		2200	45	3153.	2		1300	75	1397.	3		0400	105	542.
1		0730	16	10.	1		2230	46	2878.	2		1330	76	1352.	3		0430	106	522.
1		0800	17	25.	1		2300	47	2654.	2		1400	77	1309.	3		0500	107	503.
1		0830	18	54.	1		2330	48	2471.	2		1430	78	1269.	3		0530	108	486.
1		0900	19	103.	2		0000	49	2319.	2		1500	79	1229.	3		0600	109	471.
1		0930	20	181.	2		0030	50	2170.	2		1530	80	1189.	3		0630	110	458.
1		1000	21	296.	2		0100	51	2028.	2		1600	81	1151.	3		0700	111	446.
1		1030	22	449.	2		0130	52	1900.	2		1630	82	1116.	3		0730	112	436.
1		1100	23	656.	2		0200	53	1807.	2		1700	83	1084.	3		0800	113	428.
1		1130	24	898.	2		0230	54	1881.	2		1730	84	1053.	3		0830	114	420.
1		1200	25	1172.	2		0300	55	2088.	2		1800	85	1023.	3		0900	115	412.
1		1230	26	1477.	2		0330	56	2063.	2		1830	86	992.	3		0930	116	404.
1		1300	27	1841.	2		0400	57	2094.	2		1900	87	963.	3		1000	117	396.
1		1330	28	2266.	2		0430	58	2067.	2		1930	88	935.	3		1030	118	387.
1		1400	29	2736.	2		0500	59	2073.	2		2000	89	908.	3		1100	119	379.
1		1430	30	3209.	2		0530	60	2056.	2		2030	90	879.	3		1130	120	376.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
5181.	17.50		4659.	2777.	1455.	1455.
		(INCHES)	.488	1.163	1.511	1.511
		(AC-FT)	2310.	5509.	7157.	7157.

CUMULATIVE AREA = 88.82 SQ MI

131 KK

12	

133 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

134 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	6019.	CHANNEL LENGTH
S	.0044	SLOPE
N	.040	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	200.00	BOTTOM WIDTH OR DIAMETER
Z	5.00	SIDE SLOPE

***

COMPUTED MUSKINGUM-CUNGE PARAMETERS

ELEMENT	ALPHA	M	COMPUTATION TIME STEP DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)

```
                MAIN        .09       1.61       13.91    3009.50    5180.48   1071.28       1.51       7.21

                                   INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

                MAIN        .09       1.61       30.00               5172.79   1080.00       1.51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7156E+04 EXCESS= .0000E+00 OUTFLOW= .7139E+04 BASIN STORAGE= .2371E+02 PERCENT ERROR=   -.1


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                                                    HYDROGRAPH AT STATION   12

***************************************************************************************************************************
                                    *                                       *                                        *
  DA MON HRMN  ORD        FLOW      *  DA MON HRMN  ORD        FLOW         *  DA MON HRMN  ORD        FLOW          *  DA MON HRMN  ORD        FLOW
                                    *                                       *                                        *
   1     0000    1          1.      *   1     1500   31       3489.         *   2     0600   61       2044.          *   2     2100   91        871.
   1     0030    2          1.      *   1     1530   32       3971.         *   2     0630   62       2013.          *   2     2130   92        844.
   1     0100    3          1.      *   1     1600   33       4428.         *   2     0700   63       1973.          *   2     2200   93        818.
   1     0130    4          1.      *   1     1630   34       4800.         *   2     0730   64       1931.          *   2     2230   94        793.
   1     0200    5          1.      *   1     1700   35       5035.         *   2     0800   65       1887.          *   2     2300   95        769.
   1     0230    6          1.      *   1     1730   36       5151.         *   2     0830   66       1844.          *   2     2330   96        745.
   1     0300    7          1.      *   1     1800   37       5173.         *   2     0900   67       1800.          *   3     0000   97        724.
   1     0330    8          1.      *   1     1830   38       5108.         *   2     0930   68       1755.          *   3     0030   98        704.
   1     0400    9          1.      *   1     1900   39       4973.         *   2     1000   69       1709.          *   3     0100   99        684.
   1     0430   10          1.      *   1     1930   40       4761.         *   2     1030   70       1663.          *   3     0130  100        664.
   1     0500   11          1.      *   1     2000   41       4480.         *   2     1100   71       1616.          *   3     0200  101        643.
   1     0530   12          1.      *   1     2030   42       4178.         *   2     1130   72       1569.          *   3     0230  102        622.
   1     0600   13          1.      *   1     2100   43       3874.         *   2     1200   73       1522.          *   3     0300  103        601.
   1     0630   14          1.      *   1     2130   44       3571.         *   2     1230   74       1474.          *   3     0330  104        579.
   1     0700   15          1.      *   1     2200   45       3278.         *   2     1300   75       1426.          *   3     0400  105        559.
   1     0730   16          3.      *   1     2230   46       2998.         *   2     1330   76       1378.          *   3     0430  106        539.
   1     0800   17          9.      *   1     2300   47       2753.         *   2     1400   77       1335.          *   3     0500  107        520.
   1     0830   18         23.      *   1     2330   48       2555.         *   2     1430   78       1293.          *   3     0530  108        501.
   1     0900   19         52.      *   2     0000   49       2391.         *   2     1500   79       1253.          *   3     0600  109        484.
   1     0930   20        101.      *   2     0030   50       2243.         *   2     1530   80       1214.          *   3     0630  110        470.
   1     1000   21        181.      *   2     0100   51       2099.         *   2     1600   81       1175.          *   3     0700  111        457.
   1     1030   22        302.      *   2     0130   52       1965.         *   2     1630   82       1138.          *   3     0730  112        445.
   1     1100   23        477.      *   2     0200   53       1855.         *   2     1700   83       1104.          *   3     0800  113        435.
   1     1130   24        716.      *   2     0230   54       1837.         *   2     1730   84       1073.          *   3     0830  114        427.
   1     1200   25        989.      *   2     0300   55       1977.         *   2     1800   85       1043.          *   3     0900  115        419.
   1     1230   26       1291.      *   2     0330   56       2078.         *   2     1830   86       1013.          *   3     0930  116        411.
   1     1300   27       1636.      *   2     0400   57       2077.         *   2     1900   87        983.          *   3     1000  117        403.
   1     1330   28       2047.      *   2     0430   58       2083.         *   2     1930   88        954.          *   3     1030  118        395.
   1     1400   29       2514.      *   2     0500   59       2068.         *   2     2000   89        927.          *   3     1100  119        387.
   1     1430   30       3001.      *   2     0530   60       2065.         *   2     2030   90        899.          *   3     1130  120        381.
                                    *                                       *                                        *
***************************************************************************************************************************

 PEAK FLOW      TIME                             MAXIMUM AVERAGE FLOW
                                        6-HR         24-HR         72-HR        59.50-HR
+   (CFS)       (HR)
                            (CFS)
+    5173.      18.00                   4645.        2776.         1452.         1452.
                          (INCHES)       .486        1.162         1.507         1.507
                           (AC-FT)      2303.        5505.         7140.         7140.

                           CUMULATIVE AREA =    88.82 SQ MI


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


                 **************
                 *            *
 135 KK          *   Node9    *
                 *            *
                 **************


 137 KO          OUTPUT CONTROL VARIABLES
                         IPRNT           0  PRINT CONTROL
                         IPLOT           0  PLOT CONTROL
                         QSCAL          0.  HYDROGRAPH PLOT SCALE
                         IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                          IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                         ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                         ISAV2         120  LAST ORDINATE PUNCHED OR SAVED
                        TIMINT        .500  TIME INTERVAL IN HOURS

                             SANTA MARGARITA STORMS

 141 IN          TIME DATA FOR INPUT TIME SERIES
                         JXMIN          15  TIME INTERVAL IN MINUTES
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                JXDATE      1    0  STARTING DATE
                JXTIME           0  STARTING TIME
                   UHG FROM VALLEY S-GRAPH

          SUBBASIN RUNOFF DATA

138 BA       SUBBASIN CHARACTERISTICS
                TAREA        2.52  SUBBASIN AREA

             PRECIPITATION DATA

140 PB           STORM        4.47  BASIN TOTAL PRECIPITATION

142 PI         INCREMENTAL PRECIPITATION PATTERN
                 .02       .03       .03       .03       .04       .04       .04       .05       .06       .07
                 .06       .07       .08       .09       .09       .11       .13       .15       .17       .19
                 .13       .18       .17       .16       .23       .25       .30       .21       .24       .23
                 .21       .17       .04       .03       .04       .04       .04       .02       .03       .02
                 .03       .02       .02       .02       .02       .02       .02       .02

152 LS       SCS LOSS RATE
                STRTL         .65  INITIAL ABSTRACTION
               CRVNBR       75.50  CURVE NUMBER
                RTIMP         .00  PERCENT IMPERVIOUS AREA

153 UI       INPUT UNITGRAPH,  31 ORDINATES,  VOLUME = 1.00
              187.0     387.0     613.0     596.0     339.0     212.0     156.0     119.0      92.0      75.0
               62.0      54.5      47.8      41.1      34.4      32.7      27.3      26.0      23.2      17.2
               17.2      17.2      12.6       8.5       8.5       8.5       8.5       8.5       8.5       8.5
                1.4
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HYDROGRAPH AT STATION Node9

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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.	2		0600	61	.00	.00	.00	9.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	7.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	5.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	4.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	4.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	3.
1		0300	7	.04	.04	.00	0.	2		0900	67	.00	.00	.00	3.
1		0330	8	.04	.04	.00	0.	2		0930	68	.00	.00	.00	2.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	2.
1		0430	10	.06	.06	.00	0.	2		1030	70	.00	.00	.00	1.
1		0500	11	.07	.07	.00	0.	2		1100	71	.00	.00	.00	1.
1		0530	12	.06	.06	.00	0.	2		1130	72	.00	.00	.00	1.
1		0600	13	.07	.07	.00	0.	2		1200	73	.00	.00	.00	1.
1		0630	14	.08	.08	.00	0.	2		1230	74	.00	.00	.00	1.
1		0700	15	.09	.09	.00	0.	2		1300	75	.00	.00	.00	1.
1		0730	16	.09	.09	.01	2.	2		1330	76	.00	.00	.00	0.
1		0800	17	.11	.10	.01	5.	2		1400	77	.00	.00	.00	0.
1		0830	18	.13	.11	.02	14.	2		1430	78	.00	.00	.00	0.
1		0900	19	.15	.11	.04	28.	2		1500	79	.00	.00	.00	0.
1		0930	20	.17	.12	.05	48.	2		1530	80	.00	.00	.00	0.
1		1000	21	.19	.12	.07	75.	2		1600	81	.00	.00	.00	0.
1		1030	22	.13	.08	.06	102.	2		1630	82	.00	.00	.00	0.
1		1100	23	.18	.10	.08	130.	2		1700	83	.00	.00	.00	0.
1		1130	24	.17	.09	.08	153.	2		1730	84	.00	.00	.00	0.
1		1200	25	.16	.07	.08	175.	2		1800	85	.00	.00	.00	0.
1		1230	26	.23	.10	.13	205.	2		1830	86	.00	.00	.00	0.
1		1300	27	.26	.10	.15	242.	2		1900	87	.00	.00	.00	0.
1		1330	28	.30	.11	.20	297.	2		1930	88	.00	.00	.00	0.
1		1400	29	.21	.07	.14	353.	2		2000	89	.00	.00	.00	0.
1		1430	30	.24	.07	.17	398.	2		2030	90	.00	.00	.00	0.
1		1500	31	.23	.06	.16	422.	2		2100	91	.00	.00	.00	0.
1		1530	32	.21	.05	.16	433.	2		2130	92	.00	.00	.00	0.
1		1600	33	.17	.04	.13	442.	2		2200	93	.00	.00	.00	0.
1		1630	34	.04	.01	.03	420.	2		2230	94	.00	.00	.00	0.
1		1700	35	.03	.01	.02	368.	2		2300	95	.00	.00	.00	0.
1		1730	36	.04	.01	.03	294.	2		2330	96	.00	.00	.00	0.
1		1800	37	.04	.01	.03	230.	3		0000	97	.00	.00	.00	0.
1		1830	38	.04	.01	.03	197.	3		0030	98	.00	.00	.00	0.
1		1900	39	.02	.00	.02	177.	3		0100	99	.00	.00	.00	0.
1		1930	40	.03	.01	.02	158.	3		0130	100	.00	.00	.00	0.
1		2000	41	.02	.00	.02	141.	3		0200	101	.00	.00	.00	0.
1		2030	42	.03	.01	.02	128.	3		0230	102	.00	.00	.00	0.
1		2100	43	.02	.00	.02	118.	3		0300	103	.00	.00	.00	0.
1		2130	44	.02	.00	.02	109.	3		0330	104	.00	.00	.00	0.
1		2200	45	.02	.00	.02	102.	3		0400	105	.00	.00	.00	0.
1		2230	46	.02	.00	.02	95.	3		0430	106	.00	.00	.00	0.
1		2300	47	.02	.00	.01	90.	3		0500	107	.00	.00	.00	0.
1		2330	48	.02	.00	.01	85.	3		0530	108	.00	.00	.00	0.
2		0000	49	.02	.00	.01	79.	3		0600	109	.00	.00	.00	0.
2		0030	50	.00	.00	.00	71.	3		0630	110	.00	.00	.00	0.
2		0100	51	.00	.00	.00	61.	3		0700	111	.00	.00	.00	0.

```
         2     0130   52     .00      .00      .00          49.       *      3     0730  112     .00      .00      .00          0.
         2     0200   53     .00      .00      .00          38.       *      3     0800  113     .00      .00      .00          0.
         2     0230   54     .00      .00      .00          31.       *      3     0830  114     .00      .00      .00          0.
         2     0300   55     .00      .00      .00          26.       *      3     0900  115     .00      .00      .00          0.
         2     0330   56     .00      .00      .00          22.       *      3     0930  116     .00      .00      .00          0.
         2     0400   57     .00      .00      .00          19.       *      3     1000  117     .00      .00      .00          0.
         2     0430   58     .00      .00      .00          16.       *      3     1030  118     .00      .00      .00          0.
         2     0500   59     .00      .00      .00          13.       *      3     1100  119     .00      .00      .00          0.
         2     0530   60     .00      .00      .00          11.       *      3     1130  120     .00      .00      .00          0.
                                                                      *
*******************************************************************************************************************************

     TOTAL RAINFALL =     4.47, TOTAL LOSS =     2.40, TOTAL EXCESS =     2.07

   PEAK FLOW      TIME                           MAXIMUM AVERAGE FLOW
                                         6-HR          24-HR          72-HR        59.50-HR
+    (CFS)        (HR)
                              (CFS)
+     442.       16.00                   342.           139.            56.            56.
                          (INCHES)      1.260          2.058          2.065          2.065
                           (AC-FT)       169.           277.           277.           277.

                          CUMULATIVE AREA =     2.52 SQ MI



*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

                **************
                *            *
   158 KK       *   Node70   *
                *            *
                **************


   160 KO            OUTPUT CONTROL VARIABLES
                           IPRNT          0  PRINT CONTROL
                           IPLOT          0  PLOT CONTROL
                           QSCAL         0.  HYDROGRAPH PLOT SCALE
                           IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                            IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                           ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                           ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                          TIMINT       .500  TIME INTERVAL IN HOURS


   161 HC            HYDROGRAPH COMBINATION
                           ICOMP          2  NUMBER OF HYDROGRAPHS TO COMBINE

                                                                      ***
*******************************************************************************************************************************

                                                        HYDROGRAPH AT STATION    Node70
                                                            SUM OF  2 HYDROGRAPHS

*******************************************************************************************************************************
                                     *                                      *                                      *
  DA MON HRMN  ORD        FLOW      *  DA MON HRMN  ORD        FLOW      *  DA MON HRMN  ORD        FLOW      *  DA MON HRMN  ORD         FLOW
                                     *                                      *                                      *
   1    0000    1          1.       *   1    1500   31       3911.       *   2    0600   61       2053.       *   2    2100   91          871.
   1    0030    2          1.       *   1    1530   32       4404.       *   2    0630   62       2020.       *   2    2130   92          844.
   1    0100    3          1.       *   1    1600   33       4870.       *   2    0700   63       1978.       *   2    2200   93          818.
   1    0130    4          1.       *   1    1630   34       5220.       *   2    0730   64       1935.       *   2    2230   94          793.
   1    0200    5          1.       *   1    1700   35       5403.       *   2    0800   65       1891.       *   2    2300   95          769.
   1    0230    6          1.       *   1    1730   36       5446.       *   2    0830   66       1847.       *   2    2330   96          745.
   1    0300    7          1.       *   1    1800   37       5403.       *   2    0900   67       1803.       *   3    0000   97          724.
   1    0330    8          1.       *   1    1830   38       5306.       *   2    0930   68       1757.       *   3    0030   98          704.
   1    0400    9          1.       *   1    1900   39       5150.       *   2    1000   69       1711.       *   3    0100   99          684.
   1    0430   10          1.       *   1    1930   40       4919.       *   2    1030   70       1664.       *   3    0130  100          664.
   1    0500   11          1.       *   1    2000   41       4621.       *   2    1100   71       1617.       *   3    0200  101          643.
   1    0530   12          1.       *   1    2030   42       4306.       *   2    1130   72       1569.       *   3    0230  102          622.
   1    0600   13          1.       *   1    2100   43       3992.       *   2    1200   73       1523.       *   3    0300  103          601.
   1    0630   14          1.       *   1    2130   44       3680.       *   2    1230   74       1475.       *   3    0330  104          579.
   1    0700   15          1.       *   1    2200   45       3380.       *   2    1300   75       1426.       *   3    0400  105          559.
   1    0730   16          5.       *   1    2230   46       3093.       *   2    1330   76       1379.       *   3    0430  106          539.
   1    0800   17         14.       *   1    2300   47       2843.       *   2    1400   77       1335.       *   3    0500  107          520.
   1    0830   18         37.       *   1    2330   48       2640.       *   2    1430   78       1293.       *   3    0530  108          501.
   1    0900   19         80.       *   2    0000   49       2470.       *   2    1500   79       1253.       *   3    0600  109          484.
   1    0930   20        149.       *   2    0030   50       2314.       *   2    1530   80       1214.       *   3    0630  110          470.
   1    1000   21        256.       *   2    0100   51       2160.       *   2    1600   81       1175.       *   3    0700  111          457.
   1    1030   22        404.       *   2    0130   52       2014.       *   2    1630   82       1138.       *   3    0730  112          445.
   1    1100   23        608.       *   2    0200   53       1893.       *   2    1700   83       1104.       *   3    0800  113          435.
   1    1130   24        870.       *   2    0230   54       1869.       *   2    1730   84       1073.       *   3    0830  114          427.
   1    1200   25       1164.       *   2    0300   55       2003.       *   2    1800   85       1043.       *   3    0900  115          419.
   1    1230   26       1496.       *   2    0330   56       2100.       *   2    1830   86       1013.       *   3    0930  116          411.
   1    1300   27       1878.       *   2    0400   57       2095.       *   2    1900   87        983.       *   3    1000  117          403.
   1    1330   28       2344.       *   2    0430   58       2099.       *   2    1930   88        954.       *   3    1030  118          395.
   1    1400   29       2867.       *   2    0500   59       2082.       *   2    2000   89        927.       *   3    1100  119          387.
   1    1430   30       3399.       *   2    0530   60       2076.       *   2    2030   90        899.       *   3    1130  120          381.
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                                        *                       *                       *
 ********************************************************************************************************************************************************

  PEAK FLOW      TIME                                MAXIMUM AVERAGE FLOW
                                      6-HR        24-HR        72-HR      59.50-HR
+    (CFS)        (HR)
                     (CFS)
+     5446.      17.50                4917.        2898.        1508.        1508.
                (INCHES)                .500         1.180        1.523        1.523
                 (AC-FT)             2438.        5748.        7417.        7417.

                CUMULATIVE AREA =    91.34 SQ MI


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


          **************
          *            *
 162 KK   *    Node27  *
          *            *
          **************


 164 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          0  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .500  TIME INTERVAL IN HOURS

                          SANTA MARGARITA STORMS

 168 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN         15  TIME INTERVAL IN MINUTES
                     JXDATE      1    0  STARTING DATE
                     JXTIME          0  STARTING TIME
                          UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

               SUBBASIN RUNOFF DATA

 165 BA          SUBBASIN CHARACTERISTICS
                      TAREA       16.92  SUBBASIN AREA

                 PRECIPITATION DATA

 167 PB               STORM        5.29  BASIN TOTAL PRECIPITATION

 169 PI            INCREMENTAL PRECIPITATION PATTERN
                     .03       .04       .03       .04       .04       .05       .05       .06       .07       .08
                     .07       .08       .10       .11       .11       .13       .16       .18       .21       .23
                     .16       .21       .20       .18       .27       .30       .36       .24       .28       .27
                     .25       .20       .04       .03       .05       .05       .04       .03       .04       .03
                     .03       .03       .03       .03       .03       .02       .02       .02

 179 LS          SCS LOSS RATE
                      STRTL        .44  INITIAL ABSTRACTION
                     CRVNBR      81.90  CURVE NUMBER
                      RTIMP        .00  PERCENT IMPERVIOUS AREA

 180 UI          INPUT UNITGRAPH,  50 ORDINATES,  VOLUME = 1.00
                    411.0     571.0     838.0     927.0    1463.0    2148.0    4296.0    1997.0    1445.0     943.0
                    880.0     773.0     590.0     560.0     482.0     441.0     386.0     319.0     296.0     280.0
                    234.0     228.0     168.0     167.0     143.0      99.0      99.0      99.0      99.0      25.0
                     21.2      21.2      21.2      21.2      21.2      21.2      21.2      21.2      21.2      21.2
                     21.2      21.2      21.2      21.2      21.2      21.2      21.2      21.2      21.2      12.5

                                                                                                                 ***
 ********************************************************************************************************************************************************

                                                    HYDROGRAPH AT STATION   Node27

 ********************************************************************************************************************************************************

                                                                                *
      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.        *        2     0600    61     .00     .00     .00        191.
       1     0030     2     .03     .03     .00         0.        *        2     0630    62     .00     .00     .00        164.
       1     0100     3     .04     .04     .00         0.        *        2     0700    63     .00     .00     .00        149.
       1     0130     4     .03     .03     .00         0.        *        2     0730    64     .00     .00     .00        138.
       1     0200     5     .04     .04     .00         0.        *        2     0800    65     .00     .00     .00        125.
       1     0230     6     .04     .04     .00         0.        *        2     0830    66     .00     .00     .00        115.
       1     0300     7     .05     .05     .00         0.        *        2     0900    67     .00     .00     .00        105.
       1     0330     8     .05     .05     .00         0.        *        2     0930    68     .00     .00     .00         98.
       1     0400     9     .06     .06     .00         0.        *        2     1000    69     .00     .00     .00         89.
       1     0430    10     .07     .07     .00         0.        *        2     1030    70     .00     .00     .00         82.
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1	0500	11	.08	.08	.00	0.	*	2	1100	71	.00	.00	.00	74.
1	0530	12	.07	.06	.00	2.	*	2	1130	72	.00	.00	.00	68.
1	0600	13	.08	.07	.01	8.	*	2	1200	73	.00	.00	.00	62.
1	0630	14	.10	.08	.02	18.	*	2	1230	74	.00	.00	.00	56.
1	0700	15	.11	.08	.03	35.	*	2	1300	75	.00	.00	.00	51.
1	0730	16	.11	.08	.03	63.	*	2	1330	76	.00	.00	.00	45.
1	0800	17	.13	.08	.05	107.	*	2	1400	77	.00	.00	.00	38.
1	0830	18	.16	.09	.07	179.	*	2	1430	78	.00	.00	.00	31.
1	0900	19	.17	.09	.09	280.	*	2	1500	79	.00	.00	.00	26.
1	0930	20	.21	.09	.11	411.	*	2	1530	80	.00	.00	.00	21.
1	1000	21	.23	.09	.14	571.	*	2	1600	81	.00	.00	.00	16.
1	1030	22	.16	.06	.10	739.	*	2	1630	82	.00	.00	.00	12.
1	1100	23	.21	.07	.14	954.	*	2	1700	83	.00	.00	.00	9.
1	1130	24	.20	.06	.14	1192.	*	2	1730	84	.00	.00	.00	9.
1	1200	25	.18	.05	.14	1446.	*	2	1800	85	.00	.00	.00	8.
1	1230	26	.27	.06	.20	1726.	*	2	1830	86	.00	.00	.00	7.
1	1300	27	.30	.06	.24	1989.	*	2	1900	87	.00	.00	.00	6.
1	1330	28	.36	.07	.29	2168.	*	2	1930	88	.00	.00	.00	5.
1	1400	29	.24	.04	.20	2466.	*	2	2000	89	.00	.00	.00	5.
1	1430	30	.28	.04	.24	2716.	*	2	2030	90	.00	.00	.00	4.
1	1500	31	.27	.04	.23	2984.	*	2	2100	91	.00	.00	.00	4.
1	1530	32	.25	.03	.22	3433.	*	2	2130	92	.00	.00	.00	3.
1	1600	33	.20	.02	.18	3760.	*	2	2200	93	.00	.00	.00	3.
1	1630	34	.04	.00	.04	3984.	*	2	2230	94	.00	.00	.00	2.
1	1700	35	.03	.00	.03	3806.	*	2	2300	95	.00	.00	.00	2.
1	1730	36	.05	.01	.05	3807.	*	2	2330	96	.00	.00	.00	1.
1	1800	37	.05	.01	.04	3676.	*	3	0000	97	.00	.00	.00	1.
1	1830	38	.04	.00	.04	3426.	*	3	0030	98	.00	.00	.00	0.
1	1900	39	.03	.00	.02	2994.	*	3	0100	99	.00	.00	.00	0.
1	1930	40	.04	.00	.03	2350.	*	3	0130	100	.00	.00	.00	0.
1	2000	41	.03	.00	.02	2047.	*	3	0200	101	.00	.00	.00	0.
1	2030	42	.03	.00	.03	1883.	*	3	0230	102	.00	.00	.00	0.
1	2100	43	.03	.00	.02	1729.	*	3	0300	103	.00	.00	.00	0.
1	2130	44	.03	.00	.02	1575.	*	3	0330	104	.00	.00	.00	0.
1	2200	45	.03	.00	.02	1414.	*	3	0400	105	.00	.00	.00	0.
1	2230	46	.03	.00	.02	1330.	*	3	0430	106	.00	.00	.00	0.
1	2300	47	.02	.00	.02	1218.	*	3	0500	107	.00	.00	.00	0.
1	2330	48	.02	.00	.02	1137.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.02	.00	.02	1046.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	963.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	891.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	810.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	722.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	646.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	558.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	435.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	357.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	302.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	263.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	225.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 5.29, TOTAL LOSS = 1.96, TOTAL EXCESS = 3.33

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3984.	16.50		3276.	1487.	611.	611.
		(INCHES)	1.800	3.268	3.328	3.328
		(AC-FT)	1624.	2949.	3003.	3003.

CUMULATIVE AREA = 16.92 SQ MI

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          **************
          *            *
186 KK    *    17      *
          *            *
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188 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

189 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	55334.	CHANNEL LENGTH
S	.0039	SLOPE
N	.040	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	200.00	BOTTOM WIDTH OR DIAMETER
Z	5.00	SIDE SLOPE

***

COMPUTED MUSKINGUM-CUNGE PARAMETERS

ELEMENT	ALPHA	M	COMPUTATION TIME STEP DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.09	1.61	30.00	6148.22	3974.66	1110.00	3.33	6.29

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.09	1.61	30.00		3974.66	1110.00	3.33	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3003E+04 EXCESS= .0000E+00 OUTFLOW= .3009E+04 BASIN STORAGE= .1267E+01 PERCENT ERROR= -.3

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HYDROGRAPH AT STATION 17

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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		1500	31	1634.	2		0600	61	672.	2		2100	91	26.
1		0030	2	0.	1		1530	32	2012.	2		0630	62	613.	2		2130	92	22.
1		0100	3	0.	1		1600	33	2301.	2		0700	63	553.	2		2200	93	18.
1		0130	4	0.	1		1630	34	2598.	2		0730	64	485.	2		2230	94	16.
1		0200	5	0.	1		1700	35	2951.	2		0800	65	418.	2		2300	95	13.
1		0230	6	0.	1		1730	36	3370.	2		0830	66	371.	2		2330	96	11.
1		0300	7	0.	1		1800	37	3745.	2		0900	67	321.	3		0000	97	10.
1		0330	8	0.	1		1830	38	3975.	2		0930	68	281.	3		0030	98	9.
1		0400	9	0.	1		1900	39	3910.	2		1000	69	247.	3		0100	99	8.
1		0430	10	0.	1		1930	40	3719.	2		1030	70	215.	3		0130	100	7.
1		0500	11	0.	1		2000	41	3613.	2		1100	71	188.	3		0200	101	6.
1		0530	12	0.	1		2030	42	3423.	2		1130	72	167.	3		0230	102	5.
1		0600	13	0.	1		2100	43	3078.	2		1200	73	152.	3		0300	103	5.
1		0630	14	0.	1		2130	44	2661.	2		1230	74	139.	3		0330	104	4.
1		0700	15	0.	1		2200	45	2271.	2		1300	75	128.	3		0400	105	4.
1		0730	16	0.	1		2230	46	2006.	2		1330	76	118.	3		0430	106	3.
1		0800	17	0.	1		2300	47	1823.	2		1400	77	109.	3		0500	107	3.
1		0830	18	0.	1		2330	48	1751.	2		1430	78	101.	3		0530	108	2.
1		0900	19	0.	2		0000	49	1655.	2		1500	79	93.	3		0600	109	2.
1		0930	20	0.	2		0030	50	1469.	2		1530	80	86.	3		0630	110	2.
1		1000	21	0.	2		0100	51	1387.	2		1600	81	79.	3		0700	111	1.
1		1030	22	0.	2		0130	52	1294.	2		1630	82	73.	3		0730	112	1.
1		1100	23	1.	2		0200	53	1208.	2		1700	83	67.	3		0800	113	1.
1		1130	24	5.	2		0230	54	1147.	2		1730	84	62.	3		0830	114	1.
1		1200	25	17.	2		0300	55	1060.	2		1800	85	57.	3		0900	115	0.
1		1230	26	47.	2		0330	56	993.	2		1830	86	51.	3		0930	116	0.
1		1300	27	111.	2		0400	57	932.	2		1900	87	46.	3		1000	117	0.
1		1330	28	229.	2		0430	58	860.	2		1930	88	40.	3		1030	118	0.
1		1400	29	613.	2		0500	59	806.	2		2000	89	35.	3		1100	119	0.
1		1430	30	1236.	2		0530	60	736.	2		2030	90	30.	3		1130	120	0.

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PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
		(CFS)				
3975.	18.50		3277.	1488.	612.	612.
		(INCHES)	1.801	3.270	3.335	3.335
		(AC-FT)	1625.	2951.	3009.	3009.

CUMULATIVE AREA = 16.92 SQ MI

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190 KK Node1

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 192 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          0  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .500  TIME INTERVAL IN HOURS

                          SANTA MARGARITA STORMS

 196 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN         15  TIME INTERVAL IN MINUTES
                     JXDATE      1    0  STARTING DATE
                     JXTIME          0  STARTING TIME
                          UHG FROM VALLEY S-GRAPH

                SUBBASIN RUNOFF DATA

 193 BA          SUBBASIN CHARACTERISTICS
                      TAREA      22.37  SUBBASIN AREA

                PRECIPITATION DATA

 195 PB               STORM       4.11  BASIN TOTAL PRECIPITATION

 197 PI            INCREMENTAL PRECIPITATION PATTERN
                     .02       .03       .02       .03       .03       .04       .04       .05       .05       .06
                     .05       .07       .07       .08       .09       .10       .12       .14       .16       .18
                     .12       .16       .16       .14       .21       .23       .28       .19       .22       .21
                     .19       .16       .03       .02       .04       .04       .03       .02       .03       .02
                     .02       .02       .02       .02       .02       .02       .02       .02

 207 LS          SCS LOSS RATE
                      STRTL        .57  INITIAL ABSTRACTION
                     CRVNBR      77.70  CURVE NUMBER
                      RTIMP        .00  PERCENT IMPERVIOUS AREA

 208 UI          INPUT UNITGRAPH,  46 ORDINATES,  VOLUME = 1.00
                    958.0     1567.0     2498.0     3394.0     3836.0     3421.0     2176.0     1593.0     1187.0      984.0
                    785.0      696.0      574.0      493.0      427.0      383.0      345.0      314.0      304.0      248.0
                    241.0      217.0      192.0      192.0      173.0      152.0      152.0      152.0      117.0      101.0
                    101.0      101.0      101.0      101.0       53.0       50.0       50.0       50.0       50.0       50.0
                     49.5       49.5       49.5       49.5       49.5       35.3

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HYDROGRAPH AT STATION Node1

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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.	2		0600	61	.00	.00	.00	208.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	189.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	175.
1		0130	4	.02	.02	.00	0.	2		0730	64	.00	.00	.00	160.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	145.
1		0230	6	.03	.03	.00	0.	2		0830	66	.00	.00	.00	130.
1		0300	7	.04	.04	.00	0.	2		0900	67	.00	.00	.00	118.
1		0330	8	.04	.04	.00	0.	2		0930	68	.00	.00	.00	110.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	103.
1		0430	10	.05	.05	.00	0.	2		1030	70	.00	.00	.00	95.
1		0500	11	.06	.06	.00	0.	2		1100	71	.00	.00	.00	87.
1		0530	12	.05	.05	.00	0.	2		1130	72	.00	.00	.00	78.
1		0600	13	.07	.07	.00	0.	2		1200	73	.00	.00	.00	68.
1		0630	14	.07	.07	.00	0.	2		1230	74	.00	.00	.00	58.
1		0700	15	.08	.08	.00	2.	2		1300	75	.00	.00	.00	49.
1		0730	16	.09	.08	.01	10.	2		1330	76	.00	.00	.00	40.
1		0800	17	.10	.09	.01	30.	2		1400	77	.00	.00	.00	31.
1		0830	18	.12	.10	.02	70.	2		1430	78	.00	.00	.00	23.
1		0900	19	.14	.10	.04	138.	2		1500	79	.00	.00	.00	18.
1		0930	20	.16	.11	.05	246.	2		1530	80	.00	.00	.00	16.
1		1000	21	.18	.11	.07	396.	2		1600	81	.00	.00	.00	14.
1		1030	22	.12	.07	.05	562.	2		1630	82	.00	.00	.00	12.
1		1100	23	.16	.09	.08	760.	2		1700	83	.00	.00	.00	10.
1		1130	24	.16	.08	.08	959.	2		1730	84	.00	.00	.00	8.
1		1200	25	.14	.07	.08	1146.	2		1800	85	.00	.00	.00	8.
1		1230	26	.21	.09	.12	1351.	2		1830	86	.00	.00	.00	7.
1		1300	27	.23	.09	.15	1585.	2		1900	87	.00	.00	.00	6.
1		1330	28	.28	.10	.18	1896.	2		1930	88	.00	.00	.00	5.
1		1400	29	.19	.06	.13	2204.	2		2000	89	.00	.00	.00	4.
1		1430	30	.22	.06	.16	2558.	2		2030	90	.00	.00	.00	3.
1		1500	31	.21	.06	.15	2890.	2		2100	91	.00	.00	.00	2.
1		1530	32	.19	.05	.15	3133.	2		2130	92	.00	.00	.00	2.
1		1600	33	.16	.04	.12	3265.	2		2200	93	.00	.00	.00	1.
1		1630	34	.03	.01	.02	3229.	2		2230	94	.00	.00	.00	0.
1		1700	35	.02	.01	.02	3108.	2		2300	95	.00	.00	.00	0.
1		1730	36	.04	.01	.03	2850.	2		2330	96	.00	.00	.00	0.

1	1800	37	.04	.01	.03	2487.	*	3	0000	97	.00	.00	.00	0.
1	1830	38	.03	.01	.03	2088.	*	3	0030	98	.00	.00	.00	0.
1	1900	39	.02	.00	.02	1757.	*	3	0100	99	.00	.00	.00	0.
1	1930	40	.03	.01	.02	1552.	*	3	0130	100	.00	.00	.00	0.
1	2000	41	.02	.00	.02	1398.	*	3	0200	101	.00	.00	.00	0.
1	2030	42	.02	.01	.02	1267.	*	3	0230	102	.00	.00	.00	0.
1	2100	43	.02	.00	.02	1153.	*	3	0300	103	.00	.00	.00	0.
1	2130	44	.02	.00	.02	1062.	*	3	0330	104	.00	.00	.00	0.
1	2200	45	.02	.00	.02	989.	*	3	0400	105	.00	.00	.00	0.
1	2230	46	.02	.00	.02	926.	*	3	0430	106	.00	.00	.00	0.
1	2300	47	.02	.00	.01	873.	*	3	0500	107	.00	.00	.00	0.
1	2330	48	.02	.00	.01	825.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.02	.00	.01	781.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	728.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	670.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	602.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	532.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	460.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	394.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	347.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	309.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	279.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	254.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	231.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 4.11, TOTAL LOSS = 2.16, TOTAL EXCESS = 1.95

+	PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
			(CFS)				
+	3265.	16.00		2615.	1151.	473.	473.
			(INCHES)	1.087	1.913	1.951	1.951
			(AC-FT)	1297.	2282.	2328.	2328.

CUMULATIVE AREA = 22.37 SQ MI

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          *            *
214 KK    *    Node3   *
          *            *
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216 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

220 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

SUBBASIN RUNOFF DATA

217 BA SUBBASIN CHARACTERISTICS

TAREA	18.40	SUBBASIN AREA

PRECIPITATION DATA

219 PB

STORM	4.75	BASIN TOTAL PRECIPITATION

221 PI INCREMENTAL PRECIPITATION PATTERN

.02	.03	.03	.03	.04	.05	.05	.05	.06	.07
.06	.08	.09	.09	.10	.12	.14	.16	.19	.21
.14	.19	.18	.17	.24	.27	.32	.22	.25	.24
.22	.18	.04	.03	.05	.04	.04	.02	.03	.02
.03	.02	.02	.02	.02	.02	.02	.02		

231 LS SCS LOSS RATE

STRTL	.53	INITIAL ABSTRACTION
CRVNBR	78.90	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

232 UI INPUT UNITGRAPH, 37 ORDINATES, VOLUME = 1.00

644.0	1005.0	1367.0	2169.0	5078.0	3567.0	1871.0	1346.0	1148.0	846.0
756.0	647.0	538.0	443.0	408.0	333.0	282.0	243.0	183.0	145.0
145.0	107.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0
31.0	31.0	31.0	31.0	31.0	31.0	30.6			

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HYDROGRAPH AT STATION Node3

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.	2		0600	61	.00	.00	.00	105.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	92.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	80.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	67.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	54.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	45.
1		0300	7	.05	.05	.00	0.	2		0900	67	.00	.00	.00	35.
1		0330	8	.05	.05	.00	0.	2		0930	68	.00	.00	.00	26.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	19.
1		0430	10	.06	.06	.00	0.	2		1030	70	.00	.00	.00	13.
1		0500	11	.07	.07	.00	0.	2		1100	71	.00	.00	.00	11.
1		0530	12	.06	.06	.00	0.	2		1130	72	.00	.00	.00	10.
1		0600	13	.08	.08	.00	0.	2		1200	73	.00	.00	.00	9.
1		0630	14	.09	.08	.01	4.	2		1230	74	.00	.00	.00	8.
1		0700	15	.09	.08	.01	13.	2		1300	75	.00	.00	.00	7.
1		0730	16	.10	.08	.02	31.	2		1330	76	.00	.00	.00	6.
1		0800	17	.12	.09	.03	65.	2		1400	77	.00	.00	.00	5.
1		0830	18	.14	.10	.04	132.	2		1430	78	.00	.00	.00	5.
1		0900	19	.16	.10	.06	231.	2		1500	79	.00	.00	.00	4.
1		0930	20	.19	.11	.08	363.	2		1530	80	.00	.00	.00	3.
1		1000	21	.21	.11	.10	541.	2		1600	81	.00	.00	.00	3.
1		1030	22	.14	.07	.07	741.	2		1630	82	.00	.00	.00	2.
1		1100	23	.19	.08	.11	975.	2		1700	83	.00	.00	.00	1.
1		1130	24	.18	.07	.11	1236.	2		1730	84	.00	.00	.00	1.
1		1200	25	.17	.06	.10	1480.	2		1800	85	.00	.00	.00	0.
1		1230	26	.24	.08	.16	1634.	2		1830	86	.00	.00	.00	0.
1		1300	27	.27	.08	.19	1900.	2		1900	87	.00	.00	.00	0.
1		1330	28	.32	.09	.24	2197.	2		1930	88	.00	.00	.00	0.
1		1400	29	.22	.05	.17	2450.	2		2000	89	.00	.00	.00	0.
1		1430	30	.25	.06	.20	2876.	2		2030	90	.00	.00	.00	0.
1		1500	31	.24	.05	.19	3320.	2		2100	91	.00	.00	.00	0.
1		1530	32	.22	.04	.18	3697.	2		2130	92	.00	.00	.00	0.
1		1600	33	.18	.03	.15	3704.	2		2200	93	.00	.00	.00	0.
1		1630	34	.04	.01	.03	3701.	2		2230	94	.00	.00	.00	0.
1		1700	35	.03	.00	.02	3645.	2		2300	95	.00	.00	.00	0.
1		1730	36	.05	.01	.04	3454.	2		2330	96	.00	.00	.00	0.
1		1800	37	.04	.01	.04	3068.	3		0000	97	.00	.00	.00	0.
1		1830	38	.04	.01	.03	2407.	3		0030	98	.00	.00	.00	0.
1		1900	39	.02	.00	.02	1943.	3		0100	99	.00	.00	.00	0.
1		1930	40	.03	.01	.03	1748.	3		0130	100	.00	.00	.00	0.
1		2000	41	.02	.00	.02	1582.	3		0200	101	.00	.00	.00	0.
1		2030	42	.03	.00	.02	1408.	3		0230	102	.00	.00	.00	0.
1		2100	43	.02	.00	.02	1237.	3		0300	103	.00	.00	.00	0.
1		2130	44	.02	.00	.02	1125.	3		0330	104	.00	.00	.00	0.
1		2200	45	.02	.00	.02	1009.	3		0400	105	.00	.00	.00	0.
1		2230	46	.02	.00	.02	922.	3		0430	106	.00	.00	.00	0.
1		2300	47	.02	.00	.02	839.	3		0500	107	.00	.00	.00	0.
1		2330	48	.02	.00	.02	763.	3		0530	108	.00	.00	.00	0.
2		0000	49	.02	.00	.02	696.	3		0600	109	.00	.00	.00	0.
2		0030	50	.00	.00	.00	628.	3		0630	110	.00	.00	.00	0.
2		0100	51	.00	.00	.00	554.	3		0700	111	.00	.00	.00	0.
2		0130	52	.00	.00	.00	489.	3		0730	112	.00	.00	.00	0.
2		0200	53	.00	.00	.00	424.	3		0800	113	.00	.00	.00	0.
2		0230	54	.00	.00	.00	320.	3		0830	114	.00	.00	.00	0.
2		0300	55	.00	.00	.00	246.	3		0900	115	.00	.00	.00	0.
2		0330	56	.00	.00	.00	210.	3		0930	116	.00	.00	.00	0.
2		0400	57	.00	.00	.00	182.	3		1000	117	.00	.00	.00	0.
2		0430	58	.00	.00	.00	156.	3		1030	118	.00	.00	.00	0.
2		0500	59	.00	.00	.00	137.	3		1100	119	.00	.00	.00	0.
2		0530	60	.00	.00	.00	120.	3		1130	120	.00	.00	.00	0.

TOTAL RAINFALL = 4.75, TOTAL LOSS = 2.17, TOTAL EXCESS = 2.58

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
		(CFS)				
3704.	16.00		3037.	1269.	514.	514.
		(INCHES)	1.534	2.564	2.578	2.578
		(AC-FT)	1506.	2516.	2529.	2529.

CUMULATIVE AREA = 18.40 SQ MI

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            *            *
 237 KK     *    Node66  *
            *            *
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 239 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          0  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .500  TIME INTERVAL IN HOURS

 240 HC          HYDROGRAPH COMBINATION
                      ICOMP          3  NUMBER OF HYDROGRAPHS TO COMBINE
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HYDROGRAPH AT STATION Node66
SUM OF 3 HYDROGRAPHS

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		1500	31	7844.	2		0600	61	985.	2		2100	91	28.
1		0030	2	0.	1		1530	32	8842.	2		0630	62	894.	2		2130	92	24.
1		0100	3	0.	1		1600	33	9270.	2		0700	63	807.	2		2200	93	19.
1		0130	4	0.	1		1630	34	9528.	2		0730	64	712.	2		2230	94	16.
1		0200	5	0.	1		1700	35	9704.	2		0800	65	617.	2		2300	95	13.
1		0230	6	0.	1		1730	36	9673.	2		0830	66	546.	2		2330	96	11.
1		0300	7	0.	1		1800	37	9300.	2		0900	67	474.	3		0000	97	10.
1		0330	8	0.	1		1830	38	8470.	2		0930	68	418.	3		0030	98	9.
1		0400	9	0.	1		1900	39	7609.	2		1000	69	368.	3		0100	99	8.
1		0430	10	0.	1		1930	40	7018.	2		1030	70	323.	3		0130	100	7.
1		0500	11	0.	1		2000	41	6594.	2		1100	71	286.	3		0200	101	6.
1		0530	12	0.	1		2030	42	6098.	2		1130	72	255.	3		0230	102	5.
1		0600	13	0.	1		2100	43	5468.	2		1200	73	229.	3		0300	103	5.
1		0630	14	4.	1		2130	44	4849.	2		1230	74	205.	3		0330	104	4.
1		0700	15	15.	1		2200	45	4269.	2		1300	75	184.	3		0400	105	4.
1		0730	16	41.	1		2230	46	3854.	2		1330	76	164.	3		0430	106	3.
1		0800	17	95.	1		2300	47	3534.	2		1400	77	145.	3		0500	107	3.
1		0830	18	202.	1		2330	48	3338.	2		1430	78	129.	3		0530	108	2.
1		0900	19	369.	2		0000	49	3132.	2		1500	79	115.	3		0600	109	2.
1		0930	20	609.	2		0030	50	2825.	2		1530	80	105.	3		0630	110	2.
1		1000	21	938.	2		0100	51	2611.	2		1600	81	96.	3		0700	111	1.
1		1030	22	1304.	2		0130	52	2384.	2		1630	82	87.	3		0730	112	1.
1		1100	23	1736.	2		0200	53	2164.	2		1700	83	78.	3		0800	113	1.
1		1130	24	2201.	2		0230	54	1927.	2		1730	84	71.	3		0830	114	1.
1		1200	25	2643.	2		0300	55	1701.	2		1800	85	65.	3		0900	115	0.
1		1230	26	3032.	2		0330	56	1550.	2		1830	86	58.	3		0930	116	0.
1		1300	27	3596.	2		0400	57	1423.	2		1900	87	51.	3		1000	117	0.
1		1330	28	4322.	2		0430	58	1296.	2		1930	88	45.	3		1030	118	0.
1		1400	29	5267.	2		0500	59	1198.	2		2000	89	39.	3		1100	119	0.
1		1430	30	6670.	2		0530	60	1087.	2		2030	90	34.	3		1130	120	0.

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
9704.	17.00		8353.	3872.	1600.	1600.
		(INCHES)	1.346	2.496	2.557	2.557
		(AC-FT)	4142.	7680.	7867.	7867.

