Water Resources Data California

Water Year 1990

Volume 2. Pacific Slope Basins from Arroyo Grande to Oregon State Line except Central Valley

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-90-2

Prepared in cooperation with the California Department of Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1990

1989

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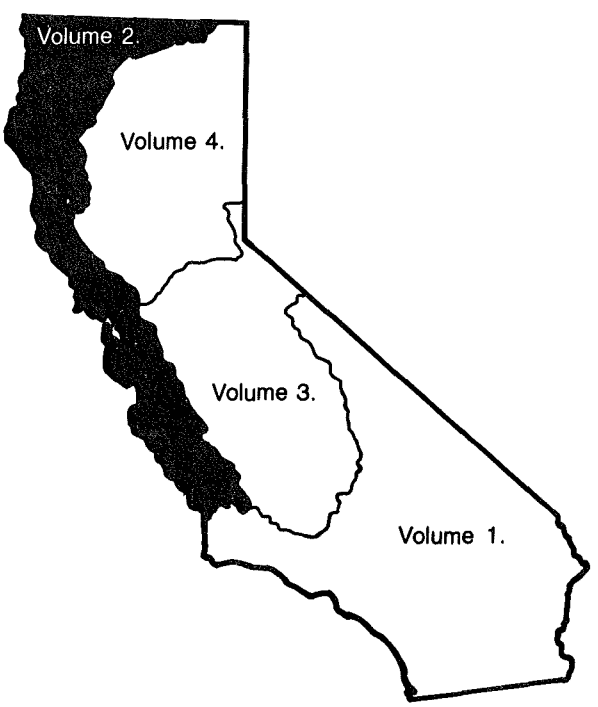
Water Resources Data California

Water Year 1990

Volume 2. Pacific Slope Basins from Arroyo Grande to Oregon State Line except Central Valley

by W.F. Shelton, L.F. Trujillo, K.L. Markham, and J.R. Palmer



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-90-2
Prepared in cooperation with the California Department of Water Resources and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., *Secretary*

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, *Director*

For information on the water program in California write to
District Chief, Water Resources Division
U.S. Geological Survey
Room W-2234, Federal Building
2800 Cottage Way
Sacramento, California 95825

1991

PREFACE

This volume of the annual hydrologic data report of California is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for California are contained in five volumes:

Volume 1. Southern Great Basin from Mexican Border to Mono Lake Basin, and Pacific Slope Basins from the Tijuana River to the Santa Maria River

Volume 2. Pacific Slope Basins from Arroyo Grande to Oregon State Line except Central Valley

Volume 3. Southern Central Valley Basins and The Great Basin from the Walker River to the Truckee River

Volume 4. Northern Central Valley Basins and The Great Basin from Honey Lake Basin to Oregon State Line

Volume 5. Ground-Water Data for California

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policy and established guidelines, the individuals contributing significantly to the collection, processing, and tabulation of the data are given on page V.

This report was prepared in cooperation with the California Department of Water Resources and with other agencies, under the general supervision of John M. Klein, District Chief, California.

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Prepared in cooperation with the California Department of Water Resources and with other agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1990 water year for California consist of records of stage, discharge, and water quality of streams; stage and contents in lakes and reservoirs; and water levels and water quality in wells. Volume 2 contains discharge records for 125 streamflow-gaging stations and 1 low-flow partial-record station; stage and contents for 7 lakes and reservoirs; precipitation records for 4 stations; and water-quality records for 29 streamflow-gaging stations and 10 water-quality partial-record stations. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in California.

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WATER RESOURCES DIVISION

E. Jerre McClelland, Assistant District Chief for Hydrologic Data
Kenneth W. Lee, Chief, Northern California Operations

Wendell W. Ayers, Hydrologic Technician
James B. Baker, Editorial Assistant
Faith L. Beattie, Hydrologic Technician
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[Letters after station name designate type of data: (d), discharge; (l), lake contents; (g), gage height; (c), chemical; (b), biological; (p), precipitation; (t), water temperature; and (s), sediment]

SURFACE-WATER AND WATER-QUALITY STATIONS
IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED--Continued

WATER RESOURCES DATA -- CALIFORNIA, WATER YEAR 1990

VOLUME 2--PACIFIC SLOPE BASINS FROM ARROYO GRANDE

TO OREGON STATE LINE EXCEPT CENTRAL VALLEY

By W.F. Shelton, L.F. Trujillo, K.L. Markham, and J.R. Palmer

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of California each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the U.S. Geological Survey, the data are published annually in this report series entitled "Water Resources Data - California."

This volume of the report includes records on surface water in the State. Specifically, it contains (1) discharge records for 125 streamflow-gaging stations and 1 low-flow partial-record streamflow station; (2) stage and contents records for 7 lakes and reservoirs; (3) precipitation records for 4 stations; and (4) water-quality records for 29 streamflow-gaging stations and 10 water-quality partial-record stations. Records included for stream stages are only a small fraction of those obtained during the water year.

The series of annual reports for California began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format changed to one volume, including data on quantities of surface water, quality of surface and ground water, and ground-water levels. Beginning with the 1985 water year, a separate volume was published for ground-water levels and quality.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports Section, Box 25425, Building 810, Federal Center, Denver, CO 80225.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. Each report has an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CA-90-2." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (916) 978-4668.

COOPERATION

The U.S. Geological Survey and organizations of the State of California have had cooperative agreements for the systematic collection of records since 1903. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Alameda County Flood Control and Water Conservation District, Robert Bitten, Director of Public Works.
Alameda County Water District, James D. Beard, General Manager.
California Department of Boating and Waterways, William H. Ivers, Director
California Department of Parks and Recreation, Henry R. Agonia, Director
California Department of Water Resources, David N. Kennedy, Director.

Contra Costa County Flood Control and Water Conservation District, Milton Kubicek, Deputy Director.
Humboldt Bay Municipal Water District, Arthur Bolli, General Manager.
Marin Municipal Water District, Ronald L. Johnson, General Manager.
Mendocino County Water Agency, Dennis Jackson, Hydrologist.
Monterey County Flood Control and Water Conservation District, William Hurst, General Manager.

Monterey Peninsula Water Management District, Bruce Buel, General Manager.
San Benito County Water Conservation and Flood Control District, William Rupert, District Manager.
San Francisco Water Department, Donald J. Birrir, General Manager.
San Luis Obispo County Engineering Department, George Protopapas, County Engineer.
San Mateo County, R. George Zinckraft, Senior Civil Engineer.

Santa Clara Valley Water District, Ronald R. Esau, General Manager.
Santa Cruz, city of, Water Department, William Kocker, Director.
Santa Cruz County Flood Control and Water Conservation District, Planning Department, Ken Hart, Program Manager.
Scotts Valley Water District, Jon Sansing, General Manager.
Sonoma County Planning Department, Kenneth L. Milam, A/CP Director.
Sonoma County Water Agency, Robert F. Beach, General Manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; and National Park Service, U.S. Department of the Interior.

The following organizations aided in collecting records: Pacific Gas and Electric Company; Pacific Power and Light Company.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

As is common in California, streamflow varied greatly in the 1990 water year--month by month and regionally. The variations are related to differences in precipitation, temperature, topography, and geology. Runoff during the 1990 water year in the area covered by this volume was 32 percent of the 1951-80 median (based on 10 representative streamflow records). Total runoff, in percent of median, at selected stations in California is shown in figure 1. Runoff ranged from 16 percent at Arroyo Seco near Soledad (station 11152000) to 59 percent of median at Smith River near Crescent City (station 11532500). In figure 2, monthly mean discharge in the 1990 water year is compared to the 1951-80 median, maximum, and minimum monthly mean discharge at four representative gaging stations. In addition, a comparison of monthly precipitation in the 1990 water year and the long-term average is shown in figure 2. Annual departure from 1951-80 mean discharge for four selected gaging stations is shown in figure 3. A comparison of 1990 peak discharge to peaks for period of record for selected stations is shown in table 1. A comparison of low-flow data for various years is shown in table 2.

Table 1. Comparison of peak discharge for 1990 water year with those for period of record for selected stations

Station No.	Station name	Peak discharge (ft^3/s)	1990 water year	Peak discharge (ft^3/s)	Period of record (water year)
11152000	Arroyo Seco near Soledad	3,020	Feb. 16	28,300	1958
11456000	Napa River near St. Helena	1,370	Feb. 16	16,900	1986
11477000	Eel River at Scotia	102,000	Jan. 8	752,000	1965
11532500	Smith River near Crescent City	113,000	Jan. 8	228,000	1965

Figure 1. Runoff, in percent of median, for the 1990 water year.

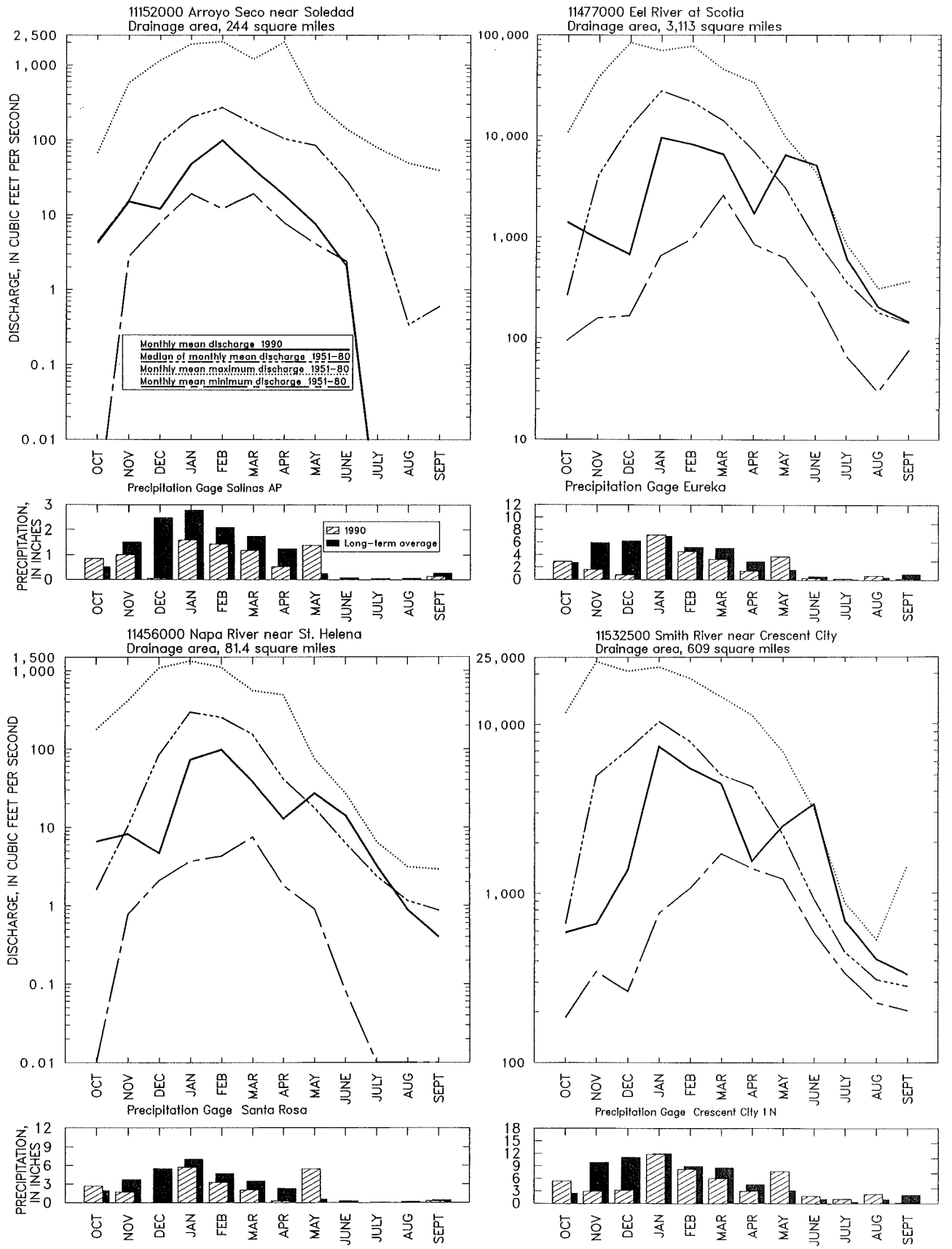


Figure 2. Discharge and precipitation during water year 1990 and long-term statistics at four representative gaging stations. Precipitation data from National Oceanic and Atmospheric Administration, 1990, Climatological data, annual report: vol. 94.

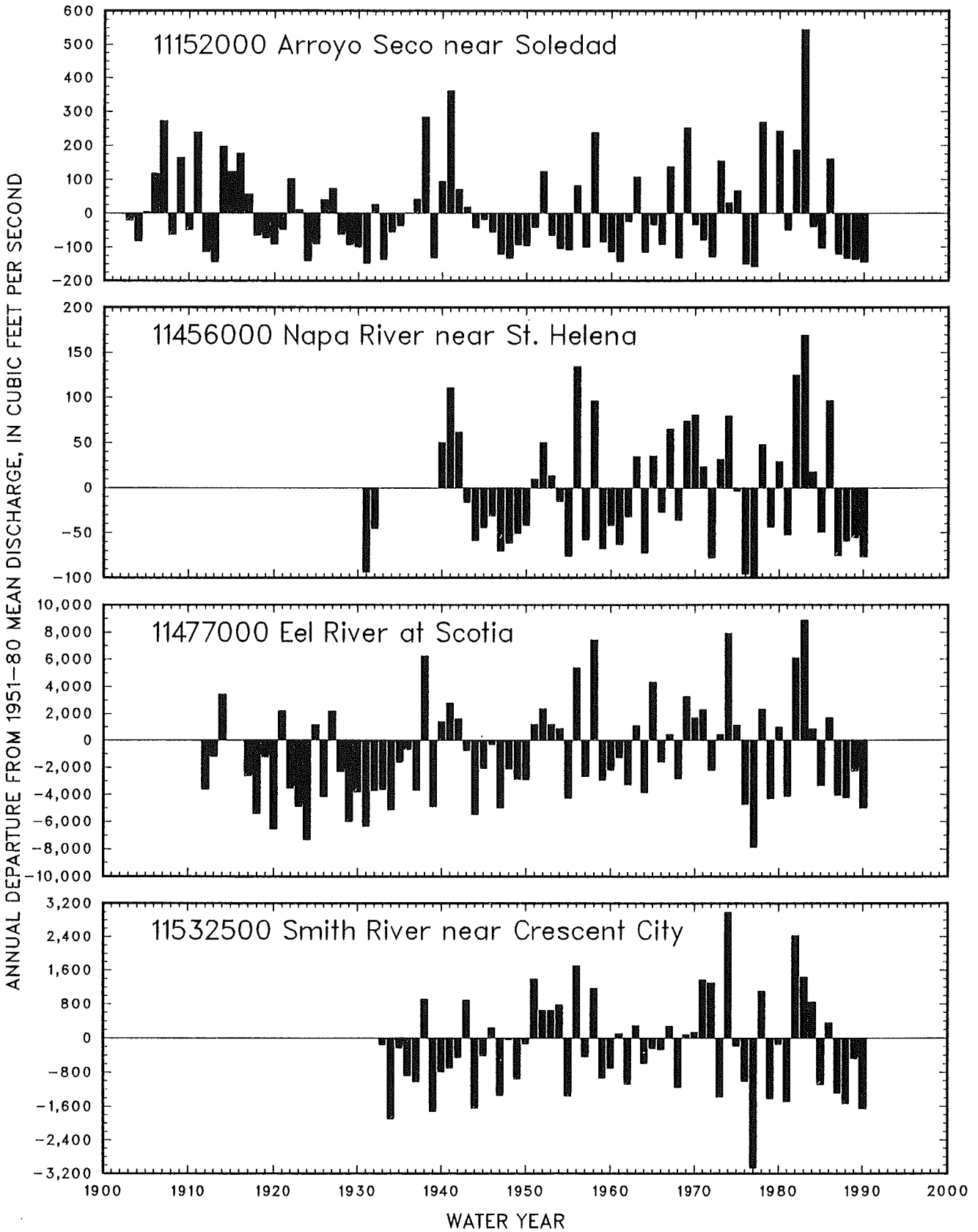


Figure 3. Annual departure from 1951-80 mean discharge for period of record at selected gaging stations.

Table 2. Comparison of 7-day low flow for 1990 water year to 7-day, 10-year low flow and minimum daily flow for 30-year base period 1951-80 at selected stations

Station No.	Station name	7-day low flow (ft^3/s) 1990 water year	7-day low flow (ft^3/s) Base period 10-year	1-day low flow (ft^3/s) 1990 water year	1-day low flow (ft^3/s) Base period 1951-80	Period of record Minimum daily (ft^3/s)	Period of record Water year
11152000	Arroyo Seco near Soledad	0	0	0	0	0	Several
11456000	Napa River near St. Helena	.45	0	.43	0	0	Several
11477000	Eel River at Scotia	123	62.1	119	25	10	1924
11532500	Smith River near Crescent City	237	189.5	235	160	160	1964

In northwestern California, several localities had difficulties due to reduced surface-water supplies. The counties north of San Francisco Bay had no significant drought-related shortages. The counties south of the bay had very low reservoir storage. On the north central coast, water supplies were marginally adequate. Required or voluntary conservation measures were enacted or continued in several localities. For example, the city of San Francisco imposed a 25 percent reduction in water consumption. The city of Santa Cruz is on a voluntary water conservation program; Monterey, Carmel and adjoining cities are under a mandatory 20 percent reduction; and the city of San Luis Obispo had a mandated 30 percent reduction.

A persistent high-pressure ridge off the California coast displaced the usual winter storm path, leaving most of the State deficient in precipitation. There were several moderate to minor storm periods in November, January, and May. These storms produced no peaks of record and few peaks above base.

Precipitation in the area covered by this volume (based on seven representative precipitation gages) was 62 percent of the long-term average. Precipitation varied from 79 percent at Crescent City to 43 percent at Pismo Beach. Rainfall was significantly below normal for all areas south of Santa Cruz and below normal elsewhere.

The water year began with many reservoir levels at or below average. In anticipation of a fifth consecutive water year with less-than-normal precipitation, many water agencies limited reservoir releases to maximize storage. By the end of the water year, storage in major reservoirs was about 80 percent of the 10-year average. Many small to moderate-sized reservoirs were less than 50 percent of capacity. Storage in selected reservoirs for water years 1988-90 is shown in figure 4.

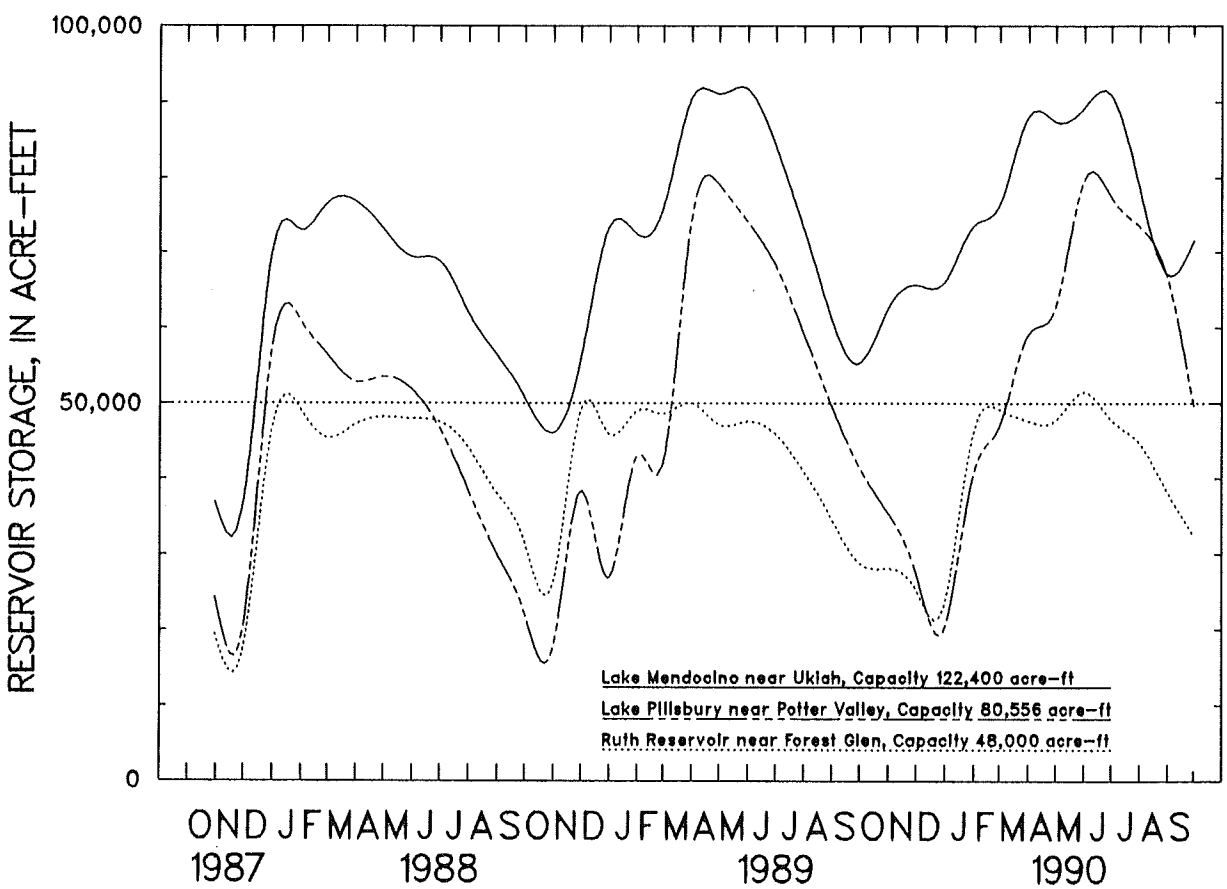


Figure 4. Storage in selected reservoirs, water years 1988-90.

The San Francisco bay area Loma Prieta earthquake had a significant impact on the base flow of many local streams. Base flow increased an order of magnitude at seven gaging stations, and about one-half order of magnitude or less at eight others. Figure 5 shows a 15-month hydrograph that indicates the change in annual flow. A hydrograph of the same site for a 5-day period shows the immediate and next day streamflow response to the earthquake.

Water Quality

Water samples collected at seven NASQAN stations and one Hydrologic Benchmark station reported in this volume were analyzed for water-quality constituents. Dissolved-solids concentrations generally increased from the previous year and was largest at Pajaro River at Chittenden (station 11159000), where the median concentration was 1,270 milligrams per liter. The smallest concentration was in water sampled from the Smith River near Crescent City (station 11532500), where the median concentration was 66 milligrams per liter; although the Salinas River near Chualar (station 11152300) did not have any measureable flow during the year. The monthly mean dissolved-solids concentrations during water year 1990 are compared in figure 6 with long-term mean dissolved-solids concentrations at two selected stations. One sulfate concentration of a water sample collected from the Pajaro River near Chittenden exceeded the water-quality criteria recommended by the U.S. Environmental Protection Agency.

The largest densities of fecal-coliform (3,200 colonies per 100 milliliters) and fecal streptococcus bacteria (3,800 colonies per 100 milliliters) were in water samples collected from Russian River near Guerneville (station 11467000).

Sediment

Suspended-sediment discharge and concentrations were monitored daily at 8 stations and periodically at 19 stations in the area included in this volume. Bed-material samples were obtained at 12 additional sites. Monthly and annual bedload discharge were estimated for seven daily stations. Sediment-monitoring stations are located as far north as Crescent City and as far south as Bryson in San Luis Obispo County. Large variations in precipitation and drainage-basin characteristics result in significant differences in sediment-discharge rates.

Sediment discharge was well below normal during the 1990 water year for all of the daily sediment stations included in this volume. Annual sediment discharge was 0.1 percent of average (1979-89) for Cull Creek above Cull Creek Reservoir, near Castro Valley (station 11180960); 18 percent (1971-89) for Redwood Creek at Orick (station 11482500); and 4 percent (1976-89) for Grass Valley Creek at Fawn Lodge, near Lewiston (station 11525600).

During the 1990 water year, sediment discharge for the eight daily stations ranged from 30 tons per year for Cull Creek above Cull Reservoir, near Castro Valley (drainage area, 5.79 square miles) to 191,000 tons per year for Redwood Creek at Orick (station 11482500, drainage area, 277 square miles). Annual sediment yield ranged from a minimum of 5.1 tons per square mile for Cull Creek above Cull Reservoir, near Castro Valley to a maximum of 691 tons per square mile for Redwood Creek at Orick.

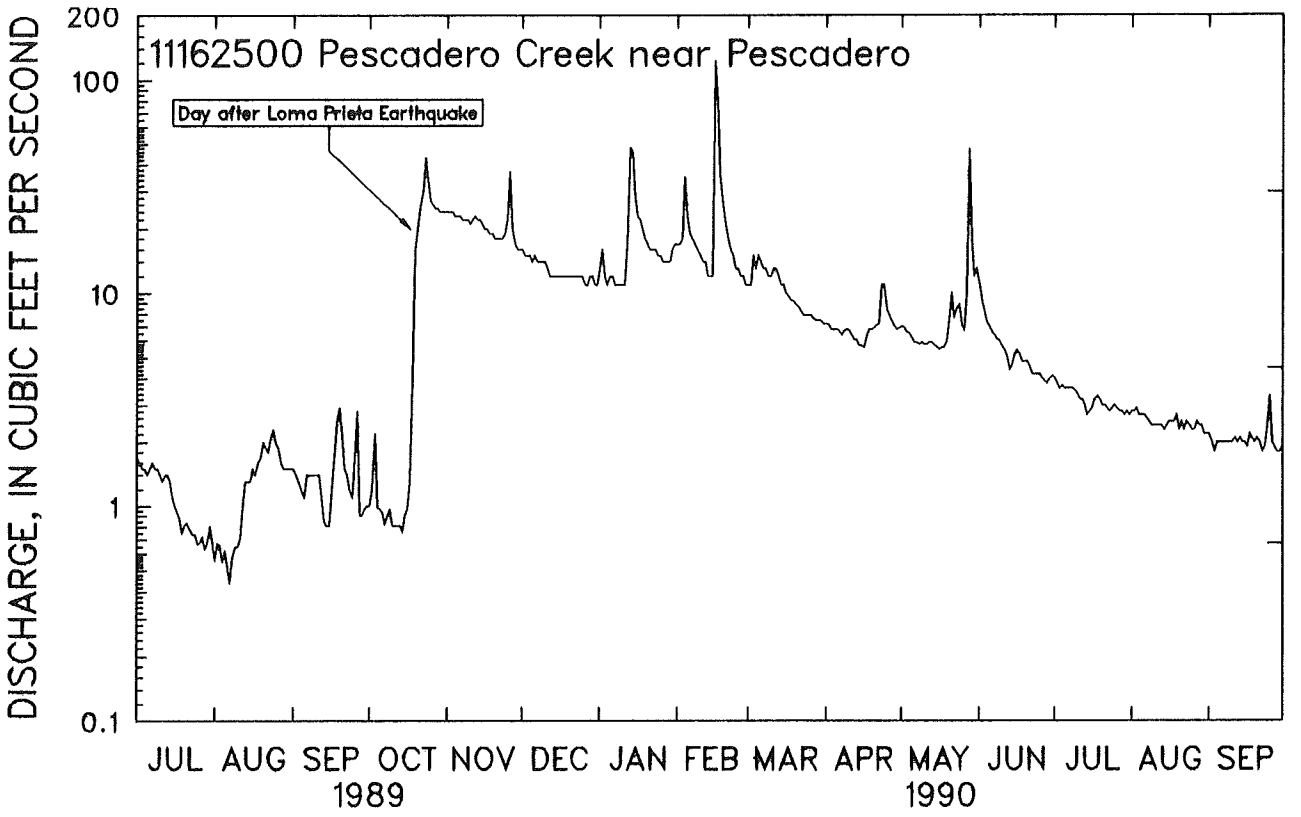
SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 56 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped drainage basins nationwide. The data provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 408 in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1990 water year that began October 1, 1989, and ended September 30, 1990. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and contents data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.



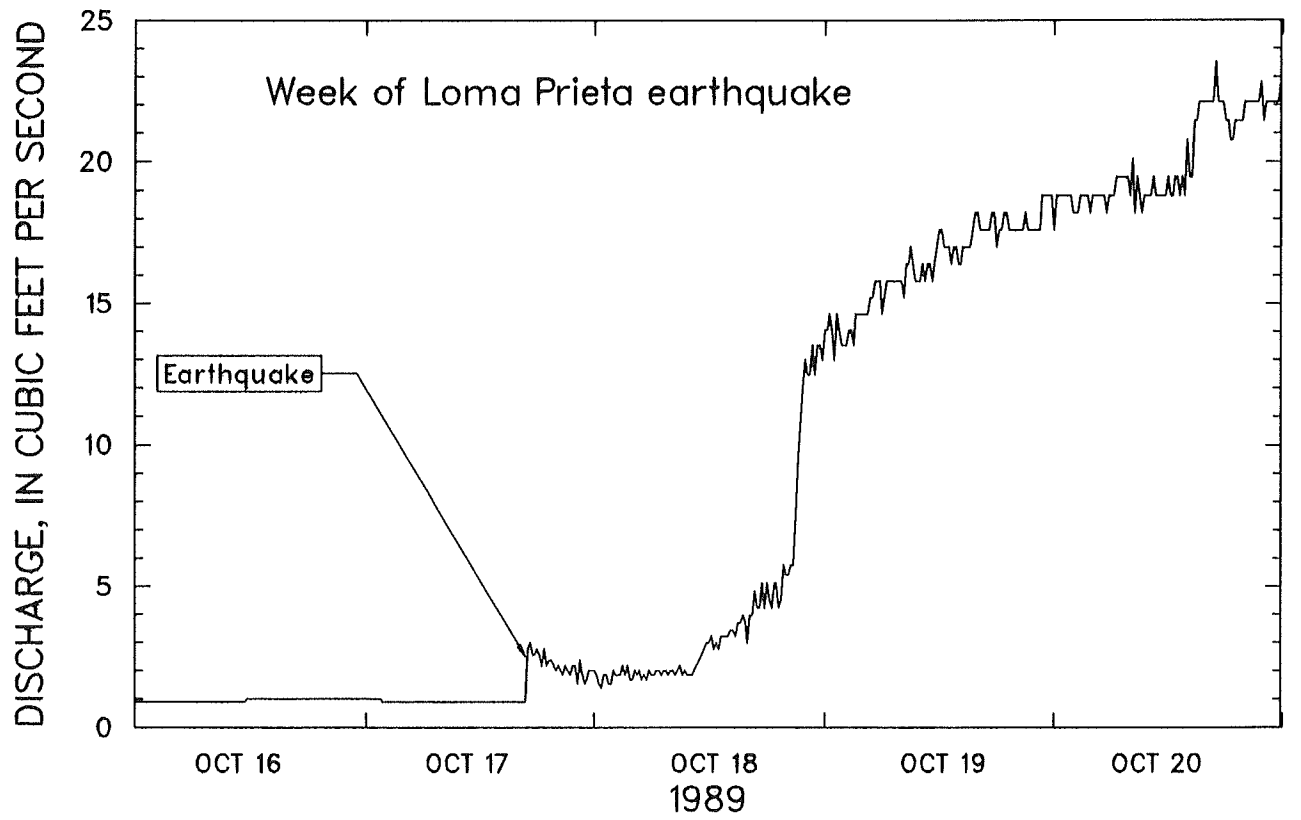


Figure 5. Stream response to Loma Prieta earthquake.

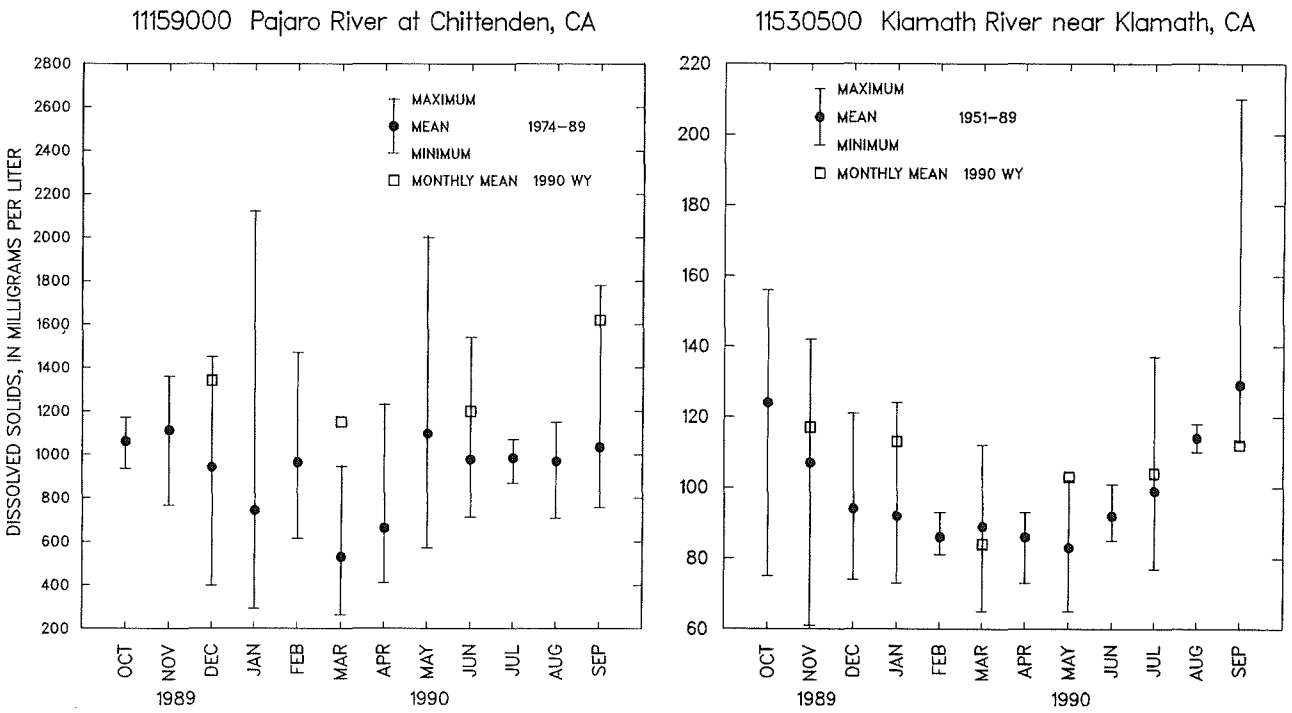


Figure 6. Comparison of monthly mean dissolved-solids concentrations during water year 1990 with long-term dissolved-solids concentrations at two selected stations.

Station Identification Numbers

Each streamsite data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for surface-water stations in California where only miscellaneous measurements are made.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports has been in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station such as 11465350, which appears just to the left of the station name, includes the two-digit part number "11" plus the six-digit downstream-order number "465350." The part number designates the major river basin; for example, part "11" is the Pacific Slope Basins in California.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description (fig. 7).

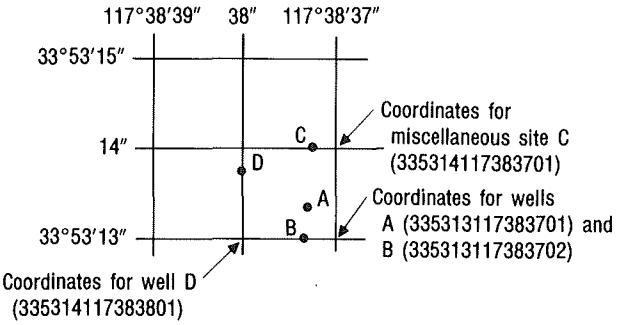


Figure 7. System for numbering miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake and reservoir contents, similarly, are those for which stage or contents may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and partial-record stations for which data are given in this report are shown, by county, in figures 8 through 24.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake contents. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge are prepared for any stage within the range of the measurements. If it is necessary to define extremes of discharge outside the range of current-meter measurements, the curves are extended using (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dam or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes or observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available surveys, curves, or tables defining the relation of stage and contents. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relation changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relation. When this is done, the contents computed may become increasingly in error as time increases since the last survey. Discharges over lake or reservoir spillways are computed from stage-discharge relations, in the same manner as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation.

The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time when the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see Definition of Terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations with at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possible, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office to determine if the published records were revised after the station was discontinued. If the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton storage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly, measured discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing the table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second (ft^3/s) for values less than 1 ft^3/s, to the nearest tenth between 1.0 and 10 ft^3/s, to whole numbers between 10 and 1,000 ft^3/s, and to three significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the measured discharge.

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of sites as well as an index of records of discharge collected by other agencies but not published by the U.S. Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge measurement notes, gage-height records, temperature measurements, and rating tables are on file in the California District office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the California District office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve various types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 8 through 24.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is the assurance that the data obtained represent the in-situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, are made onsite when samples are taken. To assure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures are followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in "Techniques of Water-Resources Investigations," Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapters A1, A3, and A4. All these references are listed on p. 23 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the California District office.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative value available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values for each constituent measured and are based on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District office.

Water Temperature

Water temperatures are measured at the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations measured immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Estimates of bedload and total-sediment discharge are included for some stations. Computations of monthly bedload discharges are based on the relation between instantaneous water discharge and corresponding bedload discharge for the station. Values of bedload discharge used in defining this relation are based on samples obtained by use of the Helley-Smith bedload sampler or by modified-Einstein or Meyer-Peter Muller computation procedures. Application of the bedload-transport relation at a station was made on a daily basis or subdivided-day basis. The Helley-Smith sampler is designed to collect a time-weighted sample for the sediment moving within 0.25 ft of the streambed. Sediment moving in this portion of the flow cannot be sampled with standard suspended-sediment samplers. Calibration of the Helley-Smith sampler has not been completed, and a trap efficiency of 1.0 has been assumed applicable to this device. Error sources in the theoretical methods, based on analysis of bed-material characteristics, channel geometry, and associated hydraulic factors, are also undefined. In consequence, figures of bedload discharge must be used with caution. They are estimates, at best, and are subject to revision.

Cross-Sectional Data

Cross-sectional surveys of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are done at all NASQAN and Hydrologic Bench-mark stations during various seasons and surface-water discharges. Documentation of cross-section variation of water quality is essential in order to determine how many samples in a cross section are necessary to ensure a representative composite sample.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S Geological Survey's National Water-Quality Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in Techniques of Water-Resources Investigations, Book 5, Chapter C1; methods used by the laboratories are given in Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and other data obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the individual parameters.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature recorder, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide various useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's District offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, VA 22092

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report are defined below. See the table for converting inch-pound units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by a well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease; others perform an essential role in nature in the recycling of materials, for example, decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35 °C. For the membrane filter method, these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C ± 0.5 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Fecal-coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. For the membrane filter method, they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5 °C ± 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Fecal-streptococcal bacteria are bacteria found in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. For the membrane filter method they are defined as all the organisms which produce red or pink colonies within 48 hours at 35 °C ± 0.5 °C on KF streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Benthic organisms (invertebrates) are the group of animals living in or on the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3) and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105 °C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cell volume determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell numbers of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements on cell dimensions (that is, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (that is, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere} \quad 4/3\ \pi r^3 \qquad \text{cone} \quad 1/3\ \pi r^3 h \qquad \text{cylinder} \quad \pi r^3 h.$$

From cell volume, total algal biomass expressed as biovolume ($\pi m^3/mL$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes over all species.

Cells per volume (cells/volume) refers to the number of cells of any organism that are counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually in milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day (cfs.d) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons or 2,445 cubic meters.

Discharge is the volume of water (or more broadly, total fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate. It is recognized that certain kinds of samples cannot be filtered; to provide for this, procedures that are considered equivalent to filtering through a 0.45-micrometer membrane filter will be identified and announced at a later date.

Dissolved-solids concentration of water is determined either analytically or by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = \sum_{i=1}^{s} \frac{n_i}{n} \log 2 \frac{n_i}{n},$$

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the samples are the same; to some positive number, when some or all the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the Earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water, together with all tributary surface streams and bodies of impounded surface water.

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to the National Geodetic Vertical Datum of 1929. This elevation is established by a system of levels from known bench marks or by approximation from topographic maps.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap that is required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation

$$I = I_o \, e^{-\lambda L},$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_o}.$$

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This development process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-pupa-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (UG/G, $\mu g/g$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, $\mu g/L$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called Sea Level Datum of 1929 or mean sea level in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 408 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes in trends with time in the pattern occurrence of water-quality characteristics, and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

Nekton are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area of the habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism--Continued

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter code is a five-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024-0.004	Sedimentation
Silt.....	0.004-0.062	Sedimentation
Sand.....	0.062-2.0	Sedimentation or sieve
Gravel.....	2.0-64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition or percent of total is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periphyton is the assemblage of micro-organisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, the periphyton also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants, respectively, are the two categories reported.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{12} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton are suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton compose the plant part of the plankton. They are usually microscopic, and their movement is subject to water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials into the surrounding water, the phytoplankton have a profound effect on the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are phytoplankton organisms having a blue pigment in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms, chiefly green plants. The rate of primary production is estimated by measuring the amount of carbon assimilated by plants (carbon method) or the amount of oxygen released (oxygen method).

Milligrams of carbon per area or volume per unit time [mg C/(m^2/time) for periphyton and macrophytes and mg C/(m^3/time) for phytoplankton] are the units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity that the oxygen light- and dark-bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O_2/(m^2/time) for periphyton and macrophytes and mg O_2/(m^3/time) for phytoplankton] are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment; thus, the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bedload is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bedload is considered to consist of particles in transit within 0.25 ft of the streambed.

Bedload discharge (tons per day) is the quantity of sediment, as measured by dry weight, that moves past a section as bedload in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour period.

Suspended-sediment discharge (tons per day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day by multiplying discharge times milligrams per liter times 0.0027.

Suspended-sediment load (tons per day) is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total-sediment discharge or total-sediment load (tons per day) is the sum of suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry mass, that passes a section in a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating dissolved-solids concentration in water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic-organism collection and plexiglass strips for periphyton collection.

Surface area of a lake is the area, in square miles or acres, outlined on the latest U.S. Geological Survey topographic map as the boundary of the lake and measured by a planimeter. In localities not covered by topographic maps, the areas are computed from the best maps available. Areas shown are for the lake stage at the time the map was made.

Surficial bed material is the part (upper 0.1 to 0.2 ft or 0.03 to 0.06 m) of the bed material that is sampled by using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment; thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	Hexagenia limbata

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or a digital mechanism that records water temperature in a digital format on punched paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total load (tons) is the total amount of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the milligrams per liter of the constituent, times the factor 0.0027, times the number of days.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment; thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in the dissolved and suspended phases of the sample. A knowledge of the expected form is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all the constituent in the sample.)

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Nephelometric turbidity units (NTU), obtained from the Nephelometric method for turbidity determination which measures the intensity of light scattered by suspended particles at 90° from the path of incident light source.

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1990, is called the "1990 water year."

WDR is used as an abbreviation for "Water-Data Reports" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Building 810, Denver, CO 80225. Prepayment is required. Remittance should be sent by check or money order payable to U.S. Geological Survey, Department of the Interior. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. Water temperature--influential factors, field measurement, and data presentation, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W.W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. Application of surface geophysics to ground-water investigations, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-D2. Application of seismic-refraction techniques to hydrologic studies, by F.P. Haeni: USGS--TWRI book 2, Chapter D2 1988. 86 pages.

2-E1. Application of borehole geophysics to water-resources investigations, by W.S. Keys, and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

2-F1. Application of drilling, coring, and sampling techniques to test holes and wells, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.

3-A1. General field and office procedures for indirect discharge measurements, by M.A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. Measurement of peak discharge by slope-area method, by Tate Dalrymple and M.A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. Measurement of peak discharge at culverts by indirect methods, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. Measurement of peak discharge at width contractions by indirect methods, by H.F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. General procedure for gaging streams, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. Stage measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. Discharge measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. Measurement of time of travel and dispersion in streams by dye tracing, by E.F. Hubbard, F.A. Kilpatrick, L.A. Martens, and J.F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A10. Discharge ratings at gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. Measurement of discharge by moving-boat method, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A12. Fluorometric procedures for dye tracing, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.

3-A13. Computation of continuous records of streamflow, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. Use of flumes in measuring discharge, by F.A. Kilpatrick and V.R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. Computation of water-surface profiles in open channels, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. Measurement of discharge using tracers, by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. Acoustic velocity meter systems, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. Determination of stream reaeration coefficients by use of tracers, by F.A. Kilpatrick, R.E. Rathbun, N. Yotsukura, G.W. Parker, and L.L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

3-A19. Levels of streamflow gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.

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3-C2. Field methods for measurement of fluvial sediment, by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

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5-A2. Determination of minor elements in water by emission spectroscopy, by P.R. Barnett and E.C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. Methods for analysis of organic substances in water, by D.F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

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8-A2. Installation and service manual for U.S. Geological Survey manometers, by J.D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. Calibration and maintenance of vertical-axis type current meters, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

DISCONTINUED GAGING STATIONS

The following continuous record streamflow stations in California have been discontinued or converted to partial-record stations. Daily records were collected and are stored in WATSTORE for the period of record shown for each station

Station No.	Station name	Drainage area (mi^2)	Period of record
11137500	ALAMO CREEK NEAR SANTA MARIA	86.6	1944-62
11138000	HUASNA RIVER NEAR SANTA MARIA	117	1930-62
11141160	WITTENBERG CREEK NEAR ARROYO GRANDE	3.11	1967-75
11141300	ARROYO GRANDE NEAR ARROYO GRANDE	68.3	1958-66
11141400	TAR SPRING CREEK NEAR ARROYO GRANDE	18.2	1968-79
11141500	ARROYO GRANDE AT ARROYO GRANDE	102	1940-86
11141600	LOS BERROS CREEK NEAR NIPOMO	15	1968-78
11142080	MORRO CREEK AT MORRO BAY	24	1971-78
11142100	TORO CREEK NEAR MORRO BAY	18	1971-78
11142200	SANTA ROSA CREEK NEAR CAMBRIA	12.5	1957-72
11142240	PERRY CREEK AT CAMBRIA	22.9	1988-89
11142300	SAN SIMEON CREEK NEAR CAMBRIA	26.3	1988-89
11142500	ARROYO DE LA CRUZ NEAR SAN SIMEON	41.2	1951-79
11142550	SAN CARPOFORO CREEK NEAR SAN SIMEON	34.6	1978
11142800	RAT CREEK NEAR LUCIA	.82	1961-63
11143300	ARROYO DEL REY AT DEL REY OAKS	13.8	1967-78
11143500	SALINAS RIVER NEAR POZO	70.3	1943-83
11144000	TORO CREEK NEAR POZO	9.56	1961-69, 1972-83
11144200	SALSIPUEDES CREEK NEAR POZO	5.91	1970-83
11144600	SALINAS RIVER BELOW SALINAS DAM, NEAR POZO	112	1974-86
11145000	SALINAS RIVER ABOVE PILITAS CREEK, NEAR SANTA MARGARITA	114	1942-43, 1948-75
11145500	SALINAS RIVER NEAR SANTA MARGARITA	149	1922, 1932-49
11147000	JACK CREEK NEAR TEMPLETON	25.3	1950-78
11147040	SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON	2.95	1967-72
11147600	HUERHUERO CREEK NEAR CRESTON	101	1959-72
11147700	CHOLAME CREEK TRIBUTARY NEAR CHOLAME	9.26	1959-65
11147800	CHOLAME CREEK NEAR SHANDON	227	1959-72
11148000	ESTRELLA RIVER NEAR PASO ROBLES	787	1940-41
11148800	NACIMIENTO RIVER NEAR BRYSON	147	1956-72
11149500	NACIMIENTO RIVER NEAR SAN MIGUEL	349	1940-57
11149650	SULPHUR SPRINGS CANYON NEAR JOLON	5.16	1968-69
11150800	COW CREEK NEAR SAN ARDO	4.8	1961-64
11151000	SAN LORENZO CREEK NEAR KING CITY	210	1940-42
11151500	SAN LORENZO CREEK AT KING CITY	259	1943-45
11151870	ARROYO SECO NEAR GREENFIELD	113	1961-86
11152570	ALISAL CREEK NEAR SALINAS	14.2	1971-74
11152650	RECLAMATION DITCH NEAR SALINAS	53.2	1971-86
11152900	CEDAR CREEK NEAR BELL STATION	12.8	1962-82
11153000	PACHECO CREEK NEAR DUNNEVILLE	146	1940-82
11153040	PACHECO CREEK AT DUNNEVILLE	154	1982-85
11153470	LLAGAS CREEK ABOVE CHESBRO RESERVOIR, NEAR MORGAN HILL	9.63	1972-82
11153700	PAJARO RIVER NEAR GILROY	399	1961-82
11153790	UVAS CREEK AT SVEADAL	2.88	1973-74
11153800	ALEC CANYON NEAR MORGAN HILL	.91	1970-73
11153900	UVAS CREEK ABOVE UVAS RESERVOIR, NEAR MORGAN HILL	21	1961-82
11154000	UVAS CREEK NEAR MORGAN HILL	30.4	1931-57
11154100	BODFISH CREEK NEAR GILROY	7.40	1960-82
11154500	PAJARO RIVER AT SARGENT	505	1941
11156000	SAN BENITO RIVER BELOW MCCOY CREEK, NEAR HERNANDEZ	108	1950-53, 1960-63
11156450	WILLOW CREEK TRIBUTARY NEAR SAN BENITO	1.24	1964-69
11156700	PESCADERO CREEK NEAR PAICINES	38.3	1959-70
11157500	TRES PINOS CREEK NEAR TRES PINOS	206	1941-83
11158500	SAN BENITO RIVER NEAR HOLLISTER	586	1950-83
11158900	PESCADERO CREEK NEAR CHITTENDEN	10.2	1970-81
11159150	CORRALITOS CREEK NEAR CORRALITOS	10.6	1958-72
11159400	GREEN VALLEY CREEK NEAR CORRALITOS	7.05	1964-67
11159500	PAJARO RIVER AT WATSONVILLE	1,272	1912-13, 1972-73
11159690	APTOS CREEK NEAR APTOS	10.2	1972-85
11159700	APTOS CREEK AT APTOS	12.2	1959-72
11159800	WEST BANK SOQUEL CREEK NEAR SOQUEL	12.2	1959-72
11159940	SOQUEL CREEK NEAR SOQUEL	32.0	1969-72
11160200	NEWELL CREEK AT BEN LOMOND	8.98	1958-60
11161500	BRANCIFORTE CREEK AT SANTA CRUZ	17.3	1940-43, 1952-68
11161570	MAJORS CREEK NEAR SANTA CRUZ	3.77	1970-76
11161590	LAGUNA CREEK NEAR DAVENPORT	3.07	1970-76
11161800	SAN VICENTE CREEK NEAR DAVENPORT	6.07	1970-85
11161900	SCOTT CREEK ABOVE LITTLE CREEK, NEAR DAVENPORT	25.1	1959-73
11162000	SCOTT CREEK NEAR DAVENPORT	27.3	1937, 1939-41
11162540	BUTANO CREEK NEAR PESCADERO	18.3	1962-74
11162600	PURISIMA CREEK NEAR HALF MOON BAY	4.83	1959-69

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
11162722	SPRUCE BAY AT SOUTH SAN FRANCISCO	0.70	1965-69
11162900	SHARON CREEK NEAR MENLO PARK	.38	1959-69
11162940	SAN FRANCISQUITO CREEK BELOW LADERA DAMSITE, NEAR STANFORD UNIVERSITY	28.5	1962-70
11162950	SAN FRANCISQUITO CREEK TRIBUTARY NEAR STANFORD UNIVERSITY	.24	1959-64
11163000	LOS TRANCOS CANAL NEAR STANFORD UNIVERSITY	--	1931-41
11163200	LOS TRANCOS CREEK TRIBUTARY NEAR STANFORD UNIVERSITY	.42	1959-66
11163500	LOS TRANCOS CREEK AT STANFORD UNIVERSITY	7.46	1931-41
11164000	LAGUNITA CANAL AT STANFORD UNIVERSITY	--	1931-41
11165500	SAN FRANCISQUITO CREEK AT PALO ALTO	40.8	1931-41
11166500	STEVENS CREEK NEAR CUPERTINO	18.1	1931-59
11166575	PERMANENTE CREEK NEAR MONTE VISTA	3.86	1984-87
11166578	WEST FORK PERMANENTE CREEK NEAR MONTE VISTA	2.98	1984-87
11167000	ALAMITOS CREEK NEAR EDENVALE	34.5	1930-58
11167660	ROSS CREEK AT SAN JOSE	5.70	1962-70
11167700	ROSS CREEK BELOW JARVIS ROAD, AT SAN JOSE	7.71	1972-74
11168500	LOS GATOS CREEK BELOW LOS GATOS	42.6	1945-53
11169800	COYOTE CREEK NEAR GILROY	109	1961-82
11170000	COYOTE CREEK NEAR MADRONE	196	1903-12, 1917-87
11170500	COYOTE CREEK AT COYOTE	204	1917-23
11172000	COYOTE CREEK AT SAN JOSE	238	1917
11172100	UPPER PENITENCIA CREEK AT SAN JOSE	21.5	1962-87
11172500	LAGUNA CREEK AT IRVINGTON	12.5	1917-19
11173000	ALAMEDA CREEK NEAR SUNOL	37.5	1912-30
11173200	ARROYO HONDO NEAR SAN JOSE	77.1	1969-81
11173500	CALAVERAS CREEK NEAR SUNOL	98.7	1898-1908, 1911-30
11174000	SAN ANTONIO CREEK NEAR SUNOL	37	1912-30, 1961-65
11174500	ALAMO CREEK AT DUBLIN	38.7	1915-20
11174600	ALAMO CANAL NEAR PLEASANTON	40.8	1978-83
11175000	TASSAJERO CREEK NEAR PLEASANTON	26.8	1915-19, 1922-30
11176090	ARROYO MOCHO AT LIVERMORE	50.8	1984-86
11176100	ARROYO LAS POSITAS ABOVE LIVERMORE	7.82	1972-74
11176140	ALTAMONT CREEK NEAR LIVERMORE	13.4	1979-80
11176145	ARROYO LAS POSITAS AT LIVERMORE	53.3	1980-86
11176150	ARROYO LAS POSITAS NEAR LIVERMORE	64.6	1912-19, 1922, 1924-30
11176180	ARROYO LAS POSITAS AT EL CHARRO ROAD, NEAR PLEASANTON	75.0	1978-83
11176200	ARROYO MOCHO NEAR PLEASANTON	142	1962-86
11176300	TASSAJARA CREEK NEAR PLEASANTON	26.8	1979-83
11176600	ARROYO VALLE AT PLEASANTON	171	1958-86
11179500	CRANDAL SLOUGH NEAR CENTERVILLE	--	1917-18
11180000	ALAMEDA CREEK NEAR SUNOL	639	1917-19
11180750	ALAMEDA CREEK AT UNION CITY	653	1959-73
11181000	SAN LORENZO CREEK AT HAYWARD	37.5	1940, 1947-83
11181004	CASTRO VALLEY CREEK AT CASTRO VALLEY	.98	1979-80
11181300	PERALTA CREEK AT OAKLAND	1.67	1973
11181335	CALDECOTT CREEK AT LAKE TEMESCAL, AT OAKLAND	0.83	1980-81
11181400	WILDCAT CREEK AT RICHMOND	8.67	1964-75
11182030	RHEM CREEK AT SAN PABLO	1.49	1961-90
11182100	PINOLE CREEK AT PINOLE	10	1939-70, 1972-77
11182400	ARROYO DEL HAMBRE AT MARTINEZ	15.1	1965-82
11183000	SAN RAMON CREEK AT WALNUT CREEK	50.8	1953-73, 1986
11183500	WALNUT CREEK AT WALNUT CREEK	79.2	1953-68
11183700	LITTLE PINE CREEK NEAR ALAMO	1.22	1975-89
11184000	GALINDO CREEK AT CONCORD	7.74	1955-58
11184500	PINE CREEK AT CONCORD	28.3	1953-60
11337500	MARSH CREEK NEAR BYRON	42.6	1953-83
11451520	CACHE CREEK NEAR LOWER LAKE PLUS NORTH FORK	725	1976
11455900	NAPA RIVER AT CALISTOGA	21.9	1976-83
11455950	SULPHUR CREEK NEAR ST HELENA	4.50	1966-67
11456500	CONN CREEK NEAR OAKVILLE	55.4	1930-59, 1971-76
11457000	DRY CREEK NEAR NAPA	17.4	1951-66
11457500	DRY CREEK NEAR YOUNTVILLE	18.7	1941
11458100	MILLIKEN CREEK NEAR NAPA	17.3	1971-83
11458200	REDWOOD CREEK NEAR NAPA	9.79	1958-73
11458300	NAPA CREEK AT NAPA	14.9	1971-83
11458350	TULUCAY CREEK AT NAPA	12.6	1972-83
11458500	SONOMA CREEK AT AGUA CALIENTE	58.4	1955-81
11459000	PETALUMA RIVER AT PETALUMA	30.9	1949-63
11459300	SAN ANTONIO CREEK NEAR PETALUMA	28.9	1975-81
11459800	SAN RAFAEL CREEK AT SAN RAFAEL	--	1972-76
11459830	IRWIN CREEK AT SAN RAFAEL	--	1972-76
11460100	ARROYO CORTE MADERA DEL PRESIDIO AT MILL VALLEY	4.69	1966-73, 1975-86
11460160	MORSES CREEK AT BOLINAS	.70	1967-69

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
11460500	NICASIO CREEK AT POINT REYES STATION	36.6	1954-60
11460800	WALKER CREEK NEAR TOMALES	40.1	1959-84
11460920	SALMON CREEK AT BODEGA	15.7	1962-75
11460940	RUSSIAN RIVER NEAR REDWOOD VALLEY	14.1	1963-68
11461400	EAST FORK RUSSIAN RIVER TRIBUTARY NEAR POTTER VALLEY	.15	1961
11461501	EAST FORK RUSSIAN RIVER & POTTER VALLEY POWERHOUSE, NEAR CALPELLA	--	1942-69
11462700	FELIZ CREEK NEAR HOPLAND	31.3	1958-66
11463160	BIG SULPHUR CREEK NEAR MIDDLETOWN	2.89	1978-79
11463500	RUSSIAN RIVER AT GEYSERVILLE	655	1911-13
11463900	MAACAMA CREEK NEAR KELLOGG	43.4	1961-81
11463940	FRANZ CREEK NEAR KELLOGG	15.7	1964-68
11464050	DRY CREEK TRIBUTARY NEAR HOPLAND	1.19	1968-69
11464400	DRY CREEK NEAR YORKVILLE	56.0	1974-83
11464860	WARM SPRINGS CREEK NEAR ASTI	12.2	1973-83
11465050	DUTCHER CREEK NEAR ASTI	2.24	1973
11465150	PENA CREEK NEAR GEYSERVILLE	22.3	1979-90
11465800	SANTA ROSA CREEK NEAR SANTA ROSA	12.5	1959-70
11466200	SANTA ROSA CREEK AT SANTA ROSA	56.6	1940-41
11467200	AUSTIN CREEK NEAR CAZADERO	63.1	1959-66
11467500	SOUTH FORK GUALALA RIVER NEAR ANNAPOLIS	161	1951-71
11467600	GARCIA RIVER NEAR POINT ARENA	98.5	1962-83
11467800	RANCHERIA CREEK NEAR BOONVILLE	65.6	1959-68
11467850	SODA CREEK TRIBUTARY NEAR BOONVILLE	1.53	1965-68
11468010	ALBION RIVER NEAR COMPTCHE	14.4	1961-69
11468070	SOUTH FORK BIG RIVER NEAR COMPTCHE	36.2	1960-71
11468150	WARNER CREEK NEAR FORT BRAGG	.61	1969-71, 1973
11468540	PUDDING CREEK NEAR FORT BRAGG	12.5	1964-71
11468850	DUNN CREEK NEAR ROCKPORT	1.88	1961-64
11468990	HONEYDEW CREEK NEAR HONEYDEW	14.9	1973-78
11469500	NORTH FORKMATTOLE RIVER AT PETROLIA	37.6	1951-57
11469800	COLD CREEK TRIBUTARY NEAR ELK CREEK	.81	1970-71, 1973
11471099	POTTER VALLEY POWERHOUSE (TRIBUTARY ONLY) NEAR POTTER VALLEY	--	1976-83, 1987-89
11471105	POTTER VALLEY IRRIGATION CANAL E5 NEAR POTTER VALLEY	--	1976-83, 1988-89
11471106	POTTER VALLEY IRRIGATION CANAL E6 NEAR POTTER VALLEY	--	1976-83, 1988-89
11471800	TOMKI CREEK NEAR WILLITS	43.4	1963-70
11472000	EEL RIVER AT HEARST	466	1911-13
11472500	EEL RIVER ABOVE DOS RIOS	705	1951-65
11472800	MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO	204	1968-70
11472900	BLACK BUTTE RIVER NEAR COVELO	162	1959-75
11473000	MIDDLE FORK EEL RIVER BELOW BLACK BUTTE RIVER, NEAR COVELO	367	1952-67
11473100	WILLIAMS CREEK NEAR COVELO	30.4	1962-69
11473500	MIDDLE FORK EEL RIVER NEAR COVELO	406	1912-18, 1920-22
11473530	MILL CREEK BELOW ALDER CREEK, NEAR COVELO	17.1	1962-65
11473600	SHORT CREEK NEAR COVELO	15.2	1959-69
11473700	MILL CREEK NEAR COVELO	95.6	1956-71
11473800	ELK CREEK NEAR HEARST	84.1	1964-73
11473980	GOFORTH CREEK AT DOS RIOS	3.83	1966-68
11474000	EEL RIVER BELOW DOS RIOS	1,484	1912-13, 1952-67
11474400	HULLS CREEK NEAR COVELO	25.9	1962-64
11475700	TENMILE CREEK NEAR LAYTONVILLE	50.3	1958-74
11475940	EAST BANK SOUTH FORK EEL RIVER NEAR GARBERVILLE	74.3	1966-72
11476000	SOUTH FORK EEL RIVER AT GARBERVILLE	468	1912-13, 1940
11476700	LARABEE CREEK NEAR HOLMES	84.1	1960-65
11477500	VAN DUZEN RIVER NEAR DINSMORE	85.2	1954-58, 1964-74
11477700	LITTLE VAN DUZEN RIVER NEAR BRIDGEVILLE	36.2	1958-67
11478000	VAN DUZEN RIVER AT BRIDGEVILLE	202	1912-13, 1940-51
11478400	VAN DUZEN RIVER TRIBUTARY NEAR BRIDGEVILLE	.71	1969-71, 1973
11479000	YAGER CREEK NEAR CARLOTTA	127	1954-55, 1957-60, 1966-72
11479500	YAGER CREEK AT CARLOTTA	134	1912-13
11479700	ELK RIVER NEAR FALK	44.2	1958-67
11480000	JACOBY CREEK NEAR FRESHWATER	5.80	1955-64
11480750	MAD RIVER NEAR KNEELAND	351	1966-74
11480800	NORTH FORK MAD RIVER NEAR KORBEL	40.4	1958-64, 1973-74
11482000	REDWOOD CREEK NEAR KORBEL	83.0	1912-13
11482120	REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK	150	1981-89
11482130	COYOTE CREEK NEAR ORICK	7.78	1980-82, 1984-89
11482200	REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK	185	1971-81
11482468	LITTLE LOST MAN CREEK AT SITE NO. 2, NEAR ORICK	3.46	1974-82, 1985-89
11488700	DRY LAKE TRIBUTARY AT PEREZ	1.74	1963-66
11489500	ANTELOPE CREEK NEAR TENNANT	18.6	1953-79
11490000	ANTELOPE CREEK NEAR MACDOEL	30	1922
11490500	BUTTE CREEK NEAR MACDOEL	178	1922, 1952-60
11512000	FALL CREEK AT COPCO	14.6	1933-59
11512500	KLAMATH RIVER BELOW FALL CREEK, NEAR COPCO	4,317	1924-61

DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi^2)	Period of record
11516600	COTTON CREEK AT HORNBROOK	89.8	1965-71
11516750	SHASTA RIVER NEAR EDGEWOOD	70.3	1963-67
11516900	LITTLE SHASTA RIVER NEAR MONTAGUE	48.2	1958-78
11517000	SHASTA RIVER NEAR MONTAGUE	673	1912-13, 1917-21, 1924-33
11517800	BEAVER CREEK NEAR KLAMATH RIVER	106	1960-65
11517900	EAST FORK SCOTT RIVER BELOW HOUSTON CREEK, NEAR CALLAHAN	19.7	1970-73
11517950	EAST FORK SCOTT RIVER ABOVE KANGAROO CREEK, NEAR CALLAHAN	49.5	1970-73
11518000	EAST FORK SCOTT RIVER NEAR CALLAHAN	57.5	1911
11518050	EAST FORK SCOTT RIVER AT CALLAHAN	110	1960-74
11518200	SOUTH FORK SCOTT RIVER NEAR CALLAHAN	41.5	1959-60
11518300	SUGAR CREEK NEAR CALLAHAN	12	1957-60
11518310	CEDAR GULCH NEAR CALLAHAN	.99	1966-73
11518600	MOFFETT CREEK NEAR FORT JONES	69.8	1959-67
11519000	SHACKLEFORD CREEK NEAR MUGGINSVILLE	17.7	1957-60
11520000	SCOTT RIVER NEAR SCOTT BAR	804	1912-13, 1968
11521000	KLAMATH RIVER NEAR HAPPY CAMP	7,024	1912
11522200	ELK CREEK NEAR HAPPY CAMP	90.4	1957-64
11522260	TI CREEK NEAR SOMES BAR	9.46	1961-64
11522300	SOUTH FORK SALMON RIVER NEAR FORKS OF SALMON	252	1957-65
11522400	NORTH FORK SALMON RIVER NEAR FORKS OF SALMON	203	1959-64
11523030	RED CAP CREEK NEAR ORLEANS	56.1	1958-65
11523050	BLUFF CREEK NEAR WEITCHPEC	74.6	1959-65
11523700	COFFEE CREEK NEAR TRINITY CENTER	107	1911-13, 1958-66
11524000	TRINITY RIVER NEAR TRINITY CENTER	300	1911-13
11525800	WEAVER CREEK NEAR DOUGLAS CITY	48.4	1959-69
11525900	BROWNS CREEK NEAR DOUGLAS CITY	71.6	1957-67
11526000	TRINITY RIVER NEAR DOUGLAS CITY	1,014	1944-51
11527400	NEW RIVER AT DENNY	173	1959-69
11527500	NEW RIVER NEAR DENNY	178	1928-29
11528000	TRINITY RIVER NEAR CHINA FLAT	1,733	1912-13
11528100	SOUTH FORK TRINITY RIVER AT FOREST GLEN	208	1960-65
11528200	SOUTH FORK TRINITY RIVER NEAR HYAMPOM	342	1956-65
11528400	HAYFORK CREEK NEAR HAYFORK	86.7	1957-65
11528440	BIG CREEK NEAR HAYFORK	27.1	1961, 1963-67
11529500	SOUTH FORK TRINITY RIVER NEAR CHINA FLAT	932	1912-13
11529800	WILLOW CREEK NEAR WILLOW CREEK	40.9	1959-74
11530150	MAREEP CREEK NEAR WEITCHPEC	3.56	1967-71, 1973
11531000	MIDDLE FORK SMITH RIVER AT GASQUET	131	1912-17, 1959-65
11531500	NORTH FORK SMITH RIVER AT GASQUET	158	1912-13
11532700	ROWDY CREEK AT SMITH RIVER	33.3	1957-62
11533000	LOPEZ CREEK NEAR SMITH RIVER	.92	1962-66, 1976-77

DISCONTINUED LAKES AND RESERVOIRS

The following continuous-record lake stations in California have been discontinued. Daily records were collected and are stored in WATSTORE for the period of record shown for each location.

Station No.	Station name	Drainage area (mi^2)	Period of record
11144500	SANTA MARGARITA LAKE NEAR POZO	112	1945-86
11461800	LAKE MENDOCINO NEAR UKIAH	105	1966-90
11464900	LAKE SONOMA NEAR GEYSERVILLE	130	1984-90

DISCONTINUED WATER-QUALITY STATIONS

The following continuous water-quality stations in California have been discontinued. Daily records were collected and are stored in WATSTORE for the period of record shown for each location.

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record
11141150	ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE	134	S	1967-73, 1977, 1990
11141280	LOPEZ CREEK NEAR ARROYO GRANDE	20.9	S	1968-72
11142200	SANTA ROSA CREEK NEAR CAMBRIA	12.5	WQ	1988-89
11142240	PERRY CREEK AT CAMBRIA	22.9	WQ	1988-89
11142300	SAN SIMEON CREEK NEAR CAMBRIA	26.3	WQ	1988-89
11143250	CARMEL RIVER NEAR CARMEL	246	WQ,S	1954-66, 1990
11147040	SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON	2.95	T	1968-72
11147070	SANTA RITA CREEK NEAR TEMPLETON	18.2	S	1968-72
11147500	SALINAS RIVER AT PASO ROBLES	390	WQ,S	1963-66, 1990
11148500	ESTRELLA RIVER NEAR ESTRELLA	922	S	1990
11148800	NACIMIENTO RIVER NEAR BRYSON	147	T,S	1959, 1961-71
11149700	SAN ANTONIO RIVER AT SAM JONES BRIDGE	204	T,S	1959, 1961-62, 1964-65
11150000	SAN ANTONIO RIVER AT PLEYTO	277	T,S	1962, 1965
11150500	SALINAS RIVER NEAR BRADLEY	2,535	WQ,S	1950, 1958, 1962-66, 1972-75, 1977, 1980-81, 1990
11151700	SALINAS RIVER AT SOLEDAD	3,563	WQ,S	1972-75, 1977, 1990
11151870	ARROYO SECO NEAR GREENFIELD	113	S	1963-75, 1978, 1984
11152300	SALINAS RIVER NEAR CHUALAR	4,042	WQ,B,C, T,S	1977-90
11152500	SALINAS RIVER NEAR SPRECKELS	4,156	WQ,B,C, T,S	1950-54, 1958-79, 1986, 1990
11152540	EL TORO CREEK NEAR SPRECKELS	31.9	S	1986, 1990
11153470	LLAGAS CREEK ABOVE CHESBRO RESERVOIR, NEAR MORGAN HILL	9.63	T	1972-78
11153900	UVAS CREEK ABOVE UVAS RESERVOIR, NEAR MORGAN HILL	21	T,S	1966-76
11159000	PAJARO RIVER AT CHITTENDEN	1,186	C	1978-82
11160300	ZAYANTE CREEK AT ZAYANTE	11.1	S	1970-73
11160500	SAN LORENZO RIVER AT BIG TREES	106	S	1973-82
11162500	PESADERO CREEK NEAR PESCADERO	45.9	S	1980
11162630	PILARCITOS CREEK AT HALF MOON BAY	27.1	S	1990
11162720	COLMA CREEK AT SOUTH SAN FRANCISCO	10.8	S	1966-76
11162722	SPRUCE B AT SOUTH SAN FRANCISCO	.70	S	1965-69
11166575	PERMANENTE CREEK NEAR MONTE VISTA	3.86	T,S	1984-87
11166578	WEST FORK PERMANENTE CREEK NEAR MONTE VISTA	2.98	T,S	1985-86
11166710	ARROYO CALERO ABOVE CALERO RESERVOIR, NEAR NEW ALMADEN	3.14	WQ	1986-90
11169580	CALABAZAS CREEK TRIBUTARY NO. 1 AT MT EDEN ROAD	.37	T	1973-77
11169600	PROSPECT CREEK ABOVE SARATOGA GOLF COURSE, NEAR SARATOGA	.27	T	1973-75
11169616	CALABAZAS CREEK AT RAINBOW DRICE, NEAR CUPERTINO	3.98	T	1974-77
11169800	COYOTE CREEK NEAR GILROY	109	T,S	1965-76
11174600	ALAMO CANAL NEAR PLEASANTON	40.8	C	1979-83
11176000	ARROYO MOCHO NEAR LIVERMORE	38.2	C	1979-83
11176140	ALTAMONT CREEK NEAR LIVERMORE	13.4	C	1979-80
11176145	ARROYO LAS POSITAS AT LIVERMORE	53.3	C	1980-83
11176180	ARROYO LAS POSITAS AT EL CHARRO, NEAR PLEASANTON	75.0	C	1980-83
11176200	ARROYO MOCHO NEAR PLEASANTON	142	C	1980-84
11176300	TASSAJARA CREEK NEAR PLEASANTON	26.8	C	1979-83
11176350	ARROYO DE LA LAGUNA ABOVE ARROYO VALLE, NEAR PLEASANTON	224	T,S	1975-79
11176400	ARROYO VALLE BELOW LANG CANAL, NEAR LIVERMORE	130	S	1963, 1965
11176500	ARROYO VALLE NEAR LIVERMORE	147	S	1966-67
11176600	ARROYO VALLE AT PLEASANTON	171	T,S	1975-79
11176900	ARROYO DE LA LAGUNA ABOVE BRIDGE, NEAR PLEASANTON	--	T	1960-63
11177000	ARROYO DE LA LAGUNA NEAR PLEASANTON	405	C	1979-83
11177200	VALLECITOS CREEK AT SUNOL	7.48	C	1975-86
11179000	ALAMEDA CREEK NEAR NILES	633	S	1960-73
11180965	CULL CREEK BELOW CULL CREEK DAM, NEAR CASTRO VALLEY	6.37	T,S	1979
11181390	WILDCAT CREEK AT VALE ROAD, AT RICHMOND	7.79	S	1978-80
11456000	NAPA RIVER NEAR ST HELENA	81.4	S	1961-62
11458000	NAPA RIVER NEAR NAPA	218	C,S	1978-81
11460000	CORTE MADERA CREEK AT ROSS	18.1	S	1978-80
11460015	CORTE MADERA CREEK AT COLLEGE AVENUE, AT KENTFIELD	18.2	S	1988-89
11460170	PINE CREEK AT BOLINAS	7.83	T,S	1967, 1969-70
11460920	SALMON CREEK AT BODEGA	15.7	T,S	1964-75
11461000	RUSSIAN RIVER NEAR UKIAH	100	S	1964-68
11461500	EAST FORK RUSSIAN RIVER NEAR CALPELLA	92.2	S	1965-68
11462000	EAST FORK RUSSIAN RIVER NEAR UKIAH	105	S	1964-68
11463000	RUSSIAN RIVER NEAR CLOVERDALE	503	S	1964-68
11463160	BIG SULPHUR CREEK NEAR MIDDLETOWN	2.89	T,S	1978-79
11463200	BIG SULPHUR CREEK NEAR CLOVERDALE	85.5	S	1967-68
11464500	DRY CREEK NEAR CLOVERDALE	87.8	T	1965-79
11465150	PENA CREEK NEAR GEYSERVILLE	22.3	S	1979-86
11465200	DRY CREEK NEAR GEYSERVILLE	162	S	1964-86

DISCONTINUED WATER-QUALITY STATIONS--Continued

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record
11467000	RUSSIAN RIVER NEAR GUERNEVILLE	1,338	C,S	1974-82
11467600	GARCIA RIVER NEAR POINT ARENA	98.5	T	1964-78
11468600	MIDDLE FORK TEN MILE RIVER NEAR FORT BRAGG	32.9	T	1965-73
11471000	POTTER VALLEY POWERHOUSE INTAKE NEAR POTTER VALLEY	--	S	1964-68
11472150	EEL RIVER NEAR DOS RIOS	528	S	1967-77
11472200	OUTLET CREEK NEAR LONGVALE	161	S	1967-70
11472500	EEL RIVER ABOVE DOS RIOS	705	T,S	1959, 1962-82
11472800	MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO	204	T,S	1966, 1969-70
11472900	BLACK BUTTE RIVER NEAR COVELO	162	T,S	1964-66, 1968-75
11473000	MIDDLE FORK EEL RIVER BELOW BLACK BUTTE RIVER, NEAR COVELO	367	T,S	1961-63, 1968-79
11473800	ELK CREEK NEAR HEARST	84.1	T	1965-73
11473900	MIDDLE FORK EEL RIVER NEAR DOS RIOS	745	C,S	1967-69
11474500	NORTH FORK EEL RIVER NEAR MINA	248	T,S	1973-75
11474700	CHAMISE CREEK NEAR ISLAND MOUNTAIN	22.6	T,S	1973-75
11475000	EEL RIVER AT FORT SEWARD	2,107	S	1966-76
11475100	DOBBYN CREEK NEAR FORT SEWARD	61.4	T,S	1973-76
11475500	SOUTH FORK EEL RIVER NEAR BRANSCOMB	43.9	T,S	1961-70
11475560	ELDER CREEK NEAR BRANSCOMB	6.50	S	1974-75
11476500	SOUTH FORK EEL RIVER NEAR MIRANDA	537	S	1981
11476600	BULL CREEK NEAR WEOTT	28.1	S	1960-80
11477000	EEL RIVER AT SCOTIA	3,112	C,S	1979-81
11477500	VAN DUZEN RIVER NEAR DINSMORE	85.2	T	1966-74
11477700	LITTLE VAN DUZEN RIVER NEAR BRIDGEVILLE	36.2	T	1961-65
11480700	MAPLE CREEK NEAR BLUE LAKE	12.1	T	1969
11480750	MAD RIVER NEAR KNEELAND	351	T	1966-74
11480780	MAD RIVER NEAR BLUE LAKE	393	T	1973-76
11481000	MAD RIVER NEAR ARCATA	485	S	1960-74
11482110	LACKS CREEK NEAR ORICK	16.9	S	1988-89
11482120	REDWOOD CREEK ABOVE PANTHER CREEK, NEAR ORICK	150	S	1988-89
11482130	COYOTE CREEK NEAR ORICK	7.78	T,S	1980
11482200	REDWOOD CREEK AT SOUTH PARK BOUNDARY, NEAR ORICK	185	T	1974-81
11482468	LITTLE LOST MAN CREEK AT SITE NO 2, NEAR ORICK	3.46	WQ,S	1974-76, 1978-82, 1985-89
11516600	COTTON CREEK AT HORNBROOK	89.8	T	1965-71
11523000	KLAMATH RIVER AT ORLEANS	8,475	S	1967-79
11525550	GRASS VALLEY CREEK NEAR FRENCH GULCH	7.93	S	1985-89
11526500	NORTH FORK TRINITY RIVER AT HELENA	151	T,S	1963
11528200	SOUTH FORK TRINITY RIVER NEAR HYAMPOM	342	T	1961-65
11528500	HAYFORK CREEK NEAR HYAMPOM	378	T	1961-74
11528700	SOUTH FORK TRINITY RIVER BELOW HYAMPON	764	S	1967-70, 1981-82
11529000	SOUTH FORK TRINITY RIVER NEAR SALYER	898	T,S	1959-67, 1981-82
11530000	TRINITY RIVER AT HOOPA	2,853	S	1960-79
11530020	SUPPLY CREEK AT HOOPA	15.8	T,S	1982-85
11530300	BLUE CREEK NEAR KLAMATH	120	T	1966-78
11530500	KLAMATH RIVER NEAR KLAMATH	12,100	C	1975-81
11532000	SOUTH FORK SMITH RIVER NEAR CRESCENT CITY	291	T,S	1978-79
11532500	SMITH RIVER NEAR CRESCENT CITY	609	C,S	1978-81
11532620	MILL CREEK NEAR CRESCENT CITY	28.6	T	1974-80
353339121053900	SANTA ROSA CREEK ON HIGHWAY 1 BRIDGE, AT CAMBRIA	46.6	WQ	1988-89
353406121061100	SANTA ROSA CREEK AT WINDSOR BOULEVARD, NEAR CAMBRIA	47.1	WQ	1988-89
353635121043101	SAN SIMEON CREEK AT PALMER FLATS, NEAR CAMBRIA	23.1	WQ	1988-89
375658122324000	CORTE MADERA CREEK NEAR COLLEGE AVENUE, AT KENTFIELD, AT CROSS SECTION 0	--	S	1988-89
375701122324200	CORTE MADERA CREEK NEAR COLLEGE AVENUE, AT KENTFIELD, AT CROSS SECTION 1	--	S	1988-89
375704122324200	CORTE MADERA CREEK NEAR COLLEGE AVENUE, AT KENTFIELD, AT CROSS SECTION 2	--	S	1988-89
375710122324000	CORTE MADERA CREEK NEAR COLLEGE AVENUE, AT KENTFIELD, AT CROSS SECTION 3	--	S	1990
375711122324600	CORTE MADERA CREEK NEAR COLLEGE AVENUE, AT KENTFIELD, AT CROSS SECTION 4	--	S	1988-89
375712122325100	CORTE MADERA CREEK NEAR COLLEGE AVENUE, AT KENTFIELD, AT CROSS SECTION 5	--	S	1988-89
375712122325200	CORTE MADERA CREEK NEAR COLLEGE AVENUE, AT KENTFIELD, AT CROSS SECTION 6	--	S	1988-89

TYPE OR RECORD: WQ (WATER QUALITY); B (BIOLOGICAL); C (CONDUCTIVITY); T (TEMPERATURE); S (SEDIMENT).

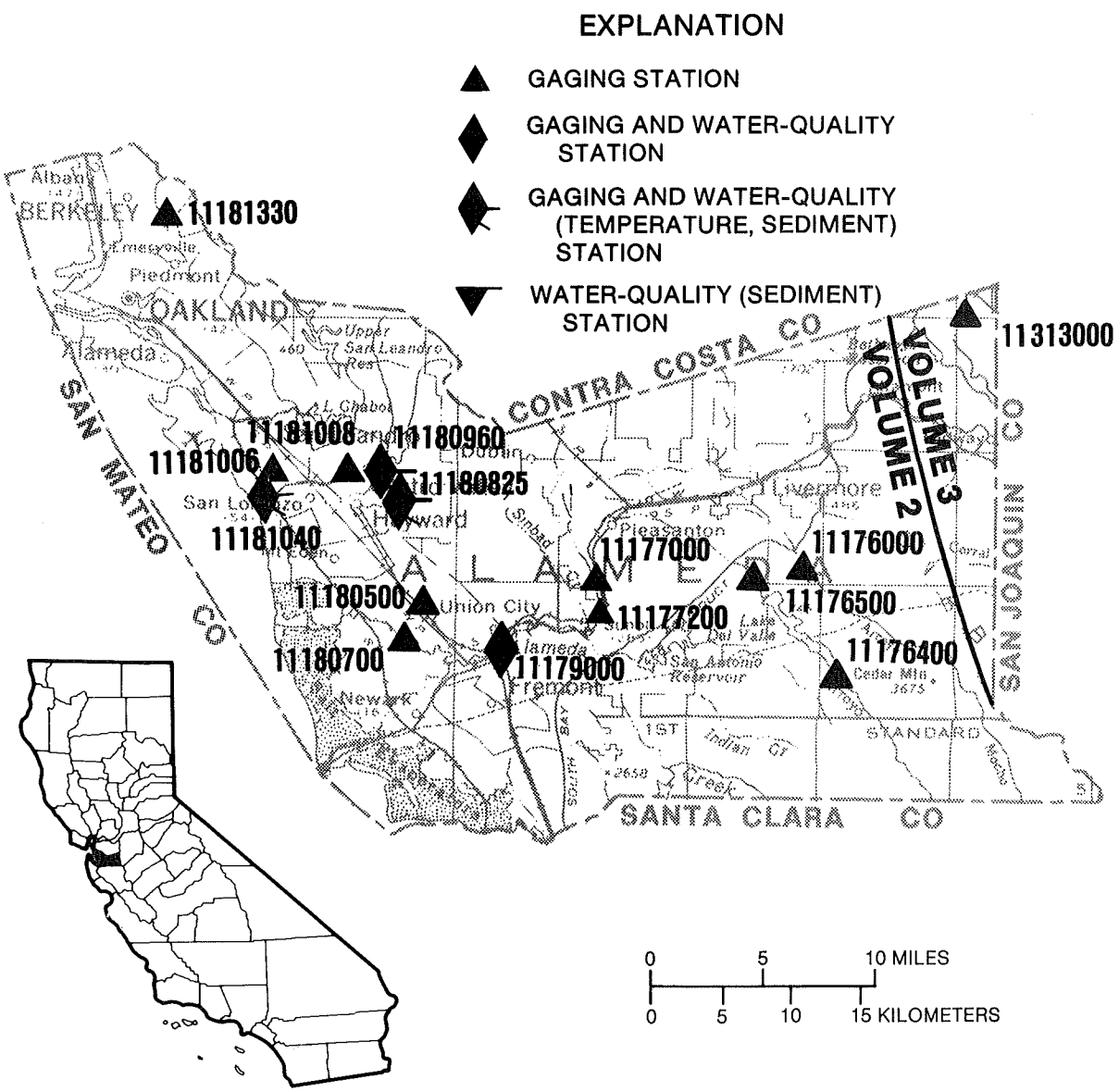

Figure 8. Location of discharge and water-quality stations in Alameda County. (NOTE: Record for station 11313000 published in volume 3.)

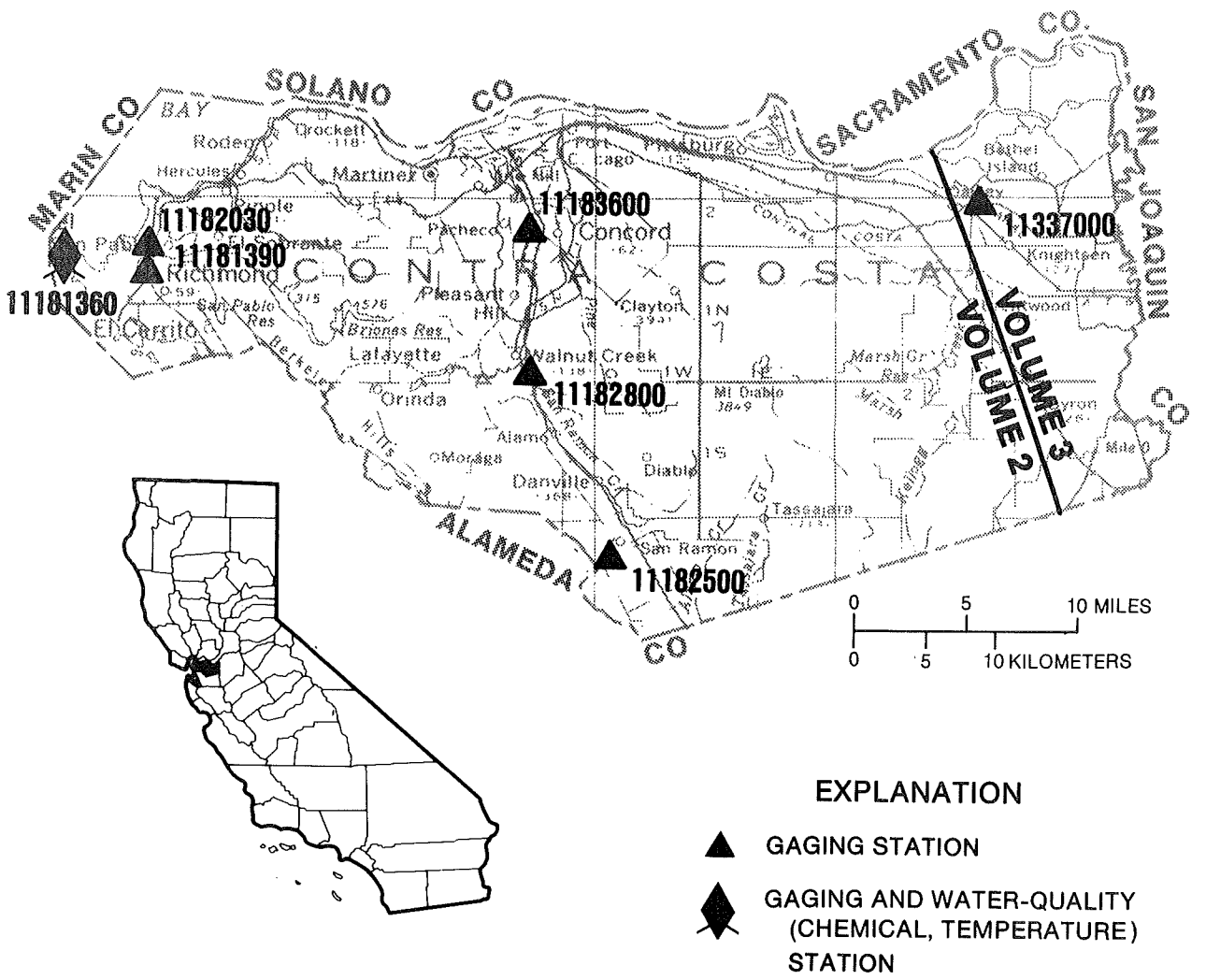

Figure 9. Location of discharge and water-quality stations in Contra Costa County. (NOTE: Record for station 11337000 published in volume 3.)

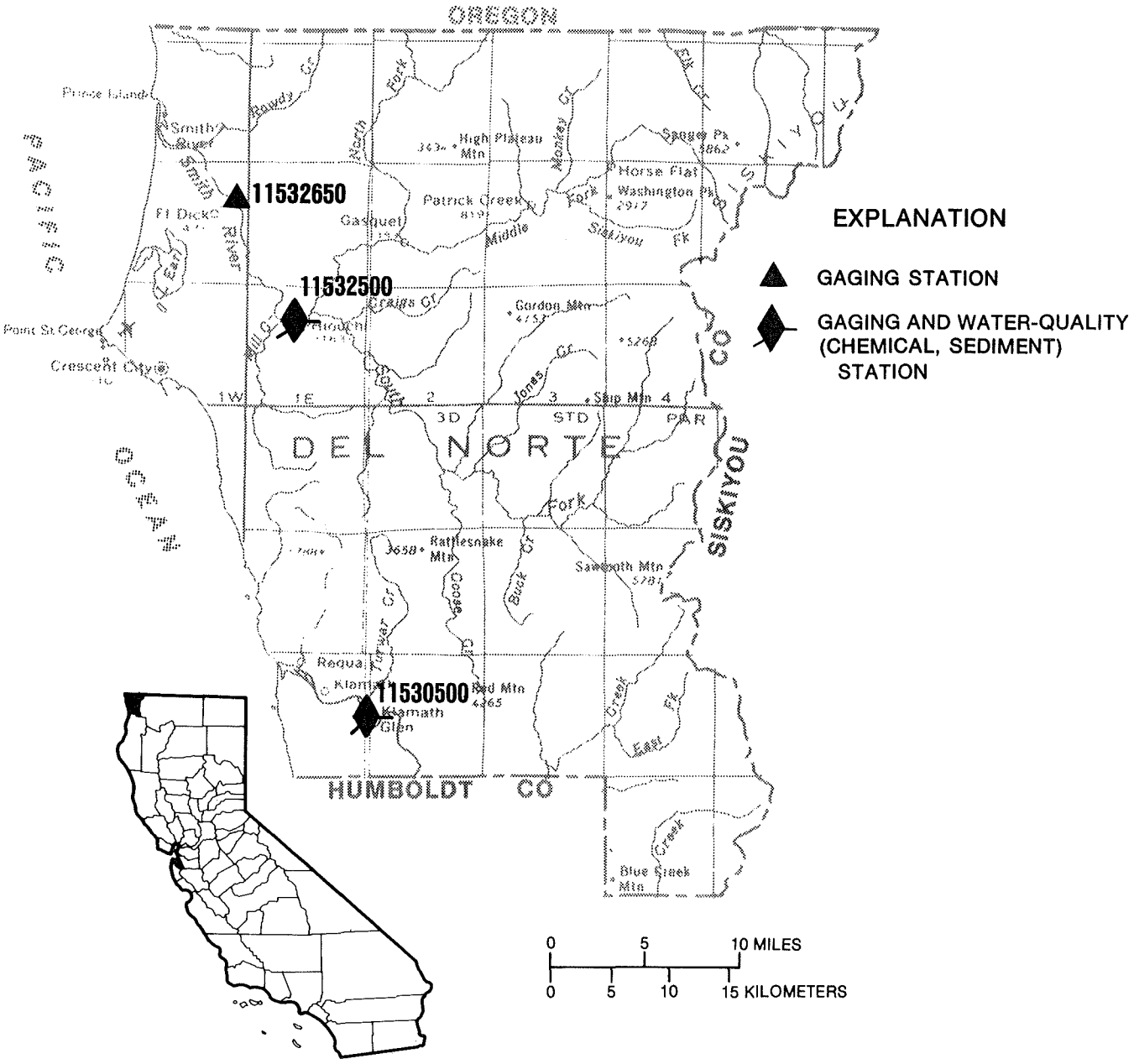

Figure 10. Location of discharge and water-quality stations in Del Norte County.

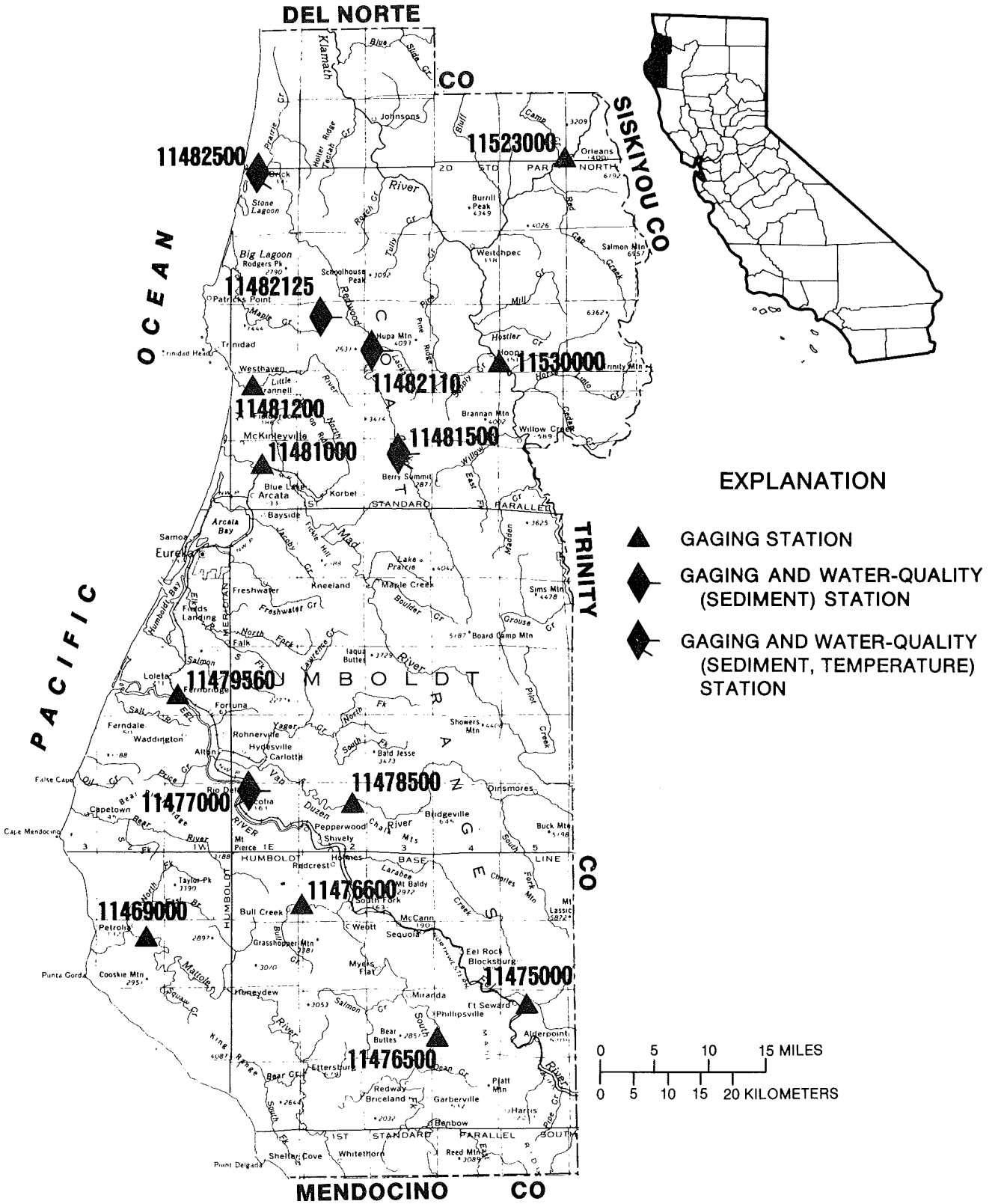

Figure 11. Location of discharge and water-quality stations in Humboldt County.

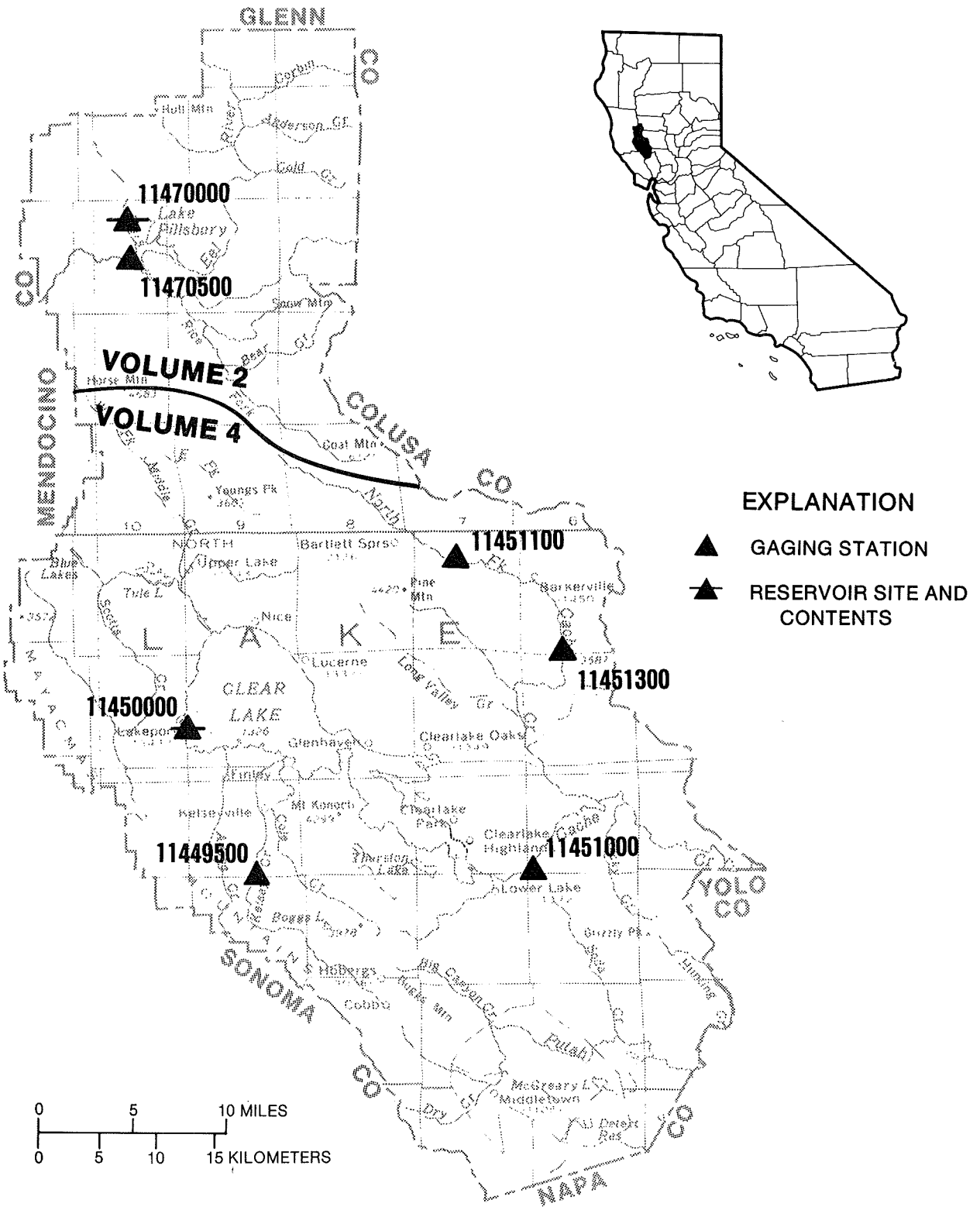

Figure 12. Location of discharge stations in Lake County. (NOTE: Records for stations 11449500 through 11451300 published in volume 4.)

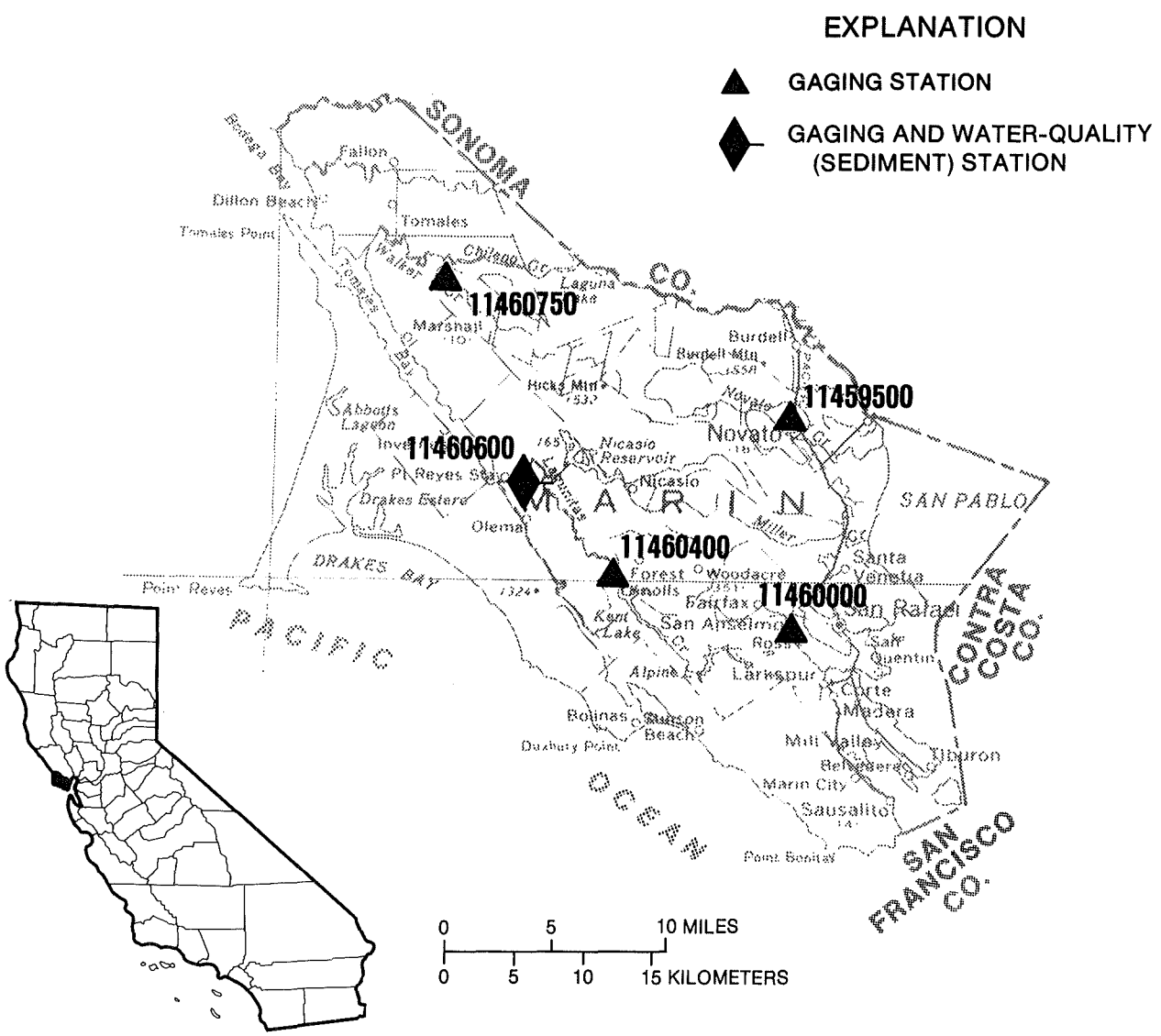

Figure 13. Location of discharge and water-quality stations in Marin County.

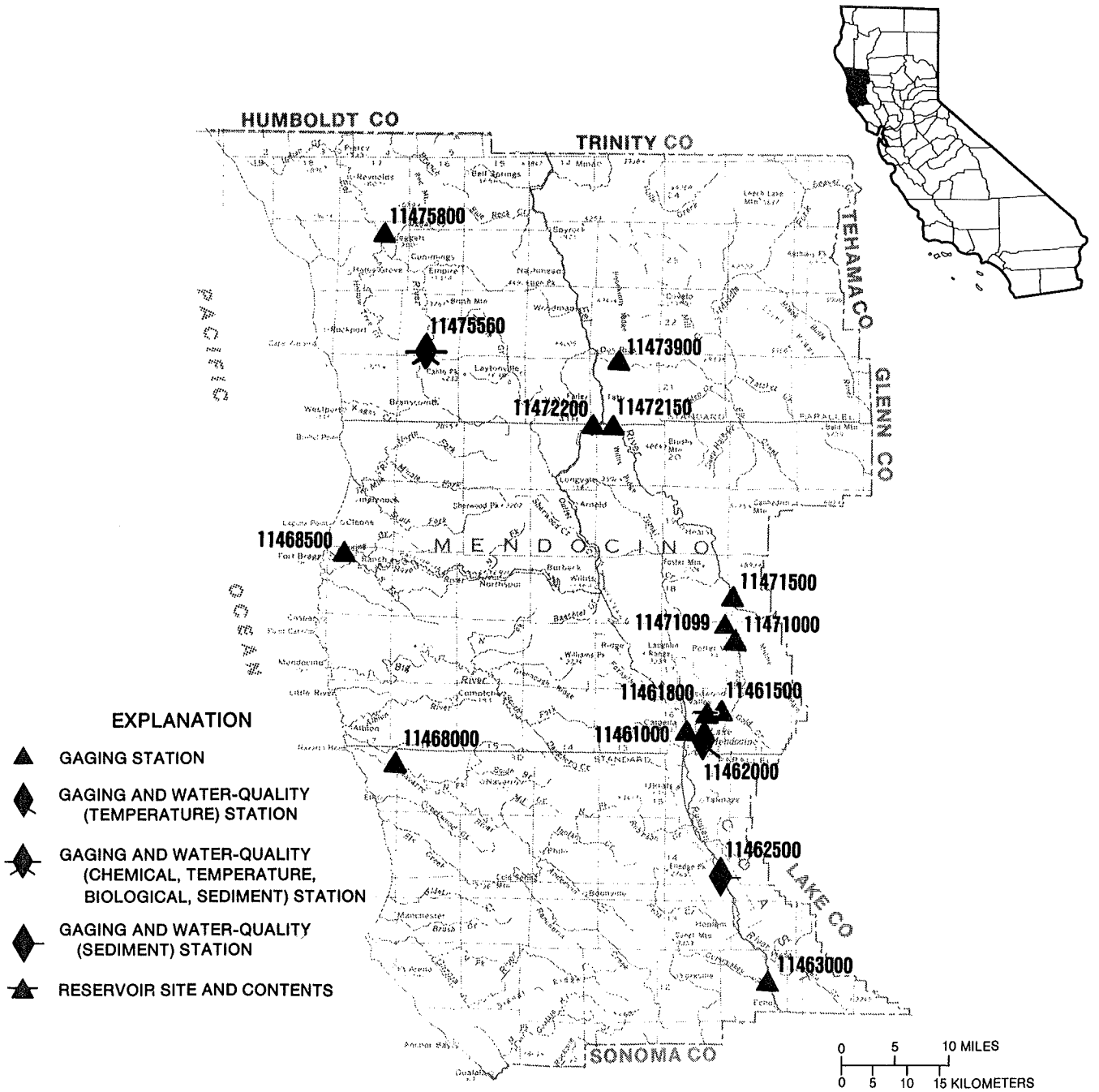

Figure 14. Location of discharge and water-quality stations in Mendocino County.

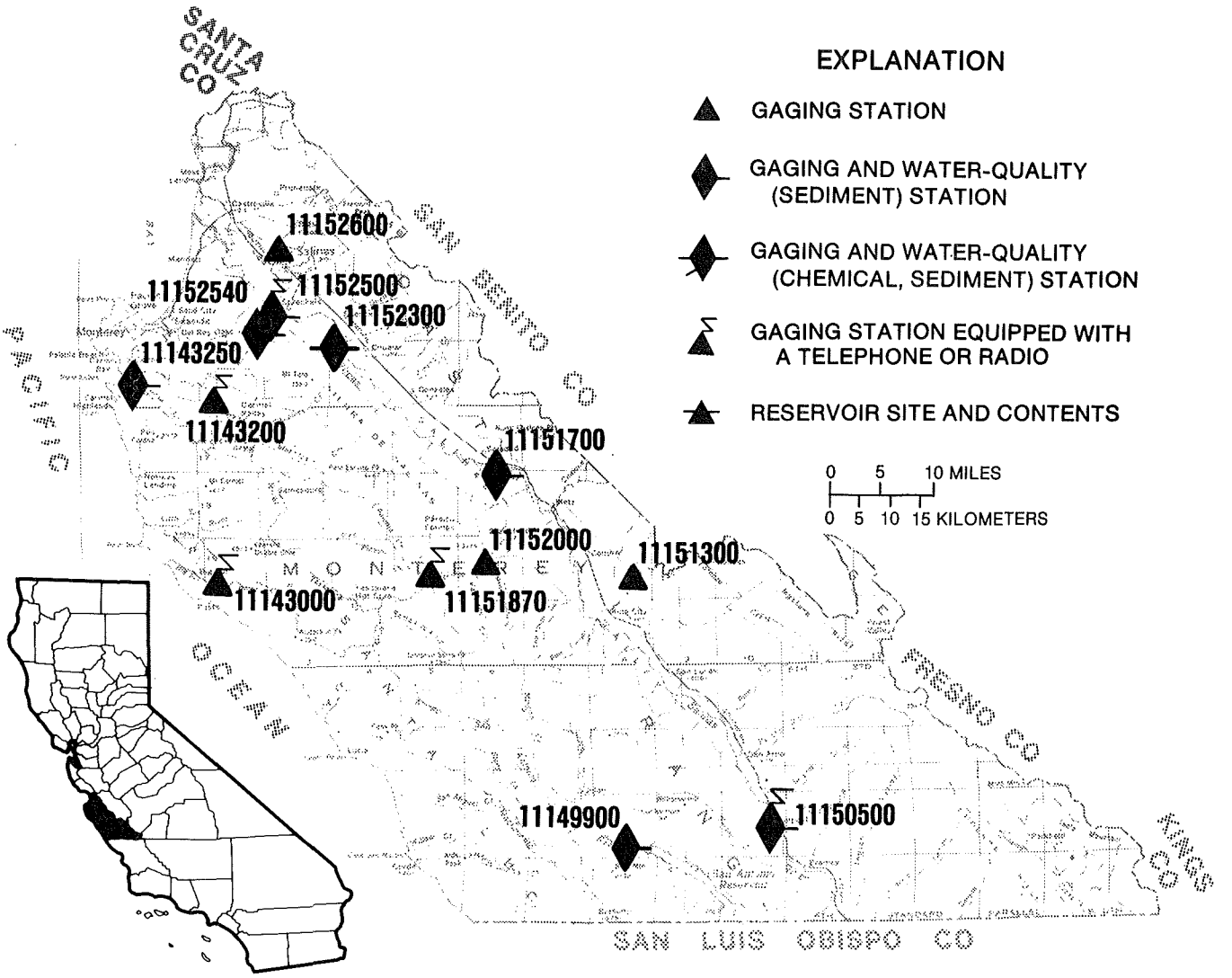

Figure 15. Location of discharge and water-quality stations in Monterey County.

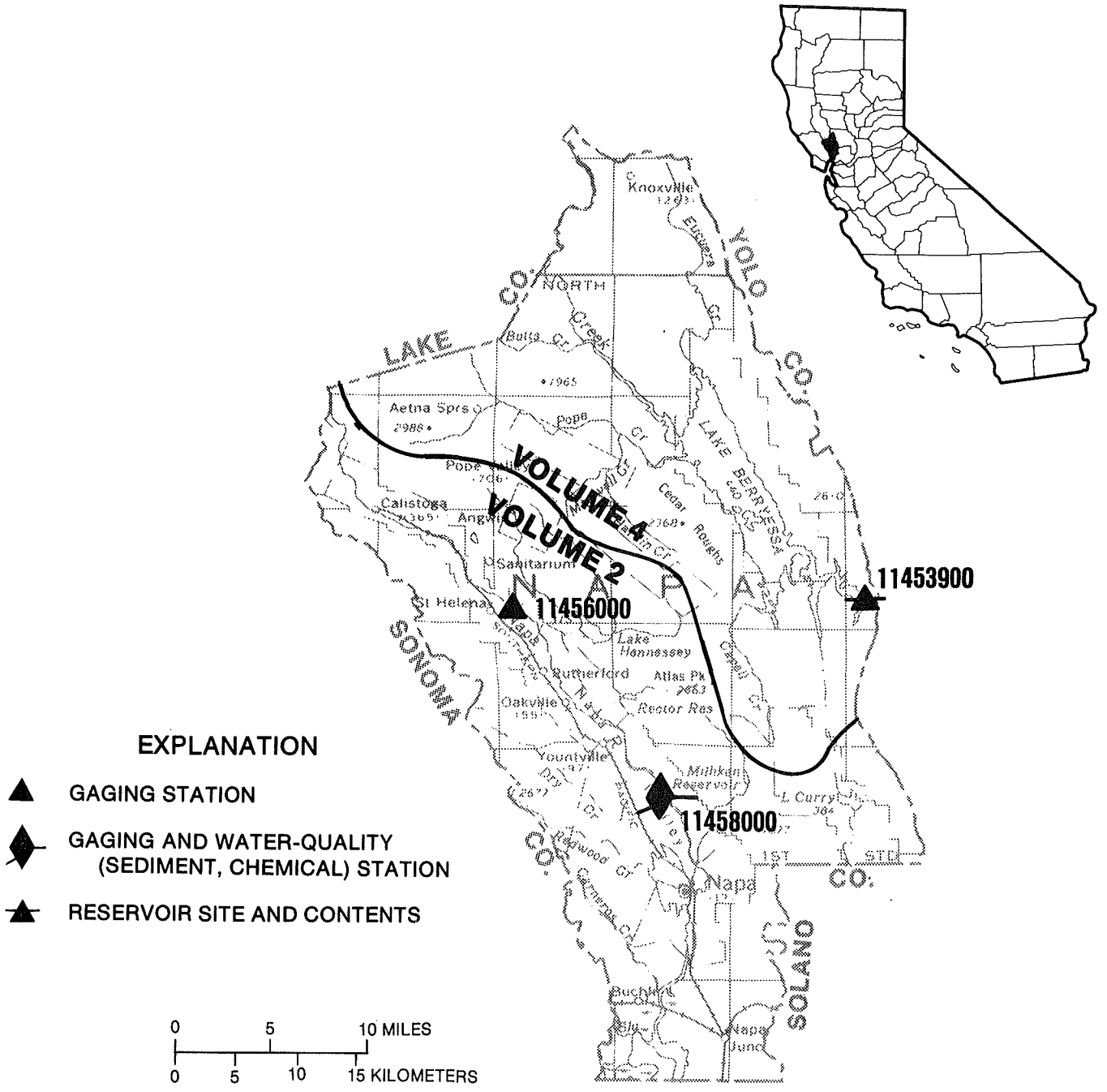

Figure 16. Location of discharge and water-quality stations in Napa County.
(NOTE: Record for station 11453900 published in volume 4.)

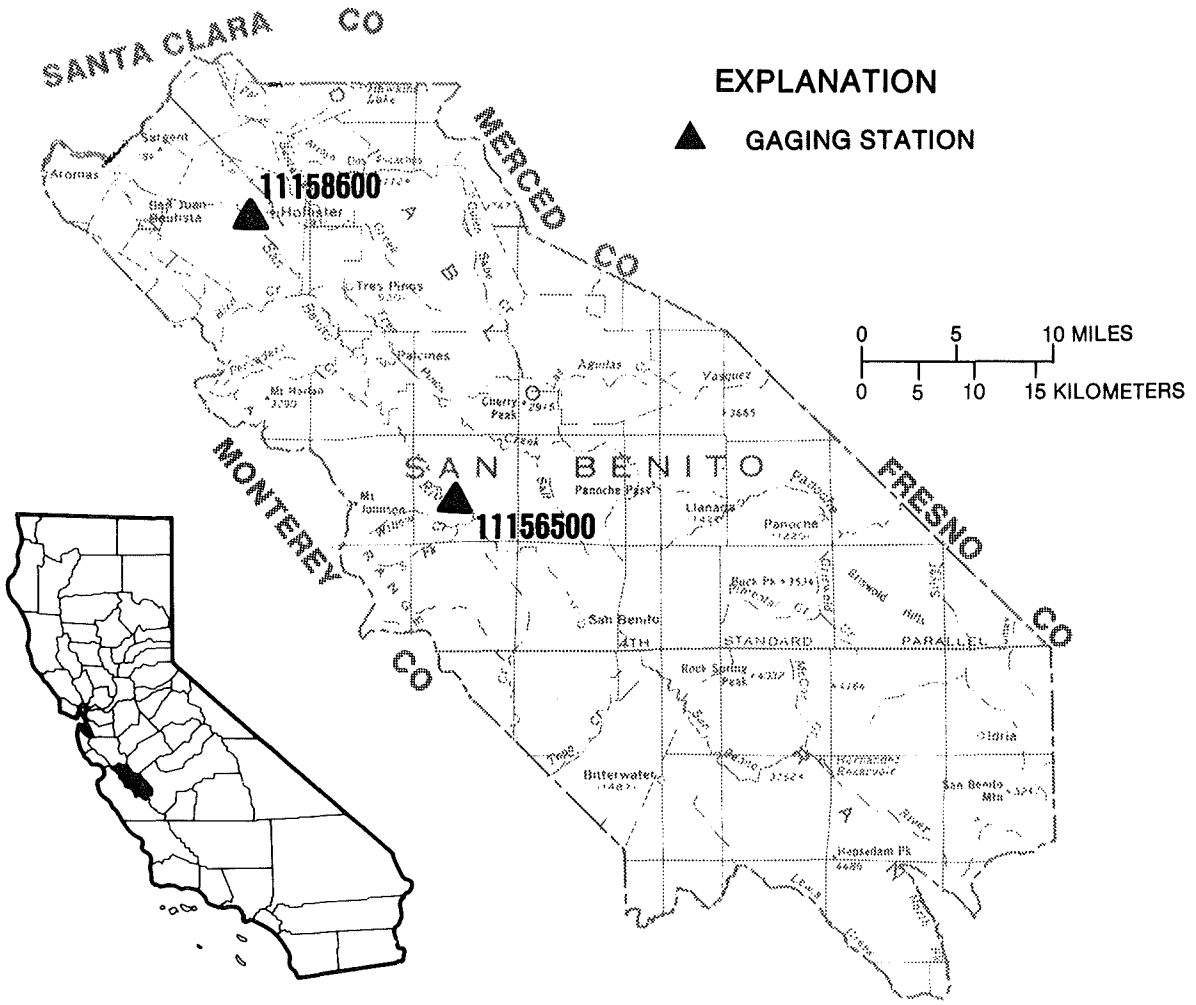

Figure 17. Location of discharge stations in San Benito County.

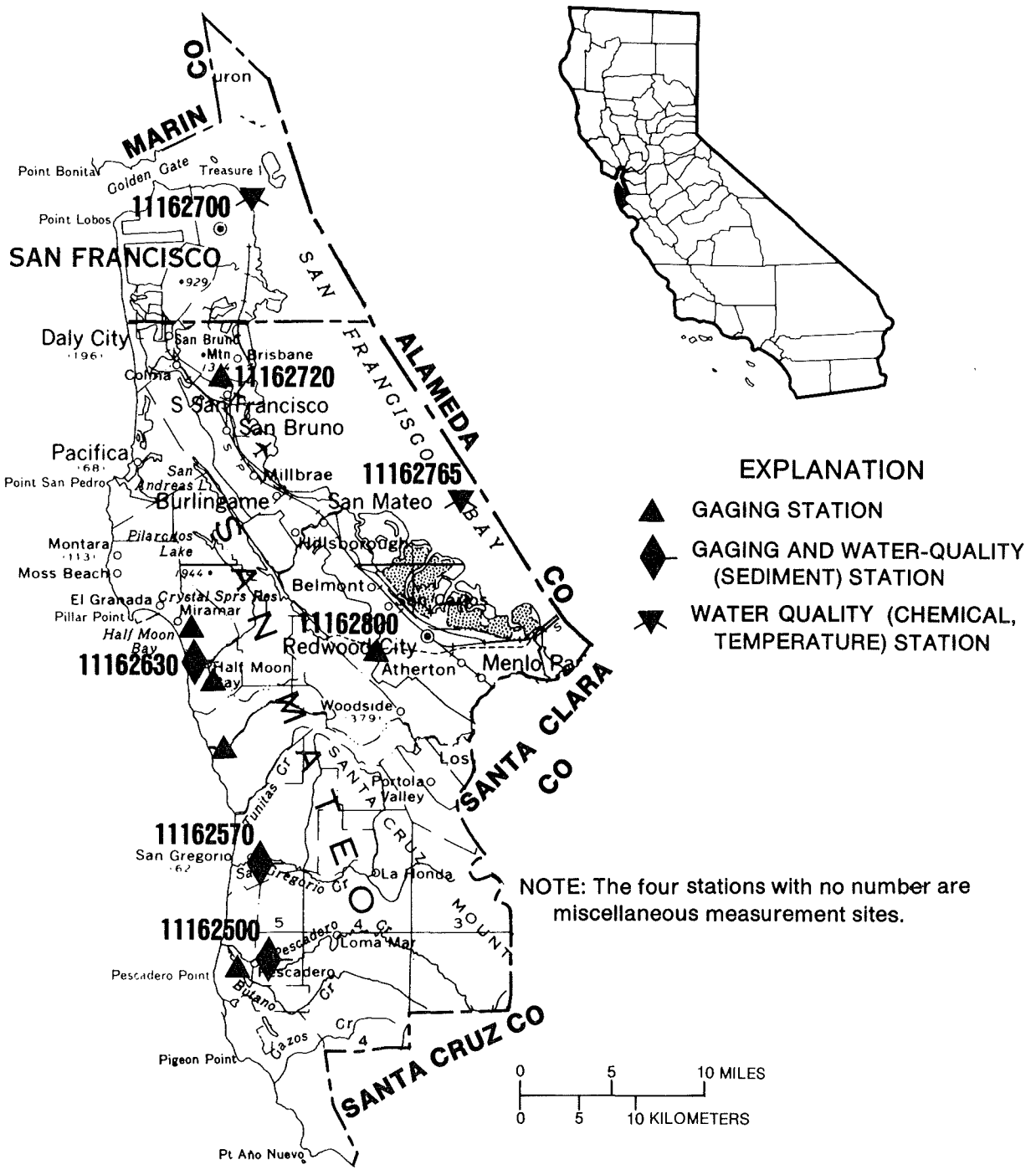

Figure 18. Location of discharge and water-quality stations in San Francisco and San Mateo Counties.

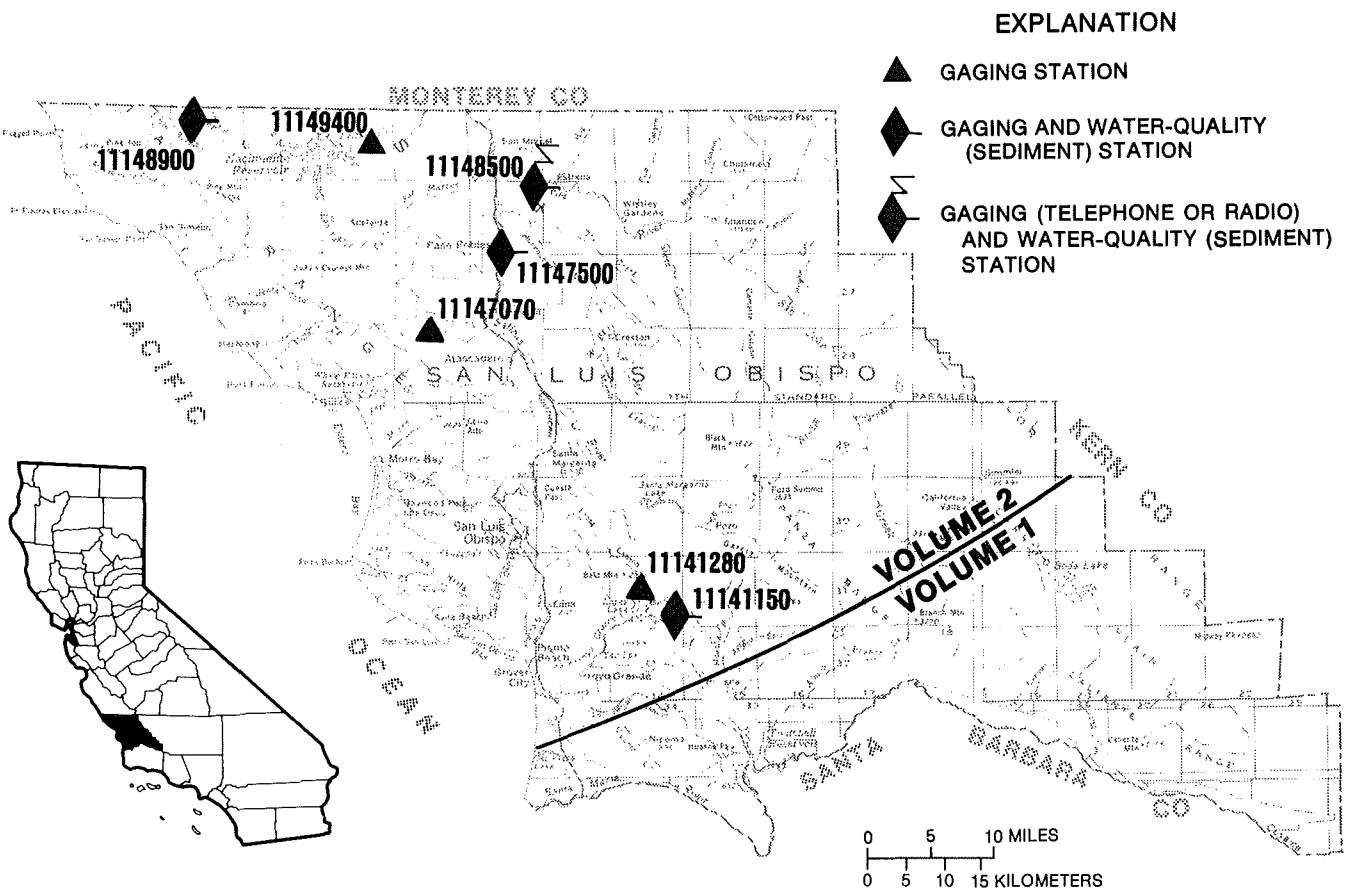

Figure 19. Location of discharge and water-quality stations in San Luis Obispo County.

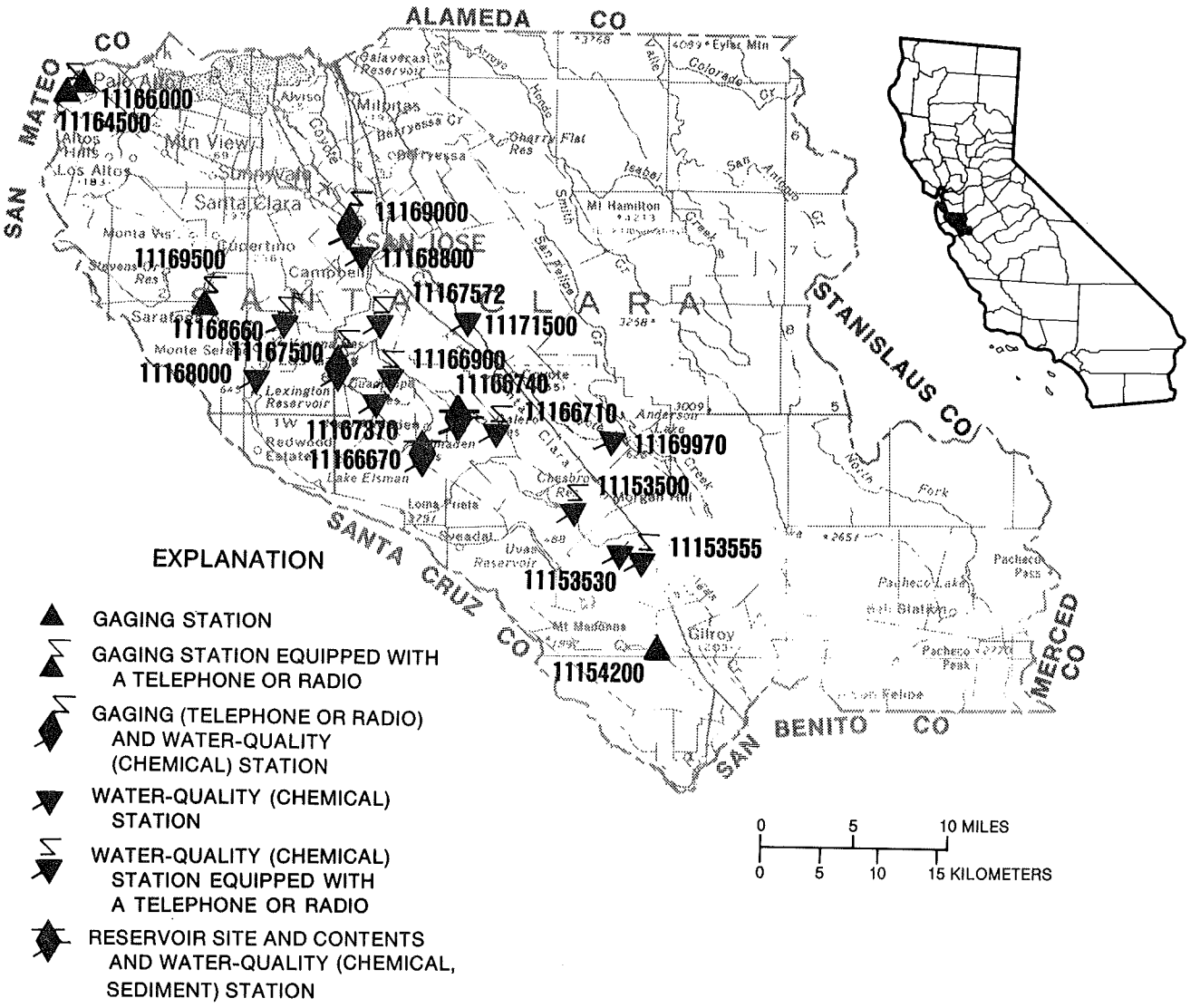

Figure 20. Location of discharge and water-quality stations in Santa Clara County.

