Water Resources Data California

Water Year 1985

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

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-85-3
Prepared in cooperation with the California Department of Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1985

1984

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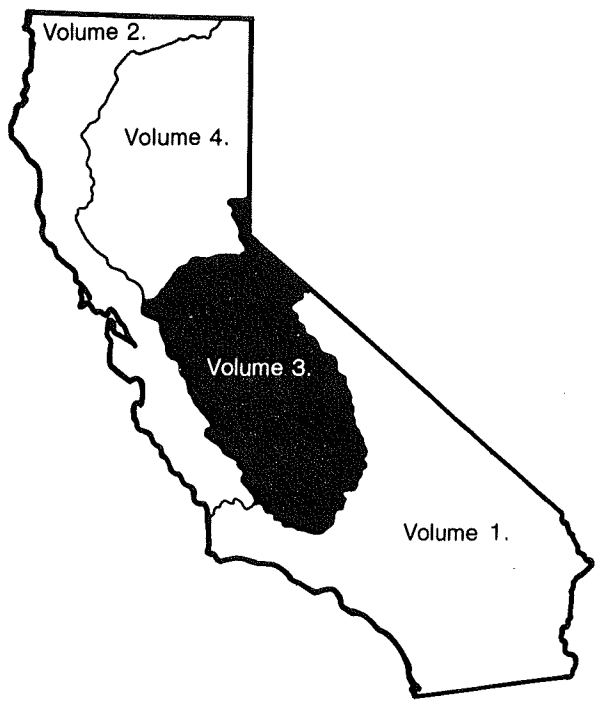
Water Year 1985

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

by T.C. Hunter, J.R. Mullen, R.G. Simpson, and D.A. Grillo



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-85-3
Prepared in cooperation with the California Department of Water Resources and with other agencies

DEPARTMENT OF THE INTERIOR

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1987

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 5 volumes:

Volume 1. Southern Great Basin from Mexican Border to Mono Lake Basin, and Pacific Slope Basins from Tijuana River to 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 Walker River to 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 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 Gilbert L. Bertoldi and John M. Klein, successive District Chiefs, California.

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16. Abstract (Limit: 200 words)

Water resources data for the 1985 water year for California consists of records of stage, discharge, and water quality of streams and stage and contents in lakes and reservoirs. Volume 3 contains discharge records for 149 gaging stations; stage and contents for 41 lakes and reservoirs; gage height records for two lakes; and water quality for 34 streams. Also included are 4 crest-stage 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.

17. Document Analysis a. Descriptors

*California, *Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Sampling sites, Water analyses

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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

[Letters after station name designate type of data:
(d), discharge; (l), lake contents; (c), chemical; (b), biological;
(t), water temperature; and (s), sediment]

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WATER RESOURCES DATA - CALIFORNIA, 1985

Volume 3

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 Geological Survey, the data are published annually in this report series entitled "Water Resources Data - California."

This report includes records on surface water in the State. Specifically, it contains: (1) Discharge records for 152 streamflow-gaging stations and 4 crest-stage partial-record streamflow stations; (2) stage and content records for 38 lakes and reservoirs; and (3) water-quality records for 9 streamflow-gaging stations. Records included for stream stages are only a small fraction of those obtained during the water year.

This 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 for ground-water levels and quality was published for California.

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." The above mentioned Water-Supply papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports, Federal Center, Bldg. 41, Box 25425, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have 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-85-3." 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 back of 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:

California Department of Health Services, Dr. John Gaston, Sanitary-Engineering Department.
California Department of Water Resources, David N. Kennedy, Director.
California State Water Resources Control Board, Michael Campos, Executive Director.
East Bay Municipal Utility District, Jerome B. Gilbert, General Manager.
El Dorado County Water Agency, Robert E. Dorr, Chairman, Board of Supervisors.
Fresno County Metropolitan Flood Control District, Doug Harrison, General Manager-Secretary.
Kern County Water Agency, Stuart T. Pyle, Engineer-Manager.
Kings River Conservation District, Jeff L. Taylor, General Manager-Chief Engineer.
Madera Irrigation District, Robert L. Stanfield, General Manager-Chief Engineer.
Merced, City of, Steven M. Stroud, Director of Public Works.
Merced Irrigation District, Tom Reta, Chief Engineer-Manager.
San Francisco, City and County, Hetch-Hetchy Water and Power, Rudolf Nothenberg, General Manager of Public Utilities.
Tahoe Regional Planning Agency, David S. Ziegler, Senior Planner.
Terra Bella Irrigation District, John E. Boudreau, Engineer-Manager.
Tulare County Flood Control District, Jack L. Carlsen, Flood Control Engineer.
Turlock Irrigation District, Paul S. Brown, Controller.
Woodbridge Irrigation District, Mabel Hall, Manager-Secretary.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; Forest Service and Soil Conservation Service, U.S. Department of Agriculture; National Park Service, Bureau of Reclamation, and Fish and Wildlife Service, U.S. Department of Interior.

The following organizations aided in collecting records: Pacific Gas and Electric Company; Southern California Edison Company; Merced, Nevada, and Oakdale-South San Joaquin Irrigation Districts.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Runoff during the 1985 water year in the area covered by this volume was below normal. Runoff, as indicated by five representative gaging stations, averaged 54 percent of the long term (1951-80) median, and ranged from 7 percent on the west side of the San Joaquin Valley to 114 percent on the east side (fig. 1). Figure 2 shows the variation in runoff during the 1985 water year and compares the 1985 monthly and annual mean flow with the median flow for representative streams in central California. The most significant runoff producing storms occurred November 28, December 16, January 8, February 8, 9, and March 27. No discharges during the water year exceeded peaks of record, nor was there local flooding at any of the gaging stations within the volume area. Streamflow at many gaging stations was the lowest since the 1977 drought year. Several small streams had no flow for a significant part of the year.

Precipitation was below normal, averaging 79 percent of normal at 10 representative weather stations, and ranged from 52 to 99 percent among those stations. No major storms occurred. Runoff from the snowpack in the central Sierra Nevada was about 80 percent of normal.

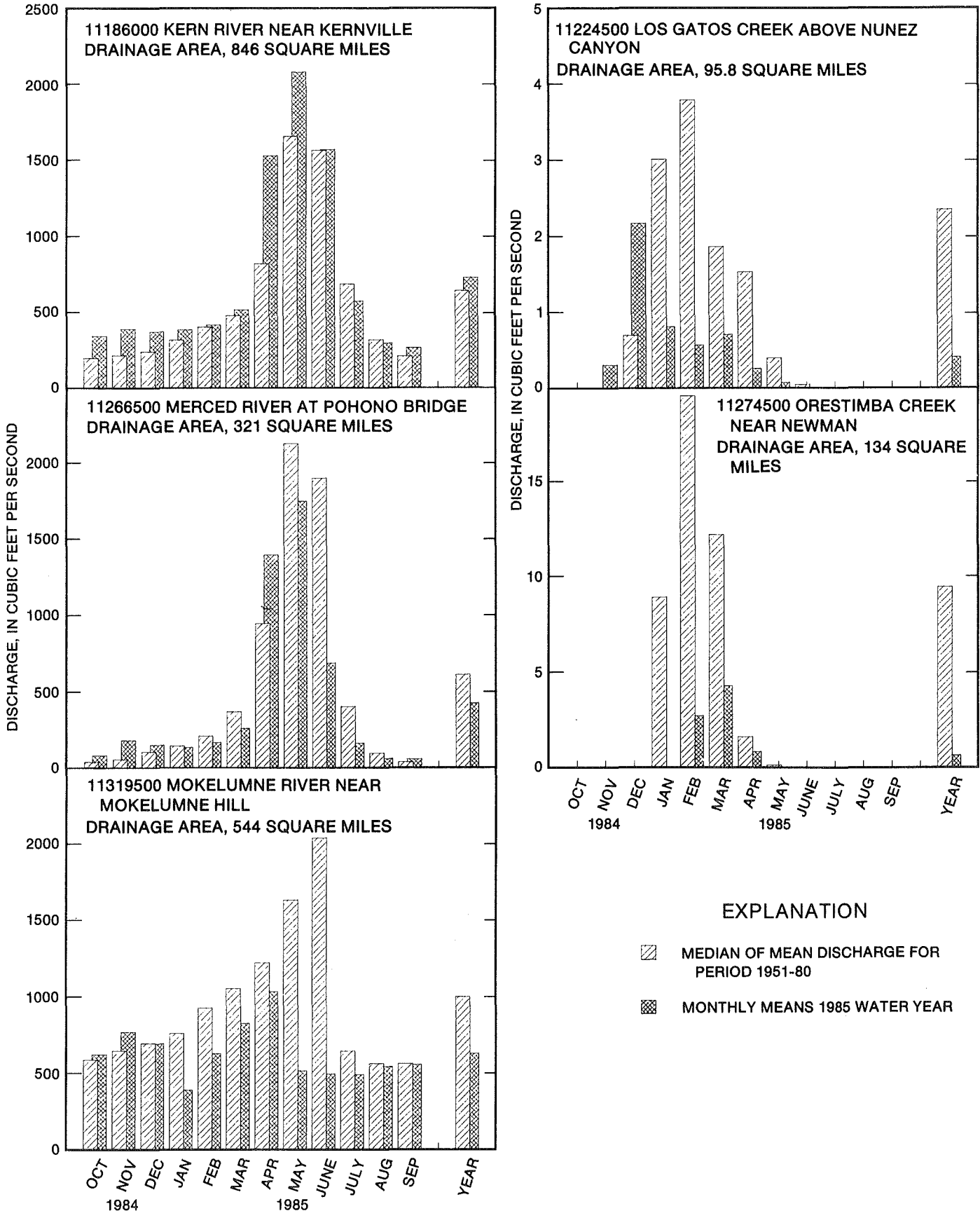
Water Quality

Water samples collected at the four NASQAN stations and one Hydrologic Benchmark station reported in this volume were analyzed for water-quality constituents. Median dissolved-solids concentrations were similar to those of the previous year at four of the stations. Median dissolved-solids concentration at the San Joaquin River near Vernalis increased from 238 mg/L in 1984 to 372 mg/L in 1985.

Fecal-coliform and fecal-streptococcal bacteria concentrations in water sampled from the San Joaquin River near Vernalis ranged from K70 to K320 col/100 mL and from K40 to 780 col/100 mL, respectively. These concentrations were lower than those measured in 1984. Fecal-coliform and fecal-streptococci bacteria concentrations in water sampled from the Kern River at Kernville ranged from <1 to K11 col/100 mL and from K1 to K19 col/100 mL, respectively, and also were lower than concentrations measured in 1984.

K Results based on colony count outside the acceptable range (non-ideal colony count).

FIGURE 1. — Runoff for the 1985 water year.


11186000 KERN RIVER NEAR KERNVILLE
DRAINAGE AREA, 846 SQUARE MILES
11224500 LOS GATOS CREEK ABOVE NUNEZ CANYON
DRAINAGE AREA, 95.8 SQUARE MILES
11266500 MERCED RIVER AT POHONO BRIDGE
DRAINAGE AREA, 321 SQUARE MILES
11274500 ORESTIMBA CREEK NEAR NEWMAN
DRAINAGE AREA, 134 SQUARE MILES
11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL
DRAINAGE AREA, 544 SQUARE MILES
DISCHARGE, IN CUBIC FEET PER SECOND
OCT NOV DEC JAN FEB MAR APR MAY JUNE JULY AUG SEP YEAR
1984
1985
EXPLANATION
MEDIAN OF MEAN DISCHARGE FOR PERIOD 1951-80
MONTHLY MEANS 1985 WATER YEAR

SUMMARY OF HYDROLOGIC CONDITIONS

Sediment

Suspended-sediment discharge and concentration were monitored daily at ten stations and periodically at eight stations in the area reported in this volume. Nine of the daily stations monitor sediment transport into Lake Tahoe. The high resistance to erosion of the granitic and volcanic rock surrounding the lake, as well as the presence of a snowcover during a significant part of the year, resulted in relatively low sediment discharge rates and concentrations. The stations monitored periodically are in an area extending from as far north as Truckee to as far south as the town of Kernville, near Isabella Reservoir.

During the 1985 water year, sediment discharge in the Lake Tahoe basin averaged 39 percent of the sediment discharge for water year 1984. Sediment discharge at San Joaquin River near Vernalis in 1985 was 68 percent of the mean sediment discharge for the 1957-84 water years.

Sediment discharge for the daily stations ranged from 2.9 ton/yr for Logan House Creek near Glenbrook, to 256,000 ton/yr for San Joaquin River near Vernalis. Annual sediment discharge per square mile of drainage area ranged from a minimum of 1.4 ton/mi^2 for Logan House Creek to a maximum of 37 ton/mi^2 for Upper Truckee River at South Lake Tahoe.

The majority of sediment transport in the Tahoe basin was the result of November storms and of snowmelt in April and May. Sediment discharge at the San Joaquin River stations was more evenly distributed during the year because of flow regulation. Maximum daily sediment discharge ranged from 0.09 ton (3 percent of the annual total) for Logan House Creek to 1,610 ton (0.6 percent of the annual total) for San Joaquin River. Maximum daily concentrations ranged from 12 mg/L for Logan House Creek to 179 mg/L for the San Joaquin River.

SPECIAL NETWORKS AND PROGRAMS

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.

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 500 or so 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 such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing 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 1985 water year that began October 1, 1984, and ended September 30, 1985. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The locations of the stations where the data were collected are shown in figures 4 through 24. 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.

Station Identification Numbers

Each data station, whether streamsite or well, 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 is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream 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 in 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 wells or 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. (See figure below).

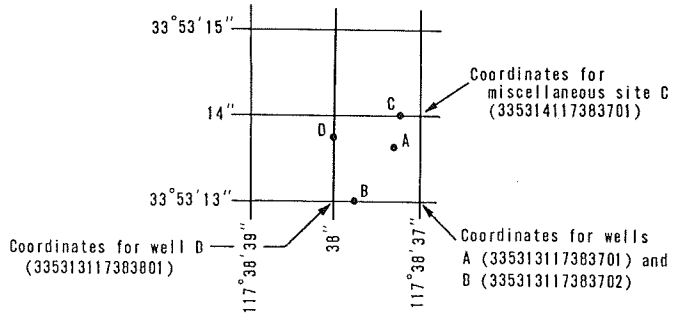


Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude).

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 content, similarly, are those for which stage or content 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 crest-stage partial-record stations for which data are given in this report are shown, by county, in figures 4 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 content. 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 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 for any stage within the range of the measurements are prepared. 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 the 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 from surveys, curves, or tables defining the relationship of stage and content. 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 relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships such 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 that 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 Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having 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. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

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 here 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 Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here 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.

Although rare, 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 ever revised after the station was discontinued. Of course, 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"), or 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 observed 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 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 3 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 observed 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 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 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 a variety of 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 once 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 4 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.

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring 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, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be 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 publications on "Techniques of Water-resources Investigations," Book 1, Chapter D2; Book 3, Chapter C2; Book 5, Chapter A1, A3, and A4. All of these references are listed on p. 22 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

One sample can define adequately 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, and values for each constituent measured and are based upon 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 USGS District Office whose address is given on the back of the title page of this report.

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 sections.

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 observed 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 observations, 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.

Cross-Sectional Data

Cross-section 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 Geological Survey laboratories in Arvada, CO, or Doraville, GA. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chapter D2; Book 3, Chapter C2; 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 so forth, 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 then 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 parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, 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 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 published 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.

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 known to be greater than the value shown
<	Actual value is known to be less than the 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

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 a variety of 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 also 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 mL 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 mL 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 Streptoccus agar (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL 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.

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 one 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 µm 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 µm 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 therein 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 8-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, µg/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, µg/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 one 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 500 or so 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 such 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 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 5-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^{10} 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 upon 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 or 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 and 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 humas. 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 (0.076 m) 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 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 or 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 the dissolved-solids content 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 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 and 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 and 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, and 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 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 of 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 degrees from the path of incident light source.

Water year in 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, 1985, is called the "1985 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, Denver, CO 80225. Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. 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-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.

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-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-B1. Aquifer-test design, observation, and data analysis, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. Introduction to ground-water hydraulics, a programmed text for self-instruction, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. Type curves for selected problems of flow to wells in confined aquifers, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-C1. Fluvial sediment concepts, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

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.

3-C3. Computation of fluvial-sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. Some statistical tools in hydrology, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. Frequency curves, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. Low-flow investigations, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. Regional analyses of streamflow characteristics, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. Methods for determination of inorganic substances in water and fluvial sediments, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

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.

5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. Methods for determination of radioactive substances in water and fluvial sediments, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. Quality assurance practices for the chemical and biological analyses of water and fluvial sediments, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. Laboratory theory and methods for sediment analysis, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

7-C1. Finite difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. Computer model of two-dimensional solute transport and dispersion in ground water, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. A model for simulation of flow in singular and interconnected channels by R. W. Shaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

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 as of the 1985 water year. Daily streamflow or stage records were collected and published for the period of record shown for each station.

Station number	Station name	Drainage area (mi^2)	Period of record
10336689	Snow Creek at Tahoe Vista, CA	4.43	1980-85
11196420	Tehachapi Creek near Tehachapi, CA	53.2	1962-85
11211790	Cottonwood Creek near Elderwood, CA	60.4	1971-85
11239000	Huntington-Shaver Conduit Outlet near Shaver Lake, CA	--	1929-85
11312000	Bear Creek near Lockeford, CA	47.4	1931-85

DISCONTINUED WATER-QUALITY STATIONS

The following water-quality stations in California have been discontinued as of the 1985 water year. Continuous daily records of water temperature and/or sediment were collected and published for the period of record shown for each station.

Station number	Station name	Drainage area (mi^2)	Type of Record	Period of Record
10336689	Snow Creek at Tahoe Vista, CA	4.43	T,S	1981-85
10336698	Third Creek near Crystal Bay, NV	6.05	T,S	1980-85
10336780	Trout Creek near Tahoe Valley, CA	36.7	T,S	1974,1978-79 1980-85

Type of record: T (water temperature); S (sediment).

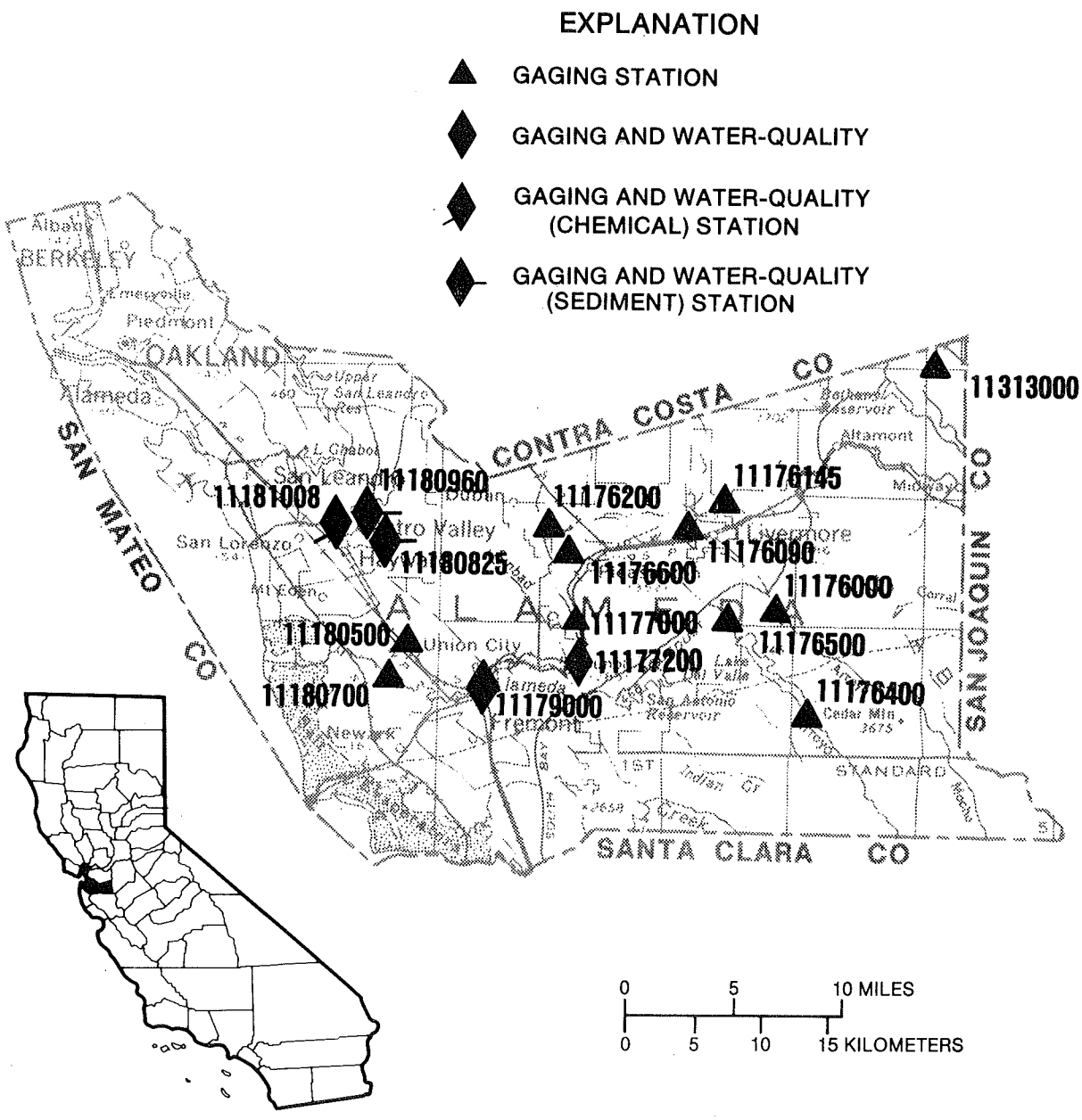


FIGURE 4. — Location of discharge and water-quality stations in Alameda County.

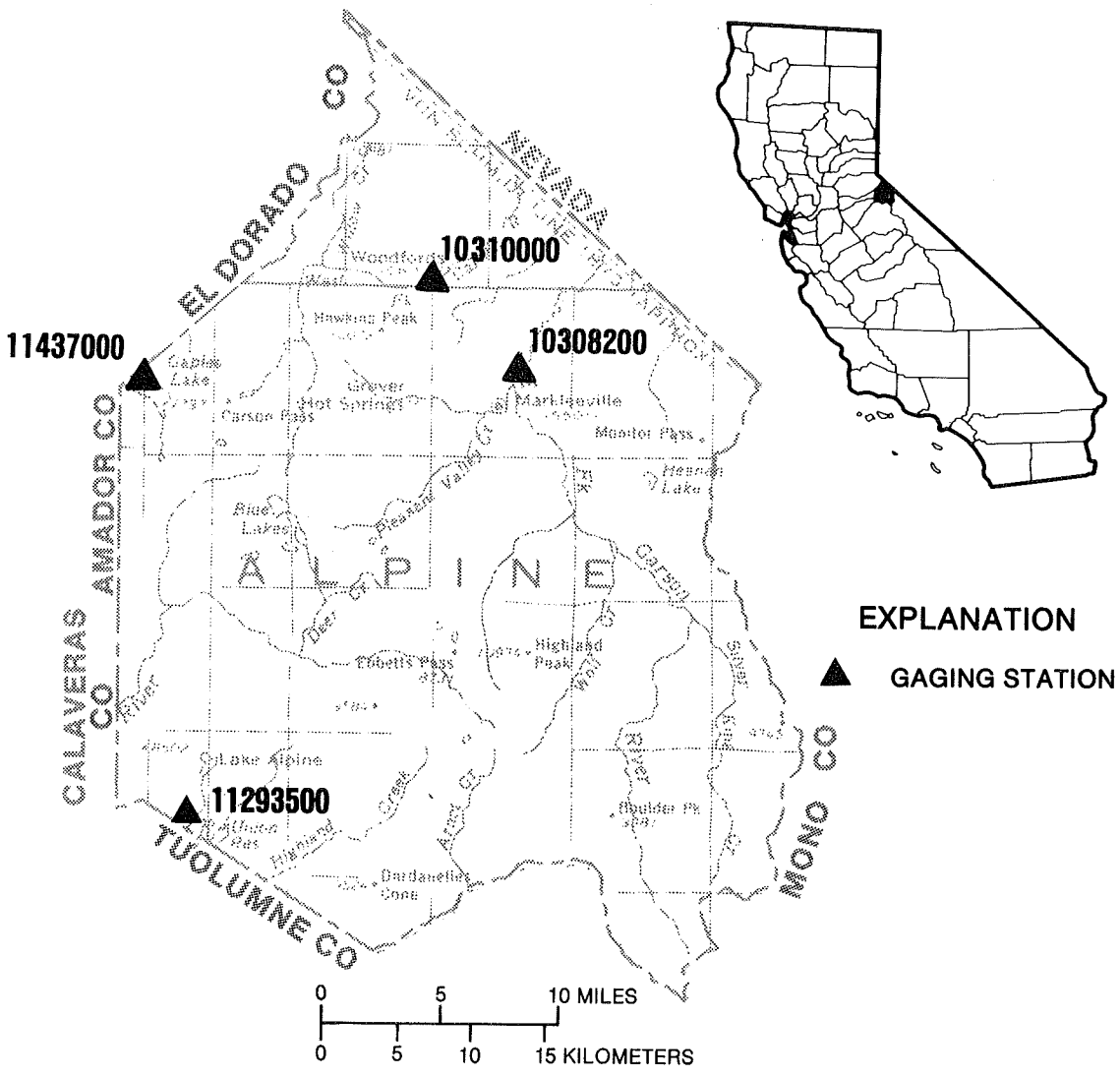


FIGURE 5. — Location of discharge stations in Alpine County.

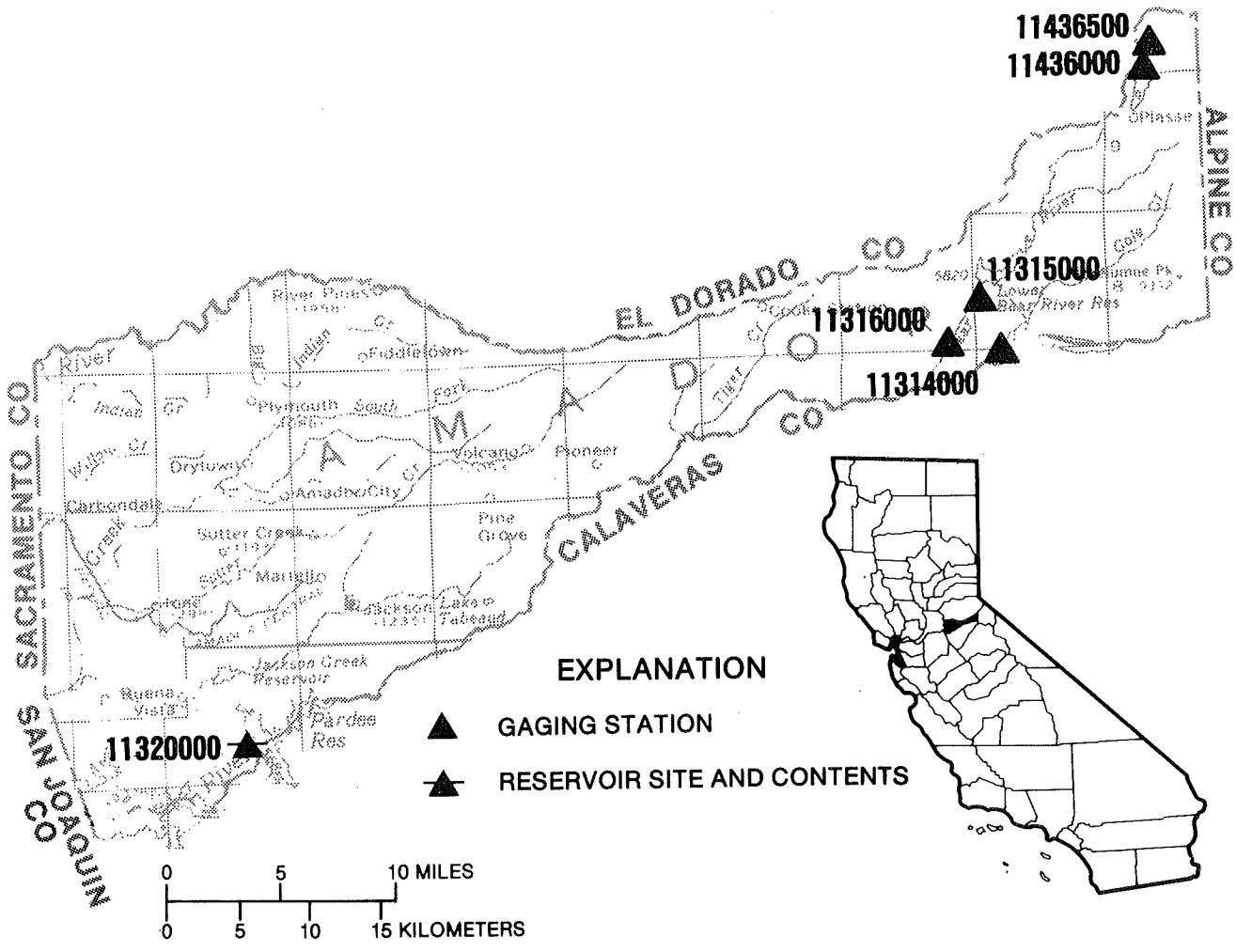


FIGURE 6. — Location of discharge stations in Amador County.

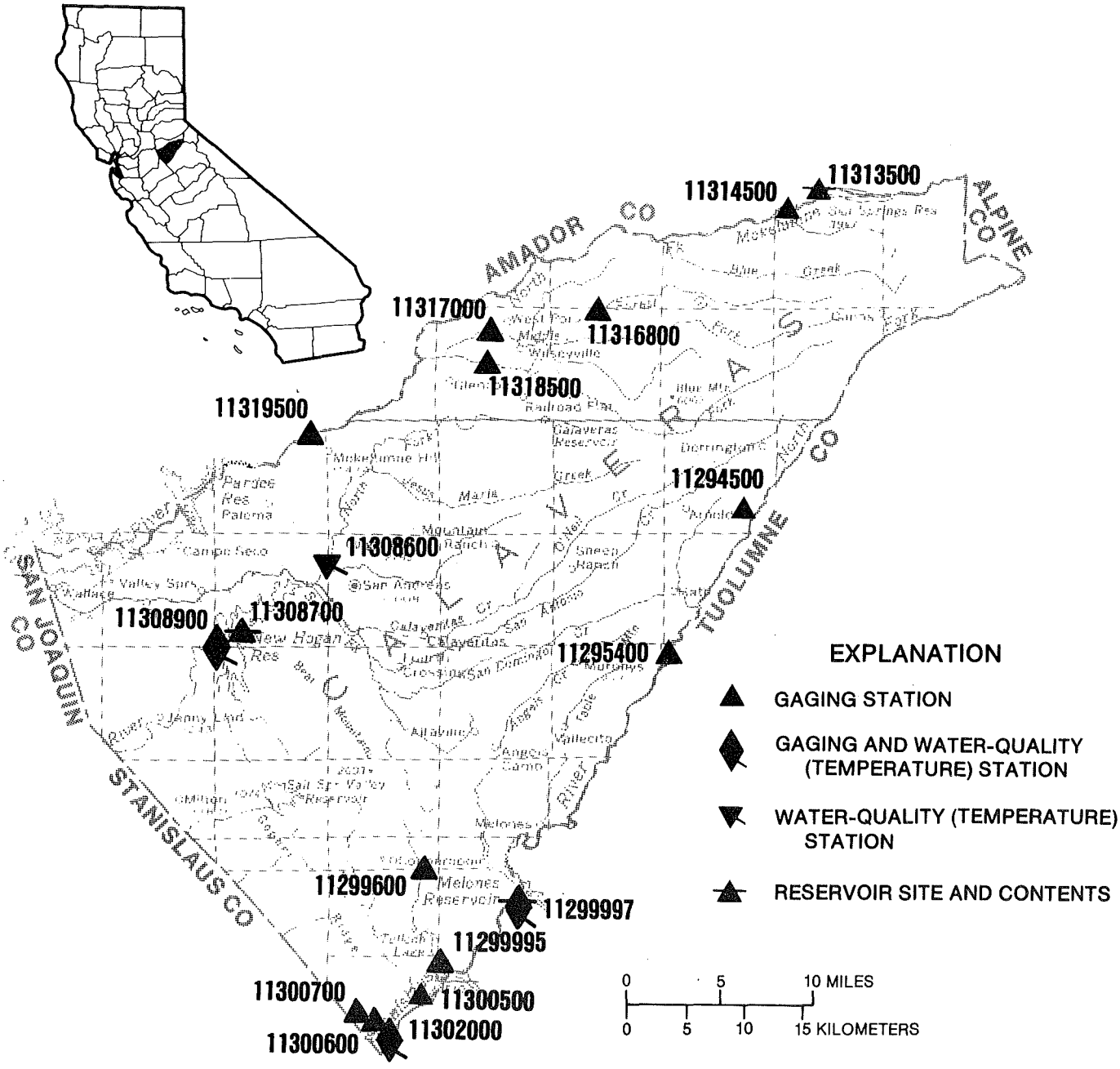


FIGURE 7. — Location of discharge and water-quality stations in Calaveras County.

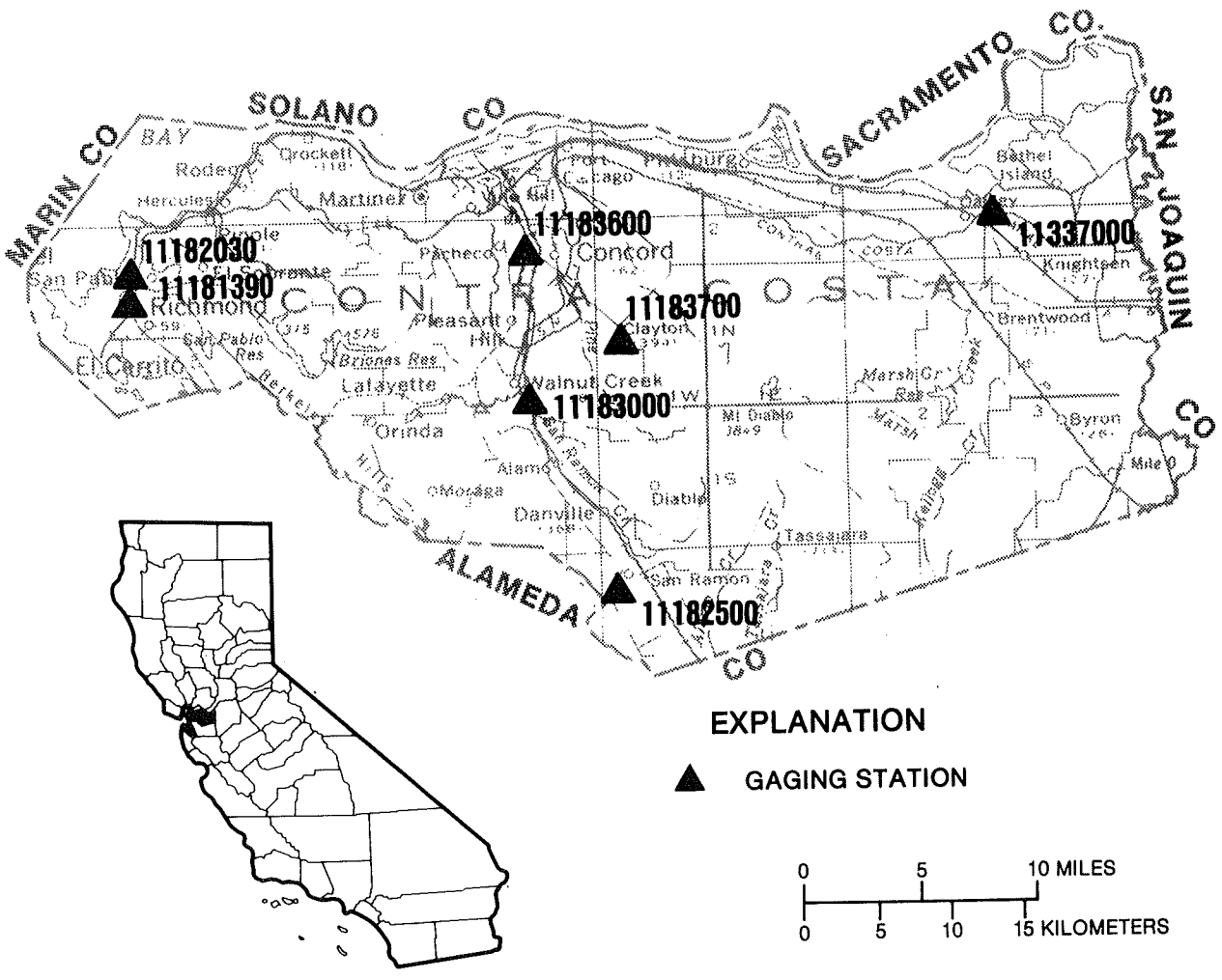


FIGURE 8. — Location of discharge stations in Contra Costa County.

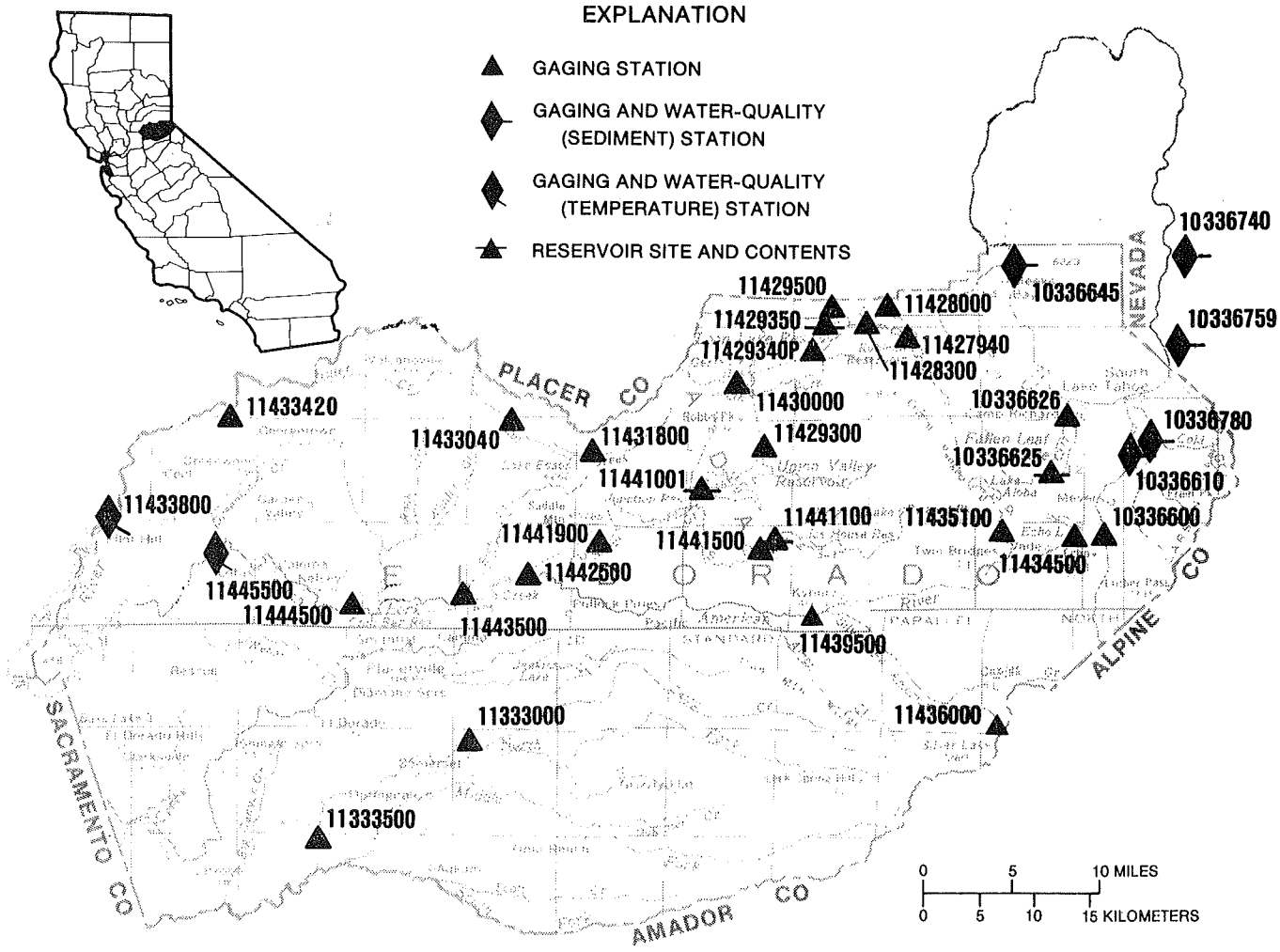


FIGURE 9. — Location of discharge and water-quality stations in El Dorado County.

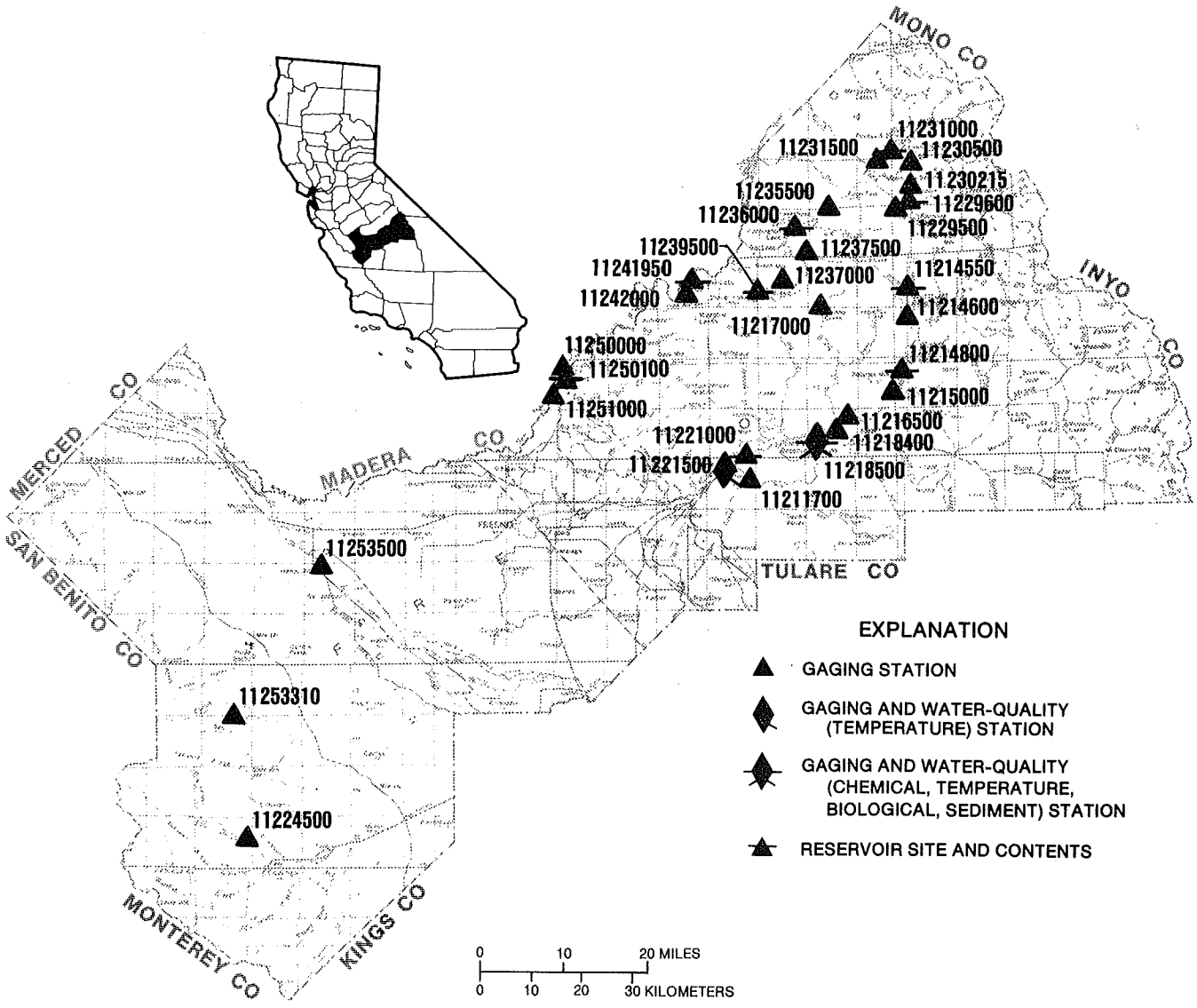


FIGURE 10. — Location of discharge and water-quality stations in Fresno County.

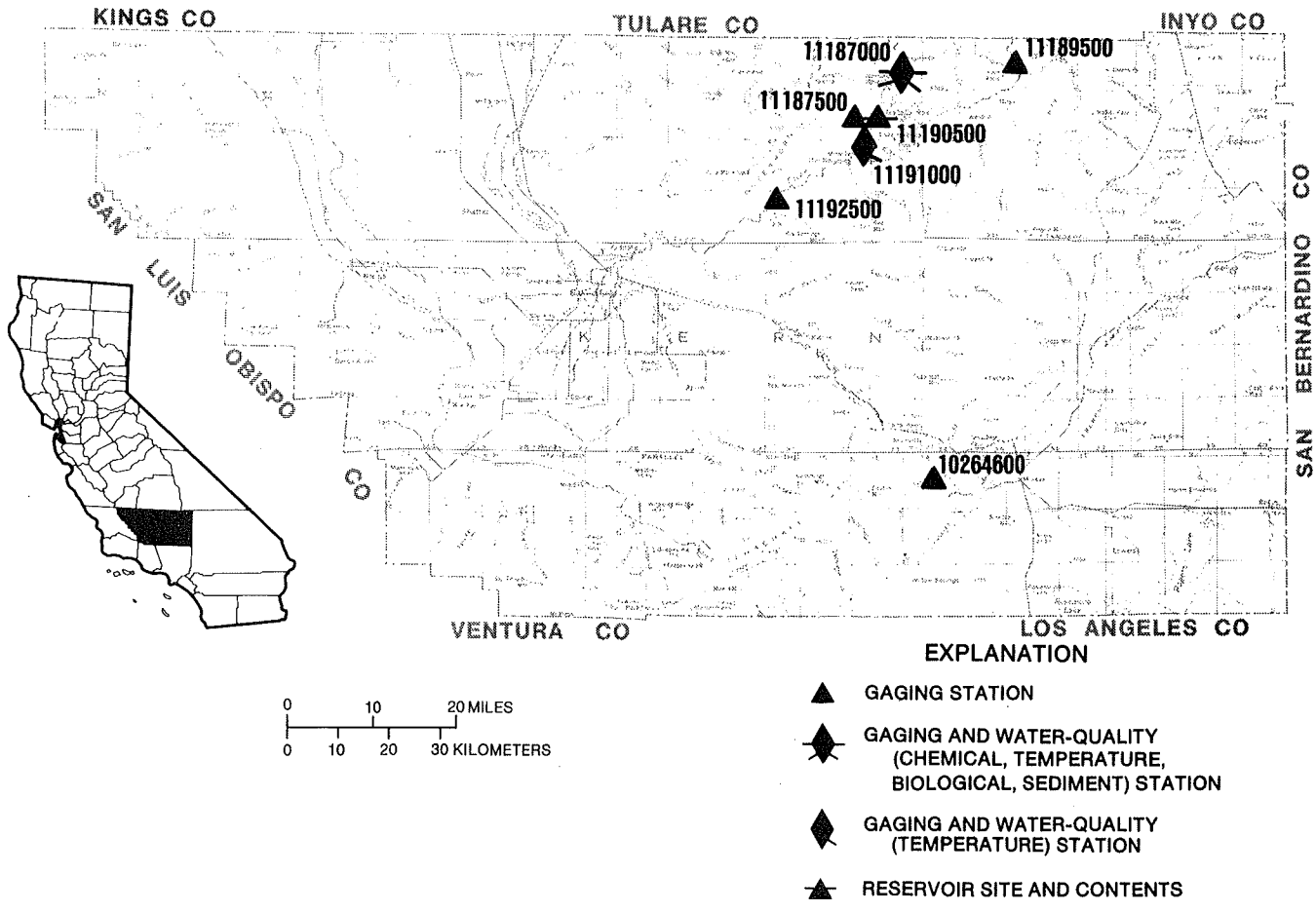


FIGURE 11. — Location of discharge and water-quality stations in Kern County.