CUMULATIVE AREA = 57.69 SQ MI

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            *            *
 241 KK     *    16      *
            *            *
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42.oh1

243 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

244 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	32736.	CHANNEL LENGTH
S	.0069	SLOPE
N	.040	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	200.00	BOTTOM WIDTH OR DIAMETER
Z	5.00	SIDE SLOPE

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COMPUTED MUSKINGUM-CUNGE PARAMETERS

ELEMENT	ALPHA	M	COMPUTATION TIME STEP DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.12	1.61	30.00	10912.00	9735.29	1080.00	2.56	10.52
			INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL					
MAIN	.12	1.61	30.00		9735.29	1080.00	2.56	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7867E+04 EXCESS= .0000E+00 OUTFLOW= .7873E+04 BASIN STORAGE= .1368E+01 PERCENT ERROR= -.1

HYDROGRAPH AT STATION 16

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		1500	31	5732.	2		0600	61	1280.	2		2100	91	52.
1		0030	2	0.	1		1530	32	7262.	2		0630	62	1192.	2		2130	92	46.
1		0100	3	0.	1		1600	33	8513.	2		0700	63	1091.	2		2200	93	40.
1		0130	4	0.	1		1630	34	9149.	2		0730	64	992.	2		2230	94	35.
1		0200	5	0.	1		1700	35	9517.	2		0800	65	902.	2		2300	95	30.
1		0230	6	0.	1		1730	36	9586.	2		0830	66	818.	2		2330	96	26.
1		0300	7	0.	1		1800	37	9735.	2		0900	67	727.	3		0000	97	22.
1		0330	8	0.	1		1830	38	9441.	2		0930	68	635.	3		0030	98	18.
1		0400	9	0.	1		1900	39	8863.	2		1000	69	563.	3		0100	99	15.
1		0430	10	0.	1		1930	40	7998.	2		1030	70	493.	3		0130	100	13.
1		0500	11	0.	1		2000	41	7253.	2		1100	71	436.	3		0200	101	11.
1		0530	12	0.	1		2030	42	6787.	2		1130	72	386.	3		0230	102	10.
1		0600	13	0.	1		2100	43	6379.	2		1200	73	341.	3		0300	103	9.
1		0630	14	0.	1		2130	44	5875.	2		1230	74	303.	3		0330	104	8.
1		0700	15	0.	1		2200	45	5272.	2		1300	75	271.	3		0400	105	7.
1		0730	16	0.	1		2230	46	4695.	2		1330	76	243.	3		0430	106	6.
1		0800	17	1.	1		2300	47	4201.	2		1400	77	218.	3		0500	107	5.
1		0830	18	5.	1		2330	48	3800.	2		1430	78	197.	3		0530	108	5.
1		0900	19	20.	2		0000	49	3534.	2		1500	79	177.	3		0600	109	4.
1		0930	20	57.	2		0030	50	3314.	2		1530	80	158.	3		0630	110	4.
1		1000	21	145.	2		0100	51	3141.	2		1600	81	141.	3		0700	111	3.
1		1030	22	307.	2		0130	52	2883.	2		1630	82	126.	3		0730	112	3.
1		1100	23	557.	2		0200	53	2623.	2		1700	83	114.	3		0800	113	2.
1		1130	24	910.	2		0230	54	2450.	2		1730	84	104.	3		0830	114	2.
1		1200	25	1396.	2		0300	55	2230.	2		1800	85	95.	3		0900	115	2.
1		1230	26	1998.	2		0330	56	2028.	2		1830	86	86.	3		0930	116	1.
1		1300	27	2555.	2		0400	57	1815.	2		1900	87	78.	3		1000	117	1.
1		1330	28	3041.	2		0430	58	1632.	2		1930	88	71.	3		1030	118	1.
1		1400	29	3626.	2		0500	59	1509.	2		2000	89	65.	3		1100	119	1.
1		1430	30	4536.	2		0530	60	1395.	2		2030	90	58.	3		1130	120	1.

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
9735.	18.00	(CFS)	8347.	3872.	1601.	1601.
		(INCHES)	1.345	2.496	2.559	2.559
		(AC-FT)	4139.	7680.	7873.	7873.

CUMULATIVE AREA = 57.69 SQ MI

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          *            *
245 KK    *    Node4   *
          *            *
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247 KO          OUTPUT CONTROL VARIABLES
                     IPRNT           0  PRINT CONTROL
                     IPLOT           0  PLOT CONTROL
                     QSCAL          0.  HYDROGRAPH PLOT SCALE
                     IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                      IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2         120  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT        .500  TIME INTERVAL IN HOURS

                         SANTA MARGARITA STORMS

251 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN          15  TIME INTERVAL IN MINUTES
                    JXDATE       1   0  STARTING DATE
                    JXTIME           0  STARTING TIME
                         UHG FROM VALLEY S-GRAPH

              SUBBASIN RUNOFF DATA

248 BA          SUBBASIN CHARACTERISTICS
                     TAREA        5.69  SUBBASIN AREA

                PRECIPITATION DATA

250 PB               STORM        4.47  BASIN TOTAL PRECIPITATION

252 PI            INCREMENTAL PRECIPITATION PATTERN
                    .02       .03       .03       .03       .04       .04       .04       .05       .06       .07
                    .06       .07       .08       .09       .09       .11       .13       .15       .17       .19
                    .13       .18       .17       .16       .23       .25       .30       .21       .24       .23
                    .21       .17       .04       .03       .04       .04       .04       .02       .03       .02
                    .03       .02       .02       .02       .02       .02       .02       .02

262 LS          SCS LOSS RATE
                     STRTL         .54  INITIAL ABSTRACTION
                    CRVNBR       78.70  CURVE NUMBER
                     RTIMP         .00  PERCENT IMPERVIOUS AREA

263 UI          INPUT UNITGRAPH,  41 ORDINATES,  VOLUME = 1.00
                   278.0     488.0     807.0    1030.0    1079.0     729.0     476.0     344.0     279.0     220.0
                   187.0     155.0     133.0     116.0      98.0      91.0      87.0      70.0      68.0      58.0
                    54.5      53.9      43.3      43.3      43.3      33.5      28.6      28.6      28.6      28.6
                    20.9      14.1      14.1      14.1      14.1      14.1      14.1      14.1      14.1      14.1
                    12.6
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HYDROGRAPH AT STATION Node4

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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.	2		0600	61	.00	.00	.00	51.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	46.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	41.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	37.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	34.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	31.
1		0300	7	.04	.04	.00	0.	2		0900	67	.00	.00	.00	28.
1		0330	8	.04	.04	.00	0.	2		0930	68	.00	.00	.00	24.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	21.
1		0430	10	.06	.06	.00	0.	2		1030	70	.00	.00	.00	18.
1		0500	11	.07	.07	.00	0.	2		1100	71	.00	.00	.00	14.
1		0530	12	.06	.06	.00	0.	2		1130	72	.00	.00	.00	11.
1		0600	13	.07	.07	.00	0.	2		1200	73	.00	.00	.00	9.
1		0630	14	.08	.08	.00	1.	2		1230	74	.00	.00	.00	6.
1		0700	15	.09	.08	.01	3.	2		1300	75	.00	.00	.00	6.
1		0730	16	.09	.08	.01	9.	2		1330	76	.00	.00	.00	5.
1		0800	17	.11	.09	.02	21.	2		1400	77	.00	.00	.00	4.
1		0830	18	.13	.10	.03	42.	2		1430	78	.00	.00	.00	4.
1		0900	19	.15	.10	.05	72.	2		1500	79	.00	.00	.00	3.
1		0930	20	.17	.11	.07	114.	2		1530	80	.00	.00	.00	3.
1		1000	21	.19	.11	.09	169.	2		1600	81	.00	.00	.00	2.
1		1030	22	.13	.07	.07	227.	2		1630	82	.00	.00	.00	2.

1	1100	23	.18	.08	.09	291.	*	2	1700	83	.00	.00	.00	2.
1	1130	24	.17	.07	.10	352.	*	2	1730	84	.00	.00	.00	1.
1	1200	25	.16	.06	.09	405.	*	2	1800	85	.00	.00	.00	1.
1	1230	26	.23	.08	.15	463.	*	2	1830	86	.00	.00	.00	1.
1	1300	27	.26	.08	.17	537.	*	2	1900	87	.00	.00	.00	1.
1	1330	28	.30	.09	.22	634.	*	2	1930	88	.00	.00	.00	0.
1	1400	29	.21	.05	.15	733.	*	2	2000	89	.00	.00	.00	0.
1	1430	30	.24	.06	.18	845.	*	2	2030	90	.00	.00	.00	0.
1	1500	31	.23	.05	.18	932.	*	2	2100	91	.00	.00	.00	0.
1	1530	32	.21	.04	.17	988.	*	2	2130	92	.00	.00	.00	0.
1	1600	33	.17	.03	.14	1005.	*	2	2200	93	.00	.00	.00	0.
1	1630	34	.04	.01	.03	987.	*	2	2230	94	.00	.00	.00	0.
1	1700	35	.03	.00	.02	927.	*	2	2300	95	.00	.00	.00	0.
1	1730	36	.04	.01	.04	823.	*	2	2330	96	.00	.00	.00	0.
1	1800	37	.04	.01	.03	692.	*	3	0000	97	.00	.00	.00	0.
1	1830	38	.04	.01	.03	568.	*	3	0030	98	.00	.00	.00	0.
1	1900	39	.02	.00	.02	487.	*	3	0100	99	.00	.00	.00	0.
1	1930	40	.03	.01	.03	437.	*	3	0130	100	.00	.00	.00	0.
1	2000	41	.02	.00	.02	394.	*	3	0200	101	.00	.00	.00	0.
1	2030	42	.03	.00	.02	357.	*	3	0230	102	.00	.00	.00	0.
1	2100	43	.02	.00	.02	325.	*	3	0300	103	.00	.00	.00	0.
1	2130	44	.02	.00	.02	301.	*	3	0330	104	.00	.00	.00	0.
1	2200	45	.02	.00	.02	280.	*	3	0400	105	.00	.00	.00	0.
1	2230	46	.02	.00	.02	263.	*	3	0430	106	.00	.00	.00	0.
1	2300	47	.02	.00	.01	247.	*	3	0500	107	.00	.00	.00	0.
1	2330	48	.02	.00	.02	234.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.02	.00	.02	221.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	205.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	187.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	165.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	142.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	119.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	102.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	90.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	80.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	71.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	63.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	57.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 4.47, TOTAL LOSS = 2.14, TOTAL EXCESS = 2.33

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1005.	16.00		804.	351.	143.	143.
		(INCHES)	1.314	2.293	2.325	2.325
		(AC-FT)	399.	696.	706.	706.

CUMULATIVE AREA = 5.69 SQ MI

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              *            *
269 KK        *    Node75  *
              *            *
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271 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

272 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node75
SUM OF 2 HYDROGRAPHS

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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		1500	31	6664.	*	2		0600	61	1332.	*	2		2100	91	52.

1	0030	2	0.	*	1	1530	32	8250.	*	2	0630	62	1238.	*	2	2130	92	46.
1	0100	3	0.	*	1	1600	33	9518.	*	2	0700	63	1131.	*	2	2200	93	40.
1	0130	4	0.	*	1	1630	34	10137.	*	2	0730	64	1029.	*	2	2230	94	35.
1	0200	5	0.	*	1	1700	35	10444.	*	2	0800	65	936.	*	2	2300	95	30.
1	0230	6	0.	*	1	1730	36	10410.	*	2	0830	66	849.	*	2	2330	96	26.
1	0300	7	0.	*	1	1800	37	10428.	*	2	0900	67	755.	*	3	0000	97	22.
1	0330	8	0.	*	1	1830	38	10009.	*	2	0930	68	660.	*	3	0030	98	18.
1	0400	9	0.	*	1	1900	39	9350.	*	2	1000	69	584.	*	3	0100	99	15.
1	0430	10	0.	*	1	1930	40	8434.	*	2	1030	70	511.	*	3	0130	100	13.
1	0500	11	0.	*	1	2000	41	7647.	*	2	1100	71	450.	*	3	0200	101	11.
1	0530	12	0.	*	1	2030	42	7144.	*	2	1130	72	398.	*	3	0230	102	10.
1	0600	13	0.	*	1	2100	43	6704.	*	2	1200	73	350.	*	3	0300	103	9.
1	0630	14	1.	*	1	2130	44	6177.	*	2	1230	74	309.	*	3	0330	104	8.
1	0700	15	3.	*	1	2200	45	5552.	*	2	1300	75	276.	*	3	0400	105	7.
1	0730	16	9.	*	1	2230	46	4959.	*	2	1330	76	248.	*	3	0430	106	6.
1	0800	17	22.	*	1	2300	47	4449.	*	2	1400	77	223.	*	3	0500	107	5.
1	0830	18	47.	*	1	2330	48	4035.	*	2	1430	78	200.	*	3	0530	108	5.
1	0900	19	91.	*	2	0000	49	3756.	*	2	1500	79	180.	*	3	0600	109	4.
1	0930	20	171.	*	2	0030	50	3519.	*	2	1530	80	161.	*	3	0630	110	4.
1	1000	21	314.	*	2	0100	51	3327.	*	2	1600	81	143.	*	3	0700	111	3.
1	1030	22	534.	*	2	0130	52	3048.	*	2	1630	82	128.	*	3	0730	112	3.
1	1100	23	848.	*	2	0200	53	2765.	*	2	1700	83	116.	*	3	0800	113	2.
1	1130	24	1262.	*	2	0230	54	2569.	*	2	1730	84	105.	*	3	0830	114	2.
1	1200	25	1800.	*	2	0300	55	2332.	*	2	1800	85	96.	*	3	0900	115	2.
1	1230	26	2461.	*	2	0330	56	2118.	*	2	1830	86	87.	*	3	0930	116	1.
1	1300	27	3092.	*	2	0400	57	1895.	*	2	1900	87	79.	*	3	1000	117	1.
1	1330	28	3675.	*	2	0430	58	1702.	*	2	1930	88	72.	*	3	1030	118	1.
1	1400	29	4359.	*	2	0500	59	1573.	*	2	2000	89	65.	*	3	1100	119	1.
1	1430	30	5381.	*	2	0530	60	1452.	*	2	2030	90	58.	*	3	1130	120	1.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 10444.	17.00		9038.	4214.	1744.	1744.
		(INCHES)	1.326	2.473	2.538	2.538
		(AC-FT)	4482.	8359.	8578.	8578.

CUMULATIVE AREA = 63.38 SQ MI

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          *            *
273 KK    *    Node33  *
          *            *
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275 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

279 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

SUBBASIN RUNOFF DATA

276 BA SUBBASIN CHARACTERISTICS

TAREA	18.46	SUBBASIN AREA

PRECIPITATION DATA

278 PB

STORM	7.84	BASIN TOTAL PRECIPITATION

280 PI INCREMENTAL PRECIPITATION PATTERN

.04	.05	.05	.06	.06	.08	.08	.09	.10	.12
.10	.13	.14	.16	.16	.20	.24	.26	.31	.34
.24	.31	.30	.27	.40	.45	.53	.36	.42	.40
.37	.30	.06	.05	.08	.07	.06	.04	.06	.04
.05	.04	.04	.04	.04	.03	.03	.03		

290 LS SCS LOSS RATE

STRTL	.59	INITIAL ABSTRACTION
CRVNBR	77.20	CURVE NUMBER

RTIMP .00 PERCENT IMPERVIOUS AREA

291 UI INPUT UNITGRAPH, 19 ORDINATES, VOLUME = 1.00

1631.0	3501.0	8638.0	3253.0	2017.0	1416.0	995.0	747.0	534.0	341.0
270.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	40.0	

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HYDROGRAPH AT STATION Node33

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1		0000	1	.00	.00	.00	0.
1		0030	2	.04	.04	.00	0.
1		0100	3	.05	.05	.00	0.
1		0130	4	.05	.05	.00	0.
1		0200	5	.05	.05	.00	0.
1		0230	6	.06	.06	.00	0.
1		0300	7	.08	.08	.00	0.
1		0330	8	.08	.08	.00	0.
1		0400	9	.09	.09	.00	0.
1		0430	10	.10	.10	.00	0.
1		0500	11	.12	.11	.01	9.
1		0530	12	.10	.09	.01	38.
1		0600	13	.13	.10	.02	123.
1		0630	14	.14	.11	.03	248.
1		0700	15	.16	.11	.05	431.
1		0730	16	.16	.10	.06	652.
1		0800	17	.20	.11	.08	919.
1		0830	18	.24	.12	.11	1245.
1		0900	19	.26	.12	.14	1692.
1		0930	20	.31	.13	.18	2258.
1		1000	21	.34	.12	.22	2878.
1		1030	22	.24	.08	.16	3489.
1		1100	23	.31	.09	.22	3983.
1		1130	24	.30	.08	.22	4019.
1		1200	25	.27	.06	.21	4554.
1		1230	26	.40	.08	.32	4900.
1		1300	27	.45	.08	.36	5392.
1		1330	28	.53	.09	.45	6674.
1		1400	29	.36	.05	.31	7543.
1		1430	30	.42	.05	.36	8266.
1		1500	31	.40	.05	.35	7777.
1		1530	32	.37	.04	.33	8065.
1		1600	33	.30	.03	.27	7959.
1		1630	34	.06	.01	.06	7255.
1		1700	35	.05	.00	.04	5945.
1		1730	36	.08	.01	.07	3905.
1		1800	37	.07	.01	.06	3045.
1		1830	38	.06	.01	.06	2676.
1		1900	39	.04	.00	.04	2234.
1		1930	40	.05	.00	.05	1888.
1		2000	41	.04	.00	.04	1540.
1		2030	42	.05	.00	.04	1419.
1		2100	43	.04	.00	.04	1234.
1		2130	44	.04	.00	.04	1169.
1		2200	45	.04	.00	.04	1082.
1		2230	46	.04	.00	.04	1032.
1		2300	47	.03	.00	.03	978.
1		2330	48	.03	.00	.03	922.
2		0000	49	.03	.00	.03	831.
2		0030	50	.00	.00	.00	738.
2		0100	51	.00	.00	.00	601.
2		0130	52	.00	.00	.00	327.
2		0200	53	.00	.00	.00	222.
2		0230	54	.00	.00	.00	157.
2		0300	55	.00	.00	.00	110.
2		0330	56	.00	.00	.00	77.
2		0400	57	.00	.00	.00	52.
2		0430	58	.00	.00	.00	36.
2		0500	59	.00	.00	.00	25.
2		0530	60	.00	.00	.00	16.
2		0600	61	.00	.00	.00	14.
2		0630	62	.00	.00	.00	11.
2		0700	63	.00	.00	.00	9.
2		0730	64	.00	.00	.00	7.
2		0800	65	.00	.00	.00	5.
2		0830	66	.00	.00	.00	3.
2		0900	67	.00	.00	.00	1.
2		0930	68	.00	.00	.00	0.
2		1000	69	.00	.00	.00	0.
2		1030	70	.00	.00	.00	0.
2		1100	71	.00	.00	.00	0.
2		1130	72	.00	.00	.00	0.
2		1200	73	.00	.00	.00	0.
2		1230	74	.00	.00	.00	0.
2		1300	75	.00	.00	.00	0.
2		1330	76	.00	.00	.00	0.
2		1400	77	.00	.00	.00	0.
2		1430	78	.00	.00	.00	0.
2		1500	79	.00	.00	.00	0.
2		1530	80	.00	.00	.00	0.
2		1600	81	.00	.00	.00	0.
2		1630	82	.00	.00	.00	0.
2		1700	83	.00	.00	.00	0.
2		1730	84	.00	.00	.00	0.
2		1800	85	.00	.00	.00	0.
2		1830	86	.00	.00	.00	0.
2		1900	87	.00	.00	.00	0.
2		1930	88	.00	.00	.00	0.
2		2000	89	.00	.00	.00	0.
2		2030	90	.00	.00	.00	0.
2		2100	91	.00	.00	.00	0.
2		2130	92	.00	.00	.00	0.
2		2200	93	.00	.00	.00	0.
2		2230	94	.00	.00	.00	0.
2		2300	95	.00	.00	.00	0.
2		2330	96	.00	.00	.00	0.
3		0000	97	.00	.00	.00	0.
3		0030	98	.00	.00	.00	0.
3		0100	99	.00	.00	.00	0.
3		0130	100	.00	.00	.00	0.
3		0200	101	.00	.00	.00	0.
3		0230	102	.00	.00	.00	0.
3		0300	103	.00	.00	.00	0.
3		0330	104	.00	.00	.00	0.
3		0400	105	.00	.00	.00	0.
3		0430	106	.00	.00	.00	0.
3		0500	107	.00	.00	.00	0.
3		0530	108	.00	.00	.00	0.
3		0600	109	.00	.00	.00	0.
3		0630	110	.00	.00	.00	0.
3		0700	111	.00	.00	.00	0.
3		0730	112	.00	.00	.00	0.
3		0800	113	.00	.00	.00	0.
3		0830	114	.00	.00	.00	0.
3		0900	115	.00	.00	.00	0.
3		0930	116	.00	.00	.00	0.
3		1000	117	.00	.00	.00	0.
3		1030	118	.00	.00	.00	0.
3		1100	119	.00	.00	.00	0.
3		1130	120	.00	.00	.00	0.

TOTAL RAINFALL = 7.84, TOTAL LOSS = 2.69, TOTAL EXCESS = 5.15

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 8266.	14.50		6524.	2554.	1031.	1031.
		(INCHES)	3.286	5.145	5.149	5.149
		(AC-FT)	3235.	5066.	5069.	5069.

CUMULATIVE AREA = 18.46 SQ MI

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294 KK    *    19      *
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296 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

297 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	8818.	CHANNEL LENGTH
S	.0060	SLOPE
N	.035	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	50.00	BOTTOM WIDTH OR DIAMETER
Z	2.00	SIDE SLOPE

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COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.31	1.58	9.17	4409.00	8221.59	880.30	5.15	16.03
			INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL					
MAIN	.31	1.58	30.00		8083.18	870.00	5.15	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5069E+04 EXCESS= .0000E+00 OUTFLOW= .5070E+04 BASIN STORAGE= .2575E-01 PERCENT ERROR= .0

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HYDROGRAPH AT STATION 19

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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	1500	31	7883.	2	0600	61	16.	2	2100	91	0.
1	0030	2	0.	1	1530	32	7995.	2	0630	62	13.	2	2130	92	0.
1	0100	3	0.	1	1600	33	7975.	2	0700	63	11.	2	2200	93	0.
1	0130	4	0.	1	1630	34	7420.	2	0730	64	9.	2	2230	94	0.
1	0200	5	0.	1	1700	35	6273.	2	0800	65	7.	2	2300	95	0.
1	0230	6	0.	1	1730	36	4518.	2	0830	66	5.	2	2330	96	0.
1	0300	7	0.	1	1800	37	3335.	2	0900	67	3.	3	0000	97	0.
1	0330	8	0.	1	1830	38	2812.	2	0930	68	1.	3	0030	98	0.
1	0400	9	0.	1	1900	39	2399.	2	1000	69	0.	3	0100	99	0.
1	0430	10	0.	1	1930	40	2025.	2	1030	70	0.	3	0130	100	0.
1	0500	11	2.	1	2000	41	1688.	2	1100	71	0.	3	0200	101	0.
1	0530	12	15.	1	2030	42	1474.	2	1130	72	0.	3	0230	102	0.
1	0600	13	59.	1	2100	43	1320.	2	1200	73	0.	3	0300	103	0.
1	0630	14	160.	1	2130	44	1200.	2	1230	74	0.	3	0330	104	0.
1	0700	15	308.	1	2200	45	1125.	2	1300	75	0.	3	0400	105	0.
1	0730	16	510.	1	2230	46	1057.	2	1330	76	0.	3	0430	106	0.
1	0800	17	768.	1	2300	47	1006.	2	1400	77	0.	3	0500	107	0.
1	0830	18	1082.	1	2330	48	951.	2	1430	78	0.	3	0530	108	0.
1	0900	19	1493.	2	0000	49	880.	2	1500	79	0.	3	0600	109	0.
1	0930	20	2034.	2	0030	50	790.	2	1530	80	0.	3	0630	110	0.
1	1000	21	2655.	2	0100	51	682.	2	1600	81	0.	3	0700	111	0.
1	1030	22	3285.	2	0130	52	503.	2	1630	82	0.	3	0730	112	0.
1	1100	23	3826.	2	0200	53	294.	2	1700	83	0.	3	0800	113	0.
1	1130	24	4005.	2	0230	54	203.	2	1730	84	0.	3	0830	114	0.
1	1200	25	4393.	2	0300	55	144.	2	1800	85	0.	3	0900	115	0.
1	1230	26	4800.	2	0330	56	102.	2	1830	86	0.	3	0930	116	0.
1	1300	27	5259.	2	0400	57	71.	2	1900	87	0.	3	1000	117	0.
1	1330	28	6342.	2	0430	58	49.	2	1930	88	0.	3	1030	118	0.
1	1400	29	7325.	2	0500	59	34.	2	2000	89	0.	3	1100	119	0.
1	1430	30	8083.	2	0530	60	24.	2	2030	90	0.	3	1130	120	0.

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
		(CFS)				
8083.	14.50		6501.	2554.	1031.	1031.
		(INCHES)	3.274	5.146	5.150	5.150
		(AC-FT)	3224.	5067.	5070.	5070.

CUMULATIVE AREA = 18.46 SQ MI

298 KK Node32

300 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

304 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	15	TIME INTERVAL IN MINUTES
JXDATE	1 0	STARTING DATE
JXTIME	0	STARTING TIME

UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

SUBBASIN RUNOFF DATA

301 BA SUBBASIN CHARACTERISTICS

TAREA	8.74	SUBBASIN AREA

PRECIPITATION DATA

303 PB

STORM	7.33	BASIN TOTAL PRECIPITATION

305 PI INCREMENTAL PRECIPITATION PATTERN

.04	.05	.04	.05	.06	.07	.07	.08	.09	.11
.09	.12	.13	.15	.15	.18	.22	.24	.29	.32
.22	.29	.28	.26	.37	.42	.50	.34	.39	.37
.35	.28	.06	.04	.07	.07	.06	.04	.05	.04
.04	.04	.04	.04	.04	.03	.03	.03		

315 LS SCS LOSS RATE

STRTL	.61	INITIAL ABSTRACTION
CRVNBR	76.70	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

316 UI INPUT UNITGRAPH, 33 ORDINATES, VOLUME = 1.00

361.0	604.0	887.0	1636.0	2757.0	1122.0	729.0	607.0	451.0	384.0
324.0	256.0	224.0	186.0	151.0	132.0	84.0	79.0	77.0	17.0
16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
16.8	16.8	6.4							

HYDROGRAPH AT STATION Node32

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.	2		0600	61	.00	.00	.00	57.
1		0030	2	.04	.04	.00	0.	2		0630	62	.00	.00	.00	45.
1		0100	3	.05	.05	.00	0.	2		0700	63	.00	.00	.00	35.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	25.
1		0200	5	.05	.05	.00	0.	2		0800	65	.00	.00	.00	17.
1		0230	6	.06	.06	.00	0.	2		0830	66	.00	.00	.00	13.
1		0300	7	.07	.07	.00	0.	2		0900	67	.00	.00	.00	11.
1		0330	8	.07	.07	.00	0.	2		0930	68	.00	.00	.00	8.
1		0400	9	.08	.08	.00	0.	2		1000	69	.00	.00	.00	7.
1		0430	10	.09	.09	.00	0.	2		1030	70	.00	.00	.00	6.
1		0500	11	.11	.11	.00	1.	2		1100	71	.00	.00	.00	6.

1	0530	12	.09	.09	.01	3.	*	2	1130	72	.00	.00	.00	5.
1	0600	13	.12	.10	.02	11.	*	2	1200	73	.00	.00	.00	4.
1	0630	14	.13	.11	.03	27.	*	2	1230	74	.00	.00	.00	4.
1	0700	15	.15	.11	.04	58.	*	2	1300	75	.00	.00	.00	3.
1	0730	16	.15	.11	.05	108.	*	2	1330	76	.00	.00	.00	3.
1	0800	17	.18	.11	.07	180.	*	2	1400	77	.00	.00	.00	2.
1	0830	18	.22	.12	.10	273.	*	2	1430	78	.00	.00	.00	2.
1	0900	19	.24	.12	.12	388.	*	2	1500	79	.00	.00	.00	1.
1	0930	20	.29	.13	.16	533.	*	2	1530	80	.00	.00	.00	1.
1	1000	21	.31	.12	.19	722.	*	2	1600	81	.00	.00	.00	0.
1	1030	22	.22	.08	.14	920.	*	2	1630	82	.00	.00	.00	0.
1	1100	23	.29	.09	.20	1134.	*	2	1700	83	.00	.00	.00	0.
1	1130	24	.28	.08	.20	1359.	*	2	1730	84	.00	.00	.00	0.
1	1200	25	.26	.07	.19	1516.	*	2	1800	85	.00	.00	.00	0.
1	1230	26	.37	.09	.28	1615.	*	2	1830	86	.00	.00	.00	0.
1	1300	27	.42	.09	.33	1866.	*	2	1900	87	.00	.00	.00	0.
1	1330	28	.50	.09	.41	2084.	*	2	1930	88	.00	.00	.00	0.
1	1400	29	.34	.06	.28	2324.	*	2	2000	89	.00	.00	.00	0.
1	1430	30	.39	.06	.33	2720.	*	2	2030	90	.00	.00	.00	0.
1	1500	31	.37	.05	.32	3031.	*	2	2100	91	.00	.00	.00	0.
1	1530	32	.34	.04	.30	3221.	*	2	2130	92	.00	.00	.00	0.
1	1600	33	.28	.03	.25	3123.	*	2	2200	93	.00	.00	.00	0.
1	1630	34	.06	.01	.05	3129.	*	2	2230	94	.00	.00	.00	0.
1	1700	35	.04	.00	.04	2986.	*	2	2300	95	.00	.00	.00	0.
1	1730	36	.07	.01	.07	2713.	*	2	2330	96	.00	.00	.00	0.
1	1800	37	.07	.01	.06	2265.	*	3	0000	97	.00	.00	.00	0.
1	1830	38	.06	.01	.05	1685.	*	3	0030	98	.00	.00	.00	0.
1	1900	39	.04	.00	.03	1433.	*	3	0100	99	.00	.00	.00	0.
1	1930	40	.05	.01	.05	1307.	*	3	0130	100	.00	.00	.00	0.
1	2000	41	.04	.00	.03	1154.	*	3	0200	101	.00	.00	.00	0.
1	2030	42	.04	.00	.04	1012.	*	3	0230	102	.00	.00	.00	0.
1	2100	43	.04	.00	.03	883.	*	3	0300	103	.00	.00	.00	0.
1	2130	44	.04	.00	.03	804.	*	3	0330	104	.00	.00	.00	0.
1	2200	45	.04	.00	.03	716.	*	3	0400	105	.00	.00	.00	0.
1	2230	46	.04	.00	.03	654.	*	3	0430	106	.00	.00	.00	0.
1	2300	47	.03	.00	.03	584.	*	3	0500	107	.00	.00	.00	0.
1	2330	48	.03	.00	.03	537.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.03	.00	.03	495.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	450.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	395.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	346.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	291.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	208.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	170.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	143.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	120.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	103.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	85.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	70.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 7.33, TOTAL LOSS = 2.70, TOTAL EXCESS = 4.63

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3221.	15.50		2593.	1083.	439.	439.
		(INCHES)	2.758	4.610	4.628	4.628
		(AC-FT)	1286.	2149.	2157.	2157.

CUMULATIVE AREA = 8.74 SQ MI

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              *            *
321 KK        *    Node64  *
              *            *
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323 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

324 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node64
SUM OF 2 HYDROGRAPHS

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		1500	31	10914.	2		0600	61	73.	2		2100	91	0.
1		0030	2	0.	1		1530	32	11216.	2		0630	62	58.	2		2130	92	0.
1		0100	3	0.	1		1600	33	11098.	2		0700	63	46.	2		2200	93	0.
1		0130	4	0.	1		1630	34	10549.	2		0730	64	34.	2		2230	94	0.
1		0200	5	0.	1		1700	35	9258.	2		0800	65	24.	2		2300	95	0.
1		0230	6	0.	1		1730	36	7231.	2		0830	66	18.	2		2330	96	0.
1		0300	7	0.	1		1800	37	5600.	2		0900	67	14.	3		0000	97	0.
1		0330	8	0.	1		1830	38	4496.	2		0930	68	10.	3		0030	98	0.
1		0400	9	0.	1		1900	39	3831.	2		1000	69	8.	3		0100	99	0.
1		0430	10	0.	1		1930	40	3332.	2		1030	70	7.	3		0130	100	0.
1		0500	11	2.	1		2000	41	2842.	2		1100	71	6.	3		0200	101	0.
1		0530	12	18.	1		2030	42	2486.	2		1130	72	5.	3		0230	102	0.
1		0600	13	70.	1		2100	43	2203.	2		1200	73	4.	3		0300	103	0.
1		0630	14	187.	1		2130	44	2004.	2		1230	74	4.	3		0330	104	0.
1		0700	15	366.	1		2200	45	1841.	2		1300	75	3.	3		0400	105	0.
1		0730	16	618.	1		2230	46	1712.	2		1330	76	3.	3		0430	106	0.
1		0800	17	947.	1		2300	47	1590.	2		1400	77	2.	3		0500	107	0.
1		0830	18	1355.	1		2330	48	1488.	2		1430	78	2.	3		0530	108	0.
1		0900	19	1882.	2		0000	49	1375.	2		1500	79	1.	3		0600	109	0.
1		0930	20	2567.	2		0030	50	1240.	2		1530	80	1.	3		0630	110	0.
1		1000	21	3377.	2		0100	51	1077.	2		1600	81	0.	3		0700	111	0.
1		1030	22	4204.	2		0130	52	849.	2		1630	82	0.	3		0730	112	0.
1		1100	23	4960.	2		0200	53	585.	2		1700	83	0.	3		0800	113	0.
1		1130	24	5364.	2		0230	54	411.	2		1730	84	0.	3		0830	114	0.
1		1200	25	5910.	2		0300	55	314.	2		1800	85	0.	3		0900	115	0.
1		1230	26	6415.	2		0330	56	244.	2		1830	86	0.	3		0930	116	0.
1		1300	27	7125.	2		0400	57	192.	2		1900	87	0.	3		1000	117	0.
1		1330	28	8426.	2		0430	58	152.	2		1930	88	0.	3		1030	118	0.
1		1400	29	9649.	2		0500	59	120.	2		2000	89	0.	3		1100	119	0.
1		1430	30	10804.	2		0530	60	93.	2		2030	90	0.	3		1130	120	0.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
11216.	15.50		9037.	3637.	1470.	1470.
		(INCHES)	3.089	4.973	4.982	4.982
		(AC-FT)	4481.	7214.	7228.	7228.

CUMULATIVE AREA = 27.20 SQ MI

325 KK

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*    18      *
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327 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

328 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	31786.	CHANNEL LENGTH
S	.0029	SLOPE
N	.035	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	50.00	BOTTOM WIDTH OR DIAMETER
Z	2.00	SIDE SLOPE

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COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT	DX	PEAK	TIME TO	VOLUME	MAXIMUM

		(MIN)	(FT)	(CFS)	PEAK (MIN)	(IN)	CELERITY (FPS)
MAIN	.22	1.58	30.00	15893.00	11146.81	990.00	4.99	14.24

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.22	1.58	30.00		11146.81	990.00	4.99

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7228E+04 EXCESS= .0000E+00 OUTFLOW= .7232E+04 BASIN STORAGE= .1556E+00 PERCENT ERROR= -.1

HYDROGRAPH AT STATION 18

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		1500	31	10675.	2		0600	61	139.	2		2100	91	0.
1		0030	2	0.	1		1530	32	11105.	2		0630	62	111.	2		2130	92	0.
1		0100	3	0.	1		1600	33	11056.	2		0700	63	88.	2		2200	93	0.
1		0130	4	0.	1		1630	34	11147.	2		0730	64	71.	2		2230	94	0.
1		0200	5	0.	1		1700	35	10454.	2		0800	65	57.	2		2300	95	0.
1		0230	6	0.	1		1730	36	9309.	2		0830	66	44.	2		2330	96	0.
1		0300	7	0.	1		1800	37	7552.	2		0900	67	34.	3		0000	97	0.
1		0330	8	0.	1		1830	38	5890.	2		0930	68	26.	3		0030	98	0.
1		0400	9	0.	1		1900	39	4806.	2		1000	69	20.	3		0100	99	0.
1		0430	10	0.	1		1930	40	4050.	2		1030	70	15.	3		0130	100	0.
1		0500	11	0.	1		2000	41	3552.	2		1100	71	11.	3		0200	101	0.
1		0530	12	0.	1		2030	42	3109.	2		1130	72	9.	3		0230	102	0.
1		0600	13	1.	1		2100	43	2693.	2		1200	73	7.	3		0300	103	0.
1		0630	14	9.	1		2130	44	2395.	2		1230	74	6.	3		0330	104	0.
1		0700	15	43.	1		2200	45	2151.	2		1300	75	5.	3		0400	105	0.
1		0730	16	136.	1		2230	46	1973.	2		1330	76	5.	3		0430	106	0.
1		0800	17	304.	1		2300	47	1824.	2		1400	77	4.	3		0500	107	0.
1		0830	18	555.	1		2330	48	1702.	2		1430	78	4.	3		0530	108	0.
1		0900	19	891.	2		0000	49	1587.	2		1500	79	3.	3		0600	109	0.
1		0930	20	1324.	2		0030	50	1489.	2		1530	80	2.	3		0630	110	0.
1		1000	21	2009.	2		0100	51	1383.	2		1600	81	2.	3		0700	111	0.
1		1030	22	2891.	2		0130	52	1256.	2		1630	82	1.	3		0730	112	0.
1		1100	23	3847.	2		0200	53	1100.	2		1700	83	1.	3		0800	113	0.
1		1130	24	4707.	2		0230	54	889.	2		1730	84	1.	3		0830	114	0.
1		1200	25	5321.	2		0300	55	645.	2		1800	85	0.	3		0900	115	0.
1		1230	26	5741.	2		0330	56	466.	2		1830	86	0.	3		0930	116	0.
1		1300	27	6357.	2		0400	57	354.	2		1900	87	0.	3		1000	117	0.
1		1330	28	7039.	2		0430	58	276.	2		1930	88	0.	3		1030	118	0.
1		1400	29	8231.	2		0500	59	218.	2		2000	89	0.	3		1100	119	0.
1		1430	30	9670.	2		0530	60	174.	2		2030	90	0.	3		1130	120	0.

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)				
		(CFS)			
11147.	16.50	9034.	3638.	1471.	1471.
		(INCHES) 3.088	4.974	4.986	4.986
		(AC-FT) 4480.	7216.	7232.	7232.

CUMULATIVE AREA = 27.20 SQ MI

329 KK

Node5

331 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

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 335 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN          15  TIME INTERVAL IN MINUTES
                     JXDATE       1    0  STARTING DATE
                     JXTIME            0  STARTING TIME
                          UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

               SUBBASIN RUNOFF DATA

 332 BA          SUBBASIN CHARACTERISTICS
                      TAREA       30.47  SUBBASIN AREA

                 PRECIPITATION DATA

 334 PB               STORM        5.88  BASIN TOTAL PRECIPITATION

 336 PI            INCREMENTAL PRECIPITATION PATTERN
                    .03      .04      .04      .04      .05      .06      .06      .06      .08      .09
                    .08      .09      .11      .12      .12      .15      .18      .19      .23      .25
                    .18      .24      .22      .21      .30      .34      .40      .27      .31      .30
                    .28      .22      .05      .04      .06      .05      .05      .03      .04      .03
                    .04      .03      .03      .03      .03      .02      .02      .02

 346 LS          SCS LOSS RATE
                      STRTL         .52  INITIAL ABSTRACTION
                     CRVNBR       79.30  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

 347 UI          INPUT UNITGRAPH,  49 ORDINATES,  VOLUME = 1.00
                  761.0    1076.0    1558.0    1803.0    2776.0    4638.0    7461.0    3337.0    2379.0    1742.0
                 1621.0    1285.0    1057.0     991.0     853.0     771.0     667.0     570.0     521.0     477.0
                  423.0     357.0     308.0     306.0     184.0     184.0     184.0     184.0      75.0      39.0
                   39.3      39.3      39.3      39.3      39.3      39.3      39.3      39.3      39.3      39.3
                   39.3      39.3      39.3      39.3      39.3      39.3      39.3      39.3       9.0
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HYDROGRAPH AT STATION Node5

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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.	2		0600	61	.00	.00	.00	350.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	313.
1		0100	3	.04	.04	.00	0.	2		0700	63	.00	.00	.00	287.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	261.
1		0200	5	.04	.04	.00	0.	2		0800	65	.00	.00	.00	238.
1		0230	6	.05	.05	.00	0.	2		0830	66	.00	.00	.00	217.
1		0300	7	.06	.06	.00	0.	2		0900	67	.00	.00	.00	200.
1		0330	8	.06	.06	.00	0.	2		0930	68	.00	.00	.00	182.
1		0400	9	.06	.06	.00	0.	2		1000	69	.00	.00	.00	166.
1		0430	10	.08	.08	.00	0.	2		1030	70	.00	.00	.00	151.
1		0500	11	.09	.09	.00	0.	2		1100	71	.00	.00	.00	137.
1		0530	12	.08	.07	.00	3.	2		1130	72	.00	.00	.00	125.
1		0600	13	.09	.08	.01	11.	2		1200	73	.00	.00	.00	113.
1		0630	14	.11	.09	.02	28.	2		1230	74	.00	.00	.00	101.
1		0700	15	.12	.09	.03	59.	2		1300	75	.00	.00	.00	88.
1		0730	16	.12	.09	.04	108.	2		1330	76	.00	.00	.00	72.
1		0800	17	.15	.10	.05	190.	2		1400	77	.00	.00	.00	60.
1		0830	18	.18	.10	.07	325.	2		1430	78	.00	.00	.00	49.
1		0900	19	.19	.10	.09	519.	2		1500	79	.00	.00	.00	39.
1		0930	20	.23	.11	.12	775.	2		1530	80	.00	.00	.00	30.
1		1000	21	.25	.11	.15	1091.	2		1600	81	.00	.00	.00	22.
1		1030	22	.18	.07	.11	1429.	2		1630	82	.00	.00	.00	19.
1		1100	23	.24	.08	.15	1858.	2		1700	83	.00	.00	.00	17.
1		1130	24	.22	.07	.15	2331.	2		1730	84	.00	.00	.00	15.
1		1200	25	.21	.06	.15	2836.	2		1800	85	.00	.00	.00	14.
1		1230	26	.30	.08	.22	3389.	2		1830	86	.00	.00	.00	12.
1		1300	27	.34	.08	.26	3874.	2		1900	87	.00	.00	.00	11.
1		1330	28	.40	.08	.32	4275.	2		1930	88	.00	.00	.00	9.
1		1400	29	.27	.05	.22	4867.	2		2000	89	.00	.00	.00	8.
1		1430	30	.31	.05	.26	5368.	2		2030	90	.00	.00	.00	7.
1		1500	31	.30	.04	.25	5960.	2		2100	91	.00	.00	.00	6.
1		1530	32	.28	.04	.24	6851.	2		2130	92	.00	.00	.00	5.
1		1600	33	.22	.03	.19	7519.	2		2200	93	.00	.00	.00	4.
1		1630	34	.05	.01	.04	7836.	2		2230	94	.00	.00	.00	3.
1		1700	35	.04	.00	.03	7514.	2		2300	95	.00	.00	.00	2.
1		1730	36	.06	.01	.05	7509.	2		2330	96	.00	.00	.00	1.
1		1800	37	.05	.01	.05	7227.	3		0000	97	.00	.00	.00	0.
1		1830	38	.05	.01	.04	6675.	3		0030	98	.00	.00	.00	0.
1		1900	39	.03	.00	.03	5719.	3		0100	99	.00	.00	.00	0.
1		1930	40	.04	.00	.04	4519.	3		0130	100	.00	.00	.00	0.
1		2000	41	.03	.00	.03	3979.	3		0200	101	.00	.00	.00	0.
1		2030	42	.04	.00	.03	3676.	3		0230	102	.00	.00	.00	0.
1		2100	43	.03	.00	.03	3362.	3		0300	103	.00	.00	.00	0.
1		2130	44	.03	.00	.03	3042.	3		0330	104	.00	.00	.00	0.
1		2200	45	.03	.00	.03	2748.	3		0400	105	.00	.00	.00	0.
1		2230	46	.03	.00	.03	2581.	3		0430	106	.00	.00	.00	0.
1		2300	47	.02	.00	.02	2357.	3		0500	107	.00	.00	.00	0.
1		2330	48	.02	.00	.02	2195.	3		0530	108	.00	.00	.00	0.

2	0000	49	.02	.00	.02	2014.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	1859.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	1708.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	1541.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	1379.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	1219.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	1034.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	794.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	658.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	563.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	485.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	410.	*	3	1130	120	.00	.00	.00	0.
							*							

TOTAL RAINFALL = 5.88, TOTAL LOSS = 2.28, TOTAL EXCESS = 3.60

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)				
		(CFS)			
7836.	16.50	6453.	2902.	1190.	1190.
		(INCHES) 1.969	3.542	3.601	3.601
		(AC-FT) 3200.	5756.	5851.	5851.

CUMULATIVE AREA = 30.47 SQ MI

353 KK Node76

355 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

356 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node76
SUM OF 2 HYDROGRAPHS

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		1500	31	16634.	2		0600	61	489.	2		2100	91	6.
1		0030	2	0.	1		1530	32	17956.	2		0630	62	424.	2		2130	92	5.
1		0100	3	0.	1		1600	33	18574.	2		0700	63	375.	2		2200	93	4.
1		0130	4	0.	1		1630	34	18983.	2		0730	64	332.	2		2230	94	3.
1		0200	5	0.	1		1700	35	17968.	2		0800	65	295.	2		2300	95	2.
1		0230	6	0.	1		1730	36	16818.	2		0830	66	261.	2		2330	96	1.
1		0300	7	0.	1		1800	37	14779.	2		0900	67	233.	3		0000	97	0.
1		0330	8	0.	1		1830	38	12565.	2		0930	68	208.	3		0030	98	0.
1		0400	9	0.	1		1900	39	10524.	2		1000	69	185.	3		0100	99	0.
1		0430	10	0.	1		1930	40	8569.	2		1030	70	166.	3		0130	100	0.
1		0500	11	0.	1		2000	41	7530.	2		1100	71	149.	3		0200	101	0.
1		0530	12	3.	1		2030	42	6785.	2		1130	72	134.	3		0230	102	0.
1		0600	13	12.	1		2100	43	6055.	2		1200	73	120.	3		0300	103	0.
1		0630	14	37.	1		2130	44	5436.	2		1230	74	107.	3		0330	104	0.
1		0700	15	102.	1		2200	45	4899.	2		1300	75	93.	3		0400	105	0.
1		0730	16	245.	1		2230	46	4554.	2		1330	76	77.	3		0430	106	0.
1		0800	17	494.	1		2300	47	4181.	2		1400	77	64.	3		0500	107	0.
1		0830	18	880.	1		2330	48	3897.	2		1430	78	53.	3		0530	108	0.
1		0900	19	1411.	2		0000	49	3601.	2		1500	79	42.	3		0600	109	0.
1		0930	20	2099.	2		0030	50	3349.	2		1530	80	32.	3		0630	110	0.
1		1000	21	3100.	2		0100	51	3091.	2		1600	81	23.	3		0700	111	0.
1		1030	22	4320.	2		0130	52	2797.	2		1630	82	20.	3		0730	112	0.
1		1100	23	5705.	2		0200	53	2479.	2		1700	83	18.	3		0800	113	0.
1		1130	24	7038.	2		0230	54	2108.	2		1730	84	16.	3		0830	114	0.
1		1200	25	8157.	2		0300	55	1679.	2		1800	85	14.	3		0900	115	0.
1		1230	26	9130.	2		0330	56	1260.	2		1830	86	12.	3		0930	116	0.
1		1300	27	10231.	2		0400	57	1012.	2		1900	87	11.	3		1000	117	0.

1	1330	28	11314.	*	2	0430	58	839.	*	2	1930	88	9.	*	3	1030	118	0.
1	1400	29	13098.	*	2	0500	59	703.	*	2	2000	89	8.	*	3	1100	119	0.
1	1430	30	15039.	*	2	0530	60	584.	*	2	2030	90	7.	*	3	1130	120	0.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
18983.	16.50		15342.	6538.	2661.	2661.
		(INCHES)	2.473	4.216	4.254	4.254
		(AC-FT)	7608.	12967.	13084.	13084.