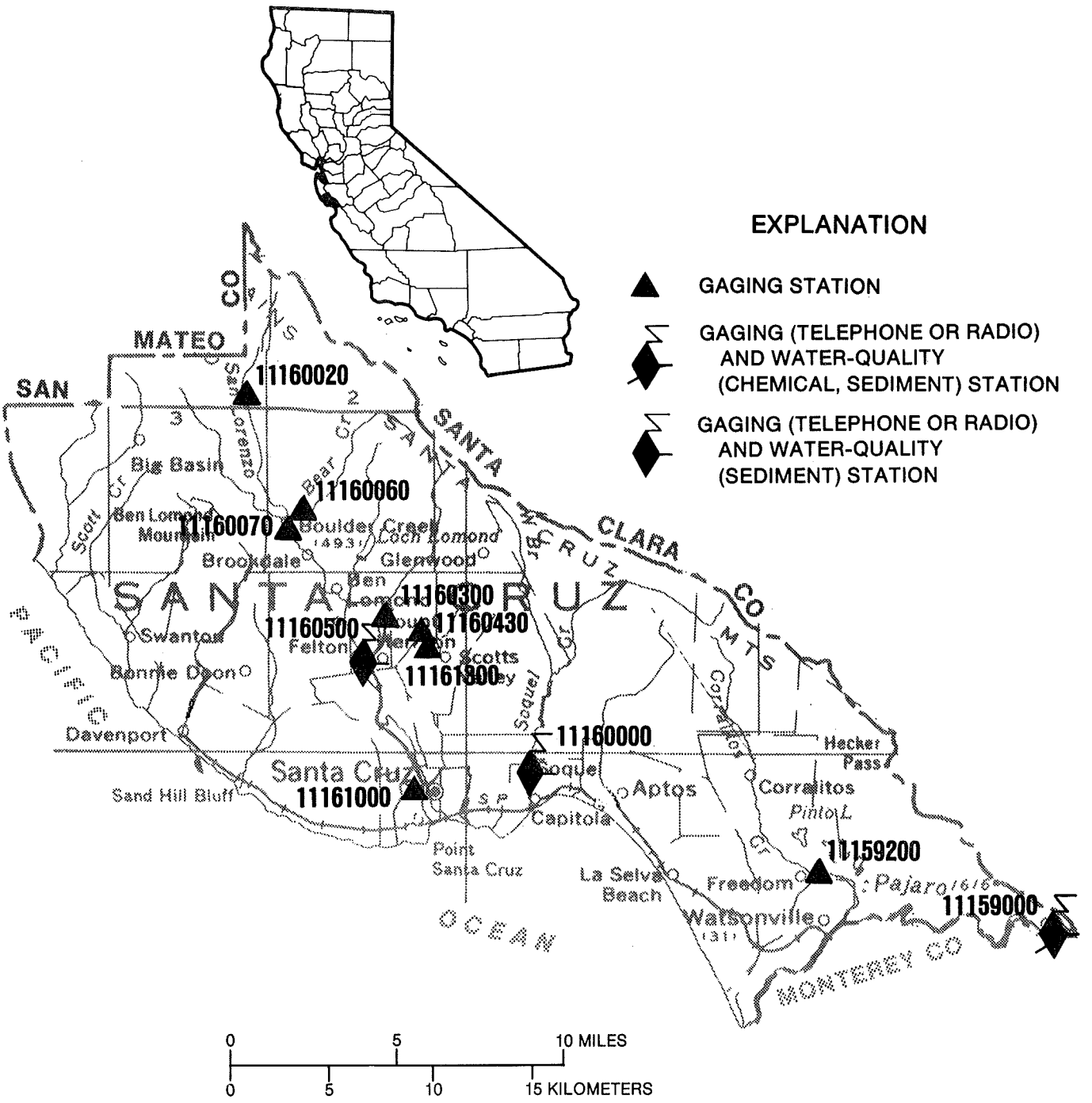

Figure 21. Location of discharge and water-quality stations in Santa Cruz County.

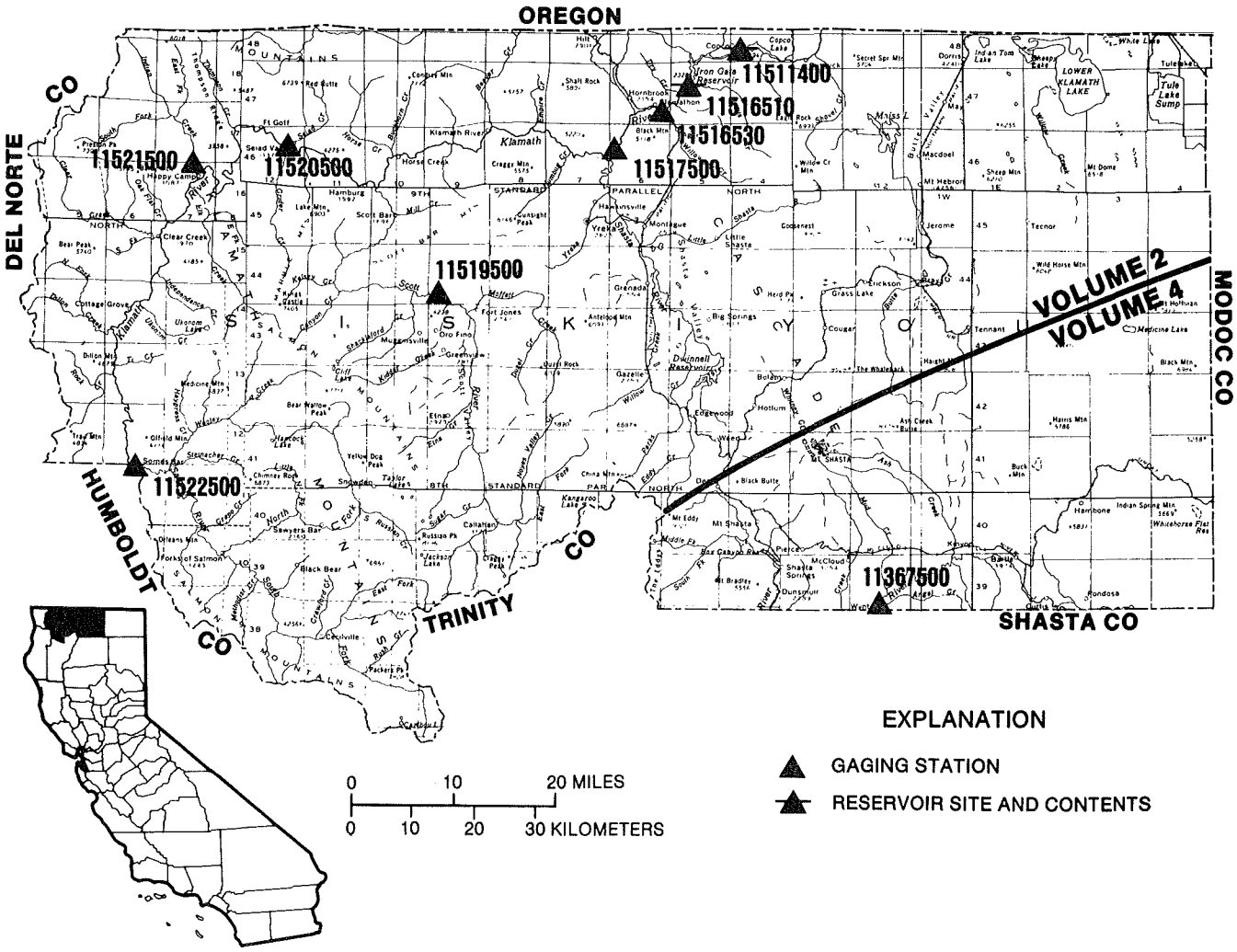

Figure 22. Location of discharge stations in Siskiyou County.
(NOTE: Records for station 11367500 published in volume 4.)

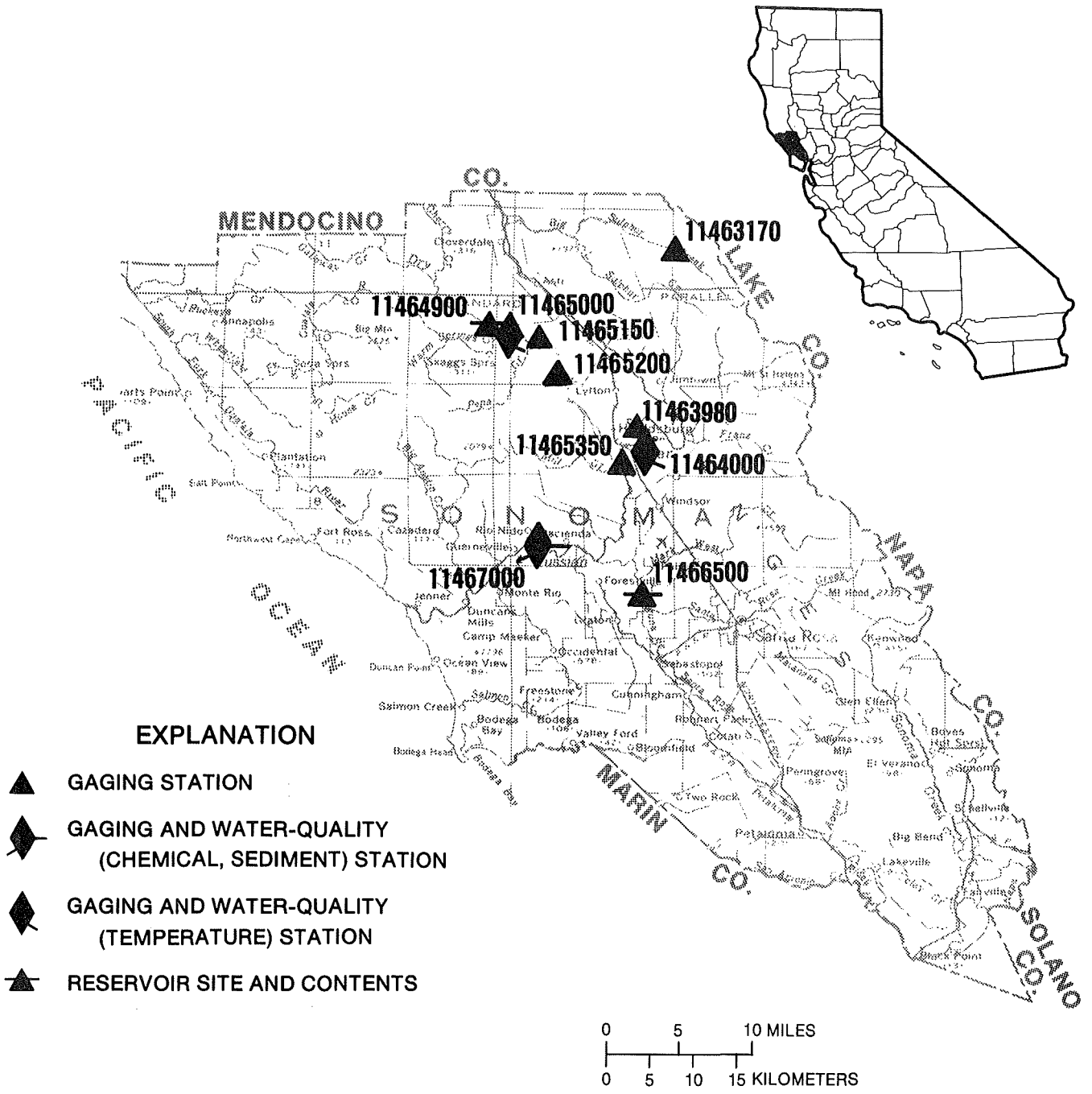

Figure 23. Location of discharge and water-quality stations in Sonoma County.

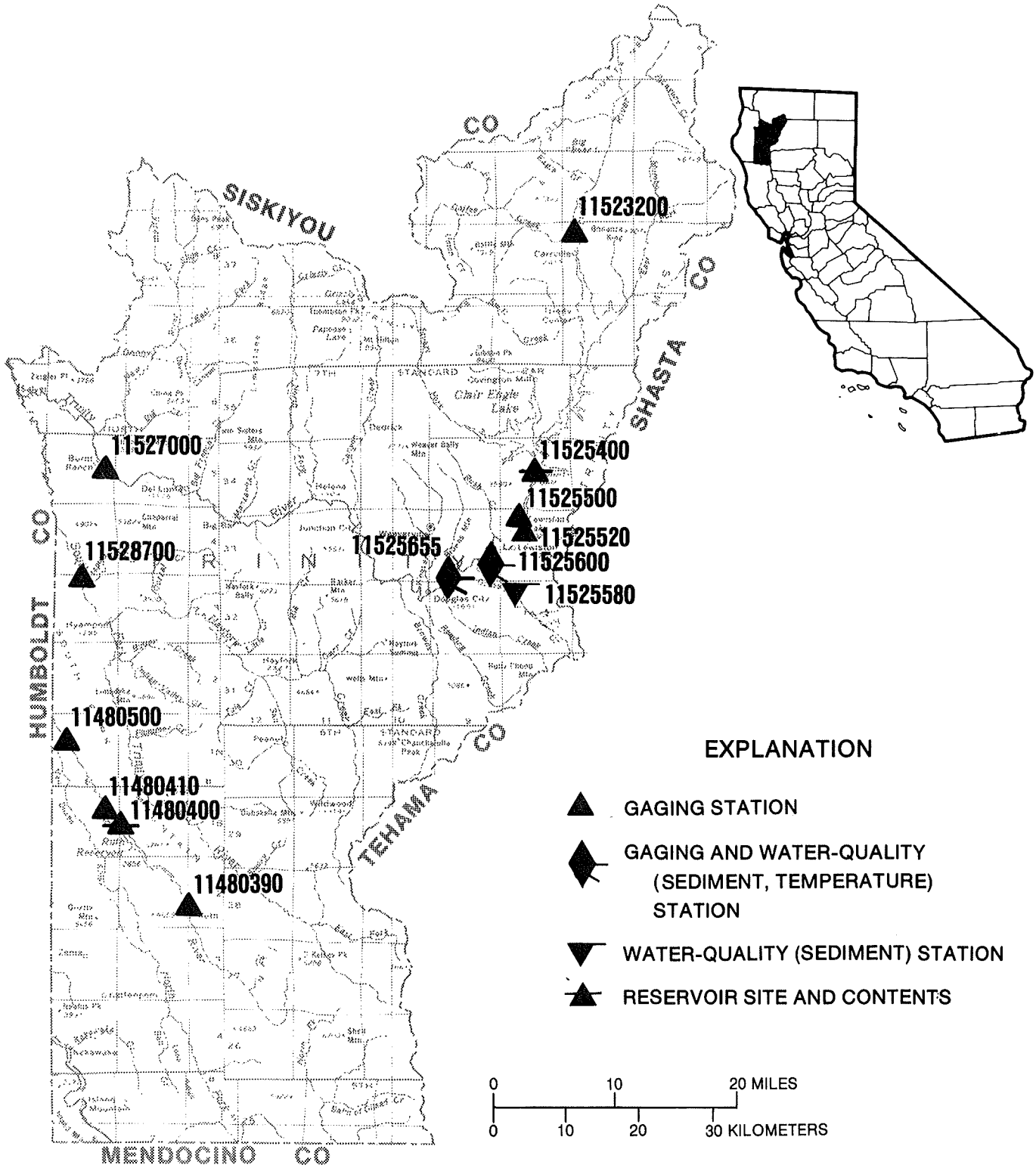

Figure 24. Location of discharge and water-quality stations in Trinity County.

GAGING STATION AND WATER-QUALITY RECORDS

Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
e	Estimated value
>	Actual value is greater than value shown
<	Actual value is less than value shown
K	Results based on colony count outside the acceptable range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
*	Instantaneous streamflow at the time of cross-sectional measurements
1	Laboratory value

NOTE: In March 1989, the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values less than 75 mg/L have a median positive bias of 2 mg/L greater than the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias.

ARROYO GRANDE BASIN

11141150 ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CA

LOCATION.--Lat 35°11'19", long 120°26'03", in Arroyo Grande Grant, San Luis Obispo County, Hydrologic Unit 18060006, on right bank 0.4 mi upstream from county road bridge, 0.45 mi upstream from Phoenix Creek, and 9.2 mi northeast of Arroyo Grande.
DRAINAGE AREA.--13.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1967 to current year.
REVISED RECORDS.--WDR CA-70-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 560 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 24, 1984, at site 0.4 mi downstream at different datum.
REMARKS.--Records fair except for estimated discharges and for daily discharges greater than 2.0 ft^3/s, which are poor. No regulation or diversion upstream from station except for small stock ponds.

AVERAGE DISCHARGE.--23 years, 2.79 ft^3/s, 2,020 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,270 ft^3/s, Jan. 25, 1969, gage height, 6.83 ft, in gage well, 6.57 ft from floodmarks, site and datum then in use, from rating curve extended above 350 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 8.29 ft, Apr. 4, 1978, from floodmark, site and datum then in use; minimum daily discharge, 0.12 ft^3/s, Sept. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	2145	*29	*7.01				

Minimum daily, 0.15 ft^3/s, several days during July and August.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.48	e.60	.71	.79	.86	.72	.41	.30	.20	.16	.20
2	.40	.49	e.60	.80	.75	.86	.73	.39	.29	.20	.17	.20
3	.41	.51	e.60	.70	.74	.87	.72	.43	.27	.20	.17	.22
4	.42	e.50	e.60	.72	.95	.86	.69	.40	.25	.20	.17	.23
5	.40	e.50	e.60	.70	.77	.86	.67	.48	.24	.20	.17	.23
6	.41	e.50	e.58	.70	.76	.84	.67	.58	.24	.19	.16	.24
7	.42	e.50	e.57	.70	.74	.85	.67	.61	.25	.19	.15	.23
8	.40	e.50	.56	.71	.73	.83	.67	.62	.30	.21	.16	.24
9	.40	e.50	.57	.71	.74	.81	.63	.62	.39	.21	.16	.24
10	.43	.51	.58	.70	.72	.82	.59	.55	.39	.20	.16	.24
11	.44	e.51	.59	.71	.71	.85	.56	.50	.35	.18	.16	.23
12	.44	e.51	.59	.80	.71	.82	.55	.47	.33	.15	.17	.23
13	.45	e.51	.62	2.2	.70	.81	.53	.46	.35	.15	.18	.23
14	.46	e.51	.62	1.2	.68	.78	.54	.45	.35	.16	.19	.23
15	.46	e.51	.63	.89	.68	.78	.53	.42	.33	.17	.20	.24
16	.46	.51	.64	1.0	1.5	.78	.57	.40	.33	.19	.21	.24
17	.45	.52	.65	.89	1.5	.78	.58	.40	.32	.18	.19	.27
18	.45	.59	.65	.82	1.2	.78	.56	.37	.30	.18	.19	.28
19	.44	e.60	.65	.79	.97	.75	.54	.36	.28	.17	.21	.27
20	.46	e.60	.65	.78	.94	.74	.51	.35	.25	.16	.24	.27
21	.50	e.60	.68	.76	.92	.75	.50	.35	.24	.15	.24	.30
22	.53	e.61	.68	.75	.90	.75	.51	.34	.26	.15	.24	.36
23	.53	e.63	.68	.74	.87	.75	.55	.35	.25	.16	.25	.36
24	.68	e.62	.67	.73	.86	.75	.51	.36	.27	.18	.24	.33
25	.52	e.61	.68	.75	.86	.75	.48	.33	.26	.18	.25	.30
26	.50	e.76	.68	.72	.86	.76	.47	.31	.22	.17	.25	.30
27	.49	e.68	.65	.72	.85	.78	.44	.36	.22	.17	.26	.30
28	.49	e.64	.66	.72	.86	.79	.42	.51	.21	.18	.25	.28
29	.49	e.64	.68	.74	---	.79	.42	.35	.21	.16	.23	.30
30	.50	e.62	.68	.79	---	.74	.44	.33	.22	.16	.21	.29
31	.48	---	.68	.77	---	.73	---	.32	---	.15	.20	---
TOTAL	14.30	16.77	19.57	25.42	24.26	24.67	16.97	13.18	8.47	5.50	6.19	7.88
MEAN	.46	.56	.63	.82	.87	.80	.57	.43	.28	.18	.20	.26
MAX	.68	.76	.68	2.2	1.5	.87	.73	.62	.39	.21	.26	.36
MIN	.39	.48	.56	.70	.68	.73	.42	.31	.21	.15	.15	.20
AC-FT	28	33	39	50	48	49	34	26	17	11	12	16

CAL YR 1989 TOTAL 254.76 MEAN .70 MAX 1.9 MIN .32 AC-FT 505
WTR YR 1990 TOTAL 183.18 MEAN .50 MAX 2.2 MIN .15 AC-FT 363

e Estimated.

11141150 ARROYO GRANDE ABOVE PHOENIX CREEK, NEAR ARROYO GRANDE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-73, 1977, June 1990 (discontinued).
CHEMICAL DATA: Water year 1977.
WATER TEMPERATURE: Water years 1968-73.
SEDIMENT DATA: Water years 1967-73, June 1990 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1967 to September 1973.
SEDIMENT DATA: October 1967 to September 1973.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
JUN 13...	1520	10	0.35	19.5	1	3	10

DATE	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JUN 13...	27	57	76	83	87	93	100

11141280 LOPEZ CREEK NEAR ARROYO GRANDE, CA

LOCATION.--Lat 35°14'08", long 120°28'17", in SE 1/4 sec.19, T.31 S., R.14 E., San Luis Obispo County, Hydrologic Unit 18060006, on right bank 3.4 mi north of Lopez Lake spillway and 9.2 mi northeast of Arroyo Grande.

DRAINAGE AREA.--20.9 mi^2.

PERIOD OF RECORD.--July 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 31, 1984, at site 0.4 mi downstream at different datum.

REMARKS.--Records good except for estimated discharges, which are fair. Small diversions upstream from station for domestic use.

AVERAGE DISCHARGE.--23 years, 10.3 ft^3/s, 7,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,830 ft^3/s, Jan. 25, 1969, gage height, 9.26 ft in gage well, 10.8 ft from floodmarks, site and datum then in use, from rating curve extended above 300 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 9.62 ft, Mar. 1, 1983, site and datum then in use; minimum daily discharge, 0.30 ft^3/s, Aug. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	0100	*13	*4.21				

Minimum daily, 0.75 ft^3/s, Sept. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.0	2.6	2.5	2.9	2.7	2.4	1.8	1.9	1.1	1.0	.93
2	2.0	1.9	2.6	2.7	2.7	2.7	2.4	1.8	1.8	1.1	1.1	.96
3	1.9	1.9	2.6	2.6	2.7	2.7	2.4	1.8	1.8	1.1	1.1	.90
4	1.9	1.9	2.6	2.8	3.6	2.8	2.4	1.7	1.8	1.1	1.1	.91
5	1.9	1.9	2.5	2.5	3.2	2.9	2.4	1.6	1.7	1.1	1.0	.89
6	1.9	2.0	2.5	2.5	3.0	2.8	2.4	1.6	1.7	1.1	1.0	.88
7	1.9	1.9	2.5	2.4	2.9	2.7	2.3	1.6	1.7	1.1	.97	.85
8	1.8	1.9	2.6	2.5	2.9	2.7	2.2	1.6	1.5	1.2	1.0	.81
9	1.8	2.0	2.6	2.6	2.8	2.7	2.3	1.7	1.6	1.2	1.1	.81
10	1.9	2.0	2.6	2.6	2.8	2.7	2.2	1.7	1.6	1.1	1.1	.84
11	1.9	2.0	2.6	2.5	2.8	2.9	2.2	1.7	1.6	1.1	1.0	.80
12	1.9	2.0	2.6	2.7	2.7	2.8	2.2	1.7	1.5	.92	1.0	.76
13	2.0	2.1	2.6	4.1	2.7	2.7	2.1	1.7	1.6	.89	.94	.75
14	2.0	2.0	2.6	4.8	2.7	2.7	2.2	1.7	1.6	.91	.99	.78
15	2.0	2.1	2.6	3.9	2.7	2.7	2.1	1.7	1.6	.98	1.0	.80
16	1.9	2.2	2.6	3.6	3.6	2.6	2.2	1.6	1.6	1.0	1.0	.81
17	1.9	2.2	2.6	3.5	8.1	2.5	2.3	1.6	1.5	1.0	.98	.88
18	1.9	2.2	2.6	3.3	5.9	2.5	2.1	1.6	1.5	1.0	.97	.91
19	1.9	2.3	2.6	3.2	4.6	2.5	2.1	1.6	1.5	.96	1.0	.88
20	1.9	2.3	2.6	3.3	3.9	2.5	2.1	1.6	1.4	.96	1.0	.87
21	1.9	2.2	2.6	3.2	3.6	2.4	2.1	1.6	1.4	.98	1.0	1.0
22	e1.9	2.3	2.6	3.0	3.3	2.4	2.1	1.6	1.4	.99	.98	1.4
23	e1.9	2.4	2.6	3.0	3.2	2.4	2.1	1.7	1.3	1.0	1.0	1.2
24	3.2	2.3	2.5	2.9	3.1	2.4	2.1	1.8	1.2	1.1	1.0	1.1
25	2.3	2.4	2.5	2.7	2.9	2.5	1.9	1.7	1.2	1.1	1.1	1.1
26	2.1	3.3	2.4	2.7	2.8	2.5	1.8	1.7	1.2	1.1	1.1	1.1
27	2.0	2.7	2.5	2.7	2.7	2.5	1.8	1.8	1.1	1.1	1.0	1.1
28	1.9	2.7	2.4	2.7	2.7	2.5	1.8	3.0	1.1	1.1	.98	1.0
29	2.0	2.7	2.4	2.6	---	2.4	1.8	2.1	1.1	1.1	.94	1.1
30	1.9	2.6	2.5	2.7	---	2.4	1.9	1.9	1.1	1.1	.94	1.0
31	1.9	---	2.5	2.7	---	2.4	---	1.9	---	1.0	.93	---
TOTAL	61.2	66.4	79.2	91.5	93.5	80.6	64.4	54.2	44.6	32.59	31.32	28.12
MEAN	1.97	2.21	2.55	2.95	3.34	2.60	2.15	1.75	1.49	1.05	1.01	.94
MAX	3.2	3.3	2.6	4.8	8.1	2.9	2.4	3.0	1.9	1.2	1.1	1.4
MIN	1.8	1.9	2.4	2.4	2.7	2.4	1.8	1.6	1.1	.89	.93	.75
AC-FT	121	132	157	181	185	160	128	108	88	65	62	56

CAL YR 1989 TOTAL 1061.2 MEAN 2.91 MAX 13 MIN 1.2 AC-FT 2100
WTR YR 1990 TOTAL 727.63 MEAN 1.99 MAX 8.1 MIN .75 AC-FT 1440

e Estimated.

11143000 BIG SUR RIVER NEAR BIG SUR, CA

LOCATION.--Lat 36°14'45", long 121°46'20", in SW 1/4 SW 1/4 sec.29, T.19 S., R.2 E., Monterey County, Hydrologic Unit 18060006, on right bank at downstream side of bridge, 0.4 mi upstream from Post Creek, and 2.6 mi southeast of town of Big Sur.

DRAINAGE AREA.--46.5 mi^2.

PERIOD OF RECORD.--March 1950 to current year. Prior to October 1959, published as Sur River at Big Sur.

REVISED RECORDS.--WSP 1445: 1952(P), 1953(M). WSP 1715: 1951, drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 240 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1951, nonrecording gage at site 0.9 mi downstream at different datum.

REMARKS.--Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--40 years, 98.2 ft^3/s, 71,150 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft^3/s, Jan. 5, 1978, gage height, 14.30 ft, from rating curve extended above 6,800 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 2.6 ft^3/s, Aug. 23, 1977, Sept. 9, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1815	*1,360	*6.80				

Minimum daily, 2.6 ft^3/s, Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	11	14	13	22	30	18	12	14	5.4	5.8	3.5
2	7.8	11	14	20	19	31	18	12	13	6.0	6.0	3.3
3	8.1	11	13	14	25	45	18	12	12	5.7	5.4	3.3
4	8.1	11	13	12	96	37	17	12	11	5.6	5.0	3.1
5	7.9	11	13	12	49	42	17	11	11	5.7	5.0	3.1
6	7.7	11	13	12	38	35	17	10	9.9	6.0	4.6	3.0
7	7.6	11	12	11	32	33	17	10	9.7	6.2	4.2	2.7
8	7.3	11	12	12	28	31	17	9.9	9.1	6.1	4.0	2.8
9	7.2	11	12	12	25	30	18	11	8.4	6.3	4.1	2.6
10	7.0	11	12	12	23	31	16	12	8.6	6.1	4.1	3.2
11	7.1	12	12	12	22	34	15	12	e8.4	5.7	4.1	3.2
12	7.1	12	12	32	21	33	14	11	e8.0	5.2	4.1	3.1
13	7.2	12	12	101	19	31	14	11	e7.8	5.1	3.4	3.0
14	7.1	12	11	159	18	29	14	11	e7.9	5.0	3.4	3.2
15	7.5	12	11	94	18	28	14	11	e8.0	4.8	3.9	3.4
16	7.1	12	11	62	335	27	16	11	e7.6	5.5	4.0	3.8
17	7.0	12	11	55	295	25	17	10	e7.6	6.1	4.0	3.9
18	8.4	12	11	44	173	25	16	11	e7.7	6.3	3.7	4.3
19	10	12	11	37	119	25	15	11	e7.7	6.3	3.8	4.7
20	12	12	11	31	90	24	15	11	e7.8	6.1	4.1	4.4
21	30	12	11	27	72	23	14	12	7.0	6.0	4.1	4.4
22	22	12	11	24	60	22	14	11	6.9	5.8	4.1	6.7
23	64	12	11	22	51	21	20	13	7.0	5.8	3.7	12
24	45	12	11	20	45	21	16	13	6.5	6.0	3.7	11
25	21	46	11	19	41	21	15	11	6.1	6.3	4.0	11
26	15	124	11	18	37	20	14	11	5.4	6.8	4.9	11
27	13	30	11	17	34	20	13	15	4.8	6.9	5.1	10
28	12	21	12	16	31	20	13	31	5.0	6.7	4.8	9.8
29	11	17	12	16	---	19	12	18	4.9	6.5	4.1	9.2
30	11	16	11	21	---	19	12	16	5.1	6.3	3.8	9.2
31	11	---	11	21	---	19	---	16	---	6.2	3.7	---
TOTAL	412.2	532	364	978	1838	851	466	388.9	243.9	184.5	132.7	161.9
MEAN	13.3	17.7	11.7	31.5	65.6	27.5	15.5	12.5	8.13	5.95	4.28	5.40
MAX	64	124	14	159	335	45	20	31	14	6.9	6.0	12
MIN	7.0	11	11	11	18	19	12	9.9	4.8	4.8	3.4	2.6
AC-FT	818	1060	722	1940	3650	1690	924	771	484	366	263	321

CAL YR 1989 TOTAL 9347.3 MEAN 25.6 MAX 384 MIN 5.4 AC-FT 18540
WTR YR 1990 TOTAL 6553.1 MEAN 18.0 MAX 335 MIN 2.6 AC-FT 13000

e Estimated.

11143200 CARMEL RIVER AT ROBLES DEL RIO, CA

LOCATION.--Lat 36°28'28", long 121°43'40", in Los Laureles Grant, Monterey County, Hydrologic Unit 18060012, on right bank 10 ft downstream from county road bridge at Robles Del Rio, 0.2 mi downstream from Hitchcock Canyon, and 11 mi southeast of town of Carmel.
DRAINAGE AREA.--193 mi^2.

PERIOD OF RECORD.--August 1957 to current year.
REVISED RECORDS.--WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 1981, at site 150 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. Low flow regulated by Los Padres Reservoir 11 mi upstream, usable capacity, 2,180 acre-ft, and San Clemente Reservoir 4 mi upstream, usable capacity, 796 acre-ft. Diversion from San Clemente Reservoir for municipal supply amounted to 2,950 acre-ft for the current year.

AVERAGE DISCHARGE (unadjusted).--33 years, 87.3 ft^3/s, 63,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,380 ft^3/s, Feb. 28, 1983, gage height, 11.49 ft, from rating curve extended above 2,800 ft^3/s on basis of slope-area measurement at gage height 9.97 ft; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 11.7 ft from floodmarks, discharge, 6,930 ft^3/s, from slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	2330	*1,230	*7.25				

Minimum daily, 1.4 ft^3/s, for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.5	2.2	2.6	7.1	30	5.1	3.1	2.4	1.6	1.5	1.7
2	1.6	2.5	2.2	3.2	7.0	30	5.4	2.8	2.2	1.7	1.5	1.7
3	1.7	2.5	2.2	2.6	7.0	34	4.8	2.9	2.2	1.6	1.5	1.7
4	1.8	2.6	2.2	2.6	18	32	4.8	2.8	2.2	1.6	1.5	1.7
5	1.8	2.6	2.2	2.6	28	38	4.6	2.7	2.2	1.6	1.5	1.7
6	1.8	2.8	2.2	2.6	25	34	4.7	2.7	2.1	1.5	1.5	1.7
7	1.8	2.8	2.2	2.5	20	31	4.5	2.8	2.1	1.5	1.5	1.7
8	1.8	2.7	2.2	2.5	18	31	4.9	2.8	2.1	1.6	1.5	1.7
9	1.7	2.7	2.2	2.4	18	28	4.9	2.8	2.0	1.6	1.5	1.8
10	1.7	2.7	2.3	2.5	20	27	4.9	2.7	2.0	1.6	1.5	1.8
11	1.8	2.6	2.3	2.5	19	35	4.6	2.6	2.0	1.5	1.5	1.9
12	1.9	2.6	2.3	2.7	18	39	4.5	2.7	2.1	1.5	1.5	1.8
13	1.9	2.7	2.3	3.4	17	35	4.5	2.7	2.1	1.4	1.5	1.8
14	2.0	2.7	2.3	4.7	15	31	4.4	2.7	2.1	1.4	1.7	1.7
15	2.1	2.6	2.2	12	14	30	4.7	2.8	2.1	1.5	1.8	1.7
16	2.0	2.6	2.2	12	146	28	4.9	2.9	2.1	1.5	1.9	1.6
17	1.9	2.6	2.3	12	553	24	3.7	2.8	2.1	1.5	1.6	1.6
18	1.8	2.5	2.3	9.5	238	20	2.9	2.8	2.0	1.4	1.5	1.4
19	1.9	2.6	2.3	8.4	143	18	3.4	2.9	1.7	1.4	1.7	1.6
20	1.9	2.6	2.3	7.3	93	20	3.4	2.7	1.4	1.5	1.7	1.6
21	2.1	2.6	2.4	6.6	70	20	3.0	2.6	1.6	1.6	1.6	1.7
22	2.1	2.5	2.3	5.7	58	19	3.1	2.6	1.6	1.5	1.6	1.9
23	2.7	3.0	2.3	5.3	50	21	3.6	2.9	1.7	1.4	1.5	1.9
24	3.4	3.1	2.3	5.2	45	26	3.2	2.9	1.7	1.4	1.5	1.9
25	3.3	3.6	2.3	4.8	42	19	3.2	2.9	1.7	1.5	1.6	1.9
26	3.0	3.2	2.3	4.8	38	18	3.1	2.7	1.6	1.4	1.5	1.9
27	2.8	2.4	2.3	4.6	35	16	3.0	3.0	1.6	1.4	1.5	1.9
28	2.5	2.3	2.4	3.9	33	14	3.0	3.9	1.6	1.4	1.4	1.9
29	2.5	2.3	2.4	3.8	---	11	3.2	2.7	1.6	1.5	1.6	1.9
30	2.4	2.3	2.4	5.6	---	8.3	3.2	2.4	1.6	1.5	1.7	1.8
31	2.5	---	2.4	7.3	---	7.3	---	2.6	---	1.5	1.7	---
TOTAL	65.9	79.8	70.7	158.2	1795.1	774.6	121.2	86.9	57.5	46.6	48.6	52.6
MEAN	2.13	2.66	2.28	5.10	64.1	25.0	4.04	2.80	1.92	1.50	1.57	1.75
MAX	3.4	3.6	2.4	12	553	39	5.4	3.9	2.4	1.7	1.9	1.9
MIN	1.6	2.3	2.2	2.4	7.0	7.3	2.9	2.4	1.4	1.4	1.4	1.4
AC-FT	131	158	140	314	3560	1540	240	172	114	92	96	104

CAL YR 1989 TOTAL 3156.02 MEAN 8.65 MAX 201 MIN .51 AC-FT 6260
WTR YR 1990 TOTAL 3357.7 MEAN 9.20 MAX 553 MIN 1.4 AC-FT 6660

11143250 CARMEL RIVER NEAR CARMEL, CA

LOCATION.--Lat 36°32'20", long 121°52'25", in Canada de la Segunda Grant, Monterey County, Hydrologic Unit 18060012, on right bank 0.3 mi downstream from Potrero Canyon and 3 mi east of Carmel.

DRAINAGE AREA.--246 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 45 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. Low flow regulated by Los Padres Reservoir, usable capacity, 2,180 acre-ft, and San Clemente Reservoir, usable capacity, 796 acre-ft. Diversion from San Clemente Reservoir for municipal supply amounted to 2,950 acre-ft for the current year.

AVERAGE DISCHARGE (unadjusted).--28 years, 104 ft^3/s, 75,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,590 ft^3/s, Feb. 28, 1983, gage height, 18.22 ft, from rating curve extended above 2,800 ft^3/s on basis of slope-area measurement at gage height 17.35 ft; no flow for many days since Apr. 27, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	0900	*134	*4.01				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	78	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	59	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	24	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.21	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	161.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	5.75	.007	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	78	.21	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	319	.4	.00	.00	.00	.00	.00	.00

CAL YR 1989 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1990 TOTAL 161.21 MEAN .44 MAX 78 MIN .00 AC-FT 320

11143250 CARMEL RIVER NEAR CARMEL, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954-66, August to September 1990 (discontinued).
CHEMICAL DATA: Water years 1954-66.
SEDIMENT DATA: August to September 1990 (discontinued).

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
AUG											
06...	1245	5	0.0	1	6	20	45	65	78	86	100
SEP											
13...	1145	20	0.0	1	4	25	64	81	89	95	100

11147070 SANTA RITA CREEK NEAR TEMPLETON, CA

LOCATION.--Lat 35°31'26", long 120°45'54", in Asuncion Grant, San Luis Obispo County, Hydrologic Unit 18060005, on left bank 1.6 mi upstream from mouth and 4 mi west of Templeton.

DRAINAGE AREA.--18.2 mi^2.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 860 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Some regulation by stockponds and small diversions by irrigation pumps upstream from station.

AVERAGE DISCHARGE.--29 years, 13.6 ft^3/s, 9,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,060 ft^3/s, Jan. 19, 1969, gage height, 11.12 ft in gage well, 11.75 ft from floodmarks, from rating curve extended above 1,300 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	2130	*480	*5.50				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.2	.14	.03	e1.3	2.0	1.0	.07	.00	.00	.00	.00
2	.00	1.3	.11	.03	e1.7	2.0	1.0	.07	.00	.00	.00	.00
3	.00	1.3	.11	.02	e5.0	2.4	7.9	.06	.00	.00	.00	.00
4	.00	1.4	.10	.02	e3.8	2.3	.78	.05	.00	.00	.00	.00
5	.00	1.4	.08	.02	e2.8	2.3	.51	.04	.00	.00	.00	.00
6	.00	1.3	.07	.02	e2.3	2.3	.44	.03	.00	.00	.00	.00
7	.00	1.3	.07	.02	e2.1	2.4	.44	.03	.00	.00	.00	.00
8	.00	1.2	.07	.02	e2.0	2.4	.44	.02	.00	.00	.00	.00
9	.00	1.2	.07	.02	1.9	2.3	.31	.02	.00	.00	.00	.00
10	.00	1.2	.06	.02	1.7	2.3	.30	.02	.00	.00	.00	.00
11	.00	1.2	.06	.02	1.7	2.7	.29	.01	.00	.00	.00	.00
12	.00	1.2	.06	.13	1.7	2.5	.29	.01	.00	.00	.00	.00
13	.00	1.2	.06	e18	1.7	2.5	.25	.01	.00	.00	.00	.00
14	.00	1.2	.06	e24	1.7	2.3	.24	.01	.00	.00	.00	.00
15	.00	1.3	.05	e13	1.6	2.2	.23	.01	.00	.00	.00	.00
16	.00	1.2	.05	e8.0	61	2.0	.26	.00	.00	.00	.00	.00
17	.00	1.2	.05	e4.5	70	2.0	.33	.00	.00	.00	.00	.00
18	.00	.90	.04	e3.0	27	1.8	.32	.00	.00	.00	.00	.00
19	.00	.44	.04	e2.4	13	1.9	.29	.00	.00	.00	.00	.00
20	.00	.25	.04	e2.0	8.2	1.8	.23	.00	.00	.00	.00	.00
21	.00	.18	.04	e1.7	6.1	1.5	.18	.00	.00	.00	.00	.00
22	.00	.18	.04	e1.6	4.9	1.4	.18	.00	.00	.00	.00	.00
23	.00	.17	.04	e1.5	3.9	1.3	.18	.00	.00	.00	.00	.00
24	.00	.13	.03	e1.4	3.5	1.3	.18	.00	.00	.00	.00	.00
25	.05	.16	.03	e1.4	3.1	1.3	.15	.00	.00	.00	.00	.00
26	3.3	.37	.03	e1.4	2.2	1.2	.15	.00	.00	.00	.00	.00
27	3.5	.25	.03	e1.4	2.0	1.2	.12	.00	.00	.00	.00	.00
28	3.4	.18	.03	e1.3	2.0	1.1	.10	.00	.00	.00	.00	.00
29	3.5	.15	.03	e1.3	---	1.2	.09	.00	.00	.00	.00	.00
30	1.4	.15	.03	e1.3	---	1.1	.07	.00	.00	.00	.00	.00
31	1.2	---	.03	e1.3	---	1.0	---	.00	---	.00	.00	---
TOTAL	16.35	24.81	1.75	90.87	239.9	58.0	17.25	0.46	0.00	0.00	0.00	0.00
MEAN	.53	.83	.056	2.93	8.57	1.87	.57	.015	.000	.000	.000	.000
MAX	3.5	1.4	.14	24	70	2.7	7.9	.07	.00	.00	.00	.00
MIN	.00	.13	.03	.02	1.3	1.0	.07	.00	.00	.00	.00	.00
AC-FT	32	49	3.5	180	476	115	34	.9	.00	.00	.00	.00

CAL YR 1989 TOTAL 1158.69 MEAN 3.17 MAX 84 MIN .00 AC-FT 2300
WTR YR 1990 TOTAL 449.39 MEAN 1.23 MAX 70 MIN .00 AC-FT 891

e Estimated.

11147500 SALINAS RIVER AT PASO ROBLES, CA

LOCATION.--Lat 35°37'43", long 120°41'00", in Paso de Robles Grant, San Luis Obispo County, Hydrologic Unit 18060005, on left bank at upstream side of 13th Street Bridge in Paso Robles and 3.5 mi upstream from Huerhuero Creek.
DRAINAGE AREA.--390 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1965, October 1969 to current year.
REVISED RECORDS.--WSP 981: 1942.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 670.61 ft above National Geodetic Vertical Datum of 1929. Prior to June 14, 1951, nonrecording gage at same site and datum.

REMARKS.--Records poor. Low flows regulated by Santa Margarita Lake 32 mi upstream beginning in December 1941, usable capacity, 23,000 acre-ft. Diversion from Santa Margarita Lake for San Luis Obispo municipal supply amounted to 1,100 acre-ft for the current year. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--47 years, 92.7 ft^3/s, 67,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,500 ft^3/s, Feb. 16, 1980, gage height, 15.99 ft, from rating curve extended above 11,000 ft^3/s; maximum gage height, 17.24 ft, Apr. 3, 1958; no flow for many days in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 23.8 ft from floodmarks, discharge, 28,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	1015	*115	*5.22				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	e.40	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	e.65	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	e.55	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	e.40	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e.36	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.41	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.24	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.17	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	15	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	e.50	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	e.10	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	e.05	5.4	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	53	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	34	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	14	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	4.8	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	e.50	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	e.20	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	e.15	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	e.10	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	e.07	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	e.05	.00	.00	.02	.00	.00	.00	.00
28	.00	.00	.00	.00	e.00	.00	.00	.03	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	15.65	113.37	3.44	0.00	0.05	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.50	4.05	.11	.000	.002	.000	.000	.000	.000
MAX	.00	.00	.00	15	53	.65	.00	.03	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	31	225	6.8	.00	.1	.00	.00	.00	.00

CAL YR 1989 TOTAL 1847.54 MEAN 5.06 MAX 96 MIN .00 AC-FT 3660
WTR YR 1990 TOTAL 132.51 MEAN .36 MAX 53 MIN .00 AC-FT 263

e Estimated.

11147500 SALINAS RIVER AT PASO ROBLES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-66, June 1990 (discontinued).
CHEMICAL DATA: Water years 1963-66.
SEDIMENT DATA: June 1990 (discontinued).

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JUN												
12...	1045	15	0.0	1	3	21	46	69	84	92	98	100

11148500 ESTRELLA RIVER NEAR ESTRELLA, CA

LOCATION.--Lat 35°43'02", long 120°38'21", in NW 1/4 NW 1/4 sec.36, T.25 S., R.12 E., San Luis Obispo County, Hydrologic Unit 18060004, on right bank 0.2 mi downstream from mouth of Ranchito Canyon and 1.9 mi northwest of Estrella.

DRAINAGE AREA.--922 mi^2, not including Carrizo Plains.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1954 to current year. Prior to October 1960, published as Estrella Creek near Estrella.

REVISED RECORDS.--WSP 2129: 1969, drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 671.59 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records poor. No regulation; pumpage from wells along river for irrigation upstream from station.

AVERAGE DISCHARGE.--36 years, 24.4 ft^3/s, 17,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft^3/s, Feb. 24, 1969, gage height, 10.4 ft, from floodmarks, by slope-area measurement of peak flow; maximum gage height, 10.9 ft, Jan. 25, 1969, from floodmarks; no flow many days in 1988-90.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 23	1230	*614	*2.83				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	e.24	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	e.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	93
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e13
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e1.4
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	107.40
MEAN	.000	.000	.000	.008	.000	.000	.000	.000	.000	.000	.000	3.58
MAX	.00	.00	.00	.24	.00	.00	.00	.00	.00	.00	.00	93
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.5	.00	.00	.00	.00	.00	.00	.00	213

CAL YR 1989 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00
WTR YR 1990 TOTAL 107.64 MEAN .29 MAX 93 MIN .00 AC-FT 214

e Estimated.

11148500 ESTRELLA RIVER NEAR ESTRELLA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
SEDIMENT DATA: June 1990 (discontinued).

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
JUN												
11...	1340	15	0.0	2	5	23	65	88	95	98	99	100

11148900 NACIMIENTO RIVER BELOW SAPAQUE CREEK, NEAR BRYSON, CA

LOCATION.--Lat 35°47'19", long 121°05'34", in SW 1/4 NE 1/4 sec.3, T.25 S., R.8 E., San Luis Obispo County, Hydrologic Unit 18060005, on left bank just downstream from Sapaque Creek and 1.4 mi south of Bryson.

DRAINAGE AREA.--162 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1971 to current year.

REVISED RECORDS.--WDR CA-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No storage or diversion upstream from station.

AVERAGE DISCHARGE.--19 years, 181 ft^3/s, 131,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,000 ft^3/s, Jan. 16, 1978, gage height, 32.00 ft, from rating curve extended above 7,900 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	2100	*4,450	a*14.89				

No flow for many days.

a Outside gage, 15.27 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.2	6.4	2.9	16	30	10	2.4	2.7	.00	.00	.00
2	.00	2.0	5.4	4.5	17	29	9.7	2.4	2.1	.00	.00	.00
3	.00	2.0	4.7	4.1	16	32	9.2	2.3	1.6	.00	.00	.00
4	.00	1.9	4.4	4.5	66	32	8.9	2.1	1.2	.00	.00	.00
5	.00	1.8	4.1	4.0	59	29	8.4	2.0	.84	.00	.00	.00
6	.00	1.7	3.8	3.7	41	29	8.0	1.8	.61	.00	.00	.00
7	.00	1.7	3.6	3.4	36	26	7.7	1.5	.49	.00	.00	.00
8	.00	1.7	3.4	3.4	31	25	8.0	1.3	.32	.00	.00	.00
9	.00	1.6	3.3	3.3	27	24	8.0	1.2	.16	.00	.00	.00
10	.00	1.7	3.5	3.2	24	22	7.8	1.3	.07	.00	.00	.00
11	.00	1.7	3.5	3.2	23	23	7.2	1.4	.01	.00	.00	.00
12	.00	1.6	3.3	8.8	22	24	6.8	1.5	.00	.00	.00	.00
13	.00	1.6	3.1	258	19	23	6.3	1.4	.00	.00	.00	.00
14	.00	1.6	3.1	338	18	21	6.0	1.2	.00	.00	.00	.00
15	.00	1.6	3.0	176	16	21	5.4	1.1	.00	.00	.00	.00
16	.00	1.6	3.1	86	636	20	5.7	1.0	.00	.00	.00	.00
17	.00	1.6	3.1	69	782	19	7.5	.93	.00	.00	.00	.00
18	.00	1.6	3.0	51	301	18	7.4	.85	.00	.00	.00	.00
19	.00	1.5	3.0	40	171	17	6.6	.83	.00	.00	.00	.00
20	.00	1.5	3.0	34	113	17	6.1	.76	.00	.00	.00	.00
21	.00	1.6	3.0	29	87	16	5.3	.73	.00	.00	.00	.00
22	.00	1.6	3.0	26	70	15	5.1	.73	.00	.00	.00	.00
23	.00	1.6	3.0	23	58	14	4.7	.78	.00	.00	.00	.00
24	26	1.7	2.9	21	50	13	4.2	.98	.00	.00	.00	.00
25	22	2.6	2.9	19	44	13	4.1	1.0	.00	.00	.00	.00
26	9.5	116	3.0	17	39	12	4.3	1.0	.00	.00	.00	.00
27	5.7	32	3.0	16	35	11	3.8	.71	.00	.00	.00	.00
28	4.0	16	2.9	14	33	11	3.5	2.0	.00	.00	.00	.00
29	3.0	10	2.9	13	---	11	2.9	3.5	.00	.00	.00	.00
30	2.6	7.7	2.9	13	---	11	2.6	5.6	.00	.00	.00	.00
31	2.5	---	2.9	13	---	11	---	3.7	---	.00	.00	---
TOTAL	75.30	225.0	106.2	1305.0	2850	619	191.2	50.00	10.10	0.00	0.00	0.00
MEAN	2.43	7.50	3.43	42.1	102	20.0	6.37	1.61	.34	.000	.000	.000
MAX	26	116	6.4	338	782	32	10	5.6	2.7	.00	.00	.00
MIN	.00	1.5	2.9	2.9	16	11	2.6	.71	.00	.00	.00	.00
AC-FT	149	446	211	2590	5650	1230	379	99	20	.00	.00	.00

CAL YR 1989 TOTAL 9248.66 MEAN 25.3 MAX 606 MIN .00 AC-FT 18340
WTR YR 1990 TOTAL 5431.80 MEAN 14.9 MAX 782 MIN .00 AC-FT 10770

11148900 NACIMIENTO RIVER BELOW SAPAQUE CREEK, NEAR BRYSON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year. Published as station 11148800 "near Bryson" in water years 1958-59, 1961-71.
WATER TEMPERATURE: Water years 1972-73.
SEDIMENT DATA: Water years 1972 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1971 to September 1973.
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1973.

REMARKS.--Zero bedload discharge observed for flows less than 36 ft^3/s during current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
30...	1255	2.9	14.0	1	0.01	--
DEC						
04...	1320	4.7	7.0	3	0.04	--
JAN						
05...	1110	4.0	4.0	0	0.0	--
FEB						
07...	1620	36	7.5	3	0.29	--
MAR						
07...	1330	27	13.5	1	0.07	--
APR						
20...	1225	6.5	20.0	5	0.09	50
JUN						
11...	1130	0.06	25.5	7	0.00	50

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
OCT								
30...	1335	1	2.9	14.0	1	3	21	55
30...	1340	1	2.9	14.0	--	--	1	1
30...	1345	1	2.9	14.0	--	1	2	8
30...	1350	1	2.9	14.0	--	--	4	24
30...	1355	1	2.9	14.0	--	1	3	25
FEB								
07...	1630	1	36	7.5	--	--	1	10
07...	1631	1	36	7.5	--	--	--	5
07...	1632	1	36	7.5	--	--	--	5
07...	1633	1	36	7.5	--	1	1	4
07...	1634	1	36	7.5	--	1	2	4
07...	1635	1	36	7.5	--	1	2	4
07...	1636	1	36	7.5	--	1	2	4
MAR								
07...	1430	1	26	13.5	--	--	--	1
07...	1431	1	26	13.5	--	1	1	2
07...	1432	1	26	13.5	--	--	1	7
07...	1433	1	26	13.5	--	--	1	14
07...	1434	1	26	13.5	--	--	1	8
07...	1435	1	26	13.5	1	4	22	85

11148900 NACIMIENTO RIVER BELOW SAPAQUE CREEK, NEAR BRYSON, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
OCT							
30...	65	68	78	100	--	--	--
30...	2	7	26	49	94	100	--
30...	33	62	72	78	89	100	--
30...	80	97	99	100	--	--	--
30...	85	99	100	--	--	--	--
FEB							
07...	39	52	60	68	88	100	--
07...	28	46	54	60	73	91	100
07...	26	40	49	62	85	100	--
07...	16	24	30	37	62	92	100
07...	10	20	29	39	59	83	100
07...	8	16	22	31	51	91	100
07...	7	11	15	26	69	100	--
MAR							
07...	1	1	5	36	100	--	--
07...	3	13	33	63	100	--	--
07...	32	52	64	77	92	100	--
07...	54	81	90	94	100	--	--
07...	58	89	92	94	100	--	--
07...	98	100	--	--	--	--	--

11149400 NACIMIENTO RIVER BELOW NACIMIENTO DAM, NEAR BRADLEY, CA

LOCATION.--Lat 35°45'41", long 120°51'16", in NE 1/4 NE 1/4 sec.14, T.25 S., R.10 E., San Luis Obispo County, Hydrologic Unit 18060005, Camp Roberts Military Reservation, on left bank 2.2 mi downstream from Nacimiento Dam, and 7.6 mi southwest of Bradley.

DRAINAGE AREA.--329 mi^2.

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR CA-84-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 597 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and discharges less than 2.0 ft^3/s, which are poor. Flow regulated by Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft. No diversion upstream from station.

AVERAGE DISCHARGE (unadjusted).--33 years, 276 ft^3/s, 200,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,340 ft^3/s, Feb. 25, 1969, gage height, 10.92 ft; no flow at times in 1958-63, 1965, 1977, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17 ft^3/s, Dec. 10, gage height, 2.56 ft; no flow for several days in May and June.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	2.4	2.4	2.4	2.5	7.3	6.6	3.4	2.4	e1.3	2.6	2.4
2	5.0	2.0	2.4	2.9	2.4	7.4	6.7	3.4	2.3	e1.6	2.5	2.3
3	.83	2.1	2.4	2.7	2.4	7.5	6.9	3.5	2.0	e1.6	2.4	2.3
4	5.5	2.5	2.5	2.6	2.7	7.3	7.1	3.5	2.0	e1.8	2.3	3.4
5	4.3	2.0	2.3	2.6	2.3	6.9	7.5	3.5	2.0	e2.2	2.3	3.6
6	4.4	1.9	1.9	2.5	2.2	6.9	7.8	2.0	2.0	2.2	2.3	2.6
7	4.3	1.7	1.9	2.6	2.3	7.1	7.6	1.5	2.0	2.1	2.1	2.3
8	6.8	1.5	1.8	2.5	2.3	7.2	8.0	1.4	1.8	2.2	2.2	2.2
9	5.5	1.7	2.6	2.6	2.3	7.5	8.0	1.5	1.7	2.4	2.5	2.1
10	2.5	1.9	11	3.0	2.4	7.1	8.3	1.7	1.9	2.1	2.2	1.9
11	4.4	2.0	2.2	3.2	2.3	7.2	8.5	1.7	2.0	2.2	2.2	2.2
12	1.6	2.0	2.0	4.0	2.4	7.0	8.5	1.6	2.1	2.3	2.3	2.1
13	4.8	2.0	1.9	5.9	2.6	6.7	8.3	1.8	1.9	2.1	2.5	2.0
14	3.6	1.7	2.4	4.7	2.4	6.7	8.2	1.6	2.1	2.0	2.4	1.5
15	3.8	1.6	3.7	3.1	2.5	6.3	7.7	1.4	1.8	2.1	2.8	1.8
16	3.5	1.9	11	3.0	3.4	6.5	8.1	1.4	1.2	2.0	2.9	2.3
17	3.0	2.3	7.6	2.7	3.1	6.2	8.4	1.5	.36	2.8	2.8	2.3
18	2.6	2.3	4.2	2.4	2.7	5.9	8.4	1.5	.06	3.0	2.9	2.5
19	3.1	2.2	4.4	2.1	2.6	6.0	8.3	1.5	.02	2.8	2.9	2.4
20	3.0	2.3	11	2.3	4.0	6.1	8.3	1.5	.00	2.8	3.0	2.6
21	4.7	2.3	11	2.3	8.0	6.1	8.3	1.3	.00	2.7	3.1	2.7
22	6.1	2.2	12	2.3	7.6	6.0	8.0	.16	.00	2.5	2.7	3.1
23	4.6	2.3	10	2.2	7.5	6.0	7.7	.01	.00	3.0	2.5	2.3
24	4.8	2.6	2.6	2.3	7.4	6.1	6.0	.00	.00	3.2	2.5	2.0
25	4.0	2.1	2.3	2.4	7.5	6.2	3.8	.00	e.00	3.1	3.2	2.1
26	4.1	2.4	2.3	2.5	7.5	6.4	3.6	.95	e.30	3.2	2.6	2.3
27	3.9	2.4	2.4	2.4	7.4	6.5	3.5	1.8	e.60	3.2	2.7	1.9
28	4.1	2.3	2.4	2.6	7.4	6.6	3.5	2.3	e.80	3.3	2.6	2.6
29	4.0	2.4	2.4	2.5	---	6.7	3.4	2.1	e.70	2.9	2.5	2.6
30	3.8	2.3	2.5	2.7	---	6.6	3.4	2.2	e.70	2.5	2.4	2.6
31	3.3	---	2.9	2.4	---	6.7	---	2.4	---	2.5	2.4	---
TOTAL	125.93	63.3	134.4	86.4	112.1	206.7	208.4	54.12	34.74	75.7	79.3	71.0
MEAN	4.06	2.11	4.34	2.79	4.00	6.67	6.95	1.75	1.16	2.44	2.56	2.37
MAX	6.8	2.6	12	5.9	8.0	7.5	8.5	3.5	2.4	3.3	3.2	3.6
MIN	.83	1.5	1.8	2.1	2.2	5.9	3.4	.00	.00	1.3	2.1	1.5
AC-FT	250	126	267	171	222	410	413	107	69	150	157	141

CAL YR 1989 TOTAL 27806.47 MEAN 76.2 MAX 391 MIN .40 AC-FT 55150
WTR YR 1990 TOTAL 1252.09 MEAN 3.43 MAX 12 MIN .00 AC-FT 2480

e Estimated.

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA

LOCATION.--Lat 35°53'48", long 121°05'14", in Los Ojitos Grant, Monterey County, Hydrologic Unit 18060005, on downstream side of highway bridge, 0.4 mi upstream from Tule Canyon, and 3.3 mi south of Lockwood.

DRAINAGE AREA.--217 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

REVISED RECORDS.--WDR CA-82-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 795.00 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 28, 1975, at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair. No regulation; some pumping upstream from station.

AVERAGE DISCHARGE.--25 years, 106 ft^3/s, 76,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft^3/s, Jan. 26, 1969, gage height, 13.25 ft, current datum; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	0345	*760	*7.90				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	25	8.4	.93	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	25	7.9	.87	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	25	7.7	.72	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	24	7.4	.59	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	22	7.4	.32	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	21	6.9	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	20	6.6	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	21	6.2	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	2.0	19	6.0	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	4.4	19	6.1	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	4.5	19	5.5	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	4.8	18	5.1	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	4.9	17	4.7	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	4.9	16	4.4	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	4.8	16	4.1	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	5.9	16	4.4	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	326	15	4.8	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	131	14	4.4	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	93	14	4.4	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	67	13	4.2	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	54	13	3.9	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	44	13	3.5	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	38	13	3.2	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	34	12	2.9	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	31	12	2.5	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	29	12	2.2	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	27	12	1.9	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	26	11	1.6	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	10	1.2	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	10	1.0	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	9.1	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	936.20	506.1	140.5	3.43	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	33.4	16.3	4.68	.11	.000	.000	.000	.000
MAX	.00	.00	.00	.00	326	25	8.4	.93	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	9.1	1.0	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	1860	1000	279	6.8	.00	.00	.00	.00

CAL YR 1989 TOTAL 4588.98 MEAN 12.6 MAX 118 MIN .00 AC-FT 9100
WTR YR 1990 TOTAL 1586.23 MEAN 4.35 MAX 326 MIN .00 AC-FT 3150

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.
WATER TEMPERATURE: Water years 1966-73.
SEDIMENT DATA: Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1965 to September 1973.
SUSPENDED-SEDIMENT DISCHARGE: October 1965 to September 1973.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB						
20...	1240	68	12.5	12	2.2	--
MAR						
07...	0940	20	12.5	2	0.11	--
APR						
19...	1220	4.5	16.0	6	0.07	46
MAY						
01...	1705	0.90	21.5	6	0.02	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
OCT							
31...	1100	1	0.0	--	--	--	1
31...	1101	1	0.0	--	--	--	2
31...	1102	1	0.0	--	--	--	1
31...	1103	1	0.0	--	--	--	4
31...	1104	1	0.0	--	--	--	3
31...	1105	1	0.0	--	--	--	1
31...	1106	1	0.0	--	--	1	7
31...	1107	1	0.0	--	--	--	2
31...	1108	1	0.0	--	--	1	2
31...	1109	1	0.0	--	--	1	3
MAR							
07...	1030	1	20	12.5	--	--	7
07...	1031	1	20	12.5	--	--	--
07...	1032	1	20	12.5	--	--	2
07...	1033	1	20	12.5	--	--	4
07...	1034	1	20	12.5	--	--	3
07...	1035	1	20	12.5	--	--	1
07...	1036	1	20	12.5	--	1	4
07...	1037	1	20	12.5	--	1	3
07...	1038	1	20	12.5	--	1	3
07...	1039	1	20	12.5	1	2	4

11149900 SAN ANTONIO RIVER NEAR LOCKWOOD, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
OCT							
31...	11	34	58	72	83	96	100
31...	14	30	48	64	79	98	100
31...	15	44	72	84	91	99	100
31...	27	62	84	92	96	100	--
31...	18	44	67	79	86	91	100
31...	11	29	41	50	59	74	100
31...	20	39	64	80	88	97	100
31...	8	24	47	62	69	81	100
31...	8	26	54	70	80	91	100
31...	12	32	52	65	74	89	100
MAR							
07...	29	52	71	84	91	98	100
07...	9	42	75	90	97	100	--
07...	18	37	54	72	86	96	100
07...	24	42	64	80	90	99	100
07...	21	46	70	82	89	94	100
07...	9	34	71	86	93	98	100
07...	14	34	56	73	83	96	100
07...	11	28	54	71	81	93	100
07...	10	29	53	69	80	91	100
07...	8	29	55	68	80	98	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)
FEB										
20...	1300	1000	1120	0.250	1255	1305	19	2.50	68	12.5
20...	1315	1000	1120	0.250	1310	1320	19	2.50	68	12.5
MAR										
07...	1000	1000	1120	0.250	0950	1005	24	3.50	20	12.5
07...	1015	1000	1120	0.250	1010	1025	24	3.50	20	12.5
APR										
19...	1050	1000	1150	0.250	1045	1055	21	0.50	4.5	16.0
19...	1105	1000	1150	0.250	1100	1110	21	0.50	4.5	16.0
19...	1135	1000	1120	0.250	1130	1140	21	0.50	4.5	16.0
19...	1155	1000	1120	0.250	1150	1200	21	0.50	4.5	16.0
MAY										
01...	1700	--	--	--	--	--	--	--	0.90	21.5

DATE	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
FEB									
20...	88	1	26	66	89	96	98	99	100
20...	88	1	23	62	86	94	98	100	--
MAR									
07...	21	--	18	62	89	96	99	100	--
07...	21	--	16	63	90	97	99	100	--
APR									
19...	2.3	1	6	44	83	96	99	100	--
19...	2.3	--	10	50	84	95	99	100	--
19...	1.9	--	7	47	87	97	99	100	--
19...	1.9	--	7	54	88	98	100	--	--
MAY									
01...	0.0	--	--	--	--	--	--	--	--

11150500 SALINAS RIVER NEAR BRADLEY, CA

LOCATION.--Lat 35°55'49", long 120°52'04", in SW 1/4 NW 1/4 sec.14, T.23 S., R.10 E., Monterey County, Hydrologic Unit 18060005, on left bank 6 mi northwest of Bradley and 7 mi downstream from San Antonio River.

DRAINAGE AREA.--2,535 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1285: 1950. WDR CA-84-2: 1978.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 442.69 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair except for estimated discharges and for discharges from Aug. 30 to Sept. 30, which are poor. Flow regulated by Santa Margarita Lake beginning in December 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Several small diversions upstream from station.

AVERAGE DISCHARGE (unadjusted).--42 years, 474 ft^3/s, 343,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft^3/s, Feb. 24, 1969, gage height, 20.34 ft, from floodmarks; no flow at times in 1951, 1954-55, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30 ft^3/s, Jan. 14, gage height, 3.58 ft; minimum daily, 0.07 ft^3/s, Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	13	14	14	16	16	15	7.6	4.1	1.7	.53	.18
2	15	13	14	17	15	17	15	6.9	3.9	1.6	.61	.16
3	15	13	14	15	15	18	15	6.6	3.9	1.5	.58	.11
4	14	13	14	14	17	18	15	6.2	3.7	1.4	.53	.08
5	13	13	14	14	15	18	15	5.8	3.3	1.3	.35	.09
6	12	13	14	14	13	18	15	5.5	3.3	1.2	.39	.11
7	11	12	14	14	13	18	15	5.5	3.2	1.2	.37	.11
8	11	12	15	14	13	18	15	5.3	3.2	1.3	.38	.08
9	11	12	15	14	13	18	14	5.0	3.0	1.2	.38	.07
10	9.9	12	15	14	13	18	13	5.3	3.3	1.1	.38	.10
11	9.9	12	15	15	13	18	13	5.1	3.0	.86	.38	.11
12	9.9	12	15	18	13	17	13	4.8	2.9	.81	.38	.13
13	9.7	12	15	25	12	17	12	4.8	2.6	.76	.38	.13
14	9.8	12	15	29	12	16	12	4.8	2.6	.75	.38	.15
15	9.9	12	15	26	13	16	12	4.5	2.6	.70	e.37	.15
16	9.9	14	15	24	15	16	12	4.7	2.7	.59	e.36	.19
17	9.9	13	15	23	17	16	12	4.8	2.8	.56	e.35	.21
18	9.7	13	15	22	17	15	12	4.7	2.9	.60	e.34	.28
19	9.3	13	15	21	17	15	12	4.6	4.5	.55	e.33	.38
20	8.8	13	15	20	16	16	11	4.4	3.7	.54	e.33	.49
21	12	13	15	19	15	15	11	4.7	e3.1	.46	e.33	.62
22	21	13	15	19	14	15	11	4.7	2.9	.41	e.32	.83
23	19	13	16	18	15	15	11	5.3	2.7	.49	e.32	1.1
24	19	13	18	17	15	15	11	5.2	2.6	.50	e.31	1.2
25	17	14	18	17	14	15	10	4.4	2.5	.57	e.31	4.6
26	15	16	18	16	14	16	9.6	4.2	2.4	.60	e.30	8.2
27	15	16	17	16	14	15	8.9	5.3	2.3	.58	e.30	7.5
28	15	15	16	15	15	15	8.2	9.4	2.0	.54	e.29	6.2
29	15	14	15	15	---	16	7.7	6.9	1.9	.52	e.29	5.6
30	14	14	14	15	---	15	7.8	5.4	1.9	.59	.28	5.0
31	14	---	14	16	---	14	---	4.4	---	.56	.24	---
TOTAL	404.7	393	469	550	404	505	364.2	166.8	89.5	26.04	11.39	44.16
MEAN	13.1	13.1	15.1	17.7	14.4	16.3	12.1	5.38	2.98	.84	.37	1.47
MAX	21	16	18	29	17	18	15	9.4	4.5	1.7	.61	8.2
MIN	8.8	12	14	14	12	14	7.7	4.2	1.9	.41	.24	.07
AC-FT	803	780	930	1090	801	1000	722	331	178	52	23	88

CAL YR 1989 TOTAL 88692.7 MEAN 243 MAX 950 MIN 8.8 AC-FT 175900
WTR YR 1990 TOTAL 3427.79 MEAN 9.39 MAX 29 MIN .07 AC-FT 6800

e Estimated.

11150500 SALINAS RIVER NEAR BRADLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950, 1958, 1962-66, 1972-75, 1977, 1980-81, June 1990 (discontinued).
CHEMICAL DATA: Water years 1958, 1962-66, 1972-75, 1977, 1980-81.
SEDIMENT DATA: Water years 1950, June 1990 (discontinued).

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JUN											
21...	1345	18	e3.1	2	23	54	78	89	94	99	100

e Estimated.

11151300 SAN LORENZO CREEK BELOW BITTERWATER CREEK, NEAR KING CITY, CA

LOCATION.--Lat 36°16'05", long 121°03'55", in NE 1/4 sec.23, T.19 S., R.8 E., Monterey County, Hydrologic Unit 18060005, on left bank 1.3 mi downstream from Bitterwater Creek, 5 mi northeast of King City, and 10 mi upstream from mouth.

DRAINAGE AREA.--233 mi^2.

PERIOD OF RECORD.--October 1958 to current year.

REVISED RECORDS.--WDR CA-85-2: 1969-84(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 431.48 ft (revised) above National Geodetic Vertical Datum of 1929. October 1958 to Apr. 24, 1967, at site 500 ft upstream at datum 5.00 ft higher. Apr. 25, 1967, to July 12, 1981, at site 200 ft upstream.

REMARKS.--No estimated daily discharges. Records fair. No regulation; small diversions upstream from station by ranchers and sand-processing plant.

AVERAGE DISCHARGE.--32 years, 13.3 ft^3/s, 9,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft^3/s, Jan. 25, 1969, gage height, 15.33 ft, in gage well, 16.2 ft, from floodmarks, from rating curve extended above 7,100 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in 1961 and 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	1045	*131	*5.39				

Minimum daily, 0.04 ft^3/s, Aug. 10, 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.16	.89	.88	2.0	2.1	1.3	.23	.12	.08	.06	.05
2	.11	.17	.87	1.2	2.0	2.2	1.3	.21	.12	.07	.06	.05
3	.11	.17	.87	1.3	2.0	2.6	1.2	.20	.12	.07	.06	.05
4	.11	.18	.88	1.1	3.0	2.7	1.1	.19	.11	.07	.06	.05
5	.11	.19	.89	1.1	2.9	2.7	1.0	.17	.11	.07	.06	.05
6	.11	.19	.92	.99	2.9	2.6	.97	.14	.10	.07	.06	.05
7	.11	.21	.89	.99	2.6	2.4	.99	.14	.09	.07	.06	.06
8	.11	.23	.92	.99	2.2	2.2	1.1	.14	.09	.07	.05	.05
9	.11	.24	.92	.99	2.2	2.1	1.0	.14	.08	.07	.05	.06
10	.11	.25	.92	1.0	2.0	2.0	.90	.13	.08	.07	.04	.06
11	.11	.28	.92	.99	2.0	2.1	.78	.13	.08	.07	.05	.06
12	.11	.30	.90	1.1	1.9	2.1	.70	.14	.08	.06	.05	.06
13	.11	.30	.85	2.4	1.8	2.4	.62	.14	.08	.06	.05	.06
14	.11	.31	.88	7.0	1.6	2.3	.54	.14	.09	.06	.05	.06
15	.11	.34	.92	13	1.6	2.1	.47	.14	.09	.06	.05	.05
16	.11	.37	.92	8.5	2.1	1.9	.45	.13	.09	.06	.05	.05
17	.12	.41	.92	5.9	36	1.8	.48	.12	.09	.07	.05	.05
18	.13	.44	.92	3.9	15	1.7	.52	.13	.09	.06	.05	.05
19	.13	.43	.92	3.2	7.4	1.7	.53	.13	.09	.05	.05	.05
20	.13	.45	.95	2.5	4.7	1.8	.55	.13	.08	.05	.05	.05
21	.16	.49	.99	2.3	3.4	1.6	.51	.13	.08	.05	.05	.06
22	.15	.51	.99	2.1	2.8	1.5	.48	.13	.08	.05	.04	.07
23	.18	.53	.99	2.1	2.5	1.5	.47	.15	.08	.05	.05	.06
24	.18	.56	.99	2.0	2.4	1.5	.47	.15	.08	.06	.05	.06
25	.17	.62	.99	2.0	2.3	1.4	.42	.13	.08	.06	.05	.06
26	.15	.97	1.0	1.9	2.2	1.4	.39	.13	.08	.06	.05	.06
27	.15	1.1	.94	1.8	2.1	1.4	.34	.15	.08	.06	.05	.06
28	.15	1.0	.92	1.7	2.1	1.3	.28	.17	.07	.06	.05	.06
29	.15	.93	.92	1.7	---	1.3	.25	.13	.08	.06	.05	.05
30	.15	.92	.92	1.8	---	1.3	.24	.12	.08	.06	.05	.05
31	.16	---	.92	2.0	---	1.3	---	.12	---	.06	.05	---
TOTAL	4.02	13.25	28.64	80.43	117.7	59.0	20.35	4.53	2.67	1.94	1.60	1.66
MEAN	.13	.44	.92	2.59	4.20	1.90	.68	.15	.089	.063	.052	.055
MAX	.18	1.1	1.0	13	36	2.7	1.3	.23	.12	.08	.06	.07
MIN	.11	.16	.85	.88	1.6	1.3	.24	.12	.07	.05	.04	.05
AC-FT	8.0	26	57	160	233	117	40	9.0	5.3	3.8	3.2	3.3

CAL YR 1989 TOTAL 261.83 MEAN .72 MAX 8.5 MIN .05 AC-FT 519
WTR YR 1990 TOTAL 335.79 MEAN .92 MAX 36 MIN .04 AC-FT 666

11151700 SALINAS RIVER AT SOLEDAD, CA

LOCATION.--Lat 36°24'40", long 121°19'06", on boundary between San Vicente and Los Coches Grants, Monterey County, Hydrologic Unit 18060005, near right bank on upstream end of pier on U.S. Highway 101, 0.9 mi south of Soledad, and 1 mi upstream from Arroyo Seco River.

DRAINAGE AREA.--3,563 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to September 1978, October 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 170 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated by Santa Margarita Lake beginning in December 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and by Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Several small diversions for irrigation upstream from station.

AVERAGE DISCHARGE (unadjusted).--17 years (water years 1969-78, 1984-90), 387 ft^3/s, 280,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 106,000 ft^3/s, Feb. 25, 1969, gage height, 23.31 ft; maximum gage height, 23.39 ft, Jan. 26, 1969; no flow at times in some years and from Sept. 30, 1989, to Sept. 30, 1990.

EXTREMES FOR CURRENT YEAR.--No flow for water year 1990.

11151700 SALINAS RIVER AT SOLEDAD, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-75, 1977, May 1990 (discontinued).
CHEMICAL DATA: Water years 1972-75, 1977.
SEDIMENT DATA: May 1990 (discontinued).

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
MAY 31...	1130	25	0.0	1	15	63	92	97	99	100

11152000 ARROYO SECO NEAR SOLEDAD, CA

LOCATION.--Lat 36°16'50", long 121°19'18", in SW 1/4 NE 1/4 sec.16, T.19 S., R.6 E., Monterey County, Hydrologic Unit 18060005, on right bank under county road bridge, 1.5 mi downstream from Vaquero Creek, and 10 mi south of Soledad.

DRAINAGE AREA.--244 mi^2.

PERIOD OF RECORD.--November 1901 to current year. Records for water year 1902 incomplete; yearly estimate published in WSP 1315-B.

REVISED RECORDS.--WSP 881: 1902-9 (yearly summary only). WSP 1565: 1916-19, 1920-21(M), 1922, 1926-27, 1928-30(M), 1932, 1934, 1936(M). WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 339.20 ft above National Geodetic Vertical Datum of 1929. Prior to June 16, 1929, nonrecording gage, and June 16, 1929, to Dec. 2, 1941, water-stage recorder at site 1 mi upstream at different datum. Dec. 3, 1941, to Sept. 30, 1959, water-stage recorder at datum 2.00 ft higher. Jan. 30 to Mar. 26, 1969, nonrecording gage at bridge at same datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or large diversion upstream from station. Low flows affected by upstream gravel mining during summer months.

AVERAGE DISCHARGE.--89 years, 167 ft^3/s, 121,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,300 ft^3/s, Apr. 3, 1958, gage height, 16.40 ft, datum then in use, from rating curve extended above 12,000 ft^3/s on basis of slope-area measurement at gage height 16.30 ft; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	2215	*3,020	*5.49				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	7.7	17	12	29	55	24	11	9.1	.02	.00	.00
2	.00	7.6	15	14	29	54	24	10	9.6	.01	.00	.00
3	.00	7.2	14	17	28	56	23	10	7.5	.00	.00	.00
4	.00	7.1	14	15	61	62	23	9.3	5.7	.00	.00	.00
5	.00	7.1	14	14	69	60	22	8.5	5.2	.00	.00	.00
6	.00	7.2	12	13	52	57	22	8.0	4.4	.00	.00	.00
7	.00	6.9	12	13	46	51	21	6.8	3.6	.00	.00	.00
8	.00	6.6	12	13	42	48	21	6.7	3.1	.00	.00	.00
9	.00	6.6	12	13	38	46	21	6.2	2.9	.00	.00	.00
10	.00	6.6	12	13	37	45	21	6.0	2.6	.00	.00	.00
11	.00	7.0	11	13	35	48	20	6.2	2.0	.00	.00	.00
12	.00	7.2	11	15	33	48	19	7.1	1.0	.00	.00	.00
13	.00	7.2	11	116	31	45	18	7.3	.75	.00	.00	.00
14	.00	7.5	11	341	29	43	18	6.1	.73	.00	.00	.00
15	.00	7.3	11	184	28	41	17	6.1	.53	.00	.00	.00
16	.00	7.5	11	97	313	39	17	6.0	.45	.00	.00	.00
17	.00	7.7	11	81	694	38	18	5.4	.56	.00	.00	.00
18	.00	7.7	11	63	273	36	18	5.4	.54	.00	.00	.00
19	.00	7.7	11	52	171	34	17	6.0	.37	.00	.00	.00
20	.00	8.0	11	45	127	33	17	6.2	.27	.00	.00	.00
21	.00	8.3	11	41	103	33	16	6.3	.22	.00	.00	.00
22	.00	8.3	11	37	89	32	16	5.8	.21	.00	.00	.00
23	.00	8.3	11	34	80	31	16	6.4	.17	.00	.00	.00
24	40	8.2	11	31	75	30	16	6.3	.16	.00	.00	.00
25	27	9.9	11	30	71	30	16	6.5	.18	.00	.00	.00
26	16	133	11	27	67	29	14	6.8	.14	.00	.00	.00
27	12	55	11	26	63	28	13	7.0	.09	.00	.00	.00
28	10	31	11	24	59	26	12	9.7	.08	.00	.00	.00
29	9.2	23	11	24	---	25	11	13	.07	.00	.00	.00
30	8.3	19	11	25	---	25	11	13	.04	.00	.00	.00
31	7.7	---	11	27	---	25	---	9.1	---	.00	.00	---
TOTAL	130.20	449.4	365	1470	2772	1253	542	234.2	62.26	0.03	0.00	0.00
MEAN	4.20	15.0	11.8	47.4	99.0	40.4	18.1	7.55	2.08	.001	.000	.000
MAX	40	133	17	341	694	62	24	13	9.6	.02	.00	.00
MIN	.00	6.6	11	12	28	25	11	5.4	.04	.00	.00	.00
AC-FT	258	891	724	2920	5500	2490	1080	465	123	.06	.00	.00

CAL YR 1989 TOTAL 9781.08 MEAN 26.8 MAX 360 MIN .00 AC-FT 19400
WTR YR 1990 TOTAL 7278.09 MEAN 19.9 MAX 694 MIN .00 AC-FT 14440

11152300 SALINAS RIVER NEAR CHUALAR, CA
(National stream-quality accounting network station)

LOCATION.--Lat 36°33'14", long 121°32'53", in Guadalupe Y Llanitos de Los Correos Grant, Monterey County, Hydrologic Unit 18060005, near left bank on downstream side of bridge on Chualar-River Road and 2 mi southwest of Chualar.

DRAINAGE AREA.--4,042 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to current year.

REVISED RECORDS.--WDR CA-85-2: 1983-84(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 68.00 ft above National Geodetic Vertical Datum of 1929. Prior to January 1979, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Daily discharges prior to January 1979 determined by discharge measurements at this site correlated to streamflow for Salinas River at Soledad (station 11151700) and Salinas River near Spreckels (station 11152500). Flow regulated by Santa Margarita Lake beginning in December 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Large withdrawals from ground-water and small surface-water diversions for municipal use and for irrigation upstream from station.

AVERAGE DISCHARGE.--14 years, 499 ft^3/s, 361,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,000 ft^3/s, Mar. 3, 1983, gage height, 14.92 ft, from rating curve extended above 21,000 ft^3/s; no flow at times during most years and Sept. 24, 1989, to Sept. 30, 1990.

EXTREMES FOR CURRENT YEAR.--No flow for water year 1990.

11152300 SALINAS RIVER NEAR CHUALAR, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.
CHEMICAL DATA: Water years 1977-89.
BIOLOGICAL DATA: Water years 1977-81.
SPECIFIC CONDUCTANCE: Water years 1977-81.
WATER TEMPERATURE: Water years 1977-81.
SEDIMENT DATA: Water years 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1977 to September 1981.
WATER TEMPERATURE: January 1977 to September 1981.

INSTRUMENTATION.--Water-quality monitor from January 1977 to September 1981.

REMARKS.--No flow for water year 1990.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM
JUN										
07...	1400	14	0.0	1	2	10	62	94	99	100

11152500 SALINAS RIVER NEAR SPRECKELS, CA

LOCATION.--Lat 36°37'52", long 121°40'17", in Nacional Grant, Monterey County, Hydrologic Unit 18060005, on right bank on downstream side of bridge on Salinas-Monterey highway, 0.8 mi upstream from El Toro Creek, 1.6 mi northwest of Spreckels, and 2 mi south of Salinas.
DRAINAGE AREA.--4,156 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1900 to August 1901, October 1929 to current year. Records for water year 1930 incomplete; yearly estimate published in WSP 1315-B. Published as "near Salinas" 1900-01.
REVISED RECORDS.--WSP 1565: 1930, 1935, 1945. WSP 1715: 1959. WSP 1929: Drainage area. WDR CA-85-2: 1983.
GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 20.56 ft above National Geodetic Vertical Datum of 1929. 1900-01, May 10 to July 29, 1940, nonrecording gages at site 0.3 mi downstream at different datum. July 29, 1940, to May 22, 1969, water-stage recorder at site 0.3 mi downstream at datum 0.69 ft lower. May 23, 1969, to Jan. 13, 1970, nonrecording gage at same site and datum. Mar. 17, 1941, to June 30, 1961, supplementary nonrecording gages.
REMARKS.--Records poor. Flow regulated by Santa Margarita Lake beginning in 1941, usable capacity, 23,000 acre-ft; Lake Nacimiento (formerly Nacimiento Reservoir) beginning in February 1957, usable capacity, 340,000 acre-ft; and by Lake San Antonio beginning in December 1965, usable capacity, 330,000 acre-ft. Large withdrawals from ground water and small surface-water diversions for municipal use and for irrigation of about 95,000 acres upstream from station. Low flows consist primarily of waste water from Alisal sewage-disposal plant.
AVERAGE DISCHARGE.--61 years (water years 1930-90), 425 ft^3/s, 307,900 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 83,100 ft^3/s, Feb. 26, 1969, gage height, 26.51 ft, site and datum then in use; maximum gage height, 26.85 ft, Jan. 16, 1952, site and datum then in use, from floodmarks; no flow at times in 1929-40, many days in 1990.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4.4 ft^3/s, Nov. 3, gage height, 4.94 ft; minimum daily, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.7	2.5	2.9	.00	.00	.00	.00	.00	.00	.00	.00
2	2.0	2.9	2.4	2.8	.00	.00	.00	.00	.00	.00	.00	.00
3	2.1	3.0	2.4	2.9	.00	.00	.00	.00	.00	.00	.00	.00
4	2.2	2.9	2.3	2.6	.00	.00	.00	.00	.00	.00	.00	.00
5	2.0	2.7	2.3	2.6	.00	.00	.00	.00	.00	.00	.00	.00
6	2.0	2.9	2.3	2.7	.00	.00	.00	.00	.00	.00	.00	.00
7	2.1	2.8	2.1	2.8	.00	.00	.00	.00	.00	.00	.00	.00
8	2.2	2.8	2.1	3.0	.00	.00	.00	.00	.00	.00	.00	.00
9	2.2	2.9	2.1	2.8	.00	.00	.00	.00	.00	.00	.00	.00
10	2.1	2.9	2.1	2.8	.00	.00	.00	.00	.00	.00	.00	.00
11	2.1	2.8	2.0	3.1	.00	.00	.00	.00	.00	.00	.00	.00
12	2.1	2.7	2.1	3.2	.00	.00	.00	.00	.00	.00	.00	.00
13	2.1	2.6	2.1	3.0	.00	.00	.00	.00	.00	.00	.00	.00
14	2.2	2.6	2.2	3.0	.00	.00	.00	.00	.00	.00	.00	.00
15	2.2	2.6	2.2	3.1	.00	.00	.00	.00	.00	.00	.00	.00
16	2.1	2.5	2.3	3.1	.00	.00	.00	.00	.00	.00	.00	.00
17	e2.2	2.7	2.3	2.8	.00	.00	.00	.00	.00	.00	.00	.00
18	e2.2	2.6	2.4	2.7	.00	.00	.00	.00	.00	.00	.00	.00
19	e2.2	2.7	2.4	2.8	.00	.00	.00	.00	.00	.00	.00	.00
20	2.2	2.6	2.4	2.8	.00	.00	.00	.00	.00	.00	.00	.00
21	2.4	2.5	2.3	2.6	.00	.00	.00	.00	.00	.00	.00	.00
22	2.5	2.6	2.3	2.6	.00	.00	.00	.00	.00	.00	.00	.00
23	2.7	2.5	2.4	2.7	.00	.00	.00	.00	.00	.00	.00	.00
24	2.8	2.6	2.5	e1.5	.00	.00	.00	.00	.00	.00	.00	.00
25	2.7	2.7	2.3	e1.0	.00	.00	.00	.00	.00	.00	.00	.00
26	2.7	3.0	2.5	e.50	.00	.00	.00	.00	.00	.00	.00	.00
27	2.6	2.6	2.7	e.20	.00	.00	.00	.00	.00	.00	.00	.00
28	2.6	2.5	2.9	e.16	.00	.00	.00	.00	.00	.00	.00	.00
29	2.8	2.3	2.7	e.10	---	.00	.00	.00	.00	.00	.00	.00
30	2.7	2.5	2.7	e.05	---	.00	.00	.00	.00	.00	.00	.00
31	2.8	---	2.5	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	72.0	80.7	72.8	68.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	2.32	2.69	2.35	2.22	.000	.000	.000	.000	.000	.000	.000	.000
MAX	2.8	3.0	2.9	3.2	.00	.00	.00	.00	.00	.00	.00	.00
MIN	2.0	2.3	2.0	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	143	160	144	137	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1989 TOTAL 786.6 MEAN 2.16 MAX 4.0 MIN 1.5 AC-FT 1560
WTR YR 1990 TOTAL 294.41 MEAN .81 MAX 3.2 MIN .00 AC-FT 584

e Estimated.

11152500 SALINAS RIVER NEAR SPRECKELS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-54, 1958-79, 1986, August 1990 (discontinued).
CHEMICAL DATA: Water years 1952-54, 1958-70, 1972-79. Published incorrectly as station 11152300 "near Chualar" in 1967.
BIOLOGICAL DATA: Water years 1975-77.
SPECIFIC CONDUCTANCE: Water years 1975 to January 1977.
WATER TEMPERATURE: Water years 1967-79. Published incorrectly as station 11152300 "near Chualar" in 1967-69.
SEDIMENT DATA: Water years 1950-51, 1967-79, 1986, August 1990 (discontinued). Published incorrectly as station 11152300 "near Chualar" in 1967-69.
TURBIDITY: Water year 1973.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to January 1977.
WATER TEMPERATURE: December 1966 to September 1979.
SUSPENDED-SEDIMENT DISCHARGE: December 1966 to September 1979.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
AUG											
13...	0950	10	0.0	1	3	31	90	98	99	99	100

11152540 EL TORO CREEK NEAR SPRECKELS, CA

LOCATION.--Lat 36°35'00", long 121°42'50", in El Toro Grant, Monterey County, Hydrologic Unit 18060005, on right bank 0.3 mi downstream from San Benancio Gulch and 4.7 mi southwest of Spreckels.

DRAINAGE AREA.--31.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 210 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 16, 1983, at site 700 ft upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station except for small stock ponds. Low flow at times affected by irrigation runoff from upstream golf course.

AVERAGE DISCHARGE.--29 years, 1.62 ft^3/s, 1,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 630 ft^3/s, Mar. 2, 1983, gage height, 6.10 ft, site and datum then in use, from rating curve extended above 93 ft^3/s on basis of slope-area measurement at gage height 6.07 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 3	2215	*11	*1.93				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.16	.03	.04	.01	e.05	.00	.00	.00
2	.00	.00	.00	.00	.03	.20	.03	.01	e.05	.00	.00	.00
3	.00	.00	.00	.00	.97	.34	.03	.01	e.04	.00	.00	.00
4	.00	.00	.00	.00	.81	.59	.03	.01	e.04	.00	.00	.00
5	.00	.00	.00	.00	.04	.33	.03	.01	e.03	.00	.00	.00
6	.00	.00	.00	.00	.06	.07	.03	.01	e.03	.00	.00	.00
7	.00	.00	.00	.00	.02	.05	.03	.01	e.02	.00	.00	.00
8	.00	.00	.00	.00	.02	.05	.03	.01	e.02	.00	.00	.00
9	.00	.00	.00	.00	.02	.04	.03	.01	e.02	.00	.00	.00
10	.00	.00	.00	.00	.18	.06	.03	.01	e.02	.00	.00	.00
11	.00	.00	.00	.00	.33	.07	.03	.01	e.02	.00	.00	.00
12	.00	.00	.00	.00	.33	.25	.03	.01	e.01	.00	.00	.00
13	.00	.00	.00	.00	.33	.05	.02	.01	e.02	.00	.00	.00
14	.00	.00	.00	.00	.33	.05	.01	e.01	e.04	.00	.00	.00
15	.00	.00	.00	.00	.26	.05	.01	e.01	e.01	.00	.00	.00
16	.00	.00	.00	.01	1.1	.05	.01	e.01	e.00	.00	.00	.00
17	.00	.00	.00	.03	.33	.05	.02	e.01	e.00	.00	.00	.00
18	.00	.00	.00	.00	.21	.05	.01	e.01	e.00	.00	.00	.00
19	.00	.00	.00	.00	.05	.04	.01	e.01	.02	.00	.00	.00
20	.00	.00	.00	.00	.04	.04	.01	e.01	.18	.00	.00	.00
21	.00	.00	.00	.00	.04	.04	.01	e.01	.01	.00	.00	.00
22	.00	.00	.00	.00	.04	.04	.01	e.01	.02	.00	.00	.00
23	.00	.00	.00	.00	.03	.04	.09	e.05	.03	.00	.00	.00
24	.00	.00	.00	.00	.03	.04	.02	e.02	.03	.00	.00	.00
25	.00	.00	.00	.00	.03	.04	.02	e.01	.00	.00	.00	.00
26	.00	.00	.00	.00	.03	.04	.01	e.01	.00	.00	.00	.00
27	.00	.00	.00	.00	.03	.04	.01	e.05	.00	.00	.00	.00
28	.00	.00	.00	.00	.03	.05	.01	e1.0	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.05	.01	e.30	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.05	.01	e.15	.00	.00	.00	.00
31	.00	---	.00	.13	---	.04	---	e.06	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.17	5.88	2.93	0.67	1.87	0.71	0.00	0.00	0.00
MEAN	.000	.000	.000	.005	.21	.095	.022	.060	.024	.000	.000	.000
MAX	.00	.00	.00	.13	1.1	.59	.09	1.0	.18	.00	.00	.00
MIN	.00	.00	.00	.00	.02	.03	.01	.01	.00	.00	.00	.00
AC-FT	.00	.00	.00	.3	12	5.8	1.3	3.7	1.4	.00	.00	.00

CAL YR 1989 TOTAL 13.24 MEAN .036 MAX 1.9 MIN .00 AC-FT 26
WTR YR 1990 TOTAL 12.23 MEAN .034 MAX 1.1 MIN .00 AC-FT 24

e Estimated.

11152540 EL TORO CREEK NEAR SPRECKELS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
SEDIMENT DATA: Water year 1986, August 1990 (discontinued).

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
APR											
02...	1300	3	e0.27	2	6	26	62	86	97	99	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
AUG												
13...	1050	3	0.0	5	13	20	36	58	80	94	98	100

e Estimated.

11152600 GABILAN CREEK NEAR SALINAS, CA

LOCATION.--Lat 36°45'21", long 121°36'34", in La Natividad Grant, Monterey County, Hydrologic Unit 18060011, on left bank at downstream side of county road bridge, 0.3 mi downstream from small left-bank tributary, and 6.2 mi northeast of Salinas.

DRAINAGE AREA.--36.7 mi^2.

PERIOD OF RECORD.--October 1970 to current year. January 1959 to September 1970 in reports of Monterey County Flood Control and Water Conservation District.

REVISED RECORDS.--WDR CA-84-2: 1974(M), 1978(P), 1980-83(P).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Oct. 9, 1975. Elevation of gage is 200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 9, 1975, on right bank at different datum.

REMARKS.--Records poor. Natural flow of stream affected by small diversions, storage reservoirs, and return flow from irrigated areas.

AVERAGE DISCHARGE.--20 years, 4.31 ft^3/s, 3,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 898 ft^3/s, Apr. 1, 1974, gage height, 11.13 ft, at datum then in use, from rating curve extended above 260 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year and from Mar. 7, 1987, to Dec. 23, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	1545	*20	*2.33				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	e.89	.89	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	2.9	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.13	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.89	5.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.029	.19	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.89	2.9	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	1.8	11	.00	.00	.00	.00	.00	.00	.00

CAL YR 1989 TOTAL 0.62 MEAN .002 MAX .30 MIN .00 AC-FT 1.2
WTR YR 1990 TOTAL 6.30 MEAN .017 MAX 2.9 MIN .00 AC-FT 12

e Estimated.

11153500 LLAGAS CREEK NEAR MORGAN HILL, CA

LOCATION.--Lat 37°06'52", long 121°41'22", in Las Uvas Grant, Santa Clara County, Hydrologic Unit 18060002, 500 ft upstream from Llagas Avenue bridge, 0.3 mi downstream from Chesbro Dam, 0.3 mi upstream from small left-bank tributary, and 2.3 mi west of Morgan Hill.
DRAINAGE AREA.--19.6 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1952-71.
CHEMICAL DATA: Water years 1979 to current year.
SEDIMENT DATA: Water year 1985.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)
OCT										
26...	1445	0.10	658	8.1	15.5	8.7	755	8.4	85	360
JAN										
14...	1030	1.2	574	8.0	10.0	34	--	--	--	330
FEB										
18...	1445	0.76	247	7.8	9.0	250	750	9.2	81	110
AUG										
29...	0945	1.9	496	7.9	21.0	2.7	750	6.3	72	240

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT									
26...	62	50	16	9	0.4	3.1	325	60	16
JAN									
14...	53	48	14	8	0.3	2.0	271	56	16
FEB									
18...	19	16	6.3	11	0.3	1.3	105	16	8.9
AUG									
29...	46	31	13	10	0.4	3.4	226	25	15

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT									
26...	0.10	15	417	0.57	0.010	0.100	0.060	0.040	1.2
JAN									
14...	0.10	15	367	0.50	0.040	0.700	0.190	0.170	1.1
FEB									
18...	0.10	11	142	0.19	0.290	0.800	0.440	0.060	1.5
AUG									
29...	0.10	9.9	279	0.38	0.010	<0.100	0.130	0.060	0.80

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT									
26...	0.30	1.3	0.140	0.020	0.020	300	4	5.5	2.4
JAN									
14...	0.60	1.8	0.100	0.030	0.020	190	17	5.2	1.9
FEB									
18...	1.4	2.3	0.290	0.040	0.040	130	310	9.9	6.1
AUG									
29...	0.60	--	0.070	0.020	0.010	270	5	7.8	1.1

11154200 UVAS CREEK NEAR GILROY, CA

LOCATION.--Lat 36°59'32", long 121°34'21", in Las Animas Grant, Santa Clara County, Hydrologic Unit 18060002, on left bank 400 ft upstream from county road bridge, 0.4 mi southwest of Gilroy, and 3.9 mi downstream from Bodfish Creek.

DRAINAGE AREA.--71.2 mi^2.

PERIOD OF RECORD.--January 1959 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 190 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. Flow regulated by Uvas Reservoir 10 mi upstream, capacity, 9,950 acre-ft. Small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--31 years, 40.6 ft^3/s, 29,410 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft^3/s, Feb. 17, 1986, gage height, 21.82 ft, from rating curve extended above 4,500 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 144 ft^3/s, Feb. 16, gage height, 10.27 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.52	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	20	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	46	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	25	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	14	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	5.4	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.98	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	111.39	0.55	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	3.98	.018	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	46	.52	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	221	1.1	.00	.00	.00	.00	.00	.00

CAL YR 1989 TOTAL 568.18 MEAN 1.56 MAX 153 MIN .00 AC-FT 1130
WTR YR 1990 TOTAL 111.94 MEAN .31 MAX 46 MIN .00 AC-FT 222

11156500 SAN BENITO RIVER NEAR WILLOW CREEK SCHOOL, CA

LOCATION.--Lat 36°36'34", long 121°12'07", in SE 1/4 SE 1/4 sec.21, T.15 S., R.7 E., San Benito County, Hydrologic Unit 18060002, on left bank 0.9 mi northwest of Willow Creek School, 1.3 mi downstream from Willow Creek, and 10 mi northwest of San Benito.
DRAINAGE AREA.--249 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.
REVISED RECORDS.--WSP 1565: 1948(M), 1949. WSP 1315-B: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 925.52 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 28, 1948, and Nov. 11, 1955, to Sept. 30, 1965, at site 0.9 mi downstream at different datum. Jan. 28, 1948, to Nov. 10, 1955, and Oct. 1, 1965, to Oct. 22, 1970, at present site at datum 2.37 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Low flow regulated by Hernandez Reservoir 40 mi upstream beginning in December 1961, capacity, 18,500 acre-ft. Small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--51 years, 25.0 ft^3/s, 18,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,210 ft^3/s, Apr. 3, 1958, gage height, 8.35 ft, site and datum then in use, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of February 1938 reached a stage of about 9.0 ft, from floodmarks at former site 0.9 mi downstream, referenced to datum used at that site.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1745	*11	*4.37				

Minimum daily, 0.04 ft^3/s, Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.07	.09	.09	.11	.09	.27	.12	.19	.16	.16	.09
2	.07	.07	.09	.09	.08	.13	.27	.11	.16	.17	.15	.09
3	.07	.07	.09	.09	.12	.32	.26	.12	.17	.18	.15	.08
4	.07	.06	.09	.08	.31	.16	.22	.12	.16	.18	.15	.09
5	.07	.06	.09	.07	.11	.15	.22	.10	.17	.20	.15	.08
6	.06	.07	.09	.07	.12	.15	.24	.11	.15	.18	.15	.07
7	.05	.06	.09	.07	.10	.13	.28	.12	.17	.18	.14	.09
8	.05	.05	.09	.06	.10	.13	.34	.13	.17	.18	.12	.08
9	.05	.07	.09	.05	.11	.16	.32	.12	.18	.16	.13	.09
10	.05	.06	.09	.05	.11	.21	.27	.14	.17	.16	.12	.09
11	.06	.06	.11	.05	.12	.46	.24	.14	.17	.16	.11	.11
12	.06	.07	.11	.08	.12	.53	.18	.14	.17	.14	.10	.10
13	.05	.07	.11	.11	.11	.45	.16	.13	.18	.14	.10	.10
14	.05	.06	.10	.16	.10	.38	.16	.15	.17	.13	.10	.10
15	.07	.06	.11	.13	.10	.27	.15	.16	.17	.14	.10	.10
16	.05	.05	.11	.17	1.5	.26	.16	.15	.17	.14	.10	.10
17	.04	.05	.11	.08	2.5	.26	.23	.13	.17	.14	.09	.09
18	.06	.05	.11	.07	.66	.25	.24	.15	.19	.13	.10	.09
19	.05	.05	.09	.07	.20	.22	.23	.17	.17	.13	.10	.10
20	.05	.05	.10	.07	.22	.24	.21	.19	.18	.13	.09	.08
21	.07	.05	.11	.07	.25	.23	.19	.16	.17	.10	.09	.08
22	.07	.05	.11	.07	.13	.23	.21	.16	.17	.11	.09	.15
23	.36	.05	.11	.07	.09	.21	.23	.29	.17	.12	.09	.12
24	.17	.05	.09	.07	.08	.20	.22	.20	.17	.12	.08	.09
25	.10	.15	.09	.07	.08	.22	.21	.15	.17	.12	.09	.08
26	.09	.15	.09	.07	.08	.24	.17	.18	.15	.12	.09	.10
27	.08	.10	.09	.07	.09	.22	.12	.36	.16	.14	.09	.10
28	.08	.09	.09	.07	.09	.25	.10	.59	.16	.14	.09	.08
29	.08	.09	.09	.07	---	.27	.12	.18	.16	.14	.09	.08
30	.07	.09	.09	.09	---	.29	.13	.20	.16	.15	.08	.07
31	.07	---	.09	.09	---	.25	---	.21	---	.15	.08	---
TOTAL	2.38	2.08	3.01	2.52	7.79	7.56	6.35	5.38	5.07	4.54	3.37	2.77
MEAN	.077	.069	.097	.081	.28	.24	.21	.17	.17	.15	.11	.092
MAX	.36	.15	.11	.17	2.5	.53	.34	.59	.19	.20	.16	.15
MIN	.04	.05	.09	.05	.08	.09	.10	.10	.15	.10	.08	.07
AC-FT	4.7	4.1	6.0	5.0	15	15	13	11	10	9.0	6.7	5.5

CAL YR 1989 TOTAL 165.68 MEAN .45 MAX 3.1 MIN .00 AC-FT 329
WTR YR 1990 TOTAL 52.82 MEAN .14 MAX 2.5 MIN .04 AC-FT 105

11158600 SAN BENITO RIVER AT STATE HIGHWAY 156, NEAR HOLLISTER, CA

LOCATION.--Lat 36°51'07", long 121°25'44", in San Justo Grant, San Benito County, Hydrologic Unit 18060002, on right bank at downstream side of bridge on State Highway 156 and 1.6 mi west of Hollister.

DRAINAGE AREA.--607 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Low flows regulated by Hernandez Reservoir 73 mi upstream, capacity, 18,500 acre-ft. Some diversions upstream from station for irrigation. Percolation ponds are constructed upstream from station during summer months.

AVERAGE DISCHARGE.--20 years, 31.5 ft^3/s, 22,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,900 ft^3/s, Mar. 1, 1983, gage height, 11.97 ft, from rating curve extended above 4,100 ft^3/s; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 11	1045	*13	*2.65				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	e.80	.00	.10	2.1	.00	.00	.00	.00	.00	.00	e.00
2	7.5	e.00	.00	.02	2.1	.45	.00	.00	.00	.00	.00	e.00
3	7.6	e.45	.00	.20	2.2	.73	.00	.00	.00	.00	.00	e.00
4	7.7	e.30	.00	.80	2.1	.33	.00	.00	.00	.00	.00	e.00
5	9.1	e.15	.00	.85	2.1	.13	.00	.00	.00	.00	.00	e.00
6	9.3	e.10	.00	.94	2.2	.00	.00	.00	.00	.00	.00	e.00
7	9.3	.06	.00	1.2	2.0	.00	.00	.00	.00	.00	.00	e.00
8	10	.05	.00	1.3	2.1	.00	.00	.00	.00	.00	.00	e.00
9	10	.03	.00	1.2	2.7	.00	.00	.00	.00	.00	.00	e.00
10	9.8	.04	.00	1.4	2.5	.00	.00	.00	.00	.00	.00	e.05
11	8.6	.02	.00	1.4	2.8	.00	.00	.00	.00	.00	.00	e.14
12	7.9	.00	.00	2.5	2.7	.00	.00	.00	.00	.00	.00	e.15
13	8.3	.00	.00	1.9	1.9	.00	.00	.00	.00	.00	.00	e.16
14	8.2	.00	.00	1.9	1.7	.00	.00	.00	.00	.00	.00	.15
15	8.5	.00	.00	2.1	1.8	.00	.00	.00	.00	.00	.00	.14
16	8.7	.00	.00	1.7	2.1	.00	.00	.00	.00	.00	.00	.14
17	e8.5	.00	.00	1.3	1.9	.00	.00	.00	.00	.00	.00	.14
18	e8.0	.00	.00	1.3	1.9	.00	.00	.00	.00	.00	.00	.15
19	e7.5	.00	.00	1.5	2.1	.00	.00	.00	.00	.00	.00	.16
20	7.0	.00	.00	1.5	2.2	.00	.00	.00	.00	.00	.00	.13
21	7.4	.00	.00	1.5	.73	.00	.00	.00	.00	.00	.00	.12
22	7.0	.00	.00	1.5	.00	.00	.00	.00	.00	.00	.00	.21
23	7.6	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00	.17
24	7.0	.00	.00	1.9	.00	.00	.00	.00	.00	.00	.00	.14
25	6.8	.02	.00	1.9	.00	.00	.00	.00	.00	.00	.00	.18
26	6.6	.00	.00	1.8	.00	.00	.00	.00	.00	.00	.00	.18
27	6.4	.00	.00	1.8	.00	.00	.00	.00	.00	.00	.00	.16
28	6.1	.00	.00	2.0	.00	.00	.00	.01	.00	.00	.00	.14
29	6.0	.00	.00	2.3	---	.00	.00	.00	.00	.00	.00	.13
30	e4.0	.00	.00	2.2	---	.00	.00	.00	.00	.00	.00	.11
31	e.10	---	.00	2.1	---	.00	---	.00	---	.00	.00	---
TOTAL	233.20	2.02	0.00	45.71	43.93	1.64	0.00	0.01	0.00	0.00	0.00	3.05
MEAN	7.52	.067	.000	1.47	1.57	.053	.000	.000	.000	.000	.000	.10
MAX	10	.80	.00	2.5	2.8	.73	.00	.01	.00	.00	.00	.21
MIN	.10	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	463	4.0	.00	91	87	3.3	.00	.02	.00	.00	.00	6.0

CAL YR 1989 TOTAL 375.14 MEAN 1.03 MAX 10 MIN .00 AC-FT 744
WTR YR 1990 TOTAL 329.56 MEAN .90 MAX 10 MIN .00 AC-FT 654

e Estimated.

11159000 PAJARO RIVER AT CHITTENDEN, CA
(National stream-quality accounting network station)

LOCATION.--Lat 36°54'01", long 121°35'48", in Salsipuedes Grant, Santa Cruz County, Hydrologic Unit 18060002, on left bank at downstream side of bridge on State Highway 129, 0.6 mi downstream from Pescadero Creek, 0.6 mi southeast of Chittenden, and 2.3 mi downstream from San Benito River.
DRAINAGE AREA.--1,186 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "near Chittenden."
GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 82.28 ft above National Geodetic Vertical Datum of 1929. Prior to May 13, 1949, nonrecording gage on former bridge 100 ft downstream at same datum except for periods in 1947 and 1948 when a water-stage recorder was in use.
REMARKS.--Records poor. Low flows regulated by Hernandez Reservoir, capacity, 18,500 acre-ft; Pacheco Lake, capacity, 6,140 acre-ft; Chesbro Reservoir, capacity, 8,090 acre-ft; Uvas Reservoir, capacity, 9,950 acre-ft; and San Felipe Lake. Many diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--51 years, 152 ft^3/s, 110,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft^3/s, Dec. 24, 1955, gage height, 32.46 ft, from rating curve extended above 8,300 ft^3/s on basis of slope-conveyance study; maximum gage height, 33.11 ft, Apr. 3, 1958; no flow at times in July and August 1948.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1938 reached a stage of 31.3 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	1745	*148	*4.51				

Minimum daily, 0.07 ft^3/s, Aug. 20, 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.93	2.2	3.1	3.3	3.8	5.3	4.4	2.0	6.5	1.1	.46	.34
2	.65	2.3	2.9	3.9	3.7	5.5	4.4	1.8	4.9	.62	.30	.38
3	.57	2.5	2.9	3.0	3.8	7.3	4.3	1.5	3.5	.56	.38	.41
4	.50	2.5	2.9	2.9	5.2	7.9	3.9	1.4	3.0	.92	.92	.33
5	.43	2.7	2.9	2.7	5.3	8.3	3.9	1.3	2.3	1.1	2.0	.28
6	.37	2.8	2.9	2.7	6.4	7.3	3.9	1.6	1.8	1.1	2.4	.22
7	.36	2.7	2.6	2.7	5.1	6.6	4.0	1.9	1.4	.92	1.9	.16
8	.37	2.7	2.6	2.8	4.4	6.6	4.1	2.0	1.3	1.1	1.4	.19
9	.37	2.7	2.6	2.7	4.2	6.6	4.1	2.6	1.3	2.2	1.2	.25
10	.40	2.7	2.6	2.7	3.9	6.6	4.0	3.0	1.0	2.9	1.4	.25
11	.48	2.8	2.6	2.7	3.9	6.7	3.8	3.1	.61	2.1	1.4	.23
12	.53	2.9	2.5	2.8	3.9	6.7	4.6	2.7	.68	1.6	.78	.18
13	.53	2.9	2.5	4.0	3.9	6.5	3.8	3.4	1.7	1.5	.41	.15
14	.53	2.9	2.6	6.0	3.8	5.9	4.5	4.4	2.5	3.9	.40	.13
15	.47	2.9	2.6	5.3	3.6	5.8	5.1	4.7	3.7	1.5	.37	.12
16	.45	2.9	2.6	4.5	6.3	5.7	5.1	3.2	3.1	.74	.18	.13
17	e.50	2.9	2.6	4.5	71	5.7	6.2	3.0	1.8	.84	.13	.16
18	e.78	2.9	2.7	4.4	75	5.7	6.0	2.7	1.3	1.0	.14	.19
19	e1.2	2.9	2.7	4.4	27	5.5	3.3	2.0	1.1	.53	.11	.22
20	e1.0	2.9	2.7	3.9	14	5.6	2.6	1.8	1.6	.25	.07	.19
21	.89	2.9	2.7	3.7	8.8	5.4	2.6	2.7	1.6	.16	.08	.18
22	.91	2.9	2.7	3.5	7.1	5.3	2.4	5.3	1.6	.18	.07	.22
23	1.3	3.0	2.7	3.3	6.2	5.3	3.2	7.2	1.9	.22	.07	.39
24	1.5	3.0	2.7	3.3	5.8	5.2	3.4	4.6	2.1	.18	.08	.52
25	1.8	4.5	2.6	3.3	5.7	5.2	2.9	3.6	1.4	.24	.09	.85
26	1.9	7.4	2.6	3.3	5.3	5.0	2.6	3.5	1.8	.16	.10	.65
27	1.9	4.1	2.7	3.2	5.3	5.3	2.3	4.9	2.0	.26	.12	.43
28	1.8	3.3	2.7	3.2	5.3	5.0	2.1	7.7	1.4	.24	.16	.34
29	1.9	3.3	2.7	3.2	---	5.0	2.1	8.9	1.1	.37	.18	.38
30	2.0	3.3	2.7	3.6	---	4.9	2.2	8.0	1.4	.48	.32	.44
31	2.1	---	2.7	3.7	---	4.4	---	7.7	---	.50	.28	---
TOTAL	29.42	92.4	83.6	109.2	307.7	183.8	111.8	114.2	61.39	29.47	17.90	8.91
MEAN	.95	3.08	2.70	3.52	11.0	5.93	3.73	3.68	2.05	.95	.58	.30
MAX	2.1	7.4	3.1	6.0	75	8.3	6.2	8.9	6.5	3.9	2.4	.85
MIN	.36	2.2	2.5	2.7	3.6	4.4	2.1	1.3	.61	.16	.07	.12
AC-FT	58	183	166	217	610	365	222	227	122	58	36	18

CAL YR 1989 TOTAL 2483.95 MEAN 6.81 MAX 190 MIN .28 AC-FT 4930
WTR YR 1990 TOTAL 1149.79 MEAN 3.15 MAX 75 MIN .07 AC-FT 2280

e Estimated.

11159000 PAJARO RIVER AT CHITTENDEN, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.
CHEMICAL DATA: Water years 1952 to current year.
BIOLOGICAL DATA: Water years 1978-81.
SPECIFIC CONDUCTANCE: Water years 1978-81.
WATER TEMPERATURE: Water years 1978-81.
SEDIMENT DATA: Water years 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1978 to September 1981.
WATER TEMPERATURE: May 1978 to September 1981.

INSTRUMENTATION.--Water-quality monitor from May 1978 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
DEC											
11...	1230	2.6	2220	8.2	8.0	0.70	765	10.0	85	K5	K13
MAR											
19...	1330	5.5	1720	8.2	15.0	1.3	765	11.1	110	K8	K22
JUN											
05...	1200	2.3	2010	8.0	17.0	1.1	760	--	--	K38	110
SEP											
10...	1245	0.30	2900	8.2	17.0	1.5	760	9.0	94	220	--

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC											
11...	560	120	63	290	53	5	4.9	622	510	160	360
MAR											
19...	580	110	75	160	37	3	3.3	472	387	280	210
JUN											
05...	480	90	61	260	54	5	4.8	547	448	150	330
SEP											
10...	530	100	68	420	63	8	5.0	550	451	110	610

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
DEC											
11...	0.50	25	1340	1330	1.82	0.020	0.220	0.120	0.120	<0.20	0.130
MAR											
19...	0.30	14	1150	1090	1.56	0.020	0.600	0.040	0.030	0.60	0.100
JUN											
05...	0.30	27	1200	1200	1.63	0.020	0.600	0.050	0.030	0.50	0.360
SEP											
10...	0.40	30	1640	1620	2.23	0.020	0.500	0.090	0.050	0.60	0.260

11159000 PAJARO RIVER AT CHITTENDEN, CA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
DEC											
11...	0.130	0.120	20	<1	<100	<10	<1.0	<1	<1	1	30
MAR											
19...	0.090	0.070	<10	2	<100	<10	<1.0	<1	1	2	20
JUN											
05...	0.340	0.310	<10	4	150	0.6	2.0	<1	1	1	13
SEP											
10...	0.260	0.260	10	5	300	<10	<1.0	<1	1	1	20

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
DEC											
11...	<1	70	180	0.2	3	2	<1	<1.0	970	9	<10
MAR											
19...	<1	40	120	0.1	3	6	<1	<1.0	800	<1	<10
JUN											
05...	<1	49	160	<0.1	3	4	<1	<1.0	720	16	5
SEP											
10...	<1	50	440	0.3	<1	3	<1	<1.0	800	32	<10

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DEPTH AT SAMPLE LOC-ATION, TOTAL (FEET)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
19...*	1305	0.82	10.5	1720	8.2	15.0	765	10.8	107	12	55
19...*	1306	1.06	6.30	1720	8.2	15.0	765	11.0	109	12	60
19...*	1307	0.93	2.80	1720	8.2	15.0	765	11.4	113	10	48

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 19, 5.5 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
11...	1230	2.6	8.0	3	0.02	72
FEB						
21...	1335	8.7	8.5	15	0.35	82
MAR						
19...	1330	5.5	15.0	11	0.16	54
JUN						
05...	1315	2.3	17.5	21	0.13	54
SEP						
10...	1245	0.30	17.0	8	0.01	--

11159000 PAJARO RIVER AT CHITTENDEN, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
FEB							
21...	1420	1	8.7	8.5	27	57	82
21...	1421	1	8.7	8.5	12	21	32
21...	1422	1	8.7	8.5	--	1	9
21...	1423	1	8.7	8.5	--	1	12
21...	1424	1	8.7	8.5	1	4	16
21...	1425	1	8.7	8.5	--	--	3
21...	1426	1	8.7	8.5	5	23	53
21...	1427	1	8.7	8.5	24	44	59
21...	1428	1	8.7	8.5	2	9	40

DATE	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
FEB							
21...	89	94	99	100	--	--	--
21...	52	81	98	100	--	--	--
21...	34	57	67	75	86	98	100
21...	40	62	71	82	94	100	--
21...	56	75	85	92	96	99	100
21...	43	78	90	97	98	100	--
21...	95	99	100	--	--	--	--
21...	78	92	99	100	--	--	--
21...	86	97	99	100	--	--	--

11159200 CORRALITOS CREEK AT FREEDOM, CA

LOCATION.--Lat 36°56'22", long 121°46'10", in Los Corralitos Grant, Santa Cruz County, Hydrologic Unit 18060002, on right bank just upstream from Green Valley Road bridge, 0.2 mi north of Freedom, and 2.3 mi north of Watsonville.

DRAINAGE AREA.--27.8 mi^2.

PERIOD OF RECORD.--October 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 89.46 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation; Watsonville Water Works can divert up to 8.0 ft^3/s upstream from station for municipal supply, domestic use, and irrigation.

AVERAGE DISCHARGE.--34 years, 15.2 ft^3/s, 11,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,610 ft^3/s, Jan. 4, 1982, gage height, 16.66 ft, from rating curve extended above 1,400 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 15.6 ft, from floodmarks, discharge, 3,620 ft^3/s based on contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	Unknown	*372	*5.02				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	5.0	3.1	1.9	1.4	.00	.00	.00	.01	.00	.00	.00
2	.00	5.6	2.8	2.7	.27	.65	.00	.00	.00	.00	.00	.00
3	.00	5.3	2.6	.19	4.9	34	.00	.00	.00	.00	.00	.00
4	.00	5.4	2.5	.15	33	17	.00	.00	.00	.00	.00	.00
5	.00	5.6	2.0	.16	7.9	14	.00	.00	.00	.00	.00	.00
6	.00	5.9	1.8	.14	3.9	8.1	.00	.00	.00	.00	.00	.00
7	.00	8.0	1.6	.07	1.5	4.8	.00	.00	.00	.00	.00	.00
8	.00	4.5	1.3	.00	.82	2.6	.00	.00	.00	.00	.00	.00
9	.00	4.0	1.2	.00	e.66	1.2	.00	.00	.00	.00	.00	.00
10	.00	3.7	1.2	.00	e.55	1.5	.00	.00	.00	.00	.00	.00
11	.00	3.9	1.2	.00	e.47	2.7	.00	.00	.00	.00	.00	.00
12	.00	4.0	1.2	.29	e.39	.77	.00	.00	.00	.00	.00	.00
13	.00	4.0	1.2	15	e.30	.49	.00	.00	.00	.00	.00	.00
14	.00	3.8	1.0	46	e.25	.32	.00	.00	.00	.00	.00	.00
15	.00	3.4	1.0	16	e.20	.24	.00	.00	.00	.00	.00	.00
16	.00	3.1	.97	8.3	e120	.05	.00	.00	.00	.00	.00	.00
17	.00	3.1	.95	2.9	e54	.00	.00	.00	.00	.00	.00	.00
18	.00	2.7	.83	1.2	e24	.00	.00	.00	.00	.00	.00	.00
19	.00	2.6	.72	.81	e12	.00	.00	.00	.00	.00	.00	.00
20	.00	2.5	.77	.53	e5.4	.00	.00	.00	.00	.00	.00	.00
21	.00	2.2	.78	.42	2.6	.00	.00	.00	.00	.00	.00	.00
22	.48	2.2	.73	.36	.95	.00	.00	.00	.00	.00	.00	.00
23	20	2.2	.81	.27	.51	.00	.00	.00	.00	.00	.00	.00
24	9.8	2.2	.86	.22	.28	.00	.00	.00	.00	.00	.00	.00
25	4.5	14	.77	.16	.11	.00	.00	.00	.00	.00	.00	.00
26	3.2	26	.70	.08	.01	.00	.00	.00	.00	.00	.00	.00
27	3.1	7.2	.57	.00	.00	.00	.00	.02	.00	.00	.00	.00
28	3.6	5.2	.56	.00	.00	.00	.00	34	.00	.00	.00	.00
29	3.9	4.0	.44	.00	---	.00	.00	4.7	.00	.00	.00	.00
30	4.2	3.3	.43	2.3	---	.00	.00	.44	.00	.00	.00	.00
31	5.2	---	.39	.63	---	.00	---	.24	---	.00	.00	---
TOTAL	57.98	154.6	36.98	100.78	276.37	88.42	0.00	39.40	0.01	0.00	0.00	0.00
MEAN	1.87	5.15	1.19	3.25	9.87	2.85	.000	1.27	.000	.000	.000	.000
MAX	20	26	3.1	46	120	34	.00	34	.01	.00	.00	.00
MIN	.00	2.2	.39	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	115	307	73	200	548	175	.00	78	.02	.00	.00	.00

CAL YR 1989 TOTAL 1247.68 MEAN 3.42 MAX 170 MIN .00 AC-FT 2470
WTR YR 1990 TOTAL 754.54 MEAN 2.07 MAX 120 MIN .00 AC-FT 1500

e Estimated.

11160000 SOQUEL CREEK AT SOQUEL, CA

LOCATION.--Lat 36°59'29", long 121°57'17", in NE 1/4 sec.10, T.11 S., R.1 W., Santa Cruz County, Hydrologic Unit 18060001, on left bank 0.2 mi upstream from highway bridge in town of Soquel and 0.4 mi downstream from Bates Creek.

DRAINAGE AREA.--40.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 21.38 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation; many diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--39 years, 42.7 ft^3/s, 30,940 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft^3/s, Dec. 23, 1955, gage height, 22.33 ft, from rating curve extended above 2,900 ft^3/s on basis of slope-area measurement of peak flow; no flow on several days during August and September 1977, and Sept. 5, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1730	*1,590	*6.67				

Minimum daily, 0.15 ft^3/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.57	9.1	12	14	15	6.7	7.1	4.7	18	2.6	1.5	.51
2	.49	9.6	11	16	11	13	7.2	4.7	13	2.5	1.6	.49
3	.51	10	10	9.3	16	95	6.7	5.1	11	2.5	1.6	.49
4	.57	11	9.7	8.0	88	37	6.3	5.0	9.0	2.4	1.4	.46
5	.57	12	8.7	7.5	21	34	6.0	4.6	7.9	2.3	1.3	.50
6	.32	12	9.1	7.5	14	19	6.0	4.5	7.2	2.1	1.1	.44
7	.47	13	9.1	7.5	11	15	6.3	4.4	6.6	2.2	.38	.59
8	.30	e14	9.1	7.5	9.2	13	6.9	4.1	6.1	2.1	.34	.85
9	.15	e14	9.0	7.5	8.5	11	7.1	4.1	5.3	2.3	.49	.85
10	.19	e14	9.0	7.5	8.0	11	6.6	4.5	5.3	2.1	.51	.87
11	.36	e14	8.6	7.4	7.4	13	6.2	4.4	4.8	2.2	.39	.86
12	.79	e14	8.3	13	7.0	9.9	5.8	4.0	4.6	2.0	.41	.83
13	1.5	e13	9.1	64	6.4	9.1	5.5	3.9	4.7	1.9	.39	.77
14	1.6	e13	9.1	127	6.1	8.0	5.7	3.9	4.7	1.8	.55	.79
15	1.4	e13	9.2	57	5.5	8.1	6.1	3.7	5.1	1.8	.57	.82
16	.47	e13	9.5	30	321	8.3	6.3	3.6	4.4	1.9	.56	.84
17	e.52	e13	9.7	20	187	7.6	6.0	3.7	4.3	2.1	.51	.83
18	e2.8	e13	9.7	15	77	7.5	5.7	3.6	3.9	1.8	.51	.91
19	e4.2	e13	9.7	12	35	7.1	5.9	3.6	3.7	1.7	.59	.91
20	4.0	e12	10	12	22	6.6	6.0	8.4	3.6	1.7	.47	.89
21	18	e12	11	13	17	6.7	5.8	11	3.6	1.6	.64	.92
22	18	e11	9.7	12	13	6.8	6.1	7.1	3.8	1.7	.48	.98
23	79	e11	9.7	11	11	7.1	8.5	12	3.6	1.8	.65	1.7
24	39	e14	9.7	11	10	7.3	6.9	9.0	3.6	1.6	.65	1.8
25	26	30	9.7	11	9.0	7.5	5.9	6.2	3.2	1.5	1.9	1.7
26	12	69	9.7	9.6	8.2	7.1	5.8	5.2	2.9	1.6	1.0	1.5
27	11	25	9.5	8.2	7.4	7.5	5.5	26	3.0	1.5	.67	1.4
28	12	19	11	7.5	7.1	7.5	5.4	256	3.0	1.6	.53	1.3
29	9.6	15	9.7	7.5	---	7.5	5.1	36	2.8	1.5	.59	1.3
30	7.4	12	9.7	13	---	7.4	4.8	20	2.7	1.5	.61	1.2
31	9.1	---	9.7	12	---	7.1	---	27	---	1.5	.48	---
TOTAL	262.88	467.7	298.7	565.5	958.8	419.4	185.2	504.0	165.4	59.4	23.37	28.30
MEAN	8.48	15.6	9.64	18.2	34.2	13.5	6.17	16.3	5.51	1.92	.75	.94
MAX	79	69	12	127	321	95	8.5	256	18	2.6	1.9	1.8
MIN	.15	9.1	8.3	7.4	5.5	6.6	4.8	3.6	2.7	1.5	.34	.44
AC-FT	521	928	592	1120	1900	832	367	1000	328	118	46	56

CAL YR 1989 TOTAL 6399.18 MEAN 17.5 MAX 900 MIN .01 AC-FT 12690
WTR YR 1990 TOTAL 3938.65 MEAN 10.8 MAX 321 MIN .15 AC-FT 7810

e Estimated.

11160000 SOQUEL CREEK AT SOQUEL, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-79, January to April 1990.
CHEMICAL DATA: Water years 1952-66, 1977.
WATER TEMPERATURE: Water years 1966-79.
SEDIMENT DATA: Water years 1976-77, January to April 1990.

PERIOD OF DAILY RECORDS.--
WATER TEMPERATURE: January 1966 to February 1979.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
JAN								
02...	1325	14	8.5	2	0.08	60	--	--
12...	1810	20	12.0	12	0.65	84	--	--
FEB								
05...	1400	18	8.5	12	0.58	94	--	--
20...	1715	20	8.0	10	0.54	90	--	--
MAR								
05...	1510	29	12.0	20	1.6	97	98	100
APR								
17...	1430	6.3	16.0	2	0.03	80	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
FEB								
05...	1415	1	18	8.5	1	2	5	11
05...	1416	1	18	8.5	2	4	9	14
05...	1417	1	18	8.5	1	3	7	13
05...	1418	1	18	8.5	--	--	2	10
05...	1419	1	18	8.5	--	--	4	41
05...	1420	1	18	8.5	--	1	8	41
05...	1421	1	18	8.5	--	1	4	17
MAR								
05...	1625	1	27	12.0	1	2	7	16
05...	1626	1	27	12.0	1	4	9	15
05...	1627	1	27	12.0	--	--	2	12
05...	1628	1	27	12.0	--	--	2	12
05...	1629	1	27	12.0	--	--	1	14
05...	1630	1	27	12.0	--	--	2	11
05...	1631	1	27	12.0	--	--	1	12
05...	1632	1	27	12.0	--	--	1	11
05...	1633	1	27	12.0	1	2	9	66

11160000 SOQUEL CREEK AT SOQUEL, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
FEB							
05...	14	18	27	43	68	100	--
05...	17	22	28	35	51	90	100
05...	17	21	29	38	54	100	--
05...	21	32	46	60	76	100	--
05...	75	91	98	100	--	--	--
05...	80	97	100	--	--	--	--
05...	30	40	51	67	85	100	--
MAR							
05...	22	30	38	49	69	100	--
05...	21	26	34	44	58	100	--
05...	29	42	54	71	94	100	--
05...	24	32	40	57	82	100	--
05...	31	40	50	62	83	100	--
05...	28	46	63	82	96	100	--
05...	56	82	92	97	100	--	--
05...	52	85	94	98	100	--	--
05...	96	99	100	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND
MAR									
05...	1545	1000	1150	0.250	1540	1550	20	3.00	29
05...	1555	1000	1150	0.250	1550	1600	20	3.00	28

DATE	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
MAR								
05...	12.0	1.6	2	47	85	96	99	100
05...	12.0	1.6	1	39	83	97	99	100

11160020 SAN LORENZO RIVER NEAR BOULDER CREEK, CA

LOCATION.--Lat 37°12'24", long 122°08'38", in NE 1/4 SW 1/4 sec.25, T.8 S., R.3 W., Santa Cruz County, Hydrologic Unit 18060001, on right bank 22 ft upstream from culvert on State Highway 9, 100 ft upstream from small right-bank tributary, and 5.8 mi north of town of Boulder Creek.

DRAINAGE AREA.--6.17 mi^2.

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 710 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--22 years, 6.65 ft^3/s, 4,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft^3/s, Jan. 4, 1982, gage height, 11.48 ft, from rating curve extended above 230 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.08 ft^3/s, Aug. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1545	*35	*2.82				

Minimum daily, 0.42 ft^3/s, Oct. 10, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	5.7	3.8	3.6	3.0	2.1	2.0	1.7	2.0	1.3	1.1	.98
2	.49	5.8	3.8	3.3	2.9	2.4	2.0	1.7	1.8	1.3	1.1	.93
3	.53	5.9	3.8	3.0	4.4	2.4	2.0	1.7	1.7	1.3	1.1	.82
4	.52	5.9	3.7	3.0	4.5	2.5	2.0	1.7	1.7	1.3	1.0	.83
5	.48	5.7	3.5	2.9	3.1	2.4	2.0	1.6	1.6	1.3	1.0	.82
6	.44	5.7	3.5	2.9	2.9	2.2	2.0	1.6	1.5	1.3	.98	.81
7	.44	5.6	3.6	2.9	2.7	2.2	2.0	1.6	1.5	1.3	.97	.81
8	.44	5.1	3.7	3.0	2.7	2.2	2.0	1.6	1.5	1.3	.94	.81
9	.43	5.1	3.5	2.8	2.7	2.1	2.0	1.6	1.4	1.2	.94	.80
10	.42	4.9	3.5	2.7	2.5	2.3	2.0	1.7	1.4	1.1	.95	.80
11	.44	4.9	3.5	2.7	2.4	2.4	2.0	1.6	1.5	1.0	.93	.83
12	.42	4.7	3.5	6.6	2.4	2.2	2.0	1.6	1.5	1.0	.92	.81
13	.44	4.7	3.5	9.3	2.4	2.1	2.0	1.6	1.4	.99	.93	.78
14	.44	4.6	3.5	7.0	2.4	2.2	2.0	1.6	1.5	1.0	.93	.78
15	.44	4.5	3.5	4.1	2.5	2.1	2.0	1.6	1.5	1.0	.95	.78
16	.44	4.4	3.5	3.7	13	2.1	2.0	1.6	1.5	1.1	.91	.79
17	e.74	4.5	3.5	3.3	7.5	2.1	2.0	1.6	1.4	1.0	.92	.78
18	e2.8	4.4	3.5	3.0	4.9	2.1	2.0	1.6	1.4	1.0	.91	.80
19	e4.0	4.6	3.5	3.0	3.5	2.1	2.0	1.6	1.4	1.0	.91	.80
20	e4.9	4.6	3.5	2.8	3.0	2.1	2.0	2.2	1.3	.97	.91	.74
21	6.3	4.4	3.5	2.7	2.7	2.1	2.0	1.7	1.3	.94	.90	.74
22	6.1	4.4	3.5	2.7	2.6	2.1	2.0	1.6	1.2	.97	.89	.80
23	8.3	4.4	3.5	2.7	2.4	2.1	2.0	2.0	1.2	.98	.89	.85
24	6.1	4.5	3.5	2.7	2.4	2.2	2.0	1.6	1.2	.98	.94	.82
25	6.0	5.9	3.4	2.6	2.4	2.2	2.0	1.6	1.2	.98	.98	.80
26	5.8	4.8	3.4	2.6	2.3	2.1	1.9	1.6	1.2	.98	.96	.81
27	5.8	4.0	3.4	2.7	2.2	2.1	1.9	2.3	1.2	.97	.91	.82
28	5.7	3.8	3.5	2.7	2.1	2.0	1.8	4.9	1.3	.95	.89	.81
29	5.7	3.7	3.4	2.7	---	2.0	1.8	2.0	1.3	.98	.87	.78
30	5.7	3.8	3.2	3.2	---	2.0	1.8	2.3	1.3	1.1	.85	.76
31	5.7	---	3.2	2.8	---	2.0	---	2.8	---	1.1	.90	---
TOTAL	86.95	145.0	108.9	105.7	94.5	67.2	59.2	57.5	42.9	33.69	29.28	24.29
MEAN	2.80	4.83	3.51	3.41	3.37	2.17	1.97	1.85	1.43	1.09	.94	.81
MAX	8.3	5.9	3.8	9.3	13	2.5	2.0	4.9	2.0	1.3	1.1	.98
MIN	.42	3.7	3.2	2.6	2.1	2.0	1.8	1.6	1.2	.94	.85	.74
AC-FT	172	288	216	210	187	133	117	114	85	67	58	48

CAL YR 1989 TOTAL 668.63 MEAN 1.83 MAX 22 MIN .29 AC-FT 1330
WTR YR 1990 TOTAL 855.11 MEAN 2.34 MAX 13 MIN .42 AC-FT 1700

e Estimated.