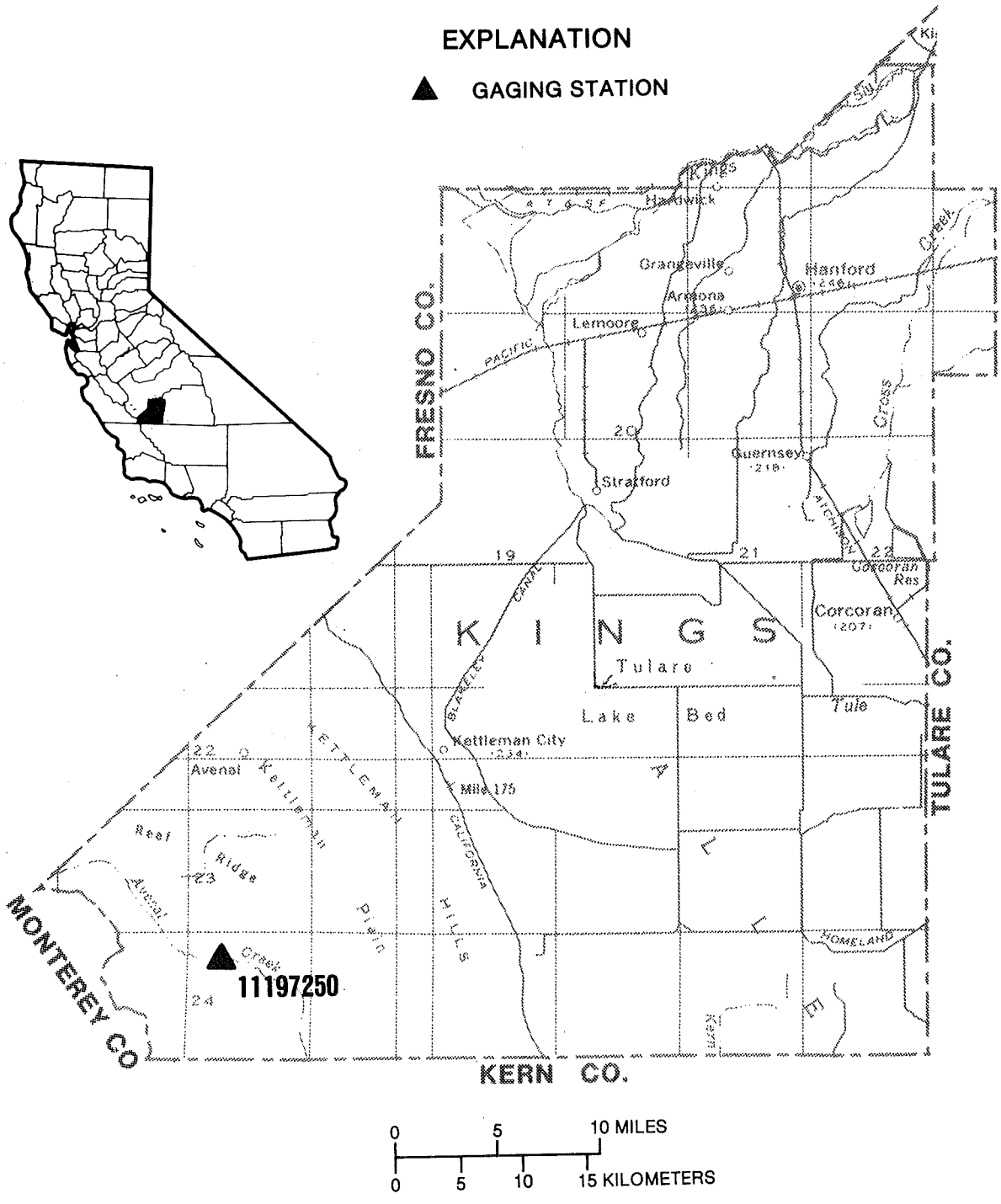


FIGURE 12. — Location of discharge station in Kings County.

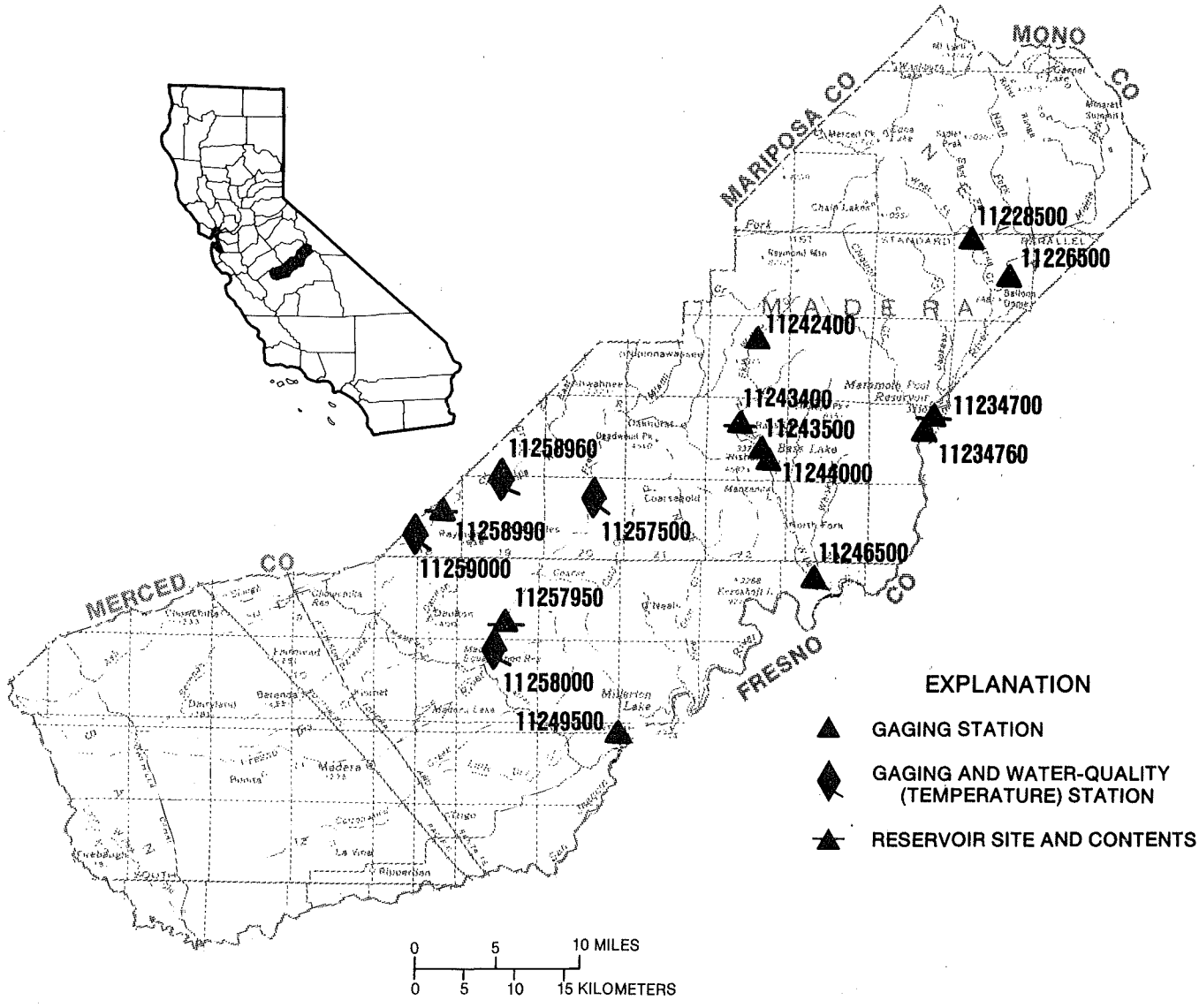


FIGURE 13. — Location of discharge and water-quality stations in Madera County.

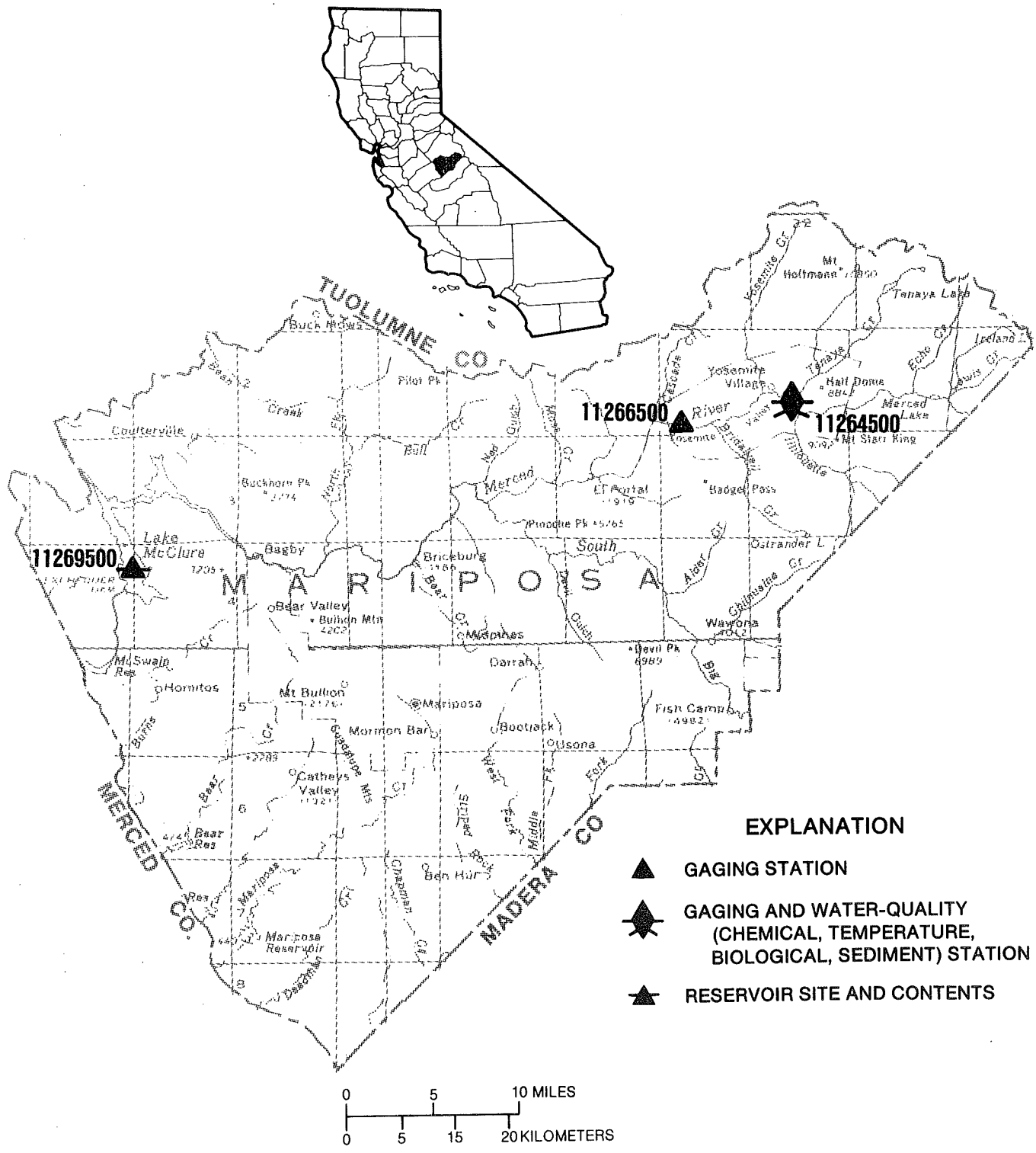


FIGURE 14. — Location of discharge and water-quality stations in Mariposa County.

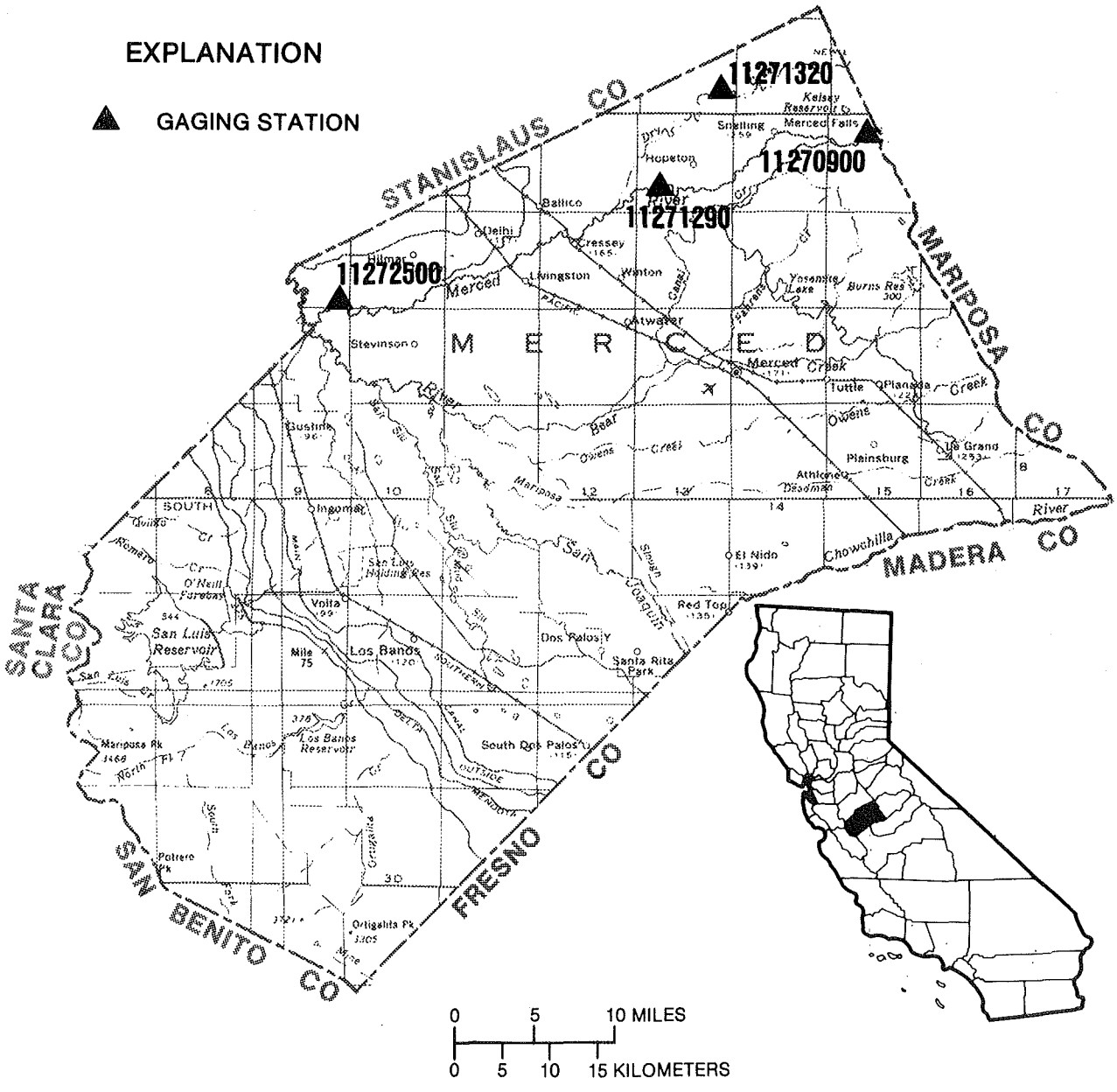


FIGURE 15. — Location of discharge stations in Merced County.

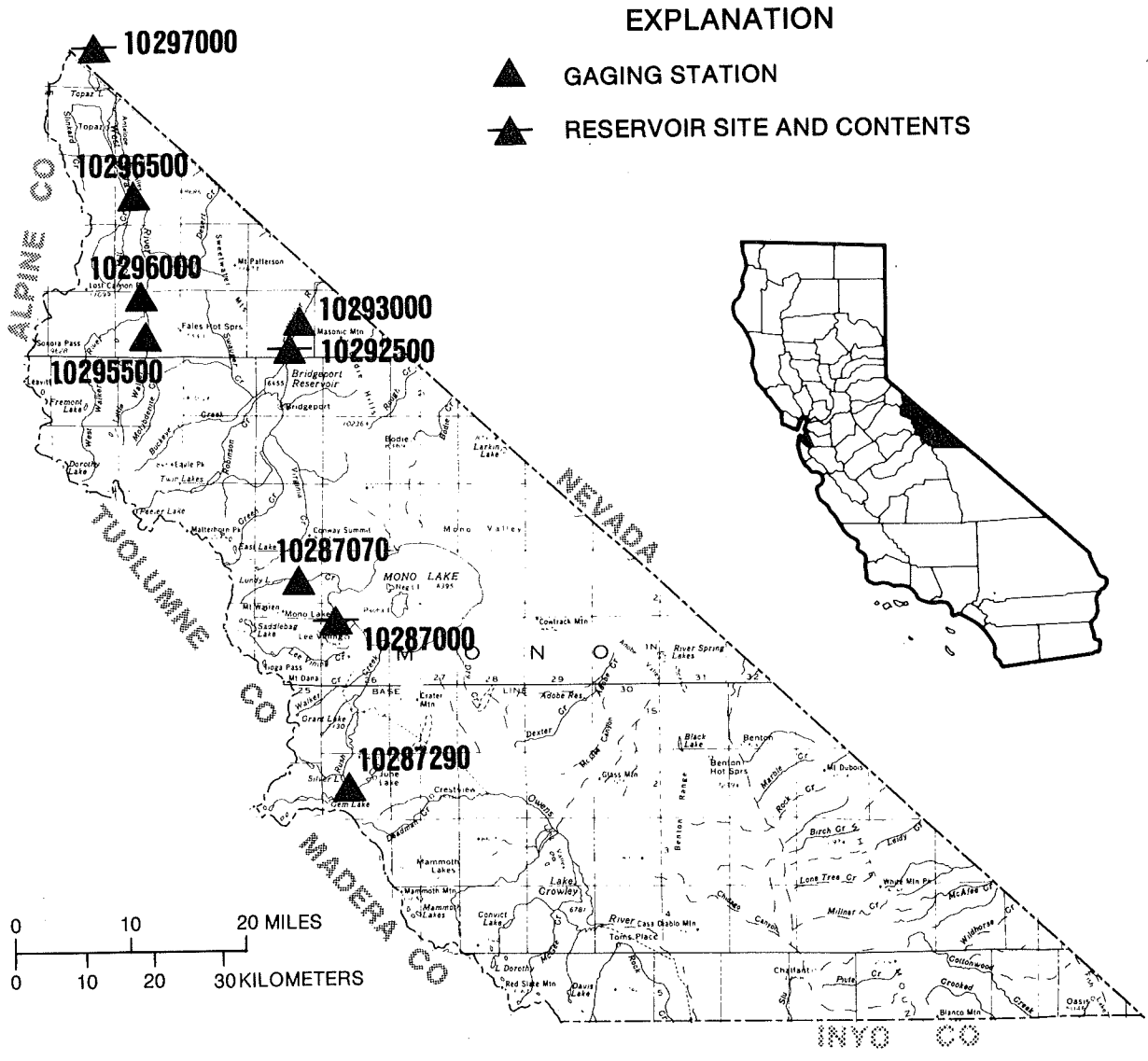


FIGURE 16. — Location of discharge stations in Mono County.

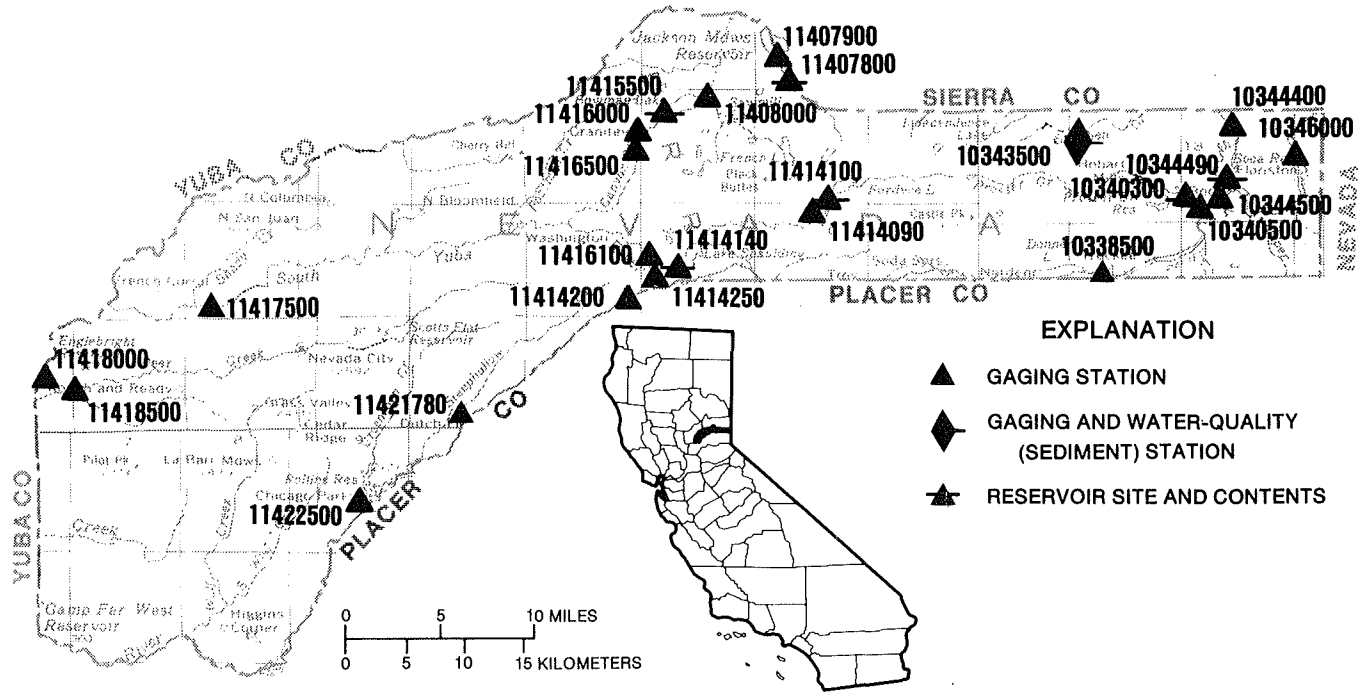


FIGURE 17. — Location of discharge and water-quality stations in Nevada County.

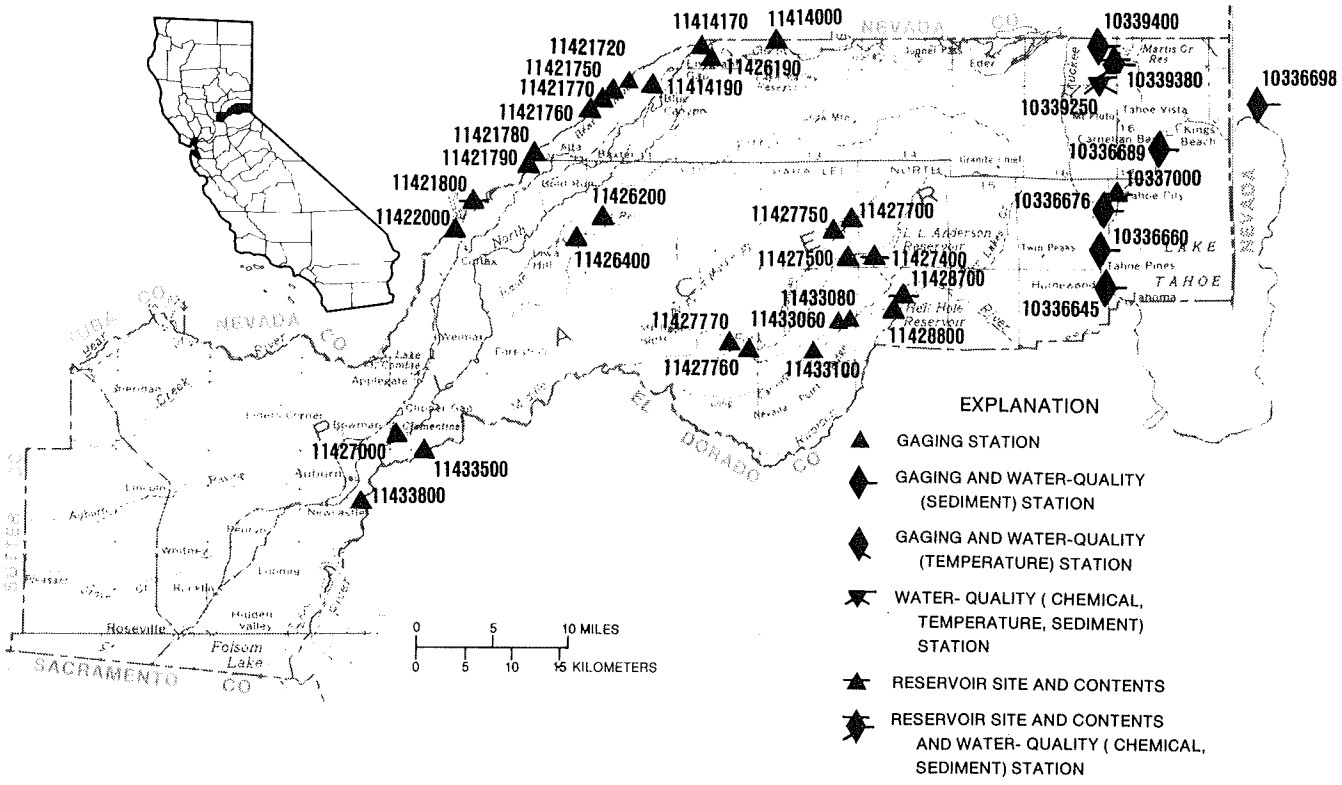


FIGURE 18. — Location of discharge and water-quality stations in Placer County.

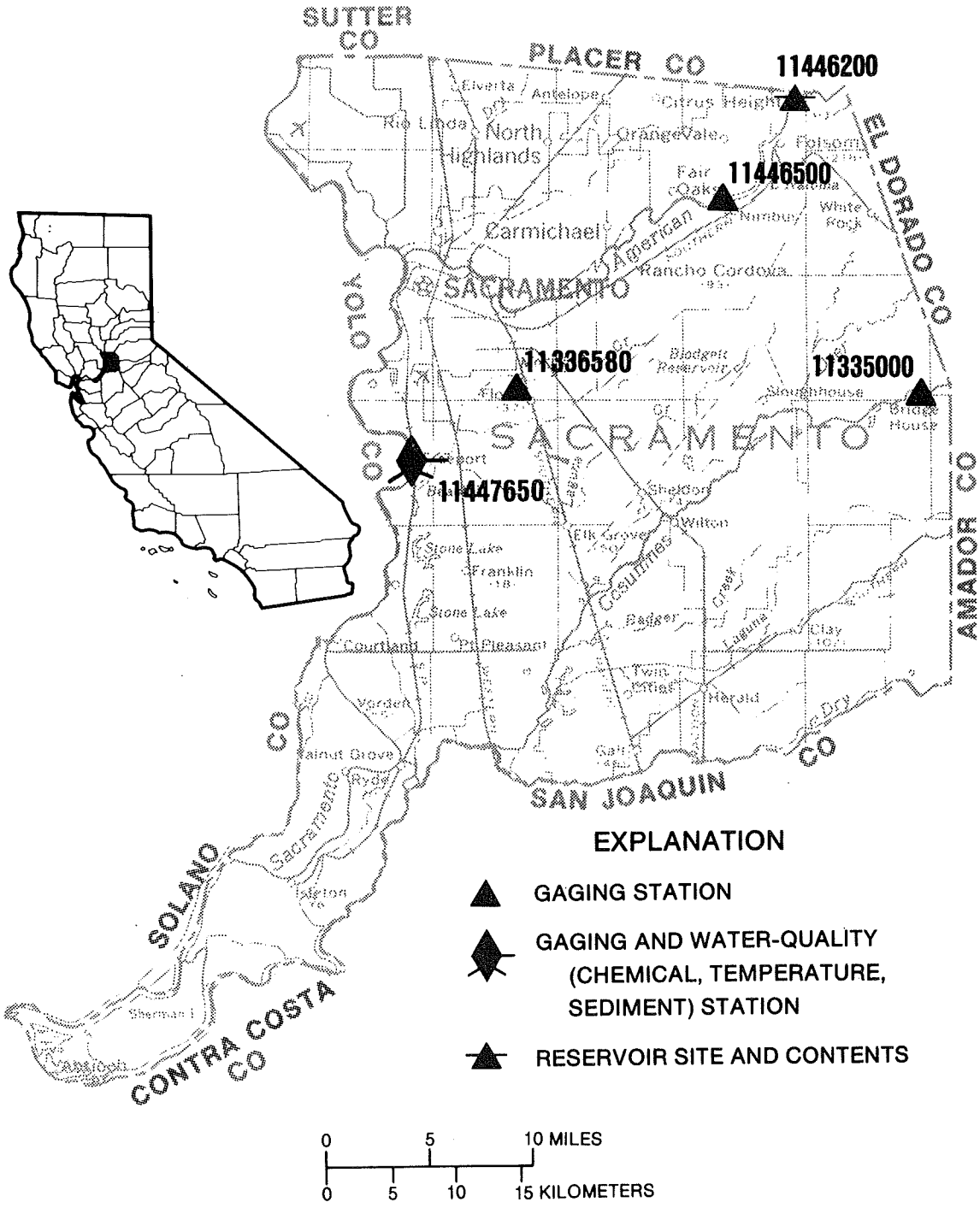


FIGURE 19. — Location of discharge and water-quality stations in Sacramento County.

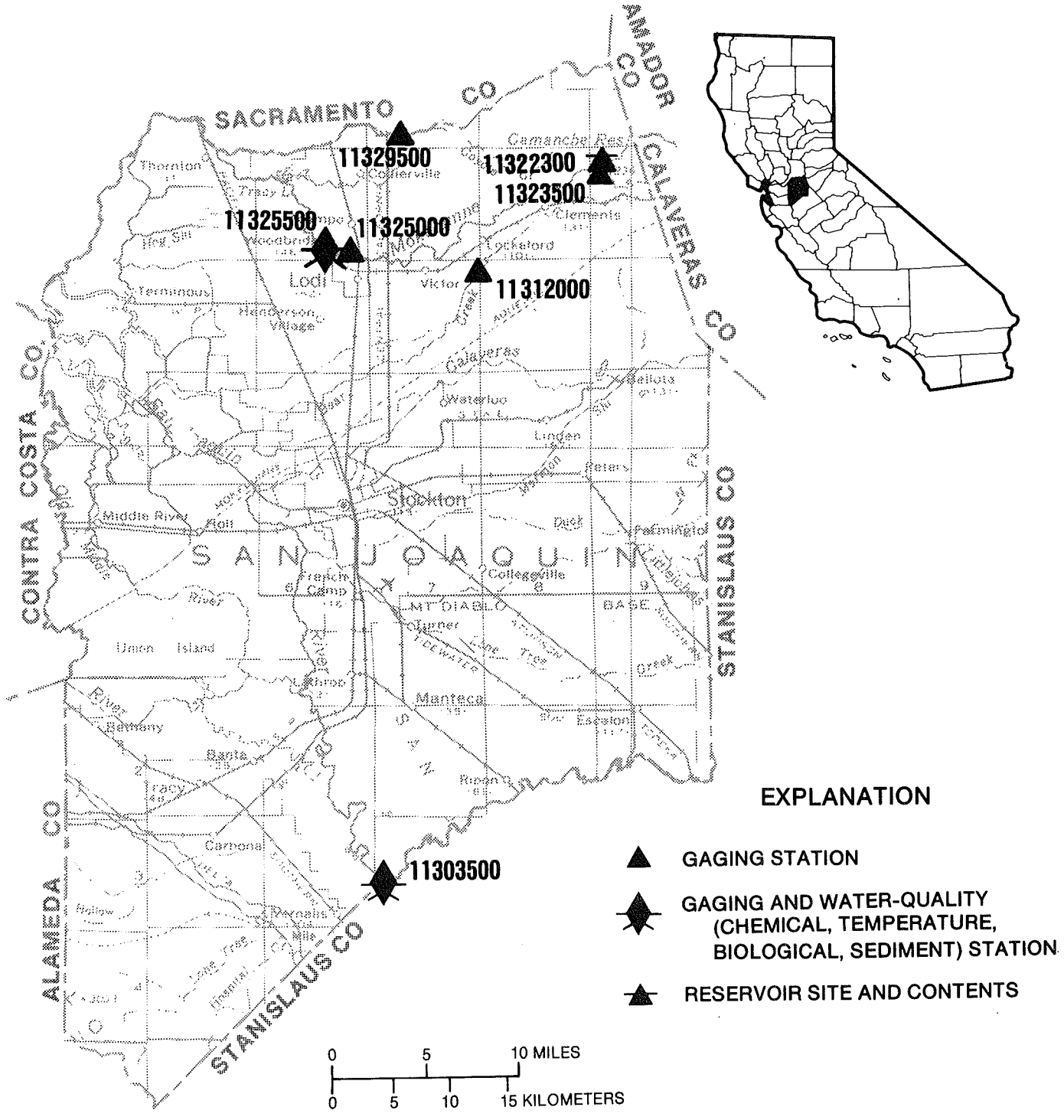


FIGURE 20. — Location of discharge and water-quality stations in San Joaquin County.

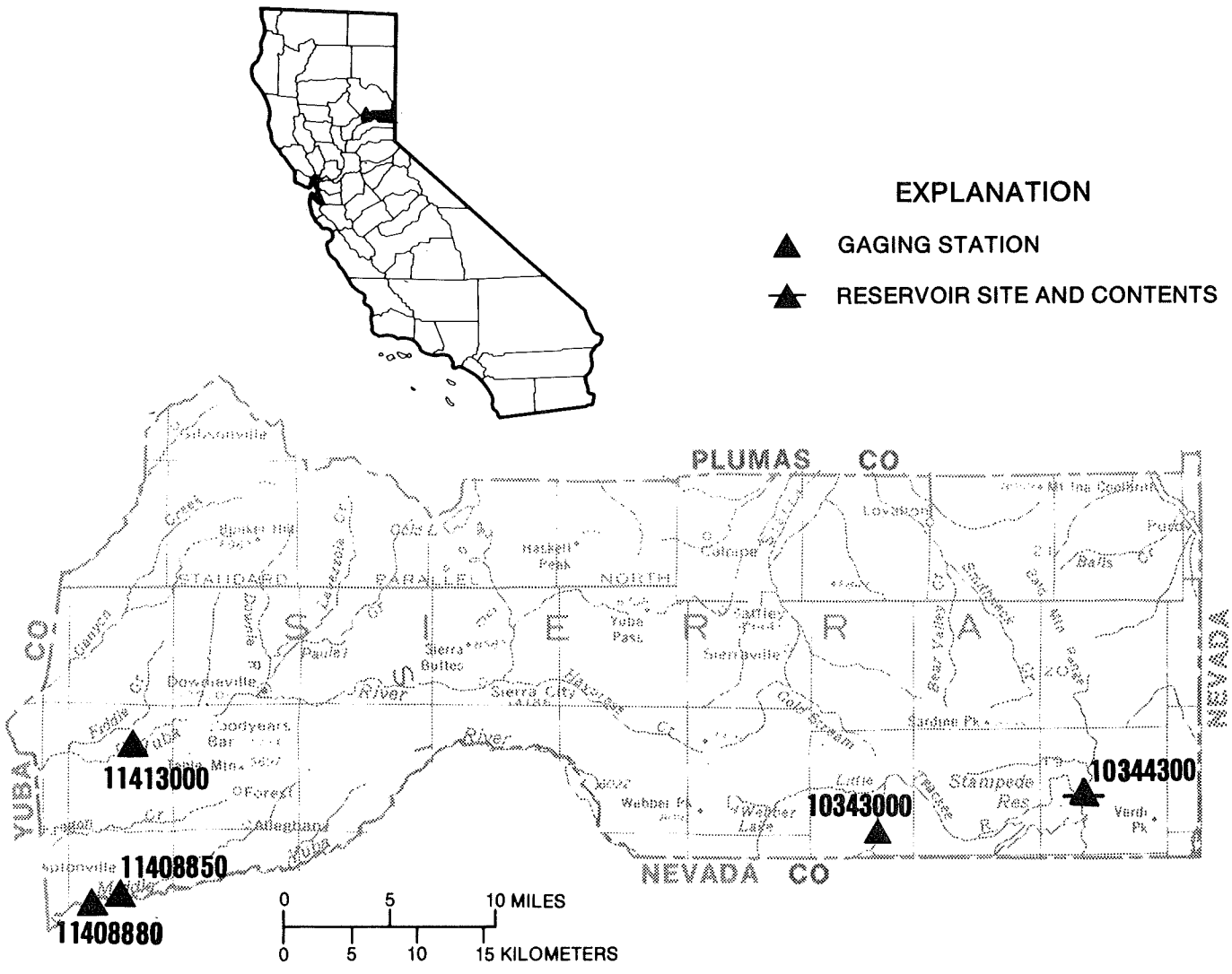


FIGURE 21. — Location of discharge stations in Sierra County.

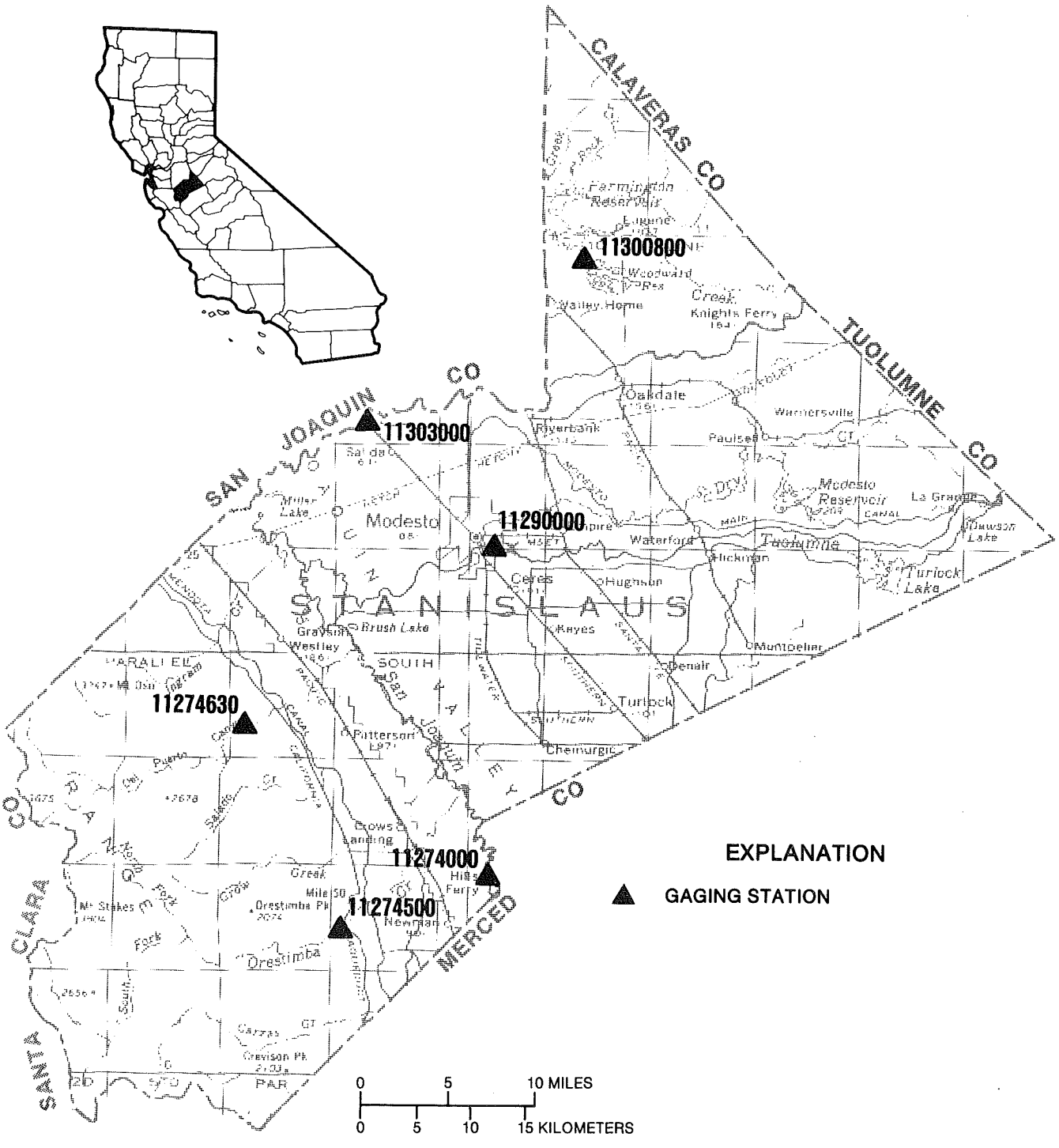


FIGURE 22. — Location of discharge stations in Stanislaus County.

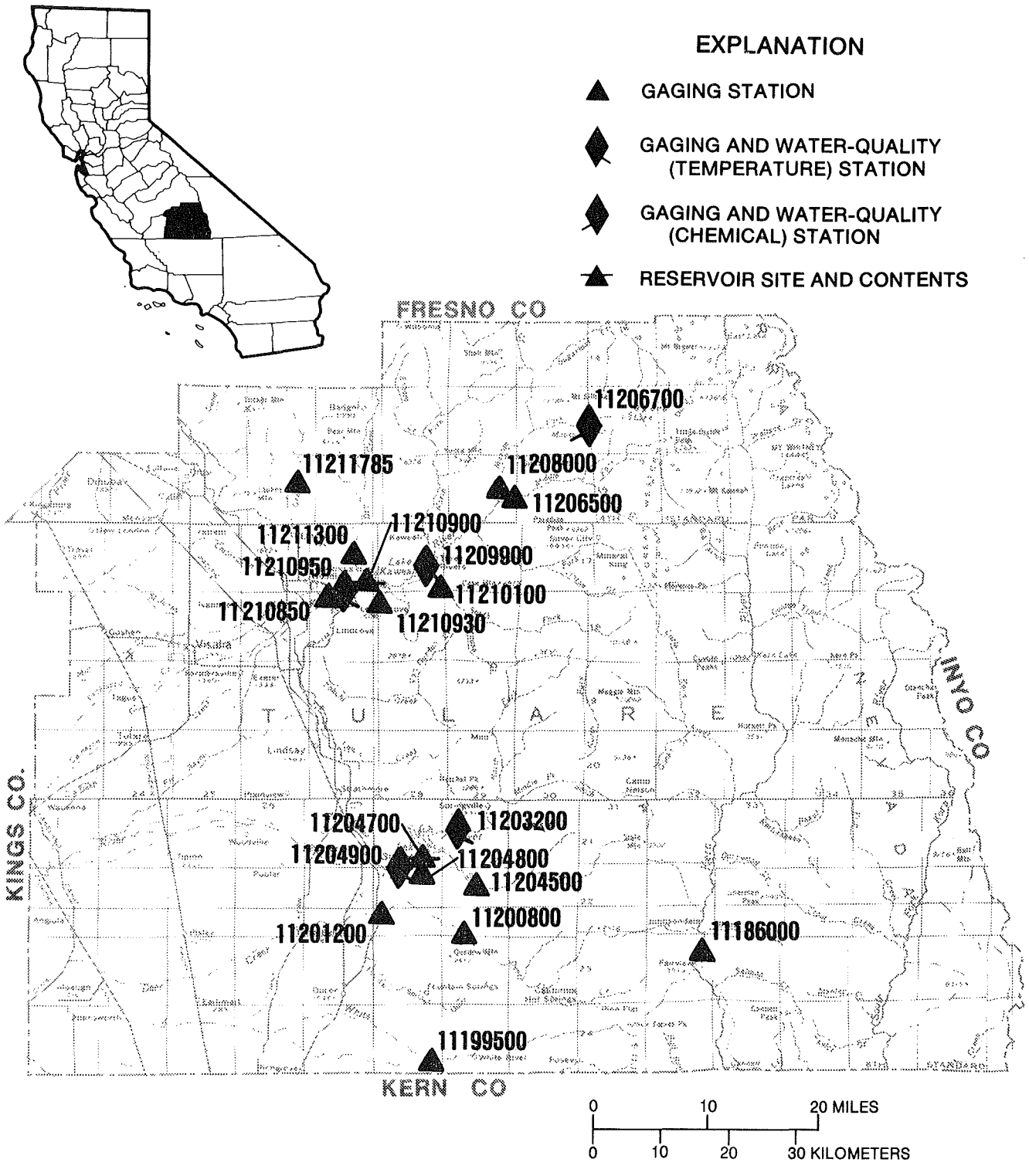


FIGURE 23. — Location of discharge and water-quality stations in Tulare County.

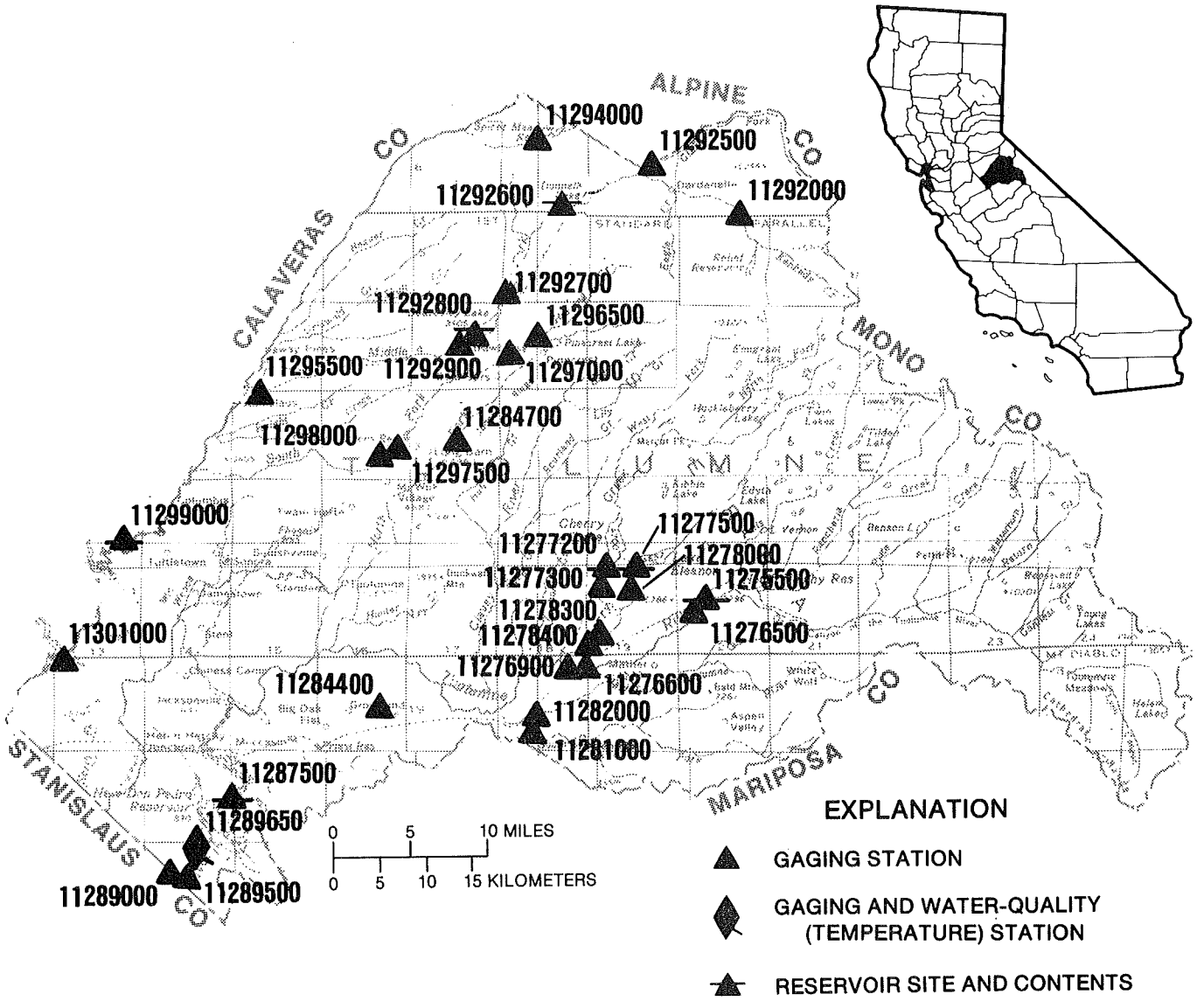


FIGURE 24. — Location of discharge and water-quality stations in Tuolumne County.

WALKER LAKE BASIN

10290300 UPPER TWIN LAKE NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°09'15", long 119°20'58", in NW¼NE¼ sec.5, T.3 N., R.24 E., Mono County, Hydrologic Unit 16050301, Toiyabe National Forest, at outlet of upper lake dam on Robinson Creek, and 10 mi southwest of Bridgeport.

DRAINAGE AREA.--29.5 mi².

PERIOD OF RECORD.--December 1961 to February 1964, September 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical datum of 1929 (project datum of U.S. Indian Irrigation Service).

REMARKS.--Contents regulated by dam at outlet. Figures given herein represent usable contents. Usable contents, 2,070 acre-ft between elevations 7,200 ft natural rim, and 7,207 ft, spillway crest.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 2,990 acre-ft, July 7, 1983, elevation, 7,209.85 ft; minimum observed, 62 acre-ft, Oct. 31, Nov. 1, 1964, elevation, 7,200.22 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--No contents observed Oct. 17, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,640 acre-ft, June 10, elevation, 7,208.79 ft; minimum, 571 acre-ft, Sept. 30, elevation, 7,202.04 ft.