CUMULATIVE AREA = 57.67 SQ MI

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357 KK      **************
            *            *
            *    Node61  *
            *            *
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359 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

360 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

***

HYDROGRAPH AT STATION Node61
SUM OF 2 HYDROGRAPHS

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		1500	31	23298.	2		0600	61	1821.	2		2100	91	58.
1		0030	2	0.	1		1530	32	26206.	2		0630	62	1662.	2		2130	92	51.
1		0100	3	0.	1		1600	33	28093.	2		0700	63	1507.	2		2200	93	44.
1		0130	4	0.	1		1630	34	29120.	2		0730	64	1361.	2		2230	94	38.
1		0200	5	0.	1		1700	35	28412.	2		0800	65	1231.	2		2300	95	32.
1		0230	6	0.	1		1730	36	27228.	2		0830	66	1110.	2		2330	96	27.
1		0300	7	0.	1		1800	37	25207.	2		0900	67	988.	3		0000	97	22.
1		0330	8	0.	1		1830	38	22575.	2		0930	68	868.	3		0030	98	18.
1		0400	9	0.	1		1900	39	19874.	2		1000	69	769.	3		0100	99	15.
1		0430	10	0.	1		1930	40	17003.	2		1030	70	677.	3		0130	100	13.
1		0500	11	0.	1		2000	41	15178.	2		1100	71	599.	3		0200	101	11.
1		0530	12	3.	1		2030	42	13929.	2		1130	72	532.	3		0230	102	10.
1		0600	13	12.	1		2100	43	12759.	2		1200	73	470.	3		0300	103	9.
1		0630	14	38.	1		2130	44	11613.	2		1230	74	416.	3		0330	104	8.
1		0700	15	105.	1		2200	45	10451.	2		1300	75	369.	3		0400	105	7.
1		0730	16	254.	1		2230	46	9513.	2		1330	76	325.	3		0430	106	6.
1		0800	17	516.	1		2300	47	8630.	2		1400	77	287.	3		0500	107	5.
1		0830	18	927.	1		2330	48	7931.	2		1430	78	253.	3		0530	108	5.
1		0900	19	1502.	2		0000	49	7357.	2		1500	79	222.	3		0600	109	4.
1		0930	20	2271.	2		0030	50	6867.	2		1530	80	193.	3		0630	110	4.
1		1000	21	3414.	2		0100	51	6419.	2		1600	81	167.	3		0700	111	3.
1		1030	22	4853.	2		0130	52	5845.	2		1630	82	148.	3		0730	112	3.
1		1100	23	6554.	2		0200	53	5244.	2		1700	83	134.	3		0800	113	2.
1		1130	24	8300.	2		0230	54	4677.	2		1730	84	121.	3		0830	114	2.
1		1200	25	9957.	2		0300	55	4011.	2		1800	85	110.	3		0900	115	2.
1		1230	26	11591.	2		0330	56	3379.	2		1830	86	99.	3		0930	116	1.
1		1300	27	13323.	2		0400	57	2907.	2		1900	87	90.	3		1000	117	1.
1		1330	28	14989.	2		0430	58	2542.	2		1930	88	81.	3		1030	118	1.
1		1400	29	17457.	2		0500	59	2276.	2		2000	89	73.	3		1100	119	1.
1		1430	30	20420.	2		0530	60	2037.	2		2030	90	65.	3		1130	120	1.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
29120.	16.50		23657.	10704.	4405.	4405.

(INCHES)	1.817	3.289	3.355	3.355
(AC-FT)	11731.	21232.	21662.	21662.

CUMULATIVE AREA = 121.05 SQ MI

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361 KK

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*            *
*    15      *
*            *
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363 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

364 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	845.	CHANNEL LENGTH
S	.0018	SLOPE
N	.035	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	50.00	BOTTOM WIDTH OR DIAMETER
Z	2.00	SIDE SLOPE

***

COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.17	1.58	.81	845.00	29096.19	990.23	3.36	17.37
INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL								
MAIN	.17	1.58	30.00		29091.12	990.00	3.36	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2166E+05 EXCESS= .0000E+00 OUTFLOW= .2166E+05 BASIN STORAGE= .4207E-01 PERCENT ERROR= .0

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HYDROGRAPH AT STATION 15

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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		1500	31	23233.	2		0600	61	1833.	2		2100	91	58.
1		0030	2	0.	1		1530	32	26138.	2		0630	62	1671.	2		2130	92	51.
1		0100	3	0.	1		1600	33	28049.	2		0700	63	1516.	2		2200	93	45.
1		0130	4	0.	1		1630	34	29091.	2		0730	64	1370.	2		2230	94	38.
1		0200	5	0.	1		1700	35	28425.	2		0800	65	1240.	2		2300	95	32.
1		0230	6	0.	1		1730	36	27249.	2		0830	66	1119.	2		2330	96	27.
1		0300	7	0.	1		1800	37	25249.	2		0900	67	997.	3		0000	97	22.
1		0330	8	0.	1		1830	38	22635.	2		0930	68	877.	3		0030	98	18.
1		0400	9	0.	1		1900	39	19939.	2		1000	69	777.	3		0100	99	15.
1		0430	10	0.	1		1930	40	17081.	2		1030	70	684.	3		0130	100	13.
1		0500	11	0.	1		2000	41	15229.	2		1100	71	606.	3		0200	101	11.
1		0530	12	2.	1		2030	42	13963.	2		1130	72	538.	3		0230	102	10.
1		0600	13	11.	1		2100	43	12793.	2		1200	73	476.	3		0300	103	9.
1		0630	14	36.	1		2130	44	11646.	2		1230	74	421.	3		0330	104	8.
1		0700	15	100.	1		2200	45	10487.	2		1300	75	374.	3		0400	105	7.
1		0730	16	238.	1		2230	46	9543.	2		1330	76	330.	3		0430	106	6.
1		0800	17	491.	1		2300	47	8660.	2		1400	77	291.	3		0500	107	5.
1		0830	18	896.	1		2330	48	7955.	2		1430	78	257.	3		0530	108	5.
1		0900	19	1466.	2		0000	49	7377.	2		1500	79	225.	3		0600	109	4.
1		0930	20	2230.	2		0030	50	6885.	2		1530	80	196.	3		0630	110	4.
1		1000	21	3362.	2		0100	51	6435.	2		1600	81	169.	3		0700	111	3.
1		1030	22	4795.	2		0130	52	5866.	2		1630	82	150.	3		0730	112	3.
1		1100	23	6491.	2		0200	53	5267.	2		1700	83	135.	3		0800	113	2.
1		1130	24	8241.	2		0230	54	4699.	2		1730	84	122.	3		0830	114	2.

1	1200	25	9905.	*	2	0300	55	4040.	*	2	1800	85	111.	*	3	0900	115	2.
1	1230	26	11543.	*	2	0330	56	3408.	*	2	1830	86	100.	*	3	0930	116	1.
1	1300	27	13274.	*	2	0400	57	2930.	*	2	1900	87	91.	*	3	1000	117	1.
1	1330	28	14947.	*	2	0430	58	2561.	*	2	1930	88	82.	*	3	1030	118	1.
1	1400	29	17396.	*	2	0500	59	2290.	*	2	2000	89	74.	*	3	1100	119	1.
1	1430	30	20349.	*	2	0530	60	2050.	*	2	2030	90	66.	*	3	1130	120	1.
				*					*					*				

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)	23647.	10704.	4405.	4405.
29091.	16.50	(INCHES)	1.816	3.289	3.356	3.356
		(AC-FT)	11726.	21232.	21663.	21663.

CUMULATIVE AREA = 121.05 SQ MI

365 KK

Node10

367 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

371 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	15	TIME INTERVAL IN MINUTES
JXDATE 1	0	STARTING DATE
JXTIME	0	STARTING TIME

UHG FROM VALLEY S-GRAPH

SUBBASIN RUNOFF DATA

368 BA SUBBASIN CHARACTERISTICS

TAREA	.18	SUBBASIN AREA

PRECIPITATION DATA

370 PB

STORM	4.57	BASIN TOTAL PRECIPITATION

372 PI INCREMENTAL PRECIPITATION PATTERN

.02	.03	.03	.03	.04	.05	.05	.05	.06	.07
.06	.07	.08	.09	.10	.11	.14	.15	.18	.20
.14	.18	.17	.16	.23	.26	.31	.21	.24	.23
.21	.17	.04	.03	.05	.04	.04	.02	.03	.02
.03	.02	.02	.02	.02	.02	.02	.02		

382 LS SCS LOSS RATE

STRTL	.57	INITIAL ABSTRACTION
CRVNBR	77.80	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

383 UI INPUT UNITGRAPH, 7 ORDINATES, VOLUME = 1.00

140.0	52.0	19.0	10.0	6.0	3.0	2.0

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HYDROGRAPH AT STATION Node10

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.	2		0600	61	.00	.00	.00	0.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	0.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	0.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	0.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	0.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	0.
1		0300	7	.05	.05	.00	0.	2		0900	67	.00	.00	.00	0.
1		0330	8	.05	.05	.00	0.	2		0930	68	.00	.00	.00	0.

1	0400	9	.05	.05	.00	0.	*	2	1000	69	.00	.00	.00	0.
1	0430	10	.06	.06	.00	0.	*	2	1030	70	.00	.00	.00	0.
1	0500	11	.07	.07	.00	0.	*	2	1100	71	.00	.00	.00	0.
1	0530	12	.06	.06	.00	0.	*	2	1130	72	.00	.00	.00	0.
1	0600	13	.07	.07	.00	0.	*	2	1200	73	.00	.00	.00	0.
1	0630	14	.08	.08	.00	0.	*	2	1230	74	.00	.00	.00	0.
1	0700	15	.09	.09	.01	1.	*	2	1300	75	.00	.00	.00	0.
1	0730	16	.10	.08	.01	2.	*	2	1330	76	.00	.00	.00	0.
1	0800	17	.11	.09	.02	4.	*	2	1400	77	.00	.00	.00	0.
1	0830	18	.14	.10	.03	6.	*	2	1430	78	.00	.00	.00	0.
1	0900	19	.15	.10	.05	9.	*	2	1500	79	.00	.00	.00	0.
1	0930	20	.18	.11	.07	13.	*	2	1530	80	.00	.00	.00	0.
1	1000	21	.20	.11	.08	17.	*	2	1600	81	.00	.00	.00	0.
1	1030	22	.14	.07	.07	16.	*	2	1630	82	.00	.00	.00	0.
1	1100	23	.18	.09	.09	19.	*	2	1700	83	.00	.00	.00	0.
1	1130	24	.17	.08	.10	21.	*	2	1730	84	.00	.00	.00	0.
1	1200	25	.16	.07	.09	22.	*	2	1800	85	.00	.00	.00	0.
1	1230	26	.23	.09	.15	29.	*	2	1830	86	.00	.00	.00	0.
1	1300	27	.26	.09	.17	35.	*	2	1900	87	.00	.00	.00	0.
1	1330	28	.31	.09	.22	44.	*	2	1930	88	.00	.00	.00	0.
1	1400	29	.21	.06	.15	38.	*	2	2000	89	.00	.00	.00	0.
1	1430	30	.24	.06	.18	40.	*	2	2030	90	.00	.00	.00	0.
1	1500	31	.23	.05	.18	41.	*	2	2100	91	.00	.00	.00	0.
1	1530	32	.21	.05	.17	40.	*	2	2130	92	.00	.00	.00	0.
1	1600	33	.17	.04	.14	35.	*	2	2200	93	.00	.00	.00	0.
1	1630	34	.04	.01	.03	18.	*	2	2230	94	.00	.00	.00	0.
1	1700	35	.03	.01	.02	11.	*	2	2300	95	.00	.00	.00	0.
1	1730	36	.05	.01	.04	10.	*	2	2330	96	.00	.00	.00	0.
1	1800	37	.04	.01	.03	9.	*	3	0000	97	.00	.00	.00	0.
1	1830	38	.04	.01	.03	8.	*	3	0030	98	.00	.00	.00	0.
1	1900	39	.02	.00	.02	6.	*	3	0100	99	.00	.00	.00	0.
1	1930	40	.03	.01	.03	6.	*	3	0130	100	.00	.00	.00	0.
1	2000	41	.02	.00	.02	5.	*	3	0200	101	.00	.00	.00	0.
1	2030	42	.03	.01	.02	5.	*	3	0230	102	.00	.00	.00	0.
1	2100	43	.02	.00	.02	5.	*	3	0300	103	.00	.00	.00	0.
1	2130	44	.02	.00	.02	5.	*	3	0330	104	.00	.00	.00	0.
1	2200	45	.02	.00	.02	4.	*	3	0400	105	.00	.00	.00	0.
1	2230	46	.02	.00	.02	4.	*	3	0430	106	.00	.00	.00	0.
1	2300	47	.02	.00	.01	4.	*	3	0500	107	.00	.00	.00	0.
1	2330	48	.02	.00	.01	4.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.02	.00	.01	4.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	1.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	1.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	0.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	0.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	0.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	0.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	0.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	0.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	0.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	0.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	0.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 4.57, TOTAL LOSS = 2.24, TOTAL EXCESS = 2.33

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 44.	13.50		32.	11.	5.	5.
		(INCHES)	1.644	2.331	2.331	2.331
		(AC-FT)	16.	22.	22.	22.

CUMULATIVE AREA = .18 SQ MI

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            *            *
385 KK      *    Node59  *
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387 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

388 HC HYDROGRAPH COMBINATION

ICOMP 3 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node59
SUM OF 3 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	27185.	2		0600	61	3886.	2		2100	91	929.
1		0030	2	1.	1		1530	32	30582.	2		0630	62	3691.	2		2130	92	895.
1		0100	3	1.	1		1600	33	32954.	2		0700	63	3495.	2		2200	93	862.
1		0130	4	1.	1		1630	34	34330.	2		0730	64	3305.	2		2230	94	831.
1		0200	5	1.	1		1700	35	33839.	2		0800	65	3131.	2		2300	95	801.
1		0230	6	1.	1		1730	36	32705.	2		0830	66	2965.	2		2330	96	772.
1		0300	7	1.	1		1800	37	30661.	2		0900	67	2800.	3		0000	97	746.
1		0330	8	1.	1		1830	38	27948.	2		0930	68	2633.	3		0030	98	722.
1		0400	9	1.	1		1900	39	25094.	2		1000	69	2488.	3		0100	99	699.
1		0430	10	1.	1		1930	40	22006.	2		1030	70	2349.	3		0130	100	677.
1		0500	11	1.	1		2000	41	19854.	2		1100	71	2223.	3		0200	101	655.
1		0530	12	3.	1		2030	42	18274.	2		1130	72	2107.	3		0230	102	632.
1		0600	13	12.	1		2100	43	16790.	2		1200	73	1998.	3		0300	103	609.
1		0630	14	37.	1		2130	44	15331.	2		1230	74	1896.	3		0330	104	587.
1		0700	15	102.	1		2200	45	13871.	2		1300	75	1800.	3		0400	105	566.
1		0730	16	244.	1		2230	46	12640.	2		1330	76	1709.	3		0430	106	545.
1		0800	17	509.	1		2300	47	11507.	2		1400	77	1626.	3		0500	107	525.
1		0830	18	939.	1		2330	48	10599.	2		1430	78	1550.	3		0530	108	506.
1		0900	19	1554.	2		0000	49	9851.	2		1500	79	1478.	3		0600	109	489.
1		0930	20	2392.	2		0030	50	9200.	2		1530	80	1409.	3		0630	110	474.
1		1000	21	3634.	2		0100	51	8595.	2		1600	81	1344.	3		0700	111	460.
1		1030	22	5215.	2		0130	52	7881.	2		1630	82	1288.	3		0730	112	448.
1		1100	23	7118.	2		0200	53	7160.	2		1700	83	1240.	3		0800	113	438.
1		1130	24	9132.	2		0230	54	6568.	2		1730	84	1195.	3		0830	114	429.
1		1200	25	11091.	2		0300	55	6043.	2		1800	85	1154.	3		0900	115	421.
1		1230	26	13068.	2		0330	56	5509.	2		1830	86	1113.	3		0930	116	413.
1		1300	27	15187.	2		0400	57	5026.	2		1900	87	1073.	3		1000	117	404.
1		1330	28	17335.	2		0430	58	4660.	2		1930	88	1036.	3		1030	118	396.
1		1400	29	20301.	2		0500	59	4372.	2		2000	89	1000.	3		1100	119	388.
1		1430	30	23789.	2		0530	60	4126.	2		2030	90	965.	3		1130	120	381.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
34330.	16.50		28431.	13475.	5918.	5918.
		(INCHES)	1.244	2.358	2.567	2.567
		(AC-FT)	14098.	26728.	29103.	29103.

CUMULATIVE AREA = 212.57 SQ MI

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389 KK

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* 11 *
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391 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

392 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	11722.	CHANNEL LENGTH
S	.0022	SLOPE
N	.035	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	50.00	BOTTOM WIDTH OR DIAMETER
Z	2.00	SIDE SLOPE

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COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.19	1.58	9.94	5861.00	34223.26	1003.88	2.57	19.66

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.19	1.58	30.00		33953.55	1020.00	2.57	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2910E+05 EXCESS= .0000E+00 OUTFLOW= .2909E+05 BASIN STORAGE= .3279E+02 PERCENT ERROR= -.1

HYDROGRAPH AT STATION 11

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	26220.	2		0600	61	4021.	2		2100	91	959.
1		0030	2	1.	1		1530	32	29637.	2		0630	62	3804.	2		2130	92	924.
1		0100	3	1.	1		1600	33	32310.	2		0700	63	3610.	2		2200	93	890.
1		0130	4	1.	1		1630	34	33934.	2		0730	64	3419.	2		2230	94	858.
1		0200	5	1.	1		1700	35	33954.	2		0800	65	3237.	2		2300	95	827.
1		0230	6	1.	1		1730	36	32982.	2		0830	66	3068.	2		2330	96	797.
1		0300	7	1.	1		1800	37	31192.	2		0900	67	2905.	3		0000	97	769.
1		0330	8	1.	1		1830	38	28689.	2		0930	68	2741.	3		0030	98	743.
1		0400	9	1.	1		1900	39	25902.	2		1000	69	2585.	3		0100	99	719.
1		0430	10	1.	1		1930	40	22939.	2		1030	70	2443.	3		0130	100	696.
1		0500	11	1.	1		2000	41	20528.	2		1100	71	2310.	3		0200	101	674.
1		0530	12	1.	1		2030	42	18781.	2		1130	72	2189.	3		0230	102	651.
1		0600	13	4.	1		2100	43	17280.	2		1200	73	2077.	3		0300	103	629.
1		0630	14	14.	1		2130	44	15828.	2		1230	74	1971.	3		0330	104	606.
1		0700	15	44.	1		2200	45	14388.	2		1300	75	1872.	3		0400	105	584.
1		0730	16	120.	1		2230	46	13091.	2		1330	76	1778.	3		0430	106	563.
1		0800	17	283.	1		2300	47	11936.	2		1400	77	1691.	3		0500	107	543.
1		0830	18	580.	1		2330	48	10954.	2		1430	78	1610.	3		0530	108	523.
1		0900	19	1049.	2		0000	49	10151.	2		1500	79	1536.	3		0600	109	504.
1		0930	20	1760.	2		0030	50	9468.	2		1530	80	1466.	3		0630	110	487.
1		1000	21	2841.	2		0100	51	8850.	2		1600	81	1398.	3		0700	111	472.
1		1030	22	4346.	2		0130	52	8191.	2		1630	82	1335.	3		0730	112	459.
1		1100	23	6197.	2		0200	53	7484.	2		1700	83	1280.	3		0800	113	447.
1		1130	24	8255.	2		0230	54	6843.	2		1730	84	1233.	3		0830	114	437.
1		1200	25	10306.	2		0300	55	6294.	2		1800	85	1189.	3		0900	115	428.
1		1230	26	12328.	2		0330	56	5772.	2		1830	86	1147.	3		0930	116	420.
1		1300	27	14437.	2		0400	57	5272.	2		1900	87	1106.	3		1000	117	412.
1		1330	28	16626.	2		0430	58	4852.	2		1930	88	1067.	3		1030	118	403.
1		1400	29	19365.	2		0500	59	4527.	2		2000	89	1030.	3		1100	119	395.
1		1430	30	22740.	2		0530	60	4262.	2		2030	90	995.	3		1130	120	387.

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
		(CFS)				
33954.	17.00		28370.	13471.	5915.	5915.
		(INCHES)	1.241	2.357	2.566	2.566
		(AC-FT)	14068.	26720.	29089.	29089.

CUMULATIVE AREA = 212.57 SQ MI

393 KK Node29

395 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

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399 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN          15  TIME INTERVAL IN MINUTES
                    JXDATE      1    0  STARTING DATE
                    JXTIME           0  STARTING TIME
                         UHG FROM VALLEY S-GRAPH

              SUBBASIN RUNOFF DATA

396 BA          SUBBASIN CHARACTERISTICS
                     TAREA        3.94  SUBBASIN AREA

                PRECIPITATION DATA

398 PB               STORM        5.14  BASIN TOTAL PRECIPITATION

400 PI            INCREMENTAL PRECIPITATION PATTERN
                    .02       .04       .03       .04       .04       .05       .05       .06       .07       .08
                    .07       .08       .09       .10       .11       .13       .15       .17       .20       .22
                    .15       .21       .20       .18       .26       .29       .35       .24       .27       .26
                    .24       .20       .04       .03       .05       .05       .04       .03       .04       .03
                    .03       .03       .03       .03       .03       .02       .02       .02

410 LS          SCS LOSS RATE
                     STRTL         .36  INITIAL ABSTRACTION
                    CRVNBR       84.70  CURVE NUMBER
                     RTIMP         .00  PERCENT IMPERVIOUS AREA

411 UI          INPUT UNITGRAPH,  30 ORDINATES,  VOLUME = 1.00
                   303.0     635.0    1011.0     906.0     514.0     321.0     237.0     182.0     143.0     116.0
                    94.7      84.3      71.4      64.0      52.4      50.3      41.6      41.6      31.0      27.5
                    27.5      26.7      13.5      13.5      13.5      13.5      13.5      13.5      13.5       6.1
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HYDROGRAPH AT STATION Node29

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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.	*	2		0600	61	.00	.00	.00	16.
1		0030	2	.03	.03	.00	0.	*	2		0630	62	.00	.00	.00	12.
1		0100	3	.04	.04	.00	0.	*	2		0700	63	.00	.00	.00	10.
1		0130	4	.03	.03	.00	0.	*	2		0730	64	.00	.00	.00	8.
1		0200	5	.04	.04	.00	0.	*	2		0800	65	.00	.00	.00	7.
1		0230	6	.04	.04	.00	0.	*	2		0830	66	.00	.00	.00	6.
1		0300	7	.05	.05	.00	0.	*	2		0900	67	.00	.00	.00	5.
1		0330	8	.05	.05	.00	0.	*	2		0930	68	.00	.00	.00	4.
1		0400	9	.06	.06	.00	0.	*	2		1000	69	.00	.00	.00	3.
1		0430	10	.07	.07	.00	0.	*	2		1030	70	.00	.00	.00	3.
1		0500	11	.08	.07	.01	2.	*	2		1100	71	.00	.00	.00	2.
1		0530	12	.07	.06	.01	7.	*	2		1130	72	.00	.00	.00	2.
1		0600	13	.08	.07	.02	18.	*	2		1200	73	.00	.00	.00	2.
1		0630	14	.09	.07	.02	34.	*	2		1230	74	.00	.00	.00	1.
1		0700	15	.10	.07	.03	55.	*	2		1300	75	.00	.00	.00	1.
1		0730	16	.11	.07	.04	82.	*	2		1330	76	.00	.00	.00	1.
1		0800	17	.13	.07	.06	115.	*	2		1400	77	.00	.00	.00	0.
1		0830	18	.15	.08	.08	156.	*	2		1430	78	.00	.00	.00	0.
1		0900	19	.17	.07	.10	208.	*	2		1500	79	.00	.00	.00	0.
1		0930	20	.20	.08	.12	274.	*	2		1530	80	.00	.00	.00	0.
1		1000	21	.22	.07	.15	351.	*	2		1600	81	.00	.00	.00	0.
1		1030	22	.15	.05	.11	421.	*	2		1630	82	.00	.00	.00	0.
1		1100	23	.21	.05	.15	483.	*	2		1700	83	.00	.00	.00	0.
1		1130	24	.20	.05	.15	523.	*	2		1730	84	.00	.00	.00	0.
1		1200	25	.18	.04	.14	562.	*	2		1800	85	.00	.00	.00	0.
1		1230	26	.26	.05	.21	620.	*	2		1830	86	.00	.00	.00	0.
1		1300	27	.29	.05	.24	694.	*	2		1900	87	.00	.00	.00	0.
1		1330	28	.35	.05	.30	814.	*	2		1930	88	.00	.00	.00	0.
1		1400	29	.24	.03	.21	928.	*	2		2000	89	.00	.00	.00	0.
1		1430	30	.27	.03	.24	1011.	*	2		2030	90	.00	.00	.00	0.
1		1500	31	.26	.03	.23	1035.	*	2		2100	91	.00	.00	.00	0.
1		1530	32	.24	.02	.22	1040.	*	2		2130	92	.00	.00	.00	0.
1		1600	33	.20	.02	.18	1040.	*	2		2200	93	.00	.00	.00	0.
1		1630	34	.04	.00	.04	973.	*	2		2230	94	.00	.00	.00	0.
1		1700	35	.03	.00	.03	840.	*	2		2300	95	.00	.00	.00	0.
1		1730	36	.05	.00	.05	666.	*	2		2330	96	.00	.00	.00	0.
1		1800	37	.05	.00	.04	525.	*	3		0000	97	.00	.00	.00	0.
1		1830	38	.04	.00	.04	452.	*	3		0030	98	.00	.00	.00	0.
1		1900	39	.03	.00	.02	404.	*	3		0100	99	.00	.00	.00	0.
1		1930	40	.04	.00	.03	360.	*	3		0130	100	.00	.00	.00	0.
1		2000	41	.03	.00	.02	319.	*	3		0200	101	.00	.00	.00	0.
1		2030	42	.03	.00	.03	289.	*	3		0230	102	.00	.00	.00	0.
1		2100	43	.03	.00	.02	265.	*	3		0300	103	.00	.00	.00	0.
1		2130	44	.03	.00	.02	244.	*	3		0330	104	.00	.00	.00	0.
1		2200	45	.03	.00	.02	226.	*	3		0400	105	.00	.00	.00	0.
1		2230	46	.03	.00	.02	210.	*	3		0430	106	.00	.00	.00	0.
1		2300	47	.02	.00	.02	197.	*	3		0500	107	.00	.00	.00	0.

1	2330	48	.02	.00	.02	184.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.02	.00	.02	169.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	150.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	129.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	103.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	80.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	65.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	54.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	45.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	38.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	31.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	26.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	21.	*	3	1130	120	.00	.00	.00	0.
							*							

****

TOTAL RAINFALL = 5.14, TOTAL LOSS = 1.67, TOTAL EXCESS = 3.47

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1040.	15.50		850.	365.	148.	148.
		(INCHES)	2.007	3.447	3.465	3.465
		(AC-FT)	422.	724.	728.	728.

CUMULATIVE AREA = 3.94 SQ MI

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          *            *
415 KK    *     10     *
          *            *
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417 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

418 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	3168.	CHANNEL LENGTH
S	.0062	SLOPE
N	.035	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	50.00	BOTTOM WIDTH OR DIAMETER
Z	2.00	SIDE SLOPE

***

COMPUTED MUSKINGUM-CUNGE PARAMETERS

COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.32	1.58	6.97	1584.00	1040.28	940.81	3.47	7.58
INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL								
MAIN	.32	1.58	30.00		1039.39	960.00	3.47	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7282E+03 EXCESS= .0000E+00 OUTFLOW= .7282E+03 BASIN STORAGE= .1095E-01 PERCENT ERROR= .0

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HYDROGRAPH AT STATION 10

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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		1500	31	1031.	*	2		0600	61	19.	*	2		2100	91	0.

1	0030	2	0.	*	1	1530	32	1039.	*	2	0630	62	14.	*	2	2130	92	0.
1	0100	3	0.	*	1	1600	33	1039.	*	2	0700	63	11.	*	2	2200	93	0.
1	0130	4	0.	*	1	1630	34	986.	*	2	0730	64	9.	*	2	2230	94	0.
1	0200	5	0.	*	1	1700	35	866.	*	2	0800	65	8.	*	2	2300	95	0.
1	0230	6	0.	*	1	1730	36	702.	*	2	0830	66	7.	*	2	2330	96	0.
1	0300	7	0.	*	1	1800	37	557.	*	2	0900	67	6.	*	3	0000	97	0.
1	0330	8	0.	*	1	1830	38	470.	*	2	0930	68	5.	*	3	0030	98	0.
1	0400	9	0.	*	1	1900	39	417.	*	2	1000	69	4.	*	3	0100	99	0.
1	0430	10	0.	*	1	1930	40	372.	*	2	1030	70	3.	*	3	0130	100	0.
1	0500	11	1.	*	1	2000	41	331.	*	2	1100	71	3.	*	3	0200	101	0.
1	0530	12	4.	*	1	2030	42	297.	*	2	1130	72	2.	*	3	0230	102	0.
1	0600	13	12.	*	1	2100	43	272.	*	2	1200	73	2.	*	3	0300	103	0.
1	0630	14	25.	*	1	2130	44	250.	*	2	1230	74	1.	*	3	0330	104	0.
1	0700	15	44.	*	1	2200	45	232.	*	2	1300	75	1.	*	3	0400	105	0.
1	0730	16	69.	*	1	2230	46	215.	*	2	1330	76	1.	*	3	0430	106	0.
1	0800	17	101.	*	1	2300	47	201.	*	2	1400	77	1.	*	3	0500	107	0.
1	0830	18	140.	*	1	2330	48	188.	*	2	1430	78	0.	*	3	0530	108	0.
1	0900	19	190.	*	2	0000	49	174.	*	2	1500	79	0.	*	3	0600	109	0.
1	0930	20	254.	*	2	0030	50	157.	*	2	1530	80	0.	*	3	0630	110	0.
1	1000	21	330.	*	2	0100	51	137.	*	2	1600	81	0.	*	3	0700	111	0.
1	1030	22	403.	*	2	0130	52	113.	*	2	1630	82	0.	*	3	0730	112	0.
1	1100	23	468.	*	2	0200	53	90.	*	2	1700	83	0.	*	3	0800	113	0.
1	1130	24	514.	*	2	0230	54	72.	*	2	1730	84	0.	*	3	0830	114	0.
1	1200	25	553.	*	2	0300	55	59.	*	2	1800	85	0.	*	3	0900	115	0.
1	1230	26	608.	*	2	0330	56	49.	*	2	1830	86	0.	*	3	0930	116	0.
1	1300	27	678.	*	2	0400	57	42.	*	2	1900	87	0.	*	3	1000	117	0.
1	1330	28	790.	*	2	0430	58	35.	*	2	1930	88	0.	*	3	1030	118	0.
1	1400	29	906.	*	2	0500	59	29.	*	2	2000	89	0.	*	3	1100	119	0.
1	1430	30	995.	*	2	0530	60	24.	*	2	2030	90	0.	*	3	1130	120	0.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1039.	16.00		850.	365.	148.	148.
		(INCHES)	2.005	3.447	3.466	3.466
		(AC-FT)	421.	724.	728.	728.

CUMULATIVE AREA = 3.94 SQ MI

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            *            *
419 KK      *    Node34  *
            *            *
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421 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

425 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM VALLEY S-GRAPH

SUBBASIN RUNOFF DATA

422 BA SUBBASIN CHARACTERISTICS

TAREA	2.05	SUBBASIN AREA

PRECIPITATION DATA

424 PB

STORM	5.67	BASIN TOTAL PRECIPITATION

426 PI INCREMENTAL PRECIPITATION PATTERN

.03	.04	.03	.04	.05	.06	.06	.06	.07	.09
.07	.09	.10	.11	.12	.14	.17	.19	.22	.24
.17	.23	.22	.20	.29	.32	.39	.26	.30	.29
.27	.22	.05	.03	.06	.05	.05	.03	.04	.03
.03	.03	.03	.03	.03	.02	.02	.02		

436 LS SCS LOSS RATE

STRTL	.37	INITIAL ABSTRACTION
CRVNBR	84.30	CURVE NUMBER

RTIMP .00 PERCENT IMPERVIOUS AREA

437 UI INPUT UNITGRAPH, 24 ORDINATES, VOLUME = 1.00

214.0	499.0	656.0	367.0	206.0	140.0	104.0	78.0	62.0	53.0
42.4	36.0	32.6	26.6	25.3	17.6	17.6	16.4	8.7	8.7
8.7	8.7	8.7	8.4						

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HYDROGRAPH AT STATION Node34

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.	2		0600	61	.00	.00	.00	5.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	4.
1		0100	3	.04	.04	.00	0.	2		0700	63	.00	.00	.00	3.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	2.
1		0200	5	.04	.04	.00	0.	2		0800	65	.00	.00	.00	2.
1		0230	6	.05	.05	.00	0.	2		0830	66	.00	.00	.00	2.
1		0300	7	.06	.06	.00	0.	2		0900	67	.00	.00	.00	1.
1		0330	8	.06	.06	.00	0.	2		0930	68	.00	.00	.00	1.
1		0400	9	.06	.06	.00	0.	2		1000	69	.00	.00	.00	1.
1		0430	10	.07	.07	.00	0.	2		1030	70	.00	.00	.00	1.
1		0500	11	.09	.08	.01	3.	2		1100	71	.00	.00	.00	0.
1		0530	12	.07	.06	.01	9.	2		1130	72	.00	.00	.00	0.
1		0600	13	.09	.07	.02	18.	2		1200	73	.00	.00	.00	0.
1		0630	14	.10	.07	.03	29.	2		1230	74	.00	.00	.00	0.
1		0700	15	.11	.07	.04	45.	2		1300	75	.00	.00	.00	0.
1		0730	16	.12	.07	.05	63.	2		1330	76	.00	.00	.00	0.
1		0800	17	.14	.07	.07	85.	2		1400	77	.00	.00	.00	0.
1		0830	18	.17	.08	.09	113.	2		1430	78	.00	.00	.00	0.
1		0900	19	.19	.08	.11	149.	2		1500	79	.00	.00	.00	0.
1		0930	20	.22	.08	.14	193.	2		1530	80	.00	.00	.00	0.
1		1000	21	.24	.08	.17	244.	2		1600	81	.00	.00	.00	0.
1		1030	22	.17	.05	.12	286.	2		1630	82	.00	.00	.00	0.
1		1100	23	.23	.06	.17	314.	2		1700	83	.00	.00	.00	0.
1		1130	24	.22	.05	.17	332.	2		1730	84	.00	.00	.00	0.
1		1200	25	.20	.04	.16	360.	2		1800	85	.00	.00	.00	0.
1		1230	26	.29	.05	.24	391.	2		1830	86	.00	.00	.00	0.
1		1300	27	.32	.05	.27	444.	2		1900	87	.00	.00	.00	0.
1		1330	28	.39	.05	.33	533.	2		1930	88	.00	.00	.00	0.
1		1400	29	.26	.03	.23	598.	2		2000	89	.00	.00	.00	0.
1		1430	30	.30	.03	.27	628.	2		2030	90	.00	.00	.00	0.
1		1500	31	.29	.03	.26	622.	2		2100	91	.00	.00	.00	0.
1		1530	32	.27	.02	.24	631.	2		2130	92	.00	.00	.00	0.
1		1600	33	.22	.02	.20	622.	2		2200	93	.00	.00	.00	0.
1		1630	34	.05	.00	.04	562.	2		2230	94	.00	.00	.00	0.
1		1700	35	.03	.00	.03	452.	2		2300	95	.00	.00	.00	0.
1		1730	36	.06	.00	.05	334.	2		2330	96	.00	.00	.00	0.
1		1800	37	.05	.00	.05	272.	3		0000	97	.00	.00	.00	0.
1		1830	38	.05	.00	.04	242.	3		0030	98	.00	.00	.00	0.
1		1900	39	.03	.00	.03	214.	3		0100	99	.00	.00	.00	0.
1		1930	40	.04	.00	.04	189.	3		0130	100	.00	.00	.00	0.
1		2000	41	.03	.00	.03	166.	3		0200	101	.00	.00	.00	0.
1		2030	42	.03	.00	.03	152.	3		0230	102	.00	.00	.00	0.
1		2100	43	.03	.00	.03	138.	3		0300	103	.00	.00	.00	0.
1		2130	44	.03	.00	.03	127.	3		0330	104	.00	.00	.00	0.
1		2200	45	.03	.00	.03	116.	3		0400	105	.00	.00	.00	0.
1		2230	46	.03	.00	.03	107.	3		0430	106	.00	.00	.00	0.
1		2300	47	.02	.00	.02	100.	3		0500	107	.00	.00	.00	0.
1		2330	48	.02	.00	.02	91.	3		0530	108	.00	.00	.00	0.
2		0000	49	.02	.00	.02	84.	3		0600	109	.00	.00	.00	0.
2		0030	50	.00	.00	.00	73.	3		0630	110	.00	.00	.00	0.
2		0100	51	.00	.00	.00	58.	3		0700	111	.00	.00	.00	0.
2		0130	52	.00	.00	.00	41.	3		0730	112	.00	.00	.00	0.
2		0200	53	.00	.00	.00	30.	3		0800	113	.00	.00	.00	0.
2		0230	54	.00	.00	.00	23.	3		0830	114	.00	.00	.00	0.
2		0300	55	.00	.00	.00	18.	3		0900	115	.00	.00	.00	0.
2		0330	56	.00	.00	.00	13.	3		0930	116	.00	.00	.00	0.
2		0400	57	.00	.00	.00	10.	3		1000	117	.00	.00	.00	0.
2		0430	58	.00	.00	.00	8.	3		1030	118	.00	.00	.00	0.
2		0500	59	.00	.00	.00	7.	3		1100	119	.00	.00	.00	0.
2		0530	60	.00	.00	.00	6.	3		1130	120	.00	.00	.00	0.

TOTAL RAINFALL = 5.67, TOTAL LOSS = 1.75, TOTAL EXCESS = 3.92

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 631.	15.50		515.	215.	87.	87.
		(INCHES)	2.334	3.907	3.919	3.919
		(AC-FT)	255.	427.	428.	428.

CUMULATIVE AREA = 2.05 SQ MI

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441 KK    *   Node53   *
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443 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

444 HC HYDROGRAPH COMBINATION

ICOMP	3	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node53
SUM OF 3 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	27873.	2		0600	61	4045.	2		2100	91	959.
1		0030	2	1.	1		1530	32	31308.	2		0630	62	3822.	2		2130	92	924.
1		0100	3	1.	1		1600	33	33971.	2		0700	63	3624.	2		2200	93	890.
1		0130	4	1.	1		1630	34	35482.	2		0730	64	3430.	2		2230	94	858.
1		0200	5	1.	1		1700	35	35271.	2		0800	65	3247.	2		2300	95	827.
1		0230	6	1.	1		1730	36	34019.	2		0830	66	3077.	2		2330	96	797.
1		0300	7	1.	1		1800	37	32021.	2		0900	67	2912.	3		0000	97	769.
1		0330	8	1.	1		1830	38	29401.	2		0930	68	2747.	3		0030	98	743.
1		0400	9	1.	1		1900	39	26532.	2		1000	69	2589.	3		0100	99	719.
1		0430	10	1.	1		1930	40	23499.	2		1030	70	2447.	3		0130	100	696.
1		0500	11	5.	1		2000	41	21025.	2		1100	71	2313.	3		0200	101	674.
1		0530	12	14.	1		2030	42	19231.	2		1130	72	2191.	3		0230	102	651.
1		0600	13	33.	1		2100	43	17690.	2		1200	73	2078.	3		0300	103	629.
1		0630	14	69.	1		2130	44	16206.	2		1230	74	1973.	3		0330	104	606.
1		0700	15	133.	1		2200	45	14736.	2		1300	75	1873.	3		0400	105	584.
1		0730	16	252.	1		2230	46	13413.	2		1330	76	1779.	3		0430	106	563.
1		0800	17	469.	1		2300	47	12237.	2		1400	77	1691.	3		0500	107	543.
1		0830	18	833.	1		2330	48	11233.	2		1430	78	1611.	3		0530	108	523.
1		0900	19	1389.	2		0000	49	10409.	2		1500	79	1536.	3		0600	109	504.
1		0930	20	2207.	2		0030	50	9698.	2		1530	80	1466.	3		0630	110	487.
1		1000	21	3415.	2		0100	51	9045.	2		1600	81	1398.	3		0700	111	472.
1		1030	22	5034.	2		0130	52	8345.	2		1630	82	1335.	3		0730	112	459.
1		1100	23	6979.	2		0200	53	7604.	2		1700	83	1280.	3		0800	113	447.
1		1130	24	9101.	2		0230	54	6938.	2		1730	84	1233.	3		0830	114	437.
1		1200	25	11219.	2		0300	55	6371.	2		1800	85	1189.	3		0900	115	428.
1		1230	26	13327.	2		0330	56	5835.	2		1830	86	1147.	3		0930	116	420.
1		1300	27	15560.	2		0400	57	5324.	2		1900	87	1106.	3		1000	117	412.
1		1330	28	17949.	2		0430	58	4895.	2		1930	88	1067.	3		1030	118	403.
1		1400	29	20869.	2		0500	59	4563.	2		2000	89	1030.	3		1100	119	395.
1		1430	30	24364.	2		0530	60	4291.	2		2030	90	995.	3		1130	120	387.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
35482.	16.50		29557.	14019.	6151.	6151.
		(INCHES)	1.257	2.385	2.595	2.595
		(AC-FT)	14656.	27806.	30245.	30245.

CUMULATIVE AREA = 218.56 SQ MI

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445 KK    *   9        *
          *            *
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447 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

448 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	10085.	CHANNEL LENGTH
S	.0029	SLOPE
N	.035	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	50.00	BOTTOM WIDTH OR DIAMETER
Z	2.00	SIDE SLOPE

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COMPUTED MUSKINGUM-CUNGE PARAMETERS

ELEMENT	ALPHA	M	COMPUTATION TIME STEP DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.22	1.58	7.74	5042.50	35448.07	998.55	2.59	21.71
INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL								
MAIN	.22	1.58	30.00		35301.05	1020.00	2.59	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3025E+05 EXCESS= .0000E+00 OUTFLOW= .3024E+05 BASIN STORAGE= .2610E+02 PERCENT ERROR= .0

HYDROGRAPH AT STATION 9

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	27095.	2		0600	61	4153.	2		2100	91	982.
1		0030	2	1.	1		1530	32	30574.	2		0630	62	3922.	2		2130	92	947.
1		0100	3	1.	1		1600	33	33425.	2		0700	63	3715.	2		2200	93	912.
1		0130	4	1.	1		1630	34	35169.	2		0730	64	3521.	2		2230	94	879.
1		0200	5	1.	1		1700	35	35301.	2		0800	65	3334.	2		2300	95	847.
1		0230	6	1.	1		1730	36	34260.	2		0830	66	3160.	2		2330	96	816.
1		0300	7	1.	1		1800	37	32423.	2		0900	67	2993.	3		0000	97	787.
1		0330	8	1.	1		1830	38	29954.	2		0930	68	2830.	3		0030	98	760.
1		0400	9	1.	1		1900	39	27162.	2		1000	69	2671.	3		0100	99	734.
1		0430	10	1.	1		1930	40	24200.	2		1030	70	2522.	3		0130	100	711.
1		0500	11	2.	1		2000	41	21618.	2		1100	71	2385.	3		0200	101	688.
1		0530	12	7.	1		2030	42	19676.	2		1130	72	2258.	3		0230	102	666.
1		0600	13	18.	1		2100	43	18085.	2		1200	73	2142.	3		0300	103	644.
1		0630	14	42.	1		2130	44	16598.	2		1230	74	2033.	3		0330	104	621.
1		0700	15	86.	1		2200	45	15139.	2		1300	75	1931.	3		0400	105	599.
1		0730	16	169.	1		2230	46	13789.	2		1330	76	1835.	3		0430	106	577.
1		0800	17	322.	1		2300	47	12582.	2		1400	77	1744.	3		0500	107	556.
1		0830	18	594.	1		2330	48	11537.	2		1430	78	1660.	3		0530	108	536.
1		0900	19	1035.	2		0000	49	10665.	2		1500	79	1583.	3		0600	109	517.
1		0930	20	1712.	2		0030	50	9925.	2		1530	80	1510.	3		0630	110	498.
1		1000	21	2799.	2		0100	51	9259.	2		1600	81	1441.	3		0700	111	482.
1		1030	22	4331.	2		0130	52	8580.	2		1630	82	1375.	3		0730	112	468.
1		1100	23	6241.	2		0200	53	7862.	2		1700	83	1315.	3		0800	113	455.
1		1130	24	8378.	2		0230	54	7178.	2		1730	84	1263.	3		0830	114	444.
1		1200	25	10557.	2		0300	55	6581.	2		1800	85	1217.	3		0900	115	434.
1		1230	26	12712.	2		0330	56	6040.	2		1830	86	1174.	3		0930	116	426.
1		1300	27	14947.	2		0400	57	5526.	2		1900	87	1132.	3		1000	117	417.
1		1330	28	17332.	2		0430	58	5070.	2		1930	88	1092.	3		1030	118	409.
1		1400	29	20157.	2		0500	59	4703.	2		2000	89	1054.	3		1100	119	401.
1		1430	30	23551.	2		0530	60	4408.	2		2030	90	1018.	3		1130	120	393.

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
		(CFS)				
35301.	17.00		29500.	14020.	6149.	6149.
		(INCHES)	1.255	2.386	2.594	2.594
		(AC-FT)	14628.	27808.	30239.	30239.

CUMULATIVE AREA = 218.56 SQ MI

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449 KK    *    Node13  *
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451 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          0  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .500  TIME INTERVAL IN HOURS

                         SANTA MARGARITA STORMS

455 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN         15  TIME INTERVAL IN MINUTES
                    JXDATE      1    0  STARTING DATE
                    JXTIME          0  STARTING TIME
                         UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

              SUBBASIN RUNOFF DATA

452 BA          SUBBASIN CHARACTERISTICS
                     TAREA       6.71  SUBBASIN AREA

                PRECIPITATION DATA

454 PB               STORM       5.78  BASIN TOTAL PRECIPITATION

456 PI            INCREMENTAL PRECIPITATION PATTERN
                    .03       .04       .03       .04       .05       .06       .06       .06       .07       .09
                    .08       .09       .10       .12       .12       .14       .17       .19       .23       .25
                    .17       .23       .22       .20       .30       .33       .39       .27       .31       .30
                    .27       .22       .05       .03       .06       .05       .05       .03       .04       .03
                    .03       .03       .03       .03       .03       .02       .02       .02

466 LS          SCS LOSS RATE
                     STRTL        .42  INITIAL ABSTRACTION
                    CRVNBR      82.60  CURVE NUMBER
                     RTIMP        .00  PERCENT IMPERVIOUS AREA

467 UI          INPUT UNITGRAPH,  24 ORDINATES,  VOLUME = 1.00
                   427.0     801.0    1851.0    2314.0     813.0     610.0     445.0     350.0     255.0     211.0
                   157.0     114.0      84.0      56.0      18.0      18.0      18.0      18.0      18.0      18.0
                    18.0      18.0      18.0       3.4
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HYDROGRAPH AT STATION Node13

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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.	2		0600	61	.00	.00	.00	8.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	6.
1		0100	3	.04	.04	.00	0.	2		0700	63	.00	.00	.00	4.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	4.
1		0200	5	.04	.04	.00	0.	2		0800	65	.00	.00	.00	3.
1		0230	6	.05	.05	.00	0.	2		0830	66	.00	.00	.00	3.
1		0300	7	.06	.06	.00	0.	2		0900	67	.00	.00	.00	2.
1		0330	8	.06	.06	.00	0.	2		0930	68	.00	.00	.00	2.
1		0400	9	.06	.06	.00	0.	2		1000	69	.00	.00	.00	1.
1		0430	10	.07	.07	.00	0.	2		1030	70	.00	.00	.00	1.
1		0500	11	.09	.08	.01	2.	2		1100	71	.00	.00	.00	0.
1		0530	12	.07	.07	.01	9.	2		1130	72	.00	.00	.00	0.
1		0600	13	.09	.07	.02	25.	2		1200	73	.00	.00	.00	0.
1		0630	14	.10	.08	.03	54.	2		1230	74	.00	.00	.00	0.
1		0700	15	.12	.08	.04	94.	2		1300	75	.00	.00	.00	0.
1		0730	16	.12	.08	.05	147.	2		1330	76	.00	.00	.00	0.
1		0800	17	.14	.08	.06	213.	2		1400	77	.00	.00	.00	0.
1		0830	18	.17	.09	.09	292.	2		1430	78	.00	.00	.00	0.
1		0900	19	.19	.09	.10	391.	2		1500	79	.00	.00	.00	0.
1		0930	20	.23	.09	.14	524.	2		1530	80	.00	.00	.00	0.
1		1000	21	.25	.09	.16	680.	2		1600	81	.00	.00	.00	0.
1		1030	22	.17	.05	.12	827.	2		1630	82	.00	.00	.00	0.