11160060 BEAR CREEK AT BOULDER CREEK, CA

LOCATION.--Lat 37°07'40", long 122°06'57", in NW 1/4 NW 1/4 sec.29, T.9 S., R.2 W., Santa Cruz County, Hydrologic Unit 18060001, on left bank on downstream side of private road bridge in town of Boulder Creek and 0.3 mi upstream from mouth.

DRAINAGE AREA.--16.0 mi^2.

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--13 years, 17.6 ft^3/s, 12,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,480 ft^3/s, Jan. 4, 1982, gage height, 13.30 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.09 ft^3/s, Sept. 8, 9, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1400	*195	*2.70				

Minimum daily, 0.21 ft^3/s, Sept. 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	e4.0	3.2	2.5	4.0	2.9	2.0	2.0	e3.5	.74	.29	.43
2	.56	e4.0	3.1	3.3	3.2	4.3	2.0	1.9	e2.6	.65	.33	.44
3	.56	e4.0	3.1	2.6	8.9	6.6	1.8	1.9	2.2	.67	.27	.50
4	.58	e4.0	3.2	2.4	13	5.2	1.7	2.0	1.9	.75	.34	.45
5	.56	e4.0	3.1	2.4	5.6	5.4	1.7	2.1	1.8	.83	.39	.29
6	.49	e4.0	3.1	2.4	4.5	4.3	1.6	1.7	1.9	.89	.51	.28
7	.41	e4.0	3.1	2.4	3.7	4.0	1.6	1.7	1.7	.68	.43	.33
8	.43	4.2	3.1	2.4	3.4	3.6	1.7	1.7	1.8	.35	.37	.32
9	.39	4.2	3.0	2.4	3.2	3.2	1.8	1.9	1.3	.56	.41	.33
10	.37	3.9	2.8	2.4	3.0	3.3	1.9	1.9	1.3	.76	.39	.30
11	.37	3.9	2.7	2.4	2.9	4.4	1.7	1.9	1.3	.67	.34	.32
12	.34	3.9	2.7	17	2.9	3.7	1.7	1.8	1.2	.70	.38	.26
13	.37	3.9	2.7	31	2.7	3.4	1.7	1.9	1.2	.46	.30	.25
14	.79	3.8	2.7	23	2.8	3.1	1.6	1.8	1.1	.29	.26	.24
15	.36	3.7	2.7	10	2.9	3.0	1.8	1.9	1.6	.29	.35	.22
16	.34	3.7	2.7	7.4	56	2.9	1.9	1.9	1.7	.29	.43	.21
17	.34	3.7	2.7	6.1	23	2.7	3.0	1.8	1.5	.38	.41	.21
18	.29	3.7	2.7	4.7	13	2.5	2.4	1.7	1.3	.51	.44	.26
19	1.1	3.4	2.7	4.0	8.8	2.4	2.4	1.8	.94	.51	.45	.23
20	1.2	3.4	2.7	3.6	6.8	2.3	2.4	3.3	1.1	.47	.48	.26
21	4.0	3.4	2.5	3.1	5.7	2.2	2.3	3.1	.90	.35	.41	.25
22	2.5	3.4	2.7	2.9	4.8	2.2	2.2	2.7	.73	.32	.38	.24
23	19	3.3	2.7	2.9	4.3	2.1	3.1	3.1	.81	.32	.41	.31
24	e5.7	3.1	2.5	2.5	4.0	2.0	3.2	3.2	.80	.33	.33	.31
25	e4.5	7.4	2.4	2.4	3.6	2.0	2.3	2.4	.88	.39	.44	.34
26	e4.4	19	2.4	2.4	3.4	1.9	2.0	2.2	1.0	.38	.48	.38
27	e4.3	5.5	2.4	2.4	3.2	1.9	1.9	6.3	1.1	.35	.52	.41
28	e4.2	4.3	2.4	2.3	2.9	2.0	1.9	25	.98	.36	.63	.41
29	e4.1	3.7	2.4	2.2	---	2.0	1.7	5.9	.93	.38	.49	.43
30	e4.0	3.5	2.4	3.4	---	2.0	1.9	4.7	.83	.26	.38	.46
31	e4.0	---	2.3	3.3	---	2.0	---	6.0	---	.29	.35	---
TOTAL	71.21	134.0	84.9	164.2	206.2	95.5	60.9	103.2	41.90	15.18	12.39	9.67
MEAN	2.30	4.47	2.74	5.30	7.36	3.08	2.03	3.33	1.40	.49	.40	.32
MAX	19	19	3.2	31	56	6.6	3.2	25	3.5	.89	.63	.50
MIN	.29	3.1	2.3	2.2	2.7	1.9	1.6	1.7	.73	.26	.26	.21
AC-FT	141	266	168	326	409	189	121	205	83	30	25	19

CAL YR 1989 TOTAL 1089.05 MEAN 2.98 MAX 99 MIN .11 AC-FT 2160
WTR YR 1990 TOTAL 999.25 MEAN 2.74 MAX 56 MIN .21 AC-FT 1980

e Estimated.

11160070 BOULDER CREEK AT BOULDER CREEK, CA

LOCATION.--Lat 37°07'36", long 122°07'18", in NW 1/4 NE 1/4 sec.30, T.9 S., R.2 W., Santa Cruz County, Hydrologic Unit 18060001, on right bank under bridge on State Highway 9 in town of Boulder Creek and 750 ft upstream from mouth.

DRAINAGE AREA.--11.3 mi^2.

PERIOD OF RECORD.--October 1976 to current year.

REVISED RECORDS.--WDR CA-84-2: 1980, 1982-83.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation; small diversions upstream from station for domestic use.

AVERAGE DISCHARGE.--14 years, 17.1 ft^3/s, 12,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft^3/s, Jan. 4, 1982, gage height, 9.50 ft, from rating curve extended above 330 ft^3/s on basis of slope-area measurement at gage height 6.03 ft; minimum daily, 0.35 ft^3/s, Oct. 16, 17, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1400	*244	*2.72				

Minimum daily, 0.45 ft^3/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.59	1.7	2.9	2.7	4.2	3.0	2.5	2.1	4.2	1.7	1.3	1.0
2	.59	1.7	2.9	3.0	2.7	5.9	2.5	2.0	3.7	1.7	1.3	1.1
3	.59	1.7	2.9	2.3	16	11	2.3	2.0	3.3	1.7	1.3	1.1
4	.55	1.8	2.9	2.3	15	7.5	2.3	2.0	3.0	1.7	1.3	1.3
5	.53	1.9	3.5	2.1	6.3	7.6	2.3	2.0	2.9	1.6	1.3	.91
6	.53	2.0	3.0	2.1	5.2	5.5	2.3	2.0	2.9	1.5	1.2	.72
7	.53	2.0	2.9	2.1	4.6	4.8	2.3	2.0	2.6	1.5	1.1	.76
8	.49	2.1	2.7	2.2	4.1	4.5	2.3	2.0	2.6	1.5	1.1	.77
9	.45	2.1	2.7	2.1	4.0	4.0	2.1	2.0	2.5	1.5	1.2	.80
10	.50	2.2	2.7	2.1	3.5	4.4	2.1	2.0	2.3	1.5	1.2	.80
11	.52	2.3	2.8	2.0	3.5	5.1	2.0	2.0	2.3	1.5	1.1	.80
12	.48	2.5	2.7	30	3.3	4.2	2.0	2.0	2.2	1.5	1.1	.82
13	.47	2.8	2.7	34	3.3	3.9	2.0	2.0	2.1	1.5	1.1	.80
14	.47	3.0	2.5	19	3.1	3.7	2.0	2.0	2.2	1.4	.97	.80
15	.48	3.1	2.5	7.3	3.1	3.5	2.0	2.0	2.3	1.4	1.0	.74
16	.47	3.1	2.5	6.4	59	3.3	2.0	2.0	2.3	1.5	.97	.79
17	.56	3.2	2.5	4.9	26	3.3	2.2	1.8	2.1	1.5	1.0	.80
18	.97	3.3	2.7	3.7	15	3.3	2.3	1.8	2.1	1.5	1.1	.80
19	1.1	3.1	2.7	3.1	8.9	3.3	2.1	1.8	2.1	1.4	1.1	.80
20	1.2	3.1	2.7	2.8	6.6	3.1	2.1	6.4	2.0	1.5	1.1	.77
21	6.7	3.1	2.5	2.5	5.3	3.1	2.1	3.2	1.8	1.3	1.1	.72
22	2.5	3.2	2.3	2.5	4.8	3.1	2.1	2.2	1.8	1.3	1.1	.81
23	21	3.1	2.3	2.3	4.2	3.0	3.5	3.1	1.8	1.3	1.1	1.2
24	5.6	3.1	2.3	2.3	3.8	2.9	2.7	2.3	1.8	1.3	1.1	.95
25	3.3	19	2.3	2.1	3.5	2.8	2.4	2.0	1.7	1.3	1.2	.88
26	2.0	11	2.3	2.1	3.5	2.7	2.3	2.0	1.7	1.3	1.3	.80
27	1.8	5.0	2.3	2.1	3.3	2.7	2.1	12	1.8	1.3	1.2	.80
28	1.7	3.4	2.2	2.1	3.1	2.7	2.1	29	1.8	1.4	1.1	.80
29	1.7	3.2	2.1	2.1	---	2.7	2.0	6.9	1.8	1.4	1.1	.80
30	3.1	2.9	2.1	3.9	---	2.6	2.1	5.8	1.8	1.3	1.1	.82
31	1.8	---	2.1	2.7	---	2.5	---	5.7	---	1.2	.97	---
TOTAL	63.27	105.7	80.2	162.9	228.9	125.7	67.1	118.1	69.5	45.0	35.21	25.76
MEAN	2.04	3.52	2.59	5.25	8.17	4.05	2.24	3.81	2.32	1.45	1.14	.86
MAX	21	19	3.5	34	59	11	3.5	29	4.2	1.7	1.3	1.3
MIN	.45	1.7	2.1	2.0	2.7	2.5	2.0	1.8	1.7	1.2	.97	.72
AC-FT	125	210	159	323	454	249	133	234	138	89	70	51

CAL YR 1989 TOTAL 2192.57 MEAN 6.01 MAX 159 MIN .45 AC-FT 4350
WTR YR 1990 TOTAL 1127.34 MEAN 3.09 MAX 59 MIN .45 AC-FT 2240

11160300 ZAYANTE CREEK AT ZAYANTE, CA

LOCATION.--Lat 37°05'10", long 122°02'45", in SE 1/4 sec.2, T.10 S., R.2 W., Santa Cruz County, Hydrologic Unit 18060001, on left bank at downstream side of bridge on Zayante Road in town of Zayante, 0.4 mi upstream from Lompico Creek, 2.0 mi east of Ben Lomond, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--11.1 mi^2.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder and bedrock notch low-flow control. Datum of gage is 372.44 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1989, at datum 0.04 ft higher.

REMARKS.--No estimated daily discharges. Records fair. No known regulation; small diversions upstream from station for individual use.

AVERAGE DISCHARGE.--33 years, 11.4 ft^3/s, 8,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,620 ft^3/s, Jan. 14, 1978, gage height, 8.52 ft, from rating curve extended above 1,200 ft^3/s on basis of slope-area measurement at gage height 7.70 ft; maximum gage height, 8.86 ft, Jan. 4, 1982; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1530	*116	*2.72				

Minimum daily, 0.29 ft^3/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	4.1	2.8	2.2	2.3	2.2	1.7	1.3	2.2	.84	.64	.43
2	.34	4.1	2.8	2.2	1.8	2.8	1.6	1.4	1.9	.81	.70	.40
3	.36	4.1	2.8	1.9	3.1	4.7	1.6	1.5	1.7	.82	.68	.40
4	.35	3.9	2.8	1.8	5.4	3.9	1.5	1.5	1.4	.83	.64	.37
5	.32	3.9	2.6	1.7	2.7	4.0	1.4	1.5	1.4	.81	.63	.40
6	.32	3.9	2.6	1.7	2.2	3.2	1.4	1.5	1.3	.83	.58	.42
7	.32	4.0	2.5	1.7	2.1	2.9	1.5	1.5	1.3	.86	.56	.42
8	.31	4.0	2.5	1.8	2.0	2.8	1.5	1.4	1.2	.83	.48	.36
9	.30	3.9	2.5	1.8	1.9	2.6	1.4	1.3	1.1	.77	.46	.37
10	.29	3.9	2.4	1.7	1.9	2.7	1.4	1.3	1.1	.77	.50	.36
11	.30	3.8	2.3	1.6	1.9	2.9	1.4	1.3	1.2	.73	.53	.36
12	.30	3.7	2.3	3.8	1.9	2.6	1.3	1.3	1.2	.66	.47	.36
13	.34	3.7	2.3	5.9	1.9	2.5	1.3	1.3	1.1	.60	.48	.36
14	.32	3.7	2.3	6.4	1.8	2.2	1.3	1.3	1.2	.60	.50	.36
15	.33	3.7	2.2	3.9	1.8	2.2	1.3	1.2	1.3	.63	.53	.38
16	.33	3.7	2.2	3.1	21	2.1	1.3	1.2	1.2	.68	.48	.38
17	.46	3.5	2.2	2.8	8.6	2.1	1.4	1.1	1.1	.68	.48	.37
18	2.1	3.5	2.2	2.4	5.3	2.0	1.3	1.1	1.1	.62	.50	.39
19	2.9	3.5	2.2	2.1	4.0	2.0	1.5	1.1	1.0	.59	.47	.38
20	3.4	3.4	2.1	2.0	3.4	1.9	1.5	2.0	1.0	.59	.48	.36
21	5.3	3.4	2.1	1.9	3.0	1.9	1.5	1.7	1.0	.54	.47	.35
22	3.9	3.6	2.1	1.8	2.9	1.9	1.5	1.3	1.1	.56	.43	.38
23	9.4	3.7	2.1	1.7	2.7	1.9	1.8	2.2	1.1	.60	.43	.51
24	7.5	3.8	2.0	1.7	2.5	1.8	1.6	1.5	.99	.59	.66	.47
25	5.0	5.6	2.0	1.7	2.5	1.8	1.5	1.2	.97	.57	.71	.45
26	4.4	5.4	2.0	1.7	2.3	1.8	1.5	1.2	.94	.60	.62	.53
27	4.1	3.3	2.0	1.7	2.2	1.8	1.5	3.1	.89	.59	.56	.84
28	4.1	3.1	2.0	1.7	2.2	1.9	1.4	13	.90	.57	.49	.98
29	4.1	3.0	2.0	1.7	---	1.9	1.4	2.9	.95	.60	.45	.97
30	4.1	2.9	2.0	2.3	---	1.8	1.3	2.5	.93	.60	.43	.69
31	4.1	---	2.0	2.1	---	1.8	---	3.5	---	.61	.43	---
TOTAL	70.04	113.8	70.9	72.5	97.3	74.6	43.6	61.2	35.77	20.98	16.47	13.80
MEAN	2.26	3.79	2.29	2.34	3.47	2.41	1.45	1.97	1.19	.68	.53	.46
MAX	9.4	5.6	2.8	6.4	21	4.7	1.8	13	2.2	.86	.71	.98
MIN	.29	2.9	2.0	1.6	1.8	1.8	1.3	1.1	.89	.54	.43	.35
AC-FT	139	226	141	144	193	148	86	121	71	42	33	27

CAL YR 1989 TOTAL 899.82 MEAN 2.47 MAX 66 MIN .05 AC-FT 1780
WTR YR 1990 TOTAL 690.96 MEAN 1.89 MAX 21 MIN .29 AC-FT 1370

11160430 BEAN CREEK NEAR SCOTTS VALLEY, CA

LOCATION.--Lat 37°03'19", long 122°02'25", in San Augustin Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank, 100 ft northeast of Mt Hermon Road, 1.2 mi northwest of Camp Evers, and 1.8 mi east of Felton.

DRAINAGE AREA.--8.81 mi^2.

PERIOD OF RECORD.--January 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 320 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for periods of estimated daily discharges and daily discharges greater than 10 ft^3/s, which are poor. No regulation; small diversions upstream from station for domestic use.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88 ft^3/s, Mar. 9, 1989, gage height, 5.65 ft; minimum daily, 1.4 ft^3/s, Oct. 19, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 28	0200	*46	*5.18				

Minimum daily, 1.4 ft^3/s, Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	3.9	e3.4	4.3	4.4	3.7	2.9	2.4	2.6	2.5	2.0	1.7
2	2.1	4.0	e3.3	4.0	3.5	6.3	2.9	2.4	2.6	2.2	2.0	1.7
3	2.1	4.0	e3.3	3.6	6.5	e8.0	2.9	2.4	2.4	2.0	1.9	1.7
4	2.0	3.9	e3.2	3.5	e7.2	e7.3	2.9	2.4	2.4	2.0	1.9	1.8
5	2.0	3.9	e3.2	3.5	e4.2	e5.5	2.9	2.4	2.2	2.0	1.9	1.7
6	2.0	3.9	e3.2	3.5	e3.5	e4.8	2.9	2.4	2.0	2.0	1.9	1.8
7	2.0	3.9	e3.2	3.6	3.3	4.3	2.9	2.4	2.0	2.1	1.9	1.8
8	2.0	3.9	3.1	3.5	3.2	4.1	2.8	2.2	2.2	2.4	1.9	1.7
9	2.0	3.9	3.1	3.2	3.1	3.9	2.8	2.2	2.2	2.3	1.9	1.8
10	2.0	3.9	3.1	3.1	3.1	4.3	2.8	2.2	2.0	2.3	1.9	1.8
11	2.0	3.9	3.0	3.3	3.1	4.2	2.8	2.2	2.1	2.2	1.9	1.8
12	2.1	3.9	3.0	e6.6	3.0	3.8	2.8	2.2	2.2	2.2	1.9	1.8
13	2.1	4.0	3.1	e9.0	2.9	3.7	2.6	2.2	2.1	2.2	2.0	1.7
14	2.1	4.1	3.1	e10	2.9	3.5	2.6	2.2	2.1	2.1	2.0	1.7
15	2.1	4.0	2.9	5.6	3.0	3.4	2.6	2.0	2.1	1.9	1.9	1.6
16	2.1	3.9	2.8	4.7	14	3.4	2.6	2.2	2.1	1.9	1.9	1.7
17	2.2	3.9	2.9	3.9	11	3.3	2.5	2.0	2.1	1.8	1.9	1.7
18	1.6	3.8	2.8	3.7	6.2	3.3	2.6	2.0	2.1	1.8	1.9	1.7
19	1.4	3.9	2.7	3.5	5.2	3.3	2.6	2.0	2.0	1.8	1.8	1.7
20	1.7	3.9	2.8	3.3	4.7	3.2	2.4	3.7	2.0	1.8	1.9	1.7
21	3.6	3.9	2.8	3.3	4.5	3.2	2.4	2.2	2.1	1.9	1.9	2.1
22	1.7	3.9	2.8	3.1	4.2	3.3	2.4	2.2	2.1	1.9	1.8	1.9
23	9.3	3.9	2.9	3.1	4.1	3.2	2.3	3.2	2.0	1.9	1.9	1.9
24	9.9	3.8	3.0	3.1	4.0	3.3	2.4	2.2	2.0	1.8	1.9	1.8
25	4.9	7.9	3.0	3.1	3.9	3.2	2.3	2.2	1.9	1.8	2.1	1.7
26	4.1	e5.8	2.9	3.1	3.9	3.0	2.3	2.2	2.0	1.8	1.9	1.7
27	3.9	e4.2	2.9	3.1	3.8	2.9	2.5	7.4	2.1	1.9	1.8	1.8
28	3.9	e3.8	3.0	3.1	3.7	3.2	2.4	15	2.1	1.9	1.8	1.8
29	3.8	e3.7	2.9	3.1	---	3.0	2.4	3.5	2.1	1.9	1.8	1.7
30	3.9	e3.5	2.9	4.0	---	3.0	2.4	3.7	2.3	1.9	1.8	1.8
31	3.9	---	2.9	3.3	---	3.0	---	3.3	---	1.9	1.8	---
TOTAL	92.5	122.9	93.2	124.8	130.1	121.6	78.6	93.2	64.2	62.1	58.8	52.8
MEAN	2.98	4.10	3.01	4.03	4.65	3.92	2.62	3.01	2.14	2.00	1.90	1.76
MAX	9.9	7.9	3.4	10	14	8.0	2.9	15	2.6	2.5	2.1	2.1
MIN	1.4	3.5	2.7	3.1	2.9	2.9	2.3	2.0	1.9	1.8	1.8	1.6
AC-FT	183	244	185	248	258	241	156	185	127	123	117	105

WTR YR 1990 TOTAL 1094.8 MEAN 3.00 MAX 15 MIN 1.4 AC-FT 2170

e Estimated.

11160500 SAN LORENZO RIVER AT BIG TREES, CA

LOCATION.--Lat 37°02'40", long 122°04'17", in Zayante Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank 20 ft upstream from bridge on Henry Cowell State Park Road, 200 ft upstream from Shingle Mill Creek, 0.3 mi downstream from Zayante Creek, 0.9 mi northwest of Big Trees station on Southern Pacific railroad, and 5.3 mi northwest of Santa Cruz.

DRAINAGE AREA.--106 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1315-B: 1938(M). WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 227.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 6, 1972, at site 1.3 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Low flow partially regulated by Loch Lomond Reservoir since 1961, capacity, 8,820 acre-ft, and by a fiber dam located 500 ft upstream from gage. Many small diversions upstream from station for domestic supply.

AVERAGE DISCHARGE.--54 years, 132 ft^3/s, 95,630 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,400 ft^3/s, Dec. 23, 1955, gage height, 22.55 ft, site and datum then in use, from rating curve extended above 11,000 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 28.85 ft, Jan. 5, 1982; minimum daily discharge, 5.6 ft^3/s, July 27, 28, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1700	*1,170	*6.64				

Minimum daily, 9.3 ft^3/s, Sept. 27, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	39	33	34	31	23	23	20	33	14	13	10
2	11	39	33	33	24	39	23	19	28	14	13	10
3	12	39	32	28	64	76	23	19	23	13	13	10
4	11	39	32	26	109	54	23	19	23	13	13	10
5	10	39	32	26	35	47	22	19	22	13	13	10
6	10	38	31	26	25	32	22	18	21	13	12	10
7	10	37	30	26	23	29	22	18	20	13	12	10
8	10	38	30	26	23	26	22	18	19	13	12	9.6
9	9.9	38	30	26	23	26	22	18	19	23	11	9.9
10	9.8	37	30	26	23	30	22	19	18	16	11	10
11	9.9	37	29	26	23	31	21	19	17	16	11	12
12	10	36	29	118	25	26	20	19	17	15	11	11
13	10	36	29	179	24	23	20	18	17	14	11	9.4
14	10	36	29	152	24	23	20	18	17	14	11	9.4
15	11	35	28	67	23	23	20	18	17	14	11	9.4
16	10	35	28	50	316	22	20	17	18	13	11	9.6
17	11	35	28	41	160	23	21	17	17	13	11	9.6
18	19	34	28	31	89	23	21	17	16	13	10	9.7
19	24	34	28	33	57	22	21	17	16	13	10	9.8
20	28	34	28	36	41	25	21	33	16	13	11	9.7
21	60	33	28	31	37	23	21	29	15	13	11	9.8
22	49	33	27	28	31	22	21	23	16	12	11	9.8
23	160	34	27	25	28	22	24	24	16	13	11	10
24	104	33	27	24	27	25	25	24	16	13	11	10
25	58	87	27	22	26	23	23	21	15	12	12	9.4
26	45	125	27	22	24	24	21	20	15	13	12	9.5
27	42	47	26	24	23	24	21	57	14	13	12	9.3
28	41	38	27	23	23	24	20	199	14	13	11	9.6
29	40	36	26	23	---	24	20	47	14	13	11	9.7
30	40	34	25	32	---	24	20	40	14	13	11	9.3
31	41	---	25	28	---	24	---	44	---	12	10	---
TOTAL	927.6	1235	889	1292	1381	882	645	908	543	423	354	295.5
MEAN	29.9	41.2	28.7	41.7	49.3	28.5	21.5	29.3	18.1	13.6	11.4	9.85
MAX	160	125	33	179	316	76	25	199	33	23	13	12
MIN	9.8	33	25	22	23	22	20	17	14	12	10	9.3
AC-FT	1840	2450	1760	2560	2740	1750	1280	1800	1080	839	702	586

CAL YR 1989 TOTAL 12799.8 MEAN 35.1 MAX 685 MIN 8.7 AC-FT 25390
WTR YR 1990 TOTAL 9775.1 MEAN 26.8 MAX 316 MIN 9.3 AC-FT 19390

11160500 SAN LORENZO RIVER AT BIG TREES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1906-7, 1952-82, 1986, November 1989 to June 1990.
CHEMICAL DATA: Water years 1906-7, 1952-67, 1969-70, 1973-75, 1977, 1980-81.
WATER TEMPERATURE: Water years 1966-82.
SEDIMENT DATA: Water years 1973-82, 1986, November 1989 to June 1990.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May 1966 to February 1979.
SUSPENDED-SEDIMENT DISCHARGE: October 1972 to September 1982.

REMARKS.--Zero bedload discharge observed for flows less than 38 ft^3/s during current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
NOV								
01...	1715	38	10.0	3	0.31	83	--	--
JAN								
02...	1715	32	7.5	1	0.09	64	--	--
13...	1210	180	--	79	38	93	98	100
FEB								
17...	1755	147	7.5	103	41	98	--	--
MAR								
01...	1645	22	11.0	2	0.12	77	--	--
APR								
02...	1430	23	12.5	4	0.25	88	--	--
JUN								
01...	1350	31	14.0	16	1.3	94	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JAN								
04...	1230	1	25	6.0	1	5	13	20
04...	1231	1	25	6.0	--	1	6	15
04...	1232	1	25	6.0	--	1	10	21
04...	1233	1	25	6.0	--	--	1	2
04...	1234	1	25	6.0	--	--	1	1
04...	1235	1	25	6.0	1	4	13	39
MAR								
01...	1730	1	22	11.0	1	4	9	15
01...	1731	1	22	11.0	--	--	--	9
01...	1732	1	22	11.0	--	--	1	13
01...	1733	1	22	11.0	--	--	2	8
01...	1734	1	22	11.0	--	--	1	5
01...	1735	1	22	11.0	2	5	14	40
APR								
02...	1445	1	23	12.5	8	25	58	79
02...	1446	1	23	12.5	1	2	7	13
02...	1447	1	23	12.5	--	--	1	9
02...	1448	1	23	12.5	--	--	--	10
02...	1449	1	23	12.5	--	--	1	16
02...	1450	1	23	12.5	--	--	2	5
02...	1451	1	23	12.5	3	10	29	56
JUN								
01...	1415	1	31	14.0	13	40	75	94
01...	1416	1	31	14.0	1	5	11	19
01...	1417	1	31	14.0	--	--	1	14
01...	1418	1	31	14.0	--	--	--	7
01...	1419	1	31	14.0	--	--	1	6
01...	1420	1	31	14.0	--	1	2	6
01...	1421	1	31	14.0	1	5	26	79

11160500 SAN LORENZO RIVER AT BIG TREES, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JAN							
04...	47	83	97	100	--	--	--
04...	31	44	59	74	96	100	--
04...	58	77	81	83	90	100	--
04...	4	8	16	32	63	100	--
04...	3	7	13	25	58	91	100
04...	78	92	98	99	100	--	--
MAR							
01...	32	65	85	93	96	100	--
01...	24	44	65	77	87	100	--
01...	30	38	44	56	74	100	--
01...	23	37	46	56	68	77	100
01...	16	32	46	59	77	100	--
01...	82	95	99	100	--	--	--
APR							
02...	86	92	97	99	100	--	--
02...	28	58	85	94	97	100	--
02...	24	36	50	62	76	100	--
02...	20	26	33	46	63	75	100
02...	49	70	75	78	84	100	--
02...	14	29	45	60	85	100	--
02...	76	90	98	100	--	--	--
JUN							
01...	98	100	--	--	--	--	--
01...	44	79	94	98	100	--	--
01...	31	48	63	78	88	100	--
01...	26	34	40	48	64	100	--
01...	18	31	44	57	78	84	100
01...	11	20	34	57	79	100	--
01...	91	96	98	99	100	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND
JAN									
13...	1235	1000	1150	0.250	1230	1245	17	2.00	238
13...	1250	1000	1150	0.250	1245	1300	17	2.00	249

DATE	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
JAN									
13...	4.6	--	1	11	40	66	87	97	100
13...	4.6	1	2	16	47	70	87	97	100

11161000 SAN LORENZO RIVER AT SANTA CRUZ, CA

LOCATION.--Lat 36°59'27", long 122°01'51", in La Carbonera Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank, in city of Santa Cruz Water Meter Repair compound, 0.3 mi upstream from intersection of State Highways 1 and 9, 1.0 mi north of Santa Cruz, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--115 mi^2.

PERIOD OF RECORD.--October 1952 to September 1960, October 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1952 to September 1960, water-stage recorder at site 0.1 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Low flow partially regulated by Loch Lomond Reservoir since 1961, capacity, 8,820 acre-ft, and by a fiber dam located 6.8 mi upstream from gage. Water is diverted 50 ft upstream from station by city of Santa Cruz for municipal supply; many small diversions upstream from station for domestic supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,400 ft^3/s, Dec. 23, 1955, gage height, 23.10 ft, site and datum then in use, from rating curve extended above 4,500 ft^3/s on basis of slope-area measurement of peak flow; no flow for several days in 1955 and many days in 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1930	*991	*7.03				

Minimum daily, 0.66 ft^3/s, Sept. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	32	32	27	25	17	19	12	41	6.5	1.7	1.5
2	2.0	35	30	32	16	26	17	11	25	5.6	1.9	1.1
3	3.2	e35	30	21	31	131	17	11	18	4.6	1.8	1.2
4	1.9	e36	29	19	138	69	18	11	16	4.6	1.7	.89
5	1.0	e36	32	18	35	59	17	11	14	4.7	2.3	1.2
6	1.4	e35	30	18	21	31	17	9.6	13	4.5	1.5	.93
7	1.2	34	29	19	15	25	16	9.4	13	4.0	1.1	1.0
8	1.6	33	27	18	15	24	16	10	12	4.2	.96	.96
9	1.3	33	27	18	14	22	17	11	11	11	.82	1.6
10	2.5	31	29	16	16	24	17	9.2	11	7.7	.77	1.5
11	1.9	31	26	18	15	27	16	9.8	10	4.7	1.1	1.4
12	1.9	32	27	91	17	22	17	11	11	4.2	1.9	2.4
13	1.5	32	24	218	16	21	13	10	9.8	3.3	1.1	.95
14	1.7	31	25	194	16	20	14	9.8	10	3.1	1.1	.69
15	1.5	29	24	101	15	18	15	9.3	10	3.3	1.2	.79
16	2.6	28	24	49	243	17	14	9.4	11	3.6	1.4	1.1
17	4.0	29	26	43	235	19	15	8.4	11	2.7	1.1	1.4
18	12	27	25	25	119	19	14	10	8.9	2.2	.95	.92
19	19	26	25	30	66	18	14	9.7	11	1.9	.84	.77
20	36	27	26	28	39	23	15	29	10	1.9	.95	.69
21	68	25	23	28	32	20	15	30	8.5	1.8	1.5	.66
22	78	26	23	23	26	19	15	18	8.2	1.9	1.3	2.1
23	174	27	23	19	22	19	22	21	8.8	2.2	1.6	8.5
24	158	24	25	20	20	20	20	19	8.4	2.2	1.8	4.2
25	80	52	24	17	20	19	23	16	7.8	1.6	1.8	3.6
26	55	183	23	17	18	18	15	13	7.6	1.8	3.0	2.2
27	45	67	24	20	17	19	13	65	6.7	1.7	2.0	1.0
28	35	44	22	18	16	19	12	328	7.3	1.6	1.7	1.3
29	33	33	21	17	---	18	12	86	6.2	1.9	1.4	1.2
30	33	32	22	24	---	19	11	53	6.0	1.8	1.3	1.5
31	35	---	20	22	---	19	---	59	---	2.0	1.0	---
TOTAL	895.2	1145	797	1228	1278	841	476	929.6	352.2	108.8	44.59	49.25
MEAN	28.9	38.2	25.7	39.6	45.6	27.1	15.9	30.0	11.7	3.51	1.44	1.64
MAX	174	183	32	218	243	131	23	328	41	11	3.0	8.5
MIN	1.0	24	20	16	14	17	11	8.4	6.0	1.6	.77	.66
AC-FT	1780	2270	1580	2440	2530	1670	944	1840	699	216	88	98

CAL YR 1989 TOTAL 10616.74 MEAN 29.1 MAX 675 MIN .65 AC-FT 21060
WTR YR 1990 TOTAL 8144.64 MEAN 22.3 MAX 328 MIN .66 AC-FT 16150

e Estimated.

11161300 CARBONERA CREEK AT SCOTTS VALLEY, CA

LOCATION.--Lat 37°03'02", long 122°00'45" in San Augustin Grant, Santa Cruz County, Hydrologic Unit 18060001, on right bank at east city limits of Scotts Valley, 1.1 mi upstream from Glen Canyon Road, 3.3 mi east of Felton, and 4.1 mi upstream from Branciforte Creek.

DRAINAGE AREA.--3.60 mi^2.

PERIOD OF RECORD.--February 1985 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 550 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station. Low flows affected by return flow from urban irrigation and by periodic flushing of upstream county well.

AVERAGE DISCHARGE.--5 years, 3.66 ft^3/s, 2,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 934 ft^3/s, Mar. 15, 1986, gage height, 9.48 ft, from rating curve extended above 190 ft^3/s on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	1100	*426	*7.19				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.3	.60	3.5	2.1	.65	.58	.67	1.0	.00	.00	.00
2	.37	1.4	.60	.67	.91	6.5	.53	.71	.89	.07	.00	.00
3	.00	1.3	.60	.56	17	6.8	.61	.88	.76	.00	.00	.03
4	.58	1.4	.56	.57	3.2	4.4	.67	.88	.76	.00	.00	.29
5	.30	1.2	.60	.56	1.5	2.4	.76	.68	.71	.00	.00	.02
6	.03	1.2	.66	.59	1.2	1.8	.42	.73	.66	.02	.00	.03
7	.18	1.2	.60	.73	1.1	1.7	.59	.68	.53	.00	.00	.00
8	.00	1.2	.66	.66	.94	1.3	.52	.71	.45	.00	.00	.00
9	.00	1.2	.60	.50	.84	1.3	.54	.65	.41	.00	.00	.00
10	.00	1.1	.60	.54	.85	2.5	.35	.70	.38	.04	.00	.00
11	.00	1.0	.68	.47	.83	1.8	.37	.67	.30	.00	.00	.00
12	.10	1.0	.46	9.4	.76	1.1	.36	.64	.28	.00	.00	.00
13	.00	.99	.53	11	.72	1.0	.32	.54	.26	.00	.00	.00
14	.00	1.0	.74	12	.68	.96	.34	.53	.29	.00	.00	.00
15	.00	1.0	.57	2.3	.93	1.0	.33	.59	.30	.00	.00	.00
16	.00	1.1	.66	3.0	30	.83	.39	.52	.27	.00	.00	.00
17	.71	1.1	.60	1.8	9.1	.82	.35	.48	.23	.00	.00	.00
18	.58	1.0	.60	1.5	3.0	.75	.36	.48	.22	.00	.00	.00
19	1.0	1.0	.60	1.3	2.0	.72	.39	.63	.27	.00	.00	.00
20	1.2	1.0	.62	1.3	1.6	.66	.46	6.7	.18	.00	.00	.00
21	15	1.3	.61	1.2	1.3	.64	.43	.40	.18	.00	.00	.00
22	1.9	1.1	.65	1.1	1.1	.62	.37	.18	.22	.00	.00	.10
23	45	.89	.60	1.0	.98	.68	1.0	5.5	.20	.00	.00	.58
24	15	.92	.74	1.0	1.1	.64	.43	.23	.17	.00	.00	.03
25	2.0	18	.86	.96	.79	.60	.32	.15	.14	.04	.79	.00
26	2.0	1.4	.60	.96	.78	.66	.35	.11	.09	.00	.31	.05
27	1.7	.83	.51	1.1	1.0	.60	.37	27	.07	.00	.16	.00
28	1.6	.71	.58	.80	.64	.60	.33	40	.05	.00	.04	.00
29	1.4	.66	.51	.79	---	.59	.36	1.8	.07	.00	.07	.05
30	1.4	.60	.54	2.4	---	.57	.31	3.7	.04	.00	.00	.21
31	1.4	---	.57	1.5	---	.58	---	1.8	---	.00	.00	---
TOTAL	93.45	49.10	18.91	65.76	86.95	45.77	13.51	99.94	10.38	0.17	1.37	1.39
MEAN	3.01	1.64	.61	2.12	3.11	1.48	.45	3.22	.35	.005	.044	.046
MAX	45	18	.86	12	30	6.8	1.0	40	1.0	.07	.79	.58
MIN	.00	.60	.46	.47	.64	.57	.31	.11	.04	.00	.00	.00
AC-FT	185	97	38	130	172	91	27	198	21	.3	2.7	2.8

CAL YR 1989 TOTAL 1035.36 MEAN 2.84 MAX 110 MIN .00 AC-FT 2050
WTR YR 1990 TOTAL 486.70 MEAN 1.33 MAX 45 MIN .00 AC-FT 965

11162500 PESCADERO CREEK NEAR PESCADERO, CA

LOCATION.--Lat 37°15'39", long 122°19'40", in SW 1/4 sec.5, T.8 S., R.4 W., San Mateo County, Hydrologic Unit 18050006, on left bank at downstream side of highway bridge, 3.0 mi east of Pescadero, and 5.3 mi upstream from mouth.

DRAINAGE AREA.--45.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1951 to current year.

REVISED RECORDS.--WSP 1445: 1952-53(M). WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 62.3 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Minor regulation from swimming pools in San Mateo County Memorial Park and Portola State Park during summer months. Small diversions upstream from station by pumping.

AVERAGE DISCHARGE.--39 years, 41.3 ft^3/s, 29,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,420 ft^3/s, Dec. 23, 1955, gage height, 21.27 ft, from rating curve extended above 2,700 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1915	*508	*4.94				

Minimum daily, 0.76 ft^3/s, Oct. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	24	16	13	17	11	7.2	7.0	11	4.0	2.8	2.2
2	1.2	24	15	16	17	11	7.1	6.9	9.2	3.8	2.8	2.0
3	2.2	24	15	12	18	15	6.8	6.6	8.2	3.6	2.9	1.8
4	.98	23	15	11	35	13	6.8	6.5	7.3	3.7	2.7	2.0
5	.97	23	14	12	23	15	6.8	6.2	7.0	3.6	2.7	2.0
6	.93	23	15	12	19	14	6.7	5.9	6.6	3.6	2.7	2.0
7	.82	22	14	11	18	13	6.4	5.9	6.4	3.6	2.6	2.0
8	.90	22	14	11	17	13	6.7	5.8	6.1	3.6	2.5	2.0
9	.96	22	14	11	16	12	6.8	5.9	6.0	3.5	2.4	2.0
10	.81	21	14	11	15	12	6.7	5.8	5.7	3.4	2.4	2.0
11	.81	22	13	11	14	13	6.4	5.8	5.4	3.2	2.4	2.1
12	.81	23	12	17	14	13	6.1	5.9	5.0	3.2	2.4	2.0
13	.81	22	12	48	12	12	6.1	5.9	4.4	3.0	2.4	2.1
14	.76	22	12	46	12	11	5.7	5.7	4.6	2.7	2.3	2.0
15	.91	21	12	28	12	11	5.7	5.6	5.2	2.8	2.4	2.0
16	.97	20	12	23	122	10	5.6	5.5	5.4	2.9	2.5	1.9
17	1.3	20	12	22	80	9.7	6.3	5.6	5.2	3.2	2.5	2.2
18	3.9	19	12	20	36	9.3	6.8	5.6	4.8	3.3	2.5	2.1
19	16	19	12	18	26	9.1	6.8	5.9	4.8	3.2	2.7	2.0
20	20	18	12	17	21	8.8	6.9	7.5	4.8	3.0	2.3	2.1
21	25	18	12	16	18	8.6	7.1	10	4.5	3.0	2.5	2.0
22	30	18	12	16	16	8.2	7.2	7.7	4.2	2.9	2.3	1.8
23	43	18	12	16	15	7.9	11	8.6	4.2	2.8	2.5	1.9
24	34	19	12	15	13	7.9	11	8.8	4.2	2.9	2.4	2.4
25	27	22	12	15	13	7.9	8.3	7.1	4.2	3.0	2.3	3.3
26	26	37	11	14	12	7.9	7.8	6.7	4.0	2.9	2.3	2.0
27	25	20	11	14	12	7.6	7.4	9.9	3.9	2.8	2.5	1.9
28	25	17	12	14	11	7.5	7.0	47	3.8	2.8	2.4	1.8
29	24	16	12	14	---	7.5	6.8	18	4.0	2.7	2.4	1.8
30	24	16	11	16	---	7.4	6.9	12	4.1	2.8	2.2	1.9
31	24	---	11	17	---	7.2	---	13	---	2.7	2.2	---
TOTAL	364.04	635	395	537	654	321.5	210.9	270.3	164.2	98.2	76.9	61.3
MEAN	11.7	21.2	12.7	17.3	23.4	10.4	7.03	8.72	5.47	3.17	2.48	2.04
MAX	43	37	16	48	122	15	11	47	11	4.0	2.9	3.3
MIN	.76	16	11	11	11	7.2	5.6	5.5	3.8	2.7	2.2	1.8
AC-FT	722	1260	783	1070	1300	638	418	536	326	195	153	122

CAL YR 1989 TOTAL 4394.11 MEAN 12.0 MAX 370 MIN .44 AC-FT 8720
WTR YR 1990 TOTAL 3788.34 MEAN 10.4 MAX 122 MIN .76 AC-FT 7510

11162500 PESCADERO CREEK NEAR PESCADERO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-80, 1986, December 1989 to June 1990.
CHEMICAL DATA: Water year 1977.
WATER TEMPERATURE: Water years 1965-80.
SEDIMENT DATA: Water years 1971, 1973, 1980, 1986, December 1989 to June 1990.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April 1965 to February 1979.
SUSPENDED-SEDIMENT DISCHARGE: December 1979 to September 1980.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
13...	1505	12	5.5	3	0.10	--
FEB						
09...	1510	16	8.0	3	0.13	89
MAR						
13...	1345	12	9.0	3	0.10	87
APR						
26...	1330	7.9	13.0	3	0.06	95

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
DEC								
13...	1610	1	12	5.5	1	2	9	38
13...	1611	1	12	5.5	--	1	2	21
13...	1612	1	12	5.5	1	2	4	24
13...	1613	1	12	5.5	--	1	2	15
13...	1614	1	12	5.5	--	--	1	8
13...	1615	1	12	5.5	--	1	3	43
MAR								
13...	1420	1	12	9.0	2	5	13	50
13...	1421	1	12	9.0	--	1	2	16
13...	1422	1	12	9.0	--	--	1	9
13...	1423	1	12	9.0	--	--	1	8
13...	1424	1	12	9.0	--	1	1	12
13...	1425	1	12	9.0	--	1	3	42
JUN								
13...	1430	1	4.8	15.5	3	8	24	73
13...	1431	1	4.8	15.5	1	3	10	43
13...	1432	1	4.8	15.5	--	1	3	16
13...	1433	1	4.8	15.5	--	1	2	8
13...	1434	1	4.8	15.5	--	1	4	20
13...	1435	1	4.8	15.5	--	--	1	14
13...	1436	1	4.8	15.5	1	5	10	61
13...	1437	1	4.8	15.5	2	6	17	63

11162500 PESCADERO CREEK NEAR PESCADERO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
DEC							
13...	86	97	99	100	--	--	--
13...	84	97	99	99	100	--	--
13...	88	98	100	--	--	--	--
13...	33	47	61	81	95	100	--
13...	17	24	30	41	63	80	100
13...	87	91	92	92	93	96	100
MAR							
13...	90	98	100	--	--	--	--
13...	53	72	81	88	93	100	--
13...	64	94	99	100	--	--	--
13...	17	22	30	42	66	100	--
13...	33	45	57	71	90	100	--
13...	88	96	98	99	100	--	--
JUN							
13...	97	99	100	--	--	--	--
13...	90	98	100	--	--	--	--
13...	55	80	90	96	100	--	--
13...	56	92	99	100	--	--	--
13...	35	42	50	62	80	100	--
13...	46	64	74	84	92	100	--
13...	96	99	100	--	--	--	--
13...	96	100	--	--	--	--	--

11162570 SAN GREGORIO CREEK AT SAN GREGORIO, CA

LOCATION.--Lat 37°19'33", long 122°23'08", in San Gregorio Grant, San Mateo County, Hydrologic Unit 18050006, on right bank at downstream side of bridge on Old Coast Highway, 0.1 mi south of town of San Gregorio, and 1.4 mi upstream from mouth.

DRAINAGE AREA.--50.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 11.40 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Low flows affected by domestic irrigation.

AVERAGE DISCHARGE.--21 years, 37.7 ft^3/s, 27,310 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,910 ft^3/s, Jan. 4, 1982, gage height, 21.28 ft, from rating curve extended above 560 ft^3/s on basis of contracted-opening measurement of peak flow; no flow for many days in 1972, 1977, 1988, and 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*), from rating curve extended above 140 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1715	*1,250	*8.48				

Minimum daily, 0.16 ft^3/s, Sept. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	12	9.3	7.3	12	7.4	5.6	3.8	9.6	2.3	e.37	.27
2	.74	12	9.0	9.4	11	8.8	5.6	3.5	8.5	1.7	e.51	.22
3	.75	11	8.6	7.3	16	13	6.5	3.4	7.9	1.7	e.54	.23
4	.92	11	8.5	6.8	42	11	6.9	4.1	7.2	1.3	e.38	.18
5	.66	12	8.3	6.6	14	13	6.4	3.8	6.7	.89	e.60	.23
6	.20	12	8.3	6.4	12	10	6.2	3.4	6.0	1.2	e.35	.24
7	.23	12	8.3	6.4	10	9.5	5.8	3.4	5.8	1.1	e.51	.18
8	.64	12	8.2	6.5	9.3	9.4	6.1	3.3	5.3	1.9	e.42	.22
9	.61	12	8.0	6.6	8.8	8.7	6.7	3.5	4.0	1.6	e.27	.23
10	.59	12	7.9	6.5	8.4	9.2	6.5	2.7	3.7	1.1	e.33	.22
11	.67	12	7.7	6.4	8.1	12	6.1	2.6	3.4	.69	e.30	.18
12	.66	12	7.4	12	7.7	11	6.0	2.8	3.9	1.1	e.26	.19
13	.53	12	7.3	35	7.5	9.8	5.3	3.1	3.8	.90	e.24	.27
14	.45	11	6.9	35	7.2	9.3	5.3	2.7	4.0	.73	e.24	.17
15	.68	11	7.0	21	7.2	9.2	5.6	3.1	4.2	.74	e.30	.19
16	.87	11	7.3	16	227	8.7	4.9	3.1	4.0	.47	.35	.16
17	.77	11	7.4	15	97	8.3	4.9	3.0	3.5	.67	.25	.17
18	1.2	11	7.4	13	52	8.3	5.1	2.7	3.1	.63	.37	.18
19	7.4	10	7.3	11	27	7.8	5.1	2.4	3.3	.69	.32	.27
20	8.7	10	7.0	11	19	7.5	5.0	3.9	3.0	.72	.29	.32
21	10	9.9	7.2	10	15	7.4	4.5	6.4	2.6	.78	.49	.30
22	12	10	7.2	9.6	13	7.4	4.5	3.9	2.3	.75	.50	.17
23	30	10	7.1	8.9	11	7.4	18	6.5	2.0	1.1	.62	.22
24	18	10	6.9	8.5	9.8	7.2	13	5.9	2.5	e.81	.52	.51
25	14	15	6.9	8.1	9.1	7.2	7.8	3.8	2.5	e.79	.58	.59
26	13	32	6.8	8.3	8.5	6.6	6.7	3.3	1.6	e.79	.40	.29
27	13	12	6.6	8.3	8.1	6.2	6.5	8.0	1.1	e.82	.68	.30
28	12	10	6.8	8.3	7.7	6.1	6.0	49	1.4	e.75	.61	.42
29	12	9.6	6.6	8.0	---	6.1	5.7	19	1.3	e1.2	.63	.54
30	11	9.5	6.3	10	---	6.0	4.9	13	2.0	e.66	.59	.63
31	12	---	6.3	12	---	6.0	---	12	---	e.48	.33	---
TOTAL	185.19	357.0	231.8	345.2	685.4	265.5	193.2	195.1	120.2	31.06	13.15	8.29
MEAN	5.97	11.9	7.48	11.1	24.5	8.56	6.44	6.29	4.01	1.00	.42	.28
MAX	30	32	9.3	35	227	13	18	49	9.6	2.3	.68	.63
MIN	.20	9.5	6.3	6.4	7.2	6.0	4.5	2.4	1.1	.47	.24	.16
AC-FT	367	708	460	685	1360	527	383	387	238	62	26	16

CAL YR 1989 TOTAL 4796.96 MEAN 13.1 MAX 379 MIN .04 AC-FT 9510
WTR YR 1990 TOTAL 2631.09 MEAN 7.21 MAX 227 MIN .16 AC-FT 5220

e Estimated.

11162570 SAN GREGORIO CREEK AT SAN GREGORIO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
SEDIMENT DATA: Water year 1986, December 1989 to June 1990.

REMARKS.--Zero bedload discharge observed for flows less than 12 ft^3/s during current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
21...	1230	7.4	6.5	5	0.10	58
JAN						
13...	1225	37	11.0	1460	146	97
FEB						
01...	1640	12	10.0	6	0.19	92
09...	1800	8.6	9.5	3	0.07	74
MAR						
22...	1545	7.4	14.5	7	0.14	58
APR						
26...	1420	6.9	13.0	3	0.06	85

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JUN								
13...	1650	1	3.2	16.0	14	26	35	52
13...	1651	1	3.2	16.0	2	3	6	32
13...	1652	1	3.2	16.0	3	7	12	26
13...	1653	1	3.2	16.0	4	13	19	28
13...	1654	1	3.2	16.0	1	2	3	5
13...	1655	1	3.2	16.0	--	1	1	2
13...	1656	1	3.2	16.0	--	1	1	2

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JUN							
13...	72	87	97	99	100	--	--
13...	53	61	68	76	86	100	--
13...	40	52	66	84	99	100	--
13...	37	47	62	78	95	100	--
13...	8	12	18	25	43	87	100
13...	4	6	11	18	40	78	100
13...	4	7	13	19	32	53	100

11162570 SAN GREGORIO CREEK AT SAN GREGORIO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)
JAN								
13...	1252	1020	1120	0.250	1245	1300	20	2.00

DATE	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM
JAN								
13...	37	11.0	<0.01	18	28	43	79	100

11162630 PILARCITOS CREEK AT HALF MOON BAY, CA

LOCATION.--Lat 37°28'00", long 122°25'59", on north boundary of Miramontes Grant, San Mateo County, Hydrologic Unit 18050006, on left bank 50 ft downstream from State Highway 1, 0.3 mi northwest of town of Half Moon Bay, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--27.1 mi^2 .

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 31.51 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1983, at site 800 ft downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges and Dec. 18-20, which are poor. Flow slightly regulated by storage in Pilarcitos Lake 10 mi upstream, capacity, 3,100 acre-ft. Water is diverted to city of San Francisco water system; small diversions for irrigation upstream from station by pumping.

AVERAGE DISCHARGE (unadjusted).--24 years, 14.7 ft^3/s, 10,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft^3/s, Jan. 4, 1982, gage height, 13.08 ft, site and datum then in use, from rating curve extended above 1,000 ft^3/s on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 25	1900	*94	*2.56				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	3.1	3.3	2.9	5.0	3.4	1.1	.35	3.8	.32	.00	.00
2	.49	2.9	3.1	2.6	3.7	5.5	1.1	.45	3.1	.45	.00	.00
3	.25	2.9	3.0	1.6	17	5.7	.71	.39	2.6	.29	.00	.00
4	.11	2.9	3.0	1.6	20	6.2	.48	.51	1.9	.04	.00	.00
5	.09	3.0	3.0	1.6	8.4	5.6	.54	.55	1.4	.22	.00	.00
6	.28	3.1	3.0	1.8	7.1	5.1	.65	.52	1.2	.00	.00	.00
7	.28	3.1	2.7	2.1	5.7	3.8	.83	.71	1.3	.00	.00	.00
8	.27	4.9	2.6	2.4	5.3	3.2	.78	.52	.95	.00	.00	.00
9	.19	5.5	2.5	2.1	4.8	2.8	.39	.62	.50	.00	.00	.00
10	.08	3.9	2.5	2.2	4.4	6.1	.06	.34	.60	.00	.00	.00
11	.18	5.8	2.4	2.1	4.2	5.6	.20	.20	.84	.00	.00	.00
12	.16	5.3	2.4	23	3.9	3.9	.42	.18	.58	.00	.00	.00
13	.13	4.4	2.4	21	3.5	2.4	.42	.35	.72	.00	.00	.00
14	.31	3.2	2.4	17	3.3	2.5	.36	.22	.58	.00	.00	.00
15	.57	2.6	2.5	9.7	3.2	2.5	.63	.13	.46	.00	.00	.00
16	.47	2.5	2.3	8.4	17	2.4	.63	.19	.75	.00	.00	.00
17	.55	2.4	2.2	6.6	25	2.7	.63	.10	.74	.00	.00	.00
18	.60	2.3	2.4	5.6	20	2.6	.59	.18	.62	.00	.00	.00
19	.40	2.2	2.2	5.0	11	2.5	.59	.33	.37	.00	.00	.00
20	.61	2.2	2.3	4.6	8.7	2.2	.54	1.1	.06	.00	.00	.00
21	1.2	2.2	2.4	4.2	7.7	1.9	.69	1.3	.00	.00	.00	.00
22	1.1	2.8	2.0	3.9	6.6	1.7	1.2	.74	.18	.00	.00	.00
23	16	2.6	1.8	3.4	5.6	1.6	8.1	2.4	.76	.00	.00	.00
24	5.1	3.6	1.9	3.2	4.5	1.7	4.1	1.3	1.1	.00	.00	.00
25	5.5	24	1.9	2.9	4.7	1.7	e2.3	.70	.70	.00	.00	.00
26	4.8	13	1.8	3.1	4.1	1.7	e1.8	.70	.12	.00	.00	.00
27	4.7	5.5	1.9	3.1	3.7	1.3	1.3	13	.01	.00	.00	.00
28	4.2	4.4	2.0	3.2	3.4	.95	1.2	21	.00	.00	.00	.00
29	3.9	4.1	1.6	3.4	---	1.1	.98	6.7	.00	.00	.00	.00
30	3.6	3.8	1.1	5.3	---	.98	.90	5.1	.08	.00	.00	.00
31	3.3	---	1.1	4.0	---	1.0	---	4.4	---	.00	.00	---
TOTAL	59.71	134.2	71.7	163.6	221.5	92.33	34.22	65.28	26.02	1.32	0.00	0.00
MEAN	1.93	4.47	2.31	5.28	7.91	2.98	1.14	2.11	.87	.043	.000	.000
MAX	16	24	3.3	23	25	6.2	8.1	21	3.8	.45	.00	.00
MIN	.08	2.2	1.1	1.6	3.2	.95	.06	.10	.00	.00	.00	.00
AC-FT	118	266	142	325	439	183	68	129	52	2.6	.00	.00

CAL YR 1989 TOTAL 2998.25 MEAN 8.21 MAX 204 MIN .00 AC-FT 5950
WTR YR 1990 TOTAL 869.88 MEAN 2.38 MAX 25 MIN .00 AC-FT 1730

e Estimated.

11162630 PILARCITOS CREEK AT HALF MOON BAY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
SEDIMENT DATA: June 1990 (discontinued).

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
JUN 13...	1945	5	0.45	14.0	11	24	34

DATE	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JUN 13...	49	62	74	87	95	99	100

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA

LOCATION.--Lat 37°47'27", long 122°23'05", in SE 1/4 NW 1/4 sec.2, T.2 S., R.5 W., in San Miguel Grant, San Francisco County, Hydrologic Unit 18050002, at end of Pier 24 and directly under the west end of the San Francisco-Oakland Bay Bridge.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1989 to September 1990.
WATER TEMPERATURE: October 1989 to September 1990.

INSTRUMENTATION.--Water-quality monitor since October 1989.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Upper probe is set at 8.8 ft below Mean Lower Low Water (MLLW). Lower probe is set at 39.3 ft below MLLW. Daily maximums and minimums sometimes differ from tidal-cycle (24.8 hours) maximums and minimums.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 50,000 microsiemens, July 20; minimum recorded, 40,300 microsiemens, Jan. 20.
WATER TEMPERATURE: Maximum recorded, 19.5°C, many days during August and September; minimum recorded, 10.0°C, several days during December, January and February.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	48400	46000	48100	44800	48000	46200	47000	44800	---	---
2	---	---	---	---	47800	45100	47800	46300	46700	43400	---	---
3	---	---	48000	46700	47800	44800	47600	46300	47200	45000	---	---
4	---	---	48300	45900	47900	45200	47600	45100	47400	43100	---	---
5	---	---	48100	45600	48000	44900	47800	44700	47700	43600	---	---
6	---	---	48300	45700	47800	44300	48000	45100	47900	43800	---	---
7	---	---	48200	45800	48100	45000	48300	45300	47600	44900	---	---
8	---	---	48100	45600	48300	46400	48500	46200	47600	45000	---	---
9	---	---	48300	45900	48600	45600	---	---	47800	45100	---	---
10	---	---	48500	47100	48500	46000	48400	46100	47700	45300	---	---
11	---	---	48600	47200	48600	45900	---	---	47700	45500	---	---
12	---	---	48700	47300	48700	44900	---	---	47600	45800	---	---
13	---	---	48700	47300	48400	45500	48500	46200	---	---	47700	44300
14	---	---	48900	46800	48400	46100	48200	44400	---	---	---	---
15	---	---	48500	45900	48300	46200	48200	44600	---	---	---	---
16	---	---	48600	46600	48200	46300	47900	44400	48300	45700	---	---
17	---	---	48600	47000	48000	46500	47200	44500	---	---	---	---
18	---	---	48600	47000	48000	46600	46200	42600	---	---	---	---
19	---	---	48300	47000	47700	45600	45700	41400	---	---	---	---
20	49000	47600	48300	46000	47500	44900	45900	40300	---	---	---	---
21	49200	47600	48300	45500	47100	45100	46100	41000	---	---	---	---
22	49000	47600	48300	45700	46700	45100	46100	42100	---	---	---	---
23	---	---	48300	46100	47400	45000	46300	42400	---	---	---	---
24	48700	47000	48500	47300	47500	45000	46900	43200	---	---	---	---
25	48600	46500	48600	47200	47600	45800	47000	42800	---	---	---	---
26	48200	46500	48400	45500	47900	46000	47400	43000	---	---	---	---
27	48300	46300	48200	45400	48300	46000	47000	44400	---	---	48400	46100
28	48100	46000	---	---	48300	46100	47200	44500	47300	45500	48500	46200
29	48200	45200	---	---	48100	46200	46800	44600	---	---	48600	46000
30	48300	45500	---	---	48200	46200	47100	45100	---	---	48600	46200
31	48500	45400	---	---	48000	46300	---	---	---	---	48800	46200
Month	---	---	---	---	48700	44300	---	---	---	---	---	---

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	48600	46400	---	---	48500	45300	---	---	49500	48500	48300	46900
2	---	---	49000	47400	48500	45400	---	---	49500	48600	48300	46300
3	48600	46800	48900	47500	48500	45300	49400	47100	49500	48500	48200	47200
4	48500	46900	49000	47600	48600	45300	49400	47900	49400	48300	48100	47300
5	48400	47000	48800	47700	48900	45600	49500	47300	49400	48100	48200	47300
6	48300	46600	49000	47600	49100	45600	49600	47800	49100	48000	48200	47300
7	48300	47200	49100	47300	49200	45800	49700	47800	48900	47900	48100	47300
8	48200	47100	49100	47600	49200	46000	49700	47900	48800	47800	48000	47200
9	48200	46800	49200	47600	49300	47300	49600	48000	48600	47600	48100	47100
10	48300	46600	49200	47700	49300	47200	49600	48200	48700	47800	48100	47200
11	48300	46400	49200	47700	49100	47400	49600	48400	48600	47900	48200	46000
12	---	---	---	---	49300	47100	---	---	48600	47800	47900	45500
13	48700	46700	---	---	49200	47600	---	---	48700	47400	47900	45900
14	48800	46900	---	---	---	---	---	---	48700	47800	48200	46900
15	48800	47200	49100	47800	---	---	---	---	48600	47800	48000	47200
16	48400	47200	---	---	---	---	---	---	48700	47800	48100	47200
17	48500	46700	---	---	---	---	---	---	48800	47700	48200	47300
18	48500	46300	---	---	---	---	---	---	48500	47600	48200	47500
19	48600	46400	---	---	---	---	---	---	48500	47600	48500	47600
20	48600	47100	---	---	---	---	50000	48600	48600	47600	48400	47600
21	48600	47200	---	---	---	---	---	---	48400	47600	49000	47800
22	---	---	---	---	---	---	---	---	48600	47800	48700	47800
23	---	---	---	---	---	---	---	---	48700	47700	48800	47000
24	48900	46500	---	---	---	---	---	---	48500	47800	48600	47300
25	48900	46600	---	---	---	---	---	---	48500	47800	48800	46900
26	49100	46500	---	---	---	---	49600	48500	48500	47400	48500	46900
27	49200	46600	---	---	---	---	49500	48700	48500	47200	48600	46900
28	49300	47200	---	---	---	---	49600	48400	48400	46100	48800	47000
29	49000	46900	---	---	---	---	49800	48000	48300	46000	48700	47500
30	---	---	---	---	---	---	49600	47700	48400	45800	48700	48000
31	---	---	48600	45900	---	---	49600	47700	48300	46200	---	---
Month	---	---	---	---	---	---	---	---	49500	45800	49000	45500

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	49000	46300	48600	45600	48000	45800	47800	45500	---	---
2	---	---	---	---	48400	45700	47800	45900	47500	44300	---	---
3	---	---	48500	46900	48200	45300	47900	46200	47600	45300	---	---
4	---	---	48400	46400	48200	45500	48100	45300	47700	43900	---	---
5	---	---	48200	45900	48100	45600	48200	44800	48000	44300	---	---
6	---	---	48200	45900	48000	45400	48400	45400	48000	44100	---	---
7	---	---	48100	45800	48300	45300	48300	45500	47900	45000	---	---
8	---	---	48000	45600	48400	46500	48700	46200	48000	45000	---	---
9	---	---	48300	45900	48600	45700	---	---	48200	45200	---	---
10	---	---	48500	46900	48800	46700	48800	46100	48100	45400	---	---
11	---	---	48500	46900	48700	46400	---	---	47800	45600	---	---
12	---	---	48600	47000	48700	45900	---	---	47700	45800	---	---
13	---	---	48700	47100	48800	45900	48400	46200	---	---	48200	44800
14	---	---	49000	46400	48900	46300	48200	44900	---	---	---	---
15	---	---	---	---	48700	46300	48100	44900	---	---	---	---
16	---	---	---	---	48500	46500	48000	45000	48700	45800	---	---
17	---	---	48900	46300	48100	46600	47700	44600	---	---	---	---
18	---	---	---	---	48200	46700	47900	42900	---	---	---	---
19	---	---	48800	46800	47900	46000	47600	41800	---	---	---	---
20	49000	47500	48500	46100	47900	45100	46500	41700	---	---	---	---
21	49300	47600	48600	45900	48000	45200	46800	41500	---	---	---	---
22	49200	47800	48300	46200	47600	45300	46900	42700	---	---	---	---
23	---	---	48700	46300	47900	45200	47400	43000	---	---	---	---
24	49200	47500	48800	46800	47900	45300	47400	43400	---	---	---	---
25	48800	47000	48800	46500	48000	45900	47800	43800	---	---	---	---
26	48800	46900	48600	45800	48500	46000	47700	43400	---	---	---	---
27	48800	46700	48400	45600	48600	45900	47400	44600	---	---	48300	46100
28	48400	46400	---	---	48600	46000	47700	44700	47600	45600	48400	46100
29	48600	46200	---	---	48400	46200	47500	44800	---	---	48600	46100
30	49000	46400	---	---	48600	46200	47700	45300	---	---	48800	46200
31	48800	46000	---	---	48200	46300	---	---	---	---	49000	46400
Month	---	---	---	---	48900	45100	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	48900	46600	---	---	48600	45400	---	---	49000	48000	48300	46900
2	---	---	49400	47700	48700	45500	---	---	49000	47900	48500	46500
3	48900	47200	49300	47900	48600	45700	49100	46900	49100	48000	48400	47400
4	48900	47300	49300	47800	48500	45600	49300	47700	49200	47600	48400	47500
5	48900	47400	49200	47900	48700	45400	49400	47100	49000	47800	48400	47500
6	48900	47500	49200	47800	48800	45700	49300	47600	48900	47900	48400	47600
7	49100	47600	49300	47600	48700	45800	49400	47400	48900	47900	48500	47600
8	49100	47700	49500	47800	48800	45900	49500	47700	48900	48000	48500	47600
9	49000	47600	49500	47900	48900	46700	49400	47500	48900	47900	48700	47500
10	49000	47300	49500	47800	48900	46900	49500	48000	49000	48000	48600	47600
11	49100	47400	49600	47800	48800	46800	49400	48100	49000	48000	48700	46500
12	---	---	---	---	48800	47000	---	---	48900	48000	48400	46100
13	49200	47300	---	---	48800	46900	---	---	48900	47800	48300	46500
14	49200	47400	---	---	---	---	---	---	48900	48000	48200	47400
15	49200	47500	49300	48000	---	---	---	---	48800	48000	48200	47300
16	49100	47600	---	---	---	---	---	---	48900	47900	48300	47300
17	49000	47100	---	---	---	---	---	---	48900	47900	48300	47300
18	49000	46800	---	---	---	---	---	---	48800	47800	48300	47500
19	49100	47100	---	---	---	---	---	---	48700	47800	48500	47600
20	49200	47500	---	---	---	---	49600	48200	48700	47700	48600	47600
21	49200	47400	---	---	---	---	---	---	48700	47800	48500	47700
22	---	---	---	---	---	---	---	---	48900	48000	48500	47800
23	---	---	---	---	---	---	---	---	48800	47900	48500	47400
24	49400	46900	---	---	---	---	---	---	48700	48000	48600	47500
25	49500	47000	---	---	---	---	---	---	48700	48000	48700	46900
26	49500	46900	---	---	---	---	48800	47900	48600	47600	48700	46800
27	49800	47100	---	---	---	---	48800	47900	48800	47300	48500	46800
28	49800	47600	---	---	---	---	48900	47900	48600	46400	48600	46900
29	49400	47300	---	---	---	---	49000	47600	48500	46100	48500	47400
30	---	---	---	---	---	---	49000	47100	48500	46200	48600	47900
31	---	---	48700	46100	---	---	48900	47500	48400	46300	---	---
Month	---	---	---	---	---	---	---	---	49200	46100	48700	46100

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	16.5	15.0	13.5	12.5	11.0	10.5	11.5	11.0	---	---
2	---	---	16.0	15.0	13.5	12.5	11.0	10.5	12.0	11.0	---	---
3	---	---	16.0	15.0	13.5	12.5	11.0	10.5	11.5	11.0	---	---
4	---	---	16.0	15.0	13.0	12.5	11.0	10.0	11.5	11.0	---	---
5	---	---	16.0	15.0	13.0	12.5	11.0	10.0	11.5	11.0	---	---
6	---	---	15.5	15.0	13.0	12.5	11.0	10.0	11.5	11.0	---	---
7	---	---	15.5	14.5	13.0	12.5	11.0	10.5	11.5	11.0	---	---
8	---	---	15.5	14.5	13.0	12.5	11.5	10.5	11.5	11.0	---	---
9	---	---	15.5	14.5	13.0	12.5	---	---	11.5	11.0	---	---
10	---	---	15.5	14.5	13.0	12.5	11.5	11.0	11.5	11.0	---	---
11	---	---	16.0	14.5	13.0	12.0	11.5	11.0	11.5	10.5	---	---
12	---	---	15.5	14.0	12.5	12.0	---	---	11.5	10.0	---	---
13	---	---	15.5	14.0	12.5	12.0	11.5	11.0	---	---	---	---
14	---	---	15.5	14.0	12.5	12.0	11.5	11.0	---	---	---	---
15	---	---	15.5	14.0	12.0	12.0	11.5	11.0	---	---	---	---
16	---	---	15.5	13.5	12.0	12.0	11.5	11.0	---	---	---	---
17	17.0	15.0	15.0	14.0	12.0	11.5	11.5	11.0	---	---	---	---
18	17.0	14.5	15.0	14.0	12.0	11.5	11.5	10.5	---	---	---	---
19	17.0	15.0	15.0	14.0	11.5	11.0	11.0	10.5	---	---	---	---
20	17.5	15.0	14.5	13.5	11.5	11.0	11.0	10.5	---	---	---	---
21	17.5	15.0	14.5	13.5	11.5	11.0	11.0	10.5	---	---	---	---
22	17.0	15.5	14.5	13.5	11.5	10.5	11.0	10.5	---	---	---	---
23	16.5	15.0	14.5	13.5	11.0	10.5	11.0	10.5	---	---	---	---
24	16.0	15.0	14.5	13.5	11.0	10.5	11.5	11.0	---	---	---	---
25	16.0	15.0	14.0	13.5	11.0	10.0	11.5	11.0	---	---	---	---
26	16.5	15.0	14.0	13.0	11.0	10.0	11.5	11.0	---	---	---	---
27	16.0	15.0	14.0	13.0	11.0	10.5	11.5	11.0	---	---	13.5	12.0
28	16.0	15.0	---	---	11.0	10.5	11.5	11.0	---	---	13.5	12.0
29	16.0	15.0	---	---	11.0	10.5	11.5	11.0	---	---	14.0	12.0
30	16.5	15.0	---	---	11.0	10.5	11.5	11.0	---	---	14.0	12.0
31	16.5	15.0	---	---	11.0	10.5	---	---	---	---	14.0	12.0
Month	---	---	---	---	13.5	10.0	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	12.0	---	---	16.0	15.0	---	---	18.0	16.0	19.5	18.0
2	14.5	12.0	15.5	13.0	16.5	15.0	---	---	18.5	16.0	19.5	17.5
3	14.0	12.5	15.5	13.5	17.0	15.0	---	---	18.5	16.0	19.5	17.5
4	14.0	12.5	15.5	13.5	17.0	15.0	---	---	18.5	16.0	19.5	17.5
5	14.0	12.5	15.5	13.5	17.5	14.5	---	---	19.0	16.5	19.5	17.5
6	14.0	13.0	15.5	14.0	16.5	14.0	---	---	19.0	16.5	19.5	17.5
7	13.5	13.0	17.0	14.0	17.5	14.5	---	---	19.0	17.0	19.5	17.0
8	14.0	13.0	16.5	13.5	17.5	14.5	---	---	19.0	17.0	19.5	17.0
9	14.0	13.0	16.5	14.0	17.5	14.0	---	---	19.0	17.0	19.5	17.0
10	14.5	13.0	16.5	14.0	18.0	14.0	---	---	19.0	17.0	19.5	16.5
11	15.0	13.5	17.0	14.0	---	---	---	---	19.0	17.0	19.5	17.0
12	14.5	13.5	---	---	---	---	---	---	19.0	17.0	19.0	16.5
13	15.5	13.0	---	---	---	---	---	---	19.0	17.0	19.0	16.5
14	15.5	13.5	---	---	---	---	---	---	19.0	17.0	19.0	16.5
15	15.0	13.5	16.5	14.5	---	---	---	---	19.0	17.0	19.0	16.5
16	15.5	14.0	---	---	---	---	---	---	19.0	17.0	19.0	16.5
17	15.5	14.0	---	---	---	---	---	---	19.5	17.0	18.5	16.5
18	15.5	14.0	---	---	---	---	---	---	19.5	17.0	18.5	16.5
19	15.0	14.0	---	---	---	---	---	---	19.5	17.5	18.5	16.0
20	15.5	14.0	---	---	---	---	---	---	19.5	17.5	18.5	16.0
21	15.0	14.0	---	---	---	---	---	---	19.5	17.5	19.0	16.0
22	15.0	14.0	---	---	---	---	---	---	19.5	17.5	18.5	16.5
23	---	---	---	---	---	---	---	---	19.5	17.5	18.5	16.5
24	15.5	14.0	---	---	---	---	---	---	19.0	17.0	18.5	16.5
25	16.0	14.0	---	---	---	---	---	---	19.0	17.5	18.5	16.5
26	16.5	13.5	---	---	---	---	18.0	16.0	19.0	17.5	18.5	17.0
27	16.5	13.5	---	---	---	---	18.0	16.0	19.0	17.0	18.5	17.0
28	16.0	13.0	---	---	---	---	17.5	16.0	19.0	17.5	18.5	16.5
29	16.5	13.5	---	---	---	---	18.0	16.0	19.0	18.0	18.5	16.5
30	---	---	---	---	---	---	18.0	16.0	19.5	18.0	19.0	16.5
31	---	---	16.0	14.5	---	---	18.0	16.0	19.5	17.5	---	---
Month	---	---	---	---	---	---	---	---	19.5	16.0	19.5	16.0

11162700 SAN FRANCISCO BAY AT PIER 24, AT SAN FRANCISCO, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	11.5	11.0	---	---
2	---	---	---	---	---	---	---	---	11.5	11.0	---	---
3	---	---	---	---	---	---	---	---	11.5	11.0	---	---
4	---	---	---	---	---	---	---	---	11.5	11.0	---	---
5	---	---	---	---	---	---	---	---	11.5	11.0	---	---
6	---	---	---	---	---	---	---	---	11.5	11.0	---	---
7	---	---	---	---	---	---	---	---	11.5	10.5	---	---
8	---	---	---	---	---	---	---	---	11.5	11.0	---	---
9	---	---	---	---	---	---	---	---	11.5	11.0	---	---
10	---	---	---	---	---	---	---	---	11.5	11.0	---	---
11	---	---	---	---	---	---	---	---	11.5	11.0	---	---
12	---	---	---	---	---	---	---	---	12.0	11.0	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	13.0	12.0
28	---	---	---	---	---	---	---	---	---	---	13.5	12.0
29	---	---	---	---	---	---	---	---	---	---	14.0	12.0
30	---	---	---	---	---	---	---	---	---	---	14.0	12.0
31	---	---	---	---	---	---	---	---	---	---	13.5	12.0
Month	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	12.0	---	---	16.0	15.0	---	---	18.0	16.0	19.5	18.0
2	14.0	12.0	15.0	13.0	16.0	15.0	---	---	18.5	16.0	19.5	17.5
3	13.5	12.5	15.0	13.0	16.5	15.0	18.0	14.5	18.5	16.0	19.5	17.5
4	13.5	12.0	15.0	13.5	16.5	15.0	17.5	14.5	19.0	16.0	19.5	17.5
5	13.5	12.5	15.5	13.5	17.5	14.5	18.0	14.5	18.5	16.5	19.5	17.5
6	13.5	12.5	15.5	13.5	17.0	14.0	18.0	14.5	18.5	16.5	19.5	17.5
7	13.5	12.5	16.5	13.5	17.0	14.5	19.0	14.5	19.0	16.5	19.5	17.5
8	13.5	12.5	16.5	13.5	17.5	14.5	18.5	14.5	19.5	16.5	19.5	17.0
9	14.0	13.0	16.0	13.5	17.5	14.0	19.0	14.5	19.0	17.0	19.5	17.0
10	14.5	13.0	16.0	14.0	18.0	14.0	18.5	14.5	19.0	17.0	19.5	16.5
11	14.5	13.0	17.0	13.5	18.5	14.5	18.0	15.0	19.0	17.0	19.5	16.5
12	14.0	13.0	---	---	17.5	14.5	---	---	19.0	17.0	19.5	16.5
13	15.0	13.0	---	---	17.0	14.5	---	---	19.0	17.0	19.0	16.5
14	15.0	13.0	---	---	---	---	---	---	19.0	17.0	19.0	16.5
15	15.0	13.5	16.5	14.0	---	---	---	---	19.0	17.0	19.0	16.5
16	15.0	13.5	---	---	---	---	---	---	19.0	17.0	19.0	16.5
17	15.0	13.5	---	---	---	---	---	---	19.5	17.0	19.0	16.5
18	15.0	14.0	---	---	---	---	---	---	19.5	17.0	18.5	16.5
19	15.0	14.0	---	---	---	---	---	---	19.5	17.0	18.5	16.0
20	15.0	14.0	---	---	---	---	18.5	15.5	19.5	17.5	18.5	16.0
21	15.0	14.0	---	---	---	---	---	---	19.5	17.0	18.5	16.0
22	15.0	14.0	---	---	---	---	---	---	19.5	17.5	19.0	16.0
23	15.0	14.0	---	---	---	---	---	---	19.5	17.0	19.0	16.5
24	15.5	14.0	---	---	---	---	---	---	19.0	17.5	18.5	16.5
25	15.5	13.5	---	---	---	---	---	---	19.0	17.5	18.5	16.5
26	16.0	13.5	---	---	---	---	18.0	16.0	19.0	17.5	18.5	16.5
27	16.5	13.0	---	---	---	---	18.0	16.0	19.0	17.5	18.5	17.0
28	16.0	13.0	---	---	---	---	18.0	16.0	19.0	17.5	18.5	16.5
29	16.0	13.5	---	---	---	---	18.0	16.0	19.0	18.0	18.5	16.5
30	---	---	---	---	---	---	18.0	16.0	19.5	18.0	18.5	16.5
31	---	---	16.0	14.5	---	---	18.0	16.0	19.5	18.0	---	---
Month	---	---	---	---	---	---	---	---	19.5	16.0	19.5	16.0

11162720 COLMA CREEK AT SOUTH SAN FRANCISCO, CA

LOCATION.--Lat 37°39'14", long 122°25'31", in Buri Buri Grant, San Mateo County, Hydrologic Unit 18050004, on left bank in Orange Memorial Park, 1.0 mi southwest of South San Francisco Post Office.

DRAINAGE AREA.--10.8 mi^2.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 12.53 ft above National Geodetic Vertical Datum of 1929. Recording raingages at Skyline College, elevation 700 ft at site 2.9 mi southwest of gaging station, and on San Bruno Mountain, elevation 930 ft at site 2.7 mi northwest of gaging station.

REMARKS.--Records poor. Low flow affected by return flow from urban irrigation. Channel lowered in 1986.

AVERAGE DISCHARGE.--27 years, 7.59 ft^3/s, 5,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,560 ft^3/s, Dec. 8, 1987, gage height, 7.53 ft, from rating curve extended above 1,200 ft^3/s on basis of step-backwater computation; no flow Oct. 5, 26, 1963, and many days in August 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	0735	*3,190	*6.93	Jan. 31	2235	2,090	5.29
Nov. 25	1640	2,540	5.94	Feb. 16	1140	1,120	3.85
Jan. 13	1720	2,380	5.71	May 27	2015	997	3.66

Minimum daily, 0.11 ft^3/s, July 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	2.7	3.2	17	5.6	2.3	3.2	1.2	.94	.76	1.1	.50
2	5.7	2.6	3.0	2.3	2.3	27	2.9	1.5	.75	.57	1.1	.44
3	4.4	2.4	2.9	1.4	48	1.2	2.8	1.1	.84	.32	1.2	.49
4	6.8	1.5	2.8	2.8	4.6	8.1	1.9	1.2	1.0	.15	.64	.38
5	5.5	1.9	2.8	1.5	1.6	2.2	2.4	1.4	.58	3.2	1.4	.74
6	4.4	2.8	1.8	1.2	8.0	1.6	1.6	.81	.72	2.0	5.6	.69
7	3.4	3.4	3.6	4.9	1.4	2.8	1.0	2.1	.87	3.4	1.4	.84
8	4.3	3.3	3.7	2.9	.86	2.5	1.3	2.4	1.0	6.8	2.0	.62
9	3.5	3.6	3.5	.81	.80	1.0	2.8	1.4	.76	6.0	3.9	.23
10	4.1	2.7	3.4	1.1	1.6	19	2.3	1.2	1.0	.99	1.6	.96
11	3.8	2.2	4.3	1.4	1.5	9.3	1.7	1.3	1.2	1.3	2.6	.58
12	3.3	1.6	3.0	116	1.8	3.0	2.1	2.1	1.5	1.2	.84	.67
13	4.9	3.1	3.0	123	3.6	1.2	2.1	2.0	2.4	1.0	1.8	.52
14	3.5	2.0	3.0	28	1.4	2.4	1.5	1.7	2.0	.35	1.1	.52
15	3.5	4.0	3.6	5.2	4.7	1.1	1.6	1.9	2.7	.11	.86	.52
16	3.2	3.2	3.7	19	71	1.5	1.8	2.6	1.9	1.1	.68	.52
17	2.6	2.6	3.2	4.3	28	.99	2.1	1.3	1.6	.24	2.5	.52
18	2.6	1.5	3.7	2.9	5.5	1.1	1.4	2.6	2.0	1.1	1.8	.77
19	2.3	2.9	3.2	2.9	3.7	1.5	1.9	1.8	1.7	4.5	1.6	1.2
20	2.8	3.2	4.7	2.6	4.3	1.3	3.1	22	2.2	5.4	2.3	1.9
21	7.2	2.2	4.5	2.7	3.2	1.4	1.1	.78	1.7	5.4	1.8	1.9
22	1.9	1.8	5.1	2.8	2.6	1.4	11	5.3	2.4	6.3	1.8	1.5
23	147	2.1	4.0	2.2	2.4	2.1	29	19	2.2	6.3	1.2	16
24	17	8.2	3.4	1.9	1.6	2.6	2.0	.93	2.1	4.8	1.2	e2.8
25	1.4	152	4.6	3.0	2.1	2.2	2.2	1.8	2.1	2.7	.56	e1.5
26	2.4	12	3.8	3.2	2.3	2.8	1.1	3.9	2.0	3.0	.36	e1.5
27	2.9	4.3	4.5	2.2	2.8	2.6	1.7	105	2.0	2.2	1.0	e1.9
28	2.5	3.6	4.4	2.4	1.9	2.0	.75	4.5	2.5	1.5	.69	e1.5
29	1.5	3.1	3.7	3.3	---	2.9	1.9	.98	3.3	.71	2.5	e1.5
30	2.2	2.3	3.4	19	---	1.7	1.8	6.7	1.8	1.5	.53	e1.9
31	2.6	---	3.7	34	---	3.0	---	.87	---	1.2	.89	---
TOTAL	268.7	244.8	111.2	417.91	219.16	115.79	94.05	203.37	49.76	76.10	48.55	45.61
MEAN	8.67	8.16	3.59	13.5	7.83	3.74	3.13	6.56	1.66	2.45	1.57	1.52
MAX	147	152	5.1	123	71	27	29	105	3.3	6.8	5.6	16
MIN	1.4	1.5	1.8	.81	.80	.99	.75	.78	.58	.11	.36	.23
AC-FT	533	486	221	829	435	230	187	403	99	151	96	90
a	0.95	1.09	0.00	2.61	1.43	0.73	0.33	1.03	0.00	0.01	0.04	0.00
b	1.88	2.25	0.00	4.25	2.19	1.06	0.58	2.35	0.04	0.03	0.00	0.10

CAL YR 1989 TOTAL 3124.3 MEAN 8.56 MAX 152 MIN 1.1 AC-FT 6200
WTR YR 1990 TOTAL 1895.00 MEAN 5.19 MAX 152 MIN .11 AC-FT 3760

e Estimated.
a Precipitation, in inches, at San Bruno Mountain gage.
b Precipitation, in inches, at Skyline College gage.

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA

WATER-QUALITY RECORDS

LOCATION.--Lat 37°35'04", long 122°14'59", unsurveyed, T.4 S., R.4 W., in San Mateo County, Hydrologic Unit 18050004, on Pier 20 directly under San Mateo Bridge.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1989 to September 1990.
WATER TEMPERATURE: October 1989 to September 1990.

INSTRUMENTATION.--Water-quality monitor since October 1989.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Upper probe is set at 5.5 ft below Mean Lower Low Water (MLLW). Lower probe is set at 45.5 ft below MLLW. Daily maximums and minimums sometimes differ from tidal-cycle (24.8 hours) maximums and minimums.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 50,200 microsiemens, Sept. 5; minimum recorded, 42,700 microsiemens, Mar. 7.
WATER TEMPERATURE: Maximum recorded, 23.0 °C, several days in August; minimum recorded, 9.5 °C, Feb. 21.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	47400	46500	---	---	---	---	44800	43600
2	---	---	---	---	47400	46600	---	---	---	---	44700	43500
3	---	---	---	---	47300	46600	---	---	44800	44400	44900	43400
4	---	---	---	---	47500	46600	---	---	44800	44000	44600	43500
5	---	---	---	---	47200	46500	---	---	44900	43900	44300	43100
6	---	---	---	---	---	---	---	---	44900	43800	44300	43000
7	---	---	48000	47400	47200	46600	---	---	44800	43600	44400	43000
8	---	---	48000	47300	47200	46500	---	---	44800	43600	44400	43000
9	---	---	48100	47400	47200	46400	---	---	44900	43800	---	---
10	---	---	48100	47500	---	---	---	---	45000	44000	---	---
11	---	---	48100	47300	---	---	---	---	45100	44100	---	---
12	---	---	48100	47200	---	---	---	---	45100	44200	---	---
13	---	---	47900	47100	---	---	46600	45900	44900	43800	---	---
14	---	---	48000	47100	---	---	46500	45800	---	---	---	---
15	---	---	47800	46900	46800	46200	46500	45900	---	---	---	---
16	---	---	47800	47000	46900	46200	---	---	---	---	---	---
17	---	---	47800	47000	46800	46200	---	---	---	---	---	---
18	---	---	---	---	46800	46300	46200	45600	---	---	---	---
19	---	---	---	---	46800	46400	46200	45400	---	---	---	---
20	---	---	---	---	46700	46400	46100	45100	---	---	---	---
21	---	---	---	---	---	---	46100	45100	44600	42800	---	---
22	---	---	---	---	---	---	46000	45100	44700	43000	---	---
23	---	---	47800	47200	---	---	45900	45100	44800	43200	---	---
24	---	---	47800	47200	---	---	45800	45200	44900	43400	---	---
25	---	---	47800	47300	---	---	45800	45100	45200	43500	---	---
26	---	---	47600	46700	---	---	45600	44800	44900	43500	44800	43700
27	48500	47300	47500	46500	---	---	45600	44800	45000	43600	44900	43800
28	48400	47200	47500	46500	---	---	45700	44900	44800	43600	45100	43900
29	48400	47200	47500	46500	---	---	45400	44800	---	---	45100	43800
30	48300	47200	47400	46500	---	---	45300	44900	---	---	45100	43900
31	---	---	---	---	---	---	---	---	---	---	---	---

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	46300	45300	---	---	---	---	---	---	49800	49500
2	---	---	---	---	46400	45200	---	---	---	---	49900	49500
3	45600	44200	46600	45600	46900	45100	---	---	49000	48300	50000	49600
4	45500	44300	46900	45700	---	---	---	---	49100	48500	50100	49600
5	45600	44500	46800	45900	47000	45500	---	---	49100	48600	50200	49700
6	45700	44500	46700	45900	47100	45700	---	---	49200	48600	50100	49700
7	45700	44600	46700	46000	47100	45800	---	---	49100	48700	50100	49500
8	45700	44500	46700	46100	47400	46000	---	---	49300	48800	---	---
9	45700	44500	46800	46100	47500	46400	---	---	---	---	---	---
10	45800	44600	46800	46200	47400	46500	---	---	49200	48900	---	---
11	45800	44600	46700	46100	47500	46500	---	---	49400	48800	49500	48900
12	45700	44600	46700	46100	47500	46800	---	---	49300	48900	---	---
13	45800	44700	46600	46100	47700	46900	---	---	49300	49000	---	---
14	45700	44600	46500	45800	47500	47000	---	---	49300	49000	---	---
15	45700	44500	46400	45700	47300	46900	---	---	49400	49000	---	---
16	45600	44500	46100	45500	47000	46600	---	---	49300	49000	---	---
17	45500	44500	45800	45400	46800	46400	---	---	49400	48900	---	---
18	---	---	45500	45200	46600	46100	---	---	49300	48800	---	---
19	---	---	45500	44900	---	---	---	---	49200	48700	---	---
20	---	---	45500	44800	---	---	---	---	49000	48500	---	---
21	---	---	45500	44600	---	---	---	---	48900	48400	---	---
22	---	---	45500	44400	---	---	---	---	49300	48300	---	---
23	---	---	---	---	---	---	---	---	48900	48500	---	---
24	45500	44400	---	---	---	---	---	---	49000	48600	---	---
25	45800	44300	---	---	---	---	---	---	49000	48700	---	---
26	46000	44500	---	---	---	---	---	---	49100	48700	---	---
27	46100	44700	---	---	---	---	---	---	---	---	---	---
28	46100	44700	---	---	---	---	---	---	49600	48900	---	---
29	46200	44800	---	---	---	---	---	---	49500	49100	---	---
30	46300	45100	---	---	---	---	---	---	49600	49200	---	---
31	---	---	---	---	---	---	---	---	49700	49300	---	---

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	47100	46200	---	---	---	---	44600	43400
2	---	---	---	---	47100	46200	---	---	---	---	44700	43600
3	---	---	---	---	47100	46400	---	---	45400	44600	44600	43700
4	---	---	---	---	47000	46100	---	---	45300	44100	44600	43400
5	---	---	---	---	47100	45900	---	---	45400	44400	44400	43000
6	---	---	---	---	---	---	---	---	45400	44300	44400	43300
7	---	---	47900	46600	46900	45900	---	---	45200	44200	44300	42700
8	---	---	47900	46700	47000	45700	---	---	45200	44300	44200	43100
9	---	---	47900	46600	47000	45800	---	---	45300	44300	---	---
10	---	---	47900	46800	---	---	46700	46100	45200	44400	---	---
11	---	---	47900	46800	---	---	46600	46100	45300	44300	---	---
12	---	---	47800	46900	---	---	46600	46100	45300	44500	---	---
13	---	---	47700	46800	---	---	46400	46000	45100	43400	---	---
14	---	---	47800	46700	---	---	46300	45900	---	---	---	---
15	---	---	47700	46200	47000	46200	46400	45300	---	---	---	---
16	---	---	47700	46700	46900	46000	46100	45300	---	---	---	---
17	---	---	47700	46500	46800	45900	46100	45700	---	---	---	---
18	---	---	---	---	46900	46300	46000	45700	---	---	---	---
19	---	---	---	---	46900	46200	46000	45500	---	---	---	---
20	---	---	---	---	46800	46100	46000	45500	---	---	---	---
21	---	---	---	---	---	---	46100	45100	44700	43500	---	---
22	---	---	---	---	---	---	46000	45000	44800	43600	---	---
23	---	---	47400	46300	---	---	46000	45200	44800	43500	---	---
24	---	---	47500	46700	---	---	45900	45300	45200	43300	---	---
25	---	---	47400	46700	---	---	45800	44900	45200	43700	---	---
26	---	---	47200	46200	---	---	45700	45000	44700	43800	44700	43600
27	48600	47000	47200	45900	---	---	45800	45000	44700	43700	44600	43500
28	48600	46900	47100	46300	---	---	45600	45000	44700	43700	44700	43500
29	48600	46300	47100	46300	---	---	45700	45100	---	---	44800	43600
30	48500	46300	47100	45800	---	---	45600	44500	---	---	44800	43700
31	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	46500	44900	---	---	47600	47100	---	---	49600	48600
2	---	---	---	---	46900	45800	47500	46700	---	---	49400	48500
3	45300	44000	47300	46000	47100	45200	---	---	50100	49000	49500	48200
4	45500	44200	47000	46100	---	---	---	---	50100	49500	49500	48300
5	45700	44300	47100	46200	47600	45800	---	---	50100	49300	49500	48100
6	45600	44500	47100	46000	47300	46000	---	---	50000	49100	49400	48600
7	45700	44600	46900	46100	47400	45900	---	---	50000	49100	49400	48200
8	45700	44700	46900	45900	47500	46300	---	---	50000	49300	---	---
9	45600	44600	47000	46300	47600	46300	---	---	---	---	---	---
10	45700	44700	46900	46300	47400	45800	---	---	49900	49400	49100	48000
11	45800	44500	47000	46100	47300	46100	---	---	49800	48700	49100	47800
12	45900	44100	47100	46100	47200	45900	---	---	49800	48900	49000	48100
13	45900	44600	47000	46200	47000	46000	---	---	49800	49000	48700	48300
14	46000	44700	47000	46000	46900	46100	---	---	49900	49000	48900	48400
15	45900	44600	46900	46100	46900	45900	---	---	49900	48900	48900	48400
16	45800	44700	46600	45300	46800	46200	---	---	49800	49000	49000	48500
17	45700	44600	46600	45600	46800	46100	---	---	49900	48800	49000	48600
18	---	---	46400	45200	47000	46000	---	---	50000	48600	49000	48600
19	---	---	46300	45400	47200	46200	---	---	49800	48900	49100	48600
20	---	---	46200	45500	47400	46500	---	---	49800	48700	49100	48700
21	---	---	46400	45100	47400	46700	---	---	49600	48600	49100	48800
22	---	---	46500	45000	47500	46700	---	---	49700	48600	49000	48800
23	---	---	---	---	47500	46400	---	---	49600	48800	49000	48700
24	45800	44000	---	---	47500	46700	---	---	49700	49300	48800	48400
25	46300	44100	---	---	47800	47100	---	---	49600	49200	48900	48600
26	46200	44200	---	---	47700	47100	---	---	49600	48500	48700	48500
27	46100	44400	---	---	47700	47100	---	---	---	---	48800	48400
28	46400	44600	---	---	47800	47300	---	---	49600	48700	49000	48500
29	46400	44600	---	---	47700	47300	---	---	49500	48300	48800	48500
30	46500	44900	---	---	47700	47300	---	---	49700	48400	48700	48400
31	---	---	---	---	---	---	---	---	49500	48600	---	---

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	14.0	13.5	---	---	---	---	11.5	11.0
2	---	---	---	---	14.0	13.5	---	---	---	---	11.5	11.0
3	---	---	---	---	14.0	13.5	---	---	11.0	10.5	12.5	11.0
4	---	---	---	---	14.0	13.5	---	---	10.5	10.5	12.0	11.5
5	---	---	---	---	13.5	13.5	---	---	11.0	10.5	12.0	11.5
6	---	---	---	---	---	---	---	---	10.5	10.5	12.0	11.5
7	---	---	16.5	16.0	13.5	13.5	---	---	10.5	10.5	12.5	12.0
8	---	---	16.5	16.0	13.5	13.5	---	---	10.5	10.0	12.5	12.0
9	---	---	16.0	16.0	13.5	13.0	---	---	10.5	10.5	---	---
10	---	---	16.5	16.0	---	---	11.0	10.5	11.0	10.5	---	---
11	---	---	16.5	16.0	---	---	11.5	10.5	11.0	10.5	---	---
12	---	---	16.5	16.0	---	---	11.5	10.5	11.0	10.5	---	---
13	---	---	16.0	16.0	---	---	11.0	10.5	11.0	10.5	---	---
14	---	---	16.0	16.0	---	---	11.0	11.0	---	---	---	---
15	---	---	16.0	16.0	12.5	12.0	11.5	11.0	---	---	---	---
16	---	---	16.0	15.5	12.5	12.0	11.0	11.0	---	---	---	---
17	---	---	16.0	15.5	12.0	11.5	11.0	10.5	---	---	---	---
18	---	---	---	---	12.0	11.5	11.5	10.5	---	---	---	---
19	---	---	---	---	12.0	11.5	11.0	10.5	---	---	---	---
20	---	---	---	---	11.5	11.5	11.0	10.5	---	---	---	---
21	---	---	---	---	---	---	11.0	10.5	10.0	9.5	---	---
22	---	---	---	---	---	---	11.0	10.5	10.5	10.0	---	---
23	---	---	15.5	15.5	---	---	11.0	10.5	11.0	10.0	---	---
24	---	---	15.5	15.0	---	---	11.0	10.5	11.5	10.0	---	---
25	---	---	15.5	15.0	---	---	11.0	10.5	11.5	10.5	---	---
26	---	---	15.0	14.5	---	---	11.0	11.0	11.5	10.5	15.5	14.0
27	---	---	15.0	14.5	---	---	11.0	10.5	12.0	11.0	15.5	14.0
28	---	---	14.5	14.0	---	---	11.0	10.5	11.5	11.0	15.5	14.0
29	---	---	14.0	14.0	---	---	11.0	10.5	---	---	15.5	14.5
30	---	---	14.0	13.5	---	---	11.0	10.5	---	---	15.5	14.5
31	---	---	---	---	---	---	---	---	---	---	15.5	15.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	17.0	16.5	---	---	---	---	---	---	22.0	21.5
2	---	---	---	---	19.0	17.5	---	---	---	---	22.0	21.0
3	16.5	15.5	18.0	17.0	19.0	18.0	---	---	22.0	21.0	22.0	21.0
4	16.0	15.0	19.0	17.5	---	---	---	---	22.0	21.5	22.0	21.0
5	16.5	15.5	19.5	18.0	19.0	18.0	---	---	22.5	21.5	22.0	21.0
6	16.5	15.5	19.0	18.5	19.0	18.0	---	---	22.0	21.5	22.0	21.0
7	16.0	15.0	19.5	18.5	19.5	18.0	---	---	22.5	21.5	21.5	20.5
8	16.0	15.0	19.5	18.5	19.5	18.5	---	---	23.0	21.5	21.5	20.5
9	16.5	15.0	19.5	18.0	20.0	19.0	---	---	23.0	22.0	21.5	20.5
10	16.0	15.5	19.5	18.0	20.5	19.0	---	---	23.0	22.0	21.0	20.5
11	16.5	15.5	19.0	18.5	20.5	19.0	---	---	23.0	22.0	21.0	20.0
12	17.0	16.0	18.5	18.0	20.0	19.0	---	---	23.0	22.0	---	---
13	17.5	16.0	18.5	18.0	19.5	18.5	---	---	23.0	21.5	---	---
14	18.0	16.5	18.0	18.0	19.5	18.5	---	---	23.0	21.5	---	---
15	17.5	16.5	18.5	17.5	19.0	18.0	---	---	22.0	21.0	---	---
16	17.5	17.0	18.0	17.5	19.0	18.5	---	---	22.0	21.5	---	---
17	17.5	17.0	18.0	17.5	19.0	18.0	---	---	22.0	21.5	---	---
18	---	---	17.5	17.0	19.0	18.0	---	---	22.0	21.0	---	---
19	---	---	17.0	16.0	---	---	---	---	22.0	21.0	---	---
20	---	---	16.5	16.0	---	---	---	---	22.0	21.0	---	---
21	---	---	17.0	16.0	---	---	---	---	22.0	21.0	---	---
22	---	---	17.0	16.5	---	---	---	---	22.5	21.0	---	---
23	---	---	---	---	---	---	---	---	22.5	21.5	---	---
24	17.0	16.5	---	---	---	---	---	---	22.0	21.0	---	---
25	17.0	16.5	---	---	---	---	---	---	21.5	21.0	---	---
26	17.0	16.5	---	---	---	---	---	---	21.5	21.0	---	---
27	17.5	16.5	---	---	---	---	---	---	22.0	20.5	---	---
28	17.5	16.5	---	---	---	---	---	---	21.5	21.0	---	---
29	17.0	16.0	---	---	---	---	---	---	22.0	21.0	---	---
30	17.0	16.0	---	---	---	---	---	---	22.0	21.5	---	---
31	---	---	---	---	---	---	---	---	22.0	21.5	---	---

11162765 SAN FRANCISCO BAY AT SAN MATEO BRIDGE, NEAR FOSTER CITY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	---	---	12.5	11.0
2	---	---	---	---	---	---	---	---	---	---	12.0	11.5
3	---	---	---	---	---	---	---	---	12.0	11.5	12.5	10.0
4	---	---	---	---	---	---	---	---	12.0	11.5	12.5	11.0
5	---	---	---	---	---	---	---	---	11.5	11.0	12.5	11.0
6	---	---	---	---	---	---	---	---	11.5	11.5	13.0	11.5
7	---	---	---	---	---	---	---	---	11.5	11.0	13.0	12.5
8	---	---	---	---	---	---	---	---	11.5	11.0	13.0	12.5
9	---	---	---	---	---	---	---	---	11.5	11.0	---	---
10	---	---	---	---	---	---	---	---	11.5	11.0	---	---
11	---	---	---	---	---	---	---	---	11.5	11.0	---	---
12	---	---	---	---	---	---	---	---	12.0	11.0	---	---
13	---	---	---	---	---	---	---	---	11.5	11.0	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	10.5	10.0	---	---
22	---	---	---	---	---	---	---	---	10.5	10.5	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	12.0	10.5	17.0	15.5
27	18.0	16.5	---	---	---	---	---	---	12.0	10.5	17.0	15.5
28	17.5	16.0	---	---	---	---	---	---	---	---	17.0	16.0
29	17.0	16.0	---	---	---	---	11.5	11.0	---	---	17.5	16.0
30	17.0	16.0	---	---	---	---	11.5	11.5	---	---	17.5	16.0
31	---	---	---	---	---	---	---	---	---	---	17.5	16.5
Month	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	22.0	21.5
2	---	---	---	---	---	---	---	---	---	---	22.0	21.5
3	17.5	16.5	---	---	---	---	---	---	22.5	21.0	22.0	21.0
4	17.5	16.5	---	---	---	---	---	---	22.5	21.5	22.0	21.0
5	18.0	17.0	---	---	---	---	---	---	22.5	21.0	22.0	21.0
6	17.5	16.5	---	---	---	---	---	---	22.0	21.5	22.0	21.5
7	17.5	16.5	---	---	---	---	---	---	22.5	21.0	22.0	21.0
8	17.5	16.5	---	---	---	---	---	---	22.5	21.5	22.0	21.0
9	17.0	16.5	---	---	---	---	---	---	23.0	22.0	22.0	21.0
10	17.5	16.5	---	---	---	---	---	---	23.0	22.0	21.5	21.0
11	18.0	17.0	---	---	14.5	13.0	---	---	23.0	22.0	21.5	21.0
12	18.0	17.0	---	---	14.5	13.5	---	---	23.0	21.5	21.0	20.0
13	18.0	17.5	---	---	15.0	14.0	---	---	23.0	22.0	21.0	20.5
14	18.5	18.0	---	---	15.0	14.0	---	---	23.0	21.0	21.0	20.0
15	18.5	17.5	---	---	15.0	14.0	---	---	22.0	20.5	21.0	20.5
16	18.5	17.5	---	---	15.0	14.5	---	---	22.0	21.0	21.5	20.5
17	18.5	17.5	---	---	15.0	14.5	---	---	22.0	21.5	21.5	20.5
18	---	---	---	---	15.0	14.0	---	---	22.0	21.0	21.5	20.5
19	---	---	---	---	---	---	---	---	22.0	21.0	21.5	20.5
20	---	---	---	---	---	---	---	---	22.0	21.0	21.5	20.5
21	---	---	---	---	---	---	---	---	22.0	21.0	22.0	20.5
22	---	---	---	---	---	---	---	---	22.5	21.0	22.0	21.0
23	---	---	---	---	---	---	---	---	22.5	21.5	22.0	21.0
24	18.5	17.5	---	---	---	---	---	---	22.0	21.0	22.0	21.0
25	18.5	17.5	---	---	---	---	---	---	21.5	20.5	21.5	21.0
26	---	---	---	---	---	---	---	---	21.5	20.5	21.5	21.0
27	---	---	---	---	---	---	---	---	21.5	20.5	21.5	21.0
28	---	---	---	---	---	---	---	---	21.5	21.0	21.5	21.0
29	---	---	---	---	---	---	---	---	22.0	21.0	21.5	21.0
30	---	---	---	---	---	---	---	---	22.5	21.0	22.0	21.0
31	---	---	---	---	---	---	---	---	22.5	21.5	---	---
Month	---	---	---	---	---	---	---	---	---	---	22.0	20.0

11162800 REDWOOD CREEK AT REDWOOD CITY, CA

LOCATION.--Lat 37°26'58", long 122°13'57", in Pulgas Grant, San Mateo County, Hydrologic Unit 18050004, at Menlo Country Club, on right bank 200 ft upstream from Alameda de las Pulgas bridge and 2.5 mi south of Redwood City Old Post Office.

DRAINAGE AREA.--1.82 mi^2.

PERIOD OF RECORD.--September 1959 to current year.

REVISED RECORDS.--WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 83.92 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Low flow at times affected by return flow from urban irrigation.

AVERAGE DISCHARGE.--31 years, 1.13 ft^3/s, 819 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 644 ft^3/s, Jan. 31, 1963, gage height, 9.36 ft, from rating curve extended above 180 ft^3/s on basis of slope-area measurement of peak flow and computation of peak flow through culvert; maximum gage height, 11.55 ft, Nov. 29, 1970 (backwater from culvert trash racks); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 130 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1315	*173	*4.79				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	e.15	.48	.67	.34	.21	e.06	e.08	e.02	.00	e.00
2	.02	.00	e.15	.26	.26	1.3	.12	e.06	e.07	e.01	.00	e.00
3	.02	.00	e.13	.11	3.3	.66	.12	e.06	e.07	e.01	.00	e.00
4	.02	.00	e.11	.07	1.0	1.4	.12	e.07	e.07	e.01	.00	e.00
5	.02	.00	e.11	.07	.44	.59	.11	e.08	e.06	e.01	.00	e.00
6	.02	.00	e.11	.07	.40	.40	.11	e.09	e.06	e.02	.00	e.00
7	.02	.00	e.10	.07	.29	.37	.12	e.10	e.05	e.02	.00	e.00
8	.02	.00	e.08	.09	.25	.30	.12	e.11	e.05	e.03	.00	e.00
9	.02	.00	.09	.10	.20	.24	.12	e.11	e.04	e.03	.00	e.00
10	.01	.00	.08	.12	.19	.62	.24	e.13	e.04	e.03	.00	e.00
11	.01	.00	.07	.16	.16	.52	.16	e.13	e.04	e.03	.00	e.00
12	.02	.00	.07	2.6	.22	.25	.12	e.12	e.03	e.03	.00	e.00
13	.02	.01	.08	5.7	.12	.21	.10	e.09	e.03	e.03	.00	e.00
14	.02	.00	.08	2.8	.09	.21	.11	e.07	e.03	e.04	.00	e.00
15	.03	.00	.08	.69	.09	.18	.10	e.05	e.03	e.04	.00	.00
16	.03	.01	.08	1.4	24	.17	.09	e.05	e.03	e.03	.00	.00
17	.03	.01	.07	.50	5.3	.17	.10	e.09	e.03	e.02	.01	.00
18	.04	.01	.07	.37	2.1	.16	.09	e.13	e.03	e.02	.00	.00
19	.05	.00	.07	.31	.99	.15	.07	e.14	e.02	e.01	.00	.00
20	.05	.00	.07	.25	.75	.18	e.07	e.13	e.03	e.02	.00	.00
21	.11	.00	.07	.21	.64	.20	e.08	e.11	e.02	e.03	.00	.00
22	.04	.00	.06	.25	.55	.17	e.09	e.14	e.01	e.02	.00	.00
23	5.6	.00	.11	.17	.50	.28	e.10	e.13	e.02	e.02	.00	.04
24	.79	.01	.08	.17	.45	.15	e.10	e.22	e.01	e.01	.00	.00
25	.25	5.5	.17	.15	.41	.13	e.10	e.70	e.01	e.00	.00	.00
26	.01	1.5	.25	.15	.39	.14	e.10	e1.50	e.01	e.00	.00	.00
27	.00	.26	.08	.13	.37	.14	e.09	e1.35	e.01	e.00	e.00	.00
28	.00	.20	.05	.13	.35	.14	e.08	e.17	e.02	e.00	e.00	.00
29	.00	.18	.04	.14	---	.13	e.08	e.14	e.02	e.00	e.00	.00
30	.00	e.17	.06	1.0	---	.12	e.08	e.11	e.02	e.00	e.00	.00
31	.00	---	.05	.34	---	.11	---	e.09	---	e.00	e.00	---
TOTAL	7.28	7.86	2.87	19.06	44.48	10.13	3.30	6.53	1.04	0.54	0.01	0.04
MEAN	.23	.26	.093	.61	1.59	.33	.11	.21	.035	.017	.000	.001
MAX	5.6	5.5	.25	5.7	24	1.4	.24	1.5	.08	.04	.01	.04
MIN	.00	.00	.04	.07	.09	.11	.07	.05	.01	.00	.00	.00
AC-FT	14	16	5.7	38	88	20	6.5	13	2.1	1.1	.02	.08

CAL YR 1989 TOTAL 137.03 MEAN .38 MAX 9.1 MIN .00 AC-FT 272
WTR YR 1990 TOTAL 103.14 MEAN .28 MAX 24 MIN .00 AC-FT 205

e Estimated.

11164500 SAN FRANCISQUITO CREEK AT STANFORD UNIVERSITY, CA

LOCATION.--Lat 37°25'24", long 122°11'18", in San Francisquito Grant, Santa Clara County, Hydrologic Unit 18050003, at golf course on right bank 1.1 mi downstream from Los Trancos Creek, 1.1 mi west of Stanford University Post Office, and 5 mi downstream from Searsville Lake.

DRAINAGE AREA.--37.4 mi^2.

PERIOD OF RECORD.--October 1930 to September 1941, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 115.75 ft above National Geodetic Vertical Datum of 1929. Recording raingage at 345 Middlefield Road in Menlo Park, 2.5 mi northeast of gage.

REMARKS.--Records good. Flow slightly regulated by Searsville Lake, capacity, 952 acre-ft. Diversions of about 800 acre-ft each year upstream from station to Los Trancos and Lagunita Canals for irrigation on Stanford University campus downstream from station. Low flow affected by wastewater from Stanford Linear Accelerator.

AVERAGE DISCHARGE.--51 years, 19.4 ft^3/s, 14,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft^3/s, Dec. 22, 1955, gage height, 13.60 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1100	*460	*3.33				

Minimum daily, 0.08 ft^3/s, Aug. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	1.7	1.0	e4.40	3.4	4.1	2.0	1.2	2.0	.41	.25	e.13
2	.38	1.7	.99	e2.30	1.9	6.9	2.0	1.1	1.8	.37	.21	e.14
3	.41	1.8	.95	e.75	5.3	6.3	1.9	1.2	1.5	.30	.22	e.10
4	.34	1.8	.77	e.28	14	8.5	1.8	1.1	1.4	.26	.33	e.12
5	.40	1.8	.93	e.25	3.2	6.8	1.8	1.2	1.3	.29	.36	e.10
6	.33	1.8	.95	e.22	3.1	5.4	1.7	1.5	1.1	.29	.28	e.10
7	.19	1.8	1.0	e.22	2.6	4.8	1.6	1.6	1.1	.33	.16	e.18
8	.23	1.8	.92	e.27	2.3	4.6	1 7	1.5	.95	.57	e.42	e.21
9	.28	1.8	.88	e.38	2.1	4.4	1.6	1.8	.80	.68	e.42	e.15
10	.23	1.9	1.0	e.45	2.1	5.3	1.6	2.2	.67	.61	e.19	e.13
11	.27	1.8	1.0	e.64	1.8	5.2	1.9	2.1	.62	.62	e.16	e.16
12	.37	1.9	1.0	4.8	1.8	4.6	1.3	2.4	.60	.63	e.13	e.18
13	.31	1.9	1.1	23	1.8	4.2	1.1	2.1	.57	.66	e.15	e.19
14	.38	1.9	1.2	16	1.6	4.0	1.3	.64	.63	.69	e.13	e.40
15	.39	1.1	1.2	4.9	1.5	3.9	1.1	.61	.61	.76	e.15	.33
16	.46	.94	1.2	4.8	118	4.2	1.4	.63	.64	1.1	e.10	.33
17	.75	.91	1.2	3.4	83	4.5	1.4	.74	.64	.52	e.10	.44
18	.79	1.7	1.2	2.5	27	4.0	1.4	.79	.60	.33	e.11	.45
19	.50	1.1	1.2	2.1	13	3.6	1.2	.74	.53	.27	e.13	.68
20	.49	.85	1.2	1.8	8.8	3.2	1.2	1.9	.46	.24	e.14	.70
21	.95	1.2	1.2	1.6	6.9	3.1	1.1	2.0	.63	.66	e.10	.63
22	.82	1.4	1.2	1.5	5.9	3.2	1.2	1.2	.35	.60	e.12	.95
23	15	1.4	1.2	1.4	5.1	3.3	1.7	1.9	.45	.34	e.10	.66
24	3.8	1.5	1.3	1.4	4.7	3.1	1.9	1.4	.40	.32	e.10	1.0
25	3.1	12	e.94	1.3	4.7	3.0	1.7	.95	.34	.18	e.18	.98
26	2.0	13	e.82	1.2	4.6	2.9	1.5	.80	.36	.20	e.09	1.0
27	1.8	4.0	e.80	1.2	4.5	2.8	1.4	2.8	.34	.22	e.08	1.0
28	1.7	3.1	e.76	1.2	4.3	2.6	1.3	16	.40	.23	e.10	.60
29	1.9	1.3	e.60	1.3	---	2.2	1.2	4.3	.39	.25	e.12	.41
30	2.0	1.1	e.28	2.9	---	2.2	1.2	3.0	.38	.27	e.13	.43
31	1.7	---	e.28	2.6	---	2.1	---	2.9	---	.22	e.11	---
TOTAL	42.69	72.00	30.27	91.06	339.0	129.0	45.2	64.30	22.56	13.42	5.37	12.88
MEAN	1.38	2.40	.98	2.94	12.1	4.16	1.51	2.07	.75	.43	.17	.43
MAX	15	13	1.3	23	118	8.5	2.0	16	2.0	1.1	.42	1.0
MIN	.19	.85	.28	.22	1.5	2.1	1.1	.61	.34	.18	.08	.10
AC-FT	85	143	60	181	672	256	90	128	45	27	11	26
a	1.08	0.93	0	1.75	1.84	---	---	---	0	0.07	0	0.07

CAL YR 1989 TOTAL 1546.87 MEAN 4.24 MAX 146 MIN .01 AC-FT 3070
WTR YR 1990 TOTAL 867.75 MEAN 2.38 MAX 118 MIN .08 AC-FT 1720

e Estimated.
a Precipitation, in inches.

11166000 MATADERO CREEK AT PALO ALTO, CA

LOCATION.--Lat 37°25'18", long 122°08'04", in Rincon de San Francisquito Grant, Santa Clara County, Hydrologic Unit 18050003, on right bank on Ash Street 150 ft upstream from Lambert Avenue Bridge and 2.1 mi southeast of Palo Alto Post Office.

DRAINAGE AREA.--7.26 mi^2.

PERIOD OF RECORD.--July 1952 to current year.

REVISED RECORDS.--WDR CA-80-2: 1971-74, 1978, 1971-72(P). WDR CA-82-2: 1973-74, 1978(P).

GAGE.--Water-stage recorder. Datum of gage is 22.07 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 25, 1958, at site 150 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--38 years, 2.29 ft^3/s, 1,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,500 ft^3/s, Jan. 24, 1983, gage height, 6.51 ft, from rating curve extended above 600 ft^3/s on basis of step-backwater computation at gage heights 7.63 and 8.00 ft, and slope-conveyance computations at 5.97 and 6.87 ft; maximum gage height, 9.88 ft, Dec. 23, 1955, site and datum then in use (backwater from culvert); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1345	*188	*2.04				

No flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.05	.17	3.1	1.5	.13	.02	.02	.01	.01	.00	.09
2	.04	.06	.13	.68	.11	3.6	.01	.06	.02	1.6	.01	.01
3	.00	.12	.15	.12	8.3	.60	.03	.11	.02	2.5	.02	.04
4	.02	.06	.15	.07	2.2	1.5	.02	.07	.03	.89	.02	.01
5	.02	.12	.14	.06	.33	.48	.03	.09	.02	.05	.01	.01
6	.01	.07	.17	.05	.52	.24	.05	.20	.01	.01	.01	.04
7	.00	.07	.18	.04	.15	.13	.02	.08	.01	.01	.01	.08
8	.01	.06	.14	.05	.06	.09	.03	.02	.01	.00	.01	.06
9	.03	.04	.09	.05	.22	.20	.05	.01	.01	.00	.11	.01
10	.01	.07	.09	.06	.01	1.3	.11	.02	.01	.00	.25	.05
11	.01	.05	.08	.04	.01	.73	.05	.05	.02	.00	.24	.01
12	.03	.07	.10	3.4	.01	.22	.09	.02	.01	.00	.18	.02
13	.01	.06	.09	20	.02	.12	.07	.03	.00	.00	.16	.02
14	.02	.07	.15	7.9	.01	.08	.06	.02	.01	.00	.13	.02
15	.01	.10	.14	1.0	.01	.04	.07	.01	.02	.00	.01	.03
16	.06	.14	.13	2.5	37	.05	.07	.03	.01	.41	.02	.01
17	.35	.11	.13	.47	8.0	.01	.06	.06	.03	.02	.01	.03
18	2.4	.07	.12	.18	2.0	.00	.15	.05	.01	.02	.01	.01
19	.08	.13	.14	.12	.73	.01	.04	.09	.01	.10	.00	.00
20	.05	.13	.15	.03	.51	.07	.05	.15	.01	.10	.01	.02
21	2.2	.19	.15	.01	.39	.04	.07	.04	.01	.07	.06	.06
22	.19	.07	.13	.01	.30	.05	.06	.10	.03	.02	.02	.27
23	14	.04	.17	.01	.23	.07	.55	1.9	.05	.00	.04	.10
24	1.0	.07	.32	.01	.19	.02	.10	.03	.02	.00	.05	.01
25	.98	11	.16	.01	.14	.05	.11	.02	.00	.00	.06	.11
26	.09	3.4	.15	.01	.11	.01	.06	.03	.00	.00	.01	.00
27	.10	.18	.16	.00	.10	.02	.07	6.3	.01	.01	.05	.02
28	.05	.11	.39	.00	.08	.01	.08	6.7	.00	.01	.01	.02
29	.05	.09	.25	.01	---	.02	.05	.07	.01	.00	.02	.04
30	.05	.11	.21	1.3	---	.03	.05	.06	.01	.03	.04	.07
31	.09	---	.21	.73	---	.02	---	.32	---	.02	.05	---
TOTAL	22.00	16.91	4.94	42.02	63.24	9.94	2.28	16.76	0.42	5.88	1.63	1.27
MEAN	.71	.56	.16	1.36	2.26	.32	.076	.54	.014	.19	.053	.042
MAX	14	11	.39	20	37	3.6	.55	6.7	.05	2.5	.25	.27
MIN	.00	.04	.08	.00	.01	.00	.01	.01	.00	.00	.00	.00
AC-FT	44	34	9.8	83	125	20	4.5	33	.8	12	3.2	2.5

CAL YR 1989 TOTAL 173.64 MEAN .48 MAX 14 MIN .00 AC-FT 344
WTR YR 1990 TOTAL 187.29 MEAN .51 MAX 37 MIN .00 AC-FT 371

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°11'00", long 121°47'28", in San Vicente Grant, T.9 S., R.2 E., Santa Clara County, Hydrologic Unit 18050003, at center of dam of Arroyo Calero, 1.7 mi northeast of New Almaden, and 6 mi southeast of Edenvale.
DRAINAGE AREA.-- 6.93 mi^2.
PERIOD OF RECORD.--
MONTHLY CONTENTS: January 1936 to September 1985. Prior to October 1959, published in WSP 1735.
REVISED RECORDS.--WDR CA-79-2: Drainage area.
REMARKS.--Reservoir is formed by earthfill dam completed to crest elevation 482.55 ft in 1936 and raised to 483.5 ft in 1962. Capacity, 10,160 acre-ft between elevations 393.7 ft, center of outlet tunnel, and 483.5 ft, crest of spillway. Water released down Arroyo Calero for ground-water recharge by percolation and minor irrigation. Up to 100 ft^3/s diverted from Almaden Reservoir to Calero Reservoir at times. Beginning in 1986, up to 180 ft^3/s was diverted from San Luis Reservoir at times. Inflows to Calero Reservoir are by Arroyo Calero, east of Uvas Road, Bailey turnout, west of Bailey and McKean Road, and pipe to the bottom of reservoir near the dam.

WATER-QUALITY RECORDS

371047121472201 CALERO RESERVOIR AT ALMADEN-CALERO CANAL, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°10'47", long 121°47'22", 300 ft from the canal outlet.
PERIOD OF RECORD.--
CHEMICAL DATA: October 1989 to September 1990.
SEDIMENT DATA: October 1989 to September 1990.
REMARKS.--Additional data on the bottom material chemistry are on file at the California District office.

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	BED MAT. FALL DIAM.DW % FINER THAN .002 MM	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM.DW % FINER THAN .008 MM	BED MAT. FALL DIAM.DW % FINER THAN .016 MM	BED MAT. FALL DIAM.DW % FINER THAN .031 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
APR										
18...	1300	33	39	47	56	66	71	82	96	100

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°10'57", long 121°47'25", 300 ft above center of dam.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1978-79, 1984 to current year.
BIOLOGICAL DATA: Water years 1978-79, 1984 to current year.
SEDIMENT DATA: October 1989 to September 1990.
REMARKS.--Lake elevation provided by Santa Clara Valley Water District. Phytoplankton analyzed by Chadwick and Associates. Additional data on the bottom material chemistry are on file at the California District office.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	LIGHT, ATTENUATION COEFFICIENT (ALPHA/METER)	ELEVATION ABOVE NGVD (FEET)
DEC										
12...	0955	0.50	622	7.7	11.1	755	7.5	69	6.64	464.36
12...	0956	1.0	622	7.8	11.1	755	7.7	71	7.09	464.36
12...	0957	2.0	623	7.8	11.2	755	7.6	70	6.97	464.36
12...	0958	3.0	624	7.8	11.2	755	7.5	69	7.09	464.36
12...	0959	4.0	624	7.8	11.2	755	7.6	70	6.97	464.36
12...	1000	5.0	625	7.8	11.2	755	7.1	65	6.97	464.36
12...	1001	6.0	623	7.9	11.2	755	7.3	67	7.09	464.36
12...	1002	7.0	624	7.9	11.2	755	7.5	69	7.09	464.36
12...	1003	8.0	625	7.9	11.2	755	7.4	68	7.09	464.36
12...	1004	9.0	624	7.9	11.2	755	7.5	69	7.33	464.36
12...	1005	10.0	625	7.9	11.2	755	7.3	67	7.59	464.36
12...	1006	11.0	624	7.9	11.2	755	7.3	67	8.16	464.36
12...	1007	12.0	624	7.9	11.3	755	7.5	69	7.86	464.36
12...	1008	13.0	624	7.9	11.3	755	7.4	68	8.16	464.36
12...	1009	14.0	624	7.9	11.3	755	7.5	69	6.64	464.36
12...	1010	15.0	623	7.9	11.3	755	7.1	66	6.44	464.36
12...	1011	16.0	623	7.9	11.3	755	7.5	69	6.54	464.36
12...	1012	17.0	623	7.9	11.3	755	7.6	70	6.64	464.36
12...	1013	18.0	623	8.0	11.3	755	7.5	69	--	464.36
12...	1014	19.0	622	8.0	11.3	755	7.5	69	--	464.36

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	LIGHT, ATTENUATION COEFFICIENT (ALPHA/METER)	ELEVATION ABOVE NGVD (FEET)
APR										
18...	0942	0.50	578	8.9	16.3	745	10.3	108	7.72	478.15
18...	0943	1.0	587	8.9	16.3	745	10.1	106	7.46	478.15
18...	0944	2.0	587	8.9	16.3	745	9.7	101	7.21	478.15
18...	0945	3.0	590	8.7	15.9	745	7.8	81	6.06	478.15
18...	0946	4.0	591	8.5	15.3	745	7.0	72	5.39	478.15
18...	0947	5.0	598	8.3	14.7	745	7.1	72	5.09	478.15
18...	0948	6.0	591	8.1	14.6	745	6.4	64	5.09	478.15
18...	0949	7.0	590	8.1	14.1	745	6.3	63	4.82	478.15
18...	0950	8.0	588	8.0	13.9	745	6.1	61	4.68	478.15
18...	0951	9.0	589	8.0	13.7	745	6.0	59	4.56	478.15
18...	0952	10.0	588	8.0	13.5	745	6.1	60	4.56	478.15
18...	0953	11.0	588	8.0	13.4	745	6.1	60	4.44	478.15
18...	0954	12.0	588	7.9	13.4	745	6.3	62	4.44	478.15
18...	0955	13.0	589	7.9	13.3	745	6.5	64	4.44	478.15
18...	0956	14.0	590	7.8	13.1	745	6.6	64	4.56	478.15
18...	0957	16.0	590	7.8	13.0	745	6.4	62	5.24	478.15
18...	0958	18.0	589	7.8	13.0	745	6.2	60	7.09	478.15
18...	0959	20.0	588	7.8	13.1	745	6.0	58	8.16	478.15
18...	1000	22.0	588	7.8	13.1	745	5.7	56	8.65	478.15
JUN										
06...	0939	0.50	621	8.2	19.6	750	9.0	100	6.44	481.45
06...	0940	1.0	621	8.2	19.6	750	8.9	99	6.24	481.45
06...	0941	2.0	622	8.2	19.6	750	8.9	99	6.64	481.45
06...	0942	3.0	621	8.2	19.5	750	8.7	96	6.97	481.45
06...	0943	4.0	622	8.1	19.4	750	8.5	94	6.75	481.45
06...	0944	5.0	621	7.9	19.1	750	7.6	84	6.54	481.45
06...	0945	6.0	622	7.6	18.2	750	5.9	64	5.71	481.45
06...	0946	7.0	621	7.4	17.8	750	5.5	59	4.82	481.45
06...	0947	8.0	620	7.4	17.7	750	5.1	55	4.32	481.45
06...	0948	9.0	621	7.3	17.6	750	4.9	52	4.32	481.45
06...	0949	12.0	621	7.1	16.5	750	3.8	40	3.11	481.45
06...	0951	18.0	617	7.0	16.0	750	3.1	32	2.85	481.45
06...	0952	21.0	619	6.9	15.9	750	2.7	28	4.09	481.45
06...	0953	22.0	619	6.9	15.9	750	2.1	22	5.39	481.45
JUL										
26...	0832	1.0	652	7.6	23.1	755	7.6	90	3.87	481.30
26...	0833	2.0	654	7.6	23.1	755	7.6	90	3.87	481.30
26...	0834	3.0	654	7.6	23.1	755	7.6	90	4.09	481.30
26...	0835	4.0	654	7.6	23.1	755	7.6	90	4.09	481.30
26...	0836	5.0	653	7.6	23.1	755	7.5	89	4.09	481.30
26...	0837	6.0	654	7.6	23.1	755	7.5	89	3.98	481.30
26...	0838	7.0	653	7.6	23.1	755	7.5	89	3.98	481.30
26...	0839	8.0	640	7.0	22.0	755	0.8	9	4.09	481.30
26...	0840	9.0	628	6.7	19.0	755	0.0	1	2.04	481.30
26...	0841	10.0	625	6.7	17.1	755	0.6	6	1.48	481.30
26...	0842	11.0	623	6.7	16.5	755	1.8	19	1.54	481.30
26...	0843	12.0	623	6.7	16.3	755	2.0	21	2.11	481.30
26...	0844	13.0	623	6.7	16.2	755	1.9	20	2.11	481.30
26...	0845	16.0	622	6.7	16.1	755	2.1	22	2.18	481.30
26...	0846	19.0	622	6.7	16.0	755	1.5	15	2.46	481.30
26...	0847	21.0	622	6.7	16.0	755	1.2	12	3.47	481.30
SEP										
19...	0928	0.50	699	7.8	21.2	745	7.9	91	3.28	479.08
19...	0929	1.0	698	7.8	21.2	745	7.9	91	3.28	479.08
19...	0930	2.0	699	7.8	21.3	745	7.9	91	3.38	479.08
19...	0931	3.0	699	7.8	21.2	745	7.9	91	3.38	479.08
19...	0932	4.0	699	7.8	21.3	745	7.9	91	3.38	479.08
19...	0933	5.0	699	7.8	21.3	745	7.9	91	3.38	479.08
19...	0934	6.0	699	7.8	21.3	745	7.9	91	3.38	479.08
19...	0935	7.0	699	7.8	21.3	745	7.9	91	3.38	479.08
19...	0936	8.0	699	7.8	21.3	745	7.9	91	3.38	479.08
19...	0937	9.0	699	7.8	21.3	745	7.9	91	3.38	479.08
19...	0938	10.0	699	7.8	21.3	745	7.9	91	3.47	479.08
19...	0939	11.0	698	7.8	21.3	745	7.8	90	3.47	479.08
19...	0940	12.0	698	7.7	21.2	745	7.7	89	3.47	479.08
19...	0941	13.0	695	7.2	20.8	745	4.5	52	3.77	479.08
19...	0942	14.0	665	6.9	19.1	745	0.2	2	3.12	479.08
19...	0943	15.0	665	6.9	18.7	745	0.0	1	2.25	479.08
19...	0944	16.0	662	6.9	18.5	745	0.0	0	1.91	479.08
19...	0945	17.0	660	6.9	18.4	745	0.0	0	2.04	479.08
19...	0946	18.0	659	6.9	18.4	745	0.0	0	2.32	479.08
19...	0947	19.0	659	6.8	18.3	745	0.0	0	2.62	479.08
19...	0948	20.0	659	6.8	18.2	745	0.0	0	2.62	479.08

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
DEC										
12...	1040	1.0	622	7.8	11.1	755	7.7	71	130	24
12...	1120	8.0	625	7.9	11.2	755	7.4	68	140	25
12...	1140	17.0	623	7.9	11.3	755	7.6	70	130	24
APR										
18...	1040	1.0	587	8.9	16.3	745	10.1	106	120	22
18...	1120	4.0	591	8.5	15.3	745	7.0	72	120	22
18...	1130	20.0	588	7.8	13.1	745	6.0	58	120	22
JUN										
06...	1020	1.0	621	8.2	19.6	750	8.9	99	120	22
06...	1100	6.0	622	7.6	18.2	750	5.9	64	120	22
06...	1120	21.0	619	6.4	15.9	750	2.7	28	110	21
JUL										
26...	0930	1.0	652	7.6	23.1	755	7.6	90	110	17
26...	1010	8.0	640	7.0	22.0	755	0.8	9	100	17
26...	1020	18.0	e622	e6.7	e16.0	755	e2.0	e21	100	17
SEP										
19...	1100	1.0	699	7.8	21.2	745	7.9	91	120	22
19...	1140	14.0	665	6.9	19.1	745	0.2	2	120	22
19...	1205	19.0	659	6.8	18.3	745	0.0	0	120	22

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
DEC										
12...	17	74	55	3	3.5	89	50	110	0.10	17
12...	18	76	54	3	3.5	90	50	110	0.10	17
12...	17	75	55	3	3.5	89	50	110	0.10	17
APR										
18...	16	69	55	3	3.1	84	42	110	0.20	13
18...	16	69	55	3	3.1	84	43	110	0.20	13
18...	15	69	55	3	3.2	81	41	110	0.20	15
JUN										
06...	16	72	56	3	3.2	83	44	120	0.30	13
06...	15	72	56	3	3.6	83	45	120	0.30	13
06...	15	72	57	3	3.5	80	42	110	0.40	15
JUL										
26...	16	75	59	3	3.7	88	48	120	0.30	14
26...	15	73	59	3	3.6	82	43	120	0.30	17
26...	15	74	60	3	3.8	81	43	120	<0.10	18
SEP										
19...	17	76	56	3	3.6	91	44	120	0.20	13
19...	16	73	56	3	3.6	88	39	110	0.50	17
19...	16	72	56	3	3.6	87	38	110	0.40	18

e Estimated.