ELEVATION NGVD AND CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,207.02	2,080	--
Oct. 31	7,205.76	1,680	-400
Nov. 30	7,207.35	g2,180	+500
Dec. 31	--	g2,180	0
CAL YR 1984	--	--	-90
Jan. 31	7,207.34	2,180	0
Feb. 28	7,207.31	2,170	-10
Mar. 31	7,207.50	2,230	+60
Apr. 30	7,207.82	2,330	-100
May 31	7,208.35	2,500	+170
June 30	7,208.36	2,510	+10
July 31	7,207.02	2,080	-430
Aug. 31	7,202.50	700	-1,380
Sept. 30	7,202.04	571	-129
WTR YR 1985	--	--	-1,509

10290400 LOWER TWIN LAKE NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°10'05", long 119°19'33", in NE¼NE¼ sec.33, T.4 N., R.24 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, at outlet of lower lake dam on Robinson Creek and 8 mi southwest of Bridgeport.

DRAINAGE AREA.--38.9 mi².

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (project datum of U.S. Indian Irrigation Service).

REMARKS.--Contents regulated by dam at outlet and by Upper Twin Lake. Figures given herein represent usable contents. Usable contents, 4,010 acre-ft between elevations 7,190 ft natural rim, and 7,200 ft, spillway crest. One transarea diversion out of Tamarack Creek into Summers Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,560 acre-ft, June 19, 1983, elevation, 7,203.58 ft; no usable contents Nov. 17, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,490 acre-ft, June 27, elevation, 7,201.14 ft; minimum, observed, 1,320 acre-ft, Oct. 30, elevation, 7,193.30 ft.

ELEVATION NGVD AND CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	7,194.24	1,700	--
Oct. 31	7,193.24	1,300	-400
Nov. 30	7,193.89	1,560	+260
Dec. 31	7,196.15	2,460	+900
CAL YR 1984	--	--	-2,120
Jan. 31	--	g3,360	+900
Feb. 28	7,200.14	4,070	+710
Mar. 31	--	g4,210	+140
Apr. 30	--	g4,370	+160
May 31	--	g3,960	-410
June 30	--	g4,330	+370
July 31	--	g2,790	-1,540
Aug. 31	--	g1,390	-1,400
Sept. 30	--	g1,080	-310
WTR YR 1985	--	--	-620

g Interpolated.

10292500 BRIDGEPORT RESERVOIR NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°19'30", long 119°12'40", in SE¼NE¼ sec.34, T.6 N., R.25 E., Mono County, Hydrologic Unit 16050301, Toiyabe National Forest, at Bridgeport Dam on East Walker River, 4.5 mi north of Bridgeport.

DRAINAGE AREA.--358 mi².

PERIOD OF RECORD.--March 1926 to current year. Monthend contents only for some periods, published in WSP 1314.

REVISED RECORDS.--WSP 1180: 1949. WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (project datum).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began Dec. 8, 1923. Dam completed in November 1924. Capacity, 42,460 acre-ft between altitudes 6,415 ft, approximate elevation of outlet tunnel, and 6,460.75 ft, crest of spillway. There are four siphons that become operative prior to reaching this spillway. Elevation of sill of outlet gage, 6,412 ft. No dead storage. Figures given herein represent total contents. Water is used for irrigation by Walker River Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 44,880 acre-ft, June 16, 1974, elevation, 6,460.78 ft; no usable contents during fall of 1929-30, 1960, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 42,580 acre-ft, Apr. 2, elevation, 6,460.04 ft; minimum, 6,880 acre-ft, Sept. 10, elevation, 6,440.72 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

6,440	6,240	6,455	29,160
6,445	11,380	6,460	42,460
6,450	18,780	6,461	45.490

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16710	20660	26680	31140	34950	40710	42550	36450	31750	32160	21720	8780
2	16690	20840	26880	31280	35060	40800	42580	36100	31650	31850	21460	8410
3	16690	20920	27090	31400	35170	41030	42400	35830	31850	31500	21190	8060
4	16790	21050	27250	31520	35250	41170	42290	35700	31980	31040	20860	7850
5	16870	21310	27480	31720	35390	41380	42200	35490	32080	30660	20490	7720
6	16950	21380	27670	31870	35650	41610	42080	35310	32280	30190	20120	7530
7	17060	21520	27830	31950	35800	41730	41880	35090	32460	29780	19630	7360
8	17150	21720	28030	32110	36040	42000	41730	34850	32740	29400	19110	7190
9	17260	21860	28420	32210	36040	42290	41520	34590	33040	29000	18640	6970
10	17400	22130	28360	32280	36120	42370	41380	34330	33270	38630	18140	6880
11	17400	22440	28560	32410	36500	42460	41230	34060	33430	28400	17630	7140
12	17630	22690	28650	32380	36630	42400	41120	33830	33580	28150	17180	7500
13	17720	22850	28770	32540	36760	42260	41060	33560	33600	27830	16690	7810
14	17800	23000	28860	32690	36930	42170	40910	33300	33680	27530	16220	7940
15	17290	23240	29090	32820	37120	42110	40830	33120	33760	27210	15740	8000
16	18210	23470	29090	32920	37290	42080	40590	32990	33810	26840	15260	8030
17	18390	23770	29110	33040	37540	42030	40360	32840	33860	26530	14730	8000
18	18580	23910	29330	33220	37810	42050	40210	32790	34040	26180	14250	7990
19	18730	24100	29420	33350	38150	42000	39830	32840	34110	25780	13790	8000
20	18870	24280	29500	33450	38320	42080	39710	32740	34250	25470	13340	8000
21	19110	24410	29570	33500	38540	41940	39480	32740	34270	25250	12930	8020
22	19190	24600	29740	33680	38790	42030	39230	32740	34250	24970	12540	8020
23	19350	24900	29950	33680	39040	42170	38950	32690	34090	24640	12180	8010
24	19520	25030	30100	33810	39340	42170	38570	32640	33890	24350	11830	7990
25	19700	25190	30340	34010	19600	42110	38150	32590	33600	24000	11480	7940
26	19810	25360	30440	34160	39860	42400	37870	32560	33500	23730	11100	7840
27	19980	25870	30590	34140	40150	42320	37590	32510	33270	23430	10710	7760
28	20160	26070	30730	34430	40450	42290	37290	32310	32970	23100	10270	7680
29	20250	26330	30920	34590	---	42170	36980	31980	23670	22730	9940	7580
30	20400	26530	30990	34610	---	42200	36710	31980	32430	22380	9540	7470
31	20490	---	31040	34740	---	42340	---	31770	---	22050	9190	---
MAX	20490	26530	31040	34740	40450	42460	42580	36450	34270	32160	21720	8780
MIN	16690	20660	26680	31140	34950	40710	36710	31770	31650	22050	9191	6880
a	6450.93	6453.85	6455.78	6457.24	6459.31	6459.96	6457.98	6456.08	6456.34	6451.73	6443.08	6441.37
b	+3650	+6040	+4510	+3700	+5710	+1890	-5630	-4940	+660	-10380	-12860	-1720

CAL YR 1984 MAX 42260 MIN 16690 b +6440
WTR YR 1985 MAX 42580 MIN 6880 b -9370

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.

10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°19'40", long 119°12'50", in SW¼NE¼ sec.34, T.6 N., R.25 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, on right bank 1,500 ft downstream from Bridgeport Reservoir, 5 mi north of Bridgeport, and 10 mi upstream from Sweetwater Creek.

DRAINAGE AREA.--359 mi².

PERIOD OF RECORD.--July 1911 to September 1914 (gage heights only), October 1921 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 2127 for history of changes prior to May 25, 1939.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of pasture lands near Bridgeport. Flow regulated by Bridgeport Reservoir (station 10292500).

AVERAGE DISCHARGE (unadjusted).--62 years (water years 1923-24, 1926-85), 147 ft³/s, 106,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s, June 19, 1963, gage height, 4.64 ft; maximum gage height, 4.95 ft, Jan. 22, 1943, top of surge; minimum daily discharge, 0.2 ft³/s, many days in 1955 and 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 314 ft³/s, July 4, gage height, 1.94 ft; minimum daily, 17 ft³/s, Feb. 3 to Mar. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	44	36	32	18	17	170	290	228	261	218	230
2	165	37	35	32	18	17	245	296	227	267	217	228
3	131	32	35	32	17	17	292	296	208	283	216	227
4	108	33	35	32	17	17	262	296	175	307	218	216
5	89	33	35	32	17	17	267	293	158	304	224	204
6	75	33	35	32	17	17	289	292	158	303	236	188
7	76	33	35	32	17	17	290	288	158	302	258	177
8	66	33	35	32	17	17	289	275	160	300	266	177
9	58	33	34	32	17	40	274	275	160	299	282	171
10	50	33	34	32	17	97	246	275	167	295	281	157
11	42	33	34	32	17	175	220	275	189	288	283	138
12	43	33	34	32	17	212	209	273	206	278	282	115
13	42	33	35	32	17	210	223	267	225	277	280	100
14	43	35	35	32	17	210	249	258	249	276	279	84
15	43	35	34	32	17	195	256	258	242	275	277	86
16	43	35	34	32	17	185	295	255	254	274	276	86
17	43	35	34	32	17	184	307	252	256	273	275	86
18	43	35	33	32	17	183	291	242	255	274	277	86
19	43	35	33	32	17	158	282	242	259	264	275	86
20	44	35	33	32	17	145	281	240	270	254	266	86
21	44	35	33	32	17	146	281	242	273	253	257	86
22	44	35	33	32	17	136	281	247	272	249	246	86
23	44	35	33	33	17	97	282	258	272	238	240	89
24	44	36	32	27	17	97	281	259	272	226	235	99
25	44	36	32	18	17	98	280	259	269	211	237	105
26	44	36	32	18	17	97	282	259	267	211	237	119
27	44	36	32	18	17	120	281	257	266	215	236	119
28	44	36	32	18	17	156	281	257	265	229	235	119
29	44	36	32	18	---	169	281	255	266	226	233	119
30	44	36	32	18	---	169	280	247	263	226	232	119
31	44	---	32	18	---	169	---	229	---	221	230	---
TOTAL	1917	1045	1043	890	478	3584	8047	8207	6889	8159	7804	3988
MEAN	61.8	34.8	33.6	28.7	17.1	116	268	265	230	263	252	133
MAX	186	44	36	33	18	212	307	296	273	307	283	230
MIN	42	32	32	18	17	17	170	229	158	211	216	84
AC-FT	3800	2070	2070	1770	948	7110	15960	16280	13660	16180	15480	7910

CAL YR 1984 TOTAL 72245 MEAN 197 MAX 632 MIN 12 AC-FT 143300
WTR YR 1985 TOTAL 52051 MEAN 143 MAX 307 MIN 17 AC-FT 103200

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.--Lat 38°21'39", long 119°26'38", in NW¼NW¼ sec.22, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, Toiyabe National Forest, on right bank 0.8 mi north of Sonora Junction, 1.5 mi upstream from mouth, and 14 mi northwest of Bridgeport.

DRAINAGE AREA.--63.1 mi².

PERIOD OF RECORD.--April to August 1910, October 1944 to current year. Prior to October 1958, published as East Fork West Walker River near Bridgeport.

REVISED RECORDS.--WDR CA-82-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,790 ft above National Geodetic Vertical Datum of 1929, from topographic map. April to August 1910, nonrecording gage at site 1 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 25, 26, Dec. 1, 2, 4, 7, 13-29, Dec. 31 to Jan. 4, Jan. 11, 13-17, Jan. 24 to Feb. 7, Feb. 9-14, and Mar. 8-10, 28. Records good except estimated daily discharges, due to ice effect, which are fair. Small diversions above station.

AVERAGE DISCHARGE.--41 years (water years 1945-85) 52.8 ft³/s, 38,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,510 ft³/s, Jan. 31, 1963, gage height, 3.22 ft from rating curve extended above 350 ft³/s on basis of slope-area measurement at gage height 2.80 ft; maximum gage height recorded, 3.63 ft, Jan. 3, 1945 (backwater from ice); minimum discharge, 1.4 ft³/s, Nov. 20, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Dec. 23	0800	Ice jam	*3.09	June 7	2200	*174	1.64

Minimum daily, 12 ft³/s, Feb. 10, 11, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	23	25	20	13	26	41	71	79	41	19	16
2	27	24	25	20	13	23	50	88	83	42	19	16
3	25	25	24	19	13	24	54	91	80	42	19	18
4	24	23	24	19	13	24	55	88	75	41	19	24
5	24	23	24	18	13	23	56	88	90	39	17	22
6	24	24	24	19	13	19	59	92	116	38	15	20
7	24	23	23	19	13	19	65	90	134	37	15	19
8	23	19	23	19	14	18	71	85	139	34	17	20
9	22	27	23	19	13	19	73	81	137	31	15	21
10	22	29	22	18	12	20	77	72	133	32	14	21
11	29	32	25	18	12	21	73	66	124	35	14	31
12	27	26	22	18	14	22	71	67	127	33	13	27
13	28	25	18	18	15	21	79	70	125	30	13	27
14	26	28	18	18	18	21	88	80	119	31	14	24
15	23	30	18	18	21	21	94	84	114	29	13	21
16	23	27	18	18	22	22	84	87	117	28	13	20
17	24	25	18	18	23	23	76	94	114	28	14	20
18	32	25	18	19	25	23	64	106	113	29	14	22
19	31	24	18	19	26	24	58	116	106	28	13	22
20	28	23	18	19	24	25	53	114	103	37	13	22
21	26	24	18	19	23	26	50	108	92	36	12	20
22	25	24	18	18	22	25	47	112	84	28	14	19
23	24	25	19	17	23	28	49	123	77	26	15	19
24	24	24	19	16	25	29	49	141	71	25	15	18
25	25	21	20	15	26	25	47	140	65	24	14	18
26	26	25	21	15	27	21	43	132	58	26	14	18
27	24	29	22	14	27	19	42	125	55	27	17	18
28	24	23	22	14	25	23	47	112	51	27	15	18
29	24	41	22	14	---	28	51	99	47	24	15	18
30	24	27	22	14	---	29	58	89	42	21	15	17
31	23	---	21	13	---	31	---	86	---	19	15	---
TOTAL	781	768	652	542	528	722	1824	2997	2869	968	461	616
MEAN	25.2	25.6	21.0	17.5	18.9	23.3	60.8	96.7	95.6	31.2	14.9	20.5
MAX	32	41	25	20	27	31	94	141	139	42	19	31
MIN	22	19	18	13	12	18	41	66	42	19	12	16
AC-FT	1550	1520	1290	1080	1050	1430	3620	5940	5690	1920	914	1220

CAL YR 1984	TOTAL	22562	MEAN	61.6	MAX	301	MIN	18	AC-FT	44750
WTR YR 1985	TOTAL	13728	MEAN	37.6	MAX	141	MIN	12	AC-FT	27230

10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA

LOCATION.--Lat 38°22'47", long 119°26'57", in NE¼SE¼ sec.9, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, Toiyabe National Forest, on right bank 150 ft downstream from Little Walker River, 60 ft upstream from bridge on U.S. Highway 395, and 13 mi southeast of Coleville.

DRAINAGE AREA.--181 mi².

PERIOD OF RECORD.--April 1938 to current year. Prior to October 1958, published as "below East Fork."

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,591.39 ft above National Geodetic Vertical Datum of 1929, supplementary adjustment of 1958. Oct. 1, 1939 to Sept. 30, 1969, at site 100 ft upstream at same datum. Prior to Oct. 1, 1939, at site 25 ft downstream at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 1, 1, 14-28, 30, Jan. 1-7, 11-14, 16-18, Jan. 24 to Feb. 7, and Feb. 9-14. Records good except those for estimated daily discharges, due to ice effect, which are fair. Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poor Lake Reservoir (capacity unknown) 7 mi upstream.

AVERAGE DISCHARGE.--47 years, 265 ft³/s, 192,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,220 ft³/s, Nov. 29, 1950, gage height, 8.10 ft, from rating curve extended above 1,900 ft³/s on basis of slope-area measurement of peak flow; minimum, 4.0 ft³/s, Nov. 18, 1948, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge observed prior to 1938, 5,800 ft³/s, Dec. 11, 1937, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,120 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 25	0100	1,180	3.80	June 7	2400	*1,230	*3.88

Minimum daily, 39 ft³/s, Feb. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	60	88	67	41	75	163	623	420	197	86	46
2	82	64	84	66	41	81	203	786	430	197	84	50
3	77	73	79	65	41	79	243	821	401	200	82	53
4	73	65	77	64	41	71	271	720	430	201	80	71
5	69	65	75	64	42	71	298	666	596	182	76	67
6	65	67	73	60	43	71	356	725	802	174	72	61
7	61	65	73	58	43	75	419	704	917	165	69	57
8	59	57	72	56	43	73	482	622	980	155	69	58
9	56	61	71	56	41	80	531	578	847	151	67	69
10	54	88	72	56	39	83	565	476	805	148	65	71
11	76	91	75	56	39	80	555	409	716	148	62	94
12	76	84	71	56	42	79	536	413	741	137	61	83
13	92	77	57	56	45	79	608	468	734	129	60	84
14	98	73	60	57	52	79	707	606	691	127	62	75
15	77	86	60	58	57	79	775	691	637	121	61	72
16	68	85	60	56	67	83	726	681	674	114	58	68
17	62	80	60	55	72	87	591	717	621	108	58	62
18	79	79	60	55	77	89	467	798	628	113	60	65
19	92	69	60	55	81	90	430	870	581	117	56	66
20	82	76	60	56	75	95	377	858	569	126	54	62
21	76	77	60	58	72	98	334	747	505	133	52	57
22	71	78	60	60	71	99	313	784	444	106	52	54
23	68	77	60	56	72	109	341	848	412	102	52	52
24	67	77	62	52	75	116	371	983	362	113	51	50
25	71	64	64	48	81	112	354	992	322	111	49	49
26	76	76	66	45	84	90	308	888	276	117	48	48
27	73	96	69	44	83	51	297	806	261	123	48	49
28	66	77	70	43	96	76	347	699	243	119	48	54
29	67	94	70	42	---	104	399	586	223	106	47	51
30	66	94	69	41	---	115	461	491	210	96	47	49
31	64	---	69	41	---	132	---	484	---	90	45	---
TOTAL	2242	2275	2106	1702	1656	2701	12828	21540	16478	4226	1881	1847
MEAN	72.3	75.8	67.9	54.9	59.1	87.1	428	695	549	136	60.7	61.6
MAX	98	96	88	67	96	132	775	992	980	201	86	94
MIN	54	57	57	41	39	51	163	409	210	90	45	46
AC-FT	4450	4510	4180	3380	3280	5360	25440	42720	32680	8380	3730	3660

CAL YR 1984 TOTAL 115856 MEAN 317 MAX 1860 MIN 54 AC-FT 229800
WTR YR 1985 TOTAL 71482 MEAN 196 MAX 992 MIN 39 AC-FT 141800

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA

LOCATION.--Lat 38°30'55", long 119°27'15", in NW¼NE¼ sec.28, T.8 N., R.23 E., Mono County, Hydrologic Unit 16050302, Toiyabe National Forest, on left bank 0.2 mi downstream from Rock Creek, and 5 mi southeast of Coleville.

DRAINAGE AREA.--250 mi².

PERIOD OF RECORD.--October 1902 to July 1908 (published as West Fork of Walker River near Coleville 1903 1905-8 and as Walker River (West Fork) near Coleville 1904), March 1909 to September 1910, June 1915 to March 1938, May 1957 to current year. Monthly discharge only for some periods published in WSP 1314.

REVISED RECORDS.--WSP 880: 1917 (runoff in acre-ft). WSP 1514: 1918, 1923, WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,520 ft National Geodetic Vertical Datum of 1929, from topographic map. See WSP 2127 for history of changes prior to Sept. 10, 1963.

REMARKS.--Estimated daily discharges: Oct. 6-9, Dec. 14-26, Jan. 1-4, 12-16, Jan. 25 to Feb. 7, Feb. 9-13, Sept. 20-30. Records good except for periods of ice effect, Dec. 14-26, Jan. 1-4, 12-26, Jan. 25 to Feb. 7, and Feb. 9-13, which are fair. Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poor Lake Reservoir (capacity unknown) 17 mi upstream.

AVERAGE DISCHARGE.--56 years (water years 1902-7, 1910, 1916-37, 1958-85), 280 ft³/s, 202,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s, Dec. 11, 1937, from slope-area measurement of peak flow; minimum, 5 ft³/s, Dec. 3, 1924, Aug. 27, 1931.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,120 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
May 25	0300	1,190	2.99	June 8	0200	*1,230	*3.05

Minimum daily, 54 ft³/s, Aug. 31, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	91	98	79	56	105	184	596	424	224	91	54
2	95	92	98	78	56	103	219	779	427	220	89	58
3	92	101	94	78	56	98	254	830	410	222	89	61
4	88	93	92	78	56	93	277	738	421	221	87	80
5	84	95	92	78	60	93	295	669	554	207	82	82
6	80	94	91	79	62	93	342	734	813	198	74	74
7	76	94	88	80	63	95	407	713	919	191	73	72
8	74	94	90	77	64	93	473	618	1020	183	73	70
9	72	70	88	78	60	100	516	572	877	174	73	78
10	70	106	89	79	57	104	554	463	846	171	74	84
11	88	114	87	73	60	102	550	402	742	173	71	107
12	91	110	88	70	64	100	522	401	764	164	71	100
13	102	108	81	70	70	100	598	439	763	153	68	99
14	115	94	80	70	79	100	705	578	712	151	70	91
15	96	105	80	70	82	101	786	684	641	142	69	86
16	93	106	80	72	87	103	759	668	681	135	67	80
17	85	100	72	74	89	107	606	702	630	131	68	76
18	96	100	70	76	92	112	453	784	636	128	70	75
19	115	88	70	79	95	108	421	869	581	136	67	81
20	107	95	70	80	94	114	379	876	565	133	64	74
21	100	95	70	80	86	119	338	750	497	156	62	67
22	97	96	70	75	90	120	312	790	432	123	60	64
23	94	94	70	73	90	130	333	839	407	113	62	61
24	96	98	74	68	91	141	367	980	369	123	61	59
25	98	81	76	64	97	138	359	1020	332	121	59	57
26	102	76	80	60	100	123	315	920	295	121	58	56
27	100	114	84	60	104	83	302	845	281	133	56	56
28	98	97	84	58	100	101	341	733	267	127	58	62
29	99	100	84	56	---	133	388	601	248	111	57	59
30	97	103	83	56	---	136	427	486	235	102	56	57
31	96	---	81	56	---	156	---	478	---	95	54	---
TOTAL	2889	2904	2554	2224	2160	3404	12782	21557	16789	4782	2133	2180
MEAN	93.2	96.8	82.4	71.7	77.1	110	426	695	560	154	68.8	72.7
MAX	115	114	98	80	104	156	786	1020	1020	224	91	107
MIN	70	70	70	56	56	83	184	401	235	95	54	54
AC-FT	5730	5760	5070	4410	4280	6750	25350	42760	33300	9490	4230	4320

CAL YR 1984 TOTAL 127120 MEAN 347 MAX 1850 MIN 70 AC-FT 252100
WTR YR 1985 TOTAL 76358 MEAN 209 MAX 1020 MIN 54 AC-ft 151500

10297000 TOPAZ LAKE NEAR TOPAZ, CA

LOCATION.--Lat 38°41'35", long 119°31'10", in NW¼NE¼ sec.33, T.10 N., R.22 E., Douglas County, Hydrologic Unit 16050301, at outlet works of Topaz Lake on West Walker River, 5.5 mi north of Topaz.

PERIOD OF RECORD.--December 1921 to September 1931 (monthly contents only published in WSP 1734), October 1931 to current year.

GAGE.--Float and nonrecording gages read once daily. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, at datum 4.62 ft higher.

REMARKS.--Topaz Lake, formerly known as Alkali Lake and Topaz Reservoir, was formed by the diversion of water from West Walker River through a feeder canal and the construction of an outlet tunnel through a low saddle in rim of lake. Storage began about December 1921. Usable capacity, 59,440 acre-ft between elevations 4,967.68 ft, lowest practical elevation for diversion through tunnel, bottom of outlet tunnel at elevation 4,965.4 ft and 5,000.38 ft, 3 ft below top of levee. Usable capacity of reservoir was increased from about 45,000 acre-ft to 59,440 acre-ft in October 1937 by an earthfill, rock-faced levee at south end. Figures given herein represent usable contents at 0800 hours. There is 65,000 acre-ft of lake volume below the point of controllable storage. Water is used for irrigation in Walker Irrigation District.

COOPERATION.--Elevations furnished by Walker River Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 60,680 acre-ft, July 3, 1980, elevation, 5,000.92 ft, present datum; no contents at times in 1924, 1960, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 48,090 acre-ft, June 17, 18, elevation, 4,995.26 ft; minimum contents observed, 4,020 acre-ft, Oct. 22, elevation, 4,970.28 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

4,970	3,580	4,990	37,360
4,975	11,520	4,995	47,540
4,980	19,760	4,996	49,680
4,985	28,310		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11270	4830	5870	14000	21120	28220	35430	34970	42450	42180	29220	12200
2	10920	4860	6180	14230	21320	28500	35690	35000	42470	41470	28590	11810
3	10690	4960	6470	14460	21520	28780	35950	35210	42470	40870	27990	11520
4	10270	4900	6820	14690	21710	29060	36290	35410	42510	40270	27470	11260
5	9950	4960	7010	14920	21910	29340	36580	35500	42780	39670	26950	10970
6	9630	4960	7450	15150	22120	29620	36800	35580	43310	39070	26220	10640
7	9310	4960	7770	15380	22340	29580	37280	35670	44200	38680	25500	10420
8	8990	4960	8080	15610	22700	29800	37900	35710	45320	38190	24730	10130
9	8590	4960	8400	15840	22900	30060	38370	35760	46440	37610	23870	9870
10	8040	4960	8670	16070	23150	30340	38900	35620	47200	37070	23270	9620
11	7590	4960	8990	16320	23360	30620	39350	35430	47660	36440	22580	9550
12	7270	4960	9230	16550	23620	30870	39490	35170	47880	35900	21900	9550
13	7020	4990	9630	16770	23920	31120	39570	34970	48000	35520	21200	9580
14	6700	5100	9790	17000	24160	31370	39670	34840	48070	35150	20650	9550
15	6370	5150	10030	17200	24440	31620	39830	34870	48030	34750	20140	9520
16	5980	5120	10260	17400	24620	31900	40100	35190	48030	34380	19470	9520
17	5730	5120	10500	17620	24900	32190	40140	35430	48090	34120	18800	9490
18	5570	5130	10730	17850	25170	32510	39970	35690	48090	33310	18300	9460
19	5270	5150	10970	18080	24450	32780	39610	36330	48050	33140	17800	9420
20	4800	5180	11210	18320	25720	33050	39090	37000	47920	32960	17330	9420
21	4360	5180	11430	18520	26000	33330	38640	37610	47660	32840	16840	9420
22	4020	5270	11680	18750	26280	33600	38190	37980	47490	32660	16340	9420
23	4530	5300	11920	18980	26550	33870	37690	38390	47180	32420	15890	9460
24	4610	5320	12160	19220	26830	34230	37280	38840	46810	32160	15460	9360
25	4630	5340	12390	19450	27110	34400	36940	39670	46330	31890	15000	9230
26	4660	5370	12630	19690	27380	34420	36560	40510	45760	31620	14540	9070
27	4700	5350	12850	19910	27660	34670	36220	41370	45130	31300	14800	8850
28	4730	5430	13060	20140	27940	34780	35880	41370	44450	30960	13660	8660
29	4770	5520	13290	20390	---	34870	35620	42490	43680	30620	13200	8500
30	4790	5590	13530	20650	---	35060	35190	42430	42940	30250	12780	8340
31	4800	---	13770	20880	---	35240	---	42450	---	29740	12550	---
MAX	11270	5590	13770	20880	27940	35240	40140	42490	48090	42180	29220	12200
MIN	4020	4830	5870	14000	21120	28220	35190	34840	42450	29740	12550	8340
a	4970.78	4971.28	4976.39	4980.66	4984.79	4988.88	4988.85	4992.56	4992.80	4985.82	4975.64	4973.02
b	-6860	+790	+8180	+7110	+7060	+7300	-50	+7260	+490	-13200	-17190	-4210

CAL YR 1984 MAX 59760 MIN 4020 b -27600
WTR YR 1985 MAX 48090 MIN 4020 b -3320

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.

10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA

LOCATION.--Lat 38°42'50", long 119°45'50", in SW¼SE¼ sec.15, T.10 N., R.20 E., Alpine County, Hydrologic Unit 16050201, on right bank 0.5 mi downstream from Markleeville Creek and 1.5 mi northeast of Markleeville.

DRAINAGE AREA.--276 mi².

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,400 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1967, at present site at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 20 to Feb. 18. Records good except for estimated discharges, period of ice effect, which are poor. A few small diversions for irrigation above station. Flow slightly regulated by several small reservoirs, total capacity, about 5,000 acre-ft.

AVERAGE DISCHARGE.--25 years, 376 ft³/s, 272,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft³/s, Jan. 31, 1963, gage height, 10.21 ft, present datum; minimum daily, 9.5 ft³/s, Nov. 9, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 15	2200	*1,600	*4.81	May 2	2300	1,450	4.66

Minimum daily, 60 ft³/s, Sept. 25-28, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	95	125	110	82	156	380	993	513	179	104	74
2	102	116	117	112	90	153	475	1170	528	177	102	75
3	97	182	124	115	90	134	548	1150	504	183	93	77
4	88	141	118	118	84	126	542	997	512	179	88	107
5	85	130	116	115	82	129	581	935	570	171	82	106
6	83	132	113	112	88	123	700	1020	647	161	84	100
7	80	129	106	110	83	123	795	982	731	158	95	99
8	76	135	112	106	80	112	902	895	763	158	92	98
9	74	102	109	110	76	129	925	817	717	150	94	158
10	73	134	112	98	83	140	997	681	665	146	90	135
11	139	166	110	92	95	137	986	613	605	146	93	156
12	111	169	107	86	100	137	973	638	578	140	108	121
13	118	152	93	82	105	146	1060	671	565	131	106	119
14	123	121	94	80	107	146	1240	788	531	124	106	106
15	96	131	112	80	110	151	1330	833	503	116	105	100
16	98	134	88	81	118	156	1210	794	485	112	102	86
17	99	126	77	84	125	164	973	845	462	108	100	77
18	102	129	81	88	135	171	777	919	451	110	104	79
19	124	116	109	90	146	167	738	965	420	135	100	80
20	116	120	92	86	146	185	648	958	399	140	96	73
21	106	122	102	80	129	201	569	880	364	206	92	69
22	101	120	92	88	129	196	538	902	328	140	91	67
23	101	113	100	80	131	218	585	953	307	122	90	76
24	102	152	100	87	131	243	623	1040	287	117	86	74
25	109	118	104	100	146	217	586	1040	264	128	84	70
26	113	93	108	95	149	191	514	954	246	139	82	61
27	117	170	112	91	153	138	512	885	228	147	81	63
28	102	201	120	90	146	147	606	783	214	136	79	64
29	102	135	128	90	---	178	666	697	199	117	79	62
30	100	135	120	80	---	203	756	611	185	111	78	61
31	98	---	115	72	---	274	---	585	---	109	75	---
TOTAL	3134	4019	3316	2908	3139	5091	22735	26994	13771	4396	3861	2693
MEAN	101	134	107	93.8	112	164	758	871	459	142	92.3	89.8
MAX	139	201	128	118	153	274	1330	1170	763	206	208	158
MIN	73	93	77	72	76	112	380	585	185	108	75	61
AC-FT	6220	7970	6580	5770	6230	10100	45090	53540	27310	8720	5670	5340

CAL YR 1984	TOTAL	154294	MEAN	422	MAX	2420	MIN	73	AC-FT 306000
WTR YR 1985	TOTAL	95057	MEAN	260	MAX	1330	MIN	61	AC-FT 188500

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA

LOCATION.--Lat 38°46'10", long 119°49'55", in NW¼SE¼ sec.34, T.11 N., R.19 E., Alpine County, Hydrologic Unit 16050201, Toiyabe National Forest, on left bank 0.3 mi downstream from bridge on State Highway 88-89, 0.6 mi southwest of Woodfords, and 3.8 mi downstream from Willow Creek.

DRAINAGE AREA.--65.4 mi².

PERIOD OF RECORD.--October 1900 to May 1907, 1910-11 (fragmentary), Oct. 1938 to current year. Monthly discharge only for some periods, published in WSP 1314. January 1890 to March 1892, June 1907 to September 1920 (except portions of 1910-11), at site 0.7 mi downstream; records not equivalent owing to diversions for irrigation.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,754.5 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1938, nonrecording gage at about the same site at different datum. Oct. 1, 1938, to Nov. 11, 1958, water-stage recorder at same site at datum 1.02 ft lower. Nov. 13, 1958, to Jan. 30, 1963, water-stage recorder at site 150 ft downstream at datum 3.06 ft lower.

REMARKS.--Estimated daily discharges: Dec. 16-18, Feb. 1, 5-7. Records good. One small diversion above station for irrigation. Flow slightly regulated by several small reservoirs, total capacity, about 1,500 acre-ft.

AVERAGE DISCHARGE.--54 years (water years 1901-7, 1939-85), 114 ft³/s, 82,590 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,890 ft³/s, Feb. 1, 1963, gage height, 9.0 ft, on basis of slope-area measurement of peak flow; minimum, about 5 ft³/s, Dec. 23, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 11, 1937, reached a stage of 8.0 ft, present datum, from floodmarks, discharge, 3,500 ft³/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Apr. 15	2000	*744	*3.47				

Minimum daily, 20 ft³/s, Aug. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	33	49	42	37	51	80	323	124	57	58	27
2	35	38	47	43	37	49	105	380	136	55	57	21
3	32	60	47	42	38	47	131	368	132	60	49	22
4	30	43	47	42	36	43	145	310	128	64	38	25
5	29	39	47	43	33	45	165	291	145	62	24	28
6	28	42	46	43	30	42	209	303	162	60	22	37
7	27	42	46	43	28	42	251	296	179	40	22	36
8	27	37	46	43	27	54	294	269	187	37	22	31
9	27	38	47	43	30	47	326	248	171	35	22	60
10	26	45	47	42	37	46	364	214	157	35	22	55
11	44	52	47	40	34	44	368	193	137	36	21	55
12	40	59	46	41	38	43	385	195	132	35	45	49
13	38	43	39	45	40	43	418	197	129	33	63	47
14	35	49	47	41	42	44	492	224	122	31	54	43
15	32	50	48	41	44	45	523	236	116	39	52	31
16	31	49	48	41	45	45	464	220	120	45	50	26
17	33	47	48	40	45	47	357	229	115	62	46	24
18	32	47	47	41	46	48	300	242	112	65	29	27
19	37	44	47	42	47	47	291	251	104	65	23	27
20	40	45	46	42	46	51	236	248	110	57	22	24
21	38	46	46	42	44	54	208	222	104	37	21	22
22	37	45	45	40	45	54	212	227	91	32	21	21
23	36	43	46	40	45	60	247	239	75	29	21	31
24	35	43	45	42	46	64	255	257	68	27	20	41
25	37	42	45	43	48	57	228	260	64	26	20	40
26	39	51	46	40	49	45	193	238	59	30	40	39
27	39	50	45	39	50	24	199	218	56	37	62	35
28	35	39	45	39	50	42	234	191	54	34	58	26
29	37	47	44	38	---	50	247	172	51	45	48	22
30	36	50	45	38	---	57	267	147	48	60	45	21
31	34	---	44	38	---	63	---	140	---	59	42	---
TOTAL	1063	1358	1428	1279	1137	1493	8194	7548	3388	1389	1129	993
MEAN	34.3	45.3	46.1	41.3	40.6	48.2	273	243	113	44.8	36.4	33.1
MAX	44	60	49	45	50	64	523	380	187	65	63	60
MIN	26	33	39	38	27	24	80	140	48	26	20	21
AC-FT	2110	2690	2830	2540	2260	2960	16250	14970	6720	2760	2240	1970

CAL YR 1984	TOTAL	51555	MEAN	141	MAX	806	MIN	26	AC-FT	102300
WTR YR 1985	TOTAL	30399	MEAN	83.3	MAX	523	MIN	20	AC-FT	60300

10336600 UPPER TRUCKEE RIVER NEAR MEYERS, CA

LOCATION.--Lat 38°50'35", long 120°01'25", in NE 1/4 SE 1/4 sec.31, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank 0.4 mi upstream from mouth of Echo Lake outlet, 1.1 mi southwest of Meyers, and 2.5 mi upstream from Angora Creek.

DRAINAGE AREA.--33.1 mi^2.

PERIOD OF RECORD.--October 1960 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,321.89 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 26, 29, Dec. 2, 14, 16-18, 22, 31, Jan. 1-4, 6-31, Feb. 1-12, Mar. 3, 4, 8-14, 27-29. Records good including estimated periods. No regulation. Some small diversions for domestic use upstream from station.

AVERAGE DISCHARGE.--25 years, 67.2 ft^3/s, 48,690 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,550 ft^3/s, Feb. 1, 1963, gage height, 12.41 ft; minimum daily, 1.5 ft^3/s, Aug. 31 to Sept. 7, 1977.

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)
Apr. 14	2130	320	6.82	May 18	2200	247	6.33
May 2	2115	*325	*6.85				

Minimum daily, 3.0 ft^3/s, Aug. 30, 31, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	17	22	18	14	22	35	217	82	28	8.8	3.1
2	12	24	22	18	14	22	50	253	91	26	8.6	3.0
3	12	54	22	18	14	20	66	241	89	25	8.3	3.4
4	10	28	22	17	14	19	72	205	94	24	8.0	4.4
5	9.7	24	21	17	14	19	82	201	107	22	7.6	4.1
6	9.4	24	21	17	14	16	102	217	115	22	7.3	4.0
7	9.1	24	21	16	14	15	117	201	127	21	7.0	4.4
8	8.7	21	21	16	14	18	135	177	121	20	6.6	6.2
9	8.5	21	21	16	14	19	147	159	114	19	6.6	15
10	8.3	23	21	16	14	19	163	125	105	16	6.6	10
11	17	35	21	15	14	19	161	109	94	15	6.3	11
12	15	36	21	15	15	20	169	121	88	14	6.1	9.0
13	24	31	20	15	16	20	190	141	83	13	6.0	10
14	21	28	19	15	17	20	331	177	75	12	5.6	11
15	16	26	19	15	18	21	238	182	71	11	5.4	12
16	16	25	20	15	18	22	216	169	68	11	4.8	8.3
17	16	24	20	15	18	22	174	174	65	10	4.9	7.4
18	15	25	20	14	18	22	140	192	62	10	6.1	8.0
19	17	23	20	14	19	22	136	200	56	9.9	5.5	7.9
20	18	24	20	14	20	24	115	189	52	10	4.8	7.1
21	18	24	19	14	19	26	102	172	47	12	4.5	6.7
22	18	23	19	14	19	26	96	181	42	11	4.2	6.4
23	18	22	19	14	19	27	106	191	40	10	4.3	6.0
24	17	24	19	14	19	30	114	196	38	8.7	4.0	6.0
25	18	17	19	14	20	28	106	187	36	8.8	3.6	5.8
26	23	23	19	14	20	23	95	167	33	10	3.3	5.4
27	24	27	19	14	21	23	99	147	32	10	3.2	5.5
28	19	26	18	14	22	24	126	126	30	10	3.2	6.5
29	21	23	18	14	---	25	139	111	29	9.3	3.1	5.8
30	21	23	18	14	---	26	166	98	29	9.0	3.0	5.8
31	19	---	18	14	---	29	---	94	---	9.3	3.0	---
TOTAL	490.7	769	619	470	472	688	3888	5320	2115	447.0	170.3	209.2
MEAN	15.8	25.6	20.0	15.2	16.9	22.2	130	172	70.5	14.4	5.49	6.97
MAX	24	54	22	18	22	30	238	253	127	28	8.8	15
MIN	8.3	17	18	14	14	15	35	94	29	8.7	3.0	3.0
AC-FT	973	1530	1230	932	936	1360	7710	10550	4200	887	338	415

CAL YR 1984 TOTAL 30971.3 MEAN 84.6 MAX 525 MIN 7.4 AC-FT 61430
WTR YR 1985 TOTAL 15658.2 MEAN 42.9 MAX 253 MIN 3.0 AC-FT 31060

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA

LOCATION.--Lat 38°55'22", long 119°59'23", in NW 1/4 SE 1/4 sec.4, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, near center of bridge span (revised) on downstream side of U.S. Highway 50 bridge, 1.0 mi northeast of South Lake Tahoe Post Office, and 1.4 mi upstream from Lake Tahoe.

DRAINAGE AREA.--54.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1971 to September 1974, October 1976 to June 1977, October 1977 to June 1978, March 1980 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6,229.04 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 26, 1984, at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Nov. 24-28, Dec. 14, 16-31, Jan. 1 to Feb. 24, Mar. 7-11, 26-30, Apr. 1, July 8 to Sept. 30. Records good except estimated periods listed above, which are fair. Two small dams may cause slight regulation at times. Some small diversions for domestic use upstream from station.

AVERAGE DISCHARGE.--8 years, 124 ft^3/s, 89,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,550 ft^3/s, Feb. 16, 1982, gage height, 10.12 ft present datum; minimum daily, 1.7 ft^3/s, on many days during September 1981.

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)
Apr. 15	0015	*459	*5.25	May 3	0030	418	5.04

Minimum daily, 3.6 ft^3/s, Aug. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	24	52	33	29	47	83	266	100	30	7.9	3.7
2	18	35	48	33	29	47	104	328	105	28	7.4	4.0
3	17	87	45	32	29	47	132	353	111	25	7.1	4.7
4	15	45	44	32	29	44	144	308	126	24	6.8	5.1
5	14	37	42	31	29	44	164	285	163	23	6.5	4.7
6	14	40	41	31	29	39	202	316	175	23	6.3	4.6
7	14	40	40	31	29	40	224	311	183	23	6.2	6.4
8	13	34	39	31	29	40	253	276	184	21	6.2	9.8
9	13	41	38	31	29	40	268	247	170	20	6.1	17
10	13	42	39	31	29	41	289	202	149	19	6.0	14
11	34	66	39	31	30	42	288	173	130	18	5.9	13
12	24	66	39	31	31	43	283	173	119	18	5.8	12
13	24	60	38	30	32	43	299	184	117	17	5.7	12
14	32	69	38	30	33	43	357	206	110	16	5.7	12
15	22	91	38	30	33	44	384	205	104	16	5.7	13
16	24	74	36	30	33	45	361	188	104	15	5.7	11
17	32	61	36	30	33	46	307	185	99	14	6.1	10
18	23	63	37	30	34	48	244	204	95	13	6.6	11
19	25	53	37	30	36	50	232	214	88	13	6.1	12
20	32	51	37	30	38	55	200	210	77	14	5.7	11
21	26	54	37	30	39	60	178	186	67	15	5.2	10
22	25	50	36	30	40	60	166	193	62	15	4.7	10
23	24	49	36	30	41	67	166	206	59	14	4.6	9.8
24	23	54	35	30	42	72	173	210	53	13	4.6	9.4
25	24	52	35	29	42	65	163	206	41	13	4.3	9.3
26	27	51	35	29	44	62	145	201	37	12	4.1	9.1
27	35	60	35	29	46	60	140	195	36	11	3.9	9.0
28	27	80	35	29	46	63	167	193	33	10	3.8	8.9
29	28	70	35	29	---	67	187	186	32	9.7	3.7	8.9
30	29	58	35	29	---	73	203	151	30	9.0	3.6	8.9
31	26	---	34	29	---	80	---	122	---	8.4	3.6	---
TOTAL	715	1657	1191	941	963	1617	6506	6883	2959	520.1	171.6	284.3
MEAN	23.1	55.2	38.4	30.4	33.2	52.2	217	222	98.6	16.8	5.54	9.48
MAX	35	91	52	33	46	80	384	353	184	30	7.9	17
MIN	13	24	34	29	29	39	83	122	30	8.4	3.6	3.7
AC-FT	1420	3290	2360	1870	1910	3210	12900	13650	5870	1030	340	564

CAL YR 1984 TOTAL 46526.0 MEAN 127 MAX 765 MIN 11 AC-FT 92280
WTR YR 1985 TOTAL 24408.0 MEAN 66.9 MAX 384 MIN 3.6 AC-FT 48410

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-74, 1978, 1980 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1981 to September 1983.
WATER TEMPERATURE: October 1971 to June 1974, October 1977 to June 1978, March 1980 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to June 1974, October 1977 to June 1978, March 1980 to current year.

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water temperature observations provided by Lahontan Regional Water Quality Control Board.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 312 mg/L, Dec. 29, 1973; minimum daily mean, 0 mg/L, on several days in most years.
SEDIMENT LOAD: Maximum daily, 445 tons, Nov. 20, 1983; minimum daily, 0 ton, on several days in most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 123 mg/L, Apr. 15; minimum daily mean, 0 mg/L, Jan. 5-9, 26.
SEDIMENT LOAD: Maximum daily, 136 tons, Apr. 15; minimum daily, 0 ton, Jan. 5-9, 26.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	---	---	---	---	---	---	10.0	---	15.0	---	---
2	---	5.0	---	---	---	---	7.0	8.0	6.5	---	---	---
3	---	3.5	---	---	---	---	---	5.0	---	16.0	---	---
4	---	---	2.5	---	---	---	---	---	13.0	---	---	13.0
5	---	---	---	---	---	2.0	---	3.5	---	---	---	---
6	---	4.0	---	---	---	---	---	10.0	---	---	---	---
7	---	---	---	---	---	---	---	---	12.0	---	18.0	---
8	---	---	---	1.0	---	---	---	4.5	---	---	15.0	10.0
9	---	---	---	0.0	---	---	4.5	6.5	13.0	21.5	---	10.0
10	---	---	---	---	---	---	---	7.0	---	---	---	---
11	6.0	---	---	---	---	---	---	6.5	16.0	---	---	11.0
12	---	---	---	---	1.0	3.0	---	8.5	---	---	---	---
13	---	---	---	---	---	---	---	11.0	---	---	---	---
14	---	---	0.0	---	---	---	---	7.5	---	---	24.0	---
15	---	4.0	---	---	---	---	3.0	5.0	---	---	---	---
16	5.0	3.0	---	1.0	---	---	8.0	---	---	---	---	---
17	---	---	0.0	---	---	---	---	5.5	20.0	18.5	---	12.0
18	---	---	---	1.0	---	---	3.0	---	---	22.0	---	---
19	---	---	---	---	2.0	---	---	---	---	---	---	---
20	---	2.0	---	---	---	6.0	---	6.5	---	---	---	---
21	---	2.0	---	---	---	---	6.0	7.0	---	---	14.0	---
22	---	---	---	2.0	---	4.5	7.0	10.0	---	---	12.5	---
23	5.0	---	---	---	---	---	4.0	9.0	---	---	---	---
24	---	---	---	---	---	---	9.0	10.0	---	---	---	---
25	---	---	---	---	---	---	---	10.0	12.0	19.0	---	---
26	---	---	---	---	4.0	---	5.5	11.5	---	19.0	---	16.0
27	---	---	1.0	---	---	---	10.0	---	---	---	---	---
28	---	---	---	---	6.0	---	5.0	13.0	---	---	15.0	---
29	---	---	---	2.0	---	1.0	7.0	12.0	---	---	---	---
30	---	---	---	0.0	---	---	4.0	---	---	---	---	---
31	---	---	---	---	---	---	---	8.0	---	16.0	---	---

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2	.10	2	.13	4	.56	1	.09	1	.08	4	.51
2	2	.10	37	7.2	3	.39	1	.09	1	.08	4	.51
3	2	.09	66	19	3	.36	2	.17	1	.08	9	1.1
4	2	.08	5	.61	3	.36	2	.17	1	.08	9	1.1
5	2	.08	4	.40	3	.34	0	.00	1	.08	9	1.1
6	2	.08	6	.65	3	.33	0	.00	1	.08	9	.95
7	2	.08	5	.54	3	.32	0	.00	1	.08	9	.97
8	2	.07	4	.37	3	.32	0	.00	2	.16	9	.97
9	2	.07	6	.66	3	.31	0	.00	4	.31	7	.76
10	2	.07	5	.57	3	.32	1	.08	3	.23	4	.44
11	8	.92	11	2.2	3	.32	1	.08	3	.24	4	.45
12	2	.13	6	1.1	3	.32	2	.17	3	.25	4	.46
13	3	.19	6	.97	6	.62	2	.16	3	.26	4	.46
14	5	.43	11	2.5	8	.82	2	.16	3	.27	4	.46
15	2	.12	10	2.5	7	.72	2	.16	3	.27	4	.48
16	3	.19	11	2.2	9	.87	2	.16	4	.36	4	.49
17	5	.43	7	1.2	7	.68	2	.16	4	.36	4	.50
18	2	.12	7	1.2	6	.60	2	.16	4	.37	4	.52
19	2	.14	6	.86	4	.40	1	.08	4	.39	6	.81
20	4	.60	6	.83	3	.30	1	.08	4	.41	16	2.4
21	2	.14	6	.87	3	.30	1	.08	5	.53	9	1.5
22	2	.14	6	.81	3	.29	4	.32	4	.43	5	.81
23	2	.13	6	.79	3	.29	4	.32	4	.44	5	.90
24	2	.12	5	.73	3	.28	3	.24	5	.57	5	.97
25	2	.13	5	.70	3	.28	1	.08	5	.57	5	.88
26	3	.22	4	.55	2	.19	0	.00	5	.59	5	.84
27	5	.47	4	.65	2	.19	1	.08	4	.50	15	2.4
28	2	.15	9	1.9	2	.19	1	.08	4	.50	26	4.4
29	2	.15	4	.76	2	.19	1	.08	---	---	55	9.9
30	2	.16	4	.63	2	.19	2	.16	---	---	35	6.9
31	2	.14	---	---	2	.18	1	.08	---	---	23	5.0
TOTAL	---	6.04	---	54.08	---	11.83	---	3.49	---	8.57	---	49.94
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	23	5.2	55	40	6	1.6	3	.24	4	.09	10	.10
2	42	12	79	70	8	2.3	5	.38	5	.10	9	.10
3	48	17	107	102	10	3.0	6	.41	5	.10	9	.11
4	53	21	65	54	12	4.1	6	.39	6	.11	9	.12
5	61	27	38	29	12	5.3	6	.37	6	.11	8	.10
6	74	40	44	38	12	5.7	6	.37	7	.12	8	.10
7	84	51	39	33	22	11	6	.37	7	.12	8	.14
8	97	66	29	22	20	9.9	6	.34	7	.12	7	.19
9	115	83	28	19	19	8.7	6	.32	7	.12	15	.69
10	110	86	20	11	14	5.6	6	.31	7	.11	5	.19
11	92	72	17	7.9	12	4.2	5	.24	7	.11	4	.14
12	90	69	20	9.3	10	3.2	5	.24	7	.11	4	.13
13	118	102	20	9.9	10	3.2	5	.23	11	.17	5	.16
14	120	123	21	12	9	2.7	4	.17	18	.28	6	.19
15	123	136	24	13	8	2.2	4	.17	16	.25	6	.21
16	102	99	16	8.1	8	2.2	4	.16	9	.14	7	.21
17	70	58	16	8.0	7	1.9	3	.11	7	.12	16	.43
18	23	15	16	8.8	7	1.8	3	.11	7	.12	10	.30
19	20	13	17	9.8	7	1.7	3	.11	7	.12	9	.29
20	18	9.7	22	12	7	1.5	4	.15	7	.11	9	.27
21	19	9.1	15	7.5	6	1.1	4	.16	7	.10	9	.24
22	16	7.2	15	7.8	5	.84	4	.16	8	.10	9	.24
23	20	9.0	19	11	4	.64	4	.15	8	.10	9	.24
24	19	8.9	26	15	3	.43	5	.18	9	.11	9	.23
25	14	6.2	23	13	3	.33	5	.18	9	.10	9	.23
26	13	5.1	19	10	3	.30	4	.13	10	.11	9	.22
27	14	5.3	15	7.9	3	.29	4	.12	10	.11	8	.19
28	21	9.5	18	9.4	3	.27	4	.11	11	.11	6	.14
29	32	16	15	7.5	3	.26	4	.10	11	.11	4	.10
30	33	18	9	3.7	3	.24	4	.10	10	.10	2	.05
31	---	---	9	3.0	---	---	4	.09	10	.10	---	---
TOTAL	---	1199.2	---	612.6	---	86.50	---	6.67	---	3.78	---	6.05

TOTAL LOAD FOR YEAR: 2048.75 TONS.