1	1100	23	.23	.06	.17	982.	*	2	1700	83	.00	.00	.00	0.
1	1130	24	.22	.05	.17	1062.	*	2	1730	84	.00	.00	.00	0.
1	1200	25	.20	.05	.16	1114.	*	2	1800	85	.00	.00	.00	0.
1	1230	26	.29	.06	.24	1262.	*	2	1830	86	.00	.00	.00	0.
1	1300	27	.33	.06	.27	1369.	*	2	1900	87	.00	.00	.00	0.
1	1330	28	.39	.06	.33	1586.	*	2	1930	88	.00	.00	.00	0.
1	1400	29	.27	.04	.23	1860.	*	2	2000	89	.00	.00	.00	0.
1	1430	30	.31	.04	.27	2071.	*	2	2030	90	.00	.00	.00	0.
1	1500	31	.29	.03	.26	2138.	*	2	2100	91	.00	.00	.00	0.
1	1530	32	.27	.03	.24	2072.	*	2	2130	92	.00	.00	.00	0.
1	1600	33	.22	.02	.20	2119.	*	2	2200	93	.00	.00	.00	0.
1	1630	34	.05	.00	.04	2000.	*	2	2230	94	.00	.00	.00	0.
1	1700	35	.03	.00	.03	1768.	*	2	2300	95	.00	.00	.00	0.
1	1730	36	.06	.01	.05	1376.	*	2	2330	96	.00	.00	.00	0.
1	1800	37	.05	.00	.05	974.	*	3	0000	97	.00	.00	.00	0.
1	1830	38	.05	.00	.04	827.	*	3	0030	98	.00	.00	.00	0.
1	1900	39	.03	.00	.03	733.	*	3	0100	99	.00	.00	.00	0.
1	1930	40	.04	.00	.04	627.	*	3	0130	100	.00	.00	.00	0.
1	2000	41	.03	.00	.03	525.	*	3	0200	101	.00	.00	.00	0.
1	2030	42	.03	.00	.03	449.	*	3	0230	102	.00	.00	.00	0.
1	2100	43	.03	.00	.03	403.	*	3	0300	103	.00	.00	.00	0.
1	2130	44	.03	.00	.03	353.	*	3	0330	104	.00	.00	.00	0.
1	2200	45	.03	.00	.03	325.	*	3	0400	105	.00	.00	.00	0.
1	2230	46	.03	.00	.03	297.	*	3	0430	106	.00	.00	.00	0.
1	2300	47	.02	.00	.02	281.	*	3	0500	107	.00	.00	.00	0.
1	2330	48	.02	.00	.02	270.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.02	.00	.02	255.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	228.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	199.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	151.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	93.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	69.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	50.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	36.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	26.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	20.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	15.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	11.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 5.78, TOTAL LOSS = 1.93, TOTAL EXCESS = 3.85

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2138.	15.00		1722.	692.	280.	280.
		(INCHES)	2.386	3.838	3.843	3.843
		(AC-FT)	854.	1374.	1375.	1375.

CUMULATIVE AREA = 6.71 SQ MI

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471 KK      *    Node74  *
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473 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

474 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node74
SUM OF 2 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	*	1		1500	31	29233.	*	2		0600	61	4161.	*	2		2100	91	982.

1	0030	2	1.	*	1	1530	32	32647.	*	2	0630	62	3928.	*	2	2130	92	947.
1	0100	3	1.	*	1	1600	33	35544.	*	2	0700	63	3719.	*	2	2200	93	912.
1	0130	4	1.	*	1	1630	34	37169.	*	2	0730	64	3525.	*	2	2230	94	879.
1	0200	5	1.	*	1	1700	35	37069.	*	2	0800	65	3338.	*	2	2300	95	847.
1	0230	6	1.	*	1	1730	36	35636.	*	2	0830	66	3162.	*	2	2330	96	816.
1	0300	7	1.	*	1	1800	37	33396.	*	2	0900	67	2996.	*	3	0000	97	787.
1	0330	8	1.	*	1	1830	38	30781.	*	2	0930	68	2832.	*	3	0030	98	760.
1	0400	9	1.	*	1	1900	39	27895.	*	2	1000	69	2672.	*	3	0100	99	734.
1	0430	10	1.	*	1	1930	40	24827.	*	2	1030	70	2523.	*	3	0130	100	711.
1	0500	11	4.	*	1	2000	41	22143.	*	2	1100	71	2385.	*	3	0200	101	688.
1	0530	12	15.	*	1	2030	42	20125.	*	2	1130	72	2258.	*	3	0230	102	666.
1	0600	13	43.	*	1	2100	43	18487.	*	2	1200	73	2142.	*	3	0300	103	644.
1	0630	14	96.	*	1	2130	44	16950.	*	2	1230	74	2033.	*	3	0330	104	621.
1	0700	15	180.	*	1	2200	45	15464.	*	2	1300	75	1931.	*	3	0400	105	599.
1	0730	16	316.	*	1	2230	46	14086.	*	2	1330	76	1835.	*	3	0430	106	577.
1	0800	17	535.	*	1	2300	47	12863.	*	2	1400	77	1744.	*	3	0500	107	556.
1	0830	18	887.	*	1	2330	48	11807.	*	2	1430	78	1660.	*	3	0530	108	536.
1	0900	19	1426.	*	2	0000	49	10920.	*	2	1500	79	1583.	*	3	0600	109	517.
1	0930	20	2236.	*	2	0030	50	10153.	*	2	1530	80	1510.	*	3	0630	110	498.
1	1000	21	3479.	*	2	0100	51	9458.	*	2	1600	81	1441.	*	3	0700	111	482.
1	1030	22	5158.	*	2	0130	52	8731.	*	2	1630	82	1375.	*	3	0730	112	468.
1	1100	23	7223.	*	2	0200	53	7955.	*	2	1700	83	1315.	*	3	0800	113	455.
1	1130	24	9440.	*	2	0230	54	7246.	*	2	1730	84	1263.	*	3	0830	114	444.
1	1200	25	11671.	*	2	0300	55	6631.	*	2	1800	85	1217.	*	3	0900	115	434.
1	1230	26	13973.	*	2	0330	56	6076.	*	2	1830	86	1174.	*	3	0930	116	426.
1	1300	27	16316.	*	2	0400	57	5552.	*	2	1900	87	1132.	*	3	1000	117	417.
1	1330	28	18918.	*	2	0430	58	5091.	*	2	1930	88	1092.	*	3	1030	118	409.
1	1400	29	22017.	*	2	0500	59	4717.	*	2	2000	89	1054.	*	3	1100	119	401.
1	1430	30	25622.	*	2	0530	60	4418.	*	2	2030	90	1018.	*	3	1130	120	393.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 37169.	16.50		30992.	14672.	6429.	6429.
		(INCHES)	1.279	2.422	2.631	2.631
		(AC-FT)	15368.	29101.	31614.	31614.

CUMULATIVE AREA = 225.27 SQ MI

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          *            *
475 KK    *    Node22  *
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477 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

481 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM MOUNTAIN S-GRAPH

SUBBASIN RUNOFF DATA

478 BA SUBBASIN CHARACTERISTICS

TAREA	38.15	SUBBASIN AREA

PRECIPITATION DATA

480 PB

STORM	8.08	BASIN TOTAL PRECIPITATION

482 PI INCREMENTAL PRECIPITATION PATTERN

.04	.06	.05	.06	.06	.08	.08	.09	.10	.12
.10	.13	.15	.16	.17	.20	.24	.27	.32	.35
.24	.32	.31	.28	.41	.46	.55	.37	.43	.41
.38	.31	.06	.05	.08	.07	.06	.04	.06	.04
.05	.04	.04	.04	.04	.03	.03	.03		

492 LS SCS LOSS RATE

STRTL	.66	INITIAL ABSTRACTION
CRVNBR	75.20	CURVE NUMBER

RTIMP .00 PERCENT IMPERVIOUS AREA

493 UI INPUT UNITGRAPH, 103 ORDINATES, VOLUME = 1.00

1440.0	1908.0	2832.0	4066.0	5346.0	3903.0	2933.0	2447.0	1865.0	1414.0
1251.0	1227.0	1028.0	952.0	888.0	782.0	782.0	699.0	625.0	571.0
558.0	521.0	496.0	447.0	443.0	417.0	417.0	356.0	338.0	338.0
287.0	278.0	278.0	268.0	245.0	245.0	245.0	237.0	219.0	219.0
219.0	219.0	197.0	192.0	192.0	192.0	192.0	172.0	162.0	162.0
162.0	162.0	162.0	138.0	124.0	124.0	124.0	124.0	124.0	124.0
124.0	101.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
90.0	90.0	47.3	32.7	32.7	32.7	32.7	32.7	32.7	32.7
32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7
32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7
32.7	32.7	10.5							

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HYDROGRAPH AT STATION Node22

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.	2		0600	61	.00	.00	.00	1545.
1		0030	2	.04	.04	.00	0.	2		0630	62	.00	.00	.00	1475.
1		0100	3	.06	.06	.00	0.	2		0700	63	.00	.00	.00	1409.
1		0130	4	.05	.05	.00	0.	2		0730	64	.00	.00	.00	1355.
1		0200	5	.06	.06	.00	0.	2		0800	65	.00	.00	.00	1304.
1		0230	6	.06	.06	.00	0.	2		0830	66	.00	.00	.00	1254.
1		0300	7	.08	.08	.00	0.	2		0900	67	.00	.00	.00	1210.
1		0330	8	.08	.08	.00	0.	2		0930	68	.00	.00	.00	1170.
1		0400	9	.09	.09	.00	0.	2		1000	69	.00	.00	.00	1132.
1		0430	10	.11	.11	.00	0.	2		1030	70	.00	.00	.00	1091.
1		0500	11	.12	.12	.00	3.	2		1100	71	.00	.00	.00	1055.
1		0530	12	.11	.10	.01	15.	2		1130	72	.00	.00	.00	1024.
1		0600	13	.13	.11	.02	46.	2		1200	73	.00	.00	.00	991.
1		0630	14	.15	.12	.03	106.	2		1230	74	.00	.00	.00	955.
1		0700	15	.16	.12	.04	209.	2		1300	75	.00	.00	.00	919.
1		0730	16	.17	.12	.05	364.	2		1330	76	.00	.00	.00	890.
1		0800	17	.20	.13	.08	586.	2		1400	77	.00	.00	.00	863.
1		0830	18	.24	.14	.11	882.	2		1430	78	.00	.00	.00	836.
1		0900	19	.27	.13	.13	1253.	2		1500	79	.00	.00	.00	806.
1		0930	20	.32	.14	.18	1730.	2		1530	80	.00	.00	.00	776.
1		1000	21	.35	.14	.21	2324.	2		1600	81	.00	.00	.00	748.
1		1030	22	.24	.08	.16	2904.	2		1630	82	.00	.00	.00	723.
1		1100	23	.32	.10	.22	3586.	2		1700	83	.00	.00	.00	699.
1		1130	24	.31	.09	.22	4250.	2		1730	84	.00	.00	.00	674.
1		1200	25	.28	.07	.21	4810.	2		1800	85	.00	.00	.00	649.
1		1230	26	.41	.10	.32	5385.	2		1830	86	.00	.00	.00	626.
1		1300	27	.46	.09	.37	6136.	2		1900	87	.00	.00	.00	606.
1		1330	28	.55	.10	.45	7013.	2		1930	88	.00	.00	.00	587.
1		1400	29	.37	.06	.31	7806.	2		2000	89	.00	.00	.00	564.
1		1430	30	.43	.06	.37	8871.	2		2030	90	.00	.00	.00	542.
1		1500	31	.41	.05	.36	9816.	2		2100	91	.00	.00	.00	519.
1		1530	32	.38	.05	.33	10503.	2		2130	92	.00	.00	.00	494.
1		1600	33	.31	.03	.27	10729.	2		2200	93	.00	.00	.00	468.
1		1630	34	.06	.01	.06	10684.	2		2230	94	.00	.00	.00	446.
1		1700	35	.05	.01	.04	10342.	2		2300	95	.00	.00	.00	427.
1		1730	36	.08	.01	.07	9655.	2		2330	96	.00	.00	.00	411.
1		1800	37	.07	.01	.06	8656.	3		0000	97	.00	.00	.00	395.
1		1830	38	.06	.01	.06	7470.	3		0030	98	.00	.00	.00	374.
1		1900	39	.04	.00	.04	6623.	3		0100	99	.00	.00	.00	351.
1		1930	40	.06	.01	.05	6045.	3		0130	100	.00	.00	.00	324.
1		2000	41	.04	.00	.04	5540.	3		0200	101	.00	.00	.00	301.
1		2030	42	.05	.00	.04	5144.	3		0230	102	.00	.00	.00	278.
1		2100	43	.04	.00	.04	4822.	3		0300	103	.00	.00	.00	256.
1		2130	44	.04	.00	.04	4572.	3		0330	104	.00	.00	.00	235.
1		2200	45	.04	.00	.04	4297.	3		0400	105	.00	.00	.00	217.
1		2230	46	.04	.00	.04	4087.	3		0430	106	.00	.00	.00	210.
1		2300	47	.03	.00	.03	3890.	3		0500	107	.00	.00	.00	206.
1		2330	48	.03	.00	.03	3710.	3		0530	108	.00	.00	.00	201.
2		0000	49	.03	.00	.03	3548.	3		0600	109	.00	.00	.00	196.
2		0030	50	.00	.00	.00	3342.	3		0630	110	.00	.00	.00	192.
2		0100	51	.00	.00	.00	3132.	3		0700	111	.00	.00	.00	189.
2		0130	52	.00	.00	.00	2934.	3		0730	112	.00	.00	.00	187.
2		0200	53	.00	.00	.00	2711.	3		0800	113	.00	.00	.00	184.
2		0230	54	.00	.00	.00	2456.	3		0830	114	.00	.00	.00	182.
2		0300	55	.00	.00	.00	2249.	3		0900	115	.00	.00	.00	179.
2		0330	56	.00	.00	.00	2089.	3		0930	116	.00	.00	.00	176.
2		0400	57	.00	.00	.00	1948.	3		1000	117	.00	.00	.00	173.
2		0430	58	.00	.00	.00	1822.	3		1030	118	.00	.00	.00	169.
2		0500	59	.00	.00	.00	1721.	3		1100	119	.00	.00	.00	165.
2		0530	60	.00	.00	.00	1627.	3		1130	120	.00	.00	.00	160.

TOTAL RAINFALL = 8.08, TOTAL LOSS = 2.94, TOTAL EXCESS = 5.14

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR

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+    (CFS)        (HR)
                    (CFS)
+    10729.      16.00                8994.        4595.        2110.        2110.
                          (INCHES)     2.192        4.479        5.100        5.100
                           (AC-FT)     4460.        9114.       10376.       10376.

                          CUMULATIVE AREA =   38.15 SQ MI
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 505 KK       *    Node24  *
              *            *
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 507 KO           OUTPUT CONTROL VARIABLES
                        IPRNT          0  PRINT CONTROL
                        IPLOT          0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE
                        IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                         IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                        ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                        ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                       TIMINT       .500  TIME INTERVAL IN HOURS

                            SANTA MARGARITA STORMS

 511 IN           TIME DATA FOR INPUT TIME SERIES
                        JXMIN         15  TIME INTERVAL IN MINUTES
                       JXDATE      1    0  STARTING DATE
                       JXTIME          0  STARTING TIME
                            UHG FROM MOUNTAIN S-GRAPH

                SUBBASIN RUNOFF DATA

 508 BA           SUBBASIN CHARACTERISTICS
                        TAREA      19.81  SUBBASIN AREA

                 PRECIPITATION DATA

 510 PB                 STORM       6.68  BASIN TOTAL PRECIPITATION

 512 PI             INCREMENTAL PRECIPITATION PATTERN
                     .03       .05       .04       .05       .05       .07       .07       .07       .09       .10
                     .09       .11       .12       .13       .14       .17       .20       .22       .26       .29
                     .20       .27       .25       .23       .34       .38       .45       .31       .35       .34
                     .31       .25       .05       .04       .07       .06       .05       .03       .05       .03
                     .04       .03       .03       .03       .03       .03       .03       .03

 522 LS           SCS LOSS RATE
                        STRTL        .71  INITIAL ABSTRACTION
                       CRVNBR      73.90  CURVE NUMBER
                        RTIMP        .00  PERCENT IMPERVIOUS AREA

 523 UI           INPUT UNITGRAPH,  61 ORDINATES,  VOLUME = 1.00
                   1418.0    2549.0    4368.0    3069.0    2046.0    1313.0    1102.0     889.0     776.0     691.0
                    589.0     512.0     469.0     415.0     385.0     368.0     299.0     283.0     246.0     239.0
                    217.0     217.0     197.0     194.0     189.0     170.0     170.0     164.0     144.0     144.0
                    144.0     121.0     110.0     110.0     110.0     109.0      80.0      80.0      80.0      80.0
                     79.6      79.6      50.2      29.0      29.0      29.0      29.0      29.0      29.0      29.0
                     29.0      29.0      29.0      29.0      29.0      29.0      29.0      29.0      29.0      29.0
                      2.1
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HYDROGRAPH AT STATION Node24

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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.	2		0600	61	.00	.00	.00	470.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	438.
1		0100	3	.05	.05	.00	0.	2		0700	63	.00	.00	.00	406.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	375.
1		0200	5	.05	.05	.00	0.	2		0800	65	.00	.00	.00	351.
1		0230	6	.05	.05	.00	0.	2		0830	66	.00	.00	.00	329.
1		0300	7	.07	.07	.00	0.	2		0900	67	.00	.00	.00	307.
1		0330	8	.07	.07	.00	0.	2		0930	68	.00	.00	.00	284.
1		0400	9	.07	.07	.00	0.	2		1000	69	.00	.00	.00	261.
1		0430	10	.09	.09	.00	0.	2		1030	70	.00	.00	.00	240.
1		0500	11	.10	.10	.00	0.	2		1100	71	.00	.00	.00	222.
1		0530	12	.09	.09	.00	0.	2		1130	72	.00	.00	.00	204.
1		0600	13	.11	.10	.00	4.	2		1200	73	.00	.00	.00	186.

1	0630	14	.12	.11	.01	21.	*	2	1230	74	.00	.00	.00	169.
1	0700	15	.13	.11	.02	65.	*	2	1300	75	.00	.00	.00	154.
1	0730	16	.14	.11	.03	143.	*	2	1330	76	.00	.00	.00	145.
1	0800	17	.17	.12	.04	256.	*	2	1400	77	.00	.00	.00	139.
1	0830	18	.20	.14	.06	411.	*	2	1430	78	.00	.00	.00	133.
1	0900	19	.22	.14	.09	619.	*	2	1500	79	.00	.00	.00	126.
1	0930	20	.26	.14	.12	895.	*	2	1530	80	.00	.00	.00	119.
1	1000	21	.29	.14	.14	1231.	*	2	1600	81	.00	.00	.00	112.
1	1030	22	.20	.09	.11	1542.	*	2	1630	82	.00	.00	.00	106.
1	1100	23	.27	.11	.16	1849.	*	2	1700	83	.00	.00	.00	99.
1	1130	24	.25	.10	.16	2054.	*	2	1730	84	.00	.00	.00	92.
1	1200	25	.23	.08	.15	2318.	*	2	1800	85	.00	.00	.00	86.
1	1230	26	.34	.11	.23	2629.	*	2	1830	86	.00	.00	.00	78.
1	1300	27	.38	.11	.27	3033.	*	2	1900	87	.00	.00	.00	68.
1	1330	28	.45	.11	.34	3687.	*	2	1930	88	.00	.00	.00	57.
1	1400	29	.31	.07	.24	4232.	*	2	2000	89	.00	.00	.00	49.
1	1430	30	.35	.07	.28	4697.	*	2	2030	90	.00	.00	.00	40.
1	1500	31	.34	.06	.28	4821.	*	2	2100	91	.00	.00	.00	30.
1	1530	32	.31	.05	.26	5003.	*	2	2130	92	.00	.00	.00	22.
1	1600	33	.25	.04	.21	5059.	*	2	2200	93	.00	.00	.00	16.
1	1630	34	.05	.01	.05	4792.	*	2	2230	94	.00	.00	.00	15.
1	1700	35	.04	.01	.03	4222.	*	2	2300	95	.00	.00	.00	14.
1	1730	36	.07	.01	.06	3436.	*	2	2330	96	.00	.00	.00	12.
1	1800	37	.06	.01	.05	2907.	*	3	0000	97	.00	.00	.00	10.
1	1830	38	.05	.01	.05	2621.	*	3	0030	98	.00	.00	.00	9.
1	1900	39	.03	.00	.03	2405.	*	3	0100	99	.00	.00	.00	8.
1	1930	40	.05	.01	.04	2213.	*	3	0130	100	.00	.00	.00	7.
1	2000	41	.03	.00	.03	2017.	*	3	0200	101	.00	.00	.00	6.
1	2030	42	.04	.01	.03	1888.	*	3	0230	102	.00	.00	.00	5.
1	2100	43	.03	.00	.03	1753.	*	3	0300	103	.00	.00	.00	4.
1	2130	44	.03	.00	.03	1653.	*	3	0330	104	.00	.00	.00	4.
1	2200	45	.03	.00	.03	1560.	*	3	0400	105	.00	.00	.00	3.
1	2230	46	.03	.00	.03	1481.	*	3	0430	106	.00	.00	.00	2.
1	2300	47	.03	.00	.02	1409.	*	3	0500	107	.00	.00	.00	1.
1	2330	48	.03	.00	.02	1338.	*	3	0530	108	.00	.00	.00	1.
2	0000	49	.03	.00	.02	1264.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	1178.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	1077.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	943.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	842.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	769.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	712.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	661.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	618.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	576.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	537.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	501.	*	3	1130	120	.00	.00	.00	0.
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TOTAL RAINFALL = 6.68, TOTAL LOSS = 2.93, TOTAL EXCESS = 3.75

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 5059.	16.00		4043.	1905.	806.	806.
		(INCHES)	1.897	3.577	3.753	3.753
		(AC-FT)	2005.	3779.	3965.	3965.

CUMULATIVE AREA = 19.81 SQ MI

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            *            *
531 KK      *    Node52  *
            *            *
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533 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

534 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node52
SUM OF 2 HYDROGRAPHS

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		1500	31	14637.	2		0600	61	2014.	2		2100	91	549.
1		0030	2	0.	1		1530	32	15507.	2		0630	62	1912.	2		2130	92	517.
1		0100	3	0.	1		1600	33	15788.	2		0700	63	1815.	2		2200	93	484.
1		0130	4	0.	1		1630	34	15476.	2		0730	64	1730.	2		2230	94	460.
1		0200	5	0.	1		1700	35	14563.	2		0800	65	1655.	2		2300	95	441.
1		0230	6	0.	1		1730	36	13091.	2		0830	66	1582.	2		2330	96	423.
1		0300	7	0.	1		1800	37	11563.	2		0900	67	1517.	3		0000	97	405.
1		0330	8	0.	1		1830	38	10091.	2		0930	68	1454.	3		0030	98	384.
1		0400	9	0.	1		1900	39	9028.	2		1000	69	1392.	3		0100	99	359.
1		0430	10	0.	1		1930	40	8258.	2		1030	70	1331.	3		0130	100	331.
1		0500	11	3.	1		2000	41	7557.	2		1100	71	1277.	3		0200	101	307.
1		0530	12	15.	1		2030	42	7031.	2		1130	72	1228.	3		0230	102	284.
1		0600	13	50.	1		2100	43	6575.	2		1200	73	1177.	3		0300	103	260.
1		0630	14	127.	1		2130	44	6225.	2		1230	74	1123.	3		0330	104	239.
1		0700	15	275.	1		2200	45	5857.	2		1300	75	1073.	3		0400	105	220.
1		0730	16	507.	1		2230	46	5568.	2		1330	76	1035.	3		0430	106	212.
1		0800	17	841.	1		2300	47	5299.	2		1400	77	1003.	3		0500	107	207.
1		0830	18	1293.	1		2330	48	5048.	2		1430	78	969.	3		0530	108	202.
1		0900	19	1872.	2		0000	49	4812.	2		1500	79	933.	3		0600	109	196.
1		0930	20	2625.	2		0030	50	4519.	2		1530	80	895.	3		0630	110	192.
1		1000	21	3555.	2		0100	51	4208.	2		1600	81	860.	3		0700	111	189.
1		1030	22	4447.	2		0130	52	3878.	2		1630	82	829.	3		0730	112	187.
1		1100	23	5435.	2		0200	53	3553.	2		1700	83	798.	3		0800	113	184.
1		1130	24	6304.	2		0230	54	3224.	2		1730	84	766.	3		0830	114	182.
1		1200	25	7128.	2		0300	55	2961.	2		1800	85	735.	3		0900	115	179.
1		1230	26	8013.	2		0330	56	2750.	2		1830	86	704.	3		0930	116	176.
1		1300	27	9170.	2		0400	57	2565.	2		1900	87	675.	3		1000	117	173.
1		1330	28	10701.	2		0430	58	2398.	2		1930	88	644.	3		1030	118	169.
1		1400	29	12038.	2		0500	59	2258.	2		2000	89	613.	3		1100	119	165.
1		1430	30	13568.	2		0530	60	2129.	2		2030	90	582.	3		1130	120	160.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)	(CFS)				
+ 15788.	16.00		13010.	6497.	2916.	2916.
		(INCHES)	2.087	4.169	4.639	4.639
		(AC-FT)	6451.	12886.	14341.	14341.

CUMULATIVE AREA = 57.96 SQ MI

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          **************
          *            *
535 KK    *     7      *
          *            *
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537 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

538 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	35482.	CHANNEL LENGTH
S	.0205	SLOPE
N	.050	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	40.00	BOTTOM WIDTH OR DIAMETER
Z	3.00	SIDE SLOPE

***

COMPUTED MUSKINGUM-CUNGE PARAMETERS
COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)

MAIN	.52	1.54	25.87	17741.00	15785.68	983.24	4.63	22.86

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.52	1.54	30.00		15691.48	990.00	4.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1434E+05 EXCESS= .0000E+00 OUTFLOW= .1432E+05 BASIN STORAGE= .3544E+02 PERCENT ERROR= -.2

HYDROGRAPH AT STATION 7

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		1500	31	13845.	2		0600	61	2176.	2		2100	91	608.
1		0030	2	0.	1		1530	32	14918.	2		0630	62	2059.	2		2130	92	576.
1		0100	3	0.	1		1600	33	15601.	2		0700	63	1954.	2		2200	93	544.
1		0130	4	0.	1		1630	34	15691.	2		0730	64	1857.	2		2230	94	512.
1		0200	5	0.	1		1700	35	15132.	2		0800	65	1768.	2		2300	95	482.
1		0230	6	0.	1		1730	36	14088.	2		0830	66	1690.	2		2330	96	458.
1		0300	7	0.	1		1800	37	12685.	2		0900	67	1619.	3		0000	97	439.
1		0330	8	0.	1		1830	38	11218.	2		0930	68	1551.	3		0030	98	421.
1		0400	9	0.	1		1900	39	9885.	2		1000	69	1488.	3		0100	99	402.
1		0430	10	0.	1		1930	40	8884.	2		1030	70	1427.	3		0130	100	381.
1		0500	11	0.	1		2000	41	8164.	2		1100	71	1367.	3		0200	101	356.
1		0530	12	0.	1		2030	42	7520.	2		1130	72	1310.	3		0230	102	330.
1		0600	13	3.	1		2100	43	6995.	2		1200	73	1260.	3		0300	103	306.
1		0630	14	15.	1		2130	44	6560.	2		1230	74	1211.	3		0330	104	283.
1		0700	15	52.	1		2200	45	6193.	2		1300	75	1160.	3		0400	105	260.
1		0730	16	141.	1		2230	46	5859.	2		1330	76	1109.	3		0430	106	239.
1		0800	17	313.	1		2300	47	5556.	2		1400	77	1063.	3		0500	107	223.
1		0830	18	583.	1		2330	48	5302.	2		1430	78	1026.	3		0530	108	213.
1		0900	19	965.	2		0000	49	5051.	2		1500	79	994.	3		0600	109	207.
1		0930	20	1573.	2		0030	50	4807.	2		1530	80	960.	3		0630	110	202.
1		1000	21	2390.	2		0100	51	4535.	2		1600	81	924.	3		0700	111	197.
1		1030	22	3388.	2		0130	52	4229.	2		1630	82	887.	3		0730	112	193.
1		1100	23	4417.	2		0200	53	3914.	2		1700	83	853.	3		0800	113	189.
1		1130	24	5421.	2		0230	54	3596.	2		1730	84	822.	3		0830	114	187.
1		1200	25	6360.	2		0300	55	3290.	2		1800	85	791.	3		0900	115	184.
1		1230	26	7231.	2		0330	56	3020.	2		1830	86	760.	3		0930	116	182.
1		1300	27	8200.	2		0400	57	2800.	2		1900	87	728.	3		1000	117	179.
1		1330	28	9470.	2		0430	58	2614.	2		1930	88	698.	3		1030	118	176.
1		1400	29	10991.	2		0500	59	2448.	2		2000	89	669.	3		1100	119	173.
1		1430	30	12448.	2		0530	60	2303.	2		2030	90	639.	3		1130	120	172.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
15691.	16.50		12973.	6494.	2913.	2913.
		(INCHES)	2.081	4.167	4.634	4.634
		(AC-FT)	6433.	12880.	14325.	14325.

CUMULATIVE AREA = 57.96 SQ MI

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539 KK      **************
            *            *
            *    Node18  *
            *            *
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541 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

545 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	15	TIME INTERVAL IN MINUTES

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                JXDATE      1    0  STARTING DATE
                JXTIME           0  STARTING TIME
                    UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

           SUBBASIN RUNOFF DATA

542 BA       SUBBASIN CHARACTERISTICS
                TAREA       22.18  SUBBASIN AREA

           PRECIPITATION DATA

544 PB           STORM        6.80  BASIN TOTAL PRECIPITATION

546 PI         INCREMENTAL PRECIPITATION PATTERN
                 .03      .05      .04      .05      .05      .07      .07      .08      .09      .10
                 .09      .11      .12      .14      .14      .17      .20      .22      .26      .29
                 .20      .27      .26      .24      .35      .39      .46      .31      .36      .35
                 .32      .26      .05      .04      .07      .06      .05      .03      .05      .03
                 .04      .03      .03      .03      .03      .03      .03      .03

556 LS       SCS LOSS RATE
                STRTL         .62  INITIAL ABSTRACTION
               CRVNBR       76.40  CURVE NUMBER
                RTIMP         .00  PERCENT IMPERVIOUS AREA

557 UI       INPUT UNITGRAPH,  47 ORDINATES,  VOLUME = 1.00
              580.0    838.0   1190.0   1487.0   2169.0   4021.0   5185.0   2413.0   1422.0   1261.0
             1160.0    846.0    789.0    682.0    613.0    538.0    434.0    405.0    375.0    321.0
              279.0    234.0    230.0    140.0    140.0    140.0    140.0     35.0     30.0     30.0
               29.9     29.9     29.9     29.9     29.9     29.9     29.9     29.9     29.9     29.9
               29.9     29.9     29.9     29.9     29.9     29.9      5.3

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HYDROGRAPH AT STATION Node18

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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.	2		0600	61	.00	.00	.00	274.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	251.
1		0100	3	.05	.05	.00	0.	2		0700	63	.00	.00	.00	227.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	205.
1		0200	5	.05	.05	.00	0.	2		0800	65	.00	.00	.00	185.
1		0230	6	.05	.05	.00	0.	2		0830	66	.00	.00	.00	170.
1		0300	7	.07	.07	.00	0.	2		0900	67	.00	.00	.00	153.
1		0330	8	.07	.07	.00	0.	2		0930	68	.00	.00	.00	140.
1		0400	9	.08	.08	.00	0.	2		1000	69	.00	.00	.00	126.
1		0430	10	.09	.09	.00	0.	2		1030	70	.00	.00	.00	114.
1		0500	11	.10	.10	.00	0.	2		1100	71	.00	.00	.00	103.
1		0530	12	.09	.09	.00	2.	2		1130	72	.00	.00	.00	90.
1		0600	13	.11	.10	.01	8.	2		1200	73	.00	.00	.00	78.
1		0630	14	.12	.10	.02	22.	2		1230	74	.00	.00	.00	65.
1		0700	15	.14	.11	.03	48.	2		1300	75	.00	.00	.00	54.
1		0730	16	.14	.10	.04	90.	2		1330	76	.00	.00	.00	43.
1		0800	17	.17	.11	.06	160.	2		1400	77	.00	.00	.00	34.
1		0830	18	.20	.12	.08	277.	2		1430	78	.00	.00	.00	25.
1		0900	19	.23	.12	.10	446.	2		1500	79	.00	.00	.00	18.
1		0930	20	.27	.13	.14	668.	2		1530	80	.00	.00	.00	16.
1		1000	21	.29	.13	.17	943.	2		1600	81	.00	.00	.00	15.
1		1030	22	.20	.08	.12	1240.	2		1630	82	.00	.00	.00	13.
1		1100	23	.27	.10	.18	1616.	2		1700	83	.00	.00	.00	12.
1		1130	24	.26	.08	.18	2027.	2		1730	84	.00	.00	.00	10.
1		1200	25	.24	.07	.17	2458.	2		1800	85	.00	.00	.00	9.
1		1230	26	.35	.09	.26	2929.	2		1830	86	.00	.00	.00	8.
1		1300	27	.39	.09	.30	3309.	2		1900	87	.00	.00	.00	7.
1		1330	28	.46	.10	.37	3681.	2		1930	88	.00	.00	.00	6.
1		1400	29	.31	.06	.25	4167.	2		2000	89	.00	.00	.00	5.
1		1430	30	.36	.06	.30	4613.	2		2030	90	.00	.00	.00	4.
1		1500	31	.35	.05	.29	5164.	2		2100	91	.00	.00	.00	3.
1		1530	32	.32	.05	.27	5906.	2		2130	92	.00	.00	.00	2.
1		1600	33	.26	.03	.22	6491.	2		2200	93	.00	.00	.00	2.
1		1630	34	.05	.01	.05	6633.	2		2230	94	.00	.00	.00	1.
1		1700	35	.04	.01	.03	6391.	2		2300	95	.00	.00	.00	0.
1		1730	36	.07	.01	.06	6327.	2		2330	96	.00	.00	.00	0.
1		1800	37	.06	.01	.05	6064.	3		0000	97	.00	.00	.00	0.
1		1830	38	.05	.01	.05	5526.	3		0030	98	.00	.00	.00	0.
1		1900	39	.03	.00	.03	4610.	3		0100	99	.00	.00	.00	0.
1		1930	40	.05	.01	.04	3649.	3		0130	100	.00	.00	.00	0.
1		2000	41	.03	.00	.03	3218.	3		0200	101	.00	.00	.00	0.
1		2030	42	.04	.00	.04	3007.	3		0230	102	.00	.00	.00	0.
1		2100	43	.03	.00	.03	2735.	3		0300	103	.00	.00	.00	0.
1		2130	44	.03	.00	.03	2445.	3		0330	104	.00	.00	.00	0.
1		2200	45	.03	.00	.03	2231.	3		0400	105	.00	.00	.00	0.
1		2230	46	.03	.00	.03	2069.	3		0430	106	.00	.00	.00	0.
1		2300	47	.03	.00	.02	1890.	3		0500	107	.00	.00	.00	0.
1		2330	48	.03	.00	.02	1747.	3		0530	108	.00	.00	.00	0.
2		0000	49	.03	.00	.02	1608.	3		0600	109	.00	.00	.00	0.
2		0030	50	.00	.00	.00	1483.	3		0630	110	.00	.00	.00	0.

2	0100	51	.00	.00	.00	1352.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	1225.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	1085.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	951.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	780.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	598.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	497.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	426.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	360.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	304.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 6.80, TOTAL LOSS = 2.68, TOTAL EXCESS = 4.12

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 6633.	16.50		5463.	2422.	991.	991.
		(INCHES)	2.290	4.062	4.120	4.120
		(AC-FT)	2709.	4805.	4874.	4874.

CUMULATIVE AREA = 22.18 SQ MI

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            *            *
563 KK      *    Node20  *
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565 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

569 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	15	TIME INTERVAL IN MINUTES
JXDATE 1	0	STARTING DATE
JXTIME	0	STARTING TIME

UHG FROM MOUNTAIN S-GRAPH

SUBBASIN RUNOFF DATA

566 BA SUBBASIN CHARACTERISTICS

TAREA	18.04	SUBBASIN AREA

PRECIPITATION DATA

568 PB STORM 6.13 BASIN TOTAL PRECIPITATION

570 PI INCREMENTAL PRECIPITATION PATTERN

.03	.04	.04	.04	.05	.06	.06	.07	.08	.09
.08	.10	.11	.12	.13	.15	.18	.20	.24	.26
.18	.25	.23	.21	.31	.35	.42	.28	.32	.31
.29	.23	.05	.04	.06	.06	.05	.03	.04	.03
.04	.03	.03	.03	.03	.02	.02	.02		

580 LS SCS LOSS RATE

STRTL	.68	INITIAL ABSTRACTION
CRVNBR	74.50	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

581 UI INPUT UNITGRAPH, 77 ORDINATES, VOLUME = 1.00

935.0	1521.0	2468.0	3176.0	2164.0	1551.0	1122.0	813.0	775.0	639.0
581.0	506.0	496.0	399.0	368.0	345.0	325.0	283.0	275.0	265.0
229.0	214.0	194.0	176.0	176.0	158.0	156.0	156.0	141.0	139.0
139.0	130.0	122.0	122.0	122.0	108.0	103.0	103.0	103.0	97.0
78.6	78.6	78.6	78.6	78.6	71.8	57.1	57.1	57.1	57.1
57.1	57.1	57.1	51.1	20.8	20.8	20.8	20.8	20.8	20.8
20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8
20.8	20.8	20.8	20.8	20.8	20.8	5.0			

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HYDROGRAPH AT STATION Node20

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.	2		0600	61	.00	.00	.00	447.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	426.
1		0100	3	.04	.04	.00	0.	2		0700	63	.00	.00	.00	405.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	386.
1		0200	5	.04	.04	.00	0.	2		0800	65	.00	.00	.00	368.
1		0230	6	.05	.05	.00	0.	2		0830	66	.00	.00	.00	351.
1		0300	7	.06	.06	.00	0.	2		0900	67	.00	.00	.00	333.
1		0330	8	.06	.06	.00	0.	2		0930	68	.00	.00	.00	315.
1		0400	9	.07	.07	.00	0.	2		1000	69	.00	.00	.00	301.
1		0430	10	.08	.08	.00	0.	2		1030	70	.00	.00	.00	288.
1		0500	11	.09	.09	.00	0.	2		1100	71	.00	.00	.00	274.
1		0530	12	.08	.08	.00	0.	2		1130	72	.00	.00	.00	259.
1		0600	13	.10	.10	.00	1.	2		1200	73	.00	.00	.00	245.
1		0630	14	.11	.10	.01	8.	2		1230	74	.00	.00	.00	232.
1		0700	15	.12	.11	.01	27.	2		1300	75	.00	.00	.00	220.
1		0730	16	.13	.11	.02	65.	2		1330	76	.00	.00	.00	209.
1		0800	17	.15	.12	.04	131.	2		1400	77	.00	.00	.00	196.
1		0830	18	.18	.13	.06	228.	2		1430	78	.00	.00	.00	184.
1		0900	19	.20	.13	.07	360.	2		1500	79	.00	.00	.00	174.
1		0930	20	.24	.14	.10	539.	2		1530	80	.00	.00	.00	164.
1		1000	21	.26	.14	.13	765.	2		1600	81	.00	.00	.00	153.
1		1030	22	.18	.09	.10	985.	2		1630	82	.00	.00	.00	140.
1		1100	23	.25	.11	.14	1232.	2		1700	83	.00	.00	.00	130.
1		1130	24	.23	.09	.14	1441.	2		1730	84	.00	.00	.00	119.
1		1200	25	.21	.08	.14	1606.	2		1800	85	.00	.00	.00	109.
1		1230	26	.31	.10	.21	1859.	2		1830	86	.00	.00	.00	99.
1		1300	27	.35	.11	.25	2137.	2		1900	87	.00	.00	.00	92.
1		1330	28	.42	.11	.31	2529.	2		1930	88	.00	.00	.00	89.
1		1400	29	.28	.07	.21	2945.	2		2000	89	.00	.00	.00	87.
1		1430	30	.33	.07	.25	3336.	2		2030	90	.00	.00	.00	85.
1		1500	31	.31	.06	.25	3618.	2		2100	91	.00	.00	.00	82.
1		1530	32	.29	.05	.23	3733.	2		2130	92	.00	.00	.00	80.
1		1600	33	.23	.04	.19	3835.	2		2200	93	.00	.00	.00	78.
1		1630	34	.05	.01	.04	3723.	2		2230	94	.00	.00	.00	75.
1		1700	35	.04	.01	.03	3451.	2		2300	95	.00	.00	.00	72.
1		1730	36	.06	.01	.05	3032.	2		2330	96	.00	.00	.00	69.
1		1800	37	.06	.01	.05	2530.	3		0000	97	.00	.00	.00	66.
1		1830	38	.05	.01	.04	2221.	3		0030	98	.00	.00	.00	63.
1		1900	39	.03	.00	.03	2017.	3		0100	99	.00	.00	.00	59.
1		1930	40	.04	.01	.04	1863.	3		0130	100	.00	.00	.00	55.
1		2000	41	.03	.00	.03	1720.	3		0200	101	.00	.00	.00	52.
1		2030	42	.04	.01	.03	1593.	3		0230	102	.00	.00	.00	47.
1		2100	43	.03	.00	.03	1492.	3		0300	103	.00	.00	.00	42.
1		2130	44	.03	.00	.03	1398.	3		0330	104	.00	.00	.00	36.
1		2200	45	.03	.00	.03	1324.	3		0400	105	.00	.00	.00	31.
1		2230	46	.03	.00	.03	1252.	3		0430	106	.00	.00	.00	26.
1		2300	47	.02	.00	.02	1192.	3		0500	107	.00	.00	.00	20.
1		2330	48	.02	.00	.02	1138.	3		0530	108	.00	.00	.00	15.
2		0000	49	.02	.00	.02	1082.	3		0600	109	.00	.00	.00	11.
2		0030	50	.00	.00	.00	1010.	3		0630	110	.00	.00	.00	10.
2		0100	51	.00	.00	.00	935.	3		0700	111	.00	.00	.00	9.
2		0130	52	.00	.00	.00	849.	3		0730	112	.00	.00	.00	8.
2		0200	53	.00	.00	.00	751.	3		0800	113	.00	.00	.00	7.
2		0230	54	.00	.00	.00	682.	3		0830	114	.00	.00	.00	6.
2		0300	55	.00	.00	.00	628.	3		0900	115	.00	.00	.00	5.
2		0330	56	.00	.00	.00	586.	3		0930	116	.00	.00	.00	5.
2		0400	57	.00	.00	.00	554.	3		1000	117	.00	.00	.00	4.
2		0430	58	.00	.00	.00	523.	3		1030	118	.00	.00	.00	4.
2		0500	59	.00	.00	.00	496.	3		1100	119	.00	.00	.00	3.
2		0530	60	.00	.00	.00	471.	3		1130	120	.00	.00	.00	2.

TOTAL RAINFALL = 6.13, TOTAL LOSS = 2.79, TOTAL EXCESS = 3.34

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
3835.	16.00		3086.	1496.	654.	654.
		(INCHES)	1.590	3.084	3.342	3.342
		(AC-FT)	1530.	2967.	3215.	3215.

CUMULATIVE AREA = 18.04 SQ MI

590 KK Node50

592 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

593 HC HYDROGRAPH COMBINATION

ICOMP	3	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node50
SUM OF 3 HYDROGRAPHS

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		1500	31	22626.	2		0600	61	2897.	2		2100	91	693.
1		0030	2	0.	1		1530	32	24557.	2		0630	62	2735.	2		2130	92	658.
1		0100	3	0.	1		1600	33	25927.	2		0700	63	2585.	2		2200	93	623.
1		0130	4	0.	1		1630	34	26047.	2		0730	64	2448.	2		2230	94	588.
1		0200	5	0.	1		1700	35	24974.	2		0800	65	2322.	2		2300	95	554.
1		0230	6	0.	1		1730	36	23446.	2		0830	66	2211.	2		2330	96	528.
1		0300	7	0.	1		1800	37	21279.	2		0900	67	2105.	3		0000	97	505.
1		0330	8	0.	1		1830	38	18965.	2		0930	68	2007.	3		0030	98	483.
1		0400	9	0.	1		1900	39	16511.	2		1000	69	1915.	3		0100	99	461.
1		0430	10	0.	1		1930	40	14396.	2		1030	70	1829.	3		0130	100	436.
1		0500	11	0.	1		2000	41	13102.	2		1100	71	1744.	3		0200	101	408.
1		0530	12	2.	1		2030	42	12120.	2		1130	72	1659.	3		0230	102	377.
1		0600	13	12.	1		2100	43	11222.	2		1200	73	1582.	3		0300	103	347.
1		0630	14	45.	1		2130	44	10403.	2		1230	74	1508.	3		0330	104	318.
1		0700	15	127.	1		2200	45	9747.	2		1300	75	1434.	3		0400	105	291.
1		0730	16	295.	1		2230	46	9180.	2		1330	76	1360.	3		0430	106	265.
1		0800	17	603.	1		2300	47	8639.	2		1400	77	1293.	3		0500	107	243.
1		0830	18	1088.	1		2330	48	8187.	2		1430	78	1236.	3		0530	108	228.
1		0900	19	1771.	2		0000	49	7741.	2		1500	79	1187.	3		0600	109	218.
1		0930	20	2780.	2		0030	50	7300.	2		1530	80	1140.	3		0630	110	211.
1		1000	21	4098.	2		0100	51	6822.	2		1600	81	1091.	3		0700	111	206.
1		1030	22	5613.	2		0130	52	6303.	2		1630	82	1040.	3		0730	112	200.
1		1100	23	7264.	2		0200	53	5749.	2		1700	83	994.	3		0800	113	196.
1		1130	24	8889.	2		0230	54	5229.	2		1730	84	951.	3		0830	114	193.
1		1200	25	10425.	2		0300	55	4698.	2		1800	85	909.	3		0900	115	190.
1		1230	26	12019.	2		0330	56	4204.	2		1830	86	867.	3		0930	116	186.
1		1300	27	13645.	2		0400	57	3852.	2		1900	87	827.	3		1000	117	183.
1		1330	28	15681.	2		0430	58	3563.	2		1930	88	793.	3		1030	118	180.
1		1400	29	18103.	2		0500	59	3304.	2		2000	89	761.	3		1100	119	176.
1		1430	30	20397.	2		0530	60	3078.	2		2030	90	728.	3		1130	120	175.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
26047.	16.50		21489.	10400.	4558.	4558.
		(INCHES)	2.035	3.940	4.281	4.281
		(AC-FT)	10656.	20629.	22414.	22414.