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)
DEC									
12...	349	--	<0.010	--	<0.100	--	0.030	0.030	0.37
12...	354	--	0.010	--	<0.100	--	0.020	0.030	0.38
12...	350	--	<0.010	--	<0.100	--	0.020	0.030	0.28
APR									
18...	326	--	0.020	--	<0.100	--	0.010	<0.010	0.79
18...	327	--	<0.010	--	<0.100	--	0.020	0.020	0.58
18...	324	0.380	0.020	--	0.400	--	0.060	0.050	0.44
JUN									
06...	340	--	<0.010	--	<0.100	--	<0.010	<0.010	--
06...	341	--	<0.010	--	<0.100	--	0.020	<0.010	0.48
06...	327	--	<0.010	<0.010	0.400	<0.100	0.020	<0.020	0.68
JUL									
26...	347	--	<0.010	--	<0.100	--	0.010	0.020	0.59
26...	338	--	--	--	--	--	--	--	--
26...	340	--	<0.010	--	0.500	--	0.010	0.030	0.39
SEP									
19...	351	--	<0.010	--	<0.100	--	<0.010	<0.010	--
19...	335	0.080	0.020	--	0.100	--	0.070	0.070	0.23
19...	333	0.170	0.030	--	0.200	--	0.110	0.110	0.39

DATE	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)
DEC									
12...	0.37	0.40	0.40	--	0.040	0.030	<0.010	200	7
12...	0.27	0.40	0.30	--	0.040	0.030	<0.010	180	10
12...	0.27	0.30	0.30	--	0.040	0.040	<0.010	190	7
APR									
18...	--	0.80	0.30	--	0.060	0.010	0.020	170	7
18...	0.28	0.60	0.30	--	0.060	0.020	<0.010	180	6
18...	0.25	0.50	0.30	0.90	0.070	0.050	0.050	180	8
JUN									
06...	--	0.30	0.60	--	0.040	0.010	<0.010	170	10
06...	--	0.50	0.30	--	0.050	0.020	0.010	190	7
06...	--	0.70	<0.20	1.1	0.030	0.010	0.010	170	6
JUL									
26...	--	0.60	<0.20	--	0.020	<0.010	<0.010	180	6
26...	--	--	--	--	--	--	--	170	7
26...	--	0.40	<0.20	0.90	0.090	0.090	0.090	170	10
SEP									
19...	--	0.40	0.50	--	0.020	0.010	<0.010	180	<3
19...	0.43	0.30	0.50	0.40	0.120	0.150	0.140	170	<3
19...	0.49	0.50	0.60	0.70	0.180	0.210	0.210	170	4

DATE	TIME	ANTI-MONY, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)
APR												
18...	1230	<1	--	--	--	--	--	--	--	--	--	--
JUL												
26...	1020	--	2	<100	2	3	400	130	<0.10	2	<10	--
SEP												
19...	1205	--	3	<100	<1	3	70	160	<0.10	2	<10	2

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	TRANSPARENCY (SECCHI DISK) (M)
DEC		
12...	1025	0.92
APR		
18...	1025	1.10
JUN		
06...	1008	1.04
JUL		
26...	0907	1.60
SEP		
19...	1000	2.00

DATE	TIME	SAMPLING DEPTH (M)	TURBIDITY (NTU)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)
DEC					
12...	1040	1.0	3.6	0.800	<0.100
12...	1100	2.0	3.7	0.700	<0.100
APR					
18...	1040	1.0	1.2	9.50	2.00
18...	1100	2.0	2.0	11.0	1.90
18...	1110	3.0	2.4	9.60	1.90
JUN					
06...	1020	1.0	3.5	7.40	1.00
06...	1050	3.0	1.7	7.00	0.800
06...	1055	5.0	1.9	4.80	0.600
JUL					
26...	0930	1.0	3.3	2.40	0.100
26...	0950	3.0	1.6	1.80	<0.100
26...	1000	6.0	--	2.70	0.200
SEP					
19...	1100	1.0	2.2	1.40	0.200
19...	1118	6.0	--	1.50	0.200
19...	1128	12.0	--	1.20	0.200

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PHYTOPLANKTON

DATE	12/12/89		12/12/89		12/12/89	
TIME	1040		1100		1115	
DEPTH (M)	1		2		3	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella meneghiniana	58	37236	31	19902	18	11556
Cyclotella pseudostelligera	924	86856	1122	105468	237	22278
Cyclotella stelligera	115	22080	125	24000	18	3456
Melosira distans	115	21735	--	--	18	3402
Stephanodiscus astraea var. minutula	173	43942	125	31750	40	10160
Stephanodiscus sp.	--	--	94	22842	--	--
Order Pennales						
Diploneis sp.	--	--	21	11865	--	--
Epithemia sp.	--	--	--	--	56	10080
Navicula atomus	99	4158	145	6090	56	2352
Navicula sp.	33	13002	--	--	--	--
Nitzschia acicularis	66	16302	103	25441	--	--
Nitzschia palea	33	17688	41	21976	--	--
Nitzschia sp. 1	33	16203	83	40753	56	27496
Nitzschia sp. 2	33	6006	--	--	--	--
Synedra radians	--	--	21	5040	--	--
CHLOROPHYTA (Green algae)						
Chlamydomonas sp.	--	--	68	16048	--	--
Chlorococcum humicola	198	6336	68	2176	504	16128
Chodatella sp.	--	--	--	--	84	5124
Cosmarium sp.	--	--	--	--	84	244944
Kirchneriella contorta	792	15048	1768	33592	588	11172
Kirchneriella lunaris	198	5346	544	14688	--	--
Mesotaenium sp.	198	8316	272	11424	--	--
Scenedesmus quadricauda	396	54648	--	--	--	--
Selenastrum minutum	99	1485	136	2040	168	2520
Tetradesmus wisconsinense	396	238788	--	--	--	--
Tetraedron pentaedricum	99	26532	--	--	--	--
Tetraedron muticum	99	3168	--	--	--	--
CHRYSOPHYTA (Golden-brown algae)						
Chrysochromulina parva	--	--	68	3128	--	--
Unknown chrysophyte flagellate	99	9702	136	13328	420	41160
CYANOPHYTA (Blue-green algae)						
Aphanocapsa delicatissima	5742	5742	340	340	3696	3696
Aphanothece saxicola	594	2970	1224	6120	2604	13020
Chroococcus dispersus	--	--	476	14756	168	5208
Chroococcus multicoloratus	--	--	340	3740	252	2772
Synechococcus lineare	297	6237	--	--	--	--
Synechococcus sp.	396	7920	340	6800	504	10080
CRYPTOPHYTA (Cryptomonads)						
Chroomonas sp.	--	--	136	18632	--	--
Rhodomonas minuta	297	28512	476	45696	336	32256
TOTAL CELLS/mL	11,582		8,303		9,907	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/mL)	705,958		507,635		478,860	
NUMBER OF SPECIES	26		26		20	

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PHYTOPLANKTON

DATE	4/18/90		4/18/90		4/18/90	
TIME	1040		1100		1110	
DEPTH (M)	1		2		3	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella meneghiniana	258	16536	681	437202	192	123264
Cyclotella pseudostelligera	16942	1592548	12254	1151876	15182	1427108
Cyclotella stelligera	--	--	--	--	192	36864
Melosira distans	--	--	--	--	384	72576
Stephanodiscus astraea var. minutula	770	195580	681	172974	384	97536
Order Pennales						
Asterionella formosa	--	--	163	59821	143	52481
Nitzschia acicularis	408	100776	654	161538	572	141284
Nitzschia gracilic	1634	825170	1634	825170	1286	649430
Synedra delicatissima	245	247940	654	661848	286	289432
Synedra rumpens var. familiaris	--	--	163	67319	--	--
CHLOROPHYTA (Green algae)						
Actinastrum hantzschii var. fluviatile	1307	265321	1634	331702	980	198940
Carteria cordiformis	327	551649	272	458864	327	551649
Chlamydomonas sp.	2287	971975	1362	578850	1307	555475
Chlorococcum humicola	653	20896	272	8704	653	20896
Chodatella subsalsa	653	39833	817	49837	980	59780
Closteriopsis longissima	--	--	--	--	327	784800
Dimorphococcus lunatus	6207	1626234	7080	1854960	9148	2396776
Dictyosphaerium pulchellum	16662	549846	10620	350460	11109	366597
Elakatothrix viridis	1307	132007	1089	109989	1307	132007
Golenkinia radiata	327	35316	272	29376	980	105840
Kirchneriella contorta	1634	31046	1906	36214	980	18620
Kirchneriella lunaris	980	26460	2178	58806	3267	88209
Micratinium pusillum	--	--	1362	85806	1307	82341
Oocystis solitaria	--	--	--	--	653	110357
Scenedesmus abundans	--	--	--	--	1960	158760
Scenedesmus bijuga	--	--	545	106820	--	--
Scenedesmus quadricauda	1307	180366	1089	150282	2164	298632
Selenastrum minutum	327	4905	272	4080	327	11772
Tetraedron trigonum var. gracile	327	280239	--	--	--	--
Tetrastrum staurogeniaeforme	--	--	--	--	1307	94104
CHRYSOPHYTA (Golden-brown algae)						
Chrysochromulina parva	653	30038	--	--	--	--
Mallomonas sp.	327	163500	272	136000	327	163500
Unknown flagellate	2287	224126	1906	186788	1307	128086
CYANOPHYTA (Blue-green algae)						
Aphanocapsa delicatissima	8494	8494	15249	15249	27116	27116
Aphanocapsa elachista var. conferta	1307	23526	545	9810	5881	105858
Aphanothece saxicola	980	4900	1089	5445	2287	11435
Chroococcus dispersus	327	6867	6263	131523	7514	157794
Chroococcus multicoloratus	1307	5228	--	--	653	2612
Chroococcus sp.	2614	20912	2723	21784	6861	54888
Dactylococcopsis fascicularis	2614	78420	1634	49020	1307	39210
Eucapsis sp.	2614	164682	--	--	--	--
Gomphosphaeria lacustris	--	--	4901	19604	--	--
Lyngbya nana	327	27468	545	45780	--	--
Marssoniella elegans	--	--	817	12255	--	--
Merismopedia tenuissima	5227	20908	--	--	--	--
Microcystis incerta	1634	3268	8169	16338	16335	32670
Oscillatoria limnetica	3267	274428	2723	228732	2164	181776
Oscillatoria sp.	327	21909	--	--		
Pseudanabaena catenata	3267	610929	11164	2087668	12415	2321605
Spirulina sp.	327	10464	--	--	--	--
Synechococcus lineare	980	20580	6535	137235	13068	274428
Synechococcus sp.	--	--	545	10900	980	19600
Synechocystis sp.	980	31360	--	--	653	20896

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PHYTOPLANKTON

DATE	4/18/90		4/18/90		4/18/90	
TIME	1040		1100		1110	
DEPTH (M)	1		2		3	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL
CRYPTOPHYTA (Cryptomonads)						
Chroomonas sp.	653	89461	1089	149193	327	44799
Cryptomonas sp.	327	84693	--	--	--	--
Rhodomonas minuta	7187	689952	6263	601248	5881	564576
TOTAL CELLS/mL	102,589		120,086		162,780	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/mL)	10,310,756		11,617,070		13,076,379	
NUMBER OF SPECIES	43		41		44	

DATE	6/6/90		6/6/90		6/6/90	
TIME	1030		1050		1055	
DEPTH (M)	1		3		5	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella pseudostelligera	15688	1474672	17328	1628832	7025	660350
Melosira distans	--	--	--	--	351	66339
Melosira granulata var. angustissima	10459	12425292	7998	9501624	1405	1669140
Stephanodiscus astraea var. minutula	1426	362204	2222	564388	1054	267716
Stephanodiscus niagarae	475	1874825	--	--	351	1385397
Stephanodiscus sp.	5705	1095360	5776	1108992	11590	2225280
Order Pennales						
Nitzschia frustulum var. perpusilla	--	--	--	--	109	17440
Nitzschia palea	--	--	--	--	109	58424
Nitzschia sp.	--	--	653	548520	218	183120
Synedra cyclopum	91	14196	--	--	--	--
Synedra delicatissima	181	183172	--	--	--	--
Synedra rumpens var. familiaris	--	--	--	--	109	45017
CHLOROPHYTA (Green algae)						
Ankistrodesmus convolutus	1089	34848	1634	52288	817	26144
Ankistrodesmus falcatus	272	5712	--	--	272	5712
Carteria cordiformis	272	458864	--	--	--	--
Chlamydomonas sp.	--	--	653	277525	--	--
Chlorella ellipsoidea	--	--	653	26773	--	--
Chlorella elliptica	--	--	--	--	817	5719
Chlorococcum humicola	6261	200352	5554	177728	3539	113248
Chodatella quadriseta	2994	182634	2614	159454	1361	83021
Chodatella subsalsa	--	--	327	19947	--	--
Cosmarium sp.	544	746368	327	448644	--	--
Elakatothrix viridis	272	27472	327	33027	272	27472
Gloeocystis ampla	1089	17424	--	--	--	--
Golenkinia radiata	--	--	327	35316	--	--
Kirchneriella lunaris	6533	176391	6207	167589	5172	139644
Micractinium pusillum	2178	137214	3594	226422	1089	68607
Nephroselmis sp.	272	53040	--	--	--	--
Pandorina morum	3266	2821824	--	--	--	--
Pediastrum duplex	1633	458873	5554	1560674	1089	306009
Oocystis parva	--	--	--	--	272	29376
Scenedesmus abundans	1633	274344	1960	329280	--	--
Scenedesmus bijuga	1633	320068	5881	1152676	1089	213444
Scenedesmus dimorphus	544	97920	--	--	1089	196020
Scenedesmus quadricauda	5444	751272	3594	495972	5444	751272

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PHYTOPLANKTON

DATE	6/6/90		6/6/90		6/6/90	
TIME	1030		1050		1055	
DEPTH (M)	1		3		5	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL
BACILLARIOPHYTA (Diatoms)--Continued						
CHLOROPHYTA (Green algae)--Continued						
Selenastrum minutum	544	8160	327	4905	817	12255
Smithsonimonas sp.?	272	39440	--	--	--	--
Tetraedron caudatum	272	14688	327	17658	--	--
Tetraedron minimum	1905	68580	3267	117612	4900	176400
Tetraedron muticum	--	--	327	10464	272	8704
CHRYSOPHYTA (Golden-brown algae)						
Dinobryon bavaricum	--	--	327	160230	--	--
Unknown flagellate	2178	213444	2940	288120	5172	506856
CYANOPHYTA (Blue-green algae)						
Anabaena circinalis	272	46784	--	--	544	93568
Aphanocapsa delicatissima	24226	24226	19602	19602	14971	14971
Aphanocapsa elachista var. conferta	--	--	--	--	1633	13064
Aphanothece nidulans	1633	4899	3920	35280	--	--
Aphanothece saxicola	4083	20415	1960	9800	9799	48995
Chroococcus dispersus	5172	108612	3267	68607	3811	80031
Chroococcus limneticus	1089	68607	--	--	2722	171486
Chroococcus varius	--	--	653	9142	544	7616
Chroococcus sp.	544	4352	1307	10456	272	2176
Dactylococcopsis fascicularis	1905	57150	980	29400	1089	32670
Lyngbya nana	1089	91476	327	27468	544	45696
Marssoniella elegans	--	--	653	9795	1633	24495
Microcystis incerta	1089	2178	5227	10454	4083	8166
Oscillatoria limnetica	272	22848	--	--	--	--
Pseudanabaena catenata	15243	2850441	18949	3543463	18782	3512234
Synechococcus lineare	--		1307	27447	817	17157
Synechococcus sp.	1905	5715	1960	62720	1361	43552
Synechocystis sp.	272	8704	--	--	--	--
EUGLENOPHYTA (Euglenoids)						
Trachelomonas volvocina	--	--	--	--	272	952000
CRYPTOPHYTA (Cryptomonads)						
Cryptomonas erosa	272	353600	--	--	--	--
Rhodomonas minuta	1633	156768	2287	219552	1633	156768
TOTAL CELLS/mL	135,824		143,097		120,314	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/mL)	28,365,428		23,197,846		14,472,771	
NUMBER OF SPECIES	45		40		44	

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PHYTOPLANKTON

DATE	7/26/90		7/26/90		7/26/90	
TIME	0930		0950		1000	
DEPTH (M)	1		3		6	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella pseudostelligera	1166	109604	832	78208	1434	134796
Cyclotella stelligera	51	9792	--	--	143	27456
Rhizosolenia erienis	101	75750	52	39000	96	72000
Stephanodiscus astraea var. minutula	51	12954	156	39624	96	24384
Stephanodiscus sp.	101	19392	104	19968	191	36672
Order Pennales						
Fragilaria leptostauron	61	7381	--	--	--	--
Navicula sp.	61	24034	--	--	--	--
Nitzschia acicularis	--	--	245	60515	--	--
Nitzschia palea	61	32696	--	--	--	--
Nitzschia sp.	61	29951	--	--	--	--
Synedra ulna	61	21228	--	--	--	--
Synedra sp.	184	27784	245	36995	--	--
CHLOROPHYTA (Green algae)						
Ankistrodesmus falcatus	163	3431	163	3431	490	10292
Chlamydomonas sp.	163	69432	--	--	--	--
Chlorococcum humicola	327	10456	980	31367	1144	36595
Chlorella ellipsoidea	163	6698	327	13396	--	--
Chodatella quadriseta	327	19931	327	19931	653	39862
Dictyosphaerium pulchellum	327	10782	653	21565	653	21565
Golenkinia radiata	163	17644	490	52931	--	--
Kirchneriella lunaris	2287	61753	980	26466	653	17644
Micractinium pusillum	817	51461	1307	82338	--	--
Phacotus lenticularis	--	--	--	--	163	105209
Scenedesmus abundans	--	--	327	54892	--	--
Scenedesmus quadricauda	--	--	--	--	327	45090
Selenastrum minutum	327	4901	--	--	163	2451
Tetraedron caudatum	163	8822	--	--	--	--
Treubaria setigerum	327	88219	--	--	163	44109
CHRYSOPHYTA (Golden-brown algae)						
Dinobryon sertularia	163	142947	--	--	327	285895
Mallomonas sp.	--	--	163	81684	--	--
Unknown flagellate	1144	112071	1307	128081	327	32020
CYANOPHYTA (Blue-green algae)						
Anabaena circinalis	--	--	--	--	3594	618186
Anabaenopsis elenkinii	490	82338	--	--	327	54892
Aphanizomenon flos-aquae	163	5718	--	--	--	--
Aphanocapsa delicatissima	3431	3431	6371	6371	6698	6698
Aphanothece saxicola	980	4901	980	4901	817	4084
Chroococcus dispersus	980	20584	817	17154	980	20584
Chroococcus limneticus	1307	82338	--	--	--	--
Chroococcus sp.	817	6535	980	7842	1797	14376
Dactylococcopsis fascicularis	817	24505	980	29406	980	29406
Lyngbya nana	--	--	327	27446	327	27446
Merismopedia tenuissima	--	--	5228	20911	--	--
Microcystis incerta	--	--	817	1634	--	--
Oscillatoria limnetica	490	41169	163	13723	163	13723
Pseudanabaena catenata	15683	2932790	23688	4429735	16010	2993890
Synechococcus lineare	163	3431	--	--	2287	48030
Synechococcus sp.	327	10456	490	15683	490	15683
TOTAL CELLS/mL	34,468		49,499		41,493	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/mL)	4,197,310		5,365,198		4,783,038	
NUMBER OF SPECIES	37		28		28	

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PHYTOPLANKTON

DATE	9/19/90		9/19/90		9/19/90	
TIME	1100		1118		1128	
DEPTH (M)	1		6		12	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL
BACILLARIOPHYTA (Diatoms)						
Order Centrales						
Cyclotella comta	--	--	--	--	105	10080
Cyclotella meneghiniana	21	2016	--	--	--	--
Cyclotella sp.	--	--	--	--	157	13188
Melosira italica	91	15015	--	--	288	47520
Melosira sp.	--	--	--	--	105	17010
Order Pennales						
Cymbella amphicephala	48	38832	163	131867	--	--
Cymbella minuta var. silesica	24	28800	--	--	--	--
Synedra minuscula	48	14400	327	98100	198	59400
Synedra pulchella	121	3993	--	--	141	224613
Synedra sp.	96	81024	490	413560	311	262484
Tabellaria flocculosa	--	--	--	--	113	8362
CHLOROPHYTA (Green algae)						
Ankistrodesmus falcatus	2178	23961	1634	17971	871	9584
Chlamydomonas sp.	--	--	762	20584	109	2941
Chlorococcum humicola	--	--	2723	10891	1525	6099
Chlorella ellipsoidea	--	--	1743	6970	218	871
Chodatella quadriseta	--	--	109	2941	109	2941
Dictyosphaerium pulchellum	1361	5446	653	2614	2178	8713
Oocystis borgei	--	--	436	6535	436	6535
Quadrigula chodatii	2995	23961	109	871	--	--
Scenedesmus abundans	272	4901	--	--	--	--
Scenedesmus bijuga	4901	88219	10347	186240	10891	196042
Selenastrum minutum	--	--	327	20584	3812	15248
Tetraedron hastatum var. palatinum	545	816842	--	--	--	--
Tetraedron minimum	2178	137229	4139	16555	--	--
Tetraedron regulare	--	--	109	17426	327	20584
Treubaria setigerum	5718	2790333	--	--	218	34852
CHRYSOPHYTA (Golden-brown algae)						
Mallomonas acaroides	--	--	109	122526	327	367579
Mallomonas producta	--	--	436	57070	327	42803
Ochromonas minuta	--	--	1198	16772	--	--
Ochromonas sp.	2451	34307	--	--	--	--
Unknown flagellate	--	--	545	6535	109	3703
CYANOPHYTA (Blue-green algae)						
Aphanocapsa delicatissima	--	--	8604	2581	9693	2908
Aphanocapsa elachista	17426	52278	--	--	--	--
Aphanothece saxicola	--	--	762	762	1852	1852
Microcystis incerta	--	--	109	218	--	--
Oscillatoria limnetica	--	--	327	41496	109	13832
Oscillatoria sp.	545	69159	--	--	--	--
Spirogyra sp.	545	1634	1852	5555	1198	3594
EUGLENOPHYTA (Euglenoids)						
Euglena elongata	--	--	109	88110	--	--
Euglena sp.	817	44109	--	--	--	--
TOTAL CELLS/mL	42,381		38,122		35,727	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/mL)	4,276,459		1,295,334		1,383,338	
NUMBER OF SPECIES	20		25		26	

11166740 CALERO RESERVOIR NEAR NEW ALMADEN, CA--Continued

371057121472501 CALERO RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

PARTICLE SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	BED MAT. FALL DIAM.DW % FINER THAN .002 MM	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM.DW % FINER THAN .008 MM	BED MAT. FALL DIAM.DW % FINER THAN .016 MM	BED MAT. FALL DIAM.DW % FINER THAN .031 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM
APR 18...	1230	15	25	42	51	53	54

DATE	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM
APR 18...	61	69	75	80	86	92	100

11166900 ALAMITOS CREEK NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°13'21", long 121°51'00", in Pueblo Lands of San Jose Grant, Santa Clara County, on right bank at Greystone bridge, 1.1 mi downstream from Arroyo Calero, 3.4 mi southwest of Edenvale, and 3.5 mi northwest of New Almaden.
DRAINAGE AREA.--31.8 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1958-72.
CHEMICAL DATA: Water years 1985 to current year.
SEDIMENT DATA: Water years 1985, 1987-89.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)
OCT										
25...	1330	1.5	653	8.1	17.0	0.90	760	9.7	101	17
JAN										
13...	1430	19	176	7.8	12.5	80	--	--	--	48
FEB										
17...	1145	35	413	8.1	9.0	50	750	11.2	99	41
AUG										
28...	1615	1.6	675	8.4	24.0	1.2	755	11.6	139	16

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT										
25...	280	38	46	32	20	0.8	2.5	223	37	73
JAN										
13...	66	11	9.3	9.3	23	0.5	2.1	58	11	17
FEB										
17...	180	26	27	19	19	0.6	3.2	121	41	36
AUG										
28...	270	37	44	36	22	0.9	1.8	230	34	70

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT									
25...	0.10	28	391	0.53	0.010	0.600	0.030	0.030	0.20
JAN									
13...	<0.10	6.4	102	0.14	0.050	0.500	0.130	0.100	1.3
FEB									
17...	0.10	12	238	0.32	0.100	2.40	0.180	0.070	1.6
AUG									
28...	0.50	26	388	0.53	<0.010	0.300	0.030	0.020	<0.20

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT									
25...	0.50	0.80	0.060	0.050	0.040	180	21	3.1	0.2
JAN									
13...	0.40	1.8	0.240	0.120	0.110	50	120	5.6	3.7
FEB									
17...	1.7	4.0	0.280	0.170	0.150	110	130	7.3	1.8
AUG									
28...	0.30	--	0.020	0.010	0.010	250	11	2.4	0.3

11167500 GUADALUPE CREEK AT GUADALUPE, CA

LOCATION.--Lat 37°13'02", long 121°54'35", in SW 1/4 sec.19, T.8 S, R.1 E., Santa Clara County, Hydrologic Unit 18050003, on left bank 0.1 mi downstream from small left-bank tributary, 0.5 mi northwest of Guadalupe.
DRAINAGE AREA.--12.8 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1930-59.
CHEMICAL DATA: Water years 1980 to current year.
SEDIMENT DATA: Water years 1985-89.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)
OCT										
25...	1500	1.2	533	8.2	14.5	8.4	755	10.0	99	16
JAN										
13...	1300	12	442	8.1	10.5	45	--	--	--	41
FEB										
17...	1000	14	431	8.2	8.0	550	750	--	--	140
AUG										
28...	1400	0.49	574	8.4	20.5	1.5	755	9.2	103	16

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	CARBONATE WATER WH FET FIELD MG/L AS CO3	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
OCT										
25...	250	52	29	27	19	0.7	2.2	--	216	60
JAN										
13...	220	40	28	21	17	0.6	2.2	--	198	45
FEB										
17...	210	34	31	16	14	0.5	1.9	--	169	58
AUG										
28...	260	43	38	29	19	0.8	1.7	2	267	36

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT										
25...	18	0.20	16	334	0.45	0.010	0.200	0.030	0.010	0.40
JAN										
13...	14	0.10	13	283	0.38	<0.010	0.300	0.030	0.020	0.70
FEB										
17...	16	0.10	17	276	0.38	0.430	1.00	0.380	0.040	1.4
AUG										
28...	21	0.30	11	341	0.46	<0.010	<0.100	0.010	<0.010	<0.20

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT									
25...	0.30	0.60	0.050	0.030	0.020	230	17	5.5	0.3
JAN									
13...	0.30	1.0	0.090	0.050	0.050	310	36	6.2	2.1
FEB									
17...	1.4	2.4	0.350	0.040	0.050	130	150	7.4	15
AUG									
28...	0.20	--	0.020	<0.010	<0.010	610	9	3.1	0.2

11167572 GUADALUPE RIVER AT ALAMITOS RECHARGE FACILITY, AT SAN JOSE, CA

LOCATION.--Lat 37°14'51", long 121°52'08", in San Juan Bautista Grant, Santa Clara County, Hydrologic Unit 18050003, at south city limits of San Jose, 0.2 mi downstream from confluence at Alamitos and Guadalupe Creeks.
DRAINAGE AREA.--53.0 mi^2.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1979 to current year.
SEDIMENT DATA: Water years 1985-87, 1989.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)
OCT										
25...	1030	28	663	7.9	17.5	15	760	7.9	83	22
JAN										
13...	1550	28	509	7.7	12.0	20	--	--	--	26
FEB										
17...	1400	62	505	8.0	11.0	20	750	10.1	93	31
AUG										
27...	1530	6.2	[1]671	8.8	25.0	1.1	760	9.5	116	22

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER WH FET FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT										
25...	240	38	35	50	31	1	2.6	--	179	53
JAN										
13...	210	33	30	34	26	1	2.2	--	157	42
FEB										
17...	220	34	32	28	22	0.8	2.7	--	162	47
AUG										
27...	190	28	28	63	42	2	2.8	8	139	42

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT										
25...	78	0.10	17	381	0.52	0.020	0.400	0.090	0.070	0.50
JAN										
13...	59	<0.10	14	309	0.42	0.050	0.800	0.160	0.150	0.80
FEB										
17...	49	0.10	15	306	0.42	0.090	1.30	0.290	0.190	1.7
AUG										
27...	100	0.30	12	360	0.49	<0.010	<0.100	0.020	0.010	0.30

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT									
25...	0.30	0.90	0.070	0.020	<0.010	190	13	3.3	0.8
JAN									
13...	0.60	1.6	0.100	0.060	0.060	160	24	5.6	1.0
FEB									
17...	0.60	3.0	0.200	0.110	0.110	130	67	5.0	1.0
AUG									
27...	0.30	--	0.020	0.010	<0.010	190	<3	3.3	0.5

11168660 LOS GATOS CREEK AT LARK AVENUE, AT LOS GATOS, CA

LOCATION.--Lat 37°15'07", long 121°57'48", in Rinconada de Los Gatos Grant, Santa Clara County, Hydrologic Unit 18050003, at bridge on Lark Avenue, 1,800 ft downstream from Vasona Dam, and 2 mi northeast of Los Gatos Post Office.

DRAINAGE AREA.--43.3 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1979 to current year.
SEDIMENT DATA: Water years 1985-89.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)
OCT										
26...	0815	3.3	587	7.9	15.5	1.8	760	7.7	78	38
JAN										
13...	1020	3.7	543	7.9	12.0	3.0	--	--	--	17
FEB										
16...	1600	4.2	386	8.1	10.5	14	750	10.2	93	32
AUG										
28...	1130	4.6	592	8.2	23.0	1.5	755	9.5	112	21

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT										
26...	270	63	27	24	16	0.6	3.3	180	130	19
JAN										
13...	270	65	25	23	16	0.6	2.7	192	100	19
FEB										
16...	170	42	17	17	17	0.6	2.5	125	62	19
AUG										
28...	250	56	27	29	20	0.8	3.0	184	110	21

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT									
26...	0.20	11	386	0.52	0.020	0.100	0.150	0.140	1.2
JAN									
13...	0.10	8.8	359	0.49	0.010	<0.100	0.040	0.040	0.40
FEB									
16...	0.10	7.0	242	0.33	0.040	0.600	0.100	0.060	1.0
AUG									
28...	0.60	11	368	0.50	<0.010	<0.100	0.030	0.010	0.30

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT									
26...	0.80	1.3	0.070	<0.010	<0.010	100	11	5.0	1.3
JAN									
13...	<0.20	--	0.040	0.020	0.010	110	21	4.0	0.5
FEB									
16...	1.6	1.6	0.140	0.080	0.070	80	51	5.5	0.8
AUG									
28...	0.20	--	0.060	0.020	0.010	140	6	2.8	0.7

11169000 GUADALUPE RIVER AT SAN JOSE, CA

LOCATION.--Lat 37°20'04", long 121°53'54", Santa Clara County, Hydrologic Unit 18050003, on right bank 150 ft upstream from St. John Street bridge, one block below Santa Clara Avenue, and 100 ft downstream from Los Gatos Creek.

DRAINAGE AREA.--146 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to 1945, published as Guadalupe Creek at San Jose.

REVISED RECORDS.--WSP 1315-B: 1943(M), 1945(M), 1949(M). WSP 1929: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 72.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for daily discharges during March to September, which are fair, and estimated daily discharges, which are poor. Flow regulated by Lexington Reservoir 12 mi upstream and by Calero, Almaden, and Guadalupe Reservoirs, and Lake Elsman (combined usable capacity, about 42,000 acre-ft), with water released during summer for percolation in spreading basins on tributaries. Transbasin diversions from San Luis Reservoir (part of San Felipe Project) and from the South Bay Aqueduct during the current year amounted to 75,600 acre-ft and 116,500 acre-ft, respectively. Upstream diversions by San Jose Water Works for urban use amounted to 4,690 acre-ft during the current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,150 ft^3/s, Apr. 2, 1958, gage height, 16.55 ft; no flow several days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,980 ft^3/s, Feb. 16, gage height, 5.99 ft; minimum daily, 0.26 ft^3/s, Aug. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	e1.5	2.8	50	13	3.1	3.7	1.3	2.8	2.3	1.1	.60
2	1.7	e1.7	2.6	20	3.7	81	3.5	1.8	2.4	1.8	.97	.87
3	1.5	e1.7	2.6	3.6	196	20	3.4	2.0	2.4	1.8	1.1	.67
4	18	e1.7	2.8	3.4	103	33	3.4	2.2	2.4	2.3	1.1	.78
5	2.8	e1.6	2.8	3.5	12	12	3.4	2.2	2.1	2.4	1.2	.77
6	2.0	e1.6	2.6	3.6	27	3.9	2.9	1.9	2.1	2.2	1.0	.54
7	1.5	e1.6	2.9	2.8	6.9	3.5	2.5	2.0	2.3	1.9	1.5	.51
8	2.1	2.0	3.3	2.8	4.2	3.4	2.5	4.7	2.1	1.8	.94	.59
9	2.1	2.1	3.0	3.4	3.5	2.9	2.7	3.7	1.7	1.8	.60	.50
10	1.7	2.3	3.2	3.5	3.8	7.7	2.4	3.5	2.4	1.6	.76	.80
11	1.5	2.3	3.3	3.7	3.7	16	2.2	3.5	2.9	1.6	1.1	1.5
12	1.4	2.2	3.5	48	3.5	3.9	2.0	3.1	2.6	1.5	1.1	1.5
13	1.3	2.1	3.4	233	3.1	3.6	2.2	3.7	2.4	1.6	.69	1.5
14	1.2	2.2	3.5	193	2.9	3.9	2.2	3.8	2.3	1.5	.53	1.4
15	1.5	2.3	4.7	26	3.1	4.2	1.9	3.7	2.4	1.4	.64	1.4
16	1.9	2.5	3.7	43	595	4.3	2.3	3.9	2.4	4.3	.73	1.6
17	1.8	2.5	3.6	11	131	4.3	2.1	3.7	2.4	2.2	.66	1.5
18	1.6	2.5	3.6	4.4	36	4.3	2.3	3.2	2.5	2.1	.70	1.4
19	1.1	2.4	3.5	3.6	15	4.2	2.6	3.3	2.5	1.7	.54	1.5
20	.88	2.5	3.6	3.5	9.0	4.2	2.7	4.0	2.2	1.5	.59	1.4
21	.86	2.2	3.9	3.5	4.7	3.9	2.3	3.8	1.8	1.8	.82	1.5
22	2.5	2.1	4.0	3.9	3.1	4.1	1.9	2.5	2.0	2.1	.62	8.6
23	329	2.7	3.9	4.9	3.0	3.9	6.6	45	2.4	2.2	.49	20
24	e60	3.0	4.2	4.4	3.3	4.0	3.8	9.0	2.3	2.1	.40	4.6
25	e17	163	4.0	4.0	3.2	3.8	2.1	3.0	1.9	1.8	.26	2.0
26	e5.8	139	4.0	3.8	3.2	4.0	1.6	2.0	1.7	1.1	.33	1.9
27	e2.4	11	3.7	3.8	3.1	3.7	1.6	117	1.7	1.1	1.1	2.1
28	e1.7	6.1	3.5	3.7	3.0	3.5	1.7	407	1.4	.80	1.2	1.8
29	e1.6	3.1	3.5	3.6	---	3.6	1.5	35	1.3	.56	.65	1.4
30	e1.7	2.7	3.4	12	---	3.5	1.1	14	1.8	.92	.30	1.7
31	e1.6	---	3.4	6.5	---	3.3	---	5.9	---	1.3	.58	---
TOTAL	473.64	376.2	106.5	719.9	1202.0	264.7	77.1	705.4	65.6	55.08	24.30	66.93
MEAN	15.3	12.5	3.44	23.2	42.9	8.54	2.57	22.8	2.19	1.78	.78	2.23
MAX	329	163	4.7	233	595	81	6.6	407	2.9	4.3	1.5	20
MIN	.86	1.5	2.6	2.8	2.9	2.9	1.1	1.3	1.3	.56	.26	.50
AC-FT	939	746	211	1430	2380	525	153	1400	130	109	48	133

CAL YR 1989 TOTAL 2625.77 MEAN 7.19 MAX 329 MIN .45 AC-FT 5210
WTR YR 1990 TOTAL 4137.35 MEAN 11.3 MAX 595 MIN .26 AC-FT 8210

e Estimated.

11169000 GUADALUPE RIVER AT SAN JOSE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1979 to current year.
SEDIMENT DATA: Water years 1985-89.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)
OCT										
24...	1700	--	320	7.6	17.5	140	760	9.0	94	70
25...	0815	29	309	7.6	16.0	44	760	8.1	82	39
JAN										
13...	1730	608	158	7.3	--	76	--	--	--	110
FEB										
17...	1545	210	346	8.1	10.0	42	750	10.2	92	62
AUG										
27...	1230	1.8	685	7.8	20.0	1.5	760	7.5	83	22

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT										
24...	120	22	15	23	30	0.9	2.3	94	26	33
25...	110	22	14	21	28	0.9	2.0	87	22	29
JAN										
13...	52	11	5.9	8.8	26	0.5	1.9	49	12	12
FEB										
17...	120	22	17	19	24	0.7	2.0	110	29	33
AUG										
27...	310	73	31	35	20	0.9	3.3	228	63	60

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT									
24...	0.10	8.9	187	0.25	0.040	0.500	0.050	0.030	0.60
25...	0.10	8.8	171	0.23	0.040	0.400	0.040	0.020	0.80
JAN									
13...	<0.10	4.3	86	0.12	0.050	0.500	0.150	0.100	1.6
FEB									
17...	0.10	9.5	198	0.27	0.110	1.00	0.280	0.180	1.1
AUG									
27...	0.30	22	425	0.58	0.010	5.10	0.030	0.030	0.70

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT									
24...	0.40	1.1	0.220	0.090	0.070	100	64	9.3	4.8
25...	0.70	1.2	0.190	0.090	0.060	90	89	7.4	1.7
JAN									
13...	0.60	2.1	0.270	0.150	0.130	50	110	4.2	--
FEB									
17...	1.4	2.1	0.250	0.100	0.100	80	91	6.6	3.4
AUG									
27...	0.60	5.8	0.110	0.080	0.070	130	23	3.6	0.3

11169500 SARATOGA CREEK AT SARATOGA, CA

LOCATION.--Lat 37°15'16", long 122°02'18", in Quito Grant, Santa Clara County, Hydrologic Unit 18050003, on right bank on upstream side of private road bridge, 0.5 mi southwest of Saratoga, and 0.7 mi downstream from diversion dam.

DRAINAGE AREA.--9.22 mi^2.

PERIOD OF RECORD.--October 1933 to current year. Prior to October 1951, published as Campbell Creek at Saratoga.

REVISED RECORDS.--WSP 1445: 1940, 1952(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 6, 1968, at site 40 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Water is diverted for municipal use by San Jose Water Works at diversion dam upstream from station. Low flows partially regulated by Lake McKenzie 8 mi upstream, usable capacity, 184 acre-ft.

AVERAGE DISCHARGE (adjusted for diversion).--57 years, 10.1 ft^3/s, 7,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,730 ft^3/s, Dec. 22, 1955, gage height, 6.40 ft, site and datum then in use, from rating curve extended above 510 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 7.03 ft, Jan. 24, 1983; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1415	*119	*3.70				

Minimum daily, 0.16 ft^3/s, Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	2.4	2.8	3.0	2.8	.79	.63	.99	1.8	.63	.37	.33
2	.35	2.4	2.8	2.7	2.0	1.6	.70	.94	1.5	.63	.42	.32
3	.35	2.6	2.8	2.5	5.4	2.1	.58	.91	1.3	.66	.40	.32
4	.30	2.5	2.8	2.5	6.0	2.7	.55	.90	1.3	.62	.37	.34
5	.26	2.5	2.8	2.5	3.5	2.3	.52	.85	1.2	.56	.31	.34
6	.22	2.6	2.7	2.5	3.1	1.0	1.1	.84	1.2	.52	.27	.29
7	.18	2.6	2.5	2.5	2.6	1.0	1.4	.84	1.1	.51	.30	.34
8	.16	2.7	2.5	2.5	2.5	.95	1.4	.79	1.1	.53	.25	.29
9	.17	2.7	2.4	2.5	2.5	2.9	1.1	.79	.97	.52	.21	.25
10	.18	2.8	2.4	2.5	2.5	3.0	.82	.90	1.0	.54	.20	.24
11	.21	2.8	2.5	2.4	2.4	3.3	2.3	.89	1.0	.48	.19	.33
12	.21	2.7	2.5	11	1.8	2.9	1.5	.87	1.0	.36	.30	.34
13	.26	2.8	2.5	26	2.0	2.5	1.3	.81	.94	.38	.36	.32
14	.24	2.8	2.5	18	1.3	2.6	1.1	.79	1.1	.43	.33	.31
15	.26	2.8	2.5	7.7	.53	2.5	1.1	.77	.97	.47	.25	.31
16	.29	2.8	2.5	5.9	37	1.9	1.2	.81	.95	.50	.30	.32
17	.29	2.8	2.5	4.2	21	1.8	1.2	.86	.84	.52	.35	.32
18	.76	2.8	2.5	3.4	12	2.4	1.3	.86	.82	.46	.37	.29
19	1.4	2.7	2.5	3.1	5.3	2.3	1.3	.91	.83	.48	.32	.30
20	1.5	2.8	2.5	2.8	3.1	2.4	1.3	1.3	.70	.50	.29	.31
21	3.7	2.8	2.5	2.5	2.2	2.3	1.2	1.2	.65	.48	.35	.33
22	2.6	2.8	2.5	2.5	1.9	2.2	1.2	.90	.68	.43	.39	.41
23	13	2.8	2.4	2.2	1.5	1.5	1.4	1.4	.78	.45	.32	.56
24	4.5	2.8	2.4	2.2	.99	.81	1.3	1.1	.76	.52	.33	.55
25	3.2	7.7	2.4	2.1	.97	.76	1.2	.87	.76	.42	.42	.51
26	2.7	6.5	2.2	1.9	1.9	.76	1.1	.88	.64	.39	.41	.49
27	2.6	3.8	2.2	1.8	.63	.81	1.1	2.2	.63	.46	.35	.46
28	2.6	3.4	2.4	1.7	.58	.81	1.0	8.4	.59	.45	.31	.40
29	2.5	3.1	2.4	1.7	---	.80	1.1	2.0	.67	.37	.29	.37
30	2.5	3.0	2.4	2.3	---	.56	1.1	2.4	.60	.39	.32	.35
31	2.5	---	2.4	2.1	---	.59	---	2.8	---	.37	.34	---
TOTAL	50.31	92.3	77.7	133.2	130.00	54.84	34.10	41.77	28.38	15.03	9.99	10.64
MEAN	1.62	3.08	2.51	4.30	4.64	1.77	1.14	1.35	.95	.48	.32	.35
MAX	13	7.7	2.8	26	37	3.3	2.3	8.4	1.8	.66	.42	.56
MIN	.16	2.4	2.2	1.7	.53	.56	.52	.77	.59	.36	.19	.24
AC-FT	100	183	154	264	258	109	68	83	56	30	20	21
a	0	0	0	0	75	60	18	0	0	0	0	0

CAL YR 1989 TOTAL 633.31 MEAN 1.74 MAX 46 MIN .03 AC-FT 1260
WTR YR 1990 TOTAL 678.26 MEAN 1.86 MAX 37 MIN .16 AC-FT 1350

a Diversion, in acre-feet, for municipal use, provided by San Jose Water Works.

11176000 ARROYO MOCHO NEAR LIVERMORE, CA

LOCATION.--Lat 37°37'35", long 121°42'13", in NW 1/4 SE 1/4 sec.36, T.3 S., R.2 E., Alameda County, Hydrologic Unit 18050004, on right bank 40 ft downstream from Mines Road bridge, 2.4 mi upstream from small right-bank tributary, and 5.2 mi southeast of Livermore.

DRAINAGE AREA.--38.2 mi^2.

PERIOD OF RECORD.--January 1912 to September 1930, October 1963 to current year. Records for water year 1914 incomplete; yearly estimate and monthly discharge only for some months, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 746.49 ft above National Geodetic Vertical Datum of 1929. January 1912 to October 1914, at present site at different datum. November 1914 to Sept. 30, 1930, at site 1 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--45 years, 4.99 ft^3/s, 3,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 2,250 ft^3/s, Jan. 24, 1983, gage height, 8.80 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 10.44 ft, Feb. 19, 1986, from floodmarks; no flow for parts of most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a discharge of 1,880 ft^3/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	2400	*47	*5.82				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.37	.46	.20	.10	.03	.00	.00	.00
2	.00	.00	.00	.00	.42	.68	.20	.10	.03	.00	.00	.00
3	.00	.00	.00	.00	.83	1.5	.21	.08	.03	.00	.00	.00
4	.00	.00	.00	.00	3.9	1.6	.22	.08	.03	.00	.00	.00
5	.00	.00	.00	.00	2.1	1.3	.20	.07	.03	.00	.00	.00
6	.00	.00	.00	.00	1.2	1.4	.20	.07	.03	.00	.00	.00
7	.00	.00	.00	.00	.94	1.1	.20	.07	.04	.00	.00	.00
8	.00	.00	.00	.00	.76	.68	.23	.07	.04	.00	.00	.00
9	.00	.00	.00	.00	.66	.52	.23	.07	.04	.00	.00	.00
10	.00	.00	.00	.00	.59	.60	.23	.05	.03	.00	.00	.00
11	.00	.00	.00	.00	.59	1.0	.21	.05	.03	.00	.00	.00
12	.00	.00	.00	.00	.57	1.1	.18	.05	.03	.00	.00	.00
13	.00	.00	.00	.00	.46	.57	.18	.05	.03	.00	.00	.00
14	.00	.00	.00	.00	.41	.52	.18	.05	.03	.00	.00	.00
15	.00	.00	.00	.00	.37	.49	.16	.05	.03	.00	.00	.00
16	.00	.00	.00	.00	7.4	.47	.16	.05	.03	.00	.00	.00
17	.00	.00	.00	.00	17	.47	.14	.05	.03	.00	.00	.00
18	.00	.00	.00	.14	8.5	.46	.12	.05	.03	.00	.00	.00
19	.00	.00	.00	.33	4.7	.43	.12	.03	.03	.00	.00	.00
20	.00	.00	.00	.37	2.8	.37	.12	.03	.02	.00	.00	.00
21	.00	.00	.00	.37	2.0	.35	.11	.03	.02	.00	.00	.00
22	.00	.00	.00	.36	1.6	.29	.11	.03	.01	.00	.00	.00
23	.00	.00	.00	.33	1.3	.29	.12	.03	.01	.00	.00	.00
24	.00	.00	.00	.33	1.0	.27	.11	.03	.01	.00	.00	.00
25	.00	.00	.00	.33	.81	.23	.11	.03	.01	.00	.00	.00
26	.00	.00	.00	.33	.66	.23	.11	.03	.01	.00	.00	.00
27	.00	.00	.00	.31	.57	.25	.11	.07	.01	.00	.00	.00
28	.00	.00	.00	.33	.48	.20	.10	.07	.00	.00	.00	.00
29	.00	.00	.00	.33	---	.20	.10	.05	.00	.00	.00	.00
30	.00	.00	.00	.36	---	.20	.10	.04	.00	.00	.00	.00
31	.00	---	.00	.37	---	.20	---	.03	---	.00	.00	---
TOTAL	0.00	0.00	0.00	4.59	62.99	18.43	4.77	1.66	0.70	0.00	0.00	0.00
MEAN	.000	.000	.000	.15	2.25	.59	.16	.054	.023	.000	.000	.000
MAX	.00	.00	.00	.37	17	1.6	.23	.10	.04	.00	.00	.00
MIN	.00	.00	.00	.00	.37	.20	.10	.03	.00	.00	.00	.00
AC-FT	.00	.00	.00	9.1	125	37	9.5	3.3	1.4	.00	.00	.00

CAL YR 1989 TOTAL 94.85 MEAN .26 MAX 3.1 MIN .00 AC-FT 188
WTR YR 1990 TOTAL 93.14 MEAN .26 MAX 17 MIN .00 AC-FT 185

11176400 ARROYO VALLE BELOW LANG CANYON, NEAR LIVERMORE, CA

LOCATION.--Lat 37°33'41", long 121°40'58", in NE 1/4 NE 1/4 sec.30, T.4 S., R.3 E., Alameda County, Hydrologic Unit 18050004, on left bank 100 ft upstream from small left-bank tributary, 1.2 mi downstream from Lang Canyon, and 9.5 mi southeast of Livermore.

DRAINAGE AREA.--130 mi^2.

PERIOD OF RECORD.--October 1963 to current year. Prior to October 1974, published as "above Lang Canyon, near Livermore."

GAGE.--Water-stage recorder. Concrete control since June 19, 1975. Elevation of gage is 750 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 19, 1975, at site 1.4 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--27 years, 34.4 ft^3/s, 24,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,790 ft^3/s, Feb. 17, 1986, gage height, 7.36 ft, from rating curve extended above 1,000 ft^3/s on basis of slope-area measurements at gage heights 4.13, 5.40, and 7.36 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	0515	*86	*1.31				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	1.5	3.1	1.5	.00	1.1	.00	.00	.00
2	.00	.00	.00	.10	1.4	3.3	1.5	.00	.35	.00	.00	.00
3	.00	.00	.00	.02	1.7	4.5	1.5	.00	.03	.00	.00	.00
4	.00	.00	.00	.00	5.3	5.3	1.5	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	4.7	7.1	1.5	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	3.3	6.1	1.5	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	2.3	4.7	1.5	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	1.8	3.8	1.5	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	1.5	3.3	1.5	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	1.5	3.3	1.4	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	1.5	4.5	1.3	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	1.5	4.8	1.1	.00	.00	.00	.00	.00
13	.00	.00	.00	3.2	1.3	4.6	1.0	.00	.00	.00	.00	.00
14	.00	.00	.00	7.8	1.0	3.9	.97	.00	.00	.00	.00	.00
15	.00	.00	.00	6.8	1.0	3.5	.88	.00	.00	.00	.00	.00
16	.00	.00	.00	2.7	20	3.1	.97	.00	.00	.00	.00	.00
17	.00	.00	.00	2.1	55	3.1	1.2	.00	.00	.00	.00	.00
18	.00	.00	.00	1.5	34	2.8	1.0	.00	.00	.00	.00	.00
19	.00	.00	.00	1.2	22	2.5	.99	.00	.00	.00	.00	.00
20	.00	.00	.00	.84	15	2.5	.87	.00	.00	.00	.00	.00
21	.00	.00	.00	.98	10	2.2	.74	.00	.00	.00	.00	.00
22	.00	.00	.00	1.0	12	1.9	.73	.00	.00	.00	.00	.00
23	.00	.00	.00	1.0	11	1.9	.98	.00	.00	.00	.00	.00
24	.00	.00	.00	.96	8.3	1.9	1.0	.00	.00	.00	.00	.00
25	.00	.00	.00	.84	6.3	1.9	.82	.00	.00	.00	.00	.00
26	.00	1.1	.00	.74	4.9	1.9	.66	.00	.00	.00	.00	.00
27	.00	1.2	.00	.74	3.9	1.7	.44	.00	.00	.00	.00	.00
28	.00	.34	.00	.74	3.3	1.5	.28	.00	.00	.00	.00	.00
29	.00	.02	.00	.74	---	1.5	.13	.63	.00	.00	.00	.00
30	.00	.00	.00	1.2	---	1.5	.04	1.0	.00	.00	.00	.00
31	.00	---	.00	1.4	---	1.5	---	1.5	---	.00	.00	---
TOTAL	0.00	2.66	0.00	36.60	237.0	99.2	31.00	3.13	1.48	0.00	0.00	0.00
MEAN	.000	.089	.000	1.18	8.46	3.20	1.03	.10	.049	.000	.000	.000
MAX	.00	1.2	.00	7.8	55	7.1	1.5	1.5	1.1	.00	.00	.00
MIN	.00	.00	.00	.00	1.0	1.5	.04	.00	.00	.00	.00	.00
AC-FT	.00	5.3	.00	73	470	197	61	6.2	2.9	.00	.00	.00

CAL YR 1989 TOTAL 842.42 MEAN 2.31 MAX 74 MIN .00 AC-FT 1670
WTR YR 1990 TOTAL 411.07 MEAN 1.13 MAX 55 MIN .00 AC-FT 815

11176500 ARROYO VALLE NEAR LIVERMORE, CA

LOCATION.--Lat 37°37'24", long 121°45'28", in Valle de San Jose Grant, Alameda County, Hydrologic Unit 18050004, on right bank 900 ft downstream from highway bridge, 1.1 mi upstream from Dry Creek, 1.3 mi downstream from Del Valle Dam, 4.1 mi south of Livermore, and 6.9 mi southeast of Pleasanton.

DRAINAGE AREA.--147 mi^2.

PERIOD OF RECORD.--January 1912 to September 1930, October 1957 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as Arroyo del Valle near Livermore, 1912-29.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 510.44 ft above National Geodetic Vertical Datum of 1929. Prior to November 1914, at site 900 ft upstream at different datum. Nov. 1, 1914, to Sept. 30, 1930, at site 300 ft upstream at different datum.

REMARKS.--Records fair. Flow regulated by Del Valle Reservoir 1.3 mi upstream beginning in September 1968, capacity, 77,100 acre-ft. Water from Sacramento-San Joaquin Delta imported through South Bay Aqueduct can be pumped into Del Valle Reservoir for storage and later released into the channel for downstream percolation or returned to the South Bay Aqueduct.

AVERAGE DISCHARGE.--29 years (1912-30, 1957-68), 29.6 ft^3/s, 21,450 acre-ft/yr; 22 years (1969-90), 25.5 ft^3/s, 18,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft^3/s, Apr. 2, 1958, gage height, 10.91 ft; no flow at times. Maximum discharge since construction of Del Valle Dam in 1968, 2,850 ft^3/s, Mar. 3, 1983, gage height, 8.89 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 13.9 ft from floodmarks, discharge, 18,200 ft^3/s, on basis of contracted-opening and slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11 ft^3/s, Feb. 26, gage height, 2.64 ft; minimum daily, 0.06 ft^3/s, July 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.52	.53	.47	.24	.51	.25	.25	.15	.20	.34	e.26
2	.21	.46	.52	.44	.24	.49	.24	.27	.14	.20	.34	e.31
3	e.24	.43	.52	.43	.32	.49	.23	.26	.13	.18	.42	e.29
4	e.24	.43	.52	.43	.40	.47	.22	.25	.12	.14	e.38	e.29
5	e.24	.44	.52	.43	.29	.50	.20	.27	.14	.13	e.29	e.24
6	e.24	.51	.43	.43	.26	.50	.21	.26	.13	.11	e.29	e.24
7	e.24	.43	.47	.40	.24	.43	.24	.22	.15	.11	e.24	e.24
8	e.24	.43	.45	.42	.24	.43	.29	.24	.12	.10	e.19	e.24
9	e.24	.43	.43	.38	.24	.48	.28	.25	.11	.10	e.17	e.24
10	e.24	.43	.47	.33	.24	.52	.28	.24	.15	.08	e.16	e.24
11	e.24	.41	.43	.30	.25	.44	.28	.24	.15	.08	e.18	e.19
12	e.36	.37	.43	.36	.24	.43	.23	.25	.13	.07	e.19	.17
13	e.36	.50	.47	.46	.24	.43	.22	.28	.15	.06	e.19	.17
14	e.36	.49	.48	.48	.27	.48	.19	.24	.17	.37	e.19	.16
15	e.36	.52	.52	.46	.31	.52	.20	.23	.17	.19	e.19	.20
16	e.43	.54	.53	.46	1.1	.53	.20	.22	.18	.18	e.19	.20
17	e.43	.52	.52	.41	.67	.54	.22	.22	.19	.15	e.19	.20
18	e.43	.52	.52	.36	.52	.41	.21	.19	.18	.14	e.19	.21
19	e.36	.55	.52	.32	.43	.35	.21	.19	.15	.14	e.19	.24
20	.40	.52	.52	.29	3.6	.29	.22	.18	.13	.15	e.19	.22
21	.47	.54	.52	.29	9.9	.29	.21	.18	.13	.17	e.19	.24
22	.49	.51	.52	.29	10	.29	.19	.18	.14	.17	e.18	.26
23	1.6	.52	.52	.29	10	.31	.21	.21	.15	.18	e.16	.28
24	1.8	.60	.51	.29	10	.24	.20	.18	.15	.19	e.16	.27
25	2.3	.81	.44	.25	10	.24	.21	.19	.14	.21	e.16	.27
26	.60	.92	.43	.24	10	.22	.20	.20	.14	.22	e.19	.26
27	.56	.66	.43	.24	5.8	.22	.19	.29	.15	.23	e.24	.28
28	.49	.62	.43	.24	.56	.24	.19	.33	.18	.27	e.24	.31
29	.48	.62	.45	.24	---	.25	.20	.22	.20	.26	e.24	.27
30	.47	.62	.43	.24	---	.24	.22	.19	.20	.24	e.24	.27
31	.51	---	.43	.19	---	.24	---	.18	---	.25	e.24	---
TOTAL	15.81	15.87	14.91	10.86	76.60	12.02	6.64	7.10	4.52	5.27	6.95	7.26
MEAN	.51	.53	.48	.35	2.74	.39	.22	.23	.15	.17	.22	.24
MAX	2.3	.92	.53	.48	10	.54	.29	.33	.20	.37	.42	.31
MIN	.18	.37	.43	.19	.24	.22	.19	.18	.11	.06	.16	.16
AC-FT	31	31	30	22	152	24	13	14	9.0	10	14	14

CAL YR 1989 TOTAL 453.06 MEAN 1.24 MAX 12 MIN .05 AC-FT 899
WTR YR 1990 TOTAL 183.81 MEAN .50 MAX 10 MIN .06 AC-FT 365

e Estimated.

11177000 ARROYO DE LA LAGUNA NEAR PLEASANTON, CA

LOCATION.--Lat 37°36'55", long 121°52'50", in Valle de San Jose Grant, Alameda County, Hydrologic Unit 18050004, on right bank 0.3 mi upstream from small left bank tributary, 0.8 mi downstream from highway bridge, and 3.2 mi south of Pleasanton.

DRAINAGE AREA.--405 mi^2.

PERIOD OF RECORD.--January 1912 to September 1930, October 1969 to September 1983, October 1987 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 248.40 ft above National Geodetic Vertical Datum of 1929. January 1912 to September 1917, at site 3.0 mi upstream at different datum. October 1917 to September 1930, at site 0.8 mi downstream at different datum. October 1969 to September 1983, at datum 3.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow partly regulated by Del Valle Reservoir 15 mi upstream, capacity, 77,100 acre-ft. Water imported from Sacramento-San Joaquin Delta (see REMARKS for station 11176500).

AVERAGE DISCHARGE.--17 years (water years 1913-19, 1921-30), 42.5 ft^3/s, 30,790 acre-ft/yr; 17 years (water years 1970-83, 1988-90), 66.5 ft^3/s, 48,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s, Jan. 5, 1982, gage height, 22.61 ft, present datum; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,520 ft^3/s, Feb. 16, gage height, 11.14 ft; minimum daily, 0.33 ft^3/s, July 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	3.9	4.9	31	35	6.5	6.4	6.7	11	2.5	3.2	3.3
2	5.7	3.4	4.9	37	7.7	27	7.9	6.5	6.2	1.1	3.7	3.3
3	5.1	3.2	8.9	12	84	36	5.8	8.0	8.1	4.4	4.3	3.3
4	4.9	3.2	8.8	6.6	100	48	4.8	8.0	7.8	3.6	3.5	3.3
5	5.0	3.7	5.4	5.4	19	28	4.3	8.4	5.4	2.3	3.4	3.1
6	4.7	6.5	4.9	7.4	21	12	4.4	8.9	4.2	2.5	2.9	3.0
7	4.7	4.2	5.2	11	13	9.1	3.8	11	4.1	2.6	4.0	3.0
8	4.6	3.7	6.3	20	9.1	8.1	4.0	11	4.1	2.3	3.5	3.9
9	4.7	3.2	6.7	11	7.1	6.0	4.0	10	3.8	2.4	2.9	3.5
10	4.2	3.1	12	6.9	5.9	13	4.4	12	3.6	.94	1.4	4.6
11	4.1	3.3	12	6.9	9.0	25	4.2	13	3.3	.33	1.3	4.8
12	4.1	7.2	6.7	84	8.9	10	4.6	13	1.8	1.4	2.2	3.9
13	4.3	8.2	6.3	191	6.3	7.0	5.0	14	1.4	2.5	3.1	3.4
14	4.2	5.1	7.4	70	5.4	6.0	6.7	13	1.2	2.5	4.2	3.2
15	4.4	4.0	4.9	29	4.8	6.4	4.8	13	4.3	.73	4.9	3.5
16	4.7	3.3	4.6	50	641	5.7	4.6	11	3.3	4.2	4.6	3.5
17	4.6	3.2	4.6	22	242	5.5	5.1	9.5	2.8	5.9	4.9	3.7
18	5.5	3.2	7.0	7.2	79	5.2	5.7	11	3.6	3.8	4.3	3.8
19	4.9	3.2	6.3	4.7	30	8.4	5.9	10	3.2	3.1	4.1	3.5
20	4.7	6.5	4.9	4.1	19	9.1	6.4	25	3.5	3.0	4.5	3.5
21	26	4.3	4.9	6.0	13	8.4	6.1	15	3.1	2.9	4.9	3.3
22	21	4.6	4.4	6.0	9.5	7.9	6.4	6.9	2.3	2.6	4.2	3.7
23	417	4.3	7.1	6.3	9.2	7.3	36	56	3.1	2.8	4.4	13
24	102	16	7.7	6.1	8.5	7.3	13	16	2.6	2.9	4.5	6.3
25	32	196	8.4	4.0	11	8.5	6.0	9.4	3.1	2.9	4.0	5.5
26	10	187	7.9	2.7	12	6.7	5.3	5.9	1.5	2.7	3.4	5.7
27	5.9	26	5.1	3.0	8.7	5.8	4.0	50	2.8	2.9	3.5	5.0
28	4.4	10	5.3	2.0	7.2	5.5	4.1	261	4.0	3.3	4.3	4.5
29	4.2	6.5	4.8	2.3	---	4.5	4.3	31	1.9	3.5	3.7	4.3
30	6.5	5.5	4.5	22	---	4.5	6.6	18	4.1	3.5	3.4	4.4
31	4.7	---	7.5	8.2	---	4.4	---	37	---	3.7	3.6	---
TOTAL	730.7	545.5	200.3	685.8	1426.3	352.8	194.6	729.2	115.2	85.80	114.8	126.8
MEAN	23.6	18.2	6.46	22.1	50.9	11.4	6.49	23.5	3.84	2.77	3.70	4.23
MAX	417	196	12	191	641	48	36	261	11	5.9	4.9	13
MIN	4.1	3.1	4.4	2.0	4.8	4.4	3.8	5.9	1.2	.33	1.3	3.0
AC-FT	1450	1080	397	1360	2830	700	386	1450	228	170	228	252

CAL YR 1989 TOTAL 5592.4 MEAN 15.3 MAX 417 MIN 2.0 AC-FT 11090
WTR YR 1990 TOTAL 5307.80 MEAN 14.5 MAX 641 MIN .33 AC-FT 10530

11179000 ALAMEDA CREEK NEAR NILES, CA

LOCATION.--Lat 37°35'14", long 121°57'35", in NW 1/4 sec.15, T.4 S., R.1 W., Alameda County, Hydrologic Unit 18050004, on right bank 0.3 mi downstream from railroad bridge, 1.2 mi northeast of Niles, and 8.3 mi downstream from James H. Turner Dam on San Antonio Creek.

DRAINAGE AREA.--633 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1891 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as "at Niles Dam" 1891-1900 and as "at Sunolglen" 1901-21.

REVISED RECORDS.--WSP 1315-B: 1921. WSP 1515: 1951-52, 1956. WSP 1565: 1945. WDR CA-86-2: 1984(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 85.65 ft above National Geodetic Vertical Datum of 1929. Prior to 1901, nonrecording gage at site 1 mi upstream at different datum. From 1901 to Sept. 30, 1914, nonrecording gage; Oct. 1, 1914, to Sept. 30, 1916, water-stage recorder at site 4.5 mi upstream at different datum; Oct. 1, 1916, to Dec. 17, 1923, water-stage recorder at site 800 ft upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1916 by Calaveras Reservoir, although dam not completed until 1925, usable capacity, 96,800 acre-ft, most of which is diverted for San Francisco water supply; since February 1965 by San Antonio Reservoir, capacity, 51,000 acre-ft; and since September 1968 by Del Valle Reservoir, 23 mi upstream, capacity, 77,100 acre-ft. Natural flow of stream affected by water imported from Delta-Mendota Canal beginning in 1962. Other diversions from ground-water basin for irrigation of 9,000 acres upstream from station.

AVERAGE DISCHARGE.--71 years (water years 1892-1962), 123 ft^3/s, 89,110 acre-ft/yr; 28 years (water years 1963-90), 117 ft^3/s, 84,770 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft^3/s, Dec. 23, 1955, gage height, 14.9 ft; minimum (water years 1892-1962), no flow at times; minimum daily (water years 1963-90), 0.63 ft^3/s, Oct. 7-10, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,390 ft^3/s, Feb. 16, gage height, 6.28 ft; minimum daily, 2.3 ft^3/s, June 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	9.7	13	68	74	13	61	29	23	23	41	42
2	9.4	8.6	13	65	50	18	60	28	14	23	42	32
3	9.0	8.2	31	28	61	50	56	27	13	24	41	27
4	23	7.5	33	36	182	43	52	27	14	24	40	30
5	23	7.4	30	40	35	47	53	26	13	29	41	33
6	24	9.5	28	40	28	36	52	27	8.8	31	40	34
7	24	10	27	42	27	42	22	27	7.7	35	40	35
8	21	8.1	27	50	44	41	36	30	7.2	36	33	45
9	21	5.9	27	39	47	46	48	30	7.7	36	31	53
10	21	5.2	30	42	53	57	54	31	6.7	35	30	52
11	22	4.9	30	44	56	73	54	31	7.9	34	30	54
12	23	8.4	27	55	57	58	52	33	7.1	34	37	53
13	23	12	40	218	58	56	51	35	4.4	37	37	51
14	23	11	53	111	34	57	35	35	3.4	40	39	51
15	22	8.8	47	56	37	52	27	33	2.3	44	36	52
16	23	7.8	47	62	680	16	26	32	20	45	40	52
17	22	23	47	46	374	48	26	31	30	48	43	53
18	11	27	56	22	151	55	28	31	30	45	46	53
19	4.4	28	58	16	60	58	39	31	20	45	46	55
20	5.1	30	57	46	37	60	38	27	24	45	46	55
21	6.3	30	57	67	39	68	47	21	33	45	45	56
22	40	29	57	58	21	68	48	12	31	45	43	56
23	360	29	59	22	20	63	58	38	33	46	42	30
24	127	37	61	18	24	61	34	22	29	46	40	12
25	53	113	63	44	37	61	52	13	24	39	45	7.7
26	22	299	62	32	37	59	51	9.4	23	36	44	5.2
27	14	42	60	52	31	58	34	29	22	36	43	9.4
28	12	28	59	51	15	59	28	276	25	40	43	17
29	9.5	35	58	55	---	58	28	57	23	41	43	17
30	11	16	59	63	---	58	30	26	23	41	43	18
31	11	---	62	51	---	57	---	52	---	41	43	---
TOTAL	1033.7	899.0	1378	1639	2369	1596	1280	1156.4	530.2	1169	1253	1140.3
MEAN	33.3	30.0	44.5	52.9	84.6	51.5	42.7	37.3	17.7	37.7	40.4	38.0
MAX	360	299	63	218	680	73	61	276	33	48	46	56
MIN	4.4	4.9	13	16	15	13	22	9.4	2.3	23	30	5.2
AC-FT	2050	1780	2730	3250	4700	3170	2540	2290	1050	2320	2490	2260

CAL YR 1989 TOTAL 14787.8 MEAN 40.5 MAX 360 MIN 4.4 AC-FT 29330
WTR YR 1990 TOTAL 15443.6 MEAN 42.3 MAX 680 MIN 2.3 AC-FT 30630

11179000 ALAMEDA CREEK NEAR NILES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1906, 1952-73, 1975 to current year.
CHEMICAL DATA: Water years 1906, 1952-67, 1969, 1975-79.
SPECIFIC CONDUCTANCE: Water years 1956-57, 1959-62, 1976 to current year.
WATER TEMPERATURE: Water years 1956-73, 1976-78.
SEDIMENT DATA: Water years 1957-73.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1956 to July 1957, August 1959 to September 1962, October 1975 to current year.
WATER TEMPERATURE: July 1956 to September 1973, October 1975 to September 1978.

INSTRUMENTATION.--Water-quality monitor since October 1975. Digital recorder set for 1-hour-interval punches.

REMARKS.--Interruptions in record were due to malfunction of recording instruments. Specific conductance affected by regulation of imported water.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,530 microsiemens, Nov. 19, 1977; minimum recorded, 122 microsiemens, Jan. 22, 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 1,410 microsiemens, Nov. 14; minimum recorded, 142 microsiemens, Feb. 16.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	852	663	---	---	1080	826	710	702	813	588	1050	967
2	849	819	---	---	1130	1080	712	577	677	622	1060	1050
3	920	852	---	---	1200	913	581	577	759	676	1350	640
4	979	637	---	---	963	920	856	580	694	245	994	649
5	660	626	---	---	918	871	727	697	447	404	847	543
6	664	629	---	---	870	829	737	710	880	448	911	624
7	644	613	---	---	849	824	759	735	942	637	688	661
8	643	612	---	---	854	841	780	757	872	711	702	678
9	634	608	---	---	847	820	770	732	739	718	708	638
10	635	616	1230	1150	828	817	762	681	720	691	644	622
11	621	598	1160	1110	863	828	737	709	740	690	916	594
12	608	595	1170	1120	845	822	840	474	744	719	605	586
13	617	604	1310	1160	818	728	437	272	731	657	622	601
14	633	616	1410	1320	729	719	445	346	708	660	619	599
15	648	623	1350	1210	726	714	598	443	714	682	630	598
16	677	641	1210	1150	733	716	898	520	863	142	662	621
17	698	678	1190	812	736	721	535	446	523	237	998	618
18	697	680	803	781	740	706	513	490	587	309	625	591
19	705	688	800	772	714	711	576	516	717	602	651	586
20	784	706	838	786	715	695	963	582	906	721	658	625
21	946	785	898	853	710	696	815	765	980	798	624	569
22	1210	587	863	801	714	702	817	779	947	748	568	561
23	648	212	818	805	731	710	811	777	1100	962	582	566
24	---	---	953	816	733	722	894	810	1160	967	584	578
25	---	---	1130	300	728	718	1160	802	1160	821	590	577
26	---	---	491	214	721	706	804	785	896	846	600	591
27	---	---	809	495	713	687	809	745	851	815	599	591
28	---	---	947	815	687	667	796	766	946	796	617	582
29	---	---	917	832	687	670	771	749	---	---	618	555
30	---	---	845	827	688	679	893	758	---	---	574	554
31	---	---	---	---	704	678	797	724	---	---	585	574
MONTH	---	---	---	---	1200	667	1160	272	1160	142	1350	543

11179000 ALAMEDA CREEK NEAR NILES, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	612	585	830	756	---	---	786	757	571	545	495	480
2	670	622	805	773	---	---	784	695	544	525	519	465
3	679	661	779	743	---	---	690	643	559	527	530	512
4	680	663	767	756	---	---	810	668	559	513	530	508
5	684	675	761	743	---	---	829	685	556	514	511	495
6	703	681	762	740	---	---	683	655	552	539	513	487
7	933	705	775	746	---	---	680	643	552	520	514	497
8	935	773	789	765	---	---	678	649	581	543	513	456
9	777	759	783	750	---	---	664	641	593	567	501	462
10	759	740	810	746	---	---	661	616	587	559	497	485
11	781	758	823	770	---	---	616	565	557	518	601	491
12	779	758	828	794	---	---	570	524	548	510	524	502
13	776	764	823	813	---	---	606	538	554	535	503	487
14	834	776	830	803	---	---	621	586	624	552	499	481
15	888	842	801	769	---	---	605	490	629	574	506	492
16	845	819	779	761	1250	906	486	440	605	590	510	493
17	820	802	777	751	889	796	647	477	588	569	515	494
18	836	813	780	758	800	786	576	480	583	544	570	512
19	856	795	790	773	838	804	481	465	542	524	568	558
20	827	805	785	777	845	787	483	466	522	513	571	556
21	834	818	1200	785	782	766	479	468	546	520	576	561
22	826	799	1150	980	769	730	479	469	544	515	580	560
23	1200	766	---	---	761	719	486	474	515	500	596	566
24	975	765	---	---	777	714	501	481	537	504	627	595
25	754	727	---	---	780	706	533	500	556	510	669	627
26	762	740	---	---	786	771	536	524	508	499	746	670
27	767	740	---	---	776	694	537	515	511	489	1060	748
28	775	760	---	---	799	690	555	539	514	486	1050	722
29	778	754	---	---	823	765	565	545	514	503	718	699
30	777	761	---	---	757	682	564	548	503	491	704	681
31	---	---	---	---	---	---	573	538	496	490	---	---
MONTH	1200	585	---	---	---	---	829	440	629	486	1060	456

11180500 DRY CREEK AT UNION CITY, CA

LOCATION.--Lat 37°36'22", long 122°01'22", in Arroyo de la Alameda Grant, Alameda County, Hydrologic Unit 18050004, on right bank 900 ft downstream from bridge on State Highway 238 in Decoto District in Union City and 1.7 mi upstream from mouth.

DRAINAGE AREA.--9.39 mi^2.

PERIOD OF RECORD.--October 1916 to September 1919 (published as "near Decoto"), April 1959 to current year.

REVISED RECORDS.--WSP 2129: 1962(M), 1968(P). WDR CA-76-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 85.12 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 1, 1959, at site 1.4 mi downstream at different datum.

REMARKS.--Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--34 years, 2.38 ft^3/s, 1,720 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,330 ft^3/s, Jan. 26, 1983, gage height, 5.14 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 5.27 ft, Oct. 13, 1962, from high-water marks past gage; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 25	1730	*4.0	*1.72				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	e.00	.00	.00	.12	.00	.00	.00	.00	.00	.00	.00
4	.00	e.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
5	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.01	.44	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.93	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.82	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.01	.03	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	e.00	.00	.00	.00	.00	.00	.00	.28	.00	.00	.00	.00
28	e.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
29	e.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	e.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	e.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.26	0.00	0.26	3.61	0.01	0.01	0.36	0.00	0.00	0.00	0.00
MEAN	.000	.009	.000	.008	.13	.000	.000	.012	.000	.000	.000	.000
MAX	.00	.26	.00	.14	1.3	.01	.01	.28	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.5	.00	.5	7.2	.02	.02	.7	.00	.00	.00	.00

CAL YR 1989 TOTAL 25.61 MEAN .070 MAX 4.0 MIN .00 AC-FT 51
WTR YR 1990 TOTAL 4.51 MEAN .012 MAX 1.3 MIN .00 AC-FT 8.9

e Estimated.

11180700 PATTERSON CREEK AT UNION CITY, CA

LOCATION.--Lat 37°55'09", long 122°02'50", in Potrero de Los Cerritos Grant, Alameda County, Hydrologic Unit 18050004, on right bank 0.1 mi downstream from effluence from Alameda Creek, 0.2 mi upstream from bridge on Interstate 880 (Nimitz Freeway), and 2.0 mi southwest of Decoto District in Union City.

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4.13 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 26, 1966, at site 0.2 mi downstream at same datum.

REMARKS.--Records fair. This stream is a distributary of Alameda Creek. Diversion by Alameda County Water District to percolation ponds between station 11179000 and this station; additional percolation to ground water by placing check dams in channel.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft^3/s, Feb. 19, 1986, gage height, 18.44 ft; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,490 ft^3/s, Feb. 16, gage height, 7.83 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	e.39	e2.5	3.4	.00	.00	.00	57	.00	.00	.00
2	.00	.00	e.07	e34	1.2	.33	.00	.00	40	.00	.00	.00
3	.00	.00	.00	e1.5	6.9	10	.00	.00	24	.00	.00	.00
4	.00	.00	.00	e.27	e474	3.2	.00	.00	10	.00	.00	.00
5	.00	.00	.00	.00	e70	19	.00	.00	2.6	.00	.00	.00
6	.00	.00	.00	.00	e11	2.0	.00	.00	.18	.00	.00	.00
7	.00	.00	.00	.00	e1.8	.51	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	e6.0	e.86	.17	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	e2.3	e.22	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	e.10	e.08	.24	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.02	e.00	1.0	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	2.8	e.00	2.3	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	255	e.00	.31	.00	.00	.00	.00	.00	.00
14	.00	.00	e5.0	147	.00	.01	.00	.00	.00	.00	.00	.00
15	.00	.00	e.39	56	26	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	30	608	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	4.5	423	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	47	144	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	16	2.1	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	3.4	1.6	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.60	1.2	.00	.00	.00	.00	.00	.00	.00
22	e180	.00	.00	.18	.60	.00	.00	.00	.00	.00	.00	.00
23	e370	.00	.00	.10	.19	.00	.14	5.7	.00	.00	.00	.00
24	e56	.00	.00	2.4	.06	.00	.06	31	.00	.00	.00	.00
25	e24	11	.00	3.1	.00	.00	.00	1.4	.00	.00	.00	.00
26	e9.8	341	.00	.48	.00	.00	.00	.00	.00	.00	.00	.00
27	e.94	43	.00	.14	.00	.00	.00	26	.00	.00	.00	.00
28	.00	18	.00	.08	.00	.00	.00	290	.00	.00	.00	.00
29	.00	16	.00	.03	---	.00	.00	258	.00	.00	.00	.00
30	.00	e4.0	.00	.29	---	.00	.00	136	.00	.00	.00	.00
31	.00	---	.00	6.5	---	.00	---	65	---	.00	.00	---
TOTAL	640.74	433.00	5.85	622.29	1776.21	39.07	0.20	813.10	133.78	0.00	0.00	0.00
MEAN	20.7	14.4	.19	20.1	63.4	1.26	.007	26.2	4.46	.000	.000	.000
MAX	370	341	5.0	255	608	19	.14	290	57	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1270	859	12	1230	3520	77	.4	1610	265	.00	.00	.00

CAL YR 1989 TOTAL 2698.05 MEAN 7.39 MAX 370 MIN .00 AC-FT 5350
WTR YR 1990 TOTAL 4464.24 MEAN 12.2 MAX 608 MIN .00 AC-FT 8850

e Estimated.

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA

LOCATION.--Lat 37°41'42", long 122°02'38", in San Lorenzo Grant, Alameda County, Hydrologic Unit 18050004, on left bank, 250 ft south of Interstate Highway 580, 0.4 mi southeast of Independent School, and 2.2 mi east of Castro Valley.

DRAINAGE AREA.--18.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Some regulation of low flow by ponds upstream from station.

AVERAGE DISCHARGE.--10 years, 6.91 ft^3/s, 5,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,460 ft^3/s, Feb. 18, 1986, gage height, 8.33 ft; maximum gage height, 9.50 ft, Jan. 24, 1983; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 275 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	1030	*332	*3.69				

Minimum daily, 0.01 ft^3/s, Sept. 16-18, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.48	.17	2.9	1.4	.42	.27	.81	.50	.03	.84	.07
2	.08	.45	.17	.43	.26	1.8	.23	.89	.40	.03	.05	.02
3	.07	.42	.19	.25	4.6	.52	.21	.86	.27	.03	.05	.02
4	.05	.46	.25	.22	1.0	e1.2	.22	1.2	.28	.03	.04	.02
5	.04	.46	.25	.24	.37	e.64	.23	e.65	.23	.03	.03	.02
6	.06	.56	.17	.28	.80	e.50	.28	e.64	.26	.03	.03	.02
7	.06	.58	.18	.81	.35	e.42	.30	e.76	.32	.03	.03	.02
8	.04	.64	.24	.86	.33	e.38	.33	e.71	.18	.03	.13	.02
9	.04	.63	.29	.30	.33	e.35	.35	e1.3	.11	.03	.49	.02
10	.03	.64	.27	.25	.33	e1.0	.44	e.86	.09	.03	.35	.02
11	.04	.71	.36	.27	.34	e.90	.43	e1.0	.11	.03	.03	.02
12	.04	.78	.39	3.5	.37	e.50	.39	e.90	.09	.03	.02	.02
13	.03	1.0	.57	8.8	.29	e.44	.39	e.86	.10	.02	.16	.02
14	.05	.89	.62	1.7	.30	.30	.30	e1.4	.11	.02	.03	.02
15	.04	.96	.66	.54	.68	.33	.31	e1.2	.10	.02	.03	.02
16	.05	.94	.74	3.6	12	.28	.26	e.95	.13	.02	.22	.01
17	.06	.98	.82	.73	12	.29	e.43	e.78	.11	.02	.55	.01
18	.06	.98	.84	.69	1.5	.29	.52	e.88	.09	.03	.03	.01
19	.08	1.0	.81	.37	.76	.30	.57	e.80	.08	.03	.03	.21
20	.08	1.2	.85	.34	.68	.29	.54	4.1	.05	.03	.22	.02
21	1.4	1.2	.87	.26	.62	.32	.51	.61	.04	.03	.02	.02
22	.15	1.3	.95	.21	.59	.31	.54	.34	.05	.02	.02	.06
23	34	1.3	.91	.21	.58	.31	8.0	8.3	.05	.02	.33	.20
24	1.1	1.4	.92	.19	.61	.29	.85	.46	.05	.05	.15	.02
25	.83	17	.93	.22	.63	.30	.70	.32	.05	.49	.03	.02
26	.78	4.1	.98	.24	.63	.36	.62	.34	.04	.04	.02	.02
27	.36	.41	1.0	.21	.59	.37	.69	17	.04	.08	.32	.02
28	.32	.22	1.2	.15	.46	.32	.66	11	.04	.06	.02	.02
29	.32	.31	1.2	.20	---	.32	.62	.81	.04	.04	.22	.02
30	.35	.17	1.2	1.6	---	.31	.69	2.0	.04	.59	.02	.01
31	.37	---	1.2	.75	---	.33	---	.95	---	.04	.02	---
TOTAL	41.06	42.17	20.20	31.32	43.40	14.69	20.88	63.68	4.05	2.01	4.53	1.02
MEAN	1.32	1.41	.65	1.01	1.55	.47	.70	2.05	.13	.065	.15	.034
MAX	34	17	1.2	8.8	12	1.8	8.0	17	.50	.59	.84	.21
MIN	.03	.17	.17	.15	.26	.28	.21	.32	.04	.02	.02	.01
AC-FT	81	84	40	62	86	29	41	126	8.0	4.0	9.0	2.0

CAL YR 1989 TOTAL 296.17 MEAN .81 MAX 34 MIN .01 AC-FT 587
WTR YR 1990 TOTAL 289.01 MEAN .79 MAX 34 MIN .01 AC-FT 573

e Estimated.

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1980 to current year (storm season only).
WATER TEMPERATURE: December 1980 to current year.
SEDIMENT DATA: December 1980 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1980 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1980 to current year.

REMARKS.--Sediment samples were collected on most days where water temperature is published. Zero bedload discharge observed for flows less than 0.44 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 10,000 mg/L, Jan. 4, 1982; minimum daily mean, 0 mg/L, Feb. 26, 1989.
SEDIMENT LOAD (storm season only): Maximum daily, 19,800 tons, Jan. 4, 1982; minimum daily, 0 ton several days in most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 1,880 mg/L, Oct. 23; minimum daily mean, 5 mg/L, Oct. 1, Jan. 3.
SEDIMENT LOAD (storm season only): Maximum daily, 718 tons, Oct. 23; 0 ton for many days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT							
23...	1520	8.9	15.0	1560	37	65	83
NOV							
25...	1530	2.9	11.5	263	2.1	--	--
25...	1555	8.9	12.0	487	12	--	--
27...	1435	0.43	9.0	90	0.10	--	--
DEC							
05...	1430	0.27	9.0	37	0.03	--	--
28...	1335	1.2	8.0	18	0.06	--	--
JAN							
01...	1500	9.8	10.5	1010	27	--	--
01...	1540	8.9	9.5	852	20	--	--
01...	1620	12	9.0	776	25	--	--
12...	1400	17	12.5	976	45	--	--
13...	1245	2.1	10.5	613	3.5	--	--
13...	1320	12	10.5	751	24	--	--
13...	1425	13	11.0	949	33	67	80
16...	1130	2.9	9.0	956	7.5	--	--
30...	1135	1.1	9.0	147	0.44	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
OCT						
23...	95	98	100	--	--	--
NOV						
25...	--	--	--	99	99	100
25...	--	--	--	100	--	--
27...	--	--	--	94	--	--
DEC						
05...	--	--	--	72	--	--
28...	--	--	--	48	--	--
JAN						
01...	--	--	--	100	--	--
01...	--	--	--	100	--	--
01...	--	--	--	100	--	--
12...	--	--	--	99	100	--
13...	--	--	--	100	--	--
13...	--	--	--	99	100	--
13...	90	95	98	100	--	--
16...	--	--	--	100	--	--
30...	--	--	--	98	--	--

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
FEB							
04...	0925	0.81	5.5	179	0.39	--	--
16...	0940	22	12.0	840	50	--	--
16...	1010	27	12.0	882	64	--	--
16...	1025	23	12.0	771	48	--	--
16...	1110	18	12.0	365	18	--	--
16...	1115	19	12.0	437	22	--	--
16...	1200	24	10.0	619	40	--	--
16...	1230	54	12.0	628	92	--	--
16...	1350	61	12.0	1790	295	46	51
16...	1420	49	12.0	1160	153	55	61
16...	1450	34	12.0	2560	235	--	--
16...	1505	27	12.0	2490	182	--	--
17...	1200	44	--	785	93	--	--
17...	1230	47	--	1330	169	--	--
17...	1300	48	--	931	121	--	--
17...	1330	55	--	933	139	--	--
17...	1345	40	--	1070	116	--	--
MAR							
04...	1325	48	11.0	1120	145	--	--
04...	1350	11	11.5	2220	68	43	52
04...	1405	26	12.0	1930	135	--	--
APR							
17...	1415	0.54	13.5	27	0.04	--	--
23...	1335	2.0	14.5	36	0.19	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
FEB						
04...	--	--	--	100	--	--
16...	--	--	--	100	--	--
16...	--	--	--	99	100	--
16...	--	--	--	100	--	--
16...	--	--	--	98	100	--
16...	--	--	--	98	100	--
16...	--	--	--	99	100	--
16...	--	--	--	99	100	--
16...	64	75	90	96	99	100
16...	74	81	93	97	99	100
16...	--	--	--	99	100	--
16...	--	--	--	99	100	--
17...	--	--	--	96	99	100
17...	--	--	--	95	98	100
17...	--	--	--	96	98	100
17...	--	--	--	98	100	--
17...	--	--	--	97	99	100
MAR						
04...	--	--	--	95	99	100
04...	73	86	96	99	100	--
04...	--	--	--	100	--	--
APR						
17...	--	--	--	49	--	--
23...	--	--	--	92	--	--

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)
OCT									
23...	1545	1000	1120	0.250	1535	1555	1.00	7.2	15.0
JAN									
13...	1445	1000	1120	0.250	1435	1500	1.00	18	11.0

DATE	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
OCT									
23...	0.02	--	0	16	79	89	93	96	100
JAN									
13...	0.01	1	2	11	45	65	77	88	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JUN								
06...	1005	1	0.21	14.5	10	34	75	94
06...	1010	1	0.25	14.5	18	50	80	90
06...	1015	1	0.27	14.5	20	41	64	80
06...	1020	1	0.27	14.5	1	3	5	16
06...	1030	1	0.27	14.5	14	31	50	64
06...	1040	1	0.27	14.5	11	30	60	87
06...	1050	1	0.29	14.5	14	33	62	87

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JUN							
06...	98	100	--	--	--	--	--
06...	98	100	--	--	--	--	--
06...	96	99	100	--	--	--	--
06...	25	31	37	43	58	83	100
06...	79	84	88	91	95	100	--
06...	99	100	--	--	--	--	--
06...	97	98	100	--	--	--	--

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	9.0	10.5	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	6.0	---	13.5	---	---	---	---	---	---
4	---	---	8.0	---	5.5	11.0	---	---	---	---	---	---
5	---	---	9.0	6.0	---	---	---	---	---	---	---	---
6	---	---	10.5	---	---	---	---	---	---	---	---	---
7	---	---	---	8.0	6.5	---	---	---	---	---	---	---
8	---	---	8.0	12.0	---	---	---	---	---	---	---	---
9	---	---	---	11.0	9.0	---	---	---	---	---	---	---
10	---	---	---	12.0	---	---	---	---	---	---	---	---
11	---	---	6.5	---	9.0	10.0	---	---	---	---	---	---
12	---	---	7.5	12.5	---	---	---	---	---	---	---	---
13	---	---	---	10.5	7.0	6.5	---	---	---	---	---	---
14	---	---	---	10.0	5.5	8.5	---	---	---	---	---	---
15	---	---	7.0	---	---	---	---	---	---	---	---	---
16	---	---	---	9.0	12.0	---	---	---	---	---	---	---
17	---	---	---	---	---	---	13.5	---	---	---	---	---
18	13.0	---	8.5	10.5	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	6.5	7.5	---	---	---	---	---	---	---	---
21	---	---	---	---	---	13.0	---	---	---	---	---	---
22	---	10.5	6.0	---	---	---	---	---	---	---	---	---
23	15.0	---	---	---	---	---	14.5	---	---	---	---	---
24	---	11.0	---	---	---	---	---	---	---	---	---	---
25	---	11.5	---	---	---	---	---	---	---	---	---	---
26	---	---	6.0	---	---	---	---	---	---	---	---	---
27	---	9.0	---	---	---	---	---	---	---	---	---	---
28	---	---	8.0	---	11.0	---	---	---	---	---	---	---
29	---	---	---	7.5	---	---	---	---	---	---	---	---
30	---	8.0	7.0	9.0	---	15.0	---	---	---	---	---	---
31	---	---	---	7.0	---	---	---	---	---	---	---	---

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.08	5	.00	.48	13	.02	.17	110	.05
2	.08	6	.00	.45	13	.02	.17	91	.04
3	.07	6	.00	.42	13	.01	.19	73	.04
4	.05	7	.00	.46	12	.01	.25	57	.04
5	.04	8	.00	.46	12	.01	.25	37	.02
6	.06	9	.00	.56	12	.02	.17	32	.01
7	.06	10	.00	.58	11	.02	.18	28	.01
8	.04	9	.00	.64	11	.02	.24	25	.02
9	.04	9	.00	.63	11	.02	.29	22	.02
10	.03	8	.00	.64	11	.02	.27	19	.01
11	.04	8	.00	.71	10	.02	.36	17	.02
12	.04	9	.00	.78	11	.02	.39	16	.02
13	.03	11	.00	1.0	15	.04	.57	21	.03
14	.05	12	.00	.89	14	.03	.62	29	.05
15	.04	14	.00	.96	14	.04	.66	36	.06
16	.05	16	.00	.94	14	.04	.74	30	.06
17	.06	18	.00	.98	13	.03	.82	23	.05
18	.06	21	.00	.98	13	.03	.84	18	.04
19	.08	19	.00	1.0	12	.03	.81	19	.04
20	.08	17	.00	1.2	12	.04	.85	22	.05
21	1.4	297	5.1	1.2	11	.04	.87	25	.06
22	.15	59	.03	1.3	11	.04	.95	29	.07
23	34	1880	718	1.3	9	.03	.91	27	.07
24	1.1	271	1.1	1.4	110	.70	.92	25	.06
25	.83	133	.46	17	972	173	.93	23	.06
26	.78	129	.40	4.1	399	12	.98	21	.06
27	.36	32	.03	.41	95	.11	1.0	19	.05
28	.32	15	.01	.22	77	.06	1.2	18	.06
29	.32	14	.01	.31	115	.13	1.2	14	.05
30	.35	14	.01	.17	109	.05	1.2	11	.04
31	.37	14	.01	---	---	---	1.2	13	.04
TOTAL	41.06	---	725.16	42.17	---	186.65	20.20	---	1.30
		JANUARY			FEBRUARY			MARCH	
1	2.9	220	4.7	1.4	77	.83	.42	13	.01
2	.43	33	.04	.26	19	.01	2.2	183	1.5
3	.25	5	.00	4.6	228	12	.52	27	.04
4	.22	8	.00	1.0	190	.79	e3.6	332	11
5	.24	12	.01	.37	60	.06	e.64	35	.06
6	.28	9	.01	.80	63	.21	e.50	27	.04
7	.81	57	.33	.35	8	.01	e.42	22	.02
8	.86	54	.20	.33	11	.01	e.38	20	.02
9	.30	12	.01	.33	14	.01	e.35	18	.02
10	.25	10	.01	.33	11	.01	e1.0	51	.14
11	.27	10	.01	.34	8	.01	e.90	44	.11
12	3.5	212	8.9	.37	8	.01	e.50	27	.04
13	8.8	702	32	.29	15	.01	e.44	27	.03
14	1.7	121	.76	.30	30	.02	.30	22	.02
15	.54	26	.04	.68	69	.23	.33	15	.01
16	3.6	400	11	12	594	41	.28	11	.01
17	.73	41	.08	12	358	27	.29	9	.01
18	.69	28	.05	1.5	87	.45	.29	10	.01
19	.37	26	.03	.76	63	.13	.30	12	.01
20	.34	24	.02	.68	47	.09	.29	15	.01
21	.26	21	.01	.62	30	.05	.32	19	.02
22	.21	17	.01	.59	28	.04	.31	22	.02
23	.21	15	.01	.58	32	.05	.31	24	.02
24	.19	12	.01	.61	26	.04	.29	20	.02
25	.22	10	.01	.63	21	.04	.30	18	.01
26	.24	9	.01	.63	17	.03	.36	18	.02
27	.21	7	.00	.59	14	.02	.37	20	.02
28	.15	6	.00	.46	11	.01	.32	26	.02
29	.20	10	.01	---	---	---	.32	38	.03
30	1.6	114	1.4	---	---	---	.31	54	.05
31	.75	48	.34	---	---	---	.33	43	.04
TOTAL	31.32	---	60.01	43.40	---	83.17	14.69	---	13.38

e Estimated.

11180825 SAN LORENZO CREEK ABOVE DON CASTRO RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	.27	32	.02
2	.23	24	.01
3	.21	19	.01
4	.22	18	.01
5	.23	17	.01
6	.28	17	.01
7	.30	16	.01
8	.33	16	.01
9	.35	18	.02
10	.44	20	.02
11	.43	22	.03
12	.39	24	.03
13	.39	27	.03
14	.30	30	.02
15	.31	29	.02
16	.26	28	.02
17	.43	27	.03
18	.52	28	.04
19	.57	30	.05
20	.54	31	.05
21	.51	22	.03
22	.54	23	.03
23	8.0	145	10
24	.85	24	.06
25	.70	21	.04
26	.62	19	.03
27	.69	22	.04
28	.66	17	.03
29	.62	16	.03
30	.69	18	.03
31	---	---	---
TOTAL	20.88	---	10.77
PERIOD	213.72		1080.44

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1989..	41.06	725.16	6	731
NOVEMBER	42.17	186.65	2	189
DECEMBER	20.20	1.30	0	1
JANUARY 1990..	31.32	60.01	0	60
FEBRUARY	43.40	83.17	1	84
MARCH	14.69	13.38	0	13
APRIL	20.88	10.77	0	11
PERIOD	213.72	1080.44	9	1089

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA

LOCATION.--Lat 37°42'55", long 122°03'12", in San Lorenzo (Castro) Grant, Alameda County, Hydrologic Unit 18050004, on left bank 0.9 mi upstream from Cull Creek Dam and 1.1 mi northeast of Castro Valley Post Office.

DRAINAGE AREA.--5.79 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

REVISIONS.--WDR CA-80-2: 1979(P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No storage or diversions upstream from station.

AVERAGE DISCHARGE.--12 years, 3.18 ft^3/s, 2,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,690 ft^3/s, Jan. 5, 1982, gage height, 8.71 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1500	*7.2	*1.41				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.04	.21	.12	.06	.02	.13	.00	.00	.00
2	.00	.00	.00	.01	.10	.28	.05	.02	.04	.00	.00	.00
3	.00	.00	.00	.01	.20	.39	.05	.02	.03	.00	.00	.00
4	.00	.00	.00	.01	.55	.40	.05	.02	.02	.00	.00	.00
5	.00	.00	.00	.01	.18	.41	.05	.02	.01	.00	.00	.00
6	.00	.00	.00	.01	.15	.20	.05	.01	.01	.00	.00	.00
7	.00	.00	.00	.02	.14	.15	.05	.01	.01	.00	.00	.00
8	.00	.00	.00	.03	.10	.12	.05	.01	.01	.00	.00	.00
9	.00	.00	.00	.01	.08	.12	.04	.01	.01	.00	.00	.00
10	.00	.00	.00	.01	.05	.21	.04	.01	.01	.00	.00	.00
11	.00	.00	.00	.01	.05	.29	.04	.01	.01	.00	.00	.00
12	.00	.00	.00	.05	.05	.17	.04	.01	.01	.00	.00	.00
13	.00	.00	.00	.13	.04	.12	.03	.01	.01	.00	.00	.00
14	.00	.00	.00	.38	.04	.12	.02	.01	.01	.00	.00	.00
15	.00	.00	.00	.07	.03	.12	.02	.01	.01	.00	.00	.00
16	.00	.00	.00	.21	1.9	.12	.02	.01	.01	.00	.00	.00
17	.00	.00	.00	.11	1.8	.12	.02	.01	.01	.00	.00	.00
18	.00	.00	.00	.03	.89	.12	.02	.01	.01	.00	.00	.00
19	.00	.00	.00	.01	.47	.12	.02	.01	.01	.00	.00	.00
20	.00	.00	.00	.01	.35	.12	.02	.05	.01	.00	.00	.00
21	.00	.00	.00	.01	.32	.12	.01	.02	.01	.00	.00	.00
22	.00	.00	.00	.01	.24	.11	.02	.01	.01	.00	.00	.00
23	.28	.00	.00	.01	.23	.07	.42	.09	.01	.00	.00	.00
24	.01	.00	.00	.01	.15	.06	.21	.02	.01	.00	.00	.00
25	.00	.15	.00	.01	.15	.06	.09	.01	.01	.00	.00	.00
26	.00	.04	.00	.01	.13	.06	.06	.01	.01	.00	.00	.00
27	.00	.01	.01	.01	.12	.06	.03	.22	.00	.00	.00	.00
28	.00	.00	.01	.01	.12	.06	.02	.85	.00	.00	.00	.00
29	.00	.00	.00	.01	---	.06	.02	.19	.00	.00	.00	.00
30	.00	.00	.00	.08	---	.06	.02	.24	.00	.00	.00	.00
31	.00	---	.00	.13	---	.06	---	.33	---	.00	.00	---
TOTAL	0.29	0.20	0.02	1.47	8.84	4.60	1.64	2.28	0.44	0.00	0.00	0.00
MEAN	.009	.007	.001	.047	.32	.15	.055	.074	.015	.000	.000	.000
MAX	.28	.15	.01	.38	1.9	.41	.42	.85	.13	.00	.00	.00
MIN	.00	.00	.00	.01	.03	.06	.01	.01	.00	.00	.00	.00
AC-FT	.6	.4	.04	2.9	18	9.1	3.3	4.5	.9	.00	.00	.00

CAL YR 1989 TOTAL 122.87 MEAN .34 MAX 12 MIN .00 AC-FT 244
WTR YR 1990 TOTAL 19.78 MEAN .054 MAX 1.9 MIN .00 AC-FT 39

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to current year (storm season only).
WATER TEMPERATURE: Water years 1979 to current year.
SEDIMENT DATA: Water years 1979 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1978 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1978 to current year.

REMARKS.--Zero bedload discharge observed at flows less than 4.20 ft^3/s. Sediment samples were collected on most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 22,400 mg/L, Feb. 17, 1986; minimum daily mean, no flow many days during most years.
SEDIMENT LOAD: Maximum daily, 26,400 tons, Feb. 17, 1986; minimum daily, 0 ton many days during most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 1,950 mg/L, Feb. 16; minimum daily mean, no flow on many days.
SEDIMENT LOAD: (storm season only): Maximum daily, 23 tons, Feb. 16; minimum daily, 0 ton on many days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT								
23...	1435	0.09	15.0	114	0.03	--	--	--
JAN								
01...	1445	0.12	9.0	58	0.02	--	--	--
12...	1415	0.19	12.0	139	0.07	--	--	--
13...	1300	0.09	10.0	109	0.03	--	--	--
FEB								
04...	0905	0.71	4.0	63	0.12	--	--	--
16...	1325	4.4	7.0	8280	98	29	35	49
16...	1405	5.0	7.5	6500	88	34	42	57
16...	1530	6.8	7.0	7650	140	35	45	58
17...	1135	1.7	4.5	846	3.9	--	--	--
17...	1215	1.9	5.0	848	4.4	--	--	--
17...	1245	2.0	5.5	811	4.4	--	--	--
17...	1315	2.5	5.5	786	5.3	--	--	--
17...	1355	3.1	6.0	1060	8.9	--	--	--
MAR								
04...	1340	0.68	10.5	212	0.39	--	--	--
04...	1420	0.52	10.5	353	0.50	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
OCT							
23...	--	--	100	--	--	--	--
JAN							
01...	--	--	90	--	--	--	--
12...	--	--	97	100	--	--	--
13...	--	--	98	--	--	--	--
FEB							
04...	--	--	95	--	--	--	--
16...	65	78	87	94	97	100	--
16...	70	80	88	94	97	99	100
16...	71	82	90	96	99	100	--
17...	--	--	99	100	--	--	--
17...	--	--	99	100	--	--	--
17...	--	--	92	95	98	100	--
17...	--	--	91	96	99	100	--
17...	--	--	89	94	98	100	--
MAR							
04...	--	--	98	99	100	--	--
04...	--	--	99	100	--	--	--

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JUN								
06...	1300	1	0.01	17.0	13	31	58	84
06...	1310	1	0.01	17.0	2	4	8	13
06...	1320	1	0.01	17.0	1	2	4	8
06...	1330	1	0.01	17.0	1	2	5	11
06...	1335	1	0.01	17.0	1	2	5	13
06...	1340	1	0.01	17.0	9	21	48	72
06...	1345	1	0.01	17.0	10	23	43	64

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JUN							
06...	96	100	--	--	--	--	--
06...	22	44	72	89	99	100	--
06...	14	21	31	41	59	84	100
06...	21	30	40	51	65	88	100
06...	17	21	28	38	52	68	100
06...	91	96	97	98	99	100	--
06...	91	98	100	--	--	--	--

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	8.0	9.0	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	6.0	---	10.5	---	---	---	---	---	---
4	---	---	---	---	4.0	10.5	---	---	---	---	---	---
5	---	---	---	6.5	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	8.0	6.5	---	---	---	---	---	---	---
8	---	---	---	12.0	---	---	---	---	---	---	---	---
9	---	---	---	11.5	9.0	---	---	---	---	---	---	---
10	---	---	---	12.0	---	---	---	---	---	---	---	---
11	---	---	---	---	10.0	9.0	---	---	---	---	---	---
12	---	---	7.0	11.5	---	---	---	---	---	---	---	---
13	---	---	---	10.0	4.0	12.0	---	---	---	---	---	---
14	---	---	---	10.0	6.5	7.5	---	---	---	---	---	---
15	---	---	7.5	---	---	---	---	---	---	---	---	---
16	---	---	---	8.0	7.0	---	---	---	---	---	---	---
17	---	---	---	---	5.5	---	---	---	---	---	---	---
18	---	---	8.5	---	---	---	13.0	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	6.0	8.0	---	---	---	---	---	---	---	---
21	---	---	---	---	10.5	7.5	---	---	---	---	---	---
22	---	---	5.5	---	---	---	---	---	---	---	---	---
23	15.0	---	---	---	---	---	9.0	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	6.0	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	7.0	---	11.0	---	---	---	---	---	---	---
29	---	---	---	9.5	---	---	---	---	---	---	---	---
30	---	6.5	6.5	8.5	---	---	---	---	---	---	---	---
31	---	---	---	7.0	---	---	---	---	---	---	---	---

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.00	0	.00	.00	0	.00	.00	0	.00
2	.00	0	.00	.00	0	.00	.00	0	.00
3	.00	0	.00	.00	0	.00	.00	0	.00
4	.00	0	.00	.00	0	.00	.00	0	.00
5	.00	0	.00	.00	0	.00	.00	0	.00
6	.00	0	.00	.00	0	.00	.00	0	.00
7	.00	0	.00	.00	0	.00	.00	0	.00
8	.00	0	.00	.00	0	.00	.00	0	.00
9	.00	0	.00	.00	0	.00	.00	0	.00
10	.00	0	.00	.00	0	.00	.00	0	.00
11	.00	0	.00	.00	0	.00	.00	0	.00
12	.00	0	.00	.00	0	.00	.00	0	.00
13	.00	0	.00	.00	0	.00	.00	0	.00
14	.00	0	.00	.00	0	.00	.00	0	.00
15	.00	0	.00	.00	0	.00	.00	0	.00
16	.00	0	.00	.00	0	.00	.00	0	.00
17	.00	0	.00	.00	0	.00	.00	0	.00
18	.00	0	.00	.00	0	.00	.00	0	.00
19	.00	0	.00	.00	0	.00	.00	0	.00
20	.00	0	.00	.00	0	.00	.00	0	.00
21	.00	0	.00	.00	0	.00	.00	0	.00
22	.00	0	.00	.00	0	.00	.00	0	.00
23	.28	568	2.2	.00	0	.00	.00	0	.00
24	.01	0	.00	.00	0	.00	.00	0	.00
25	.00	0	.00	.15	143	.29	.00	0	.00
26	.00	0	.00	.04	226	.04	.00	0	.00
27	.00	0	.00	.01	32	.00	.01	5	.00
28	.00	0	.00	.00	0	.00	.01	4	.00
29	.00	0	.00	.00	0	.00	.00	0	.00
30	.00	0	.00	.00	0	.00	.00	0	.00
31	.00	0	.00	---	---	---	.00	0	.00
TOTAL	0.29	---	2.20	0.20	---	0.33	0.02	---	0.00
DAY		JANUARY			FEBRUARY			MARCH	
1	.04	12	.00	.21	25	.00	.12	4	.00
2	.01	5	.00	.10	9	.00	.28	33	.02
3	.01	5	.00	.20	17	.01	.39	23	.02
4	.01	4	.00	.55	41	.05	.40	118	.14
5	.01	4	.00	.18	15	.00	.41	45	.05
6	.01	5	.00	.15	9	.00	.20	13	.01
7	.02	7	.00	.14	5	.00	.15	9	.00
8	.03	7	.00	.10	4	.00	.12	8	.00
9	.01	5	.00	.08	4	.00	.12	7	.00
10	.01	12	.00	.05	4	.00	.21	6	.00
11	.01	20	.00	.05	3	.00	.29	4	.00
12	.05	39	.00	.05	4	.00	.17	4	.00
13	.13	84	.02	.04	5	.00	.12	4	.00
14	.38	65	.07	.04	5	.00	.12	9	.00
15	.07	12	.00	.03	4	.00	.12	10	.00
16	.21	37	.01	1.9	1950	23	.12	9	.00
17	.11	20	.00	1.8	656	3.4	.12	9	.00
18	.03	18	.00	.89	26	.06	.12	9	.00
19	.01	15	.00	.47	15	.02	.12	9	.00
20	.01	9	.00	.35	13	.01	.12	8	.00
21	.01	8	.00	.32	12	.01	.12	8	.00
22	.01	7	.00	.24	11	.01	.11	7	.00
23	.01	7	.00	.23	9	.01	.07	6	.00
24	.01	7	.00	.15	8	.00	.06	6	.00
25	.01	6	.00	.15	7	.00	.06	5	.00
26	.01	6	.00	.13	6	.00	.06	5	.00
27	.01	6	.00	.12	5	.00	.06	4	.00
28	.01	5	.00	.12	4	.00	.06	4	.00
29	.01	5	.00	---	---	---	.06	3	.00
30	.08	17	.00	---	---	---	.06	3	.00
31	.13	9	.00	---	---	---	.06	3	.00
TOTAL	1.47	---	0.10	8.84	---	26.58	4.60	---	0.24

11180960 CULL CREEK ABOVE CULL CREEK RESERVOIR, NEAR CASTRO VALLEY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	.06	3	.00
2	.05	4	.00
3	.05	4	.00
4	.05	4	.00
5	.05	4	.00
6	.05	5	.00
7	.05	5	.00
8	.05	5	.00
9	.04	6	.00
10	.04	6	.00
11	.04	6	.00
12	.04	7	.00
13	.03	7	.00
14	.02	8	.00
15	.02	8	.00
16	.02	9	.00
17	.02	9	.00
18	.02	10	.00
19	.02	10	.00
20	.02	9	.00
21	.01	9	.00
22	.02	8	.00
23	.42	80	.13
24	.21	7	.00
25	.09	6	.00
26	.06	6	.00
27	.03	5	.00
28	.02	4	.00
29	.02	3	.00
30	.02	3	.00
31	---	---	---
TOTAL	1.64	---	0.13
PERIOD	17.06		29.58

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1989..	0.29	2.20	0	2
NOVEMBER	0.20	0.33	0	0
DECEMBER	0.02	0.00	0	0
JANUARY 1990..	1.47	0.10	0	0
FEBRUARY	8.84	26.58	0	27
MARCH	4.60	0.24	0	0
APRIL	1.64	0.13	0	0
PERIOD	17.06	29.58	0	29

11181006 CASTRO VALLEY CREEK AT KNOX STREET, AT CASTRO VALLEY, CA

LOCATION.--Lat 37°40'56", long 122°04'44", in San Lorenzo (Castro) Grant, Alameda County, Hydrologic Unit 18050004, on left bank at Knox Street, 1.0 mi southeast of Castro Valley Post Office.

DRAINAGE AREA.--2.20 mi^2.

PERIOD OF RECORD.--October 1978 to September 1980, October 1989 to September 1990.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 130 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 873 ft^3/s, Oct. 23, 1989, gage height, 6.69 ft, from rating curve extended above 160 ft^3/s; no flow many days in 1979, Sept. 18, 19, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	0930	*873	*6.69				

No flow, Sept. 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.04	.04	5.9	1.1	.16	.06	.29	.18	.08	.04	.05
2	.14	.04	.04	.19	.17	3.4	.06	.23	.12	.08	.04	.05
3	.11	.04	.04	.07	5.7	.41	.07	.25	.11	.08	.03	.03
4	.07	.06	.04	.05	.62	3.9	.09	.25	.11	.07	.03	.03
5	.06	.07	.04	.05	.22	.34	.09	.25	.09	.09	.03	.03
6	.06	.06	e.03	.05	1.3	.22	.09	.24	.09	.11	.03	.02
7	.09	.04	e.03	1.2	.21	.16	.09	.15	.09	.11	.05	.02
8	.07	.04	e.02	.77	.17	.17	.09	.14	.09	.13	.07	.03
9	.03	.06	.01	.08	.19	.16	.08	.15	.09	.11	.05	.03
10	.04	.04	.01	.06	.14	1.4	.09	.18	.07	.05	.05	.03
11	.06	.06	.01	.09	.13	.31	.08	.16	.07	.06	.05	.02
12	.09	.04	.01	4.4	.16	.12	.09	.16	.07	.06	.05	.02
13	.09	.04	.03	7.9	.25	.11	.10	.16	.07	.07	.05	.02
14	.25	.04	.02	2.6	.11	.11	.10	.18	.06	.07	.04	.03
15	.16	.11	.01	.31	.11	.11	.07	.20	.07	.08	.04	.02
16	1.1	.06	.12	3.7	10	.12	.11	.19	.07	.07	.03	.02
17	.04	.06	.01	.26	8.0	.11	.09	.19	.07	.07	.03	.03
18	.03	.06	.05	.16	1.1	.11	.06	.20	.06	.06	.03	.00
19	.02	.06	.01	.14	.36	.11	.06	.21	.06	.07	.03	.00
20	.11	.06	e.02	.13	.28	.10	.06	2.6	.07	.06	.03	.01
21	1.4	.14	.02	.11	.25	.09	.07	.20	.07	.06	.03	.01
22	.48	.32	.02	.11	.20	.09	.19	.13	.08	.06	.02	.39
23	41	.28	.02	.12	.19	.09	5.3	4.3	.07	.12	.02	.09
24	1.4	1.2	.02	.13	.19	.09	.27	.19	.07	.04	.02	.02
25	.54	20	.02	.20	.19	.09	.17	.18	.07	.03	.05	.01
26	.09	2.3	.02	.21	.19	.11	.17	.25	.07	.03	.02	.01
27	.14	.06	.02	.15	.16	.09	.16	14	.09	.03	.03	.01
28	.11	.04	.05	.09	.16	.09	.16	4.0	.09	.03	.03	.01
29	.09	.04	.03	.09	---	.09	.16	.27	.10	.04	.03	.01
30	.09	.04	.03	2.9	---	.07	.18	2.2	.09	.05	.03	.01
31	.07	---	.03	1.9	---	.07	---	.50	---	.04	.04	---
TOTAL	48.07	25.50	0.87	34.12	31.85	12.60	8.46	32.60	2.51	2.11	1.12	1.06
MEAN	1.55	.85	.028	1.10	1.14	.41	.28	1.05	.084	.068	.036	.035
MAX	41	20	.12	7.9	10	3.9	5.3	14	.18	.13	.07	.39
MIN	.02	.04	.01	.05	.11	.07	.06	.13	.06	.03	.02	.00
AC-FT	95	51	1.7	68	63	25	17	65	5.0	4.2	2.2	2.1

WTR YR 1990 TOTAL 200.87 MEAN .55 MAX 41 MIN .00 AC-FT 398

e Estimated.

11181008 CASTRO VALLEY CREEK AT HAYWARD, CA

LOCATION.--Lat 37°40'48", long 122°04'46", in San Lorenzo (Castro) Grant, Alameda County, Hydrologic Unit 18050004, on left bank 500 ft east of Hayward City Hall, 700 ft upstream from mouth, and 700 ft downstream from small left-bank tributary.

DRAINAGE AREA.--5.51 mi^2.

PERIOD OF RECORD.--October 1971 to current year (seasonal records only, water years 1975-77).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--16 years (water years 1972-74, 1978-90), 3.94 ft^3/s, 2,850 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,350 ft^3/s, Jan. 23, 1983, gage height, 8.51 ft, from rating curve extended above 61 ft^3/s on basis of slope-area measurement at gage height 3.92 ft and step-backwater computation to gage height 10.40 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	0930	*1,120	*7.76				

Minimum daily, 0.14 ft^3/s, Oct. 19, Sept. 1, 8, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	.24	.29	18	2.9	.51	.31	.32	.51	.26	.18	.14
2	.24	.21	.25	.83	.45	12	.32	.40	.45	.28	.20	.15
3	.23	.24	.24	.75	19	1.1	.32	.33	.36	.26	.20	.24
4	.22	.21	.26	.74	1.6	9.5	.30	.32	.43	.26	.20	.16
5	.20	.22	.29	.25	.68	.87	.28	.29	.65	.29	.20	.28
6	.17	.22	.24	.23	4.0	.67	.28	.30	.69	.29	.24	.16
7	.18	.21	.24	3.6	.59	.63	.28	.34	.65	.30	.22	.26
8	.20	.19	.24	2.1	.57	.69	.28	.32	.36	.24	.31	.14
9	.21	.20	.25	.33	.57	.58	.28	.30	.32	.29	.20	.16
10	.22	.23	.23	.36	.42	4.8	.30	.32	.31	.22	.25	.30
11	.17	.23	.21	.32	.42	.89	.26	.28	.32	.27	.19	.15
12	.23	.19	.21	16	.40	.54	.33	.30	.31	.36	.20	.16
13	.25	.26	.21	25	.46	.46	.29	.33	.34	.21	.27	.15
14	.20	.21	.25	8.9	.32	.41	.32	.37	.32	.22	.16	.15
15	.19	.19	.20	.94	.32	.42	.29	.43	.33	.23	.28	.14
16	.82	.18	.32	11	33	.42	.33	.32	.33	.23	.17	.16
17	.22	.19	.22	1.2	27	.42	.31	.32	.32	.22	.17	.17
18	.15	.18	.33	.98	3.5	.41	.27	.33	.31	.22	.16	.16
19	.14	.18	.21	.79	1.2	.39	.33	.47	.32	.22	.15	.18
20	.16	.20	.20	.45	.87	.40	.33	8.0	.34	.27	.16	.17
21	3.5	.20	.23	.39	.73	.41	.31	.53	.33	.21	.18	.15
22	.50	.19	.20	.40	.66	.35	.61	.45	.30	.19	.40	1.9
23	77	.19	.20	.35	.65	.35	18	12	.27	.53	.17	.69
24	1.8	2.0	.20	.39	.61	.38	.58	.52	.28	.26	.16	.24
25	.87	51	.20	.40	.60	.38	.44	.44	.28	.21	.30	.26
26	.32	5.2	.21	.44	.58	.39	.38	.59	.27	.19	.17	.19
27	.28	.59	.22	.32	.53	.34	.38	44	.28	.21	.36	.23
28	.24	.42	.36	.31	.52	.33	.37	14	.28	.17	.15	.20
29	.23	.33	.21	.37	---	.34	.35	.91	.28	.18	.16	.21
30	.29	.29	.19	8.4	---	.34	.35	11	.28	.19	.15	.26
31	.24	---	.20	6.6	---	.32	---	1.2	---	.41	.16	---
TOTAL	89.93	64.59	7.31	111.14	103.15	40.04	27.78	100.03	10.82	7.89	6.47	7.91
MEAN	2.90	2.15	.24	3.59	3.68	1.29	.93	3.23	.36	.25	.21	.26
MAX	77	51	.36	25	33	12	18	44	.69	.53	.40	1.9
MIN	.14	.18	.19	.23	.32	.32	.26	.28	.27	.17	.15	.14
AC-FT	178	128	14	220	205	79	55	198	21	16	13	16

CAL YR 1989 TOTAL 618.11 MEAN 1.69 MAX 77 MIN .13 AC-FT 1230
WTR YR 1990 TOTAL 577.06 MEAN 1.58 MAX 77 MIN .14 AC-FT 1140

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA

LOCATION.--Lat 37°41'03", long 122°08'20", in San Lorenzo (Soto) Grant, Alameda County, Hydrologic Unit 18050004, on left bank 400 ft downstream from Washington Avenue bridge in San Lorenzo and 1.6 mi upstream from mouth.

DRAINAGE AREA.--44.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to September 1978, October 1987 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6.13 ft above National Geodetic Vertical Datum of 1929 (levels by Alameda County Flood Control and Water Conservation District).

REMARKS.--Records fair. Flow partly regulated by Cull Creek Reservoir beginning in October 1962 (capacity, 310 acre-ft) and Don Castro Reservoir (capacity, 380 acre-ft) 7 mi upstream beginning in January 1965. A few very small diversions upstream from station.

AVERAGE DISCHARGE.--14 years (water years 1968-78, 1988-90), 17.5 ft^3/s, 12,680 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft^3/s, Apr. 1, 1974, gage height, 8.22 ft from rating curve extended above 1,200 ft^3/s; minimum daily, 0.01 ft^3/s, June 30, July 1, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 850 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	1145	*1,040	*5.48				

Minimum daily, 0.36 ft^3/s, Aug. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.79	.75	1.4	36	21	4.6	1.3	1.9	2.9	e.82	e.55	e.40
2	.81	.66	1.2	9.4	4.0	11	1.4	2.5	1.7	e.76	e.50	e.65
3	1.5	.61	1.2	3.1	33	12	1.2	e2.4	1.4	e.74	e.45	e.47
4	1.5	.62	1.2	2.0	20	6.4	1.2	e2.2	1.2	e.70	e.41	e.56
5	1.6	.66	1.3	1.3	5.2	7.5	1.7	e2.0	1.5	e.73	e.47	1.7
6	1.4	.69	1.2	1.1	14	6.4	1.9	e1.9	1.5	e.80	e.46	.51
7	1.2	.73	1.3	6.6	4.4	5.4	1.9	e1.8	1.6	e.70	e.45	.70
8	1.2	.70	1.3	12	3.6	5.1	2.0	e2.5	1.3	e.63	e.53	.55
9	1.2	.71	1.2	2.7	3.7	5.0	2.1	e3.0	1.1	e.68	e.45	.54
10	1.4	.73	1.1	1.6	3.2	5.9	1.9	e2.7	1.0	e.60	e.47	.57
11	1.2	.74	1.3	1.6	3.4	7.0	1.9	e2.8	1.0	e.78	e.37	.40
12	1.2	.72	1.1	31	3.5	4.4	2.3	e2.5	1.1	e.58	e.45	.40
13	1.4	.97	1.2	61	3.6	3.5	2.1	e2.8	1.2	e.69	e.55	.48
14	1.2	.97	1.2	29	3.1	3.1	2.0	e3.3	1.1	e.63	e.37	.50
15	1.3	.85	1.2	6.5	3.1	3.0	1.9	e3.6	1.1	e.61	e.50	.53
16	1.7	.81	1.3	29	83	3.0	1.7	e3.3	1.2	e.64	e.45	.50
17	.87	.80	1.3	7.1	81	3.2	1.9	e3.0	1.1	e.58	e.41	.55
18	.88	.72	1.4	4.3	25	2.8	2.6	e3.3	1.1	e.51	e.37	.51
19	1.2	.71	1.3	3.5	10	2.5	2.9	6.2	1.1	e.45	.36	.60
20	1.2	.75	1.3	2.7	6.6	2.1	2.9	21	1.2	e.64	.37	.61
21	7.5	.90	1.5	2.4	5.4	2.2	2.7	6.4	1.0	e.52	.44	.59
22	4.0	.90	1.5	2.3	4.9	2.1	3.4	3.5	e.94	e.64	.63	1.6
23	212	.89	1.5	2.2	4.8	2.0	37	30	e.88	e.79	.48	3.9
24	14	5.3	1.5	2.2	4.6	1.9	5.2	4.1	e1.1	e.59	.55	.72
25	5.4	131	1.6	2.3	4.6	1.9	2.4	1.8	e.94	e.61	.74	.61
26	1.7	34	1.7	2.3	4.7	1.9	1.6	2.2	e.88	e.52	e.60	.57
27	1.4	4.1	1.7	2.2	4.7	1.7	1.3	81	e.82	e.55	e1.0	.62
28	.94	2.1	2.2	2.0	4.6	1.6	1.3	55	e1.0	e.45	e.45	.64
29	.82	1.7	2.0	2.1	---	1.5	1.4	6.3	e.82	e.52	e.50	.70
30	.76	1.6	1.8	23	---	1.4	1.6	8.8	e.94	e.56	e.37	.75
31	.76	---	1.6	9.2	---	1.3	---	12	---	e.67	e.45	---
TOTAL	274.03	197.39	43.6	303.7	372.7	123.4	96.7	285.8	35.72	19.69	15.15	22.43
MEAN	8.84	6.58	1.41	9.80	13.3	3.98	3.22	9.22	1.19	.64	.49	.75
MAX	212	131	2.2	61	83	12	37	81	2.9	.82	1.0	3.9
MIN	.76	.61	1.1	1.1	3.1	1.3	1.2	1.8	.82	.45	.36	.40
AC-FT	544	392	86	602	739	245	192	567	71	39	30	44

CAL YR 1989 TOTAL 2204.50 MEAN 6.04 MAX 212 MIN .35 AC-FT 4370
WTR YR 1990 TOTAL 1790.31 MEAN 4.90 MAX 212 MIN .36 AC-FT 3550

e Estimated.

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to September 1990 (storm season only).
WATER TEMPERATURE: October 1989 to September 1990.
SEDIMENT DATA: October 1989 to September 1990.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1989 to September 1990.
SUSPENDED-SEDIMENT DISCHARGE: October 1989 to September 1990.

REMARKS.--Sediment samples were collected on most days where water temperature is published. Zero bedload discharge observed for flows less than 30 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 321 mg/L, Oct. 23, 1989; minimum daily mean, 1 mg/L, Feb. 20, 21, 1990.
SEDIMENT LOAD (storm season only): Maximum daily, 560 tons, Oct. 23, 1989; minimum daily, 0.01 ton several days.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 321 mg/L, Oct. 23; minimum daily mean, 1 mg/L, on several days.
SEDIMENT LOAD (storm season only): Maximum daily, 560 tons, Oct. 23; minimum daily, 0.01 ton several days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT							
23...	1325	602	--	339	551	--	--
27...	1125	1.5	15.5	20	0.08	--	--
DEC							
06...	0935	1.2	12.0	7	0.02	--	--
06...	1100	1.2	12.5	10	0.03	--	--
JAN							
12...	1047	5.8	11.5	105	1.6	--	--
12...	1120	6.6	11.5	51	0.91	--	--
12...	1150	29	13.5	121	9.5	--	--
12...	1425	90	13.5	264	64	53	57
FEB							
16...	1110	85	9.5	98	22	--	--
APR							
27...	1315	1.4	25.5	8	0.03	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
OCT							
23...	--	--	--	92	97	99	100
27...	--	--	--	87	--	--	--
DEC							
06...	--	--	--	39	--	--	--
06...	--	--	--	58	--	--	--
JAN							
12...	--	--	--	90	--	--	--
12...	--	--	--	93	--	--	--
12...	--	--	--	83	--	--	--
12...	65	68	92	95	99	100	--
FEB							
16...	--	--	--	90	95	97	100
APR							
27...	--	--	--	46	--	--	--

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA--Continued

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	SEDIMENT DISCHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM
OCT 23...	1230	1000	1100	0.250	1205	1255	22	759	73	0

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
OCT 23...	0	1	9	19	31	40	50	68	90	100

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	---	---	10.5	11.5	8.5	---	22.0
2	---	---	9.5	8.5	---	13.5	---
3	---	---	---	---	---	16.0	21.0
4	---	---	---	6.0	10.0	13.5	---
5	---	---	---	---	---	---	---
6	---	---	12.0	10.5	---	---	19.5
7	---	---	---	---	10.5	---	---
8	---	---	14.0	14.0	---	---	---
9	---	---	---	13.0	14.0	---	---
10	---	---	10.0	14.0	---	13.5	23.0
11	---	---	---	11.5	13.5	---	---
12	---	---	7.0	11.5	---	---	---
13	---	---	---	11.5	---	---	24.5
14	---	---	---	---	9.0	---	---
15	---	---	7.0	---	---	---	---
16	---	---	---	10.0	9.5	---	22.0
17	14.0	---	---	10.5	8.0	---	---
18	---	---	10.0	8.5	6.5	---	---
19	---	---	---	---	---	---	---
20	---	---	---	---	9.0	---	25.5
21	---	---	10.0	---	---	---	---
22	---	14.5	---	---	16.0	---	---
23	---	---	---	---	---	19.0	---
24	---	15.0	---	---	15.0	---	---
25	---	13.5	---	---	---	18.0	---
26	---	---	---	---	16.5	---	---
27	15.5	11.0	---	---	---	---	25.5
28	---	---	---	---	---	16.5	---
29	---	---	---	12.0	---	---	---
30	---	9.0	---	---	---	17.0	---
31	---	---	---	10.5	---	---	---

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	.79	5	.01	.75	18	.04	1.4	5	.02
2	.81	5	.01	.66	18	.03	1.2	5	.02
3	1.5	5	.02	.61	17	.03	1.2	6	.02
4	1.5	5	.02	.62	17	.03	1.2	6	.02
5	1.6	5	.02	.66	16	.03	1.3	7	.02
6	1.4	5	.02	.69	16	.03	1.2	8	.03
7	1.2	5	.02	.73	15	.03	1.3	5	.02
8	1.2	5	.02	.70	15	.03	1.3	2	.01
9	1.2	5	.02	.71	14	.03	1.2	3	.01
10	1.4	5	.02	.73	14	.03	1.1	4	.01
11	1.2	5	.02	.74	14	.03	1.3	4	.01
12	1.2	5	.02	.72	13	.03	1.1	4	.01
13	1.4	5	.02	.97	13	.03	1.2	4	.01
14	1.2	5	.02	.97	13	.03	1.2	4	.01
15	1.3	5	.02	.85	12	.03	1.2	4	.01
16	1.7	33	.34	.81	12	.03	1.3	7	.02
17	.87	7	.02	.80	12	.02	1.3	6	.02
18	.88	5	.01	.72	11	.02	1.4	8	.05
19	1.2	5	.02	.71	11	.02	1.3	7	.02
20	1.2	5	.02	.75	11	.02	1.3	6	.02
21	7.5	84	4.0	.90	10	.03	1.5	89	.36
22	4.0	49	.65	.90	10	.02	1.5	56	.23
23	212	321	560	.89	10	.02	1.5	22	.09
24	14	50	2.4	5.3	24	.82	1.5	10	.04
25	5.4	42	.74	131	193	236	1.6	7	.03
26	1.7	22	.10	34	51	7.6	1.7	7	.03
27	1.4	20	.08	4.1	10	.11	1.7	23	.11
28	.94	20	.05	2.1	7	.04	2.2	59	.35
29	.82	19	.04	1.7	6	.03	2.0	43	.23
30	.76	19	.04	1.6	5	.02	1.8	32	.16
31	.76	18	.04	---	---	---	1.6	18	.08
TOTAL	274.03	---	568.83	197.39	---	245.26	43.6	---	2.07
		JANUARY			FEBRUARY			MARCH	
1	36	108	29	21	77	10	4.6	47	.59
2	9.4	24	.76	4.0	8	.09	11	73	2.4
3	3.1	28	.23	33	68	21	12	10	.39
4	2.0	38	.20	20	22	1.7	6.4	82	1.5
5	1.3	26	.09	5.2	8	.11	7.5	47	.95
6	1.1	17	.05	14	29	1.7	6.4	20	.35
7	6.6	57	2.8	4.4	5	.06	5.4	9	.13
8	12	47	2.4	3.6	4	.04	5.1	7	.10
9	2.7	12	.09	3.7	5	.04	5.0	6	.08
10	1.6	2	.01	3.2	4	.04	5.9	25	.42
11	1.6	2	.01	3.4	5	.04	7.0	28	.52
12	31	70	17	3.5	5	.04	4.4	18	.21
13	61	177	42	3.6	4	.04	3.5	16	.15
14	29	35	3.9	3.1	4	.03	3.1	15	.13
15	6.5	8	.14	3.1	4	.03	3.0	14	.11
16	29	84	15	83	141	55	3.0	12	.10
17	7.1	13	.25	81	69	26	3.2	10	.09
18	4.3	5	.06	25	82	6.5	2.8	9	.07
19	3.5	5	.05	10	7	.23	2.5	8	.05
20	2.7	5	.04	6.6	1	.03	2.1	8	.05
21	2.4	5	.03	5.4	1	.02	2.2	6	.04
22	2.3	5	.03	4.9	2	.03	2.1	6	.03
23	2.2	5	.03	4.8	11	.14	2.0	6	.03
24	2.2	6	.03	4.6	46	.57	1.9	8	.04
25	2.3	6	.03	4.6	57	.71	1.9	6	.03
26	2.3	6	.04	4.7	58	.73	1.9	9	.05
27	2.2	6	.03	4.7	54	.69	1.7	14	.06
28	2.0	6	.03	4.6	51	.63	1.6	22	.10
29	2.1	6	.03	---	---	---	1.5	21	.09
30	23	91	14	---	---	---	1.4	16	.06
31	9.2	25	1.7	---	---	---	1.3	14	.05
TOTAL	303.7	---	130.06	372.7	---	126.24	123.4	---	8.97

11181040 SAN LORENZO CREEK AT SAN LORENZO, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	1.3	12	.04
2	1.4	16	.06
3	1.2	22	.07
4	1.2	24	.08
5	1.7	24	.11
6	1.9	24	.12
7	1.9	21	.11
8	2.0	18	.10
9	2.1	16	.09
10	1.9	14	.07
11	1.9	12	.06
12	2.3	12	.07
13	2.1	10	.06
14	2.0	9	.05
15	1.9	6	.03
16	1.7	4	.02
17	1.9	4	.02
18	2.6	4	.03
19	2.9	6	.05
20	2.9	6	.05
21	2.7	6	.04
22	3.4	6	.06
23	37	66	11
24	5.2	8	.11
25	2.4	8	.05
26	1.6	8	.03
27	1.3	8	.03
28	1.3	8	.03
29	1.4	8	.03
30	1.6	8	.03
TOTAL	96.7	---	12.70
PERIOD	1411.52		1094.13

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1989..	274.03	568.83	18	587
NOVEMBER	197.39	245.26	7	252
DECEMBER	43.60	2.07	0	2
JANUARY 1990..	303.70	130.06	1	131
FEBRUARY	372.70	126.24	2	128
MARCH	123.40	8.97	0	9
APRIL	96.70	12.70	0	13
PERIOD	1411.52	1094.13	28	1122

11181330 TEMESCAL CREEK ABOVE LAKE TEMESCAL, AT OAKLAND, CA

LOCATION.--Lat 37°50'38", long 122°13'35, in San Antonio (V and D Peralta) Grant, Alameda County, Hydrologic Unit 18050002, on right bank at Oakland, 0.1 mi upstream of inflow to Lake Temescal.