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR						
02...	1715	114	7.0	68	21	65
09...	1315	232	4.5	60	38	36
15...	0900	348	3.0	78	73	34
16...	1720	296	8.0	49	39	37
23...	1100	162	5.0	13	5.7	51
MAY						
14...	1415	194	10.0	16	8.4	49

10336625 FALLEN LEAF LAKE NEAR CAMP RICHARDSON, CA

LOCATION.--Lat 38°54'00", long 120°04'14", in NE 1/4 SW 1/4 sec.11, T.12 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, Eldorado National Forest, 200 ft north of Cathedral Creek, 1.5 mi south of Fallen Leaf Dam, 2.9 mi southwest of Camp Richardson, and 3.7 mi west of South Lake Tahoe Post Office.

DRAINAGE AREA.--16.7 mi^2.

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1973, published as "near Tahoe Valley."

GAGE.--Water-stage recorder. Datum of gage is 6,372.30 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Lake levels regulated by a concrete dam at the outlet constructed in 1934. Regulation is for maintenance of lake level and enhancement of fishery.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 5.85 ft, Jan. 13, 1980; minimum, 1.79 ft, Jan. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 4.32 ft, June 22; minimum, 2.03 ft, Jan. 16-20.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.15	2.45	2.39	2.05	2.09	2.15	2.41	3.05	3.41	4.22	3.86	3.27
2	3.13	2.57	2.34	2.05	2.10	2.18	2.42	3.20	3.44	4.23	3.85	3.29
3	3.12	2.63	2.32	2.05	2.09	2.18	2.44	3.31	3.45	4.23	3.84	3.27
4	3.10	2.62	2.30	2.05	2.08	2.18	2.47	3.34	3.49	4.22	3.82	3.27
5	3.08	2.56	2.28	2.05	2.08	2.22	2.51	3.37	3.58	4.22	3.81	3.26
6	3.06	2.58	2.25	2.05	2.07	2.23	2.57	3.40	3.66	4.21	3.78	3.25
7	3.05	2.55	2.23	2.06	2.15	2.27	2.63	3.43	3.76	4.21	3.75	3.23
8	3.01	2.60	2.22	2.06	2.34	2.27	2.71	3.43	3.85	4.20	3.73	3.30
9	2.99	2.55	2.20	2.06	2.32	2.25	2.79	3.41	3.93	4.20	3.72	3.33
10	2.93	2.54	2.20	2.06	2.30	2.25	2.86	3.36	3.98	4.19	3.69	3.34
11	3.04	2.59	2.18	2.05	2.28	2.23	2.91	3.31	4.01	4.19	3.68	3.33
12	3.01	2.58	2.16	2.05	2.26	2.22	2.95	3.28	4.02	4.17	3.67	3.31
13	2.98	2.63	2.14	2.04	2.25	2.21	2.99	3.27	4.05	4.16	3.67	3.29
14	2.95	2.59	2.13	2.04	2.23	2.21	3.06	3.30	4.09	4.15	3.66	3.27
15	2.91	2.54	2.18	2.04	2.22	2.20	3.13	3.34	4.12	4.13	3.65	3.26
16	3.00	2.49	2.17	2.03	2.20	2.19	3.15	3.35	4.17	4.11	3.64	3.26
17	2.96	2.45	2.16	2.03	2.20	2.19	3.13	3.37	4.22	4.09	3.64	3.24
18	2.94	2.44	2.15	2.03	2.19	2.22	3.06	3.41	4.26	4.08	3.63	3.28
19	2.91	2.41	2.14	2.03	2.18	2.21	2.99	3.45	4.28	4.07	3.60	3.27
20	2.89	2.37	2.14	2.03	2.17	2.21	2.93	3.47	4.30	4.06	3.58	3.26
21	2.85	2.38	2.13	2.04	2.16	2.20	2.87	3.48	4.31	4.06	3.56	3.26
22	2.83	2.36	2.13	2.04	2.16	2.21	2.82	3.50	4.32	4.05	3.55	3.25
23	2.79	2.33	2.12	2.04	2.15	2.20	2.78	3.53	4.30	4.03	3.54	3.24
24	2.74	2.43	2.11	2.04	2.14	2.22	2.76	3.56	4.29	4.03	3.53	3.22
25	2.71	2.40	2.10	2.04	2.13	2.22	2.74	3.58	4.28	4.02	3.51	3.19
26	2.70	2.37	2.07	2.06	2.13	2.42	2.71	3.57	4.28	4.02	3.47	3.16
27	2.66	2.47	2.06	2.06	2.14	2.51	2.71	3.53	4.28	4.02	3.45	3.13
28	2.63	2.46	2.06	2.08	2.14	2.49	2.76	3.47	4.26	4.02	3.42	3.11
29	2.61	2.43	2.05	2.08	---	2.46	2.83	3.45	4.24	3.96	3.39	3.08
30	2.58	2.40	2.05	2.08	---	2.43	2.89	3.42	4.22	3.93	3.36	3.05
31	2.53	---	2.05	2.07	---	2.42	---	3.41	---	3.88	3.32	---
MEAN	2.90	2.49	2.17	2.05	2.18	2.26	2.80	3.40	4.03	4.11	3.62	3.24
MAX	3.15	2.63	2.39	2.08	2.34	2.51	3.15	3.58	4.32	4.23	3.86	3.34
MIN	2.53	2.33	2.05	2.03	2.07	2.15	2.41	3.05	3.41	3.88	3.32	3.05

CAL YR 1984 MAX 4.46 MIN 2.05
WTR YR 1985 MAX 4.32 MIN 2.03

10336626 TAYLOR CREEK NEAR CAMP RICHARDSON, CA

LOCATION.--Lat 38°55'18", long 120°03'37", in NE 1/4 NW 1/4 sec.2, T.12 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, Eldorado National Forest, on left bank 0.1 mi downstream from Fallen Leaf Lake outlet, and 1.4 mi southwest of Camp Richardson.

DRAINAGE AREA.--16.7 mi^2.

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1973, published as "near Tahoe Valley."

GAGE.--Water-stage recorder. Datum of gage is 6,361.08 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Fallen Leaf Lake Dam (station 10336625).

AVERAGE DISCHARGE (unadjusted).--17 years, 48.3 ft^3/s, 34,990 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,530 ft^3/s, Jan. 14, 1980, gage height, 6.33 ft; minimum daily, 0.20 ft^3/s, Oct. 4-7, 1970, Sept. 4-6, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 156 ft^3/s, Apr. 16, gage height, 4.15 ft; minimum daily, 0.56 ft^3/s, Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	39	34	6.9	8.2	13	32	57	36	4.3	2.7	.96
2	11	40	32	6.9	9.0	15	32	74	36	4.3	2.2	.77
3	9.6	48	29	6.9	8.9	15	33	92	37	4.1	3.0	1.4
4	8.8	48	27	6.6	8.1	16	36	100	33	4.1	3.7	2.9
5	8.3	49	25	6.6	7.9	15	39	103	19	4.0	3.1	2.5
6	9.4	50	23	6.7	8.0	19	43	109	18	4.1	2.5	2.3
7	10	49	21	7.7	10	22	51	114	20	3.9	1.0	2.3
8	9.6	53	20	7.5	26	21	59	115	23	4.0	.86	2.5
9	8.6	51	19	7.5	26	20	69	113	28	4.2	1.0	3.1
10	15	48	19	7.3	24	20	81	101	31	4.1	1.0	2.9
11	21	53	18	7.1	23	19	92	89	34	4.3	1.1	2.8
12	20	56	17	6.5	21	18	99	84	35	4.0	1.7	2.4
13	18	58	15	6.5	20	17	106	82	29	3.8	2.3	2.1
14	17	55	14	6.3	18	17	119	85	18	3.7	3.0	2.0
15	16	50	15	6.2	18	16	139	91	15	3.4	2.8	1.7
16	18	46	18	6.1	17	16	154	94	9.8	3.5	.81	2.7
17	20	42	16	6.0	16	15	151	98	13	3.5	.81	4.1
18	19	41	16	6.2	16	16	137	103	15	3.8	.83	4.1
19	20	38	15	5.8	16	17	123	108	17	3.6	.79	3.8
20	20	36	14	5.6	14	17	107	113	18	2.9	2.7	2.1
21	19	35	14	5.7	13	17	96	113	19	2.3	4.1	.73
22	18	33	13	5.9	13	17	84	115	20	1.7	3.9	.56
23	17	31	12	6.0	12	17	77	118	20	1.7	3.7	11
24	21	35	12	6.0	12	19	73	122	14	1.6	3.8	18
25	26	38	11	6.2	12	19	63	126	11	1.5	3.8	18
26	27	35	10	6.9	12	23	55	128	8.1	1.1	3.5	17
27	26	37	9.8	7.5	12	36	43	124	3.7	.93	3.3	17
28	25	43	9.1	8.2	12	41	38	102	4.2	.88	3.3	15
29	24	40	8.4	8.2	---	39	41	81	4.7	3.1	2.8	13
30	29	37	7.8	7.8	---	36	46	61	4.3	3.7	2.6	16
31	37	---	7.0	7.6	---	34	---	37	---	3.2	2.3	---
TOTAL	559.3	1314	521.1	208.9	413.1	642	2318	3052	593.8	99.31	75.00	175.72
MEAN	18.0	43.8	16.8	6.74	14.8	20.7	77.3	98.5	19.8	3.20	2.42	5.86
MAX	37	58	34	8.2	26	41	154	128	37	4.3	4.1	18
MIN	8.3	31	7.0	5.6	7.9	13	32	37	3.7	.88	.79	.56
AC-FT	1110	2610	1030	414	819	1270	4600	6050	1180	197	149	349

CAL YR 1984 TOTAL 18467.00 MEAN 50.5 MAX 281 MIN 4.0 AC-FT 36630
WTR YR 1985 TOTAL 9972.23 MEAN 27.3 MAX 154 MIN .56 AC-FT 19780

10336645 GENERAL CREEK NEAR MEEKS BAY, CA

LOCATION.--Lat 39°03'07", long 120°07'03", in NE 1/4 NE 1/4 sec.20, T.14 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, on right bank 200 ft upstream from State Highway 89, 0.4 mi upstream from Lake Tahoe, and 1.1 mi north of Meeks Bay.

DRAINAGE AREA.--7.44 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,250.38 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 26, Dec. 15 to Jan. 9, Jan. 11, 13, 21-27, 29, Feb. 2-4, 8-18, Mar. 3, 5-9, 26-31. Records good except for periods of ice effect listed above, which are fair. No known diversion or regulation upstream from station.

AVERAGE DISCHARGE.--5 years, 22.4 ft^3/s, 16,230 acre-feet/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 765 ft^3/s, Dec. 20, 1981, gage height, 5.43 ft, from rating curve extended above 180 ft^3/s on basis of computation of flow through culvert; minimum daily, 0.53 ft^3/s, Sept. 10, 1981 and Sept. 2, 1985.

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)
Apr. 14	2245	111	2.01	May 1	2200	*129	*2.14

Minimum daily, 0.53 ft^3/s, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.6	6.1	4.5	3.5	6.2	10	90	17	1.2	1.2	.93
2	1.4	2.8	5.8	4.4	3.5	6.3	14	99	17	1.3	.93	.53
3	1.3	9.8	5.7	4.3	3.6	6.0	18	84	20	1.3	1.0	.58
4	1.2	5.0	5.7	4.2	3.7	5.7	22	68	19	1.2	1.0	.66
5	1.2	3.7	5.6	4.1	3.8	5.7	26	68	18	1.2	.99	.70
6	1.2	4.3	5.3	4.0	4.0	5.6	37	75	17	1.1	.99	.78
7	1.3	4.9	5.3	3.9	4.2	5.6	46	67	16	1.1	.98	1.0
8	1.2	4.8	5.3	3.8	4.2	5.5	55	56	14	1.1	1.0	1.7
9	1.4	3.9	5.3	3.7	4.3	5.5	62	40	13	1.1	1.1	2.7
10	1.5	4.4	5.3	3.6	4.4	5.5	67	36	11	1.1	1.1	1.5
11	3.6	10	5.3	3.5	4.5	5.3	66	35	9.1	1.2	1.1	1.2
12	1.5	12	5.3	3.4	4.7	5.3	64	40	7.7	1.1	1.1	1.1
13	1.4	8.2	5.3	3.4	5.0	5.1	71	49	6.7	1.0	1.1	1.0
14	1.3	6.6	5.3	3.4	5.2	5.3	89	63	5.9	.99	.95	1.0
15	1.3	6.4	5.2	3.4	5.3	5.4	97	58	5.2	1.1	.98	.99
16	2.1	5.9	5.1	3.4	5.2	5.7	84	49	4.7	1.1	.90	.97
17	2.2	5.4	5.1	3.4	5.2	5.8	62	52	4.1	1.1	.98	.95
18	1.6	5.6	5.1	3.4	5.3	6.1	45	60	3.7	1.0	1.1	1.6
19	2.0	5.3	5.0	3.4	5.3	6.2	45	60	3.3	1.0	.98	1.2
20	1.9	5.3	5.0	3.4	5.3	7.1	36	54	2.8	1.0	.96	1.1
21	1.7	5.3	4.9	3.4	5.1	8.3	30	46	2.6	1.2	.91	1.0
22	1.5	5.0	4.8	3.4	5.0	8.3	27	48	2.3	1.1	.84	1.0
23	1.5	5.0	4.8	3.4	5.0	8.7	33	50	2.1	1.1	.85	1.2
24	1.5	6.4	4.8	3.4	5.0	10	41	47	2.0	1.1	.79	.89
25	1.5	5.4	4.8	3.4	5.1	8.8	38	40	1.8	1.1	.77	.75
26	1.6	5.4	4.7	3.4	5.6	8.3	33	36	1.7	1.2	.80	.77
27	1.7	7.6	4.7	3.4	6.0	8.0	32	32	1.6	1.2	.88	.78
28	1.5	9.3	4.7	3.4	6.0	7.8	48	26	1.5	1.1	.96	.86
29	1.7	7.3	4.7	3.4	---	8.3	60	23	1.4	1.1	1.0	.93
30	1.5	6.5	4.6	3.4	---	8.7	70	19	1.3	1.1	1.2	.97
31	1.6	---	4.5	3.4	---	9.2	---	18	---	1.1	1.4	---
TOTAL	49.8	179.1	159.1	112.0	133.0	209.3	1428	1588	233.5	34.69	30.84	31.34
MEAN	1.61	5.97	5.13	3.61	4.75	6.75	47.6	51.2	7.78	1.12	.99	1.04
MAX	3.6	12	6.1	4.5	6.0	10	97	99	20	1.3	1.4	2.7
MIN	1.2	1.6	4.5	3.4	3.5	5.1	10	18	1.3	.99	.77	.53
AC-FT	99	355	316	222	264	415	2830	3150	463	69	61	62

CAL YR 1984 TOTAL 6666.2 MEAN 18.2 MAX 147 MIN 1.1 AC-FT 13220
WTR YR 1985 TOTAL 4188.67 MEAN 11.5 MAX 99 MIN .53 AC-FT 8310

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1980 to September 1983.
WATER TEMPERATURE: October 1980 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1980 to current year.

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water temperature observations provided by University of California at Davis.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 266 mg/L, Dec. 20, 1981; minimum daily mean, 0 mg/L, on many days in most years.
SEDIMENT LOAD: Maximum daily, 457 tons, Dec. 20, 1981; minimum daily, 0 ton, on many days in most years.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 15 mg/L, May 1, 2; minimum daily mean, 0 mg/L, on many days.
SEDIMENT LOAD: Maximum daily, 4.6 tons, May 2; minimum daily, 0 ton, on many days.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	1.5	5.0	---	---	---	---
2	6.5	4.0	---	---	---	---	---	2.0	---	---	---	---
3	---	---	---	---	0.0	---	2.0	5.5	---	---	---	---
4	---	---	---	---	---	---	---	4.0	10.5	---	---	---
5	---	3.0	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	2.0	3.5	---	---	---	12.0
7	---	---	---	---	---	---	1.0	6.0	---	---	14.5	---
8	---	---	---	---	---	---	---	1.5	---	17.5	---	10.5
9	6.5	---	---	0.5	---	---	1.0	---	---	---	---	7.5
10	---	---	---	---	---	---	1.0	3.0	---	14.0	---	---
11	5.0	2.0	---	---	---	---	---	6.0	---	---	---	---
12	---	---	1.0	---	0.5	1.0	3.0	5.0	14.5	---	12.0	---
13	---	---	0.0	---	---	---	4.0	5.0	16.0	---	---	---
14	---	---	---	0.0	---	---	---	7.5	---	---	11.0	---
15	---	1.5	---	---	0.0	1.5	3.0	3.0	---	---	---	---
16	---	---	---	---	---	---	2.5	5.0	---	---	---	---
17	---	---	---	---	---	---	---	8.0	---	---	---	---
18	---	---	---	---	---	---	4.0	5.0	---	13.0	---	---
19	---	---	---	---	---	---	---	8.0	16.0	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	6.0
21	3.5	---	0.0	---	---	2.0	---	6.0	---	---	---	---
22	---	---	---	---	---	---	---	5.0	---	---	---	---
23	---	---	---	0.0	---	---	4.0	---	---	---	---	---
24	---	---	---	---	---	---	3.0	11.0	---	---	---	---
25	---	---	---	---	1.0	---	---	6.5	---	---	12.0	---
26	---	---	---	---	---	---	---	10.0	14.5	---	---	---
27	---	---	---	---	---	---	5.0	---	---	---	---	---
28	---	---	---	---	---	---	2.0	9.0	---	15.0	---	---
29	---	---	---	1.0	---	---	4.0	---	---	---	---	---
30	4.0	1.0	---	---	---	---	1.0	8.5	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	1	.00	1	.02	2	.02	0	.00	1	.02
2	0	.00	5	.04	1	.02	2	.02	0	.00	1	.02
3	0	.00	10	.26	1	.02	2	.02	0	.00	1	.02
4	0	.00	3	.04	2	.03	2	.02	0	.00	1	.02
5	0	.00	2	.02	2	.03	2	.02	0	.00	1	.02
6	1	.00	2	.02	2	.03	1	.01	0	.00	1	.02
7	1	.00	2	.03	2	.03	1	.01	0	.00	2	.03
8	1	.00	2	.03	2	.03	1	.01	0	.00	2	.03
9	1	.00	2	.02	2	.03	1	.01	1	.01	2	.03
10	1	.00	2	.02	2	.03	1	.01	1	.01	2	.03
11	2	.02	8	.22	3	.04	1	.01	1	.01	2	.03
12	1	.00	5	.16	3	.04	0	.00	1	.01	2	.03
13	1	.00	3	.07	3	.04	0	.00	1	.01	2	.03
14	1	.00	2	.04	3	.04	0	.00	0	.00	3	.04
15	1	.00	1	.02	3	.04	0	.00	0	.00	3	.04
16	2	.01	1	.02	2	.03	0	.00	0	.00	3	.05
17	2	.01	1	.01	2	.03	0	.00	0	.00	3	.05
18	1	.00	1	.02	2	.03	0	.00	0	.00	2	.03
19	2	.01	1	.01	2	.03	0	.00	0	.00	2	.03
20	2	.01	1	.01	0	.00	0	.00	0	.00	2	.04
21	3	.01	1	.01	0	.00	0	.00	1	.01	2	.04
22	3	.01	1	.01	0	.00	0	.00	1	.01	2	.04
23	2	.01	1	.01	0	.00	0	.00	1	.01	2	.05
24	2	.01	2	.03	0	.00	0	.00	1	.01	2	.05
25	2	.01	1	.01	1	.01	0	.00	1	.01	2	.05
26	2	.01	1	.01	1	.01	0	.00	1	.02	2	.04
27	1	.00	1	.02	1	.01	0	.00	1	.02	3	.06
28	1	.00	1	.03	1	.01	0	.00	1	.02	3	.06
29	1	.00	1	.02	1	.01	0	.00	---	---	3	.07
30	1	.00	1	.02	1	.01	0	.00	---	---	3	.07
31	1	.00	---	---	1	.01	0	.00	---	---	3	.07
TOTAL	---	0.12	---	1.23	---	0.66	---	0.16	---	0.16	---	1.21

10336645 GENERAL CREEK NEAR MEEKS BAY, CA--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3	.08	15	4.1	2	.09	1	.00	2	.01	3	.01
2	4	.15	15	4.6	2	.09	1	.00	2	.01	3	.00
3	4	.19	11	2.5	3	.16	1	.00	3	.01	3	.00
4	4	.24	4	.73	3	.15	1	.00	3	.01	3	.01
5	4	.28	4	.73	3	.15	1	.00	3	.01	3	.01
6	6	.60	4	.81	3	.14	1	.00	3	.01	3	.01
7	6	.75	4	.72	3	.13	1	.00	3	.01	3	.01
8	6	.89	3	.45	2	.08	1	.00	3	.01	3	.01
9	8	1.3	3	.32	2	.07	2	.01	3	.01	3	.02
10	7	1.3	3	.29	2	.06	2	.01	3	.01	3	.01
11	4	.71	3	.28	2	.05	2	.01	3	.01	3	.01
12	4	.69	4	.43	2	.04	2	.01	3	.01	3	.01
13	7	1.3	5	.66	2	.04	2	.01	3	.01	3	.01
14	10	2.4	6	1.0	2	.03	2	.01	3	.01	3	.01
15	10	2.6	3	.47	2	.03	2	.01	3	.01	2	.01
16	5	1.1	3	.40	1	.01	2	.01	3	.01	2	.01
17	4	.67	3	.42	1	.01	2	.01	3	.01	2	.01
18	3	.36	3	.49	1	.01	2	.01	3	.01	2	.01
19	3	.36	3	.49	1	.01	2	.01	3	.01	2	.01
20	3	.29	3	.44	1	.01	2	.01	3	.01	2	.01
21	2	.16	3	.37	1	.01	2	.01	3	.01	2	.01
22	3	.22	3	.39	1	.01	2	.01	3	.01	2	.01
23	4	.36	3	.41	1	.01	2	.01	3	.01	2	.01
24	4	.44	3	.38	1	.01	2	.01	3	.01	2	.00
25	2	.21	3	.32	1	.00	2	.01	3	.01	2	.00
26	2	.18	3	.29	1	.00	2	.01	3	.01	2	.00
27	4	.35	3	.26	1	.00	2	.01	3	.01	2	.00
28	6	.78	3	.21	1	.00	2	.01	3	.01	2	.00
29	5	.81	2	.12	1	.00	2	.01	3	.01	2	.01
30	8	1.5	2	.10	1	.00	2	.01	3	.01	2	.01
31	---	---	2	.10	---	---	2	.01	3	.01	---	---
TOTAL	---	21.27	---	23.28	---	1.40	---	0.23	---	0.31	---	0.24

TOTAL LOAD FOR YEAR: 50.27 TONS.

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA

LOCATION.--Lat 39°06'27", long 120°09'40", in NW 1/4 NE 1/4 sec.36, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, on right bank 300 ft upstream from bridge on State Highway 89, 1,000 ft upstream from Lake Tahoe, and 4.6 mi south of Tahoe City.

DRAINAGE AREA.--11.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 6,240 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1960, to Sept. 30, 1964, at datum 10.25 ft lower and Oct. 1, 1964, to Aug. 27, 1970, at datum 12 ft lower at site 400 ft downstream.

REMARKS.--Estimated daily discharges: Nov. 8, 9, 25, 26, 29, Dec. 2, 13-29, Dec. 31 to Jan. 4, Jan. 7, 8, 11-15, Jan. 18 to Feb. 6, Feb. 8-13, 15, 21, Mar. 3-10, 25-31. Records good except for above periods of ice effect, which are fair. No known diversion or regulation upstream from station.

AVERAGE DISCHARGE.--25 years, 38.8 ft^3/s, 28,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft^3/s, Dec. 22 or 24, 1964, on basis of computation of flow through culvert; maximum gage height, 9.90 ft, site and datum then in use, Dec. 22, 1964; minimum discharge, 0.30 ft^3/s, Sept. 19, 1968.

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)
Apr. 15	1945	200	2.35	May 2	2000	*202	*2.36

Minimum daily, 2.1 ft^3/s, Aug. 26-29, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	5.5	11	7.7	7.2	13	24	137	56	9.9	3.7	2.2
2	3.2	24	10	7.7	7.3	13	32	162	58	9.3	3.7	2.1
3	2.9	35	10	7.6	7.4	12	41	151	57	8.8	3.6	2.2
4	2.8	15	10	7.6	7.5	12	46	133	65	8.3	3.5	2.3
5	2.9	11	10	7.5	7.6	11	55	130	73	8.0	3.2	2.2
6	3.0	13	9.8	7.6	7.8	11	71	135	78	7.8	3.1	2.2
7	3.0	12	9.5	7.6	8.1	11	85	125	84	7.5	3.0	2.6
8	3.0	11	9.5	7.4	8.2	11	96	109	82	6.9	2.9	3.4
9	3.0	11	9.5	7.4	8.5	11	105	96	77	6.5	3.0	4.1
10	3.0	11	9.7	7.3	9.0	11	113	88	69	6.3	2.9	3.1
11	5.6	43	9.4	7.3	9.1	11	111	81	63	6.3	2.8	2.9
12	4.3	32	9.4	7.2	9.2	11	111	87	61	6.0	2.8	3.3
13	4.7	24	9.2	7.2	9.2	11	120	95	58	5.7	2.7	3.2
14	4.9	21	9.1	7.2	9.0	11	146	112	52	5.3	2.7	3.2
15	4.3	17	9.0	7.2	8.7	12	158	112	49	5.1	2.7	3.2
16	5.0	15	9.0	7.2	8.6	12	139	105	47	4.9	2.5	3.2
17	5.2	13	8.9	7.1	8.9	13	108	112	44	4.8	2.6	3.0
18	4.9	13	8.8	7.0	9.0	13	95	120	43	4.7	2.8	3.5
19	5.3	12	8.7	7.0	9.8	13	90	128	39	4.5	2.6	3.2
20	5.6	11	8.6	7.0	9.8	16	72	127	34	4.5	2.5	3.2
21	5.6	11	8.4	6.8	9.4	18	63	119	30	5.0	2.5	3.2
22	5.5	10	8.3	6.8	9.3	18	60	124	26	4.8	2.4	3.0
23	5.7	10	8.3	6.8	9.3	20	69	131	23	4.5	2.3	3.0
24	5.4	12	8.3	6.8	9.9	23	76	131	19	4.3	2.2	2.9
25	5.9	11	8.3	6.8	11	19	73	122	17	4.2	2.2	2.8
26	8.7	11	8.3	6.8	12	18	66	112	15	4.2	2.1	2.8
27	7.5	12	8.3	6.8	12	17	71	101	14	4.3	2.1	2.8
28	6.0	14	8.2	6.9	13	17	87	88	12	4.1	2.1	2.8
29	7.8	12	8.0	7.0	---	18	95	76	11	4.0	2.1	2.7
30	6.9	11	7.9	7.0	---	19	109	68	10	3.9	2.2	2.7
31	6.1	---	7.8	7.1	---	21	---	63	---	3.8	2.2	---
TOTAL	151.2	463.5	279.2	222.4	255.8	447	2587	3480	1366	178.2	83.7	87.0
MEAN	4.88	15.4	9.01	7.17	9.14	14.4	86.2	112	45.5	5.75	2.70	2.90
MAX	8.7	43	11	7.7	13	23	158	162	84	9.9	3.7	4.1
MIN	2.8	5.5	7.8	6.8	7.2	11	24	63	10	3.8	2.1	2.1
AC-FT	300	919	554	441	507	887	5130	6900	2710	353	166	173

CAL YR 1984 TOTAL 16075.7 MEAN 43.9 MAX 273 MIN 2.5 AC-FT 31890
WTR YR 1985 TOTAL 9601.0 MEAN 26.3 MAX 162 MIN 2.1 AC-FT 19040

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-78, 1980 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1980 to September 1983.
WATER TEMPERATURE: October 1974 to June 1978 (1977-78 storm season only), October 1979 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to June 1978 (1977-78 storm season only), October 1979 to current year.

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water temperature observations provided by University of California at Davis.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 1,200 mg/L, Jan. 13, 1980; minimum daily mean, 0 mg/L, on many days each year.
SEDIMENT LOAD: Maximum daily, 2,590 tons, Jan. 13, 1980; minimum daily, 0 ton, on many days each year.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 56 mg/L, May 2; minimum daily mean, 0 mg/L, on many days.
SEDIMENT LOAD: Maximum daily, 27 tons, May 2; minimum daily, 0 ton, on many days.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	6.0	4.5	---	---	---	---
2	8.0	4.0	---	---	---	---	---	3.0	---	---	---	---
3	---	3.0	---	---	0.0	---	6.5	8.0	---	---	---	---
4	---	3.5	---	---	---	---	---	3.5	12.0	---	---	---
5	10.0	---	---	---	---	---	---	---	---	---	---	---
6	---	4.5	---	---	---	---	6.0	4.0	14.0	---	---	13.0
7	---	---	---	---	---	---	3.5	7.0	---	---	---	---
8	---	---	---	1.0	---	---	---	2.0	---	22.0	---	10.5
9	---	---	---	---	---	---	3.0	---	7.5	---	---	7.0
10	---	---	---	---	---	---	2.0	3.0	14.5	13.5	---	---
11	7.0	2.0	2.0	---	---	---	7.0	9.0	---	---	---	---
12	---	---	2.0	---	0.5	1.5	5.0	3.5	13.5	---	12.0	---
13	---	---	---	---	---	---	8.0	3.0	16.0	---	---	---
14	---	---	---	0.0	---	---	---	9.0	---	---	11.5	---
15	---	3.5	---	---	0.0	4.5	6.0	4.0	---	---	---	---
16	---	---	---	---	---	---	3.0	3.0	---	---	---	---
17	---	---	---	---	---	---	---	10.0	---	---	---	---
18	---	---	---	---	---	---	6.0	6.0	---	13.5	---	---
19	---	---	---	---	---	---	---	7.0	14.0	---	---	---
20	---	---	---	---	---	---	---	7.5	---	---	---	8.0
21	4.0	---	0.0	---	---	3.0	---	---	---	---	---	---
22	---	---	---	---	---	---	---	3.5	---	---	---	---
23	---	---	---	0.5	---	---	6.0	---	---	---	---	---
24	---	---	---	---	---	---	4.5	12.0	---	---	---	---
25	---	---	---	---	---	---	---	3.5	---	---	12.5	---
26	---	---	---	---	---	---	---	9.5	15.0	---	---	---
27	---	---	---	---	---	---	9.0	---	---	---	---	---
28	---	---	---	---	---	---	3.5	9.5	---	16.5	---	---
29	---	---	---	1.0	---	---	7.0	---	---	---	---	---
30	5.0	1.0	---	---	---	---	2.0	10.5	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA-Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	0	.00	1	.01	2	.06	1	.02	2	.04	2	.07
2	0	.00	31	5.9	2	.05	1	.02	2	.04	2	.07
3	0	.00	18	2.5	2	.05	1	.02	2	.04	2	.06
4	1	.01	3	.12	2	.05	1	.02	2	.04	2	.06
5	1	.01	3	.09	2	.05	1	.02	2	.04	2	.06
6	1	.01	4	.14	1	.03	0	.00	2	.04	2	.06
7	1	.01	2	.06	1	.03	0	.00	2	.04	3	.09
8	1	.01	1	.03	1	.03	0	.00	1	.02	3	.09
9	1	.01	1	.03	1	.03	1	.02	1	.02	3	.09
10	1	.01	1	.03	1	.03	1	.02	1	.02	3	.09
11	5	.08	18	2.5	1	.03	2	.04	1	.02	3	.09
12	1	.01	4	.35	0	.00	2	.04	3	.07	3	.09
13	1	.01	2	.13	0	.00	3	.06	1	.02	4	.12
14	2	.03	2	.11	0	.00	3	.06	1	.02	5	.15
15	2	.02	1	.05	0	.00	3	.06	1	.02	6	.19
16	2	.03	1	.04	0	.00	2	.04	1	.02	5	.16
17	2	.03	1	.04	0	.00	2	.04	1	.02	5	.18
18	2	.03	1	.04	0	.00	2	.04	1	.02	4	.14
19	3	.04	1	.03	0	.00	1	.02	1	.03	4	.14
20	3	.05	1	.03	0	.00	1	.02	1	.03	3	.13
21	3	.05	1	.03	0	.00	1	.02	1	.03	3	.15
22	3	.04	1	.03	0	.00	0	.00	2	.05	3	.15
23	3	.05	1	.03	0	.00	0	.00	2	.05	4	.22
24	3	.04	2	.06	0	.00	0	.00	2	.05	4	.25
25	4	.06	2	.06	0	.00	0	.00	2	.06	4	.21
26	7	.16	2	.06	0	.00	0	.00	2	.06	4	.19
27	4	.08	2	.06	0	.00	1	.02	2	.06	5	.23
28	2	.03	3	.11	1	.02	1	.02	2	.07	5	.23
29	2	.04	2	.06	1	.02	1	.02	---	---	5	.24
30	2	.04	2	.06	1	.02	1	.02	---	---	5	.26
31	1	.02	---	---	1	.02	1	.02	---	---	6	.34
TOTAL	---	1.01	---	12.79	---	0.52	---	0.68	---	1.04	---	4.60
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6	.39	47	20	4	.60	3	.08	0	.00	1	.01
2	11	.95	56	27	4	.63	3	.08	0	.00	1	.01
3	17	1.9	41	18	4	.62	3	.07	0	.00	1	.01
4	20	2.5	26	9.3	5	.88	3	.07	0	.00	2	.01
5	24	4.0	21	7.4	6	1.2	3	.06	0	.00	2	.01
6	28	6.1	20	7.3	7	1.5	3	.06	1	.01	2	.01
7	29	7.2	13	4.4	8	1.8	3	.06	1	.01	2	.01
8	33	9.2	11	3.2	7	1.5	3	.06	1	.01	3	.03
9	38	12	10	2.6	6	1.2	3	.05	1	.01	1	.01
10	40	13	9	2.1	5	.93	3	.05	1	.01	1	.01
11	29	8.7	9	2.0	5	.85	3	.05	1	.01	1	.01
12	20	6.0	11	2.6	6	.99	3	.05	1	.01	3	.03
13	35	13	18	4.6	6	.94	2	.03	1	.01	1	.01
14	46	21	20	6.0	5	.70	2	.03	1	.01	1	.01
15	51	24	13	3.9	4	.53	2	.03	1	.01	1	.01
16	18	6.8	15	4.3	3	.38	1	.01	1	.01	1	.01
17	10	2.9	15	4.5	3	.36	1	.01	1	.01	1	.01
18	15	3.8	13	4.2	3	.35	1	.01	1	.01	1	.01
19	7	1.7	11	3.8	3	.32	1	.01	0	.00	1	.01
20	5	.97	11	3.8	3	.28	1	.01	0	.00	1	.01
21	5	.85	11	3.5	3	.24	1	.01	0	.00	1	.01
22	5	.81	13	4.4	3	.21	1	.01	0	.00	1	.01
23	10	1.9	17	6.0	3	.19	1	.01	0	.00	1	.01
24	9	1.8	16	5.7	3	.15	0	.00	0	.00	1	.01
25	6	1.2	13	4.3	3	.14	0	.00	0	.00	1	.01
26	5	.89	11	3.3	3	.12	0	.00	0	.00	1	.01
27	10	1.9	7	1.9	3	.11	0	.00	0	.00	1	.01
28	20	4.7	6	1.4	3	.10	0	.00	0	.00	1	.01
29	19	4.9	6	1.2	3	.09	0	.00	1	.01	1	.01
30	32	11	6	1.1	3	.08	0	.00	1	.01	1	.01
31	---	---	5	.85	---	---	0	.00	1	.01	---	---
TOTAL	---	176.06	---	174.65	---	17.99	---	0.91	---	0.16	---	0.34

TOTAL LOAD FOR YEAR: 390.75 TONS.

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (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	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
APR									
07...	1830	108	3.5	88	26	64	--	--	--
09...	1730	117	5.0	70	22	67	84	97	100
30...	2010	147	5.0	95	38	36	--	--	--
MAY									
01...	1950	182	5.0	138	68	42	--	--	--
01...	2330	176	3.0	60	29	42	--	--	--
02...	0215	161	3.0	45	20	42	--	--	--
19...	1950	156	7.0	41	17	39	--	--	--

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA

LOCATION.--Lat 39°07'56", long 120°09'24", in NW 1/4 SE 1/4 sec.24, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, Tahoe National Forest, on right bank 165 ft downstream from State Highway 89 bridge, 2.1 mi north of Tahoe Pines, and 2.6 mi southwest of Tahoe City.

DRAINAGE AREA.--9.70 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 2-5, 8, 9, 13-16, 25-27, Dec. 13-19, 21-30, Jan. 2-7, 13, 14, 18-29, Feb. 10, 11, Mar. 3-10, Mar. 26 to Apr. 1. Records good except those for periods of estimated record, which are fair. Minor diversion for local water supply upstream from station.

AVERAGE DISCHARGE.--13 years, 29.1 ft^3/s, 21,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft^3/s, Dec. 19, 1981, gage height, 8.05 ft, from rating curve extended above 800 ft^3/s; no flow many days during 1977-78, 1981.

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)
Nov. 2	2030	129	Unknown	Apr. 15	1830	146	5.19
Mar. 28	1415	ice jam	*5.53	May 2	1630	*164	5.29

Minimum daily, 0.75 ft^3/s, Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	4.1	7.7	5.6	5.3	8.8	14	100	39	7.5	1.5	1.1
2	2.9	23	7.5	5.6	5.5	8.4	20	121	42	6.8	1.5	1.0
3	2.5	20	7.4	5.7	5.3	7.9	26	99	40	6.3	1.4	1.3
4	2.3	9.7	7.0	5.8	5.1	7.5	30	86	44	5.7	1.4	1.5
5	2.1	8.4	6.9	5.8	4.8	7.3	38	86	48	5.3	1.3	1.4
6	2.1	11	6.7	5.7	4.8	7.0	49	89	51	4.8	1.3	1.5
7	2.1	10	6.6	5.7	4.7	6.7	56	83	54	4.5	1.2	1.9
8	2.0	8.8	6.6	5.7	2.1	6.5	63	72	53	4.1	1.1	3.8
9	2.0	8.3	6.4	5.5	4.5	6.3	70	65	52	3.8	1.1	4.0
10	2.0	12	6.6	5.5	5.0	6.1	78	57	49	3.6	1.2	3.0
11	6.0	32	6.5	5.4	5.1	6.0	75	54	46	3.7	1.1	2.8
12	3.8	21	6.3	5.5	4.9	5.8	76	58	44	3.5	1.1	2.4
13	5.2	13	6.2	5.5	5.0	5.9	84	64	43	3.1	1.1	2.5
14	3.5	12	6.2	5.5	5.0	6.2	100	74	40	2.9	1.1	2.3
15	2.8	11	6.1	5.5	5.4	6.5	113	70	38	2.8	1.1	2.2
16	3.0	10	6.1	5.5	5.7	6.8	93	65	36	2.6	.98	2.0
17	3.0	9.7	6.0	5.5	5.9	7.0	72	71	34	2.4	1.1	1.7
18	3.4	9.6	6.0	5.4	5.9	7.4	69	76	32	2.3	1.3	2.0
19	3.2	9.2	6.0	5.4	6.4	7.4	61	83	28	2.1	1.2	2.0
20	3.6	9.0	5.9	5.3	6.4	9.4	47	82	25	2.1	1.1	1.9
21	3.5	8.6	5.9	5.3	6.0	11	40	78	22	2.7	1.1	1.8
22	3.7	8.1	5.9	5.2	5.9	10	40	82	19	2.6	1.0	1.7
23	3.8	8.1	5.9	5.2	6.0	12	48	86	17	2.2	.96	1.5
24	4.2	9.4	5.9	5.2	6.4	13	50	88	15	2.1	.88	1.4
25	4.6	8.5	5.8	5.2	7.3	11	46	82	14	1.9	.82	1.4
26	7.7	8.6	5.8	5.2	7.7	10	42	74	12	2.0	.75	1.4
27	5.9	10	5.8	5.2	8.0	9.2	50	68	11	2.3	.81	1.4
28	4.5	12	5.8	5.3	8.4	9.0	63	60	9.7	1.8	.80	1.3
29	6.8	9.8	5.7	5.3	---	9.3	67	53	8.9	1.6	.79	1.3
30	5.3	8.7	5.7	5.6	---	9.7	82	47	8.2	1.5	.97	1.3
31	4.6	---	5.7	5.5	---	10	---	43	---	1.5	1.1	---
TOTAL	115.2	343.6	194.6	169.3	158.5	255.1	1762	2316	974.8	102.1	34.16	56.8
MEAN	3.72	11.5	6.28	5.46	5.66	8.23	58.7	74.7	32.5	3.29	1.10	1.89
MAX	7.7	32	7.7	5.8	8.4	13	113	121	54	7.5	1.5	4.0
MIN	2.0	4.1	5.7	5.2	2.1	5.8	14	43	8.2	1.5	.75	1.0
AC-FT	228	682	386	336	314	506	3490	4590	1930	203	68	113

CAL YR 1984 TOTAL 11645.50 MEAN 31.8 MAX 199 MIN 1.7 AC-FT 23100
WTR YR 1985 TOTAL 6482.16 MEAN 17.8 MAX 121 MIN .75 AC-FT 12860

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973-78, 1980 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1980 to September 1983.
WATER TEMPERATURE: October 1972 to June 1978 (storm season only for water years 1977-78), October 1979 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1972 to June 1978 (storm season only for water years 1977-78), October 1979 to current year.