CUMULATIVE AREA = 98.18 SQ MI

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              *            *
594 KK        *    6       *
              *            *
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596 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

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               HYDROGRAPH ROUTING DATA

  597 RD          MUSKINGUM-CUNGE CHANNEL ROUTING
                             L        41976.  CHANNEL LENGTH
                             S         .0120  SLOPE
                             N          .050  CHANNEL ROUGHNESS COEFFICIENT
                            CA           .00  CONTRIBUTING AREA
                         SHAPE          TRAP  CHANNEL SHAPE
                            WD         60.00  BOTTOM WIDTH OR DIAMETER
                             Z          3.00  SIDE SLOPE

                                                                   ***
                                 COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                         COMPUTATION TIME STEP
                  ELEMENT      ALPHA       M          DT          DX          PEAK      TIME TO      VOLUME      MAXIMUM
                                                                                          PEAK                    CELERITY
                                                    (MIN)        (FT)        (CFS)       (MIN)        (IN)        (FPS)

                    MAIN         .29      1.57       30.00    20988.00    25991.15     1020.00        4.28        21.93

                                          INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL


                    MAIN         .29      1.57       30.00                25991.15     1020.00        4.28

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .2242E+05 EXCESS= .0000E+00 OUTFLOW= .2241E+05 BASIN STORAGE= .5820E+02 PERCENT ERROR=    -.2


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                                                    HYDROGRAPH AT STATION    6

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                                      *                              *                              *
  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    1500   31    20662.  *   2    0600   61     3246.  *   2    2100   91      768.
   1    0030    2        0.   *   1    1530   32    22857.  *   2    0630   62     3038.  *   2    2130   92      735.
   1    0100    3        0.   *   1    1600   33    24820.  *   2    0700   63     2870.  *   2    2200   93      701.
   1    0130    4        0.   *   1    1630   34    25986.  *   2    0730   64     2716.  *   2    2230   94      667.
   1    0200    5        0.   *   1    1700   35    25991.  *   2    0800   65     2572.  *   2    2300   95      633.
   1    0230    6        0.   *   1    1730   36    24780.  *   2    0830   66     2441.  *   2    2330   96      598.
   1    0300    7        0.   *   1    1800   37    23137.  *   2    0900   67     2320.  *   3    0000   97      564.
   1    0330    8        0.   *   1    1830   38    21110.  *   2    0930   68     2213.  *   3    0030   98      536.
   1    0400    9        0.   *   1    1900   39    18747.  *   2    1000   69     2108.  *   3    0100   99      512.
   1    0430   10        0.   *   1    1930   40    16529.  *   2    1030   70     2010.  *   3    0130  100      490.
   1    0500   11        0.   *   1    2000   41    14452.  *   2    1100   71     1919.  *   3    0200  101      469.
   1    0530   12        0.   *   1    2030   42    13104.  *   2    1130   72     1834.  *   3    0230  102      444.
   1    0600   13        0.   *   1    2100   43    12216.  *   2    1200   73     1749.  *   3    0300  103      418.
   1    0630   14        1.   *   1    2130   44    11322.  *   2    1230   74     1665.  *   3    0330  104      388.
   1    0700   15        5.   *   1    2200   45    10527.  *   2    1300   75     1589.  *   3    0400  105      359.
   1    0730   16       25.   *   1    2230   46     9842.  *   2    1330   76     1514.  *   3    0430  106      330.
   1    0800   17       86.   *   1    2300   47     9290.  *   2    1400   77     1442.  *   3    0500  107      303.
   1    0830   18      230.   *   1    2330   48     8764.  *   2    1430   78     1368.  *   3    0530  108      277.
   1    0900   19      522.   *   2    0000   49     8284.  *   2    1500   79     1301.  *   3    0600  109      254.
   1    0930   20     1014.   *   2    0030   50     7869.  *   2    1530   80     1243.  *   3    0630  110      236.
   1    1000   21     1734.   *   2    0100   51     7429.  *   2    1600   81     1193.  *   3    0700  111      224.
   1    1030   22     3018.   *   2    0130   52     6987.  *   2    1630   82     1147.  *   3    0730  112      216.
   1    1100   23     4794.   *   2    0200   53     6498.  *   2    1700   83     1099.  *   3    0800  113      209.
   1    1130   24     6660.   *   2    0230   54     5981.  *   2    1730   84     1048.  *   3    0830  114      203.
   1    1200   25     8507.   *   2    0300   55     5459.  *   2    1800   85     1002.  *   3    0900  115      199.
   1    1230   26    10196.   *   2    0330   56     4972.  *   2    1830   86      959.  *   3    0930  116      195.
   1    1300   27    11844.   *   2    0400   57     4478.  *   2    1900   87      917.  *   3    1000  117      191.
   1    1330   28    13615.   *   2    0430   58     4052.  *   2    1930   88      875.  *   3    1030  118      188.
   1    1400   29    15661.   *   2    0500   59     3751.  *   2    2000   89      836.  *   3    1100  119      185.
   1    1430   30    18204.   *   2    0530   60     3486.  *   2    2030   90      801.  *   3    1130  120      182.
                                      *                              *                              *
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  PEAK FLOW       TIME                              MAXIMUM AVERAGE FLOW
                                           6-HR          24-HR         72-HR       59.50-HR
-   (CFS)         (HR)
                                 (CFS)
-   25991.        17.00                   21490.         10400.         4556.         4556.
                              (INCHES)     2.035          3.940         4.278         4.278
                               (AC-FT)    10656.         20629.        22402.        22402.

                              CUMULATIVE AREA =     98.18 SQ MI


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                   *            *
 598 KK            *    Node7   *
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          *            *
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 600 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           0  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2         120  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .500  TIME INTERVAL IN HOURS

                          SANTA MARGARITA STORMS

 604 IN          TIME DATA FOR INPUT TIME SERIES
                       JXMIN          15  TIME INTERVAL IN MINUTES
                      JXDATE       1    0  STARTING DATE
                      JXTIME           0  STARTING TIME
                          UHG FROM MOUNTAIN S-GRAPH

               SUBBASIN RUNOFF DATA

 601 BA          SUBBASIN CHARACTERISTICS
                      TAREA       24.60  SUBBASIN AREA

                 PRECIPITATION DATA

 603 PB               STORM        6.74  BASIN TOTAL PRECIPITATION

 605 PI            INCREMENTAL PRECIPITATION PATTERN
                     .03       .05       .04       .05       .05       .07       .07       .07       .09       .10
                     .09       .11       .12       .13       .14       .17       .20       .22       .26       .29
                     .20       .27       .26       .24       .34       .38       .46       .31       .36       .34
                     .32       .26       .05       .04       .07       .06       .05       .03       .05       .03
                     .04       .03       .03       .03       .03       .03       .03       .03

 615 LS          SCS LOSS RATE
                      STRTL         .58  INITIAL ABSTRACTION
                     CRVNBR       77.60  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

 616 UI          INPUT UNITGRAPH,  96 ORDINATES,  VOLUME = 1.00
                   995.0     1342.0     2049.0     3059.0     3501.0     2428.0     1838.0     1506.0     1112.0      860.0
                   860.0      737.0      663.0      614.0      539.0      537.0      471.0      425.0      391.0      374.0
                   358.0      320.0      307.0      293.0      287.0      262.0      232.0      232.0      202.0      191.0
                   191.0      182.0      169.0      169.0      169.0      157.0      151.0      151.0      151.0      143.0
                   132.0      132.0      132.0      132.0      119.0      112.0      112.0      112.0      112.0      112.0
                    86.3       85.1       85.1       85.1       85.1       85.1       85.1       73.5       61.9       61.9
                    61.9       61.9       61.9       61.9       61.9       61.9       61.9       52.4       22.5       22.5
                    22.5       22.5       22.5       22.5       22.5       22.5       22.5       22.5       22.5       22.5
                    22.5       22.5       22.5       22.5       22.5       22.5       22.5       22.5       22.5       22.5
                    22.5       22.5       22.5       22.5       22.5       21.5

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                                                HYDROGRAPH AT STATION   Node7

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                                                                                *
      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.                     *       2     0600    61     .00     .00     .00        800.
       1     0030     2     .03     .03     .00         0.                     *       2     0630    62     .00     .00     .00        766.
       1     0100     3     .05     .05     .00         0.                     *       2     0700    63     .00     .00     .00        734.
       1     0130     4     .04     .04     .00         0.                     *       2     0730    64     .00     .00     .00        705.
       1     0200     5     .05     .05     .00         0.                     *       2     0800    65     .00     .00     .00        678.
       1     0230     6     .05     .05     .00         0.                     *       2     0830    66     .00     .00     .00        653.
       1     0300     7     .07     .07     .00         0.                     *       2     0900    67     .00     .00     .00        629.
       1     0330     8     .07     .07     .00         0.                     *       2     0930    68     .00     .00     .00        606.
       1     0400     9     .07     .07     .00         0.                     *       2     1000    69     .00     .00     .00        586.
       1     0430    10     .09     .09     .00         0.                     *       2     1030    70     .00     .00     .00        565.
       1     0500    11     .10     .10     .00         1.                     *       2     1100    71     .00     .00     .00        544.
       1     0530    12     .09     .08     .00         6.                     *       2     1130    72     .00     .00     .00        523.
       1     0600    13     .11     .10     .01        20.                     *       2     1200    73     .00     .00     .00        504.
       1     0630    14     .12     .10     .02        51.                     *       2     1230    74     .00     .00     .00        488.
       1     0700    15     .13     .10     .03       104.                     *       2     1300    75     .00     .00     .00        472.
       1     0730    16     .14     .10     .04       187.                     *       2     1330    76     .00     .00     .00        454.
       1     0800    17     .17     .11     .06       307.                     *       2     1400    77     .00     .00     .00        435.
       1     0830    18     .20     .12     .09       469.                     *       2     1430    78     .00     .00     .00        417.
       1     0900    19     .22     .12     .11       672.                     *       2     1500    79     .00     .00     .00        404.
       1     0930    20     .26     .12     .14       937.                     *       2     1530    80     .00     .00     .00        389.
       1     1000    21     .29     .12     .17      1268.                     *       2     1600    81     .00     .00     .00        374.
       1     1030    22     .20     .07     .13      1589.                     *       2     1630    82     .00     .00     .00        359.
       1     1100    23     .27     .09     .18      1965.                     *       2     1700    83     .00     .00     .00        345.
       1     1130    24     .26     .08     .18      2321.                     *       2     1730    84     .00     .00     .00        333.
       1     1200    25     .24     .06     .17      2605.                     *       2     1800    85     .00     .00     .00        321.
       1     1230    26     .34     .08     .26      2929.                     *       2     1830    86     .00     .00     .00        307.
       1     1300    27     .38     .08     .30      3340.                     *       2     1900    87     .00     .00     .00        293.
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1	1330	28	.46	.09	.37	3825.	*	2	1930	88	.00	.00	.00	278.
1	1400	29	.31	.05	.26	4293.	*	2	2000	89	.00	.00	.00	264.
1	1430	30	.36	.06	.30	4891.	*	2	2030	90	.00	.00	.00	251.
1	1500	31	.34	.05	.29	5398.	*	2	2100	91	.00	.00	.00	239.
1	1530	32	.32	.04	.28	5716.	*	2	2130	92	.00	.00	.00	230.
1	1600	33	.26	.03	.23	5837.	*	2	2200	93	.00	.00	.00	220.
1	1630	34	.05	.01	.05	5787.	*	2	2230	94	.00	.00	.00	207.
1	1700	35	.04	.00	.04	5555.	*	2	2300	95	.00	.00	.00	192.
1	1730	36	.07	.01	.06	5135.	*	2	2330	96	.00	.00	.00	177.
1	1800	37	.06	.01	.05	4524.	*	3	0000	97	.00	.00	.00	165.
1	1830	38	.05	.01	.05	3898.	*	3	0030	98	.00	.00	.00	152.
1	1900	39	.03	.00	.03	3463.	*	3	0100	99	.00	.00	.00	139.
1	1930	40	.05	.01	.04	3175.	*	3	0130	100	.00	.00	.00	128.
1	2000	41	.03	.00	.03	2914.	*	3	0200	101	.00	.00	.00	120.
1	2030	42	.04	.00	.04	2710.	*	3	0230	102	.00	.00	.00	117.
1	2100	43	.03	.00	.03	2549.	*	3	0300	103	.00	.00	.00	115.
1	2130	44	.03	.00	.03	2394.	*	3	0330	104	.00	.00	.00	112.
1	2200	45	.03	.00	.03	2258.	*	3	0400	105	.00	.00	.00	109.
1	2230	46	.03	.00	.03	2147.	*	3	0430	106	.00	.00	.00	107.
1	2300	47	.03	.00	.02	2039.	*	3	0500	107	.00	.00	.00	106.
1	2330	48	.03	.00	.02	1945.	*	3	0530	108	.00	.00	.00	104.
2	0000	49	.03	.00	.02	1849.	*	3	0600	109	.00	.00	.00	102.
2	0030	50	.00	.00	.00	1744.	*	3	0630	110	.00	.00	.00	101.
2	0100	51	.00	.00	.00	1636.	*	3	0700	111	.00	.00	.00	99.
2	0130	52	.00	.00	.00	1523.	*	3	0730	112	.00	.00	.00	97.
2	0200	53	.00	.00	.00	1392.	*	3	0800	113	.00	.00	.00	94.
2	0230	54	.00	.00	.00	1255.	*	3	0830	114	.00	.00	.00	91.
2	0300	55	.00	.00	.00	1155.	*	3	0900	115	.00	.00	.00	88.
2	0330	56	.00	.00	.00	1069.	*	3	0930	116	.00	.00	.00	83.
2	0400	57	.00	.00	.00	997.	*	3	1000	117	.00	.00	.00	79.
2	0430	58	.00	.00	.00	935.	*	3	1030	118	.00	.00	.00	76.
2	0500	59	.00	.00	.00	884.	*	3	1100	119	.00	.00	.00	72.
2	0530	60	.00	.00	.00	840.	*	3	1130	120	.00	.00	.00	68.
							*							

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TOTAL RAINFALL = 6.74, TOTAL LOSS = 2.54, TOTAL EXCESS = 4.20

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 5837.	16.00		4855.	2451.	1115.	1115.
		(INCHES)	1.835	3.706	4.180	4.180
		(AC-FT)	2407.	4862.	5485.	5485.

CUMULATIVE AREA = 24.60 SQ MI

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          *            *
627 KK    *   Node8    *
          *            *
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629 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

633 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

SUBBASIN RUNOFF DATA

630 BA SUBBASIN CHARACTERISTICS

TAREA	88.44	SUBBASIN AREA

PRECIPITATION DATA

632 PB

STORM	6.68	BASIN TOTAL PRECIPITATION

634 PI INCREMENTAL PRECIPITATION PATTERN

.03	.05	.04	.05	.05	.07	.07	.07	.09	.10
.09	.11	.12	.13	.14	.17	.20	.22	.26	.29
.20	.27	.25	.23	.34	.38	.45	.31	.35	.34

.31	.25	.05	.04	.07	.06	.05	.03	.05	.03
.04	.03	.03	.03	.03	.03	.03	.03		

644 LS SCS LOSS RATE

STRTL	.76	INITIAL ABSTRACTION
CRVNBR	72.40	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

645 UI INPUT UNITGRAPH, 83 ORDINATES, VOLUME = 1.00

1288.0	1396.0	1757.0	2120.0	2950.0	2588.0	3547.0	4749.0	4958.0	7878.0
12770.0	12282.0	6233.0	5129.0	4035.0	2951.0	2896.0	2761.0	2683.0	2280.0
1915.0	1757.0	1757.0	1621.0	1486.0	1384.0	1326.0	1208.0	1105.0	966.0
961.0	878.0	878.0	803.0	716.0	716.0	662.0	522.0	522.0	522.0
522.0	331.0	312.0	312.0	312.0	312.0	312.0	312.0	167.0	67.0
66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6
66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6
66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6
66.6	66.6	43.5							

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HYDROGRAPH AT STATION Node8

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.	2		0600	61	.00	.00	.00	3495.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	3201.
1		0100	3	.05	.05	.00	0.	2		0700	63	.00	.00	.00	2953.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	2715.
1		0200	5	.05	.05	.00	0.	2		0800	65	.00	.00	.00	2507.
1		0230	6	.05	.05	.00	0.	2		0830	66	.00	.00	.00	2319.
1		0300	7	.07	.07	.00	0.	2		0900	67	.00	.00	.00	2128.
1		0330	8	.07	.07	.00	0.	2		0930	68	.00	.00	.00	1944.
1		0400	9	.07	.07	.00	0.	2		1000	69	.00	.00	.00	1752.
1		0430	10	.09	.09	.00	0.	2		1030	70	.00	.00	.00	1605.
1		0500	11	.10	.10	.00	0.	2		1100	71	.00	.00	.00	1476.
1		0530	12	.09	.09	.00	0.	2		1130	72	.00	.00	.00	1347.
1		0600	13	.11	.11	.00	1.	2		1200	73	.00	.00	.00	1222.
1		0630	14	.12	.11	.01	9.	2		1230	74	.00	.00	.00	1100.
1		0700	15	.13	.12	.01	29.	2		1300	75	.00	.00	.00	1001.
1		0730	16	.14	.12	.02	63.	2		1330	76	.00	.00	.00	898.
1		0800	17	.17	.13	.04	122.	2		1400	77	.00	.00	.00	801.
1		0830	18	.20	.14	.06	220.	2		1430	78	.00	.00	.00	713.
1		0900	19	.22	.14	.08	358.	2		1500	79	.00	.00	.00	624.
1		0930	20	.26	.15	.11	560.	2		1530	80	.00	.00	.00	542.
1		1000	21	.29	.15	.14	839.	2		1600	81	.00	.00	.00	470.
1		1030	22	.20	.10	.10	1131.	2		1630	82	.00	.00	.00	427.
1		1100	23	.27	.12	.15	1554.	2		1700	83	.00	.00	.00	404.
1		1130	24	.25	.10	.15	2091.	2		1730	84	.00	.00	.00	383.
1		1200	25	.23	.09	.15	2748.	2		1800	85	.00	.00	.00	360.
1		1230	26	.34	.12	.22	3586.	2		1830	86	.00	.00	.00	339.
1		1300	27	.38	.12	.26	4662.	2		1900	87	.00	.00	.00	325.
1		1330	28	.45	.12	.33	5928.	2		1930	88	.00	.00	.00	312.
1		1400	29	.31	.08	.23	7188.	2		2000	89	.00	.00	.00	299.
1		1430	30	.35	.08	.27	8710.	2		2030	90	.00	.00	.00	287.
1		1500	31	.34	.07	.27	10094.	2		2100	91	.00	.00	.00	279.
1		1530	32	.31	.06	.25	11266.	2		2130	92	.00	.00	.00	272.
1		1600	33	.25	.05	.21	12411.	2		2200	93	.00	.00	.00	266.
1		1630	34	.05	.01	.04	13603.	2		2230	94	.00	.00	.00	259.
1		1700	35	.04	.01	.03	14603.	2		2300	95	.00	.00	.00	253.
1		1730	36	.07	.01	.05	15904.	2		2330	96	.00	.00	.00	247.
1		1800	37	.06	.01	.05	17469.	3		0000	97	.00	.00	.00	241.
1		1830	38	.05	.01	.05	18376.	3		0030	98	.00	.00	.00	238.
1		1900	39	.03	.01	.03	18514.	3		0100	99	.00	.00	.00	236.
1		1930	40	.05	.01	.04	18152.	3		0130	100	.00	.00	.00	233.
1		2000	41	.03	.01	.03	17831.	3		0200	101	.00	.00	.00	229.
1		2030	42	.04	.01	.03	16990.	3		0230	102	.00	.00	.00	223.
1		2100	43	.03	.01	.03	15432.	3		0300	103	.00	.00	.00	215.
1		2130	44	.03	.01	.03	13198.	3		0330	104	.00	.00	.00	207.
1		2200	45	.03	.01	.03	11219.	3		0400	105	.00	.00	.00	199.
1		2230	46	.03	.01	.03	10345.	3		0430	106	.00	.00	.00	189.
1		2300	47	.03	.00	.02	9658.	3		0500	107	.00	.00	.00	179.
1		2330	48	.03	.00	.02	8998.	3		0530	108	.00	.00	.00	167.
2		0000	49	.03	.00	.02	8476.	3		0600	109	.00	.00	.00	151.
2		0030	50	.00	.00	.00	7966.	3		0630	110	.00	.00	.00	132.
2		0100	51	.00	.00	.00	7493.	3		0700	111	.00	.00	.00	113.
2		0130	52	.00	.00	.00	7012.	3		0730	112	.00	.00	.00	96.
2		0200	53	.00	.00	.00	6637.	3		0800	113	.00	.00	.00	78.
2		0230	54	.00	.00	.00	6271.	3		0830	114	.00	.00	.00	60.
2		0300	55	.00	.00	.00	5941.	3		0900	115	.00	.00	.00	45.
2		0330	56	.00	.00	.00	5581.	3		0930	116	.00	.00	.00	34.
2		0400	57	.00	.00	.00	5175.	3		1000	117	.00	.00	.00	32.
2		0430	58	.00	.00	.00	4814.	3		1030	118	.00	.00	.00	29.
2		0500	59	.00	.00	.00	4429.	3		1100	119	.00	.00	.00	26.
2		0530	60	.00	.00	.00	3949.	3		1130	120	.00	.00	.00	22.

TOTAL RAINFALL = 6.68, TOTAL LOSS = 3.08, TOTAL EXCESS = 3.60

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)				
		(CFS)			
+ 18514.	19.00	15991.	8101.	3450.	3450.
		(INCHES) 1.681	3.407	3.596	3.596
		(AC-FT) 7929.	16068.	16963.	16963.

CUMULATIVE AREA = 88.44 SQ MI

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655 KK      **************
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            *    Node49  *
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657 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

658 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node49
SUM OF 2 HYDROGRAPHS

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		1500	31	15492.	2		0600	61	4295.	2		2100	91	518.
1		0030	2	0.	1		1530	32	16982.	2		0630	62	3967.	2		2130	92	502.
1		0100	3	0.	1		1600	33	18249.	2		0700	63	3687.	2		2200	93	485.
1		0130	4	0.	1		1630	34	19390.	2		0730	64	3420.	2		2230	94	465.
1		0200	5	0.	1		1700	35	20158.	2		0800	65	3184.	2		2300	95	445.
1		0230	6	0.	1		1730	36	21039.	2		0830	66	2973.	2		2330	96	424.
1		0300	7	0.	1		1800	37	21993.	2		0900	67	2758.	3		0000	97	406.
1		0330	8	0.	1		1830	38	22274.	2		0930	68	2550.	3		0030	98	389.
1		0400	9	0.	1		1900	39	21977.	2		1000	69	2338.	3		0100	99	375.
1		0430	10	0.	1		1930	40	21327.	2		1030	70	2171.	3		0130	100	361.
1		0500	11	1.	1		2000	41	20745.	2		1100	71	2020.	3		0200	101	348.
1		0530	12	6.	1		2030	42	19700.	2		1130	72	1870.	3		0230	102	340.
1		0600	13	21.	1		2100	43	17981.	2		1200	73	1726.	3		0300	103	330.
1		0630	14	59.	1		2130	44	15592.	2		1230	74	1588.	3		0330	104	319.
1		0700	15	133.	1		2200	45	13477.	2		1300	75	1473.	3		0400	105	308.
1		0730	16	251.	1		2230	46	12491.	2		1330	76	1352.	3		0430	106	296.
1		0800	17	430.	1		2300	47	11697.	2		1400	77	1236.	3		0500	107	284.
1		0830	18	688.	1		2330	48	10943.	2		1430	78	1129.	3		0530	108	271.
1		0900	19	1030.	2		0000	49	10325.	2		1500	79	1027.	3		0600	109	254.
1		0930	20	1497.	2		0030	50	9710.	2		1530	80	931.	3		0630	110	233.
1		1000	21	2107.	2		0100	51	9129.	2		1600	81	843.	3		0700	111	211.
1		1030	22	2720.	2		0130	52	8535.	2		1630	82	786.	3		0730	112	193.
1		1100	23	3519.	2		0200	53	8029.	2		1700	83	749.	3		0800	113	172.
1		1130	24	4413.	2		0230	54	7526.	2		1730	84	716.	3		0830	114	151.
1		1200	25	5353.	2		0300	55	7096.	2		1800	85	680.	3		0900	115	132.
1		1230	26	6514.	2		0330	56	6650.	2		1830	86	646.	3		0930	116	118.
1		1300	27	8003.	2		0400	57	6172.	2		1900	87	618.	3		1000	117	111.
1		1330	28	9753.	2		0430	58	5749.	2		1930	88	590.	3		1030	118	105.
1		1400	29	11481.	2		0500	59	5313.	2		2000	89	563.	3		1100	119	97.
1		1430	30	13601.	2		0530	60	4789.	2		2030	90	537.	3		1130	120	90.

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)				
		(CFS)			
+ 22274.	18.50	20093.	10520.	4565.	4565.
		(INCHES) 1.653	3.461	3.723	3.723
		(AC-FT) 9964.	20865.	22447.	22447.

CUMULATIVE AREA = 113.04 SQ MI

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659 KK    *     8      *
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661 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

662 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	46358.	CHANNEL LENGTH
S	.0154	SLOPE
N	.050	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	60.00	BOTTOM WIDTH OR DIAMETER
Z	3.00	SIDE SLOPE

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COMPUTED MUSKINGUM-CUNGE PARAMETERS

ELEMENT	ALPHA	M	COMPUTATION TIME STEP DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.33	1.57	30.00	23179.00	22316.55	1140.00	3.72	22.44
INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL								
MAIN	.33	1.57	30.00		22316.55	1140.00	3.72	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2245E+05 EXCESS= .0000E+00 OUTFLOW= .2244E+05 BASIN STORAGE= .4190E+02 PERCENT ERROR= -.2

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HYDROGRAPH AT STATION 8

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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		1500	31	13333.	2		0600	61	5078.	2		2100	91	571.
1		0030	2	0.	1		1530	32	15505.	2		0630	62	4577.	2		2130	92	545.
1		0100	3	0.	1		1600	33	17008.	2		0700	63	4155.	2		2200	93	525.
1		0130	4	0.	1		1630	34	18301.	2		0730	64	3875.	2		2230	94	507.
1		0200	5	0.	1		1700	35	19421.	2		0800	65	3613.	2		2300	95	491.
1		0230	6	0.	1		1730	36	20287.	2		0830	66	3363.	2		2330	96	472.
1		0300	7	0.	1		1800	37	21071.	2		0900	67	3143.	3		0000	97	452.
1		0330	8	0.	1		1830	38	22014.	2		0930	68	2943.	3		0030	98	432.
1		0400	9	0.	1		1900	39	22317.	2		1000	69	2738.	3		0100	99	413.
1		0430	10	0.	1		1930	40	21913.	2		1030	70	2541.	3		0130	100	396.
1		0500	11	0.	1		2000	41	21309.	2		1100	71	2341.	3		0200	101	381.
1		0530	12	0.	1		2030	42	20599.	2		1130	72	2175.	3		0230	102	366.
1		0600	13	0.	1		2100	43	19639.	2		1200	73	2026.	3		0300	103	353.
1		0630	14	2.	1		2130	44	17893.	2		1230	74	1878.	3		0330	104	344.
1		0700	15	11.	1		2200	45	15725.	2		1300	75	1736.	3		0400	105	334.
1		0730	16	36.	1		2230	46	13625.	2		1330	76	1599.	3		0430	106	323.
1		0800	17	93.	1		2300	47	12443.	2		1400	77	1484.	3		0500	107	313.
1		0830	18	197.	1		2330	48	11847.	2		1430	78	1366.	3		0530	108	301.
1		0900	19	367.	2		0000	49	11042.	2		1500	79	1251.	3		0600	109	290.
1		0930	20	622.	2		0030	50	10416.	2		1530	80	1145.	3		0630	110	277.
1		1000	21	971.	2		0100	51	9843.	2		1600	81	1045.	3		0700	111	262.
1		1030	22	1451.	2		0130	52	9251.	2		1630	82	950.	3		0730	112	243.
1		1100	23	2086.	2		0200	53	8697.	2		1700	83	862.	3		0800	113	222.
1		1130	24	2803.	2		0230	54	8153.	2		1730	84	800.	3		0830	114	203.
1		1200	25	3780.	2		0300	55	7692.	2		1800	85	759.	3		0900	115	183.
1		1230	26	4833.	2		0330	56	7227.	2		1830	86	724.	3		0930	116	163.
1		1300	27	5979.	2		0400	57	6822.	2		1900	87	689.	3		1000	117	144.
1		1330	28	7477.	2		0430	58	6372.	2		1930	88	655.	3		1030	118	128.

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    1    1400   29     9326.   *    2     0500   59     5924.   *    2     2000   89      626.   *    3     1100  119      117.
    1    1430   30    11289.   *    2     0530   60     5525.   *    2     2030   90      598.   *    3     1130  120      110.
                              *                                  *                                 *
 ********************************************************************************************************************************************************

  PEAK FLOW      TIME                                MAXIMUM AVERAGE FLOW
                                        6-HR          24-HR          72-HR        59.50-HR
+   (CFS)        (HR)
                          (CFS)
+   22317.       19.00                 20094.         10520.          4564.          4564.
                          (INCHES)      1.653          3.461          3.722          3.722
                          (AC-FT)       9964.         20865.         22441.         22441.

                          CUMULATIVE AREA =  113.04 SQ MI


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              *            *
  663 KK      *   Node12   *
              *            *
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  665 KO            OUTPUT CONTROL VARIABLES
                      IPRNT          0  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .500  TIME INTERVAL IN HOURS

                          SANTA MARGARITA STORMS

  669 IN            TIME DATA FOR INPUT TIME SERIES
                       JXMIN         15  TIME INTERVAL IN MINUTES
                     JXDATE      1    0  STARTING DATE
                     JXTIME          0  STARTING TIME
                          UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

                SUBBASIN RUNOFF DATA

  666 BA            SUBBASIN CHARACTERISTICS
                       TAREA      42.32  SUBBASIN AREA

                    PRECIPITATION DATA

  668 PB                STORM       6.61  BASIN TOTAL PRECIPITATION

  670 PI              INCREMENTAL PRECIPITATION PATTERN
                       .03       .05       .04       .05       .05       .07       .07       .07       .09       .10
                       .09       .11       .12       .13       .14       .16       .20       .22       .26       .28
                       .20       .26       .25       .23       .34       .38       .45       .30       .35       .34
                       .31       .25       .05       .04       .07       .06       .05       .03       .05       .03
                       .04       .03       .03       .03       .03       .03       .03       .03

  680 LS            SCS LOSS RATE
                       STRTL        .69  INITIAL ABSTRACTION
                     CRVNBR      74.40  CURVE NUMBER
                      RTIMP        .00  PERCENT IMPERVIOUS AREA

  681 UI            INPUT UNITGRAPH,  50 ORDINATES,  VOLUME = 1.00
                     1020.0    1410.0    2080.0    2273.0    3611.0    5291.0   10582.0    5159.0    3691.0    2342.0
                     2186.0    1974.0    1479.0    1391.0    1219.0    1104.0     973.0     816.0     744.0     696.0
                      601.0     567.0     442.0     414.0     385.0     247.0     247.0     247.0     247.0     101.0
                       52.8      52.8      52.8      52.8      52.8      52.8      52.8      52.8      52.8      52.8
                       52.8      52.8      52.8      52.8      52.8      52.8      52.8      52.8      52.8      49.6

                                                                  ***
 ********************************************************************************************************************************************************

                                                  HYDROGRAPH AT STATION   Node12

 ********************************************************************************************************************************************************

       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.       *        2     0600   61     .00     .00     .00        565.
        1     0030    2     .03     .03     .00          0.       *        2     0630   62     .00     .00     .00        483.
        1     0100    3     .05     .05     .00          0.       *        2     0700   63     .00     .00     .00        434.
        1     0130    4     .04     .04     .00          0.       *        2     0730   64     .00     .00     .00        400.
        1     0200    5     .05     .05     .00          0.       *        2     0800   65     .00     .00     .00        365.
        1     0230    6     .05     .05     .00          0.       *        2     0830   66     .00     .00     .00        334.
        1     0300    7     .07     .07     .00          0.       *        2     0900   67     .00     .00     .00        307.
        1     0330    8     .07     .07     .00          0.       *        2     0930   68     .00     .00     .00        284.
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1	0400	9	.07	.07	.00	0.	*	2	1000	69	.00	.00	.00	261.
1	0430	10	.09	.09	.00	0.	*	2	1030	70	.00	.00	.00	240.
1	0500	11	.10	.10	.00	0.	*	2	1100	71	.00	.00	.00	218.
1	0530	12	.09	.09	.00	0.	*	2	1130	72	.00	.00	.00	202.
1	0600	13	.11	.10	.00	4.	*	2	1200	73	.00	.00	.00	184.
1	0630	14	.12	.11	.01	16.	*	2	1230	74	.00	.00	.00	167.
1	0700	15	.13	.11	.02	43.	*	2	1300	75	.00	.00	.00	153.
1	0730	16	.14	.11	.03	89.	*	2	1330	76	.00	.00	.00	136.
1	0800	17	.17	.12	.04	165.	*	2	1400	77	.00	.00	.00	117.
1	0830	18	.20	.13	.07	293.	*	2	1430	78	.00	.00	.00	95.
1	0900	19	.22	.13	.09	505.	*	2	1500	79	.00	.00	.00	82.
1	0930	20	.26	.14	.12	821.	*	2	1530	80	.00	.00	.00	67.
1	1000	21	.28	.14	.15	1235.	*	2	1600	81	.00	.00	.00	52.
1	1030	22	.20	.09	.11	1686.	*	2	1630	82	.00	.00	.00	39.
1	1100	23	.26	.11	.16	2265.	*	2	1700	83	.00	.00	.00	28.
1	1130	24	.25	.09	.16	2923.	*	2	1730	84	.00	.00	.00	26.
1	1200	25	.23	.08	.15	3643.	*	2	1800	85	.00	.00	.00	24.
1	1230	26	.34	.10	.23	4452.	*	2	1830	86	.00	.00	.00	21.
1	1300	27	.38	.10	.27	5245.	*	2	1900	87	.00	.00	.00	19.
1	1330	28	.45	.11	.34	5829.	*	2	1930	88	.00	.00	.00	16.
1	1400	29	.30	.07	.24	6706.	*	2	2000	89	.00	.00	.00	15.
1	1430	30	.35	.07	.28	7481.	*	2	2030	90	.00	.00	.00	13.
1	1500	31	.34	.06	.27	8307.	*	2	2100	91	.00	.00	.00	11.
1	1530	32	.31	.05	.26	9645.	*	2	2130	92	.00	.00	.00	9.
1	1600	33	.25	.04	.21	10666.	*	2	2200	93	.00	.00	.00	8.
1	1630	34	.05	.01	.04	11390.	*	2	2230	94	.00	.00	.00	6.
1	1700	35	.04	.01	.03	10956.	*	2	2300	95	.00	.00	.00	5.
1	1730	36	.07	.01	.06	10993.	*	2	2330	96	.00	.00	.00	3.
1	1800	37	.06	.01	.05	10670.	*	3	0000	97	.00	.00	.00	2.
1	1830	38	.05	.01	.04	9991.	*	3	0030	98	.00	.00	.00	1.
1	1900	39	.03	.00	.03	8761.	*	3	0100	99	.00	.00	.00	0.
1	1930	40	.05	.01	.04	6887.	*	3	0130	100	.00	.00	.00	0.
1	2000	41	.03	.00	.03	5982.	*	3	0200	101	.00	.00	.00	0.
1	2030	42	.04	.01	.03	5504.	*	3	0230	102	.00	.00	.00	0.
1	2100	43	.03	.00	.03	5066.	*	3	0300	103	.00	.00	.00	0.
1	2130	44	.03	.00	.03	4621.	*	3	0330	104	.00	.00	.00	0.
1	2200	45	.03	.00	.03	4145.	*	3	0400	105	.00	.00	.00	0.
1	2230	46	.03	.00	.03	3899.	*	3	0430	106	.00	.00	.00	0.
1	2300	47	.03	.00	.02	3580.	*	3	0500	107	.00	.00	.00	0.
1	2330	48	.03	.00	.02	3349.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.03	.00	.02	3078.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	2837.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	2620.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	2385.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	2123.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	1896.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	1642.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	1291.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	1062.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	890.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	775.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	666.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 6.61, TOTAL LOSS = 2.86, TOTAL EXCESS = 3.75

	PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
				6-HR	24-HR	72-HR	59.50-HR
+	(CFS)	(HR)					
			(CFS)				
+	11390.	16.50		9341.	4188.	1718.	1718.
			(INCHES)	2.052	3.680	3.744	3.744
			(AC-FT)	4632.	8307.	8449.	8449.

CUMULATIVE AREA = 42.32 SQ MI

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            **************
            *            *
687 KK      *    Node14  *
            *            *
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689 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

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693 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN          15  TIME INTERVAL IN MINUTES
                    JXDATE      1    0  STARTING DATE
                    JXTIME           0  STARTING TIME
                        UHG FROM MOUNTAIN S-GRAPH

              SUBBASIN RUNOFF DATA

690 BA          SUBBASIN CHARACTERISTICS
                     TAREA       23.58  SUBBASIN AREA

                PRECIPITATION DATA

692 PB               STORM        6.27  BASIN TOTAL PRECIPITATION

694 PI          INCREMENTAL PRECIPITATION PATTERN
                   .03       .04       .04       .04       .05       .06       .06       .07       .08       .09
                   .08       .10       .11       .13       .13       .16       .19       .21       .24       .27
                   .19       .25       .24       .22       .32       .36       .43       .29       .33       .32
                   .29       .24       .05       .04       .06       .06       .05       .03       .04       .03
                   .04       .03       .03       .03       .03       .03       .03       .03

704 LS          SCS LOSS RATE
                     STRTL         .89  INITIAL ABSTRACTION
                    CRVNBR       69.20  CURVE NUMBER
                     RTIMP         .00  PERCENT IMPERVIOUS AREA

705 UI          INPUT UNITGRAPH,  70 ORDINATES,  VOLUME = 1.00
                  1391.0    2325.0    3933.0    4193.0    2586.0    1937.0    1279.0    1139.0    941.0     839.0
                   727.0     692.0     566.0     518.0     479.0     433.0     404.0     380.0     343.0     308.0
                   278.0     253.0     249.0     223.0     223.0     214.0     200.0     200.0     191.0     175.0
                   175.0     175.0     151.0     148.0     148.0     148.0     121.0     113.0     113.0     113.0
                   113.0     101.0      82.0      82.0      82.0      82.0      82.0      82.0      82.0      33.0
                    29.8      29.8      29.8      29.8      29.8      29.8      29.8      29.8      29.8      29.8
                    29.8      29.8      29.8      29.8      29.8      29.8      29.8      29.8      29.8      13.8
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HYDROGRAPH AT STATION Node14

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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.	2		0600	61	.00	.00	.00	508.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	481.
1		0100	3	.04	.04	.00	0.	2		0700	63	.00	.00	.00	455.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	429.
1		0200	5	.04	.04	.00	0.	2		0800	65	.00	.00	.00	406.
1		0230	6	.05	.05	.00	0.	2		0830	66	.00	.00	.00	386.
1		0300	7	.06	.06	.00	0.	2		0900	67	.00	.00	.00	366.
1		0330	8	.06	.06	.00	0.	2		0930	68	.00	.00	.00	344.
1		0400	9	.07	.07	.00	0.	2		1000	69	.00	.00	.00	322.
1		0430	10	.08	.08	.00	0.	2		1030	70	.00	.00	.00	303.
1		0500	11	.09	.09	.00	0.	2		1100	71	.00	.00	.00	288.
1		0530	12	.08	.08	.00	0.	2		1130	72	.00	.00	.00	271.
1		0600	13	.10	.10	.00	0.	2		1200	73	.00	.00	.00	255.
1		0630	14	.11	.11	.00	0.	2		1230	74	.00	.00	.00	239.
1		0700	15	.13	.12	.00	3.	2		1300	75	.00	.00	.00	223.
1		0730	16	.13	.12	.01	19.	2		1330	76	.00	.00	.00	208.
1		0800	17	.16	.14	.02	60.	2		1400	77	.00	.00	.00	191.
1		0830	18	.19	.15	.04	144.	2		1430	78	.00	.00	.00	177.
1		0900	19	.21	.16	.05	279.	2		1500	79	.00	.00	.00	162.
1		0930	20	.24	.17	.08	478.	2		1530	80	.00	.00	.00	147.
1		1000	21	.27	.17	.10	740.	2		1600	81	.00	.00	.00	133.
1		1030	22	.19	.11	.08	1002.	2		1630	82	.00	.00	.00	122.
1		1100	23	.25	.13	.12	1297.	2		1700	83	.00	.00	.00	118.
1		1130	24	.24	.12	.12	1541.	2		1730	84	.00	.00	.00	115.
1		1200	25	.22	.10	.12	1768.	2		1800	85	.00	.00	.00	111.
1		1230	26	.32	.14	.18	2095.	2		1830	86	.00	.00	.00	107.
1		1300	27	.36	.14	.22	2462.	2		1900	87	.00	.00	.00	103.
1		1330	28	.43	.15	.28	3018.	2		1930	88	.00	.00	.00	100.
1		1400	29	.29	.09	.20	3557.	2		2000	89	.00	.00	.00	95.
1		1430	30	.33	.10	.23	4062.	2		2030	90	.00	.00	.00	91.
1		1500	31	.32	.09	.23	4372.	2		2100	91	.00	.00	.00	86.
1		1530	32	.29	.07	.22	4535.	2		2130	92	.00	.00	.00	82.
1		1600	33	.24	.06	.18	4690.	2		2200	93	.00	.00	.00	77.
1		1630	34	.05	.01	.04	4521.	2		2230	94	.00	.00	.00	72.
1		1700	35	.04	.01	.03	4143.	2		2300	95	.00	.00	.00	66.
1		1730	36	.06	.01	.05	3525.	2		2330	96	.00	.00	.00	59.
1		1800	37	.06	.01	.04	2932.	3		0000	97	.00	.00	.00	51.
1		1830	38	.05	.01	.04	2601.	3		0030	98	.00	.00	.00	43.
1		1900	39	.03	.01	.02	2370.	3		0100	99	.00	.00	.00	36.
1		1930	40	.04	.01	.03	2193.	3		0130	100	.00	.00	.00	29.
1		2000	41	.03	.01	.03	2018.	3		0200	101	.00	.00	.00	23.
1		2030	42	.04	.01	.03	1876.	3		0230	102	.00	.00	.00	17.
1		2100	43	.03	.01	.03	1762.	3		0300	103	.00	.00	.00	14.
1		2130	44	.03	.01	.03	1657.	3		0330	104	.00	.00	.00	13.
1		2200	45	.03	.01	.03	1570.	3		0400	105	.00	.00	.00	11.
1		2230	46	.03	.01	.03	1491.	3		0430	106	.00	.00	.00	10.

1	2300	47	.03	.01	.02	1424.	*	3	0500	107	.00	.00	.00	9.
1	2330	48	.03	.01	.02	1357.	*	3	0530	108	.00	.00	.00	8.
2	0000	49	.03	.01	.02	1293.	*	3	0600	109	.00	.00	.00	7.
2	0030	50	.00	.00	.00	1204.	*	3	0630	110	.00	.00	.00	6.
2	0100	51	.00	.00	.00	1108.	*	3	0700	111	.00	.00	.00	5.
2	0130	52	.00	.00	.00	988.	*	3	0730	112	.00	.00	.00	4.
2	0200	53	.00	.00	.00	871.	*	3	0800	113	.00	.00	.00	4.
2	0230	54	.00	.00	.00	792.	*	3	0830	114	.00	.00	.00	3.
2	0300	55	.00	.00	.00	730.	*	3	0900	115	.00	.00	.00	2.
2	0330	56	.00	.00	.00	682.	*	3	0930	116	.00	.00	.00	2.
2	0400	57	.00	.00	.00	640.	*	3	1000	117	.00	.00	.00	1.
2	0430	58	.00	.00	.00	604.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	569.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	537.	*	3	1130	120	.00	.00	.00	0.
							*							

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TOTAL RAINFALL = 6.27, TOTAL LOSS = 3.33, TOTAL EXCESS = 2.94

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 4690.	16.00		3698.	1751.	753.	753.
		(INCHES)	1.458	2.762	2.943	2.943
		(AC-FT)	1834.	3474.	3701.	3701.

CUMULATIVE AREA = 23.58 SQ MI

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          **************
          *            *
713 KK    *    Node15  *
          *            *
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715 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

719 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

SUBBASIN RUNOFF DATA

716 BA SUBBASIN CHARACTERISTICS

TAREA	1.00	SUBBASIN AREA

PRECIPITATION DATA

718 PB STORM 5.18 BASIN TOTAL PRECIPITATION

720 PI INCREMENTAL PRECIPITATION PATTERN

.03	.04	.03	.04	.04	.05	.05	.06	.07	.08
.07	.08	.09	.10	.11	.13	.16	.17	.20	.22
.16	.21	.20	.18	.26	.30	.35	.24	.28	.27
.24	.20	.04	.03	.05	.05	.04	.03	.04	.03
.03	.03	.03	.03	.03	.02	.02	.02		

730 LS SCS LOSS RATE

STRTL	.49	INITIAL ABSTRACTION
CRVNBR	80.40	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

731 UI INPUT UNITGRAPH, 10 ORDINATES, VOLUME = 1.00

246.0	640.0	195.0	102.0	57.0	26.0	6.0	6.0	6.0	6.0

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HYDROGRAPH AT STATION Node15

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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.	2		0600	61	.00	.00	.00	0.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	0.
1		0100	3	.04	.04	.00	0.	2		0700	63	.00	.00	.00	0.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	0.
1		0200	5	.04	.04	.00	0.	2		0800	65	.00	.00	.00	0.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	0.
1		0300	7	.05	.05	.00	0.	2		0900	67	.00	.00	.00	0.
1		0330	8	.05	.05	.00	0.	2		0930	68	.00	.00	.00	0.
1		0400	9	.06	.06	.00	0.	2		1000	69	.00	.00	.00	0.
1		0430	10	.07	.07	.00	0.	2		1030	70	.00	.00	.00	0.
1		0500	11	.08	.08	.00	0.	2		1100	71	.00	.00	.00	0.
1		0530	12	.07	.07	.00	0.	2		1130	72	.00	.00	.00	0.
1		0600	13	.08	.08	.01	2.	2		1200	73	.00	.00	.00	0.
1		0630	14	.09	.08	.01	7.	2		1230	74	.00	.00	.00	0.
1		0700	15	.10	.08	.02	15.	2		1300	75	.00	.00	.00	0.
1		0730	16	.11	.08	.03	23.	2		1330	76	.00	.00	.00	0.
1		0800	17	.13	.09	.04	34.	2		1400	77	.00	.00	.00	0.
1		0830	18	.16	.10	.06	49.	2		1430	78	.00	.00	.00	0.
1		0900	19	.17	.10	.07	68.	2		1500	79	.00	.00	.00	0.
1		0930	20	.20	.10	.10	91.	2		1530	80	.00	.00	.00	0.
1		1000	21	.22	.10	.12	119.	2		1600	81	.00	.00	.00	0.
1		1030	22	.16	.06	.09	134.	2		1630	82	.00	.00	.00	0.
1		1100	23	.21	.08	.13	133.	2		1700	83	.00	.00	.00	0.
1		1130	24	.20	.07	.13	156.	2		1730	84	.00	.00	.00	0.
1		1200	25	.18	.06	.13	160.	2		1800	85	.00	.00	.00	0.
1		1230	26	.26	.07	.19	177.	2		1830	86	.00	.00	.00	0.
1		1300	27	.29	.07	.22	227.	2		1900	87	.00	.00	.00	0.
1		1330	28	.35	.08	.28	273.	2		1930	88	.00	.00	.00	0.
1		1400	29	.24	.05	.19	299.	2		2000	89	.00	.00	.00	0.
1		1430	30	.27	.05	.23	272.	2		2030	90	.00	.00	.00	0.
1		1500	31	.26	.04	.22	285.	2		2100	91	.00	.00	.00	0.
1		1530	32	.24	.04	.21	281.	2		2130	92	.00	.00	.00	0.
1		1600	33	.20	.03	.17	262.	2		2200	93	.00	.00	.00	0.
1		1630	34	.04	.01	.04	202.	2		2230	94	.00	.00	.00	0.
1		1700	35	.03	.00	.03	108.	2		2300	95	.00	.00	.00	0.
1		1730	36	.05	.01	.05	76.	2		2330	96	.00	.00	.00	0.
1		1800	37	.05	.01	.04	69.	3		0000	97	.00	.00	.00	0.
1		1830	38	.04	.01	.04	58.	3		0030	98	.00	.00	.00	0.
1		1900	39	.03	.00	.02	49.	3		0100	99	.00	.00	.00	0.
1		1930	40	.04	.00	.03	41.	3		0130	100	.00	.00	.00	0.
1		2000	41	.03	.00	.02	41.	3		0200	101	.00	.00	.00	0.
1		2030	42	.03	.00	.03	35.	3		0230	102	.00	.00	.00	0.
1		2100	43	.03	.00	.02	34.	3		0300	103	.00	.00	.00	0.
1		2130	44	.03	.00	.02	31.	3		0330	104	.00	.00	.00	0.
1		2200	45	.03	.00	.02	31.	3		0400	105	.00	.00	.00	0.
1		2230	46	.03	.00	.02	30.	3		0430	106	.00	.00	.00	0.
1		2300	47	.02	.00	.02	28.	3		0500	107	.00	.00	.00	0.
1		2330	48	.02	.00	.02	25.	3		0530	108	.00	.00	.00	0.
2		0000	49	.02	.00	.02	24.	3		0600	109	.00	.00	.00	0.
2		0030	50	.00	.00	.00	19.	3		0630	110	.00	.00	.00	0.
2		0100	51	.00	.00	.00	7.	3		0700	111	.00	.00	.00	0.
2		0130	52	.00	.00	.00	4.	3		0730	112	.00	.00	.00	0.
2		0200	53	.00	.00	.00	2.	3		0800	113	.00	.00	.00	0.
2		0230	54	.00	.00	.00	1.	3		0830	114	.00	.00	.00	0.
2		0300	55	.00	.00	.00	0.	3		0900	115	.00	.00	.00	0.
2		0330	56	.00	.00	.00	0.	3		0930	116	.00	.00	.00	0.
2		0400	57	.00	.00	.00	0.	3		1000	117	.00	.00	.00	0.
2		0430	58	.00	.00	.00	0.	3		1030	118	.00	.00	.00	0.
2		0500	59	.00	.00	.00	0.	3		1100	119	.00	.00	.00	0.
2		0530	60	.00	.00	.00	0.	3		1130	120	.00	.00	.00	0.