DRAINAGE AREA.--1.74 mi^2.

PERIOD OF RECORD.--October 1979 to September 1981, June 1989 to current year.
CHEMICAL DATA: Water years 1979-80.
SEDIMENT DATA: Water years 1979-81.

GAGE.--Water-stage recorder. Elevation of gage is 395 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 140 ft^3/s, Feb. 19, 1980, Oct. 23, 1989, gage height, 4.37 ft, 4.38 ft respectively; no flow Sept. 30, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	0815	*140	*4.38	Jan. 13	1815	130	4.18
Nov. 25	1615	106	3.71				

No flow Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	e.09	.03	.01	.01
2	---	---	---	---	---	---	---	---	e.08	.04	.01	.01
3	---	---	---	---	---	---	---	---	e.08	.03	.02	.01
4	---	---	---	---	---	---	---	---	e.07	.02	.02	.01
5	---	---	---	---	---	---	---	---	e.07	.02	.02	.01
6	---	---	---	---	---	---	---	---	e.06	.02	.02	.02
7	---	---	---	---	---	---	---	---	e.06	.02	.02	.01
8	---	---	---	---	---	---	---	---	e.07	.03	.04	.01
9	---	---	---	---	---	---	---	---	e.07	.02	.03	.01
10	---	---	---	---	---	---	---	---	.07	.02	.02	.01
11	---	---	---	---	---	---	---	---	.06	.02	.04	.01
12	---	---	---	---	---	---	---	---	.06	.03	.02	.01
13	---	---	---	---	---	---	---	---	.06	.03	.02	.01
14	---	---	---	---	---	---	---	---	.07	.03	.03	.01
15	---	---	---	---	---	---	---	---	.07	.03	.04	.01
16	---	---	---	---	---	---	---	---	.05	.02	.02	.92
17	---	---	---	---	---	---	---	---	.04	.02	.02	.51
18	---	---	---	---	---	---	---	---	.04	.03	.03	1.1
19	---	---	---	---	---	---	---	---	.04	.01	.02	.12
20	---	---	---	---	---	---	---	---	.04	.01	.02	.08
21	---	---	---	---	---	---	---	---	.03	.02	.03	.07
22	---	---	---	---	---	---	---	---	.05	.01	.03	.10
23	---	---	---	---	---	---	---	---	.04	.01	.02	.06
24	---	---	---	---	---	---	---	---	.04	.03	.01	.06
25	---	---	---	---	---	---	---	---	.04	.02	.02	.06
26	---	---	---	---	---	---	---	---	.04	.04	.02	.05
27	---	---	---	---	---	---	---	---	.05	.06	.03	.06
28	---	---	---	---	---	---	---	---	.04	.04	.02	.24
29	---	---	---	---	---	---	---	---	.05	.02	.02	.30
30	---	---	---	---	---	---	---	---	.07	.02	.01	.06
31	---	---	---	---	---	---	---	---	---	.02	.01	---
TOTAL	---	---	---	---	---	---	---	---	1.70	0.77	0.69	3.95
MEAN	---	---	---	---	---	---	---	---	.057	.025	.022	.13
MAX	---	---	---	---	---	---	---	---	.09	.06	.04	1.1
MIN	---	---	---	---	---	---	---	---	.03	.01	.01	.01
AC-FT	---	---	---	---	---	---	---	---	3.4	1.5	1.4	7.8

e Estimated.

11181330 TEMESCAL CREEK ABOVE LAKE TEMESCAL, AT OAKLAND, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.45	.17	2.8	.51	.25	.11	.14	.26	e.10	.04	.01
2	.06	.45	.16	.25	.30	2.8	.11	.15	.26	e.08	.06	.03
3	.07	.34	.16	.22	5.7	.46	.13	.14	.21	e.09	.05	.01
4	.06	.34	.17	.20	.73	1.4	.14	.13	e.20	e.10	.07	.01
5	.06	.35	.17	.19	.48	.41	.15	.12	e.17	e.09	.04	.02
6	.06	.36	.17	.18	1.2	.33	.15	.13	e.15	e.08	.05	.02
7	.06	.36	.16	2.3	.35	.37	.15	.15	e.16	e.08	.03	.02
8	.05	.36	.17	.94	.29	.32	.11	.15	e.17	e.09	.03	.02
9	.08	.37	.17	.32	.32	.27	.11	.13	e.15	e.10	.07	.02
10	.05	.35	.17	.27	.25	1.3	.11	.15	e.16	e.09	.03	.03
11	.04	.35	.18	.25	.25	.31	.11	.14	e.17	e.08	.03	.01
12	.05	.36	.18	11	.24	.26	.10	.13	e.14	e.09	.04	.01
13	.05	.39	.18	16	.24	.25	.08	.11	e.12	e.08	.05	.01
14	.05	.34	.17	2.8	.23	.24	.08	.13	e.14	e.07	.03	.01
15	.06	.32	.18	.79	.33	.22	.09	.10	e.13	e.09	.04	.01
16	.06	.32	.16	1.0	10	.20	.10	.10	e.12	e.08	.08	.01
17	.08	.32	.16	.47	3.1	.19	.09	.09	e.11	e.07	.07	.04
18	.08	.32	.16	.40	.91	.18	.10	.08	e.12	e.06	.05	.01
19	.12	.33	.15	.36	.56	.16	.09	.10	e.11	e.07	.07	.01
20	.15	.34	.15	.34	.51	.17	.10	6.4	e.11	e.06	.09	.01
21	.50	.35	.15	.32	.44	.15	.10	.34	e.12	e.05	.06	.01
22	.14	.35	.15	.30	.38	.13	.41	.83	e.13	e.06	.03	.02
23	11	.35	.15	.29	.31	.14	1.5	2.2	e.12	e.08	.02	.04
24	4.5	.50	.15	.28	.29	.13	.20	.30	e.11	.07	.02	.01
25	.32	12	.16	.27	.27	.13	.18	.28	e.10	.04	.03	.01
26	.25	.72	.16	.26	.27	.13	.16	.28	e.12	.05	.02	.01
27	.24	.24	.18	.25	.26	.12	.16	8.6	e.13	.05	.04	.01
28	.24	.22	.19	.25	.25	.12	.15	1.3	e.10	.03	.02	.07
29	.31	.22	.22	.34	---	.12	.17	.34	e.09	.05	.01	.01
30	.40	.18	.22	1.7	---	.12	.14	1.1	e.08	.06	.03	.00
31	.43	---	.41	.84	---	.12	---	.33	---	.04	.03	---
TOTAL	19.68	22.25	5.48	46.18	28.97	11.50	5.38	24.67	4.26	2.23	1.33	0.51
MEAN	.63	.74	.18	1.49	1.03	.37	.18	.80	.14	.072	.043	.017
MAX	11	12	.41	16	10	2.8	1.5	8.6	.26	.10	.09	.07
MIN	.04	.18	.15	.18	.23	.12	.08	.08	.08	.03	.01	.00
AC-FT	39	44	11	92	57	23	11	49	8.4	4.4	2.6	1.0

WTR YR 1990 TOTAL 172.44 MEAN .47 MAX 16 MIN .00 AC-FT 342

e Estimated.

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA

LOCATION.--Lat 37°57'53", long 122°25'42", in NW 1/4 sec.3, T.1 N., R.5 W., Contra Costa County, Hydrologic Unit 18050002, on north end of Port of Richmond Pier on west side of Point San Pablo.

GAGE-HEIGHT RECORDS

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1989 to September 1990 (gage height only).

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No record Jan. 23 to Sept. 30. Daily maximums and minimums sometimes differ from tidal-cycle maximums and minimums.

EXTREMES FOR CURRENT YEAR.--Maximum gage height recorded, 14.81 ft, Jan. 12; minimum gage height recorded, 5.59 ft, Dec. 12.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.37	7.99	13.45	6.95	13.44	6.56	12.90	7.08	---	---	---	---
2	13.43	7.73	13.28	7.08	13.08	6.63	12.54	7.10	---	---	---	---
3	13.30	7.66	13.15	7.24	12.83	6.90	12.56	7.59	---	---	---	---
4	13.26	7.84	12.88	7.47	12.51	7.32	12.71	7.82	---	---	---	---
5	13.18	7.90	12.59	7.46	12.47	7.65	13.20	7.27	---	---	---	---
6	12.91	7.72	12.31	7.46	12.74	7.87	13.55	6.63	---	---	---	---
7	12.69	7.61	12.42	7.50	13.28	8.13	13.98	6.24	---	---	---	---
8	12.69	7.64	12.73	7.57	13.80	7.50	14.24	5.88	---	---	---	---
9	12.91	7.62	13.09	7.80	14.21	6.86	14.34	5.67	---	---	---	---
10	12.97	7.55	13.67	7.33	14.50	6.22	14.36	5.74	---	---	---	---
11	12.92	7.41	14.21	6.76	14.63	5.70	14.54	6.18	---	---	---	---
12	13.07	7.52	14.51	6.21	14.51	5.59	14.81	6.72	---	---	---	---
13	13.52	7.57	14.64	5.76	14.66	5.69	14.40	7.14	---	---	---	---
14	13.92	6.99	14.52	5.73	14.28	5.95	13.41	7.21	---	---	---	---
15	14.16	6.50	14.26	5.74	14.02	6.40	12.97	7.71	---	---	---	---
16	14.35	6.29	13.99	6.23	13.65	6.93	13.07	8.35	---	---	---	---
17	14.33	6.29	13.68	6.74	12.93	7.46	13.02	8.95	---	---	---	---
18	14.00	6.50	13.01	7.04	13.02	7.95	13.11	8.79	---	---	---	---
19	13.83	7.03	12.64	7.70	12.94	8.39	13.22	7.87	---	---	---	---
20	13.49	7.46	12.88	7.90	12.90	8.54	13.07	7.97	---	---	---	---
21	13.16	7.64	12.88	8.08	12.98	8.27	13.26	6.94	---	---	---	---
22	12.90	7.60	13.08	8.48	12.96	7.55	13.52	6.86	---	---	---	---
23	13.37	8.36	13.22	8.04	13.10	7.11	---	---	---	---	---	---
24	13.10	8.11	13.58	7.80	13.32	6.86	---	---	---	---	---	---
25	13.07	8.36	13.87	7.93	13.50	6.67	---	---	---	---	---	---
26	13.03	7.92	13.61	6.82	13.79	6.60	---	---	---	---	---	---
27	13.06	7.50	13.57	6.56	14.01	6.57	---	---	---	---	---	---
28	13.16	7.33	13.70	6.55	13.96	6.39	---	---	---	---	---	---
29	13.34	7.05	13.89	6.65	13.76	6.32	---	---	---	---	---	---
30	13.39	6.91	13.71	6.60	13.58	6.41	---	---	---	---	---	---
31	13.61	7.10	---	---	13.14	6.58	---	---	---	---	---	---
MONTH	14.35	6.29	14.64	5.73	14.66	5.59	---	---	---	---	---	---

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1989 to September 1990.
WATER TEMPERATURE: October 1989 to September 1990.

INSTRUMENTATION.--Water-quality monitor since October 1989.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Upper probe is set at 3.6 ft below Mean Lower Low Water (MLLW). Lower probe is set at 24.8 ft below MLLW. Daily maximums and minimums sometimes differ from tidal-cycle (24.8 hours) maximums and minimums.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 50,100 microsiemens, July 23; minimum recorded, 29,100 microsiemens, Jan. 19.
WATER TEMPERATURE: Maximum recorded, 22.0 °C, Sept. 6; minimum recorded, 7.0 °C, Feb. 15.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	47100	37000	46900	36700	47100	38600	---	---	45900	38400
2	---	---	47600	37800	46400	35800	46600	39100	45700	36000	46300	37200
3	---	---	47200	38100	45800	35600	46600	35600	46200	35300	46500	37100
4	---	---	46700	37700	45400	36600	---	---	46600	35600	46300	37400
5	---	---	46400	38200	46000	36800	45800	37200	46600	35600	46500	37700
6	---	---	46100	37600	45400	35600	45800	36700	46400	37200	46200	36300
7	---	---	45600	37200	46100	35800	46600	37000	46400	35200	---	---
8	---	---	45700	37200	45900	37200	46500	36800	46500	34900	46000	37000
9	---	---	46000	38300	46400	36700	46600	37000	46300	35200	46200	36600
10	---	---	46600	38700	46800	37100	46600	36800	46300	35400	45900	37600
11	---	---	47300	37900	46700	36400	47100	37500	46000	35700	45800	38700
12	---	---	47900	38500	46900	36200	47100	37100	45900	38600	45900	38500
13	---	---	47600	38500	47100	36700	46400	37200	45500	38200	45900	37300
14	---	---	47800	38800	46800	37900	45500	35900	45500	37200	46100	35900
15	---	---	47900	38400	47400	37900	45000	34600	46100	37800	46100	35100
16	---	---	47900	38200	47500	38000	---	---	46500	40500	45800	36300
17	---	---	47900	39100	47000	38100	45000	32400	45600	34900	46400	36100
18	48900	40000	47500	38500	46500	38700	44700	30900	46700	34400	46300	36800
19	49100	41100	46800	38000	46400	37900	43100	29100	46600	34400	46200	37900
20	49300	40600	---	---	46700	36900	43300	30600	45900	33800	46000	36200
21	49000	43700	46600	37000	46500	36600	43900	32900	45900	35300	46000	37200
22	49100	40400	46300	38300	46500	34800	---	---	45700	34800	45800	38600
23	48900	39700	46700	39700	46100	35700	---	---	45600	35100	45800	39100
24	48700	39200	46800	39000	46700	35800	---	---	45700	35700	46400	38000
25	48900	40600	47300	37700	46900	36600	---	---	45700	36500	46400	39900
26	---	---	46400	37500	47300	37000	---	---	45600	37800	46300	40700
27	---	---	47200	37800	47500	38000	---	---	45800	39200	46900	39300
28	---	---	46800	35200	47800	38200	---	---	46000	38100	47100	38900
29	---	---	46900	35500	47800	38700	---	---	---	---	47500	39500
30	---	---	46800	36200	48000	37600	44600	37400	---	---	47800	39400
31	49900	37900	---	---	47700	38800	44700	38200	---	---	48000	40000
Month	---	---	---	---	48000	34800	---	---	---	---	---	---

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	47500	42400	---	---	47100	35600	48100	39500	48800	41400	48300	40700
2	47300	35600	47400	38600	46800	34800	---	---	48800	43100	48400	40300
3	47000	39900	47400	38300	46900	36500	---	---	48700	42200	48400	39900
4	47300	40500	47600	41100	45600	37100	48900	40500	48400	41900	48600	41700
5	47300	39900	48000	40200	46100	36500	48900	40800	48200	40700	48500	40900
6	47200	40500	48000	40200	46500	38300	48600	40700	47800	39700	48400	41900
7	47400	40800	48000	40000	46500	38500	48600	41500	47700	40600	48500	42800
8	47300	41500	48100	40200	47800	36700	49000	40500	47200	39100	48300	41100
9	47100	40100	48300	41400	48000	37600	49100	40900	---	---	48400	40200
10	---	---	48300	41500	47400	39100	48500	40900	48900	41500	48400	42500
11	---	---	48400	40800	47000	38600	48400	40900	49000	40900	47900	41000
12	---	---	48000	40300	47400	38500	48400	39900	49200	41800	47600	40800
13	---	---	47900	40600	47000	38700	---	---	49400	41000	---	---
14	46600	37900	48000	41300	47000	37400	48500	41200	49300	41800	48400	41400
15	47200	40100	48000	39600	46900	34500	48700	41400	49000	41200	48600	41200
16	47300	40500	47500	39700	46600	35700	48700	41600	49600	42600	48900	41600
17	46700	39000	---	---	46700	35500	48800	41400	49300	42400	48800	40300
18	46400	36700	47700	37800	---	---	---	---	49400	41500	49000	41600
19	46200	36700	48000	40300	48200	38500	48100	40200	49200	43000	48700	41900
20	46500	36300	47900	39100	48600	38800	---	---	49200	39700	48900	42000
21	46400	38200	48300	39600	48500	39100	49300	41900	49000	40500	48600	41800
22	46300	39000	48500	40500	48700	40800	49300	41200	48900	40500	48700	40900
23	46500	39300	48400	40400	48800	40300	49300	41400	48800	40800	48600	41100
24	46800	40700	48300	41000	48600	39000	49200	41400	48600	41200	47800	42000
25	46600	40000	48500	42200	48400	38300	48800	40800	48700	39500	47900	42100
26	46800	40000	48500	42100	48200	41100	48600	41000	48500	39800	48000	42400
27	47200	37700	48600	38500	47900	38400	48800	39500	47200	39500	48100	42100
28	47200	38200	48500	39200	47600	38500	48900	41200	47600	40000	48000	40600
29	46800	39800	47300	40400	47800	39400	48600	40300	47400	39100	47900	41700
30	46600	39000	---	---	47900	39600	48600	41200	---	---	47900	41300
31	---	---	47400	35600	---	---	48700	42000	48200	42000	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	46700	33700	47500	37400	47100	39200	---	---	45300	37400
2	---	---	46800	33800	47300	36800	46500	39400	44900	35000	45600	36700
3	---	---	46300	37700	46900	37100	46500	36900	45500	35800	45900	36300
4	---	---	46600	37400	46400	37500	---	---	45100	35100	45700	36900
5	---	---	46300	38000	46400	38400	44100	36000	45500	35000	45400	37400
6	---	---	45700	37800	46000	36600	44500	36200	45400	35000	44900	35500
7	---	---	45600	34200	46400	37200	45200	36500	45600	34700	---	---
8	---	---	45800	38800	46400	37700	45400	36300	45500	34400	45100	36400
9	---	---	46000	34900	46800	37400	45600	38200	45200	34500	44500	36100
10	---	---	46800	33100	46900	37600	45700	37300	45200	34700	44800	35900
11	---	---	47000	35200	46900	38100	46400	37500	45200	35000	45100	37800
12	---	---	47700	38400	47000	37200	46600	35700	45000	37400	44700	35000
13	---	---	47500	36500	46800	37000	45100	33700	44800	37800	45100	35900
14	---	---	47500	32800	46900	38500	45200	36100	44900	36100	44900	34600
15	---	---	47500	36500	47600	38500	45100	36100	45400	35100	44900	34400
16	---	---	47800	34000	47700	39000	---	---	44900	37100	45100	35500
17	---	---	47500	34000	47400	38800	45500	34800	44700	34200	43900	34600
18	45900	37900	47500	38900	46800	39700	45800	35600	43800	33700	44000	35400
19	46300	38300	46800	37500	46400	38400	46000	31400	43400	33100	44200	34800
20	46200	37600	---	---	46700	37500	46200	33000	44600	33200	44600	35300
21	45900	40700	47300	38100	46800	37000	46300	33400	45100	34000	44500	36300
22	46000	37900	47400	40500	46400	36200	---	---	44900	34200	44900	37800
23	45700	38200	47500	40700	46500	36700	---	---	44900	34600	45000	37600
24	45800	36700	47700	40000	47100	36600	---	---	44700	35000	45200	37300
25	46200	38600	47900	40000	47200	37000	---	---	44700	35700	45700	38500
26	---	---	46800	39900	46700	37200	---	---	44700	37000	45500	39500
27	---	---	47700	38700	47600	38400	---	---	45200	38000	46100	38200
28	---	---	47400	36300	47700	38300	---	---	45200	37400	46200	38200
29	---	---	45700	37000	48000	39000	---	---	---	---	46700	38800
30	---	---	47900	37000	47900	38400	45500	38600	---	---	46800	38800
31	47500	36500	---	---	47500	39500	45600	38700	---	---	47000	39100
Month	---	---	---	---	48000	36200	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	46300	41200	---	---	43100	34500	48700	40200	48600	42100	---	---
2	46200	36600	48000	33300	42900	34800	---	---	49300	42700	---	---
3	46600	39500	48400	34000	47100	33500	---	---	48600	42000	---	---
4	46700	40200	47400	36200	46900	37400	49600	41100	49800	43100	---	---
5	46700	39500	47700	38400	46600	38000	49700	41300	49700	42600	---	---
6	46600	40100	47100	37500	47400	37000	49300	41400	49500	41800	---	---
7	46800	39900	48600	40600	47400	35900	49600	43200	49700	42200	---	---
8	46800	40700	48700	40200	48300	37700	49700	41000	49400	41200	---	---
9	46700	39600	46500	36900	48700	38400	49800	41900	---	---	---	---
10	---	---	47200	37200	48400	37900	49400	41900	49500	42700	---	---
11	---	---	46400	38200	48100	39100	49200	42000	49600	42200	---	---
12	47300	40300	48000	38300	48400	38300	49200	41000	49800	42700	49500	42000
13	47500	40200	46900	38000	47700	40100	---	---	50000	41700	---	---
14	47500	39800	44600	37600	48000	38700	49300	41900	---	---	49600	42000
15	47700	40300	45900	38900	48200	37200	49600	42100	---	---	49400	42400
16	48000	41200	48100	37900	48100	35900	49800	42400	---	---	49700	43100
17	47600	40200	---	---	48500	39300	50000	42600	---	---	49500	41000
18	47400	39300	48400	38500	---	---	---	---	---	---	49400	42600
19	47000	39400	48700	42100	49000	38600	49900	42700	---	---	49500	43300
20	46800	37300	48700	41500	49300	39400	---	---	---	---	49600	42800
21	46800	39500	49100	40600	49000	39600	49900	42800	---	---	49600	42400
22	46800	40700	49200	41200	48900	39100	50000	42100	---	---	49400	41600
23	47100	39600	49300	41800	49400	41300	50100	38900	---	---	49200	42500
24	47500	41600	49300	42400	49300	39400	49900	42000	---	---	49200	44800
25	47300	40500	49400	43300	49100	41600	49500	41500	---	---	49200	43500
26	47500	41500	49300	43200	48900	41100	49300	41700	49200	40300	48700	42900
27	47700	40100	49300	39300	48300	39200	49500	42700	48800	40200	46800	41200
28	47900	38700	49100	39800	48300	39900	49300	42900	---	---	48900	41500
29	47800	41300	48600	40500	48600	40000	48600	40300	---	---	48800	42700
30	47600	40000	---	---	48800	41800	49300	42000	---	---	48800	42300
31	---	---	46700	36400	---	---	49500	42600	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

11181360 SAN PABLO STRAITS AT POINT SAN PABLO, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(UPPER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	16.0	15.0	13.5	12.5	---	---	---	---	11.5	11.0
2	---	---	16.0	15.0	13.5	12.5	---	---	11.0	10.0	11.5	11.0
3	---	---	16.0	15.0	13.5	12.5	---	---	11.5	10.0	12.5	11.0
4	---	---	16.5	15.0	13.5	12.5	---	---	11.0	10.0	12.0	11.0
5	---	---	16.5	15.5	14.0	12.5	10.5	9.0	11.0	10.5	12.5	11.0
6	---	---	16.0	15.0	13.5	13.0	10.5	9.0	11.5	10.5	13.0	11.0
7	---	---	16.0	15.0	13.5	12.5	11.0	9.5	11.0	10.0	---	---
8	---	---	16.5	15.0	13.0	12.5	12.5	10.0	11.0	10.0	13.0	11.0
9	---	---	16.0	15.0	13.0	11.5	13.0	10.5	11.5	10.5	13.0	11.0
10	---	---	16.5	15.0	---	---	12.0	10.5	11.5	10.5	12.5	11.5
11	---	---	16.5	15.0	---	---	12.0	10.5	11.0	10.5	12.5	11.0
12	---	---	16.5	14.5	---	---	12.0	11.0	12.0	10.5	13.0	10.5
13	---	---	15.5	15.0	---	---	11.5	10.5	11.0	9.5	13.0	11.0
14	---	---	16.0	14.5	---	---	11.5	10.5	10.5	7.5	12.5	11.5
15	---	---	15.0	14.5	---	---	11.5	10.5	10.5	7.5	12.5	11.5
16	---	---	15.0	14.0	---	---	---	---	10.0	9.5	12.5	11.5
17	---	---	15.5	14.5	---	---	11.5	10.0	10.0	9.0	13.0	11.5
18	18.0	15.5	15.5	14.5	---	---	11.5	10.0	10.0	8.5	13.0	11.5
19	18.0	15.5	15.5	14.5	---	---	11.0	10.0	10.0	9.0	14.0	11.5
20	17.5	15.5	---	---	---	---	11.0	9.5	10.0	9.0	14.5	12.0
21	16.5	15.5	15.5	14.5	---	---	11.0	10.0	10.5	9.5	14.5	12.0
22	17.0	15.5	15.0	14.5	---	---	---	---	11.0	9.5	14.5	12.0
23	17.0	15.5	15.0	14.5	---	---	---	---	11.5	10.0	15.5	12.5
24	17.0	15.5	15.5	14.5	---	---	---	---	12.0	10.0	15.5	12.5
25	17.0	15.5	14.5	14.0	---	---	---	---	12.5	10.5	16.0	12.5
26	---	---	14.5	14.0	---	---	---	---	12.5	10.5	16.0	12.5
27	---	---	14.0	13.0	---	---	---	---	12.5	11.0	15.0	13.0
28	---	---	14.0	12.5	---	---	---	---	12.5	11.0	15.5	13.0
29	---	---	13.5	12.5	---	---	---	---	---	---	15.0	12.5
30	---	---	13.5	12.5	---	---	11.5	10.5	---	---	15.0	12.5
31	16.0	15.0	---	---	---	---	11.0	9.5	---	---	15.0	12.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.0	13.0	---	---	18.5	15.5	19.5	16.5	19.5	17.5	20.5	19.0
2	16.5	13.0	19.0	15.0	19.0	16.0	---	---	19.5	17.5	20.5	19.0
3	17.0	13.0	19.0	15.0	19.5	16.0	---	---	20.0	17.5	21.5	18.5
4	16.0	13.5	19.5	15.5	20.0	16.5	20.0	16.5	20.5	17.5	21.5	18.5
5	15.5	13.5	19.0	15.0	19.5	16.5	20.5	16.5	21.0	18.0	21.5	18.5
6	15.0	13.5	18.5	15.5	19.5	16.5	21.0	17.0	20.5	18.0	22.0	18.5
7	15.0	13.5	19.0	15.5	20.5	16.5	20.5	17.5	21.0	18.0	21.5	18.5
8	15.5	13.5	18.5	15.0	20.5	16.0	20.0	16.5	21.5	18.0	21.0	18.5
9	16.0	13.5	18.0	15.0	20.5	16.0	20.5	16.5	---	---	21.5	18.5
10	---	---	18.0	15.0	20.0	16.5	21.0	17.0	21.0	18.0	20.0	18.0
11	---	---	18.0	15.0	19.5	16.5	20.5	17.5	21.0	18.0	20.5	18.5
12	17.5	13.0	18.0	15.5	19.5	16.5	21.0	17.5	20.5	18.0	20.5	18.5
13	17.5	13.5	18.0	15.5	19.5	16.5	---	---	20.5	18.0	---	---
14	17.0	13.5	17.5	15.5	19.5	16.0	20.5	17.5	20.0	18.0	21.5	19.0
15	16.5	12.5	18.0	15.5	19.5	16.0	20.5	17.0	20.0	18.0	21.0	18.5
16	16.5	14.0	17.5	15.5	19.0	16.0	20.5	17.0	20.5	17.5	21.5	18.0
17	17.0	15.0	---	---	19.0	15.5	20.5	17.0	21.0	18.0	21.0	18.0
18	17.0	15.0	18.0	15.5	---	---	21.0	17.0	21.0	17.5	21.0	18.0
19	17.0	15.0	17.0	15.0	19.0	16.0	21.0	17.0	21.0	17.5	20.5	18.0
20	18.0	15.0	17.5	15.0	20.5	16.0	---	---	20.5	17.5	21.0	17.5
21	17.0	15.0	18.0	15.0	19.5	15.5	21.0	17.5	21.0	17.5	20.5	18.0
22	16.5	15.0	18.5	15.0	19.5	15.5	21.0	17.5	21.5	18.0	20.5	18.0
23	17.5	15.0	18.0	14.5	19.5	15.5	20.0	17.0	21.0	18.5	20.5	18.0
24	18.0	15.0	18.0	15.0	19.5	16.0	20.5	17.0	21.0	18.5	20.5	18.0
25	18.5	15.0	18.0	14.5	20.0	16.0	20.0	17.5	20.0	18.0	20.5	18.5
26	18.5	15.0	17.0	14.5	19.0	16.5	20.5	17.5	20.0	18.0	20.5	18.0
27	18.0	14.5	17.0	14.5	20.0	16.5	20.0	17.5	21.0	19.0	20.0	18.0
28	18.5	14.5	17.5	14.5	20.0	16.5	20.0	17.5	21.0	18.5	20.0	18.0
29	17.5	14.5	17.0	15.0	19.5	17.0	20.5	17.5	21.0	18.5	20.5	18.0
30	17.5	14.5	---	---	19.5	16.5	19.5	17.5	21.0	19.0	21.0	18.0
31	---	---	18.0	15.0	---	---	20.0	17.5	21.5	19.0	---	---

11181360 SAN PABLO STRAIT AT POINT SAN PABLO, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
(LOWER PROBE)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	15.5	15.0	13.0	12.5	10.5	9.0	---	---	12.0	11.0
2	---	---	15.5	15.0	12.5	12.5	10.0	8.5	11.0	10.0	12.0	11.0
3	---	---	15.5	15.0	12.5	12.5	10.0	8.5	11.5	10.5	12.5	11.0
4	---	---	15.5	15.0	12.5	12.0	---	---	11.0	10.0	12.5	11.0
5	---	---	15.5	15.0	13.0	12.0	10.5	8.5	11.5	10.0	12.5	11.0
6	---	---	15.5	15.0	13.0	12.5	10.5	9.0	12.0	10.5	13.5	11.0
7	---	---	15.5	15.0	13.0	12.0	10.5	9.5	11.0	9.5	---	---
8	---	---	15.5	15.0	12.5	12.0	12.0	10.0	11.0	9.5	13.5	11.5
9	---	---	15.5	15.0	12.5	12.0	12.5	10.5	11.5	10.0	13.5	11.5
10	---	---	16.0	14.5	12.5	12.0	12.0	10.0	12.0	10.5	13.0	11.5
11	---	---	16.0	14.5	12.5	11.5	11.5	10.5	11.0	10.0	12.5	11.0
12	---	---	16.0	14.5	12.0	11.0	12.0	10.5	12.0	10.5	13.0	10.5
13	---	---	15.0	14.5	12.0	10.5	11.5	10.5	11.0	9.0	13.5	10.5
14	---	---	15.5	14.5	12.0	10.5	11.5	10.5	10.5	7.5	12.5	11.5
15	---	---	15.0	14.5	11.5	10.5	11.5	10.5	10.5	7.0	13.5	11.5
16	---	---	15.0	14.0	11.5	10.5	---	---	10.0	9.0	13.0	11.5
17	---	---	15.0	14.5	11.5	10.5	11.5	10.0	10.0	8.5	13.0	12.0
18	18.5	16.5	15.0	14.5	11.5	10.5	11.0	10.0	9.5	8.5	13.5	12.0
19	18.5	16.5	15.0	14.5	11.5	10.0	11.0	9.5	10.0	9.0	14.0	12.0
20	18.0	16.5	---	---	11.0	10.0	11.0	9.5	10.0	9.0	15.0	12.0
21	17.5	16.5	15.0	14.0	11.0	9.5	11.0	9.5	10.5	9.0	15.5	12.5
22	17.5	16.5	14.5	14.0	11.0	9.5	---	---	11.5	9.5	15.0	12.5
23	17.5	16.0	14.0	13.5	10.5	9.0	---	---	12.5	10.0	16.5	12.5
24	17.0	16.0	14.5	13.5	10.5	9.0	---	---	12.5	10.0	15.5	12.5
25	17.0	16.0	14.0	13.5	10.5	8.5	---	---	12.5	10.5	16.0	12.5
26	---	---	13.5	13.5	10.5	8.5	---	---	12.5	11.0	16.5	13.0
27	---	---	13.5	13.0	10.5	8.5	---	---	13.0	11.0	15.5	13.0
28	---	---	13.5	12.5	10.5	8.5	---	---	12.5	11.0	16.0	13.0
29	---	---	13.0	12.0	10.5	8.5	---	---	---	---	15.5	13.0
30	---	---	13.0	12.5	10.5	8.5	11.5	10.5	---	---	15.5	13.0
31	15.5	15.0	---	---	10.5	9.0	11.5	10.0	---	---	15.5	12.5
Month	---	---	---	---	13.0	8.5	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.5	13.0	---	---	18.0	15.5	19.5	16.5	19.5	17.0	20.5	19.0
2	17.0	13.0	18.5	14.5	19.0	16.0	---	---	19.0	17.0	20.5	19.0
3	18.0	13.5	18.5	15.0	18.0	16.0	---	---	20.0	17.0	21.0	18.5
4	16.5	13.5	19.0	15.0	19.0	16.5	19.5	16.0	19.5	17.5	21.0	18.5
5	16.0	13.5	18.5	15.0	18.5	16.5	20.5	16.0	20.5	17.5	21.0	18.5
6	15.5	13.5	18.0	15.0	19.0	16.0	21.0	16.5	20.0	17.5	21.5	18.5
7	15.0	13.5	18.5	15.0	19.0	16.5	20.0	16.5	20.0	17.5	21.5	18.5
8	16.0	13.5	18.5	15.0	20.0	16.0	20.0	16.5	21.0	17.5	21.0	18.5
9	17.5	13.5	18.0	15.0	20.0	16.0	19.5	16.0	---	---	21.5	18.5
10	---	---	17.5	15.0	19.5	16.0	20.0	17.0	20.5	18.0	20.0	18.0
11	---	---	17.5	15.0	19.5	16.0	20.5	17.0	21.0	18.0	20.5	18.0
12	16.5	14.0	18.0	15.5	19.0	16.0	20.5	17.0	20.5	18.0	20.5	18.0
13	16.5	14.5	17.5	15.5	19.0	16.0	---	---	20.5	18.0	---	---
14	17.0	14.5	17.5	15.5	19.0	16.0	20.0	17.5	20.0	18.0	20.5	18.5
15	16.5	14.5	17.5	15.5	19.0	16.0	20.0	17.0	20.0	18.5	20.5	18.0
16	16.0	14.5	17.5	15.5	18.5	15.5	20.0	16.5	20.5	18.0	20.5	18.0
17	17.0	14.5	---	---	18.5	15.5	20.5	16.5	21.0	18.0	20.5	18.0
18	17.0	15.0	18.0	15.5	---	---	21.0	17.0	21.0	18.0	20.5	17.5
19	16.5	15.0	16.5	15.0	18.5	15.5	20.5	17.0	21.5	18.0	20.5	17.5
20	18.0	15.0	17.0	14.5	20.0	15.5	---	---	20.5	18.0	20.5	17.5
21	17.0	15.0	17.0	14.5	19.5	15.5	20.5	17.0	21.0	18.0	20.5	17.5
22	16.5	15.0	18.0	14.5	19.0	15.5	20.5	17.0	21.5	18.5	20.0	18.0
23	17.5	15.0	17.0	14.5	19.0	15.5	19.5	16.5	21.0	18.5	20.5	18.0
24	17.5	15.0	17.5	14.5	19.5	15.5	20.0	16.5	20.5	18.5	20.0	18.0
25	18.0	15.0	17.5	14.5	19.5	16.0	19.5	17.0	20.0	18.0	20.0	18.0
26	18.5	15.0	16.5	14.5	19.0	16.0	19.5	17.0	20.5	18.5	20.0	18.0
27	18.0	15.0	17.0	14.5	19.0	16.5	19.0	17.0	20.5	18.5	20.0	18.0
28	18.0	14.5	17.0	14.5	19.5	16.5	19.5	17.0	21.0	18.5	20.0	18.0
29	17.0	14.5	17.0	15.0	19.5	16.5	19.5	17.0	21.0	18.5	19.5	18.0
30	17.5	14.5	---	---	19.0	16.5	19.5	17.0	21.0	19.0	20.0	18.0
31	---	---	18.0	15.5	---	---	19.5	17.0	21.0	19.0	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

11181390 WILDCAT CREEK AT VALE ROAD, AT RICHMOND, CA

LOCATION.--Lat 37°57'12", long 122°20'14", in San Pablo Grant, Contra Costa County, Hydrologic Unit 18050002, on left bank at upstream side of Vale Road bridge at Richmond, 3.6 mi upstream from mouth.

DRAINAGE AREA.--7.79 mi^2.

PERIOD OF RECORD.--October 1975 to current year.

REVISED RECORDS.--WDR CA-81-2: 1979-80(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 65.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Minor storage in Lake Anza and Jewel Lake 5 mi upstream. No diversion upstream from station.

AVERAGE DISCHARGE.--15 years, 4.84 ft^3/s, 3,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,050 ft^3/s, Jan. 4, 1982, gage height, 14.68 ft; maximum gage height, 15.80 ft from floodmarks, from rating curve extended above 400 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in 1979, 1987-90.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 25	1530	*216	*4.93				

No flow, Oct. 1-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.74	.18	2.6	.71	.19	.23	.08	.36	.03	.02	e.02
2	.00	.43	.11	2.1	.47	2.9	.23	.08	.22	.03	.02	e.02
3	.00	.17	.08	.92	6.0	2.3	.23	.07	.18	.03	.02	e.02
4	.01	.26	.08	.49	5.8	2.3	.23	.07	.14	.03	.04	e.02
5	.01	.56	1.4	.32	1.3	1.4	.23	.07	e.10	.03	.04	e.02
6	.01	.23	.10	.20	1.8	.64	.13	.06	.08	.03	.04	e.02
7	.01	.09	.08	.88	.85	.50	.13	.07	.06	.03	.04	e.02
8	.01	.06	.08	2.3	.56	.38	.13	.06	.07	.03	.04	e.02
9	.01	.05	.08	1.5	.49	.38	.13	.06	.06	.03	.04	e.02
10	.27	.15	.08	1.7	.40	1.3	.15	.06	.06	.03	.04	e.02
11	.56	.04	.08	7.6	.26	.82	.16	.06	.06	.03	.04	e.02
12	.77	.01	.08	16	.22	.50	.14	.06	.05	.03	.04	e.02
13	.77	.01	.08	11	.17	.34	.13	.08	.06	.03	.04	e.02
14	.77	.01	.08	12	.12	.28	.11	e.06	.08	.03	.04	e.02
15	.75	.03	.08	3.6	.29	.28	.06	.05	.09	.02	.04	e.02
16	.70	.04	.08	7.8	19	.28	.09	.05	.10	.02	.04	e.02
17	.77	.04	.08	6.7	7.5	.28	.15	.05	.10	.02	.04	e.02
18	.83	.04	.10	6.1	3.1	.23	.16	.05	.10	.03	.02	e.02
19	.70	.04	.10	6.1	1.4	.21	.09	.05	.10	.04	.02	e.02
20	.70	.04	.10	6.1	.80	.19	.08	.64	.08	.04	.02	e.02
21	.84	.04	.10	5.8	.58	.19	.08	.32	.06	.04	.02	e.02
22	.85	.04	.10	5.6	.45	.19	.08	.33	.08	.04	.03	.02
23	5.0	.04	.10	1.0	.33	.19	.36	1.2	.10	.04	e.03	.04
24	.18	.08	.10	.35	.32	.19	.27	.21	.10	.04	e.03	.03
25	.03	15	.10	.27	.27	.19	.10	.05	.10	.04	e.03	.03
26	.03	7.3	.10	.20	.23	.19	.04	.06	.06	.04	e.02	.03
27	.03	1.3	.10	.17	.19	.19	.05	6.4	.05	.04	e.02	.03
28	.03	.60	.10	.13	.19	.19	.06	5.3	.04	.04	e.02	.03
29	.27	.34	.10	.13	---	.22	.06	.95	.04	.04	e.02	.03
30	.15	.22	.10	1.8	---	.23	.06	1.6	.04	.04	e.02	.03
31	.34	---	.10	1.2	---	.23	---	.57	---	.02	e.02	---
TOTAL	15.40	28.00	4.23	112.66	53.80	17.90	4.15	18.82	2.82	1.01	0.94	0.69
MEAN	.50	.93	.14	3.63	1.92	.58	.14	.61	.094	.033	.030	.023
MAX	5.0	15	1.4	16	19	2.9	.36	6.4	.36	.04	.04	.04
MIN	.00	.01	.08	.13	.12	.19	.04	.05	.04	.02	.02	.02
AC-FT	31	56	8.4	223	107	36	8.2	37	5.6	2.0	1.9	1.4

CAL YR 1989 TOTAL 456.37 MEAN 1.25 MAX 66 MIN .00 AC-FT 905
WTR YR 1990 TOTAL 260.42 MEAN .71 MAX 19 MIN .00 AC-FT 517

e Estimated.

11182030 RHEEM CREEK AT SAN PABLO, CA

LOCATION.--Lat 37°58'38", long 122°21'10", in San Pablo Grant, Contra Costa County, Hydrologic Unit 18050002, on left bank 50 ft downstream from Santa Fe Railway bridge at San Pablo and 0.7 mi upstream from mouth.

DRAINAGE AREA.--1.49 mi^2.

PERIOD OF RECORD.--December 1960 to September 1990 (discontinued).

REVISED RECORDS.--WDR CA-72-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 13.63 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Aug. 13, 1965, at site 0.2 mi upstream at datum 7.74 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Low flow affected by return flow from industrial waste, leakage, and infrequent releases from off-stream North Reservoir.

AVERAGE DISCHARGE.--29 years (water years 1962-90), 1.47 ft^3/s, 1,060 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 477 ft^3/s, Dec. 20, 1969, gage height, 6.95 ft, from rating curve extended above 150 ft^3/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	0745	255	5.59	Feb. 16	1100	259	5.63
Nov. 25	1530	*300	*6.05				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.02	6.3	1.1	.10	.03	.00	.09	.00	.00	.00
2	.00	.00	.02	.12	.13	10	.02	.00	.04	.00	.00	.00
3	.00	.00	.01	.02	14	.71	.05	.00	.01	.00	.00	.00
4	.00	.00	.00	.00	1.1	8.3	.02	.00	.01	.00	.00	.00
5	.00	.00	.00	.00	.24	.66	.01	.00	.00	.00	.00	.00
6	.00	.00	.00	.02	3.6	.32	.01	.27	.01	.00	.00	.00
7	.00	.00	.00	.62	.20	.21	.00	.28	.00	.00	.00	.00
8	.00	.00	.00	.68	.15	.17	.00	.27	.00	.00	.00	.00
9	.00	.00	.00	.04	.12	.15	.00	.29	.00	.00	.00	.00
10	.00	.00	.00	.00	.12	2.2	.02	.29	.00	.00	.00	.00
11	.00	.00	.00	.00	.11	.30	.00	.29	.00	.00	.00	.00
12	.00	.00	.00	10	.09	.12	.00	.27	.00	.00	.00	.00
13	.00	.00	.00	24	.06	.11	.02	.00	.00	.00	.00	.00
14	.00	.00	.00	18	.06	.15	.02	.00	.00	.00	.00	.00
15	.00	.00	.00	.70	1.5	.11	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	2.0	38	.08	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.22	8.8	.08	.01	.00	.00	.00	.00	.00
18	.00	.00	.00	.16	.97	.07	.02	.00	.00	.00	.00	.00
19	.00	.00	.00	.12	.47	.06	.01	.00	.00	.00	.00	.00
20	.00	.00	.00	.10	.33	.07	.01	4.1	.00	.00	.00	.00
21	.51	.00	.00	.08	.25	.07	.01	.08	.00	.00	.00	.00
22	.03	.00	.00	.11	.21	.06	.00	.49	.00	.00	.00	.00
23	18	.00	.00	.06	.20	.06	.40	2.8	.00	.00	.00	.49
24	5.9	.32	.00	.04	.16	.05	.00	.07	.00	.00	.00	.00
25	.14	38	.00	.03	.15	.08	.00	.00	.00	.00	.00	.02
26	.26	1.7	.00	.03	.13	.05	.00	.19	.00	.00	.00	.01
27	.08	.20	.00	.02	.11	.05	.00	23	.00	.00	.00	.00
28	.01	.09	.00	.06	.10	.16	.00	2.2	.00	.00	.00	.00
29	.00	.06	.00	.20	---	.04	.01	.15	.00	.00	.00	.00
30	.00	.03	.00	6.0	---	.05	.00	5.9	.00	.00	.00	.00
31	.00	---	.00	2.7	---	.04	---	.33	---	.00	.00	---
TOTAL	24.93	40.40	0.05	72.43	72.46	24.68	0.67	41.27	0.16	0.00	0.00	0.52
MEAN	.80	1.35	.002	2.34	2.59	.80	.022	1.33	.005	.000	.000	.017
MAX	18	38	.02	24	38	10	.40	23	.09	.00	.00	.49
MIN	.00	.00	.00	.00	.06	.04	.00	.00	.00	.00	.00	.00
AC-FT	49	80	.1	144	144	49	1.3	82	.3	.00	.00	1.0

CAL YR 1989 TOTAL 264.00 MEAN .72 MAX 38 MIN .00 AC-FT 524
WTR YR 1990 TOTAL 277.57 MEAN .76 MAX 38 MIN .00 AC-FT 551

11182500 SAN RAMON CREEK AT SAN RAMON, CA

LOCATION.--Lat 37°46'23", long 121°59'37", in sec.8, T.2 S., R.1 W., Contra Costa County, Hydrologic Unit 18050001, on right bank 0.2 mi downstream from Bollinger Creek and 1.0 mi southwest of San Ramon.

DRAINAGE AREA.--5.89 mi^2.

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1445: 1953-54(P).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 530 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--38 years, 3.09 ft^3/s, 2,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft^3/s, Oct. 13, 1962, gage height, 16.98 ft, from rating curve extended above 200 ft^3/s on basis of culvert computations at gage heights 11.80, 12.09, 14.20, and 16.98 ft; no flow for parts of most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1315	*45	*2.59				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.03	.21	.45	.25	.08	.01	.11	.00	.00	.01
2	.01	.01	.03	.32	.24	.55	.07	.01	.05	.00	.00	.01
3	.01	.01	.02	.11	.88	.62	.08	.00	.02	.00	.00	.01
4	.01	.01	.03	.08	1.2	.57	.05	.00	.01	.00	.00	.01
5	.01	.01	.05	.08	.32	.45	.05	.00	.01	.00	.00	.01
6	.01	.01	.05	.10	.41	.31	.07	.00	.01	.00	.00	.00
7	.01	.01	.03	.13	.28	.31	.12	.00	.01	.00	.00	.00
8	.01	.01	.04	.70	.23	.31	.13	.01	.00	.00	.00	.00
9	.01	.01	.05	.24	.20	.31	.12	.01	.00	.00	.00	.00
10	.01	.01	.04	.18	.19	.57	.05	.01	.01	.00	.00	.00
11	.01	.01	.03	.16	.19	.56	.03	.01	.01	.00	.00	.00
12	.01	.01	.02	.82	.19	.31	.02	.01	.01	.00	.00	.00
13	.01	.01	.05	1.9	.18	.31	.05	.01	.01	.00	.00	.00
14	.01	.01	.05	1.2	.16	.31	.02	.01	.01	.00	.00	.00
15	.01	.01	.06	.45	.17	.30	.04	.01	.01	.00	.00	.00
16	.01	.00	.07	.60	9.2	.28	.04	.01	.00	.01	.00	.00
17	.01	.01	.07	.32	6.2	.26	.05	.01	.00	.01	.00	.00
18	.00	.01	.07	.22	1.5	.26	.05	.01	.00	.01	.00	.00
19	.00	.01	.06	.19	.64	.23	.05	.00	.00	.01	.00	.01
20	.00	.01	.07	.16	.43	.23	.05	.29	.00	.00	.00	.01
21	.01	.01	.07	.16	.35	.23	.02	.17	.00	.00	.00	.01
22	.01	.01	.07	.16	.31	.22	.02	.01	.00	.00	.00	.01
23	1.4	.01	.07	.17	.28	.12	.37	.22	.00	.00	.00	.01
24	.15	.01	.08	.16	.27	.10	.12	.06	.00	.00	.00	.01
25	.03	1.3	.10	.16	.27	.10	.04	.01	.00	.00	.00	.01
26	.01	1.0	.10	.19	.27	.09	.02	.01	.00	.00	.00	.01
27	.01	.09	.10	.17	.25	.07	.02	.50	.00	.00	.00	.01
28	.01	.03	.10	.16	.27	.08	.01	1.5	.00	.00	.00	.01
29	.01	.03	.10	.17	---	.13	.01	.18	.00	.00	.00	.01
30	.01	.03	.10	.69	---	.09	.01	.31	.00	.00	.00	.01
31	.01	---	.08	.31	---	.06	---	.42	---	.00	.00	---
TOTAL	1.83	2.71	1.89	10.67	25.53	8.59	1.86	3.81	0.28	0.04	0.00	0.17
MEAN	.059	.090	.061	.34	.91	.28	.062	.12	.009	.001	.000	.006
MAX	1.4	1.3	.10	1.9	9.2	.62	.37	1.5	.11	.01	.00	.01
MIN	.00	.00	.02	.08	.16	.06	.01	.00	.00	.00	.00	.00
AC-FT	3.6	5.4	3.7	21	51	17	3.7	7.6	.6	.08	.00	.3

CAL YR 1989 TOTAL 158.71 MEAN .43 MAX 19 MIN .00 AC-FT 315
WTR YR 1990 TOTAL 57.38 MEAN .16 MAX 9.2 MIN .00 AC-FT 114

11182800 SAN RAMON CREEK NEAR WALNUT CREEK, CA

LOCATION.--Lat 37°52'38", long 122°02'52", in San Ramon Grant, Contra Costa County, Hydrologic Unit 18050001, on left bank 600 ft upstream from Rudgear Road, near south city limits of town of Walnut Creek.

DRAINAGE AREA.--47.9 mi^2.

PERIOD OF RECORD.--October 1973 to current year. Prior to October 1987, published as San Ramon Creek at Walnut Creek.

REVISED RECORDS.--WDR CA-79-2: 1978. WDR CA-84-2: 1974-75(P), 1978-80(P). WDR CA-88-2: 1974-75(P), 1978-80(P), 1982-87(P).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control. Datum of gage is 169.98 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. No regulation, pumping for irrigation upstream from station during periods of low flow.

AVERAGE DISCHARGE.--17 years, 24.1 ft^3/s, 17,460 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft^3/s, Jan. 5, 1982, gage height, 15.55 ft, from rating curve extended above 1,400 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1345	*1,710	5.36	May 27	2345	(a)	*10.10

(a) Backwater from earthen dam

Minimum daily, 0.74 ft^3/s, Aug. 6, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.2	2.9	13	21	4.8	4.1	2.6	5.3	1.6	.89	1.9
2	2.3	2.2	2.8	13	5.4	24	4.6	2.4	4.5	1.6	.85	1.9
3	1.9	2.2	2.8	5.0	42	13	4.0	2.2	4.1	1.4	.81	1.9
4	1.8	2.1	3.7	3.2	28	19	3.7	2.0	3.9	1.5	.81	1.8
5	1.7	2.1	3.3	2.8	6.6	9.5	4.6	1.7	3.5	1.6	.81	1.8
6	1.7	2.2	2.9	2.8	14	5.9	4.5	1.4	3.2	1.5	.74	1.8
7	1.5	2.9	3.1	2.8	6.7	5.5	3.9	1.2	2.7	1.5	.85	1.7
8	1.4	2.7	3.5	13	5.1	5.2	3.6	1.1	2.6	1.5	.87	1.5
9	1.3	2.4	3.4	5.2	4.7	5.2	3.6	1.2	2.3	1.4	.79	1.4
10	1.2	2.4	3.7	3.2	4.7	11	3.8	1.1	2.0	1.4	.74	1.3
11	1.2	2.4	3.2	3.1	4.5	13	3.7	1.1	1.7	1.4	.80	1.2
12	1.2	2.4	3.3	50	4.4	5.4	3.6	1.1	1.7	1.3	.81	1.2
13	1.3	2.4	4.9	93	4.3	4.8	3.6	1.3	1.7	1.2	.81	1.7
14	1.3	2.7	5.6	54	4.3	4.5	3.6	1.5	1.7	1.1	.78	1.1
15	1.3	3.7	4.4	12	4.4	4.6	3.6	1.6	1.9	1.1	.75	1.0
16	1.3	3.4	3.8	23	365	4.3	3.8	1.6	2.0	1.1	.86	1.1
17	1.4	2.9	3.1	8.9	126	4.1	3.9	1.6	1.9	1.1	1.1	1.6
18	1.2	2.7	3.0	6.0	29	4.1	3.7	1.7	1.9	1.1	1.0	1.3
19	1.1	2.5	2.9	4.4	12	4.0	3.5	1.8	1.9	1.1	.91	1.2
20	1.1	2.4	3.0	4.1	8.2	4.0	3.7	e28	1.7	.94	1.0	1.4
21	2.0	2.5	3.0	3.9	7.0	4.4	3.8	e10	1.6	.88	1.1	1.6
22	3.4	2.6	2.9	3.7	6.3	3.8	4.0	e6.2	1.6	.85	1.1	1.2
23	142	2.6	2.8	3.6	6.1	3.5	e15	e36	1.6	.79	1.3	1.2
24	45	3.3	2.8	3.5	5.7	3.6	6.1	e6.3	1.7	.81	1.4	1.7
25	9.1	99	2.9	3.3	5.5	3.6	4.6	e4.5	1.7	.88	1.3	1.6
26	3.9	44	2.9	3.3	5.3	3.6	4.3	e4.1	1.7	.92	1.3	1.4
27	3.0	6.8	2.9	3.5	5.2	3.7	4.0	e20	1.7	.89	1.3	1.2
28	2.5	4.2	2.9	3.6	5.0	3.6	3.7	e53	1.6	.82	1.5	1.1
29	2.2	3.5	3.0	3.6	---	4.6	3.3	e7.0	1.6	.81	1.7	1.1
30	2.2	3.1	2.9	18	---	5.0	2.8	e12	1.5	.78	1.8	1.1
31	2.2	---	2.9	6.9	---	4.1	---	e20	---	.89	1.8	---
TOTAL	247.9	222.5	101.2	379.4	746.4	199.4	128.7	237.3	68.5	35.76	32.58	43.0
MEAN	8.00	7.42	3.26	12.2	26.7	6.43	4.29	7.65	2.28	1.15	1.05	1.43
MAX	142	99	5.6	93	365	24	15	53	5.3	1.6	1.8	1.9
MIN	1.1	2.1	2.8	2.8	4.3	3.5	2.8	1.1	1.5	.78	.74	1.0
AC-FT	492	441	201	753	1480	396	255	471	136	71	65	85

CAL YR 1989 TOTAL 2217.69 MEAN 6.08 MAX 142 MIN .68 AC-FT 4400
WTR YR 1990 TOTAL 2442.64 MEAN 6.69 MAX 365 MIN .74 AC-FT 4840

e Estimated.

11183600 WALNUT CREEK AT CONCORD, CA

LOCATION.--Lat 37°56'43", long 122°02'55", in Arroyo de las Nueces y Bolbones Grant, Contra Costa County, Hydrologic Unit 18050001, on right bank at southwest city limits of Concord, 0.2 mi upstream from Southern Pacific railroad bridge, 3.8 mi downstream from confluence of San Ramon and Las Trampas Creeks, and 10 mi downstream from Lafayette Reservoir.

DRAINAGE AREA.--85.2 mi^2.

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WDR CA-79-2: Drainage area. WDR CA-82-2: 1969(M), 1970(M), 1973(P), 1975(M), 1978(M), 1980(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 35.44 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated by Lafayette Reservoir, capacity, 4,240 acre-ft. Some small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--22 years, 48.8 ft^3/s, 35,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft^3/s, Jan. 5, 1982, gage height, 19.1 ft, from rating curve extended above 3,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.70 ft^3/s, Oct. 7, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	1000	2,090	6.54	Feb. 16	1315	*4,480	*9.07

Minimum daily, 2.8 ft^3/s, Oct. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	5.5	43	38	41	12	10	8.2	14	4.9	4.0	4.8
2	3.7	5.9	31	27	14	51	11	8.1	12	4.8	4.2	4.9
3	3.5	5.6	15	11	85	34	12	8.1	11	4.8	4.2	4.4
4	3.3	5.5	11	8.1	67	42	11	7.9	9.6	4.8	4.0	4.2
5	3.3	5.5	9.4	7.5	18	24	11	6.1	8.7	5.1	3.7	4.5
6	3.2	5.4	8.7	7.1	35	15	13	6.7	7.9	5.0	3.9	4.6
7	3.5	5.9	7.9	9.5	21	14	11	6.3	7.7	5.8	4.0	5.2
8	3.3	6.4	7.4	33	17	13	11	6.0	7.2	4.8	4.0	5.2
9	3.0	5.8	7.4	14	14	13	10	6.2	6.9	4.8	4.2	5.2
10	2.9	5.9	7.4	9.1	14	26	10	6.1	6.4	4.8	4.0	4.9
11	2.9	5.9	6.8	8.2	13	28	9.8	6.5	5.9	5.1	3.6	4.5
12	2.8	5.9	6.7	199	12	14	8.9	6.5	5.8	5.1	3.8	4.6
13	6.3	6.0	7.5	240	11	12	9.0	6.3	5.8	5.2	3.3	4.5
14	7.0	6.1	8.3	130	10	12	8.3	6.5	5.8	5.1	3.1	5.2
15	3.1	6.3	8.4	33	10	11	8.2	6.6	5.7	4.6	3.5	4.6
16	3.2	7.4	8.5	46	986	11	9.3	6.7	6.3	4.2	4.1	4.7
17	7.5	6.4	7.6	22	202	11	9.7	6.7	5.9	4.7	4.7	4.8
18	6.4	6.2	7.4	15	77	11	8.7	6.7	6.1	4.7	5.1	5.0
19	3.5	5.8	7.4	12	44	11	8.5	6.9	6.2	4.5	4.5	5.2
20	4.1	5.6	7.4	16	31	10	8.7	59	5.9	4.5	4.7	4.4
21	17	5.8	7.2	16	28	10	8.7	23	5.9	4.6	5.1	3.9
22	7.1	6.1	7.1	11	26	11	8.9	14	5.6	4.3	5.0	4.6
23	389	6.2	7.0	10	24	11	31	39	5.6	4.1	5.6	5.9
24	94	9.1	7.0	10	14	10	15	16	5.7	4.0	5.5	6.7
25	19	252	7.0	9.5	14	9.9	11	11	5.6	3.8	5.3	7.3
26	9.4	121	7.0	9.6	13	9.7	12	10	5.3	3.7	5.1	7.1
27	7.5	45	7.0	9.5	13	9.9	10	61	5.3	4.1	5.1	10
28	6.6	45	7.0	9.5	12	9.6	9.4	127	5.4	4.0	4.8	16
29	5.7	44	7.0	9.5	---	12	9.4	21	5.2	4.0	5.1	18
30	5.5	44	7.0	47	---	12	8.7	33	5.2	3.9	4.8	18
31	4.5	---	7.0	18	---	11	---	48	---	3.7	4.8	---
TOTAL	647.7	697.2	301.5	1045.1	1866	491.1	323.2	591.1	205.6	141.5	136.8	192.9
MEAN	20.9	23.2	9.73	33.7	66.6	15.8	10.8	19.1	6.85	4.56	4.41	6.43
MAX	389	252	43	240	986	51	31	127	14	5.8	5.6	18
MIN	2.8	5.4	6.7	7.1	10	9.6	8.2	6.0	5.2	3.7	3.1	3.9
AC-FT	1280	1380	598	2070	3700	974	641	1170	408	281	271	383

CAL YR 1989 TOTAL 5438.3 MEAN 14.9 MAX 389 MIN 2.5 AC-FT 10790
WTR YR 1990 TOTAL 6639.7 MEAN 18.2 MAX 986 MIN 2.8 AC-FT 13170

11456000 NAPA RIVER NEAR ST. HELENA, CA

LOCATION.--Lat 38°29'52", long 122°25'37", in Carne Humana Grant, Napa County, Hydrologic Unit 18050002, on right bank 0.2 mi upstream from highway bridge, 1.3 mi northeast of Zinfandel, and 2.5 mi east of St. Helena.

DRAINAGE AREA.--81.4 mi^2.

PERIOD OF RECORD.--October 1929 to September 1932, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1929: Drainage area. WDR CA-78-2: 1977(M).

GAGE.--Water-stage recorder. Datum of gage is 170.12 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1958, at datum 3.00 ft higher. Nov. 22, 1958, to July 22, 1976, at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good above 10 ft^3/s and fair below. Some regulation by Bell Canyon Reservoir, capacity, 2,530 acre-ft, since 1959. Small diversions upstream from station for irrigation of about 1,500 acres.

AVERAGE DISCHARGE.--54 years, 95.5 ft^3/s, 69,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft^3/s, Feb. 17, 1986, gage height, 18.52 ft, from rating curve extended above 11,000 ft^3/s on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1315	*1,370	*7.39				

Minimum daily, 0.43 ft^3/s, Sept. 14, 15, 20, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.83	3.1	6.2	5.6	39	40	17	8.6	39	5.6	1.5	.66
2	.83	2.9	5.6	6.7	28	51	17	8.6	32	5.5	1.4	.63
3	.82	2.9	5.5	5.4	60	69	17	8.2	27	5.3	1.4	.62
4	.77	2.9	5.1	4.8	139	75	17	7.6	25	4.9	1.3	.58
5	.77	2.9	4.9	4.4	65	82	16	5.5	22	4.7	1.3	.54
6	.73	2.9	4.9	4.4	51	61	14	4.5	19	5.6	1.2	.51
7	.72	2.9	4.4	21	42	52	14	6.1	16	5.5	1.2	.48
8	.71	2.9	4.3	146	38	48	12	5.8	15	5.3	1.1	.49
9	.69	3.1	4.0	76	34	45	14	4.8	14	4.7	.99	.50
10	.69	3.2	4.0	32	31	49	14	4.4	13	4.3	.87	.52
11	.69	3.2	3.9	22	30	46	14	3.6	13	3.6	.82	.52
12	.70	3.3	3.2	119	29	41	14	3.1	13	2.8	.77	.49
13	.72	3.5	3.4	638	28	39	14	3.0	12	2.2	.83	.46
14	.73	3.5	3.7	481	27	36	13	3.7	12	2.2	.86	.43
15	.77	3.2	3.7	198	27	37	13	4.0	13	2.3	.97	.43
16	.77	3.2	3.5	101	608	35	13	5.1	13	2.4	1.0	.46
17	.76	3.3	4.1	60	443	32	13	4.7	12	2.4	1.0	.48
18	.75	3.1	4.9	40	284	31	12	4.7	11	2.4	.81	.45
19	.77	2.9	4.9	33	164	30	12	5.2	11	2.2	.53	.44
20	.77	3.1	4.9	29	112	29	12	10	9.6	2.2	.49	.43
21	3.1	3.2	4.9	29	88	27	12	9.5	8.8	2.8	.47	.45
22	10	3.0	4.9	27	74	26	11	7.2	8.7	2.4	.60	.48
23	94	2.9	4.9	24	63	25	12	12	9.4	2.4	.61	.50
24	34	3.1	4.9	21	58	25	12	8.7	8.6	2.3	.61	.49
25	17	52	4.9	20	54	24	10	6.7	8.2	2.1	.63	.49
26	8.8	70	4.9	19	49	24	10	5.5	8.1	2.1	.61	.49
27	6.8	21	4.9	17	46	23	9.8	167	7.5	2.0	.66	.45
28	5.1	13	4.7	16	42	22	9.0	324	6.9	1.7	.68	.44
29	3.7	8.8	5.7	15	---	19	8.5	81	7.0	1.8	.69	.43
30	3.2	7.0	6.0	22	---	19	8.5	51	6.9	1.9	.69	.46
31	3.2	---	5.5	19	---	16	---	57	---	1.8	.68	---
TOTAL	203.89	246.0	145.3	2256.3	2753	1178	384.8	840.8	421.7	99.4	27.27	14.80
MEAN	6.58	8.20	4.69	72.8	98.3	38.0	12.8	27.1	14.1	3.21	.88	.49
MAX	94	70	6.2	638	608	82	17	324	39	5.6	1.5	.66
MIN	.69	2.9	3.2	4.4	27	16	8.5	3.0	6.9	1.7	.47	.43
AC-FT	404	488	288	4480	5460	2340	763	1670	836	197	54	29

CAL YR 1989 TOTAL 15380.36 MEAN 42.1 MAX 1690 MIN .30 AC-FT 30510
WTR YR 1990 TOTAL 8571.26 MEAN 23.5 MAX 638 MIN .43 AC-FT 17000

11458000 NAPA RIVER NEAR NAPA, CA
(National stream-quality accounting network station)

LOCATION.--Lat 38°22'06", long 122°18'08", in Yajome Grant, Napa County, Hydrologic Unit 18050002, on left bank at downstream side of Oak Knoll Avenue bridge, 0.4 mi downstream from Dry Creek, 5 mi north of Napa, and 12.8 mi downstream from Conn Dam.

DRAINAGE AREA.--218 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to September 1932, October 1959 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1315-B: 1930(M). WDR CA-87-2: 1963(M), 1965(M), 1967(M), 1982-85.

GAGE.--Water-stage recorder. Datum of gage is 24.74 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Lake Hennessey beginning in December 1945, 12.8 mi upstream, capacity 31,000 acre-ft; Rector Reservoir beginning in 1948, 12.4 mi upstream, capacity 4,400 acre-ft; Bell Canyon Reservoir beginning in 1959, 19.6 mi upstream, capacity 2,530 acre-ft. Diversions for irrigation upstream from station of about 10,000 acres.

AVERAGE DISCHARGE.--34 years, 199 ft^3/s, 144,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,100 ft^3/s, Feb. 18, 1986, gage height, 30.20 ft, from floodmarks; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,880 ft^3/s, Feb. 16, gage height, 10.18 ft; no flow on Sept. 25, 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	5.7	12	6.5	46	68	31	12	66	6.8	1.3	1.3
2	1.8	5.6	10	7.0	49	72	31	11	49	6.2	1.4	1.1
3	1.7	5.5	9.1	6.9	59	113	27	11	39	5.5	1.7	1.2
4	1.7	5.3	8.5	6.4	294	103	26	10	34	5.5	1.7	1.3
5	.86	5.4	8.5	6.1	129	162	24	11	32	5.6	1.7	1.5
6	.63	5.4	8.3	6.1	83	108	24	9.1	29	4.7	1.8	1.5
7	.48	5.5	8.2	7.7	67	91	24	8.7	26	3.5	1.6	1.3
8	.60	5.6	7.7	120	56	80	24	9.6	24	3.7	1.4	.55
9	1.1	5.6	7.5	139	52	77	24	9.5	21	3.9	1.2	.38
10	1.6	5.6	7.4	50	47	79	21	8.8	19	2.7	1.2	.58
11	1.7	5.6	7.3	e30	44	84	21	8.0	18	.62	1.3	1.4
12	1.9	5.6	7.2	e61	43	71	21	7.4	18	.98	1.3	1.4
13	2.0	5.9	7.2	e750	40	69	23	7.4	17	.82	1.4	1.3
14	2.2	6.2	7.2	e890	38	65	23	7.1	15	.61	1.5	1.3
15	2.1	6.1	7.2	e376	37	64	22	7.4	15	1.0	1.7	1.2
16	2.1	6.1	7.9	e190	680	63	22	7.9	15	1.3	1.6	1.1
17	2.2	6.1	8.6	e100	853	60	21	8.7	14	1.5	1.5	1.2
18	2.1	5.9	8.3	e80	550	57	22	8.3	13	2.1	1.5	1.1
19	2.6	5.7	7.9	e58	341	53	19	8.7	13	2.2	1.4	1.1
20	2.9	5.8	7.8	57	224	47	19	11	12	2.1	1.6	.97
21	3.7	5.6	7.7	51	165	45	20	15	10	2.1	1.4	.10
22	4.6	5.6	7.5	48	135	43	20	12	10	2.0	1.5	.46
23	7.9	5.6	7.4	45	116	40	20	13	9.7	2.2	1.5	1.2
24	87	5.8	7.5	40	102	39	19	17	10	2.2	1.4	.23
25	23	13	7.7	37	95	37	16	13	9.8	2.1	1.4	.00
26	15	105	7.7	35	87	37	15	12	9.0	1.9	1.5	.05
27	10	42	7.7	33	79	35	14	48	8.8	1.8	1.6	.13
28	8.4	22	7.0	30	72	34	13	537	7.9	1.9	1.5	.00
29	7.7	17	6.9	30	---	33	12	202	6.9	1.7	1.2	.00
30	6.5	14	6.8	32	---	32	13	94	7.0	1.7	1.1	.01
31	6.0	---	6.5	35	---	31	---	88	---	1.3	1.4	---
TOTAL	214.17	349.8	244.2	3363.7	4583	1992	631	1233.6	578.1	82.23	45.3	24.96
MEAN	6.91	11.7	7.88	109	164	64.3	21.0	39.8	19.3	2.65	1.46	.83
MAX	87	105	12	890	853	162	31	537	66	6.8	1.8	1.5
MIN	.48	5.3	6.5	6.1	37	31	12	7.1	6.9	.61	1.1	.00
AC-FT	425	694	484	6670	9090	3950	1250	2450	1150	163	90	50

CAL YR 1989 TOTAL 22556.48 MEAN 61.8 MAX 2640 MIN .48 AC-FT 44740
WTR YR 1990 TOTAL 13342.06 MEAN 36.6 MAX 890 MIN .00 AC-FT 26460

e Estimated.

11458000 NAPA RIVER NEAR NAPA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971, 1973 to current year.
CHEMICAL DATA: Water years 1973 to current year.
BIOLOGICAL DATA: Water years 1978-81.
SPECIFIC CONDUCTANCE: Water years 1978 to current year.
WATER TEMPERATURE: Water years 1977 to current year.
SEDIMENT DATA: Water years 1971, 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1978 to September 1981.
WATER TEMPERATURE: October 1976 to September 1981.
SUSPENDED-SEDIMENT DISCHARGE: October 1976 to September 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV												
28...	1235	21	349	7.9	10.0	36	775	10.3	90	K560	1800	110
JAN												
24...	1110	40	318	8.1	8.5	3.4	765	11.2	95	K27	46	100
MAR												
22...	0950	42	334	8.1	14.5	52	765	9.8	96	K27	K11	120
MAY												
23...	1200	13	372	8.2	16.5	1.5	760	8.9	91	43	180	150
JUL												
11...	1040	0.54	406	8.0	21.5	1.0	760	5.8	66	43	400	150
SEP												
05...	1210	1.6	445	8.2	19.0	0.50	765	7.1	76	27	180	180

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV										
28...	20	14	26	34	1	2.8	121	99	28	24
JAN										
24...	17	14	25	35	1	2.4	118	97	29	21
MAR										
22...	22	16	23	29	0.9	2.5	136	112	27	11
MAY										
23...	24	21	26	27	0.9	2.3	171	140	28	24
JUL										
11...	25	22	25	26	0.9	2.4	188	154	30	24
SEP										
05...	30	26	25	23	0.8	2.5	220	180	31	24

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
NOV											
28...	0.40	30	203	208	0.28	<0.010	0.500	0.040	0.020	0.40	0.090
JAN											
24...	0.40	39	231	213	0.31	0.030	1.50	0.080	0.090	0.30	0.150
MAR											
22...	0.20	30	196	203	0.27	0.020	0.900	<0.010	<0.010	0.40	0.100
MAY											
23...	<0.10	35	243	246	0.33	0.010	0.300	0.010	0.010	0.30	0.070
JUL											
11...	0.30	33	248	255	0.34	0.040	0.100	0.050	0.040	<0.20	0.080
SEP											
05...	0.20	33	273	280	0.37	<0.010	<0.100	0.020	<0.010	<0.20	0.100

11458000 NAPA RIVER NEAR NAPA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
NOV											
28...	0.060	0.070	70	3	56	<0.5	<1.0	1	<3	3	61
JAN											
24...	0.130	0.140	30	2	53	<0.5	2.0	<1	<3	<10	41
MAR											
22...	0.080	0.090	--	--	--	--	--	--	--	--	--
MAY											
23...	0.060	0.070	<10	2	70	<0.5	<1.0	<1	<3	<1	19
JUL											
11...	0.080	0.060	--	--	--	--	--	--	--	--	--
SEP											
05...	0.070	0.070	20	3	80	<0.5	<1.0	<1	<3	1	14

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV											
28...	<1	78	7	<0.1	<10	3	<1	<1.0	150	<6	<3
JAN											
24...	<10	59	11	<0.1	<10	<10	<1	<1.0	140	<6	<3
MAR											
22...	--	--	--	--	--	--	--	--	--	--	--
MAY											
23...	<1	49	14	<0.1	<10	1	<1	<1.0	180	<6	<3
JUL											
11...	--	--	--	--	--	--	--	--	--	--	--
SEP											
05...	<1	42	21	<0.1	<10	3	<1	<1.0	190	<6	6

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY											
23... *	1431	1.52	0.90	382	8.1	18.5	760	9.7	104	10	79
23... *	1434	1.41	3.00	382	8.1	18.5	760	9.6	103	8	74
23... *	1436	0.70	6.50	382	8.1	18.5	760	9.7	104	6	81
23... *	1438	1.06	11.0	383	8.1	18.5	760	9.7	104	8	74
23... *	1441	1.09	13.6	383	8.1	18.5	760	9.7	104	8	80

* Instantaneous streamflow at the time of cross-sectional measurement: May 23, 14 ft^3/s.

11458000 NAPA RIVER NEAR NAPA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
28...	1255	21	10.0	35	2.0	98
JAN						
24...	1135	40	8.5	2	0.22	100
MAR						
22...	1030	42	15.0	7	0.79	100
MAY						
23...	1235	14	16.5	5	0.19	78
23...	1435	14	18.5	8	0.30	78
JUL						
11...	1035	0.54	21.5	2	0.00	100
SEP						
05...	1215	1.6	19.0	1	0.00	90

11459500 NOVATO CREEK AT NOVATO, CA

LOCATION.--Lat 38°06'28", long 122°34'44", in Novato Grant, Marin County, Hydrologic Unit 18050002, on left bank in Novato, 100 ft upstream from 7th Street Bridge, and 3.9 mi downstream from Novato Creek Dam.

DRAINAGE AREA.--17.6 mi^2.

PERIOD OF RECORD.--October 1946 to current year. Records of diversions for water years 1952-53, estimated. Prior to October 1966, published as "near Novato."

GAGE.--Water-stage recorder. Datum of gage is 14.76 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 23, 1967, at site 0.6 mi upstream at different datum.

REMARKS.--Records good. Flow regulated by Stafford Lake beginning Dec. 1, 1951, capacity, 4,500 acre-ft since Oct. 18, 1954; contents, 830 acre-ft, Sept. 30, 1990. Diversion from Stafford Lake for municipal water supply began Apr. 25, 1952, and amounted to 1,425 acre-ft for the current year. No diversion from Russian River into Stafford Lake during the current year.

COOPERATION.--Record of diversions and storage were provided by North Marin Water District.

AVERAGE DISCHARGE (adjusted for diversions).--44 years, 14.1 ft^3/s, 10,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft^3/s, Jan. 4, 1982, gage height, 14.52 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 242 ft^3/s, Feb. 16, gage height, 5.37 ft; no flow several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.19	.15	e1.6	2.6	1.5	.74	.55	.64	.10	.32	.00
2	.47	.17	.12	e1.0	.70	3.8	.72	.53	.45	.08	.35	.00
3	.36	.08	.12	e.54	24	1.9	.58	.41	.40	.08	.35	.00
4	.28	.05	.11	e.30	5.5	5.4	.59	.37	.35	.08	.35	.00
5	.24	.05	.10	e.50	2.4	2.1	.70	.36	.30	.08	.31	.00
6	.26	.08	.09	e1.2	2.1	1.7	.56	.34	.61	.06	.27	.16
7	.21	.04	.08	e2.0	1.6	1.5	.54	.36	.69	.05	.26	.24
8	.18	.03	.08	e.94	1.4	1.4	.52	.33	.57	.04	.21	.28
9	.15	.04	.08	e.50	1.3	1.4	.47	.40	.74	.05	.20	.28
10	.12	.03	.08	e.46	1.2	2.2	.43	.38	.45	.04	.14	.36
11	.11	.05	.14	.33	1.1	1.6	.45	.38	.46	.03	.13	.38
12	.11	.03	.29	33	.98	1.4	.43	.11	.42	.01	.13	.34
13	.08	.05	.15	68	.87	1.3	.45	.06	.42	.01	.16	.51
14	.07	.05	.13	20	.81	1.3	.38	.08	.42	.02	.21	.62
15	.09	.04	.08	5.1	.97	1.3	.35	.10	.51	.03	.25	.65
16	.06	.05	.07	3.6	58	1.3	.36	.09	.54	.04	.18	.68
17	.07	.05	.09	2.5	21	1.3	.34	.14	.48	.04	.05	.75
18	2.0	.05	.11	2.0	7.8	1.2	.39	.18	.49	.06	.03	1.2
19	1.0	.06	.18	1.8	4.5	1.2	.41	.18	.51	.08	.01	1.1
20	.46	.07	.19	1.6	3.4	1.1	.48	2.8	.34	.07	.00	1.2
21	14	.06	.24	1.4	2.7	1.2	.36	.61	.35	.06	.00	1.4
22	.72	.08	.23	1.3	2.4	1.1	.40	.50	.28	.05	.01	1.7
23	36	.08	e.29	1.1	2.1	1.1	.82	1.6	.28	.09	.00	2.5
24	4.3	.35	e.30	1.0	2.0	1.0	.43	1.4	.30	.08	.00	2.3
25	.79	18	e.31	.91	1.8	1.0	.43	.78	.29	.21	.00	2.4
26	.43	3.3	e.37	.88	1.8	1.0	.37	.55	.21	.30	.00	2.1
27	.35	.55	e.38	.77	1.7	1.0	.33	19	.20	.31	.00	.98
28	.25	.28	e.38	.74	1.5	.90	.32	3.3	.23	.37	.00	.52
29	.20	.22	e.59	.69	---	.97	.30	2.3	.22	.30	.00	.43
30	.18	.18	e.60	1.6	---	.83	.27	4.6	.14	.32	.00	.45
31	.17	---	e1.4	1.6	---	.79	---	1.5	---	.37	.00	---
TOTAL	65.01	24.36	7.53	158.96	158.23	46.79	13.92	44.29	12.29	3.51	3.92	23.53
MEAN	2.10	.81	.24	5.13	5.65	1.51	.46	1.43	.41	.11	.13	.78
MAX	36	18	1.4	68	58	5.4	.82	19	.74	.37	.35	2.5
MIN	.06	.03	.07	.30	.70	.79	.27	.06	.14	.01	.00	.00
AC-FT	129	48	15	315	314	93	28	88	24	7.0	7.8	47

CAL YR 1989 TOTAL 729.49 MEAN 2.00 MAX 69 MIN .03 AC-FT 1450
WTR YR 1990 TOTAL 562.34 MEAN 1.54 MAX 68 MIN .00 AC-FT 1120

e Estimated.

11460000 CORTE MADERA CREEK AT ROSS, CA

LOCATION.--Lat 37°57'45", long 122°33'20", in Punta de Quentin Grant, Marin County, Hydrologic Unit 18050002, on left bank behind fire station at Ross, 1.7 mi southwest of San Rafael, 1.7 mi below Phoenix Lake, and 4 mi upstream from mouth.

DRAINAGE AREA.--18.1 mi^2.

PERIOD OF RECORD.--February 1951 to current year.

REVISED RECORD.--WDR CA-85-2: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 7.97 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair. Flow slightly regulated by Phoenix Lake, capacity 612 acre-ft. Diversion on tributary upstream from station by Marin Municipal Water District.

AVERAGE DISCHARGE.--39 years, 27.7 ft^3/s, 20,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,200 ft^3/s, Jan. 4, 1982, gage height, 19.81 ft, from rating curve extended above 2,700 ft^3/s; no flow at times.

EXTREMES FOR CURRENT YEAR..--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1100	*588	*8.78				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	e1.0	1.0	5.7	4.5	2.7	2.0	1.2	5.4	.41	.27	.02
2	.12	e.98	1.1	1.7	2.2	13	2.0	1.2	4.2	.38	.22	.02
3	.21	e.90	1.1	1.2	37	12	2.0	.98	3.4	.38	.19	.01
4	.12	e.88	1.1	1.0	23	18	1.9	.92	3.0	.34	.20	.01
5	.08	e.85	1.0	1.0	9.2	13	1.8	.82	2.7	.35	.18	.00
6	.06	e.84	1.2	1.0	8.4	8.5	1.8	.86	2.5	.34	.15	.00
7	.04	e.82	1.2	3.9	5.4	6.9	1.9	.77	2.2	.33	.13	.00
8	.05	e.78	1.3	5.7	4.4	6.0	1.8	.71	2.0	.32	.11	.00
9	.02	e.75	1.3	2.5	3.9	5.0	1.8	.68	2.0	.32	.09	.00
10	.00	e.75	1.2	1.5	3.6	6.4	1.8	.71	1.8	.26	.09	.00
11	.00	e.70	1.3	1.4	3.4	5.4	1.8	.73	1.7	.21	.10	.00
12	.01	e.66	1.3	86	3.1	4.5	1.8	.71	1.6	.19	.09	.00
13	.03	e.64	1.3	152	2.8	4.0	1.7	.72	1.6	.17	.08	.00
14	.03	e.63	1.3	92	2.8	4.1	1.6	.67	1.5	.19	.09	.00
15	.03	e.63	1.3	20	4.4	3.9	1.7	.64	1.4	.24	.09	.19
16	.03	e.63	1.3	10	149	3.5	1.8	.60	1.3	.29	.11	.21
17	.03	e.62	1.4	5.9	38	3.3	1.8	.58	1.3	.28	.10	.00
18	.04	e.62	1.4	3.9	21	3.1	1.8	.64	1.2	.18	.11	.00
19	.08	e.61	1.3	3.2	12	2.8	1.7	.62	1.0	1.0	.09	.00
20	.09	e.61	1.3	2.7	8.6	2.7	1.6	7.4	.89	.66	.08	.00
21	9.6	e.60	1.3	2.4	6.9	2.8	1.6	.62	.78	.57	.09	.00
22	.91	e.60	1.3	2.4	5.8	2.6	1.5	.83	.83	.54	.08	.00
23	60	e.62	1.3	2.2	4.8	2.6	2.3	3.1	.76	.54	.07	.00
24	24	2.2	1.4	2.1	4.5	2.6	1.5	.48	.72	.48	.06	.01
25	e8.0	51	1.4	2.0	3.8	2.4	1.5	.40	.65	.43	.07	.00
26	e1.9	7.0	1.4	2.0	3.4	2.3	1.5	.49	.61	.44	.06	.00
27	e1.7	2.2	1.4	1.9	3.1	2.2	1.4	101	.54	.38	.06	.00
28	e1.5	1.4	1.4	1.8	2.8	2.2	1.3	30	.55	.30	.06	.00
29	e1.4	1.1	1.4	1.9	---	2.1	1.3	9.2	.51	.29	.06	.00
30	e1.2	1.0	1.4	6.7	---	2.0	1.3	11	.46	.26	.03	.00
31	e1.1	---	1.4	4.1	---	2.0	---	7.8	---	.25	.02	---
TOTAL	112.52	82.62	39.8	431.8	381.8	154.6	51.3	187.08	49.10	11.32	3.23	0.47
MEAN	3.63	2.75	1.28	13.9	13.6	4.99	1.71	6.03	1.64	.37	.10	.016
MAX	60	51	1.4	152	149	18	2.3	101	5.4	1.0	.27	.21
MIN	.00	.60	1.0	1.0	2.2	2.0	1.3	.40	.46	.17	.02	.00
AC-FT	223	164	79	856	757	307	102	371	97	22	6.4	.9

CAL YR 1989 TOTAL 4119.89 MEAN 11.3 MAX 461 MIN .00 AC-FT 8170
WTR YR 1990 TOTAL 1505.64 MEAN 4.13 MAX 152 MIN .00 AC-FT 2990

e Estimated.

11460400 LAGUNITAS CREEK AT SAMUEL P. TAYLOR STATE PARK, CA

LOCATION.--Lat 38°01'37", long 122°44'07", Marin County, Hydrologic Unit 18050005, in Samuel P. Taylor State Park, on left bank 300 ft upstream from Deadmans Gulch, 0.9 mi downstream from park entrance, 2.1 mi northwest of Lagunitas, and 3.4 mi downstream from Kent Lake.

DRAINAGE AREA.--34.3 mi^2.

PERIOD OF RECORD.--December 1982 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 102.89 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Kent Lake, capacity, 16,680 acre-ft, and Alpine Lake, capacity, 8,890 acre-ft, both of which divert for domestic and industrial use in Marin County.

AVERAGE DISCHARGE.--8 years, 36.0 ft^3/s, 26,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,470 ft^3/s, Feb. 18, 1986, gage height, 8.44 ft; minimum daily, 3.8 ft^3/s, Oct. 16-18, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 586 ft^3/s, May 27, gage height, 4.98 ft; minimum daily, 5.8 ft^3/s, for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	17	20	20	28	20	17	10	23	8.2	6.7	5.8
2	6.3	17	20	20	24	28	16	10	19	8.2	6.6	5.8
3	6.3	17	20	19	60	36	15	10	16	8.1	6.4	5.8
4	6.3	17	19	19	62	32	16	10	13	7.9	6.3	5.8
5	6.3	17	19	18	30	30	14	10	12	7.8	6.1	5.8
6	6.2	17	20	18	27	25	13	10	11	7.7	6.3	5.8
7	6.1	17	20	27	22	22	13	10	10	7.5	6.3	5.8
8	6.3	17	19	34	21	21	13	10	9.8	7.6	6.1	5.8
9	6.2	17	19	23	20	19	13	10	9.9	7.5	6.0	5.8
10	6.1	17	19	21	20	22	12	10	9.2	7.3	6.0	5.8
11	6.1	17	19	21	20	22	12	10	8.9	7.0	6.3	5.8
12	6.2	17	19	93	20	20	11	10	9.2	7.0	6.1	6.0
13	6.3	17	19	218	20	20	11	10	9.1	7.2	6.0	6.1
14	6.3	17	19	118	20	21	11	10	8.6	7.0	6.1	6.1
15	11	17	19	43	20	22	12	9.7	8.5	7.1	6.1	6.1
16	21	17	19	28	110	21	12	8.6	8.6	7.4	6.2	6.1
17	19	17	19	23	66	21	11	8.6	9.5	7.9	6.3	6.1
18	19	17	19	23	43	20	10	7.8	9.3	7.9	6.1	6.1
19	20	17	19	24	32	20	10	6.7	9.2	7.9	6.1	6.4
20	19	18	19	24	27	21	10	16	8.9	8.0	6.2	6.3
21	20	18	19	23	24	20	10	8.4	8.8	7.9	6.4	6.1
22	20	18	19	22	21	23	11	7.9	8.8	7.9	6.2	6.3
23	32	18	19	22	20	23	12	11	8.9	7.9	6.1	6.8
24	21	18	18	21	22	20	11	7.7	8.9	7.9	6.0	6.5
25	20	37	18	21	21	19	11	7.0	8.8	7.9	5.8	6.4
26	19	31	18	20	20	19	10	7.3	8.6	7.5	5.8	6.4
27	18	22	18	20	20	19	10	261	8.4	6.6	5.8	6.4
28	17	21	18	20	20	18	10	129	8.3	6.6	5.8	6.4
29	17	20	18	20	---	18	9.9	44	8.5	6.4	5.9	6.2
30	17	20	18	23	---	18	9.9	37	8.4	6.4	5.8	5.8
31	17	---	18	22	---	18	---	30	---	6.4	5.9	---
TOTAL	414.3	564	586	1068	860	678	356.8	747.7	309.1	231.6	189.8	182.4
MEAN	13.4	18.8	18.9	34.5	30.7	21.9	11.9	24.1	10.3	7.47	6.12	6.08
MAX	32	37	20	218	110	36	17	261	23	8.2	6.7	6.8
MIN	6.1	17	18	18	20	18	9.9	6.7	8.3	6.4	5.8	5.8
AC-FT	822	1120	1160	2120	1710	1340	708	1480	613	459	376	362

CAL YR 1989 TOTAL 7427.7 MEAN 20.3 MAX 405 MIN 5.8 AC-FT 14730
WTR YR 1990 TOTAL 6187.7 MEAN 17.0 MAX 261 MIN 5.8 AC-FT 12270

11460600 LAGUNITAS CREEK NEAR POINT REYES STATION, CA

LOCATION.--Lat 38°04'49", long 122°47'00", in Nicasio (Black) Grant, Marin County, Hydrologic Unit 18050005, on right bank at upstream side of road bridge, 300 ft downstream from small right-bank tributary, 1.4 mi northeast of town of Point Reyes Station, and 2.5 mi downstream from Nicasio Dam.

DRAINAGE AREA.--81.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR CA-79-2: 1975, 1978. WDR CA-82-2: 1975(m), 1978(m), 1980(m).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Nicasio Reservoir, capacity, 22,450 acre-ft; Kent Lake, capacity, 16,680 acre-ft; and Alpine Lake, capacity, 8,890 acre-ft, all of which divert water for domestic and industrial use in Marin County.

AVERAGE DISCHARGE.--16 years, 80.3 ft^3/s, 58,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft^3/s, Jan. 4, 1982, gage height, 26.96 ft, from rating curve extended above 6,200 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.01 ft^3/s, Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 684 ft^3/s, May 27, gage height, 5.96 ft; minimum daily, 5.2 ft^3/s, Aug. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	20	21	20	33	23	18	12	32	8.5	6.2	5.6
2	6.5	20	21	22	29	27	18	12	25	8.2	6.2	5.5
3	6.5	20	21	20	95	52	17	12	21	8.1	5.9	5.5
4	6.5	20	21	19	147	41	17	12	18	8.1	5.8	5.5
5	6.5	20	20	19	58	44	16	12	16	8.1	5.8	5.6
6	6.3	20	20	19	47	33	16	12	15	7.9	5.8	5.3
7	6.3	20	20	25	36	28	16	12	14	7.8	5.8	5.4
8	6.3	20	20	37	30	26	15	12	13	7.8	5.8	5.5
9	6.6	20	19	25	26	23	15	12	13	7.6	5.7	5.6
10	6.3	20	19	24	26	27	14	12	12	7.6	5.6	5.6
11	6.5	20	19	23	24	30	14	12	11	7.4	5.5	5.7
12	6.9	19	19	90	24	26	14	12	11	7.2	5.5	5.6
13	6.9	19	19	368	23	25	14	12	11	7.2	5.5	5.5
14	6.9	19	19	224	22	25	14	12	10	7.2	5.5	5.5
15	6.9	19	19	79	22	25	13	12	10	7.2	5.5	5.5
16	23	19	19	48	133	25	13	11	9.9	7.2	5.5	5.5
17	22	19	19	34	128	24	13	10	10	7.8	5.6	5.5
18	22	19	19	31	82	23	12	10	10	7.8	5.6	5.5
19	23	19	19	29	58	22	12	9.0	10	7.8	5.6	5.5
20	22	20	19	30	45	22	12	17	9.9	7.8	5.4	5.5
21	24	20	19	28	38	22	12	12	9.6	7.8	5.5	5.5
22	25	20	19	27	31	23	12	10	9.2	7.6	5.6	5.5
23	43	20	19	26	27	25	14	15	9.1	7.4	5.6	5.9
24	29	20	19	25	28	21	13	11	9.0	7.4	5.7	6.1
25	25	37	19	24	26	20	13	9.5	8.7	7.4	5.6	5.8
26	23	51	19	24	24	20	13	9.4	8.7	7.4	5.2	5.8
27	23	27	19	23	24	20	12	232	8.7	6.6	5.3	5.8
28	21	24	19	23	23	20	12	248	8.6	6.4	5.3	5.6
29	20	22	19	23	---	19	12	72	8.5	6.4	5.3	5.6
30	20	22	19	26	---	19	12	51	8.5	6.2	5.4	5.6
31	20	---	19	25	---	18	---	43	---	6.2	5.5	---
TOTAL	483.4	655	601	1460	1309	798	418	949.9	370.4	231.1	173.8	167.6
MEAN	15.6	21.8	19.4	47.1	46.7	25.7	13.9	30.6	12.3	7.45	5.61	5.59
MAX	43	51	21	368	147	52	18	248	32	8.5	6.2	6.1
MIN	6.3	19	19	19	22	18	12	9.0	8.5	6.2	5.2	5.3
AC-FT	959	1300	1190	2900	2600	1580	829	1880	735	458	345	332

CAL YR 1989 TOTAL 10914.8 MEAN 29.9 MAX 752 MIN 5.0 AC-FT 21650
WTR YR 1990 TOTAL 7617.2 MEAN 20.9 MAX 368 MIN 5.2 AC-FT 15110

11460600 LAGUNITAS CREEK NEAR POINT REYES STATION, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to September 1990 (storm season only), discontinued.
WATER TEMPERATURE: October 1989 to September 1990 (discontinued).
SEDIMENT DATA: October 1989 to September 1990 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1989 to September 1990 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: October 1989 to October 1990 (discontinued).

REMARKS.--Sediment samples were collected on most days where water temperature is published.

EXTREMES FOR PERIOD OF RECORD.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 175 mg/L, Jan. 13, 1990; minimum daily mean, 1 mg/L, many days in 1990.
SEDIMENT LOAD (storm season only): Maximum daily, 203 tons, Jan. 13, 1990; minimum daily, 0.02 ton, Oct. 1-6, 1989.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION (storm season only): Maximum daily mean, 175 mg/L, Jan. 13; minimum daily mean, 1 mg/L, many days.
SEDIMENT LOAD (storm season only): Maximum daily, 203 tons, Jan. 13; minimum daily, 0.02 ton, Oct. 1-6.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
NOV									
25...	1545	30	12.0	4	0.32	85	--	--	--
26...	0930	49	12.0	29	3.8	92	--	--	--
29...	0820	22	9.0	6	0.36	65	--	--	--
DEC									
06...	0830	20	11.0	6	0.32	57	--	--	--
08...	0840	20	9.0	7	0.38	50	--	--	--
JAN									
13...	0850	357	11.0	279	269	81	--	--	--
13...	1100	376	11.0	152	154	95	99	99	100
13...	1300	303	11.0	131	107	93	--	--	--
13...	1505	309	11.0	98	82	94	--	--	--
13...	1705	464	11.0	230	288	90	--	--	--
14...	1505	179	--	11	5.3	88	--	--	--
15...	0810	85	10.0	19	4.4	82	--	--	--
FEB									
16...	1300	87	8.0	81	19	98	100	--	--
16...	1810	334	8.0	237	214	100	--	--	--
17...	0815	123	7.0	26	8.6	100	--	--	--
17...	1110	126	7.5	20	6.8	99	--	--	--
17...	1410	127	8.0	16	5.5	98	--	--	--
17...	1715	129	8.0	15	5.2	94	--	--	--
MAR									
05...	0815	46	9.5	14	1.7	98	--	--	--

11460600 LAGUNITAS CREEK NEAR POINT REYES STATION, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
AUG							
07...	1220	1	5.8	8	26	72	94
07...	1225	1	5.8	13	28	50	63
07...	1230	1	5.8	1	3	10	36
07...	1235	1	5.8	1	2	6	8
07...	1240	1	5.8	19	33	46	53

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
AUG						
07...	99	100	--	--	--	--
07...	70	78	86	92	100	--
07...	52	66	80	90	100	--
07...	11	17	27	46	75	100
07...	59	67	81	94	100	--

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	---	---	10.0	---	7.0	11.0	---
2	---	---	---	9.0	8.0	10.5	14.5
3	---	---	---	8.0	---	12.5	---
4	---	---	9.0	---	---	11.0	14.0
5	---	---	13.5	---	9.5	9.5	---
6	---	---	11.0	---	8.0	---	---
7	---	---	---	10.0	---	10.0	12.0
8	---	---	9.0	12.0	8.0	12.0	---
9	---	12.0	---	13.0	---	---	11.0
10	---	---	---	10.0	11.0	11.0	---
11	15.0	---	8.0	---	---	10.5	14.0
12	---	---	---	11.0	11.0	9.0	---
13	---	13.0	7.0	11.0	9.0	---	13.5
14	---	---	---	11.0	---	9.5	---
15	---	11.0	7.0	10.0	5.0	---	---
16	---	---	---	10.0	8.0	---	13.0
17	---	10.0	---	---	7.5	11.5	---
18	---	---	8.0	10.0	8.5	---	---
19	---	---	---	---	10.0	---	15.0
20	---	11.0	8.0	---	6.5	12.0	14.5
21	---	---	---	---	7.0	---	---
22	---	11.0	---	9.0	---	12.5	---
23	---	---	8.0	---	8.5	---	13.0
24	---	12.0	---	---	---	12.5	---
25	---	12.0	---	9.0	---	---	15.5
26	---	12.0	---	---	11.0	14.0	---
27	---	9.0	8.0	---	---	---	---
28	---	---	---	---	---	---	14.5
29	---	9.0	8.0	8.0	---	13.0	---
30	---	---	---	9.0	---	15.0	---
31	---	---	---	---	---	---	---

11460600 LAGUNITAS CREEK NEAR POINT REYES STATION, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	6.5	1	.02	20	1	.05	21	2	.11
2	6.5	1	.02	20	1	.05	21	3	.17
3	6.5	1	.02	20	1	.05	21	3	.17
4	6.5	1	.02	20	1	.05	21	4	.23
5	6.5	1	.02	20	1	.05	20	5	.27
6	6.3	1	.02	20	1	.05	20	6	.32
7	6.3	2	.03	20	1	.05	20	7	.38
8	6.3	2	.03	20	1	.05	20	6	.32
9	6.6	2	.04	20	1	.05	19	4	.21
10	6.3	2	.03	20	1	.05	19	3	.15
11	6.5	2	.04	20	1	.05	19	2	.10
12	6.9	2	.04	19	1	.05	19	1	.05
13	6.9	2	.04	19	1	.05	19	1	.05
14	6.9	2	.04	19	1	.05	19	1	.05
15	6.9	2	.04	19	1	.05	19	1	.05
16	23	4	.25	19	1	.05	19	1	.05
17	22	3	.18	19	1	.05	19	1	.05
18	22	2	.12	19	1	.05	19	1	.05
19	23	2	.12	19	1	.05	19	1	.05
20	22	2	.12	20	1	.05	19	1	.05
21	24	3	.19	20	1	.05	19	1	.05
22	25	2	.13	20	1	.05	19	1	.05
23	43	19	3.1	20	1	.05	19	1	.05
24	29	13	1.0	20	1	.05	19	1	.05
25	25	7	.47	37	16	3.5	19	1	.05
26	23	6	.37	51	28	4.8	19	1	.05
27	23	5	.31	27	2	.15	19	1	.05
28	21	4	.23	24	3	.19	19	1	.05
29	20	3	.16	22	5	.30	19	1	.05
30	20	2	.11	22	3	.18	19	1	.05
31	20	1	.05	---	---	---	19	1	.05
TOTAL	483.4	---	7.36	655	---	10.32	601	---	3.43
		JANUARY			FEBRUARY			MARCH	
1	20	4	.22	33	4	.36	23	4	.25
2	22	6	.36	29	4	.31	27	6	.44
3	20	2	.11	95	67	50	52	13	1.8
4	19	1	.05	147	60	31	41	8	1.1
5	19	1	.05	58	11	1.7	44	13	1.5
6	19	1	.05	47	7	.89	33	6	.53
7	25	3	.20	36	5	.49	28	3	.23
8	37	11	1.0	30	3	.24	26	2	.14
9	25	5	.34	26	3	.21	23	2	.12
10	24	1	.06	26	4	.28	27	3	.22
11	23	1	.06	24	4	.26	30	6	.49
12	90	45	30	24	4	.26	26	6	.42
13	368	175	203	23	4	.25	25	5	.34
14	224	47	34	22	3	.18	25	4	.27
15	79	16	3.4	22	2	.12	25	4	.27
16	48	5	.65	133	94	69	25	4	.27
17	34	4	.37	128	28	10	24	4	.26
18	31	4	.33	82	10	2.2	23	4	.25
19	29	4	.31	58	5	.78	22	4	.24
20	30	3	.24	45	5	.61	22	4	.24
21	28	3	.23	38	6	.62	22	3	.18
22	27	3	.22	31	6	.50	23	2	.12
23	26	2	.14	27	6	.44	25	2	.13
24	25	1	.07	28	4	.30	21	2	.11
25	24	1	.06	26	3	.21	20	2	.11
26	24	1	.06	24	2	.13	20	2	.11
27	23	1	.06	24	2	.13	20	2	.11
28	23	1	.06	23	3	.19	20	2	.11
29	23	1	.06	---	---	---	19	2	.10
30	26	2	.14	---	---	---	19	2	.10
31	25	2	.13	---	---	---	18	2	.10
TOTAL	1460	---	276.03	1309	---	171.66	798	---	10.66

11460600 LAGUNITAS CREEK NEAR POINT REYES STATION, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL	
1	18	1	.05
2	18	1	.05
3	17	1	.05
4	17	1	.05
5	16	1	.04
6	16	2	.09
7	16	2	.09
8	15	2	.08
9	15	2	.08
10	14	2	.08
11	14	2	.08
12	14	3	.11
13	14	4	.15
14	14	4	.15
15	13	3	.11
16	13	3	.11
17	13	3	.11
18	12	2	.06
19	12	2	.06
20	12	3	.10
21	12	3	.10
22	12	4	.13
23	14	4	.15
24	13	3	.11
25	13	3	.11
26	13	3	.11
27	12	2	.06
28	12	2	.06
29	12	2	.06
30	12	2	.06
31	---	---	---
TOTAL	418	---	2.65
PERIOD	5724.40	---	482.11

11460750 WALKER CREEK NEAR MARSHALL, CA

LOCATION.--Lat 38°10'33", long 122°49'02", in Soulajule (Vasquez) Grant, Marin County, Hydrologic Unit 18050005, on right bank 0.8 mi downstream from Verde Canyon, 2.8 mi below confluence of Arroyo Sausal and Salmon Creek, and 4.0 mi east of Marshall.

DRAINAGE AREA.--31.1 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 140 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow affected by regulation and diversions and by Soulajule Reservoir on Arroyo Sausal; reservoir capacity, 10,570 acre-ft.

AVERAGE DISCHARGE.--7 years, 24.0 ft^3/s, 17,390 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft^3/s, Feb. 17, 1986, gage height, 10.79 ft, from rating curve extended above 1,100 ft^3/s on basis of comparison with discontinued downstream station Walker Creek near Tomales; minimum daily, 2.1 ft^3/s, several days in 1990.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Jan. 4, 1982, reached a stage of 15.9 ft, present datum, from floodmarks, discharge, 14,600 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 384 ft^3/s, Feb. 16, gage height, 2.91 ft; minimum daily, 2.1 ft^3/s, on several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	6.5	11	11	13	10	10	5.2	4.5	2.5	2.2	2.5
2	5.8	6.5	11	11	10	12	9.7	4.5	4.1	2.5	2.2	2.5
3	5.8	6.5	11	11	27	13	9.2	4.5	3.9	2.5	2.2	2.5
4	5.9	6.5	11	11	31	19	9.2	4.4	3.8	2.4	2.2	2.6
5	5.9	6.5	12	11	19	17	9.0	4.4	3.6	2.4	2.1	2.6
6	5.9	6.5	12	11	16	12	8.7	4.4	3.4	2.4	2.2	2.6
7	5.9	6.5	12	15	12	12	8.5	4.3	3.4	2.4	2.2	2.6
8	5.9	6.5	12	14	11	11	7.5	3.9	3.4	2.3	2.3	2.6
9	6.0	6.5	12	13	11	10	7.3	3.9	3.2	2.3	2.3	2.6
10	6.1	6.5	12	12	11	13	7.3	3.8	3.1	2.3	2.3	2.6
11	6.1	6.5	12	12	11	13	7.3	3.8	3.0	2.3	2.3	2.6
12	6.1	6.5	11	24	10	11	7.1	3.8	3.0	2.3	2.3	2.6
13	5.9	6.5	11	154	9.7	10	7.1	3.7	3.0	2.3	2.3	2.6
14	5.9	6.5	11	75	9.3	11	7.1	3.7	2.9	2.3	2.3	2.5
15	5.9	6.5	11	33	9.3	12	6.9	3.7	2.9	2.2	2.3	2.5
16	5.9	6.5	11	25	113	12	6.9	3.7	2.9	2.2	2.3	2.5
17	5.9	6.5	11	18	76	11	6.5	3.7	2.7	2.1	2.3	2.4
18	5.9	6.5	11	15	44	11	5.8	3.7	2.6	2.1	2.3	2.3
19	5.9	6.5	11	15	28	10	5.8	3.7	2.6	2.2	2.3	2.3
20	5.9	6.5	11	14	22	10	5.8	4.9	2.6	2.2	2.3	2.4
21	7.0	6.5	11	14	18	9.9	5.7	4.0	2.5	2.2	2.4	2.4
22	6.5	6.5	11	13	15	10	5.8	4.1	2.5	2.2	2.4	2.3
23	10	6.5	11	13	14	11	6.8	4.4	2.8	2.2	2.4	2.3
24	6.9	6.5	11	13	13	11	5.9	3.9	2.9	2.2	2.4	2.3
25	6.5	10	11	12	12	11	5.7	3.9	2.9	2.2	2.5	2.3
26	6.5	8.1	11	12	11	11	5.6	4.0	2.8	2.2	2.5	2.3
27	6.5	6.7	11	12	10	10	5.6	22	2.8	2.2	2.5	2.3
28	6.5	6.7	11	12	10	10	5.6	13	2.7	2.2	2.5	2.3
29	6.5	7.7	11	12	---	10	5.5	6.8	2.6	2.1	2.5	2.2
30	6.5	11	11	13	---	10	5.4	4.7	2.5	2.1	2.5	2.2
31	6.5	---	11	13	---	10	---	5.1	---	2.1	2.5	---
TOTAL	194.4	206.2	348	644	596.3	353.9	210.3	157.6	91.6	70.1	72.3	73.3
MEAN	6.27	6.87	11.2	20.8	21.3	11.4	7.01	5.08	3.05	2.26	2.33	2.44
MAX	10	11	12	154	113	19	10	22	4.5	2.5	2.5	2.6
MIN	5.8	6.5	11	11	9.3	9.9	5.4	3.7	2.5	2.1	2.1	2.2
AC-FT	386	409	690	1280	1180	702	417	313	182	139	143	145

CAL YR 1989 TOTAL 4660.1 MEAN 12.8 MAX 277 MIN 3.6 AC-FT 9240
WTR YR 1990 TOTAL 3018.0 MEAN 8.27 MAX 154 MIN 2.1 AC-FT 5990

11461000 RUSSIAN RIVER NEAR UKIAH, CA

LOCATION.--Lat 39°11'44", long 123°11'38", in Yokaya Grant, Mendocino County, Hydrologic Unit 18010110, on right bank 20 ft downstream from bridge on Lake Mendocino Drive, 0.4 mi upstream from East Fork, 0.6 mi downstream from York Creek, and 3.2 mi north of Ukiah.

DRAINAGE AREA.--100 mi^2.

PERIOD OF RECORD.--August 1911 to September 1913, October 1952 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 599.22 ft above National Geodetic Vertical Datum of 1929. Prior to October 1952, nonrecording gage at bridge 20 ft upstream at different datum. Oct. 1, 1952, to Nov. 8, 1971, water-stage recorder at site 0.6 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. No regulation. Diversions upstream from station for irrigation of about 1,000 acres.

AVERAGE DISCHARGE.--40 years, 175 ft^3/s, 126,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft^3/s, Dec. 21, 1955, gage height, 19.0 ft, site and datum then in use; flood of Feb. 17, 1986, reached a stage of 19.00 ft, present site and datum; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 7	1615	*5,790	*13.85				

Minimum daily, 0.02 ft^3/s, Aug. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	14	10	5.9	325	58	29	12	263	6.3	.63	.15
2	4.0	13	8.5	7.1	234	110	26	11	171	4.9	.54	.52
3	2.5	13	7.5	7.0	417	136	23	11	123	4.9	.55	.46
4	1.5	11	7.0	6.0	380	381	24	10	92	4.5	.56	.55
5	2.5	6.8	6.8	5.5	208	338	23	8.8	72	5.1	.50	.79
6	2.3	6.5	6.8	5.4	287	194	24	8.3	59	5.4	.53	.47
7	1.9	5.8	6.6	2350	167	153	24	8.7	52	4.8	.54	.66
8	1.9	5.7	6.5	1220	136	128	24	7.0	43	3.6	.64	.44
9	1.5	5.6	6.2	478	128	105	22	6.8	36	3.8	.34	.46
10	1.8	5.4	5.9	185	101	172	20	6.3	32	3.5	.21	.51
11	1.7	5.9	5.5	109	82	177	19	7.9	27	3.1	.13	.59
12	1.7	5.8	5.3	423	71	127	18	8.3	24	2.9	.05	.42
13	1.7	5.4	5.2	887	60	101	17	8.2	23	2.6	.02	.36
14	1.6	5.3	5.2	391	54	151	17	8.2	21	1.6	.06	.32
15	3.8	5.2	5.3	180	52	180	15	7.8	20	2.4	.08	.20
16	2.4	5.2	5.2	137	948	137	16	7.8	18	2.3	.05	.15
17	2.1	5.1	5.2	98	560	113	16	7.8	17	2.1	.04	.31
18	1.5	5.0	5.2	72	390	95	15	8.0	16	2.1	.19	.28
19	1.8	4.9	5.2	59	283	82	13	8.7	14	2.5	.60	.24
20	1.9	4.5	5.2	50	225	71	12	17	13	1.9	.93	.34
21	6.9	4.7	5.2	44	191	61	12	14	11	1.5	.74	.35
22	8.0	5.0	5.1	40	180	56	13	159	11	1.6	.29	.34
23	52	5.2	4.9	37	147	54	18	198	10	1.2	.26	.43
24	63	7.1	4.9	33	119	50	17	64	9.8	1.3	.18	.83
25	31	15	4.9	32	96	46	15	39	8.7	1.2	.14	1.4
26	15	51	4.9	30	82	43	16	69	6.6	1.7	.15	1.7
27	16	35	4.9	28	70	39	15	1410	5.6	1.5	.27	1.0
28	13	21	4.9	26	62	36	14	519	6.3	1.2	.12	1.3
29	12	16	4.9	25	---	35	13	210	7.1	.77	.13	1.1
30	17	14	4.8	163	---	33	11	263	6.4	.57	.16	1.0
31	17	---	4.7	192	---	30	---	465	---	.73	.12	---
TOTAL	293.3	313.1	178.4	7325.9	6055	3492	541	3589.6	1218.5	83.57	9.75	17.67
MEAN	9.46	10.4	5.75	236	216	113	18.0	116	40.6	2.70	.31	.59
MAX	63	51	10	2350	948	381	29	1410	263	6.3	.93	1.7
MIN	1.5	4.5	4.7	5.4	52	30	11	6.3	5.6	.57	.02	.15
AC-FT	582	621	354	14530	12010	6930	1070	7120	2420	166	19	35

CAL YR 1989 TOTAL 36339.48 MEAN 99.6 MAX 3280 MIN .00 AC-FT 72080
WTR YR 1990 TOTAL 23117.79 MEAN 63.3 MAX 2350 MIN .02 AC-FT 45850

11461500 EAST FORK RUSSIAN RIVER NEAR CALPELLA, CA

LOCATION.--Lat 39°14'48", long 123°07'45", in NW 1/4 NW 1/4 sec.18, T.16 N., R.11 W., Mendocino County, Hydrologic Unit 18010110, on left bank 0.1 mi downstream from Cold Creek and 3.9 mi east of Calpella.

DRAINAGE AREA.--92.2 mi^2.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 787.87 ft above National Geodetic Vertical Datum of 1929. Prior to May 28, 1957, at site 1.3 mi downstream at different datum. May 28, 1957, to Apr. 5, 1966, at site 0.4 mi downstream at same datum.

REMARKS.--Records good. Flow greatly affected by diversion from Eel River through Potter Valley powerplant (see stations 11471000, 11471099). Diversion for irrigation of about 8,000 acres upstream from station.

AVERAGE DISCHARGE.--49 years, 333 ft^3/s, 241,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft^3/s, Dec. 22, 1964, gage height, 20.21 ft, site then in use; maximum gage height, 20.82 ft, Feb. 17, 1986; minimum daily, 1.7 ft^3/s, July 23, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 7	1600	*4,390	*14.15				

Minimum daily, 1.7 ft^3/s, July 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	322	46	244	165	559	331	75	65	305	73	54	78
2	320	47	246	165	461	428	73	59	335	68	60	81
3	321	87	245	112	e719	408	68	54	322	63	59	85
4	320	152	246	105	e540	680	35	60	318	71	54	126
5	321	154	244	110	e435	514	21	56	317	81	79	280
6	325	154	244	112	e405	409	20	56	314	75	81	269
7	322	154	246	1710	e385	381	64	53	316	69	70	271
8	322	150	233	911	e365	363	75	56	302	71	68	276
9	321	152	107	471	350	333	76	62	304	78	62	280
10	318	228	110	303	337	385	66	54	309	67	62	278
11	321	236	111	345	331	383	66	55	310	63	54	278
12	320	243	111	477	326	353	55	56	301	65	67	274
13	321	244	112	1280	312	335	51	53	295	54	62	272
14	321	241	98	559	303	354	53	58	283	49	68	277
15	317	239	98	393	301	361	53	60	261	44	72	284
16	e320	240	103	378	1250	352	68	62	144	51	67	288
17	e245	241	102	349	659	341	67	60	136	16	66	293
18	e162	241	102	338	552	332	58	48	128	4.2	79	284
19	e160	241	116	332	451	328	53	65	132	2.3	87	282
20	e158	241	201	323	427	327	60	102	227	3.4	85	283
21	169	241	167	322	404	330	55	103	203	3.6	73	280
22	163	241	161	320	405	325	59	165	120	2.0	75	280
23	254	241	164	317	382	318	72	201	72	1.7	70	292
24	365	244	165	322	366	326	70	155	68	18	76	292
25	259	258	165	320	355	327	76	134	73	40	65	309
26	330	273	162	319	349	321	69	150	78	45	80	319
27	333	255	161	311	343	269	68	712	75	42	84	315
28	322	251	161	314	338	76	68	393	76	39	46	306
29	314	250	161	313	---	81	57	320	69	41	31	307
30	206	247	162	473	---	82	60	417	77	44	72	302
31	48	---	164	435	---	80	---	438	---	49	73	---
TOTAL	8620	6232	5112	12704	12410	10233	1811	4382	6270	1393.2	2101	7841
MEAN	278	208	165	410	443	330	60.4	141	209	44.9	67.8	261
MAX	365	273	246	1710	1250	680	76	712	335	81	87	319
MIN	48	46	98	105	301	76	20	48	68	1.7	31	78
AC-FT	17100	12360	10140	25200	24620	20300	3590	8690	12440	2760	4170	15550

CAL YR 1989 TOTAL 98754 MEAN 271 MAX 3350 MIN 46 AC-FT 195900
WTR YR 1990 TOTAL 79109.2 MEAN 217 MAX 1710 MIN 1.7 AC-FT 156900

e Estimated.

11461800 LAKE MENDOCINO NEAR UKIAH, CA

LOCATION.--Lat 39°11'53", long 123°10'50", in Yokaya Grant, Mendocino County, Hydrologic Unit 18010110, in intake tower 30 ft upstream from Coyote Dam on East Fork Russian River and 3.6 mi northeast of Ukiah.
DRAINAGE AREA.--105 mi^2.

PERIOD OF RECORD.--October 1965 to September 1990 (discontinued). Records prior to October 1965 in files of U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).
REMARKS.--Reservoir is formed by earthfill dam; storage began in November 1958. Capacity based on 1953 survey, capacity table returned to use Oct. 1, 1983, 122,400 acre-ft between elevations 637.0 ft, invert of outlet tunnel, and 764.8 ft, spillway crest. Storage affected by diversions from Eel River through Potter Valley powerplant (station 11471000). Water is released down East Fork Russian River for irrigation and recreation use. Records, including current year extremes, represent contents at 2400 hours.
COOPERATION.--Records were provided by U.S. Army Corps of Engineers; not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 114,800 acre-ft, Jan. 24, 1970, elevation, 760.86 ft; minimum, 12,070 acre-ft, Nov. 4, 1977, elevation, 687.15 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 92,559 acre-ft, June 6, elevation, 748.84 ft; minimum, 55,812 acre-ft, Oct. 1, elevation, 727.66 ft.
REVISIONS.--The 2400 hour elevation and contents reported for Sept. 30, 1989 have been revised to 727.48 ft and 55,526 acre-ft, respectively. Revised change in contents for September 1989 is -5,788 acre-ft, and revised change in contents for water year 1989 is +4,613 acre-ft. Figures supersede those published in the report for 1989.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on a survey provided by U.S. Army Corps of Engineers in 1953)

637	0	665	2,870	690	13,800	730	59,600
645	118	670	4,340	695	17,200	740	76,700
650	390	675	6,130	700	21,300	750	94,700
655	909	680	8,270	710	31,400	760	113,300
660	1,730	685	10,800	720	44,200	764.8	122,400

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55812	62142	65799	66019	73636	76553	87993	87432	89845	90827	78446	66766
2	56115	61877	65985	66019	73618	77171	88029	87287	90481	90645	78056	66426
3	56354	61744	66155	65934	74126	77666	88066	87196	91118	90445	77666	66087
4	56610	61744	66290	65816	74336	78802	88066	87142	91720	90245	77259	65867
5	56883	61761	66477	65731	74319	79424	87993	86997	92322	90045	76906	65867
6	57140	61761	66630	65697	74406	79762	87921	86853	92559	89754	76570	66155
7	57429	61761	66800	68663	74249	80047	87903	86726	92468	89408	76376	66426
8	57703	61761	66953	70333	74073	80279	87884	86563	92377	89063	75988	66698
9	57962	61761	66868	71476	73898	80546	87903	86328	92267	88718	75425	66936
10	58221	61893	66766	72049	73688	81046	87921	86076	92158	88374	75021	67158
11	58480	62076	66664	72658	73461	81493	87939	85823	92030	88029	74617	67362
12	58740	62258	66545	73618	73269	81868	87921	85570	91902	87649	74231	67550
13	59001	62441	66460	76076	72955	82227	87884	85336	91738	87269	73881	67755
14	59245	62658	66324	76059	72676	82675	87830	85065	91592	86835	73496	67960
15	59506	62824	66223	74968	72467	83105	87776	84867	91574	86383	73129	68183
16	59752	63008	66104	73863	73793	83482	87758	84633	91683	85967	72745	68406
17	59981	63175	65985	72902	73898	83842	87739	84381	91756	85480	72362	68628
18	59964	63342	65850	72293	73671	84201	87721	84093	91811	84975	72014	68852
19	59899	63509	65748	72171	73251	84579	87667	83878	91884	84471	71667	69075
20	59850	63660	65816	72275	73059	85011	87631	83770	92139	83949	71320	69212
21	59932	63811	65816	72327	73391	85426	87595	83662	92340	83446	70956	69402
22	59981	63978	65833	72397	73881	85877	87595	83788	92267	82908	70592	69557
23	60325	64180	65833	72501	74336	86347	87613	84093	92103	82370	70212	69815
24	60835	64365	65850	72571	74740	86816	87613	84399	91921	81886	69832	70057
25	61033	64701	65850	72641	75126	87305	87613	84597	91775	81439	69453	70402
26	61397	64903	65867	72676	75531	87758	87613	84831	91611	81010	69092	70627
27	61744	65089	65883	72745	75883	88138	87613	86202	91483	80546	68731	70852
28	62092	65275	65883	72780	76218	88084	87522	86835	91301	80118	68354	71077
29	62425	65443	65900	72902	---	88066	87486	87450	91155	79673	67909	71302
30	62558	65646	65917	73339	---	88011	87414	88319	90991	79264	67482	71493
31	62342	---	65934	73444	---	87957	---	89209	---	78837	67107	---
MAX	62558	65646	66953	76076	76218	88138	88066	89209	92559	90827	78446	71493
MIN	55812	61744	65748	65697	72467	76553	87414	83662	89845	78837	67107	65867
a	731.67	731.64	733.81	738.17	739.75	746.31	746.01	747.00	747.98	741.23	734.50	737.05
b	+6816	+3304	+288	+7510	+2774	+11739	-543	+1795	+1782	-12154	-11730	+4386

CAL YR 1989 MAX 92961 MIN 55256 b -7265
WTR YR 1990 MAX 92559 MIN 55812 b +15967

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA

LOCATION.--Lat 39°11'51", long 123°11'11", in Yokaya Grant, Mendocino County, Hydrologic Unit 18010110, on right bank of outlet channel, 500 ft downstream from Coyote Dam, 1,300 ft upstream from mouth, and 3.2 mi northeast of Ukiah.

DRAINAGE AREA.--105 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1911 to September 1913, October 1951 to June 1956, October 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 614.41 ft above National Geodetic Vertical Datum of 1929. Prior to October 1951, nonrecording gage at site 0.5 mi upstream at different datum. October 1951 to June 1956, water-stage recorder at site 1.0 mi upstream at different datum.

REMARKS.--Records good. Flow affected by diversion from Eel River through Potter Valley powerplant (station 11471000) and since November 1958 by storage in Lake Mendocino (station 11461800) 500 ft upstream. Diversions above station for irrigation of about 8,000 acres.

AVERAGE DISCHARGE (unadjusted).--7 years (water years 1912-13, 1952-55, 1958), 356 ft^3/s, 257,900 acre-ft/yr; 31 years (water years 1960-90), 343 ft^3/s, 248,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Prior to regulation by Lake Mendocino, maximum discharge, 13,300 ft^3/s, Dec. 21, 1955, gage height, 16.86 ft, site and datum then in use, from rating curve extended above 6,300 ft^3/s on basis of maximum flow at station upstream which was defined to 8,600 ft^3/s; no flow Aug. 13-15, 1913. Maximum discharge (water years 1959-90), 7,350 ft^3/s, Jan. 24, 1970, gage height, 10.84 ft; minimum daily, 0.02 ft^3/s, Apr. 17, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft^3/s, Jan. 14, gage height, 3.33 ft; maximum gage height, 7.32 ft, Sept. 11, (backwater from coffer dam); minimum daily, 20 ft^3/s, Jan. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	153	158	153	508	202	38	70	28	140	240	242
2	174	153	160	153	509	202	35	75	28	149	239	242
3	177	153	163	153	509	204	35	83	28	154	238	242
4	177	153	163	153	513	206	35	100	28	151	238	242
5	176	153	162	153	514	236	43	119	28	164	238	e250
6	173	153	161	153	514	296	53	119	230	207	238	e145
7	173	153	160	156	514	298	53	118	379	230	243	e115
8	173	155	160	70	514	298	53	136	379	224	240	e140
9	173	156	160	20	503	258	53	175	379	224	238	e147
10	173	156	160	35	497	196	57	173	379	226	238	e148
11	173	156	160	63	497	199	61	173	378	226	238	e145
12	173	156	160	63	497	200	63	173	383	231	238	e175
13	173	156	160	64	497	199	65	174	384	236	242	e174
14	173	155	160	653	497	199	68	173	384	242	242	e174
15	174	152	160	1010	497	199	72	173	256	239	241	e182
16	176	146	160	1000	683	199	75	175	84	238	238	e180
17	177	152	160	879	744	199	72	177	88	239	240	e185
18	176	156	160	669	742	199	68	188	90	240	240	e199
19	177	156	160	399	742	170	67	199	89	239	240	e198
20	171	156	160	312	578	150	69	199	88	238	242	e192
21	169	156	160	312	279	151	68	126	115	238	243	e197
22	166	156	160	312	198	124	68	75	145	239	242	e193
23	158	156	160	312	195	105	61	47	146	239	242	e188
24	153	156	160	312	199	110	55	36	146	242	242	e199
25	153	156	160	312	199	110	63	60	145	242	242	e220
26	155	156	157	312	199	107	68	75	139	242	242	e230
27	155	156	153	312	202	106	68	75	137	240	244	e220
28	153	156	153	312	202	105	68	75	139	242	243	e215
29	153	156	153	312	---	108	68	48	140	242	242	e216
30	153	157	153	312	---	107	69	28	140	242	247	e220
31	153	---	153	433	---	107	---	28	---	242	242	---
TOTAL	5206	4640	4929	9864	12742	5549	1791	3645	5502	6887	7462	5815
MEAN	168	155	159	318	455	179	59.7	118	183	222	241	194
MAX	177	157	163	1010	744	298	75	199	384	242	247	250
MIN	153	146	153	20	195	105	35	28	28	140	238	115
AC-FT	10330	9200	9780	19570	25270	11010	3550	7230	10910	13660	14800	11530

CAL YR 1989 TOTAL 102960 MEAN 282 MAX 1980 MIN 12 AC-FT 204200
WTR YR 1990 TOTAL 74032 MEAN 203 MAX 1010 MIN 20 AC-FT 146800

e Estimated.

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953-55, 1964-68, 1973 to current year.
CHEMICAL DATA: Water years 1953-55, 1973-82.
BIOLOGICAL DATA: Water year 1977-78.
WATER TEMPERATURE: Water years 1953-55, 1965-68, 1973 to current year.
SEDIMENT DATA: Water years 1953-55, 1964-68.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1952 to March 1955, October 1964 to September 1968, October 1972 to current year.
SUSPENDED-SEDIMENT DISCHARGE: December 1952 to March 1955, January 1964 to September 1968.

INSTRUMENTATION.--Water-temperature recorder since October 1972. Digital recorder set for 1-hour interval punches.