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water temperature observations furnished by University of California at Davis.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 1,510 mg/L, Dec. 19, 1981; minimum daily mean, 0 mg/L, on many days each year.
SEDIMENT LOAD: Maximum daily, 3,720 tons, Dec. 19, 1981; minimum daily, 0 ton, on many days each year.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 41 mg/L, Nov. 2; minimum daily mean, 0 mg/L, on many days.
SEDIMENT LOAD: Maximum daily, 9.9 tons, April 15, May 2; minimum daily, 0 ton, on many days.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.0	6.0	---	---	---	---
2	7.0	2.5	---	0.0	---	---	---	3.0	---	---	---	---
3	---	2.0	---	---	0.0	---	4.5	6.0	---	---	---	---
4	---	2.0	---	---	---	---	---	3.0	11.5	---	---	---
5	5.0	---	---	---	---	---	---	---	---	---	---	---
6	---	4.0	---	---	---	---	5.0	4.0	13.5	---	---	13.5
7	---	---	---	0.0	---	---	2.0	8.0	---	---	---	---
8	---	---	---	---	---	---	---	2.0	---	22.0	---	10.0
9	8.0	---	---	---	---	---	2.0	---	6.5	---	---	6.5
10	---	---	---	---	---	---	3.0	4.0	14.5	18.0	17.0	---
11	6.0	0.5	0.5	---	---	---	6.0	9.0	---	---	---	---
12	---	---	1.0	---	---	0.0	3.0	3.0	---	---	---	---
13	---	---	---	---	3.5	---	7.0	3.0	16.0	---	---	---
14	---	---	---	0.0	---	---	---	8.0	14.5	---	16.5	---
15	---	0.0	---	---	0.0	2.0	5.0	4.0	---	---	---	---
16	---	---	---	---	---	---	2.5	3.0	---	---	---	---
17	---	---	---	---	---	---	---	8.5	---	---	---	---
18	---	---	---	---	---	---	6.5	6.5	---	14.0	---	---
19	---	---	---	---	---	---	---	6.0	13.5	---	---	---
20	---	---	---	---	---	---	---	3.0	---	---	---	8.0
21	2.5	---	0.0	---	---	2.0	---	---	---	---	---	---
22	---	---	---	---	---	---	---	3.0	---	---	---	---
23	---	---	---	0.0	---	---	6.0	---	---	---	---	---
24	---	---	---	---	---	---	3.0	11.5	---	---	---	---
25	---	---	---	---	1.0	---	---	3.0	---	---	13.0	---
26	---	---	---	---	---	---	---	8.5	14.5	---	---	---
27	4.0	---	---	---	---	---	8.0	---	---	---	---	---
28	---	---	---	---	---	---	3.0	10.0	---	18.0	---	---
29	---	---	---	0.0	---	---	5.5	---	---	---	---	---
30	4.0	0.0	---	---	---	---	1.0	10.0	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

10336676 WARD CREEK AT HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1	.01	1	.01	1	.02	1	.02	0	.00	2	.05
2	1	.01	41	8.7	1	.02	1	.02	0	.00	2	.05
3	1	.01	14	.76	1	.02	1	.02	0	.00	2	.04
4	1	.01	1	.03	1	.02	1	.02	0	.00	2	.04
5	1	.01	1	.02	1	.02	2	.03	0	.00	2	.04
6	1	.01	2	.06	2	.04	2	.03	0	.00	2	.04
7	1	.01	2	.05	2	.04	2	.03	0	.00	2	.04
8	1	.01	1	.02	2	.04	2	.03	0	.00	2	.04
9	0	.00	1	.02	2	.03	2	.03	0	.00	1	.02
10	0	.00	1	.03	2	.04	1	.01	0	.00	1	.02
11	8	.16	8	.78	2	.04	1	.01	0	.00	1	.02
12	2	.02	2	.11	0	.00	1	.01	0	.00	2	.03
13	3	.04	2	.07	0	.00	0	.00	0	.00	2	.03
14	1	.01	3	.10	0	.00	0	.00	0	.00	3	.05
15	1	.01	4	.12	0	.00	0	.00	0	.00	5	.09
16	1	.01	2	.05	0	.00	0	.00	0	.00	5	.09
17	1	.01	1	.03	1	.02	0	.00	0	.00	5	.09
18	2	.02	1	.03	1	.02	0	.00	0	.00	4	.08
19	1	.01	1	.02	1	.02	0	.00	0	.00	4	.08
20	1	.01	1	.02	1	.02	0	.00	1	.02	4	.10
21	1	.01	1	.02	1	.02	0	.00	2	.03	3	.09
22	2	.02	1	.02	1	.02	0	.00	1	.02	2	.05
23	2	.02	1	.02	1	.02	0	.00	1	.02	3	.10
24	5	.06	1	.03	1	.02	0	.00	1	.02	3	.11
25	4	.05	1	.02	1	.02	0	.00	2	.04	3	.09
26	10	.31	1	.02	1	.02	0	.00	3	.06	4	.11
27	2	.03	1	.03	1	.02	1	.01	2	.04	5	.12
28	1	.01	1	.03	1	.02	1	.01	2	.05	5	.12
29	9	.17	1	.03	1	.02	1	.01	---	---	6	.15
30	7	.10	1	.02	1	.02	1	.02	---	---	8	.21
31	1	.01	---	---	1	.02	1	.01	---	---	14	.38
TOTAL	---	1.17	---	11.27	---	0.63	---	0.32	---	0.30	---	2.57
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17	.64	22	7.4	3	.32	2	.04	2	.01	1	.00
2	7	.38	26	9.9	3	.34	2	.04	3	.01	1	.00
3	7	.49	14	3.9	4	.43	2	.03	3	.01	1	.00
4	7	.57	7	1.6	4	.48	2	.03	3	.01	0	.00
5	7	.72	7	1.6	5	.65	2	.03	3	.01	0	.00
6	8	1.1	6	1.4	5	.69	2	.03	3	.01	0	.00
7	9	1.5	5	1.1	6	.87	2	.02	3	.01	1	.01
8	10	1.9	3	.58	5	.72	2	.02	3	.01	12	.25
9	12	2.6	3	.53	4	.56	2	.02	3	.01	8	.11
10	14	3.2	2	.31	4	.53	3	.03	4	.01	6	.05
11	13	2.9	3	.44	4	.50	3	.03	4	.01	5	.04
12	12	2.7	3	.47	4	.48	3	.03	4	.01	2	.01
13	16	4.3	5	.86	4	.46	3	.03	4	.01	2	.01
14	20	6.5	6	1.2	4	.43	3	.02	4	.01	2	.01
15	29	9.9	5	.95	4	.41	3	.02	4	.01	2	.01
16	11	2.8	4	.70	3	.29	3	.02	4	.01	2	.01
17	6	1.2	4	.77	3	.28	3	.02	3	.01	2	.01
18	7	1.3	6	1.2	3	.26	3	.02	3	.01	2	.01
19	5	.82	7	1.6	3	.23	3	.02	3	.01	2	.01
20	3	.38	6	1.3	3	.20	3	.02	3	.01	2	.01
21	3	.32	5	1.1	3	.18	3	.02	3	.01	2	.01
22	3	.32	6	1.3	3	.15	3	.02	3	.01	2	.01
23	4	.52	7	1.6	2	.09	3	.02	2	.01	2	.01
24	3	.41	6	1.4	2	.08	2	.01	2	.00	2	.01
25	3	.37	5	1.1	2	.08	2	.01	2	.00	2	.01
26	3	.34	4	.80	2	.06	2	.01	2	.00	2	.01
27	5	.68	4	.73	2	.06	2	.01	2	.00	1	.00
28	6	1.0	3	.49	2	.05	2	.01	2	.00	1	.00
29	5	.90	3	.43	2	.05	2	.01	1	.00	1	.00
30	15	4.1	3	.38	2	.04	2	.01	1	.00	1	.00
31	---	---	3	.35	---	---	2	.01	1	.00	---	---
TOTAL	---	54.86	---	47.49	---	9.97	---	0.66	---	0.23	---	0.61

TOTAL LOAD FOR YEAR: 130.08 TONS.

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR						
10...	1645	98	3.0	34	9.0	70
30...	1950	120	4.0	38	12	64
MAY						
01...	1755	143	6.0	73	28	61
01...	2100	138	3.0	37	14	63

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	TEMPER-ATURE (DEG C)	NUMBER OF SAM-PLING POINTS	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM
MAY								
15...	1510	--	22	67	27.0	1.5	8	23

DATE	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	SED. BEDLOAD SIEVE DIAM. % FINER THAN 76.0 MM
MAY							
15...	42	60	78	90	96	99	100

10336689 SNOW CREEK AT TAHOE VISTA, CA

LOCATION.--Lat 39°14'18", long 120°02'19", in SE 1/4 NW 1/4 sec.13, T.16 N., R.17 E., Placer County, Hydrologic Unit 16050101, on right bank 20 ft upstream from Lake Tahoe, 300 ft downstream from State Highway 28, and 0.6 mi east of Tahoe Vista Post Office.

DRAINAGE AREA.--4.43 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1980 to September 1985 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 6,225.24 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-16, Nov. 4-7, 20-24, 27, 28, Dec. 15 to Jan. 4, Jan. 6-9, Feb. 8 to Mar. 28, May 15 to Sept. 30. Records good except flows below 2 ft^3/s, which are poor. Some small diversions for domestic use upstream from station.

AVERAGE DISCHARGE.--5 years, 3.43 ft^3/s, 2,480 acre-feet/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100 ft^3/s, May 29, 1983, gage height, 4.34 ft; no flow many days during July, August, and September, 1981.

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)
Apr. 15	1815	*9.1	2.84	May 29	0300	backwater	*3.16

Minimum daily, 0.02 ft^3/s, Aug. 29 to Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	.70	.87	.54	.79	.98	2.4	2.6	.64	.07	.09	.02
2	.25	2.6	.77	.56	.79	.98	3.1	2.7	.64	.06	.08	.02
3	.24	.91	.67	.58	.77	.96	3.3	2.7	.65	.06	.08	.02
4	.24	.60	.73	.60	.70	.92	3.3	2.1	.67	.06	.07	.02
5	.24	.56	.61	.63	.70	.88	3.8	2.1	.72	.07	.07	.02
6	.24	.64	.77	.65	.70	.85	4.5	2.5	.74	.07	.07	.02
7	.24	.50	.71	.67	.70	.84	5.1	2.4	.75	.08	.07	.02
8	.23	.82	.63	.69	.66	.83	5.6	2.8	.74	.08	.06	.02
9	.23	.59	.63	.72	.60	.82	6.4	2.8	.70	.08	.06	.05
10	.28	.64	.67	.70	.55	.80	6.8	2.9	.66	.08	.06	.05
11	.60	2.6	.70	.70	.52	.80	6.6	1.6	.62	.08	.06	.04
12	.58	2.1	.80	.70	.52	.80	6.2	1.4	.57	.08	.06	.03
13	.36	2.1	.61	.66	.52	.80	6.5	1.1	.52	.08	.06	.03
14	.28	1.1	.42	.62	.54	.80	7.2	1.4	.49	.08	.06	.03
15	.26	.89	.50	.62	.58	.87	7.8	1.3	.46	.07	.06	.03
16	.33	.83	.49	.62	.66	.95	7.1	1.2	.43	.07	.06	.03
17	.43	.73	.49	.64	.70	1.0	6.2	1.2	.38	.07	.06	.04
18	.24	.75	.48	.70	.74	1.1	5.4	1.2	.35	.07	.06	.22
19	.33	.56	.48	.70	.76	1.1	5.0	1.2	.33	.07	.06	.21
20	.45	.56	.48	.73	.79	1.2	4.4	1.2	.30	.07	.06	.19
21	.42	.56	.48	.78	.82	1.2	4.1	1.1	.27	.15	.06	.18
22	.44	.58	.49	.70	.84	1.2	3.6	1.2	.25	.19	.06	.17
23	.52	.67	.49	.70	.86	1.2	3.6	1.2	.23	.12	.06	.15
24	.60	1.3	.49	.70	.88	1.1	3.6	1.1	.21	.10	.05	.14
25	.69	.93	.49	.70	.92	1.0	3.3	1.0	.19	.17	.05	.13
26	.84	.67	.49	.79	.94	1.0	3.0	.95	.16	.23	.04	.12
27	.86	.82	.49	.79	.96	1.1	2.9	.86	.14	.21	.03	.12
28	.79	1.4	.49	.79	.98	.96	2.9	.78	.12	.16	.03	.11
29	.82	1.3	.50	.79	---	1.3	2.8	.73	.10	.13	.02	.10
30	.79	1.1	.51	.71	---	1.3	2.4	.68	.08	.11	.02	.10
31	.72	---	.53	.73	---	1.7	---	.66	---	.10	.02	---
TOTAL	13.80	30.11	17.96	21.21	20.49	31.34	138.9	48.66	13.11	3.12	1.75	2.43
MEAN	.45	1.00	.58	.68	.73	1.01	4.63	1.57	.44	.10	.056	.081
MAX	.86	2.6	.87	.79	.98	1.7	7.8	2.9	.75	.23	.09	.22
MIN	.23	.50	.42	.54	.52	.80	2.4	.66	.08	.06	.02	.02
AC-FT	27	60	36	42	41.00	62	276	97	26	6.2	3.5	4.8

CAL YR 1984 TOTAL 859.22 MEAN 2.35 MAX 12 MIN .03 AC-FT 1700
WTR YR 1985 TOTAL 342.88 MEAN .94 MAX 7.8 MIN .02 AC-FT 680

10336689 SNOW CREEK AT TAHOE VISTA, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to September 1985 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1981 to September 1983.
WATER TEMPERATURE: October 1980 to September 1985 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: October 1980 to September 1985 (discontinued).

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water temperature observations provided by University of California at Davis.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 936 mg/L Oct. 7, 1981; minimum daily mean, 1 mg/L on several days during most years.
SEDIMENT LOAD: Maximum daily, 23 tons Nov. 21, 1981; minimum daily, 0 ton on many days each year.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 77 mg/L Nov. 27; minimum daily mean, 4 mg/L on several days.
SEDIMENT LOAD: Maximum daily, 0.78 ton Nov. 2, Apr. 9; minimum daily, 0 ton on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.0	---	---	---	---	---	2.0	---	---	16.5	---	---
2	---	4.0	---	---	---	---	2.0	---	---	---	13.0	---
3	---	---	---	0.5	0.0	---	5.0	13.5	---	---	---	12.5
4	---	---	---	---	---	---	5.5	---	15.0	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	18.0	---
7	---	---	---	---	---	---	8.0	12.0	---	---	---	---
8	---	---	---	---	---	---	7.0	---	---	17.5	---	12.0
9	11.5	---	---	1.0	---	---	2.5	---	---	---	---	8.0
10	---	---	2.5	---	---	---	6.0	---	---	---	---	---
11	7.0	2.0	---	---	0.5	---	7.0	---	---	16.5	---	---
12	---	---	1.5	---	---	3.0	9.0	---	---	---	13.0	---
13	---	---	---	0.5	---	0.5	11.0	---	22.0	---	---	---
14	---	3.0	---	0.5	---	---	10.0	10.0	---	---	---	---
15	---	3.5	---	---	1.0	---	9.5	---	---	---	---	---
16	---	---	---	---	---	---	9.0	---	---	---	---	---
17	---	---	0.0	---	---	---	---	---	17.0	---	---	---
18	---	---	---	---	1.0	---	---	16.0	---	14.0	---	9.5
19	5.5	---	---	---	---	---	---	---	21.0	---	---	---
20	---	---	---	---	---	5.5	---	15.0	---	---	---	13.0
21	6.5	---	0.5	1.0	---	4.0	---	---	---	---	12.0	---
22	---	---	---	---	1.0	---	---	---	---	---	---	---
23	---	---	---	---	---	---	10.0	---	---	---	21.5	---
24	---	---	---	---	---	---	9.0	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	7.0	---	---	---	---	---	---	---	19.0	19.5	---	---
27	---	3.0	0.0	---	---	---	12.0	---	---	---	---	---
28	---	---	---	---	1.0	---	---	17.0	---	---	13.5	---
29	---	1.0	---	1.0	---	1.0	8.0	14.0	---	---	---	---
30	6.0	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

10336689 SNOW CREEK AT TAHOE VISTA, CA--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20	.01	8	.02	7	.02	6	.01	4	.01	5	.01
2	20	.01	75	.78	7	.01	6	.01	4	.01	6	.02
3	20	.01	12	.03	8	.01	6	.01	4	.01	7	.02
4	19	.01	8	.01	8	.02	6	.01	5	.01	8	.02
5	19	.01	8	.01	8	.01	6	.01	5	.01	8	.02
6	19	.01	8	.01	9	.02	6	.01	5	.01	8	.02
7	19	.01	8	.01	9	.02	6	.01	5	.01	8	.02
8	18	.01	8	.02	9	.02	6	.01	5	.01	8	.02
9	18	.01	8	.01	10	.02	6	.01	6	.01	8	.02
10	40	.03	8	.01	10	.02	6	.01	6	.01	8	.02
11	35	.06	33	.23	7	.01	6	.01	6	.01	8	.02
12	8	.01	25	.14	5	.01	6	.01	6	.01	11	.02
13	8	.01	28	.16	5	.01	6	.01	6	.01	8	.02
14	8	.01	45	.13	5	.01	6	.01	10	.01	8	.02
15	8	.01	32	.08	4	.01	6	.01	74	.12	7	.02
16	25	.02	30	.07	4	.01	5	.01	70	.12	7	.02
17	15	.02	30	.06	4	.01	5	.01	50	.09	8	.02
18	8	.01	30	.06	5	.01	5	.01	46	.09	10	.03
19	8	.01	30	.05	5	.01	5	.01	42	.09	18	.05
20	8	.01	30	.05	6	.01	4	.01	38	.08	24	.08
21	8	.01	30	.05	6	.01	4	.01	34	.08	14	.05
22	8	.01	30	.05	6	.01	4	.01	30	.07	15	.05
23	8	.01	30	.05	6	.01	4	.01	26	.06	20	.06
24	8	.01	57	.20	6	.01	4	.01	22	.05	23	.07
25	8	.01	30	.08	6	.01	4	.01	18	.04	18	.05
26	8	.02	30	.05	6	.01	4	.01	12	.03	18	.05
27	8	.02	77	.17	6	.01	4	.01	8	.02	18	.05
28	8	.02	6	.02	6	.01	4	.01	5	.01	23	.06
29	8	.02	6	.02	6	.01	4	.01	---	---	42	.15
30	8	.02	7	.02	6	.01	4	.01	---	---	23	.08
31	8	.02	---	---	6	.01	4	.01	---	---	25	.11
TOTAL	---	0.46	---	2.65	---	0.38	---	0.31	---	1.09	---	1.27

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	26	.17	9	.06	21	.04	10	.00	16	.00	15	.00
2	31	.26	12	.09	22	.04	10	.00	15	.00	16	.00
3	34	.34	19	.14	21	.04	9	.00	12	.00	17	.00
4	30	.27	15	.09	20	.04	9	.00	11	.00	18	.00
5	25	.26	13	.07	21	.04	9	.00	10	.00	20	.00
6	32	.39	12	.08	21	.04	8	.00	8	.00	20	.00
7	40	.55	8	.05	20	.04	8	.00	8	.00	20	.00
8	42	.64	9	.07	20	.04	8	.00	8	.00	27	.00
9	45	.78	10	.08	20	.04	8	.00	8	.00	32	.00
10	38	.70	12	.09	19	.03	9	.00	9	.00	32	.00
11	33	.59	8	.03	20	.03	9	.00	9	.00	30	.00
12	21	.35	7	.03	21	.03	9	.00	9	.00	30	.00
13	13	.23	6	.02	30	.04	9	.00	9	.00	30	.00
14	21	.41	12	.05	21	.03	9	.00	9	.00	30	.00
15	23	.48	13	.05	28	.03	9	.00	9	.00	30	.00
16	22	.42	16	.05	42	.05	9	.00	9	.00	30	.00
17	17	.28	18	.06	48	.05	9	.00	10	.00	30	.00
18	17	.25	21	.07	43	.04	12	.00	10	.00	28	.02
19	16	.22	27	.09	37	.03	14	.00	10	.00	16	.01
20	15	.18	40	.13	33	.03	14	.00	10	.00	10	.01
21	14	.15	18	.05	21	.02	15	.01	10	.00	8	.00
22	11	.11	15	.05	17	.01	15	.01	10	.00	8	.00
23	9	.09	17	.06	16	.01	16	.01	9	.00	8	.00
24	8	.08	15	.04	16	.01	17	.00	11	.00	8	.00
25	7	.06	16	.04	13	.01	19	.01	12	.00	8	.00
26	7	.06	15	.04	12	.01	21	.01	13	.00	8	.00
27	6	.05	16	.04	11	.00	21	.01	14	.00	8	.00
28	7	.05	15	.03	12	.00	21	.01	14	.00	8	.00
29	8	.06	30	.06	11	.00	20	.01	14	.00	8	.00
30	8	.05	16	.03	10	.00	19	.01	14	.00	8	.00
31	---	---	23	.04	---	---	17	.00	14	.00	---	---
TOTAL	---	8.53	---	1.88	---	0.82	---	0.09	---	0.00	---	0.04

TOTAL LOAD FOR YEAR: 17.52 TONS.

10336689 SNOW CREEK AT TAHOE VISTA, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR						
03...	1555	4.3	5.0	76	.88	33
04...	1430	3.5	5.5	37	.35	26
07...	1520	6.0	8.0	69	1.1	12
08...	1750	6.7	7.0	75	1.7	13
10...	2345	7.2	6.0	39	.76	22
12...	2045	7.2	9.0	27	.45	31

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	TEMPER-ATURE (DEG C)	NUMBER OF SAM-PLING POINTS	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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							
11...	1215	7.0	1	6.2	1	14	53
SEPT							
09...	1050	8.0	1	.05	--	23	74

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
APR						
11...	57	58	60	66	80	100
SEPT						
09...	80	81	82	85	94	100

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV

LOCATION.--Lat 39°14'26", long 119°56'41", in SW¼NE¼ sec.22, T.16 N., R.18 E., Washoe County, Hydrologic Unit 16050101, on right bank 50 ft upstream from culvert on Lakeshore Boulevard, 600 ft upstream from mouth, and 3 mi east of Crystal Bay.

DRAINAGE AREA.--6.05 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to September 1973, February to September 1975, October 1977 to current year.

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,234.03 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 24 to Mar. 30. Records good except those for period of ice effect, Nov. 24 to Mar. 30, which are fair. One transmountain diversion to Washoe Valley.

AVERAGE DISCHARGE.--12 years (water years 1970-73, 1978-85), 8.88 ft³/s, 6,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150 ft³/s, June 18, 1982, gage height, 3.40 ft; maximum gage height, 3.77 ft, Jan. 23, 1973, backwater from ice; minimum daily, 0.66 ft³/s, several days during October 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft³/s and maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)	Date	Time	Discharge (ft³/s)	Gage height (ft)
Jan. 31	0745	(a)	*3.48	May 16	1700	32	2.57
Apr. 13	2015	*37	2.60				

(a) Backwater from ice.
Minimum daily, 2.0 ft³/s, Jan. 26 to Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	8.2	8.6	2.1	2.0	5.0	17	19	11	3.9	4.2	2.8
2	5.4	9.7	8.1	2.1	2.1	4.8	19	19	12	4.0	4.2	2.8
3	5.1	10	7.6	2.1	2.2	4.5	20	21	12	3.9	4.0	2.9
4	5.1	9.1	7.1	2.1	2.4	5.4	20	20	12	3.8	3.9	3.3
5	5.0	8.9	6.8	2.1	2.5	6.0	21	21	11	4.0	3.8	3.1
6	5.0	11	6.5	2.2	2.7	5.8	22	22	8.4	3.9	3.7	3.1
7	4.9	10	6.2	2.2	2.9	5.5	24	22	8.0	3.9	3.6	3.5
8	4.9	11	5.9	2.2	3.0	5.0	24	20	8.3	3.9	3.6	4.2
9	5.0	11	5.7	2.1	3.2	6.6	27	18	8.3	3.8	3.5	4.8
10	5.0	11	5.5	2.1	3.2	7.4	28	16	7.5	3.9	3.5	4.8
11	7.2	16	5.3	2.1	3.5	7.2	27	14	7.0	4.2	3.5	3.7
12	6.3	13	5.1	2.1	3.8	6.8	27	14	6.9	4.1	3.5	3.8
13	10	13	4.9	2.1	4.1	6.8	30	15	6.8	4.0	3.6	3.9
14	10	14	4.8	2.1	4.4	6.8	33	17	6.6	3.9	3.5	3.8
15	7.1	12	4.7	2.1	4.7	7.0	31	17	6.4	3.8	3.3	3.4
16	6.2	12	4.6	2.1	4.9	7.1	20	20	6.2	3.9	3.2	3.2
17	9.0	12	4.5	2.1	4.9	7.2	17	21	6.0	4.0	3.5	3.1
18	9.0	12	4.5	2.1	4.8	7.2	15	21	6.0	3.9	3.5	4.0
19	7.8	12	4.4	2.1	4.6	7.4	15	21	6.2	4.1	3.4	3.4
20	7.1	12	4.4	2.1	4.3	7.6	13	18	6.1	4.2	3.2	3.1
21	6.6	12	4.2	2.1	4.7	7.4	12	18	5.5	5.0	3.2	3.0
22	6.4	12	4.0	2.1	5.0	7.2	12	20	5.3	4.7	3.1	3.0
23	6.4	11	3.8	2.1	5.0	6.9	13	21	5.2	4.5	3.0	2.9
24	6.5	11	3.5	2.1	5.0	6.6	14	22	4.9	4.3	3.0	2.8
25	6.7	10	3.4	2.1	5.0	6.6	13	22	4.8	4.3	2.9	2.7
26	8.2	9.0	3.2	2.0	5.0	6.0	12	21	4.7	4.4	2.8	2.7
27	8.3	9.6	3.0	2.0	5.0	5.8	13	19	4.3	4.3	2.9	2.8
28	7.7	10	2.9	2.0	5.0	6.0	15	17	4.0	4.3	3.1	2.8
29	7.8	9.8	2.8	2.0	---	7.5	15	14	4.0	4.2	2.9	2.8
30	8.0	9.0	2.6	2.0	---	10	17	12	3.9	4.1	2.9	2.8
31	8.3	---	2.4	2.0	---	14	---	12	---	4.1	2.8	---
TOTAL	211.2	331.3	151.0	64.8	109.9	211.1	586	574	209.3	127.3	104.8	99.0
MEAN	6.81	11.0	4.87	2.09	3.92	6.81	19.5	18.5	6.98	4.11	3.38	3.30
MAX	10	16	8.6	2.2	5.0	14	33	22	12	5.0	4.2	4.8
MIN	4.9	8.2	2.4	2.0	2.0	4.5	12	12	3.9	3.8	2.8	2.7
AC-FT	419	657	300	129	218	419	1160	1140	415	252	208	196

CAL YR 1984	TOTAL	4153.1	MEAN	11.3	MAX	58	MIN	2.4	AC-FT	8240
WTR YR 1985	TOTAL	2779.7	MEAN	7.60	MAX	33	MIN	2.0	AC-FT	5510

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-73, 1975, 1978 to September 1985 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1981 to September 1983.
WATER TEMPERATURE: January 1980 to September 1985 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: January 1980 to September 1985 (discontinued).

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water temperature observations provided by University of California at Davis.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 800 mg/L, June 18, 1980; minimum daily mean, 0 mg/L, on several days during October 1980 and December 8, 1981.
SEDIMENT LOAD: Maximum daily, 183 tons, June 19, 1982; minimum daily, 0 ton, on many days during October 1980 and December 8, 1981.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 55 mg/L, July 21; minimum daily mean, 2 mg/L, on many days.
SEDIMENT LOAD: Maximum daily, 4.4 tons, Apr. 15; minimum daily, 0.01 ton, on several days.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	---	---	---	---	---	4.0	4.0	---	---	---	---
2	---	4.0	---	---	---	---	3.0	4.0	---	---	11.0	---
3	---	---	---	1.0	0.0	---	7.0	5.5	---	---	---	---
4	---	---	---	---	---	---	6.0	4.0	10.5	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	6.0	---	---	---	---
7	---	---	---	---	---	---	9.0	9.0	---	---	---	---
8	---	---	---	---	---	---	---	3.0	14.0	18.5	---	10.0
9	9.0	---	---	2.5	---	---	7.0	3.5	---	---	---	6.5
10	---	---	---	---	---	---	---	---	---	---	---	---
11	6.0	3.0	---	---	1.5	---	3.0	---	---	---	---	---
12	6.5	---	2.0	---	---	5.0	4.5	6.0	---	---	10.0	---
13	---	---	---	0.0	---	2.0	9.0	6.0	16.5	---	---	---
14	---	3.0	---	0.0	---	---	3.5	8.0	---	---	---	---
15	---	3.5	---	---	3.0	6.0	---	5.0	---	---	---	---
16	---	---	---	---	---	---	5.0	10.5	---	---	---	---
17	---	---	0.0	---	---	---	---	9.5	13.0	---	---	---
18	---	---	---	---	4.0	---	4.0	9.0	---	11.5	---	7.0
19	---	---	---	---	---	---	---	8.0	16.0	---	8.5	---
20	---	---	---	---	---	7.5	---	6.0	---	---	---	9.0
21	5.0	---	1.5	2.0	---	6.0	---	---	---	14.0	---	---
22	---	---	---	---	4.5	---	---	6.0	---	---	---	---
23	---	---	---	---	---	---	9.5	---	---	14.0	15.5	---
24	---	---	---	---	---	---	4.0	13.5	---	---	---	---
25	---	---	---	---	---	---	---	6.0	---	---	---	---
26	5.5	---	---	---	---	---	2.5	12.0	15.0	---	---	---
27	---	---	---	---	---	---	10.0	---	---	---	---	---
28	---	---	---	---	---	---	5.5	9.0	---	---	---	---
29	---	1.0	---	1.0	---	---	5.0	---	---	---	---	---
30	5.0	---	---	---	---	---	5.0	7.5	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3	.04	2	.04	3	.07	2	.01	2	.01	5	.07
2	3	.04	14	.47	3	.07	2	.01	2	.01	5	.06
3	3	.04	5	.14	3	.06	2	.01	2	.01	5	.06
4	3	.04	5	.12	3	.06	3	.02	3	.02	5	.07
5	3	.04	4	.10	3	.06	3	.02	3	.02	5	.08
6	2	.03	19	.56	3	.05	3	.02	4	.03	5	.08
7	2	.03	4	.11	3	.05	4	.02	4	.03	5	.07
8	2	.03	4	.12	3	.05	4	.02	5	.04	5	.07
9	2	.03	4	.12	3	.05	4	.02	5	.04	7	.12
10	2	.03	4	.12	3	.04	4	.02	6	.05	7	.14
11	33	.80	18	.78	3	.04	4	.02	6	.06	5	.10
12	7	.12	5	.18	3	.04	4	.02	4	.04	7	.13
13	47	2.0	7	.25	3	.04	10	.06	4	.04	7	.13
14	6	.16	4	.15	3	.04	4	.02	5	.06	7	.13
15	5	.10	3	.10	3	.04	4	.02	7	.09	8	.15
16	5	.08	2	.06	3	.04	4	.02	7	.09	7	.13
17	26	.99	2	.06	3	.04	3	.02	7	.09	7	.14
18	11	.27	2	.06	3	.04	3	.02	10	.13	7	.14
19	7	.15	2	.06	3	.04	3	.02	5	.06	7	.14
20	5	.10	2	.06	4	.05	3	.02	5	.06	9	.18
21	2	.04	2	.06	4	.05	3	.02	5	.06	8	.16
22	2	.03	2	.06	4	.04	3	.02	5	.07	7	.14
23	2	.03	2	.06	4	.04	3	.02	5	.07	7	.13
24	2	.04	2	.06	4	.04	4	.02	5	.07	5	.09
25	2	.04	2	.05	3	.03	4	.02	7	.09	5	.09
26	2	.04	2	.05	3	.03	4	.02	7	.09	5	.08
27	2	.04	5	.13	3	.02	4	.02	7	.09	5	.08
28	2	.04	5	.14	3	.02	5	.03	5	.07	5	.08
29	2	.04	3	.08	3	.02	5	.03	---	---	5	.10
30	2	.04	3	.07	3	.02	4	.02	---	---	5	.14
31	2	.04	---	---	2	.01	3	.02	---	---	17	.64
TOTAL	---	5.54	---	4.42	---	1.29	---	0.65	---	1.59	---	3.92
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	28	1.4	30	1.5	8	.24	5	.05	4	.05	5	.04
2	38	2.2	25	1.3	7	.23	5	.05	4	.05	5	.04
3	50	2.9	20	1.1	7	.23	4	.04	4	.04	6	.05
4	39	2.1	20	1.1	7	.23	4	.04	4	.04	15	.13
5	40	2.3	23	1.3	7	.21	4	.04	4	.04	5	.04
6	36	2.1	26	1.5	7	.16	4	.04	4	.04	5	.04
7	37	2.4	25	1.5	7	.15	4	.04	4	.04	17	.16
8	40	2.6	18	.97	10	.22	4	.04	3	.03	41	.67
9	43	3.1	13	.63	7	.16	4	.04	3	.03	40	.61
10	39	2.9	8	.35	6	.12	5	.05	3	.03	23	.30
11	28	2.0	8	.30	5	.09	5	.06	3	.03	5	.05
12	25	1.8	12	.45	4	.07	6	.07	3	.03	10	.10
13	40	3.2	13	.53	4	.07	6	.06	14	.14	10	.11
14	45	4.0	15	.69	4	.07	7	.07	7	.07	5	.05
15	52	4.4	10	.46	5	.09	7	.07	5	.04	5	.05
16	27	1.5	22	1.5	5	.08	8	.08	5	.04	5	.04
17	12	.55	16	.91	5	.08	8	.09	7	.07	5	.04
18	12	.49	20	1.3	5	.08	8	.08	5	.05	17	.18
19	9	.36	20	1.1	7	.12	6	.07	5	.05	3	.03
20	7	.25	8	.39	5	.08	5	.06	5	.04	3	.03
21	7	.23	15	.73	5	.07	55	.86	4	.03	3	.02
22	7	.23	17	.92	5	.07	5	.06	4	.03	3	.02
23	10	.35	17	.96	5	.07	5	.06	4	.03	3	.02
24	9	.34	20	1.2	5	.07	5	.06	4	.03	3	.02
25	6	.21	17	1.0	5	.06	5	.06	4	.03	3	.02
26	13	.42	13	.74	5	.06	5	.06	4	.03	2	.01
27	15	.53	12	.62	5	.06	5	.06	4	.03	2	.02
28	17	.69	8	.37	5	.05	5	.06	15	.13	2	.02
29	15	.61	8	.30	5	.05	4	.05	5	.04	2	.02
30	21	.96	8	.26	5	.05	4	.04	5	.04	2	.02
31	---	---	8	.26	---	---	4	.04	5	.04	---	---
TOTAL	---	47.12	---	26.24	---	3.39	---	2.55	---	1.41	---	2.95

TOTAL LOAD FOR YEAR: 101.07 TONS.

10336698 THIRD CREEK NEAR CRYSTAL BAY, NV--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR						
03...	1520	24	7.0	148	9.6	68
04...	1655	24	6.0	70	4.5	61
09...	1655	28	7.5	49	3.7	63
14...	2145	36	3.5	105	10	43
30...	2130	21	5.0	44	2.5	50

10336710 MARLETTE LAKE NEAR CARSON CITY, NV

LOCATION.--Lat 39°10'22", long 119°54'15", in SW¼SE¼ sec.12, T.15 N., R.18 E., Washoe County, Hydrologic Unit 16050101, Toiyabe National Forest, on west shore about 1,000 ft upstream from left side of dam on Marlette Creek, and 7.5 mi west of Carson City.

DRAINAGE AREA.--2.86 mi².

PERIOD OF RECORD.--November 1973 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (spillway elevation provided in written communication from Walter Reid, 1971).

REMARKS.--Lake is formed by earthfill dam across the outlet of a small natural lake (at one time called Goodwin Lake) on Marlette Creek, built in 1873 to provide water for fluming lumber from Spooner Summit to Carson City. The dam was built higher in 1876 and used to divert water by flume and siphon to Virginia City, until the flume was abandoned prior to 1963. The dam was raised to its present elevation in 1959. Present capacity, 11,780 acre-ft at spillway elevation 7,838.0 ft. Figures given herein represent total contents at 2400 hours. Stored water is used for spawning Cutthroat Trout and in dry years is pumped over the mountain to the Hobart system for municipal and domestic use outside the basin in Virginia City and Carson City. Lake freezes over in winter.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,220 acre-ft, June 18-20, 1983, elevation, 7,839.01 ft; minimum, 10,970 acre-ft, Nov. 10-13, 1976, elevation, 7,835.8 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,030 acre-ft, Mar. 29, elevation, 7,838.57 ft; minimum, 11,570 acre-ft, Sept. 8, elevation, 7,837.42 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

7,836	11,030	7,838	11,790
7,837	11,410	7,839	12,220

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11790	11840	11970	11880	11870	11890	12000	11970	11890	11820	11730	11600
2	11790	11830	11960	11870	11880	11880	11990	11970	11900	11820	11730	11590
3	11790	11850	11950	11870	11880	11890	11980	11970	11890	11810	11730	11580
4	11790	11860	11950	11870	11880	11890	11970	11970	11900	11810	11720	11600
5	11800	11850	11930	11870	11870	11890	11970	11970	11900	11810	11720	11600
6	11800	11860	11930	11870	11870	11900	11970	11970	11890	11810	11710	11600
7	11800	11870	11930	11890	11880	11910	11970	11970	11890	11810	11700	11580
8	11800	11910	11930	11890	11970	11910	11970	11970	11890	11810	11700	11600
9	11800	11920	11920	11880	11970	11910	11970	11960	11880	11800	11700	11610
10	11780	11930	11920	11880	11950	11920	11970	11960	11880	11800	11690	11610
11	11810	11930	11920	11870	11940	11910	11970	11960	11880	11800	11680	11600
12	11810	11920	11910	11870	11940	11910	11970	11950	11870	11800	11680	11610
13	11820	11960	11900	11870	11930	11900	11970	11950	11880	11800	11680	11600
14	11810	11970	11900	11870	11930	11900	11980	11940	11870	11790	11680	11610
15	11790	11960	11930	11870	11920	11900	11980	11940	11870	11790	11670	11600
16	11840	11950	11930	11860	11920	11900	11980	11940	11870	11790	11670	11610
17	11860	11940	11930	11870	11900	11900	12000	11940	11870	11780	11660	11600
18	11850	11940	11910	11870	11910	11910	11990	11940	11860	11780	11660	11620
19	11860	11930	11920	11870	11890	11900	11990	11930	11870	11780	11660	11620
20	11860	11920	11920	11860	11890	11900	11980	11930	11870	11770	11650	11620
21	11860	11940	11910	11860	11900	11900	11970	11930	11870	11780	11650	11620
22	11850	11940	11910	11860	11880	11900	11980	11930	11860	11780	11650	11620
23	11850	11920	11900	11860	11890	11890	11980	11930	11850	11780	11650	11620
24	11840	11970	11900	11860	11890	11890	11970	11920	11850	11780	11650	11620
25	11860	11960	11900	11870	11880	11900	11950	11910	11850	11770	11650	11610
26	11850	11950	11900	11870	11880	11920	11960	11900	11840	11770	11630	11620
27	11850	11990	11890	11860	11880	12000	11970	11910	11830	11770	11630	11620
28	11830	12000	11890	11880	11880	12030	11970	11900	11820	11770	11620	11610
29	11850	11990	11880	11880	---	12030	11970	11890	11820	11750	11620	11610
30	11850	11980	11880	11870	---	12030	11970	11890	11820	11740	11610	11610
31	11850	---	11880	11870	---	12010	---	11880	---	11730	11600	---
MAX	11860	12000	11970	11890	11970	12030	12000	11970	11900	11820	11730	11620
MIN	11780	11830	11880	11860	11870	11880	11950	11880	11820	11730	11600	11580
a	7838.15	7838.45	7838.22	7838.20	7838.22	7838.52	7838.43	7838.23	7838.07	7837.84	7837.51	7837.53
b	+100	+130	-100	-10	+10	+130	-40	-90	-60	-90	-130	+10

CAL YR 1984 MAX 12000 MIN 11780 b -90
WTR YR 1985 MAX 12030 MIN 11580 b -140

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.

10336715 MARLETTE CREEK NEAR CARSON CITY, NV

LOCATION.--Lat 39°10'20", long 119°54'25", in SE¼SW¼ sec.12, T.15 N., R.18 E., Washoe County, Hydrologic Unit 16050101, Toiyabe National Forest, on left bank about 300 ft below dam on Marlette Lake, 0.7 mi upstream from Marlette Lake, and 7 mi west of Carson City.

DRAINAGE AREA.--2.86 mi².

PERIOD OF RECORD.--October 1973 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,760 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Mar. 24, 26-30. Records good except estimated discharges, which are fair. Flow regulated by Marlette Lake (station 10336710).

AVERAGE DISCHARGE.--12 years, 3.02 ft³/s, 2,190 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44 ft³/s, June 22, 1983, gage height, 3.00 ft; no flow July 12-15, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, unknown, Mar. 29, gage height, unknown; minimum daily, 0.02 ft³/s Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	1.3	7.1	2.7	2.6	2.7	9.1	4.5	1.4	.09	.02	.03
2	.29	2.2	6.5	2.5	2.6	3.0	8.4	4.7	1.3	.08	.02	.03
3	.20	1.5	6.3	2.5	2.6	3.0	7.9	4.7	1.4	.08	.02	.03
4	.23	1.2	5.8	2.4	2.6	2.8	7.1	4.5	1.4	.08	.02	.03
5	.21	1.3	5.6	2.4	2.6	3.0	6.5	4.5	1.5	.07	.02	.04
6	.23	1.7	5.2	2.3	2.6	3.7	6.2	4.4	1.3	.08	.02	.03
7	.24	1.5	4.9	2.9	2.6	4.1	6.1	4.3	1.3	.06	.02	.03
8	.31	3.5	4.6	3.2	4.2	4.1	5.8	4.2	1.2	.06	.02	.03
9	.26	3.8	4.3	3.2	5.9	3.9	5.8	4.2	1.2	.05	.02	.04
10	.35	3.8	4.5	3.1	5.9	3.8	6.1	4.1	1.2	.05	.02	.04
11	.70	4.6	4.5	3.2	5.9	3.9	6.2	3.9	1.1	.05	.02	.03
12	.49	4.1	4.3	3.2	5.8	3.9	6.1	3.8	.97	.05	.02	.04
13	.65	6.1	4.2	2.9	5.8	3.8	6.1	3.5	.95	.05	.02	.04
14	.53	6.2	3.8	2.7	5.8	3.5	6.5	3.5	.91	.05	.02	.03
15	.61	5.7	4.0	2.8	5.8	3.3	6.8	3.4	.87	.04	.02	.03
16	1.0	5.2	5.3	2.7	5.3	3.1	6.8	3.2	.83	.04	.02	.03
17	1.5	4.8	4.9	2.4	4.4	3.0	7.2	3.1	.81	.04	.02	.04
18	1.4	4.7	4.8	2.4	4.1	3.4	7.4	3.0	.74	.04	.02	.04
19	1.4	4.2	4.5	2.3	3.9	3.5	7.3	2.9	.68	.03	.02	.04
20	1.5	4.1	4.3	2.3	3.7	3.4	6.7	2.8	.85	.03	.02	.04
21	1.4	4.8	4.0	2.3	3.6	3.2	6.8	2.6	.71	.03	.02	.04
22	1.4	5.0	3.8	2.3	3.5	3.0	6.1	2.5	.62	.03	.03	.03
23	1.4	4.5	3.6	2.2	3.3	2.8	6.0	2.4	.60	.03	.03	.03
24	1.4	5.9	3.5	2.2	3.0	2.9	5.8	2.3	.49	.03	.03	.03
25	1.3	6.2	3.4	2.2	2.9	3.1	5.7	2.2	.35	.03	.03	.03
26	1.6	5.6	3.1	2.4	2.7	4.7	5.5	2.1	.27	.03	.03	.03
27	1.3	6.5	3.1	2.4	2.7	6.6	4.8	2.0	.21	.03	.03	.03
28	1.3	9.3	3.0	2.6	2.5	10	4.7	1.9	.18	.02	.03	.03
29	1.3	8.8	3.0	2.7	---	12	4.6	1.7	.14	.02	.03	.03
30	1.2	8.0	2.9	2.6	---	11	4.4	1.5	.09	.02	.03	.03
31	1.2	---	2.8	2.6	---	10	---	1.4	---	.02	.03	---
TOTAL	27.14	136.1	135.6	80.6	108.9	138.2	190.5	99.8	25.57	1.41	.72	1.00
MEAN	.88	4.54	4.37	2.60	3.89	4.46	6.35	3.22	.85	.04	.02	.03
MAX	1.6	9.3	7.1	3.2	5.9	12	9.1	4.7	1.5	.09	.03	.04
MIN	.20	1.2	2.8	2.2	2.5	2.7	4.4	1.4	.09	.02	.02	.03
AC-FT	53.8	270	270	160	220	270	380	200	50.7	2.80	1.43	1.98

CAL YR 1984 TOTAL 1424.92 MEAN 3.89 MAX 10 MIN .01 AC-FT 2830
WTR YR 1985 TOTAL 945.54 MEAN 2.59 MAX 12 MIN .02 AC-FT 1875

10336740 LOGAN HOUSE CREEK NEAR GLENBROOK, NV

LOCATION.--Lat 39°04'00", long 119°56'04", in NW 1/4 NW 1/4 sec.23, T.14 N., R.18 E., Douglas County, Hydrologic Unit 16050101, Toiyabe National Forest, on right bank 0.1 mi downstream from unnamed tributary, 0.3 mi upstream from U.S. Highway 50, and 1.6 mi south of Glenbrook.

DRAINAGE AREA.--2.08 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Feb. 8-11, May 3-6. Records good except periods of no gage height record, which are fair. One small diversion 50 ft upstream from station for domestic use.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4.0 ft^3/s, Apr. 14, 1985, gage height, 4.52 ft; minimum daily, 0.15 ft^3/s, Aug. 12, 14-16, 1985.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 14	1630	*4.0	*4.52				

Minimum daily, 0.15 ft^3/s, Aug. 12, 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	.64	.69	.59	.54	.59	1.1	1.7	.49	.24	.22	.18
2	.82	.71	.69	.59	.54	.59	1.2	1.7	.58	.23	.22	.18
3	.73	.76	.69	.59	.54	.59	1.3	1.6	.59	.21	.19	.21
4	.64	.69	.69	.59	.54	.59	1.4	1.5	.52	.21	.18	.23
5	.64	.64	.69	.59	.54	.59	1.8	1.4	.48	.19	.18	.22
6	.64	.65	.69	.59	.54	.59	2.1	1.3	.44	.20	.17	.25
7	.62	.61	.69	.59	.54	.59	2.0	1.2	.40	.19	.17	.25
8	.59	.52	.69	.59	.54	.59	2.0	1.1	.41	.18	.17	.30
9	.59	.63	.69	.59	.55	.60	2.1	1.1	.43	.17	.16	.41
10	.59	.63	.69	.59	.57	.64	2.2	.99	.42	.19	.16	.33
11	.67	.72	.69	.59	.58	.64	2.3	.94	.39	.21	.16	.33
12	.77	.82	.69	.59	.59	.64	2.3	.94	.36	.20	.15	.28
13	.81	.76	.69	.59	.59	.64	2.6	.94	.32	.18	.16	.23
14	.71	.69	.65	.59	.59	.64	2.9	.87	.30	.18	.15	.23
15	.66	.69	.64	.59	.59	.64	2.7	.86	.31	.20	.15	.22
16	.63	.69	.64	.59	.59	.64	2.0	.85	.30	.23	.15	.22
17	.64	.69	.63	.59	.59	.64	1.8	.81	.30	.20	.20	.23
18	.59	.69	.59	.59	.60	.64	1.7	.79	.29	.18	.23	.46
19	.61	.69	.60	.59	.64	.65	1.5	.79	.32	.18	.20	.31
20	.66	.69	.56	.59	.64	.72	1.3	.70	.33	.21	.20	.26
21	.64	.69	.54	.59	.64	.77	1.2	.65	.28	.32	.19	.26
22	.64	.69	.54	.59	.64	.73	1.3	.64	.27	.24	.18	.25
23	.64	.69	.54	.59	.60	.79	1.5	.62	.26	.22	.17	.23
24	.66	.72	.54	.54	.59	.81	1.5	.59	.25	.19	.17	.23
25	.69	.69	.54	.54	.59	.75	1.4	.59	.27	.19	.17	.23
26	.69	.67	.54	.54	.59	.67	1.2	.59	.25	.23	.16	.23
27	.69	.70	.56	.54	.59	.66	1.3	.59	.25	.23	.17	.25
28	.64	.72	.59	.54	.59	.69	1.5	.58	.25	.21	.17	.26
29	.64	.69	.59	.54	---	.66	1.5	.54	.24	.20	.17	.26
30	.64	.69	.59	.54	---	.69	1.6	.54	.24	.20	.18	.26
31	.64	---	.59	.54	---	.87	---	.51	---	.22	.18	---
TOTAL	20.49	20.56	19.44	17.89	16.27	20.54	52.3	28.52	10.54	6.43	5.48	7.79
MEAN	.66	.69	.63	.58	.58	.66	1.74	.92	.35	.21	.18	.26
MAX	.82	.82	.69	.59	.64	.87	2.9	1.7	.59	.32	.23	.46
MIN	.59	.52	.54	.54	.54	.59	1.1	.51	.24	.17	.15	.18
AC-FT	41	41	39	35	32	41	104	57	21	13	11	15

CAL YR 1984 TOTAL 375.03 MEAN 1.02 MAX 3.4 MIN .39 AC-FT 744
WTR YR 1985 TOTAL 226.25 MEAN .62 MAX 2.9 MIN .15 AC-FT 449

10336740 LOGAN HOUSE CREEK NEAR GLENBROOK, NV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1983 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1983 to current year.