TOTAL RAINFALL = 5.18, TOTAL LOSS = 2.09, TOTAL EXCESS = 3.09

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
		(CFS)				
299.	14.00		226.	83.	33.	33.
		(INCHES)	2.104	3.087	3.087	3.087
		(AC-FT)	112.	165.	165.	165.

CUMULATIVE AREA = 1.00 SQ MI

733 KK

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*    Node17  *
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735 KO OUTPUT CONTROL VARIABLES
IPRNT 0 PRINT CONTROL

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                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                 IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       .500  TIME INTERVAL IN HOURS

                   SANTA MARGARITA STORMS

739 IN      TIME DATA FOR INPUT TIME SERIES
                 JXMIN         15  TIME INTERVAL IN MINUTES
               JXDATE      1    0  STARTING DATE
               JXTIME           0  STARTING TIME
                   UHG FROM MOUNTAIN S-GRAPH

          SUBBASIN RUNOFF DATA

736 BA      SUBBASIN CHARACTERISTICS
                TAREA      38.50  SUBBASIN AREA

            PRECIPITATION DATA

738 PB           STORM       6.93  BASIN TOTAL PRECIPITATION

740 PI        INCREMENTAL PRECIPITATION PATTERN
               .04   .05   .04   .05   .06   .07   .07   .08   .09   .10
               .09   .11   .12   .14   .14   .17   .21   .23   .27   .30
               .21   .28   .26   .24   .35   .40   .47   .32   .37   .35
               .32   .26   .06   .04   .07   .06   .06   .03   .05   .03
               .04   .03   .03   .03   .03   .03   .03   .03

750 LS      SCS LOSS RATE
                STRTL        .79  INITIAL ABSTRACTION
               CRVNBR      71.70  CURVE NUMBER
                RTIMP        .00  PERCENT IMPERVIOUS AREA

751 UI      INPUT UNITGRAPH, 101 ORDINATES,  VOLUME = 1.00
            1474.0  1961.0  2928.0  4314.0  5339.0  3911.0  2943.0  2458.0  1847.0  1406.0
            1279.0  1221.0  1038.0   961.0   886.0   799.0   799.0   678.0   628.0   581.0
             557.0   533.0   485.0   457.0   443.0   426.0   416.0   346.0   346.0   330.0
             284.0   284.0   284.0   259.0   251.0   251.0   251.0   230.0   224.0   224.0
             224.0   214.0   197.0   197.0   197.0   197.0   187.0   166.0   166.0   166.0
             166.0   166.0   153.0   127.0   127.0   127.0   127.0   127.0   127.0   127.0
             110.0    92.0    92.0    92.0    92.0    92.0    92.0    92.0    92.0    92.0
              92.0    51.3    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5
              33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5
              33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5    33.5
              32.7
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HYDROGRAPH AT STATION Node17

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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.	2		0600	61	.00	.00	.00	1163.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	1110.
1		0100	3	.05	.05	.00	0.	2		0700	63	.00	.00	.00	1060.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	1019.
1		0200	5	.05	.05	.00	0.	2		0800	65	.00	.00	.00	979.
1		0230	6	.06	.06	.00	0.	2		0830	66	.00	.00	.00	941.
1		0300	7	.07	.07	.00	0.	2		0900	67	.00	.00	.00	909.
1		0330	8	.07	.07	.00	0.	2		0930	68	.00	.00	.00	878.
1		0400	9	.08	.08	.00	0.	2		1000	69	.00	.00	.00	847.
1		0430	10	.09	.09	.00	0.	2		1030	70	.00	.00	.00	817.
1		0500	11	.10	.10	.00	0.	2		1100	71	.00	.00	.00	792.
1		0530	12	.09	.09	.00	0.	2		1130	72	.00	.00	.00	767.
1		0600	13	.11	.11	.00	1.	2		1200	73	.00	.00	.00	740.
1		0630	14	.12	.12	.01	12.	2		1230	74	.00	.00	.00	712.
1		0700	15	.14	.12	.02	39.	2		1300	75	.00	.00	.00	687.
1		0730	16	.14	.12	.02	90.	2		1330	76	.00	.00	.00	666.
1		0800	17	.17	.13	.04	186.	2		1400	77	.00	.00	.00	646.
1		0830	18	.21	.15	.06	345.	2		1430	78	.00	.00	.00	624.
1		0900	19	.23	.15	.08	570.	2		1500	79	.00	.00	.00	600.
1		0930	20	.27	.16	.11	882.	2		1530	80	.00	.00	.00	577.
1		1000	21	.30	.16	.14	1291.	2		1600	81	.00	.00	.00	557.
1		1030	22	.21	.10	.11	1706.	2		1630	82	.00	.00	.00	539.
1		1100	23	.28	.12	.15	2211.	2		1700	83	.00	.00	.00	520.
1		1130	24	.26	.11	.16	2715.	2		1730	84	.00	.00	.00	500.
1		1200	25	.24	.09	.15	3154.	2		1800	85	.00	.00	.00	482.
1		1230	26	.35	.12	.23	3639.	2		1830	86	.00	.00	.00	466.
1		1300	27	.39	.12	.27	4248.	2		1900	87	.00	.00	.00	452.
1		1330	28	.47	.13	.34	4968.	2		1930	88	.00	.00	.00	436.
1		1400	29	.32	.08	.24	5644.	2		2000	89	.00	.00	.00	419.
1		1430	30	.37	.08	.28	6518.	2		2030	90	.00	.00	.00	402.
1		1500	31	.35	.07	.28	7308.	2		2100	91	.00	.00	.00	383.
1		1530	32	.32	.06	.26	7876.	2		2130	92	.00	.00	.00	364.

1	1600	33	.26	.05	.22	8126.	*	2	2200	93	.00	.00	.00	346.
1	1630	34	.06	.01	.05	8134.	*	2	2230	94	.00	.00	.00	332.
1	1700	35	.04	.01	.03	7897.	*	2	2300	95	.00	.00	.00	319.
1	1730	36	.07	.01	.06	7378.	*	2	2330	96	.00	.00	.00	307.
1	1800	37	.06	.01	.05	6592.	*	3	0000	97	.00	.00	.00	292.
1	1830	38	.06	.01	.05	5693.	*	3	0030	98	.00	.00	.00	273.
1	1900	39	.03	.01	.03	5053.	*	3	0100	99	.00	.00	.00	252.
1	1930	40	.05	.01	.04	4618.	*	3	0130	100	.00	.00	.00	234.
1	2000	41	.03	.01	.03	4234.	*	3	0200	101	.00	.00	.00	216.
1	2030	42	.04	.01	.04	3938.	*	3	0230	102	.00	.00	.00	198.
1	2100	43	.03	.01	.03	3700.	*	3	0300	103	.00	.00	.00	181.
1	2130	44	.03	.01	.03	3506.	*	3	0330	104	.00	.00	.00	167.
1	2200	45	.03	.01	.03	3298.	*	3	0400	105	.00	.00	.00	160.
1	2230	46	.03	.01	.03	3143.	*	3	0430	106	.00	.00	.00	157.
1	2300	47	.03	.00	.02	2993.	*	3	0500	107	.00	.00	.00	153.
1	2330	48	.03	.00	.02	2857.	*	3	0530	108	.00	.00	.00	149.
2	0000	49	.03	.00	.02	2734.	*	3	0600	109	.00	.00	.00	145.
2	0030	50	.00	.00	.00	2570.	*	3	0630	110	.00	.00	.00	143.
2	0100	51	.00	.00	.00	2414.	*	3	0700	111	.00	.00	.00	141.
2	0130	52	.00	.00	.00	2257.	*	3	0730	112	.00	.00	.00	139.
2	0200	53	.00	.00	.00	2073.	*	3	0800	113	.00	.00	.00	137.
2	0230	54	.00	.00	.00	1871.	*	3	0830	114	.00	.00	.00	135.
2	0300	55	.00	.00	.00	1708.	*	3	0900	115	.00	.00	.00	133.
2	0330	56	.00	.00	.00	1585.	*	3	0930	116	.00	.00	.00	131.
2	0400	57	.00	.00	.00	1472.	*	3	1000	117	.00	.00	.00	128.
2	0430	58	.00	.00	.00	1376.	*	3	1030	118	.00	.00	.00	125.
2	0500	59	.00	.00	.00	1298.	*	3	1100	119	.00	.00	.00	122.
2	0530	60	.00	.00	.00	1224.	*	3	1130	120	.00	.00	.00	118.
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TOTAL RAINFALL = 6.93, TOTAL LOSS = 3.19, TOTAL EXCESS = 3.74

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 8134.	16.50		6751.	3397.	1550.	1550.
		(INCHES)	1.630	3.282	3.712	3.712
		(AC-FT)	3348.	6739.	7623.	7623.

CUMULATIVE AREA = 38.50 SQ MI

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763 KK

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765 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

766 HC HYDROGRAPH COMBINATION

ICOMP	6	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node45
SUM OF 6 HYDROGRAPHS

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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		1500	31	54267.	*	2		0600	61	10560.	*	2		2100	91	1820.
1		0030	2	0.	*	1		1530	32	60700.	*	2		0630	62	9689.	*	2		2130	92	1736.
1		0100	3	0.	*	1		1600	33	65573.	*	2		0700	63	8973.	*	2		2200	93	1658.
1		0130	4	0.	*	1		1630	34	68534.	*	2		0730	64	8438.	*	2		2230	94	1585.
1		0200	5	0.	*	1		1700	35	68516.	*	2		0800	65	7934.	*	2		2300	95	1514.
1		0230	6	0.	*	1		1730	36	67039.	*	2		0830	66	7466.	*	2		2330	96	1439.
1		0300	7	0.	*	1		1800	37	64472.	*	2		0900	67	7045.	*	3		0000	97	1361.
1		0330	8	0.	*	1		1830	38	61468.	*	2		0930	68	6662.	*	3		0030	98	1285.
1		0400	9	0.	*	1		1900	39	57297.	*	2		1000	69	6276.	*	3		0100	99	1213.
1		0430	10	0.	*	1		1930	40	52182.	*	2		1030	70	5911.	*	3		0130	100	1150.
1		0500	11	0.	*	1		2000	41	48035.	*	2		1100	71	5559.	*	3		0200	101	1088.

1	0530	12	0.	*	1	2030	42	45056.	*	2	1130	72	5249.	*	3	0230	102	1025.
1	0600	13	7.	*	1	2100	43	42416.	*	2	1200	73	4954.	*	3	0300	103	966.
1	0630	14	38.	*	1	2130	44	39030.	*	2	1230	74	4662.	*	3	0330	104	911.
1	0700	15	116.	*	1	2200	45	35296.	*	2	1300	75	4388.	*	3	0400	105	865.
1	0730	16	282.	*	1	2230	46	32030.	*	2	1330	76	4124.	*	3	0430	106	821.
1	0800	17	624.	*	1	2300	47	29758.	*	2	1400	77	3880.	*	3	0500	107	777.
1	0830	18	1259.	*	1	2330	48	28199.	*	2	1430	78	3630.	*	3	0530	108	735.
1	0900	19	2311.	*	2	0000	49	26455.	*	2	1500	79	3395.	*	3	0600	109	696.
1	0930	20	3907.	*	2	0030	50	24915.	*	2	1530	80	3180.	*	3	0630	110	663.
1	1000	21	6089.	*	2	0100	51	23422.	*	2	1600	81	2981.	*	3	0700	111	632.
1	1030	22	8998.	*	2	0130	52	21871.	*	2	1630	82	2796.	*	3	0730	112	602.
1	1100	23	12785.	*	2	0200	53	20263.	*	2	1700	83	2626.	*	3	0800	113	572.
1	1130	24	16798.	*	2	0230	54	18695.	*	2	1730	84	2490.	*	3	0830	114	544.
1	1200	25	21013.	*	2	0300	55	17232.	*	2	1800	85	2378.	*	3	0900	115	517.
1	1230	26	25391.	*	2	0330	56	15756.	*	2	1830	86	2278.	*	3	0930	116	490.
1	1300	27	30005.	*	2	0400	57	14474.	*	2	1900	87	2181.	*	3	1000	117	465.
1	1330	28	35180.	*	2	0430	58	13293.	*	2	1930	88	2083.	*	3	1030	118	442.
1	1400	29	41193.	*	2	0500	59	12317.	*	2	2000	89	1991.	*	3	1100	119	424.
1	1430	30	47825.	*	2	0530	60	11439.	*	2	2030	90	1905.	*	3	1130	120	409.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 68534.	16.50		59544.	30253.	13174.	13174.
		(INCHES)	1.748	3.553	3.836	3.836
		(AC-FT)	29526.	60006.	64781.	64781.

CUMULATIVE AREA = 316.62 SQ MI

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767 KK

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*            *
*    Vail    *
*            *
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769 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

770 RS STORAGE ROUTING

NSTPS	1	NUMBER OF SUBREACHES
ITYP	STOR	TYPE OF INITIAL CONDITION
RSVRIC	28985.00	INITIAL CONDITION
X	.00	WORKING R AND D COEFFICIENT

771 SV	STORAGE	.0	51000.0	52100.0	53200.0	54300.0	55400.0	56500.0	62571.0	65000.0
772 SQ	DISCHARGE	0.	1.	1000.	3500.	7000.	11000.	16000.	50000.	67500.

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HYDROGRAPH AT STATION Vail

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DA	MON	HRMN	ORD	OUTFLOW	STORAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE
1		0000	1	1.	28985.00	*	1		2000	41	39181.	60639.09	*	2		1600	81	5110.	53705.92
1		0030	2	1.	28984.98	*	1		2030	42	40708.	60911.87	*	2		1630	82	4836.	53619.79
1		0100	3	1.	28984.95	*	1		2100	43	41336.	61024.02	*	2		1700	83	4574.	53537.41
1		0130	4	1.	28984.93	*	1		2130	44	41209.	61001.32	*	2		1730	84	4325.	53459.26
1		0200	5	1.	28984.91	*	1		2200	45	40370.	60851.46	*	2		1800	85	4092.	53385.93
1		0230	6	1.	28984.88	*	1		2230	46	38979.	60603.04	*	2		1830	86	3874.	53317.54
1		0300	7	1.	28984.86	*	1		2300	47	37302.	60303.60	*	2		1900	87	3671.	53253.76
1		0330	8	1.	28984.84	*	1		2330	48	35575.	59995.34	*	2		1930	88	3486.	53193.97
1		0400	9	1.	28984.81	*	2		0000	49	33864.	59689.86	*	2		2000	89	3356.	53136.78
1		0430	10	1.	28984.79	*	2		0030	50	32168.	59386.92	*	2		2030	90	3230.	53081.20
1		0500	11	1.	28984.77	*	2		0100	51	30509.	59090.65	*	2		2100	91	3107.	53027.23
1		0530	12	1.	28984.75	*	2		0130	52	28878.	58799.46	*	2		2130	92	2988.	52974.77
1		0600	13	1.	28984.88	*	2		0200	53	27258.	58510.18	*	2		2200	93	2872.	52923.81
1		0630	14	1.	28985.79	*	2		0230	54	25644.	58222.08	*	2		2230	94	2760.	52874.43

1	0700	15	1.	28988.94	*	2	0300	55	24051.	57937.59	*	2	2300	95	2651.	52826.65
1	0730	16	1.	28997.15	*	2	0330	56	22484.	57657.71	*	2	2330	96	2546.	52780.27
1	0800	17	1.	29015.85	*	2	0400	57	20955.	57384.80	*	3	0000	97	2443.	52735.04
1	0830	18	1.	29054.72	*	2	0430	58	19488.	57122.89	*	3	0030	98	2343.	52690.81
1	0900	19	1.	29128.46	*	2	0500	59	18102.	56875.36	*	3	0100	99	2245.	52647.65
1	0930	20	1.	29256.92	*	2	0530	60	16811.	56644.83	*	3	0130	100	2149.	52605.70
1	1000	21	1.	29463.45	*	2	0600	61	15674.	56428.18	*	3	0200	101	2057.	52565.03
1	1030	22	1.	29775.14	*	2	0630	62	14721.	56218.57	*	3	0230	102	1967.	52525.55
1	1100	23	1.	30225.18	*	2	0700	63	13795.	56014.98	*	3	0300	103	1880.	52487.21
1	1130	24	1.	30836.37	*	2	0730	64	12921.	55822.72	*	3	0330	104	1796.	52450.06
1	1200	25	1.	31617.56	*	2	0800	65	12108.	55643.86	*	3	0400	105	1714.	52414.25
1	1230	26	1.	32576.29	*	2	0830	66	11351.	55477.33	*	3	0430	106	1636.	52379.84
1	1300	27	1.	33720.80	*	2	0900	67	10714.	55321.24	*	3	0500	107	1561.	52346.80
1	1330	28	1.	35067.56	*	2	0930	68	10174.	55172.88	*	3	0530	108	1489.	52315.04
1	1400	29	1.	36645.49	*	2	1000	69	9656.	55030.47	*	3	0600	109	1419.	52284.51
1	1430	30	1.	38484.69	*	2	1030	70	9158.	54893.55	*	3	0630	110	1353.	52255.30
1	1500	31	1.	40594.00	*	2	1100	71	8680.	54761.97	*	3	0700	111	1290.	52227.45
1	1530	32	1.	42969.31	*	2	1130	72	8222.	54636.05	*	3	0730	112	1229.	52200.88
1	1600	33	1.	45578.20	*	2	1200	73	7786.	54516.12	*	3	0800	113	1172.	52175.51
1	1630	34	1.	48348.96	*	2	1230	74	7370.	54401.66	*	3	0830	114	1117.	52151.29
1	1700	35	162.	51177.21	*	2	1300	75	6975.	54292.26	*	3	0900	115	1064.	52128.18
1	1730	36	5597.	53858.96	*	2	1330	76	6640.	54186.83	*	3	0930	116	1014.	52106.07
1	1800	37	14462.	56161.69	*	2	1400	77	6314.	54084.55	*	3	1000	117	986.	52084.49
1	1830	38	24204.	57964.85	*	2	1430	78	5999.	53985.30	*	3	1030	118	966.	52062.89
1	1900	39	31500.	59267.75	*	2	1500	79	5692.	53888.91	*	3	1100	119	947.	52041.27
1	1930	40	36321.	60128.43	*	2	1530	80	5395.	53795.68	*	3	1130	120	927.	52019.78
					*						*					

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 41336.	21.00		37335.	19379.	8490.	8490.
		(INCHES)	1.096	2.276	2.472	2.472
		(AC-FT)	18513.	38437.	41746.	41746.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	59.50-HR
+ (AC-FT)	(HR)				
61024.	21.00	60310.	56860.	48508.	48508.

CUMULATIVE AREA = 316.62 SQ MI

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773 KK        *     5      *
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775 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

776 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	60984.	CHANNEL LENGTH
S	.0066	SLOPE
N	.040	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	380.00	BOTTOM WIDTH OR DIAMETER
Z	2.00	SIDE SLOPE

***

COMPUTED MUSKINGUM-CUNGE PARAMETERS

			COMPUTATION TIME STEP					
ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.06	1.65	30.00	15246.00	41474.30	1320.00	2.47	15.50

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN .06 1.65 30.00 41474.30 1320.00 2.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4177E+05 EXCESS= .0000E+00 OUTFLOW= .4168E+05 BASIN STORAGE= .4856E+03 PERCENT ERROR= -1.0

HYDROGRAPH AT STATION 5

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	1.	2		0600	61	18490.	2		2100	91	3694.
1		0030	2	1.	1		1530	32	1.	2		0630	62	17254.	2		2130	92	3511.
1		0100	3	1.	1		1600	33	1.	2		0700	63	16127.	2		2200	93	3377.
1		0130	4	1.	1		1630	34	1.	2		0730	64	15139.	2		2230	94	3251.
1		0200	5	1.	1		1700	35	1.	2		0800	65	14275.	2		2300	95	3130.
1		0230	6	1.	1		1730	36	1.	2		0830	66	13445.	2		2330	96	3012.
1		0300	7	1.	1		1800	37	1.	2		0900	67	12627.	3		0000	97	2897.
1		0330	8	1.	1		1830	38	1.	2		0930	68	11895.	3		0030	98	2786.
1		0400	9	1.	1		1900	39	117.	2		1000	69	11210.	3		0100	99	2678.
1		0430	10	1.	1		1930	40	21278.	2		1030	70	10616.	3		0130	100	2574.
1		0500	11	1.	1		2000	41	34750.	2		1100	71	10114.	3		0200	101	2472.
1		0530	12	1.	1		2030	42	36177.	2		1130	72	9637.	3		0230	102	2373.
1		0600	13	1.	1		2100	43	40405.	2		1200	73	9163.	3		0300	103	2276.
1		0630	14	1.	1		2130	44	40751.	2		1230	74	8715.	3		0330	104	2181.
1		0700	15	1.	1		2200	45	41474.	2		1300	75	8283.	3		0400	105	2090.
1		0730	16	1.	1		2230	46	40961.	2		1330	76	7871.	3		0430	106	2001.
1		0800	17	1.	1		2300	47	40017.	2		1400	77	7478.	3		0500	107	1914.
1		0830	18	1.	1		2330	48	38531.	2		1430	78	7106.	3		0530	108	1831.
1		0900	19	1.	2		0000	49	36866.	2		1500	79	6763.	3		0600	109	1750.
1		0930	20	1.	2		0030	50	35179.	2		1530	80	6464.	3		0630	110	1672.
1		1000	21	1.	2		0100	51	33532.	2		1600	81	6163.	3		0700	111	1597.
1		1030	22	1.	2		0130	52	31907.	2		1630	82	5872.	3		0730	112	1525.
1		1100	23	1.	2		0200	53	30306.	2		1700	83	5591.	3		0800	113	1456.
1		1130	24	1.	2		0230	54	28744.	2		1730	84	5319.	3		0830	114	1389.
1		1200	25	1.	2		0300	55	27196.	2		1800	85	5057.	3		0900	115	1326.
1		1230	26	1.	2		0330	56	25657.	2		1830	86	4806.	3		0930	116	1265.
1		1300	27	1.	2		0400	57	24139.	2		1900	87	4565.	3		1000	117	1207.
1		1330	28	1.	2		0430	58	22652.	2		1930	88	4337.	3		1030	118	1152.
1		1400	29	1.	2		0500	59	21206.	2		2000	89	4109.	3		1100	119	1099.
1		1430	30	1.	2		0530	60	19811.	2		2030	90	3894.	3		1130	120	1048.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
41474.	22.00		37361.	19362.	8471.	8471.
		(INCHES)	1.097	2.274	2.467	2.467
		(AC-FT)	18526.	38403.	41656.	41656.

CUMULATIVE AREA = 316.62 SQ MI

777 KK Node28

779 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

783 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

SUBBASIN RUNOFF DATA

780 BA SUBBASIN CHARACTERISTICS

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                TAREA       29.36  SUBBASIN AREA

            PRECIPITATION DATA

782 PB            STORM        4.85  BASIN TOTAL PRECIPITATION

784 PI          INCREMENTAL PRECIPITATION PATTERN
                   .02       .03       .03       .03       .04       .05       .05       .05       .06       .07
                   .06       .08       .09       .10       .10       .12       .15       .16       .19       .21
                   .15       .19       .18       .17       .25       .28       .33       .22       .26       .25
                   .23       .18       .04       .03       .05       .04       .04       .03       .03       .03
                   .03       .03       .03       .03       .03       .02       .02       .02

794 LS          SCS LOSS RATE
                     STRTL        .74  INITIAL ABSTRACTION
                    CRVNBR      73.00  CURVE NUMBER
                     RTIMP        .00  PERCENT IMPERVIOUS AREA

795 UI          INPUT UNITGRAPH,  63 ORDINATES,  VOLUME = 1.00
                   569.0     708.0     896.0    1244.0    1333.0    1996.0    2569.0    4002.0    5982.0    2612.0
                  2173.0    1323.0    1269.0    1220.0    1045.0     831.0     776.0     735.0     648.0     610.0
                   538.0     477.0     427.0     398.0     388.0     331.0     316.0     282.0     231.0     231.0
                   219.0     138.0     138.0     138.0     138.0     138.0      71.0      29.0      29.0      29.0
                    29.4      29.4      29.4      29.4      29.4      29.4      29.4      29.4      29.4      29.4
                    29.4      29.4      29.4      29.4      29.4      29.4      29.4      29.4      29.4      29.4
                    29.4      29.4       3.3
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HYDROGRAPH AT STATION Node28

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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.	2		0600	61	.00	.00	.00	447.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	398.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	348.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	300.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	266.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	236.
1		0300	7	.05	.05	.00	0.	2		0900	67	.00	.00	.00	204.
1		0330	8	.05	.05	.00	0.	2		0930	68	.00	.00	.00	175.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	150.
1		0430	10	.06	.06	.00	0.	2		1030	70	.00	.00	.00	135.
1		0500	11	.07	.07	.00	0.	2		1100	71	.00	.00	.00	126.
1		0530	12	.06	.06	.00	0.	2		1130	72	.00	.00	.00	117.
1		0600	13	.08	.08	.00	0.	2		1200	73	.00	.00	.00	108.
1		0630	14	.09	.09	.00	0.	2		1230	74	.00	.00	.00	101.
1		0700	15	.10	.10	.00	0.	2		1300	75	.00	.00	.00	95.
1		0730	16	.10	.10	.00	3.	2		1330	76	.00	.00	.00	89.
1		0800	17	.12	.11	.01	10.	2		1400	77	.00	.00	.00	84.
1		0830	18	.15	.12	.02	25.	2		1430	78	.00	.00	.00	80.
1		0900	19	.16	.13	.03	52.	2		1500	79	.00	.00	.00	76.
1		0930	20	.19	.14	.05	95.	2		1530	80	.00	.00	.00	73.
1		1000	21	.21	.14	.07	161.	2		1600	81	.00	.00	.00	69.
1		1030	22	.15	.09	.06	237.	2		1630	82	.00	.00	.00	66.
1		1100	23	.19	.11	.08	355.	2		1700	83	.00	.00	.00	62.
1		1130	24	.18	.10	.09	516.	2		1730	84	.00	.00	.00	59.
1		1200	25	.17	.08	.09	713.	2		1800	85	.00	.00	.00	55.
1		1230	26	.25	.11	.13	981.	2		1830	86	.00	.00	.00	51.
1		1300	27	.28	.12	.16	1282.	2		1900	87	.00	.00	.00	49.
1		1330	28	.33	.12	.21	1640.	2		1930	88	.00	.00	.00	45.
1		1400	29	.22	.08	.15	1952.	2		2000	89	.00	.00	.00	41.
1		1430	30	.26	.08	.17	2223.	2		2030	90	.00	.00	.00	35.
1		1500	31	.25	.07	.17	2614.	2		2100	91	.00	.00	.00	30.
1		1530	32	.23	.06	.16	2935.	2		2130	92	.00	.00	.00	25.
1		1600	33	.18	.05	.14	3337.	2		2200	93	.00	.00	.00	20.
1		1630	34	.04	.01	.03	3769.	2		2230	94	.00	.00	.00	15.
1		1700	35	.03	.01	.02	4102.	2		2300	95	.00	.00	.00	11.
1		1730	36	.05	.01	.04	4310.	2		2330	96	.00	.00	.00	10.
1		1800	37	.04	.01	.03	4186.	3		0000	97	.00	.00	.00	9.
1		1830	38	.04	.01	.03	4222.	3		0030	98	.00	.00	.00	8.
1		1900	39	.02	.01	.02	4038.	3		0100	99	.00	.00	.00	7.
1		1930	40	.03	.01	.03	3756.	3		0130	100	.00	.00	.00	6.
1		2000	41	.02	.01	.02	3250.	3		0200	101	.00	.00	.00	6.
1		2030	42	.03	.01	.02	2610.	3		0230	102	.00	.00	.00	5.
1		2100	43	.02	.01	.02	2347.	3		0300	103	.00	.00	.00	4.
1		2130	44	.02	.01	.02	2186.	3		0330	104	.00	.00	.00	4.
1		2200	45	.02	.01	.02	2049.	3		0400	105	.00	.00	.00	3.
1		2230	46	.02	.01	.02	1899.	3		0430	106	.00	.00	.00	3.
1		2300	47	.02	.00	.02	1747.	3		0500	107	.00	.00	.00	2.
1		2330	48	.02	.00	.02	1649.	3		0530	108	.00	.00	.00	1.
2		0000	49	.02	.00	.02	1546.	3		0600	109	.00	.00	.00	1.
2		0030	50	.00	.00	.00	1468.	3		0630	110	.00	.00	.00	1.
2		0100	51	.00	.00	.00	1363.	3		0700	111	.00	.00	.00	0.
2		0130	52	.00	.00	.00	1279.	3		0730	112	.00	.00	.00	0.
2		0200	53	.00	.00	.00	1189.	3		0800	113	.00	.00	.00	0.
2		0230	54	.00	.00	.00	1103.	3		0830	114	.00	.00	.00	0.
2		0300	55	.00	.00	.00	1002.	3		0900	115	.00	.00	.00	0.

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        2     0330   56     .00     .00     .00       909.       *       3     0930  116     .00     .00     .00         0.
        2     0400   57     .00     .00     .00       797.       *       3     1000  117     .00     .00     .00         0.
        2     0430   58     .00     .00     .00       656.       *       3     1030  118     .00     .00     .00         0.
        2     0500   59     .00     .00     .00       572.       *       3     1100  119     .00     .00     .00         0.
        2     0530   60     .00     .00     .00       501.       *       3     1130  120     .00     .00     .00         0.
                                                                  *
 ********************************************************************************************************************************

    TOTAL RAINFALL =     4.85, TOTAL LOSS =     2.69, TOTAL EXCESS =     2.16

  PEAK FLOW      TIME                              MAXIMUM AVERAGE FLOW
                                    6-HR        24-HR        72-HR      59.50-HR
+   (CFS)        (HR)
                        (CFS)
+    4310.      17.50                3583.        1663.         689.         689.
                             (INCHES)    1.135        2.106        2.163        2.163
                              (AC-FT)    1777.        3298.        3386.        3386.

                             CUMULATIVE AREA =   29.36 SQ MI


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


              **************
              *            *
  803 KK      *    Node30  *
              *            *
              **************


  805 KO           OUTPUT CONTROL VARIABLES
                        IPRNT          0  PRINT CONTROL
                        IPLOT          0  PLOT CONTROL
                        QSCAL         0.  HYDROGRAPH PLOT SCALE
                        IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                         IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                        ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                        ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                       TIMINT       .500  TIME INTERVAL IN HOURS

                            SANTA MARGARITA STORMS

  809 IN           TIME DATA FOR INPUT TIME SERIES
                        JXMIN         15  TIME INTERVAL IN MINUTES
                       JXDATE      1    0  STARTING DATE
                       JXTIME          0  STARTING TIME
                            UHG FROM MOUNTAIN S-GRAPH

                SUBBASIN RUNOFF DATA

  806 BA           SUBBASIN CHARACTERISTICS
                        TAREA      16.19  SUBBASIN AREA

                   PRECIPITATION DATA

  808 PB                STORM       7.04  BASIN TOTAL PRECIPITATION

  810 PI             INCREMENTAL PRECIPITATION PATTERN
                       .04       .05       .04       .05       .06       .07       .07       .08       .09       .11
                       .09       .11       .13       .14       .15       .18       .21       .23       .27       .30
                       .21       .28       .27       .25       .36       .40       .48       .32       .37       .36
                       .33       .27       .06       .04       .07       .06       .06       .03       .05       .03
                       .04       .03       .03       .03       .03       .03       .03       .03

  820 LS           SCS LOSS RATE
                        STRTL        .87  INITIAL ABSTRACTION
                       CRVNBR      69.60  CURVE NUMBER
                        RTIMP        .00  PERCENT IMPERVIOUS AREA

  821 UI           INPUT UNITGRAPH,  93 ORDINATES,  VOLUME = 1.00
                      681.0     926.0    1473.0    2175.0    2292.0    1564.0    1189.0     938.0     682.0     586.0
                      562.0     474.0     436.0     394.0     367.0     353.0     293.0     273.0     262.0     244.0
                      227.0     209.0     203.0     195.0     182.0     159.0     159.0     138.0     130.0     130.0
                      122.0     115.0     115.0     115.0     104.0     103.0     103.0     103.0      92.0      90.0
                       90.2      90.2      87.5      76.2      76.2      76.2      76.2      76.2      63.3      58.1
                       58.1      58.1      58.1      58.1      58.1      49.9      42.2      42.2      42.2      42.2
                       42.2      42.2      42.2      42.2      42.2      25.6      15.4      15.4      15.4      15.4
                       15.4      15.4      15.4      15.4      15.4      15.4      15.4      15.4      15.4      15.4
                       15.4      15.4      15.4      15.4      15.4      15.4      15.4      15.4      15.4      15.4
                       15.4      15.4       9.1

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                                                HYDROGRAPH AT STATION   Node30

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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.	2		0600	61	.00	.00	.00	463.
1		0030	2	.04	.04	.00	0.	2		0630	62	.00	.00	.00	443.
1		0100	3	.05	.05	.00	0.	2		0700	63	.00	.00	.00	425.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	407.
1		0200	5	.05	.05	.00	0.	2		0800	65	.00	.00	.00	391.
1		0230	6	.06	.06	.00	0.	2		0830	66	.00	.00	.00	376.
1		0300	7	.07	.07	.00	0.	2		0900	67	.00	.00	.00	362.
1		0330	8	.07	.07	.00	0.	2		0930	68	.00	.00	.00	349.
1		0400	9	.08	.08	.00	0.	2		1000	69	.00	.00	.00	336.
1		0430	10	.09	.09	.00	0.	2		1030	70	.00	.00	.00	323.
1		0500	11	.11	.11	.00	0.	2		1100	71	.00	.00	.00	310.
1		0530	12	.09	.09	.00	0.	2		1130	72	.00	.00	.00	299.
1		0600	13	.11	.11	.00	0.	2		1200	73	.00	.00	.00	289.
1		0630	14	.13	.12	.00	2.	2		1230	74	.00	.00	.00	278.
1		0700	15	.14	.13	.01	9.	2		1300	75	.00	.00	.00	266.
1		0730	16	.15	.13	.02	26.	2		1330	76	.00	.00	.00	254.
1		0800	17	.18	.14	.03	60.	2		1400	77	.00	.00	.00	245.
1		0830	18	.21	.16	.05	122.	2		1430	78	.00	.00	.00	237.
1		0900	19	.23	.16	.07	215.	2		1500	79	.00	.00	.00	228.
1		0930	20	.28	.17	.10	348.	2		1530	80	.00	.00	.00	219.
1		1000	21	.30	.17	.13	525.	2		1600	81	.00	.00	.00	210.
1		1030	22	.21	.11	.10	705.	2		1630	82	.00	.00	.00	202.
1		1100	23	.28	.14	.15	924.	2		1700	83	.00	.00	.00	195.
1		1130	24	.27	.12	.15	1136.	2		1730	84	.00	.00	.00	187.
1		1200	25	.25	.10	.15	1314.	2		1800	85	.00	.00	.00	178.
1		1230	26	.36	.13	.22	1530.	2		1830	86	.00	.00	.00	169.
1		1300	27	.40	.14	.27	1794.	2		1900	87	.00	.00	.00	161.
1		1330	28	.48	.14	.33	2113.	2		1930	88	.00	.00	.00	152.
1		1400	29	.32	.09	.24	2434.	2		2000	89	.00	.00	.00	145.
1		1430	30	.37	.09	.28	2827.	2		2030	90	.00	.00	.00	140.
1		1500	31	.36	.08	.28	3156.	2		2100	91	.00	.00	.00	133.
1		1530	32	.33	.07	.26	3367.	2		2130	92	.00	.00	.00	125.
1		1600	33	.27	.05	.21	3473.	2		2200	93	.00	.00	.00	115.
1		1630	34	.06	.01	.05	3455.	2		2230	94	.00	.00	.00	107.
1		1700	35	.04	.01	.03	3318.	2		2300	95	.00	.00	.00	98.
1		1730	36	.07	.01	.06	3050.	2		2330	96	.00	.00	.00	90.
1		1800	37	.06	.01	.05	2662.	3		0000	97	.00	.00	.00	82.
1		1830	38	.06	.01	.05	2284.	3		0030	98	.00	.00	.00	75.
1		1900	39	.04	.01	.03	2033.	3		0100	99	.00	.00	.00	72.
1		1930	40	.05	.01	.04	1867.	3		0130	100	.00	.00	.00	70.
1		2000	41	.04	.01	.03	1719.	3		0200	101	.00	.00	.00	69.
1		2030	42	.04	.01	.03	1606.	3		0230	102	.00	.00	.00	67.
1		2100	43	.04	.01	.03	1507.	3		0300	103	.00	.00	.00	65.
1		2130	44	.04	.01	.03	1415.	3		0330	104	.00	.00	.00	64.
1		2200	45	.04	.01	.03	1340.	3		0400	105	.00	.00	.00	63.
1		2230	46	.04	.01	.03	1276.	3		0430	106	.00	.00	.00	62.
1		2300	47	.03	.00	.02	1213.	3		0500	107	.00	.00	.00	61.
1		2330	48	.03	.00	.02	1155.	3		0530	108	.00	.00	.00	60.
2		0000	49	.03	.00	.02	1102.	3		0600	109	.00	.00	.00	59.
2		0030	50	.00	.00	.00	1040.	3		0630	110	.00	.00	.00	57.
2		0100	51	.00	.00	.00	974.	3		0700	111	.00	.00	.00	55.
2		0130	52	.00	.00	.00	901.	3		0730	112	.00	.00	.00	54.
2		0200	53	.00	.00	.00	816.	3		0800	113	.00	.00	.00	51.
2		0230	54	.00	.00	.00	734.	3		0830	114	.00	.00	.00	49.
2		0300	55	.00	.00	.00	671.	3		0900	115	.00	.00	.00	47.
2		0330	56	.00	.00	.00	620.	3		0930	116	.00	.00	.00	44.
2		0400	57	.00	.00	.00	576.	3		1000	117	.00	.00	.00	42.
2		0430	58	.00	.00	.00	541.	3		1030	118	.00	.00	.00	39.
2		0500	59	.00	.00	.00	512.	3		1100	119	.00	.00	.00	36.
2		0530	60	.00	.00	.00	486.	3		1130	120	.00	.00	.00	31.

****

TOTAL RAINFALL = 7.04, TOTAL LOSS = 3.43, TOTAL EXCESS = 3.61

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 3473.	16.00		2838.	1404.	632.	632.
		(INCHES)	1.630	3.225	3.600	3.600
		(AC-FT)	1407.	2785.	3108.	3108.

CUMULATIVE AREA = 16.19 SQ MI

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          **************
          *            *
832 KK    *    Node43  *
          *            *
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834 KO OUTPUT CONTROL VARIABLES
IPRNT 0 PRINT CONTROL

IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

835 HC HYDROGRAPH COMBINATION

ICOMP	3	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node43
SUM OF 3 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	5770.	2		0600	61	19400.	2		2100	91	3857.
1		0030	2	1.	1		1530	32	6302.	2		0630	62	18095.	2		2130	92	3661.
1		0100	3	1.	1		1600	33	6811.	2		0700	63	16900.	2		2200	93	3511.
1		0130	4	1.	1		1630	34	7225.	2		0730	64	15846.	2		2230	94	3373.
1		0200	5	1.	1		1700	35	7421.	2		0800	65	14932.	2		2300	95	3239.
1		0230	6	1.	1		1730	36	7361.	2		0830	66	14057.	2		2330	96	3112.
1		0300	7	1.	1		1800	37	6849.	2		0900	67	13193.	3		0000	97	2988.
1		0330	8	1.	1		1830	38	6507.	2		0930	68	12419.	3		0030	98	2869.
1		0400	9	1.	1		1900	39	6187.	2		1000	69	11696.	3		0100	99	2757.
1		0430	10	1.	1		1930	40	26901.	2		1030	70	11073.	3		0130	100	2651.
1		0500	11	1.	1		2000	41	39719.	2		1100	71	10549.	3		0200	101	2547.
1		0530	12	1.	1		2030	42	40393.	2		1130	72	10053.	3		0230	102	2445.
1		0600	13	1.	1		2100	43	44260.	2		1200	73	9561.	3		0300	103	2345.
1		0630	14	2.	1		2130	44	44352.	2		1230	74	9094.	3		0330	104	2249.
1		0700	15	10.	1		2200	45	44863.	2		1300	75	8644.	3		0400	105	2156.
1		0730	16	29.	1		2230	46	44136.	2		1330	76	8214.	3		0430	106	2065.
1		0800	17	71.	1		2300	47	42977.	2		1400	77	7808.	3		0500	107	1977.
1		0830	18	148.	1		2330	48	41335.	2		1430	78	7423.	3		0530	108	1892.
1		0900	19	267.	2		0000	49	39514.	2		1500	79	7067.	3		0600	109	1809.
1		0930	20	444.	2		0030	50	37687.	2		1530	80	6755.	3		0630	110	1730.
1		1000	21	686.	2		0100	51	35869.	2		1600	81	6442.	3		0700	111	1652.
1		1030	22	943.	2		0130	52	34087.	2		1630	82	6141.	3		0730	112	1578.
1		1100	23	1280.	2		0200	53	32311.	2		1700	83	5847.	3		0800	113	1507.
1		1130	24	1653.	2		0230	54	30580.	2		1730	84	5564.	3		0830	114	1438.
1		1200	25	2028.	2		0300	55	28869.	2		1800	85	5290.	3		0900	115	1372.
1		1230	26	2512.	2		0330	56	27186.	2		1830	86	5026.	3		0930	116	1309.
1		1300	27	3076.	2		0400	57	25512.	2		1900	87	4775.	3		1000	117	1249.
1		1330	28	3754.	2		0430	58	23849.	2		1930	88	4534.	3		1030	118	1191.
1		1400	29	4387.	2		0500	59	22290.	2		2000	89	4294.	3		1100	119	1134.
1		1430	30	5050.	2		0530	60	20798.	2		2030	90	4069.	3		1130	120	1079.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)					
		(CFS)				
44863.	22.00		40467.	21009.	9792.	9792.
		(INCHES)	1.039	2.157	2.493	2.493
		(AC-FT)	20066.	41671.	48150.	48150.