REMARKS.--Water temperature is affected by regulation from Coyote Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 23.5 °C on several days in 1977; minimum recorded, 7.0 °C, Jan. 14, 1973, many days in 1984, several days in 1989, Feb. 23, 25-28, 1990.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 21.0 °C, Sept. 6; minimum recorded, 7.0 °C, Feb. 23, 25-28.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.5	20.0	16.0	15.5	12.0	12.0	9.5	9.5	8.5	8.5	7.5	7.5
2	20.0	20.0	16.0	15.5	12.0	11.5	9.5	9.5	8.5	8.5	7.5	7.5
3	20.0	20.0	16.0	15.5	12.0	11.5	9.5	9.0	8.5	8.0	8.0	7.5
4	20.0	19.5	16.0	15.5	12.0	11.5	9.5	9.0	8.5	8.5	7.5	7.5
5	20.0	19.5	15.5	15.5	12.0	11.5	9.5	9.0	8.5	8.0	8.0	7.5
6	19.5	19.5	15.5	15.0	12.0	12.0	9.5	9.0	8.5	8.0	8.0	7.5
7	19.5	19.5	15.5	15.0	12.0	12.0	9.0	9.0	8.0	8.0	8.0	7.5
8	19.5	19.0	15.5	15.0	12.0	12.0	9.5	9.0	8.0	8.0	8.0	7.5
9	19.5	19.0	15.0	15.0	12.0	11.5	10.0	8.5	8.0	8.0	8.0	7.5
10	19.5	19.0	15.0	14.5	12.0	11.5	9.0	8.5	8.0	8.0	8.0	7.5
11	19.5	19.0	15.0	14.5	12.0	11.5	9.0	8.5	8.0	8.0	8.0	7.5
12	19.5	19.0	14.5	14.5	12.0	11.5	9.0	9.0	8.5	8.0	8.0	7.5
13	19.5	19.0	14.5	14.5	12.0	11.5	9.0	9.0	8.5	8.0	8.0	7.5
14	19.0	19.0	14.5	14.5	12.0	11.5	9.5	9.0	8.5	8.0	8.0	7.5
15	19.0	19.0	14.5	14.5	11.5	11.5	9.5	9.0	8.5	8.0	8.0	7.5
16	19.0	19.0	14.5	14.0	11.5	11.0	9.5	9.5	8.5	8.0	8.0	8.0
17	19.0	18.5	14.5	14.0	11.5	11.0	9.5	9.5	8.5	8.0	8.0	8.0
18	18.5	18.5	14.0	14.0	11.0	11.0	9.5	9.0	8.0	8.0	8.0	8.0
19	18.5	18.5	14.0	13.5	11.0	11.0	9.0	9.0	8.0	7.5	8.0	8.0
20	18.5	18.5	14.0	13.5	11.0	11.0	9.0	9.0	8.0	7.5	8.0	8.0
21	18.5	18.5	14.0	13.5	11.0	10.5	9.0	9.0	7.5	7.5	8.0	8.0
22	18.5	18.5	14.0	13.5	10.5	10.5	9.0	8.5	7.5	7.5	8.5	8.0
23	18.5	18.5	13.5	13.5	10.5	10.5	9.0	8.5	7.5	7.0	8.5	8.0
24	18.5	18.0	13.5	13.5	10.5	10.0	8.5	8.5	7.5	7.5	8.5	8.0
25	18.0	17.5	13.5	13.5	10.5	10.0	8.5	8.5	7.5	7.0	8.5	8.0
26	17.0	16.5	13.5	13.0	10.5	10.0	9.0	8.5	7.5	7.0	8.5	8.0
27	17.0	16.5	13.5	13.0	10.0	10.0	9.0	8.5	7.5	7.0	8.5	8.0
28	16.5	16.0	13.0	13.0	10.0	9.5	8.5	8.5	7.5	7.0	8.5	8.0
29	16.5	16.0	13.0	12.5	10.0	9.5	8.5	8.5	---	---	8.5	8.0
30	16.5	15.5	12.5	12.0	10.0	9.5	8.5	8.5	---	---	8.5	8.0
31	16.0	15.5	---	---	9.5	9.5	9.0	8.5	---	---	8.5	8.0
MONTH	20.5	15.5	16.0	12.0	12.0	9.5	10.0	8.5	8.5	7.0	8.5	7.5

11462000 EAST FORK RUSSIAN RIVER NEAR UKIAH, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	8.0	9.0	8.0	10.0	8.5	10.0	9.5	13.0	12.0	16.0	15.5
2	9.0	8.0	9.0	8.0	10.0	8.5	10.0	9.5	13.5	12.0	16.5	15.5
3	9.0	8.0	9.0	8.0	10.5	8.5	10.0	9.5	13.5	12.5	16.0	16.0
4	9.0	8.0	9.0	8.0	10.5	8.5	10.0	9.5	13.0	12.5	16.5	16.0
5	9.0	8.0	9.0	8.0	10.5	8.5	10.0	9.5	13.5	12.5	16.5	16.0
6	8.0	8.0	9.0	8.0	9.0	8.5	10.0	9.5	14.0	13.0	21.0	16.0
7	8.0	8.0	9.0	8.0	9.0	8.5	10.0	9.5	14.0	13.0	16.5	16.0
8	8.5	8.0	9.0	8.0	9.0	8.5	10.5	9.5	14.0	13.0	16.5	16.0
9	9.0	8.0	8.5	8.5	9.0	9.0	10.5	9.5	14.5	13.5	17.0	16.5
10	8.5	8.0	8.5	8.5	9.0	9.0	10.5	10.0	14.5	13.5	17.0	16.5
11	8.5	8.0	8.5	8.0	9.0	9.0	10.5	10.0	14.5	13.5	17.0	17.0
12	8.5	8.0	8.5	8.5	9.0	9.0	10.5	10.0	14.5	13.5	17.0	17.0
13	9.0	8.0	8.5	8.5	9.0	9.0	11.0	10.0	14.5	13.5	17.5	17.0
14	9.0	8.0	9.0	8.5	9.0	9.0	11.0	10.0	14.5	14.0	17.5	17.0
15	8.5	8.0	9.0	8.5	9.5	9.0	11.0	10.0	14.5	14.0	17.5	17.0
16	8.5	8.0	9.0	8.5	9.5	9.0	11.0	10.0	15.0	14.0	17.5	17.5
17	8.5	8.0	9.0	8.5	9.5	9.0	11.0	10.5	14.5	14.0	17.5	17.5
18	9.0	8.0	9.0	8.5	9.5	9.0	11.0	10.5	15.0	14.0	18.0	17.5
19	8.5	8.0	8.5	8.5	9.5	9.0	11.5	10.5	15.0	14.5	18.0	17.5
20	9.0	8.0	8.5	8.5	10.0	9.0	11.5	10.5	15.0	14.5	18.0	18.0
21	9.0	8.0	8.5	8.5	9.5	9.0	11.5	10.5	15.0	14.5	18.0	18.0
22	8.5	8.0	8.5	8.5	9.5	9.0	12.0	11.0	15.0	14.5	18.5	18.0
23	9.0	8.0	10.0	8.5	9.5	9.0	12.0	11.0	15.0	14.5	18.5	18.0
24	9.0	8.0	10.0	8.5	9.5	9.0	12.0	11.0	15.5	14.5	18.5	18.0
25	9.0	8.0	9.5	8.5	9.5	9.0	12.0	11.0	15.5	14.5	18.5	18.5
26	9.0	8.0	9.0	8.5	9.5	9.0	12.0	11.5	15.5	15.0	18.5	18.5
27	9.0	8.0	8.5	8.5	9.5	9.0	12.5	11.5	16.0	15.0	19.0	18.5
28	9.0	8.0	9.0	8.5	10.0	9.0	12.5	11.5	16.0	15.0	19.0	18.5
29	9.0	8.0	10.0	8.5	10.0	9.0	12.5	11.5	16.0	15.0	19.0	19.0
30	9.0	8.0	9.0	8.5	10.0	9.0	12.5	12.0	16.0	15.5	19.0	19.0
31	---	---	9.5	8.5	---	---	13.0	12.0	16.0	15.5	---	---
MONTH	9.0	8.0	10.0	8.0	10.5	8.5	13.0	9.5	16.0	12.0	21.0	15.5

11462500 RUSSIAN RIVER NEAR HOPLAND, CA

LOCATION.--Lat 39°01'36", long 123°07'46", in Rancho de Sanel Grant, Mendocino County, Hydrologic Unit 18010110, on right bank at abandoned highway bridge, 0.2 mi downstream from McNab Creek, 4 mi north of Hopland, and 15.2 mi downstream from Coyote Dam.

DRAINAGE AREA.--362 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1041: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 497.61 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 9, 1943, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of about 11,800 acres upstream from station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (station 11461800) 15.2 mi upstream.

AVERAGE DISCHARGE.--51 years, 711 ft^3/s, 515,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,000 ft^3/s, Dec. 22, 1955, gage height, 27.00 ft; minimum daily, 9.1 ft^3/s, Apr. 20, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 30.0 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,560 ft^3/s, Jan. 7, gage height, 11.54 ft; minimum daily, 73 ft^3/s, June 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	163	172	155	890	325	150	84	461	96	193	206
2	172	163	172	156	829	362	121	77	306	102	194	205
3	171	163	169	155	1040	422	109	90	226	116	194	209
4	169	161	169	153	1210	634	105	90	180	117	191	213
5	168	159	169	153	826	808	102	110	148	121	189	212
6	164	158	168	153	925	618	107	107	199	141	198	174
7	163	154	165	2500	764	550	108	112	404	174	190	90
8	163	153	163	1970	710	514	110	112	405	176	193	89
9	165	153	163	819	690	473	109	157	401	185	190	113
10	165	153	163	389	650	460	107	163	397	183	188	131
11	163	153	161	272	621	523	104	153	392	178	189	132
12	161	153	161	478	601	443	104	154	384	183	195	136
13	152	154	161	1680	583	397	100	156	368	191	192	137
14	155	154	161	1130	569	425	98	167	369	187	188	138
15	156	153	161	1150	562	526	104	162	349	185	191	145
16	158	153	158	1090	2260	453	107	161	122	191	201	143
17	160	154	158	1000	1670	412	107	162	106	190	194	149
18	158	158	158	824	1350	384	102	161	104	190	193	163
19	163	158	158	575	1140	349	100	177	85	190	194	168
20	163	158	158	439	977	298	100	200	76	191	207	169
21	174	158	158	411	674	279	97	183	73	177	209	164
22	173	158	158	396	553	260	92	160	99	176	206	159
23	340	159	158	381	492	225	106	368	109	186	204	155
24	230	163	158	374	451	219	104	151	106	184	201	165
25	208	184	158	366	412	210	96	114	110	190	199	192
26	178	224	158	362	380	199	100	123	111	195	192	198
27	171	209	156	357	355	191	99	1530	106	191	203	188
28	168	190	153	352	338	188	94	941	102	190	206	186
29	163	183	153	349	---	187	91	432	106	202	206	188
30	163	178	153	430	---	183	91	317	103	204	207	188
31	163	---	153	665	---	175	---	680	---	193	211	---
TOTAL	5392	4934	4984	19684	22522	11692	3124	7754	6507	5375	6108	4905
MEAN	174	164	161	635	804	377	104	250	217	173	197	163
MAX	340	224	172	2500	2260	808	150	1530	461	204	211	213
MIN	152	153	153	153	338	175	91	77	73	96	188	89
AC-FT	10700	9790	9890	39040	44670	23190	6200	15380	12910	10660	12120	9730

CAL YR 1989 TOTAL 161382 MEAN 442 MAX 5850 MIN 152 AC-FT 320100
WTR YR 1990 TOTAL 102981 MEAN 282 MAX 2500 MIN 73 AC-FT 204300

11462500 RUSSIAN RIVER NEAR HOPLAND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to March 1979, October 1989 to September 1990.
CHEMICAL DATA: Water years 1951-66.
WATER TEMPERATURE: Water years 1965-79.
SEDIMENT DATA: October 1989 to September 1990.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: September 1965 to March 1979.

REMARKS.--Zero-bedload discharge observed at flows less than 259 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
DEC									
14...	1515	161	--	2	0.87	88	--	--	--
JAN									
11...	1315	262	--	19	13	98	--	--	--
FEB									
16...	1640	3000	7.5	342	2770	91	95	97	100

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	SEDIMENT DISCHARGE, BEDLOAD (TONS/ DAY)
FEB									
16...	1515	1000	1100	0.250	1425	1605	21	3140	679

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
FEB								
16...	1	8	18	34	56	76	94	100

11462500 RUSSIAN RIVER NEAR HOPLAND, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
JAN							
11...	1445	1	259	-	1	7	22
11...	1505	1	259	-	-	2	17
11...	1510	1	259	-	-	1	5
11...	1515	1	259	-	1	2	7
11...	1520	1	259	-	1	2	4
11...	1525	1	259	-	1	2	3
11...	1530	1	259	1	2	3	5
11...	1535	1	259	2	3	5	8

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
JAN							
11...	26	35	48	64	90	100	--
11...	26	33	41	53	78	100	--
11...	12	21	30	46	64	100	--
11...	18	30	42	61	81	100	--
11...	12	23	40	60	84	100	--
11...	12	24	39	63	90	100	--
11...	12	18	24	33	45	76	100
11...	9	15	26	42	69	100	--

11463000 RUSSIAN RIVER NEAR CLOVERDALE, CA

LOCATION.--Lat 38°52'46", long 123°03'09", in NW 1/4 NW 1/4 sec.23, T.12 N., R.11 W., Mendocino County, Hydrologic Unit 18010110, on left bank 0.3 mi downstream from Cummisky Creek, 5.5 mi northwest of Cloverdale, and 28 mi downstream from Coyote Dam.

DRAINAGE AREA.--503 mi^2.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 350 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 30, 1970, at site 0.2 mi upstream at different datum.

REMARKS.--Records good. Diversions for irrigation of about 15,300 acres upstream from station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (station 11461800).

AVERAGE DISCHARGE.--39 years, 964 ft^3/s, 698,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,200 ft^3/s, Dec. 22, 1964, gage height, 31.60 ft, site and datum then in use; minimum daily, 12 ft^3/s, Apr. 22, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,880 ft^3/s, Jan. 7, gage height, 10.78 ft; minimum daily, 80 ft^3/s, May 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	177	198	168	1040	399	202	89	725	115	184	187
2	166	176	194	172	1010	424	163	80	471	116	187	199
3	158	177	193	169	1470	516	157	82	355	127	189	205
4	155	175	191	167	2040	728	144	86	294	129	179	207
5	157	172	189	166	1160	1220	130	91	252	131	177	203
6	159	169	188	166	1250	845	130	86	221	139	196	199
7	158	167	185	2010	1010	724	128	94	411	163	179	114
8	162	165	183	3320	885	663	129	92	429	171	191	100
9	164	165	183	1260	837	599	128	105	421	181	186	105
10	159	164	182	571	772	544	126	136	416	182	182	121
11	155	163	181	378	723	667	125	132	411	175	182	123
12	157	163	180	687	687	551	120	136	407	184	179	125
13	150	164	179	3820	654	486	115	136	392	195	186	129
14	150	163	175	2010	628	471	115	146	392	193	175	129
15	150	163	173	1590	613	651	120	143	394	189	184	133
16	152	164	171	1390	3200	555	125	136	e280	192	196	134
17	157	165	167	1260	2650	498	127	131	e175	196	192	136
18	155	169	170	1020	2100	461	e123	126	e142	192	187	143
19	158	171	171	733	1690	431	e123	145	124	188	185	150
20	161	171	170	513	1460	373	e123	185	113	178	197	153
21	179	170	171	461	1030	345	e121	195	101	175	202	150
22	186	171	171	434	804	326	e117	159	105	172	e197	137
23	785	169	171	413	687	287	e128	397	114	188	e192	128
24	326	174	171	398	600	273	e127	222	122	188	185	150
25	264	232	171	389	534	261	104	147	130	194	187	168
26	216	302	173	379	484	244	106	139	132	195	187	198
27	208	258	169	370	448	236	105	2230	128	187	192	190
28	194	225	167	363	419	228	100	1900	114	181	198	179
29	184	210	165	362	---	225	99	751	117	183	194	175
30	180	203	164	396	---	219	97	483	122	201	192	172
31	178	---	163	678	---	215	---	977	---	189	199	---
TOTAL	6047	5477	5479	26213	30885	14665	3757	9957	8010	5389	5838	4642
MEAN	195	183	177	846	1103	473	125	321	267	174	188	155
MAX	785	302	198	3820	3200	1220	202	2230	725	201	202	207
MIN	150	163	163	166	419	215	97	80	101	115	175	100
AC-FT	11990	10860	10870	51990	61260	29090	7450	19750	15890	10690	11580	9210

CAL YR 1989 TOTAL 206323 MEAN 565 MAX 9420 MIN 150 AC-FT 409200
WTR YR 1990 TOTAL 126359 MEAN 346 MAX 3820 MIN 80 AC-FT 250600

e Estimated.

11463170 BIG SULPHUR CREEK AT GEYSERS RESORT, NEAR CLOVERDALE, CA

LOCATION.--Lat 38°47'52", long 122°48'05", in NW 1/4 NW 1/4 sec.19, T.11 N., R.8 W., Sonoma County, Hydrologic Unit 18010110, on left bank 400 ft downstream from unnamed tributary and 12 mi east of Cloverdale.

DRAINAGE AREA.--13.1 mi^2.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,420 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Diversion for industrial use 150 ft upstream from station when flows are above 10 ft^3/s.

AVERAGE DISCHARGE.--10 years, 39.5 ft^3/s, 28,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,700 ft^3/s, Feb. 17, 1986, gage height, 8.98 ft, from rating curve extended above 1,200 ft^3/s on basis of culvert computation of peak flow; minimum daily, 0.08 ft^3/s, Aug. 31, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	0730	2,050	7.04	May 27	1530	*2,760	*7.52

Minimum daily, 1.1 ft^3/s, Sept. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	10	6.2	3.0	14	11	12	6.6	71	7.0	2.6	1.8
2	1.5	9.9	5.8	2.9	11	26	10	6.6	49	6.6	2.6	1.8
3	1.4	9.2	5.4	2.6	98	28	8.4	6.4	36	6.6	2.4	1.6
4	1.4	8.4	4.7	2.4	67	34	8.2	5.8	29	6.6	2.4	1.6
5	1.4	7.9	4.4	2.4	36	27	8.1	5.8	24	6.2	2.4	1.6
6	1.4	6.8	4.4	2.4	37	21	7.9	5.8	22	6.1	2.2	1.5
7	1.4	6.3	4.3	77	25	18	8.1	5.8	20	5.8	2.2	1.6
8	1.4	6.2	4.1	99	21	17	8.1	5.5	19	5.7	2.2	1.6
9	1.4	6.2	4.1	46	17	13	8.3	5.0	17	5.4	2.2	1.6
10	1.4	5.9	3.9	20	14	20	9.2	5.0	16	5.0	2.2	1.4
11	1.4	4.6	4.0	12	14	15	9.5	5.0	15	5.0	2.0	1.4
12	1.4	4.2	4.0	170	12	10	9.7	5.0	15	4.6	2.0	1.4
13	1.4	4.1	4.1	552	11	8.9	9.3	5.0	13	4.7	2.0	1.4
14	1.4	4.1	4.1	260	10	11	9.1	5.0	12	4.4	1.8	1.4
15	1.4	4.1	3.8	95	11	10	8.6	5.0	12	4.4	1.9	1.3
16	1.4	4.1	3.5	57	133	11	7.7	5.0	11	4.1	2.0	1.3
17	1.4	3.8	3.5	37	58	11	8.1	4.7	11	4.0	2.0	1.3
18	1.4	3.8	3.2	25	40	11	8.1	4.7	10	3.5	2.0	1.6
19	1.4	3.8	3.0	19	33	12	8.1	4.9	10	3.5	2.2	1.6
20	1.3	3.6	3.0	13	31	11	8.1	25	9.5	3.5	2.0	1.2
21	37	3.5	2.8	12	35	12	8.1	9.4	10	3.4	2.0	1.2
22	35	3.3	2.8	10	45	12	7.8	81	11	3.3	2.1	1.1
23	396	3.1	2.8	9.2	34	12	9.4	58	11	3.3	2.2	1.3
24	60	3.0	2.8	10	27	12	8.8	16	10	3.3	2.0	1.3
25	23	51	2.8	9.2	23	11	8.1	13	9.6	3.3	2.0	1.3
26	13	22	2.6	10	18	11	8.1	26	8.6	3.0	2.0	1.4
27	17	11	2.6	10	14	11	7.4	1390	8.6	3.0	2.1	1.3
28	10	10	2.6	10	12	12	7.0	430	8.5	2.8	2.2	1.3
29	10	9.1	2.6	9.8	---	12	7.0	129	8.1	2.8	2.2	1.3
30	9.2	7.1	2.6	21	---	13	7.0	135	7.5	2.7	2.2	1.3
31	9.0	---	2.6	10	---	12	---	114	---	2.6	1.8	---
TOTAL	647.6	240.1	113.1	1618.9	901	455.9	253.3	2529.0	514.4	136.2	66.1	42.8
MEAN	20.9	8.00	3.65	52.2	32.2	14.7	8.44	81.6	17.1	4.39	2.13	1.43
MAX	396	51	6.2	552	133	34	12	1390	71	7.0	2.6	1.8
MIN	1.3	3.0	2.6	2.4	10	8.9	7.0	4.7	7.5	2.6	1.8	1.1
AC-FT	1280	476	224	3210	1790	904	502	5020	1020	270	131	85

CAL YR 1989 TOTAL 8799.76 MEAN 24.1 MAX 1020 MIN .98 AC-FT 17450
WTR YR 1990 TOTAL 7518.4 MEAN 20.6 MAX 1390 MIN 1.1 AC-FT 14910

11463980 RUSSIAN RIVER AT DIGGER BEND, NEAR HEALDSBURG, CA

LOCATION.--Lat 38°37'59", long 122°51'16", in Sotoyome Grant, Sonoma County, Hydrologic Unit 18010110, on right bank, 1,800 ft downstream from unnamed tributary and 1.6 mi northeast of Healdsburg.

DRAINAGE AREA.--791 mi^2.

PERIOD OF RECORD.--October 1988 to current year (low flow only). Records for October 1985 to September 1988 are in the files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. No records computed above 300 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	182	249	263	e195	---	---	298	135	---	151	173	178
2	176	241	252	e200	---	---	289	129	---	148	169	174
3	177	232	243	194	---	---	266	118	---	147	168	178
4	173	227	238	191	---	---	250	108	---	148	169	183
5	170	222	235	191	---	---	239	104	---	150	167	184
6	169	213	232	191	---	---	229	102	---	149	167	181
7	171	207	226	---	---	---	223	105	---	148	171	177
8	168	203	222	---	---	---	222	105	---	159	165	141
9	169	200	219	---	---	---	219	108	---	169	169	122
10	169	198	216	---	---	---	216	114	---	175	168	115
11	166	194	213	---	---	---	205	133	---	173	165	122
12	164	192	207	---	---	---	195	137	---	169	166	124
13	165	190	208	---	---	---	187	137	---	168	165	124
14	162	190	207	---	---	---	178	138	---	169	168	127
15	160	186	205	---	---	---	173	145	---	169	166	126
16	160	186	203	---	---	---	175	150	---	170	167	128
17	161	186	202	---	---	---	178	148	---	172	174	128
18	165	188	201	---	---	---	180	141	256	174	176	130
19	163	189	200	---	---	---	170	139	236	176	173	135
20	165	189	198	---	---	---	168	178	210	175	171	140
21	191	189	198	---	---	---	162	224	188	170	176	137
22	271	188	198	---	---	---	153	219	174	166	182	135
23	---	188	198	---	---	---	161	---	171	165	179	134
24	---	191	e195	---	---	---	170	---	172	169	176	128
25	---	250	e190	---	---	---	162	270	174	171	173	138
26	---	---	e188	---	---	---	153	225	173	173	178	149
27	---	---	e188	---	---	---	150	---	173	174	179	166
28	---	---	e186	---	---	---	147	---	167	169	182	160
29	---	---	e184	---	---	---	138	---	158	167	185	158
30	282	280	e188	---	---	---	135	---	153	170	184	157
31	263	---	e190	---	---	---	---	---	---	177	180	---
TOTAL	---	---	6493	---	---	---	5791	---	---	5130	5351	4379
MEAN	---	---	209	---	---	---	193	---	---	165	173	146
MAX	---	---	263	---	---	---	298	---	---	177	185	184
MIN	---	---	184	---	---	---	135	---	---	147	165	115
AC-FT	---	---	12880	---	---	---	11490	---	---	10180	10610	8690

e Estimated.

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA

LOCATION.--Lat 38°36'48", long 122°50'07", in Sotoyome Grant, Sonoma County, Hydrologic Unit 18010110, on left bank 2 mi east of Healdsburg and 3.5 mi upstream from Dry Creek.

DRAINAGE AREA.--793 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 981: 1942. WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 77.01 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several diversions for irrigation of about 17,800 acres upstream from station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (station 11461800) 63 mi upstream.

AVERAGE DISCHARGE.--51 years, 1,418 ft^3/s, 1,027,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,300 ft^3/s, Dec. 23, 1964, gage height, 27.00 ft; maximum gage height, 30.0 ft, Feb. 28, 1940; minimum daily discharge, 12 ft^3/s, June 14, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 30.8 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,100 ft^3/s, May 28, gage height, 9.61 ft (affected by backwater from summer dam); minimum daily, 99 ft^3/s, May 5-7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177	237	252	184	1120	630	304	126	1380	160	172	181
2	171	230	241	190	1260	668	289	118	1020	142	157	183
3	172	224	235	188	1460	859	256	107	806	125	160	186
4	168	218	229	185	3370	877	233	100	651	133	161	e188
5	164	213	226	184	1970	1520	221	99	e590	129	159	189
6	162	208	222	181	1730	1260	210	99	e505	118	158	187
7	162	202	221	399	1560	1050	205	99	e452	108	158	184
8	161	198	215	4160	1300	942	204	100	e581	133	158	142
9	161	196	212	2450	1170	853	201	e102	e560	156	152	115
10	162	192	210	1250	1090	801	198	124	e543	173	157	107
11	161	189	207	736	1010	832	189	151	e537	172	147	114
12	158	188	203	1070	941	805	176	156	e520	166	146	116
13	159	185	203	7490	876	714	171	158	e505	163	145	114
14	156	185	199	6550	832	661	162	161	e488	168	146	118
15	153	182	199	3180	800	726	160	169	e485	171	144	118
16	153	181	196	2380	2610	761	165	169	e475	174	154	158
17	152	180	195	2020	4410	692	170	166	e430	177	145	120
18	156	180	192	1660	3230	643	168	163	268	179	146	121
19	154	181	192	1340	2450	606	158	162	242	181	145	126
20	157	181	192	1020	2080	563	155	208	213	182	145	131
21	186	181	192	814	1700	510	152	270	185	169	147	131
22	271	182	192	734	1340	477	147	e260	e192	164	167	127
23	1890	183	192	676	1140	449	157	e400	e176	161	170	125
24	1590	187	192	633	983	414	165	e450	e175	167	163	118
25	681	242	192	599	865	395	155	e300	179	169	181	130
26	450	539	192	575	782	375	145	e260	196	172	183	142
27	362	413	188	547	721	355	142	2980	199	172	172	169
28	333	328	188	528	670	341	139	6210	184	165	176	163
29	289	287	184	516	---	331	131	2020	166	164	181	160
30	263	264	181	539	---	320	126	1300	163	160	183	158
31	247	---	181	662	---	314	---	1540	---	179	191	---
TOTAL	9781	6756	6315	43640	43470	20744	5454	18727	13066	4952	4969	4321
MEAN	316	225	204	1408	1552	669	182	604	436	160	160	144
MAX	1890	539	252	7490	4410	1520	304	6210	1380	182	191	189
MIN	152	180	181	181	670	314	126	99	163	108	144	107
AC-FT	19400	13400	12530	86560	86220	41150	10820	37140	25920	9820	9860	8570

CAL YR 1989 TOTAL 278520 MEAN 763 MAX 13100 MIN 130 AC-FT 552400
WTR YR 1990 TOTAL 182195 MEAN 499 MAX 7490 MIN 99 AC-FT 361400

e Estimated.

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL DATA: Water years 1951-66, 1980.
WATER TEMPERATURE: Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1965 to current year.

INSTRUMENTATION.--Temperature recorder since October 1965 provides hourly recordings.

REMARKS.--Interruptions in record were due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 28.0 °C, at times in some years; minimum recorded, 5.0 °C, Dec. 10, 11, 1972, Feb. 7, 8, 1989.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 28.0 °C, June 20; minimum recorded, 6.0 °C, several days in February.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.5	17.0	16.5	12.5	12.0	8.5	---	---	---	---	13.0	10.0
2	21.0	17.5	17.0	13.0	12.5	9.5	---	---	9.5	7.0	12.5	10.0
3	20.5	16.0	16.5	13.0	12.0	9.5	---	---	9.0	7.0	14.0	10.0
4	20.5	16.0	17.0	13.0	12.5	9.5	---	---	8.5	6.0	14.0	10.0
5	20.5	16.0	16.5	13.0	13.0	10.0	---	---	9.5	7.0	12.5	10.0
6	20.5	16.0	16.5	12.5	12.5	10.5	---	---	9.5	8.0	13.5	10.0
7	21.0	16.5	15.5	12.5	12.0	9.5	---	---	9.0	7.0	13.0	10.0
8	21.5	16.5	15.5	12.5	11.5	8.5	---	---	9.5	6.0	13.0	10.0
9	21.5	17.0	15.5	12.0	11.5	9.0	---	---	11.0	8.0	13.0	10.0
10	21.5	16.5	16.0	12.0	11.0	8.5	---	---	11.5	9.0	13.5	10.0
11	21.0	17.0	15.5	12.5	10.5	7.5	---	---	11.5	10.0	12.5	10.0
12	19.5	16.5	16.0	13.0	9.0	7.0	---	---	11.0	10.0	12.5	10.0
13	19.5	16.5	15.5	13.0	9.5	7.0	---	---	10.0	8.0	13.0	10.0
14	19.0	16.0	15.5	12.0	9.5	7.0	---	---	8.5	6.0	13.0	10.0
15	19.5	15.5	14.5	12.0	10.0	7.0	---	---	8.5	6.0	14.5	10.0
16	19.0	15.5	14.0	10.5	9.5	7.0	---	---	9.0	7.0	14.5	10.0
17	19.0	15.5	14.0	11.0	10.0	7.5	---	---	7.5	6.0	15.5	12.5
18	19.5	16.0	15.5	12.0	10.5	8.5	---	---	8.5	6.0	16.0	13.5
19	20.0	16.0	14.5	11.5	10.0	7.5	---	---	9.0	6.0	16.5	14.5
20	18.0	16.0	14.5	11.5	10.5	7.5	---	---	8.0	7.0	17.0	13.5
21	18.5	15.5	14.0	10.5	10.0	8.0	---	---	11.0	7.0	18.0	15.0
22	18.0	16.0	13.0	11.5	10.0	8.0	---	---	12.0	8.0	17.5	15.0
23	17.0	15.5	13.5	11.0	9.0	7.5	---	---	12.5	10.0	18.5	15.0
24	16.5	15.0	14.0	11.5	9.0	7.5	---	---	13.0	10.0	18.0	15.5
25	16.5	14.5	13.0	11.5	---	---	---	---	13.5	10.0	18.5	15.0
26	16.0	14.0	12.5	10.5	---	---	---	---	13.5	10.0	18.0	14.0
27	17.0	14.5	11.0	9.0	---	---	---	---	13.0	10.0	19.0	14.5
28	16.5	14.0	11.0	9.0	---	---	---	---	13.0	10.0	19.0	16.0
29	16.0	13.0	11.0	8.5	---	---	---	---	---	---	18.5	15.5
30	16.0	12.5	11.5	9.0	---	---	---	---	---	---	19.5	15.5
31	16.0	12.5	---	---	---	---	---	---	---	---	18.5	15.5
MONTH	22.5	12.5	17.0	8.5	---	---	---	---	---	---	19.5	10.0

11464000 RUSSIAN RIVER NEAR HEALDSBURG, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.5	15.0	22.5	15.0	18.0	14.5	25.0	20.0	---	---	24.0	22.0
2	19.5	14.0	23.5	17.0	19.5	16.0	24.5	20.0	24.0	22.5	23.5	21.5
3	20.0	14.5	24.5	18.5	21.0	17.5	24.5	20.0	24.0	22.0	23.5	22.0
4	20.5	15.0	25.5	18.0	21.5	18.5	24.0	20.0	24.0	22.0	23.5	21.0
5	18.5	16.0	25.0	18.5	22.0	18.5	24.0	20.0	25.0	23.0	24.0	21.0
6	16.5	15.5	25.0	18.5	22.5	19.5	24.5	20.0	26.0	24.0	24.0	20.5
7	16.0	14.0	25.0	18.0	23.0	19.0	25.0	20.0	25.5	24.5	23.5	20.5
8	16.5	14.0	24.0	17.5	23.5	20.5	25.0	20.0	25.5	23.5	23.5	20.0
9	19.5	12.5	22.0	18.0	23.5	20.0	25.0	20.0	26.0	24.0	24.0	20.5
10	19.5	14.5	23.0	18.0	23.0	20.0	26.0	20.0	25.5	24.0	24.0	20.5
11	21.0	14.5	23.5	18.0	22.5	20.0	26.5	20.0	25.0	23.5	24.0	21.0
12	21.5	15.5	24.0	18.0	22.0	20.0	26.5	20.0	25.0	23.5	24.0	21.0
13	22.0	16.0	23.5	18.0	21.0	20.0	26.5	20.0	25.0	23.0	23.5	20.0
14	21.5	16.5	24.0	18.0	22.0	20.0	26.5	20.0	24.5	23.0	23.0	20.0
15	18.5	16.5	24.0	18.5	22.5	20.0	25.0	20.0	24.0	22.0	23.0	20.0
16	17.0	15.5	23.5	18.0	22.5	20.0	24.5	20.0	24.5	22.5	23.0	19.5
17	18.0	15.5	23.0	18.0	23.5	20.0	25.0	20.0	24.5	22.5	24.5	19.0
18	21.0	15.0	22.5	18.0	24.5	20.0	25.0	20.0	24.5	22.5	24.0	19.5
19	18.5	16.0	19.5	17.5	26.0	20.0	25.0	20.0	24.0	21.5	24.0	18.5
20	21.0	16.5	19.5	16.5	28.0	20.0	26.0	20.0	24.0	22.0	24.0	19.0
21	21.0	16.5	19.5	17.0	27.0	20.0	25.5	23.5	24.0	22.0	24.0	19.5
22	18.0	16.0	18.5	17.0	24.5	20.0	25.5	23.5	24.5	22.0	23.5	20.0
23	20.5	16.0	19.5	16.5	24.5	20.0	24.5	22.5	24.5	22.5	24.0	20.0
24	20.5	14.0	20.0	16.5	24.0	20.0	25.0	23.0	24.0	22.0	23.0	20.5
25	21.5	15.0	20.0	17.0	24.5	20.0	25.0	23.0	23.5	21.5	22.0	19.5
26	22.5	16.0	18.0	16.5	24.5	20.0	24.5	23.0	22.0	21.0	23.0	19.0
27	23.0	16.5	17.0	14.5	24.5	20.0	24.5	22.5	22.0	20.5	23.5	18.5
28	21.5	17.0	18.0	13.5	25.0	20.0	24.0	22.5	23.5	21.0	23.5	19.0
29	20.5	14.5	18.5	15.0	25.0	20.0	24.0	22.0	24.0	22.0	24.0	19.5
30	20.0	14.5	18.0	16.0	25.5	20.0	24.0	22.0	24.0	22.0	24.0	19.0
31	---	---	17.5	14.5	---	---	---	---	24.0	22.0	---	---
MONTH	23.0	12.5	25.5	13.5	28.0	14.5	---	---	---	---	24.5	18.5

11464900 LAKE SONOMA NEAR GEYSERVILLE, CA

LOCATION.--Lat 38°43'21", long 123°00'36", in SW 1/4 SE 1/4 sec.7, T.10 N., R.10 W., Sonoma County, Hydrologic Unit 18010110, in reservoir control tower 400 ft upstream from Warm Springs Dam and 6.0 mi west of Geyserville.

DRAINAGE AREA.--130 mi^2.

PERIOD OF RECORD.--October 1983 to September 1990 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam; storage began in October 1983. Usable capacity 380,570 acre-ft between elevations 221.00 ft, invert of lowest outlet tunnel, and 495.00 ft, spillway crest. Water is released down Dry Creek for domestic use and fisheries. Records, including extremes, represent contents at 2400 hours.

COOPERATION.--Records were provided by U.S. Army Corps of Engineers; not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 264,347 acre-ft, Mar. 11, 1986, elevation, 458.19 ft; minimum after initial reservoir filling, 120,888 acre-ft, Nov. 29, 1987, elevation, 392.48 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 168,015 acre-ft, June 2, elevation, 418.09 ft; minimum, 144,542 acre-ft, Jan. 6, elevation, 406.04 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on a survey provided by U. S. Army Corps of Engineers in 1964)

221	111	280	14,286	360	75,150	440	217,014
230	1,151	300	24,025	380	101,566	460	269,406
240	2,621	320	37,003	400	133,654	480	329,768
260	7,265	340	53,833	420	171,956	495	380,681

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161191	157673	151899	145357	158006	165915	165936	164902	167974	163391	156323	149331
2	160992	157437	151708	145209	158065	166098	165976	164842	168015	163090	156089	149217
3	160773	157222	151498	145042	159148	166200	165976	164781	167995	162869	155875	149104
4	160614	157007	151288	144875	159801	166464	165956	164680	167913	162668	155641	148991
5	160415	156772	151097	144708	160237	166606	165956	164539	167872	162428	155466	148877
6	160177	156537	150887	144542	160554	166668	165936	164438	167749	162208	155233	148783
7	160038	156323	150678	147129	160713	166708	165936	164256	167708	162028	155000	148670
8	159860	156089	150469	148218	160852	166749	165936	164115	167626	161749	154806	148538
9	159643	155855	150260	148651	160992	166749	165936	164014	167443	161609	154555	148406
10	159386	155641	150032	148802	161071	166831	165956	163934	167218	161469	154342	148274
11	159188	155408	149804	148859	161151	166851	165936	163833	167055	161210	154091	148143
12	158951	155194	149577	150374	161131	166851	165936	163733	166912	161011	153859	148030
13	158793	154981	149369	154593	161111	166851	165875	163652	166729	160733	153627	147879
14	158537	154748	149161	156537	161091	166871	165834	163531	166525	160475	153396	147767
15	158321	154535	148953	157202	161091	166892	165814	163431	166362	160237	153146	147654
16	158183	154303	148727	157555	162668	166892	165794	163330	166220	159999	152896	147523
17	157987	154071	148481	157771	163692	166912	165733	163250	166037	159801	152685	147391
18	157810	153859	148274	157888	164337	166871	165692	163170	165915	159563	152416	147223
19	157614	153647	148067	157947	164781	166851	165672	163150	165814	159366	152186	147054
20	157359	153415	147842	157987	165064	166831	165611	163230	165652	159148	151937	146904
21	157418	153184	147635	157987	165327	166790	165591	163170	165348	158892	151746	146699
22	157437	152915	147410	157947	165510	166708	165570	163431	165186	158655	151517	146568
23	158577	152704	147204	157947	165672	166647	165489	163491	164983	158459	151288	146437
24	158675	152493	146979	157888	165753	166545	165348	163491	164801	158164	151021	146288
25	158577	152838	146774	157830	165814	166484	165246	163451	164619	157928	150773	146176
26	158478	152819	146549	157751	165854	166423	165226	163592	164397	157673	150564	146064
27	158419	152666	146344	157692	165895	166301	165165	166159	164155	157437	150374	145952
28	158301	152474	146157	157614	165915	166200	165105	166810	163994	157202	150184	145878
29	158164	152282	145934	157555	---	166118	165024	167034	163793	156967	149956	145766
30	158006	152090	145692	157653	---	166017	164983	167524	163612	156752	149728	145655
31	157849	---	145487	157771	---	165936	---	167872	---	156518	149501	---
MAX	161191	157673	151899	157987	165915	166912	165976	167872	168015	163391	156323	149331
MIN	157359	152090	145487	144542	158006	165915	164983	163150	163612	156518	149501	145655
a	413.02	410.05	406.55	412.98	417.06	417.07	416.60	418.02	415.92	412.34	408.69	406.64
b	-3541	-5759	-6603	+12284	+8144	+21	-953	+2889	-4260	-7094	-7017	-3846

CAL YR 1989 MAX 193876 MIN 136803 b +6623
WTR YR 1990 MAX 168015 MIN 144542 b -15735

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA

LOCATION.--Lat 38°43'11", long 122°59'58", in Tzabaco Grant, Sonoma County, Hydrologic Unit 18010110, on right bank of outlet channel, 500 ft downstream from Warm Springs Dam, 500 ft upstream from county road bridge, and 5.0 mi west of Geyserville.

DRAINAGE AREA.--131 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1942 (published as "Dry Creek near Healdsburg"), October 1981 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 188.21 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 30, 1942, nonrecording gage at site 500 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow affected by storage in Lake Sonoma (station 11464900) since October 1983.

AVERAGE DISCHARGE.--8 years (water years 1983-90), 192 ft^3/s, 139,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,500 ft^3/s, Feb. 28, 1940, gage height, 16.9 ft, datum then in use; no flow Oct. 1 to Dec. 8, 1939. Maximum discharge since regulation by Lake Sonoma, 3,050 ft^3/s, Dec. 27, 1983; minimum daily, 6.3 ft^3/s, July 10, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 21.8 ft from floodmarks, discharge about 25,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 156 ft^3/s, Mar. 20, June 5, gage height, 4.87 ft; minimum daily, 26 ft^3/s, Apr. 2, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	111	119	90	78	76	34	37	84	99	97	61
2	101	119	116	89	77	76	26	41	84	99	97	40
3	104	120	122	89	81	76	26	41	84	98	96	40
4	102	120	122	90	78	76	28	46	84	98	97	40
5	103	120	123	90	78	77	30	52	87	98	97	41
6	103	120	123	90	78	76	31	53	89	98	97	41
7	102	120	122	94	78	76	32	53	88	98	97	45
8	103	120	122	78	78	76	33	47	92	98	97	48
9	104	120	123	71	78	76	32	41	95	100	100	47
10	104	120	122	72	78	76	31	41	95	101	101	47
11	104	120	122	72	78	75	30	40	95	100	101	46
12	104	121	122	77	78	75	28	40	77	100	101	46
13	104	121	122	80	78	75	30	40	101	98	101	46
14	104	121	122	73	77	75	31	40	105	98	100	46
15	104	121	122	71	76	75	31	40	103	98	99	47
16	104	121	123	72	78	76	31	39	101	98	98	46
17	104	121	122	72	77	75	31	40	103	97	99	54
18	104	120	122	72	77	75	31	40	103	97	101	66
19	104	121	122	75	76	75	31	40	102	96	100	64
20	103	121	122	79	76	74	30	40	102	97	100	64
21	104	121	122	79	76	76	31	34	102	97	99	63
22	103	121	123	78	76	77	31	28	102	96	98	63
23	95	121	122	79	76	76	58	27	102	96	97	63
24	85	120	122	78	76	75	78	27	102	96	97	56
25	85	120	122	79	76	76	49	32	101	96	97	50
26	85	120	122	78	76	75	30	38	102	96	96	45
27	84	119	122	78	76	75	30	39	102	96	94	39
28	84	119	122	78	76	75	30	37	100	96	95	41
29	84	119	121	78	---	75	30	32	100	96	95	42
30	92	119	121	78	---	74	30	27	100	96	93	42
31	97	---	121	78	---	74	---	53	---	95	93	---
TOTAL	3064	3597	3775	2457	2161	2339	1004	1225	2887	3022	3030	1479
MEAN	98.8	120	122	79.3	77.2	75.5	33.5	39.5	96.2	97.5	97.7	49.3
MAX	104	121	123	94	81	77	78	53	105	101	101	66
MIN	84	111	116	71	76	74	26	27	77	95	93	39
AC-FT	6080	7130	7490	4870	4290	4640	1990	2430	5730	5990	6010	2930

CAL YR 1989 TOTAL 35542 MEAN 97.4 MAX 123 MIN 68 AC-FT 70500
WTR YR 1990 TOTAL 30040 MEAN 82.3 MAX 123 MIN 26 AC-FT 59580

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
WATER TEMPERATURE: November 1981 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: November 1981 to current year.

INSTRUMENTATION.--Temperature recorder.

REMARKS.--Water temperature is affected by regulation from Warm Springs Dam. Interruptions in record were due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 27.0 °C, several days in 1983; minimum recorded, 6.5 °C, Jan. 20, 1982.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 17.5 °C, Aug. 22; minimum recorded, 9.5 °C, on many days in February and March.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	12.0	13.0	13.0	13.5	13.5	11.0	11.0	10.0	10.0	9.5	9.5
2	12.5	12.0	13.5	13.0	13.5	13.5	11.0	10.5	10.5	10.0	9.5	9.5
3	12.5	12.5	13.5	13.0	13.5	13.5	11.0	10.5	10.0	10.0	10.0	9.5
4	12.5	12.5	14.0	13.0	13.5	13.5	11.0	10.5	10.0	10.0	10.0	9.5
5	12.5	12.0	14.5	13.5	13.5	13.5	10.5	10.5	10.0	10.0	10.0	9.5
6	12.5	12.0	14.0	13.5	13.5	13.5	10.5	10.5	10.0	10.0	10.0	10.0
7	12.5	12.0	14.0	13.5	13.5	13.0	10.5	10.5	10.0	10.0	10.0	9.5
8	12.5	12.5	14.0	13.5	13.0	13.0	10.5	10.5	10.0	10.0	10.5	9.5
9	12.5	12.5	14.0	13.5	13.5	13.0	11.0	10.5	10.0	10.0	10.5	10.0
10	12.5	12.5	14.0	13.5	13.0	13.0	11.0	10.5	10.0	10.0	10.5	10.0
11	12.5	12.5	14.0	13.5	13.0	13.0	10.5	10.5	10.0	10.0	10.5	10.0
12	12.5	12.0	14.5	13.5	13.0	12.5	11.0	10.5	10.5	10.0	10.5	10.0
13	13.0	12.5	14.0	13.5	12.5	12.5	10.5	10.5	10.0	10.0	10.5	10.0
14	13.0	12.0	14.5	13.5	12.5	12.5	11.0	10.5	10.0	9.5	10.5	10.0
15	12.5	12.5	14.0	13.5	12.5	12.0	10.5	10.5	10.0	9.5	10.5	10.0
16	12.5	12.5	14.0	13.5	12.0	12.0	10.5	10.5	10.0	9.5	10.5	10.0
17	12.5	12.5	15.0	14.0	12.0	12.0	10.5	10.5	10.0	9.5	10.5	10.0
18	13.0	12.5	15.0	13.5	12.0	12.0	10.5	10.5	10.0	9.5	10.5	10.0
19	12.5	12.5	14.5	13.5	12.0	12.0	10.5	10.5	10.0	9.5	10.5	10.0
20	12.5	12.5	14.5	13.5	12.0	12.0	10.5	10.0	9.5	9.5	10.5	9.5
21	13.0	12.5	14.5	13.5	12.0	12.0	10.5	10.0	10.0	9.5	10.5	9.5
22	12.5	12.5	14.0	13.5	12.0	11.5	10.5	10.0	10.0	9.5	10.5	9.5
23	13.0	12.5	14.0	13.5	11.5	11.5	10.5	10.0	10.0	9.5	10.5	10.0
24	13.0	12.5	14.0	13.5	11.5	11.5	10.5	10.0	10.0	9.5	10.5	10.0
25	13.0	12.5	14.0	12.5	11.5	11.5	10.5	10.0	10.0	9.5	11.0	10.0
26	12.5	12.5	14.0	13.5	11.5	11.0	10.5	10.0	9.5	9.5	10.5	10.0
27	13.0	12.5	14.5	13.5	11.0	11.0	10.5	10.0	10.0	9.5	10.5	10.0
28	13.0	12.5	14.0	13.5	11.0	11.0	10.5	10.0	9.5	9.5	10.5	10.0
29	13.0	12.5	14.0	13.5	11.0	11.0	10.5	10.0	---	---	10.5	10.0
30	13.5	12.5	13.5	13.5	11.0	11.0	10.5	10.0	---	---	10.5	10.0
31	13.0	12.5	---	---	11.0	11.0	10.0	10.0	---	---	10.5	10.0
MONTH	13.5	12.0	15.0	12.5	13.5	11.0	11.0	10.0	10.5	9.5	11.0	9.5

11465000 DRY CREEK BELOW WARM SPRINGS DAM, NEAR GEYSERVILLE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	10.0	12.0	11.0	11.0	11.0	12.0	11.5	12.5	12.5	---	---
2	11.5	10.0	12.0	11.0	11.5	11.0	12.0	11.5	12.5	12.5	---	---
3	11.5	10.5	11.5	11.0	11.5	11.0	12.0	11.5	12.5	12.5	---	---
4	11.5	10.5	11.5	11.0	11.5	11.0	12.0	11.5	12.5	12.5	---	---
5	11.5	10.5	11.5	11.0	11.5	11.0	12.0	11.5	13.0	12.5	---	---
6	11.0	10.5	11.5	11.0	11.5	11.0	12.5	11.5	13.0	12.5	---	---
7	10.5	10.5	11.5	11.0	11.5	11.0	12.0	12.0	13.0	12.0	---	---
8	11.0	10.5	11.5	11.0	12.0	11.0	12.0	11.5	14.0	12.5	---	---
9	11.5	10.0	11.5	11.0	11.5	11.0	12.0	12.0	13.5	12.0	---	---
10	11.5	10.5	11.5	11.0	11.5	11.0	12.0	12.0	14.0	12.5	---	---
11	12.5	10.5	11.5	11.0	11.5	11.0	12.5	12.0	13.5	12.5	---	---
12	12.0	10.5	12.0	11.0	14.5	11.0	12.5	11.5	14.0	12.0	---	---
13	11.5	10.5	11.5	11.0	11.5	11.0	12.5	12.0	16.5	12.5	---	---
14	11.5	10.5	12.0	11.0	11.5	11.0	12.5	12.0	16.5	13.5	---	---
15	11.0	10.5	12.0	11.0	11.5	11.0	12.0	12.0	16.5	13.5	---	---
16	11.0	10.5	12.0	11.0	11.5	11.0	12.5	12.0	17.0	14.0	---	---
17	11.0	10.5	11.5	11.0	11.5	11.0	12.5	12.0	17.0	13.5	---	---
18	11.5	10.5	11.5	11.0	11.5	11.0	12.5	12.0	16.5	14.0	---	---
19	11.5	11.0	11.5	11.0	12.0	11.5	12.5	12.0	16.5	13.5	---	---
20	12.0	10.5	11.5	11.0	11.5	11.5	12.5	12.0	16.0	13.5	---	---
21	11.5	10.5	11.5	11.0	11.5	11.0	12.5	12.0	17.0	13.5	---	---
22	11.0	10.5	11.5	11.0	12.0	11.5	12.5	12.0	17.5	13.5	---	---
23	11.0	10.5	12.5	11.0	12.0	11.5	13.0	12.0	16.0	13.0	---	---
24	11.0	10.5	12.5	11.0	12.0	11.5	12.5	12.0	16.0	13.0	---	---
25	12.0	10.5	12.0	11.0	12.0	11.5	12.5	12.0	14.5	12.5	---	---
26	12.0	11.0	11.0	11.0	12.0	11.5	12.5	12.0	14.0	13.0	---	---
27	12.0	11.0	12.0	11.0	12.0	11.0	12.5	12.0	15.5	13.0	---	---
28	12.0	11.0	12.0	11.0	12.0	11.5	12.5	12.0	15.5	13.0	---	---
29	12.0	10.5	12.5	11.0	12.0	11.5	12.5	12.0	15.0	13.0	---	---
30	11.5	10.5	11.5	11.0	12.0	11.5	12.5	12.5	15.0	13.0	---	---
31	---	---	12.0	11.0	---	---	12.5	12.5	14.5	12.5	---	---
MONTH	12.5	10.0	12.5	11.0	14.5	11.0	13.0	11.5	17.5	12.0	---	---

11465150 PENA CREEK NEAR GEYSERVILLE, CA

LOCATION.--Lat 38°42'02", long 122°58'16", in sec.21, T.10 N., R.10 W., Sonoma County, Hydrologic Unit 18010110, on right bank on upstream side of bridge on West Dry Creek Road, 1.1 mi upstream from mouth, and 3.7 mi west of Geyserville.

DRAINAGE AREA.--22.3 mi^2.

PERIOD OF RECORD.--October 1978 to September 1990 (discontinued).
WATER TEMPERATURE: Water years 1979-86.
SEDIMENT DATA: Water years 1979-87.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 195 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation; some small diversion for irrigation of less than 200 acres in summer months.

AVERAGE DISCHARGE.--12 years, 41.4 ft^3/s, 29,990 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,710 ft^3/s, Jan. 26, 1983, gage height, 9.01 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	0700	*595	*4.16				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.86	2.3	.16	18	11	3.6	.00	17	.00	.00	.00
2	.00	.71	1.9	.34	11	14	3.6	.00	14	.00	.00	.00
3	.00	.62	1.6	.12	52	17	3.7	.00	12	.00	.00	.00
4	.00	.53	1.4	.02	56	21	3.4	.00	11	.00	.00	.00
5	.00	.40	1.3	.00	32	20	2.9	.00	9.3	.00	.00	.00
6	.00	.27	1.0	.01	26	16	2.4	.00	8.2	.00	.00	.00
7	.00	.44	.88	110	19	14	2.4	.00	7.8	.00	.00	.00
8	.00	.19	.73	68	15	14	2.4	.00	7.1	.00	.00	.00
9	.00	.09	.75	32	13	13	2.5	.00	6.2	.00	.00	.00
10	.00	.00	.61	19	12	13	2.2	.00	5.2	.00	.00	.00
11	.00	.00	.30	12	11	12	2.2	.00	4.5	.00	.00	.00
12	.00	.00	.21	84	10	10	2.2	.00	3.7	.00	.00	.00
13	.00	.00	.20	367	8.5	9.4	1.7	.00	3.2	.00	.00	.00
14	.00	.00	.16	262	7.8	9.1	1.2	.00	2.9	.00	.00	.00
15	.00	.00	.14	95	7.4	9.6	.99	.00	2.6	.00	.00	.00
16	.00	.00	.13	50	110	8.9	.92	.00	1.5	.00	.00	.00
17	.00	.00	.11	31	89	8.4	1.2	.00	2.6	.00	.00	.00
18	.00	.00	.11	21	68	8.0	1.4	.00	2.1	.00	.00	.00
19	.00	.00	.09	16	51	7.6	.95	.00	1.3	.00	.00	.00
20	.00	.00	.08	13	39	7.2	.88	2.0	.00	.00	.00	.00
21	.00	.00	.09	11	31	6.6	.58	.34	.00	.00	.00	.00
22	.00	.00	.06	9.9	26	6.1	.59	2.6	.00	.00	.00	.00
23	82	.00	.06	9.0	21	6.1	1.1	4.4	.00	.00	.00	.00
24	18	.00	.06	8.2	18	5.6	.56	1.7	.00	.00	.00	.00
25	7.9	22	.06	7.3	16	5.2	.23	.96	.00	.00	.00	.00
26	4.4	20	.06	6.8	14	5.2	.01	1.1	.00	.00	.00	.00
27	3.8	7.7	.05	6.1	13	5.0	.02	169	.00	.00	.00	.00
28	2.6	5.0	.06	5.6	12	4.8	.03	77	.00	.00	.00	.00
29	1.8	3.5	.02	5.6	---	4.3	.00	29	.00	.00	.00	.00
30	1.4	2.8	.00	7.7	---	4.3	.00	22	.00	.00	.00	.00
31	1.1	---	.00	6.4	---	3.7	---	24	---	.00	.00	---
TOTAL	123.00	65.11	14.52	1264.25	806.7	300.1	45.86	334.10	122.20	0.00	0.00	0.00
MEAN	3.97	2.17	.47	40.8	28.8	9.68	1.53	10.8	4.07	.000	.000	.000
MAX	82	22	2.3	367	110	21	3.7	169	17	.00	.00	.00
MIN	.00	.00	.00	.00	7.4	3.7	.00	.00	.00	.00	.00	.00
AC-FT	244	129	29	2510	1600	595	91	663	242	.00	.00	.00

CAL YR 1989 TOTAL 5012.85 MEAN 13.7 MAX 514 MIN .00 AC-FT 9940
WTR YR 1990 TOTAL 3075.84 MEAN 8.43 MAX 367 MIN .00 AC-FT 6100

11465200 DRY CREEK NEAR GEYSERVILLE, CA

LOCATION.--Lat 38°41'55", long 122°57'25", in Tzabaco Grant, Sonoma County, Hydrologic Unit 18010110, on left bank pier of bridge 0.3 mi downstream from Pena Creek, 3.0 mi downstream from Warm Springs Dam, and 3 mi west of Geyserville.

DRAINAGE AREA.--162 mi^2.

PERIOD OF RECORD.--October 1959 to current year.
CHEMICAL DATA: Water years 1971-81.
WATER TEMPERATURE: Water years 1964-86.
SEDIMENT DATA: Water years 1964-87.
TURBIDITY: Water years 1964-86.

REVISED RECORDS.--WDR CA-65-1: 1962(M), 1963(M).

GAGE.--Water-stage recorder. Datum of gage is 156.40 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1964, at datum 4.00 ft higher. Oct. 1, 1964, to Apr. 8, 1976, at datum 3.00 ft higher; Apr. 9, 1976, to Sept. 30, 1982, at datum 2.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Small diversions upstream from station for irrigation of about 1,200 acres in summer. Flow regulated by Lake Sonoma (station 11464900) 3.0 mi upstream beginning October 1983.

AVERAGE DISCHARGE.--24 years (water years 1959-83), 342 ft^3/s, 248,000 acre-ft/yr; 5 years (water years 1986-90), 176 ft^3/s, 127,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft^3/s, Jan. 31, 1963, gage height, 20.50 ft, present datum; no flow at times. Maximum discharge since regulation by Lake Sonoma, 5,280 ft^3/s, gage height, 10.41 ft, Feb. 17, 1986; minimum daily, 19 ft^3/s, Oct. 18-25, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 910 ft^3/s, Jan. 13, gage height, 5.77 ft; minimum daily, 31 ft^3/s, Apr. 12, 13, 30, May 23, 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	106	112	93	99	95	52	37	99	99	96	71
2	92	120	109	90	90	99	34	45	96	99	96	43
3	94	121	111	91	128	101	32	46	94	99	94	41
4	89	121	110	91	131	104	32	50	93	98	92	41
5	88	120	111	91	113	104	34	60	92	98	92	40
6	89	120	112	90	109	101	33	61	93	98	92	41
7	87	121	111	217	102	102	37	62	90	96	93	44
8	87	121	110	134	99	103	37	56	94	96	93	47
9	88	116	111	99	97	101	36	46	99	97	94	47
10	88	113	110	93	95	102	36	46	99	99	95	48
11	89	114	109	87	94	101	34	44	99	97	97	47
12	89	114	108	163	94	100	31	46	81	98	97	47
13	89	114	109	573	92	99	31	45	98	97	98	47
14	88	111	109	429	90	99	34	45	104	96	97	47
15	87	111	108	181	88	99	34	45	103	96	97	47
16	87	111	109	132	181	99	34	44	102	98	99	47
17	87	111	109	115	157	98	34	44	102	98	98	52
18	87	110	109	104	138	97	34	43	102	97	97	65
19	87	111	108	100	125	96	34	44	102	99	97	63
20	87	110	108	98	118	95	33	46	102	98	98	62
21	92	110	108	94	112	96	33	39	102	95	97	63
22	90	110	109	93	108	97	34	32	101	96	97	63
23	191	109	108	92	106	97	62	31	101	96	98	62
24	96	108	107	91	102	95	98	31	101	97	98	58
25	84	137	108	89	101	95	70	35	101	95	97	51
26	80	132	108	89	99	95	34	45	101	96	97	48
27	81	116	108	89	97	95	32	190	102	96	97	41
28	81	114	109	87	96	95	32	100	102	95	96	42
29	80	113	108	86	---	94	32	57	102	94	96	42
30	85	112	109	88	---	94	31	47	99	95	97	43
31	91	---	108	87	---	93	---	65	---	95	97	---
TOTAL	2823	3457	3383	4056	3061	3041	1154	1627	2956	3003	2979	1500
MEAN	91.1	115	109	131	109	98.1	38.5	52.5	98.5	96.9	96.1	50.0
MAX	191	137	112	573	181	104	98	190	104	99	99	71
MIN	80	106	107	86	88	93	31	31	81	94	92	40
AC-FT	5600	6860	6710	8050	6070	6030	2290	3230	5860	5960	5910	2980

CAL YR 1989 TOTAL 42239 MEAN 116 MAX 873 MIN 80 AC-FT 83780
WTR YR 1990 TOTAL 33040 MEAN 90.5 MAX 573 MIN 31 AC-FT 65530

11465350 DRY CREEK NEAR MOUTH, NEAR HEALDSBURG, CA

LOCATION.--Lat 38°35'15", long 122°51'40", in Sotoyome Grant, Sonoma County, Hydrologic Unit 18010110, on right bank 0.25 mi upstream from mouth, 0.4 mi downstream from Mill Creek, 1.7 mi south of Healdsburg, and 13.5 mi downstream from Warm Springs Dam.

DRAINAGE AREA.--217 mi^2.

PERIOD OF RECORD.--November 1980 to current year (low flow only).

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. No records computed above 200 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	94	121	104	141	113	77	23	e110	93	90	90
2	84	111	119	90	111	170	52	30	e110	93	92	50
3	87	114	118	86	e180	e160	44	33	e108	92	91	40
4	87	115	119	84	e190	e152	39	34	e108	92	91	36
5	86	115	119	84	e180	e150	38	43	e107	93	92	33
6	86	114	119	85	171	143	38	49	e106	93	93	32
7	85	113	117	---	149	134	38	50	e105	91	91	31
8	85	114	117	e190	136	130	39	49	104	91	90	35
9	87	113	118	166	128	125	38	40	107	91	90	36
10	86	114	118	119	121	122	37	35	106	91	90	36
11	87	113	117	102	117	120	35	34	105	90	91	37
12	86	113	117	e200	114	114	33	33	95	88	92	36
13	86	114	117	---	108	110	31	34	94	87	92	37
14	86	113	117	---	106	108	30	35	106	88	93	36
15	87	112	117	---	103	108	32	34	109	91	93	36
16	86	112	118	e185	---	107	32	33	108	92	94	35
17	86	113	119	e145	e195	106	31	32	106	91	93	36
18	86	111	119	e135	e170	103	29	32	106	90	93	51
19	87	112	117	e130	e165	102	29	33	104	93	94	55
20	87	113	117	e125	e145	100	29	48	100	92	94	54
21	112	113	117	e120	e138	97	28	38	98	90	94	53
22	102	113	117	e118	e132	99	29	33	98	90	93	54
23	---	113	117	114	e128	96	35	32	99	91	93	56
24	171	113	117	109	e124	97	71	27	98	90	93	56
25	109	---	117	104	e120	95	75	25	97	88	94	47
26	91	190	115	102	e118	94	41	35	96	88	94	44
27	85	141	115	99	e115	92	31	---	95	88	95	36
28	81	129	115	97	e114	92	27	e180	96	88	94	32
29	78	124	115	96	---	91	25	e90	95	90	94	31
30	78	121	115	100	---	90	24	e80	94	90	95	31
31	86	---	114	103	---	89	---	e78	---	90	94	---
TOTAL	---	---	3634	---	---	3509	1137	---	3070	2805	2872	1272
MEAN	---	---	117	---	---	113	37.9	---	102	90.5	92.6	42.4
MAX	---	---	121	---	---	170	77	---	110	93	95	90
MIN	---	---	114	---	---	89	24	---	94	87	90	31
AC-FT	---	---	7210	---	---	6960	2260	---	6090	5560	5700	2520

e Estimated.

11466500 LAGUNA DE SANTA ROSA NEAR GRATON, CA

LOCATION.--Lat 38°27'10", long 122°50'03", in Molinos Grant, Sonoma County, Hydrologic Unit 18010110, on downstream side of left bank pier of highway bridge, 0.2 mi downstream from Santa Rosa Creek, and 2 mi northeast of Graton.

PERIOD OF RECORD.--February 1940 to September 1949 (contents only), October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Dec. 31, 1958, at site 75 ft downstream at same datum.

REMARKS.--The laguna is a natural water channel and overflow basin connecting Santa Rosa Creek, Mark West Creek, and other smaller creeks with the Russian River. During floods, directions of flow may be either to or from the Russian River, and the laguna acts as a natural regulator of floods on the lower Russian River. Figures given herein represent only those days when the elevation was above 55.0 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 74.6 ft, Feb. 18, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 58.9 ft, Jan. 14.

ELEVATION (FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	55.3	---	---	---	---	---	---	---	---
13	---	---	---	58.8	---	---	---	---	---	---	---	---
14	---	---	---	57.8	---	---	---	---	---	---	---	---
15	---	---	---	56.2	---	---	---	---	---	---	---	---
16	---	---	---	---	55.7	---	---	---	---	---	---	---
17	---	---	---	---	56.1	---	---	---	---	---	---	---
18	---	---	---	---	55.3	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	55.4	---	---	---	---
28	---	---	---	---	---	---	---	55.7	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 38°30'31", long 122°55'36", in NE 1/4 SE 1/4 sec.26, T.8 N., R.10 W., Sonoma County, Hydrologic Unit 18010110, on right bank at downstream side of Hacienda bridge, 0.1 mi upstream from Hobson Creek, and 3.8 mi east of Guerneville.

DRAINAGE AREA.--1,338 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "at Guerneville."

REVISED RECORDS.--WSP 1395: Drainage area at former site. WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 20.14 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1954, nonrecording gage at bridge 5.3 mi downstream at datum 8.58 ft lower. Oct. 1, 1954, to Oct. 23, 1974, at site 0.7 mi downstream at datum 2.75 ft lower. Supplementary water-stage recorder 2.1 mi downstream used during periods of low flow, 1948-54.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Mendocino (station 11461800) 77 mi upstream, since November 1958, and by Lake Sonoma (station 11464900) 26 mi upstream, since October 1983. Many diversions upstream from station for irrigation of about 29,000 acres. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations), and by diversion at Wohler pumping plant beginning in May 1959.

AVERAGE DISCHARGE.--51 years, 2,282 ft^3/s, 1,653,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,000 ft^3/s, Feb. 18, 1986, gage height, 48.56 ft, from rating curve extended above 39,000 ft^3/s; maximum gage height, 49.7 ft, Dec. 23, 1955, site and datum then in use, from floodmarks; minimum daily discharge, 0.75 ft^3/s, May 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,000 ft^3/s, Jan. 14, gage height, 20.34 ft; minimum daily, 89 ft^3/s, Sept. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259	380	449	300	1320	888	461	122	1940	178	179	188
2	362	375	414	314	1460	1000	419	126	1440	171	170	159
3	282	363	390	315	1610	1440	370	107	1130	163	181	146
4	264	356	378	297	4080	1350	197	91	925	157	180	241
5	249	349	366	319	2910	1950	272	94	840	161	158	199
6	238	342	362	284	2230	1830	270	99	702	170	156	124
7	231	334	351	866	2070	1480	266	99	499	172	155	139
8	226	328	341	4260	1680	1300	266	93	519	166	158	113
9	222	322	338	3870	1480	1180	261	94	577	173	155	104
10	188	322	339	2250	1350	1110	252	95	576	190	149	98
11	128	317	334	1460	1250	1110	230	105	573	181	163	92
12	130	312	297	1570	1160	1100	235	112	554	167	145	92
13	152	308	182	9700	1080	986	212	102	543	158	152	89
14	156	304	220	15200	1020	911	201	100	537	165	152	90
15	155	299	251	7290	971	917	196	98	521	161	157	92
16	164	298	256	4480	2900	973	192	94	523	166	154	97
17	173	296	260	3210	7240	898	182	95	468	176	168	106
18	183	294	263	2500	5640	839	183	94	378	172	171	101
19	174	292	265	1970	3920	791	180	100	342	181	184	102
20	181	290	269	1540	3030	746	178	192	299	192	180	101
21	251	291	272	1240	2460	687	178	229	259	174	159	101
22	360	290	277	1100	1930	651	174	137	209	173	179	100
23	1620	292	284	996	1630	626	197	218	159	170	177	104
24	2560	295	289	916	1420	602	234	487	133	177	185	109
25	1120	450	294	848	1250	585	248	328	173	173	172	101
26	751	933	298	798	1120	569	202	259	205	174	188	110
27	613	754	298	754	1030	540	182	1940	204	167	192	122
28	563	615	300	717	950	525	172	9540	200	186	198	109
29	501	539	298	689	---	506	162	4000	184	173	173	108
30	436	496	297	706	---	490	150	2190	184	161	191	117
31	404	---	297	776	---	480	---	2110	---	159	188	---
TOTAL	13296	11436	9529	71535	60191	29060	6922	23550	15796	5307	5269	3554
MEAN	429	381	307	2308	2150	937	231	760	527	171	170	118
MAX	2560	933	449	15200	7240	1950	461	9540	1940	192	198	241
MIN	128	290	182	284	950	480	150	91	133	157	145	89
AC-FT	26370	22680	18900	141900	119400	57640	13730	46710	31330	10530	10450	7050

CAL YR 1989 TOTAL 393242 MEAN 1077 MAX 22900 MIN 128 AC-FT 780000
WTR YR 1990 TOTAL 255445 MEAN 700 MAX 15200 MIN 89 AC-FT 506700

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL DATA: Water years 1951 to current year. Published as "at Guerneville" in 1961-65.
BIOLOGICAL DATA: Water years 1975-81.
SPECIFIC CONDUCTANCE: Water years 1974 to current year.
WATER TEMPERATURE: Water years 1964 to current year.
SEDIMENT DATA: Water years 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1973 to September 1981.
WATER TEMPERATURE: January 1964 to September 1986.
SUSPENDED-SEDIMENT DISCHARGE: April to September 1967, October 1969 to September 1986.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
NOV												
29...	1250	524	266	8.0	9.5	3.6	775	10.1	87	3200	3800	110
JAN												
23...	1320	996	268	7.8	8.5	7.4	770	9.9	84	K34	--	110
MAR												
23...	1225	628	284	8.2	15.5	1.8	765	9.9	99	K9	K7	120
MAY												
22...	1115	175	272	8.1	18.0	3.1	765	7.7	81	210	130	120
JUL												
10...	1120	192	282	8.0	23.0	2.8	760	7.8	91	K19	150	120
SEP												
04...	1120	143	260	7.7	23.0	2.3	760	7.7	90	K13	170	120

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	CARBONATE WATER DIS IT FIELD MG/L AS CO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV											
29...	22	13	13	20	0.5	3.0	134	0	110	14	11
JAN											
23...	21	13	13	21	0.5	2.1	138	0	117	15	10
MAR											
23...	24	15	13	19	0.5	1.7	146	3	124	16	12
MAY											
22...	23	15	12	18	0.5	1.7	150	0	123	15	10
JUL											
10...	24	15	11	16	0.4	1.3	146	4	126	15	8.1
SEP											
04...	24	14	11	17	0.4	1.1	143	0	116	7.5	7.8

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)
NOV											
29...	0.10	14	--	158	0.21	0.020	0.260	0.160	0.160	0.60	0.170
JAN											
23...	0.10	16	175	162	0.24	0.020	0.670	0.220	0.220	0.50	0.230
MAR											
23...	0.10	12	169	170	0.23	0.040	0.300	0.120	0.110	0.40	0.110
MAY											
22...	<0.10	13	157	164	0.21	0.010	0.100	0.040	0.030	0.60	0.090
JUL											
10...	0.10	12	153	162	0.21	<0.010	<0.100	0.020	<0.010	<0.20	0.030
SEP											
04...	<0.10	13	146	149	0.20	<0.010	<0.100	0.110	<0.010	0.20	0.070

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV											
29...	0.130	0.130	20	1	64	<0.5	<1.0	<1	<3	2	35
JAN											
23...	0.200	0.210	20	<1	69	<0.5	<1.0	<1	<3	<10	27
MAR											
23...	0.100	0.110	--	--	--	--	--	--	--	--	--
MAY											
22...	0.070	0.070	10	1	72	<0.5	<1.0	<1	<3	1	20
JUL											
10...	0.030	0.020	--	--	--	--	--	--	--	--	--
SEP											
04...	0.030	0.020	10	1	76	<0.5	<1.0	<1	<3	2	11

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV											
29...	1	5	13	<0.1	<10	3	<1	<1.0	200	<6	<3
JAN											
23...	<10	5	20	<0.1	<10	<10	<1	<1.0	220	<6	<3
MAR											
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
22...	<1	8	11	<0.1	<10	1	<1	<1.0	200	<6	3
JUL											
10...	--	--	--	--	--	--	--	--	--	--	--
SEP											
04...	1	5	7	<0.1	<10	3	<1	<1.0	210	<6	6

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DEPTH AT SAMPLE LOC-ATION, TOTAL (FEET)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY											
22...*	1440	1.59	13.0	275	7.8	17.5	765	7.6	79	13	90
22...*	1443	1.78	24.5	275	7.8	17.5	765	7.7	80	14	84
22...*	1447	1.78	35.0	276	7.8	17.5	765	7.7	80	12	93
22...*	1449	2.00	48.0	274	7.8	17.5	765	7.7	80	10	97
22...*	1451	2.43	57.0	277	7.8	17.5	765	7.7	80	10	91
AUG											
09...*	1335	0.90	15.5	250	7.9	24.5	760	7.9	95	6	100
09...*	1336	1.10	30.3	250	7.9	24.5	760	7.9	95	6	100
09...*	1337	1.60	40.6	250	7.9	24.5	760	7.9	95	4	100
09...*	1338	2.00	46.8	251	7.9	24.5	760	7.9	95	4	100
09...*	1339	1.90	53.6	249	7.9	24.5	760	7.9	95	4	100

* Instantaneous streamflow at the time of cross-sectional measurement: May 22, 173 ft^3/s; Aug. 9, 136 ft^3/s.

11467000 RUSSIAN RIVER NEAR GUERNEVILLE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
29...	1310	524	9.5	10	14	86
JAN						
23...	1400	989	8.5	8	21	100
MAR						
23...	1240	628	15.5	5	8.5	94
MAY						
22...	1135	175	18.0	11	5.2	92
22...	1445	173	18.0	12	5.6	95
JUL						
10...	1125	192	23.0	8	4.1	97
AUG						
09...	1055	135	23.0	5	1.8	97
09...	1330	135	24.5	5	1.8	100
SEP						
04...	1200	143	23.0	4	1.5	96

11468000 NAVARRO RIVER NEAR NAVARRO, CA

LOCATION.--Lat 39°10'20", long 123°40'06", in SE 1/4 sec.7, T.15 N., R.16 W., Mendocino County, Hydrologic Unit 18010108, on right bank 2.9 mi downstream from North Fork, 5.2 mi upstream from mouth, and 6.8 mi west of Navarro.

DRAINAGE AREA.--303 mi^2.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1445: 1954(M). WSP 1929: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4.79 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1969, at site 0.2 mi upstream at datum 1.86 ft higher.

REMARKS.--Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--40 years, 512 ft^3/s, 370,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,500 ft^3/s, Dec. 22, 1955, gage height, 40.60 ft, site and datum then in use, from rating curve extended above 19,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.23 ft^3/s, July 13, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1937 reached a stage of 38.2 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 7	2315	*4,930	*11.43				

Minimum daily, 3.1 ft^3/s, Sept. 17, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	41	59	22	388	513	87	35	e350	37	7.8	4.6
2	23	36	49	33	515	500	82	33	e300	35	7.2	4.5
3	17	33	42	36	480	387	78	31	e250	36	6.9	4.3
4	15	30	38	28	1120	332	74	28	e240	34	6.8	4.1
5	13	28	36	25	610	296	71	26	e233	33	6.7	4.4
6	12	27	34	23	618	288	69	23	211	34	7.5	5.0
7	11	25	33	1390	508	328	68	23	188	33	7.8	4.3
8	10	24	31	2420	418	306	68	23	167	30	6.7	4.3
9	9.4	23	29	991	376	310	68	23	149	30	5.6	3.7
10	9.1	22	28	476	e346	291	63	21	139	29	5.3	3.7
11	8.9	21	27	291	e314	339	60	20	121	25	4.6	4.0
12	8.5	21	26	325	e272	327	56	21	109	23	4.8	3.8
13	8.1	21	25	1810	e230	277	55	20	107	21	4.5	3.9
14	8.1	21	24	1270	e188	252	52	20	102	19	4.3	4.1
15	7.9	20	23	625	169	274	50	20	96	18	5.4	4.0
16	7.2	19	23	437	1530	258	49	19	89	17	5.3	3.5
17	7.4	19	22	348	1710	238	50	18	84	19	4.5	3.1
18	7.6	19	22	276	1350	220	50	18	80	17	4.7	3.1
19	7.2	19	22	229	870	202	48	19	73	19	5.2	3.9
20	8.0	18	21	187	609	184	46	41	64	17	4.6	4.1
21	11	18	21	158	474	169	44	53	61	e15	4.5	4.5
22	33	18	21	139	391	157	48	151	58	e14	4.3	3.9
23	240	18	20	123	315	146	74	448	54	e11	4.5	4.7
24	383	21	20	119	272	136	75	254	53	11	4.6	4.7
25	208	36	20	108	237	130	62	169	52	11	4.3	4.4
26	137	178	20	98	186	122	52	164	48	11	4.5	5.5
27	105	198	20	89	211	114	47	2540	44	11	4.6	5.9
28	91	128	20	78	228	108	43	2330	41	10	6.1	7.6
29	78	95	19	73	---	103	39	902	40	8.6	5.6	7.5
30	60	74	19	118	---	96	37	e600	38	8.9	4.8	6.3
31	49	---	18	193	---	91	---	e400	---	8.7	4.6	---
TOTAL	1621.4	1271	832	12538	14935	7494	1765	8493	3641	646.2	168.6	135.4
MEAN	52.3	42.4	26.8	404	533	242	58.8	274	121	20.8	5.44	4.51
MAX	383	198	59	2420	1710	513	87	2540	350	37	7.8	7.6
MIN	7.2	18	18	22	169	91	37	18	38	8.6	4.3	3.1
AC-FT	3220	2520	1650	24870	29620	14860	3500	16850	7220	1280	334	269

CAL YR 1989 TOTAL 87120.7 MEAN 239 MAX 6790 MIN 2.6 AC-FT 172800
WTR YR 1990 TOTAL 53540.6 MEAN 147 MAX 2540 MIN 3.1 AC-FT 106200

e Estimated.

11468500 NOYO RIVER NEAR FORT BRAGG, CA

LOCATION.--Lat 39°25'42", long 123°44'12", in NE 1/4 sec.15, T.18 N., R.17 W., Mendocino County, Hydrologic Unit 18010108, on right bank 0.7 mi downstream from South Fork and 3.5 mi east of Fort Bragg.

DRAINAGE AREA.--106 mi^2.

PERIOD OF RECORD.--August 1951 to current year.

REVISED RECORDS.--WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 11.73 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--39 years, 211 ft^3/s, 152,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft^3/s, Mar. 29, 1974, gage height, 27.14 ft, from rating curve extended above 4,500 ft^3/s on basis of slope-conveyance study; minimum daily, 0.79 ft^3/s, Sept. 8, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 7	2045	3,560	11.72	May 27	1600	*5,020	*13.82

Minimum daily, 6.7 ft^3/s, Oct. 17, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	20	9.9	305	92	54	28	906	43	15	9.0
2	9.3	13	18	11	335	105	51	27	673	43	15	9.0
3	8.2	12	16	9.7	361	128	48	26	477	42	15	9.7
4	7.7	12	15	8.4	483	183	47	25	354	40	15	10
5	7.3	12	15	7.7	383	297	45	24	273	40	14	9.4
6	7.6	12	15	8.2	372	264	45	23	221	40	14	9.2
7	7.3	12	14	1440	306	230	44	23	188	39	14	10
8	9.6	11	14	2370	274	205	44	23	155	37	14	9.9
9	10	11	13	1290	261	175	42	22	135	33	13	9.7
10	7.0	11	12	536	234	191	40	22	119	31	12	9.6
11	7.0	12	12	286	213	207	38	22	105	29	11	10
12	7.2	13	11	237	189	195	37	22	95	27	11	9.7
13	7.4	13	11	444	163	178	36	22	89	26	11	9.4
14	6.8	12	11	457	142	183	35	21	83	25	11	9.2
15	6.9	12	10	312	130	210	34	21	78	24	11	9.1
16	6.8	11	10	245	333	206	33	20	73	24	10	8.8
17	6.7	11	10	193	535	195	33	20	69	23	11	8.6
18	6.7	12	9.9	157	607	176	33	20	65	22	11	8.9
19	6.8	13	9.5	133	464	156	32	18	62	23	11	8.6
20	7.2	13	9.1	112	338	137	32	49	59	22	11	8.6
21	14	15	9.1	96	262	122	32	40	56	21	10	8.2
22	17	18	9.0	86	219	107	34	804	53	22	10	7.7
23	206	23	8.7	78	184	96	59	927	52	21	9.6	7.1
24	71	32	8.4	71	157	89	53	383	50	20	9.7	7.5
25	32	45	8.3	66	138	83	42	229	48	19	10	8.4
26	24	98	8.0	64	124	76	36	235	46	19	10	8.7
27	53	64	8.3	58	111	72	33	3510	44	18	10	8.6
28	39	42	8.5	54	100	68	32	2330	44	18	10	8.3
29	27	31	9.3	54	---	64	30	1050	43	17	10	7.8
30	19	24	9.1	116	---	61	29	750	42	16	10	7.2
31	16	---	8.9	234	---	56	---	955	---	16	9.4	---
TOTAL	673.5	634	351.1	9243.9	7723	4607	1183	11691	4757	840	358.7	265.9
MEAN	21.7	21.1	11.3	298	276	149	39.4	377	159	27.1	11.6	8.86
MAX	206	98	20	2370	607	297	59	3510	906	43	15	10
MIN	6.7	11	8.0	7.7	100	56	29	18	42	16	9.4	7.1
AC-FT	1340	1260	696	18340	15320	9140	2350	23190	9440	1670	711	527

CAL YR 1989 TOTAL 51610.9 MEAN 141 MAX 2200 MIN 5.5 AC-FT 102400
WTR YR 1990 TOTAL 42328.1 MEAN 116 MAX 3510 MIN 6.7 AC-FT 83960

11469000 MATTOLE RIVER NEAR PETROLIA, CA

LOCATION.--Lat 40°18'42", long 124°15'48", in SE 1/4 NW 1/4 sec.11, T.2 S., R.2 W., Humboldt County, Hydrologic Unit 18010107, on right bank 0.2 mi upstream from Clear Creek, 1.5 mi southeast of Petrolia, and 1.7 mi upstream from North Fork.

DRAINAGE AREA.--240 mi^2.

PERIOD OF RECORD.--October 1911 to December 1913, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1285: 1912-13. WSP 1929: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. November 1911 to December 1913, nonrecording gages at several sites upstream within 0.3 mi of present site at various datums. Dec. 11, 1950, to July 14, 1955, at site 0.3 mi upstream at datum 7.48 ft higher. July 15, 1955, to Oct. 26, 1967, at site 0.4 mi downstream at different datum.

REMARKS.--Records good. Diversions for irrigation of about 350 acres upstream from station.

AVERAGE DISCHARGE.--42 years, 1,328 ft^3/s, 962,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,400 ft^3/s, Dec. 22, 1955, gage height, 29.60 ft, site and datum then in use, from rating curve extended above 26,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 17 ft^3/s, Sept. 5, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0345	*19,100	*14.48	May 27	1030	15,100	12.95

Minimum daily, 29 ft^3/s, Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	159	123	72	1930	663	387	155	2940	246	78	66
2	39	138	109	103	2060	758	372	149	2160	239	75	61
3	35	123	102	95	2590	1420	353	145	1740	226	74	56
4	33	111	95	80	2830	1650	338	138	1450	219	72	55
5	32	103	94	74	2150	1730	323	133	1220	215	70	52
6	31	95	100	92	2320	1440	312	129	1090	226	70	52
7	31	90	103	8620	1890	1280	304	124	e1060	212	66	49
8	30	85	95	15100	1940	1280	295	121	e970	197	66	49
9	30	80	92	7070	2130	1100	281	120	e890	185	65	49
10	30	78	86	2900	1860	1300	265	118	e830	177	63	48
11	30	74	83	1780	1620	1420	256	117	e770	166	60	47
12	30	71	80	1990	1430	1290	244	113	650	155	58	46
13	30	71	75	4410	1290	1170	235	110	611	151	57	44
14	30	68	74	3590	1140	1210	229	107	571	145	55	43
15	30	64	74	2270	1070	1250	222	104	543	137	54	42
16	30	62	73	1900	1830	1140	219	103	508	134	54	42
17	29	60	71	1590	1730	1050	217	99	482	131	54	42
18	30	58	69	1370	1630	966	212	98	459	131	62	42
19	30	57	68	1200	1460	883	207	110	435	130	66	41
20	30	56	67	1070	1320	809	207	435	412	126	63	39
21	40	53	66	955	1210	746	202	417	390	116	59	37
22	176	52	65	877	1130	693	206	2480	363	112	55	36
23	1890	56	64	806	1030	652	283	1420	353	105	53	36
24	1150	85	63	753	957	610	294	821	337	98	52	36
25	722	141	62	707	884	579	225	597	322	94	50	38
26	503	517	61	702	809	538	202	854	304	94	51	40
27	1210	348	61	655	753	506	185	11200	289	94	94	44
28	554	220	61	622	707	481	179	6410	279	91	169	48
29	334	170	58	655	---	451	170	2810	269	88	117	44
30	236	140	57	1290	---	429	163	3610	256	84	88	44
31	189	---	56	1520	---	405	---	4430	---	83	72	---
TOTAL	7638	3485	2407	64918	43700	29899	7587	37777	22953	4607	2142	1368
MEAN	246	116	77.6	2094	1561	964	253	1219	765	149	69.1	45.6
MAX	1890	517	123	15100	2830	1730	387	11200	2940	246	169	66
MIN	29	52	56	72	707	405	163	98	256	83	50	36
AC-FT	15150	6910	4770	128800	86680	59300	15050	74930	45530	9140	4250	2710

CAL YR 1989 TOTAL 282852 MEAN 775 MAX 10900 MIN 23 AC-FT 561000
WTR YR 1990 TOTAL 228481 MEAN 626 MAX 15100 MIN 29 AC-FT 453200

e Estimated.

11470000 LAKE PILLSBURY NEAR POTTER VALLEY, CA

LOCATION.--Lat 39°24'30", long 122°57'30", on line between secs.14 and 23, T.18 N., R.10 W., Lake County, Hydrologic Unit 18010103, Mendocino National Forest, at Scott Dam near right bank of Eel River, 0.3 mi downstream from Rice Fork, and 10.2 mi northeast of town of Potter Valley.
DRAINAGE AREA.--289 mi^2.

PERIOD OF RECORD.--October 1922 to September 1928 (daily gage heights only), October 1928 to current year. Monthend contents only for some periods, published in WSP 1315-B. Prior to October 1953, published as "at Hullville".

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 81.7 ft below National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Jan. 26, 1950, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete overflow type dam; storage began in December 1921. Beginning Oct. 1, 1985, capacity based on 1984 resurvey. Usable capacity, 80,556 acre-ft between gage heights 1,822.4 ft, sill of outlet gate, and 1,910.0 ft, top of spillway gates; dead storage, 87 acre-ft. Water is released down Eel River to Van Arsdale Reservoir, most of which is diverted through tunnel to Potter Valley powerplant; part is then used for irrigation and remainder flows into East Fork Russian River. Records given represent total contents at 2400 hours.
COOPERATION.--Records were provided by Pacific Gas & Electric Co., in connection with a Federal Energy Regulatory Commission project; not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 95,600 acre-ft, May 13, 16, 1925, gage height, 1,910.8 ft; maximum gage height, 1,911.84 ft, Dec. 22, 1964, from floodmarks; minimum contents, 10 acre-ft, Dec. 9, 10, 1931, gage height, 1,822.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 80,643 acre-ft, June 1, 2, gage height, 1,910.00 ft; minimum, 19,178 acre-ft, Jan. 6, gage height, 1,871.68 ft.

Capacity table (elevation, in feet, and contents in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated April 1984)

1,822.4	87	1,835	1,371	1,855	7,831	1,875	22,450	1,895	50,180
1,824	153	1,840	2,463	1,860	10,460	1,880	28,070	1,900	59,470
1,827	333	1,845	3,391	1,865	13,700	1,885	34,470	1,905	69,680
1,830	626	1,850	5,710	1,870	17,660	1,890	41,810	1,910	80,640

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41124	35579	27554	19787	40138	47508	59156	62537	80643	77399	73248	66416
2	40598	35677	27256	19570	40016	48944	59313	62497	80643	77288	73052	66209
3	39986	35524	26949	19485	40429	50620	59625	62477	80142	77200	72857	66003
4	39455	35384	26622	19336	40876	52340	59937	62376	79642	77111	72597	65490
5	38810	35190	26331	19243	41124	53693	60211	62356	79461	77022	72381	64918
6	38247	35079	26055	19178	41576	54658	60486	62316	79620	76890	72101	64204
7	37646	34831	25712	24225	41591	55400	60743	62296	79552	76713	71928	63611
8	37068	34638	25576	28504	41607	56036	60901	62236	79529	76625	71692	62961
9	36482	34338	25485	30082	41560	56413	61106	62195	79552	76448	71435	62296
10	35930	33998	25440	30727	41560	57057	61277	62215	79461	76294	71222	61635
11	35343	33661	25305	30919	41560	57534	61396	62155	79280	76162	70966	61019
12	34652	33300	25204	31895	41591	57840	61516	61995	79100	76030	70774	60388
13	34066	32915	25046	36824	41529	57994	61715	61955	78875	75877	70520	59800
14	33527	32546	24878	39199	41279	58225	61755	61855	78650	75724	70371	59156
15	32902	32128	24666	41186	41186	58535	61875	61775	78605	75549	70202	58477
16	32310	31740	24423	41015	41341	58690	61995	61675	78650	75571	69907	57821
17	31908	31278	24247	41404	41560	58825	62115	61615	78672	75571	69675	57190
18	31624	30919	24038	41701	41560	59020	62155	61536	78650	75571	69440	56602
19	31316	30549	23745	41795	41466	59000	62256	61377	78470	75505	69206	55980
20	31112	30170	23379	41795	41404	58981	62356	61436	78157	75483	69036	55270
21	30958	29781	23060	41732	41435	58962	62396	61556	77978	75461	68696	54658
22	30970	29421	22754	41670	41968	58942	62477	61556	77956	75439	68464	54081
23	34242	29076	22451	41576	42744	58845	62598	62860	77934	75330	68253	53472
24	35593	28734	22140	41295	43693	58690	62698	64163	77889	75091	68042	52885
25	35846	28698	21852	41170	44606	58612	62678	64512	77844	74870	67832	52376
26	35733	28966	21577	40907	45449	58361	62618	64735	77800	74671	67602	51798
27	36029	28771	21224	40644	46135	58322	62638	65531	77733	74385	67414	51189
28	35874	28480	20925	40414	46809	58535	62678	72770	77666	74187	67330	50585
29	35607	28191	20628	40108	---	58709	62698	75899	77555	73946	67205	49966
30	35482	27866	20258	40337	---	58806	62598	77177	77466	73727	66913	49347
31	35552	---	19987	40260	---	58981	---	79552	---	73531	66685	---
MAX	41124	35677	27554	41795	46809	59020	62698	79552	80643	77399	73248	66416
MIN	30958	27866	19987	19178	40016	47508	59156	61377	77466	73531	66685	49347
a	1885.78	1879.83	1872.54	1889.00	1893.06	1899.75	1901.58	1909.52	1908.59	1906.80	1903.58	1894.53
b	-6133	-7686	-7879	+20273	+6549	+12172	+3617	+16954	-2086	-3935	-6846	-17338

CAL YR 1989 MAX 80620 MIN 19987 b -6880
WTR YR 1990 MAX 80643 MIN 19178 b +7662
a Elevation in feet, at end of month.
b Change in contents, in acre-feet.

11470500 EEL RIVER BELOW SCOTT DAM, NEAR POTTER VALLEY, CA

LOCATION.--Lat 39°24'29", long 122°58'29", in SE 1/4 sec.15, T.18 N., R.10 W., Lake County, Hydrologic Unit 18010103, Mendocino National Forest, on left bank 0.4 mi upstream from Soda Creek, 0.7 mi downstream from Scott Dam, and 9.7 mi northeast of town of Potter Valley.

DRAINAGE AREA.--290 mi^2.

PERIOD OF RECORD.--October 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as South Eel River at Hullville, and October 1929 to September 1953, "at Hullville."

REVISED RECORDS.--WSP 1315-B: 1923(M), 1938(M). WSP 1395: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,740 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 15, 1930, at datum 3.00 ft higher.

REMARKS.--No estimated daily diacharges. Flow regulated by Lake Pillsbury (station 11470000) 0.7 mi upstream. No diversion upstream from station.

COOPERATION.--Records collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

AVERAGE DISCHARGE.--68 years, 554 ft^3/s, 401,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft^3/s, Dec. 22, 1964, gage height, 24.24 ft, from floodmarks, from rating curve extended above 37,000 ft^3/s; minimum daily, 0.1 ft^3/s, Sept. 8, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,880 ft^3/s, May 31, gage height, 9.17 ft; minimum daily, 30 ft^3/s, July 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	76	249	166	431	361	117	85	1290	97	109	107
2	329	76	251	140	427	339	83	85	1240	96	109	107
3	317	127	251	98	419	324	57	85	1040	95	109	107
4	321	159	250	101	402	307	45	85	734	95	110	257
5	326	159	249	102	392	295	49	85	459	96	110	337
6	329	160	250	102	391	309	75	85	400	97	110	346
7	331	160	252	121	384	310	85	84	353	97	109	352
8	329	160	176	117	382	312	83	84	315	98	108	352
9	328	210	108	114	387	330	83	84	311	98	107	351
10	327	245	110	202	393	339	85	83	306	98	105	351
11	327	255	111	263	392	336	87	83	306	98	104	352
12	330	258	112	258	393	349	87	82	303	98	103	351
13	330	257	136	202	396	365	88	82	300	97	102	351
14	332	257	153	177	400	377	88	82	298	97	101	350
15	337	255	153	259	406	377	87	82	203	97	100	349
16	338	254	153	276	382	379	87	82	124	46	103	348
17	241	255	152	286	345	383	87	82	126	30	108	348
18	154	256	152	302	341	389	87	82	128	31	108	348
19	157	255	199	309	358	399	89	82	203	31	108	347
20	157	255	231	318	385	411	91	82	256	31	108	349
21	155	254	211	324	391	417	88	82	202	31	108	354
22	150	253	208	328	391	420	88	84	136	31	107	357
23	155	253	209	334	376	428	87	84	101	82	107	359
24	157	252	209	337	345	439	87	84	102	108	107	353
25	257	253	208	337	318	443	86	84	101	109	107	347
26	326	252	207	340	309	445	86	86	101	109	107	345
27	306	251	206	344	320	302	86	95	100	109	67	342
28	303	250	205	345	341	193	86	102	99	109	43	340
29	318	249	206	345	---	161	86	171	99	109	73	338
30	237	248	207	336	---	153	85	226	98	109	107	337
31	76	---	182	384	---	153	---	1110	---	109	107	---
TOTAL	8422	6604	5956	7667	10597	10545	2505	3874	9834	2638	3171	9632
MEAN	272	220	192	247	378	340	83.5	125	328	85.1	102	321
MAX	342	258	252	384	431	445	117	1110	1290	109	110	359
MIN	76	76	108	98	309	153	45	82	98	30	43	107
AC-FT	16710	13100	11810	15210	21020	20920	4970	7680	19510	5230	6290	19110

CAL YR 1989 TOTAL 145659 MEAN 399 MAX 6750 MIN 59 AC-FT 288900
WTR YR 1990 TOTAL 81445 MEAN 223 MAX 1290 MIN 30 AC-FT 161500

11471000 POTTER VALLEY POWERHOUSE INTAKE NEAR POTTER VALLEY, CA

LOCATION.--Lat 39°22'00", long 123°07'35", in SW 1/4 SW 1/4 sec.31, T.18 N., R.11 W., Mendocino County, Hydrologic Unit 18010103, in penstock of powerhouse of Pacific Gas & Electric Co., 1.5 mi southwest of Van Arsdale Dam, and 3.2 mi northwest of town of Potter Valley.

PERIOD OF RECORD.--December 1909 to current year. Prior to October 1922, monthly discharge only, published in WSP 1315-B. Prior to October 1931, published as Snow Mountain Water and Power Co.'s Tailrace near Potter Valley. October 1931 to September 1984, published as Potter Valley Powerhouse Tailrace near Potter Valley.

REVISED RECORDS.--WSP 1395: 1950. WDR CA-89-2: 1988.

GAGE.--Acoustic flowmeter in penstock of powerplant. Elevation of gage is 1,440 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 11, 1985, water-stage recorder and Parshall flume. See WSP 1929 for history of changes prior to Apr. 12, 1950.

REMARKS.--No estimated daily discharges. Water is diverted from Eel River above Van Arsdale Dam. After passing through powerhouse, part is used for irrigation in Potter Valley and remainder flows into East Fork Russian River.

COOPERATION.--Records collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

AVERAGE DISCHARGE.--80 years (water years 1911-90), 203 ft^3/s, 147,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (1922 TO CURRENT YEAR).--Maximum daily discharge, 351 ft^3/s, Oct. 31, 1982; no flow at times in several years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	318	41	231	162	319	316	69	86	245	106	107	122
2	318	37	233	151	319	317	69	88	318	106	107	125
3	319	93	233	100	319	315	48	88	318	106	105	128
4	319	150	234	104	319	315	.00	91	318	106	105	198
5	317	151	232	107	319	317	.00	97	318	106	104	321
6	315	144	219	108	319	318	27	90	318	107	105	321
7	317	147	230	183	319	318	72	88	318	106	106	321
8	316	151	192	273	319	309	72	92	312	106	105	321
9	316	163	90	285	319	297	69	88	318	105	104	321
10	313	224	88	263	319	315	66	86	318	101	105	321
11	313	232	87	317	319	316	66	77	318	100	105	321
12	314	238	88	311	319	306	67	77	318	100	105	321
13	316	237	86	318	305	303	69	89	318	99	104	321
14	314	235	82	319	301	314	68	95	318	98	112	321
15	317	234	88	319	304	316	69	86	232	96	119	321
16	319	234	89	318	270	316	69	88	161	38	119	321
17	272	234	92	319	195	311	74	91	161	.50	114	321
18	167	235	92	319	262	307	74	94	161	.00	118	321
19	165	235	117	318	282	305	73	88	176	.00	118	321
20	164	233	182	317	308	310	76	101	258	.00	120	321
21	163	232	157	317	310	309	76	101	216	1.0	122	321
22	163	231	157	316	312	306	76	117	144	2.0	120	321
23	223	231	157	315	312	296	79	145	111	26	119	321
24	280	231	157	318	312	315	80	135	107	106	120	321
25	246	229	158	316	312	316	82	114	107	110	120	321
26	313	228	158	317	312	313	84	127	107	112	120	320
27	310	228	159	318	312	207	84	156	107	108	88	321
28	305	228	160	319	314	67	82	230	106	107	28	321
29	303	229	157	319	---	70	80	242	107	107	53	321
30	103	232	160	319	---	69	83	318	106	107	119	321
31	41	---	161	319	---	69	---	226	---	107	121	---
TOTAL	8279	5947	4726	8404	8551	8578	2003.00	3691	6740	2479.50	3317	8918
MEAN	267	198	152	271	305	277	66.8	119	225	80.0	107	297
MAX	319	238	234	319	319	318	84	318	318	112	122	321
MIN	41	37	82	100	195	67	.00	77	106	.00	28	122
AC-FT	16420	11800	9370	16670	16960	17010	3970	7320	13370	4920	6580	17690

CAL YR 1989 TOTAL 76578 MEAN 210 MAX 319 MIN 37 AC-FT 151900
WTR YR 1990 TOTAL 71633.50 MEAN 196 MAX 321 MIN .00 AC-FT 142100

11471099 POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CA

LOCATION.--Lat 39°21'42", long 123°07'38", in SW 1/4 NW 1/4 sec.6, T.17 N., R.11 W., Mendocino County, Hydrologic Unit 18010103, 100 ft downstream from powerhouse of Pacific Gas and Electric Co., 1.8 mi southwest of Van Arsdale Dam, and 2.9 mi northwest of town of Potter Valley.

PERIOD OF RECORD.--October 1987 to current year. October 1931 to September 1984, record published for Potter Valley Powerhouse Tailrace (station 11471000) not equivalent because diversion for irrigation is included.

GAGE.--Discharge computed as difference between Potter Valley powerhouse intake (station 11471000) and the combined flows of Potter Valley Irrigation District east canal and Potter Valley Irrigation District west canal. Elevation of tailrace is 1,020 ft above National Geodetic Vertical Datum, from topographic map.

REMARKS.--No estimated daily discharges. Flow represents inflow into the Russian River basin after passing through powerhouse.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 320 ft^3/s, Sept. 7, 1990; no flow Apr. 4, 5 and July 18-20, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	311	41	226	157	313	310	65	67	245	106	99	103
2	311	35	228	146	314	311	65	65	318	102	99	105
3	312	88	228	95	313	309	45	62	318	100	98	121
4	312	144	229	103	313	309	.00	69	318	101	98	190
5	311	146	227	105	313	311	.00	75	318	105	101	313
6	309	139	214	106	313	312	27	68	318	103	104	319
7	311	142	225	179	313	312	71	75	318	102	102	320
8	310	145	187	269	313	304	71	91	312	105	101	309
9	310	156	87	281	313	292	68	87	318	105	96	299
10	308	217	85	260	313	309	65	85	318	101	97	298
11	309	227	86	312	313	310	63	76	318	94	97	298
12	310	232	87	306	313	301	53	76	318	88	100	298
13	312	232	85	312	300	298	49	88	311	84	100	298
14	310	229	80	314	297	308	48	94	304	84	111	298
15	313	228	86	314	299	310	49	85	211	77	118	298
16	314	228	87	313	263	310	48	63	136	23	118	298
17	264	228	90	314	188	306	52	64	137	.32	98	298
18	163	229	90	314	258	302	52	70	150	.00	97	299
19	160	229	115	313	278	300	51	65	176	.00	96	298
20	159	227	179	312	302	305	53	88	257	.00	111	298
21	158	226	154	312	305	304	53	99	216	.87	122	299
22	161	226	152	311	306	301	53	117	144	1.9	120	300
23	220	226	152	310	306	291	56	145	111	25	117	307
24	277	226	152	313	306	309	62	135	107	102	114	311
25	243	225	153	311	306	310	64	114	107	106	117	314
26	310	225	153	312	306	307	62	127	107	104	120	313
27	307	224	154	313	306	202	68	156	107	100	75	316
28	302	223	155	314	308	63	67	230	106	99	2.0	315
29	300	224	152	314	---	66	63	242	103	99	27	315
30	101	227	155	314	---	65	67	318	103	99	99	315
31	41	---	156	314	---	65	---	226	---	99	101	---
TOTAL	8139	5794	4609	8263	8391	8412	1610.00	3422	6630	2316.09	3055.0	8463
MEAN	263	193	149	267	300	271	53.7	110	221	74.7	98.5	282
MAX	314	232	229	314	314	312	71	318	318	106	122	320
MIN	41	35	80	95	188	63	.00	62	103	.00	2.0	103
AC-FT	16140	11490	9140	16390	16640	16690	3190	6790	13150	4590	6060	16790

CAL YR 1989 TOTAL 70046.00 MEAN 192 MAX 314 MIN 35 AC-FT 138900
WTR YR 1990 TOTAL 69104.09 MEAN 189 MAX 320 MIN .00 AC-FT 137100

11471500 EEL RIVER AT VAN ARSDALE DAM, NEAR POTTER VALLEY, CA

LOCATION.--Lat 39°23'19", long 123°06'54", in NE 1/4 sec.30, T.18 N., R.11 W, Mendocino County, Hydrologic Unit 18010103, on left bank 1,000 ft downstream from Van Arsdale Dam and 4.6 mi north of town of Potter Valley.

DRAINAGE AREA.--349 mi^2.

PERIOD OF RECORD.--November 1909 to September 1922 (combined monthly discharge only, of Eel River at this station and Snow Mountain Water and Power Co.'s tailrace near Potter Valley), October 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as South Eel River at Van Arsdale Dam, near Potter Valley.

REVISED RECORDS.--WSP 1315-B: 1913, 1920-23, 1925-27. WSP 1395: 1923(M), 1938.

GAGE.--Water-stage recorder. Elevation of gage is 1,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Nov. 18, 1909, to Mar. 3, 1927, recorder in reservoir 800 ft upstream from Van Arsdale Dam at different datum. Oct. 1, 1927, to Feb. 28, 1937, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Flow regulated by Lake Pillsbury (station 11470000) 11 mi upstream. Water is diverted from Van Arsdale Reservoir through tunnel to Potter Valley powerplant (station 11471000) after which part is used for irrigation and remainder flows into East Fork Russian River (see station 11471099). Records given represent only flow in the Eel River.

COOPERATION.--Records collected by Pacific Gas and Electric Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

AVERAGE DISCHARGE (combined flow of Eel River at Van Arsdale Dam and Potter Valley powerhouse tailrace).--81 years (water years 1910-90), 655 ft^3/s, 474,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,100 ft^3/s, Dec. 22, 1964, gage height, 33.9 ft from floodmarks; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,690 ft^3/s, May 31, gage height, 12.89 ft; minimum daily, 6.6 ft^3/s, Oct. 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	54	13	19	117	122	94	21	1510	8.4	8.8	8.1
2	8.1	39	14	19	125	187	50	21	1290	8.5	7.0	8.0
3	7.4	12	14	8.0	194	199	48	20	1020	8.4	7.1	7.8
4	7.1	13	14	7.7	217	242	58	19	629	8.1	7.1	8.8
5	7.1	16	14	7.5	134	210	63	18	234	8.2	7.2	7.8
6	6.7	16	14	7.5	204	159	57	18	124	8.3	7.2	7.7
7	7.3	17	14	785	127	123	42	18	87	8.4	7.4	7.4
8	7.1	16	15	688	100	109	38	18	39	9.2	7.6	7.3
9	7.9	35	16	79	101	106	36	18	28	11	7.6	7.4
10	8.5	12	14	20	100	134	35	18	19	12	7.4	7.2
11	7.6	12	14	21	99	115	35	16	14	9.2	7.3	7.1
12	7.7	12	14	49	95	107	35	17	11	13	7.4	7.3
13	7.5	12	25	559	95	107	34	16	8.7	15	7.3	7.3
14	8.0	13	54	187	94	121	34	14	8.2	15	7.4	7.4
15	8.1	13	55	95	95	129	33	14	7.9	11	7.9	7.5
16	7.1	11	56	41	164	111	33	14	8.0	39	7.8	7.6
17	6.8	12	58	14	178	108	34	13	7.7	27	7.7	7.7
18	6.6	12	56	9.8	94	109	34	12	7.7	24	7.7	7.8
19	6.6	12	56	8.1	94	109	32	13	11	25	7.9	7.4
20	6.7	12	53	7.3	94	110	32	19	20	22	8.3	7.0
21	29	13	53	7.9	104	111	32	11	8.7	18	8.4	6.9
22	7.5	14	54	6.9	159	112	29	79	9.6	15	9.0	7.0
23	98	14	53	7.8	208	115	34	89	9.7	13	9.2	7.0
24	27	15	53	7.9	211	116	30	11	9.6	9.0	9.2	7.1
25	7.7	37	53	7.8	170	116	28	11	9.7	9.4	9.1	7.9
26	19	96	54	7.8	132	116	26	26	9.7	9.6	11	7.7
27	51	25	54	7.8	113	141	24	893	9.8	9.7	12	7.5
28	6.7	14	54	7.8	110	193	23	322	11	9.6	8.5	7.9
29	6.7	12	54	7.8	---	138	23	70	12	10	8.3	8.0
30	241	13	54	46	---	118	21	241	10	10	7.8	7.7
31	64	---	41	62	---	116	---	1350	---	10	8.2	---
TOTAL	705.0	604	1160	2809.4	3728	4109	1127	3440	5184.0	414.0	251.8	226.3
MEAN	22.7	20.1	37.4	90.6	133	133	37.6	111	173	13.4	8.12	7.54
MAX	241	96	58	785	217	242	94	1350	1510	39	12	8.8
MIN	6.6	11	13	6.9	94	106	21	11	7.7	8.1	7.0	6.9
AC-FT	1400	1200	2300	5570	7390	8150	2240	6820	10280	821	499	449

CAL YR 1989 TOTAL 86490.3 MEAN 237 MAX 7450 MIN 4.9 AC-FT 171600
WTR YR 1990 TOTAL 23758.5 MEAN 65.1 MAX 1510 MIN 6.6 AC-FT 47120

11472150 EEL RIVER NEAR DOS RIOS, CA

LOCATION.--Lat 39°37'30", long 123°20'25", in SW 1/4 SW 1/4 sec.32, T.21 N., R.13 W., Mendocino County, Hydrologic Unit 18010103, on left bank 1,100 ft upstream from Outlet Creek and 6.3 mi south of Dos Rios.

DRAINAGE AREA.--528 mi^2.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,001.28 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except for discharges below 12 ft^3/s, which are fair. Flow partly regulated by Lake Pillsbury (station 11470000) 40 mi upstream and by diversion through Potter Valley powerplant (station 11471000).

AVERAGE DISCHARGE.--24 years, 908 ft^3/s, 657,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,100 ft^3/s, Feb. 17, 1986, gage height, 35.54 ft, from rating curve extended above 26,000 ft^3/s on basis of slope-area measurement at gage height 33.64 ft; no flow for many days in 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 45.52 ft, from information by local resident, discharge, 100,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,900 ft^3/s, Jan. 7, gage height, 12.41 ft; minimum daily, 11 ft^3/s, on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	74	40	58	592	341	206	54	2220	37	13	13
2	17	61	37	39	754	434	169	50	1680	35	14	12
3	16	55	36	34	974	683	133	48	1370	33	14	12
4	17	30	35	31	1360	966	126	48	1020	33	13	12
5	18	24	34	25	799	1120	132	45	648	33	13	12
6	16	23	33	24	943	737	132	43	427	33	12	11
7	15	22	33	4620	650	582	126	42	363	33	12	12
8	15	22	32	5500	512	506	112	42	262	32	12	12
9	14	22	31	2030	477	441	104	42	196	31	12	11
10	14	22	32	846	414	578	98	42	166	29	11	11
11	14	30	31	455	380	657	94	38	141	27	11	11
12	12	18	30	649	322	496	91	40	124	26	11	11
13	11	17	30	2210	292	427	87	39	102	25	11	11
14	13	16	30	1390	266	490	84	38	92	22	11	11
15	13	16	65	704	265	548	81	36	87	22	11	11
16	13	14	68	482	1110	458	80	35	78	22	11	11
17	13	14	68	339	1100	404	80	35	79	30	12	11
18	13	14	68	243	737	372	80	33	74	44	12	11
19	13	14	66	192	629	347	78	34	73	35	12	12
20	13	14	64	167	585	322	76	73	67	34	12	11
21	20	14	62	141	554	302	75	69	67	33	13	11
22	44	14	60	125	741	291	73	833	54	28	13	11
23	368	15	60	111	784	276	84	1210	51	25	13	11
24	273	22	60	108	708	264	90	379	51	22	12	12
25	202	65	60	94	613	256	74	193	49	19	11	17
26	80	350	60	82	516	246	66	286	47	18	12	22
27	193	174	60	77	428	237	61	4530	44	16	12	24
28	155	83	60	77	381	269	59	2420	42	16	13	21
29	70	56	60	70	---	258	57	1060	40	15	17	20
30	46	45	60	344	---	228	55	1460	39	13	16	18
31	141	---	60	535	---	215	---	2500	---	13	13	---
TOTAL	1883	1360	1525	21802	17886	13751	2863	15797	9753	834	385	396
MEAN	60.7	45.3	49.2	703	639	444	95.4	510	325	26.9	12.4	13.2
MAX	368	350	68	5500	1360	1120	206	4530	2220	44	17	24
MIN	11	14	30	24	265	215	55	33	39	13	11	11
AC-FT	3730	2700	3020	43240	35480	27280	5680	31330	19350	1650	764	785

CAL YR 1989 TOTAL 145392.7 MEAN 398 MAX 9440 MIN 9.5 AC-FT 288400
WTR YR 1990 TOTAL 88235 MEAN 242 MAX 5500 MIN 11 AC-FT 175000

11472200 OUTLET CREEK NEAR LONGVALE, CA

LOCATION.--Lat 39°37'05", long 123°21'20", in NE 1/4 sec.1, T.20 N., R.14 W., Mendocino County, Hydrologic Unit 18010103, on right bank 0.2 mi downstream from Bloody Run Creek, 0.9 mi upstream from mouth, and 6.9 mi northeast of Longvale.

DRAINAGE AREA.--161 mi^2.

PERIOD OF RECORD.--October 1956 to current year.

REVISED RECORDS.--WSP 1929: 1958(M), 1960(M), 1963(M).

GAGE.--Water-stage recorder. Datum of gage is 1,018.14 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for discharges below 2.0 ft^3/s, which are fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--34 years, 409 ft^3/s, 296,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,900 ft^3/s, Dec. 22, 1964, gage height, 30.6 ft, from floodmarks, from rating curve extended above 17,000 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in 1959, 1967, 1977, 1981, 1987-89.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 7	1730	*11,600	*13.00				

Minimum daily, 0.36 ft^3/s, Sept. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	18	e24	9.3	786	158	59	24	1210	18	5.0	.97
2	5.1	15	e23	9.7	880	260	55	23	840	17	5.2	.93
3	4.8	13	e21	13	1130	505	51	22	629	16	4.6	.89
4	3.5	12	e20	13	1170	797	49	21	518	16	4.5	.87
5	2.4	10	19	12	815	868	46	19	442	16	4.1	.75
6	3.9	9.6	19	11	904	550	43	19	e380	17	4.5	.66
7	5.1	9.0	18	5030	569	394	41	18	e302	17	4.1	.54
8	3.4	8.5	17	5200	449	336	41	17	e250	16	3.5	.49
9	2.5	8.3	16	2290	442	276	41	16	e215	15	3.3	.54
10	2.3	e11	15	1110	344	489	39	16	e170	13	2.8	.57
11	2.2	e11	14	539	279	543	37	16	e150	12	2.5	.55
12	2.3	e10	13	739	236	422	36	15	e122	11	2.2	.51
13	2.1	e8.0	13	1700	194	322	34	15	e100	10	2.2	.43
14	2.0	e7.2	12	1100	165	526	33	14	e87	9.5	2.7	.37
15	1.9	e6.8	12	615	150	596	32	13	e73	8.9	2.6	.36
16	1.8	e6.6	12	418	1380	432	32	12	e62	8.3	2.3	.39
17	2.0	e6.5	12	307	1090	339	31	12	e53	7.5	3.7	.47
18	2.3	e6.4	12	229	791	287	31	11	44	7.7	4.5	.46
19	2.1	e6.4	12	183	635	245	30	12	39	7.9	4.3	.47
20	2.1	e6.4	12	147	528	209	30	32	33	7.5	4.1	.47
21	3.8	e6.5	11	121	456	184	30	51	30	7.2	3.1	.47
22	9.8	e6.7	11	106	464	166	30	1080	26	7.1	2.4	.45
23	332	e6.9	10	93	407	147	41	811	24	7.2	1.9	.42
24	173	e7.8	10	82	341	121	56	450	24	6.1	1.5	.50
25	133	e55	10	75	286	107	40	309	23	6.3	1.3	.57
26	62	e145	10	70	241	96	34	659	21	6.7	1.3	.67
27	222	e78	10	67	205	89	31	4270	19	6.4	1.4	.75
28	95	e36	9.9	58	179	82	28	1970	19	6.3	1.5	.78
29	47	e29	9.8	56	---	75	26	1100	19	6.6	1.5	.67
30	30	e27	9.8	697	---	70	25	1550	19	6.3	1.2	.66
31	22	---	9.8	678	---	64	---	1750	---	5.8	1.1	---
TOTAL	1187.5	587.6	427.3	21778.0	15516	9755	1132	14347	5943	323.3	90.9	17.63
MEAN	38.3	19.6	13.8	703	554	315	37.7	463	198	10.4	2.93	.59
MAX	332	145	24	5200	1380	868	59	4270	1210	18	5.2	.97
MIN	1.8	6.4	9.8	9.3	150	64	25	11	19	5.8	1.1	.36
AC-FT	2360	1170	848	43200	30780	19350	2250	28460	11790	641	180	35

CAL YR 1989 TOTAL 87165.03 MEAN 239 MAX 4430 MIN .21 AC-FT 172900
WTR YR 1990 TOTAL 71105.23 MEAN 195 MAX 5200 MIN .36 AC-FT 141000

e Estimated.

11473900 MIDDLE FORK EEL RIVER NEAR DOS RIOS, CA

LOCATION.--Lat 39°42'23", long 123°19'27", in NE 1/4 SE 1/4 sec.5, T.21 N., R.13 W., Mendocino County, Hydrologic Unit 18010104, on right bank 0.6 mi upstream from Eastman Creek, 1.7 mi southeast of Dos Rios, and 1.9 mi upstream from mouth.

DRAINAGE AREA.--745 mi^2.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 901.58 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--25 years, 1,592 ft^3/s, 1,153,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 93,100 ft^3/s, Feb. 17, 1986, gage height, 27.41 ft, from rating curve extended above 52,000 ft^3/s; minimum daily, 2.4 ft^3/s, Sept. 1, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0745	*18,800	*16.27				

Minimum daily, 2.7 ft^3/s, Sept. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	281	255	71	582	1600	862	315	3200	194	43	13
2	37	195	348	77	662	1990	827	285	2400	180	40	11
3	35	163	348	74	963	3250	788	260	2130	171	37	9.7
4	32	144	328	68	1320	2700	776	242	1790	165	35	8.2
5	28	131	342	64	848	2410	785	224	1430	158	33	7.0
6	23	121	408	67	1140	2000	798	212	1220	155	31	6.0
7	21	98	346	2750	813	1750	787	203	1080	153	30	5.3
8	19	90	274	11700	704	1590	753	196	941	146	28	4.8
9	18	76	235	3390	758	1410	710	186	841	136	26	4.5
10	18	66	211	1660	806	1580	668	177	769	127	24	4.2
11	18	58	183	1090	851	1680	637	169	704	118	23	4.0
12	20	56	163	1180	809	1480	602	159	654	110	23	3.8
13	21	55	150	3350	726	1330	572	155	616	102	23	3.6
14	22	48	145	2270	628	1340	546	149	586	97	22	3.4
15	23	43	136	1460	562	1680	526	143	556	94	22	3.4
16	23	42	130	1170	871	1590	514	133	521	95	21	3.5
17	24	39	125	984	859	1520	503	127	489	94	21	3.4
18	23	37	118	827	721	1550	483	121	466	89	22	3.2
19	21	36	112	712	668	1560	462	117	441	87	23	3.2
20	21	36	106	621	673	1480	451	200	404	82	19	3.0
21	25	33	103	547	647	1440	447	270	373	76	13	2.9
22	53	32	100	503	964	1420	428	1260	344	70	25	2.8
23	1420	30	98	466	1200	1400	476	3190	323	66	33	2.7
24	2290	46	94	431	1370	1330	548	1340	304	63	25	2.8
25	1500	223	90	402	1420	1280	456	924	287	60	17	3.1
26	806	633	86	384	1490	1200	423	816	272	59	14	3.7
27	955	510	80	362	1560	1130	404	2590	247	57	18	5.3
28	975	373	78	322	1560	1080	388	4070	233	55	21	4.9
29	584	304	77	307	---	1010	366	1970	223	52	22	4.2
30	445	259	74	486	---	957	342	3000	209	49	20	3.9
31	344	---	70	567	---	906	---	5970	---	46	15	---
TOTAL	9880	4258	5413	38362	26175	48643	17328	29173	24053	3206	769	144.5
MEAN	319	142	175	1237	935	1569	578	941	802	103	24.8	4.82
MAX	2290	633	408	11700	1560	3250	862	5970	3200	194	43	13
MIN	18	30	70	64	562	906	342	117	209	46	13	2.7
AC-FT	19600	8450	10740	76090	51920	96480	34370	57860	47710	6360	1530	287

CAL YR 1989 TOTAL 384221.3 MEAN 1053 MAX 15100 MIN 8.6 AC-FT 762100
WTR YR 1990 TOTAL 207404.5 MEAN 568 MAX 11700 MIN 2.7 AC-FT 411400

11475000 EEL RIVER AT FORT SEWARD, CA

LOCATION.--Lat 40°13'05", long 123°37'54", in SE 1/4 NE 1/4 sec.8, T.3 S., R.5 E., Humboldt County, Hydrologic Unit 18010105, on right bank at downstream side of bridge, 1.0 mi southeast of Fort Seward, 1.9 mi upstream from Dobbyn Creek, and 11.8 mi northeast of Garberville.

DRAINAGE AREA.--2,107 mi^2.

PERIOD OF RECORD.--September 1955 to current year. Prior to October 1965, published as "at Alderpoint."

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 217.26 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1964, at site 7.5 mi upstream at datum 46.55 ft higher. Feb. 2 to Sept. 30, 1965, at site 7.7 mi upstream at datum 49.42 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated by Lake Pillsbury (station 11470000) 99 mi upstream, and by diversion through Potter Valley powerplant (station 11471000).

AVERAGE DISCHARGE.--35 years, 4,615 ft^3/s, 3,344,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 561,000 ft^3/s, Dec. 22, 1964, gage height, 82.6 ft, from floodmarks, present site and datum, 87.2 ft, from floodmarks, site and datum then in use, from rating curve extended above 110,000 ft^3/s on basis of slope-area measurement at gage height 72.5 ft; minimum daily, 1.2 ft^3/s, Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 41,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0515	*55,700	*26.94				

Minimum daily, 13 ft^3/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	651	462	128	3860	4050	1620	586	14500	484	73	56
2	89	523	421	139	4590	4060	1560	547	10100	462	69	56
3	90	440	458	135	5170	7220	1460	516	7620	437	67	53
4	85	393	444	122	8750	7390	1380	487	5860	404	65	49
5	76	341	417	107	5750	8230	1370	457	4400	376	62	46
6	67	297	416	101	6690	5680	1390	419	3330	352	60	45
7	60	272	489	10000	5200	4500	1390	394	2800	338	58	43
8	51	251	406	47000	4210	3970	1360	378	2370	325	57	42
9	44	233	336	19700	4350	3460	1270	362	2000	309	56	39
10	40	220	292	9750	4210	3830	1190	344	1760	287	55	38
11	35	205	262	5740	4020	5410	1130	324	1580	262	54	37
12	31	196	235	4780	3700	4360	1080	313	1450	235	51	37
13	28	189	208	12600	3320	3630	1030	301	1340	214	48	36
14	25	176	191	11000	2950	3750	994	288	1260	196	45	34
15	22	167	177	6510	2660	5090	959	276	1180	180	45	33
16	19	158	180	4740	4130	4340	925	270	1110	167	45	32
17	18	150	200	3960	5870	3780	904	257	1040	161	47	32
18	16	144	196	3380	4590	3500	887	247	987	162	48	31
19	15	140	189	2980	3880	3300	857	246	939	162	47	31
20	13	136	180	2690	3670	3040	824	323	877	165	46	31
21	22	132	169	2440	3440	2850	819	607	820	155	47	32
22	37	127	160	2270	4280	2710	806	2800	779	150	49	32
23	3410	127	153	2150	5000	2610	824	10500	720	138	51	32
24	6900	156	150	2030	5300	2470	1030	4170	676	122	56	33
25	4450	406	144	1930	5100	2310	998	2290	642	109	59	47
26	2230	2900	138	1860	4790	2190	824	1840	608	103	59	49
27	2240	2280	136	1800	4540	2040	749	16900	580	99	62	45
28	2450	1190	133	1720	4260	1940	701	20000	550	96	58	52
29	1500	763	131	1660	---	1890	648	9430	530	88	56	60
30	977	567	127	2150	---	1780	620	8910	509	81	56	64
31	704	---	125	3840	---	1690	---	21100	---	77	56	---
TOTAL	25835	13930	7725	169412	128280	117070	31599	105882	72917	6896	1707	1247
MEAN	833	464	249	5465	4581	3776	1053	3416	2431	222	55.1	41.6
MAX	6900	2900	489	47000	8750	8230	1620	21100	14500	484	73	64
MIN	13	127	125	101	2660	1690	620	246	509	77	45	31
AC-FT	51240	27630	15320	336000	254400	232200	62680	210000	144600	13680	3390	2470

CAL YR 1989 TOTAL 1069561 MEAN 2930 MAX 54100 MIN 13 AC-FT 2121000
WTR YR 1990 TOTAL 682500 MEAN 1870 MAX 47000 MIN 13 AC-FT 1354000

11475560 ELDER CREEK NEAR BRANSCOMB, CA
(Hydrologic benchmark station)

LOCATION.--Lat 39°43'47", long 123°38'34", in NW 1/4 NE 1/4 sec.29, T.22 N., R.16 W., Mendocino County, Hydrologic Unit 18010106, on right bank 0.2 mi upstream from mouth and 5.3 mi north of Branscomb. Raingage: lat 39°43'50", long 123°38'07", in NW 1/4 NW 1/4 sec.28, T.22 N., R.16 W., elevation, 1,440 ft at site 0.5 mi east of gaging station.
DRAINAGE AREA.--6.50 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.
GAGE.--Water-stage recorder, crest-stage gage, and one recording and storage-type precipitation gage. Datum of gage is 1,391.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation; small diversion upstream from station for domestic use.

AVERAGE DISCHARGE.--23 years, 25.2 ft^3/s, 18,260 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,280 ft^3/s, Mar. 29, 1974, gage height, 9.77 ft, from rating curve extended above 660 ft^3/s on basis of slope-area measurements at gage heights 9.40 and 11.41 ft; minimum daily, 0.27 ft^3/s, Sept. 10-15, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 11.41 ft, from floodmarks, discharge, 3,660 ft^3/s by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0245	*240	*5.74				

Minimum daily, 1.3 ft^3/s, Oct. 13-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	4.5	3.5	2.3	19	22	9.9	4.6	90	6.9	3.1	2.1
2	1.5	4.0	3.4	2.3	23	25	9.4	4.3	71	6.7	3.0	2.1
3	1.5	3.8	3.2	2.2	32	29	9.0	4.2	57	6.5	2.9	2.1
4	1.5	3.5	3.1	2.1	38	32	8.5	4.0	48	6.3	2.9	2.1
5	1.5	e3.3	3.0	2.1	39	35	8.3	3.9	39	6.2	2.9	2.1
6	1.5	e3.0	3.0	2.5	42	35	8.1	3.9	35	6.2	2.9	2.0
7	1.5	e2.9	3.0	96	39	34	7.8	3.9	31	6.1	2.7	2.0
8	1.4	2.8	3.0	187	36	31	7.7	3.5	27	5.7	2.6	1.9
9	1.4	2.8	2.9	115	35	28	7.5	3.4	24	5.5	2.5	1.9
10	1.4	2.7	2.9	67	33	31	7.0	3.4	21	5.4	2.5	1.8
11	1.4	2.6	2.8	45	32	30	7.0	3.4	19	5.2	2.4	1.8
12	1.4	2.5	2.7	41	31	29	7.0	3.3	18	5.0	2.4	1.8
13	1.3	2.5	2.7	55	28	27	6.6	3.2	16	4.9	2.4	1.8
14	1.3	2.5	2.5	51	25	29	6.4	3.2	15	4.7	2.4	1.8
15	1.3	2.4	2.5	43	25	31	6.2	3.1	14	4.6	2.4	1.8
16	1.3	2.4	2.5	37	36	30	6.0	3.0	14	4.5	2.4	1.8
17	1.3	2.4	2.5	31	34	29	6.0	3.0	13	4.5	2.4	1.8
18	1.3	2.3	2.4	26	32	27	6.0	3.0	12	4.4	2.4	1.8
19	1.3	2.3	2.4	23	29	25	5.8	3.5	11	4.3	2.4	1.8
20	1.3	2.3	2.3	20	27	23	5.8	6.3	11	4.1	2.4	1.8
21	3.5	2.2	2.3	18	26	20	5.6	4.7	10	4.0	2.4	1.7
22	4.2	2.2	2.3	16	26	19	5.4	51	9.9	3.9	2.3	1.7
23	28	2.3	2.3	15	29	18	5.6	43	9.5	3.7	2.3	1.7
24	19	2.6	2.3	14	31	16	5.8	27	9.0	3.6	2.3	1.7
25	12	4.1	2.2	13	30	15	5.3	20	8.8	3.6	2.3	1.7
26	8.1	8.1	2.2	12	28	14	5.1	26	8.5	3.6	2.3	1.7
27	11	5.6	2.2	11	26	13	4.9	137	8.3	3.5	2.3	1.7
28	7.9	4.6	2.2	11	23	12	4.9	118	8.0	3.4	2.3	1.7
29	6.4	4.2	2.2	11	---	11	4.8	79	7.7	3.1	2.3	1.7
30	5.4	3.9	2.1	18	---	11	4.8	84	7.3	3.1	2.3	1.7
31	4.8	---	2.1	17	---	10	---	113	---	3.1	2.1	---
TOTAL	138.4	97.3	80.7	1006.5	854	741	198.2	776.8	673.0	146.3	77.2	55.1
MEAN	4.46	3.24	2.60	32.5	30.5	23.9	6.61	25.1	22.4	4.72	2.49	1.84
MAX	28	8.1	3.5	187	42	35	9.9	137	90	6.9	3.1	2.1
MIN	1.3	2.2	2.1	2.1	19	10	4.8	3.0	7.3	3.1	2.1	1.7
AC-FT	275	193	160	2000	1690	1470	393	1540	1330	290	153	109
a	8.95	2.69	0.54	16.41	6.67	3.65	1.00	13.87	0.47	0.02	0.10	0.00

CAL YR 1989 TOTAL 5833.1 MEAN 16.0 MAX 184 MIN 1.0 AC-FT 11570
WTR YR 1990 TOTAL 4844.5 MEAN 13.3 MAX 187 MIN 1.3 AC-FT 9610

e Estimated.
a Precipitation, in inches.

11475560 ELDER CREEK NEAR BRANSCOMB, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.
CHEMICAL DATA: Water years 1968 to current year.
WATER TEMPERATURE: Water years 1968-79.
SEDIMENT DATA: Water years 1969 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1967 to September 1979.
SUSPENDED-SEDIMENT DISCHARGE: October 1973 to September 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DISSOLVED (UG/L AS U)
SEP 13...	1515	1.0	0.5	<0.4	0.8	<0.4	0.6	<0.4	0.12	0.03

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
DEC 06...	1040	3.0	130	8.1	8.0	0.20	730	10.9	96	K12	K4
MAR 21...	1255	20	109	7.9	10.0	0.60	730	10.4	96	K14	<1
JUN 15...	1020	15	113	8.1	11.0	0.30	725	10.5	100	K9	K10
SEP 11...	1105	1.7	142	8.2	13.5	0.30	725	9.9	100	K10	K16

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
DEC 06...	51	13	4.4	7.5	24	0.5	0.70	77	63	4.0	2.8
MAR 21...	42	11	3.5	6.1	24	0.4	0.60	64	52	2.5	1.9
JUN 15...	43	11	3.8	6.6	25	0.4	0.60	70	58	2.8	2.7
SEP 11...	52	13	4.6	8.4	26	0.5	0.80	83	68	3.0	3.2

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)
DEC 06...	0.10	15	81	86	0.11	<0.010	<0.100	0.020	<0.010	<0.20	0.020
MAR 21...	<0.10	15	68	72	0.09	<0.010	<0.100	<0.010	<0.010	1.8	0.020
JUN 15...	<0.10	16	70	78	0.09	<0.010	<0.100	<0.010	<0.010	<0.20	0.020
SEP 11...	<0.10	15	77	89	0.10	<0.010	0.040	<0.010	<0.010	<0.20	0.030

11475560 ELDER CREEK NEAR BRANSCOMB, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
DEC											
06...	0.010	0.020	<10	<1	17	<0.5	<1.0	<1	<3	1	4
MAR											
21...	0.010	0.010	<10	<1	13	<0.5	<1.0	<1	<3	1	6
JUN											
15...	0.010	0.010	<10	<1	13	<0.5	<1.0	<1	<3	1	4
SEP											
11...	0.020	0.010	<10	<1	18	<0.5	<1.0	<1	<3	1	<3

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
DEC											
06...	<1	<4	1	<0.1	<10	<1	<1	<1.0	140	<6	6
MAR											
21...	<1	<4	<1	<0.1	<10	<1	<1	<1.0	110	<6	5
JUN											
15...	<1	4	<1	<0.1	<10	<1	<1	<1.0	120	<6	5
SEP											
11...	<1	<4	<1	<0.1	<10	<1	<1	<1.0	150	<6	6

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)
MAR										
21...*	1210	1.27	5.50	108	7.9	9.5	730	10.5	96	2
21...*	1220	1.28	12.0	108	7.9	9.5	730	10.5	96	4
21...*	1230	1.27	16.5	108	8.0	9.5	730	10.5	96	2
SEP										
11...*	1010	0.60	2.20	142	8.2	13.5	725	9.9	100	0
11...*	1020	0.62	5.80	142	8.2	13.5	725	10.0	101	0
11...*	1030	0.42	10.0	142	8.2	13.5	725	9.8	99	0

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 21, 21 ft^3/s; Sept. 11, 1.7 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
DEC					
06...	1040	3.0	8.0	2	0.02
MAR					
21...	1255	20	9.5	2	0.11
JUN					
15...	1020	15	11.0	1	0.04
SEP					
11...	1105	1.7	13.5	0	0.0

11475800 SOUTH FORK EEL RIVER AT LEGGETT, CA

LOCATION.--Lat 39°52'29", long 123°43'10", in NE 1/4 SE 1/4 sec.3, T.23 N., R.17 W., Mendocino County, Hydrologic Unit 18010106, on right bank near Standish Hickey State Park, 0.2 mi upstream from Rock Creek, and 0.7 mi northwest of Leggett.