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, 23 mg/L, Nov. 11, 1983; minimum daily mean, 0 mg/L, Nov. 5-9, 1983.
SEDIMENT LOAD: Maximum daily, 0.16 tons, Nov. 11, 1983; minimum daily, 0 ton, on many days in each year.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 12 mg/L, Apr. 9, 14, 15; minimum daily mean, 1 mg/L, July 14-16 and Sept. 11.
SEDIMENT LOAD: Maximum daily, 0.09 tons, Apr. 14, 15; minimum daily, 0 ton, on many days.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	5.5	---	1.0	---	---	---	---	---	---	8.0	---	10.0
3	---	---	---	---	---	---	---	6.5	8.0	10.5	10.0	---
4	---	---	---	---	---	---	2.0	---	---	---	---	---
5	---	2.5	---	---	---	---	---	4.0	---	9.0	---	---
6	---	---	---	---	---	---	2.0	7.5	10.0	---	11.0	---
7	---	---	---	---	---	---	---	5.0	---	---	---	---
8	7.0	---	---	---	---	---	2.0	---	---	12.5	---	8.0
9	---	---	---	1.5	---	---	2.0	4.5	---	---	---	---
10	---	---	---	---	---	---	---	---	8.5	---	---	5.0
11	---	2.0	---	---	0.5	---	2.5	---	---	10.5	10.0	4.5
12	---	---	---	---	---	---	3.0	6.0	---	---	---	---
13	---	---	---	---	---	1.0	2.5	---	---	---	---	5.0
14	---	---	0.0	---	---	---	---	5.0	11.0	---	---	---
15	---	1.5	---	---	---	---	2.0	---	---	12.0	11.0	---
16	---	---	---	---	---	---	---	---	---	---	---	7.0
17	---	---	0.0	---	---	---	1.0	5.0	10.0	---	---	---
18	1.0	---	---	---	---	---	---	---	---	10.0	---	---
19	---	---	---	---	---	---	---	---	---	---	7.0	4.0
20	---	---	---	---	---	---	---	6.0	13.0	---	---	---
21	---	---	---	---	---	---	---	---	---	11.0	---	---
22	2.5	---	---	---	---	1.5	---	---	---	---	---	8.0
23	---	1.0	---	---	---	---	4.0	---	10.0	---	10.0	---
24	---	---	---	---	---	---	2.0	7.5	---	10.0	---	---
25	---	---	---	---	---	---	2.0	---	---	---	---	---
26	---	---	---	---	---	---	---	---	8.0	---	10.0	---
27	---	---	---	---	---	---	---	8.0	---	---	---	6.0
28	2.0	---	---	---	1.0	---	---	---	---	10.0	---	---
29	---	---	---	---	---	---	3.5	---	8.0	---	---	---
30	---	---	---	---	---	---	---	4.0	---	---	11.0	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

10336740 LOGAN HOUSE CREEK NEAR GLENBROOK, NV--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8	.01	2	.00	3	.01	4	.01	4	.01	2	.00
2	9	.02	4	.01	3	.01	4	.01	4	.01	2	.00
3	8	.02	4	.01	3	.01	4	.01	4	.01	3	.00
4	5	.01	4	.01	3	.01	4	.01	4	.01	3	.00
5	5	.01	5	.01	3	.01	3	.00	4	.01	3	.00
6	5	.01	5	.01	3	.01	3	.00	4	.01	4	.01
7	5	.01	5	.01	3	.01	3	.00	4	.01	4	.01
8	5	.01	5	.01	3	.01	3	.00	4	.01	4	.01
9	5	.01	5	.01	3	.01	3	.00	4	.01	5	.01
10	5	.01	5	.01	3	.01	3	.00	4	.01	5	.01
11	5	.01	11	.02	3	.01	3	.00	4	.01	5	.01
12	8	.02	4	.01	3	.01	3	.00	4	.01	6	.01
13	4	.01	3	.01	3	.01	3	.00	4	.01	6	.01
14	3	.01	3	.01	3	.01	3	.00	4	.01	6	.01
15	2	.00	3	.01	4	.01	3	.00	4	.01	6	.01
16	2	.00	3	.01	4	.01	3	.00	4	.01	6	.01
17	2	.00	3	.01	5	.01	3	.00	3	.00	6	.01
18	2	.00	3	.01	5	.01	3	.00	3	.00	7	.01
19	2	.00	3	.01	5	.01	3	.00	3	.01	7	.01
20	3	.01	2	.00	5	.01	3	.00	3	.01	7	.01
21	4	.01	2	.00	5	.01	3	.00	3	.01	7	.01
22	4	.01	2	.00	5	.01	3	.00	3	.01	7	.01
23	4	.01	2	.00	5	.01	3	.00	3	.00	7	.01
24	3	.01	2	.00	4	.01	3	.00	3	.00	7	.02
25	3	.01	2	.00	4	.01	3	.00	2	.00	7	.01
26	3	.01	2	.00	4	.01	4	.01	2	.00	7	.01
27	2	.00	2	.00	4	.01	4	.01	2	.00	7	.01
28	2	.00	3	.01	4	.01	4	.01	2	.00	7	.01
29	2	.00	3	.01	4	.01	4	.01	---	---	7	.01
30	2	.00	3	.01	4	.01	4	.01	---	---	7	.01
31	2	.00	---	---	4	.01	4	.01	---	---	8	.02
TOTAL	---	0.24	---	0.22	---	0.31	---	0.10	---	0.20	---	0.28
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9	.03	5	.02	3	.00	3	.00	3	.00	5	.00
2	10	.03	5	.02	3	.00	3	.00	3	.00	3	.00
3	9	.03	5	.02	3	.00	2	.00	3	.00	3	.00
4	11	.04	5	.02	3	.00	2	.00	3	.00	3	.00
5	11	.05	5	.02	3	.00	3	.00	3	.00	4	.00
6	10	.06	6	.02	3	.00	3	.00	3	.00	4	.00
7	10	.05	4	.01	3	.00	4	.00	3	.00	4	.00
8	11	.06	4	.01	3	.00	4	.00	3	.00	5	.00
9	12	.08	4	.01	4	.00	4	.00	4	.00	6	.01
10	11	.07	4	.01	4	.00	3	.00	4	.00	4	.00
11	11	.07	4	.01	4	.00	3	.00	4	.00	1	.00
12	10	.06	4	.01	4	.00	2	.00	4	.00	2	.00
13	11	.08	3	.01	4	.00	2	.00	4	.00	3	.00
14	12	.09	3	.01	4	.00	1	.00	4	.00	3	.00
15	12	.09	3	.01	4	.00	1	.00	4	.00	3	.00
16	11	.06	4	.01	5	.00	1	.00	4	.00	3	.00
17	9	.04	4	.01	6	.00	2	.00	4	.00	3	.00
18	7	.03	4	.01	5	.00	2	.00	3	.00	4	.00
19	4	.02	3	.01	4	.00	2	.00	3	.00	5	.00
20	4	.01	3	.01	4	.00	3	.00	3	.00	4	.00
21	4	.01	3	.01	4	.00	4	.00	2	.00	3	.00
22	5	.02	3	.01	3	.00	3	.00	2	.00	3	.00
23	6	.02	4	.01	3	.00	2	.00	2	.00	3	.00
24	5	.02	4	.01	2	.00	2	.00	3	.00	3	.00
25	2	.01	4	.01	2	.00	2	.00	4	.00	2	.00
26	2	.01	3	.00	2	.00	2	.00	5	.00	2	.00
27	3	.01	3	.00	2	.00	2	.00	5	.00	2	.00
28	3	.01	3	.00	2	.00	2	.00	6	.00	2	.00
29	4	.02	3	.00	2	.00	2	.00	7	.00	2	.00
30	4	.02	3	.00	2	.00	2	.00	8	.00	2	.00
31	---	---	3	.00	---	---	2	.00	6	.00	---	---
TOTAL	---	1.20	---	0.31	---	0.00	---	0.00	---	0.00	---	0.01

TOTAL LOAD FOR YEAR: 2.87 TONS.

10336740 LOGAN HOUSE CREEK NEAR GLENBROOK, NV--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR						
09...	1520	2.3	3.0	44	.27	66

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	TEMPER-ATURE (DEG C)	NUMBER OF SAM-PLING POINTS	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM
APR						
09...	1550	3.0	2	2.5	1	1

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
APR							
09...	3	6	10	17	30	57	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	TEMPER-ATURE (DEG C)	NUMBER OF SAM-PLING POINTS	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM
JUN								
05...	1730	6.0	12	11	9.50	2.5	--	--
08...	1600	6.0	12	9.5	9.50	0.73	4	16

DATE	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	SED. BEDLOAD SIEVE DIAM. % FINER THAN 76.0 MM
JUN								
05...	--	--	--	--	--	--	--	--
08...	31	42	58	69	80	87	93	100

10336740 LOGAN HOUSE CREEK NEAR GLENBROOK, NV--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	TEMPERATURE (DEG C)	NUMBER OF SAMPLING POINTS	STREAMFLOW, INSTANTANEOUS (CFS)	STREAM WIDTH (FT)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)
MAY						
10...	1800	8.5	7	3.7	4.20	0.04

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	TEMPERATURE (DEG C)	NUMBER OF SAMPLING POINTS	STREAMFLOW, INSTANTANEOUS (CFS)	STREAM WIDTH (FT)	SEDIMENT DISCHARGE, BEDLOAD (TONS/DAY)
APR						
09...	1535	3.0	3	2.5	3.50	0.02

10336759 EDGEWOOD CREEK NEAR STATELINE, NV

LOCATION.--Lat 38°57'50", long 119°55'24", in SW 1/4 NE 1/4 sec.26, T.13 N., R.18 E., Douglas County, Hydrologic Unit 16050101, on right bank 0.1 mi upstream from unnamed tributary, 0.9 mi upstream from U.S. Highway 50, and 1.1 mi northeast of Stateline.

DRAINAGE AREA.--3.20 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,420 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 11, Feb. 3. Records good including those days of ice effect listed above. No known diversion or regulation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24 ft^3/s, May 27, 1983, gage height, 2.41 ft; minimum daily, 0.94 ft^3/s, July 14, 16, 17, 19, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 7	1830	*7.9	*1.58				

Minimum daily, 0.94 ft^3/s, July 14, 16, 17, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.5	2.4	2.2	2.0	2.5	3.7	3.0	1.8	1.2	1.2	1.1
2	2.4	3.0	2.4	2.2	2.1	2.5	4.1	3.0	2.1	1.2	1.3	1.2
3	2.3	3.1	2.4	2.2	2.1	2.4	4.2	2.8	1.9	1.1	1.5	1.2
4	2.6	2.7	2.4	2.2	2.1	2.4	4.1	2.6	1.8	1.1	1.2	1.3
5	2.1	2.5	2.4	2.2	2.1	2.7	4.5	2.6	1.6	1.1	1.1	1.3
6	2.1	2.8	2.3	2.2	2.1	2.4	4.9	2.5	1.5	1.1	1.1	1.3
7	2.2	2.7	2.3	2.3	2.1	2.4	5.2	2.4	1.5	1.1	1.1	1.3
8	2.1	2.6	2.3	2.2	2.1	2.4	5.5	2.4	1.5	1.1	1.1	1.6
9	2.1	2.6	2.3	2.2	2.1	2.5	5.7	2.4	1.4	1.0	1.1	1.9
10	2.1	2.6	2.3	2.2	2.1	2.5	5.5	2.4	1.3	1.1	1.1	1.6
11	3.1	3.4	2.3	2.2	2.2	2.5	5.1	2.3	1.3	1.1	1.1	1.8
12	2.9	3.0	2.3	2.2	2.3	2.5	5.0	2.2	1.3	1.0	1.1	1.5
13	2.9	2.8	2.2	2.2	2.3	2.4	5.0	2.2	1.2	.97	1.1	1.4
14	2.6	2.6	2.1	2.2	2.3	2.4	5.1	2.2	1.2	.94	1.1	1.3
15	2.6	2.6	2.2	2.2	2.4	2.4	5.1	2.1	1.2	.95	1.1	1.3
16	2.7	2.6	2.2	2.2	2.4	2.4	4.5	2.1	1.2	.94	1.1	1.3
17	2.8	2.5	2.1	2.2	2.4	2.4	4.5	2.0	1.2	.94	1.2	1.3
18	2.8	2.5	2.2	2.3	2.4	2.4	4.2	2.0	1.2	.96	1.2	1.7
19	3.0	2.6	2.1	2.2	2.4	2.5	3.8	2.0	1.3	.94	1.2	1.5
20	3.0	2.4	2.1	2.2	2.4	2.6	4.0	1.9	1.3	.99	1.1	1.4
21	2.9	2.4	2.1	2.2	2.4	2.6	3.6	1.9	1.2	1.1	1.1	1.3
22	2.8	2.4	2.3	2.1	2.4	2.6	4.0	1.8	1.2	1.1	1.1	1.2
23	2.7	2.4	2.2	2.1	2.4	2.7	3.5	2.1	1.2	1.3	1.1	1.2
24	2.7	2.4	2.2	2.1	2.4	2.7	3.3	1.8	1.2	.95	1.1	1.1
25	2.8	2.5	2.2	2.1	2.4	2.5	3.1	1.8	1.2	1.3	1.1	1.1
26	2.8	2.3	2.2	2.1	2.4	2.1	3.0	1.8	1.2	1.1	1.1	1.2
27	2.7	2.5	2.1	2.1	2.6	2.3	2.9	1.8	1.1	1.7	1.1	1.2
28	2.7	2.5	2.4	2.1	2.5	2.5	2.9	1.8	1.1	1.1	1.1	1.1
29	2.7	2.5	2.2	2.1	---	2.5	2.9	1.8	1.1	1.0	1.1	1.1
30	2.6	2.4	2.2	2.0	---	2.6	3.0	1.8	1.2	1.3	1.1	1.2
31	2.6	---	2.2	2.0	---	3.1	---	1.7	---	1.2	1.1	---
TOTAL	80.9	78.4	69.6	67.2	63.9	77.4	125.9	67.2	40.5	33.98	35.2	40.0
MEAN	2.61	2.61	2.25	2.17	2.28	2.50	4.20	2.17	1.35	1.10	1.14	1.33
MAX	3.1	3.4	2.4	2.3	2.6	3.1	5.7	3.0	2.1	1.7	1.5	1.9
MIN	2.1	2.3	2.1	2.0	2.0	2.1	2.9	1.7	1.1	.94	1.1	1.1
AC-FT	160	156	138	133	127	154	250	133	80	67	70	79

CAL YR 1984 TOTAL 1130.9 MEAN 3.09 MAX 5.7 MIN 1.5 AC-FT 2240
WTR YR 1985 TOTAL 780.18 MEAN 2.14 MAX 5.7 MIN .94 AC-FT 1550

10336759 EDGEWOOD CREEK NEAR STATELINE, NV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1982 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1982 to current year.

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water temperature observations provided by Lahontan Regional Water Quality Control Board.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 403 mg/L, May 21, 1983; minimum daily mean, 2 mg/L, Dec. 13-19, 1983.
SEDIMENT LOAD: Maximum daily, 22 tons, May 21, 1983; minimum daily, 0.01 ton, several days in each year.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 83 mg/L, Apr. 2; minimum daily mean, 3 mg/L, on several days.
SEDIMENT LOAD: Maximum daily, 1.3 tons, Apr. 9; minimum daily, 0.01 ton, on many days.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	---	---	---	---	---	---	10.0	---	9.0	---	---
2	6.5	5.0	---	---	---	---	5.0	9.0	---	---	---	---
3	---	---	---	---	---	---	---	7.0	---	9.5	---	---
4	---	---	3.0	---	---	---	---	---	---	---	---	8.0
5	---	---	---	---	2.0	4.0	---	5.0	---	---	---	---
6	---	5.0	---	---	---	---	---	11.0	---	---	---	---
7	---	---	---	---	---	---	---	---	9.0	---	---	---
8	---	---	---	3.5	---	---	---	5.0	---	---	8.0	8.0
9	---	---	---	2.5	---	---	8.0	---	14.0	10.0	---	6.5
10	---	---	---	---	---	---	6.5	7.0	---	---	---	---
11	6.5	---	---	---	2.0	---	---	8.0	---	---	---	5.0
12	---	---	---	---	---	5.0	---	---	---	---	---	---
13	---	---	---	---	---	3.0	---	9.0	---	---	---	---
14	---	---	---	---	---	---	---	6.0	---	---	---	---
15	---	2.5	---	---	---	---	5.0	5.0	---	---	---	---
16	4.0	---	---	3.0	---	---	7.0	---	---	---	---	---
17	---	---	0.5	---	---	---	2.5	5.0	11.0	9.5	---	7.0
18	---	---	---	---	---	---	3.5	---	---	9.0	---	---
19	---	---	---	---	3.5	---	---	---	---	---	15.5	---
20	---	---	---	---	---	6.0	---	7.0	---	---	---	---
21	---	---	---	---	---	---	---	9.5	---	---	7.0	---
22	---	---	---	2.0	---	---	5.0	8.0	---	---	---	---
23	4.0	---	---	---	---	---	4.0	7.5	---	---	---	---
24	---	---	---	---	---	---	7.0	12.0	---	---	---	---
25	---	---	---	---	---	---	---	8.0	7.0	11.0	---	---
26	---	---	---	---	6.0	---	4.5	11.0	---	---	---	8.0
27	---	---	3.0	---	---	---	8.0	---	---	---	---	---
28	---	---	---	---	---	---	4.0	7.0	---	---	8.0	---
29	---	---	---	2.0	---	---	6.0	---	---	---	---	---
30	---	---	---	---	---	---	9.0	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	9.0	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

10336759 EDGEWOOD CREEK NEAR STATELINE, NV--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7	.05	3	.02	5	.03	5	.03	9	.05	12	.08
2	4	.03	9	.09	5	.03	5	.03	8	.05	12	.08
3	5	.03	4	.03	5	.03	5	.03	8	.05	12	.08
4	7	.05	3	.02	5	.03	5	.03	7	.04	12	.08
5	4	.02	3	.02	6	.04	5	.03	7	.04	17	.12
6	4	.02	4	.03	5	.03	5	.03	7	.04	10	.06
7	5	.03	3	.02	5	.03	5	.03	7	.04	7	.05
8	4	.02	3	.02	5	.03	5	.03	7	.04	6	.04
9	4	.02	3	.02	6	.04	5	.03	7	.04	6	.04
10	4	.02	3	.02	6	.04	5	.03	7	.04	6	.04
11	31	.28	11	.10	6	.04	5	.03	7	.04	6	.04
12	11	.09	6	.05	6	.04	5	.03	8	.05	6	.04
13	8	.06	6	.05	6	.04	4	.02	8	.05	6	.04
14	8	.06	6	.04	6	.03	4	.02	9	.06	6	.04
15	8	.06	5	.04	7	.04	4	.02	10	.06	6	.04
16	9	.07	5	.04	7	.04	4	.02	11	.07	6	.04
17	8	.06	5	.03	7	.04	4	.02	12	.08	6	.04
18	6	.05	5	.03	7	.04	5	.03	13	.08	6	.04
19	5	.04	6	.04	7	.04	5	.03	13	.08	13	.09
20	4	.03	5	.03	6	.03	5	.03	13	.08	26	.18
21	5	.04	5	.03	6	.03	6	.04	13	.08	18	.13
22	4	.03	5	.03	6	.04	6	.03	13	.08	16	.11
23	3	.02	5	.03	6	.04	7	.04	12	.08	24	.17
24	3	.02	5	.03	6	.04	7	.04	12	.08	18	.13
25	3	.02	5	.03	5	.03	8	.05	12	.08	10	.07
26	3	.02	5	.03	5	.03	8	.05	12	.08	10	.06
27	3	.02	5	.03	5	.03	9	.05	15	.11	10	.06
28	3	.02	5	.03	6	.04	9	.05	12	.08	10	.07
29	3	.02	5	.03	5	.03	10	.06	---	---	10	.07
30	3	.02	5	.03	5	.03	10	.05	---	---	27	.19
31	3	.02	---	---	5	.03	9	.05	---	---	54	.49
TOTAL	---	1.34	---	1.04	---	1.08	---	1.06	---	1.75	---	2.81
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	71	.80	15	.12	10	.05	6	.02	5	.02	5	.01
2	83	1.0	16	.13	9	.05	6	.02	5	.02	5	.02
3	71	.86	11	.08	9	.05	7	.02	15	.07	5	.02
4	60	.70	11	.08	9	.04	7	.02	5	.02	8	.03
5	59	.79	12	.08	9	.04	7	.02	5	.01	5	.02
6	60	.86	13	.09	9	.04	6	.02	5	.01	5	.02
7	69	1.1	13	.08	9	.04	6	.02	5	.01	5	.02
8	72	1.1	13	.08	10	.04	6	.02	5	.01	19	.12
9	78	1.3	12	.08	12	.05	6	.02	5	.01	39	.24
10	73	1.2	10	.06	12	.04	6	.02	5	.01	10	.04
11	59	.87	11	.07	12	.04	6	.02	5	.01	10	.05
12	58	.86	12	.07	12	.04	6	.02	5	.01	7	.03
13	50	.76	12	.07	12	.04	6	.02	5	.01	4	.02
14	56	.83	11	.07	11	.04	6	.02	5	.01	4	.01
15	56	.81	10	.06	11	.04	6	.02	5	.01	4	.01
16	37	.45	10	.06	11	.04	6	.02	5	.01	4	.01
17	25	.30	10	.05	11	.04	6	.02	5	.02	4	.01
18	17	.19	10	.05	11	.04	5	.01	5	.02	4	.02
19	12	.12	9	.05	11	.04	5	.01	5	.02	4	.02
20	40	.43	9	.05	11	.04	5	.01	4	.01	4	.02
21	12	.12	13	.07	11	.04	7	.02	4	.01	4	.01
22	40	.43	14	.07	10	.03	5	.01	4	.01	4	.01
23	16	.15	23	.13	10	.03	16	.07	4	.01	4	.01
24	14	.12	17	.08	10	.03	5	.01	4	.01	4	.01
25	12	.10	15	.07	10	.03	19	.08	5	.01	3	.01
26	13	.11	18	.09	10	.03	7	.02	5	.01	3	.01
27	13	.10	14	.07	9	.03	17	.09	5	.01	3	.01
28	14	.11	10	.05	9	.03	5	.01	5	.01	3	.01
29	13	.10	10	.05	8	.02	5	.01	5	.01	3	.01
30	14	.11	10	.05	7	.02	12	.05	5	.01	3	.01
31	---	---	10	.05	---	---	7	.02	5	.01	---	---
TOTAL	---	16.78	---	2.26	---	1.13	---	0.76	---	0.43	---	0.84

TOTAL LOAD FOR YEAR: 31.28 TONS.

10336759 EDGEWOOD CREEK NEAR STATELINE, NV--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
APR						
02...	1630	5.2	5.0	192	2.7	58
09...	1430	5.9	8.0	170	2.7	24
10...	1505	5.3	6.5	67	.96	43
10...	1540	5.6	6.5	95	1.4	38
16...	1630	4.5	7.0	32	.39	52
17...	1130	4.5	2.5	23	.28	68
22...	1200	3.8	5.0	38	.39	64

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	TEMPER-ATURE (DEG C)	NUMBER OF SAM-PLING POINTS	STREAM-FLOW, INSTAN-TANEOUS (CFS)	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											
14...	1205	7.5	1	2.2	1	6	25	52	80	95	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	TEMPER-ATURE (DEG C)	NUMBER OF SAM-PLING POINTS	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, 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
MAY												
16...	1340	6.0	8	4.2	4.50	0.10	7	16	30	71	99	100
23...	1355	10.0	8	3.7	4.50	0.01	--	--	--	--	--	--
JUN												
07...	1405	7.0	8	3.2	4.50	0.02	--	--	--	--	--	--
11...	1425	7.5	8	3.0	4.50	0.33	6	29	68	90	99	100

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA

LOCATION.--Lat 38°55'12", long 119°58'17", in NW 1/4 SE 1/4 sec.3, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank 5 ft upstream from Martin Avenue Bridge, 500 ft upstream from Heavenly Valley Creek, and 1.8 mi east of Tahoe Valley.

DRAINAGE AREA.--36.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder and sharp crested weir in culvert at bridge. Elevation of gage is 6,250 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 26, Dec. 14, 16-24, 26, 27, 29, Jan. 1, 6, 7, 12, 13, 23-27, Jan. 29 to Feb. 19, Feb. 25 to Mar. 4, 6-10, 12, 27-29. Records good except the periods of ice effect listed above, which are fair. Minor diversions for local water supply upstream from station.

AVERAGE DISCHARGE.--25 years, 38.8 ft^3/s, 28,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 535 ft^3/s, Feb. 1, 1963, gage height, 11.14 ft, from rating curve extended above 250 ft^3/s on basis of computation of peak flow (weir formula); no flow for part of Sept. 11, 1966.

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. 1	0815	ice jam	*7.84	Apr. 15	2130	*100	7.34

Minimum daily, 9.5 ft^3/s, Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	25	28	24	21	22	31	57	47	21	14	9.8
2	29	35	30	23	21	22	34	62	48	20	14	9.8
3	25	41	28	23	21	22	39	61	48	20	13	11
4	25	27	28	23	21	23	40	56	45	19	13	12
5	24	25	28	23	20	24	45	56	44	19	12	12
6	24	26	27	23	20	24	50	58	44	18	12	12
7	24	26	27	23	20	24	55	57	44	18	12	13
8	24	24	27	23	20	24	60	54	45	17	12	15
9	23	29	27	23	20	25	65	53	45	17	11	24
10	23	31	27	23	20	25	68	50	44	17	12	19
11	33	37	26	22	20	25	67	48	42	18	11	19
12	30	33	27	22	20	25	68	48	42	17	11	18
13	32	31	24	22	20	25	72	49	42	16	11	18
14	28	31	27	23	20	25	78	50	41	16	11	16
15	25	30	27	23	20	25	84	51	39	16	11	16
16	26	30	27	23	21	25	77	51	39	19	11	15
17	29	29	27	23	21	25	68	51	36	15	11	15
18	27	29	28	23	22	25	60	53	35	16	13	16
19	28	28	29	23	22	25	59	52	34	16	11	16
20	28	28	28	24	23	26	53	54	32	15	11	15
21	27	27	26	24	24	26	49	53	30	18	11	14
22	27	28	25	23	24	25	49	53	28	16	11	13
23	26	29	25	23	24	25	51	54	27	16	11	13
24	27	30	24	23	24	26	51	55	26	15	10	14
25	26	27	24	23	23	24	49	56	26	15	10	14
26	29	26	24	23	23	19	47	55	24	17	10	14
27	28	34	24	23	22	19	48	53	24	20	10	14
28	26	34	24	23	22	19	50	51	23	20	10	14
29	27	31	24	23	---	21	50	50	22	15	10	14
30	26	30	24	22	---	26	52	48	21	14	9.5	14
31	25	---	24	22	---	27	---	48	---	14	9.7	---
TOTAL	830	891	815	711	599	743	1669	1647	1087	530	349.2	439.6
MEAN	26.8	29.7	26.3	22.9	21.4	24.0	55.6	53.1	36.2	17.1	11.3	14.7
MAX	33	41	30	24	24	27	84	62	48	21	14	24
MIN	23	24	24	22	20	19	31	48	21	14	9.5	9.8
AC-FT	1650	1770	1620	1410	1190	1470	3310	3270	2160	1050	693	872

CAL YR 1984 TOTAL 20841.0 MEAN 56.9 MAX 216 MIN 21 AC-FT 41340
WTR YR 1985 TOTAL 10310.8 MEAN 28.2 MAX 84 MIN 9.5 AC-FT 20450

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974, 1978, 1980 to September 1985 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1981 to September 1983.
WATER TEMPERATURE: October 1973 to September 1974, October 1977 to June 1978, March 1980 to September 1985 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: October 1973 to September 1974, October 1977 to June 1978, March 1980 to September 1985 (discontinued).

REMARKS.--Sediment samples were collected on most days where a water temperature is published.

COOPERATION.--Selected sediment samples and water temperature observations provided by Lahontan Regional Water Quality Control Board.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATION: Maximum daily mean, 321 mg/L, Mar. 13, 1983; minimum daily mean, 0 mg/L, Oct. 15, 16, 1973.
SEDIMENT LOAD: Maximum daily, 162 tons, Feb. 16, 1982; minimum daily, 0 ton, Oct. 15, 16, 1973.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATION: Maximum daily mean, 113 mg/L, Oct. 11; minimum daily mean, 2 mg/L, on several days in August.
SEDIMENT LOAD: Maximum daily, 18 tons, Apr. 15; minimum daily, 0.05 ton, Aug. 24.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	---	---	---	---	---	---	10.5	---	12.0	---	---
2	5.5	4.5	---	---	---	---	7.0	9.5	7.0	---	---	---
3	---	3.0	---	---	---	---	---	5.5	---	---	---	---
4	---	---	1.5	---	---	---	---	---	11.0	---	---	10.0
5	---	---	---	---	1.5	3.0	---	4.0	---	---	---	---
6	---	1.0	---	---	---	---	---	10.5	---	---	---	---
7	---	---	---	---	---	---	---	---	11.0	---	---	---
8	---	---	---	1.5	---	---	---	4.5	---	---	10.0	9.0
9	---	---	---	---	---	---	8.0	6.5	12.5	19.0	---	8.5
10	---	---	---	1.0	---	---	7.0	6.5	---	---	---	---
11	6.0	---	---	---	---	---	---	7.0	10.0	12.5	---	---
12	---	---	---	---	1.0	3.0	---	10.0	---	---	---	---
13	---	---	---	---	---	---	---	9.5	---	---	---	---
14	---	---	0.0	---	---	---	---	7.0	---	---	19.0	---
15	---	2.5	---	---	---	---	4.0	5.0	---	---	---	---
16	4.5	---	---	2.0	---	---	7.0	4.5	---	---	---	9.5
17	---	---	---	---	---	---	---	5.0	17.5	12.0	---	7.0
18	---	---	---	---	---	---	3.0	---	---	---	---	---
19	---	---	0.5	---	2.0	---	---	---	---	---	13.5	---
20	---	---	---	---	---	5.0	---	6.0	---	---	---	---
21	---	1.0	---	---	---	---	6.5	6.0	---	---	9.0	---
22	---	---	---	2.0	---	5.5	7.0	9.5	---	---	---	---
23	2.0	---	---	---	---	---	3.5	8.0	---	---	---	---
24	---	---	---	---	---	---	7.0	12.0	---	---	---	---
25	---	---	---	---	---	---	---	9.5	9.0	12.0	---	---
26	---	---	---	---	4.5	---	4.0	12.0	---	15.5	---	13.5
27	---	---	1.5	---	---	---	8.0	---	---	---	---	---
28	---	---	---	---	4.0	3.0	4.5	6.5	---	---	10.0	---
29	---	---	---	2.0	---	1.0	7.5	10.0	---	---	---	---
30	---	---	---	---	---	---	6.5	---	---	---	---	---
31	---	---	---	---	---	---	---	7.5	---	9.5	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4	.31	5	.34	3	.23	6	.39	15	.85	19	1.1
2	28	2.4	55	7.9	3	.24	6	.37	17	.96	20	1.2
3	4	.27	53	8.1	3	.23	6	.37	19	1.1	21	1.2
4	4	.27	8	.58	29	2.7	6	.37	21	1.2	22	1.4
5	4	.26	8	.54	5	.38	6	.37	22	1.2	22	1.4
6	4	.26	8	.56	5	.36	5	.31	35	1.9	22	1.4
7	4	.26	8	.56	5	.36	5	.31	22	1.2	21	1.4
8	4	.26	8	.52	5	.36	5	.31	21	1.1	21	1.4
9	4	.25	31	2.9	5	.36	7	.43	21	1.1	21	1.4
10	4	.25	27	2.5	5	.36	10	.62	20	1.1	20	1.4
11	113	11	24	2.8	5	.35	9	.53	20	1.1	20	1.4
12	44	3.9	8	.71	5	.36	8	.48	19	1.0	20	1.4
13	15	1.3	8	.67	5	.32	7	.42	19	1.0	19	1.3
14	8	.60	8	.67	20	1.5	6	.37	19	1.0	19	1.3
15	8	.54	8	.65	12	.87	6	.37	19	1.0	19	1.3
16	15	1.1	7	.57	7	.51	6	.37	19	1.1	18	1.2
17	8	.63	6	.47	7	.51	6	.37	18	1.0	18	1.2
18	15	1.1	5	.39	7	.53	6	.37	18	1.1	18	1.2
19	10	.76	4	.30	7	.55	6	.37	18	1.1	17	1.1
20	5	.38	3	.23	7	.53	6	.39	18	1.1	17	1.2
21	4	.29	3	.22	7	.49	6	.39	25	1.6	17	1.2
22	4	.29	3	.23	7	.47	8	.50	18	1.2	16	1.1
23	4	.28	3	.23	7	.47	8	.50	18	1.2	16	1.1
24	22	1.6	3	.24	7	.45	6	.37	18	1.2	16	1.1
25	5	.35	3	.22	7	.45	7	.43	18	1.1	16	1.0
26	10	.78	3	.21	7	.45	7	.43	18	1.1	16	.82
27	7	.53	3	.28	7	.45	9	.56	18	1.1	16	.82
28	5	.35	3	.28	7	.45	9	.56	18	1.1	16	.82
29	5	.36	3	.25	7	.45	9	.56	---	---	80	4.5
30	5	.35	3	.24	7	.45	11	.65	---	---	45	3.2
31	5	.34	---	---	6	.39	13	.77	---	---	37	2.7
TOTAL	---	31.62	---	34.36	---	16.58	---	13.61	---	31.81	---	44.26
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	54	4.7	30	4.6	15	1.9	8	.45	7	.26	4	.11
2	55	5.0	32	5.4	15	1.9	8	.43	5	.19	4	.11
3	47	4.9	35	5.8	15	1.9	8	.43	3	.11	5	.15
4	53	5.7	20	3.0	15	1.8	7	.36	2	.07	5	.16
5	50	6.1	22	3.3	14	1.7	7	.36	2	.06	5	.16
6	50	6.8	26	4.1	14	1.7	7	.34	2	.06	5	.16
7	52	7.7	25	3.8	13	1.5	6	.29	2	.06	5	.18
8	50	8.1	18	2.6	13	1.6	6	.28	2	.06	22	1.3
9	62	11	14	2.0	12	1.5	6	.28	2	.06	52	3.8
10	67	12	11	1.5	13	1.5	5	.23	2	.06	3	.15
11	62	11	18	2.3	15	1.7	5	.24	2	.06	3	.15
12	68	12	16	2.1	15	1.7	5	.23	2	.06	3	.15
13	65	13	15	2.0	15	1.7	4	.17	2	.06	3	.15
14	75	16	16	2.2	15	1.7	4	.17	5	.15	3	.13
15	81	18	18	2.5	15	1.6	8	.35	2	.06	3	.13
16	76	16	18	2.5	16	1.7	20	1.0	2	.06	3	.12
17	60	11	18	2.5	16	1.6	4	.16	2	.06	3	.12
18	34	5.5	22	3.1	15	1.4	3	.13	4	.14	3	.13
19	32	5.1	16	2.2	14	1.3	3	.13	5	.15	3	.13
20	18	2.6	36	5.2	13	1.1	3	.12	3	.09	3	.12
21	22	2.9	20	2.9	12	.97	3	.15	2	.06	3	.11
22	20	2.6	23	3.3	11	.83	3	.13	2	.06	3	.11
23	24	3.3	18	2.6	10	.73	3	.13	2	.06	3	.11
24	23	3.2	21	3.1	9	.63	3	.12	2	.05	3	.11
25	21	2.8	20	3.0	8	.56	3	.12	3	.08	3	.11
26	20	2.5	21	3.1	8	.52	19	1.1	3	.08	3	.11
27	20	2.6	20	2.9	8	.52	49	2.9	3	.08	3	.11
28	30	4.1	17	2.3	8	.50	29	1.9	3	.08	4	.15
29	25	3.4	24	3.2	8	.48	9	.36	3	.08	5	.19
30	30	4.2	22	2.9	8	.45	9	.34	3	.08	6	.23
31	---	---	16	2.1	---	---	9	.34	4	.10	---	---
TOTAL	---	213.8	---	94.1	---	38.69	---	13.74	---	2.69	---	8.95

TOTAL LOAD FOR YEAR: 544.21 TONS.

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
2...	1000	45	5.5	196	24	53
2...	1005	43	5.5	168	20	48
MAR						
29...	1540	29	1.0	160	13	42
APR						
10...	1330	59	7.0	43	6.8	52
MAY						
20...	0925	76	6.0	207	42	61

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	TEMPER-ATURE (DEG C)	NUMBER OF SAM-PLING POINTS	STREAM-FLOW, INSTAN-TANEOUS (CFS)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
SEPT							
16...	1235	9.5	2	14	1	2	8

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
SEPT						
16...	14	19	38	77	97	100

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	TEMPER-ATURE (DEG C)	NUMBER OF SAM-PLING POINTS	STREAM-FLOW, INSTAN-TANEOUS (CFS)	STREAM WIDTH (FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM
APR							
30...	1150	6.5	11	50	25.0	22	1

DATE	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
APR							
30...	17	40	62	84	94	99	100

10337000 LAKE TAHOE AT TAHOE CITY, CA

LOCATION.--Lat 39°10'51", long 120°07'06", in NE 1/4 NE 1/4 sec.5, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050101, on U.S. Coast Guard pier at Lake Forest, 1.1 mi northeast of Tahoe City, and 1.8 mi northeast of Lake Tahoe outlet dam on Truckee River at Tahoe City.

DRAINAGE AREA.--506 mi^2, at lake outlet.

PERIOD OF RECORD.--April 1900 to current year. Monthend elevations only for October 1943 to September 1957, published in WSP 1734. Prior to October 1961, published as "at Tahoe."

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,220.00 ft Bureau of Reclamation datum, 6,218.86 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1957, nonrecording gages at several sites near outlet of lake at same datum. Oct. 1, 1957, to May 8, 1958, water-stage recorder on left wingwall of dam at outlet of lake at same datum. May 9, 1958, to Sept. 30, 1968, water-stage recorder on pier, 1,000 ft east of dam at lake outlet.

REMARKS.--Lake levels regulated by a 17-gate concrete dam at outlet of lake; storage began about 1874. Monthly figures given herein represent usable contents. Usable capacity, 744,600 acre-ft between elevations 6,223 ft, natural rim of lake and 6,229.1 ft, maximum permissible elevation by Federal Court decree. Lake elevations are referred to Bureau of Reclamation datum because that datum is used as the official reference point by all local, State, and Federal agencies. There are minor diversions for domestic purposes, irrigation, and power.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 6,231.26 ft, July 14, 15, 17, 18, 1907; minimum, 6,221.74 ft, Dec. 26, 1934

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6,228.09 ft, June 14-17, 19, 21; minimum, 6226.73 ft, Sept. 30.

Capacity table (elevation, in feet, and contents, in acre-feet)

6,223	0	6,227	486,800
6,224	121,400	6,228	609,300
6,225	243,000	6,229.1	744,600
6,226	364,800		

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.55	7.24	7.60	7.42	7.25	7.32	7.49	7.79	7.99	7.97	7.59	7.02
2	7.54	7.32	7.60	7.41	7.26	7.32	7.50	7.80	8.03	7.96	7.60	7.00
3	7.52	7.30	7.62	7.41	7.24	7.30	7.51	7.81	8.02	7.95	7.57	6.98
4	7.50	7.28	7.60	7.40	7.23	7.27	7.51	7.83	8.01	7.93	7.55	6.97
5	7.51	7.26	7.58	7.40	7.23	7.29	7.53	7.84	8.02	7.93	7.55	6.94
6	7.50	7.30	7.58	7.40	7.19	7.30	7.54	7.83	8.04	7.93	7.53	6.91
7	7.50	7.30	7.57	7.40	7.22	7.33	7.56	7.85	8.04	7.92	7.49	6.89
8	7.47	7.35	7.57	7.40	7.39	7.33	7.57	7.86	8.06	7.92	7.48	6.93
9	7.45	7.37	7.56	7.40	7.38	7.32	7.59	7.87	8.06	7.92	7.45	6.91
10	7.41	7.38	7.56	7.40	7.37	7.33	7.59	7.87	8.06	7.91	7.43	6.90
11	7.47	7.40	7.55	7.39	7.37	7.33	7.61	7.88	8.08	7.91	7.41	6.88
12	7.45	7.40	7.54	7.38	7.40	7.32	7.63	7.89	8.07	7.90	7.39	6.86
13	7.46	7.47	7.53	7.38	7.41	7.32	7.64	7.90	8.07	7.89	7.38	6.84
14	7.41	7.45	7.50	7.38	7.42	7.32	7.66	7.90	8.09	7.88	7.38	6.84
15	7.41	7.44	7.54	7.37	7.41	7.31	7.66	7.91	8.09	7.87	7.37	6.81
16	7.44	7.47	7.54	7.37	7.41	7.30	7.67	7.91	8.09	7.86	7.35	6.82
17	7.42	7.45	7.54	7.37	7.39	7.30	7.73	7.93	8.09	7.85	7.34	6.79
18	7.40	7.46	7.52	7.37	7.39	7.31	7.71	7.94	8.08	7.84	7.32	6.83
19	7.41	7.46	7.51	7.37	7.38	7.31	7.73	7.95	8.09	7.83	7.29	6.81
20	7.39	7.43	7.49	7.37	7.38	7.28	7.74	7.96	8.07	7.82	7.26	6.80
21	7.39	7.47	7.49	7.35	7.36	7.28	7.74	7.97	8.09	7.82	7.26	6.81
22	7.38	7.44	7.48	7.34	7.36	7.28	7.75	7.99	8.06	7.81	7.25	6.79
23	7.37	7.42	7.47	7.33	7.35	7.21	7.76	7.99	8.04	7.80	7.25	6.82
24	7.37	7.52	7.46	7.32	7.33	7.27	7.76	8.00	8.02	7.79	7.23	6.80
25	7.34	7.50	7.45	7.33	7.32	7.27	7.78	8.01	8.01	7.79	7.20	6.79
26	7.33	7.50	7.45	7.33	7.32	7.40	7.79	8.02	8.01	7.79	7.18	6.78
27	7.29	7.61	7.44	7.32	7.32	7.48	7.78	8.01	8.00	7.76	7.15	6.77
28	7.28	7.62	7.44	7.32	7.32	7.49	7.77	8.05	7.98	7.73	7.13	6.76
29	7.30	7.61	7.43	7.30	---	7.48	7.78	8.03	7.96	7.71	7.10	6.75
30	7.27	7.60	7.43	7.30	---	7.48	7.79	8.02	7.94	7.68	7.08	6.73
31	7.28	---	7.43	7.25	---	7.48	---	7.99	---	7.64	7.06	---
MEAN	7.41	7.43	7.52	7.36	7.34	7.33	7.66	7.92	8.04	7.85	7.34	6.85
MAX	7.55	7.62	7.62	7.42	7.42	7.49	7.79	8.05	8.09	7.97	7.60	7.02
MIN	7.27	7.24	7.43	7.25	7.19	7.21	7.49	7.79	7.94	7.64	7.06	6.73
a	521100	560300	539500	517400	526000	545600	583600	608100	601900	565200	494100	453900
b	-39200	+39200	-20800	-22100	+8600	+19600	+38000	+24500	-6200	-36700	-71100	-40200

CAL YR 1984 b -109200
WTR YR 1985 b -106400

a Usable contents, in acre-feet, at end of month.
b Change in contents, in acre-feet.
NOTE.--Add 6,220 ft to obtain elevation, Bureau of Reclamation datum, at 2400 hours.

10337500 TRUCKEE RIVER AT TAHOE CITY, CA

LOCATION.--Lat 39°09'59", long 120°08'36", in NE 1/4 NW 1/4 sec.7, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050102, on left bank 510 ft downstream from dam at outlet of Lake Tahoe at Tahoe City.

DRAINAGE AREA.--507 mi^2.

PERIOD OF RECORD.--July 1895 to February 1896, March 1900 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734. Prior to October 1961, published as "at Tahoe."

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,216.59 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 12, 1912, nonrecording gage at site 370 ft upstream at different datum. Nov. 12, 1912, to Sept. 30, 1937, nonrecording gage, Oct. 1, 1937, to Aug. 21, 1957, water-stage recorder at datum 2.26 ft higher and Aug. 22, 1957, to July 10, 1960, at datum 2.42 ft higher; all at site 270 ft upstream.

REMARKS.--No estimated daily discharges. Records excellent. Flow completely regulated by dam at outlet of Lake Tahoe, (station 10337000) 510 ft upstream. There are several diversions for irrigation, power, and domestic water supply. In addition, sewer effluent is pumped from the Lake Tahoe basin.

AVERAGE DISCHARGE (unadjusted).--85 years (water years 1901-85), 259 ft^3/s, 187,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,630 ft^3/s, June 19, 1969, gage height, 9.32 ft; no flow for parts of many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 381 ft^3/s, Aug. 8, gage height, 4.14 ft; minimum daily, 7.5 ft^3/s, Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	49	50	58	209	310	84	63	68	87	255	367
2	56	53	51	57	114	309	58	65	71	90	330	365
3	53	51	49	56	116	309	59	64	71	95	349	365
4	53	51	144	57	116	310	57	63	71	109	351	367
5	53	50	254	56	116	309	57	63	71	110	351	364
6	53	50	250	57	116	311	59	65	71	110	350	277
7	53	50	250	57	145	312	61	69	71	110	358	224
8	53	51	250	57	236	311	61	69	71	95	378	222
9	52	50	250	57	242	311	61	69	71	87	376	187
10	52	50	250	52	256	311	62	69	72	87	376	138
11	55	52	251	52	254	311	61	69	72	87	375	115
12	53	50	252	53	254	310	61	68	71	87	375	115
13	53	50	249	54	254	311	61	68	71	88	375	117
14	53	49	244	57	254	312	60	69	71	88	374	122
15	52	49	243	56	254	312	58	68	71	87	374	124
16	51	49	244	57	254	312	56	67	71	88	374	125
17	51	50	244	58	253	311	55	67	79	89	374	150
18	51	51	244	57	253	284	59	68	92	89	374	168
19	51	49	245	57	224	245	66	68	67	93	373	169
20	52	49	243	57	201	205	65	68	77	102	371	170
21	52	49	243	89	200	138	65	67	88	103	371	170
22	26	48	243	246	198	126	65	67	88	195	371	171
23	8.5	49	243	242	198	109	64	67	88	247	371	168
24	7.5	49	245	243	198	109	64	67	88	246	371	188
25	7.8	48	248	242	198	108	62	67	88	246	371	201
26	30	47	155	243	198	110	60	67	88	242	371	202
27	41	50	57	243	198	110	60	67	89	239	370	203
28	48	51	57	242	244	107	61	66	88	239	369	203
29	50	48	57	242	---	107	60	66	89	239	368	203
30	51	48	57	254	---	107	59	65	90	236	367	182
31	47	---	57	264	---	108	---	65	---	235	367	---
TOTAL	1431.8	1490	5919	3672	5753	7255	1841	2070	2334	4345	11280	6142
MEAN	46.2	49.7	191	118	205	234	61.4	66.8	77.8	140	364	205
MAX	63	53	254	264	256	312	84	69	92	247	378	367
MIN	7.5	47	49	52	114	107	55	63	67	87	255	115
AC-FT	2840	2960	11740	7280	11410	14390	3650	4110	4630	8620	22370	12180

CAL YR 1984 TOTAL 158648.0 MEAN 433 MAX 2310 MIN 7.5 AC-FT 314700
WTR YR 1985 TOTAL 53532.8 MEAN 147 MAX 378 MIN 7.5 AC-FT 106200

10338500 DONNER CREEK AT DONNER LAKE, NEAR TRUCKEE, CA

LOCATION.--Lat 39°19'25", long 120°14'00", in SW 1/4 NW 1/4 sec.17, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, in Donner Memorial State Park, on left bank 10 ft downstream from bridge on Donner Memorial State Park road, 0.2 mi downstream from outlet of Donner Lake, 0.7 mi upstream from Cold Creek, and 2.5 mi west of Truckee.

DRAINAGE AREA.--14.3 mi^2.

PERIOD OF RECORD.--November 1909 to August 1910, January 1929 to October 1935, January 1936 to March 1938, July to October 1938, January 1939 to February 1943, June 1943 to December 1953, May 1955 to December 1957, October 1958 to current year. Monthly discharge only prior to October 1958, published in WSP 1314 and 1734.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,924.40 ft above National Geodetic Vertical Datum of 1929 (revised). Nov. 1, 1909, to Aug. 31, 1910, nonrecording gage at different datum. January 1929 to December 1957, water-stage recorder at same site at unknown datum.

REMARKS.--No estimated daily discharges. Records excellent. Flow completely regulated by dam at outlet of Donner Lake 0.2 mi upstream, usable capacity, 9,500 acre-ft.

AVERAGE DISCHARGE (unadjusted).--48 years (water years 1930-35, 1937, 1940-42, 1944-52, 1956-57, 1959-85), 35.4 ft^3/s, 25,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 700 ft^3/s, estimated, Nov. 21, 1950; maximum gage height observed, 4.55 ft, Dec. 25, 1964; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 294 ft^3/s, Sept. 9, gage height, 3.78 ft; minimum daily, 0.42 ft^3/s, July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	12	35	10	11	20	39	3.1	6.3	10	1.2	8.9
2	120	9.0	32	9.9	11	22	41	2.8	6.8	25	1.0	8.5
3	109	7.2	31	9.9	11	22	45	2.8	7.0	15	1.0	8.5
4	93	6.9	29	9.6	11	22	49	2.7	7.3	4.6	1.5	8.5
5	81	5.5	27	9.0	11	23	54	2.6	7.4	3.9	1.5	8.1
6	70	17	26	9.0	11	28	61	2.6	7.4	3.5	1.3	66
7	62	31	24	9.5	12	30	72	4.1	15	3.2	.96	159
8	55	34	23	10	78	29	82	5.8	19	3.0	.86	151
9	49	33	22	10	26	27	91	27	17	2.6	3.4	213
10	44	31	22	9.9	24	26	101	49	16	2.3	4.4	261
11	45	36	21	9.9	22	26	111	46	17	2.0	4.3	227
12	41	39	20	9.5	21	25	116	46	16	1.8	3.8	191
13	38	41	19	9.5	20	24	122	39	16	1.6	4.4	158
14	34	41	17	9.5	19	23	130	30	16	1.5	4.0	131
15	29	40	18	9.7	18	23	123	31	16	1.6	3.3	110
16	27	39	20	9.5	18	23	75	31	16	2.0	3.0	105
17	27	36	19	9.5	18	23	65	70	15	1.7	2.7	98
18	24	35	18	9.5	18	24	62	109	14	1.5	3.4	84
19	23	36	17	9.5	18	25	42	108	8.7	1.2	10	72
20	21	37	16	9.5	17	26	6.0	107	6.4	1.1	10	63
21	20	35	16	9.9	17	27	5.8	85	6.2	.99	10	55
22	9.9	32	15	10	17	29	5.5	70	6.2	.93	9.7	47
23	3.2	30	15	10	17	30	5.4	95	6.7	.87	9.5	41
24	1.0	34	14	10	17	34	5.2	75	7.7	.75	9.7	36
25	.94	34	13	10	17	35	4.5	41	7.5	.67	9.5	32
26	8.5	31	13	11	18	39	4.1	40	7.2	.52	9.5	29
27	15	33	12	11	18	48	4.0	40	6.9	.42	9.5	26
28	14	41	11	11	19	47	3.9	38	6.9	1.4	9.5	23
29	14	40	11	11	---	44	3.2	37	6.9	2.6	9.2	20
30	13	37	11	11	---	41	2.9	19	6.9	2.5	9.0	18
31	13	---	10	10	---	39	---	6.3	---	1.4	9.1	---
TOTAL	1232.54	913.6	597	307.3	535	904	1531.5	1265.8	319.4	102.15	170.22	2458.5
MEAN	39.8	30.5	19.3	9.91	19.1	29.2	51.0	40.8	10.6	3.30	5.49	82.0
MAX	128	41	35	11	78	48	130	109	19	25	10	261
MIN	.94	5.5	10	9.0	11	20	2.9	2.6	6.2	.42	.86	8.1
AC-FT	2440	1810	1180	610	1060	1790	3040	2510	634	203	338	4880

CAL YR 1984 TOTAL 15006.63 MEAN 41.0 MAX 228 MIN .28 AC-FT 29770
WTR YR 1985 TOTAL 10337.01 MEAN 28.3 MAX 261 MIN .42 AC-FT 20500

10339250 MARTIS CREEK AT STATE HIGHWAY 267, NEAR TRUCKEE, CA

LOCATION.--Lat 39°18'08", long 120°07'13", in SW 1/4 SW 1/4 sec.20, T.17 N., R.17 E., Placer County, Hydrologic Unit 16050102, 4.0 mi southeast of Truckee. Water-quality samples are collected 10 ft upstream from State Highway 267. Temperature records are obtained about 300 ft upstream from highway, off left bank immediately downstream from confluence of main stem and Middle Martis Creek.