CUMULATIVE AREA = 362.17 SQ MI

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836 KK 4

838 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

```
 839 RD          MUSKINGUM-CUNGE CHANNEL ROUTING
                          L        4435.  CHANNEL LENGTH
                          S        .0044  SLOPE
                          N         .035  CHANNEL ROUGHNESS COEFFICIENT
                         CA          .00  CONTRIBUTING AREA
                      SHAPE         TRAP  CHANNEL SHAPE
                         WD       115.00  BOTTOM WIDTH OR DIAMETER
                          Z         2.50  SIDE SLOPE

                                                              ***
                                  COMPUTED MUSKINGUM-CUNGE PARAMETERS
                                       COMPUTATION TIME STEP
                    ELEMENT     ALPHA       M         DT        DX        PEAK     TIME TO     VOLUME     MAXIMUM
                                                                                     PEAK                 CELERITY
                                                     (MIN)     (FT)      (CFS)      (MIN)       (IN)       (FPS)

                     MAIN        .15      1.61       3.34   2217.50   44827.87    1321.75       2.49       22.15

                                          INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL


                     MAIN        .15      1.61      30.00             44809.28    1320.00       2.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4815E+05 EXCESS= .0000E+00 OUTFLOW= .4814E+05 BASIN STORAGE= .2539E+02 PERCENT ERROR=    .0


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                                                  HYDROGRAPH AT STATION   4

*****************************************************************************************************************************
                                  *                                 *                                 *
  DA MON HRMN  ORD       FLOW     *  DA MON HRMN  ORD       FLOW    *  DA MON HRMN  ORD       FLOW    *  DA MON HRMN  ORD       FLOW
                                  *                                 *                                 *
   1     0000    1         1.     *   1    1500    31     5634.     *   2    0600    61    19564.     *   2    2100    91     3903.
   1     0030    2         1.     *   1    1530    32     6206.     *   2    0630    62    18253.     *   2    2130    92     3704.
   1     0100    3         1.     *   1    1600    33     6721.     *   2    0700    63    17048.     *   2    2200    93     3545.
   1     0130    4         1.     *   1    1630    34     7154.     *   2    0730    64    15980.     *   2    2230    94     3404.
   1     0200    5         1.     *   1    1700    35     7387.     *   2    0800    65    15051.     *   2    2300    95     3270.
   1     0230    6         1.     *   1    1730    36     7370.     *   2    0830    66    14173.     *   2    2330    96     3142.
   1     0300    7         1.     *   1    1800    37     6938.     *   2    0900    67    13310.     *   3    0000    97     3018.
   1     0330    8         1.     *   1    1830    38     6568.     *   2    0930    68    12526.     *   3    0030    98     2898.
   1     0400    9         1.     *   1    1900    39     6274.     *   2    1000    69    11799.     *   3    0100    99     2785.
   1     0430   10         1.     *   1    1930    40    24617.     *   2    1030    70    11164.     *   3    0130   100     2677.
   1     0500   11         1.     *   1    2000    41    38462.     *   2    1100    71    10627.     *   3    0200   101     2573.
   1     0530   12         1.     *   1    2030    42    40358.     *   2    1130    72    10128.     *   3    0230   102     2471.
   1     0600   13         1.     *   1    2100    43    43895.     *   2    1200    73     9637.     *   3    0300   103     2371.
   1     0630   14         1.     *   1    2130    44    44348.     *   2    1230    74     9167.     *   3    0330   104     2275.
   1     0700   15         7.     *   1    2200    45    44809.     *   2    1300    75     8716.     *   3    0400   105     2181.
   1     0730   16        22.     *   1    2230    46    44195.     *   2    1330    76     8284.     *   3    0430   106     2090.
   1     0800   17        56.     *   1    2300    47    43073.     *   2    1400    77     7876.     *   3    0500   107     2001.
   1     0830   18       123.     *   1    2330    48    41478.     *   2    1430    78     7488.     *   3    0530   108     1915.
   1     0900   19       230.     *   2    0000    49    39677.     *   2    1500    79     7129.     *   3    0600   109     1832.
   1     0930   20       391.     *   2    0030    50    37854.     *   2    1530    80     6810.     *   3    0630   110     1752.
   1     1000   21       615.     *   2    0100    51    36038.     *   2    1600    81     6498.     *   3    0700   111     1674.
   1     1030   22       870.     *   2    0130    52    34256.     *   2    1630    82     6195.     *   3    0730   112     1599.
   1     1100   23      1185.     *   2    0200    53    32483.     *   2    1700    83     5901.     *   3    0800   113     1527.
   1     1130   24      1549.     *   2    0230    54    30751.     *   2    1730    84     5617.     *   3    0830   114     1457.
   1     1200   25      1925.     *   2    0300    55    29041.     *   2    1800    85     5342.     *   3    0900   115     1391.
   1     1230   26      2386.     *   2    0330    56    27360.     *   2    1830    86     5078.     *   3    0930   116     1327.
   1     1300   27      2940.     *   2    0400    57    25689.     *   2    1900    87     4825.     *   3    1000   117     1266.
   1     1330   28      3603.     *   2    0430    58    24030.     *   2    1930    88     4583.     *   3    1030   118     1207.
   1     1400   29      4254.     *   2    0500    59    22463.     *   2    2000    89     4344.     *   3    1100   119     1150.
   1     1430   30      4919.     *   2    0530    60    20968.     *   2    2030    90     4117.     *   3    1130   120     1098.
                                  *                                 *                                 *
*****************************************************************************************************************************

  PEAK FLOW     TIME                                   MAXIMUM AVERAGE FLOW
                                            6-HR         24-HR         72-HR      59.50-HR
+   (CFS)       (HR)
                               (CFS)
+   44809.     22.00                       40455.       21018.         9793.         9793.
                            (INCHES)        1.039        2.158         2.493         2.493
                             (AC-FT)       20060.       41689.        48155.        48155.

                            CUMULATIVE AREA =  362.17 SQ MI


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


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                 *            *
 840 KK          *   Nodell   *
                 *            *
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842 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           0  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2         120  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .500  TIME INTERVAL IN HOURS

                          SANTA MARGARITA STORMS

846 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN          15  TIME INTERVAL IN MINUTES
                     JXDATE       1   0  STARTING DATE
                     JXTIME           0  STARTING TIME
                          UHG FROM MOUNTAIN S-GRAPH

              SUBBASIN RUNOFF DATA

843 BA          SUBBASIN CHARACTERISTICS
                      TAREA        1.88  SUBBASIN AREA

                PRECIPITATION DATA

845 PB                STORM        7.37  BASIN TOTAL PRECIPITATION

847 PI            INCREMENTAL PRECIPITATION PATTERN
                    .04       .05       .04       .05       .06       .07       .07       .08       .10       .11
                    .10       .12       .13       .15       .15       .18       .22       .24       .29       .32
                    .22       .29       .28       .26       .38       .42       .50       .34       .39       .38
                    .35       .28       .06       .04       .07       .07       .06       .04       .05       .04
                    .04       .04       .04       .04       .04       .03       .03       .03

857 LS          SCS LOSS RATE
                      STRTL         .48  INITIAL ABSTRACTION
                     CRVNBR       80.80  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

858 UI          INPUT UNITGRAPH,  18 ORDINATES,  VOLUME = 1.00
                   922.0     558.0     258.0     161.0     115.0      82.0      66.0      57.0      48.0      38.0
                    31.9      25.5      18.5       9.3       9.3       9.3       9.3       7.4

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HYDROGRAPH AT STATION Node11

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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.	2		0600	61	.00	.00	.00	2.
1		0030	2	.04	.04	.00	0.	2		0630	62	.00	.00	.00	1.
1		0100	3	.05	.05	.00	0.	2		0700	63	.00	.00	.00	1.
1		0130	4	.04	.04	.00	0.	2		0730	64	.00	.00	.00	1.
1		0200	5	.05	.05	.00	0.	2		0800	65	.00	.00	.00	0.
1		0230	6	.06	.06	.00	0.	2		0830	66	.00	.00	.00	0.
1		0300	7	.07	.07	.00	0.	2		0900	67	.00	.00	.00	0.
1		0330	8	.07	.07	.00	0.	2		0930	68	.00	.00	.00	0.
1		0400	9	.08	.08	.00	0.	2		1000	69	.00	.00	.00	0.
1		0430	10	.10	.09	.00	3.	2		1030	70	.00	.00	.00	0.
1		0500	11	.11	.10	.01	13.	2		1100	71	.00	.00	.00	0.
1		0530	12	.10	.08	.02	24.	2		1130	72	.00	.00	.00	0.
1		0600	13	.12	.09	.03	40.	2		1200	73	.00	.00	.00	0.
1		0630	14	.13	.09	.04	60.	2		1230	74	.00	.00	.00	0.
1		0700	15	.15	.09	.05	85.	2		1300	75	.00	.00	.00	0.
1		0730	16	.15	.09	.07	110.	2		1330	76	.00	.00	.00	0.
1		0800	17	.18	.09	.09	146.	2		1400	77	.00	.00	.00	0.
1		0830	18	.22	.10	.12	196.	2		1430	78	.00	.00	.00	0.
1		0900	19	.24	.10	.15	249.	2		1500	79	.00	.00	.00	0.
1		0930	20	.29	.10	.19	317.	2		1530	80	.00	.00	.00	0.
1		1000	21	.32	.10	.22	389.	2		1600	81	.00	.00	.00	0.
1		1030	22	.22	.06	.16	377.	2		1630	82	.00	.00	.00	0.
1		1100	23	.29	.07	.22	426.	2		1700	83	.00	.00	.00	0.
1		1130	24	.28	.06	.22	459.	2		1730	84	.00	.00	.00	0.
1		1200	25	.26	.05	.21	466.	2		1800	85	.00	.00	.00	0.
1		1230	26	.38	.06	.31	567.	2		1830	86	.00	.00	.00	0.
1		1300	27	.42	.06	.36	674.	2		1900	87	.00	.00	.00	0.
1		1330	28	.50	.07	.44	805.	2		1930	88	.00	.00	.00	0.
1		1400	29	.34	.04	.30	758.	2		2000	89	.00	.00	.00	0.
1		1430	30	.39	.04	.35	771.	2		2030	90	.00	.00	.00	0.
1		1500	31	.38	.04	.34	785.	2		2100	91	.00	.00	.00	0.
1		1530	32	.35	.03	.32	771.	2		2130	92	.00	.00	.00	0.
1		1600	33	.28	.02	.26	710.	2		2200	93	.00	.00	.00	0.
1		1630	34	.06	.00	.05	489.	2		2230	94	.00	.00	.00	0.
1		1700	35	.04	.00	.04	350.	2		2300	95	.00	.00	.00	0.
1		1730	36	.07	.01	.07	308.	2		2330	96	.00	.00	.00	0.
1		1800	37	.07	.00	.06	275.	3		0000	97	.00	.00	.00	0.
1		1830	38	.06	.00	.05	242.	3		0030	98	.00	.00	.00	0.

1	1900	39	.04	.00	.03	200.	*	3	0100	99	.00	.00	.00	0.
1	1930	40	.05	.00	.05	183.	*	3	0130	100	.00	.00	.00	0.
1	2000	41	.04	.00	.03	158.	*	3	0200	101	.00	.00	.00	0.
1	2030	42	.04	.00	.04	145.	*	3	0230	102	.00	.00	.00	0.
1	2100	43	.04	.00	.03	130.	*	3	0300	103	.00	.00	.00	0.
1	2130	44	.04	.00	.03	117.	*	3	0330	104	.00	.00	.00	0.
1	2200	45	.04	.00	.03	108.	*	3	0400	105	.00	.00	.00	0.
1	2230	46	.04	.00	.03	101.	*	3	0430	106	.00	.00	.00	0.
1	2300	47	.03	.00	.03	92.	*	3	0500	107	.00	.00	.00	0.
1	2330	48	.03	.00	.03	84.	*	3	0530	108	.00	.00	.00	0.
2	0000	49	.03	.00	.03	79.	*	3	0600	109	.00	.00	.00	0.
2	0030	50	.00	.00	.00	49.	*	3	0630	110	.00	.00	.00	0.
2	0100	51	.00	.00	.00	31.	*	3	0700	111	.00	.00	.00	0.
2	0130	52	.00	.00	.00	23.	*	3	0730	112	.00	.00	.00	0.
2	0200	53	.00	.00	.00	17.	*	3	0800	113	.00	.00	.00	0.
2	0230	54	.00	.00	.00	13.	*	3	0830	114	.00	.00	.00	0.
2	0300	55	.00	.00	.00	11.	*	3	0900	115	.00	.00	.00	0.
2	0330	56	.00	.00	.00	8.	*	3	0930	116	.00	.00	.00	0.
2	0400	57	.00	.00	.00	7.	*	3	1000	117	.00	.00	.00	0.
2	0430	58	.00	.00	.00	5.	*	3	1030	118	.00	.00	.00	0.
2	0500	59	.00	.00	.00	4.	*	3	1100	119	.00	.00	.00	0.
2	0530	60	.00	.00	.00	3.	*	3	1130	120	.00	.00	.00	0.
							*							

TOTAL RAINFALL = 7.37, TOTAL LOSS = 2.24, TOTAL EXCESS = 5.13

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 805.	13.50		637.	259.	105.	105.
		(INCHES)	3.149	5.119	5.126	5.126
		(AC-FT)	316.	513.	514.	514.

CUMULATIVE AREA = 1.88 SQ MI

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861 KK      *   Node72   *
            *            *
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863 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

864 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node72
SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	6419.	2		0600	61	19566.	2		2100	91	3903.
1		0030	2	1.	1		1530	32	6976.	2		0630	62	18254.	2		2130	92	3704.
1		0100	3	1.	1		1600	33	7431.	2		0700	63	17049.	2		2200	93	3545.
1		0130	4	1.	1		1630	34	7643.	2		0730	64	15980.	2		2230	94	3404.
1		0200	5	1.	1		1700	35	7737.	2		0800	65	15051.	2		2300	95	3270.
1		0230	6	1.	1		1730	36	7678.	2		0830	66	14173.	2		2330	96	3142.
1		0300	7	1.	1		1800	37	7213.	2		0900	67	13310.	3		0000	97	3018.
1		0330	8	1.	1		1830	38	6809.	2		0930	68	12526.	3		0030	98	2898.
1		0400	9	1.	1		1900	39	6473.	2		1000	69	11799.	3		0100	99	2785.
1		0430	10	4.	1		1930	40	24799.	2		1030	70	11164.	3		0130	100	2677.
1		0500	11	14.	1		2000	41	38620.	2		1100	71	10627.	3		0200	101	2573.
1		0530	12	24.	1		2030	42	40503.	2		1130	72	10128.	3		0230	102	2471.
1		0600	13	40.	1		2100	43	44025.	2		1200	73	9637.	3		0300	103	2371.
1		0630	14	62.	1		2130	44	44465.	2		1230	74	9167.	3		0330	104	2275.
1		0700	15	92.	1		2200	45	44917.	2		1300	75	8716.	3		0400	105	2181.
1		0730	16	133.	1		2230	46	44296.	2		1330	76	8284.	3		0430	106	2090.
1		0800	17	203.	1		2300	47	43165.	2		1400	77	7876.	3		0500	107	2001.

1	0830	18	319.	*	1	2330	48	41563.	*	2	1430	78	7488.	*	3	0530	108	1915.
1	0900	19	478.	*	2	0000	49	39756.	*	2	1500	79	7129.	*	3	0600	109	1832.
1	0930	20	707.	*	2	0030	50	37903.	*	2	1530	80	6810.	*	3	0630	110	1752.
1	1000	21	1004.	*	2	0100	51	36069.	*	2	1600	81	6498.	*	3	0700	111	1674.
1	1030	22	1247.	*	2	0130	52	34279.	*	2	1630	82	6195.	*	3	0730	112	1599.
1	1100	23	1611.	*	2	0200	53	32500.	*	2	1700	83	5901.	*	3	0800	113	1527.
1	1130	24	2008.	*	2	0230	54	30765.	*	2	1730	84	5617.	*	3	0830	114	1457.
1	1200	25	2391.	*	2	0300	55	29052.	*	2	1800	85	5342.	*	3	0900	115	1391.
1	1230	26	2953.	*	2	0330	56	27368.	*	2	1830	86	5078.	*	3	0930	116	1327.
1	1300	27	3614.	*	2	0400	57	25696.	*	2	1900	87	4825.	*	3	1000	117	1266.
1	1330	28	4408.	*	2	0430	58	24035.	*	2	1930	88	4583.	*	3	1030	118	1207.
1	1400	29	5012.	*	2	0500	59	22467.	*	2	2000	89	4344.	*	3	1100	119	1150.
1	1430	30	5690.	*	2	0530	60	20971.	*	2	2030	90	4117.	*	3	1130	120	1098.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 44917.	22.00		40542.	21104.	9897.	9897.
		(INCHES)	1.035	2.156	2.507	2.507
		(AC-FT)	20103.	41860.	48669.	48669.

CUMULATIVE AREA = 364.05 SQ MI

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865 KK

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* *
* Node41 *
* *
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867 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

868 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node41
SUM OF 2 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	*	1		1500	31	35653.	*	2		0600	61	23727.	*	2		2100	91	4885.
1		0030	2	1.	*	1		1530	32	39623.	*	2		0630	62	22181.	*	2		2130	92	4651.
1		0100	3	1.	*	1		1600	33	42975.	*	2		0700	63	20768.	*	2		2200	93	4457.
1		0130	4	1.	*	1		1630	34	44812.	*	2		0730	64	19505.	*	2		2230	94	4283.
1		0200	5	1.	*	1		1700	35	44807.	*	2		0800	65	18389.	*	2		2300	95	4117.
1		0230	6	1.	*	1		1730	36	43314.	*	2		0830	66	17335.	*	2		2330	96	3958.
1		0300	7	1.	*	1		1800	37	40609.	*	2		0900	67	16306.	*	3		0000	97	3805.
1		0330	8	1.	*	1		1830	38	37591.	*	2		0930	68	15358.	*	3		0030	98	3658.
1		0400	9	1.	*	1		1900	39	34369.	*	2		1000	69	14471.	*	3		0100	99	3519.
1		0430	10	5.	*	1		1930	40	49627.	*	2		1030	70	13687.	*	3		0130	100	3388.
1		0500	11	18.	*	1		2000	41	60763.	*	2		1100	71	13012.	*	3		0200	101	3261.
1		0530	12	40.	*	1		2030	42	60628.	*	2		1130	72	12386.	*	3		0230	102	3137.
1		0600	13	84.	*	1		2100	43	62513.	*	2		1200	73	11778.	*	3		0300	103	3015.
1		0630	14	158.	*	1		2130	44	61416.	*	2		1230	74	11200.	*	3		0330	104	2896.
1		0700	15	272.	*	1		2200	45	60382.	*	2		1300	75	10647.	*	3		0400	105	2780.
1		0730	16	448.	*	1		2230	46	58382.	*	2		1330	76	10119.	*	3		0430	106	2667.
1		0800	17	737.	*	1		2300	47	56028.	*	2		1400	77	9620.	*	3		0500	107	2558.
1		0830	18	1206.	*	1		2330	48	53370.	*	2		1430	78	9148.	*	3		0530	108	2451.
1		0900	19	1905.	*	2		0000	49	50676.	*	2		1500	79	8711.	*	3		0600	109	2349.
1		0930	20	2943.	*	2		0030	50	48056.	*	2		1530	80	8320.	*	3		0630	110	2250.
1		1000	21	4483.	*	2		0100	51	45527.	*	2		1600	81	7939.	*	3		0700	111	2156.
1		1030	22	6405.	*	2		0130	52	43010.	*	2		1630	82	7571.	*	3		0730	112	2067.
1		1100	23	8834.	*	2		0200	53	40455.	*	2		1700	83	7217.	*	3		0800	113	1982.
1		1130	24	11448.	*	2		0230	54	38011.	*	2		1730	84	6880.	*	3		0830	114	1901.
1		1200	25	14062.	*	2		0300	55	35683.	*	2		1800	85	6559.	*	3		0900	115	1825.
1		1230	26	16926.	*	2		0330	56	33444.	*	2		1830	86	6251.	*	3		0930	116	1753.
1		1300	27	19929.	*	2		0400	57	31248.	*	2		1900	87	5957.	*	3		1000	117	1683.
1		1330	28	23326.	*	2		0430	58	29125.	*	2		1930	88	5675.	*	3		1030	118	1616.

1	1400	29	27028.	*	2	0500	59	27184.	*	2	2000	89	5398.	*	3	1100	119	1551.
1	1430	30	31312.	*	2	0530	60	25389.	*	2	2030	90	5134.	*	3	1130	120	1491.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 62513.	21.00		55338.	34873.	16327.	16327.
		(INCHES)	.873	2.201	2.554	2.554
		(AC-FT)	27440.	69170.	80284.	80284.

CUMULATIVE AREA = 589.32 SQ MI

869 KK 3

871 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

872 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	50424.	CHANNEL LENGTH
S	.0119	SLOPE
N	.030	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	100.00	BOTTOM WIDTH OR DIAMETER
Z	2.00	SIDE SLOPE

***

COMPUTED MUSKINGUM-CUNGE PARAMETERS

COMPUTATION TIME STEP

ELEMENT	ALPHA	M	DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.30	1.62	21.07	25212.00	62922.52	1285.04	2.55	39.89
INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL								
MAIN	.30	1.62	30.00		62526.12	1290.00	2.55	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8029E+05 EXCESS= .0000E+00 OUTFLOW= .8018E+05 BASIN STORAGE= .2283E+03 PERCENT ERROR= -.2

HYDROGRAPH AT STATION 3

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	32657.	2		0600	61	24999.	2		2100	91	5237.
1		0030	2	1.	1		1530	32	36991.	2		0630	62	23403.	2		2130	92	4987.
1		0100	3	1.	1		1600	33	40810.	2		0700	63	21909.	2		2200	93	4750.
1		0130	4	1.	1		1630	34	43703.	2		0730	64	20557.	2		2230	94	4540.
1		0200	5	1.	1		1700	35	44842.	2		0800	65	19339.	2		2300	95	4358.
1		0230	6	1.	1		1730	36	44143.	2		0830	66	18246.	2		2330	96	4190.
1		0300	7	1.	1		1800	37	42353.	2		0900	67	17215.	3		0000	97	4029.
1		0330	8	1.	1		1830	38	39505.	2		0930	68	16219.	3		0030	98	3874.
1		0400	9	1.	1		1900	39	36690.	2		1000	69	15297.	3		0100	99	3725.
1		0430	10	1.	1		1930	40	39804.	2		1030	70	14437.	3		0130	100	3583.
1		0500	11	2.	1		2000	41	55662.	2		1100	71	13674.	3		0200	101	3449.
1		0530	12	7.	1		2030	42	60995.	2		1130	72	13006.	3		0230	102	3321.
1		0600	13	18.	1		2100	43	60854.	2		1200	73	12387.	3		0300	103	3196.
1		0630	14	44.	1		2130	44	62526.	2		1230	74	11793.	3		0330	104	3074.

1	0700	15	92.	*	1	2200	45	60867.	*	2	1300	75	11224.	*	3	0400	105	2954.
1	0730	16	178.	*	1	2230	46	59527.	*	2	1330	76	10682.	*	3	0430	106	2837.
1	0800	17	313.	*	1	2300	47	57334.	*	2	1400	77	10163.	*	3	0500	107	2723.
1	0830	18	542.	*	1	2330	48	54877.	*	2	1430	78	9671.	*	3	0530	108	2613.
1	0900	19	915.	*	2	0000	49	52236.	*	2	1500	79	9208.	*	3	0600	109	2506.
1	0930	20	1512.	*	2	0030	50	49601.	*	2	1530	80	8775.	*	3	0630	110	2402.
1	1000	21	2424.	*	2	0100	51	47044.	*	2	1600	81	8383.	*	3	0700	111	2302.
1	1030	22	3797.	*	2	0130	52	44554.	*	2	1630	82	8008.	*	3	0730	112	2206.
1	1100	23	5779.	*	2	0200	53	42056.	*	2	1700	83	7645.	*	3	0800	113	2115.
1	1130	24	8459.	*	2	0230	54	39581.	*	2	1730	84	7297.	*	3	0830	114	2028.
1	1200	25	11356.	*	2	0300	55	37219.	*	2	1800	85	6963.	*	3	0900	115	1946.
1	1230	26	14242.	*	2	0330	56	34948.	*	2	1830	86	6645.	*	3	0930	116	1867.
1	1300	27	17301.	*	2	0400	57	32766.	*	2	1900	87	6341.	*	3	1000	117	1794.
1	1330	28	20546.	*	2	0430	58	30629.	*	2	1930	88	6050.	*	3	1030	118	1723.
1	1400	29	24190.	*	2	0500	59	28601.	*	2	2000	89	5771.	*	3	1100	119	1655.
1	1430	30	28187.	*	2	0530	60	26734.	*	2	2030	90	5499.	*	3	1130	120	1610.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 62526.	21.50		55309.	34891.	16316.	16316.
		(INCHES)	.873	2.202	2.553	2.553
		(AC-FT)	27426.	69204.	80232.	80232.

CUMULATIVE AREA = 589.32 SQ MI

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873 KK

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* *
* Node16 *
* *
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875 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

879 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM MOUNTAIN S-GRAPH

SUBBASIN RUNOFF DATA

876 BA SUBBASIN CHARACTERISTICS

TAREA	32.84	SUBBASIN AREA

PRECIPITATION DATA

878 PB

STORM	6.23	BASIN TOTAL PRECIPITATION

880 PI INCREMENTAL PRECIPITATION PATTERN

.03	.04	.04	.04	.05	.06	.06	.07	.08	.09
.08	.10	.11	.12	.13	.16	.19	.21	.24	.27
.19	.25	.24	.22	.32	.36	.42	.29	.33	.32
.29	.24	.05	.04	.06	.06	.05	.03	.04	.03
.04	.03	.03	.03	.03	.02	.02	.02		

890 LS SCS LOSS RATE

STRTL	.55	INITIAL ABSTRACTION
CRVNBR	78.30	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

891 UI INPUT UNITGRAPH, 95 ORDINATES, VOLUME = 1.00

1357.0	1838.0	2858.0	4217.0	4714.0	3204.0	2431.0	1954.0	1431.0	1170.0
1157.0	960.0	884.0	810.0	731.0	731.0	596.0	560.0	532.0	493.0
477.0	418.0	415.0	390.0	390.0	320.0	316.0	301.0	260.0	260.0
260.0	229.0	229.0	229.0	222.0	205.0	205.0	205.0	201.0	180.0
180.0	180.0	180.0	166.0	152.0	152.0	152.0	152.0	152.0	119.0
116.0	116.0	116.0	116.0	116.0	116.0	97.0	84.0	84.0	84.0
84.2	84.2	84.2	84.2	84.2	84.2	55.9	30.6	30.6	30.6
30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6
30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6
30.6	30.6	30.6	30.6	4.0					

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                                           HYDROGRAPH AT STATION    Node16

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                                                            *
     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.   *      2    0600   61      .00     .00     .00       968.
      1     0030    2      .03     .03     .00         0.   *      2    0630   62      .00     .00     .00       927.
      1     0100    3      .04     .04     .00         0.   *      2    0700   63      .00     .00     .00       888.
      1     0130    4      .04     .04     .00         0.   *      2    0730   64      .00     .00     .00       853.
      1     0200    5      .04     .04     .00         0.   *      2    0800   65      .00     .00     .00       820.
      1     0230    6      .05     .05     .00         0.   *      2    0830   66      .00     .00     .00       791.
      1     0300    7      .06     .06     .00         0.   *      2    0900   67      .00     .00     .00       760.
      1     0330    8      .06     .06     .00         0.   *      2    0930   68      .00     .00     .00       733.
      1     0400    9      .07     .07     .00         0.   *      2    1000   69      .00     .00     .00       708.
      1     0430   10      .08     .08     .00         0.   *      2    1030   70      .00     .00     .00       680.
      1     0500   11      .09     .09     .00         0.   *      2    1100   71      .00     .00     .00       654.
      1     0530   12      .08     .08     .00         5.   *      2    1130   72      .00     .00     .00       629.
      1     0600   13      .10     .09     .01        20.   *      2    1200   73      .00     .00     .00       608.
      1     0630   14      .11     .09     .02        54.   *      2    1230   74      .00     .00     .00       587.
      1     0700   15      .12     .10     .03       115.   *      2    1300   75      .00     .00     .00       565.
      1     0730   16      .13     .09     .04       212.   *      2    1330   76      .00     .00     .00       541.
      1     0800   17      .16     .10     .05       355.   *      2    1400   77      .00     .00     .00       517.
      1     0830   18      .19     .11     .08       550.   *      2    1430   78      .00     .00     .00       501.
      1     0900   19      .21     .11     .10       797.   *      2    1500   79      .00     .00     .00       483.
      1     0930   20      .24     .12     .13      1120.   *      2    1530   80      .00     .00     .00       464.
      1     1000   21      .27     .11     .15      1525.   *      2    1600   81      .00     .00     .00       446.
      1     1030   22      .19     .07     .12      1917.   *      2    1630   82      .00     .00     .00       428.
      1     1100   23      .25     .09     .16      2380.   *      2    1700   83      .00     .00     .00       413.
      1     1130   24      .24     .07     .16      2813.   *      2    1730   84      .00     .00     .00       396.
      1     1200   25      .22     .06     .16      3159.   *      2    1800   85      .00     .00     .00       379.
      1     1230   26      .32     .08     .24      3559.   *      2    1830   86      .00     .00     .00       362.
      1     1300   27      .36     .08     .27      4068.   *      2    1900   87      .00     .00     .00       343.
      1     1330   28      .42     .09     .34      4673.   *      2    1930   88      .00     .00     .00       325.
      1     1400   29      .29     .05     .23      5264.   *      2    2000   89      .00     .00     .00       308.
      1     1430   30      .33     .05     .28      6011.   *      2    2030   90      .00     .00     .00       294.
      1     1500   31      .32     .05     .27      6628.   *      2    2100   91      .00     .00     .00       283.
      1     1530   32      .29     .04     .25      7011.   *      2    2130   92      .00     .00     .00       269.
      1     1600   33      .24     .03     .21      7156.   *      2    2200   93      .00     .00     .00       252.
      1     1630   34      .05     .01     .04      7087.   *      2    2230   94      .00     .00     .00       233.
      1     1700   35      .04     .00     .03      6790.   *      2    2300   95      .00     .00     .00       216.
      1     1730   36      .06     .01     .05      6253.   *      2    2330   96      .00     .00     .00       201.
      1     1800   37      .06     .01     .05      5487.   *      3    0000   97      .00     .00     .00       184.
      1     1830   38      .05     .01     .04      4718.   *      3    0030   98      .00     .00     .00       168.
      1     1900   39      .03     .00     .03      4194.   *      3    0100   99      .00     .00     .00       155.
      1     1930   40      .04     .01     .04      3851.   *      3    0130  100      .00     .00     .00       148.
      1     2000   41      .03     .00     .03      3543.   *      3    0200  101      .00     .00     .00       145.
      1     2030   42      .04     .00     .03      3303.   *      3    0230  102      .00     .00     .00       142.
      1     2100   43      .03     .00     .03      3103.   *      3    0300  103      .00     .00     .00       138.
      1     2130   44      .03     .00     .03      2912.   *      3    0330  104      .00     .00     .00       135.
      1     2200   45      .03     .00     .03      2755.   *      3    0400  105      .00     .00     .00       132.
      1     2230   46      .03     .00     .03      2621.   *      3    0430  106      .00     .00     .00       130.
      1     2300   47      .02     .00     .02      2488.   *      3    0500  107      .00     .00     .00       128.
      1     2330   48      .02     .00     .02      2370.   *      3    0530  108      .00     .00     .00       126.
      2     0000   49      .02     .00     .02      2251.   *      3    0600  109      .00     .00     .00       124.
      2     0030   50      .00     .00     .00      2128.   *      3    0630  110      .00     .00     .00       121.
      2     0100   51      .00     .00     .00      1990.   *      3    0700  111      .00     .00     .00       118.
      2     0130   52      .00     .00     .00      1847.   *      3    0730  112      .00     .00     .00       114.
      2     0200   53      .00     .00     .00      1682.   *      3    0800  113      .00     .00     .00       110.
      2     0230   54      .00     .00     .00      1517.   *      3    0830  114      .00     .00     .00       105.
      2     0300   55      .00     .00     .00      1395.   *      3    0900  115      .00     .00     .00        99.
      2     0330   56      .00     .00     .00      1290.   *      3    0930  116      .00     .00     .00        95.
      2     0400   57      .00     .00     .00      1204.   *      3    1000  117      .00     .00     .00        90.
      2     0430   58      .00     .00     .00      1129.   *      3    1030  118      .00     .00     .00        85.
      2     0500   59      .00     .00     .00      1069.   *      3    1100  119      .00     .00     .00        81.
      2     0530   60      .00     .00     .00      1017.   *      3    1130  120      .00     .00     .00        74.
                                                            *
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    TOTAL RAINFALL =     6.23, TOTAL LOSS =    2.42, TOTAL EXCESS =     3.81

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR         24-HR        72-HR      59.50-HR
+   (CFS)       (HR)
                             (CFS)
+   7156.      16.00                5934.        2986.        1354.        1354.
                           (INCHES) 1.680        3.381        3.801        3.801
                            (AC-FT) 2943.        5922.        6658.        6658.

                           CUMULATIVE AREA =    32.84 SQ MI


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          *            *
902 KK    *    Node21  *
          *            *
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904 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          0  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .500  TIME INTERVAL IN HOURS

                         SANTA MARGARITA STORMS

908 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN         15  TIME INTERVAL IN MINUTES
                    JXDATE      1    0  STARTING DATE
                    JXTIME           0  STARTING TIME
                         UHG FROM MOUNTAIN S-GRAPH

              SUBBASIN RUNOFF DATA

905 BA.         SUBBASIN CHARACTERISTICS
                     TAREA       21.59  SUBBASIN AREA

                PRECIPITATION DATA

907 PB               STORM        4.76  BASIN TOTAL PRECIPITATION

909 PI            INCREMENTAL PRECIPITATION PATTERN
                    .02       .03       .03       .03       .04       .05       .05       .05       .06       .07
                    .06       .08       .09       .10       .10       .12       .14       .16       .19       .21
                    .14       .19       .18       .17       .24       .27       .32       .22       .25       .24
                    .22       .18       .04       .03       .05       .04       .04       .02       .03       .02
                    .03       .02       .02       .02       .02       .02       .02       .02

919 LS          SCS LOSS RATE
                     STRTL        .38  INITIAL ABSTRACTION
                    CRVNBR      83.90  CURVE NUMBER
                     RTIMP        .00  PERCENT IMPERVIOUS AREA

920 UI          INPUT UNITGRAPH, 128 ORDINATES,  VOLUME = 1.00
                  638.0     785.0    1013.0    1415.0    1947.0    2552.0    1889.0    1501.0    1235.0    1102.0
                  867.0     706.0     566.0     566.0     553.0     472.0     437.0     414.0     389.0     354.0
                  354.0     343.0     283.0     278.0     257.0     257.0     236.0     236.0     214.0     202.0
                  202.0     190.0     189.0     189.0     155.0     153.0     153.0     144.0     126.0     126.0
                  126.0     126.0     113.0     111.0     111.0     111.0     111.0     101.0      99.0      99.0
                   99.3      99.3      96.1      87.1      87.1      87.1      87.1      87.1      87.1      75.3
                   73.5      73.5      73.5      73.5      73.5      73.5      68.5      56.1      56.1      56.1
                   56.1      56.1      56.1      56.1      56.1      56.1      50.7      40.7      40.7      40.7
                   40.7      40.7      40.7      40.7      40.7      40.7      40.7      40.7      40.7      40.7
                   23.2      14.8      14.8      14.8      14.8      14.8      14.8      14.8      14.8      14.8
                   14.8      14.8      14.8      14.8      14.8      14.8      14.8      14.8      14.8      14.8
                   14.8      14.8      14.8      14.8      14.8      14.8      14.8      14.8      14.8      14.8
                   14.8      14.8      14.8      14.8      14.8      14.8      14.8      13.5

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HYDROGRAPH AT STATION Node21

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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.	2		0600	61	.00	.00	.00	576.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	548.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	524.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	499.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	475.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	453.
1		0300	7	.05	.05	.00	0.	2		0900	67	.00	.00	.00	433.
1		0330	8	.05	.05	.00	0.	2		0930	68	.00	.00	.00	417.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	402.
1		0430	10	.06	.06	.00	0.	2		1030	70	.00	.00	.00	386.
1		0500	11	.07	.07	.00	1.	2		1100	71	.00	.00	.00	373.
1		0530	12	.06	.06	.01	4.	2		1130	72	.00	.00	.00	363.
1		0600	13	.08	.07	.01	12.	2		1200	73	.00	.00	.00	353.
1		0630	14	.09	.07	.02	27.	2		1230	74	.00	.00	.00	342.
1		0700	15	.10	.07	.03	52.	2		1300	75	.00	.00	.00	332.
1		0730	16	.10	.07	.03	88.	2		1330	76	.00	.00	.00	324.
1		0800	17	.12	.07	.05	144.	2		1400	77	.00	.00	.00	316.
1		0830	18	.14	.08	.06	221.	2		1430	78	.00	.00	.00	309.
1		0900	19	.16	.08	.08	320.	2		1500	79	.00	.00	.00	300.
1		0930	20	.18	.08	.10	446.	2		1530	80	.00	.00	.00	291.
1		1000	21	.20	.08	.13	602.	2		1600	81	.00	.00	.00	284.

1	1030	22	.14	.05	.09	758.	*	2	1630	82	.00	.00	.00	278.
1	1100	23	.19	.06	.13	951.	*	2	1700	83	.00	.00	.00	271.
1	1130	24	.18	.05	.13	1149.	*	2	1730	84	.00	.00	.00	264.
1	1200	25	.17	.04	.12	1340.	*	2	1800	85	.00	.00	.00	257.
1	1230	26	.24	.06	.19	1549.	*	2	1830	86	.00	.00	.00	250.
1	1300	27	.27	.06	.22	1746.	*	2	1900	87	.00	.00	.00	243.
1	1330	28	.32	.06	.27	2011.	*	2	1930	88	.00	.00	.00	238.
1	1400	29	.22	.03	.18	2228.	*	2	2000	89	.00	.00	.00	232.
1	1430	30	.25	.04	.22	2488.	*	2	2030	90	.00	.00	.00	226.
1	1500	31	.24	.03	.21	2789.	*	2	2100	91	.00	.00	.00	219.
1	1530	32	.22	.03	.20	3053.	*	2	2130	92	.00	.00	.00	214.
1	1600	33	.18	.02	.16	3238.	*	2	2200	93	.00	.00	.00	208.
1	1630	34	.04	.00	.03	3235.	*	2	2230	94	.00	.00	.00	203.
1	1700	35	.03	.00	.03	3222.	*	2	2300	95	.00	.00	.00	196.
1	1730	36	.05	.01	.04	3139.	*	2	2330	96	.00	.00	.00	191.
1	1800	37	.04	.00	.04	2964.	*	3	0000	97	.00	.00	.00	184.
1	1830	38	.04	.00	.03	2681.	*	3	0030	98	.00	.00	.00	179.
1	1900	39	.02	.00	.02	2346.	*	3	0100	99	.00	.00	.00	173.
1	1930	40	.03	.00	.03	2114.	*	3	0130	100	.00	.00	.00	168.
1	2000	41	.02	.00	.02	1949.	*	3	0200	101	.00	.00	.00	165.
1	2030	42	.03	.00	.03	1798.	*	3	0230	102	.00	.00	.00	162.
1	2100	43	.02	.00	.02	1656.	*	3	0300	103	.00	.00	.00	158.
1	2130	44	.02	.00	.02	1549.	*	3	0330	104	.00	.00	.00	153.
1	2200	45	.02	.00	.02	1473.	*	3	0400	105	.00	.00	.00	148.
1	2230	46	.02	.00	.02	1407.	*	3	0430	106	.00	.00	.00	143.
1	2300	47	.02	.00	.02	1344.	*	3	0500	107	.00	.00	.00	138.
1	2330	48	.02	.00	.02	1280.	*	3	0530	108	.00	.00	.00	133.
2	0000	49	.02	.00	.02	1228.	*	3	0600	109	.00	.00	.00	127.
2	0030	50	.00	.00	.00	1167.	*	3	0630	110	.00	.00	.00	123.
2	0100	51	.00	.00	.00	1111.	*	3	0700	111	.00	.00	.00	119.
2	0130	52	.00	.00	.00	1047.	*	3	0730	112	.00	.00	.00	115.
2	0200	53	.00	.00	.00	986.	*	3	0800	113	.00	.00	.00	111.
2	0230	54	.00	.00	.00	914.	*	3	0830	114	.00	.00	.00	107.
2	0300	55	.00	.00	.00	835.	*	3	0900	115	.00	.00	.00	103.
2	0330	56	.00	.00	.00	776.	*	3	0930	116	.00	.00	.00	98.
2	0400	57	.00	.00	.00	725.	*	3	1000	117	.00	.00	.00	92.
2	0430	58	.00	.00	.00	682.	*	3	1030	118	.00	.00	.00	85.
2	0500	59	.00	.00	.00	642.	*	3	1100	119	.00	.00	.00	80.
2	0530	60	.00	.00	.00	607.	*	3	1130	120	.00	.00	.00	74.
							*							

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TOTAL RAINFALL = 4.76, TOTAL LOSS = 1.72, TOTAL EXCESS = 3.04

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)				
		(CFS)			
+ 3238.	16.00	2787.	1473.	697.	697.
		(INCHES) 1.200	2.538	2.978	2.978
		(AC-FT) 1382.	2922.	3429.	3429.

CUMULATIVE AREA = 21.59 SQ MI

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          *            *
934 KK    *    Node39  *
          *            *
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936 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

937 HC HYDROGRAPH COMBINATION

ICOMP	3	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node39
SUM OF 3 HYDROGRAPHS

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DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
			*				*				*			

1	0000	1	1.	*	1	1500	31	42074.	*	2	0600	61	26543.	*	2	2100	91	5739.
1	0030	2	1.	*	1	1530	32	47055.	*	2	0630	62	24878.	*	2	2130	92	5470.
1	0100	3	1.	*	1	1600	33	51205.	*	2	0700	63	23321.	*	2	2200	93	5211.
1	0130	4	1.	*	1	1630	34	54025.	*	2	0730	64	21909.	*	2	2230	94	4976.
1	0200	5	1.	*	1	1700	35	54854.	*	2	0800	65	20634.	*	2	2300	95	4771.
1	0230	6	1.	*	1	1730	36	53535.	*	2	0830	66	19490.	*	2	2330	96	4581.
1	0300	7	1.	*	1	1800	37	50803.	*	2	0900	67	18408.	*	3	0000	97	4397.
1	0330	8	1.	*	1	1830	38	46905.	*	2	0930	68	17369.	*	3	0030	98	4221.
1	0400	9	1.	*	1	1900	39	43231.	*	2	1000	69	16407.	*	3	0100	99	4053.
1	0430	10	1.	*	1	1930	40	45769.	*	2	1030	70	15504.	*	3	0130	100	3899.
1	0500	11	3.	*	1	2000	41	61154.	*	2	1100	71	14702.	*	3	0200	101	3760.
1	0530	12	16.	*	1	2030	42	66095.	*	2	1130	72	13998.	*	3	0230	102	3625.
1	0600	13	51.	*	1	2100	43	65612.	*	2	1200	73	13349.	*	3	0300	103	3492.
1	0630	14	125.	*	1	2130	44	66987.	*	2	1230	74	12723.	*	3	0330	104	3361.
1	0700	15	258.	*	1	2200	45	65095.	*	2	1300	75	12120.	*	3	0400	105	3234.
1	0730	16	479.	*	1	2230	46	63556.	*	2	1330	76	11547.	*	3	0430	106	3110.
1	0800	17	812.	*	1	2300	47	61166.	*	2	1400	77	10997.	*	3	0500	107	2989.
1	0830	18	1312.	*	1	2330	48	58527.	*	2	1430	78	10481.	*	3	0530	108	2872.
1	0900	19	2031.	*	2	0000	49	55715.	*	2	1500	79	9991.	*	3	0600	109	2757.
1	0930	20	3079.	*	2	0030	50	52897.	*	2	1530	80	9530.	*	3	0630	110	2646.
1	1000	21	4552.	*	2	0100	51	50146.	*	2	1600	81	9113.	*	3	0700	111	2539.
1	1030	22	6473.	*	2	0130	52	47448.	*	2	1630	82	8714.	*	3	0730	112	2436.
1	1100	23	9110.	*	2	0200	53	44724.	*	2	1700	83	8329.	*	3	0800	113	2336.