DRAINAGE AREA.--248 mi^2.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 691.32 ft above National Geodetic Vertical Datum of 1929. Prior to July 29, 1988, at datum 2.00 ft higher.

REMARKS.--Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--25 years, 873 ft^3/s, 632,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,700 ft^3/s, Jan. 4, 1966, gage height, 27.4 ft, from floodmarks, present datum, from rating curve extended above 21,000 ft^3/s on basis of slope-area measurement at gage height 28.13 ft; minimum daily, 7.3 ft^3/s, Aug. 4-6, 12, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 28.13 ft, from floodmarks, present datum, discharge, 78,700 ft^3/s, by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 7	2130	*14,400	*13.01	May 27	1600	9,150	10.77

Minimum daily, 21 ft^3/s, Oct. 13-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	106	e118	75	976	453	271	129	2380	156	55	42
2	34	97	e102	85	1310	533	260	124	1680	148	54	41
3	30	90	e96	84	1420	895	249	120	1340	143	52	40
4	28	84	e93	80	1680	1070	240	115	1120	140	51	39
5	25	80	e88	78	1390	1260	231	109	958	138	51	39
6	25	77	e84	81	1610	1000	224	105	852	139	49	39
7	24	73	e82	5840	1230	872	221	102	769	138	46	38
8	24	71	78	9980	1130	793	219	100	673	131	46	38
9	24	70	76	4020	1110	700	213	95	579	125	44	38
10	22	68	74	1860	968	934	203	83	518	114	41	38
11	22	66	73	1310	865	993	197	83	470	106	39	37
12	22	64	71	1270	778	874	189	83	431	99	38	38
13	21	63	71	2140	692	782	183	82	401	94	38	37
14	21	62	70	1600	603	914	178	80	376	91	38	36
15	21	61	69	1240	565	1020	173	78	351	88	38	36
16	21	59	69	1030	1590	896	173	77	331	86	39	36
17	21	59	69	855	1430	809	170	75	313	84	40	36
18	21	59	69	726	1240	743	166	74	292	83	42	36
19	21	58	69	618	1110	679	161	80	273	82	43	36
20	21	58	71	525	989	604	161	213	254	80	43	35
21	41	56	70	461	918	546	158	195	240	76	42	34
22	117	55	68	415	949	501	167	1780	227	72	42	33
23	1190	56	68	377	888	462	231	1490	220	69	40	34
24	842	81	67	345	802	429	223	791	211	65	40	34
25	514	161	67	320	722	400	181	543	201	64	38	34
26	290	689	68	306	634	373	163	672	191	64	38	34
27	421	351	69	278	553	352	152	6570	181	63	42	36
28	292	e243	69	259	496	333	144	3600	176	62	43	39
29	205	e178	69	257	---	313	137	1850	169	60	43	36
30	156	e140	70	737	---	298	135	2450	163	59	43	34
31	128	---	70	953	---	283	---	3770	---	56	43	---
TOTAL	4685	3435	2347	38205	28648	21114	5773	25718	16340	2975	1341	1103
MEAN	151	114	75.7	1232	1023	681	192	830	545	96.0	43.3	36.8
MAX	1190	689	118	9980	1680	1260	271	6570	2380	156	55	42
MIN	21	55	67	75	496	283	135	74	163	56	38	33
AC-FT	9290	6810	4660	75780	56820	41880	11450	51010	32410	5900	2660	2190

CAL YR 1989 TOTAL 168882 MEAN 463 MAX 7730 MIN 16 AC-FT 335000
WTR YR 1990 TOTAL 151684 MEAN 416 MAX 9980 MIN 21 AC-FT 300900

e Estimated.

11476500 SOUTH FORK EEL RIVER NEAR MIRANDA, CA

LOCATION.--Lat 40°10'55", long 123°46'30", in NW 1/4 sec.30, T.3 S., R.4 E., Humboldt County, Hydrologic Unit 18010106, on right bank 0.5 mi upstream from Rocky Glen Creek, 4.3 mi southeast of Miranda, and 20 mi upstream from mouth.

DRAINAGE AREA.--537 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.-- WSP 1395: Drainage area. WSP 2129: 1955.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 217.57 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1940, nonrecording gage at site 200 ft upstream at datum 0.8 ft higher. Nov. 2, 1940, to Oct. 31, 1944, nonrecording gage at present site and datum.

REMARKS.--Records good. Occasional storage and release for recreational use during summer months at Benbow Dam, 16 mi upstream. No diversion upstream from station.

AVERAGE DISCHARGE.--51 years, 1,913 ft^3/s, 1,386,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 199,000 ft^3/s, Dec. 22, 1964, gage height, 46.0 ft, from floodmarks, from rating curve extended above 53,000 ft^3/s on basis of slope-area measurement at gage height 42.7 ft; minimum observed, 9 ft^3/s, Oct. 17, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0230	*36,400	*20.35	May 27	1500	26,400	17.68

Minimum daily, 38 ft^3/s, Nov. 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	107	228	68	2740	1160	581	248	7780	375	124	88
2	72	87	198	113	3310	1180	551	242	5180	359	121	86
3	66	73	177	96	3760	1900	521	237	3730	339	119	84
4	59	63	162	83	4960	2670	495	230	3000	319	113	82
5	56	56	156	72	3690	3450	479	220	2380	314	113	69
6	53	51	162	78	4240	2730	460	207	1930	300	102	78
7	50	48	148	10500	3340	2270	454	201	1730	291	110	77
8	49	45	132	28600	2990	2090	449	195	1410	296	108	77
9	47	43	120	13400	3000	1770	434	190	1270	119	102	76
10	47	42	111	5970	2640	2160	417	190	1140	175	91	76
11	46	41	103	3550	2280	2690	404	187	1010	246	88	75
12	46	41	95	3500	1980	2320	386	185	956	239	87	74
13	44	41	89	6860	1750	1990	369	180	873	275	86	74
14	44	40	84	5320	1540	2080	357	177	811	178	85	74
15	43	39	80	3590	1430	2530	341	173	753	204	85	74
16	43	38	76	2930	3170	2180	339	165	702	193	86	74
17	42	38	75	2360	3690	1930	334	160	667	187	89	75
18	42	39	72	1880	3190	1730	323	165	632	181	93	74
19	42	40	68	1590	2830	1560	315	141	603	178	98	73
20	43	40	66	1380	2510	1380	313	269	567	178	97	73
21	84	40	67	1230	2200	1240	302	385	533	140	94	72
22	146	40	66	1130	2190	1130	309	4070	507	166	93	93
23	460	44	61	1040	2080	1040	366	5000	495	160	89	235
24	e1550	79	59	973	1880	955	434	2360	474	154	85	92
25	e1340	292	55	920	1680	890	381	1490	459	148	84	71
26	577	1340	53	897	1500	827	324	1500	440	138	87	82
27	1040	976	53	845	1360	777	292	17700	416	133	92	76
28	588	497	53	795	1240	730	277	12800	407	131	99	67
29	309	346	51	782	---	687	265	6490	391	128	96	67
30	194	272	50	1270	---	646	257	6720	380	128	93	65
31	138	---	49	2470	---	611	---	11000	---	126	91	---
TOTAL	7440	4938	3019	104292	73170	51303	11529	73477	41626	6498	3000	2453
MEAN	240	165	97.4	3364	2613	1655	384	2370	1388	210	96.8	81.8
MAX	1550	1340	228	28600	4960	3450	581	17700	7780	375	124	235
MIN	42	38	49	68	1240	611	257	141	380	119	84	65
AC-FT	14760	9790	5990	206900	145100	101800	22870	145700	82570	12890	5950	4870

CAL YR 1989 TOTAL 426037 MEAN 1167 MAX 20000 MIN 31 AC-FT 845000
WTR YR 1990 TOTAL 382745 MEAN 1049 MAX 28600 MIN 38 AC-FT 759200

e Estimated.

11476600 BULL CREEK NEAR WEOTT, CA

LOCATION.--Lat 40°21'05", long 124°00'10", in SW 1/4 NW 1/4 sec.30, T.1 S., R.2 E., Humboldt County, Hydrologic Unit 18010106, on left bank 0.2 mi downstream from Albee Creek, 4.5 mi northwest of Weott, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--28.1 mi^2.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 269.36 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1964, water-stage recorder, and Jan. 14 to Aug. 10, 1965, nonrecording gage at site 150 ft downstream at datum 8.90 ft lower.

REMARKS.--No estimated daily discharges. Records good. Minor diversions upstream from station for domestic and recreational use.

AVERAGE DISCHARGE.--30 years, 123 ft^3/s, 89,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft^3/s, Dec. 22, 1964, gage height, 20.6 ft, from floodmarks, site and datum then in use, from rating curve extended above 2,100 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.30 ft^3/s, Sept. 28, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0030	*806	*5.50				

Minimum daily, 1.5 ft^3/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	8.5	8.5	6.7	219	113	42	11	187	17	6.0	3.7
2	2.3	7.6	7.8	7.7	226	110	40	10	159	16	5.8	3.6
3	2.2	7.0	7.7	5.8	299	117	38	9.7	140	16	5.3	3.1
4	2.0	6.3	7.3	5.4	295	142	36	8.9	121	15	5.4	3.1
5	1.9	6.1	7.6	5.2	273	148	34	8.3	105	15	5.1	3.0
6	1.8	5.8	7.5	8.8	258	132	34	8.0	94	15	4.9	2.9
7	1.8	5.5	7.0	412	238	123	32	7.9	81	14	5.0	2.8
8	1.6	5.2	6.9	580	240	114	31	7.5	70	13	5.0	2.7
9	1.6	5.2	6.5	338	244	103	30	7.2	63	13	4.4	2.6
10	1.5	5.0	6.3	242	230	125	28	7.0	56	12	4.3	2.4
11	1.5	4.8	5.9	198	218	130	27	6.7	50	11	4.2	2.3
12	1.5	4.7	5.6	243	205	125	26	6.3	46	10	4.0	2.4
13	1.6	4.7	5.6	336	196	118	24	6.1	43	9.8	4.0	2.3
14	1.6	4.7	5.5	294	182	134	23	5.8	39	9.5	4.1	2.3
15	1.5	4.6	5.3	252	184	128	22	5.5	35	9.1	4.1	2.3
16	1.6	4.3	5.2	235	228	122	22	5.4	34	8.7	4.0	2.3
17	1.6	4.3	5.1	210	219	114	21	5.0	33	9.6	4.1	2.0
18	1.5	4.3	4.9	189	211	107	20	5.0	30	9.5	4.8	1.9
19	1.5	4.3	4.9	173	203	99	20	7.3	28	8.2	4.9	1.9
20	1.5	4.2	4.9	156	193	92	19	16	27	7.6	4.2	1.9
21	5.3	4.2	4.7	144	185	86	18	19	25	7.1	3.9	1.7
22	30	4.1	4.6	132	183	80	20	64	24	7.0	3.8	1.5
23	103	4.7	4.5	123	176	74	21	27	23	6.9	3.7	1.6
24	74	8.4	4.5	113	167	68	18	19	23	6.7	3.6	1.8
25	29	15	4.5	107	157	63	16	16	22	7.1	3.5	2.0
26	28	27	4.4	104	148	60	15	26	21	7.7	4.0	2.1
27	31	16	4.3	95	136	56	14	263	20	7.2	9.8	2.1
28	18	12	4.3	90	123	52	13	154	20	6.6	7.8	1.9
29	14	10	4.1	95	---	50	12	109	19	6.3	5.3	1.8
30	11	9.4	4.0	167	---	47	12	205	18	6.4	4.8	1.5
31	9.8	---	3.9	176	---	44	---	220	---	6.4	4.0	---
TOTAL	387.8	217.9	173.8	5243.6	5836	3076	728	1276.6	1656	314.4	147.8	69.5
MEAN	12.5	7.26	5.61	169	208	99.2	24.3	41.2	55.2	10.1	4.77	2.32
MAX	103	27	8.5	580	299	148	42	263	187	17	9.8	3.7
MIN	1.5	4.1	3.9	5.2	123	44	12	5.0	18	6.3	3.5	1.5
AC-FT	769	432	345	10400	11580	6100	1440	2530	3280	624	293	138

CAL YR 1989 TOTAL 23569.02 MEAN 64.6 MAX 849 MIN .47 AC-FT 46750
WTR YR 1990 TOTAL 19127.4 MEAN 52.4 MAX 580 MIN 1.5 AC-FT 37940

11477000 EEL RIVER AT SCOTIA, CA
(National stream-quality accounting network station)

LOCATION.--Lat 40°29'30", long 124°05'55", in SW 1/4 sec.5, T.1 N., R.1 E., Humboldt County, Hydrologic Unit 18010105, near center of span in left pier of A.S. Murphy Memorial Bridge on State Highway 283, 0.5 mi north of Scotia, and 6 mi upstream from Van Duzen River.
DRAINAGE AREA.--3,113 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods and yearly estimates for 1915-16, published in WSP 1315-B.

REVISED RECORDS.--WSP 931: 1938. WSP 1315-B: 1914-15(M), 1917(M), 1927-28(M), 1936(M), 1939(M). WSP 1345: Drainage area. WSP 1715: 1959.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 35.50 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow slightly regulated by Lake Pillsbury (station 11470000) 138 mi upstream since December 1921 and by diversion through Potter Valley powerplant (station 11471000).

AVERAGE DISCHARGE.--80 years, 7,380 ft^3/s, 5,347,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 752,000 ft^3/s, Dec. 23, 1964, gage height, 72.0 ft, from floodmarks, from rating curve extended above 220,000 ft^3/s on basis of maximum flow at upstream stations; minimum observed, 10 ft^3/s, Aug. 12-14, 1924.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 72,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	1100	*102,000	*29.35				

Minimum daily, 119 ft^3/s, Sept. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	1250	1230	415	8000	5740	2740	940	29100	1060	306	175
2	201	1150	1070	447	9610	5610	2600	908	19300	1010	282	174
3	199	984	984	492	9740	8150	2470	879	14400	953	273	170
4	197	858	984	471	15800	10900	2340	856	11500	917	262	166
5	195	800	944	446	11800	13800	2230	824	9150	882	258	161
6	190	744	940	434	11900	10800	2210	791	7420	855	249	155
7	186	680	946	9450	10700	8570	2230	769	6420	835	241	146
8	179	639	984	83500	8710	7590	2180	760	5580	715	228	144
9	171	611	882	45700	9090	6700	2100	753	4810	711	219	143
10	165	584	813	18400	8430	7020	1980	743	4260	734	211	141
11	161	562	746	10700	7650	9700	1860	737	3800	725	209	140
12	158	540	706	7930	6930	8810	1760	733	3450	693	202	135
13	153	521	659	17100	6220	7460	1680	726	3160	596	190	129
14	148	507	633	19800	5410	7250	1620	722	2950	586	178	129
15	144	486	599	12200	4800	8900	1520	719	2760	564	175	131
16	143	472	571	9200	6360	8480	1460	721	2580	539	171	132
17	140	465	559	7600	10700	7410	1440	716	2420	523	171	124
18	138	453	567	6230	9340	6660	1400	716	2280	503	171	124
19	136	438	564	5230	7680	6200	1370	731	2130	495	168	124
20	136	428	544	4610	6890	5700	1330	846	2000	469	171	124
21	146	424	536	4090	6400	5250	1280	1110	1870	472	175	124
22	284	419	513	3710	6580	4950	1270	4440	1740	452	174	123
23	2160	418	495	3410	7500	4680	1370	17000	1620	422	171	119
24	10600	437	483	3190	7790	4460	1490	10400	1530	396	168	199
25	7780	540	469	2990	7540	4040	1670	5670	1460	378	160	213
26	4560	2560	455	2890	7040	3810	1460	4360	1380	376	167	156
27	3940	4750	441	2770	6540	3590	1260	27000	1300	362	188	146
28	4110	2860	435	2630	6150	3360	1150	e42000	1230	347	226	150
29	3120	1930	429	2530	---	3190	1060	e20600	1170	339	217	146
30	2070	1480	414	3140	---	3060	992	15500	1120	328	202	144
31	1520	---	410	6540	---	2880	---	37100	---	316	185	---
TOTAL	43619	28990	21005	298245	231300	204720	51522	200770	153890	18553	6368	4387
MEAN	1407	966	678	9621	8261	6604	1717	6476	5130	598	205	146
MAX	10600	4750	1230	83500	15800	13800	2740	42000	29100	1060	306	213
MIN	136	418	410	415	4800	2880	992	716	1120	316	160	119
AC-FT	86520	57500	41660	591600	458800	406100	102200	398200	305200	36800	12630	8700

CAL YR 1989 TOTAL 1864742 MEAN 5109 MAX 93400 MIN 81 AC-FT 3699000
WTR YR 1990 TOTAL 1263369 MEAN 3461 MAX 83500 MIN 119 AC-FT 2506000

e Estimated.

11477000 EEL RIVER AT SCOTIA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.
CHEMICAL DATA: Water years 1952-75, 1977, 1979 to current year.
BIOLOGICAL DATA: Water year 1979-81.
SPECIFIC CONDUCTANCE: Water years 1979-81.
WATER TEMPERATURE: Water years 1958-82.
SEDIMENT DATA: Water years 1955 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1979 to September 1981.
WATER TEMPERATURE: October 1957 to June 1982.
SUSPENDED-SEDIMENT DISCHARGE: October 1957 to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
NOV												
01...	1120	1250	223	8.3	12.0	3.6	765	10.3	95	K17	27	100
JAN												
03...	1050	505	258	8.4	7.0	0.30	770	11.9	97	K1	K1	120
MAR												
02...	1300	5580	156	8.2	11.5	12	760	10.4	96	K3	K6	70
MAY												
03...	0945	897	233	8.3	17.0	1.0	765	9.2	95	K6	K2	110
JUL												
25...	1115	382	267	8.4	20.0	0.40	765	8.5	93	K1	50	130
SEP												
07...	1115	148	270	8.5	22.0	1.0	765	8.7	99	K2	22	120

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	CARBONATE WATER DIS IT FIELD MG/L AS CO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
NOV											
01...	28	7.5	6.8	13	0.3	1.0	115	--	94	18	4.4
JAN											
03...	33	9.0	8.0	13	0.3	0.90	136	--	111	19	5.5
MAR											
02...	19	5.5	5.0	13	0.3	0.70	86	--	71	14	3.0
MAY											
03...	30	7.9	6.8	12	0.3	0.90	108	10	105	15	5.0
JUL											
25...	36	8.9	8.1	12	0.3	1.3	137	5	120	15	6.3
SEP											
07...	32	9.2	8.8	14	0.4	1.5	141	--	116	15	6.1

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)
NOV											
01...	0.10	9.8	125	133	0.17	<0.010	<0.100	<0.010	<0.010	<0.20	0.030
JAN											
03...	0.10	8.4	145	151	0.20	<0.010	<0.100	<0.010	0.020	<0.20	0.010
MAR											
02...	<0.10	10	103	100	0.14	<0.010	<0.100	<0.010	<0.010	<0.20	0.030
MAY											
03...	<0.10	10	130	139	0.18	<0.010	<0.100	0.010	<0.010	<0.20	0.020
JUL											
25...	<0.10	9.9	143	158	0.19	<0.010	<0.100	0.010	<0.010	<0.20	0.010
SEP											
07...	0.10	5.9	146	148	0.20	<0.010	<0.100	<0.010	<0.010	<0.20	0.010

11477000 EEL RIVER AT SCOTIA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV											
01...	0.010	<0.010	20	1	56	<0.5	<1.0	1	<3	1	24
JAN											
03...	<0.010	0.010	20	<1	66	<0.5	<1.0	<1	<3	1	13
MAR											
02...	0.010	0.010	--	--	--	--	--	--	--	--	--
MAY											
03...	<0.010	0.010	<10	1	62	<0.5	<1.0	<1	<3	1	5
JUL											
25...	<0.010	<0.010	--	--	--	--	--	--	--	--	--
SEP											
07...	0.010	<0.010	<10	1	75	<0.5	<1.0	<1	<3	1	<3

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV											
01...	3	<4	8	<0.1	<10	<1	<1	<1.0	320	<6	9
JAN											
03...	2	<4	7	<0.1	<10	2	<1	<1.0	380	<6	15
MAR											
02...	--	--	--	--	--	--	--	--	--	--	--
MAY											
03...	<1	<4	3	<0.1	<10	1	<1	<1.0	340	<6	8
JUL											
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
07...	<1	5	3	<0.1	<10	1	<1	<1.0	370	<6	5

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DEPTH AT SAMPLE LOC-ATION, TOTAL (FEET)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	SEDI-MENT, SUS-PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
02...*	1050	7.80	50.0	157	8.2	11.5	760	9.9	91	22	92
02...*	1125	5.70	100	156	8.2	11.5	760	10.5	97	19	99
02...*	1155	3.40	155	156	8.2	11.5	760	10.5	97	22	84
02...*	1230	3.30	245	156	8.2	11.5	760	10.7	98	20	88
02...*	1305	2.70	375	159	8.2	12.0	760	10.7	100	19	94
AUG											
30...*	1320	1.25	62.0	267	8.5	23.5	765	10.2	120	0	--
30...*	1335	1.58	94.0	268	8.4	23.0	765	9.7	113	0	--
30...*	1350	2.58	118	270	8.3	23.0	765	9.6	112	0	--
30...*	1405	2.30	132	270	8.3	23.0	765	9.4	109	0	--
30...*	1420	1.38	155	270	8.3	23.5	765	9.3	109	0	--

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 2, 5,660 ft^3/s; Aug. 30, 204 ft^3/s.

11477000 EEL RIVER AT SCOTIA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
01...	1120	1250	12.0	12	41	76
JAN						
03...	1050	505	7.0	9	12	54
MAR						
02...	1300	5580	11.5	20	301	91
MAY						
03...	0945	897	17.0	5	12	74
JUL						
25...	1115	382	20.0	1	1.0	86
AUG						
30...	1345	204	23.0	0	0.0	--
SEP						
07...	1115	148	22.0	0	0.0	--

11478500 VAN DUZEN RIVER NEAR BRIDGEVILLE, CA

LOCATION.--Lat 40°28'50", long 123°53'23", in NE 1/4 SE 1/4 sec.12, T.1 N., R.2 E., Humboldt County, Hydrologic Unit 18010105, on left bank at downstream side of bridge on State Highway 36, 0.9 mi upstream from Grizzly Creek, and 5 mi west of Bridgeville.

DRAINAGE AREA.--222 mi^2.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 358.18 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1965, at site 2.4 mi upstream at different datum.

REMARKS.--Records good. No storage or large diversion upstream from station.

AVERAGE DISCHARGE.--40 years, 871 ft^3/s, 631,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,700 ft^3/s, Dec. 22, 1964, gage height, 24.0 ft, from floodmarks, present site and datum, from rating curve extended above 20,000 ft^3/s on basis of slope-area measurement at gage height 21.3 ft, former site and datum; minimum daily, 4.6 ft^3/s, Aug. 8, 13, 14, Sept. 9-15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0130	*17,100	*12.53				

Minimum daily, 9.7 ft^3/s, Sept. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	161	192	e58	1180	1410	266	107	3100	145	24	26
2	20	139	200	e68	1100	1430	256	103	1880	135	23	24
3	18	124	189	e59	1660	2320	246	97	1370	133	21	23
4	16	111	167	e54	1550	2180	233	94	1080	126	19	21
5	16	102	163	e56	1220	2020	230	85	892	120	18	20
6	15	93	188	e62	1410	1390	220	81	818	120	17	19
7	14	87	167	e600	1100	1250	213	79	778	121	16	18
8	13	84	143	11000	1290	1090	206	77	655	112	15	17
9	13	78	136	4090	1570	863	196	75	585	103	14	16
10	12	74	124	2090	1470	1800	182	72	530	94	14	17
11	12	70	111	1500	1390	1570	173	70	482	85	13	17
12	11	68	99	1560	1240	1310	166	69	431	76	13	16
13	11	66	93	3010	1040	1120	158	66	404	69	12	14
14	11	62	89	1960	813	1730	150	64	383	64	12	14
15	11	60	84	1420	707	1770	146	64	354	60	13	13
16	11	58	79	1210	913	1470	141	65	333	56	14	13
17	11	56	75	1050	816	1250	138	66	316	53	15	13
18	9.8	55	73	822	687	1160	134	67	301	53	15	12
19	9.8	53	68	706	623	927	130	69	280	52	18	12
20	9.8	51	65	585	612	791	127	125	266	47	19	12
21	17	50	62	483	684	681	124	201	252	42	18	12
22	e45	49	59	422	1080	646	123	3860	234	39	18	11
23	e2500	50	58	373	1280	592	219	3390	225	38	17	9.8
24	1230	74	56	360	1420	513	269	1020	213	36	18	9.7
25	729	163	54	333	1520	480	176	666	203	34	17	9.8
26	393	756	51	276	1520	431	149	612	194	33	18	12
27	913	466	e48	256	1470	383	133	7710	184	33	26	14
28	490	313	e48	241	1500	359	126	4440	175	31	30	14
29	319	235	e46	312	---	347	122	1980	163	28	30	14
30	235	200	e45	1030	---	307	113	3360	156	27	30	13
31	190	---	e46	984	---	288	---	4870	---	25	28	---
TOTAL	7327.4	4008	3078	37030	32865	33878	5265	33704	17237	2190	575	456.3
MEAN	236	134	99.3	1195	1174	1093	175	1087	575	70.6	18.5	15.2
MAX	2500	756	200	11000	1660	2320	269	7710	3100	145	30	26
MIN	9.8	49	45	54	612	288	113	64	156	25	12	9.7
AC-FT	14530	7950	6110	73450	65190	67200	10440	66850	34190	4340	1140	905

CAL YR 1989 TOTAL 234529.9 MEAN 643 MAX 13400 MIN 9.0 AC-FT 465200
WTR YR 1990 TOTAL 177613.7 MEAN 487 MAX 11000 MIN 9.7 AC-FT 352300

e Estimated.

11479560 EEL RIVER AT FERNBRIDGE, CA

LOCATION.--Lat 40°36'57", long 124°12'06", in SW 1/4 NE 1/4 sec.29, T.3 N., R.1 W, Humboldt County, Hydrologic Unit 18010105, on right bank downstream from bridge on county road at Fernbridge.

DRAINAGE AREA.--3,614 mi^2.

PERIOD OF RECORD.--October 1989 to September 1990. Records prior to October 1989 are in the files of the California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is 3.64 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Data is collected for flood warning purposes only. Figures given represent only those days when the gage height was above 2.5 ft prior to December 1989, and 8.0 ft thereafter.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 14.55 ft, Jan. 8; maximum observed, 15.3 ft, from outside staff at 1015 hours, Jan. 8.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	8.03	---	---	---
4	---	---	---	---	---	---	---	---	8.03	8.03	---	---
5	---	---	---	---	---	---	---	---	8.03	8.02	---	---
6	---	---	---	---	---	---	---	---	8.02	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	13.49	9.44	---	---	---	---
10	---	---	---	---	---	---	9.44	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	3.17	---	---	---	---	---	---	---	---	---	---	---
24	5.76	3.18	---	---	---	---	---	---	---	---	---	---
25	4.61	3.54	---	---	---	---	---	---	---	---	---	---
26	3.53	---	---	---	---	---	---	---	---	---	---	---
27	2.58	---	2.91	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

11479560 EEL RIVER AT FERNBRIDGE, CA--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	9.62	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	11.81	---	---	---	---	---	---	---	---	---
28	---	---	12.09	8.99	---	---	---	---	---	---	---	---
29	---	---	8.95	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	10.06	---	---	---	---	---	---	---	---	---

NOTE: No gage-height record Dec. 20 to Jan. 8.

11480390 MAD RIVER ABOVE RUTH RESERVOIR, NEAR FOREST GLEN, CA

LOCATION.--Lat 40°17'04", long 123°20'03", in NW 1/4 NE 1/4 sec.24, T.2 S., R.7 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, near right bank on downstream end of pier of Zenia Road Bridge, 500 ft downstream from unnamed creek, 0.4 mile downstream from Tompkins Creek, and 6.1 mi southwest of Forest Glen.

DRAINAGE AREA.--93.8 mi^2.

PERIOD OF RECORD.--June 1980 to current year. Discharge measurements only September to December 1971, July 1972, June to September 1977.

REVISED RECORDS.--WDR CA-80-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,700 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 28 to Sept. 30, 1990, nonrecording gage 400 ft upstream at different datum.

REMARKS.-- Records fair except for discharges below 10 ft^3/s, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--10 years, 223 ft^3/s, 161,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft^3/s, Feb. 17, 1986, gage height, 11.39 ft in gage, 12.94 ft from crest-stage gage, from rating curve extended above 5,000 ft^3/s; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0515	*6,680	*8.58				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	37	45	8.7	114	343	66	26	1160	e28	3.6	2.3
2	.00	31	41	9.4	106	378	61	23	742	27	3.6	2.3
3	.00	26	35	10	177	542	56	23	512	26	2.8	1.8
4	.00	23	32	9.5	250	516	55	20	377	25	3.2	2.3
5	.00	21	30	9.4	229	493	55	19	285	23	2.5	2.3
6	.00	18	28	9.9	268	410	49	18	237	22	2.5	2.3
7	.00	17	26	2020	225	346	46	17	203	22	2.5	1.8
8	.00	16	24	4070	204	309	44	16	168	22	2.5	1.8
9	.00	14	23	1180	237	259	42	16	146	20	2.5	1.8
10	.00	13	21	581	309	422	40	15	129	20	2.5	1.8
11	.00	12	20	350	355	449	38	14	116	18	2.5	1.8
12	.00	12	18	341	345	362	38	13	101	15	2.5	1.8
13	.00	12	17	718	289	308	35	13	95	14	2.5	1.8
14	.00	11	16	506	231	362	34	12	87	14	2.5	1.8
15	.00	10	16	348	195	462	34	11	83	14	2.3	1.8
16	.00	10	16	272	192	398	34	11	76	13	2.3	1.8
17	.00	10	14	215	168	338	32	10	69	13	2.3	1.8
18	.00	9.7	14	176	137	288	32	9.5	66	12	2.3	1.8
19	.00	8.4	13	149	122	244	32	10	61	12	2.3	1.8
20	.00	8.0	12	122	125	207	29	29	57	11	2.3	1.8
21	.00	8.0	12	104	127	180	30	35	51	11	2.3	1.8
22	2.1	8.0	11	92	196	161	31	669	48	11	2.3	1.8
23	261	7.8	11	82	305	147	40	656	47	9.8	2.3	1.8
24	442	14	11	73	438	128	46	283	44	8.4	2.3	1.8
25	288	57	10	67	504	115	39	183	40	7.1	2.3	1.8
26	148	229	9.7	64	470	105	34	197	38	7.1	2.3	1.8
27	290	130	9.4	55	427	94	33	1150	35	7.1	2.3	1.8
28	150	86	9.4	51	377	88	30	914	e32	7.1	2.3	1.8
29	93	65	9.4	51	---	80	29	528	e31	5.8	2.3	1.8
30	64	55	8.9	120	---	74	27	1280	e29	5.8	2.3	1.8
31	47	---	8.7	121	---	70	---	1850	---	4.6	2.3	---
TOTAL	1785.10	978.9	571.5	11984.9	7122	8678	1191	8070.5	5165	455.8	77.3	56.5
MEAN	57.6	32.6	18.4	387	254	280	39.7	260	172	14.7	2.49	1.88
MAX	442	229	45	4070	504	542	66	1850	1160	28	3.6	2.3
MIN	.00	7.8	8.7	8.7	106	70	27	9.5	29	4.6	2.3	1.8
AC-FT	3540	1940	1130	23770	14130	17210	2360	16010	10240	904	153	112

CAL YR 1989 TOTAL 70743.81 MEAN 194 MAX 3910 MIN .00 AC-FT 140300
WTR YR 1990 TOTAL 46136.50 MEAN 126 MAX 4070 MIN .00 AC-FT 91510

e Estimated.

11480400 RUTH RESERVOIR NEAR FOREST GLEN, CA

LOCATION.--Lat 40°22'08", long 123°25'56", in NW 1/4 NW 1/4 sec.19, T.1 S., R.7 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, near center of Robert W. Matthews Dam on Mad River, 5.6 mi west of Forest Glen.

DRAINAGE AREA.--121 mi^2.

PERIOD OF RECORD.--October 1966 to current year. Records prior to October 1966 in files of Humboldt Bay Municipal Water District.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Humboldt Bay Municipal Water District).

REMARKS.--Reservoir is formed by earthfill dam; storage began July 1961. Total capacity, 48,000 acre-ft at elevation 2,654.0 ft, crest of spillway. Minimum pool capacity, 7,810 acre-ft at elevation 2,600 ft. Water is released down Mad River for municipal use. Records given represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 68,000 acre-ft, Feb. 17, 1986, elevation, 2,667.06 ft; minimum, 11,700 acre-ft, Oct. 24-28, 1977; minimum elevation, 2,607.13 ft, Oct. 28, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 51,700 acre-ft, May 31, elevation, 2,657.21 ft; minimum contents, 22,500 acre-ft, Jan. 5, 6, elevation, 2,626.31 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Humboldt Bay Municipal Water District in 1977)

2,595	5,920	2,620	18,100	2,645	38,600
2,600	7,810	2,625	21,500	2,650	43,700
2,605	10,000	2,630	25,300	2,655	49,200
2,610	12,500	2,635	29,400	2,660	55,100
2,615	15,100	2,640	33,800	2,664	60,200

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28700	28100	25500	22900	46000	49000	47600	47700	50800	47800	44600	38100
2	28600	28000	25500	22900	45800	49200	47600	47700	50100	47800	44400	37900
3	28400	27900	25500	22900	46000	49500	47700	47700	49600	47800	44200	37700
4	28200	27800	25500	22700	46200	49600	47700	47700	49300	47800	43900	37500
5	28100	27700	25500	22500	46300	49400	47800	47600	49000	47700	43700	37300
6	27900	27600	25500	22500	46500	49300	47800	47500	48800	47700	43600	37100
7	27700	27400	25500	27100	46700	49100	47800	47500	48700	47700	43300	36900
8	27500	27300	25500	34800	46800	48900	47900	47500	48500	47600	43100	36700
9	27300	27100	25600	37300	46900	48800	47900	47400	48300	47600	42900	36500
10	27100	27000	25600	38500	47300	49100	47900	47400	48200	47600	42700	36300
11	26900	26800	25600	39200	47700	49100	47900	47300	48000	47500	42500	36100
12	26700	26600	25600	40000	48100	49000	47900	47300	47900	47500	42300	35800
13	26400	26400	25600	41300	48300	48900	47900	47200	47900	47400	42000	35600
14	26200	26300	25500	42200	48300	49000	47900	47100	47900	47300	41800	35400
15	26000	26100	25500	42900	48400	49100	47900	47100	47900	47200	41600	35200
16	25800	25900	25400	43500	48500	49100	47900	46900	47900	47200	41400	35000
17	25700	25700	25300	43900	48400	49000	47900	46900	47900	47100	41200	34800
18	25500	25600	25200	44200	48200	48800	47800	46800	47800	47000	41000	34600
19	25300	25400	25100	44400	48100	48700	47800	46900	47800	46900	40800	34400
20	25100	25200	24900	44600	48000	48600	47900	46900	47800	46800	40600	34200
21	24900	25000	24800	44700	47900	48500	47900	47100	47800	46600	40300	34000
22	25000	24900	24600	44800	48100	48300	47900	48500	47900	46400	40100	33800
23	25600	24700	24500	44900	48400	48200	47900	49000	47900	46300	39800	33700
24	26500	24600	24300	45000	48800	48100	47900	48800	47900	46100	39600	33500
25	27000	24700	24100	45100	49100	48000	47900	48500	47900	45900	39400	33300
26	27300	25000	24000	45200	49200	47800	47800	48600	47900	45700	39200	33100
27	27800	25200	23800	45200	49200	47700	47800	50700	47900	45500	39100	32900
28	28000	25300	23600	45300	49200	47600	47700	50300	47900	45400	38900	32800
29	28000	25400	23400	45300	---	47700	47700	49800	47900	45200	38700	32600
30	28000	25500	23300	45600	---	47700	47700	51100	47900	45000	38500	32400
31	28100	---	23100	45800	---	47700	---	51500	---	44800	38300	---
MAX	28700	28100	25600	45800	49200	49600	47900	51500	50800	47800	44600	38100
MIN	24900	24600	23100	22500	45800	47600	47600	46800	47800	44800	38300	32400
a	2633.40	2630.19	2627.15	2652.03	2655.01	2653.69	2653.70	2657.02	2653.85	2651.06	2644.72	2638.42
b	-800	-2600	-2400	+22700	+3400	-1500	0	+3800	-3600	-3100	-6500	-5900

CAL YR 1989 MAX 54700 MIN 23100 b -22900
WTR YR 1990 MAX 51500 MIN 22500 b +3500

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11480410 MAD RIVER BELOW RUTH RESERVOIR, NEAR FOREST GLEN, CA

LOCATION.--Lat 40°22'16", long 123°26'06", in SW 1/4 SW 1/4 sec.18, T.1 S., R.7 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, 1,200 ft downstream from Robert W. Matthews Dam, and 5.8 mi west of Forest Glen.

DRAINAGE AREA.--121 mi^2.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except for flows below 10 ft^3/s, which are poor. Flow regulated by Ruth Reservoir (station 11480400) 1,200 ft upstream.

AVERAGE DISCHARGE.--10 years, 308 ft^3/s, 223,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft^3/s, Feb. 17, 1986, gage height, 17.61 ft, from floodmarks, from rating curve extended above 8,800 ft^3/s; minimum daily, 6.4 ft^3/s, Dec. 25-28, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,020 ft^3/s, May. 31, gage height, 8.10 ft; minimum daily, 8.7 ft^3/s, Dec. 9-11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	62	46	96	107	502	99	36	1690	40	104	97
2	85	75	46	51	227	496	83	33	1190	40	101	97
3	84	75	46	27	229	611	57	32	860	41	100	97
4	84	75	46	75	230	674	49	44	653	41	101	95
5	84	77	47	98	228	678	49	50	522	37	100	94
6	90	86	46	98	223	611	49	47	425	28	100	94
7	98	94	27	103	220	536	49	45	358	40	100	97
8	97	90	9.0	79	219	474	49	44	307	41	101	102
9	98	95	8.7	50	219	422	48	40	269	41	101	101
10	98	94	8.7	49	218	441	48	40	239	41	102	100
11	102	94	8.7	49	217	510	48	40	223	41	109	100
12	100	94	30	118	217	493	48	43	173	41	110	100
13	96	94	46	254	230	452	48	49	143	47	110	100
14	96	94	47	138	252	443	48	52	116	58	110	100
15	96	94	49	51	260	498	48	49	76	58	108	99
16	96	94	54	49	232	509	50	52	100	58	108	99
17	96	94	54	44	278	478	50	50	100	54	86	98
18	93	94	71	63	249	434	49	49	100	58	95	96
19	94	94	82	73	229	384	39	49	89	58	108	95
20	97	94	82	73	220	339	40	47	75	68	109	96
21	95	93	82	73	218	302	40	31	39	85	108	96
22	96	94	82	59	218	272	40	145	39	88	111	95
23	88	94	89	47	231	245	54	443	39	88	109	95
24	79	94	93	46	325	229	67	430	39	88	105	99
25	65	95	92	46	451	220	67	342	39	89	102	95
26	55	72	92	46	521	219	61	297	39	90	103	93
27	56	51	94	46	541	219	48	811	40	89	101	91
28	62	46	95	46	492	138	48	1300	40	89	98	91
29	77	46	97	52	---	45	47	936	41	91	98	90
30	65	46	98	71	---	120	38	893	40	97	98	89
31	47	---	97	73	---	99	---	1920	---	101	96	---
TOTAL	2656	2494	1865.1	2243	7501	12093	1558	8439	8103	1926	3192	2891
MEAN	85.7	83.1	60.2	72.4	268	390	51.9	272	270	62.1	103	96.4
MAX	102	95	98	254	541	678	99	1920	1690	101	111	102
MIN	47	46	8.7	27	107	45	38	31	39	28	86	89
AC-FT	5270	4950	3700	4450	14880	23990	3090	16740	16070	3820	6330	5730

CAL YR 1989 TOTAL 106044.1 MEAN 291 MAX 4450 MIN 8.7 AC-FT 210300
WTR YR 1990 TOTAL 54961.1 MEAN 151 MAX 1920 MIN 8.7 AC-FT 109000

11480500 MAD RIVER NEAR FOREST GLEN, CA

LOCATION.--Lat 40°27'30", long 123°30'35", in SW 1/4 sec.16, T.1 N., R.6 E., Trinity County, Hydrologic Unit 18010102, Six Rivers National Forest, on right bank 0.7 mi downstream from Lamb Creek and 11.1 mi northwest of Forest Glen.

DRAINAGE AREA.--143 mi^2.

PERIOD OF RECORD.--June 1953 to current year.

REVISED RECORDS.--WSP 1395: 1954. WSP 1715: 1957(M), 1958(P). WSP 1929: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,408.18 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1955, water-stage recorder at site 0.7 mi upstream at different datum. Jan. 13 to June 18, 1956, nonrecording gage at former site at datum 4.17 ft lower than former datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Ruth Reservoir (station 11480400), 9 mi upstream, beginning in July 1961. No diversion upstream from station.

AVERAGE DISCHARGE.--37 years, 375 ft^3/s, 271,700 acre-ft/yr (unadjusted).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,200 ft^3/s, Dec. 22, 1955, gage height, 24.5 ft, present datum, from floodmarks, from rating curve extended above 8,100 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.60 ft^3/s, Sept. 15, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,580 ft^3/s, May 31, gage height, 7.51 ft; minimum daily, 13 ft^3/s, Dec. 10, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	60	56	98	104	608	112	39	2160	48	108	100
2	85	80	55	82	248	596	103	40	1550	48	105	100
3	85	80	55	18	294	739	78	27	1100	48	104	100
4	84	80	54	59	308	836	60	39	817	49	104	100
5	84	80	54	94	296	840	59	50	640	48	104	99
6	86	87	53	95	289	710	59	48	507	34	104	99
7	97	99	47	535	274	600	59	45	420	44	104	99
8	97	94	17	558	275	517	60	44	357	47	104	103
9	97	99	14	163	292	443	60	40	313	46	103	103
10	97	99	13	102	310	470	60	38	276	46	104	103
11	98	99	13	85	304	530	60	38	251	46	110	103
12	104	99	18	147	298	529	60	38	213	46	112	103
13	99	99	49	402	297	481	59	47	167	46	112	103
14	98	99	50	261	298	496	57	50	149	61	113	103
15	98	98	50	104	302	534	57	48	114	61	112	103
16	99	97	56	95	277	548	57	49	108	62	112	103
17	99	97	57	86	316	530	58	49	121	58	107	103
18	98	97	65	84	302	463	58	48	121	61	80	100
19	96	97	83	88	276	408	48	49	114	62	113	100
20	99	98	84	88	266	357	46	53	107	65	118	101
21	104	99	85	86	269	319	45	41	56	88	113	100
22	111	99	85	76	298	297	46	221	55	93	114	100
23	231	100	89	56	338	269	54	507	54	93	111	100
24	142	101	96	53	437	255	73	502	53	93	109	101
25	98	115	96	52	583	236	74	388	53	93	105	102
26	72	114	96	53	653	231	73	340	52	94	106	99
27	86	75	96	51	672	227	53	1350	51	97	108	96
28	71	58	97	51	602	194	52	1780	50	96	103	96
29	86	56	97	52	---	33	52	1240	50	96	102	96
30	82	55	97	92	---	136	45	1170	49	100	102	96
31	55	---	97	93	---	113	---	2440	---	105	100	---
TOTAL	3024	2710	1974	3959	9478	13545	1837	10858	10128	2074	3306	3014
MEAN	97.5	90.3	63.7	128	338	437	61.2	350	338	66.9	107	100
MAX	231	115	97	558	672	840	112	2440	2160	105	118	103
MIN	55	55	13	18	104	33	45	27	49	34	80	96
AC-FT	6000	5380	3920	7850	18800	26870	3640	21540	20090	4110	6560	5980

CAL YR 1989 TOTAL 123092 MEAN 337 MAX 5380 MIN 13 AC-FT 244200
WTR YR 1990 TOTAL 65907 MEAN 181 MAX 2440 MIN 13 AC-FT 130700

11481000 MAD RIVER NEAR ARCATA, CA

LOCATION.--Lat 40°54'35", long 124°03'35", in NW 1/4 NW 1/4 sec.15, T.6 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, on right bank 100 ft upstream from bridge on U.S. Highway 299, 1.0 mi downstream from Warren Creek, and 2.8 mi northeast of Arcata.

DRAINAGE AREA.--485 mi^2.

PERIOD OF RECORD.--October 1910 to September 1913, August 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WDR CA-72-1: 1965(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 12.79 ft above National Geodetic Vertical Datum of 1929. December 1910 to September 1913, nonrecording gage at site 0.1 mi upstream at different datum. Aug. 15, 1950, to July 23, 1956, water-stage recorder at site 0.6 mi upstream at datum 11.00 ft higher. July 24, 1956, to Apr. 9, 1965, water-stage recorder at datum 5.00 ft higher, at present site.

REMARKS.--Records fair. Flow regulated by Ruth Reservoir (station 11480400), 68 mi upstream, beginning in July 1961. Water is diverted 0.5 mi upstream from station for municipal supply and industrial use in Humboldt Bay area.

AVERAGE DISCHARGE (adjusted for diversions).--43 years, 1,478 ft^3/s, 1,071,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,000 ft^3/s, Dec. 22, 1964, gage height, 30.7 ft, present datum, from high-water profile and flood routing study; minimum daily, 0.10 ft^3/s, Aug. 29, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,400 ft^3/s, Jan. 8, gage height, 13.45 ft; minimum daily, 27 ft^3/s, Oct. 5-7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	90	145	102	3280	2620	e620	242	6910	119	55	51
2	37	69	188	182	3250	2630	e580	206	4630	114	52	47
3	33	61	171	133	2810	3410	e505	181	3300	107	55	44
4	31	64	145	90	3280	3710	e465	158	2300	103	54	41
5	27	63	148	52	2310	3790	e420	129	1540	100	51	39
6	27	63	199	83	2750	2710	e390	137	1280	115	47	36
7	27	62	167	4940	2220	2220	e345	136	1210	106	44	34
8	31	68	154	12400	2990	2030	e315	126	973	77	45	36
9	37	73	182	5380	3830	1690	e298	109	872	78	43	37
10	34	70	124	2810	2900	3530	286	97	795	66	43	42
11	34	72	91	1760	2420	3930	267	91	740	58	45	42
12	34	75	74	1430	2060	3050	244	90	661	51	49	44
13	37	74	59	2740	1830	2410	226	87	584	48	50	42
14	36	71	48	2560	1620	3360	214	83	515	44	54	40
15	36	69	62	1820	1510	3590	204	87	463	43	50	41
16	34	69	61	2000	2800	3030	196	85	430	48	46	39
17	33	69	60	1730	2740	2640	199	78	402	48	50	37
18	34	68	62	1290	2250	2330	207	79	388	50	66	37
19	33	65	59	1070	1760	2060	202	86	367	38	51	38
20	33	65	65	912	1550	1790	204	156	346	34	43	35
21	40	66	77	782	1510	1580	191	245	335	34	54	32
22	67	66	81	669	1890	1430	211	2320	271	40	63	32
23	388	79	80	575	2250	1320	570	3140	235	51	56	31
24	849	136	79	512	2350	1210	716	2080	222	52	55	38
25	672	199	84	509	2700	1130	471	1580	200	54	51	46
26	321	811	81	610	2890	1030	380	1360	186	48	53	59
27	457	617	75	590	2920	975	327	4060	169	49	54	46
28	354	339	76	513	2850	921	349	6480	154	49	69	36
29	181	215	75	829	---	e850	343	4050	139	44	60	32
30	129	162	74	2200	---	e760	288	4120	131	44	57	31
31	108	---	73	2620	---	e680	---	7390	---	49	54	---
TOTAL	4242	4070	3119	53893	69520	68416	10233	39268	30748	1961	1619	1185
MEAN	137	136	101	1738	2483	2207	341	1267	1025	63.3	52.2	39.5
MAX	849	811	199	12400	3830	3930	716	7390	6910	119	69	59
MIN	27	61	48	52	1510	680	191	78	131	34	43	31
AC-FT	8410	8070	6190	106900	137900	135700	20300	77890	60990	3890	3210	2350
a	5150	4990	5050	5070	4400	4950	4650	5440	5660	5750	5670	5470

CAL YR 1989 TOTAL 396096 MEAN 1085 MAX 12300 MIN 26 AC-FT 785700
WTR YR 1990 TOTAL 288274 MEAN 790 MAX 12400 MIN 27 AC-FT 571800

e Estimated.
a Diversion, in acre-feet, for municipal supply and industrial use; provided by Humboldt Bay Municipal Water District.

11481200 LITTLE RIVER NEAR TRINIDAD, CA

LOCATION.--Lat 41°00'40", long 124°04'50", in NE 1/4 sec.8, T.7 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, on right bank 0.5 mi upstream from Coon Creek, 4.7 mi southeast of Trinidad, and 9.1 mi north of Arcata.

DRAINAGE AREA.--40.5 mi^2.

PERIOD OF RECORD.--October 1955 to current year. Prior to October 1971, published as "at Crannell."

REVISED RECORDS.--WSP 2129: 1956-60. WDR CA-78-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 17.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No storage or diversion upstream from station.

AVERAGE DISCHARGE.--35 years, 141 ft^3/s, 102,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,830 ft^3/s, Mar. 18, 1975, gage height, 14.19 ft, from rating curve extended above 3,100 ft^3/s on basis of slope-area measurement at gage height 14.08 ft; minimum daily, 2.8 ft^3/s, Oct. 20-22, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 17, 18, 1953, reached a stage of 15.7 ft, observed by an employee of Hammond Lumber Co.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 7	unknown	*2,740	*7.20				

Minimum daily, 6.2 ft^3/s, Oct. 9-20, Nov. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	22	37	771	81	50	35	423	30	14	12
2	9.0	8.2	18	58	482	101	48	33	250	30	13	12
3	8.5	7.4	17	33	368	191	45	31	199	30	13	11
4	6.8	6.5	17	25	352	356	43	28	158	29	13	10
5	6.8	6.2	110	24	266	342	42	25	126	30	13	9.3
6	6.8	6.5	82	34	322	216	41	25	140	36	12	8.9
7	6.8	7.4	53	e1670	253	173	40	24	147	30	11	9.4
8	6.8	7.4	91	e1740	675	166	40	24	116	28	11	9.4
9	6.2	7.4	91	763	726	135	39	23	101	28	11	9.4
10	6.2	7.2	59	296	416	477	36	23	88	27	9.9	9.4
11	6.2	6.8	45	179	288	533	35	23	77	25	8.7	9.4
12	6.2	6.9	36	140	225	396	34	22	69	23	9.1	9.4
13	6.2	8.8	30	228	195	274	33	21	64	22	9.5	9.2
14	6.2	10	26	210	162	349	31	20	61	22	9.4	8.5
15	6.2	8.8	22	146	180	279	31	19	56	22	9.4	8.0
16	6.2	8.4	21	212	536	220	31	19	54	21	9.4	8.0
17	6.2	8.0	18	168	447	179	29	19	52	21	10	8.0
18	6.2	7.4	18	119	353	151	29	19	49	22	19	8.0
19	6.2	7.4	17	92	255	132	29	19	47	21	17	8.0
20	6.2	7.0	16	75	210	114	30	36	44	18	13	8.0
21	8.2	6.8	14	67	182	102	29	37	43	17	11	7.7
22	19	6.8	13	61	158	93	35	503	41	17	10	6.8
23	56	16	13	57	136	87	189	194	40	17	9.5	6.8
24	52	50	12	55	118	80	92	98	40	17	9.4	7.0
25	61	55	12	51	107	75	59	66	39	17	9.4	8.7
26	57	177	12	79	98	70	50	62	37	16	9.9	11
27	126	82	12	69	91	65	44	463	35	15	23	9.4
28	45	49	12	63	85	61	48	311	35	15	24	9.3
29	25	35	12	190	---	58	43	173	34	14	17	8.7
30	16	26	12	509	---	54	37	330	33	14	16	8.3
31	12	---	11	466	---	52	---	462	---	14	14	---
TOTAL	614.1	657.3	944	7916	8457	5662	1362	3187	2698	688	388.6	269.0
MEAN	19.8	21.9	30.5	255	302	183	45.4	103	89.9	22.2	12.5	8.97
MAX	126	177	110	1740	771	533	189	503	423	36	24	12
MIN	6.2	6.2	11	24	85	52	29	19	33	14	8.7	6.8
AC-FT	1220	1300	1870	15700	16770	11230	2700	6320	5350	1360	771	534

CAL YR 1989 TOTAL 37209.2 MEAN 102 MAX 2050 MIN 6.2 AC-FT 73800
WTR YR 1990 TOTAL 32843.0 MEAN 90.0 MAX 1740 MIN 6.2 AC-FT 65140

e Estimated.

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA

LOCATION.--Lat 40°54'22", long 123°48'51", in SE 1/4 NE 1/4 sec.15, T.6 N., R.3 E., Humboldt County, Hydrologic Unit 18010102, on right bank 400 ft upstream from Lupton Creek and 9.1 mi east of town of Blue Lake.

DRAINAGE AREA.--67.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1953 to September 1958, October 1972 to current year.

REVISED RECORDS.--WDR CA-78-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 850 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--23 years, 246 ft^3/s, 178,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft^3/s, Mar. 18, 1975, gage height, 13.70 ft, from rating curve extended above 6,400 ft^3/s; minimum daily, 1.8 ft^3/s, Oct. 19-22, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0300	*5,980	*9.66				

Minimum daily, 5.9 ft^3/s, Sept. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	22	38	22	548	442	174	81	829	55	16	10
2	10	20	50	26	534	498	165	76	529	55	15	9.6
3	9.2	19	50	21	622	577	156	72	406	53	14	9.2
4	8.6	18	50	20	556	572	156	66	329	51	12	8.5
5	8.5	16	59	20	523	511	160	62	272	49	12	8.5
6	8.2	16	67	24	493	423	150	60	268	54	12	8.2
7	7.8	17	50	1430	461	381	142	59	260	50	11	8.1
8	7.6	16	49	e2900	527	346	136	56	218	46	12	8.1
9	7.5	16	52	e700	535	306	127	53	194	42	12	7.9
10	7.1	16	44	e400	470	578	119	52	177	39	11	7.6
11	6.8	16	37	281	e405	497	115	51	160	36	11	6.9
12	6.8	15	33	278	e365	437	109	50	149	34	9.8	7.1
13	6.8	16	31	e430	e320	396	102	49	140	32	9.9	7.5
14	6.8	16	29	e400	e283	739	99	47	130	30	9.7	7.3
15	6.8	16	28	e390	e265	607	96	46	120	29	9.2	7.3
16	6.8	15	26	e375	e385	525	92	45	113	28	9.2	7.3
17	6.8	15	25	364	e335	479	89	43	110	28	9.2	7.3
18	6.8	15	24	320	e280	443	89	42	101	29	12	7.3
19	6.8	14	23	286	e250	406	88	43	92	27	12	7.3
20	6.8	14	22	257	e232	363	86	62	86	25	10	7.2
21	7.6	14	21	238	e230	337	82	57	80	24	9.9	6.4
22	11	14	21	225	345	318	86	413	77	23	9.6	5.9
23	137	16	20	212	387	297	180	281	76	22	8.9	5.9
24	139	59	20	201	395	273	143	169	73	22	8.6	7.0
25	79	78	19	191	436	258	112	128	70	22	8.5	7.8
26	47	158	18	208	454	236	101	128	67	22	8.5	9.2
27	113	89	18	194	457	222	92	705	63	20	10	8.1
28	54	56	18	189	453	212	105	515	62	19	15	7.9
29	36	44	17	303	---	202	96	272	59	18	12	7.6
30	29	38	17	477	---	193	89	664	57	17	13	7.2
31	25	---	17	473	---	183	---	1020	---	17	11	---
TOTAL	831.1	894	993	11855	11546	12257	3536	5467	5367	1018	344.0	231.2
MEAN	26.8	29.8	32.0	382	412	395	118	176	179	32.8	11.1	7.71
MAX	139	158	67	2900	622	739	180	1020	829	55	16	10
MIN	6.8	14	17	20	230	183	82	42	57	17	8.5	5.9
AC-FT	1650	1770	1970	23510	22900	24310	7010	10840	10650	2020	682	459

CAL YR 1989 TOTAL 72256.8 MEAN 198 MAX 2530 MIN 5.4 AC-FT 143300
WTR YR 1990 TOTAL 54339.3 MEAN 149 MAX 2900 MIN 5.9 AC-FT 107800

e Estimated.

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.
CHEMICAL DATA: Water years 1974-75.
WATER TEMPERATURE: Water years 1973 to current year.
SEDIMENT DATA: Water years 1973 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1972 to September 1981, October 1981 to current year (storm season only).
SUSPENDED-SEDIMENT DISCHARGE: October 1972 to September 1981, October 1981 to current year (storm season only).

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 33.5 °C, Aug. 2, 1977; minimum recorded, 0.5 °C, Jan. 9, 1977.
SEDIMENT CONCENTRATION: Maximum daily mean, 11,200 mg/L, Mar. 18, 1975; minimum daily mean, 0 mg/L, at times in several years.
SEDIMENT LOAD: Maximum daily, 276,000 tons, Mar. 18, 1975; minimum daily, 0 ton, at times in several years.

EXTREMES FOR CURRENT YEAR (storm season only).--
SEDIMENT CONCENTRATION: Maximum daily mean, 2,020 mg/L, Jan. 8; minimum daily mean, 0 mg/L, on many days.
SEDIMENT LOAD: Maximum daily, 21,800 tons, Jan. 8; minimum daily, 0 ton on many days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT								
23...	1500	207	11.0	349	195	--	--	--
JAN								
08...	1335	4220	9.5	1550	17700	17	23	32
08...	1610	3750	9.5	1180	11900	20	26	35
09...	1445	665	9.0	227	--	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
OCT								
23...	--	--	95	--	--	--	--	--
JAN								
08...	42	52	61	72	82	89	97	100
08...	46	56	66	77	86	92	97	100
09...	--	--	76	82	89	95	97	100

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
AUG							
02...	1320	1	16	20.5	1	4	17
02...	1322	1	16	20.5	--	2	11
02...	1323	1	16	20.5	--	1	5
02...	1325	1	16	20.5	--	1	4
02...	1326	1	16	20.5	--	1	5
02...	1328	1	16	20.5	1	2	8
02...	1330	1	16	20.5	1	3	7

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
AUG							
02...	31	36	43	59	92	100	--
02...	27	42	61	81	99	100	--
02...	12	21	33	47	73	100	--
02...	11	17	24	33	63	100	--
02...	11	18	29	40	66	81	100
02...	17	28	46	71	96	100	--
02...	10	19	38	58	74	100	--

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)
JAN											
08...	1420	1000	1100	0.250	1355	1444	16	12.0	1800	9.5	311
09...	1523	1000	1100	0.250	1510	1535	16	2.00	660	9.0	31

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
JAN										
08...	1	3	11	26	38	49	61	73	84	100
09...	--	6	24	44	57	66	74	82	100	--

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	---	---	---	---	5.0	---	10.0
2	---	10.0	---	---	7.0	---	---
3	---	---	---	4.0	6.0	8.0	---
4	---	---	14.0	---	---	---	---
5	---	---	---	---	---	7.5	14.0
6	---	9.0	---	---	5.0	---	---
7	---	---	7.0	8.0	---	---	---
8	---	---	---	9.5	7.0	7.0	---
9	12.5	10.0	---	9.0	---	---	---
10	---	---	---	---	---	4.0	11.0
11	---	---	5.0	8.0	---	5.0	---
12	---	---	---	9.0	6.0	---	---
13	14.0	11.0	---	8.0	---	---	---
14	---	---	---	---	3.0	8.0	---
15	---	---	4.0	7.5	---	---	12.0
16	---	7.0	---	6.0	4.0	---	---
17	11.0	---	---	---	---	10.0	---
18	---	---	4.5	---	---	---	---
19	---	---	---	---	3.0	---	---
20	---	---	---	---	---	---	13.0
21	13.0	---	---	4.0	4.5	---	---
22	---	---	---	---	6.0	9.0	---
23	12.0	---	5.0	---	---	9.5	11.0
24	10.0	---	---	4.0	---	---	---
25	---	---	---	---	---	---	---
26	11.0	6.0	---	---	8.0	---	---
27	10.0	4.0	---	5.0	---	10.0	---
28	---	---	---	---	---	---	---
29	---	---	3.0	---	---	---	---
30	---	8.0	---	5.0	---	---	---
31	10.0	---	---	5.0	---	---	---

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	11	0	.00	22	0	.00	38	3	.31
2	10	0	.00	20	0	.00	50	3	.40
3	9.2	0	.00	19	0	.00	50	4	.54
4	8.6	0	.00	18	0	.00	50	4	.54
5	8.5	0	.00	16	0	.00	59	5	.80
6	8.2	0	.00	16	0	.00	67	3	.54
7	7.8	0	.00	17	2	.09	50	3	.40
8	7.6	0	.00	16	2	.09	49	4	.53
9	7.5	0	.00	16	4	.17	52	3	.42
10	7.1	0	.00	16	3	.13	44	3	.36
11	6.8	0	.00	16	2	.09	37	3	.30
12	6.8	0	.00	15	1	.04	33	3	.27
13	6.8	0	.00	16	1	.04	31	3	.25
14	6.8	0	.00	16	1	.04	29	3	.23
15	6.8	0	.00	16	0	.00	28	3	.23
16	6.8	0	.00	15	0	.00	26	3	.21
17	6.8	0	.00	15	0	.00	25	2	.13
18	6.8	0	.00	15	0	.00	24	2	.13
19	6.8	0	.00	14	0	.00	23	2	.12
20	6.8	0	.00	14	0	.00	22	1	.06
21	7.6	0	.00	14	0	.00	21	1	.06
22	11	10	.30	14	0	.00	21	0	.00
23	137	213	111	16	1	.04	20	0	.00
24	139	47	18	59	8	1.6	20	0	.00
25	79	13	2.8	78	15	4.5	19	0	.00
26	47	7	.89	158	22	9.4	18	0	.00
27	113	21	6.8	89	7	1.7	18	0	.00
28	54	12	1.7	56	4	.60	18	0	.00
29	36	5	.49	44	4	.48	17	0	.00
30	29	2	.16	38	4	.41	17	0	.00
31	25	0	.00	---	---	---	17	0	.00
TOTAL	831.1	---	142.14	894	---	19.42	993	---	6.83

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	JANUARY			FEBRUARY			MARCH		
1	22	1	.06	548	131	194	442	25	30
2	26	1	.07	534	70	101	498	50	74
3	21	0	.00	622	127	262	577	96	150
4	20	0	.00	556	113	170	572	74	114
5	20	0	.00	523	30	42	511	42	58
6	24	2	.13	493	42	56	423	27	31
7	1430	1130	6440	461	23	29	381	19	20
8	e2900	2020	21800	527	33	47	346	15	14
9	e700	370	700	535	61	88	306	12	9.9
10	e400	140	151	470	37	47	578	61	100
11	281	48	36	e405	22	24	497	34	46
12	278	45	49	e365	17	17	437	20	24
13	e430	94	109	e320	15	13	396	13	14
14	e400	37	40	e283	12	9.2	739	201	454
15	e390	17	18	e265	14	10	607	80	131
16	e375	20	20	e385	15	16	525	40	57
17	364	16	16	e335	13	12	479	19	25
18	320	12	10	e280	11	8.3	443	17	20
19	286	9	6.9	e250	8	5.4	406	16	18
20	257	7	4.9	e232	8	5.0	363	14	14
21	238	5	3.2	e230	13	9.9	337	12	11
22	225	5	3.0	345	25	23	318	10	8.6
23	212	4	2.3	387	27	28	297	9	7.2
24	201	4	2.2	395	25	27	273	8	5.9
25	191	4	2.1	436	28	33	258	7	4.9
26	208	5	2.8	454	29	36	236	6	3.8
27	194	3	1.6	457	28	35	222	5	3.0
28	189	3	1.5	453	27	33	212	5	2.9
29	303	93	80	---	---	---	202	5	2.7
30	477	142	183	---	---	---	193	4	2.1
31	473	40	51	---	---	---	183	4	2.0
TOTAL	11855	---	29733.76	11546	---	1380.8	12257	---	1458.0

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	APRIL		
1	174	4	1.9
2	165	4	1.8
3	156	4	1.7
4	156	3	1.3
5	160	5	2.2
6	150	4	1.6
7	142	4	1.5
8	136	3	1.1
9	127	3	1.0
10	119	2	.64
11	115	2	.62
12	109	3	.88
13	102	3	.83
14	99	4	1.1
15	96	4	1.0
16	92	4	.99
17	89	4	.96
18	89	3	.72
19	88	3	.71
20	86	3	.70
21	82	3	.66
22	86	3	.70
23	180	30	17
24	143	23	8.9
25	112	13	3.9
26	101	10	2.7
27	92	8	2.0
28	105	9	2.6
29	96	5	1.3
30	89	2	.48
31	---	---	---
TOTAL	3536	---	63.49
PERIOD	41912.1		32804.44

e Estimated.

11481500 REDWOOD CREEK NEAR BLUE LAKE, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1989..	831.10	142.14	0	142
NOVEMBER	894.00	19.42	0	19
DECEMBER	993.00	6.83	0	7
JANUARY 1990..	11855.00	29733.76	1170	30900
FEBRUARY	11546.00	1380.80	201	1580
MARCH	12257.00	1458.00	247	1700
APRIL	3536.00	63.49	0	63
PERIOD	41912.10	32804.44	1618	34411

11482110 LACKS CREEK NEAR ORICK, CA

LOCATION.--Lat 41°03'39", long 123°51'57", unsurveyed, Humboldt County, Hydrologic Unit 18010102, on right bank at private road bridge, 0.3 mi upstream from mouth, and 19 mi southeast of Orick.

DRAINAGE AREA.--16.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 480 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--10 years, 69.6 ft^3/s, 50,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,940 ft^3/s, Nov. 22, 1988, gage height, 27.99 ft; minimum daily, 0.16 ft^3/s, Sept. 1-4, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 880 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0230	*3,530	*27.37				

Minimum daily, 1.2 ft^3/s, Oct. 15-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3.4	6.2	9.8	422	96	17	10	383	8.0	2.4	2.2
2	1.9	3.1	5.4	11	358	105	16	9.3	208	7.8	2.4	2.1
3	1.6	2.9	4.9	5.7	325	136	15	8.3	135	7.4	2.3	2.0
4	1.5	2.7	4.8	4.7	266	208	14	7.6	99	7.1	2.2	1.9
5	1.5	2.7	24	5.0	261	189	14	7.1	77	8.5	2.1	1.8
6	1.4	2.6	20	17	303	135	13	6.6	74	9.3	2.1	1.8
7	1.4	2.5	14	1350	206	111	12	6.5	69	7.4	2.1	1.8
8	1.4	2.5	24	1590	321	92	12	6.2	57	6.5	2.1	1.8
9	1.3	2.4	21	615	423	78	11	6.0	50	6.0	1.9	1.7
10	1.3	2.4	16	293	336	211	10	5.8	43	5.3	1.7	1.7
11	1.3	2.3	12	144	253	171	9.8	5.8	37	4.9	1.7	1.6
12	1.3	2.3	9.9	159	187	145	9.4	5.6	33	4.4	1.7	1.6
13	1.3	2.5	8.5	250	143	127	8.8	5.3	30	4.3	1.7	1.6
14	1.3	2.5	6.9	152	108	264	8.4	5.1	27	4.1	1.8	1.6
15	1.2	2.4	6.0	110	101	226	8.1	4.9	24	4.0	1.8	1.6
16	1.2	2.3	5.5	113	144	173	8.1	4.6	22	4.0	1.7	1.6
17	1.2	2.2	5.0	87	125	134	8.2	4.4	21	3.8	1.8	1.5
18	1.2	2.2	4.7	69	102	104	8.1	4.4	18	3.8	2.5	1.5
19	1.2	2.2	4.3	57	89	82	7.9	5.0	16	3.7	2.8	1.5
20	1.3	2.1	3.9	46	85	67	8.0	14	15	3.5	2.3	1.5
21	1.7	2.1	3.8	38	101	55	7.7	16	14	3.4	2.0	1.4
22	2.6	2.1	3.6	34	158	47	8.7	147	13	3.3	2.0	1.3
23	14	4.2	3.5	29	195	40	28	96	13	3.1	1.9	1.3
24	25	16	3.4	26	195	35	17	60	12	3.1	1.8	1.4
25	13	24	3.3	24	186	31	13	44	12	3.1	1.8	1.4
26	20	64	3.2	32	164	28	12	55	11	3.0	1.8	1.5
27	25	28	3.2	26	139	25	11	263	9.9	2.9	3.0	1.5
28	10	15	3.1	25	115	23	14	220	9.5	2.7	3.2	1.5
29	5.8	11	3.0	57	---	21	12	122	9.1	2.6	2.8	1.5
30	4.3	8.1	2.9	336	---	19	11	299	8.7	2.5	2.9	1.4
31	3.8	---	3.0	275	---	18	---	467	---	2.5	2.4	---
TOTAL	153.2	224.7	243.0	5990.2	5811	3196	353.2	1921.5	1550.2	146.0	66.7	48.6
MEAN	4.94	7.49	7.84	193	208	103	11.8	62.0	51.7	4.71	2.15	1.62
MAX	25	64	24	1590	423	264	28	467	383	9.3	3.2	2.2
MIN	1.2	2.1	2.9	4.7	85	18	7.7	4.4	8.7	2.5	1.7	1.3
AC-FT	304	446	482	11880	11530	6340	701	3810	3070	290	132	96

CAL YR 1989 TOTAL 19290.95 MEAN 52.9 MAX 1140 MIN .97 AC-FT 38260
WTR YR 1990 TOTAL 19704.3 MEAN 54.0 MAX 1590 MIN 1.2 AC-FT 39080

11482110 LACKS CREEK NEAR ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-76, 1978 to current year.
CHEMICAL DATA: Water years 1975-76, 1978.
SEDIMENT DATA: Water years 1975, 1978 to current year.

REMARKS.--Prior to October 1975, published in U.S. Geological Survey Open-File Report 76-678, "Redwood National Park Studies." Zero bedload discharge observed for flows less than 42 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT					
31...	1120	3.9	8.0	2	0.02
DEC					
27...	1230	3.2	4.0	1	0.01
FEB					
01...	1255	494	6.5	326	435
MAR					
23...	1030	40	9.5	2	0.22

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)
FEB											
01...	1325	1000	1100	0.250	1315	1340	13	2.00	530	6.5	37

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
FEB										
01...	1	2	5	15	19	20	22	27	42	100

11482125 PANTHER CREEK NEAR ORICK, CA

LOCATION.--Lat 41°05'19", long 123°54'26", unsurveyed, Humboldt County, Hydrologic Unit 18010102, on right bank 300 ft upstream from mouth, 16 mi southeast of Orick.

DRAINAGE AREA.--6.07 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair for discharges above 2.0 ft^3/s, poor below. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--11 years, 25.2 ft^3/s, 18,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 839 ft^3/s, Feb. 17, 1986, gage height, 4.28 ft; minimum daily, 0.25 ft^3/s, Sept. 1-4, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0215	*247	*2.86				

Minimum daily, 1.1 ft^3/s, Oct. 15-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.0	3.5	5.2	66	25	16	7.8	47	10	3.4	2.1
2	1.9	1.9	3.4	4.7	64	26	16	7.6	40	10	3.0	2.1
3	e1.6	1.9	3.4	3.8	63	28	15	7.2	36	9.7	2.9	2.0
4	e1.5	1.9	3.2	3.8	63	33	14	6.8	33	9.3	3.0	2.0
5	e1.4	1.9	10	3.8	63	33	14	6.4	30	10	2.7	2.0
6	e1.3	1.9	7.0	6.0	63	30	13	6.1	32	10	2.7	2.0
7	e1.3	1.9	5.8	115	60	29	13	6.1	31	9.3	2.6	2.0
8	e1.3	2.0	8.1	176	81	29	12	6.1	28	8.9	2.7	2.0
9	e1.2	2.0	7.3	95	87	27	12	6.1	26	8.8	2.4	2.0
10	e1.2	2.0	6.2	59	77	40	11	6.1	25	8.0	2.4	2.0
11	e1.2	2.0	5.7	46	67	40	11	6.0	24	7.6	2.1	2.0
12	e1.2	2.0	5.3	42	59	38	10	5.7	23	7.3	2.1	2.0
13	e1.2	2.6	4.8	41	53	36	9.8	5.7	22	7.2	2.1	2.0
14	e1.2	2.3	4.7	37	47	45	9.4	5.7	21	6.8	2.1	2.0
15	e1.1	2.1	4.2	33	47	42	9.3	5.4	20	6.6	2.0	2.0
16	e1.1	2.0	4.2	34	55	40	8.9	5.4	19	6.5	2.0	2.0
17	e1.1	2.0	3.9	32	49	38	8.9	5.3	19	6.5	2.2	2.0
18	e1.1	2.0	3.8	31	44	36	8.8	5.0	18	6.6	3.6	1.9
19	e1.1	2.0	3.5	30	41	34	8.5	5.1	17	6.4	2.8	1.9
20	e1.2	2.0	3.4	26	38	32	8.4	8.1	16	6.1	2.4	1.9
21	e1.5	2.0	3.4	25	36	30	8.1	8.0	15	5.7	2.1	1.7
22	e2.5	2.0	3.4	23	35	29	9.6	23	14	5.5	2.1	1.7
23	e4.5	4.8	3.4	23	34	27	19	15	14	5.4	2.0	1.7
24	e8.6	5.6	3.0	23	32	26	12	12	13	5.3	2.0	1.7
25	e3.6	6.9	3.0	23	30	24	10	10	13	5.2	2.0	1.7
26	e5.0	13	3.0	26	29	23	9.3	11	12	5.0	2.1	1.9
27	e8.6	7.3	2.7	23	27	22	8.9	26	11	5.0	4.3	1.9
28	e3.8	5.7	2.7	24	26	20	9.6	25	11	4.3	3.6	1.9
29	e2.5	4.8	2.7	31	---	19	8.7	20	11	4.2	2.7	1.9
30	2.0	4.1	2.7	47	---	18	8.1	30	11	3.8	2.6	1.9
31	2.0	---	2.8	45	---	17	---	41	---	4.0	2.1	---
TOTAL	71.3	96.6	134.2	1137.3	1436	936	332.3	344.7	652	215.0	78.8	57.9
MEAN	2.30	3.22	4.33	36.7	51.3	30.2	11.1	11.1	21.7	6.94	2.54	1.93
MAX	8.6	13	10	176	87	45	19	41	47	10	4.3	2.1
MIN	1.1	1.9	2.7	3.8	26	17	8.1	5.0	11	3.8	2.0	1.7
AC-FT	141	192	266	2260	2850	1860	659	684	1290	426	156	115

CAL YR 1989 TOTAL 7197.7 MEAN 19.7 MAX 243 MIN 1.0 AC-FT 14280
WTR YR 1990 TOTAL 5492.1 MEAN 15.0 MAX 176 MIN 1.1 AC-FT 10890

e Estimated.

11482125 PANTHER CREEK NEAR ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to current year.
WATER TEMPERATURE: Water year 1980.
SEDIMENT DATA: Water years 1979 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1979 to September 1980.

REMARKS.--Zero-bedload discharge observed for flows less than 43 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
DEC					
13...	1230	5.0	5.0	3	0.04
MAR					
01...	1100	25	8.0	4	0.27
APR					
16...	1200	8.9	10.5	23	0.55

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
AUG								
14...	1025	1	2.2	14.0	1	2	6	25
14...	1030	1	2.2	14.0	--	--	--	1
14...	1035	1	2.2	14.0	--	1	2	8
14...	1040	1	2.2	14.0	--	1	3	8
14...	1045	1	2.2	14.0	--	1	3	10

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
AUG							
14...	43	52	62	77	98	100	--
14...	2	2	3	4	32	81	100
14...	16	25	48	70	88	100	--
14...	24	62	93	100	--	--	--
14...	19	30	43	57	78	100	--

11482500 REDWOOD CREEK AT ORICK, CA

LOCATION.--Lat 41°17'58", long 124°03'00", in NE 1/4 NE 1/4 sec.34, T.11 N., R.1 E., Humboldt County, Hydrologic Unit 18010102, on right bank on U.S. Highway 101, 0.8 mi north of Orick, 300 ft downstream from Prairie Creek, and 3.7 mi upstream from mouth.
DRAINAGE AREA.--277 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to September 1913, October 1953 to current year. Monthly discharge only for some periods, published in WSP 1315-B.
REVISED RECORDS.--WSP 1315-B: 1912-13.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 5.16 ft above National Geodetic Vertical Datum of 1929. Sept. 10, 1911, to Aug. 9, 1913, nonrecording gage at different datum. October 1953 to April 16, 1987, at site 0.9 mi downstream at same datum. May 7, 1987, to Aug. 3, 1987, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--39 years, 1,042 ft^3/s, 754,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,500 ft^3/s, Dec. 22, 1964, gage height, 24.0 ft, former site, from outside high-water marks; minimum daily, 2.1 ft^3/s, Oct. 20-22, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 18, 1953, reached a stage of 23.95 ft, former site, from floodmarks, discharge, 50,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0715	*18,100	*21.08				

Minimum daily, 22 ft^3/s, Oct. 17-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	79	101	155	3070	1170	626	356	3920	209	75	57
2	40	69	89	222	3120	1210	596	332	2520	206	73	53
3	33	59	90	155	2750	1540	560	307	1940	192	71	49
4	29	53	95	122	2940	1880	535	289	1620	186	69	49
5	28	49	297	119	2420	2110	519	278	1350	189	67	47
6	26	46	299	141	2830	1640	498	267	1280	212	67	45
7	26	43	219	5840	2430	1400	477	259	1300	193	66	44
8	25	42	292	13100	3330	1380	457	246	1100	181	64	43
9	24	41	349	5140	4040	1200	433	237	949	174	62	42
10	24	40	248	2250	3100	2360	407	233	852	166	60	41
11	24	39	192	1610	2540	2550	387	224	764	150	58	40
12	23	38	160	1330	2120	2150	369	222	694	146	56	39
13	23	42	138	1870	1840	1840	352	214	638	141	56	38
14	23	42	125	1670	1560	2500	336	207	586	135	57	36
15	23	41	113	1430	1460	2630	321	206	533	129	56	35
16	23	38	105	1400	2360	2240	315	199	490	123	55	34
17	22	37	99	1300	2110	2000	307	195	462	120	60	34
18	22	36	93	1160	1820	1840	307	194	421	119	75	33
19	22	35	89	1060	1550	1700	301	190	382	119	74	33
20	22	34	86	964	1400	1560	301	259	349	115	67	31
21	27	33	81	889	1360	1430	292	289	324	107	63	30
22	43	32	80	836	1580	1340	301	1400	297	102	60	29
23	245	40	76	786	1690	1230	791	1550	293	96	59	29
24	415	120	74	746	1620	1120	764	928	284	94	58	28
25	366	216	73	715	1530	1040	518	663	274	91	57	29
26	229	657	71	788	1450	956	452	643	259	89	56	30
27	387	443	71	758	1350	891	397	1940	246	85	61	29
28	264	239	69	715	1270	828	442	2780	237	82	83	28
29	162	161	67	959	---	770	436	1730	231	79	72	27
30	116	122	65	2030	---	714	393	2250	222	78	69	25
31	93	---	65	2380	---	667	---	4310	---	77	63	---
TOTAL	2881	2966	4071	52640	60640	47886	13190	23397	24817	4185	1989	1107
MEAN	92.9	98.9	131	1698	2166	1545	440	755	827	135	64.2	36.9
MAX	415	657	349	13100	4040	2630	791	4310	3920	212	83	57
MIN	22	32	65	119	1270	667	292	190	222	77	55	25
AC-FT	5710	5880	8070	104400	120300	94980	26160	46410	49220	8300	3950	2200

CAL YR 1989 TOTAL 293955 MEAN 805 MAX 12500 MIN 20 AC-FT 583100
WTR YR 1990 TOTAL 239769 MEAN 657 MAX 13100 MIN 22 AC-FT 475600

11482500 REDWOOD CREEK AT ORICK, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955-56, 1959 to current year.
CHEMICAL DATA: Water years 1959-66, 1973-81.
WATER TEMPERATURE: Water years 1966 to current year.
SEDIMENT DATA: Water years 1955-56, 1970 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1965 to September 1981, October 1981 to current year (storm season only).
SUSPENDED-SEDIMENT DISCHARGE: March 1970 to September 1981, October 1981 to current year (storm season only).

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 9,610 mg/L, Mar. 18, 1975; minimum daily mean, 0 mg/L, Nov. 10-12, 1986, Apr. 20, 29, 30, 1987, and on several days during 1989-90.
SEDIMENT LOAD: Maximum daily, 1,070,000 tons, Mar. 18, 1975; minimum daily, 0 ton, Nov. 10-12, 1986, Apr. 20, 29, 30, 1987, and on several days during 1989-90.

EXTREMES FOR CURRENT YEAR (storm season only).--
SEDIMENT CONCENTRATION: Maximum daily mean, 2,700 mg/L, Jan. 8; minimum daily mean, 0 mg/L, on several days.
SEDIMENT LOAD: Maximum daily, 102,000 tons, Jan. 8; minimum daily, 0 ton, on several days.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN						
08...	1505	11500	11.0	1920	59600	7[illegible]

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
OCT								
06...	1124	1	26	--	1	2	4	8
06...	1125	1	26	--	--	--	--	--
06...	1126	1	26	1.0	1	1	2	2
06...	1127	1	26	--	--	--	2	6
06...	1128	1	26	--	--	--	2	12
06...	1129	1	26	--	--	--	1	10
06...	1130	1	26	--	--	--	1	15
06...	1131	1	26	--	--	1	2	14
06...	1132	1	26	--	1	2	3	12
06...	1133	1	26	--	1	2	3	13
06...	1134	1	26	--	1	2	2	5
06...	1135	1	26	--	1	2	3	9
06...	1136	1	26	--	1	2	3	5
06...	1137	1	26	--	6	9	9	10
06...	1138	1	26	--	6	11	16	23
AUG								
28...	1435	1	86	--	--	--	--	--
28...	1436	1	86	--	--	--	1	4
28...	1437	1	86	--	--	--	1	5
28...	1438	1	86	--	--	--	--	2
28...	1439	1	86	--	1	1	4	16
28...	1440	1	86	--	1	2	3	11
28...	1441	1	86	--	1	1	5	22
28...	1442	1	86	--	5	7	9	27
28...	1443	1	86	--	4	9	12	29
28...	1444	1	86	--	1	2	2	2

11482500 REDWOOD CREEK AT ORICK, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
OCT							
06...	12	17	24	32	44	57	100
06...	--	--	--	--	2	28	100
06...	2	9	30	66	92	100	--
06...	16	28	48	77	95	100	--
06...	26	38	51	68	92	100	--
06...	34	53	64	72	87	100	--
06...	29	34	41	57	83	100	--
06...	24	29	36	49	66	82	100
06...	22	26	33	49	74	89	100
06...	26	30	40	60	82	92	100
06...	12	19	27	50	77	91	100
06...	28	37	45	57	78	94	100
06...	23	37	52	72	90	98	100
06...	10	17	41	79	97	100	--
06...	31	40	52	63	78	100	--
AUG							
28...	4	20	44	68	91	100	--
28...	15	31	44	63	87	100	--
28...	20	34	48	66	90	100	--
28...	26	49	69	89	100	--	--
28...	25	32	41	54	73	94	100
28...	40	56	67	80	94	100	--
28...	36	42	50	65	85	100	--
28...	51	60	67	75	87	100	--
28...	54	59	63	69	84	100	--
28...	9	21	41	68	91	100	--

PARTICLE SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	START-ING TIME (2400 HOURS)	END-ING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)
JAN										
08...	1355	1000	1100	0.250	1335	1415	20	10.0	12400	10.5
08...	1435	1000	1100	0.250	1420	1450	20	10.0	11700	10.5
09...	1245	1000	1100	0.250	1225	1300	19	4.00	4550	10.0
09...	1315	1000	1100	0.250	1303	1331	19	4.00	4430	10.0
09...	1505	1000	1100	0.250	1453	1520	19	4.00	4090	10.5
09...	1535	1000	1100	0.250	1522	1546	19	4.00	3980	10.5
12...	1240	1000	1100	0.250	1230	1248	21	10.0	1280	10.0
12...	1300	1000	1100	0.250	1252	1309	21	10.0	1280	10.0
FEB										
09...	1235	1000	1100	0.250	1226	1244	19	5.00	3980	8.0
09...	1300	1000	1100	0.250	1251	1308	19	5.00	3930	8.0
MAR										
09...	1135	1000	1100	0.250	1115	1155	22	3.00	1200	7.0

DATE	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
JAN										
08...	1260	2	8	16	26	38	60	84	98	100
08...	1260	2	9	21	29	41	57	80	97	100
09...	2080	1	2	4	13	35	56	75	92	100
09...	2080	1	5	11	24	40	57	76	91	100
09...	1810	1	4	15	35	56	72	87	95	100
09...	1810	1	5	15	37	57	73	89	100	--
12...	465	1	10	55	83	94	98	100	--	--
12...	465	1	10	53	84	96	99	100	--	--
FEB										
09...	2730	--	8	21	36	55	76	92	100	--
09...	2730	1	6	18	34	52	72	89	98	100
MAR										
09...	481	--	8	29	57	80	94	100	--	--

11482500 REDWOOD CREEK AT ORICK, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	---	---	---	7.5	7.0	---	---
2	---	---	11.5	8.0	8.0	9.0	---
3	---	15.0	---	---	8.0	---	---
4	---	---	13.0	4.0	7.5	9.0	---
5	---	---	12.0	---	7.5	9.5	---
6	---	---	12.0	8.0	7.0	6.5	---
7	---	---	---	11.0	6.5	---	---
8	---	---	11.0	11.0	8.0	7.0	---
9	---	---	11.0	11.0	9.0	6.5	---
10	---	---	11.0	11.0	9.5	7.5	---
11	---	---	---	11.0	7.0	7.0	---
12	---	---	9.5	9.0	---	9.0	11.5
13	---	---	---	10.0	5.0	6.0	---
14	---	12.5	9.5	9.0	---	---	---
15	---	---	---	10.0	4.0	11.0	---
16	---	---	9.5	9.0	7.0	10.0	---
17	---	---	---	---	6.5	---	---
18	---	---	10.0	6.0	8.0	10.0	---
19	---	15.0	---	---	---	---	---
20	---	---	---	5.0	5.5	9.0	---
21	---	---	6.0	---	---	---	---
22	---	---	---	6.0	7.0	9.0	---
23	---	---	5.5	---	---	---	---
24	---	13.0	---	5.0	7.0	9.5	---
25	---	9.0	---	---	---	---	---
26	13.0	9.0	5.5	7.0	8.0	9.0	---
27	15.0	10.0	---	---	---	---	---
28	10.0	10.0	8.0	6.0	8.5	9.0	---
29	15.0	---	---	6.5	---	---	---
30	---	11.5	4.5	7.5	---	9.5	15.0
31	15.0	---	---	6.0	---	---	---

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	52	2	.28	79	2	.43	101	2	.55
2	40	1	.11	69	2	.37	89	1	.25
3	33	1	.09	59	2	.32	90	1	.25
4	29	1	.08	53	2	.29	95	1	.26
5	28	1	.08	49	2	.26	297	54	43
6	26	1	.07	46	1	.12	299	7	6.1
7	26	1	.07	43	1	.12	219	4	2.4
8	25	1	.07	42	1	.11	292	13	14
9	24	1	.06	41	1	.11	349	9	8.5
10	24	1	.06	40	1	.11	248	4	2.7
11	24	1	.06	39	1	.11	192	2	1.0
12	23	1	.06	38	1	.10	160	0	.00
13	23	1	.06	42	1	.11	138	0	.00
14	23	1	.06	42	2	.23	125	1	.34
15	23	1	.06	41	2	.22	113	1	.31
16	23	1	.06	38	1	.10	105	2	.57
17	22	1	.06	37	1	.10	99	1	.27
18	22	1	.06	36	1	.10	93	0	.00
19	22	1	.06	35	0	.00	89	0	.00
20	22	1	.06	34	1	.09	86	1	.23
21	27	1	.07	33	1	.09	81	2	.44
22	43	2	.23	32	1	.09	80	1	.22
23	245	6	4.0	40	7	1.2	76	1	.21
24	415	4	4.5	120	23	6.9	74	0	.00
25	366	1	.99	216	11	6.5	73	0	.00
26	229	15	11	657	125	238	71	0	.00
27	387	36	38	443	19	25	71	0	.00
28	264	7	5.0	239	5	3.2	69	1	.19
29	162	1	.44	161	4	1.7	67	1	.18
30	116	0	.00	122	4	1.3	65	1	.18
31	93	1	.25	---	---	---	65	1	.18
TOTAL	2881	---	66.05	2966	---	287.38	4071	---	82.33

11482500 REDWOOD CREEK AT ORICK, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	155	5	2.1	3070	308	2830	1170	35	111
2	222	5	3.0	3120	218	1840	1210	36	118
3	155	2	.84	2750	167	1360	1540	62	258
4	122	0	.00	2940	204	1620	1880	158	897
5	119	0	.00	2420	117	797	2110	105	598
6	141	140	53	2830	145	1110	1640	39	173
7	5840	2160	42700	2430	75	492	1400	25	94
8	13100	2700	102000	3330	142	1280	1380	27	101
9	5140	625	8670	4040	197	2150	1200	20	65
10	2250	223	1350	3100	88	737	2360	317	2290
11	1610	126	548	2540	77	528	2550	120	826
12	1330	90	323	2120	72	412	2150	50	290
13	1870	215	1110	1840	67	333	1840	33	164
14	1670	76	343	1560	56	236	2500	130	1020
15	1430	62	239	1460	56	239	2630	125	888
16	1400	63	239	2360	133	852	2240	63	381
17	1300	43	151	2110	63	359	2000	41	221
18	1160	29	91	1820	44	216	1840	33	164
19	1060	21	60	1550	47	197	1700	28	129
20	964	15	39	1400	53	200	1560	26	110
21	889	12	29	1360	51	187	1430	22	85
22	836	9	20	1580	52	222	1340	20	72
23	786	7	15	1690	52	237	1230	19	63
24	746	5	10	1620	49	214	1120	17	51
25	715	4	7.7	1530	45	186	1040	13	37
26	788	8	17	1450	43	168	956	10	26
27	758	6	12	1350	42	153	891	9	22
28	715	4	7.7	1270	41	141	828	9	20
29	959	35	92	---	---	---	770	8	17
30	2030	463	2800	---	---	---	714	5	9.6
31	2380	170	1090	---	---	---	667	4	7.2
TOTAL	52640	---	162022.34	60640	---	19296	47886	---	9307.8

		APRIL	
1	626	4	6.8
2	596	4	6.4
3	560	3	4.5
4	535	3	4.3
5	519	3	4.2
6	498	3	4.0
7	477	3	3.9
8	457	3	3.7
9	433	3	3.5
10	407	3	3.3
11	387	3	3.1
12	369	8	8.0
13	352	6	5.7
14	336	5	4.5
15	321	5	4.3
16	315	4	3.4
17	307	4	3.3
18	307	4	3.3
19	301	3	2.4
20	301	3	2.4
21	292	3	2.4
22	301	4	3.3
23	791	31	71
24	764	16	33
25	518	11	15
26	452	9	11
27	397	8	8.6
28	442	10	12
29	436	7	8.2
30	393	5	5.3
31	---	---	---
TOTAL	13190	---	254.8
PERIOD	184274		191316.67

11482500 REDWOOD CREEK AT ORICK, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1989..	2881.00	66.05	28	94
NOVEMBER	2966.00	287.38	65	352
DECEMBER	4071.00	82.33	14	96
JANUARY 1990..	52640.00	162022.31	15700	178000
FEBRUARY	60640.00	19296.00	26700	46000
MARCH	47886.00	9307.80	19100	28400
APRIL	13190.00	254.80	608	863
PERIOD	184274.00	191316.67	62215	253805

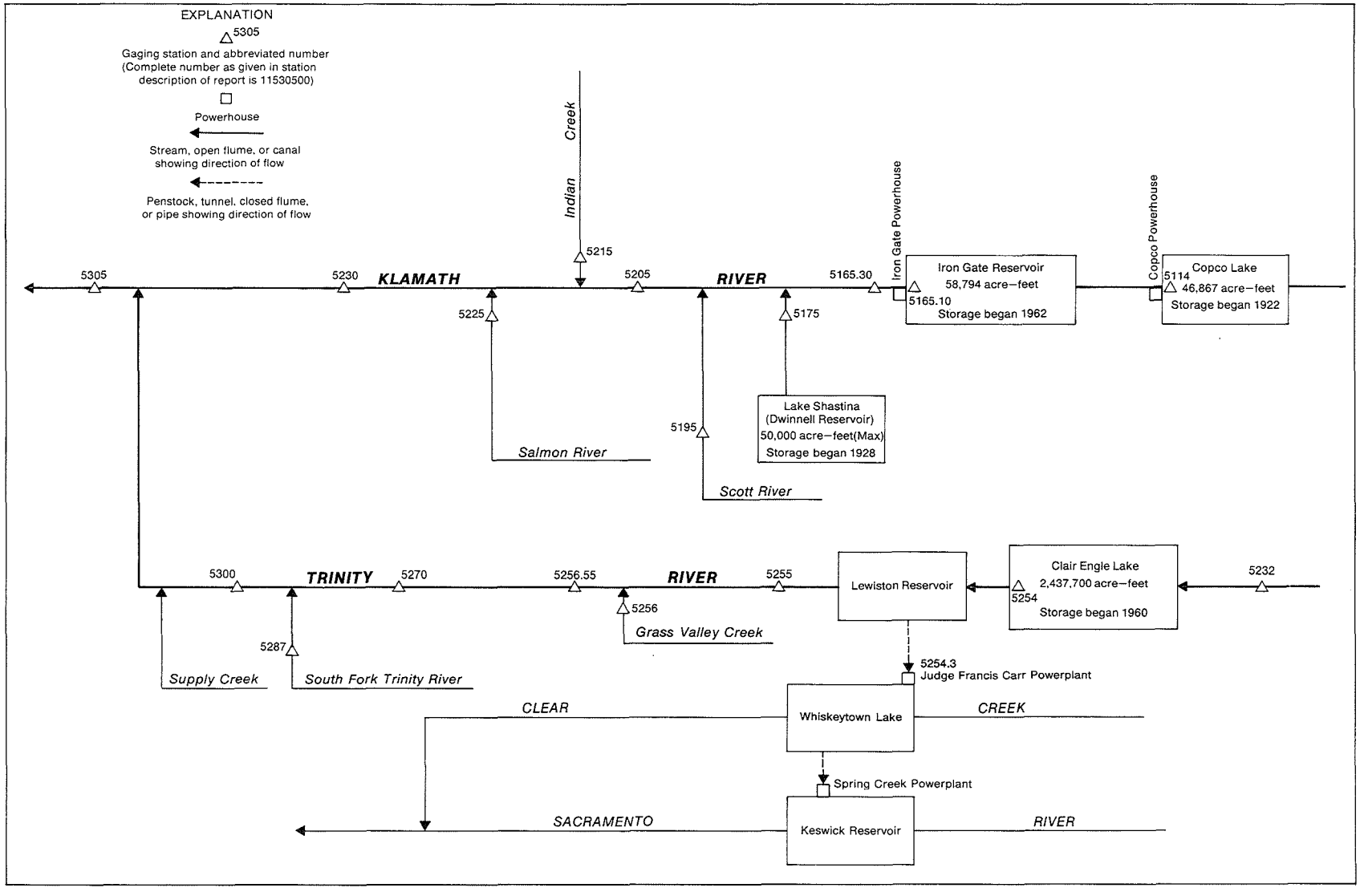

Figure 25. Diversions and storage in Klamath River and Trinity River basins.

RESERVOIRS IN KLAMATH RIVER BASIN, CA

11511400 COPCO LAKE NEAR COPCO.--Lat 41°58'46", long 122°20'00", in SE 1/4 SW 1/4 sec.29, T.48 N., R.4 W., Siskiyou County, Hydrologic Unit 18010206, 12.7 mi northeast of Hornbrook. DRAINAGE AREA, 4,300 mi^2, approximately (not including Lost River, Butte Creek or Lower Klamath Lake basins). PERIOD OF RECORD, October 1967 to current year (monthend contents only). GAGE, pressure device and telemark read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Power and Light Co.). Monthend contents computed from capacity table provided by Pacific Power and Light Co., dated Aug. 25, 1964.

REMARKS.--Lake is formed by gravity-type dam completed in 1922. Usable capacity, 17,107 acre-ft between elevations 2,607.5 ft, top of tainter gates, and 2,588.5 ft, invert to powerplant intake. Dead storage 29,760 acre-ft below elevation 2,588.5 ft. Figures given represent total contents at 0800 hours. Lake is used for power generation. See schematic diagram of Klamath River and Trinity River basins.

COOPERATION.--Records were provided by Pacific Power and Light Co. in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 46,818 acre-ft, June 24, 1969, elevation, 2,607.45 ft; minimum since first filling, 30,360 acre-ft, Aug. 19, 1971, elevation, 2,589.24 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 46,136 acre-ft, Aug. 27, elevation, 2,606.76 ft; minimum, 40,558 acre-ft, Feb. 5, elevation, 2,600.92 ft.

11516510 IRON GATE RESERVOIR NEAR HORNBROOK.--Lat 41°55'58", long 122°26'06", in SW 1/4 SW 1/4 sec.9, T.47 N., R.5 W., Siskiyou County, Hydrologic Unit 18010206, 6.6 mi northeast of Hornbrook. DRAINAGE AREA, 4,573 mi^2, approximately (not including Lost River, Butte Creek, or Lower Klamath Lake basins). PERIOD OF RECORD, October 1967 to current year (monthend contents only). GAGE, pressure device and telemark read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Power and Light Co.). Monthend contents computed from capacity table provided by Pacific Power and Light Co., dated Feb. 15, 1960.

REMARKS.--Reservoir is formed by earth and rockfill dam completed in 1962. Usable capacity, 58,387 acre-ft, between elevations 2,328.0 ft, crest of spillway, and 2,184.75 ft, invert to diversion tunnel. Dead storage 407 acre-ft. Normal operating pool is from elevations 2,305.0 ft, capacity, 39,963 acre-ft, to 2,328.0 ft, capacity, 58,794 acre-ft. Figures given represent total contents at 0800 hours. Reservoir is used for power generation and recreation. See schematic diagram of Klamath River and Trinity River basins.

COOPERATION.--Records were provided by Pacific Power and Light Co. in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 61,776 acre-ft, Mar. 3, 1972, elevation, 2,330.96 ft; minimum since first filling, 50,103 acre-ft, Dec. 9, 1968, elevation, 2,318.40 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 59,794 acre-ft, Apr. 5, elevation, 2,329.01 ft; minimum, 54,622 acre-ft, Apr. 18, elevation, 2,323.58 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
	11511400 COPCO LAKE			11516510 IRON GATE RESERVOIR		
Sept. 30	2,603.30	42,792	--	2,325.98	56,848	--
Oct. 31	2,604.16	43,612	+820	2,326.68	57,516	+668
Nov. 30	2,604.30	43,746	+134	2,325.67	56,557	-959
Dec. 31	2,602.27	41,819	-1,927	2,325.08	56,003	-554
CAL YR 1989	--	--	-1,783	--	--	-685
Jan. 31	2,605.17	44,584	+2,765	2,327.99	58,784	+2,781
Feb. 28	2,603.48	42,963	-1,621	2,326.58	57,420	-1,364
Mar. 31	2,603.68	43,154	+191	2,328.27	59,061	+1,641
Apr. 30	2,602.36	41,905	-1,249	2,324.81	55,752	-3,309
May 31	2,604.30	43,746	+1,841	2,326.78	57,612	+1,860
June 30	2,604.20	43,650	-96	2,327.56	58,366	+754
July 31	2,603.15	42,650	-1,000	2,326.19	57,048	-1,318
Aug. 31	2,605.60	45,002	+2,352	2,326.30	57,154	+106
Sept. 30	2,604.79	44,217	-785	2,326.43	57,278	+124
WTR YR 1990	--	--	+1,425	--	--	+430

11516530 KLAMATH RIVER BELOW IRON GATE DAM, CA

LOCATION.--Lat 41°55'41", long 122°26'35", in SE 1/4 NE 1/4 sec.17, T.47 N., R.5 W., Siskiyou County, Hydrologic Unit 18010206, on left bank 0.1 mi downstream from Bogus Creek, 0.6 mi downstream from Iron Gate Dam, and 5.9 mi northeast of Hornbrook.

DRAINAGE AREA.--4,630 mi^2, approximately (not including Lost River, Butte Creek, or Lower Klamath Lake basins).

PERIOD OF RECORD.--October 1960 to current year.
CHEMICAL DATA: Water years 1962-81.
WATER TEMPERATURE: Water years 1963-80.

GAGE.--Water-stage recorder. Datum of gage is 2,162.44 ft above National Geodetic Vertical Datum of 1929 (levels by Pacific Corp. formerly Pacific Power & Light Co.).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Upper Klamath Lake, OR, capacity, 523,700 acre-ft; Iron Gate Reservoir (station 11516510), other smaller reservoirs, and diversions upstream from station. See schematic diagram of Klamath River and Trinity River basins.

AVERAGE DISCHARGE.--30 years, 2,209 ft^3/s, 1,600,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft^3/s, Dec. 22, 1964, gage height, 13.63 ft, from rating curve extended above 15,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 539 ft^3/s, July 7, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,360 ft^3/s, Jan. 9, gage height, 5.55 ft; minimum daily, 717 ft^3/s, July 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	1400	1630	1410	2300	1790	2270	1040	953	738	722	1030
2	1340	1400	1640	1410	2300	1810	2260	1020	1090	748	741	1030
3	1340	1400	1630	1400	2310	1820	2260	1020	1090	749	755	1030
4	1350	1400	1630	1410	2350	1820	2260	1020	1340	736	759	1030
5	1350	1400	1640	1410	2140	2280	2110	1020	1390	733	768	1030
6	1350	1400	1630	1410	1790	2630	1780	1020	1390	732	770	1030
7	1350	1400	1630	1460	1790	2650	1770	1020	1190	730	769	1030
8	1360	1400	1630	2120	1790	2660	1770	1020	847	725	768	1030
9	1360	1400	1630	3310	1790	2540	1600	1020	733	739	771	1030
10	1360	1400	1630	3000	1790	2200	1340	1020	733	740	785	1030
11	1370	1400	1620	1800	1790	2170	1350	1020	729	734	1040	1030
12	1370	1400	1620	1790	1790	2130	1340	1020	724	733	1050	1030
13	1370	1390	1620	1800	1790	2110	1340	1020	722	737	1050	1030
14	1380	1390	1620	1800	1780	2110	1340	1020	721	732	1050	1030
15	1380	1390	1620	1790	1790	2130	1340	1020	726	728	1050	1030
16	1380	1390	1620	1790	1790	2010	1340	1020	734	731	1040	1030
17	1390	1390	1620	1790	1790	1800	1350	1020	736	727	1030	1040
18	1400	1390	1610	1790	1790	1800	1330	1030	822	727	1030	1350
19	1410	1390	1610	1790	1790	1800	1340	1030	737	733	1030	1350
20	1410	1390	1430	1780	1790	1790	1340	1030	744	728	1040	1360
21	1410	1400	1410	1780	1790	1790	1340	1030	745	724	1040	1360
22	1410	1400	1400	1780	1590	1780	1350	1070	737	722	1040	1360
23	1420	1400	1400	1780	1410	1770	1360	1090	744	721	1030	1340
24	1410	1400	1400	1780	1410	1770	1350	1040	737	721	1030	1330
25	1410	1400	1400	1790	1410	1770	1350	1030	741	718	1030	1340
26	1410	1400	1400	1790	1410	1760	1350	1030	755	718	1030	1340
27	1410	1400	1400	1790	1530	1760	1350	1040	739	717	1160	1340
28	1400	1400	1410	1790	1790	1800	1350	1050	730	722	1340	1340
29	1400	1410	1410	1790	---	2370	1350	1030	743	723	1340	1350
30	1400	1480	1410	1790	---	2290	1360	1070	743	723	1270	1350
31	1400	---	1410	2060	---	2280	---	1080	---	722	1030	---
TOTAL	42840	42010	47760	56180	50580	63190	46340	32010	25565	22611	30358	35030
MEAN	1382	1400	1541	1812	1806	2038	1545	1033	852	729	979	1168
MAX	1420	1480	1640	3310	2350	2660	2270	1090	1390	749	1340	1360
MIN	1340	1390	1400	1400	1410	1760	1330	1020	721	717	722	1030
AC-FT	84970	83330	94730	111400	100300	125300	91920	63490	50710	44850	60220	69480

CAL YR 1989 TOTAL 757774 MEAN 2076 MAX 9780 MIN 731 AC-FT 1503000
WTR YR 1990 TOTAL 494474 MEAN 1355 MAX 3310 MIN 717 AC-FT 980800

11517500 SHASTA RIVER NEAR YREKA, CA

LOCATION.--Lat 41°49'23", long 122°35'40", in SE 1/4 NE 1/4 sec.24, T.46 N., R.7 W., Siskiyou County, Hydrologic Unit 18010207, on right bank 24 mi downstream from Lake Shastina, 0.5 mi upstream from mouth, and 7 mi north of Yreka.
DRAINAGE AREA.--793 mi^2.
PERIOD OF RECORD.--October 1933 to December 1941, December 1944 to current year.
CHEMICAL DATA: Water years 1959-79.
WATER TEMPERATURE: Water years 1965-79.
SEDIMENT DATA: Water years 1955-56, 1958-62.
REVISED RECORDS.--WSP 1929: Drainage area.
GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,000 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 2, 1933, nonrecording gage at same site and datum.
REMARKS.--No estimated daily discharges. Records fair. Low flow completely regulated by Lake Shastina (formerly Lake Dwinnell) beginning in 1928; storage limited to 50,000 acre-ft. Small powerplant, 5.6 miles upstream, has operated intermittently since summer of 1987. Many diversions upstream from station for irrigation. See schematic diagram of Klamath River and Trinity River basins.
AVERAGE DISCHARGE.--53 years (water years 1934-41, 1946-90), 186 ft^3/s, 134,800 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft^3/s, Dec. 22, 1964, gage height, 12.92 ft, in gage well, 13.85 ft, from floodmarks, from rating curve extended above 4,100 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 1.5 ft^3/s, Aug. 24, 1981, July 17, 1985.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 630 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	1930	*725	*5.06				

Minimum daily, 11 ft^3/s, July 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	165	166	160	177	210	158	68	262	29	26	27
2	141	163	165	163	178	222	148	64	242	30	20	33
3	142	163	165	160	176	266	126	65	197	26	16	35
4	142	162	165	160	181	260	104	52	150	25	13	34
5	142	162	167	159	183	300	107	52	128	24	17	29
6	140	161	167	161	180	302	107	46	125	26	18	27
7	146	161	166	239	176	275	95	34	120	35	19	21
8	144	162	169	628	175	266	76	30	79	32	28	18
9	142	164	170	468	174	262	73	24	67	31	25	14
10	142	168	167	323	174	270	66	27	57	32	18	23
11	141	167	165	236	174	275	53	30	57	19	17	20
12	148	167	164	210	174	262	47	31	55	16	16	34
13	146	166	164	203	174	248	44	37	48	14	14	36
14	145	165	163	202	171	247	54	24	47	15	12	35
15	146	163	163	195	171	258	58	36	48	12	12	29
16	147	163	163	192	173	251	46	44	45	25	25	27
17	146	165	162	191	174	244	59	28	55	21	27	32
18	146	164	160	183	173	243	77	20	56	46	24	35
19	147	164	160	178	173	231	71	20	46	67	24	36
20	152	163	160	175	174	218	75	47	38	50	29	43
21	150	163	158	172	177	217	94	64	37	46	33	48
22	153	163	159	171	193	210	84	100	35	42	35	44
23	178	165	159	171	204	218	76	300	24	41	33	28
24	210	168	157	170	211	219	105	281	16	37	24	23
25	194	171	158	169	213	215	103	199	20	24	23	54
26	177	179	157	170	214	215	84	162	40	19	23	96
27	177	176	157	168	214	214	73	155	35	18	25	87
28	174	170	157	168	211	199	76	199	43	13	25	89
29	169	168	158	171	---	183	74	216	37	11	22	90
30	165	167	158	177	---	174	84	207	30	18	24	91
31	166	---	158	178	---	171	---	249	---	25	29	---
TOTAL	4802	4968	5027	6471	5142	7345	2497	2911	2239	869	696	1238
MEAN	155	166	162	209	184	237	83.2	93.9	74.6	28.0	22.5	41.3
MAX	210	179	170	628	214	302	158	300	262	67	35	96
MIN	140	161	157	159	171	171	44	20	16	11	12	14
AC-FT	9520	9850	9970	12840	10200	14570	4950	5770	4440	1720	1380	2460

CAL YR 1989 TOTAL 54054 MEAN 148 MAX 756 MIN 11 AC-FT 107200
WTR YR 1990 TOTAL 44205 MEAN 121 MAX 628 MIN 11 AC-FT 87680

11519500 SCOTT RIVER NEAR FORT JONES, CA

LOCATION.--Lat 41°38'27", long 123°00'50", in NE 1/4 NE 1/4 sec.29, T.44 N., R.10 W., Siskiyou County, Hydrologic Unit 18010208, on right bank 1.8 mi upstream from Snow Creek and 9.0 mi west of Fort Jones.
DRAINAGE AREA.--653 mi^2.
PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only October to December 1941, published in WSP 1315-B.
CHEMICAL DATA: Water years 1959-79.
SEDIMENT DATA: Water years 1955-56.
REVISED RECORDS.--WSP 1445: 1942-43(M), 1946(M), 1948. WSP 1715: 1951-52(M). WSP 1929: Drainage area.
GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,623.80 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1966, water-stage recorder 400 ft downstream at datum 2.00 ft higher.
REMARKS.--Records good. Diversions for irrigation of about 30,000 acres upstream from station. See schematic diagram of Klamath River and Trinity River basins.
AVERAGE DISCHARGE.--49 years, 649 ft^3/s, 470,200 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,600 ft^3/s, Dec. 22, 1964, gage height, 25.34 ft, from floodmarks, from rating curve extended above 15,000 ft^3/s on basis of slope-area measurement at 21.40 ft, site and datum then in use; minimum daily, 5.0 ft^3/s, several days during August 1981.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	1645	*5,170	*11.73				

Minimum daily, 7.9 ft^3/s, Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	169	134	115	293	460	500	350	1060	111	28	10
2	47	160	133	115	281	565	505	312	980	104	24	10
3	47	153	133	115	280	855	494	285	1020	103	21	10
4	49	149	136	112	286	827	488	268	963	98	18	10
5	48	145	223	107	281	728	525	250	800	93	17	9.0
6	47	145	316	109	277	638	560	245	712	91	16	7.9
7	47	143	254	449	265	590	558	246	660	85	16	8.6
8	46	138	222	4040	262	563	584	239	564	78	15	8.9
9	45	135	217	2620	271	534	541	246	492	72	14	9.3
10	43	134	202	1330	276	556	505	233	442	71	14	9.7
11	43	133	186	931	276	548	487	219	393	66	13	10
12	43	133	173	749	274	506	474	211	355	58	13	10
13	43	133	165	844	265	476	460	197	320	55	13	10
14	41	131	159	818	249	465	475	187	293	53	13	11
15	41	131	155	667	245	456	507	179	271	49	12	11
16	41	129	151	581	259	447	539	170	255	44	12	11
17	41	127	148	517	260	446	655	157	248	43	12	11
18	41	126	146	463	252	488	703	146	240	44	12	13
19	41	124	141	429	241	520	636	141	233	43	12	13
20	44	122	138	394	237	555	600	142	222	70	12	13
21	45	122	134	370	238	584	559	151	208	63	11	13
22	45	121	132	355	242	617	521	254	192	52	12	13
23	e672	122	131	341	252	642	645	816	179	47	11	13
24	e871	129	129	330	265	635	712	634	171	45	11	14
25	436	144	128	318	298	628	563	484	169	44	11	15
26	307	147	126	310	353	579	506	411	155	42	11	16
27	265	143	126	297	392	565	468	657	147	37	11	17
28	235	142	124	286	422	543	464	2100	144	35	11	18
29	209	139	122	286	---	518	447	1410	133	34	11	20
30	192	137	119	301	---	518	400	1120	123	33	11	21
31	180	---	115	305	---	508	---	1160	---	30	11	---
TOTAL	4343	4106	4918	19004	7792	17560	16081	13620	12144	1893	429	366.4
MEAN	140	137	159	613	278	566	536	439	405	61.1	13.8	12.2
MAX	871	169	316	4040	422	855	712	2100	1060	111	28	21
MIN	41	121	115	107	237	446	400	141	123	30	11	7.9
AC-FT	8610	8140	9750	37690	15460	34830	31900	27020	24090	3750	851	727

CAL YR 1989 TOTAL 172110 MEAN 472 MAX 5230 MIN 17 AC-FT 341400
WTR YR 1990 TOTAL 102256.4 MEAN 280 MAX 4040 MIN 7.9 AC-FT 202800

e Estimated.

11520500 KLAMATH RIVER NEAR SEIAD VALLEY, CA

LOCATION.--Lat 41°51'14", long 123°13'52", in SW 1/4 SW 1/4 sec.3, T.46 N., R.12 W., Siskiyou County, Hydrologic Unit 18010206, Klamath National Forest, on left bank 0.4 mi upstream from Bittenbender Creek, 1.4 mi downstream from Grider Creek, 2.2 mi west of Seiad Valley, and 55 mi downstream from Iron Gate Dam.
DRAINAGE AREA.--6,940 mi^2, approximately (not including Lost River, Butte Creek, or Lower Klamath Lake basins).
PERIOD OF RECORD.--October 1912 to September 1925, July 1951 to current year. Monthly discharges only for some periods, published in WSP 1315-B.
CHEMICAL DATA: Water years 1959-66.
WATER TEMPERATURE: Water years 1964-79.
SEDIMENT DATA: Water years 1955-56.
GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,320 ft above National Geodetic Vertical Datum of 1929, from river-profile map. November 1912 to June 1925, nonrecording gage at site 3.5 mi upstream at different datum.
REMARKS.--Records good. Low flow regulated considerably by reservoirs and powerplants upstream from station. Large diversions upstream from station for irrigation. See schematic diagram of Klamath River and Trinity River basins.
AVERAGE DISCHARGE.--52 years (water years 1913-25, 1952-90), 4,033 ft^3/s, 2,922,000 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 165,000 ft^3/s, Dec. 23, 1964, gage height, 33.75 ft, from floodmarks, from rating curve extended above 49,000 ft^3/s on basis of slope-area measurements at gage heights 20.1 and 29.2 ft; minimum daily, 320 ft^3/s, Nov. 25, 1917.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	1215	*12,900	*9.87				

Minimum daily, 857 ft^3/s, Aug. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1670	1810	1930	1790	3090	3360	3560	2080	3400	1020	867	1110
2	e1670	1790	2010	1790	3070	3580	3550	1770	3250	1010	857	1100
3	e1670	1780	2020	1780	3080	4390	3520	1730	3340	1020	869	1100
4	1640	1770	2050	1770	3130	4210	3490	1680	3230	1010	877	1100
5	1650	1770	2300	1770	3160	4090	3540	1640	3090	1000	871	1090
6	1650	1770	2410	1800	2670	4560	3250	1620	2920	1000	879	1080
7	1650	1760	2290	3210	2550	4430	3100	1590	2820	990	874	1080
8	1640	1760	2280	10600	2520	4350	3040	1570	2320	982	873	1080
9	1630	1740	2270	8830	2520	4250	2970	1550	1930	963	897	1070
10	1630	1750	2210	6460	2580	3940	2570	1530	1770	969	885	1070
11	1620	1760	2150	4420	2600	3800	2440	1500	1670	960	921	1070
12	1630	1750	2120	3550	2610	3620	2420	1490	1590	930	1100	1070
13	1630	1750	2110	3500	2580	3510	2380	1460	1510	917	1100	1090
14	1630	1750	2090	3480	2490	3460	2410	1430	1450	913	1100	1090
15	1630	1740	2070	3250	2490	3460	2450	1410	1400	897	1090	1090
16	1630	1740	2060	3100	2550	3450	2470	1410	1380	889	1090	1090
17	1630	1740	2060	2970	2530	3180	2600	1390	1350	897	1100	1090
18	1640	1730	2050	2840	2490	3160	2700	1350	1330	927	1120	1200
19	1640	1730	2040	2770	2460	3220	2590	1340	1360	1020	1130	1390
20	1650	1730	1970	2710	2450	3240	2530	1420	1260	1000	1120	1390
21	1710	1730	1820	2650	2460	3270	2500	1450	1240	982	1140	1420
22	1760	1730	1810	2620	2510	3340	2440	1860	1200	959	1120	1400
23	2050	1750	1790	2590	2300	3370	2710	2490	1150	937	1110	1400
24	2970	1810	1790	2560	2320	3330	2770	2510	1130	921	1100	1390
25	2300	1810	1790	2540	2500	3300	2590	2160	1100	920	1100	1410
26	2090	1860	1780	2540	2710	3230	2460	2020	1090	903	1100	1490
27	2110	1830	1780	2500	2850	3180	2390	2300	1090	899	1120	1460
28	1970	1800	1780	2470	3220	3130	2390	4010	1060	893	1320	1460
29	1890	1780	1780	2500	---	3420	2350	3560	1050	876	1390	1470
30	1850	1800	1780	2590	---	3630	2260	4950	1040	863	1400	1470
31	1830	---	1780	2600	---	3580	---	5180	---	866	1240	---
TOTAL	55360	53020	62170	100550	74490	112040	82440	63450	53520	29333	32760	36820
MEAN	1786	1767	2005	3244	2660	3614	2748	2047	1784	946	1057	1227
MAX	2970	1860	2410	10600	3220	4560	3560	5180	3400	1020	1400	1490
MIN	1620	1730	1780	1770	2300	3130	2260	1340	1040	863	857	1070
AC-FT	109800	105200	123300	199400	147800	222200	163500	125900	106200	58180	64980	73030

CAL YR 1989 TOTAL 1209441 MEAN 3314 MAX 18200 MIN 939 AC-FT 2399000
WTR YR 1990 TOTAL 755953 MEAN 2071 MAX 10600 MIN 857 AC-FT 1499000

e Estimated.

11521500 INDIAN CREEK NEAR HAPPY CAMP, CA

LOCATION.--Lat 41°50'07", long 123°22'55", in SW 1/4 SW 1/4 sec.26, T.17 N., R.7 E., Siskiyou County, Hydrologic Unit 18010209, on left bank 0.2 mi upstream from Slater Creek, 3.0 mi north of Happy Camp, and 3.5 mi upstream from mouth.
DRAINAGE AREA.--120 mi^2.
PERIOD OF RECORD.--September 1911 to September 1921 (fragmentary), December 1956 to current year. Monthly discharge only for some periods, published in WSP 1315-B.
REVISED RECORDS.--WSP 1635: 1957-58.
GAGE.--Water-stage recorder. Datum of gage is 1,198.37 ft above National Geodetic Vertical Datum of 1929. Prior to December 1956, nonrecording gages at sites 1.0 mi upstream at different datums. December 1956 to Sept. 20, 1969, water-stage recorder at site 0.8 mi upstream at different datum.
REMARKS.--No estimated daily discharges. Records good. Small diversions upstream and at station for irrigation. See schematic diagram of Klamath River and Trinity River basins.
AVERAGE DISCHARGE.--36 years (water years 1912-14, 1958-90), 424 ft^3/s, 307,200 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft^3/s, Dec. 22, 1964, gage height, 24.3 ft, from floodmarks, present site and datum; 36.59 ft from floodmarks in gage well, from rating curve extended above 6,000 ft^3/s on basis of slope-area measurement at gage height 29.0 ft, previous site and datum; minimum discharge observed, 20 ft^3/s, Aug. 19 to Sept. 6, 1914.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 21, 1955, reached a stage of 29.0 ft, at 1956-69 site and datum, from floodmarks, discharge, 23,000 ft^3/s on basis of slope-area measurement of peak flow.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0115	*8,830	*12.39				

Minimum daily, 39 ft^3/s, Sept. 22, 23, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	84	80	73	196	721	409	185	804	127	58	54
2	51	80	84	72	185	920	397	175	777	132	58	52
3	49	77	91	69	197	1060	386	172	1020	127	57	51
4	47	75	205	67	192	905	400	168	848	120	56	49
5	47	78	557	68	189	737	434	163	661	120	55	48
6	46	76	333	96	186	615	436	157	580	123	54	47
7	46	73	206	2960	180	559	394	149	498	115	53	46
8	46	72	262	3770	180	521	351	142	423	110	53	46
9	45	70	243	1240	184	468	316	137	374	104	52	45
10	44	68	188	708	194	510	302	133	337	101	52	45
11	44	68	158	501	209	460	303	131	309	97	51	43
12	44	68	138	418	212	410	294	128	288	94	50	43
13	44	74	125	476	205	372	283	124	271	90	50	43
14	43	70	114	436	194	353	294	122	255	87	49	43
15	43	67	107	369	192	343	289	119	240	84	49	43
16	43	65	101	329	191	359	278	116	231	82	49	43
17	43	64	97	290	179	414	274	113	221	81	55	43
18	43	64	93	262	170	470	257	112	208	81	65	42
19	43	63	90	243	165	515	238	115	198	80	62	42
20	43	62	86	227	161	537	226	153	189	80	57	41
21	64	61	83	213	162	549	220	157	181	76	58	40
22	93	60	81	200	182	594	233	481	172	73	54	39
23	387	68	79	190	219	583	397	352	167	69	51	39
24	231	101	78	181	259	533	295	258	161	69	50	41
25	155	97	76	174	370	512	248	216	153	69	50	44
26	164	100	74	175	508	473	238	223	149	68	53	46
27	242	92	73	164	615	455	220	903	145	66	64	44
28	151	86	72	161	691	443	263	713	142	64	66	42
29	115	81	70	175	---	431	218	480	137	62	61	41
30	99	79	69	210	---	417	198	675	131	61	66	39
31	89	---	69	196	---	409	---	898	---	60	57	---
TOTAL	2699	2243	4182	14713	6767	16648	9091	8170	10270	2772	1715	1324
MEAN	87.1	74.8	135	475	242	537	303	264	342	89.4	55.3	44.1
MAX	387	101	557	3770	691	1060	436	903	1020	132	66	54
MIN	43	60	69	67	161	343	198	112	131	60	49	39
AC-FT	5350	4450	8290	29180	13420	33020	18030	16210	20370	5500	3400	2630

CAL YR 1989 TOTAL 124011 MEAN 340 MAX 2660 MIN 42 AC-FT 246000
WTR YR 1990 TOTAL 80594 MEAN 221 MAX 3770 MIN 39 AC-FT 159900

11522500 SALMON RIVER AT SOMES BAR, CA

LOCATION.--Lat 41°22'40", long 123°28'35", in NE 1/4 sec.3, T.11 N., R.6 E., Siskiyou County, Hydrologic Unit 18010210, Klamath National Forest, on left bank at Somes Bar, 1.0 mi upstream from mouth.

DRAINAGE AREA.--751 mi^2.

PERIOD OF RECORD.--September 1911 to September 1915, October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1285: 1912, 1914, 1915(M), 1946(M), 1948(M). WDR CA-72-1: 1970-1971(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 482.97 ft above National Geodetic Vertical Datum of 1929. Prior to October 1927, nonrecording gage at different datum, October 1927 to Dec. 22, 1964, water-stage recorder at site 0.5 mi upstream at datum 6.54 ft higher.

REMARKS.--Records good. No storage or large diversion upstream from station.

AVERAGE DISCHARGE.--67 years, 1,800 ft^3/s, 1,304,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 133,000 ft^3/s, Dec. 22, 1964, gage height, 46.6 ft, present site and datum, from floodmarks, from rating curve extended above 33,000 ft^3/s; minimum, 70 ft^3/s, Aug. 25, Sept. 4, 5, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0545	*20,600	*13.39				

Minimum daily, 177 ft^3/s, Sept. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	407	404	330	931	3060	e1790	1050	5140	e660	295	246
2	265	392	432	337	877	3570	e1750	995	4660	e640	285	239
3	250	383	461	332	955	4510	1720	1010	4870	e620	280	232
4	242	380	638	332	1060	3820	1820	1040	4460	e600	273	228
5	236	390	1750	322	1010	3280	2170	1070	3690	e582	267	223
6	232	388	1900	341	1050	2840	2220	1050	3460	e570	264	217
7	228	370	905	4800	995	2580	2060	943	3140	e550	258	210
8	225	358	842	14400	965	2350	2020	856	2660	e535	257	207
9	221	347	836	6370	981	2130	1820	800	2370	e519	256	207
10	216	342	689	3610	1060	2340	1710	776	2140	e500	260	203
11	210	339	613	2530	1160	2140	1670	766	1930	484	251	198
12	210	339	549	2050	1210	1950	1630	748	1760	467	243	192
13	207	343	544	2180	1160	1800	1620	717	1630	453	242	192
14	207	347	482	1890	1050	1810	1790	695	1520	438	236	192
15	205	335	455	1620	1020	1760	1890	676	1420	428	236	192
16	204	324	434	1470	1070	e1790	1890	654	1340	418	236	192
17	204	316	416	1310	973	e1850	1790	635	1270	431	240	192
18	201	310	401	1160	886	e1900	1680	633	1200	433	259	192
19	201	302	388	1080	836	e2000	1580	632	1120	464	284	192
20	202	294	376	1000	828	e2080	1540	875	1080	444	269	187
21	321	286	370	960	827	e2180	1460	889	1050	404	266	181
22	574	281	362	887	908	e2170	1420	3610	994	384	263	178
23	2320	311	355	845	1150	e2210	2520	3420	931	371	247	177
24	1270	547	348	807	1480	e2220	1990	2110	879	359	238	193
25	794	533	342	779	2040	e2100	1530	1640	836	355	236	216
26	667	571	336	788	2530	e1980	1460	1730	795	352	247	252
27	984	502	332	733	2830	e1900	1360	4850	764	345	280	240
28	682	435	326	713	3020	e1810	1520	5650	734	336	287	218
29	538	407	317	759	---	e1790	1340	3770	708	327	268	201
30	468	395	309	955	---	e1890	1130	4160	e680	311	278	193
31	428	---	312	899	---	e1880	---	5290	---	304	260	---
TOTAL	13520	11274	17224	56589	34862	71690	51890	53740	59231	14084	8061	6182
MEAN	436	376	556	1825	1245	2313	1730	1734	1974	454	260	206
MAX	2320	571	1900	14400	3020	4510	2520	5650	5140	660	295	252
MIN	201	281	309	322	827	1760	1130	632	680	304	236	177
AC-FT	26820	22360	34160	112200	69150	142200	102900	106600	117500	27940	15990	12260

CAL YR 1989 TOTAL 561335 MEAN 1538 MAX 11100 MIN 175 AC-FT 1113000
WTR YR 1990 TOTAL 398347 MEAN 1091 MAX 14400 MIN 177 AC-FT 790100

e Estimated.

11523000 KLAMATH RIVER AT ORLEANS, CA

LOCATION.--Lat 41°18'13", long 123°32'00", in SW 1/4 NE 1/4 sec.31, T.11 N., R.6 E., Humboldt County, Hydrologic Unit 18010209, Six Rivers National Forest, on right bank at Orleans, 25 ft upstream from highway bridge, and 0.2 mi downstream from Cheenitch Creek.

DRAINAGE AREA.--8,475 mi^2, not including Lost River or Lower Klamath Lake basins.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1965, published as "at Somesbar."

REVISED RECORDS.--WSP 1565: 1935(M), 1949.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 355.98 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1965, at site 6.7 mi upstream at datum 90.68 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow considerably regulated by reservoirs and powerplants upstream from station. Large diversions upstream from station for irrigation. See schematic diagram of Klamath River and Trinity River basins.