DRAINAGE AREA.--25.8 mi^2.

PERIOD OF RECORD.--Water years 1975 to current year.
CHEMICAL ANALYSES: Water years 1975 to current year.
WATER TEMPERATURES: Water years 1975 to current year.
SEDIMENT RECORDS: Water years 1975, 1977 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October to November 1974, August 1975 to current year.

INSTRUMENTATION.--Digital water-temperature recorder October to November 1974, and August 1975 to current year.

REMARKS.--Water-temperature recorder stopped Oct. 24 to Nov. 1, and June 26 to July 1. Clock stopped July 25 to Aug. 2. Recorder malfunction May 2-9, Aug. 12-26.

REVISED RECORDS.--WDR CA-80-3: Drainage area.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 27.5°C, July 30, Aug. 3, 1977; minimum recorded, -0.5°C, Jan. 5, 10-16, 1979.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 24.0°C, June 18; minimum recorded, 0.0°C many days during November to April.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION
OCT									
30...	1035	9.8	130	7.8	3.5	615	2.0	11.2	105
APR									
22...	1030	39	76	7.8	6.5	615	5.4	11.2	113
JUN									
04...	1020	11	114	7.8	10.5	615	2.8	10.0	111
AUG									
12...	1050	4.2	135	7.9	11.0	615	2.0	9.6	108

DATE	ALKA-LINITY FIELD (MG/L AS CACO3)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT								
30...	66	<.10	.010	.19	.20	.020	.010	<1
APR								
22...	38	<.10	.050	.55	.60	.030	.030	1
JUN								
04...	62	<.10	.050	.15	.20	.090	.020	3
AUG								
12...	74	<.10	.040	.36	.40	.030	.030	2

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT									
30...	--	270	130	5	5	30	19	20	14
APR									
22...	3	330	100	<1	4	10	--	20	13
JUN									
04...	5	310	150	2	4	30	16	10	21
AUG									
12...	2	450	260	4	<1	30	30	20	14

< Actual value is known to be less than the value shown.

10339250 MARTIS CREEK AT STATE HIGHWAY 267, NEAR TRUCKEE, CA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	6.0	---	---	2.5	0.0	0.0	0.0	0.0	0.0	4.0	0.5
2	12.5	5.0	4.5	2.5	3.0	0.0	0.0	0.0	1.0	0.0	2.0	0.0
3	13.0	5.5	7.5	2.5	3.5	0.5	0.5	0.0	0.5	0.0	2.5	0.0
4	12.0	6.0	6.5	0.5	3.5	0.0	0.5	0.0	1.0	0.0	0.0	0.0
5	12.5	5.0	5.5	1.0	3.5	0.0	1.5	0.0	0.5	0.0	1.5	0.0
6	12.5	5.0	5.0	2.0	2.5	0.0	2.0	1.0	1.0	0.0	1.0	0.0
7	13.5	5.0	6.0	1.5	3.0	0.0	2.0	1.0	1.5	0.0	1.5	0.0
8	13.0	5.0	3.5	0.0	3.5	0.0	2.5	0.5	0.0	0.0	1.0	0.0
9	12.5	4.5	3.0	0.0	3.0	0.5	2.0	1.0	0.0	0.0	3.0	0.0
10	11.0	4.0	3.0	0.5	3.5	0.5	2.0	0.0	0.0	0.0	3.0	0.5
11	9.5	5.0	5.0	2.0	4.5	1.0	1.5	0.0	0.0	0.0	3.5	1.0
12	11.0	4.0	5.0	1.5	3.5	0.0	0.0	0.0	0.5	0.0	5.0	0.5
13	13.0	7.5	3.5	0.0	1.0	0.0	0.0	0.0	1.5	0.0	4.5	0.0
14	10.0	4.0	3.5	0.0	0.0	0.0	0.5	0.0	2.0	0.0	5.0	0.0
15	8.0	2.5	4.0	0.5	0.0	0.0	1.0	0.0	2.5	0.0	5.0	0.0
16	5.0	2.5	5.0	1.5	0.0	0.0	1.0	0.0	2.5	0.0	5.0	0.5
17	6.0	2.0	4.0	1.0	0.0	0.0	1.5	0.0	3.0	0.5	5.0	0.5
18	4.5	1.0	6.0	1.5	0.0	0.0	2.0	0.0	3.0	0.5	3.5	1.5
19	7.5	4.0	4.0	0.0	0.0	0.0	2.0	0.0	2.5	0.5	5.5	1.0
20	8.0	4.0	3.0	0.5	0.0	0.0	2.0	0.0	2.0	0.0	5.5	0.5
21	7.5	3.0	3.0	1.0	0.0	0.0	2.0	0.0	3.0	0.0	5.5	0.5
22	8.0	1.5	4.5	1.0	0.0	0.0	1.0	0.0	4.0	0.0	5.5	0.0
23	8.5	1.0	3.5	0.5	0.0	0.0	1.0	0.0	4.0	0.0	5.5	0.5
24	---	---	2.5	0.0	0.0	0.0	1.0	0.0	4.0	0.0	2.0	0.5
25	---	---	2.5	0.0	0.0	0.0	1.0	0.0	4.0	0.5	3.5	0.0
26	---	---	0.5	0.0	0.5	0.0	1.5	0.5	4.0	0.5	0.5	0.0
27	---	---	1.5	0.0	0.5	0.0	1.5	0.5	4.5	1.0	0.0	0.0
28	---	---	2.0	0.0	1.0	0.0	2.0	0.5	4.5	0.0	0.0	0.0
29	---	---	2.0	0.0	0.5	0.0	1.5	0.0	---	---	0.0	0.0
30	---	---	3.5	0.0	1.5	0.0	1.0	0.0	---	---	0.0	0.0
31	---	---	---	---	0.0	0.0	0.0	0.0	---	---	3.5	0.0
MONTH	---	---	7.5	0.0	4.5	0.0	2.5	0.0	4.5	0.0	5.5	0.0

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.5	0.0	14.0	4.0	15.0	4.5	---	---	---	---	17.5	11.0
2	4.5	0.0	---	---	12.0	6.0	22.5	10.0	---	---	16.5	9.0
3	5.5	0.0	---	---	17.5	6.5	22.0	10.5	20.5	14.0	14.0	8.5
4	5.5	0.5	---	---	16.5	8.0	22.5	10.5	20.5	10.0	17.0	9.0
5	6.5	0.5	---	---	19.5	8.0	22.0	10.5	20.0	9.0	13.5	9.0
6	6.5	0.5	---	---	20.5	9.0	20.5	11.0	20.0	8.5	14.0	10.5
7	7.0	0.5	---	---	20.5	9.0	22.5	11.0	19.5	9.0	12.5	10.0
8	7.5	0.0	---	---	21.5	9.5	23.0	12.5	19.5	9.5	10.5	8.5
9	7.5	0.5	---	---	21.0	9.5	22.5	12.0	17.5	7.5	13.0	6.5
10	8.0	0.0	11.5	3.5	21.0	9.0	18.5	13.0	19.0	8.0	12.0	5.5
11	11.5	0.5	12.5	3.0	22.0	8.5	16.0	10.5	19.0	8.0	10.0	5.5
12	13.5	0.5	14.5	3.5	22.0	9.5	22.0	8.5	---	---	13.0	4.0
13	13.5	0.5	15.5	4.0	22.5	10.5	23.0	10.5	---	---	13.0	5.5
14	13.5	1.5	16.0	5.5	22.0	9.5	22.0	10.0	---	---	14.5	7.5
15	12.0	2.0	15.0	5.0	22.5	10.5	22.0	10.5	---	---	13.0	4.0
16	10.0	2.0	15.0	5.0	23.5	11.5	21.0	10.5	---	---	14.0	5.0
17	9.0	2.0	16.5	5.0	23.5	12.5	22.0	10.5	---	---	11.5	5.5
18	11.0	2.0	15.0	6.0	24.0	12.5	20.5	11.5	---	---	10.0	6.5
19	7.5	2.0	17.0	6.0	22.5	12.5	19.5	12.0	---	---	12.0	4.0
20	7.5	1.5	15.5	6.0	22.0	12.5	17.0	12.5	---	---	13.5	5.0
21	8.0	2.0	18.0	5.5	23.5	11.5	17.5	10.5	---	---	14.0	5.5
22	12.5	2.0	17.0	7.0	22.5	12.0	19.0	10.5	---	---	14.5	6.0
23	12.5	2.5	19.0	8.0	21.5	11.5	21.0	11.0	---	---	14.5	6.0
24	11.5	2.0	19.0	8.0	20.5	9.5	22.0	12.0	---	---	14.0	6.0
25	9.0	2.0	18.0	7.5	20.0	7.5	---	---	---	---	15.0	6.5
26	10.5	1.0	18.0	7.0	---	---	---	---	---	---	15.0	6.5
27	13.0	2.0	17.0	6.5	---	---	---	---	19.0	9.0	15.0	7.0
28	13.0	3.5	15.0	6.5	---	---	---	---	18.5	9.5	14.0	7.0
29	10.5	3.5	13.5	5.5	---	---	---	---	17.5	9.0	12.5	5.0
30	14.0	3.0	15.5	4.0	---	---	---	---	17.0	10.5	13.5	6.5
31	---	---	13.0	7.0	---	---	---	---	18.5	10.5	---	---
MONTH	14.0	0.0	---	---	24.0	4.5	---	---	---	---	17.5	4.0

10339250 MARTIS CREEK AT STATE HIGHWAY 267, NEAR TRUCKEE, CA--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT					
30...	0935	9.8	3.5	6	.16
APR					
22...	1030	39	6.5	9	.95
JUN					
04...	1020	11	10.5	14	.42
AUG					
12...	1050	4.2	11.0	4	.05

10339380 MARTIS CREEK LAKE NEAR TRUCKEE, CA

LOCATION.--Lat 39°19'38", long 120°06'48", in NE 1/4 NW 1/4 sec.17, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, Tahoe National Forest, in control house at Martis Creek Dam, 2.0 mi upstream from mouth, and 3.5 mi east of Truckee.

DRAINAGE AREA.--39.6 mi^2.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--March to May 1972 (occasional readings only), June 1972 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

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

REMARKS.--Lake is formed by rolled-earthfill dam. Storage began Oct. 7, 1971. Usable capacity, 19,600 acre-ft between elevations 5,780 ft, bottom of intake tower, and 5,838 ft, crest of spillway. Dead contents, below elevation 5,780 ft, 775 acre-ft. Figures given herein, including extremes, represent total contents at 2400 hours. Reservoir is used for flood control, enhancement of fishery, and recreation.

COOPERATION.--Capacity tables were provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,700 acre-ft, May 11, 12, 1980, elevation, 5,815.16 ft; minimum since reservoir first filled, 768 acre-ft, Aug. 24, 1977, elevation, 5,779.88 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 890 acre-ft, Apr. 9, 10, elevation, 5,781.77 ft; minimum, 784 acre-ft, Aug. 8, elevation, 5,780.15 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

5,779	716	5,800	3,260
5,780	775	5,810	5,880
5,785	1,140	5,820	9,720
5,790	1,650		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	796	793	803	794	793	803	813	824	796	789	788	787
2	795	801	801	794	793	802	833	826	799	789	788	787
3	794	800	801	794	792	800	842	824	798	789	787	788
4	794	796	800	794	792	798	851	822	797	789	786	788
5	794	796	799	794	792	799	862	820	796	788	786	788
6	794	800	798	794	793	799	875	818	795	788	786	789
7	794	799	798	796	795	798	885	816	793	788	785	789
8	793	801	798	796	792	798	883	815	794	788	784	796
9	793	799	798	796	793	798	890	815	793	788	785	796
10	793	799	798	796	794	799	890	813	793	788	785	794
11	801	811	798	794	794	799	875	811	790	789	785	793
12	797	804	798	793	796	798	867	810	791	789	786	791
13	796	807	796	793	796	799	866	808	790	788	786	791
14	795	802	796	794	796	800	867	808	790	788	786	790
15	794	800	798	794	796	802	867	807	790	788	786	790
16	801	800	797	794	796	803	859	806	790	788	786	790
17	799	799	794	794	796	806	854	806	790	787	786	791
18	797	799	794	794	796	807	846	804	790	788	788	794
19	796	798	794	794	798	810	840	799	790	788	788	793
20	798	798	793	794	797	813	835	798	791	788	786	792
21	796	798	793	794	797	815	831	798	791	790	786	791
22	796	798	793	794	797	817	829	799	791	789	786	790
23	796	797	792	794	797	817	827	800	790	789	786	790
24	796	810	792	794	798	818	827	800	790	788	786	790
25	796	802	793	794	799	818	825	799	790	789	786	790
26	796	799	795	795	799	817	822	798	790	789	785	790
27	796	846	795	795	800	817	822	797	790	790	785	790
28	796	820	795	794	801	817	822	796	790	791	785	790
29	796	810	794	794	---	816	824	797	790	792	785	790
30	796	805	795	794	---	815	823	797	789	789	787	790
31	796	---	794	793	---	814	---	796	---	789	788	---
MAX	801	846	803	796	801	818	890	826	799	792	788	796
MIN	793	793	792	793	792	798	813	796	789	787	784	787
a	5780.33	5780.48	5780.31	5780.28	5780.41	5780.62	5780.76	5780.34	5780.23	5780.23	5780.21	5780.24
b	+2	+9	-11	-1	+8	+13	+9	-27	-7	0	-1	+2

CAL YR 1984 b -94
WTR YR 1985 b -4

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10339380 MARTIS CREEK LAKE NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.
CHEMICAL ANALYSES: Water years 1975 to current year.
SEDIMENT RECORDS: Water years 1975-76, 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ALKALINITY FIELD (MG/L AS CACO3)
OCT 30...	1115	138	8.8	8.0	615	2.5	10.6	111	69
APR 22...	1255	73	7.1	10.0	615	7.3	10.6	117	38
JUN 04...	1150	107	8.7	16.5	615	3.0	10.4	133	58
AUG 12...	1210	128	9.3	19.0	615	1.8	9.2	124	72

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	COPPER, DISSOLVED (UG/L AS CU)
OCT 30...	<.10	.020	.28	.30	--	.010	.010	3
APR 22...	<.10	.070	.23	.30	--	.030	.030	--
JUN 04...	<.20	.050	.15	.20	.40	.040	.020	6
AUG 12...	<.10	.050	.55	.60	--	.020	.010	2

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 30...	--	170	71	12	1	20	7	10	7
APR 22...	3	410	--	11	--	20	--	10	--
JUN 04...	4	260	83	9	6	30	9	10	30
AUG 12...	3	280	110	--	--	50	22	40	20

SUSPENDED SEDIMENT CONCENTRATION, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	TEMPERATURE (DEG C)	SEDIMENT, SUSPENDED (MG/L)
OCT 30...	1115	8.0	4
APR 22...	1255	10.0	6
JUN 04...	1150	16.5	23
AUG 12...	1210	19.0	4

< Actual value is known to be less than value shown.

10339400 MARTIS CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°19'44", long 120°07'00", in NE 1/4 NW 1/4 sec.17, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 0.2 mi downstream from Martis Creek Lake Dam, 1.8 mi upstream from mouth, and 3.5 mi east of Truckee.

DRAINAGE AREA.--39.9 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,730 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 10, 1972, at site 1.0 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Jan. 6 to Mar. 12. Records excellent except for period of estimated record, which are fair. Low and medium flow may be regulated and high flow completely regulated by Martis Creek Lake Dam (station 10339380) since Oct. 7, 1971.

AVERAGE DISCHARGE (unadjusted).--27 years, 26.8 ft^3/s, 19,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft^3/s, Feb. 1, 1963, gage height, 6.16 ft, site and datum then in use; minimum, 1.1 ft^3/s, July 19, 20, 1961. Maximum discharge since construction of Martis Creek Lake Dam in 1971, 648 ft^3/s, Apr. 2, 1974, gage height, 6.01 ft; minimum daily, 0.20 ft^3/s, Nov. 9-14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 170 ft^3/s Apr. 10, gage height, 3.53 ft; minimum daily, 4.2 ft^3/s, July 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	14	20	15	14	18	33	41	16	9.1	8.8	8.9
2	13	15	19	16	14	18	46	43	16	9.0	8.4	8.6
3	13	18	19	16	14	18	61	43	16	8.8	8.2	8.7
4	13	16	18	16	14	17	74	39	15	8.8	8.1	9.5
5	13	15	18	16	14	17	87	36	15	8.7	8.0	9.6
6	13	16	18	16	14	17	106	34	14	8.6	7.9	9.7
7	13	18	17	16	14	17	123	32	13	8.6	7.7	9.8
8	12	18	17	16	14	17	127	31	13	8.6	7.6	11
9	13	17	17	16	14	17	133	30	12	8.3	7.6	14
10	13	17	17	16	15	17	142	28	12	8.2	7.8	12
11	17	21	17	15	15	17	126	26	11	8.6	7.8	11
12	16	23	17	15	15	17	107	25	11	8.8	7.9	10
13	14	23	17	15	15	18	101	24	11	8.5	7.9	10
14	14	20	15	15	16	18	102	23	10	8.2	8.0	9.8
15	14	18	17	15	16	19	105	23	10	8.0	8.0	9.7
16	15	18	17	15	16	20	102	22	10	8.0	7.9	9.5
17	17	17	15	15	16	21	93	21	10	8.0	7.9	9.7
18	15	18	16	15	16	24	77	21	9.7	8.0	8.6	11
19	15	17	17	15	16	25	71	19	9.6	8.2	8.5	11
20	15	17	17	15	16	29	59	18	9.9	8.4	8.2	11
21	15	17	16	15	16	35	52	17	9.7	9.2	8.0	10
22	14	17	16	15	16	35	48	18	9.6	9.6	8.0	9.8
23	14	16	16	15	16	38	47	18	9.6	9.5	8.0	9.6
24	14	23	16	15	17	45	47	18	9.4	9.1	8.0	9.3
25	15	22	16	14	17	38	44	18	9.4	9.1	7.9	9.2
26	15	17	16	14	17	28	40	17	9.5	11	7.9	9.1
27	15	31	16	14	18	19	38	16	9.4	10	8.0	9.0
28	15	52	16	14	18	21	39	16	9.3	7.0	8.0	9.1
29	15	29	16	14	---	27	40	16	9.3	4.2	8.0	9.0
30	15	23	16	14	---	28	39	16	9.1	12	8.4	9.1
31	14	---	16	14	---	29	---	16	---	10	8.9	---
TOTAL	442	603	521	467	433	724	2309	765	338.5	270.1	249.9	297.7
MEAN	14.3	20.1	16.8	15.1	15.5	23.4	77.0	24.7	11.3	8.71	8.06	9.92
MAX	17	52	20	16	18	45	142	43	16	12	8.9	14
MIN	12	14	15	14	14	17	33	16	9.1	4.2	7.6	8.6
AC-FT	877	1200	1030	926	859	1440	4580	1520	671	536	496	590

CAL YR 1984 TOTAL 10924.0 MEAN 29.8 MAX 117 MIN 11 AC-FT 21670
WTR YR 1985 TOTAL 7420.2 MEAN 20.3 MAX 142 MIN 4.2 AC-FT 14720

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.
CHEMICAL ANALYSES: Water years 1975 to current year.
WATER TEMPERATURE: Water years 1975 to current year.
SEDIMENT DATA: Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1974 to current year.

INSTRUMENTATION.--Digital water-temperature recorder since October 1974.

REMARKS.--No record Dec. 4 to Jan. 3. Unpublished chemical-quality, water temperatures, and sediment data prior to October 1974, available at State office in Carson City, NV.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 24.0°C, on several days in 1977 and 1979; minimum recorded, 0.0°C, Feb. 16, 17, 1982.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 23.0°C, July 29; minimum recorded, 0.5°C, Feb. 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT 30...	1240	15	133	8.9	8.5	615	2.8	11.3	120
APR 22...	1415	48	82	7.1	7.5	615	7.2	10.8	112
JUN 04...	1335	15	113	8.4	15.0	615	2.8	9.8	121
AUG 12...	1300	7.8	127	9.4	19.0	615	2.1	10.2	137

DATE	ALKA-LINITY FIELD (MG/L AS CACO3)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (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)	COPPER, DIS-SOLVED (UG/L AS CU)
OCT 30...	70	<.10	.020	.28	.30	--	.010	.010	1
APR 22...	38	<.10	.060	.44	.50	--	.050	.060	1
JUN 04...	57	<.10	.040	.16	.20	--	.050	.010	2
AUG 12...	73	.20	.040	.36	.40	.60	.030	.020	1

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 30...	--	170	66	3	2	20	7	10	11
APR 22...	3	390	160	4	4	40	--	60	11
JUN 04...	3	250	69	6	1	40	10	10	21
AUG 12...	2	280	100	14	7	80	25	40	47

< Actual value is known to be less than value shown.

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	12.0	8.5	6.5	3.5	2.5	---	---	2.5	1.5	4.0	2.0
2	13.5	11.5	7.0	6.5	3.5	2.5	---	---	3.0	1.5	3.0	2.5
3	14.0	11.5	7.5	6.0	3.5	2.5	---	---	2.5	1.0	3.5	2.0
4	13.5	11.5	7.5	6.0	---	---	3.0	1.5	2.5	1.0	3.5	2.0
5	13.5	11.5	7.5	5.5	---	---	3.0	1.0	2.5	1.0	3.5	2.0
6	13.5	11.5	7.0	5.5	---	---	3.0	2.0	2.5	1.0	3.0	2.0
7	14.0	11.5	7.0	5.5	---	---	2.5	2.0	2.5	1.0	3.0	1.5
8	14.0	11.5	6.0	5.0	---	---	3.0	2.0	2.5	0.5	3.5	1.5
9	14.0	11.5	6.0	5.0	---	---	3.0	2.0	3.0	1.0	3.5	1.5
10	13.5	11.5	5.5	5.0	---	---	3.0	1.5	2.5	1.0	3.5	2.0
11	12.5	10.5	6.0	5.0	---	---	3.0	1.5	3.0	1.5	3.0	2.0
12	12.5	11.0	5.5	4.5	---	---	3.0	1.5	3.0	1.5	3.5	2.0
13	12.5	11.0	4.5	3.5	---	---	3.0	1.5	3.0	1.5	3.5	2.0
14	12.5	10.5	4.5	3.5	---	---	3.0	1.5	3.0	1.5	3.5	2.0
15	11.5	10.0	4.0	3.5	---	---	3.0	1.5	3.0	1.5	3.5	2.0
16	10.0	9.0	5.0	4.0	---	---	3.0	1.5	3.0	1.5	3.5	2.0
17	10.0	8.5	4.5	3.5	---	---	3.0	1.5	3.0	1.5	3.5	2.5
18	9.0	8.0	5.0	3.5	---	---	3.0	1.5	3.0	1.5	3.5	2.5
19	9.0	8.0	4.5	3.5	---	---	3.0	1.5	3.0	1.5	4.0	2.5
20	9.0	8.0	4.5	3.5	---	---	3.0	1.5	3.0	1.5	4.0	2.5
21	9.0	7.5	4.5	3.5	---	---	3.0	1.5	3.0	1.5	3.5	3.0
22	8.5	7.0	4.5	3.5	---	---	3.0	1.5	3.5	2.0	4.0	3.0
23	8.5	6.5	4.0	3.0	---	---	3.0	1.5	3.5	2.0	4.0	3.0
24	8.5	7.0	4.0	3.0	---	---	3.0	1.5	3.5	1.5	4.0	2.5
25	9.0	6.5	3.5	3.0	---	---	3.0	1.5	3.5	2.0	3.0	2.5
26	8.0	7.5	4.0	2.5	---	---	2.5	1.5	3.5	2.0	3.0	2.0
27	8.5	6.5	3.5	2.5	---	---	3.0	1.5	3.5	2.0	3.5	2.0
28	8.0	6.5	3.0	2.5	---	---	2.5	1.5	4.0	2.0	3.5	2.0
29	8.5	7.0	2.5	2.0	---	---	3.0	1.5	---	---	3.0	2.0
30	9.0	7.0	3.0	2.0	---	---	3.0	1.5	---	---	3.0	1.5
31	8.5	6.5	---	---	---	---	2.5	1.5	---	---	3.0	1.5
MONTH	14.0	6.5	8.5	2.0	---	---	---	---	4.0	0.5	4.0	1.5

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.5	1.5	13.0	10.5	15.0	12.5	20.0	15.5	19.5	16.0	19.0	16.0
2	2.5	1.5	14.0	11.5	14.0	12.5	20.0	16.0	19.0	15.5	18.0	15.5
3	2.5	1.5	13.5	11.5	15.0	12.0	20.0	16.0	19.5	15.5	17.5	15.0
4	3.0	2.0	13.0	11.5	15.5	13.0	20.0	16.5	19.5	15.5	18.0	15.0
5	3.0	2.5	14.0	11.5	16.0	13.5	20.5	16.0	20.0	15.5	16.5	15.0
6	3.5	2.5	14.0	12.0	17.5	14.0	20.5	16.5	20.0	16.0	16.5	15.0
7	3.5	2.5	14.0	12.5	18.5	14.5	21.0	16.5	20.0	16.0	15.5	14.5
8	4.0	3.0	13.5	12.0	18.0	15.0	21.0	17.5	20.0	16.0	15.0	14.0
9	4.0	3.0	13.0	12.0	18.5	15.5	21.0	16.5	19.5	15.5	14.5	13.0
10	4.5	2.5	13.0	11.0	19.0	15.5	20.5	17.5	20.0	15.5	15.0	12.5
11	5.0	4.0	12.5	11.0	19.5	15.5	19.0	17.5	19.5	15.5	13.5	12.0
12	5.0	4.0	12.0	10.5	20.0	16.0	20.5	17.0	19.5	15.0	14.5	11.5
13	7.5	3.5	14.0	10.5	20.0	16.5	21.0	17.0	19.5	15.0	14.5	12.0
14	10.5	7.0	14.0	12.0	20.5	16.5	21.0	17.0	19.5	15.5	15.0	12.0
15	10.5	8.5	13.5	12.0	20.5	17.0	21.0	17.0	19.5	15.5	15.0	11.5
16	9.0	8.0	14.5	11.5	21.0	17.5	21.0	17.0	19.5	15.5	14.5	11.5
17	9.0	8.0	15.0	12.5	21.0	17.5	21.5	16.5	19.5	15.5	14.5	11.5
18	9.5	7.5	16.0	13.0	21.5	18.0	21.5	17.0	19.0	15.5	13.5	11.5
19	8.5	7.5	15.5	13.5	21.5	17.5	21.0	17.5	19.0	15.0	13.5	11.0
20	7.5	6.5	15.5	13.5	21.0	18.0	19.5	16.0	18.5	15.0	13.5	11.0
21	7.0	6.5	16.0	13.0	21.0	17.5	20.0	17.5	18.5	15.0	14.0	11.0
22	8.0	6.0	16.0	13.5	21.5	18.0	20.0	17.0	19.0	14.5	14.0	11.5
23	9.5	7.0	17.0	14.0	22.0	18.0	20.5	17.0	19.0	14.5	14.5	11.5
24	8.5	7.5	17.5	14.5	21.0	16.5	20.5	17.0	19.0	15.0	14.5	11.5
25	8.0	7.5	18.0	15.0	20.5	17.0	21.0	17.0	19.5	15.0	14.5	11.5
26	8.0	7.0	18.0	15.5	20.5	16.5	20.5	18.0	20.0	15.5	15.0	12.0
27	10.0	7.0	18.0	15.5	20.5	16.5	20.5	17.0	20.0	16.0	15.0	12.0
28	11.0	8.5	17.5	15.0	20.0	17.0	21.5	16.0	19.5	16.0	15.0	12.0
29	11.0	9.0	15.5	13.5	20.0	16.5	23.0	15.0	20.0	15.5	14.5	12.0
30	12.0	9.5	15.5	13.0	20.0	16.0	20.0	15.5	19.0	16.0	14.5	12.0
31	---	---	15.0	13.0	---	---	19.5	17.0	19.5	16.0	---	---
MONTH	12.0	1.5	18.0	10.5	22.0	12.0	23.0	15.0	20.0	14.5	19.0	11.0

10339400 MARTIS CREEK NEAR TRUCKEE, CA--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT					
30...	1240	15	8.5	5	.20
APR					
22...	1415	48	7.5	8	1.0
JUN					
04...	1335	15	15.0	16	.65
AUG					
12...	1300	7.8	19.0	13	.27

10340300 PROSSER CREEK RESERVOIR NEAR TRUCKEE, CA

LOCATION (REVISED).--Lat 39°22'48", long 120°08'12", in NW 1/4 SW 1/4 sec.30, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, in control house on Prosser Creek Dam on Prosser Creek, 1.4 mi upstream from mouth, and 4.2 mi northeast of Truckee.

DRAINAGE AREA.--50.3 mi^2.

PERIOD OF RECORD.--January 1963 to current year. Prior to October 1976, published as "near Boca."

GAGE.--Nonrecording gage read three times weekly. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REVISED RECORDS.--WDR CA-76-3: 1975. WDR CA-79-3: Drainage area.

REMARKS.--Reservoir is formed by rolled-earth and rockfill dam. Storage began Jan. 30, 1963. Usable capacity, 28,641 acre-ft between elevations, 5,660.6 ft, top of inactive contents, and 5,741.2 ft, crest of spillway. Inactive contents, 1,201 acre-ft, includes 83 acre-ft dead contents below elevation 5,637.0 ft. Figures given herein represent total contents at 0800 hours. Reservoir is used for flood control, enhancement of fishery, and recreation.

COOPERATION.--Gage readings and capacity table were provided by Bureau of Reclamation.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 32,269 acre-ft, June 1, 1973, elevation, 5,744.33 ft; minimum since reservoir first filled, 66 acre-ft, Oct. 10-12, 1983, elevation, 5,635.75 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 29,918 acre-ft, June 19, elevation, 5,741.30 ft; minimum, 9,471 acre-ft, Feb. 10, elevation, 5,702.62 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	5,722.00	17,671	---
Oct. 31.....	5,705.30	10,385	-7,286
Nov. 30.....	5,703.30	9,696	-689
Dec. 31.....	5,703.35	9,713	+17
CAL YR 1984.....	--	--	-471
Jan. 31.....	5,703.04	9,608	-105
Feb. 28.....	5,704.08	9,962	+354
Mar. 31.....	5,703.78	9,856	-106
Apr. 30.....	5,721.40	17,360	+7,504
May 31.....	5,738.15	27,614	+10,254
June 30.....	5,737.14	26,901	-713
July 31.....	5,720.23	16,759	-10,142
Aug. 31.....	5,719.02	16,145	-614
Sept. 30.....	5,710.60	12,389	-3,756
WTR YR 1985.....	--	--	-5,282

10340500 PROSSER CREEK BELOW PROSSER CREEK DAM, NEAR TRUCKEE, CA

LOCATION.--Lat 39°22'24", long 120°07'50", in NW 1/4 NE 1/4 sec.31, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 300 ft downstream from Station Creek, 0.5 mi downstream from Prosser Creek Dam, 0.9 mi upstream from mouth, and 4.2 mi northeast of Truckee.

DRAINAGE AREA.--52.9 mi^2.

PERIOD OF RECORD.--October 1902 to June 1903 (gage heights only), October 1942 to December 1950, June 1951 to current year. Prior to October 1976, published as "near Boca." Monthly discharge only for October 1942 to December 1950, published in WSP 1734. Records for April 1889 to November 1890, published in the 11th and 12th Annual Reports, Part 2, have been found to be unreliable and should not be used.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,602.31 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). See WSP 2127 for history of changes prior to September 1956. October 1956 to May 1976, water-stage recorder at site 0.8 mi downstream at datum 29.69 ft lower.

REMARKS.--Estimated daily discharges: Sept. 17-30. Records good including estimated period. Flow regulated by Prosser Creek Dam since Jan. 31, 1963.

AVERAGE DISCHARGE (adjusted for change in contents in Prosser Creek Reservoir since 1963).--42 years (water years 1943-50, 1952-85), 90.1 ft^3/s, 65,280 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (water years 1943-85).--Maximum discharge, 4,560 ft^3/s Dec. 23, 1955, gage height, 10.13 ft, present datum, from rating curve extended above 910 ft^3/s on basis of slope-area measurement of peak flow; maximum gage height, 11.0 ft from floodmarks, present datum, Nov. 20, 1950; minimum discharge, 0.4 ft^3/s, July 18, 1961, result of work on dam upstream. Maximum discharge since construction of Prosser Creek Dam in 1963, 1,610 ft^3/s, Dec. 25, 1964, gage height, 6.28 ft; minimum daily, 0.02 ft^3/s, Jan. 2, 1975, result of temporary closing of Prosser Creek Dam for spillway maintenance.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 267 ft^3/s, Apr. 10, gage height, 4.14 ft; minimum daily, 9.5 ft^3/s, Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	10	11	37	35	39	82	15	148	200	75	11
2	139	50	11	37	35	39	83	15	148	201	37	11
3	106	76	50	37	35	39	84	15	68	203	12	11
4	84	76	76	38	35	39	85	15	14	204	12	11
5	101	106	37	38	35	39	127	15	14	205	12	11
6	112	126	11	38	35	39	154	15	14	206	12	11
7	112	73	50	24	35	39	155	15	14	207	12	11
8	130	39	77	14	36	39	209	15	14	207	12	12
9	140	76	78	14	35	39	247	15	14	206	12	12
10	158	100	38	14	26	39	250	15	14	212	12	12
11	170	101	11	14	12	39	247	15	14	214	12	34
12	169	102	11	14	12	39	247	15	14	213	12	50
13	168	102	11	14	12	40	247	15	14	211	12	86
14	167	50	11	28	12	40	247	15	14	208	12	113
15	150	9.5	12	36	12	40	112	15	14	206	12	115
16	139	19	12	36	12	40	16	15	14	204	12	115
17	139	26	25	36	12	40	84	15	15	202	12	115
18	137	26	34	36	12	64	133	15	56	200	12	114
19	137	51	34	36	28	80	133	15	134	200	12	114
20	137	68	35	36	39	80	133	15	131	198	12	114
21	136	34	35	36	40	81	134	15	142	197	12	113
22	61	11	35	35	40	80	67	15	150	172	12	113
23	11	11	35	35	40	81	15	15	150	79	12	113
24	11	12	36	35	40	81	15	15	149	79	12	112
25	11	11	36	35	40	81	15	15	171	80	12	112
26	126	63	36	35	39	80	15	15	192	79	12	112
27	199	103	37	35	39	80	15	15	197	78	11	111
28	199	102	37	35	40	79	15	15	198	78	11	111
29	197	100	37	35	---	79	15	15	198	77	11	111
30	194	48	37	35	---	79	15	15	198	76	11	110
31	82	---	37	35	---	80	---	83	---	76	11	---
TOTAL	3961	1781.5	1033	963	823	1773	3396	533	2627	5178	455	2201
MEAN	128	59.4	33.3	31.1	29.4	57.2	113	17.2	87.6	167	14.7	73.4
MAX	199	126	78	38	40	81	250	83	198	214	75	115
MIN	11	9.5	11	14	12	39	15	15	14	76	11	11
AC-FT	7860	3530	2050	1910	1630	3520	6740	1060	5210	10270	902	4370

CAL YR 1984	TOTAL	38308.5	MEAN	105	MAX	405	MIN	9.5	AC-FT	75980	MEAN a	104	AC-FT a	75510
WTR YR 1985	TOTAL	24724.5	MEAN	67.7	MAX	250	MIN	9.5	AC-FT	49040	MEAN a	60.4	AC-FT a	43760

a Adjusted for change in contents in Prosser Creek Reservoir.

10343000 INDEPENDENCE CREEK NEAR TRUCKEE, CA

LOCATION (REVISED).--Lat 39°27'24", long 120°17'10", in SW 1/4 NW 1/4 sec.35, T.19 N., R.15 E., Sierra County, Hydrologic Unit 16050102, on left bank 0.4 mi downstream from Independence Lake outlet, and 10.5 mi northwest of Truckee.

DRAINAGE AREA.--8.10 mi^2.

PERIOD OF RECORD.--November 1902 to September 1907, November 1909 to June 1910, August 1968 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,940 ft above National Geodetic Vertical Datum of 1929, from topographic map. July 1, 1904, to June 30, 1910, nonrecording gage 75 ft downstream from Independence Lake outlet; prior to July 1, 1904, nonrecording gage 600 ft downstream at approximately same datum.

REMARKS.--Estimated daily discharges: Feb. 8-11, Mar. 26-28. Records good including estimated periods. Flow regulated by dam at outlet of Independence Lake, usable capacity, 17,500 acre-ft.

AVERAGE DISCHARGE (unadjusted).--22 years (water years 1903-7, 1969-85), 27.9 ft^3/s, 20,210 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 291 ft^3/s, Dec. 20, 1981, gage height, 6.12 ft; no flow Sept. 28 to Nov. 10, 1905, June 1, 1906.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65 ft^3/s, May 27, gage height, 3.46 ft; minimum daily, 1.3 ft^3/s, Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	4.6	4.9	4.6	5.6	5.6	5.9	11	29	8.1	6.4	6.3
2	14	4.7	4.8	4.6	5.6	5.6	6.0	11	21	8.0	6.4	6.1
3	3.6	4.6	4.6	4.6	5.6	5.6	6.1	9.9	23	7.7	6.4	6.1
4	2.9	4.6	4.6	5.0	5.6	5.7	6.1	9.4	24	7.4	6.5	6.0
5	1.9	4.6	4.9	5.3	5.6	5.6	6.3	12	27	7.2	5.6	6.0
6	1.6	4.6	4.9	5.3	5.6	5.7	6.6	30	29	6.8	5.6	6.0
7	1.6	4.6	4.9	5.3	5.6	5.9	6.9	35	32	6.8	5.6	6.0
8	1.3	4.6	4.7	5.3	5.6	5.7	7.0	38	33	6.8	5.6	6.1
9	2.4	4.6	4.9	5.3	5.6	5.6	7.5	39	35	6.8	5.6	6.0
10	6.0	4.6	4.9	5.4	5.6	5.6	7.9	40	36	6.8	5.5	6.0
11	6.1	4.9	4.9	5.6	5.6	5.6	8.3	40	36	6.6	5.6	6.0
12	6.3	4.7	4.9	5.6	5.6	5.6	8.6	40	36	6.4	5.6	6.0
13	5.3	4.7	4.9	5.6	5.6	5.6	9.2	42	35	6.5	5.6	6.0
14	4.9	4.6	4.7	5.6	5.9	5.6	9.6	43	34	6.5	5.6	6.0
15	4.7	4.6	4.9	5.5	5.6	5.6	10	45	33	6.6	5.6	6.0
16	4.6	4.6	4.8	5.5	5.6	5.6	9.8	46	32	6.4	5.5	6.0
17	4.6	4.6	4.8	5.6	5.6	5.6	9.0	47	31	6.8	5.5	6.0
18	4.6	4.6	4.6	5.6	5.6	5.7	9.1	49	29	6.7	5.7	6.0
19	4.6	4.6	4.6	5.6	5.6	5.6	8.6	51	28	6.5	5.6	6.0
20	4.6	4.6	4.6	5.6	5.6	5.6	8.1	53	26	6.8	5.7	6.0
21	4.6	4.6	4.6	5.6	5.6	5.6	8.1	53	25	6.8	5.9	5.9
22	4.6	4.6	4.6	5.6	5.6	5.6	8.3	55	24	6.6	6.0	5.7
23	4.6	4.6	4.6	5.6	5.6	5.7	9.1	57	16	7.1	6.0	5.6
24	4.6	4.7	4.6	5.6	5.6	5.7	9.1	60	10	7.3	6.0	5.6
25	4.6	4.6	4.6	5.6	5.6	5.6	8.7	59	10	7.2	6.2	5.6
26	4.6	4.6	4.6	5.6	5.6	5.6	8.6	42	10	7.4	6.2	5.6
27	4.6	4.8	4.6	5.6	5.6	5.6	9.5	43	9.6	7.2	6.3	5.6
28	4.6	4.9	4.6	5.6	5.6	5.6	9.9	58	9.6	6.9	6.3	5.6
29	4.6	4.9	4.6	5.6	---	5.6	9.6	54	9.6	6.8	6.3	5.6
30	4.6	4.9	4.6	5.6	---	5.6	10	50	9.2	6.4	6.4	5.6
31	4.6	---	4.6	5.6	---	5.7	---	47	---	6.4	6.4	---
TOTAL	160.2	139.8	146.4	168.1	157.1	174.6	247.5	1269.3	742.0	214.3	183.2	177.0
MEAN	5.17	4.66	4.72	5.42	5.61	5.63	8.25	40.9	24.7	6.91	5.91	5.90
MAX	24	4.9	4.9	5.6	5.9	5.9	10	60	36	8.1	6.5	6.3
MIN	1.3	4.6	4.6	4.6	5.6	5.6	5.9	9.4	9.2	6.4	5.5	5.6
AC-FT	318	277	290	333	312	346	491	2520	1470	425	363	351

CAL YR 1984 TOTAL 9518.3 MEAN 26.0 MAX 182 MIN 1.3 AC-FT 18880
WTR YR 1985 TOTAL 3779.5 MEAN 10.4 MAX 60 MIN 1.3 AC-FT 7500

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA

LOCATION.--Lat 39°25'54", long 120°14'13", in NE 1/4 NE 1/4 sec.7, T.18 N., R.16 E., Nevada County, Hydrologic Unit 16050102, on left bank 2.2 mi upstream from bridge on State Highway 89, and 7.5 mi north of Truckee.

DRAINAGE AREA.--10.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,320 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 2, 1953, nonrecording gage at site 100 ft upstream at different datum.

REMARKS.--Estimated daily discharges: Dec. 18, 31, Jan. 1, 4, 11-13, 22-25, 31, Feb. 3, 8-10, Mar. 8, 27-29 Records good including estimated periods. No storage or diversion upstream from station.

AVERAGE DISCHARGE.--32 years, 13.1 ft^3/s, 9,490 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 765 ft^3/s, Feb. 1, 1963, gage height, 4.64 ft from floodmarks, from rating curve extended above 160 ft^3/s on basis of slope-area measurement at gage height 4.28 ft; minimum, 0.6 ft^3/s, Aug. 8, 1960, Aug. 7, 1961, result of temporary regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 15	1700	*72	*2.81	May 2	1730	56	2.66

Minimum daily, 2.5 ft^3/s, Aug. 26-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	5.2	6.8	5.3	4.7	6.1	9.2	38	12	3.8	2.8	2.7
2	5.0	11	6.6	5.3	4.9	6.0	12	44	14	3.7	2.8	2.8
3	4.7	10	6.5	5.1	4.7	5.8	14	39	12	3.7	2.9	2.8
4	4.6	7.1	6.3	5.1	4.7	5.7	16	35	11	3.6	2.7	2.9
5	4.6	6.4	6.3	5.1	4.7	5.7	18	34	11	3.5	2.7	2.9
6	4.6	8.4	6.1	5.1	4.6	5.7	21	35	10	3.5	2.8	2.9
7	4.4	7.6	6.1	5.1	4.7	5.6	24	34	9.6	3.5	2.8	3.2
8	4.4	7.2	6.1	5.1	5.0	5.5	26	31	9.3	3.4	2.7	6.2
9	4.4	6.8	6.1	5.1	5.1	5.5	29	29	9.0	3.3	2.8	5.4
10	4.4	6.6	6.1	5.1	5.1	5.5	32	27	8.6	3.3	2.8	4.0
11	11	15	6.1	5.1	5.0	5.4	32	25	8.2	3.5	2.7	3.7
12	6.0	10	6.1	5.0	5.0	5.4	33	24	8.0	3.4	2.7	3.4
13	5.8	9.2	6.1	4.8	5.0	5.6	40	24	7.7	3.2	2.7	3.2
14	5.2	8.0	5.9	4.8	5.1	5.7	45	24	7.3	3.1	2.7	3.1
15	5.1	7.6	6.1	4.9	5.4	5.9	51	22	7.0	3.0	2.7	3.1
16	5.6	7.3	6.1	4.9	5.6	6.2	47	21	6.8	3.0	2.7	3.1
17	6.0	7.1	6.1	4.8	5.6	6.5	39	20	6.6	2.9	2.8	3.6
18	5.7	6.9	5.9	4.9	5.6	6.6	38	20	6.1	2.8	2.9	4.6
19	6.6	6.6	5.7	4.9	5.7	6.6	33	20	5.9	2.8	2.8	3.7
20	6.5	6.6	5.7	5.0	5.7	7.5	28	19	5.7	3.0	2.7	3.3
21	5.9	6.6	5.5	4.9	5.5	7.6	26	18	5.3	3.5	2.7	3.2
22	5.7	6.4	5.5	4.8	5.5	7.3	27	18	5.1	3.3	2.7	3.1
23	5.5	6.3	5.5	4.7	5.6	7.9	31	18	4.9	3.0	2.7	3.1
24	5.5	6.6	5.5	4.7	5.7	7.9	30	18	4.8	2.8	2.7	3.1
25	5.5	6.6	5.5	4.7	5.8	7.2	27	17	4.7	3.1	2.6	3.0
26	5.9	6.3	5.5	4.7	5.9	5.9	25	16	4.5	3.5	2.5	3.0
27	6.1	8.1	5.5	4.9	6.0	5.7	27	16	4.3	3.1	2.5	3.0
28	5.6	8.8	5.3	4.9	6.0	5.5	32	15	4.2	2.8	2.5	3.0
29	5.8	7.4	5.4	4.9	---	5.9	32	15	4.1	2.7	2.6	3.2
30	5.5	7.1	5.3	4.9	---	6.7	34	14	3.8	2.7	2.9	3.3
31	5.3	---	5.3	4.7	---	7.6	---	13	---	2.8	2.8	---
TOTAL	172.4	230.8	182.6	153.3	147.9	193.7	878.2	743	221.5	99.3	84.4	101.6
MEAN	5.56	7.69	5.89	4.95	5.28	6.25	29.3	24.0	7.38	3.20	2.72	3.39
MAX	11	15	6.8	5.3	6.0	7.9	51	44	14	3.8	2.9	6.2
MIN	4.4	5.2	5.3	4.7	4.6	5.4	9.2	13	3.8	2.7	2.5	2.7
AC-FT	342	458	362	304	293	384	1740	1470	439	197	167	202

CAL YR 1984 TOTAL 6242.5 MEAN 17.1 MAX 78 MIN 4.2 AC-FT 12380
WTR YR 1985 TOTAL 3208.7 MEAN 8.79 MAX 51 MIN 2.5 AC-FT 6360

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1981 to current year.
SEDIMENT RECORDS: Water years 1981 to current year.