1	1130	24	12421.	*	2	0230	54	42012.	*	2	1730	84	7957.	*	3	0830	114	2241.
1	1200	25	15855.	*	2	0300	55	39449.	*	2	1800	85	7600.	*	3	0900	115	2148.
1	1230	26	19350.	*	2	0330	56	37014.	*	2	1830	86	7257.	*	3	0930	116	2061.
1	1300	27	23115.	*	2	0400	57	34695.	*	2	1900	87	6927.	*	3	1000	117	1976.
1	1330	28	27230.	*	2	0430	58	32440.	*	2	1930	88	6612.	*	3	1030	118	1894.
1	1400	29	31683.	*	2	0500	59	30312.	*	2	2000	89	6310.	*	3	1100	119	1815.
1	1430	30	36685.	*	2	0530	60	28358.	*	2	2030	90	6018.	*	3	1130	120	1758.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 66987.	21.50		59463.	39149.	18368.	18368.
		(INCHES)	.859	2.262	2.631	2.631
		(AC-FT)	29486.	77651.	90320.	90320.

CUMULATIVE AREA = 643.75 SQ MI

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            **************
            *            *
938 KK      *    2       *
            *            *
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940 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

941 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	39283.	CHANNEL LENGTH
S	.0061	SLOPE
N	.040	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	100.00	BOTTOM WIDTH OR DIAMETER
Z	2.50	SIDE SLOPE

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COMPUTED MUSKINGUM-CUNGE PARAMETERS

			COMPUTATION TIME STEP					
ELEMENT	ALPHA	M	DT	DX	PEAK	TIME TO PEAK	VOLUME	MAXIMUM CELERITY
			(MIN)	(FT)	(CFS)	(MIN)	(IN)	(FPS)
MAIN	.17	1.61	24.11	19641.50	66931.20	1253.67	2.63	27.16

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.17	1.61	30.00		66581.87	1260.00	2.63	

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9037E+05 EXCESS= .0000E+00 OUTFLOW= .9023E+05 BASIN STORAGE= .2916E+03 PERCENT ERROR= -.2

HYDROGRAPH AT STATION 2

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	37927.	2		0600	61	28120.	2		2100	91	6171.
1		0030	2	1.	1		1530	32	43363.	2		0630	62	26356.	2		2130	92	5893.
1		0100	3	1.	1		1600	33	48229.	2		0700	63	24729.	2		2200	93	5626.
1		0130	4	1.	1		1630	34	52131.	2		0730	64	23230.	2		2230	94	5368.
1		0200	5	1.	1		1700	35	54254.	2		0800	65	21861.	2		2300	95	5125.
1		0230	6	1.	1		1730	36	54253.	2		0830	66	20612.	2		2330	96	4906.
1		0300	7	1.	1		1800	37	52581.	2		0900	67	19478.	3		0000	97	4707.
1		0330	8	1.	1		1830	38	49632.	2		0930	68	18422.	3		0030	98	4520.
1		0400	9	1.	1		1900	39	46037.	2		1000	69	17413.	3		0100	99	4339.
1		0430	10	1.	1		1930	40	44789.	2		1030	70	16464.	3		0130	100	4167.
1		0500	11	1.	1		2000	41	51028.	2		1100	71	15580.	3		0200	101	4005.
1		0530	12	2.	1		2030	42	63065.	2		1130	72	14785.	3		0230	102	3857.
1		0600	13	4.	1		2100	43	66582.	2		1200	73	14085.	3		0300	103	3719.
1		0630	14	16.	1		2130	44	65970.	2		1230	74	13439.	3		0330	104	3585.
1		0700	15	48.	1		2200	45	66193.	2		1300	75	12821.	3		0400	105	3454.
1		0730	16	123.	1		2230	46	64497.	2		1330	76	12228.	3		0430	106	3325.
1		0800	17	264.	1		2300	47	62675.	2		1400	77	11662.	3		0500	107	3199.
1		0830	18	505.	1		2330	48	60227.	2		1430	78	11121.	3		0530	108	3077.
1		0900	19	884.	2		0000	49	57560.	2		1500	79	10606.	3		0600	109	2958.
1		0930	20	1466.	2		0030	50	54757.	2		1530	80	10121.	3		0630	110	2842.
1		1000	21	2317.	2		0100	51	52024.	2		1600	81	9665.	3		0700	111	2729.
1		1030	22	3552.	2		0130	52	49320.	2		1630	82	9243.	3		0730	112	2619.
1		1100	23	5369.	2		0200	53	46653.	2		1700	83	8846.	3		0800	113	2514.
1		1130	24	8182.	2		0230	54	43980.	2		1730	84	8464.	3		0830	114	2413.
1		1200	25	11775.	2		0300	55	41354.	2		1800	85	8097.	3		0900	115	2315.
1		1230	26	15609.	2		0330	56	38871.	2		1830	86	7743.	3		0930	116	2220.
1		1300	27	19442.	2		0400	57	36510.	2		1900	87	7402.	3		1000	117	2130.
1		1330	28	23502.	2		0430	58	34239.	2		1930	88	7075.	3		1030	118	2044.
1		1400	29	27883.	2		0500	59	32056.	2		2000	89	6761.	3		1100	119	1960.
1		1430	30	32642.	2		0530	60	30010.	2		2030	90	6461.	3		1130	120	1884.

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	59.50-HR
(CFS)	(HR)				
		(CFS)			
66582.	21.00	59309.	39164.	18353.	18353.
		(INCHES) .857	2.263	2.629	2.629
		(AC-FT) 29410.	77682.	90247.	90247.

CUMULATIVE AREA = 643.75 SQ MI

942 KK Node19

944 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

948 IN TIME DATA FOR INPUT TIME SERIES

JXMIN	15	TIME INTERVAL IN MINUTES
JXDATE	1 0	STARTING DATE
JXTIME	0	STARTING TIME

UHG FROM MOUNTAIN S-GRAPH

SUBBASIN RUNOFF DATA

945 BA SUBBASIN CHARACTERISTICS

TAREA	47.79	SUBBASIN AREA

PRECIPITATION DATA

947 PB STORM 5.23 BASIN TOTAL PRECIPITATION

949 PI INCREMENTAL PRECIPITATION PATTERN

.03	.04	.03	.04	.04	.05	.05	.06	.07	.08
.07	.08	.09	.10	.11	.13	.16	.17	.20	.23
.16	.21	.20	.18	.27	.30	.36	.24	.28	.27
.25	.20	.04	.03	.05	.05	.04	.03	.04	.03
.03	.03	.03	.03	.03	.02	.02	.02		

959 LS SCS LOSS RATE

STRTL .67 INITIAL ABSTRACTION
CRVNBR 75.00 CURVE NUMBER
RTIMP .00 PERCENT IMPERVIOUS AREA

960 UI INPUT UNITGRAPH, 143 ORDINATES, VOLUME = 1.00

1248.0	1464.0	1870.0	2630.0	3267.0	4151.0	4973.0	3740.0	2826.0	2435.0
2240.0	1776.0	1486.0	1205.0	1122.0	1122.0	1046.0	929.0	863.0	822.0
789.0	701.0	701.0	701.0	617.0	561.0	540.0	510.0	510.0	468.0
467.0	444.0	401.0	401.0	393.0	374.0	374.0	374.0	305.0	303.0
303.0	303.0	254.0	249.0	249.0	249.0	249.0	221.0	220.0	220.0
220.0	220.0	212.0	197.0	197.0	197.0	197.0	197.0	195.0	173.0
173.0	173.0	173.0	173.0	173.0	173.0	147.0	146.0	146.0	146.0
146.0	146.0	146.0	146.0	129.0	111.0	111.0	111.0	111.0	111.0
111.0	111.0	111.0	111.0	111.0	99.0	81.0	81.0	81.0	81.0
80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7	80.7
74.9	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
29.4	29.4	25.5							

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HYDROGRAPH AT STATION Node19

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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.	2		0600	61	.00	.00	.00	1203.
1		0030	2	.03	.03	.00	0.	2		0630	62	.00	.00	.00	1144.
1		0100	3	.04	.04	.00	0.	2		0700	63	.00	.00	.00	1094.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	1047.
1		0200	5	.04	.04	.00	0.	2		0800	65	.00	.00	.00	999.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	954.
1		0300	7	.05	.05	.00	0.	2		0900	67	.00	.00	.00	916.
1		0330	8	.05	.05	.00	0.	2		0930	68	.00	.00	.00	877.
1		0400	9	.06	.06	.00	0.	2		1000	69	.00	.00	.00	839.
1		0430	10	.07	.07	.00	0.	2		1030	70	.00	.00	.00	799.
1		0500	11	.08	.08	.00	0.	2		1100	71	.00	.00	.00	767.
1		0530	12	.07	.07	.00	0.	2		1130	72	.00	.00	.00	742.
1		0600	13	.08	.08	.00	0.	2		1200	73	.00	.00	.00	716.
1		0630	14	.09	.09	.00	1.	2		1230	74	.00	.00	.00	690.
1		0700	15	.10	.10	.01	10.	2		1300	75	.00	.00	.00	665.
1		0730	16	.11	.10	.01	28.	2		1330	76	.00	.00	.00	649.
1		0800	17	.13	.11	.02	64.	2		1400	77	.00	.00	.00	634.
1		0830	18	.16	.12	.04	126.	2		1430	78	.00	.00	.00	617.
1		0900	19	.17	.12	.05	224.	2		1500	79	.00	.00	.00	600.
1		0930	20	.20	.13	.07	375.	2		1530	80	.00	.00	.00	583.
1		1000	21	.23	.13	.10	589.	2		1600	81	.00	.00	.00	571.
1		1030	22	.16	.08	.07	816.	2		1630	82	.00	.00	.00	560.
1		1100	23	.21	.10	.11	1122.	2		1700	83	.00	.00	.00	547.
1		1130	24	.20	.09	.11	1463.	2		1730	84	.00	.00	.00	535.
1		1200	25	.18	.08	.11	1812.	2		1800	85	.00	.00	.00	522.
1		1230	26	.27	.10	.16	2245.	2		1830	86	.00	.00	.00	510.
1		1300	27	.30	.10	.19	2695.	2		1900	87	.00	.00	.00	497.
1		1330	28	.36	.11	.25	3187.	2		1930	88	.00	.00	.00	489.
1		1400	29	.24	.07	.17	3667.	2		2000	89	.00	.00	.00	478.
1		1430	30	.28	.07	.21	4204.	2		2030	90	.00	.00	.00	468.
1		1500	31	.27	.06	.20	4774.	2		2100	91	.00	.00	.00	457.
1		1530	32	.25	.05	.19	5364.	2		2130	92	.00	.00	.00	447.
1		1600	33	.20	.04	.16	5873.	2		2200	93	.00	.00	.00	438.
1		1630	34	.04	.01	.03	6102.	2		2230	94	.00	.00	.00	428.
1		1700	35	.03	.01	.03	6117.	2		2300	95	.00	.00	.00	418.
1		1730	36	.05	.01	.04	6099.	2		2330	96	.00	.00	.00	408.
1		1800	37	.05	.01	.04	5913.	3		0000	97	.00	.00	.00	398.
1		1830	38	.04	.01	.03	5559.	3		0030	98	.00	.00	.00	388.
1		1900	39	.03	.00	.02	5022.	3		0100	99	.00	.00	.00	379.
1		1930	40	.04	.01	.03	4437.	3		0130	100	.00	.00	.00	372.
1		2000	41	.03	.00	.02	4014.	3		0200	101	.00	.00	.00	364.
1		2030	42	.03	.01	.03	3732.	3		0230	102	.00	.00	.00	354.
1		2100	43	.03	.00	.02	3469.	3		0300	103	.00	.00	.00	344.
1		2130	44	.03	.00	.02	3208.	3		0330	104	.00	.00	.00	335.
1		2200	45	.03	.00	.02	3006.	3		0400	105	.00	.00	.00	325.
1		2230	46	.03	.00	.02	2870.	3		0430	106	.00	.00	.00	314.
1		2300	47	.02	.00	.02	2746.	3		0500	107	.00	.00	.00	304.
1		2330	48	.02	.00	.02	2633.	3		0530	108	.00	.00	.00	297.

2	0000	49	.02	.00	.02	2514.	*	3	0600	109	.00	.00	.00	293.
2	0030	50	.00	.00	.00	2393.	*	3	0630	110	.00	.00	.00	288.
2	0100	51	.00	.00	.00	2279.	*	3	0700	111	.00	.00	.00	282.
2	0130	52	.00	.00	.00	2159.	*	3	0730	112	.00	.00	.00	275.
2	0200	53	.00	.00	.00	2029.	*	3	0800	113	.00	.00	.00	267.
2	0230	54	.00	.00	.00	1903.	*	3	0830	114	.00	.00	.00	259.
2	0300	55	.00	.00	.00	1773.	*	3	0900	115	.00	.00	.00	252.
2	0330	56	.00	.00	.00	1633.	*	3	0930	116	.00	.00	.00	244.
2	0400	57	.00	.00	.00	1512.	*	3	1000	117	.00	.00	.00	237.
2	0430	58	.00	.00	.00	1420.	*	3	1030	118	.00	.00	.00	229.
2	0500	59	.00	.00	.00	1339.	*	3	1100	119	.00	.00	.00	223.
2	0530	60	.00	.00	.00	1267.	*	3	1130	120	.00	.00	.00	219.
							*							

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TOTAL RAINFALL = 5.23, TOTAL LOSS = 2.59, TOTAL EXCESS = 2.64

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 6117.	17.00		5275.	2780.	1321.	1321.
		(INCHES)	1.026	2.163	2.549	2.549
		(AC-FT)	2616.	5514.	6497.	6497.

CUMULATIVE AREA = 47.79 SQ MI

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          **************
          *            *
976 KK    *    Node23  *
          *            *
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978 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

SANTA MARGARITA STORMS

982 IN TIME DATA FOR INPUT TIME SERIES

JXMIN		15	TIME INTERVAL IN MINUTES
JXDATE	1	0	STARTING DATE
JXTIME		0	STARTING TIME

UHG FROM MOUNTAIN S-GRAPH

SUBBASIN RUNOFF DATA

979 BA SUBBASIN CHARACTERISTICS

TAREA	10.58	SUBBASIN AREA

PRECIPITATION DATA

981 PB

STORM	4.38	BASIN TOTAL PRECIPITATION

983 PI INCREMENTAL PRECIPITATION PATTERN

.02	.03	.03	.03	.04	.04	.04	.05	.06	.07
.06	.07	.08	.09	.09	.11	.13	.14	.17	.19
.13	.18	.17	.15	.22	.25	.30	.20	.23	.22
.21	.17	.04	.03	.04	.04	.04	.02	.03	.02
.03	.02	.02	.02	.02	.02	.02	.02		

993 LS SCS LOSS RATE

STRTL	.89	INITIAL ABSTRACTION
CRVNBR	69.20	CURVE NUMBER
RTIMP	.00	PERCENT IMPERVIOUS AREA

994 UI INPUT UNITGRAPH, 91 ORDINATES, VOLUME = 1.00

453.0	619.0	1007.0	1488.0	1475.0	1001.0	780.0	590.0	436.0	390.0
362.0	310.0	285.0	254.0	244.0	221.0	194.0	177.0	170.0	162.0
143.0	139.0	131.0	130.0	111.0	105.0	102.0	87.0	87.0	86.0
76.5	76.5	76.5	72.7	68.4	68.4	68.4	64.4	60.0	60.0
60.0	60.0	51.3	50.6	50.6	50.6	50.6	44.2	38.6	38.6
38.6	38.6	38.6	38.6	33.7	28.1	28.1	28.1	28.1	28.1
28.1	28.1	28.1	28.1	15.0	10.2	10.2	10.2	10.2	10.2
10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
10.2									

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HYDROGRAPH AT STATION Node23

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.	2		0600	61	.00	.00	.00	135.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	129.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	123.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	118.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	113.
1		0230	6	.04	.04	.00	0.	2		0830	66	.00	.00	.00	109.
1		0300	7	.04	.04	.00	0.	2		0900	67	.00	.00	.00	105.
1		0330	8	.04	.04	.00	0.	2		0930	68	.00	.00	.00	101.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	97.
1		0430	10	.06	.06	.00	0.	2		1030	70	.00	.00	.00	93.
1		0500	11	.07	.07	.00	0.	2		1100	71	.00	.00	.00	89.
1		0530	12	.06	.06	.00	0.	2		1130	72	.00	.00	.00	86.
1		0600	13	.07	.07	.00	0.	2		1200	73	.00	.00	.00	83.
1		0630	14	.08	.08	.00	0.	2		1230	74	.00	.00	.00	80.
1		0700	15	.09	.09	.00	0.	2		1300	75	.00	.00	.00	76.
1		0730	16	.09	.09	.00	0.	2		1330	76	.00	.00	.00	73.
1		0800	17	.11	.11	.00	0.	2		1400	77	.00	.00	.00	71.
1		0830	18	.13	.13	.00	2.	2		1430	78	.00	.00	.00	68.
1		0900	19	.14	.13	.01	8.	2		1500	79	.00	.00	.00	65.
1		0930	20	.17	.15	.03	24.	2		1530	80	.00	.00	.00	62.
1		1000	21	.19	.15	.04	52.	2		1600	81	.00	.00	.00	60.
1		1030	22	.13	.10	.03	90.	2		1630	82	.00	.00	.00	58.
1		1100	23	.18	.12	.05	144.	2		1700	83	.00	.00	.00	56.
1		1130	24	.17	.11	.06	203.	2		1730	84	.00	.00	.00	54.
1		1200	25	.15	.10	.06	259.	2		1800	85	.00	.00	.00	51.
1		1230	26	.22	.13	.09	330.	2		1830	86	.00	.00	.00	49.
1		1300	27	.25	.13	.12	415.	2		1900	87	.00	.00	.00	46.
1		1330	28	.30	.15	.15	521.	2		1930	88	.00	.00	.00	44.
1		1400	29	.20	.09	.11	632.	2		2000	89	.00	.00	.00	42.
1		1430	30	.23	.10	.13	765.	2		2030	90	.00	.00	.00	40.
1		1500	31	.22	.09	.13	881.	2		2100	91	.00	.00	.00	38.
1		1530	32	.21	.08	.13	962.	2		2130	92	.00	.00	.00	35.
1		1600	33	.17	.06	.11	1015.	2		2200	93	.00	.00	.00	32.
1		1630	34	.04	.01	.02	1024.	2		2230	94	.00	.00	.00	30.
1		1700	35	.03	.01	.02	991.	2		2300	95	.00	.00	.00	27.
1		1730	36	.04	.02	.03	912.	2		2330	96	.00	.00	.00	24.
1		1800	37	.04	.01	.03	792.	3		0000	97	.00	.00	.00	22.
1		1830	38	.04	.01	.02	679.	3		0030	98	.00	.00	.00	21.
1		1900	39	.02	.01	.01	606.	3		0100	99	.00	.00	.00	21.
1		1930	40	.03	.01	.02	558.	3		0130	100	.00	.00	.00	20.
1		2000	41	.02	.01	.01	515.	3		0200	101	.00	.00	.00	19.
1		2030	42	.03	.01	.02	483.	3		0230	102	.00	.00	.00	19.
1		2100	43	.02	.01	.01	453.	3		0300	103	.00	.00	.00	18.
1		2130	44	.02	.01	.01	427.	3		0330	104	.00	.00	.00	18.
1		2200	45	.02	.01	.01	404.	3		0400	105	.00	.00	.00	18.
1		2230	46	.02	.01	.01	386.	3		0430	106	.00	.00	.00	17.
1		2300	47	.02	.01	.01	368.	3		0500	107	.00	.00	.00	17.
1		2330	48	.02	.01	.01	351.	3		0530	108	.00	.00	.00	17.
2		0000	49	.02	.01	.01	337.	3		0600	109	.00	.00	.00	17.
2		0030	50	.00	.00	.00	317.	3		0630	110	.00	.00	.00	16.
2		0100	51	.00	.00	.00	297.	3		0700	111	.00	.00	.00	16.
2		0130	52	.00	.00	.00	273.	3		0730	112	.00	.00	.00	15.
2		0200	53	.00	.00	.00	245.	3		0800	113	.00	.00	.00	15.
2		0230	54	.00	.00	.00	219.	3		0830	114	.00	.00	.00	14.
2		0300	55	.00	.00	.00	199.	3		0900	115	.00	.00	.00	13.
2		0330	56	.00	.00	.00	183.	3		0930	116	.00	.00	.00	13.
2		0400	57	.00	.00	.00	169.	3		1000	117	.00	.00	.00	12.
2		0430	58	.00	.00	.00	159.	3		1030	118	.00	.00	.00	11.
2		0500	59	.00	.00	.00	150.	3		1100	119	.00	.00	.00	9.
2		0530	60	.00	.00	.00	142.	3		1130	120	.00	.00	.00	8.

TOTAL RAINFALL = 4.38, TOTAL LOSS = 2.85, TOTAL EXCESS = 1.53

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
		(CFS)				
1024.	16.50		817.	394.	176.	176.
		(INCHES)	.718	1.383	1.530	1.530
		(AC-FT)	405.	781.	863.	863.

CUMULATIVE AREA = 10.58 SQ MI

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1005 KK      *    Node36  *
             *            *
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1007 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           0  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                       ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                       ISAV2         120  LAST ORDINATE PUNCHED OR SAVED
                      TIMINT        .500  TIME INTERVAL IN HOURS


1008 HC          HYDROGRAPH COMBINATION
                       ICOMP           3  NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node36
SUM OF 3 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	43583.	2		0600	61	29459.	2		2100	91	6667.
1		0030	2	1.	1		1530	32	49689.	2		0630	62	27629.	2		2130	92	6375.
1		0100	3	1.	1		1600	33	55117.	2		0700	63	25946.	2		2200	93	6096.
1		0130	4	1.	1		1630	34	59258.	2		0730	64	24395.	2		2230	94	5826.
1		0200	5	1.	1		1700	35	61362.	2		0800	65	22973.	2		2300	95	5571.
1		0230	6	1.	1		1730	36	61264.	2		0830	66	21675.	2		2330	96	5338.
1		0300	7	1.	1		1800	37	59286.	2		0900	67	20499.	3		0000	97	5127.
1		0330	8	1.	1		1830	38	55870.	2		0930	68	19400.	3		0030	98	4929.
1		0400	9	1.	1		1900	39	51665.	2		1000	69	18349.	3		0100	99	4739.
1		0430	10	1.	1		1930	40	49785.	2		1030	70	17356.	3		0130	100	4559.
1		0500	11	1.	1		2000	41	55557.	2		1100	71	16436.	3		0200	101	4388.
1		0530	12	2.	1		2030	42	67281.	2		1130	72	15613.	3		0230	102	4230.
1		0600	13	4.	1		2100	43	70504.	2		1200	73	14884.	3		0300	103	4081.
1		0630	14	17.	1		2130	44	69604.	2		1230	74	14208.	3		0330	104	3938.
1		0700	15	59.	1		2200	45	69603.	2		1300	75	13562.	3		0400	105	3796.
1		0730	16	151.	1		2230	46	67752.	2		1330	76	12950.	3		0430	106	3657.
1		0800	17	327.	1		2300	47	65789.	2		1400	77	12367.	3		0500	107	3521.
1		0830	18	634.	1		2330	48	63212.	2		1430	78	11805.	3		0530	108	3392.
1		0900	19	1117.	2		0000	49	60411.	2		1500	79	11271.	3		0600	109	3267.
1		0930	20	1864.	2		0030	50	57467.	2		1530	80	10766.	3		0630	110	3145.
1		1000	21	2959.	2		0100	51	54599.	2		1600	81	10296.	3		0700	111	3026.
1		1030	22	4457.	2		0130	52	51752.	2		1630	82	9861.	3		0730	112	2909.
1		1100	23	6635.	2		0200	53	48927.	2		1700	83	9449.	3		0800	113	2795.
1		1130	24	9847.	2		0230	54	46102.	2		1730	84	9053.	3		0830	114	2685.
1		1200	25	13846.	2		0300	55	43326.	2		1800	85	8670.	3		0900	115	2580.
1		1230	26	18183.	2		0330	56	40687.	2		1830	86	8301.	3		0930	116	2477.
1		1300	27	22552.	2		0400	57	38192.	2		1900	87	7945.	3		1000	117	2378.
1		1330	28	27210.	2		0430	58	35818.	2		1930	88	7607.	3		1030	118	2284.
1		1400	29	32182.	2		0500	59	33545.	2		2000	89	7282.	3		1100	119	2192.
1		1430	30	37611.	2		0530	60	31418.	2		2030	90	6969.	3		1130	120	2111.

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 70504.	21.00		62712.	42297.	19850.	19850.
		(INCHES)	.830	2.240	2.607	2.607
		(AC-FT)	31097.	83895.	97607.	97607.

CUMULATIVE AREA = 702.12 SQ MI

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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


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             *            *
1009 KK      *    1       *
             *            *
             **************


1011 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           0  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
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ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

HYDROGRAPH ROUTING DATA

1012 RD MUSKINGUM-CUNGE CHANNEL ROUTING

L	69010.	CHANNEL LENGTH
S	.0020	SLOPE
N	.040	CHANNEL ROUGHNESS COEFFICIENT
CA	.00	CONTRIBUTING AREA
SHAPE	TRAP	CHANNEL SHAPE
WD	150.00	BOTTOM WIDTH OR DIAMETER
Z	5.00	SIDE SLOPE

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COMPUTED MUSKINGUM-CUNGE PARAMETERS

ELEMENT	ALPHA	M	COMPUTATION TIME STEP DT (MIN)	DX (FT)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	MAXIMUM CELERITY (FPS)
MAIN	.08	1.60	30.00	17252.50	71466.59	1320.00	2.59	16.15

INTERPOLATED TO SPECIFIED COMPUTATION INTERVAL

MAIN	.08	1.60	30.00		71466.59	1320.00	2.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9765E+05 EXCESS= .0000E+00 OUTFLOW= .9719E+05 BASIN STORAGE= .1008E+04 PERCENT ERROR= -.6

HYDROGRAPH AT STATION 1

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	1.	1		1500	31	29470.	2		0600	61	34442.	2		2100	91	7994.
1		0030	2	1.	1		1530	32	35609.	2		0630	62	32377.	2		2130	92	7674.
1		0100	3	1.	1		1600	33	42160.	2		0700	63	30447.	2		2200	93	7367.
1		0130	4	1.	1		1630	34	48860.	2		0730	64	28659.	2		2230	94	7071.
1		0200	5	1.	1		1700	35	54812.	2		0800	65	26995.	2		2300	95	6786.
1		0230	6	1.	1		1730	36	59086.	2		0830	66	25450.	2		2330	96	6505.
1		0300	7	1.	1		1800	37	61192.	2		0900	67	24028.	3		0000	97	6228.
1		0330	8	1.	1		1830	38	61049.	2		0930	68	22715.	3		0030	98	5958.
1		0400	9	1.	1		1900	39	59060.	2		1000	69	21511.	3		0100	99	5700.
1		0430	10	1.	1		1930	40	55892.	2		1030	70	20404.	3		0130	100	5461.
1		0500	11	1.	1		2000	41	52518.	2		1100	71	19370.	3		0200	101	5242.
1		0530	12	1.	1		2030	42	51242.	2		1130	72	18385.	3		0230	102	5039.
1		0600	13	1.	1		2100	43	55640.	2		1200	73	17450.	3		0300	103	4846.
1		0630	14	1.	1		2130	44	65419.	2		1230	74	16580.	3		0330	104	4663.
1		0700	15	1.	1		2200	45	71467.	2		1300	75	15787.	3		0400	105	4489.
1		0730	16	1.	1		2230	46	70068.	2		1330	76	15073.	3		0430	106	4327.
1		0800	17	2.	1		2300	47	68596.	2		1400	77	14420.	3		0500	107	4174.
1		0830	18	4.	1		2330	48	67880.	2		1430	78	13801.	3		0530	108	4028.
1		0900	19	13.	2		0000	49	65359.	2		1500	79	13210.	3		0600	109	3887.
1		0930	20	44.	2		0030	50	62936.	2		1530	80	12647.	3		0630	110	3748.
1		1000	21	125.	2		0100	51	60301.	2		1600	81	12108.	3		0700	111	3612.
1		1030	22	304.	2		0130	52	57381.	2		1630	82	11590.	3		0730	112	3480.
1		1100	23	644.	2		0200	53	54658.	2		1700	83	11098.	3		0800	113	3354.
1		1130	24	1234.	2		0230	54	51889.	2		1730	84	10634.	3		0830	114	3232.
1		1200	25	2180.	2		0300	55	49200.	2		1800	85	10199.	3		0900	115	3112.
1		1230	26	3582.	2		0330	56	46499.	2		1830	86	9792.	3		0930	116	2995.
1		1300	27	5725.	2		0400	57	43860.	2		1900	87	9406.	3		1000	117	2881.
1		1330	28	11203.	2		0430	58	41312.	2		1930	88	9034.	3		1030	118	2770.
1		1400	29	17739.	2		0500	59	38904.	2		2000	89	8675.	3		1100	119	2663.
1		1430	30	23692.	2		0530	60	36620.	2		2030	90	8328.	3		1130	120	2560.

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.50-HR
		(CFS)				
71467.	22.00		62606.	42258.	19753.	19753.
		(INCHES)	.829	2.238	2.594	2.594
		(AC-FT)	31044.	83818.	97134.	97134.

CUMULATIVE AREA = 702.12 SQ MI

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          *            *
1013 KK   *    Node25  *
          *            *
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1015 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          0  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        120  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .500  TIME INTERVAL IN HOURS

                          SANTA MARGARITA STORMS

1019 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN         15  TIME INTERVAL IN MINUTES
                     JXDATE      1    0  STARTING DATE
                     JXTIME          0  STARTING TIME
                          UHG FROM AVERAGE FULLERTON - SAN JOSE S-GRAPH

               SUBBASIN RUNOFF DATA

1016 BA          SUBBASIN CHARACTERISTICS
                      TAREA      43.88  SUBBASIN AREA

                 PRECIPITATION DATA

1018 PB               STORM       4.33  BASIN TOTAL PRECIPITATION

1020 PI            INCREMENTAL PRECIPITATION PATTERN
                     .02       .03       .03       .03       .03       .04       .04       .05       .06       .06
                     .06       .07       .08       .09       .09       .11       .13       .14       .17       .19
                     .13       .17       .16       .15       .22       .25       .29       .20       .23       .22
                     .20       .16       .03       .03       .04       .04       .03       .02       .03       .02
                     .03       .02       .02       .02       .02       .02       .02       .02

1030 LS          SCS LOSS RATE
                      STRTL        .68  INITIAL ABSTRACTION
                     CRVNBR      74.70  CURVE NUMBER
                      RTIMP        .00  PERCENT IMPERVIOUS AREA

1031 UI          INPUT UNITGRAPH, 114 ORDINATES,  VOLUME = 1.00
                   467.0     467.0     565.0     637.0     750.0     912.0    1058.0     900.0    1194.0    1508.0
                  1751.0    1751.0    2549.0    3194.0    4742.0    5300.0    2521.0    2110.0    1806.0    1767.0
                  1081.0    1113.0    1051.0    1001.0    1001.0     962.0     873.0     701.0     675.0     637.0
                   637.0     637.0     554.0     539.0     510.0     500.0     470.0     438.0     438.0     360.0
                   350.0     350.0     329.0     318.0     318.0     312.0     259.0     259.0     259.0     259.0
                   207.0     189.0     189.0     189.0     189.0     189.0     131.0     113.0     113.0     113.0
                   113.0     113.0     113.0     113.0     113.0     113.0      47.0      24.0      24.0      24.0
                    24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2
                    24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2
                    24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2
                    24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2      24.2
                    24.2      24.2      24.2       2.8

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HYDROGRAPH AT STATION Node25

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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.	2		0600	61	.00	.00	.00	1401.
1		0030	2	.02	.02	.00	0.	2		0630	62	.00	.00	.00	1317.
1		0100	3	.03	.03	.00	0.	2		0700	63	.00	.00	.00	1234.
1		0130	4	.03	.03	.00	0.	2		0730	64	.00	.00	.00	1129.
1		0200	5	.03	.03	.00	0.	2		0800	65	.00	.00	.00	1017.
1		0230	6	.03	.03	.00	0.	2		0830	66	.00	.00	.00	951.
1		0300	7	.04	.04	.00	0.	2		0900	67	.00	.00	.00	889.
1		0330	8	.04	.04	.00	0.	2		0930	68	.00	.00	.00	838.
1		0400	9	.05	.05	.00	0.	2		1000	69	.00	.00	.00	785.
1		0430	10	.06	.06	.00	0.	2		1030	70	.00	.00	.00	743.
1		0500	11	.06	.06	.00	0.	2		1100	71	.00	.00	.00	705.
1		0530	12	.06	.06	.00	0.	2		1130	72	.00	.00	.00	667.
1		0600	13	.07	.07	.00	0.	2		1200	73	.00	.00	.00	635.
1		0630	14	.08	.08	.00	0.	2		1230	74	.00	.00	.00	602.
1		0700	15	.09	.09	.00	0.	2		1300	75	.00	.00	.00	572.
1		0730	16	.09	.09	.00	1.	2		1330	76	.00	.00	.00	541.
1		0800	17	.11	.10	.01	6.	2		1400	77	.00	.00	.00	511.
1		0830	18	.13	.11	.02	15.	2		1430	78	.00	.00	.00	480.
1		0900	19	.14	.11	.03	29.	2		1500	79	.00	.00	.00	452.
1		0930	20	.17	.12	.04	53.	2		1530	80	.00	.00	.00	429.
1		1000	21	.19	.12	.06	87.	2		1600	81	.00	.00	.00	406.

1	1030	22	.13	.08	.05	121.	*	2	1630	82	.00	.00	.00	382.
1	1100	23	.17	.10	.07	171.	*	2	1700	83	.00	.00	.00	357.
1	1130	24	.16	.09	.08	227.	*	2	1730	84	.00	.00	.00	334.
1	1200	25	.15	.08	.08	292.	*	2	1800	85	.00	.00	.00	316.
1	1230	26	.22	.10	.12	386.	*	2	1830	86	.00	.00	.00	295.
1	1300	27	.25	.11	.14	499.	*	2	1900	87	.00	.00	.00	274.
1	1330	28	.29	.11	.18	648.	*	2	1930	88	.00	.00	.00	253.
1	1400	29	.20	.07	.13	802.	*	2	2000	89	.00	.00	.00	235.
1	1430	30	.23	.08	.15	997.	*	2	2030	90	.00	.00	.00	222.
1	1500	31	.22	.07	.15	1231.	*	2	2100	91	.00	.00	.00	211.
1	1530	32	.20	.06	.15	1509.	*	2	2130	92	.00	.00	.00	197.
1	1600	33	.16	.04	.12	1807.	*	2	2200	93	.00	.00	.00	180.
1	1630	34	.03	.01	.03	2070.	*	2	2230	94	.00	.00	.00	161.
1	1700	35	.03	.01	.02	2348.	*	2	2300	95	.00	.00	.00	145.
1	1730	36	.04	.01	.03	2615.	*	2	2330	96	.00	.00	.00	129.
1	1800	37	.04	.01	.03	2842.	*	3	0000	97	.00	.00	.00	113.
1	1830	38	.03	.01	.03	3119.	*	3	0030	98	.00	.00	.00	98.
1	1900	39	.02	.01	.02	3342.	*	3	0100	99	.00	.00	.00	84.
1	1930	40	.03	.01	.02	3648.	*	3	0130	100	.00	.00	.00	78.
1	2000	41	.02	.01	.02	3983.	*	3	0200	101	.00	.00	.00	75.
1	2030	42	.03	.01	.02	4230.	*	3	0230	102	.00	.00	.00	71.
1	2100	43	.02	.01	.02	4289.	*	3	0300	103	.00	.00	.00	67.
1	2130	44	.02	.01	.02	4194.	*	3	0330	104	.00	.00	.00	64.
1	2200	45	.02	.01	.02	4201.	*	3	0400	105	.00	.00	.00	61.
1	2230	46	.02	.01	.02	4010.	*	3	0430	106	.00	.00	.00	59.
1	2300	47	.02	.00	.01	3687.	*	3	0500	107	.00	.00	.00	58.
1	2330	48	.02	.00	.01	3192.	*	3	0530	108	.00	.00	.00	56.
2	0000	49	.02	.00	.01	2744.	*	3	0600	109	.00	.00	.00	54.
2	0030	50	.00	.00	.00	2551.	*	3	0630	110	.00	.00	.00	53.
2	0100	51	.00	.00	.00	2411.	*	3	0700	111	.00	.00	.00	51.
2	0130	52	.00	.00	.00	2254.	*	3	0730	112	.00	.00	.00	50.
2	0200	53	.00	.00	.00	2092.	*	3	0800	113	.00	.00	.00	49.
2	0230	54	.00	.00	.00	1996.	*	3	0830	114	.00	.00	.00	47.
2	0300	55	.00	.00	.00	1913.	*	3	0900	115	.00	.00	.00	46.
2	0330	56	.00	.00	.00	1814.	*	3	0930	116	.00	.00	.00	46.
2	0400	57	.00	.00	.00	1733.	*	3	1000	117	.00	.00	.00	46.
2	0430	58	.00	.00	.00	1639.	*	3	1030	118	.00	.00	.00	46.
2	0500	59	.00	.00	.00	1554.	*	3	1100	119	.00	.00	.00	46.
2	0530	60	.00	.00	.00	1467.	*	3	1130	120	.00	.00	.00	46.
							*							

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TOTAL RAINFALL = 4.33, TOTAL LOSS = 2.43, TOTAL EXCESS = 1.90

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 4289.	21.00		3724.	2008.	893.	893.
		(INCHES)	.789	1.702	1.876	1.876
		(AC-FT)	1847.	3983.	4391.	4391.

CUMULATIVE AREA = 43.88 SQ MI

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            *            *
1044 KK     *    Node35  *
            *            *
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1046 KO OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	120	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.500	TIME INTERVAL IN HOURS

1047 HC HYDROGRAPH COMBINATION

ICOMP	2	NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION Node35
SUM OF 2 HYDROGRAPHS

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DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW	*	DA MON HRMN	ORD	FLOW
			*				*				*			

1	0000	1	1.	*	1	1500	31	30701.	*	2	0600	61	35843.	*	2	2100	91	8204.
1	0030	2	1.	*	1	1530	32	37119.	*	2	0630	62	33694.	*	2	2130	92	7871.
1	0100	3	1.	*	1	1600	33	43967.	*	2	0700	63	31680.	*	2	2200	93	7547.
1	0130	4	1.	*	1	1630	34	50931.	*	2	0730	64	29788.	*	2	2230	94	7232.
1	0200	5	1.	*	1	1700	35	57160.	*	2	0800	65	28012.	*	2	2300	95	6931.
1	0230	6	1.	*	1	1730	36	61702.	*	2	0830	66	26401.	*	2	2330	96	6634.
1	0300	7	1.	*	1	1800	37	64034.	*	2	0900	67	24917.	*	3	0000	97	6341.
1	0330	8	1.	*	1	1830	38	64168.	*	2	0930	68	23553.	*	3	0030	98	6055.
1	0400	9	1.	*	1	1900	39	62402.	*	2	1000	69	22296.	*	3	0100	99	5784.
1	0430	10	1.	*	1	1930	40	59540.	*	2	1030	70	21147.	*	3	0130	100	5539.
1	0500	11	1.	*	1	2000	41	56501.	*	2	1100	71	20075.	*	3	0200	101	5317.
1	0530	12	1.	*	1	2030	42	55472.	*	2	1130	72	19052.	*	3	0230	102	5110.
1	0600	13	1.	*	1	2100	43	59929.	*	2	1200	73	18085.	*	3	0300	103	4914.
1	0630	14	1.	*	1	2130	44	69614.	*	2	1230	74	17182.	*	3	0330	104	4727.
1	0700	15	1.	*	1	2200	45	75668.	*	2	1300	75	16359.	*	3	0400	105	4551.
1	0730	16	3.	*	1	2230	46	74078.	*	2	1330	76	15614.	*	3	0430	106	4386.
1	0800	17	7.	*	1	2300	47	72283.	*	2	1400	77	14931.	*	3	0500	107	4231.
1	0830	18	18.	*	1	2330	48	71072.	*	2	1430	78	14281.	*	3	0530	108	4084.
1	0900	19	42.	*	2	0000	49	68103.	*	2	1500	79	13662.	*	3	0600	109	3941.
1	0930	20	97.	*	2	0030	50	65487.	*	2	1530	80	13076.	*	3	0630	110	3800.
1	1000	21	213.	*	2	0100	51	62713.	*	2	1600	81	12514.	*	3	0700	111	3663.
1	1030	22	425.	*	2	0130	52	59636.	*	2	1630	82	11972.	*	3	0730	112	3530.
1	1100	23	815.	*	2	0200	53	56749.	*	2	1700	83	11455.	*	3	0800	113	3403.
1	1130	24	1462.	*	2	0230	54	53886.	*	2	1730	84	10968.	*	3	0830	114	3279.
1	1200	25	2473.	*	2	0300	55	51113.	*	2	1800	85	10515.	*	3	0900	115	3159.
1	1230	26	3968.	*	2	0330	56	48313.	*	2	1830	86	10088.	*	3	0930	116	3041.
1	1300	27	6225.	*	2	0400	57	45594.	*	2	1900	87	9680.	*	3	1000	117	2927.
1	1330	28	11851.	*	2	0430	58	42951.	*	2	1930	88	9287.	*	3	1030	118	2816.
1	1400	29	18541.	*	2	0500	59	40458.	*	2	2000	89	8909.	*	3	1100	119	2709.
1	1430	30	24689.	*	2	0530	60	38087.	*	2	2030	90	8550.	*	3	1130	120	2606.
				*					*					*				

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.50-HR
+ (CFS)	(HR)					
		(CFS)				
+ 75668.	22.00		65890.	44261.	20646.	20646.
		(INCHES)	.821	2.207	2.552	2.552
		(AC-FT)	32673.	87791.	101525.	101525.

CUMULATIVE AREA = 746.00 SQ MI

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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+					6-HOUR	24-HOUR	72-HOUR			
	HYDROGRAPH AT									
+		Node26	11952.	17.50	10064.	4812.	2002.	50.52		
	ROUTED TO									
+		Skinne	1171.	30.50	1134.	839.	412.	50.52		
	ROUTED TO									
+		14	1172.	32.00	1134.	839.	397.	50.52		
	HYDROGRAPH AT									
+		Node2	1389.	16.50	1152.	536.	225.	8.10		
	HYDROGRAPH AT									
+		Node6	3662.	18.50	3259.	1692.	763.	27.55		
	3 COMBINED AT									
+		Node73	4859.	18.00	4327.	2620.	1386.	86.17		
	ROUTED TO									
+		13	4847.	18.00	4312.	2619.	1381.	86.17		
	HYDROGRAPH AT									
+		Node31	540.	16.00	428.	183.	74.	2.65		
	2 COMBINED AT									
+		Node71	5181.	17.50	4659.	2777.	1455.	88.82		
	ROUTED TO									
+		12	5173.	18.00	4645.	2776.	1452.	88.82		
	HYDROGRAPH AT									
+		Node9	442.	16.00	342.	139.	56.	2.52		
	2 COMBINED AT									
+		Node70	5446.	17.50	4917.	2898.	1508.	91.34		
	HYDROGRAPH AT									
+		Node27	3984.	16.50	3276.	1487.	611.	16.92		
	ROUTED TO									

+		17	3975.	18.50	3277.	1488.	612.	16.92
+	HYDROGRAPH AT	Node1	3265.	16.00	2615.	1151.	473.	22.37
+	HYDROGRAPH AT	Node3	3704.	16.00	3037.	1269.	514.	18.40
+	3 COMBINED AT	Node66	9704.	17.00	8353.	3872.	1600.	57.69
+	ROUTED TO	16	9735.	18.00	8347.	3872.	1601.	57.69
+	HYDROGRAPH AT	Node4	1005.	16.00	804.	351.	143.	5.69
+	2 COMBINED AT	Node75	10444.	17.00	9038.	4214.	1744.	63.38
+	HYDROGRAPH AT	Node33	8266.	14.50	6524.	2554.	1031.	18.46
+	ROUTED TO	19	8083.	14.50	6501.	2554.	1031.	18.46
+	HYDROGRAPH AT	Node32	3221.	15.50	2593.	1083.	439.	8.74
+	2 COMBINED AT	Node64	11216.	15.50	9037.	3637.	1470.	27.20
+	ROUTED TO	18	11147.	16.50	9034.	3638.	1471.	27.20
+	HYDROGRAPH AT	Node5	7836.	16.50	6453.	2902.	1190.	30.47
+	2 COMBINED AT	Node76	18983.	16.50	15342.	6538.	2661.	57.67
+	2 COMBINED AT	Node61	29120.	16.50	23657.	10704.	4405.	121.05
+	ROUTED TO	15	29091.	16.50	23647.	10704.	4405.	121.05
+	HYDROGRAPH AT	Node10	44.	13.50	32.	11.	5.	.18
+	3 COMBINED AT	Node59	34330.	16.50	28431.	13475.	5918.	212.57
+	ROUTED TO	11	33954.	17.00	28370.	13471.	5915.	212.57
+	HYDROGRAPH AT	Node29	1040.	15.50	850.	365.	148.	3.94
+	ROUTED TO	10	1039.	16.00	850.	365.	148.	3.94
+	HYDROGRAPH AT	Node34	631.	15.50	515.	215.	87.	2.05
+	3 COMBINED AT	Node53	35482.	16.50	29557.	14019.	6151.	218.56
+	ROUTED TO	9	35301.	17.00	29500.	14020.	6149.	218.56
+	HYDROGRAPH AT	Node13	2138.	15.00	1722.	692.	280.	6.71
+	2 COMBINED AT	Node74	37169.	16.50	30992.	14672.	6429.	225.27
+	HYDROGRAPH AT	Node22	10729.	16.00	8994.	4595.	2110.	38.15
+	HYDROGRAPH AT	Node24	5059.	16.00	4043.	1905.	806.	19.81
+	2 COMBINED AT	Node52	15788.	16.00	13010.	6497.	2916.	57.96
+	ROUTED TO	7	15691.	16.50	12973.	6494.	2913.	57.96
+	HYDROGRAPH AT	Node18	6633.	16.50	5463.	2422.	991.	22.18

+	HYDROGRAPH AT	Node20	3835.	16.00	3086.	1496.	654.	18.04
+	3 COMBINED AT	Node50	26047.	16.50	21489.	10400.	4558.	98.18
+	ROUTED TO	6	25991.	17.00	21490.	10400.	4556.	98.18
+	HYDROGRAPH AT	Node7	5837.	16.00	4855.	2451.	1115.	24.60
+	HYDROGRAPH AT	Node8	18514.	19.00	15991.	8101.	3450.	88.44
+	2 COMBINED AT	Node49	22274.	18.50	20093.	10520.	4565.	113.04
+	ROUTED TO	8	22317.	19.00	20094.	10520.	4564.	113.04
+	HYDROGRAPH AT	Node12	11390.	16.50	9341.	4188.	1718.	42.32
+	HYDROGRAPH AT	Node14	4690.	16.00	3698.	1751.	753.	23.58
+	HYDROGRAPH AT	Node15	299.	14.00	226.	83.	33.	1.00
+	HYDROGRAPH AT	Node17	8134.	16.50	6751.	3397.	1550.	38.50
+	6 COMBINED AT	Node45	68534.	16.50	59544.	30253.	13174.	316.62
+	ROUTED TO	Vail	41336.	21.00	37335.	19379.	8490.	316.62
+	ROUTED TO	5	41474.	22.00	37361.	19362.	8471.	316.62
+	HYDROGRAPH AT	Node28	4310.	17.50	3583.	1663.	689.	29.36
+	HYDROGRAPH AT	Node30	3473.	16.00	2838.	1404.	632.	16.19
+	3 COMBINED AT	Node43	44863.	22.00	40467.	21009.	9792.	362.17
+	ROUTED TO	4	44809.	22.00	40455.	21018.	9793.	362.17
+	HYDROGRAPH AT	Node11	805.	13.50	637.	259.	105.	1.88
+	2 COMBINED AT	Node72	44917.	22.00	40542.	21104.	9897.	364.05
+	2 COMBINED AT	Node41	62513.	21.00	55338.	34873.	16327.	589.32
+	ROUTED TO	3	62526.	21.50	55309.	34891.	16316.	589.32
+	HYDROGRAPH AT	Node16	7156.	16.00	5934.	2986.	1354.	32.84
+	HYDROGRAPH AT	Node21	3238.	16.00	2787.	1473.	697.	21.59
+	3 COMBINED AT	Node39	66987.	21.50	59463.	39149.	18368.	643.75
+	ROUTED TO	2	66582.	21.00	59309.	39164.	18353.	643.75
+	HYDROGRAPH AT	Node19	6117.	17.00	5275.	2780.	1321.	47.79
+	HYDROGRAPH AT	Node23	1024.	16.50	817.	394.	176.	10.58
+	3 COMBINED AT	Node36	70504.	21.00	62712.	42297.	19850.	702.12
+	ROUTED TO	1	71467.	22.00	62606.	42258.	19753.	702.12
+	HYDROGRAPH AT	Node25	4289.	21.00	3724.	2008.	893.	43.88

2 COMBINED AT
\+ Node35 75668. 22.00 65890. 44261. 20646. 746.00
1

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

ISTAQ	ELEMENT	DT	PEAK	TIME TO PEAK	VOLUME	INTERPOLATED TO COMPUTATION INTERVAL DT	PEAK	TIME TO PEAK	VOLUME
		(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)	(IN)
14	MANE	30.00	1172.33	1920.00	.73	30.00	1172.33	1920.00	.73
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2029E+04 EXCESS= .0000E+00 OUTFLOW= .1960E+04 BASIN STORAGE= .8543E+02 PERCENT ERROR= -.8									
13	MANE	21.91	4847.54	1095.53	1.48	30.00	4847.47	1080.00	1.48
CONTINUITY SUMMARY (AC-FT) - INFLOW= .6811E+04 EXCESS= .0000E+00 OUTFLOW= .6786E+04 BASIN STORAGE= .3596E+02 PERCENT ERROR= -.2									
12	MANE	13.91	5180.48	1071.28	1.51	30.00	5172.79	1080.00	1.51
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7156E+04 EXCESS= .0000E+00 OUTFLOW= .7139E+04 BASIN STORAGE= .2371E+02 PERCENT ERROR= -.1									
17	MANE	30.00	3974.66	1110.00	3.33	30.00	3974.66	1110.00	3.33
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3003E+04 EXCESS= .0000E+00 OUTFLOW= .3009E+04 BASIN STORAGE= .1267E+01 PERCENT ERROR= -.3									
16	MANE	30.00	9735.29	1080.00	2.56	30.00	9735.29	1080.00	2.56
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7867E+04 EXCESS= .0000E+00 OUTFLOW= .7873E+04 BASIN STORAGE= .1368E+01 PERCENT ERROR= -.1									
19	MANE	9.17	8221.59	880.30	5.15	30.00	8083.18	870.00	5.15
CONTINUITY SUMMARY (AC-FT) - INFLOW= .5069E+04 EXCESS= .0000E+00 OUTFLOW= .5070E+04 BASIN STORAGE= .2575E-01 PERCENT ERROR= .0									
18	MANE	30.00	11146.81	990.00	4.99	30.00	11146.81	990.00	4.99
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7228E+04 EXCESS= .0000E+00 OUTFLOW= .7232E+04 BASIN STORAGE= .1556E+00 PERCENT ERROR= -.1									
15	MANE	.81	29096.19	990.23	3.36	30.00	29091.12	990.00	3.36
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2166E+05 EXCESS= .0000E+00 OUTFLOW= .2166E+05 BASIN STORAGE= .4207E-01 PERCENT ERROR= .0									
11	MANE	9.94	34223.26	1003.88	2.57	30.00	33953.55	1020.00	2.57
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2910E+05 EXCESS= .0000E+00 OUTFLOW= .2909E+05 BASIN STORAGE= .3279E+02 PERCENT ERROR= -.1									
10	MANE	6.97	1040.28	940.81	3.47	30.00	1039.39	960.00	3.47
CONTINUITY SUMMARY (AC-FT) - INFLOW= .7282E+03 EXCESS= .0000E+00 OUTFLOW= .7282E+03 BASIN STORAGE= .1095E-01 PERCENT ERROR= .0									
9	MANE	7.74	35448.07	998.55	2.59	30.00	35301.05	1020.00	2.59
CONTINUITY SUMMARY (AC-FT) - INFLOW= .3025E+05 EXCESS= .0000E+00 OUTFLOW= .3024E+05 BASIN STORAGE= .2610E+02 PERCENT ERROR= .0									
7	MANE	25.87	15785.68	983.24	4.63	30.00	15691.48	990.00	4.63
CONTINUITY SUMMARY (AC-FT) - INFLOW= .1434E+05 EXCESS= .0000E+00 OUTFLOW= .1432E+05 BASIN STORAGE= .3544E+02 PERCENT ERROR= -.2									
6	MANE	30.00	25991.15	1020.00	4.28	30.00	25991.15	1020.00	4.28
CONTINUITY SUMMARY (AC-FT) - INFLOW= .2242E+05 EXCESS= .0000E+00 OUTFLOW= .2241E+05 BASIN STORAGE= .5820E+02 PERCENT ERROR= -.2									
8	MANE	30.00	22316.55	1140.00	3.72	30.00	22316.55	1140.00	3.72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2245E+05 EXCESS= .0000E+00 OUTFLOW= .2244E+05 BASIN STORAGE= .4190E+02 PERCENT ERROR= -.2

5	MANE	30.00	41474.30	1320.00	2.47	30.00	41474.30	1320.00	2.47

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4177E+05 EXCESS= .0000E+00 OUTFLOW= .4168E+05 BASIN STORAGE= .4856E+03 PERCENT ERROR= -1.0

4	MANE	3.34	44827.87	1321.75	2.49	30.00	44809.28	1320.00	2.49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4815E+05 EXCESS= .0000E+00 OUTFLOW= .4814E+05 BASIN STORAGE= .2539E+02 PERCENT ERROR= .0

3	MANE	21.07	62922.52	1285.04	2.55	30.00	62526.12	1290.00	2.55

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8029E+05 EXCESS= .0000E+00 OUTFLOW= .8018E+05 BASIN STORAGE= .2283E+03 PERCENT ERROR= -.2

2	MANE	24.11	66931.20	1253.67	2.63	30.00	66581.87	1260.00	2.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9037E+05 EXCESS= .0000E+00 OUTFLOW= .9023E+05 BASIN STORAGE= .2916E+03 PERCENT ERROR= -.2

1	MANE	30.00	71466.59	1320.00	2.59	30.00	71466.59	1320.00	2.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9765E+05 EXCESS= .0000E+00 OUTFLOW= .9719E+05 BASIN STORAGE= .1008E+04 PERCENT ERROR= -.6