AVERAGE DISCHARGE.--63 years, 8,209 ft^3/s, 5,947,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 307,000 ft^3/s, Dec. 22, 1964, gage height, 76.5 ft, from floodmarks, site and datum then in use, from rating curve extended above 80,000 ft^3/s by slope-conveyance study; minimum daily, 320 ft^3/s, Aug. 25, Sept. 1, 1951.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0645	*56,700	*17.54				

Minimum daily, 1,510 ft^3/s, Aug. 9-11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2290	2750	2680	2520	5650	10900	7910	4910	15700	2770	1630	1920
2	2210	2690	2920	2560	5770	12100	7860	4520	13400	2720	1610	1830
3	2170	2630	3000	2500	5860	15600	7740	4290	14200	2710	1580	1790
4	2150	2610	3510	2470	6180	14100	7820	4220	13200	2650	1570	1790
5	2150	2610	6110	2460	6030	12300	8230	4170	11100	2580	1560	1770
6	2140	2600	5950	2580	5970	11300	8300	4080	10100	2600	1550	1750
7	2140	2570	4550	16600	5370	10800	7710	3920	9460	2530	1540	1730
8	2140	2540	4320	41100	5250	10200	7450	3770	8270	2450	1530	1720
9	2130	2500	4670	24700	5300	9580	7100	3650	7240	2380	1510	1710
10	2100	2490	4040	16200	5470	9970	6760	3560	6550	2290	1510	1710
11	2100	2490	3700	12000	5710	9270	6360	3490	6040	2230	1510	1680
12	2100	2470	3480	9040	5790	8710	6260	3420	5600	2180	1550	1680
13	2100	2470	3340	9220	5660	8250	6160	3350	5240	2110	1670	1680
14	2100	2480	3240	8690	5330	8100	6290	3270	4960	2070	1680	1680
15	2100	2450	3150	7790	5180	7990	6410	3200	4680	2030	1690	1680
16	2100	2430	3080	7150	5440	8080	6400	3130	4490	1980	1690	1680
17	2100	2420	3030	6580	5210	8250	6320	3080	4320	1960	1740	1680
18	2100	2410	2970	6110	4950	8440	6320	3030	4160	1970	1850	1680
19	2100	2390	2920	5780	4770	8720	6150	2980	4010	2030	1920	1820
20	2100	2380	2890	5470	4690	8840	5960	3460	3870	2100	1850	1930
21	2300	2360	2750	5210	4660	8790	5820	3640	3720	2030	1830	1930
22	2840	2360	2640	5030	4860	9010	5720	8060	3590	1960	1830	1960
23	5880	2410	2610	4880	5330	9030	7570	8550	3430	1910	1800	1960
24	5590	2870	2590	4730	5770	8670	7070	6930	3320	1860	1780	1990
25	4520	2960	2560	4600	6970	8530	6210	5820	3210	1840	1750	2030
26	3730	3090	2550	4620	8500	8230	5900	5560	3100	1820	1760	2100
27	4970	2950	2530	4460	9630	8010	5590	11600	3040	1790	1900	2130
28	3760	2770	2520	4360	10400	7870	5860	14500	3000	1750	1980	2080
29	3220	2690	2500	4550	---	7700	5560	11300	2920	1710	2130	2050
30	2960	2660	2480	5360	---	8050	5170	11700	2830	1680	2220	2050
31	2820	---	2480	5330	---	7920	---	16000	---	1650	2180	---
TOTAL	85210	77500	101760	244650	165700	293310	199980	177160	188750	66340	53900	55190
MEAN	2749	2583	3283	7892	5918	9462	6666	5715	6292	2140	1739	1840
MAX	5880	3090	6110	41100	10400	15600	8300	16000	15700	2770	2220	2130
MIN	2100	2360	2480	2460	4660	7700	5170	2980	2830	1650	1510	1680
AC-FT	169000	153700	201800	485300	328700	581800	396700	351400	374400	131600	106900	109500

CAL YR 1989 TOTAL 2594220 MEAN 7107 MAX 38000 MIN 1780 AC-FT 5146000
WTR YR 1990 TOTAL 1709450 MEAN 4683 MAX 41100 MIN 1510 AC-FT 3391000

11523200 TRINITY RIVER ABOVE COFFEE CREEK, NEAR TRINITY CENTER, CA

LOCATION.--Lat 41°06'41", long 122°42'16", in SW 1/4 NW 1/4 sec.32, T.38 N., R.7 W., Trinity County, Hydrologic Unit 18010211, Shasta National Forest, on left bank 24 ft upstream from State Highway No. 3 bridge, 1.8 mi upstream from Coffee Creek, and 8.6 mi north of Trinity Center.
DRAINAGE AREA.--149 mi^2.
PERIOD OF RECORD.--September 1957 to current year.
REVISED RECORDS.--WDR CA-85-2: 1982 (M).
GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,536.93 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, water-stage recorder at site 0.2 mi downstream at datum 3.57 ft lower.
REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station. See schematic diagram of Klamath River and Trinity River basins.
AVERAGE DISCHARGE.--33 years, 408 ft^3/s, 295,600 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,500 ft^3/s, Jan. 16, 1974, gage height, 12.96 ft, site and datum then in use, from rating curve extended above 4,500 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 13.78 ft, Nov. 16, 1981, present site and datum; minimum daily, 16 ft^3/s, Sept. 11-14, 1977.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 10.5 ft, previous site and datum, from floodmarks, discharge, 11,400 ft^3/s.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	0815	6,260	10.55	May 27	1815	*6,330	*10.73

Minimum daily, 30 ft^3/s, Sept. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	144	77	59	134	533	431	234	974	123	54	42
2	43	131	76	59	124	785	442	216	835	122	53	41
3	40	125	78	54	129	1060	438	205	711	122	51	40
4	40	123	90	58	125	774	510	202	605	115	51	38
5	39	125	127	60	122	609	550	204	527	110	50	37
6	38	118	128	60	120	513	565	190	475	112	48	37
7	38	111	103	79	111	473	581	179	425	107	46	36
8	37	104	96	344	116	439	552	168	385	102	45	34
9	36	100	92	415	114	396	498	158	356	97	46	34
10	35	97	84	332	118	394	461	151	332	93	46	34
11	35	95	78	273	124	361	435	146	308	89	44	33
12	35	92	79	440	132	327	417	139	289	86	43	33
13	35	91	78	1060	131	301	425	133	275	82	41	33
14	35	87	77	571	118	295	466	128	262	87	41	33
15	34	84	75	394	124	287	477	121	249	80	41	32
16	34	82	74	321	132	280	455	116	240	76	41	33
17	35	80	71	270	125	290	710	111	240	82	42	33
18	34	79	68	234	119	344	515	110	253	96	45	31
19	34	77	67	213	113	425	480	129	220	106	52	33
20	35	75	65	196	115	486	446	223	205	93	49	32
21	144	73	67	184	117	523	365	210	190	82	48	31
22	716	73	66	176	134	584	355	1550	176	75	48	30
23	2890	73	65	169	163	580	525	1310	167	70	44	30
24	731	90	63	163	219	549	409	729	161	67	42	33
25	420	90	63	157	301	549	349	540	156	67	41	36
26	309	89	62	155	366	511	324	620	148	65	50	39
27	269	80	61	144	434	503	307	4130	143	63	57	38
28	221	78	60	141	500	475	301	3130	138	61	56	35
29	185	76	58	138	---	448	273	1460	133	60	50	33
30	165	79	59	146	---	431	249	1280	130	59	46	31
31	153	---	58	135	---	416	---	1150	---	56	44	---
TOTAL	6943	2821	2365	7200	4680	14941	13311	19372	9708	2705	1455	1035
MEAN	224	94.0	76.3	232	167	482	444	625	324	87.3	46.9	34.5
MAX	2890	144	128	1060	500	1060	710	4130	974	123	57	42
MIN	34	73	58	54	111	280	249	110	130	56	41	30
AC-FT	13770	5600	4690	14280	9280	29640	26400	38420	19260	5370	2890	2050

CAL YR 1989 TOTAL 121301 MEAN 332 MAX 7190 MIN 29 AC-FT 240600
WTR YR 1990 TOTAL 86536 MEAN 237 MAX 4130 MIN 30 AC-FT 171600

11525400 CLAIR ENGLE LAKE NEAR LEWISTON, CA

LOCATION.--Lat 40°48'05", long 122°45'44", in NW 1/4 SW 1/4 sec.15, T.34 N., R.8 W., Trinity County, Hydrologic Unit 18010211, Trinity National Forest, Whiskeytown-Shasta-Trinity National Recreation Area, on side of intake structure of Trinity Dam on Trinity River, 9 mi north of Lewiston.
DRAINAGE AREA.--692 mi^2.
PERIOD OF RECORD.--November 1960 to current year. Prior to October 1963 published as Trinity Lake near Lewiston.
GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to Jan. 4, 1962, nonrecording gage at same site and datum. Contents based on capacity table provided by U.S. Bureau of Reclamation, dated April 1962.
REMARKS.--The lake is formed by an earthfill dam completed in November 1960. Storage began Nov. 23, 1960. Usable capacity, 2,437,700 acre-ft between elevations 1,995.5 ft, elevation of invert of river outlets, and 2,370.0 ft, crest of glory hole spillway. Dead storage, 10,000 acre-ft. Operating pool is from elevation 2,145.0 ft, capacity, 312,621 acre-ft, to 2,370.0 ft, capacity, 2,447,700 acre-ft. Figures given represent total contents at 2400 hours. Lake is used for power generation, flood control, and recreation. See schematic diagram of Klamath River and Trinity River basins.
COOPERATION.--Records were provided by U.S. Bureau of Reclamation, not rounded to U.S. Geological Survey standards.
EXTREMES (at 2400) FOR PERIOD OF RECORD.--Maximum contents, 2,588,000 acre-ft, Jan. 19, 1974, elevation, 2,378.32 ft; minimum since first filling, 222,400 acre-ft, Nov. 9, 1977, elevation, 2,120.22 ft.
EXTREMES (at 2400) FOR CURRENT YEAR.--Maximum contents, 1,637,111 acre-ft, June 13, elevation, 2,314.25 ft; minimum, 1,162,444 acre-ft, Sept. 30, elevation, 2,272.42 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated April 1962)

2,100	162,231	2,250	955,140
2,140	292,859	2,310	1,583,586
2,190	529,611	2,380	2,616,989

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1368128	1279433	1265287	1258733	1315546	1343249	1433877	1498916	1604606	1626313	1461946	1339358
2	1360921	1279753	1265393	1258207	1315985	1349043	1436326	1499036	1611020	1622257	1456402	1335028
3	1354081	1280073	1265605	1258102	1317083	1356431	1438774	1500119	1616448	1618339	1450858	1330611
4	1347365	1280604	1265393	1257891	1317851	1362048	1441589	1499398	1620736	1614174	1444991	1325973
5	1342250	1280073	1265923	1257470	1318397	1366100	1445813	1500119	1624285	1609886	1439361	1319166
6	1337246	1278792	1266241	1257786	1319276	1368576	1449447	1501083	1625935	1604103	1434458	1312379
7	1332930	1278258	1266559	1262639	1319385	1371287	1453099	1500119	1629484	1598079	1429679	1305625
8	1328845	1278365	1266453	1272391	1320154	1374685	1456756	1500239	1631134	1592326	1424331	1299012
9	1324869	1277620	1266347	1278258	1320813	1376950	1459823	1498675	1633543	1586583	1419579	1292413
10	1319605	1276766	1266453	1281887	1321469	1380121	1462420	1498554	1635835	1580978	1415404	1285860
11	1314450	1275912	1266029	1284465	1321908	1382168	1465266	1496871	1635835	1575141	1410449	1279219
12	1307260	1275058	1265605	1287903	1322347	1384674	1467163	1495195	1636473	1572035	1405375	1274527
13	1299984	1273779	1265499	1298038	1323006	1386496	1468469	1495195	1637111	1569189	1400899	1268040
14	1292521	1272712	1264756	1303774	1323445	1388204	1470247	1493398	1636601	1565975	1396317	1261263
15	1285217	1271540	1264756	1307260	1324321	1390256	1473093	1493158	1636346	1562762	1390370	1254630
16	1277831	1270582	1264650	1309874	1325089	1392078	1474998	1492798	1633924	1555855	1385130	1247915
17	1270476	1269946	1264544	1309983	1325973	1393908	1478572	1492438	1633416	1548230	1380121	1241334
18	1263169	1268676	1264438	1313685	1326305	1396773	1481673	1492079	1633670	1541373	1377403	1234580
19	1256209	1268464	1264123	1314780	1326634	1398493	1483105	1490042	1633797	1534889	1374799	1231259
20	1250635	1268570	1264017	1315546	1326855	1401014	1485489	1490759	1634179	1528192	1372194	1227742
21	1247705	1267934	1262639	1315655	1327629	1403649	1486206	1490162	1634179	1525392	1369816	1221144
22	1247810	1267934	1262533	1315655	1327961	1406875	1488123	1501686	1633543	1521864	1367452	1213856
23	1264438	1267722	1262003	1315765	1328624	1410218	1489682	1510239	1633035	1517385	1364412	1207408
24	1269630	1266453	1262003	1315109	1329948	1413099	1491719	1514236	1632401	1511691	1361598	1200691
25	1272287	1267404	1261687	1314450	1331827	1415868	1492438	1517021	1632023	1504698	1357997	1194204
26	1274740	1267616	1260521	1314341	1334146	1418883	1494355	1521621	1631007	1497711	1355423	1187632
27	1276232	1267510	1259889	1314121	1336801	1421781	1495075	1553889	1629865	1490879	1353633	1181503
28	1277193	1267510	1259673	1313031	1340026	1424215	1496871	1577500	1628852	1484298	1351283	1175190
29	1278045	1267298	1259257	1313358	---	1426649	1498433	1587832	1628344	1477382	1348819	1168700
30	1278792	1267404	1259049	1313685	---	1428978	1497711	1593450	1627836	1471790	1346363	1162444
31	1279219	---	1258839	1314560	---	1431313	---	1597953	---	1467519	1343805	---
MAX	1368128	1280604	1266559	1315765	1340026	1431313	1498433	1597953	1637111	1626313	1461946	1339358
MIN	1247705	1266453	1258839	1257470	1315546	1343249	1433877	1490042	1604606	1467519	1343805	1162444
a	2283.77	2282.66	2281.85	2287.04	2289.35	2297.37	2302.98	2311.15	2313.52	2300.45	2289.69	2272.42
b	-96940	-11815	-8565	+55721	+25466	+91287	+66398	+100242	+29883	-160317	-123714	-181361
c	1758	615	309	437	457	2216	3842	4590	6329	7024	5470	3834

CAL YR 1989 b +9,255
WTR YR 1990 b -213,715

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet, provided by U.S. Bureau of Reclamation, not reviewed by U.S. Geological Survey.

11525430 JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, CA

LOCATION.--Lat 40°38'49", long 122°37'34", Shasta County, Hydrologic Unit 18010212, at powerplant 1.6 mi downstream from Mill Creek and 3.8 mi south of French Gulch.

PERIOD OF RECORD.--April 1963 to current year.

GAGE.--Recorded powerplant output.

REMARKS.--No estimated daily discharges. Water is diverted from Trinity River at NW 1/4 SE 1/4 sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake. See schematic diagram of Klamath River and Trinity River basins.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation, not rounded to U.S. Geological Survey standards.

AVERAGE DISCHARGE.--27 years, 1,467 ft^3/s, 1,063,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,000 ft^3/s, Oct. 18, 1987; no flow for many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3420	.00	822	.00	.00	1	28	.00	.00	521	2300	2092
2	3424	.00	.00	.00	.00	.00	.00	462	.00	2000	2418	2056
3	3434	.00	.00	.00	.00	.00	.00	.00	.00	1991	2024	1911
4	2843	.00	78	.00	.00	.00	.00	726	.00	1948	2550	1763
5	2366	454	50	.00	.00	.00	.00	.00	.00	1958	2610	3005
6	2350	655	4	.00	.00	.00	.00	.00	504	3038	2460	3005
7	1931	353	19	19	.00	.00	.00	795	.00	2953	2012	3375
8	2015	.00	4	.00	.00	.00	.00	.00	506	2918	2175	3131
9	1884	472	13	.00	.00	.00	.00	1010	.00	2918	1978	3025
10	2246	430	47	.00	.00	.00	.00	.00	.00	3039	2010	3025
11	2566	504	1	.00	.00	.00	.00	1010	553	3040	1977	3025
12	3309	534	.00	.00	.00	.00	408	1038	513	1513	2021	2017
13	3469	505	8	.00	.00	.00	536	.00	570	1520	1877	2989
14	3458	470	251	.00	.00	.00	407	1042	918	1518	2009	3131
15	3457	509	178	.00	11	.00	.00	.00	1025	1592	2292	3071
16	3458	475	.00	.00	.00	.00	417	.00	2115	3407	2233	3079
17	3435	498	.00	.00	.00	.00	.00	.00	509	3184	2079	2961
18	3446	466	.00	.00	.00	.00	.00	.00	532	3213	909	2946
19	3240	.00	.00	.00	.00	.00	441	692	535	3247	882	1588
20	2699	.00	7	271	51	.00	67	.00	533	3267	1092	1599
21	2111	.00	560	274	.00	.00	406	729	529	1482	1072	3066
22	2167	.00	2	330	.00	.00	.00	.00	499	1660	1112	3064
23	2067	.00	.00	327	.00	.00	406	.00	462	1439	1209	2951
24	.00	692	.00	612	.00	.00	84	.00	450	2055	1037	3069
25	.00	.00	.00	498	.00	.00	427	.00	534	3391	1295	3176
26	.00	.00	499	417	.00	.00	.00	.00	570	3274	1137	2896
27	.00	.00	.00	414	.00	.00	396	.00	489	3239	947	2950
28	.00	.00	.00	381	.00	.00	12	.00	508	3252	997	2959
29	.00	.00	.00	380	---	.00	.00	.00	573	3229	1023	2954
30	.00	.00	.00	383	---	.00	419	2108	509	2344	991	2855
31	.00	---	.00	.00	---	.00	---	2042	---	2296	978	---
TOTAL	64795.00	7017.00	2543.00	4306.00	62.00	1.00	4454.00	11654.00	13936.00	76446	51706	82734
MEAN	2090	234	82.0	139	2.21	.032	148	376	465	2466	1668	2758
MAX	3470	692	822	612	51	1.0	536	2110	2110	3410	2610	3370
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	521	882	1590
AC-FT	128500	13920	5040	8540	123	2.0	8830	23120	27640	151600	102600	164100

CAL YR 1989 TOTAL 335819.00 MEAN 920 MAX 3500 MIN .00 AC-FT 666100
WTR YR 1990 TOTAL 319654.00 MEAN 876 MAX 3470 MIN .00 AC-FT 634000

11525500 TRINITY RIVER AT LEWISTON, CA

LOCATION.--Lat 40°43'10", long 122°48'09", in SW 1/4 NW 1/4 sec.17, T.33 N., R.8 W., Trinity County, Hydrologic Unit 18010211, on right bank 400 ft upstream from Deadwood Creek, 0.8 mi downstream from Lewiston diversion dam, and 0.8 mi northeast of Lewiston.
DRAINAGE AREA.--719 mi^2.
PERIOD OF RECORD.--August 1911 to current year.
CHEMICAL DATA: Water years 1951-81.
WATER TEMPERATURE: Water years 1952-55, 1958-83.
SEDIMENT DATA: Water years 1955-61.
REVISED RECORDS.--WSP 331: 1911-12. WSP 1181: 1949. WSP 1929: Drainage area.
GAGE.--Water-stage recorder. Datum of gage is 1,815.95 ft above National Geodetic Vertical Datum of 1929. See WSP 1929 for history of changes prior to July 7, 1964.
REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Clair Engle Lake (station 11525400) beginning in November 1960 and Lewiston Lake, capacity, 14,660 acre-ft, when diversion to Judge Francis Carr powerplant (station 11525430) began in April 1963. Small diversions above head of Clair Engle Lake for irrigation, power, placer mining, and domestic use between Trinity Dam and station at Lewiston. See schematic diagram of Klamath River and Trinity River basins.
AVERAGE DISCHARGE.--49 years (water years 1912-60) prior to storage and diversions, 1,641 ft^3/s, 1,189,000 acre-ft/yr; 30 years (water years 1961-90), 1,875 ft^3/s, 1,358,000 acre-ft/yr, adjusted for changes in contents, evaporation, and diversion; unadjusted flow for same period was 428 ft^3/s, 310,100 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,600 ft^3/s, Dec. 22, 1955, gage height, 27.3 ft, from floodmarks, site and datum then in use; minimum, 23 ft^3/s, July 30, 1924. Since completion of Trinity Dam in 1960, maximum discharge, 14,400 ft^3/s, Jan. 18, 1974, gage height, 10.41 ft; minimum daily, 100 ft^3/s, Apr. 14, 1976.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1861 reached a stage of 21.6 ft, from floodmarks, at site 1.1 mi downstream at different datum, discharge not determined.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 691 ft^3/s, May 15, gage height, 4.39 ft; minimum daily, 162 ft^3/s, June 8, 12-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	329	314	314	320	316	315	328	322	302	314	341	294
2	330	316	312	320	315	315	328	319	300	313	343	291
3	333	313	311	320	315	312	327	320	297	310	346	289
4	339	312	320	320	313	312	321	316	298	309	345	290
5	332	314	328	321	314	313	303	307	299	312	347	293
6	327	314	329	321	315	309	312	306	242	307	341	295
7	325	316	328	329	314	290	308	307	172	309	326	297
8	324	314	328	327	314	280	308	310	162	313	302	295
9	319	315	330	323	312	284	307	306	163	298	291	296
10	321	315	329	320	312	276	306	311	163	314	288	296
11	314	315	320	320	312	278	308	306	165	341	284	294
12	314	313	315	319	314	279	314	307	162	340	285	295
13	312	310	316	318	312	272	314	307	162	338	291	297
14	314	311	315	316	312	273	313	304	162	336	288	290
15	316	313	315	316	313	289	317	614	185	339	283	288
16	316	311	312	314	314	289	315	625	294	340	285	289
17	318	310	312	313	301	288	316	621	320	349	282	288
18	319	310	312	312	308	285	316	619	322	354	281	290
19	320	311	312	313	308	284	315	619	318	351	282	292
20	319	310	312	312	309	279	316	630	315	351	283	284
21	318	310	312	313	311	285	315	633	312	350	279	276
22	317	313	314	316	314	283	317	629	312	346	291	280
23	318	315	318	316	315	310	316	628	311	347	294	284
24	317	316	320	316	315	324	317	626	311	351	294	286
25	313	315	319	319	315	323	317	619	310	352	293	294
26	314	313	318	319	315	324	318	619	309	349	293	293
27	313	314	319	317	314	329	321	622	313	348	291	293
28	317	312	319	320	315	330	323	617	314	348	292	289
29	310	314	322	320	---	330	319	619	315	347	291	291
30	313	313	320	317	---	330	319	613	314	350	289	293
31	312	---	320	316	---	329	---	326	---	351	292	---
TOTAL	9903	9392	9871	9863	8757	9319	9474	14627	7924	10377	9313	8722
MEAN	319	313	318	318	313	301	316	472	264	335	300	291
MAX	339	316	330	329	316	330	328	633	322	354	347	297
MIN	310	310	311	312	301	272	303	304	162	298	279	276
AC-FT	19640	18630	19580	19560	17370	18480	18790	29010	15720	20580	18470	17300
MEAN a	862	359	266	1370	782	1821	1645	2553	1337	308	45.3	65.1
AC-FT a	52980	21350	16370	84260	43420	111985	97864	156958	79574	18918	2785	3876

CAL YR 1989 TOTAL 168243 MEAN 461 MAX 1960 MIN 151 AC-FT 333700 MEAN a 1448 AC-FT a 1048000
WTR YR 1990 TOTAL 117542 MEAN 322 MAX 633 MIN 162 AC-FT 233100 MEAN a 954 AC-FT a 690300

a Adjusted for change in contents and evaporation from Clair Engle Lake and diversion to Judge Francis Carr powerplant.

11525580 LITTLE GRASS VALLEY CREEK NEAR LEWISTON, CA

LOCATION.--Lat 40°39'45", long 122°47'57", in NE 1/4 NW 1/4, sec.5, T.32 N., R.8 W., Trinity County, Hydrologic Unit 18010211, on left bank 0.2 mi upstream from the confluence with Grass Valley Creek, 0.9 mi west of Buckhorn Station, and 3.1 mi south of Lewiston on State Highway 299.

DRAINAGE AREA.--10.69 mi^2.

PERIOD OF RECORD.--
SEDIMENT DATA: Water years 1985 to current year.

REMARKS.--Zero bedload observed at flows less than 2.2 ft^3/s. Record is collected for hydrologic and sediment-transport correlation studies with Grass Valley Creek at Fawn Lodge, near Lewiston (station 11525600).

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
OCT										
05...	0805	1.8	7.5	2	0.01	--	--	--	--	--
23...	1330	17	10.0	290	13	85	91	96	99	100
24...	1330	6.2	9.0	25	0.42	67	--	--	--	--
NOV										
06...	0850	2.7	5.0	2	0.02	--	--	--	--	--
DEC										
08...	0900	2.5	3.5	2	0.01	--	--	--	--	--
JAN										
02...	1300	2.3	1.5	0	0.0	--	--	--	--	--
08...	1400	9.8	5.5	54	1.4	65	--	--	--	--
FEB										
02...	1340	3.4	2.5	2	0.02	--	--	--	--	--
MAR										
05...	1405	3.9	5.5	4	0.04	--	--	--	--	--
30...	1500	2.7	6.5	2	0.02	--	--	--	--	--
MAY										
07...	1415	2.1	12.5	2	0.01	--	--	--	--	--
21...	1450	2.2	10.0	3	0.02	--	--	--	--	--
22...	1245	4.1	10.5	61	0.68	--	--	--	--	--
31...	1425	4.4	10.0	11	0.13	83	--	--	--	--
JUL										
03...	1610	1.5	15.0	1	0.00	--	--	--	--	--
AUG										
07...	1105	0.73	17.5	1	0.00	--	--	--	--	--
SEP										
07...	1225	0.95	13.5	0	0.0	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	TEMPERATURE WATER (DEG C)	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
OCT							
24...	1345	9.0	1	6.2	--	2	13
24...	1350	9.0	1	6.2	--	1	7
24...	1355	9.0	1	6.2	--	2	13
24...	1400	9.0	1	6.2	--	1	10
24...	1405	9.0	1	6.2	--	3	14
MAR							
30...	1505	6.5	1	2.7	1	4	19
30...	1510	6.5	1	2.7	--	2	13
30...	1515	6.5	1	2.7	--	1	8
30...	1520	6.5	1	2.7	--	1	8
30...	1525	6.5	1	2.7	--	1	9

11525580 LITTLE GRASS VALLEY CREEK NEAR LEWISTON, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
OCT							
24...	28	44	68	88	94	95	100
24...	22	42	64	89	98	100	--
24...	28	41	58	79	97	100	--
24...	23	37	55	79	94	100	--
24...	26	40	61	86	97	100	--
MAR							
30...	48	70	82	90	98	100	--
30...	34	51	69	91	100	--	--
30...	22	38	60	85	96	100	--
30...	23	33	53	85	99	100	--
30...	23	33	50	86	99	100	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND
OCT									
24...	1340	1000	1120	0.250	1335	1345	12	1.20	6.2
JAN									
08...	1440	1000	1120	0.250	1435	1445	14	0.90	9.8
08...	1450	1000	1120	0.250	1445	1455	14	0.90	9.8
MAY									
21...	1455	1000	1120	0.250	1450	1500	8	1.60	2.2
21...	1505	1000	1120	0.250	1500	1510	8	1.60	2.2
22...	1255	1000	1120	0.250	1250	1300	12	1.50	4.1
22...	1305	1000	1120	0.250	1300	1310	12	1.50	4.1
31...	1420	1000	1120	0.250	1415	1425	10	1.30	4.4
31...	1430	1000	1120	0.250	1425	1435	10	1.30	4.4

DATE	TEMPERATURE WATER (DEG C)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM
OCT									
24...	9.0	0.44	4	22	52	82	97	100	--
JAN									
08...	5.5	0.98	6	23	40	65	92	99	100
08...	5.5	0.98	6	23	40	65	92	99	100
MAY									
21...	10.0	0.14	7	49	78	91	99	100	--
21...	10.0	0.14	7	49	78	91	99	100	--
22...	10.5	3.9	2	16	40	68	93	100	--
22...	10.5	3.9	6	44	72	87	97	100	--
31...	10.0	3.5	1	11	29	58	92	100	--
31...	10.0	3.5	2	15	35	59	89	100	--

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA

LOCATION.--Lat 40°40'35", long 122°49'46", in SW 1/4, NE 1/4 sec.36, T.33 N., R.9 W., Trinity County, Hydrologic Unit 18010211, on right bank 0.1 mi upstream from Phillips Gulch and 2.5 mi southwest of Lewiston.

DRAINAGE AREA.--30.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1975 to current year.

REVISED RECORDS.--WDR CA-86-2: 1983(M)

GAGE.--Water-stage recorder. Datum of gage is 2,049.73 ft above National Geodetic Vertical Datum of 1929 (California State Highway Department bench mark).

REMARKS.--Records fair except for estimated daily discharge for ice-affect, Feb. 4, which is poor. No regulation; small pumping diversions upstream from station. See schematic diagram of Klamath River and Trinity River basins.

AVERAGE DISCHARGE.--14 years (water years 1977-90), 45.0 ft^3/s, 32,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,140 ft^3/s, Feb. 28, 1983; gage height, 10.11 ft, from rating curve extended above 700 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 4.3 ft^3/s, many days in 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 220 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 23	1045	267	6.15	May 27	2115	*332	*6.34

Minimum daily, 6.7 ft^3/s, Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	19	16	14	24	23	21	16	65	19	9.8	9.1
2	11	19	15	14	22	27	20	16	59	19	9.2	9.1
3	11	18	15	14	25	32	20	15	54	19	9.1	8.9
4	11	18	15	14	e25	30	20	15	49	18	9.1	8.8
5	11	17	15	14	23	29	20	15	45	18	9.0	8.6
6	11	17	15	14	22	27	20	14	43	18	8.7	8.2
7	11	17	15	52	22	27	20	14	40	18	8.4	7.9
8	10	17	15	71	22	27	20	14	37	17	8.4	8.0
9	10	17	15	37	22	26	19	14	36	16	8.6	8.0
10	10	16	15	28	22	29	19	14	34	16	8.8	7.8
11	10	16	15	25	23	27	19	14	32	15	8.4	7.6
12	11	16	15	29	22	26	19	14	31	15	8.3	7.6
13	11	16	15	67	22	26	19	13	30	14	8.2	7.7
14	11	16	15	70	21	26	18	13	30	14	8.3	6.9
15	11	16	14	52	23	26	18	13	28	14	8.6	8.2
16	11	15	14	45	22	26	18	13	28	13	9.0	8.3
17	11	15	14	39	21	25	18	13	28	14	9.4	8.0
18	11	15	14	35	20	25	18	13	26	15	9.3	7.5
19	11	15	14	32	20	25	18	14	25	15	9.4	6.7
20	11	15	14	30	20	24	18	19	24	14	9.6	7.5
21	15	15	14	29	20	23	17	17	23	13	12	7.0
22	24	15	14	28	20	23	18	44	22	12	9.9	7.2
23	121	16	14	27	21	23	18	52	22	12	9.1	7.5
24	44	17	14	26	22	22	17	29	22	12	9.0	9.2
25	30	18	14	25	22	21	17	25	21	12	9.7	9.3
26	26	18	14	24	22	21	17	28	21	11	12	9.3
27	25	17	14	24	22	21	17	171	21	11	11	9.2
28	22	16	14	23	22	21	16	168	20	11	10	8.8
29	21	16	14	23	---	21	16	93	20	11	9.9	8.1
30	20	16	14	25	---	21	16	85	19	10	9.7	8.0
31	19	---	14	23	---	21	---	76	---	10	9.4	---
TOTAL	584	494	449	973	614	771	551	1074	955	446	289.3	244.0
MEAN	18.8	16.5	14.5	31.4	21.9	24.9	18.4	34.6	31.8	14.4	9.33	8.13
MAX	121	19	16	71	25	32	21	171	65	19	12	9.3
MIN	10	15	14	14	20	21	16	13	19	10	8.2	6.7
AC-FT	1160	980	891	1930	1220	1530	1090	2130	1890	885	574	484

CAL YR 1989 TOTAL 10033.5 MEAN 27.5 MAX 357 MIN 6.9 AC-FT 19900
WTR YR 1990 TOTAL 7444.3 MEAN 20.4 MAX 171 MIN 6.7 AC-FT 14770

e Estimated.

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.
WATER TEMPERATURE: Water years 1976 to current year.
SEDIMENT DATA: Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: November 1975 to current year.

REMARKS.--Sediment samples were collected on most days where a water temperature is published. Zero bedload observed at flows less than 29 ft^3/s.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 9,550 mg/L, Mar. 2, 1983; minimum daily mean, 0 mg/L several days most years.
SEDIMENT LOAD: Maximum daily, 65,200 tons, Mar. 2, 1983; minimum daily, 0 ton several days most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 773 mg/L, May 27; minimum daily mean, 1 mg/L many days.
SEDIMENT LOAD: Maximum daily, 503 tons, May 27; minimum daily, 0.02 tons, many days during August and September.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT								
23...	1040	265	10.0	1350	966	19	30	43
24...	0950	46	8.5	45	5.6	--	--	--
NOV								
06...	1045	17	5.0	5	0.23	--	--	--
DEC								
08...	1050	15	3.0	2	0.08	--	--	--
JAN								
02...	0915	14	1.0	2	0.08	--	--	--
08...	1130	72	5.0	147	29	--	--	--
FEB								
02...	0940	22	1.0	2	0.12	--	--	--
MAY								
22...	1350	39	10.5	146	15	--	--	--
22...	1400	40	10.5	158	17	--	--	--
23...	0745	54	8.0	85	12	--	--	--
27...	1415	184	10.0	832	413	--	--	--
31...	1250	76	8.0	46	9.4	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
OCT								
23...	56	68	73	78	83	90	96	100
24...	--	--	65	--	--	--	--	--
NOV								
06...	--	--	52	--	--	--	--	--
DEC								
08...	--	--	68	--	--	--	--	--
JAN								
02...	--	--	90	--	--	--	--	--
08...	--	--	88	--	--	--	--	--
FEB								
02...	--	--	54	--	--	--	--	--
MAY								
22...	--	--	90	97	99	100	--	--
22...	--	--	80	--	--	--	--	--
23...	--	--	89	94	96	98	100	--
27...	--	--	74	79	81	85	92	100
31...	--	--	75	83	88	94	100	--

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	TEMPERATURE WATER (DEG C)	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM
OCT							
24...	1000	8.5	1	46	--	2	9
24...	1001	8.5	1	46	1	8	28
24...	1002	8.5	1	46	--	--	--
24...	1003	8.5	1	46	1	5	15
24...	1004	8.5	1	46	--	1	4
MAR							
30...	1015	6.5	1	21	--	2	4
30...	1016	6.5	1	21	--	--	--
30...	1017	6.5	1	21	--	--	--
30...	1018	6.5	1	21	1	4	14
30...	1019	6.5	1	21	--	--	--
MAY							
23...	0930	8.0	1	50	1	4	10
23...	0931	8.0	1	50	--	--	--
23...	0932	8.0	1	50	--	--	--
23...	0933	8.0	1	50	--	1	3
23...	0934	8.0	1	50	1	3	8

DATE	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM
OCT						
24...	24	38	41	41	52	100
24...	65	94	99	100	--	--
24...	1	2	2	2	14	100
24...	35	84	99	100	--	--
24...	10	25	32	32	61	100
MAR						
30...	8	12	16	16	16	100
30...	--	1	1	1	31	100
30...	--	--	--	--	30	100
30...	58	94	100	--	--	--
30...	--	--	1	3	16	100
MAY						
23...	16	22	27	31	40	100
23...	1	2	3	4	8	100
23...	1	2	3	3	5	100
23...	6	9	12	17	48	100
23...	16	24	28	39	46	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	STARTING TIME (2400 HOURS)	ENDING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)
OCT										
24...	1015	1000	1120	0.250	1010	1020	20	2.00	46	8.5
JAN										
08...	1145	1000	1120	0.250	1140	1147	21	6.00	70	5.0
08...	1150	1000	1120	0.250	1147	1155	21	6.00	70	5.0
MAY										
22...	1415	1000	1120	0.250	1410	1417	21	1.00	41	10.5
22...	1420	1000	1120	0.250	1417	1425	21	1.00	41	10.5
23...	0815	1000	1120	0.250	0810	0817	20	2.00	53	8.0
23...	0820	1000	1120	0.250	0817	0825	20	2.00	53	8.0
27...	1515	1000	1100	0.250	1510	1520	18	1.50	213	10.0
27...	1525	1000	1100	0.250	1520	1530	18	1.50	213	10.0
31...	1315	1000	1120	0.250	1310	1317	14	2.00	74	8.0
31...	1320	1000	1120	0.250	1317	1325	14	2.00	74	8.0
JUN										
11...	1015	1000	1120	0.250	1010	1017	20	1.00	34	9.5
11...	1020	1000	1120	0.250	1017	1025	20	1.00	34	9.5

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
OCT									
24...	9.8	--	3	17	54	94	100	--	--
JAN									
08...	2.8	2	11	30	64	91	100	--	--
08...	2.8	2	11	30	64	91	100	--	--
MAY									
22...	3.0	4	22	54	83	98	100	--	--
22...	3.0	3	18	46	76	98	100	--	--
23...	7.8	1	9	36	72	96	100	--	--
23...	7.8	1	9	36	72	96	100	--	--
27...	43	2	11	34	34	69	92	99	100
27...	43	3	13	36	69	93	98	100	--
31...	20	1	7	25	61	93	100	--	--
31...	20	1	4	24	62	94	100	--	--
JUN									
11...	0.89	1	7	42	88	100	--	--	--
11...	0.89	1	7	42	85	100	--	--	--

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	7.0	---	---	---
2	---	---	---	1.0	1.0	7.0	---	---	10.5	16.5	---	---
3	---	---	---	2.0	---	---	6.0	---	---	15.5	---	17.5
4	---	---	---	---	---	5.0	---	---	9.0	---	---	---
5	8.0	---	6.0	---	3.0	4.0	---	---	---	---	---	---
6	8.5	5.0	---	---	---	---	---	---	13.0	---	---	15.0
7	---	---	---	3.5	2.0	---	---	10.0	---	---	18.0	14.0
8	---	---	3.0	5.0	---	5.5	---	---	---	---	---	12.5
9	9.0	---	5.5	.0	4.0	---	---	---	12.0	---	20.5	---
10	---	7.0	---	---	---	5.5	9.5	---	---	---	---	12.0
11	12.5	---	---	5.0	---	---	---	---	9.5	---	20.0	---
12	---	---	---	---	---	---	12.5	12.0	---	---	---	12.0
13	12.0	---	1.0	6.0	1.5	---	---	---	---	21.0	20.5	---
14	---	---	---	5.0	---	3.0	---	14.0	9.0	---	---	14.0
15	---	5.0	---	---	---	---	---	---	---	---	20.0	---
16	---	---	2.0	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	12.0	---	---	---	17.5	14.0
18	---	---	---	---	---	---	---	12.0	---	---	---	---
19	10.0	---	---	3.0	2.0	---	---	---	---	---	---	---
20	---	---	2.0	---	---	6.0	14.0	9.0	---	21.0	17.0	12.0
21	11.5	4.0	---	---	---	---	---	10.0	---	---	---	---
22	11.0	---	---	---	3.0	---	---	10.5	16.5	---	17.0	15.5
23	10.0	---	---	---	---	---	12.0	8.0	---	---	---	---
24	8.5	7.0	2.0	---	---	---	---	9.5	---	---	17.5	16.0
25	7.0	---	---	2.5	---	---	---	---	---	---	---	---
26	---	---	---	---	6.5	5.0	---	10.0	16.5	---	---	13.0
27	7.0	---	1.0	---	---	---	14.5	10.0	---	---	14.5	---
28	---	2.5	---	---	7.5	---	---	9.5	---	---	---	15.0
29	---	2.0	.0	---	---	---	---	8.0	17.5	---	15.0	---
30	---	---	---	---	---	6.5	7.5	9.0	---	---	---	---
31	4.0	---	---	2.0	---	---	---	8.0	---	20.5	15.5	---

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	12	1	.03	19	5	.26	16	2	.09
2	11	1	.03	19	5	.26	15	2	.08
3	11	1	.03	18	5	.24	15	2	.08
4	11	1	.03	18	5	.24	15	2	.08
5	11	1	.03	17	5	.23	15	2	.08
6	11	1	.03	17	4	.18	15	2	.08
7	11	1	.03	17	3	.14	15	2	.08
8	10	1	.03	17	2	.09	15	1	.04
9	10	1	.03	17	2	.09	15	1	.04
10	10	1	.03	16	2	.09	15	1	.04
11	10	1	.03	16	2	.09	15	1	.04
12	11	1	.03	16	2	.09	15	1	.04
13	11	1	.03	16	3	.13	15	1	.04
14	11	1	.03	16	3	.13	15	1	.04
15	11	1	.03	16	3	.13	14	1	.04
16	11	1	.03	15	1	.04	14	1	.04
17	11	1	.03	15	3	.12	14	1	.04
18	11	1	.03	15	8	.32	14	1	.04
19	11	1	.03	15	6	.24	14	2	.08
20	11	3	.09	15	4	.16	14	2	.08
21	15	11	.45	15	3	.12	14	2	.08
22	24	47	5.1	15	5	.20	14	2	.08
23	121	576	272	16	7	.30	14	2	.08
24	44	41	4.9	17	8	.37	14	2	.08
25	30	17	1.4	18	6	.29	14	2	.08
26	26	13	.91	18	4	.19	14	1	.04
27	25	12	.81	17	3	.14	14	1	.04
28	22	11	.65	16	2	.09	14	2	.08
29	21	10	.57	16	2	.09	14	3	.11
30	20	7	.38	16	2	.09	14	3	.11
31	19	5	.26	---	---	---	14	2	.08
TOTAL	584	---	288.09	494	---	5.15	449	---	2.03
		JANUARY			FEBRUARY			MARCH	
1	14	2	.08	24	3	.19	23	8	.50
2	14	3	.11	22	2	.12	27	13	.95
3	14	3	.11	25	4	.27	32	15	1.3
4	14	3	.11	e25	7	.47	30	10	.81
5	14	3	.11	23	12	.75	29	4	.31
6	14	3	.11	22	11	.65	27	3	.22
7	52	160	30	22	9	.53	27	2	.15
8	71	138	29	22	7	.42	27	1	.07
9	37	15	1.5	22	5	.30	26	4	.28
10	28	5	.38	22	4	.24	29	11	.86
11	25	2	.13	23	4	.25	27	10	.73
12	29	10	.78	22	3	.18	26	9	.63
13	67	96	22	22	3	.18	26	7	.49
14	70	46	9.2	21	3	.17	26	6	.42
15	52	12	1.7	23	3	.19	26	4	.28
16	45	7	.85	22	3	.18	26	3	.21
17	39	7	.74	21	4	.23	25	2	.13
18	35	6	.57	20	4	.22	25	2	.13
19	32	6	.52	20	4	.22	25	1	.07
20	30	6	.49	20	5	.27	24	1	.06
21	29	6	.47	20	6	.32	23	1	.06
22	28	5	.38	20	8	.43	23	1	.06
23	27	5	.36	21	7	.40	23	1	.06
24	26	5	.35	22	7	.42	22	1	.06
25	25	5	.34	22	6	.36	21	1	.06
26	24	5	.32	22	6	.36	21	1	.06
27	24	5	.32	22	5	.30	21	1	.06
28	23	4	.25	22	4	.24	21	2	.11
29	23	4	.25	---	---	---	21	2	.11
30	25	4	.27	---	---	---	21	3	.17
31	23	4	.25	---	---	---	21	4	.23
TOTAL	973	---	102.05	614	---	8.86	771	---	9.64

e Estimated.

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	21	5	.28	16	5	.22	65	31	5.4
2	20	6	.32	16	5	.22	59	26	4.1
3	20	7	.38	15	5	.20	54	23	3.4
4	20	7	.38	15	4	.16	49	19	2.5
5	20	6	.32	15	4	.16	45	13	1.6
6	20	6	.32	14	4	.15	43	11	1.3
7	20	6	.32	14	3	.11	40	10	1.1
8	20	5	.27	14	3	.11	37	10	1.0
9	19	5	.26	14	4	.15	36	10	.97
10	19	5	.26	14	4	.15	34	8	.73
11	19	4	.21	14	5	.19	32	7	.60
12	19	4	.21	14	5	.19	31	6	.50
13	19	4	.21	13	4	.14	30	5	.40
14	18	4	.19	13	4	.14	30	4	.32
15	18	5	.24	13	4	.14	28	4	.30
16	18	5	.24	13	3	.11	28	4	.30
17	18	5	.24	13	3	.11	28	5	.38
18	18	5	.24	13	3	.11	26	5	.35
19	18	4	.19	14	4	.15	25	5	.34
20	18	4	.19	19	16	.82	24	5	.32
21	17	5	.23	17	7	.32	23	6	.37
22	18	5	.24	44	155	31	22	6	.36
23	18	6	.29	52	102	18	22	5	.30
24	17	6	.28	29	13	1.0	22	5	.30
25	17	5	.23	25	8	.54	21	4	.23
26	17	5	.23	28	8	.60	21	4	.23
27	17	5	.23	171	773	503	21	3	.17
28	16	5	.22	168	591	297	20	3	.16
29	16	5	.22	93	190	48	20	2	.11
30	16	5	.22	85	101	23	19	2	.10
31	---	---	---	76	48	9.8	---	---	---
TOTAL	551	---	7.66	1074	---	935.99	955	---	28.24
		JULY			AUGUST			SEPTEMBER	
1	19	2	.10	9.8	3	.08	9.1	1	.02
2	19	2	.10	9.2	3	.07	9.1	1	.02
3	19	2	.10	9.1	3	.07	8.9	1	.02
4	18	2	.10	9.1	2	.05	8.8	1	.02
5	18	2	.10	9.0	2	.05	8.6	1	.02
6	18	2	.10	8.7	2	.05	8.2	1	.02
7	18	2	.10	8.4	1	.02	7.9	1	.02
8	17	2	.09	8.4	1	.02	8.0	1	.02
9	16	2	.09	8.6	1	.02	8.0	1	.02
10	16	2	.09	8.8	2	.05	7.8	1	.02
11	15	2	.08	8.4	4	.09	7.6	1	.02
12	15	2	.08	8.3	3	.07	7.6	1	.02
13	14	2	.08	8.2	3	.07	7.7	1	.02
14	14	2	.08	8.3	2	.04	6.9	1	.02
15	14	2	.08	8.6	2	.05	8.2	1	.02
16	13	2	.07	9.0	2	.05	8.3	1	.02
17	14	3	.11	9.4	2	.05	8.0	1	.02
18	15	3	.12	9.3	2	.05	7.5	1	.02
19	15	3	.12	9.4	1	.03	6.7	1	.02
20	14	3	.11	9.6	1	.03	7.5	1	.02
21	13	2	.07	12	1	.03	7.0	1	.02
22	12	2	.06	9.9	1	.03	7.2	1	.02
23	12	2	.06	9.1	1	.02	7.5	3	.06
24	12	2	.06	9.0	1	.02	9.2	9	.22
25	12	2	.06	9.7	1	.03	9.3	6	.15
26	11	2	.06	12	1	.03	9.3	3	.08
27	11	3	.09	11	1	.03	9.2	2	.05
28	11	3	.09	10	1	.03	8.8	2	.05
29	11	3	.09	9.9	1	.03	8.1	2	.04
30	10	3	.08	9.7	1	.03	8.0	2	.04
31	10	3	.08	9.4	1	.03	---	---	---
TOTAL	446	---	2.70	289.3	---	1.32	244.0	---	1.13
YEAR	7444.3		1392.86						

11525600 GRASS VALLEY CREEK AT FAWN LODGE, NEAR LEWISTON, CA--Continued

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1989	584.00	288.09	77	365
NOVEMBER	494.00	5.15	0	5
DECEMBER	449.00	2.03	0	2
JANUARY 1990	973.00	102.05	73	175
FEBRUARY	614.00	8.86	0	9
MARCH	771.00	9.64	3	13
APRIL	551.00	7.66	0	8
MAY	1074.00	935.99	351	1290
JUNE	955.00	28.24	44	72
JULY	446.00	2.70	0	3
AUGUST	289.30	1.32	0	1
SEPTEMBER ...	244.00	1.13	0	1
TOTAL	7444.30	1392.86	548	1944

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA

LOCATION.--Lat 40°40'21", long 122°55'07", in SW 1/4 NW 1/4 sec.32, T.33 N., R.9 W., Trinity County, Hydrologic Unit 18010211, on left bank 1.8 mi northeast of Douglas City, 2.3 mi downstream from Limekiln Gulch, and 11.3 mi downstream from Lewiston diversion dam.

DRAINAGE AREA.--812 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Clair Engle Lake (station 11525400) and transbasin diversion to Judge Francis Carr powerplant (station 11525430). Small diversion for irrigation upstream from station. See schematic diagram of Klamath River and Trinity River basins.

AVERAGE DISCHARGE.--9 years, 748 ft^3/s, 541,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,070 ft^3/s, June 12, 1983, gage height, 10.45 ft; minimum daily, 228 ft^3/s, June 15, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,560 ft^3/s, May 28, gage height, 6.34 ft; minimum daily, 228 ft^3/s, June 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	355	351	344	336	369	380	402	347	485	344	342	323
2	338	348	341	339	369	399	402	344	465	342	342	321
3	331	348	334	339	378	442	402	337	447	342	342	313
4	334	345	337	339	391	432	401	337	428	342	342	313
5	334	344	355	339	382	414	388	337	410	342	342	313
6	334	344	358	332	380	404	412	328	369	342	342	313
7	334	347	353	498	378	397	404	326	275	340	334	313
8	334	348	348	849	374	384	402	318	246	337	315	313
9	337	348	348	541	374	377	392	316	246	335	303	313
10	339	348	348	453	374	375	385	308	245	327	302	318
11	334	348	346	422	374	367	385	308	242	352	298	323
12	330	345	344	412	374	358	385	308	236	356	302	320
13	330	344	344	498	374	358	385	308	230	365	305	313
14	330	344	344	529	366	358	380	312	233	366	308	307
15	334	344	344	462	358	367	380	530	228	360	308	303
16	334	344	343	436	374	378	380	595	320	356	308	303
17	334	344	339	417	358	374	380	614	366	352	308	303
18	334	344	336	406	346	368	380	611	368	352	308	314
19	334	344	330	400	347	363	377	608	363	367	308	314
20	336	344	330	393	347	363	374	633	363	368	310	313
21	347	344	330	388	347	363	369	635	363	363	316	308
22	374	344	331	385	347	363	363	793	363	362	313	303
23	621	343	334	382	347	374	390	738	358	355	313	303
24	444	339	334	377	367	397	376	660	358	352	313	303
25	403	348	334	374	369	397	361	644	358	352	321	314
26	383	359	334	374	369	393	358	659	358	352	323	317
27	385	348	334	374	385	391	357	1130	353	352	323	313
28	377	345	334	374	381	391	352	1080	352	352	323	308
29	363	344	334	369	---	391	352	811	351	350	323	308
30	358	344	334	369	---	397	350	778	347	342	323	308
31	353	---	334	369	---	402	---	587	---	342	323	---
TOTAL	11108	10374	10533	12875	10299	11917	11424	16640	10126	10861	9883	9351
MEAN	358	346	340	415	368	384	381	537	338	350	319	312
MAX	621	359	358	849	391	442	412	1130	485	368	342	323
MIN	330	339	330	332	346	358	350	308	228	327	298	303
AC-FT	22030	20580	20890	25540	20430	23640	22660	33010	20080	21540	19600	18550

CAL YR 1989 TOTAL 192543 MEAN 528 MAX 2000 MIN 273 AC-FT 381900
WTR YR 1990 TOTAL 135391 MEAN 371 MAX 1130 MIN 228 AC-FT 268500

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to current year.
WATER TEMPERATURE: Water years 1981 to current year.
SEDIMENT DATA: Water years 1981 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: April 1981 to current year.

REMARKS.--Sediment samples were collected most days where a water temperature is published. Zero bedload observed at flows less than 870 ft^3/s.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 1,990 mg/L, Feb. 14, 1986; minimum daily mean, 0 mg/L, several days most years.
SEDIMENT LOAD: Maximum daily, 17,300 tons, Feb. 14, 1986; minimum daily, 0 ton, several days most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 86 mg/L, May 28; minimum daily mean, 1 mg/L, many days.
SEDIMENT LOAD: Maximum daily, 280 tons, May 28; minimum daily, 0.62 ton, June 13, 15.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
OCT								
23...	1245	910	9.5	124	305	94	98	100
24...	1145	436	9.0	17	20	75	--	--
NOV								
06...	1315	344	8.0	3	2.8	73	--	--
DEC								
11...	1000	344	5.0	3	2.8	80	--	--
JAN								
02...	1130	339	5.0	5	4.6	65	--	--
08...	1300	847	5.0	39	89	92	--	--
FEB								
02...	1155	369	5.0	3	3.0	87	--	--
MAY								
23...	1145	722	12.0	19	37	88	--	--
27...	1645	1330	10.5	96	345	88	--	--
31...	1040	533	9.5	9	13	89	94	100

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	NUMBER OF SAMPLING POINTS (COUNT)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
MAR								
30...	1315	1	402	9.5	--	1	2	6
30...	1320	1	402	9.5	1	2	4	10
30...	1325	1	402	9.5	--	--	1	5
30...	1330	1	402	9.5	1	2	4	7
30...	1335	1	402	9.5	--	1	2	5
MAY								
23...	1330	1	715	12.0	2	3	6	11
23...	1335	1	715	12.0	1	4	11	19
23...	1340	1	715	12.0	2	4	6	7
JUN								
08...	1330	1	246	15.5	--	1	2	5
08...	1335	1	246	15.5	--	--	1	2
08...	1340	1	246	15.5	--	--	--	--
08...	1345	1	246	15.5	--	--	1	2
08...	1350	1	246	15.5	--	1	2	3

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 64.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 128 MM
MAR								
30...	12	16	24	30	40	52	78	100
30...	18	25	31	36	43	58	100	--
30...	9	10	11	12	14	30	52	100
30...	10	17	22	24	32	49	100	--
30...	7	12	17	20	28	48	100	--
MAY								
23...	21	42	92	100	--	--	--	--
23...	26	40	78	100	--	--	--	--
23...	11	26	76	100	--	--	--	--
JUN								
08...	10	13	17	22	30	46	100	--
08...	4	7	9	10	13	17	17	100
08...	1	1	1	1	1	4	21	100
08...	4	6	8	9	10	16	32	100
08...	5	8	11	14	16	30	100	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	START-ING TIME (2400 HOURS)	END-ING TIME (2400 HOURS	NUMBER OF SAMPLING POINTS (COUNT)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)
MAY										
16...	1305	1000	1100	0.250	1235	1335	23	14.0	595	12.5
16...	1310	1000	1100	0.250	1240	1340	23	14.0	595	12.5
21...	1245	1000	1100	0.250	1215	1315	23	16.0	634	11.0
21...	1250	1000	1100	0.250	1220	1320	23	16.0	634	11.0
23...	1245	1000	1100	0.250	1215	1315	23	16.0	715	12.0
23...	1250	1000	1100	0.250	1220	1320	23	16.0	715	12.0
27...	1715	1000	1100	0.250	1650	1740	20	5.00	1330	10.5
27...	1720	1000	1100	0.250	1655	1745	20	5.00	1330	10.5

DATE	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM
MAY									
16...	0.02	10	20	40	60	80	100	--	--
16...	0.02	10	20	40	60	80	100	--	--
21...	0.01	12	25	38	62	75	100	--	--
21...	0.01	12	25	38	62	75	100	--	--
23...	0.20	1	2	8	27	65	89	100	--
23...	0.20	1	2	8	27	65	89	100	--
27...	2.1	1	2	32	68	84	93	97	100
27...	1.4	1	3	34	73	87	94	98	100

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	9.0	---	---	---
2	---	---	---	5.0	5.0	8.0	---	---	12.0	17.5	---	---
3	---	---	---	---	---	---	9.5	---	---	16.0	---	15.0
4	---	---	---	---	---	7.0	---	---	11.0	---	---	---
5	8.5	---	8.0	---	5.5	6.0	---	---	---	---	---	---
6	---	8.0	---	---	---	---	---	---	14.5	---	---	12.5
7	---	---	---	5.5	5.0	---	---	12.0	---	---	13.5	12.0
8	---	---	---	5.0	---	8.0	---	---	15.5	---	---	11.0
9	9.0	---	8.0	5.5	6.5	---	---	---	16.0	---	15.5	---
10	---	9.5	---	---	---	8.0	12.0	---	---	---	---	11.0
11	11.0	---	5.0	6.5	---	---	---	---	---	---	15.0	---
12	---	---	---	---	---	---	14.0	13.5	---	---	---	11.0
13	11.0	---	5.0	7.0	4.0	---	---	---	---	16.5	15.0	---
14	---	---	---	6.5	---	7.0	---	15.0	14.5	---	---	11.5
15	---	7.5	---	---	---	---	---	---	---	---	14.0	---
16	---	---	5.5	---	---	---	---	12.5	---	---	---	---
17	---	---	---	---	---	---	12.5	---	---	---	14.5	11.0
18	---	8.0	---	---	---	---	---	13.0	---	---	---	---
19	9.5	---	---	5.0	5.0	---	---	---	---	---	---	---
20	---	---	6.0	---	---	8.5	14.5	11.5	---	17.0	14.5	10.0
21	9.5	7.5	---	---	---	---	---	11.0	---	---	---	---
22	9.5	---	---	---	6.0	---	---	11.0	16.0	---	14.5	12.5
23	9.5	---	---	---	---	---	12.5	12.0	---	---	---	---
24	9.0	8.0	6.0	---	---	---	---	12.0	---	---	15.0	12.5
25	8.0	---	---	5.0	---	---	---	---	---	---	---	---
26	---	---	---	---	8.0	8.5	---	10.5	16.5	---	---	11.5
27	8.0	7.0	5.5	---	---	---	15.5	10.5	---	---	12.5	---
28	---	7.0	---	---	9.0	---	---	10.0	---	---	---	12.5
29	---	7.0	4.5	---	---	---	---	10.0	18.0	---	12.5	---
30	---	---	---	---	---	9.5	11.0	10.0	---	---	---	---
31	7.0	---	---	5.5	---	---	---	9.5	---	14.5	13.5	---

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	355	7	6.7	351	2	1.9	344	1	.93
2	338	4	3.7	348	2	1.9	341	1	.92
3	331	3	2.7	348	2	1.9	334	2	1.8
4	334	3	2.7	345	3	2.8	337	2	1.8
5	334	2	1.8	344	3	2.8	355	2	1.9
6	334	2	1.8	344	3	2.8	358	2	1.9
7	334	2	1.8	347	3	2.8	353	1	.95
8	334	1	.90	348	2	1.9	348	1	.94
9	337	1	.91	348	2	1.9	348	1	.94
10	339	1	.92	348	2	1.9	348	2	1.9
11	334	1	.90	348	2	1.9	346	3	2.8
12	330	1	.89	345	2	1.9	344	2	1.9
13	330	1	.89	344	2	1.9	344	1	.93
14	330	1	.89	344	2	1.9	344	1	.93
15	334	1	.90	344	2	1.9	344	1	.93
16	334	2	1.8	344	2	1.9	343	1	.93
17	334	2	1.8	344	1	.93	339	1	.92
18	334	3	2.7	344	1	.93	336	1	.91
19	334	3	2.7	344	1	.93	330	1	.89
20	336	2	1.8	344	2	1.9	330	1	.89
21	347	1	.94	344	2	1.9	330	1	.89
22	374	5	5.0	344	2	1.9	331	1	.89
23	621	77	152	343	1	.93	334	1	.90
24	444	15	19	339	1	.92	334	1	.90
25	403	5	5.4	348	1	.94	334	1	.90
26	383	4	4.1	359	1	.97	334	1	.90
27	385	4	4.2	348	1	.94	334	1	.90
28	377	3	3.1	345	1	.93	334	1	.90
29	363	3	2.9	344	1	.93	334	1	.90
30	358	2	1.9	344	1	.93	334	2	1.8
31	353	2	1.9	---	---	---	334	2	1.8
TOTAL	11108	---	239.64	10374	---	49.98	10533	---	37.69

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

	JANUARY			FEBRUARY			MARCH		
1	336	3	2.7	369	2	2.0	380	4	4.1
2	339	3	2.7	369	3	3.0	399	5	5.4
3	339	2	1.8	378	3	3.1	442	4	4.8
4	339	3	2.7	391	3	3.2	432	3	3.5
5	339	2	1.8	382	3	3.1	414	2	2.2
6	332	2	1.8	380	3	3.1	404	2	2.2
7	498	21	36	378	4	4.1	397	3	3.2
8	849	51	130	374	4	4.0	384	3	3.1
9	541	7	10	374	3	3.0	377	2	2.0
10	453	5	6.1	374	3	3.0	375	2	2.0
11	422	4	4.6	374	2	2.0	367	3	3.0
12	412	4	4.4	374	2	2.0	358	3	2.9
13	498	29	40	374	2	2.0	358	3	2.9
14	529	16	24	366	2	2.0	358	3	2.9
15	462	4	5.0	358	3	2.9	367	3	3.0
16	436	4	4.7	374	3	3.0	378	3	3.1
17	417	3	3.4	358	3	2.9	374	3	3.0
18	406	3	3.3	346	4	3.7	368	3	3.0
19	400	3	3.2	347	4	3.7	363	2	2.0
20	393	3	3.2	347	4	3.7	363	2	2.0
21	388	3	3.1	347	3	2.8	363	2	2.0
22	385	2	2.1	347	3	2.8	363	2	2.0
23	382	2	2.1	347	3	2.8	374	2	2.0
24	377	2	2.0	367	4	4.0	397	2	2.1
25	374	2	2.0	369	4	4.0	397	2	2.1
26	374	2	2.0	369	5	5.0	393	2	2.1
27	374	2	2.0	385	4	4.2	391	2	2.1
28	374	2	2.0	381	3	3.1	391	2	2.1
29	369	2	2.0	---	---	---	391	3	3.2
30	369	2	2.0	---	---	---	397	2	2.1
31	369	2	2.0	---	---	---	402	2	2.2
TOTAL	12875	---	314.7	10299	---	88.2	11917	---	84.3

	APRIL			MAY			JUNE		
1	402	2	2.2	347	4	3.7	485	1	1.3
2	402	3	3.3	344	4	3.7	465	1	1.3
3	402	4	4.3	337	4	3.6	447	1	1.2
4	401	4	4.3	337	4	3.6	428	1	1.2
5	388	3	3.1	337	4	3.6	410	1	1.1
6	412	3	3.3	328	4	3.5	369	1	1.0
7	404	3	3.3	326	3	2.6	275	2	1.5
8	402	2	2.2	318	2	1.7	246	2	1.3
9	392	2	2.1	316	2	1.7	246	1	.66
10	385	2	2.1	308	1	.83	245	1	.66
11	385	1	1.0	308	1	.83	242	1	.65
12	385	1	1.0	308	1	.83	236	1	.64
13	385	1	1.0	308	1	.83	230	1	.62
14	380	1	1.0	312	1	.84	233	1	.63
15	380	1	1.0	530	2	2.9	228	1	.62
16	380	1	1.0	595	3	4.8	320	1	.86
17	380	1	1.0	614	2	3.3	366	1	.99
18	380	1	1.0	611	1	1.6	368	1	.99
19	377	1	1.0	608	1	1.6	363	1	.98
20	374	1	1.0	633	1	1.7	363	1	.98
21	369	2	2.0	635	3	5.1	363	1	.98
22	363	3	2.9	793	10	23	363	1	.98
23	390	5	5.3	738	18	37	358	1	.97
24	376	5	5.1	660	4	7.1	358	1	.97
25	361	5	4.9	644	4	7.0	358	1	.97
26	358	5	4.8	659	6	11	358	1	.97
27	357	4	3.9	1130	72	250	353	1	.95
28	352	4	3.8	1080	86	280	352	1	.95
29	352	4	3.8	811	18	39	351	1	.95
30	350	4	3.8	778	7	15	347	1	.94
31	---	---	---	587	4	6.3	---	---	---
TOTAL	11424	---	80.5	16640	---	728.26	10126	---	28.81

11525655 TRINITY RIVER BELOW LIMEKILN GULCH, NEAR DOUGLAS CITY, CA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	344	1	.93	342	2	1.8	323	4	3.5
2	342	1	.92	342	2	1.8	321	2	1.7
3	342	3	2.8	342	2	1.8	313	1	.85
4	342	1	.92	342	3	2.8	313	1	.85
5	342	1	.92	342	3	2.8	313	2	1.7
6	342	1	.92	342	3	2.8	313	3	2.5
7	340	1	.92	334	3	2.7	313	1	.85
8	337	1	.91	315	2	1.7	313	1	.85
9	335	2	1.8	303	2	1.6	313	1	.85
10	327	2	1.8	302	2	1.6	318	1	.86
11	352	2	1.9	298	3	2.4	323	1	.87
12	356	2	1.9	302	2	1.6	320	1	.86
13	365	2	2.0	305	2	1.6	313	1	.85
14	366	2	2.0	308	3	2.5	307	1	.83
15	360	2	1.9	308	5	4.2	303	1	.82
16	356	2	1.9	308	6	5.0	303	1	.82
17	352	3	2.9	308	5	4.2	303	1	.82
18	352	3	2.9	308	5	4.2	314	1	.85
19	367	3	3.0	308	4	3.3	314	1	.85
20	368	2	2.0	310	4	3.3	313	1	.85
21	363	1	.98	316	5	4.3	308	1	.83
22	362	1	.98	313	6	5.1	303	1	.82
23	355	1	.96	313	7	5.9	303	1	.82
24	352	1	.95	313	7	5.9	303	1	.82
25	352	1	.95	321	4	3.5	314	1	.85
26	352	1	.95	323	2	1.7	317	1	.86
27	352	2	1.9	323	1	.87	313	1	.85
28	352	2	1.9	323	1	.87	308	1	.83
29	350	2	1.9	323	2	1.7	308	1	.83
30	342	2	1.8	323	4	3.5	308	1	.83
31	342	2	1.8	323	6	5.2	---	---	---
TOTAL	10861	---	50.31	9883	---	92.24	9351	---	31.27
YEAR	135391		1825.90						

SUMMARY OF WATER AND SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

MONTH	WATER DISCHARGE CFS-DAYS	SUSPENDED SEDIMENT DISCHARGE TONS	BEDLOAD DISCHARGE TONS	TOTAL SEDIMENT DISCHARGE TONS
OCTOBER 1989..	11108.00	239.64	0	240
NOVEMBER	10374.00	49.98	0	50
DECEMBER	10533.00	37.69	0	38
JANUARY 1990..	12875.00	314.70	0	315
FEBRUARY	10299.00	88.20	0	88
MARCH	11917.00	84.30	0	84
APRIL	11424.00	80.50	0	81
MAY	16640.00	728.26	1	729
JUNE	10126.00	28.81	0	29
JULY	10861.00	50.31	0	50
AUGUST	9883.00	92.24	0	92
SEPTEMBER	9351.00	31.27	0	31
TOTAL	135391.00	1825.90	1	1827

11527000 TRINITY RIVER NEAR BURNT RANCH, CA

LOCATION.--Lat 40°47'20", long 123°26'20", in S 1/2 sec.19, T.5 N., R.7 E., Trinity County, Hydrologic Unit 18010211, Trinity National Forest, on left bank 500 ft upstream from Cedar Flat Creek, 700 ft upstream from highway bridge at Cedar Flat, and 2.3 mi southeast of town of Burnt Ranch.

DRAINAGE AREA.--1,439 mi^2.

PERIOD OF RECORD.--October 1931 to September 1940, October 1956 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WDR CA-78-2: 1975(M). WSP 1929: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 944.05 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1931, to Jan. 19, 1940, at site 2 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since November 1960 by Clair Engle Lake (station 11525400), 64 mi upstream, and by transbasin diversion to Judge Francis Carr powerplant (station 11525430) since April 1963. Small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--13 years (water years 1932-40, 1957-60), 2,785 ft^3/s, 2,016,000 acre-ft/yr; 27 years (water years 1964-90), 1,716 ft^3/s, 1,243,000 acre-ft/yr .

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,500 ft^3/s, Feb. 25, 1958, gage height, 30.50 ft, from rating curve extended above 40,000 ft^3/s on basis of slope-area measurement at gage height 43.2 ft; minimum, 82 ft^3/s, Aug. 31, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached a stage of 43.2 ft, from floodmarks, discharge, 172,000 ft^3/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,100 ft^3/s, Jan. 8, gage height, 12.19 ft; minimum daily, 349 ft^3/s, Sept. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	651	648	586	524	872	1860	1130	706	3260	623	440	393
2	569	635	588	532	874	2100	1130	692	2810	610	432	390
3	538	624	592	527	891	2800	1110	703	2670	603	430	383
4	518	618	617	522	1040	2410	1120	723	2290	588	429	376
5	512	621	784	520	973	2090	1260	737	1910	582	426	374
6	503	613	872	525	977	1840	1300	729	1710	586	424	373
7	494	596	711	1570	934	1690	1220	687	1550	579	417	373
8	491	587	663	8900	907	1580	1190	643	1300	570	408	373
9	486	578	648	4280	926	1460	1110	614	1210	560	393	371
10	478	575	629	2320	990	1520	1060	603	1090	545	384	369
11	476	572	614	1700	1090	1480	1030	599	995	543	379	365
12	468	572	597	1460	1150	1380	1020	586	911	552	374	362
13	468	569	586	1990	1140	1310	1010	573	848	548	371	362
14	466	565	580	2440	1070	1310	1050	562	801	544	372	362
15	465	559	575	1960	1010	1300	1080	566	754	549	372	361
16	465	553	570	1650	1050	1340	1080	733	744	560	368	363
17	465	548	562	1430	999	1370	1030	738	823	575	368	365
18	465	544	558	1280	923	1420	987	741	840	596	366	363
19	465	540	553	1160	890	1480	947	742	819	593	369	363
20	465	540	549	1070	872	1480	971	853	816	569	381	364
21	493	540	546	1010	868	1430	911	868	828	537	385	356
22	648	535	544	964	907	1420	868	2440	815	514	383	349
23	2980	534	540	926	1050	1400	1150	2580	782	492	381	350
24	1770	588	540	889	1290	1380	1080	1540	742	476	380	373
25	1120	623	539	859	1600	1360	885	1240	718	474	381	377
26	871	668	534	844	1780	1310	850	1350	693	473	397	399
27	965	635	531	814	1850	1280	835	5660	673	464	410	397
28	830	609	529	791	1890	1240	884	7080	655	460	416	388
29	738	595	528	786	---	1200	830	3590	641	452	418	381
30	690	588	523	849	---	1160	748	2970	635	445	408	377
31	663	---	523	854	---	1140	---	3600	---	443	399	---
TOTAL	21676	17572	18311	45946	30813	47540	30876	46448	35333	16705	12261	11152
MEAN	699	586	591	1482	1100	1534	1029	1498	1178	539	396	372
MAX	2980	668	872	8900	1890	2800	1300	7080	3260	623	440	399
MIN	465	534	523	520	868	1140	748	562	635	443	366	349
AC-FT	42990	34850	36320	91130	61120	94300	61240	92130	70080	33130	24320	22120

CAL YR 1989 TOTAL 522186 MEAN 1431 MAX 12900 MIN 351 AC-FT 1036000
WTR YR 1990 TOTAL 334633 MEAN 917 MAX 8900 MIN 349 AC-FT 663700

11528700 SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CA

LOCATION.--Lat 40°39'00", long 123°29'35", in NW 1/4 SW 1/4 sec.10, T.3 N., R.6 E., Trinity County, Hydrologic Unit 18010212, Trinity National Forest, on left bank 0.3 mi downstream from Big Creek, 3.0 mi northeast of Hyampom, and 3.5 mi downstream from Hayfork Creek.

DRAINAGE AREA.--764 mi^2.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,211.37 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--25 years, 1,413 ft^3/s, 1,024,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,000 ft^3/s, Feb. 17, 1986, gage height, 25.47 ft, from rating curve extended above 15,000 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 28.00 ft, Jan. 26, 1983; minimum daily, 14 ft^3/s, Aug. 24, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1964, reached a stage of 30.45 ft, from floodmarks, discharge, 88,000 ft^3/s, on basis of flood-routing study.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0200	*11,600	*10.65				

Minimum daily, 54 ft^3/s, Sept. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	e300	e246	170	840	1600	712	420	3650	334	129	86
2	171	e290	276	172	876	1740	699	416	2600	324	119	83
3	138	e280	305	172	1040	2150	679	403	2010	317	117	82
4	123	e275	319	172	1030	2000	665	392	1670	307	111	77
5	112	e270	337	157	1050	1780	669	382	1420	299	106	75
6	103	e260	334	222	e1040	1540	649	368	1260	295	104	73
7	98	e255	328	4260	e1000	1400	654	362	1150	288	98	70
8	94	e250	311	7830	959	1300	659	357	1010	278	94	67
9	92	e240	256	3570	970	1190	643	350	920	264	89	67
10	e81	e239	241	1510	1020	1320	627	345	851	252	86	65
11	e77	e231	241	1140	1070	1340	612	340	785	244	81	61
12	e76	e230	241	1390	1100	1240	585	336	736	233	79	60
13	e75	e229	241	2280	1080	1150	581	329	704	226	77	59
14	e74	e224	228	1970	1010	1160	565	320	669	218	74	59
15	e74	e222	201	1550	970	1230	552	312	630	211	74	59
16	e74	e221	193	1350	1020	1230	552	294	605	208	74	59
17	e74	e220	192	1190	969	1230	546	286	583	201	74	60
18	e74	e220	185	1100	894	1220	539	280	556	200	77	59
19	e74	e220	178	1100	832	1180	529	283	529	205	82	59
20	e75	e219	174	1100	817	1120	519	356	500	236	81	59
21	e84	e216	177	1100	802	1070	518	370	479	203	99	55
22	e200	e219	175	1090	847	1020	510	777	459	185	97	55
23	e1150	e221	172	797	973	988	572	1120	436	171	90	54
24	e1450	e235	166	797	1170	939	554	732	424	164	83	55
25	e1280	e250	167	797	1380	901	507	570	408	157	81	62
26	e590	e270	164	797	1550	850	489	525	394	157	80	71
27	e540	e281	161	797	1620	814	473	1660	383	156	103	78
28	e480	e268	167	797	1620	804	455	2900	369	151	121	83
29	e360	e251	164	786	---	775	440	1690	361	144	109	82
30	e330	e247	159	836	---	751	435	1760	350	141	102	75
31	e312	---	159	827	---	726	---	4570	---	135	93	---
TOTAL	8727	7353	6858	41826	29549	37758	17189	23605	26901	6904	2884	2009
MEAN	282	245	221	1349	1055	1218	573	761	897	223	93.0	67.0
MAX	1450	300	337	7830	1620	2150	712	4570	3650	334	129	86
MIN	74	216	159	157	802	726	435	280	350	135	74	54
AC-FT	17310	14580	13600	82960	58610	74890	34090	46820	53360	13690	5720	3980

CAL YR 1989 TOTAL 323956 MEAN 888 MAX 13000 MIN 51 AC-FT 642600
WTR YR 1990 TOTAL 211563 MEAN 580 MAX 7830 MIN 54 AC-FT 419600

e Estimated.

11530000 TRINITY RIVER AT HOOPA, CA

LOCATION.--Lat 41°03'00", long 123°40'15", in SE 1/4 NW 1/4 sec.25, T.8 N., R.4 E., Humboldt County, Hydrologic Unit 18010211, in Hoopa Valley Indian Reservation, on left bank at Hoopa, 0.4 mi upstream from Supply Creek.

DRAINAGE AREA.--2,853 mi^2.

PERIOD OF RECORD.--October 1911 to January 1914, October 1916 to September 1918, October 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near Hoopa" 1931-60.

REVISED RECORDS.--WSP 1565: 1913. WDR CA-77-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 274.82 ft above National Geodetic Vertical Datum of 1929. Prior to October 1931, nonrecording gage at site 0.4 mi upstream at different datum. October 1931 to Dec. 22, 1964, water-stage recorder at site 2.5 mi upstream at datum 31.67 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since November 1960 by Clair Engle Lake (station 11525400) 84 mi upstream, and by transbasin diversion to Judge Francis Carr powerplant (station 11525430) since April 1963. Small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--33 years (water years 1912-13, 1917-18, 1932-60), 5,619 ft^3/s, 4,071,000 acre-ft/yr; 27 years (water years 1964-90), 4,836 ft^3/s, 3,504,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 231,000 ft^3/s, Dec. 22, 1964, gage height, 57.0 ft, present site and datum, from floodmarks, from rating curve extended above 123,000 ft^3/s; minimum, 162 ft^3/s, Oct. 4, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 22,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	1100	*39,700	*27.70				

Minimum daily, 515 ft^3/s, Sept. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1120	1380	1260	895	2930	7140	3080	1780	12200	1540	767	648
2	929	1310	1310	929	2990	7580	3020	1720	10000	1500	750	635
3	825	1260	1380	918	3060	9770	2940	1690	8880	1460	733	625
4	779	1220	1430	896	3880	9190	2910	1680	7640	1420	723	605
5	763	1190	1620	883	3520	8180	3060	1680	6360	1380	711	596
6	749	1170	1980	908	3730	6910	3070	1650	5670	1380	700	590
7	739	1130	1650	6270	3490	6100	2960	1610	5310	1350	694	584
8	724	1110	1470	32200	3290	5510	2860	1540	4570	1310	677	576
9	719	1090	1390	15900	3400	4850	2740	1470	4150	1260	653	573
10	710	1060	1300	8630	3560	5400	2600	1420	3800	1210	628	572
11	705	1050	1230	5650	3870	5680	2510	1400	3410	1150	618	567
12	696	1040	1170	4560	4050	5020	2450	1380	3150	1140	608	559
13	691	1040	1120	6340	3980	4580	2390	1350	2950	1110	598	550
14	682	1040	1090	7610	3400	4620	2380	1310	2790	1080	596	545
15	682	1020	1060	6080	3270	4860	2400	1290	2630	1060	601	543
16	682	1000	1040	4990	3460	5020	2380	1420	2500	1060	601	539
17	682	989	1020	4270	3340	5210	2320	1500	2480	1050	595	544
18	682	975	992	3680	3020	5300	2260	1500	2470	1120	613	542
19	682	970	980	3240	2800	5270	2170	1510	2380	1110	627	541
20	682	959	962	2950	2680	5060	2170	1710	2280	1120	631	540
21	719	955	953	2690	2650	4740	2130	1850	2210	1080	641	533
22	879	945	941	2520	2730	4570	2080	3630	2150	994	644	522
23	3280	965	933	2380	3220	4410	2530	6550	2070	937	627	515
24	5250	1160	924	2240	4140	4210	2770	4180	1970	902	623	535
25	3360	1400	924	2130	5330	4080	2240	2990	1890	880	612	576
26	2370	1660	914	2110	6360	3870	2090	2800	1810	878	627	594
27	2370	1620	908	2010	6910	3670	2020	7220	1750	864	678	622
28	2170	1490	890	1910	7200	3520	2030	15500	1690	844	712	603
29	1770	1360	891	1960	---	3380	2010	8940	1630	821	719	590
30	1570	1290	886	2610	---	3270	1870	7530	1590	792	695	572
31	1470	---	877	2880	---	3150	---	12600	---	780	669	---
TOTAL	40131	34848	35495	143239	106260	164120	74440	104400	114380	34582	20371	17136
MEAN	1295	1162	1145	4621	3795	5294	2481	3368	3813	1116	657	571
MAX	5250	1660	1980	32200	7200	9770	3080	15500	12200	1540	767	648
MIN	682	945	877	883	2650	3150	1870	1290	1590	780	595	515
AC-FT	79600	69120	70400	284100	210800	325500	147700	207100	226900	68590	40410	33990

CAL YR 1989 TOTAL 1438604 MEAN 3941 MAX 41200 MIN 541 AC-FT 2853000
WTR YR 1990 TOTAL 889402 MEAN 2437 MAX 32200 MIN 515 AC-FT 1764000

11530500 KLAMATH RIVER NEAR KLAMATH, CA
(National stream-quality accounting network station)

LOCATION.--Lat 41°30'52", long 123°59'57", in SW 1/4, sec.13, T.13 N., R.2 E., Del Norte County, Hydrologic Unit 18010209, on right bank 0.2 mi upstream from Turwar Creek and 2.2 mi southeast of Klamath.

DRAINAGE AREA.--12,100 mi^2, approximately (not including Lost River or Lower Klamath Lake basins).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to December 1926 (published as "near Requa"), October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1285: 1951(P). WSP 1445: 1918-20. WDR CA-81-2: 1980.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to June 1926, nonrecording gage at site 2.6 mi upstream at different datum. Oct. 1, 1950, to Oct. 2, 1975, water-stage recorder at site 2.6 mi upstream at datum 5.60 ft above NGVD.

REMARKS.--No estimated daily discharges. Records fair except for discharges less than 3,500 ft^3/s, which are poor. Medium and low flows considerably regulated by reservoirs and powerplants upstream from station. Large diversions for irrigation above station. See schematic diagram of Klamath River and Trinity River basins.

AVERAGE DISCHARGE.--56 years, 17,700 ft^3/s, 12,820,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 557,000 ft^3/s, Dec. 23, 1964, gage height, 55.3 ft, former datum, from floodmarks, from rating curve extended above 230,000 ft^3/s on basis of flood-routing study; minimum daily, 1,310 ft^3/s, Sept. 4, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	1330	*131,000	*23.68				

Minimum daily, 2,620 ft^3/s, Sept. 13, 16-18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3570	4310	4140	4560	17100	26600	15700	8940	50100	5830	3030	3380
2	3360	4120	4340	4810	18000	27900	15400	8370	39100	5690	2990	3000
3	3060	3970	4640	4600	16800	36500	15200	7740	34400	5590	2940	2930
4	2940	3850	4970	4450	18700	36600	15100	7550	32200	5460	2880	2860
5	2900	3800	8660	4440	17600	32900	15600	7390	26700	5330	2840	2810
6	2910	3780	11600	4720	19300	28400	16100	7250	23700	5390	2800	2760
7	2880	3700	9180	31400	17500	26200	15200	7070	23100	5320	2780	2730
8	2880	3620	8210	108000	18200	24500	14600	6750	19900	5140	2760	2710
9	2910	3540	8870	74200	20000	22600	14000	6440	17300	4980	2700	2700
10	2900	3490	7940	45400	18600	24600	13300	6230	15600	4820	2670	2670
11	2900	3470	7080	30500	18000	24800	12400	6130	14200	4660	2670	2650
12	2940	3480	6510	22500	17700	22900	12000	5960	13100	4520	2640	2630
13	2950	3490	6120	23100	17000	21000	11700	5890	12200	4390	2750	2620
14	2980	3520	5850	24800	15800	20500	11600	5740	11400	4260	2810	2630
15	2960	3410	5640	21900	15000	20500	11800	5580	10700	4140	2790	2630
16	2950	3340	5480	19000	16300	20600	11900	5460	10100	4000	2780	2620
17	2940	3290	5340	16800	15900	20800	11600	5590	9680	3990	2870	2620
18	2890	3250	5230	15200	14800	21000	11500	5510	9410	4060	3120	2620
19	2880	3220	5110	14000	13600	21200	11100	5480	9070	4090	3320	2630
20	2880	3190	5010	13100	12900	21100	10900	6390	8790	4260	3170	2920
21	3050	3170	4930	12200	12700	20700	10700	7530	8430	4170	3060	2910
22	3770	3150	4690	11600	13000	20400	10500	12200	8150	3920	3050	2900
23	6240	3240	4610	11000	14200	20300	14100	22500	7830	3730	3010	2920
24	15000	3970	4550	10400	15800	19400	15300	16900	7480	3590	2910	2950
25	11000	4740	4500	10000	18400	18800	12400	13300	7170	3510	2860	3060
26	7930	5930	4470	10100	21900	18000	11100	11600	6850	3470	2870	3220
27	8830	5980	4430	9730	24400	17300	10400	18400	6630	3430	3090	3330
28	7950	5100	4380	9340	25800	16800	10500	44500	6430	3340	3370	3270
29	6110	4540	4340	10400	---	16400	10600	31800	6240	3250	3420	3190
30	5130	4240	4310	14200	---	16300	9450	27600	6050	3150	3610	3150
31	4610	---	4310	16300	---	16000	---	44600	---	3080	3560	---
TOTAL	139200	115900	179440	612750	485000	701600	381750	382390	462010	134560	92120	86020
MEAN	4490	3863	5788	19770	17320	22630	12720	12340	15400	4341	2972	2867
MAX	15000	5980	11600	108000	25800	36600	16100	44600	50100	5830	3610	3380
MIN	2880	3150	4140	4440	12700	16000	9450	5460	6050	3080	2640	2620
AC-FT	276100	229900	355900	1215000	962000	1392000	757200	758500	916400	266900	182700	170600

CAL YR 1989 TOTAL 5506850 MEAN 15090 MAX 99900 MIN 2380 AC-FT 10920000
WTR YR 1990 TOTAL 3772740 MEAN 10340 MAX 108000 MIN 2620 AC-FT 7483000

11530500 KLAMATH RIVER NEAR KLAMATH, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL DATA: Water years 1951 to current year.
BIOLOGICAL DATA: Water years 1975-81.
SPECIFIC CONDUCTANCE: Water years 1975-81.
WATER TEMPERATURE: Water years 1966-81.
SEDIMENT DATA: Water years 1955-56, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1981.
WATER TEMPERATURE: November 1965 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
SEP										
29...	1205	2920	1.0	<0.4	2.3	<0.4	1.8	<0.4	0.06	0.16

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV											
02...	1345	4140	195	8.3	11.0	1.0	770	11.1	100	K7	K8
JAN											
05...	1320	4460	185	8.3	5.5	1.4	770	12.7	100	K5	K1
MAR											
06...	1240	28200	121	8.1	8.5	6.8	770	11.9	101	K2	K2
MAY											
09...	1230	6430	155	8.4	15.5	0.50	760	9.6	97	K3	K1
JUL											
19...	1445	4030	177	8.5	22.0	1.9	760	9.0	103	K6	K3
SEP											
05...	1435	2800	198	8.7	20.5	1.0	765	10.0	111	K8	K3

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
NOV											
02...	78	17	8.5	9.1	20	0.4	1.3	102	--	84	10
JAN											
05...	74	16	8.3	9.4	21	0.5	1.2	96	--	79	10
MAR											
06...	60	14	6.0	3.8	12	0.2	0.60	69	--	57	10
MAY											
09...	64	14	6.9	5.7	16	0.3	1.0	80	--	66	8.7
JUL											
19...	67	14	7.7	6.8	18	0.4	1.2	91	1	77	9.8
SEP											
05...	77	17	8.4	9.9	21	0.5	1.6	100	2	84	11

11530500 KLAMATH RIVER NEAR KLAMATH, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
NOV											
02...	4.5	0.10	21	117	123	0.16	<0.010	0.250	<0.010	<0.010	0.30
JAN											
05...	4.5	0.10	22	113	121	0.15	<0.010	0.360	0.010	0.020	0.20
MAR											
06...	2.3	<0.10	15	84	86	0.11	<0.010	0.100	<0.010	<0.010	<0.20
MAY											
09...	3.7	<0.10	14	103	94	0.14	<0.010	<0.100	<0.010	<0.010	<0.20
JUL											
19...	4.3	<0.10	13	104	103	0.14	<0.010	<0.100	0.010	<0.010	0.40
SEP											
05...	5.6	<0.10	14	112	119	0.15	<0.010	<0.100	<0.010	0.020	0.30

DATE	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)
NOV											
02...	0.060	0.060	0.050	<10	2	15	<0.5	<1.0	<1	<3	3
JAN											
05...	0.040	0.030	0.030	10	2	14	<0.5	<1.0	<1	<3	2
MAR											
06...	0.040	0.010	0.010	--	--	--	--	--	--	--	--
MAY											
09...	0.030	0.010	0.020	10	1	13	<0.5	<1.0	<1	<3	2
JUL											
19...	0.020	0.010	<0.010	--	--	--	--	--	--	--	--
SEP											
05...	0.050	0.040	0.040	<10	2	18	<0.5	<1.0	<1	<3	1

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)
NOV										
02...	22	1	6	4	<0.1	<10	2	<1	<1.0	110
JAN										
05...	17	<1	5	3	<0.1	<10	3	<1	<1.0	110
MAR										
06...	--	--	--	--	--	--	--	--	--	--
MAY										
09...	11	<1	<4	2	<0.1	<10	2	<1	<1.0	94
JUL										
19...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	14	1	5	2	<0.1	<10	2	<1	<1.0	120

DATE	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DISSOLVED (UG/L AS U)
NOV										
02...	<6	<3	--	--	--	--	--	--	--	--
JAN										
05...	<6	9	--	--	--	--	--	--	--	--
MAR										
06...	--	--	<0.4	<0.4	1.1	<0.4	1.0	<0.4	<0.05	<0.01
MAY										
09...	<6	14	--	--	--	--	--	--	--	--
JUL										
19...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	<6	10	<0.4	<0.4	1.3	<0.4	1.1	<0.4	0.09	0.12

11530500 KLAMATH RIVER NEAR KLAMATH, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
06...*	1225	8.50	145	120	8.1	8.5	770	11.9	101	33	70
06...*	1245	10.7	220	120	8.1	8.5	770	12.0	101	40	71
06...*	1305	11.4	350	121	8.1	8.0	770	12.0	100	42	68
06...*	1320	11.4	460	120	8.1	8.0	770	11.9	99	44	72
06...*	1340	8.80	590	120	8.1	8.5	765	11.9	101	44	74
SEP											
05...*	1235	6.00	212	196	8.7	20.5	765	10.4	115	1	--
05...*	1310	6.60	302	198	8.7	20.5	765	10.0	111	1	--
05...*	1345	5.40	382	198	8.7	20.5	765	10.0	111	1	--
05...*	1415	5.30	457	198	8.7	20.5	765	9.7	107	0	--
05...*	1450	4.60	517	197	8.8	20.5	765	9.4	104	0	--

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 6, 28,300 ft^3/s; Sept. 5, 2,790 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
02...	1345	4140	11.0	5	56	--
JAN						
05...	1320	4460	5.5	10	120	61
MAR						
06...	1240	28200	8.5	41	3120	71
MAY						
09...	1230	6430	15.5	3	52	--
JUL						
19...	1445	4030	22.0	3	33	--
SEP						
05...	1435	2800	20.5	1	7.6	--

11532500 SMITH RIVER NEAR CRESCENT CITY, CA
(National stream-quality accounting network station)

LOCATION.--Lat 41°47'22", long 124°03'14", in SW 1/4 SW 1/4 sec.10, T.16 N., R.1 E., Del Norte County, Hydrologic Unit 18010101, Six Rivers National Forest, on left bank 0.5 mi downstream from South Fork and 8.1 mi east of Crescent City.

DRAINAGE AREA.--609 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 89.61 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--59 years, 3,810 ft^3/s, 2,760,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 228,000 ft^3/s, Dec. 22, 1964, gage height, 48.5 ft, from floodmarks, from rating curve extended above 110,000 ft^3/s on basis of slope-area measurement at gage height 39.51 ft; minimum daily, 160 ft^3/s, Oct. 24, 25, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 36,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	0145	*113,000	*34.86				

Minimum daily, 235 ft^3/s, Oct. 17-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	305	518	853	795	7380	5280	1860	1480	16700	976	447	387
2	272	473	886	881	6720	6340	1760	1340	8820	994	435	380
3	260	443	867	716	6680	8300	1660	1220	7370	949	427	367
4	250	417	1060	689	7020	9910	1630	1120	6250	904	421	360
5	246	404	5720	851	6340	8170	1650	1040	4970	940	419	354
6	246	389	4180	2180	7830	5980	1600	969	5170	1060	406	350
7	246	388	2540	51400	6220	5010	1480	906	6120	898	404	349
8	246	378	3490	60300	8340	4480	1400	860	4760	842	401	341
9	244	363	3470	22800	10200	3860	1320	820	3930	812	388	343
10	240	355	2400	10300	8180	6510	1260	786	3370	777	377	333
11	238	347	1800	6740	6910	6150	1220	752	2960	740	374	333
12	240	355	1450	5310	5670	5160	1190	722	2680	713	368	336
13	239	418	1260	6020	4670	4490	1130	695	2460	688	367	333
14	241	400	1110	5940	3800	4360	1100	662	2270	670	367	330
15	239	373	1010	4720	3570	4790	1070	638	2090	650	367	331
16	237	361	927	4260	4080	4830	1030	611	1950	631	364	325
17	235	343	865	3660	3570	4580	1010	593	1840	619	398	326
18	235	333	812	3200	3130	4290	982	582	1710	e600	520	326
19	235	327	767	2880	2890	3920	942	588	1600	e590	569	328
20	235	321	726	2550	2720	3540	957	1120	1510	e575	429	313
21	317	311	695	2280	2680	3340	903	1080	1440	e560	395	305
22	567	301	669	2070	3460	3270	1010	4560	1380	e550	379	302
23	1640	357	641	1870	4450	3090	4120	3490	1340	e540	369	305
24	1930	998	626	1710	4790	2850	2690	2530	1290	527	362	306
25	1470	1740	602	1590	5350	2700	1890	2000	1230	e520	352	315
26	1360	3000	587	1760	5730	2490	1660	1860	1180	e512	357	336
27	2590	2050	573	1560	5800	2340	1470	6830	1130	504	415	326
28	1280	1370	558	1620	5660	2240	2570	6540	1100	487	494	320
29	888	1090	540	4350	---	2140	2210	4220	1050	473	435	310
30	695	924	522	7860	---	2030	1750	8250	1010	472	442	304
31	588	---	532	6790	---	1930	---	18500	---	463	409	---
TOTAL	18254	19847	42738	229652	153840	138370	46524	77364	100680	21236	12657	9974
MEAN	589	662	1379	7408	5494	4464	1551	2496	3356	685	408	332
MAX	2590	3000	5720	60300	10200	9910	4120	18500	16700	1060	569	387
MIN	235	301	522	689	2680	1930	903	582	1010	463	352	302
AC-FT	36210	39370	84770	455500	305100	274500	92280	153500	199700	42120	25110	19780

CAL YR 1989 TOTAL 1026073 MEAN 2811 MAX 38300 MIN 235 AC-FT 2035000
WTR YR 1990 TOTAL 871136 MEAN 2387 MAX 60300 MIN 235 AC-FT 1728000

e Estimated.

11532500 SMITH RIVER NEAR CRESCENT CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.
CHEMICAL DATA: Water years 1952 to current year.
BIOLOGICAL DATA: Water years 1978-81.
SPECIFIC CONDUCTANCE: Water years 1979-81.
WATER TEMPERATURE: Water years 1966-81.
SEDIMENT DATA: Water years 1955-56, November 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1978 to September 1981.
WATER TEMPERATURE: October 1965 to September 1981.
SUSPENDED-SEDIMENT DISCHARGE: November 1977 to September 1979, October 1980 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
DEC											
12...	1030	1460	111	8.1	5.5	0.20	760	12.7	101	64	K5
MAR											
27...	1150	2360	94	8.1	9.5	0.30	760	11.6	102	K1	K1
JUN											
20...	1430	1520	112	8.2	17.5	0.40	760	9.9	104	K1	K2
SEP											
27...	0955	326	145	8.3	17.0	0.30	760	9.6	100	K6	K11

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC											
12...	57	4.7	11	1.9	7	0.1	0.30	70	58	2.0	1.9
MAR											
27...	49	5.4	8.5	1.7	7	0.1	0.30	57	47	2.0	1.6
JUN											
20...	55	6.2	9.5	2.0	7	0.1	0.20	63	52	2.2	2.6
SEP											
27...	71	8.5	12	2.7	8	0.1	0.30	86	70	3.8	3.4

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)
DEC											
12...	<0.10	14	55	70	0.08	<0.010	<0.100	<0.010	<0.010	0.30	<0.010
MAR											
27...	<0.10	13	68	61	0.09	<0.010	<0.100	<0.010	<0.010	0.30	<0.010
JUN											
20...	<0.10	14	64	68	0.09	<0.010	<0.100	<0.010	<0.010	<0.20	0.010
SEP											
27...	<0.10	13	76	86	0.10	<0.010	<0.100	<0.010	<0.010	<0.20	<0.010

11532500 SMITH RIVER NEAR CRESCENT CITY, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
DEC											
12...	<0.010	<0.010	<10	<1	6	<0.5	2.0	3	<3	1	9
MAR											
27...	<0.010	<0.010	<10	<1	4	0.7	<1.0	<5	<3	1	6
JUN											
20...	<0.010	<0.010	<10	<1	6	<0.5	1.0	3	<3	2	4
SEP											
27...	<0.010	<0.010	<10	<1	8	<0.5	<1.0	2	<3	2	4

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
DEC											
12...	1	<4	<1	<0.1	<10	8	<1	<1.0	29	<6	6
MAR											
27...	<1	<4	<1	<0.1	<10	6	<1	1.0	26	<6	4
JUN											
20...	3	<4	<1	<0.1	10	5	<1	<1.0	33	<6	6
SEP											
27...	3	<4	1	<0.1	<10	5	<1	<1.0	44	<6	11

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	SEDIMENT, SUSPENDED (MG/L)
MAR										
27...*	1210	2.50	40.0	93	7.9	10.0	760	11.6	103	0
27...*	1235	3.10	100	93	7.9	10.0	760	11.7	104	0
27...*	1300	4.00	137	93	8.0	10.0	760	11.6	103	2
27...*	1325	4.20	170	93	8.0	10.0	760	11.7	104	1
27...*	1350	3.00	210	94	8.1	10.0	760	11.6	103	2
SEP										
26...*	1555	0.90	40.0	146	8.4	17.0	765	9.8	101	0
26...*	1610	1.40	62.0	146	8.4	17.0	765	9.8	101	0
26...*	1625	1.50	82.0	146	8.4	17.0	765	9.9	102	0
26...*	1640	1.50	105	146	8.4	17.0	765	10.0	103	0
26...*	1655	2.10	120	146	8.4	17.0	765	9.8	101	0

* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 27, 2,330 ft^3/s; Sept. 26, 330 ft^3/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
DEC					
12...	1030	1460	5.5	3	12
MAR					
27...	1150	2360	10.0	1	6.4
JUN					
20...	1430	1520	17.5	3	12
SEP					
26...	1620	330	17.0	0	0.0
27...	0955	326	17.0	0	0.0

11532650 SMITH RIVER NEAR FORT DICK, CA

LOCATION.--Lat 41°52'51", long 124°08'07", in SW 1/4 NW 1/4 sec.12, T.17 N., R.1 W, Del Norte County, Hydrologic Unit 18010101, on right bank 10 ft upstream from bridge on U.S. Highway 101, 0.2 mi downstream from Hutsinpillar Creek, and 1.2 mi northeast of Fort Dick.

DRAINAGE AREA.--672 mi^2.

PERIOD OF RECORD.--October 1989 to September 1990. Records prior to October 1989 are in files of the California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Data is collected for flood warning purposes only. Figures given represent only those days when the gage height was above 16.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 34.12 ft, Jan. 8.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	16.28	16.19	16.19	---	16.83	---	20.68	19.99	19.22	19.10
2	---	---	16.19	16.12	16.21	---	16.84	16.22	20.63	19.57	20.54	19.10
3	---	---	16.12	16.08	16.33	---	16.49	---	20.81	19.37	20.67	20.08
4	---	---	16.08	16.05	17.78	16.01	16.41	---	20.69	19.71	21.32	20.12
5	---	---	16.05	16.03	20.56	17.80	16.57	16.12	20.60	19.38	21.10	19.93
6	---	---	16.03	16.00	19.66	18.11	18.13	16.28	20.69	20.03	19.92	19.29
7	---	---	16.02	16.00	18.28	17.34	31.16	18.18	20.02	19.70	19.29	19.09
8	---	---	16.01	---	19.45	17.40	34.12	26.01	21.90	19.96	19.18	18.86
9	---	---	---	---	19.18	17.90	26.50	22.50	21.87	21.00	18.88	18.68
10	---	---	---	---	18.08	17.32	22.64	20.59	20.99	20.32	19.98	18.90
11	---	---	---	---	17.93	16.86	20.76	19.52	20.32	19.76	19.94	19.56
12	---	---	16.12	---	17.26	16.83	19.68	19.07	19.74	19.40	19.56	19.17
13	---	---	---	---	16.90	16.77	19.95	19.32	19.40	19.10	19.17	18.98
14	---	---	---	---	16.82	16.55	19.97	19.27	19.10	18.76	19.00	18.94
15	---	---	---	---	16.56	16.44	19.41	18.85	19.18	18.68	19.09	18.99
16	---	---	---	---	16.44	16.37	19.11	18.65	19.24	19.01	19.08	19.00
17	---	---	---	---	16.37	16.24	18.74	18.31	19.11	18.87	19.00	18.93
18	---	---	---	---	16.24	16.17	18.44	18.06	18.87	18.62	18.93	18.75
19	---	---	---	---	16.33	16.11	18.16	17.73	18.62	18.48	18.75	18.60
20	---	---	---	---	16.30	16.22	17.95	17.56	18.48	18.38	18.60	18.48
21	16.23	---	---	---	16.23	16.13	17.73	17.44	18.39	18.33	18.49	18.40
22	16.44	16.22	---	---	16.13	16.11	17.45	17.40	18.76	18.40	18.43	18.40
23	18.15	16.42	---	---	16.12	16.07	17.67	17.41	19.06	18.74	18.40	18.26
24	18.07	17.66	17.11	---	16.08	16.06	17.49	17.39	19.15	18.96	18.26	17.91
25	17.74	16.91	18.13	17.06	16.06	16.03	17.43	17.32	19.34	19.05	17.91	17.80
26	17.97	16.49	18.31	17.80	16.03	---	17.55	17.42	19.41	19.14	17.80	17.66
27	18.36	17.45	17.82	16.93	16.02	---	17.41	17.31	19.43	19.23	17.66	17.58
28	17.44	16.89	17.03	16.52	16.00	---	17.80	17.29	19.44	19.19	17.58	17.51
29	16.89	16.59	16.68	16.17	---	---	19.03	17.81	---	---	17.51	17.44
30	16.59	16.41	16.40	16.04	---	---	21.05	19.03	---	---	17.44	17.36
31	16.41	16.28	---	---	---	---	20.91	19.86	---	---	17.36	17.30
MONTH	---	---	---	---	---	---	34.12	---	21.90	18.33	21.32	17.30

11532650 SMITH RIVER NEAR FORT DICK, CA--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.30	17.24	17.15	16.96	24.39	21.60	16.41	16.36	---	---	---	---
2	17.24	17.17	16.96	16.84	21.59	20.26	16.44	16.38	---	---	---	---
3	17.17	17.09	16.84	16.71	20.30	20.10	16.42	16.34	---	---	---	---
4	17.11	17.05	16.71	16.64	20.10	19.33	16.35	16.29	---	---	---	---
5	17.08	17.03	16.67	16.59	19.32	18.86	16.99	16.30	---	---	---	---
6	17.07	17.02	16.59	16.45	19.77	18.78	16.73	16.43	---	---	---	---
7	17.02	16.92	16.45	16.42	19.86	19.29	16.46	16.23	---	---	---	---
8	16.92	16.83	16.44	16.38	19.31	18.75	16.24	16.14	---	---	---	---
9	16.83	16.74	16.38	16.34	18.81	18.42	16.25	16.09	---	---	---	---
10	16.74	16.68	16.35	16.31	18.47	18.13	16.25	16.09	---	---	---	---
11	16.68	16.67	16.31	16.29	18.17	17.94	16.24	16.10	---	---	---	---
12	16.68	16.64	16.29	16.26	17.94	17.74	16.14	16.09	---	---	---	---
13	16.64	16.58	16.27	16.23	17.75	17.59	16.15	16.08	---	---	---	---
14	16.58	16.56	16.24	16.21	17.59	17.44	16.12	16.06	---	---	---	---
15	16.56	16.44	16.22	16.19	17.44	17.30	16.09	16.03	---	---	---	---
16	16.46	16.39	16.20	16.17	17.31	17.23	16.06	16.00	---	---	---	---
17	16.43	16.38	16.20	16.14	17.22	17.13	16.03	---	---	---	---	---
18	16.38	16.24	16.17	16.14	17.14	17.01	16.05	16.02	---	---	---	---
19	16.34	16.22	16.32	16.14	17.09	16.92	16.05	---	---	---	---	---
20	16.51	16.26	16.92	16.32	16.98	16.83	16.07	---	---	---	---	---
21	16.26	16.19	17.58	16.55	16.89	16.78	16.05	---	---	---	---	---
22	16.90	16.19	19.42	17.58	16.83	16.68	---	---	---	---	---	---
23	19.20	16.90	19.00	18.20	16.75	16.63	---	---	---	---	---	---
24	18.48	17.47	18.29	17.77	16.68	16.56	---	---	---	---	---	---
25	17.47	17.13	17.77	17.44	16.64	16.52	---	---	---	---	---	---
26	17.15	16.93	17.70	17.38	16.57	16.50	---	---	---	---	---	---
27	17.07	16.79	21.31	17.72	16.56	16.45	---	---	---	---	---	---
28	18.21	17.07	20.91	19.28	16.54	16.46	---	---	---	---	---	---
29	17.80	17.45	19.27	18.72	16.51	16.45	---	---	---	---	---	---
30	17.45	17.15	22.27	18.74	16.48	16.40	---	---	---	---	---	---
31	---	---	24.42	22.28	---	---	---	---	---	---	---	---
MONTH	19.20	16.19	24.42	16.14	24.39	16.40	---	---	---	---	---	---

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low- or flood-flow analyses, depending on the type of data collected.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this volume made at low-flow partial-record stations are given in the following table. The column headed "Period of record" shows the water years in which measurements were made at the same or practically the same site.

Discharge measurements made at low-flow partial-record stations during water year 1990

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Klamath River basin				
11525520	Deadwood Creek at Lewiston, CA	Lat 40°43'02", long 122°48'04", in SW 1/4 NW 1/4 sec.17, T.33 N., R.8 W., Trinity County, 300 ft upstream from mouth and 0.7 mi northeast of Lewiston.	9.10	a1965-75 1976-90	10-05-89	b0.85
					11-03-89	1.05
					02-28-90	3.28
					05-04-90	b.30
					05-30-90	10.4
					09-05-90	b.20

a Published as a miscellaneous measurement.
b Base flow.

Special study and miscellaneous sites

Discharge measurements in the following table were made at special study and miscellaneous sites throughout the area covered by this volume.

Discharge measurements made at special study and miscellaneous sites during water year 1990

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water year)	Measurements	
					Date	Discharge (ft^3/s)
Salinas River basin						
11151870 Arroyo Seco near Greenfield, CA	Salinas River	Lat 36°14'15", long 121°28'50", in NE 1/4 SE 1/4 sec.36, T.19 S., R.4 E., Monterey County, Hydrologic Unit 18060005, on right bank 0.6 mi downstream from Rocky Creek and 14.5 mi southwest of Greenfield.	113	1962-89	10-03-89	a2.53
					11-01-89	a8.98
					12-01-89	15.9
					1-02-90	a16.8
					2-01-90	a24.5
					3-01-90	a52.2
					4-02-90	a23.0
					5-01-90	a9.85
					7-19-90	a.04
					9-04-90	0
Frenchmans Creek basin						
11162635 Frenchmans Creek near Half Moon Bay, CA		Lat 37°29'00", long 122°26'42", in Corral de Tierra (Vasquez) Grant, San Mateo County, Hydrologic Unit 18050006, at bridge on State Highway 1, 0.4 mi upstream from mouth, and 1.7 mi northwest of city of Half Moon Bay.	4.17	1977, 1988-89	10-12-89	a0.18
					11-15-89	a.76
					12-21-89	a.69
					2-01-90	1.30
					3-22-90	a.77
					4-26-90	.09
					6-13-90	a.16
					8-15-90	0
Purisima Creek basin						
Purisima Creek		Lat 37°24'09", long 122°24'41", in Canada de Verde Y Arroyo de la Purisima Grant, San Mateo County, Hydrologic Unit 18050006, at bridge on Verde Road, 0.5 mi northwest of Lobitos and 4 mi south of Half Moon Bay.	8.35	1988-89	10-12-89	a0.53
					11-15-89	a5.02
					12-20-89	a3.09
					2-01-90	3.35
					3-22-90	a2.58
					4-26-90	2.45
					6-13-90	a1.62
					8-15-90	a1.00
Pescadero Creek basin						
Butano Creek	Pescadero Creek	Lat 37°15'00", long 122°23'41", in Butano Grant, San Mateo County, Hydrologic Unit 18050006, at bridge on Pescadero Road near intersection of Bean Hollow and Pescadero Roads, 1.2 mi east of State Highway 1 and 0.7 mi southwest of Pescadero.	20.3	1988-89	11-17-89	a6.32
					12-13-89	a4.64
					1-10-90	3.80
					2-09-90	5.19
					3-13-90	5.48
					4-26-90	3.02
					6-13-90	a3.18
					8-14-90	a.63
Pilarcitos Creek basin						
Arroyo Leon	Pilarcitos Creek	Lat 37°27'44", long 122°25'32", in Miramontes Grant, San Mateo County, Hydrologic Unit 18050006, at bridge at entrance to emetery, at east end of Half Moon Bay city limits, and 0.2 mi upstream from mouth.	8.52	1988-89	10-12-89	0
					11-15-89	a1.51
					12-20-89	a1.08
					2-01-90	1.22
					3-22-90	ae<.01
					4-26-90	.89
					6-13-90	a.06
					8-15-90	0
Alameda Creek basin						
11177200 Vallecitos Creek	Arroyo de la Laguna	Lat 37°35'42", long 121°52'51", in Valle de San Jose Grant, Alameda County, Hydrologic Unit 18050004, on right bank at culvert on Sunol Road, 700 ft upstream from mouth and 0.3 mi east of Sunol.	7.48	1975-76, 1977-90	12-07-89	21.7
					1-10-90	30.3
					2-15-90	25.4
					3-20-90	46.0
					4-26-90	44.4
					6-06-90	1.69
					8-01-90	43.9

a No measurable precipitation had fallen for 10 days prior to discharge measurement.
e Estimated.

PAJARO RIVER BASIN

11153530 LLAGAS CREEK AT MACHADO SCHOOL, NEAR MORGAN HILL, CA

LOCATION.-- Lat 37°05'23", long 121°39'38", in San Francisco de Las Llagas Grant, Santa Clara County, Hydrologic Unit 18060002, on left bank at Machado School, 125 ft upstream from Sycamore Avenue bridge, 1,300 ft downstream from Machado Creek, and 2.8 mi south of Morgan Hill.
DRAINAGE AREA.--24.1 mi^2.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1980-88, October 1989 to September 1990.
SEDIMENT DATA: Water years 1985-87.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)
OCT										
26...	1330	0.46	604	7.6	15.5	0.20	760	8.2	83	320
FEB										
18...	1315	2.3	455	7.9	9.0	13	755	9.8	86	260
AUG										
29...	0815	e1.9	524	7.7	19.0	1.1	750	6.6	72	250

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT									
26...	52	45	15	9	0.4	1.2	279	49	19
FEB									
18...	42	37	14	11	0.4	1.4	194	45	28
AUG									
29...	46	34	14	11	0.4	2.0	236	29	18

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT									
26...	0.10	27	376	0.51	<0.010	0.600	0.030	0.010	<0.20
FEB									
18...	0.10	22	306	0.42	0.040	3.20	0.030	<0.010	1.0
AUG									
29...	0.10	19	304	0.41	<0.010	0.200	0.010	0.010	0.40

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT									
26...	0.20	--	0.020	0.030	0.010	250	6	2.3	0.1
FEB									
18...	0.50	4.2	0.070	0.030	0.040	140	52	8.3	0.6
AUG									
29...	0.30	0.60	0.030	0.020	0.010	250	7	5.4	0.2

e Estimated.

PAJARO RIVER BASIN

11153555 LLAGAS CREEK AT SAN MARTIN, CA

LOCATION.--Lat 37°05'13", long 121°36'15", in San Francisco de Las Llagas Grant, Santa Clara County, Hydrologic Unit 18060002, at bridge on San Martin Avenue, 0.3 mi east of San Martin.
DRAINAGE AREA.--28.2 mi^2.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1980-86, 1989 to current year.
SEDIMENT DATA: Water years 1985-87.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)
FEB 18...	1145	2.0	252	7.9	9.0	70	755	10.6	93	110

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
FEB 18...	21	15	9.0	14	0.4	2.4	85	19	14

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)
FEB 18...	0.10	14	146	0.20	0.110	2.40	0.150	0.060	2.2

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
FEB 18...	1.7	4.6	0.250	0.130	0.140	70	200	10	2.6

GUADALUPE RIVER BASIN

11166670 ALMADEN RESERVOIR NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°09'54", long 121°49'39", in San Vincente Grant, Santa Clara County, Hydrologic Unit 18050003, at center of dam on Alamitos Creek, 0.7 mi southwest of New Almaden, and 7 mi south of Edenvale.
DRAINAGE AREA.-- 12.0 mi^2.
PERIOD OF RECORD.--
MONTHLY CONTENTS: January 1936 to September 1985. Prior to October 1959, published in WSP 1735.
REMARKS.--Reservoir is formed by earthfill dam completed in 1936. Capacity, 1,780 acre-ft between elevations 531.1 ft, invert of outlet tunnel and 607.9 ft crest of spillway. Water released down Alamitos Creek for ground-water recharge by percolation and minor irrigation. Up to 100 ft^3/s diverted to Calero Reservoir at times.

WATER-QUALITY RECORDS

370939121502701 ALMADEN RESERVOIR AT JAQUES GULCH, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°09'39", long 121°50'27", 200 ft southeast of Jaques Gulch.
PERIOD OF RECORD.--
CHEMICAL DATA: October 1989 to September 1990.
SEDIMENT DATA: October 1989 to September 1990.
REMARKS.--Additional data on the bottom-material chemistry are in the files of the U.S. Geological Survey.

PARTICLE SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	BED MAT. FALL DIAM.DW % FINER THAN .002 MM	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM.DW % FINER THAN .008 MM	BED MAT. FALL DIAM.DW % FINER THAN .016 MM	BED MAT. FALL DIAM.DW % FINER THAN .031 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM
APR												
17...	1630	4	5	5	6	6	7	13	47	79	93	100

370952121493901 ALMADEN RESERVOIR AT DAM, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°09'52", long 121°49'39", 300 ft above center of dam.
PERIOD OF RECORD.--
CHEMICAL DATA: October 1989 to September 1990.
BIOLOGICAL DATA: October 1989 to September 1990.
SEDIMENT DATA: October 1989 to September 1990.
REMARKS.--Phytoplankton analyzed by Chadwick and Associates.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ELEVATION ABOVE NGVD (FEET)
SEP									
20...	0933	0.50	477	8.5	20.6	745	8.3	95	564.83
20...	0934	1.0	478	8.5	20.6	745	8.0	91	564.83
20...	0935	2.0	480	8.4	20.5	745	6.6	75	564.83
20...	0936	3.0	486	8.3	20.5	745	3.4	39	564.83
20...	0937	4.0	487	8.2	20.4	745	2.6	30	564.83
20...	0938	5.0	488	8.2	20.4	745	2.4	27	564.83
20...	0939	6.0	489	8.2	20.4	745	2.4	27	564.83
20...	0940	7.0	488	8.1	20.4	745	2.5	28	564.83
20...	0941	8.0	488	8.2	20.3	745	2.5	28	564.83

DATE	TIME	SAMPLING DEPTH (M)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)
JUL												
26...	1430	--	4	<100	1	2	170	40	<0.10	3	10	--
SEP												
20...	0950	7.0	16	100	4	3	1300	240	<0.10	9	10	29

GUADALUPE RIVER BASIN

11166670 ALMADEN RESERVOIR NEAR NEW ALMADEN, CA--Continued

370952121493901 ALMADEN RESERVOIR AT DAM, NEAR NEW ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PHYTOPLANKTON

DATE	9-20-90	
TIME	1000	
DEPTH (M)	1	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL
BACILLARIOPHYTA (Diatoms)		
Order Centrales		
Cyclotella sp.	638	53592
Melosira italica	820	135300
Melosira sp.	39712	4368320
Order Pennales		
Synedra pulchella	1144	1822392
CHLOROPHYTA (Green algae)		
Chlamydomonas sp.	5718	154383
Chlorococcum humicola	1470	5881
Crucigenia quadrata	8659	103902
Dictyosphaerium pulchellum	27283	109130
Micractinium pusillum	1307	15683
Pediastrum duplex var. gracilimum	2777	12498
Scenedesmus opoliensis var. contacta	1307	23525
Schroederia judayi	1797	258776
Tetraedron minimum	327	20584
CHRYSOPHYTA (Golden-brown algae)		
Mallomonas producta	980	128408
Unknown flagellate	2451	83318
CYANOPHYTA (Blue-green algae)		
Anabaena flos-aquae	3431	1029221
Anabaena limnetica	18787	29684042
Aphanocapsa delicatissima	23035	6910
Aphanothece saxicola	7025	7025
Chroococcus sp.	23362	23362
EUGLENOPHYTA (Euglenoids)		
Euglena gracilis	817	1764379
TOTAL CELLS/mL	172,847	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/mL)	39,810,631	
NUMBER OF SPECIES	21	

GUADALUPE RIVER BASIN

11166670 ALMADEN RESERVOIR NEAR NEW ALMADEN, CA--Continued

370957121493601 ALAMITOS CREEK AT ALMADEN RESERVOIR, AT OUTLET, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°09'57", long 121°49'36", 600 ft below the center of dam.
PERIOD OF RECORD.--
CHEMICAL DATA: October 1989 to September 1990.
SEDIMENT DATA: October 1989 to September 1990.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	ARSENIC TOTAL (UG/L AS AS)
JUL										
27...	1030	e4.5	--	--	--	--	--	--	--	8
SEP										
19...	1445	e1.5	489	8.0	20.5	17	745	3.7	42	16

DATE	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)
JUL									
27...	200	19	8	5200	470	0.30	34	20	--
SEP									
19...	<100	5	3	1600	250	0.10	12	10	20

e Estimated.

GUADALUPE RIVER BASIN

11166710 ARROYO CALERO ABOVE CALERO RESERVOIR, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°10'38", long 121°45'45", in Pueblo Lands of San Jose Grant, T.9 S., R.2 E., Santa Clara County, Hydrologic Unit 18050003, 3.2 mi east of New Almaden.

DRAINAGE AREA.--3.14 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1986 to September 1990 (discontinued).
BIOLOGICAL DATA: Water years 1986 to September 1990 (discontinued). Prior to October 1987, published with Calero Reservoir (station 11166740) as "at Calero Creek above Calero Reservoir".

REMARKS.--Phytoplankton analyzed by Chadwick and Associates. Streamflow data provided by Santa Clara Valley Water District; not reviewed by the U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)
DEC										
11...	1530	e50	739	8.4	17.5	42	755	9.6	102	220
APR										
18...	1400	e180	584	7.7	12.0	7.5	750	--	--	110

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER WH FET FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC										
11...	47	24	75	42	2	5.0	2	172	67	110
APR										
18...	21	15	71	57	3	3.3	--	75	39	110

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
DEC									
11...	0.10	16	448	0.61	0.080	0.200	0.020	0.020	0.40
APR									
18...	0.20	17	322	0.44	<0.010	0.700	0.020	0.020	0.20

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L)
DEC									
11...	0.40	0.60	0.100	0.060	0.030	220	10	0.100	<0.100
APR									
18...	0.30	0.90	0.130	0.100	0.100	160	11	<0.100	<0.100

e Estimated

GUADALUPE RIVER BASIN

11166710 ARROYO CALERO ABOVE CALERO RESERVOIR, NEAR NEW ALMADEN, ALMADEN, CA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA,
WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PHYTOPLANKTON

DATE	12/11/89		4/18/90	
TIME	1530		1400	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL	CELLS/ mL	CELL VOLUME μm^3/mL
BACILLARIOPHYTA (Diatoms)				
Order Centrales				
Cyclotella pseudostelligera	47	4418	--	--
Cyclotella stelligera	16	3072	--	--
Melosira varians	32	26112	--	--
Stephanodiscus astraea var. minutula	32	8128	--	--
Stephanodiscus niagarae	--	--	82	323654
Order Pennales				
Achnanthes minutissima	--	--	16	944
Amphora ovalis var. pediculus	7	1652		
Asterionella formosa	--	--	33	12111
Cocconeis placentula var. euglypta	15	25920	--	--
Cymbella amphicephala	15	16530	--	--
Fragilaria leptostauron var. dubia	7	1750	--	--
Fragilaria vaucheriae	22	5984	--	--
Gomphonema sp.	30	16200	--	--
Navicula atomus	7	294	--	--
Navicula graciloides	15	21600	--	--
Navicula radiosa	7	6930	--	--
Navicula sp.	--	--	16	26880
Nitzschia filiformis	7	3829	--	--
Nitzschia frustulum var. perpusilla	37	3552	--	--
Nitzschia hungarica	7	9002	--	--
Nitzschia linearis	7	10500	--	--
Nitzschia palea	--	--	16	8576
Nitzschia sigmoidea	7	57120	--	--
Nitzschia sp.1	7	3437	--	--
Synedra cyclopum	7	2688	--	--
CHLOROPHYTA (Green algae)				
Chlamydomonas sp.	42	9912	82	34850
Chlorella ellipsoidea	--	--	82	2788
Scenedesmus bijuga	--	--	82	15416
Selenastrum minutum	--	--	245	3675
CHRYSOPHYTA (Golden-brown algae)				
Unknown flagellate	--	--	1389	136122
CYANOPHYTA (Blue-green algae)				
Aphanocapsa delicatissima	1428	1428	--	--
Aphanothece saxicola	--	--	1389	6945
Chroococcus dispersus	--	--	572	12012
Chroococcus limneticus	--	--	163	10106
Chroococcus multicoloratus	84	924	--	--
Marssoniella elegans	--	--	735	11025
Oscillatoria limnetica	--	--	654	54936
Synechococcus sp.	--	--	409	8180
CRYPTOPHYTA (Cryptomonads)				
Rhodomonas minuta	168	16128	572	54912
TOTAL CELLS/mL	2053		6537	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/mL)	257110		723132	
NUMBER OF SPECIES	24		17	

GUADALUPE RIVER BASIN

11167370 GUADALUPE RESERVOIR NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°11'57", long 121°52'42", in Los Capitancillos Grant, Santa Clara County, Hydrologic Unit 18050003, at center of dam on Guadalupe Creek, 3.6 mi northwest of New Almaden, and 5 mi southeast of Los Gatos.
DRAINAGE AREA.-- 5.9 mi^2.
PERIOD OF RECORD.--
MONTHLY CONTENTS: January 1936 to September 1985. Prior to October 1959, published in WSP 1735.
REMARKS.--Reservoir is formed by earthfill dam completed in 1936. Capacity, 3,740 acre-ft between elevations 506.8 ft, invert of outlet tunnel and 617.3 ft crest of spillway. Water released down Guadalupe Creek for ground-water recharge by percolation.

WATER-QUALITY RECORDS

371140121521701 GUADALUPE RESERVOIR AT ENRIQUITA MINE, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°11'40", long 121°52'17", 1,000 ft northwest of Enriquita Mine.
PERIOD OF RECORD.--
CHEMICAL DATA: October 1989 to September 1990.
SEDIMENT DATA: October 1989 to September 1990.
REMARKS.--Additional data on the bottom-material chemistry are in the files of the U.S. Geological Survey.

PARTICLE SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	BED MAT. FALL DIAM.DW % FINER THAN .002 MM	BED MAT. FALL DIAM. % FINER THAN .004 MM	BED MAT. FALL DIAM.DW % FINER THAN .008 MM	BED MAT. FALL DIAM.DW % FINER THAN .016 MM	BED MAT. FALL DIAM.DW % FINER THAN .031 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
APR										
17...	1430	4	6	6	10	15	21	51	94	100

371156121523901 GUADALUPE RESERVOIR AT DAM, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°11'56", long 121°52'39", 300 ft above center of dam.
PERIOD OF RECORD.--
CHEMICAL DATA: October 1989 to September 1990.
BIOLOGICAL DATA: October 1989 to September 1990.
SEDIMENT DATA: October 1989 to September 1990.
REMARKS.--Phytoplankton analyzed by Chadwick and Associates.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	SAMPLING DEPTH (M)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ELEVATION ABOVE NGVD (FEET)
SEP									
20...	1149	0.50	595	8.1	22.0	740	8.2	97	551.14
20...	1150	1.0	594	8.1	21.9	740	7.7	91	551.14
20...	1151	2.0	594	8.1	21.8	740	7.7	91	551.14
20...	1152	3.0	594	8.1	21.7	740	7.6	89	551.14
20...	1153	4.0	600	8.1	21.6	740	6.5	76	551.14
20...	1154	5.0	600	8.1	21.5	740	6.5	76	551.14
20...	1155	6.0	602	8.1	21.3	740	6.0	70	551.14
20...	1156	7.0	597	8.0	20.8	740	3.9	45	551.14
20...	1157	8.0	538	7.7	15.7	740	0.6	6	551.14
20...	1158	9.0	554	7.7	13.0	740	0.5	5	551.14

DATE	TIME	SAMPLING DEPTH (M)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
JUL											
26...	1530	--	2	<100	1	2	580	1400	0.10	9	10
SEP											
20...	1200	8.0	2	100	<1	2	250	790	<0.10	12	10

GUADALUPE RIVER BASIN

11167370 GUADALUPE RESERVOIR NEAR NEW ALMADEN, CA--Continued

371156121523901 GUADALUPE RESERVOIR AT DAM, NEAR NEW ALMADEN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

PHYTOPLANKTON

DATE	9-20-90	
TIME	1205	
DEPTH (M)	1	
ORGANISM	CELLS/ mL	CELL VOLUME μm^3/mL
BACILLARIOPHYTA (Diatoms)		
Order Centrales		
Cyclotella sp.	919	77196
Melosira italica	184	30360
Melosira sp.	1838	297756
Order Pennales		
Synedra minuscula	54	16200
Synedra sp.	54	45576
Tabellaria fenestrata	218	16132
CHLOROPHYTA (Green algae)		
Ankistrodesmus falcatus	163	1797
Chlamydomonas sp.	1960	7842
Chlorococcum humicola	3921	15683
Crucigenia quadrata	653	5881
Coelastrum reticulatum	51951	207805
Dictyosphaerium pulchellum	15357	61427
Scenedesmus bijuga	980	17644
CHRYSOPHYTA (Golden-brown algae)		
Mallomonas acaroides	163	183789
Mallomonas producta	327	42803
Unknown flagellate	3267	111091
CYANOPHYTA (Blue-green algae)		
Aphanocapsa delicatissima	33491	100472
Aphanocapsa elachista var. conferta	29080	8724
Aphanothece saxicola	12906	12906
Chroococcus sp.	17644	17644
EUGLENOPHYTA (Euglenoids)		
Euglena sp.	1144	61753
Phacus sp.	490	23035
TOTAL CELLS/mL	176,764	
TOTAL ALGAL BIOMASS AS BIOVOLUME (μm^3/mL)	1,363,516	
NUMBER OF SPECIES	22	

GUADALUPE RIVER BASIN

11167370 GUADALUPE RESERVOIR NEAR NEW ALMADEN, CA--Continued

371158121524801 GUADALUPE CREEK AT OUTLET OF GUADALUPE RESERVOIR, NEAR NEW ALMADEN, CA

LOCATION.--Lat 37°11'58", long 121°52'48", 500 ft below dam on left side.
PERIOD OF RECORD.--
CHEMICAL DATA: October 1989 to September 1990.
SEDIMENT DATA: October 1989 to September 1990.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ARSENIC TOTAL (UG/L AS AS)
JUL										
27...	1145	e2.5	--	--	--	--	--	--	--	2
SEP										
20...	1245	e0.90	596	8.0	21.5	4.6	740	8.0	94	1

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)
JUL									
27...	<100	9	2	160	250	<0.10	8	<10	--
SEP									
20...	<100	1	2	460	150	<0.10	10	<10	28

e Estimated.

GUADALUPE RIVER BASIN

11168000 LOS GATOS CREEK AT LOS GATOS, CA

LOCATION.--Lat 37°13'03", long 121°59'11", in SE 1/4 sec.20, T.8 S., R.1 W., Santa Clara County, Hydrologic Unit 18050003, on right bank 0.4 mi upstream from Main Street bridge, 0.7 mi southwest of Los Gatos Post Office, and 1.1 mi downstream from Lexington Dam.

DRAINAGE AREA.-- 39 mi^2.

PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1930-44, 1954-71.
CHEMICAL DATA: Water years 1952-66, 1980-87, 1989 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)
JAN										
13...	1130	1.9	423	7.8	11.0	110	745	11.3	105	32
FEB										
17...	0815	2.8	449	8.1	7.5	5.0	745	8.7	74	24
AUG										
28...	0900	4.3	663	8.2	19.0	4.8	750	9.0	99	22

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN										
13...	200	49	19	19	17	0.6	2.3	167	56	10
FEB										
17...	210	51	21	19	16	0.6	2.0	177	56	12
AUG										
28...	300	73	28	29	17	0.7	3.0	216	130	18

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
JAN									
13...	0.10	11	267	0.36	0.050	0.600	0.070	0.020	0.40
FEB									
17...	0.20	13	281	0.38	0.030	1.30	0.030	0.020	1.7
AUG									
28...	0.60	7.9	419	0.57	<0.010	<0.100	0.020	<0.010	0.30

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
JAN									
13...	<0.20	1.0	0.120	0.020	0.030	190	200	3.8	2.2
FEB									
17...	1.3	3.0	0.050	0.020	0.030	160	38	6.0	0.2
AUG									
28...	<0.20	--	0.040	<0.010	<0.010	140	6	3.3	0.5

GUADALUPE RIVER BASIN

11168800 LOS GATOS CREEK AT LINCOLN AVENUE, AT SAN JOSE, CA

LOCATION.-- Lat 37°18'45", long 121°54'12", in San Juan Bautista Grant, Santa Clara County, Hydrologic Unit 18050003, on right bank 100 ft upstream from Lincoln Avenue bridge, 0.6 mi downstream from Dry Creek.

DRAINAGE AREA.--48.4 mi^2.

PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1980-87, October 1989 to September 1990.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)
OCT										
24...	1415	32	207	7.4	18.0	26	760	8.5	90	55
JAN										
13...	0815	28	131	7.1	13.0	28	755	9.5	91	45
FEB										
16...	1345	274	105	7.6	10.0	150	750	10.6	95	90

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT										
24...	55	13	5.5	20	43	1	2.3	43	14	24
JAN										
13...	39	10	3.3	8.4	31	0.6	2.0	40	11	10
FEB										
16...	32	8.0	3.0	7.5	33	0.6	1.2	25	10	11

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT									
24...	0.10	5.6	111	0.15	0.050	0.500	0.150	0.140	0.90
JAN									
13...	<0.10	2.4	72	0.10	0.050	0.400	0.130	0.120	0.70
FEB									
16...	0.10	2.3	59	0.08	0.120	0.300	0.380	0.170	2.2

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT									
24...	0.60	1.4	0.270	0.200	0.150	70	76	12	1.9
JAN									
13...	0.30	1.1	0.190	0.120	0.090	30	45	7.8	1.5
FEB									
16...	1.1	2.5	0.480	0.120	0.110	30	140	5.0	7.0

COYOTE CREEK BASIN

11169970 COYOTE CREEK BELOW LEROY ANDERSON DAM, NEAR MADRONE, CA

LOCATION.--Lat 37°09'54", long 121°37'56", in southeast corner of La Laguna Seca Grant, Santa Clara County, Hydrologic Unit 18050003, on left bank 500 ft downstream from release at Leroy Anderson Dam, 2.3 mi northeast of Madrone.
DRAINAGE AREA.--195 mi^2.
PERIOD OF RECORD.--
CHEMICAL DATA: Water years 1980-88, October 1989 to September 1990.
SEDIMENT DATA: Water year 1985.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)
JAN										
14...	0915	1.6	639	8.2	11.0	1.0	--	--	--	170
FEB										
18...	1015	0.14	654	8.1	8.0	1.0	--	--	--	170
AUG										
29...	1100	e30	659	8.6	21.0	1.4	750	8.4	96	150

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	CAR-BONATE WATER WH FET FIELD MG/L AS CO3	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
JAN										
14...	34	21	72	47	2	4.2	--	125	55	100
FEB										
18...	34	20	67	46	2	3.4	--	131	55	100
AUG										
29...	29	18	74	52	3	3.8	4	105	47	110

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
JAN									
14...	0.10	7.9	369	0.50	0.010	<0.100	0.030	0.030	0.30
FEB									
18...	0.10	7.2	365	0.50	0.020	0.100	0.040	0.030	0.60
AUG									
29...	0.30	10	355	0.48	<0.010	0.100	0.020	0.020	0.40

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
JAN									
14...	0.40	--	0.030	0.020	<0.010	190	10	3.4	0.3
FEB									
18...	0.70	0.70	0.020	<0.010	<0.010	180	5	3.4	0.2
AUG									
29...	<0.20	0.50	0.070	0.030	0.030	180	<3	3.1	0.6

e Estimated.

COYOTE CREEK BASIN

11171500 COYOTE CREEK NEAR EDENVALE, CA

LOCATION.--Lat 37°16'15", long 121°47'47", at east boundary of Santa Teresa Grant, Santa Clara County, Hydrologic Unit 18050003, at "THE NARROWS," 1.5 mi northeast of Edenvale, and 7 mi south of San Jose.
DRAINAGE AREA.--229 mi^2.
PERIOD OF RECORD.--
DAILY STREAMFLOW DATA: Water years 1916-62. Published as Coyote River near Edenvale 1916-26.
CHEMICAL DATA: Water years 1979-88, October 1989 to September 1990.
SEDIMENT DATA: Water years 1985-87.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)
JAN										
14...	0800	0.93	79	7.0	11.5	8.2	--	--	--	27
FEB										
18...	0845	20	615	8.4	7.5	1.5	755	10.5	89	200

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	CARBONATE WATER WH FET FIELD MG/L AS CO3	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
JAN										
14...	6.7	2.5	4.0	23	0.3	1.6	--	29	3.0	3.8
FEB										
18...	40	24	56	38	2	3.0	2	158	57	76

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
JAN									
14...	<0.10	3.3	43	0.06	0.040	0.300	0.080	0.090	0.60
FEB									
18...	0.10	8.8	360	0.49	0.020	1.00	0.020	0.010	1.5

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
JAN									
14...	0.30	0.90	0.170	0.130	0.120	30	80	6.5	0.8
FEB									
18...	0.90	2.5	0.030	<0.010	<0.010	160	9	3.1	0.3

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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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