COOPERATION.--Suspended sediment samples were provided by University of California at Berkeley.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT					
15...	0810	5.1	2.5	4	.06
22...	0800	5.5	1.0	3	.04
29...	0900	5.7	4.5	4	.06
NOV					
05...	0745	6.1	1.0	3	.05
21...	1610	6.6	2.0	4	.07
DEC					
03...	1100	6.4	2.0	2	.03
11...	1310	6.1	2.5	2	.03
21...	1130	5.5	0.0	2	.03
JAN					
14...	1130	4.7	0.5	2	.03
30...	1130	4.9	0.0	2	.03
FEB					
25...	1215	5.7	2.5	4	.06
MAR					
19...	1120	6.1	3.0	2	.03
APR					
09...	1045	22	3.0	4	.24
16...	1500	52	5.0	11	1.5
22...	1645	34	7.0	7	.64
26...	1600	26	7.5	3	.21
27...	1600	32	9.5	8	.69
29...	1400	29	7.5	5	.39
MAY					
02...	1515	52	10.0	17	2.4
04...	1535	35	11.0	4	.38
07...	1445	32	11.0	4	.35
JUN					
19...	0600	6.1	11.0	5	.08
25...	1345	4.7	15.0	3	.04
JUL					
10...	1250	3.5	16.5	2	.02
29...	1530	2.5	16.5	3	.02
AUG					
06...	1550	2.8	16.5	3	.02
SEP					
05...	1030	2.9	9.0	2	.02

10344300 STAMPEDE RESERVOIR NEAR TRUCKEE, CA

LOCATION.--Lat 39°28'16", long 120°06'10", in NW 1/4 NW 1/4 sec.28, T.19 N., R.17 E., Sierra County, Hydrologic Unit 16050102, Tahoe National Forest, in control house near base of spillway of Stampede Dam on Little Truckee River, 0.2 mi upstream from Worn Mill Canyon, and 11.0 mi northeast of Truckee.

DRAINAGE AREA.--136 mi^2.

PERIOD OF RECORD.--August 1969 to current year. August 1969 to September 1977 (monthend elevations and contents only). Prior to October 1976, published as "near Boca."

GAGE.--Nonrecording gage read three times weekly. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by rolled-earth and rockfill dam. Storage began Aug. 1, 1969. Total capacity, 226,500 acre-ft at elevation 5,948.7 ft, spillway crest. Inactive contents, 5,010 acre-ft, includes 660 acre-ft dead contents below elevation 5,798.3 ft. Figures given herein, including extremes, represent total contents at 0800 hours. Reservoir is used for flood control, municipal water supply, enhancement of fishery, and recreation.

COOPERATION.--Records and capacity table were provided by Bureau of Reclamation, not rounded to Geological Survey standards.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 254,493 acre-ft, June 1, 1983, elevation, 5,956.55 ft; minimum since reservoir first filled, 30,772 acre-ft, Jan. 31, Feb. 1, 1978, elevation, 5,853.60 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 195,910 acre-ft, Mar. 20, elevation, 5,939.46 ft; minimum, 118,460 acre-ft, Sept. 30, elevation, 5,911.13 ft.

Capacity table (elevation, in feet, and contents in acre-feet)

5,850	27,915	5,900	94,535
5,855	31,951	5,910	115,865
5,860	36,470	5,920	140,141
5,865	41,505	5,930	167,355
5,870	47,204	5,940	197,630
5,875	53,295	5,950	231,005
5,880	60,185	5,960	267,386
5,890	76,008		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191246	190123	192813	192908	192908	193853	193506	179815	128534	124909	122660	120717
2	191246	190060	192844	192908	192908	193853	191783	178270	127391	124861	122530	120694
3	191246	190143	192876	192908	192908	193853	190060	176725	126472	124813	122459	120682
4	191246	190226	192892	192908	192908	193853	188557	175180	125725	124753	122388	120671
5	191246	190310	192908	192908	192908	193853	187055	173635	125365	124694	122317	120671
6	191246	190310	192892	192908	192908	193853	185881	172092	125293	124630	122246	120671
7	191246	190310	192876	192908	193136	194422	184707	170671	125461	124566	122175	120671
8	191246	190435	192876	192908	193364	194990	183533	169251	125669	124503	122069	120671
9	191027	190559	192876	192908	193592	195075	183686	167732	125877	124431	121963	120671
10	190809	190663	192876	192908	193821	195160	183838	166213	126086	124359	121831	120671
11	190809	190767	192876	192908	193821	195244	185078	164565	126231	124287	121699	120671
12	190809	190871	192876	192908	193821	195276	186317	162917	126375	124216	121567	120671
13	190788	191043	192876	192908	193821	195307	187689	161269	126399	124145	121553	120671
14	190767	191215	192876	192908	193821	195355	189061	159543	126423	124074	121539	120671
15	190746	192046	192876	192908	193853	195402	190434	157818	126375	124002	121445	120671
16	190715	192876	192892	192908	193853	195508	191718	156086	126327	123918	121351	120671
17	190684	192489	192908	192908	193853	195614	193002	154355	126279	123835	121257	120671
18	190652	192102	192908	192908	193853	195720	193412	152625	126242	123787	121163	120671
19	190621	191715	192908	192908	193853	195815	193821	150895	126206	123740	121069	119832
20	190590	191731	192908	192908	193853	195910	193318	149165	126206	123669	120975	118993
21	190559	191747	192908	192908	193853	195751	192815	147463	126206	123598	120882	118946
22	190528	191747	192908	192908	193853	195593	192311	145762	126198	123526	120823	118899
23	190465	191747	192908	192908	193853	195434	191090	144122	126190	123454	120765	118854
24	190403	191883	192908	192908	193853	195275	189687	142483	126182	123383	120765	118773
25	190387	192019	192908	192908	193853	195117	188325	140654	125797	123347	120765	118722
26	190372	192154	192908	192908	193853	195016	186963	138825	125413	123312	120765	118657
27	190372	192468	192908	192908	193853	194915	185678	136995	125257	123209	120765	118622
28	190372	192782	192908	192908	193853	194814	184393	134798	125101	123106	120765	118568
29	190372	192782	192908	192908	---	194713	183108	133245	125037	123003	120765	118514
30	190294	192782	192908	192908	---	194611	181461	131623	124973	122896	120765	118460
31	190216	---	192908	192908	---	194010	---	130002	---	122790	120741	---
MAX	191246	192876	192908	192908	193853	195910	193821	179815	128534	124909	122660	120717
MIN	190216	190060	192813	192908	192908	193853	181461	130002	124973	122790	120741	118460
a	5937.65	5938.47	5938.51	5938.51	5938.81	5938.86	5934.80	5915.97	5913.89	5912.98	5912.11	5911.13
b	-1406	+2566	+126	0	+945	+157	-12549	-51459	-5029	-2183	-2049	-2281

CAL YR 1984 b -12568
WTR YR 1985 b -73162

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR TRUCKEE, CA

LOCATION.--Lat 39°26'09", long 120°05'00", in SW 1/4 SW 1/4 sec.3, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 1 mi upstream from Boca Reservoir, 1.5 mi upstream from Dry Creek, 3.0 mi downstream from Stampede Dam, and 5.5 mi northeast of Truckee.

DRAINAGE AREA.--146 mi^2.

PERIOD OF RECORD.--June 1903 to October 1910, September 1939 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734. Published as "at Pine Station", June 1903 to December 1907, as "at Starr", January 1908 to October 1910, and as "near Boca", September 1939 to September 1976.

REVISED RECORDS.--WSP 1564: 1903-4, 1906-7, 1910, drainage area at site used in 1903-7.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,618.67 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). June 1903 to October 1910, nonrecording gages at different sites and datums.

REMARKS.--Estimated daily discharges: Dec. 24, 27, 29, 31, Jan. 1, 3, 4, 12-14, 16, 17, 22-25, 30, 31, Feb. 1, 3, 5-11, 21, Mar. 8, 9. Records excellent except periods of ice effect listed above which are good. Flow regulated by Independence Lake, capacity, 17,500 acre-ft, one transbasin diversion to Sierra Valley, and Stampede Reservoir (station 10344300) since 1969.

AVERAGE DISCHARGE (adjusted for change in contents in Stampede Reservoir since 1969).--53 years (water years 1904-10, 1940-85), 194 ft^3/s, 140,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft^3/s, Feb. 1, 1963, gage height, 9.00 ft, from rating curve extended above 1,600 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.30 ft^3/s, Sept. 16-21, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft^3/s, Apr. 29, 30, May 1, 2, 4, gage height, 2.90 ft; minimum daily, 20 ft^3/s Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	42	44	42	44	48	871	1320	793	40	43	39
2	43	44	44	42	44	48	1080	1330	689	40	43	38
3	42	43	44	42	44	48	1090	1320	572	40	43	39
4	42	42	44	42	44	47	1100	1330	423	39	43	39
5	42	42	43	42	44	47	1100	1320	298	39	43	39
6	42	44	42	43	44	47	1100	1240	149	40	43	39
7	43	43	42	44	44	47	1100	1160	61	41	42	40
8	42	44	42	44	44	48	799	1160	58	41	42	41
9	42	44	42	44	44	47	170	1160	57	41	41	40
10	42	43	43	43	44	47	85	1160	57	41	42	40
11	44	45	44	42	44	47	80	1150	57	41	42	41
12	42	44	42	42	44	47	76	1150	83	41	42	40
13	42	45	44	42	45	48	75	1200	122	41	42	40
14	42	44	44	42	45	48	75	1250	122	41	41	40
15	42	44	44	42	45	49	169	1250	122	41	41	40
16	44	44	44	42	45	50	279	1230	123	41	40	34
17	44	44	44	42	45	50	313	1220	113	42	41	20
18	43	44	42	42	45	52	372	1270	108	42	40	40
19	44	43	42	44	46	53	511	1270	99	43	40	40
20	43	42	42	44	45	137	668	1240	85	43	40	40
21	42	43	42	44	45	226	643	1220	84	43	40	40
22	42	43	42	44	46	225	772	1210	85	43	40	40
23	42	42	42	44	46	229	1070	1210	84	42	40	40
24	42	45	42	44	47	228	1090	1210	85	42	40	41
25	42	44	42	44	47	226	1010	1260	84	42	40	41
26	42	43	44	44	47	224	1010	1290	84	42	39	41
27	42	48	44	44	47	224	1000	1280	84	43	40	41
28	42	47	44	44	48	222	1000	1230	66	43	40	41
29	42	44	43	44	---	222	1160	1100	41	43	39	41
30	42	44	43	44	---	340	1320	998	40	43	39	41
31	42	---	42	44	---	556	---	911	---	43	39	---
TOTAL	1316	1313	1332	1336	1262	3977	21188	37649	4928	1287	1270	1176
MEAN	42.5	43.8	43.0	43.1	45.1	128	706	1214	164	41.5	41.0	39.2
MAX	44	48	44	44	48	556	1320	1330	793	43	43	41
MIN	42	42	42	42	44	47	75	911	40	39	39	20
AC-FT	2610	2600	2640	2650	2500	7890	42030	74680	9770	2550	2520	2330

CAL YR 1984 TOTAL 80037 MEAN 219 MAX 1720 MIN 39 AC-FT 158800 MEAN a 201 AC-FT a 146200
WTR YR 1985 TOTAL 78034 MEAN 214 MAX 1330 MIN 20 AC-FT 154800 MEAN a 113 AC-FT a 81640

a Adjusted for change in contents in Stampede Reservoir.

10344490 BOCA RESERVOIR NEAR TRUCKEE, CA

LOCATION.--Lat 39°23'20", long 120°05'43", in NE 1/4 NW 1/4 sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, in control house at Boca Dam on Little Truckee River 1,800 ft upstream from mouth, and 6.3 mi northeast of Truckee.

DRAINAGE AREA.--172 mi^2.

PERIOD OF RECORD.--December 1938 to current year. Prior to October 1976 published as "at Boca." Month end contents only for December 1938 to September 1957, published in WSP 1734.

REVISED RECORDS.--WSP 1634: Drainage area.

GAGE.--Pressure gage with mercury column read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by earthfill, rock-faced dam. Storage began Dec. 8, 1938. Usable capacity, 40,868 acre-ft between elevations 5,521 ft, outlet sill, and 5,605 ft, top of spillway gates. Elevation of spillway (gate open) is 5,589.01 ft. Dead contents, 241 acre-ft. Records, including extremes, represent usable contents at 0800 hours. Water is used for irrigation in the State of Nevada and for power development.

COOPERATION.--Records and capacity table were provided by Bureau of Reclamation, not rounded to Geological Survey standards.

EXTREMES (at 0800) FOR PERIOD OF RECORD.--Maximum contents, 41,440 acre-ft, Dec. 23, 1955, elevation, 5,605.55 ft; minimum, 37 acre-ft, Mar. 4-9, 1955, elevation, 5,521.65 ft.

EXTREMES (at 0800) FOR CURRENT YEAR.--Maximum contents, 40,527 acre-ft, June 17-21, elevation, 5,604.65 ft; minimum, 13,712 acre-ft, Feb. 11-16, elevation, 5,569.90 ft.

Capacity table (elevation, in feet, and contents in acre-feet)

5,548	4,352	5,576	17,359
5,552	5,636	5,580	20,002
5,556	7,112	5,585	23,589
5,560	8,778	5,590	27,488
5,564	10,627	5,595	31,699
5,568	12,671	5,600	36,128
5,572	14,915	5,605	40,868

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34898	31699	25421	22663	15120	14392	18589	37053	40381	39849	36082	35034
2	34898	31307	25111	22334	14944	14508	19900	37333	40429	39656	35944	35034
3	34853	31134	24879	21922	14798	14594	21328	37707	40478	39560	35944	34988
4	34853	30789	24726	21613	14623	14710	22773	38084	40429	39464	35899	34943
5	34853	30403	24611	21258	14421	14827	24344	38462	40381	39320	35853	34943
6	34853	30317	24611	20905	14220	14915	26206	38794	40429	39224	35807	34943
7	34808	30190	24649	20555	14050	15032	28305	38937	40478	39080	35761	34898
8	34808	30104	24687	20140	13965	15120	30147	38937	40478	38937	35716	34853
9	34808	29977	24726	19797	13880	15180	31438	38985	40478	38842	35670	34853
10	34808	29850	24726	19424	13880	15239	31850	38985	40478	38747	35624	34898
11	34808	29681	24764	19054	13712	15328	32283	38985	40478	38604	35579	34943
12	34808	29554	24764	18655	13712	15417	32632	38985	40478	38414	35488	34988
13	34808	29386	24802	18294	13712	15507	32894	38985	40429	38320	35488	34988
14	34853	29135	24802	17904	13712	15627	33246	39033	40429	38225	35488	34988
15	34853	29135	24802	17550	13712	15747	33511	39080	40478	30084	35488	34943
16	34717	28885	24802	17200	13712	15868	33733	39080	40478	37942	35488	34943
17	34582	28677	24802	16854	13768	15990	33867	39128	40527	37801	35442	34898
18	34448	28470	24649	16480	13796	16112	34045	39224	40527	37660	35397	34853
19	34313	28305	24420	16112	13824	16234	34224	39320	40527	37520	35351	34853
20	34134	28099	24420	15777	13880	16449	34492	39416	40527	37379	35306	34853
21	33956	28305	24420	15387	13937	16573	34898	39512	40527	37239	35306	34762
22	33778	27895	24420	15003	13965	16729	35260	39608	40478	37146	35306	34672
23	33335	27326	24420	15032	13993	16885	35670	39800	40478	37053	35260	34582
24	32894	27084	24420	15062	14021	17042	36128	39897	40429	36913	35215	34492
25	32457	26845	24420	15091	14078	17232	36312	39993	40429	36867	35215	34403
26	32023	26523	24420	15120	14135	17359	36497	39993	40381	36867	35215	34313
27	32023	26285	24268	15180	14192	17518	36635	40042	40381	36728	35169	34224
28	32023	26206	23965	15209	14278	17663	36774	40042	40381	36589	35169	34134
29	32023	25969	23664	15239	---	17807	36913	39993	40235	36497	35124	34045
30	32023	25734	23290	15268	---	17904	36968	40042	39993	36358	35079	33956
31	32023	---	22994	15298	---	18098	---	40235	---	36220	35079	---
MAX	34898	31699	25421	22663	15120	18098	36968	40235	40527	39849	36082	35034
MIN	32023	25734	22994	15003	13712	14392	18589	37053	39993	30084	35079	33956
a	5595.40	5587.80	5584.20	5572.65	5570.90	5577.15	5600.90	5604.35	5604.10	5600.10	5598.85	5597.60
b	-2875	-6289	-2740	-7696	-1020	+3820	+18870	+3267	-242	-3773	-1141	-1123

CAL YR 1984 b -4575
WTR YR 1985 b -942

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10344500 LITTLE TRUCKEE RIVER BELOW BOCA DAM, NEAR TRUCKEE, CA

LOCATION.--Lat 39°23'13", long 120°05'40", in NE 1/4 NW 1/4 sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on right bank 800 ft upstream from mouth, 1,000 ft downstream from Boca Dam, and 6.2 mi northeast of Truckee.

DRAINAGE AREA.--173 mi^2.

PERIOD OF RECORD.--April to October 1890 (monthly discharge only), January 1911 to September 1915, January 1939 to current year. Prior to October 1976 published as "at Boca." Monthly discharge only for January 1939 to September 1957, published in WSP 1734.

REVISED RECORDS.--WDR CA-79-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. Jan. 1, 1911, to Sept. 30, 1915, nonrecording gage at site 650 ft downstream at different datum. January 1939 to September 1957, records computed from daily log of rated settings of needle valve in dam, and from computed flow over spillway.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Boca Reservoir (station 10344490), Independence Lake, capacity, 17,500 acre-ft, one transmountain diversion to Sierra Valley, and Stampede Reservoir (station 10344300), since 1969.

AVERAGE DISCHARGE (unadjusted).--50 years (water years 1912-15, 1940-85), 192 ft^3/s, 139,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,800 ft^3/s, Dec. 24, 1955, from records of Washoe County Water Conservation District; no flow many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,470 ft^3/s, Apr. 29, gage height, 5.03 ft; minimum daily, 0.39 ft^3/s, Feb. 28, Mar. 3-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	222	190	203	134	.40	401	1200	753	129	96	46
2	44	208	190	215	134	.41	405	1120	672	104	70	46
3	44	194	167	227	134	.39	410	1100	633	96	57	46
4	44	194	133	232	133	.39	415	1110	484	99	57	46
5	44	143	31	234	133	.39	316	1120	300	99	57	46
6	44	93	26	233	133	.41	220	1130	136	99	57	45
7	41	105	28	232	133	.41	223	1130	58	99	57	45
8	35	115	33	231	93	14	119	1130	58	99	57	45
9	35	115	33	230	40	30	1.8	1130	58	99	57	36
10	35	119	33	229	109	30	1.8	1130	58	99	57	1.7
11	35	122	34	228	120	19	1.8	1140	61	99	57	1.2
12	35	141	36	228	45	.45	1.8	1140	85	99	50	23
13	35	159	41	227	46	.59	1.8	1170	109	99	45	44
14	35	116	41	226	50	.63	1.6	1230	109	99	45	44
15	73	122	43	226	39	.58	102	1210	109	99	45	43
16	108	143	46	225	29	.45	214	1200	109	99	45	43
17	109	142	93	224	29	.47	262	1200	109	99	45	43
18	113	141	141	223	29	.55	326	1200	109	100	45	44
19	114	141	92	222	29	.52	394	1210	97	100	45	43
20	115	141	48	222	29	93	454	1180	84	100	45	63
21	115	161	35	221	29	179	455	1150	84	107	45	78
22	214	191	34	89	29	180	583	1160	84	109	45	78
23	263	191	43	30	30	181	847	1160	84	94	45	78
24	265	191	47	30	30	182	929	1160	83	84	45	77
25	278	191	47	30	30	182	933	1260	83	81	45	77
26	135	191	81	30	30	183	931	1220	83	87	46	77
27	31	191	189	30	12	183	934	1230	84	87	46	77
28	32	191	195	30	.39	184	938	1230	109	87	46	77
29	36	191	205	30	---	183	1150	1090	129	94	46	76
30	37	191	204	30	---	281	1310	915	129	96	46	77
31	141	---	203	91	---	375	---	829	---	96	46	---
TOTAL	2729	4756	2762	5158	1811.39	2486.04	13281.6	35584	5143	3037	1590	1565.9
MEAN	88.0	159	89.1	166	64.7	80.2	443	1148	171	98.0	51.3	52.2
MAX	278	222	205	234	134	375	1310	1260	753	129	96	78
MIN	31	93	26	30	.39	.39	1.6	829	58	81	45	1.2
AC-FT	5410	9430	5480	10230	3590	4930	26340	70580	10200	6020	3150	3110

CAL YR 1984 TOTAL 86937.30 MEAN 238 MAX 1690 MIN 2.2 AC-FT 172400
WTR YR 1985 TOTAL 79903.93 MEAN 219 MAX 1310 MIN .39 AC-FT 158500

10346000 TRUCKEE RIVER AT FARAD, CA

LOCATION.--Lat 39°25'41", long 120°01'59", in SE 1/4 NE 1/4 sec.12, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank 0.5 mi upstream from Mystic Canyon, 0.7 mi downstream from Farad powerplant, 2.5 mi north of Floriston, 3.4 mi downstream from Bronco Creek, and 3.5 mi upstream from California-Nevada State line.

DRAINAGE AREA.--932 mi^2.

PERIOD OF RECORD.--March to October 1890 (monthly discharge only), September 1899 to current year. Monthly discharge only for January 1944 to July 1957, published in WSP 1734. Published as "near Boca", March to October 1890, "at or near Nevada-California State line", September 1899 to August 1912, and as "at Iceland" August 1912 to December 1937.

REVISED RECORDS.--WSP 1714: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,153.21 ft above National Geodetic Vertical Datum of 1929 (Bureau of Reclamation bench mark). See WSP 2127 for history of changes prior to Aug. 26, 1957.

REMARKS.--No estimated daily discharges. Records excellent. Flow regulated by Lake Tahoe, Martis Creek Lake, Prosser Creek, Stampede, and Boca Reservoirs (stations 10337000, 10339380, 10340300, 10344300, and 10344490), Donner and Independence Lakes, and by several powerplants.

AVERAGE DISCHARGE.--86 years (water years 1900-85), 818 ft^3/s, 592,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft^3/s, Nov. 21, 1950, gage height, 14.5 ft present datum, from floodmarks, from slope-area measurement of peak flow; minimum, 28 ft^3/s, Dec. 18, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,970 ft^3/s, May 20, gage height, 5.21 ft; minimum daily, 357 ft^3/s, Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	488	384	422	392	520	492	899	1770	1160	536	494	467
2	461	409	418	407	415	508	928	1820	1120	542	496	467
3	425	564	429	426	390	493	1010	1810	1010	527	476	468
4	373	470	428	428	390	489	1060	1740	851	521	479	474
5	369	434	482	436	386	488	1060	1720	708	527	476	468
6	373	412	440	435	385	495	1080	1740	584	524	473	456
7	361	421	467	429	389	495	1160	1740	508	522	471	483
8	357	384	510	411	432	489	1180	1700	520	521	490	496
9	359	394	510	409	433	515	1140	1670	495	491	495	528
10	371	431	482	406	486	526	1200	1660	478	496	494	508
11	433	507	436	395	507	513	1190	1620	457	505	495	442
12	406	574	445	393	419	485	1150	1620	461	502	490	444
13	401	554	439	393	422	490	1180	1660	481	496	483	461
14	391	458	424	407	427	490	1260	1760	467	492	479	468
15	398	360	437	424	425	495	1310	1760	452	489	479	453
16	431	388	442	421	419	502	1230	1710	445	486	477	440
17	446	389	476	420	423	510	1180	1750	437	487	479	444
18	431	389	578	420	423	553	1200	1820	470	486	480	484
19	431	399	507	422	435	510	1250	1840	527	485	482	467
20	435	429	449	425	415	610	1170	1810	481	495	481	467
21	429	416	435	426	408	668	1110	1730	488	511	480	474
22	444	403	430	425	406	653	1120	1720	487	517	474	466
23	403	397	437	405	407	626	1280	1770	476	518	474	456
24	380	427	440	406	409	666	1390	1770	467	504	472	454
25	398	421	444	408	418	631	1370	1800	474	507	471	476
26	370	432	455	414	423	610	1330	1730	491	513	470	471
27	406	530	407	409	416	570	1320	1700	489	498	471	467
28	392	629	391	411	406	590	1370	1650	498	492	471	464
29	411	551	399	408	---	604	1580	1490	518	490	471	461
30	410	494	400	408	---	677	1750	1250	515	499	472	457
31	412	---	396	467	---	821	---	1180	---	499	470	---
TOTAL	12595	13450	13855	12886	11834	17264	36457	52510	17015	15678	14865	14031
MEAN	406	448	447	416	423	557	1215	1694	567	506	480	468
MAX	488	629	578	467	520	821	1750	1840	1160	542	496	528
MIN	357	360	391	392	385	485	899	1180	437	485	470	440
AC-FT	24980	26680	27480	25560	23470	34240	72310	104200	33750	31100	29480	27830

CAL YR 1984 TOTAL 403530 MEAN 1103 MAX 4630 MIN 357 AC-FT 800400
WTR YR 1985 TOTAL 232440 MEAN 637 MAX 1840 MIN 357 AC-FT 461000

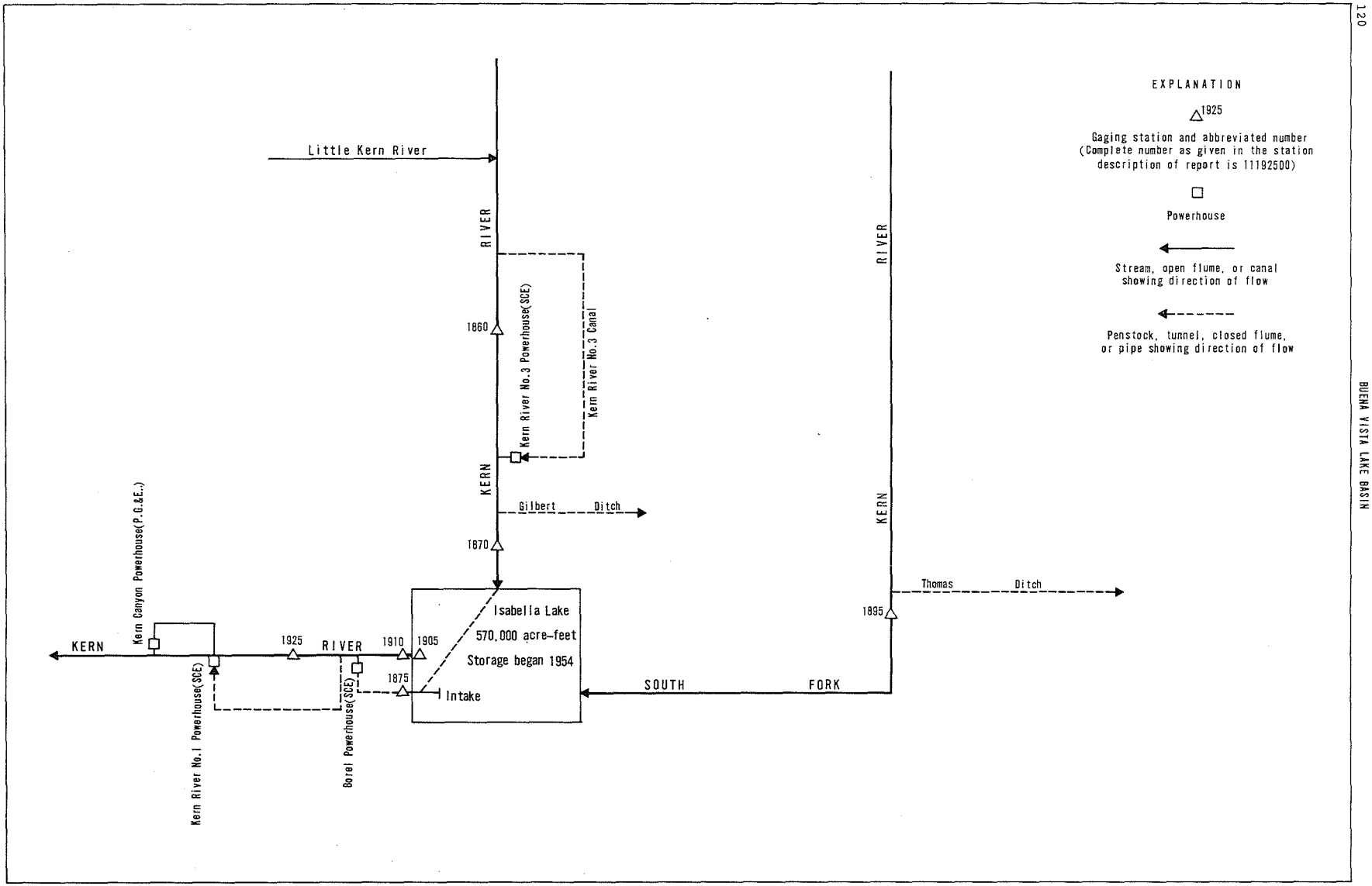


FIGURE 25. — Schematic diagram showing diversions and storage in Kern River basin.

BUENA VISTA LAKE BASIN

11186000 KERN RIVER NEAR KERNVILLE, CA

LOCATION.--Lat 35°56'43", long 118°28'36", unsurveyed, Tulare County, Hydrologic Unit 18030001, on left bank at Packsaddle Canyon Creek, 100 ft downstream from diversion dam, and 13.4 mi north of Kernville.

DRAINAGE AREA.--846 mi^2.

PERIOD OF RECORD.--January 1912 to current year. Records for water year 1912 incomplete, yearly estimates published in WSP 1315-A. March 1921 to October 1953, records for river and canal published separately; combined flow only, October 1953 to September 1960.

REVISED RECORDS.--WSP 1445: 1912, 1916(M). WSP 1930: 1914(M), 1918(M).

GAGE.--Water-stage recorder on river; water-stage recorder and rectangular concrete-lined flume for canal diversion. Elevation of gage is 3,620 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 1, 1913, at site 1.4 mi downstream at different datum. Apr. 1 to Sept. 14, 1913, nonrecording gage and Sept. 15, 1913, to Sept. 30, 1967, water-stage recorder, at site 1.2 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 2 to Feb. 7 and May 18-22. Records good, except for periods of estimated record, which are fair. Since 1921 Kern River No. 3 Canal diverts up to 630 ft^3/s 100 ft upstream from station, from left bank of Kern River for power development; water is returned to river 15 mi downstream from station. See schematic diagram of Kern River basin. For records of combined discharge of river and canal, see following page.

COOPERATION.--Gage-height record and 15 discharge measurements for Kern River and gage-height record and 11 discharge measurements for canal were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only: 9 years (water years 1912-20), 790 ft^3/s, 571,900 acre-ft/yr; 58 years (water years 1921-53, 1961-85), 402 ft^3/s, 291,200 acre-ft/yr.
Combined river and diversion: 65 years (water years 1921-85), 757 ft^3/s, 548,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 60,000 ft^3/s, Dec. 6, 1966, gage height, 22.77 ft site and datum then in use, from floodmarks, from rating curve extended above 6,000 ft^3/s on basis of computed flow over dam at gage height 17.55 ft, basic data for computation were provided by Southern California Edison Co., and slope-area measurement of peak flow; no flow many days in 1924, 1925.
Combined river and diversion: Maximum discharge, 60,000 ft^3/s, Dec. 6, 1966; minimum daily, 78 ft^3/s, Aug. 30, 31, Sept. 17, 19, 1924.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 2,240 ft^3/s, May 25, gage height, 6.85 ft; minimum daily, 34 ft^3/s, Nov. 11.
Combined river and diversion: Maximum discharge, 2,840 ft^3/s, May 25; minimum daily, 234 ft^3/s, Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	40	60	45	39	71	236	1170	955	111	94	80
2	54	39	55	43	38	70	355	1450	896	116	95	77
3	51	37	53	42	43	70	471	1420	867	115	95	76
4	51	37	48	45	40	70	564	1500	812	113	95	75
5	52	37	46	43	39	71	609	1550	882	113	97	73
6	52	36	45	41	39	71	710	1620	1210	113	99	73
7	52	35	43	41	40	72	888	1600	1490	114	99	73
8	52	37	41	76	41	70	965	1450	1690	113	98	73
9	52	48	40	70	43	69	1080	1320	1700	112	98	72
10	56	38	45	60	42	68	1150	1190	1690	112	97	72
11	298	34	47	54	41	68	1170	1050	1540	111	98	73
12	332	37	45	50	41	68	1190	1080	1530	111	97	74
13	338	42	47	48	41	68	1360	1080	1490	110	97	73
14	324	44	41	46	41	69	1500	1270	1530	111	99	73
15	302	42	38	44	40	69	1620	1510	1380	110	99	73
16	305	39	40	45	40	71	1510	1570	1240	100	98	72
17	443	43	36	44	40	73	1330	1560	1110	99	98	75
18	69	39	37	45	40	73	1150	1660	1090	98	98	75
19	62	41	36	46	40	73	1090	1770	1050	98	97	89
20	62	40	42	46	43	75	948	1820	964	98	97	266
21	62	38	46	47	43	75	845	1700	808	98	97	77
22	61	43	52	47	43	76	813	1670	644	98	97	76
23	61	45	50	48	43	77	819	1860	550	99	99	75
24	58	60	49	43	43	78	883	1970	493	99	100	74
25	57	110	48	45	43	78	897	1990	422	97	99	76
26	55	60	49	42	43	78	770	1770	305	96	98	74
27	51	52	48	45	43	254	704	1630	246	97	98	75
28	50	280	48	43	43	125	666	1450	218	95	98	75
29	49	150	47	42	---	83	752	1280	182	96	98	75
30	49	70	42	37	---	83	912	1120	138	96	98	75
31	49	---	46	39	---	135	---	1020	---	95	98	---
TOTAL	3665	1693	1410	1452	1155	2551	27957	46100	29122	3244	3025	2439
MEAN	118	56.4	45.5	46.8	41.2	82.3	932	1487	971	105	97.6	81.3
MAX	443	280	60	76	43	254	1620	1990	1700	116	100	266
MIN	49	34	36	37	38	68	236	1020	138	95	94	72
AC-FT	7270	3360	2800	2880	2290	5060	55450	91440	57760	6430	6000	4840

CAL YR 1984	TOTAL	132383	MEAN	362	MAX	2600	MIN	34	AC-FT	262600
WTR YR 1985	TOTAL	123813	MEAN	339	MAX	1990	MIN	34	AC-FT	245600

11186001 KERN RIVER NEAR KERNVILLE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF KERN RIVER AND KERN RIVER NO. 3 CANAL NEAR KERNVILLE, CA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	312	316	455	337	341	531	827	1760	1550	682	389	237
2	333	309	423	343	361	542	954	2040	1490	669	376	239
3	335	305	416	348	346	494	1070	2010	1460	678	365	239
4	342	301	394	342	319	488	1160	2090	1410	681	356	269
5	333	299	387	343	320	472	1210	2140	1480	677	353	316
6	324	298	384	353	342	471	1310	2210	1810	669	351	314
7	315	296	376	441	332	473	1490	2190	2090	656	343	308
8	306	365	375	485	387	458	1560	2040	2290	643	338	306
9	300	337	372	437	381	460	1680	1910	2300	638	333	292
10	297	339	373	419	376	476	1750	1780	2290	633	324	282
11	324	358	391	378	379	469	1770	1640	2140	661	319	286
12	332	356	379	368	381	452	1790	1670	2130	634	313	288
13	338	393	368	361	393	449	1960	1670	2090	582	307	282
14	324	364	316	375	395	439	2100	1860	2130	550	301	266
15	302	373	348	374	403	436	2220	2100	1980	532	294	257
16	305	364	357	375	425	429	2110	2160	1840	517	290	249
17	465	357	334	376	451	439	1920	2150	1710	503	286	244
18	364	345	365	389	466	450	1750	2250	1690	499	284	242
19	391	341	382	403	476	434	1690	2360	1650	574	278	272
20	403	333	393	415	495	447	1540	2410	1560	613	273	299
21	381	344	368	426	464	470	1440	2290	1410	671	263	277
22	363	370	364	426	459	478	1410	2260	1240	584	257	261
23	354	354	359	414	460	491	1410	2450	1150	530	254	251
24	348	505	358	405	468	524	1480	2560	1090	494	248	244
25	353	485	359	393	485	540	1490	2590	1020	484	244	239
26	349	407	360	394	500	531	1360	2370	904	482	243	234
27	360	427	363	384	516	850	1300	2230	845	466	244	246
28	347	863	366	352	522	718	1260	2050	817	476	243	254
29	338	662	351	341	---	655	1340	1880	781	448	243	246
30	333	503	353	363	---	663	1500	1720	737	427	241	235
31	325	---	346	339	---	731	---	1620	---	409	237	---
TOTAL	10596	11669	11535	11899	11643	15960	45851	64460	47084	17762	9190	7974
MEAN	342	389	372	384	416	515	1528	2079	1569	573	296	266
MAX	465	863	455	485	522	850	2220	2590	2300	682	389	316
MIN	297	296	316	337	319	429	827	1620	737	409	237	234
AC-FT	21020	23150	22880	23600	23090	31660	90950	127900	93390	35230	18230	15820

CAL YR 1984 TOTAL 307531 MEAN 840 MAX 3200 MIN 296 AC-FT 610000
WTR YR 1985 TOTAL 265623 MEAN 728 MAX 2590 MIN 234 AC-FT 526900

11187000 KERN RIVER AT KERNVILLE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 35°45'16", long 118°25'21", in NE 1/4 SW 1/4 sec.15, T.25 S., R.33 E., Kern County, Hydrologic Unit 18030001, on right bank 300 ft downstream from highway bridge at Kernville, 1.1 mi upstream from Caldwell Creek, 8.9 mi upstream from Isabella Dam, and 42 mi northeast of Bakersfield.

DRAINAGE AREA.--1,009 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1905 to December 1912, October 1953 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,621.57 ft above National Geodetic Vertical Datum of 1929. January 1905 to September 1912, nonrecording gage at two sites 3.5 mi downstream at different datums. October 1953 to Feb. 20, 1967, at present site and datum. Feb. 20, 1967, to Oct. 11, 1976, water-stage recorder 0.6 mi upstream at datum 2,634.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Slight regulation at times by operation of Kern River No. 3 canal and powerplant. A few small diversions for irrigation above station. Gilbert irrigation ditch diverts up to 7 ft^3/s around station during irrigation season.

COOPERATION.--One discharge measurement was provided by Southern California Edison Co.

AVERAGE DISCHARGE.--39 years, 918 ft^3/s, 665,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,000 ft^3/s, Dec. 6, 1966, gage height, 22.2 ft, from floodmarks, present site, from rating curve extended above 11,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 70 ft^3/s, Sept. 29, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known from at least 1912 to December 1966, 18.4 ft, from floodmarks, Nov. 19, 1950, site and datum then in use, discharge, 38,700 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 25	1230	*2,790	*7.40				

Minimum daily, 214 ft^3/s, Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	316	336	490	364	365	591	920	1810	1540	691	391	248
2	324	324	453	371	382	614	1070	2120	1500	663	373	241
3	332	322	448	373	372	565	1230	2110	1480	665	361	241
4	340	319	424	371	345	557	1350	2170	1420	669	349	264
5	336	316	411	369	343	538	1400	2240	1430	666	342	312
6	329	314	412	377	365	538	1500	2300	1730	662	341	313
7	320	311	402	464	355	537	1660	2270	2020	650	336	305
8	313	380	398	536	400	524	1770	2140	2170	632	331	304
9	305	362	398	469	495	528	1900	2000	2200	625	323	292
10	300	350	396	454	435	535	1950	1880	2190	627	317	282
11	227	371	421	411	428	535	1990	1740	2070	641	308	284
12	295	377	403	397	432	519	2010	1670	2030	631	301	286
13	310	414	398	388	452	511	2100	1690	1990	579	298	281
14	302	386	343	402	461	501	2290	1880	2020	543	293	265
15	292	388	369	399	469	495	2450	2130	1900	524	287	259
16	291	381	383	403	495	498	2320	2170	1740	515	284	249
17	500	376	355	403	533	502	2100	2180	1630	496	282	246
18	462	361	386	414	561	515	1880	2250	1580	493	283	247
19	409	359	402	432	574	504	1790	2380	1560	553	281	263
20	422	349	416	443	612	512	1680	2420	1490	593	274	214
21	403	359	398	454	554	533	1540	2290	1330	665	264	311
22	378	392	391	456	528	536	1450	2270	1190	580	261	259
23	366	374	391	444	528	550	1450	2420	1100	536	256	249
24	362	547	386	433	534	594	1520	2560	1050	496	249	244
25	359	567	389	422	540	620	1530	2600	1000	483	246	235
26	360	425	387	419	559	617	1440	2400	894	479	246	235
27	366	445	394	412	581	1080	1370	2230	825	470	247	242
28	356	1120	395	377	596	967	1340	2070	794	473	244	259
29	345	741	381	365	---	818	1420	1890	772	457	244	248
30	343	544	376	385	---	783	1590	1710	745	437	242	235
31	337	---	374	364	---	816	---	1570	---	418	238	---
TOTAL	10700	12610	12370	12771	13294	18533	50010	65560	45390	17612	9092	7913
MEAN	345	420	399	412	475	598	1667	2115	1513	568	293	264
MAX	500	1120	490	536	612	1080	2450	2600	2200	691	391	313
MIN	227	311	343	364	343	495	920	1570	745	418	238	214
AC-FT	21220	25010	24540	25330	26370	36760	99190	130000	90030	34930	18030	15700

CAL YR 1984 TOTAL 316915 MEAN 866 MAX 3260 MIN 227 AC-FT 628600
WTR YR 1985 TOTAL 275855 MEAN 756 MAX 2600 MIN 214 AC-FT 547200

11187000 KERN RIVER AT KERNVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.
CHEMICAL ANALYSES: Water years 1975 to current year.
BIOLOGICAL DATA: Water years 1978-81.
WATER TEMPERATURES: Water years 1962 to current year.
SEDIMENT RECORDS: Water years 1967-74, 1978 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1962 to current year.

INSTRUMENTATION.--Temperature recorder since June 1962.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1962-85): Maximum recorded, 28.5°C, Aug. 20, 1972; minimum recorded, 0.0°C, several days in 1976, 1978-79, 1982, and Dec. 17, 1984.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 22.0°C, Aug. 25-27, Aug. 30 to Sept. 1; minimum recorded, 0.0°C, Dec. 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	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 (MG/L AS CACO3)
NOV												
19...	1015	361	124	7.4	6.0	700	1.2	11.8	104	<1	K5	38
JAN												
16...	1200	394	123	7.6	4.0	695	.60	12.4	104	K2	K1	41
MAR												
19...	1400	467	112	7.7	7.5	690	1.2	10.6	98	K1	K3	41
MAY												
15...	1430	2290	45	7.8	14.0	690	3.0	4.2	45	K11	K19	15
JUL												
17...	1100	467	62	8.0	19.5	700	2.8	8.6	102	K11	K8	24
SEP												
11...	1345	305	128	8.1	15.5	695	.80	9.4	104	K4	K14	37

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CAC03)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV												
19...	0	12	1.9	11	38	.8	1.3	--	--	46	7.2	3.8
JAN												
16...	0	13	2.1	11	36	.8	1.4	70	57	57	9.9	4.0
MAR												
19...	0	13	2.0	11	36	.8	1.2	63	52	52	7.5	4.0
MAY												
15...	0	4.8	.70	3.7	34	.4	.80	24	20	20	3.6	.90
JUL												
17...	0	7.8	1.2	11	48	1	1.1	44	36	37	5.5	2.5
SEP												
11...	0	12	1.8	11	38	.8	1.4	60	50	51	8.6	5.2

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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (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)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV												
19...	.20	16	75	81	.10	73	<.10	.010	<.20	.040	.010	<.010
JAN												
16...	.20	18	--	94	.13	100	<.10	.020	.20	<.010	.010	<.010
MAR												
19...	.10	19	77	89	.10	97	<.10	.060	.50	<.010	<.010	<.010
MAY												
15...	.10	11	32	38	.04	198	<.10	.030	.50	.040	<.010	.020
JUL												
17...	.10	11	63	62	.09	79	<.10	.030	.30	<.010	<.010	<.010
SEP												
11...	.20	15	80	85	.11	66	<.10	<.010	.20	<.010	<.010	.010

See footnotes at end of table.

11187000 KERN RIVER AT KERNVILLE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)	LEAD, DISSOLVED (UG/L AS PB)
NOV 19...	1015	10	3	15	<.5	1	<1	<3	1	60	<1
MAR 19...	1400	20	2	15	<.5	<1	<1	<3	1	57	3
MAY 15...	1430	20	<1	10	.7	<1	<1	<3	<1	31	3
SEP 11...	1345	20	5	16	<.5	<1	<1	<3	1	37	<1

DATE	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 19...	21	<1	<.1	<10	2	<1	<1	78	<6	12
MAR 19...	18	5	<.1	<10	<1	<1	<1	83	<6	27
MAY 15...	7	4	--	<10	5	<1	<1	33	<6	35
SEP 11...	19	2	<.1	<10	<1	<1	<1	78	<6	8

< Actual value is known to be less than the value shown.
K Results based on colony count outside the acceptable range (non-ideal colony count).

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.5	14.0	9.0	7.5	4.0	3.0	3.0	1.5	3.5	1.5	8.5	7.0
2	14.0	12.0	8.5	6.5	4.0	2.5	3.0	1.5	3.0	1.5	8.0	5.5
3	14.5	12.5	10.0	7.5	4.5	3.5	3.0	1.5	3.0	1.5	5.5	4.0
4	14.5	12.5	9.5	8.0	5.0	3.5	3.0	1.5	3.0	1.0	6.0	3.5
5	15.0	12.5	9.5	7.5	5.5	4.5	3.0	2.0	2.5	1.0	5.5	4.0
6	15.0	13.0	10.0	8.0	6.5	5.0	4.5	3.0	2.5	1.0	6.0	4.0
7	15.5	13.0	10.0	8.5	6.0	5.0	5.0	4.5	3.5	1.5	5.5	4.0
8	15.5	13.0	9.5	8.0	7.0	5.5	4.5	3.0	4.0	3.0	5.5	4.0
9	15.0	13.0	8.0	6.5	6.0	5.5	4.5	3.5	4.5	2.5	7.0	4.5
10	15.5	13.0	7.0	5.5	5.0	4.5	5.0	3.5	4.0	2.0	8.0	6.5
11	17.0	14.0	7.5	5.5	5.5	4.0	4.0	2.5	4.5	2.5	8.0	6.5
12	15.5	12.5	7.5	6.5	6.0	4.5	3.0	2.0	5.5	3.0	8.5	6.5
13	16.0	12.0	8.0	6.5	5.5	3.0	3.0	1.0	6.5	4.5	8.5	6.5
14	16.0	13.0	7.5	5.5	3.0	2.0	3.0	1.0	6.5	5.0	7.5	6.5
15	14.0	11.5	6.5	5.0	2.5	1.5	3.5	1.5	7.0	5.0	7.5	5.5
16	12.0	10.0	7.0	5.5	2.5	1.0	4.0	2.5	7.5	5.5	8.5	5.5
17	11.0	9.0	7.5	6.0	1.5	0.0	4.5	2.5	7.5	6.0	9.5	7.0
18	9.5	7.0	7.5	5.5	0.5	0.5	5.0	3.0	7.5	6.5	9.0	6.5
19	10.5	8.0	6.5	5.5	1.5	0.5	5.0	3.5	8.5	6.5	8.0	5.0
20	10.5	9.0	6.0	4.5	2.5	0.5	5.5	4.0	8.5	6.5	9.5	6.5
21	10.0	8.0	5.5	5.0	2.0	0.5	5.0	4.0	6.5	4.0	10.5	8.0
22	10.0	8.5	5.0	3.5	2.0	0.5	5.0	4.0	7.0	5.0	9.5	7.5
23	10.0	8.0	4.5	3.5	2.0	0.5	4.5	3.0	7.5	5.5	10.0	7.0
24	10.0	8.0	5.0	4.0	2.5	0.5	4.5	3.0	8.0	6.0	10.5	8.0
25	10.0	8.0	4.0	3.0	2.5	0.5	4.5	2.5	8.5	6.5	10.0	8.5
26	10.0	8.5	3.0	2.0	1.5	1.0	4.5	3.5	8.5	6.5	8.5	6.5
27	10.5	9.0	3.0	2.0	2.5	1.5	5.5	3.5	8.5	6.5	8.0	5.0
28	9.5	7.5	5.5	3.5	4.0	2.0	4.5	2.5	8.5	6.5	7.0	5.0
29	9.5	7.5	4.5	3.5	4.0	2.5	3.0	2.0	---	---	7.0	5.0
30	10.0	7.5	4.0	3.0	3.5	2.0	3.5	2.0	---	---	8.0	5.0
31	9.5	8.0	---	---	3.5	2.0	3.0	2.0	---	---	10.0	6.5
MONTH	17.0	7.0	10.0	2.0	7.0	0.0	5.5	1.0	8.5	1.0	10.5	3.5

11187000 KERN RIVER AT KERNVILLE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	8.5			---	---	18.0	15.0	20.0	17.0	22.0	19.0
2	12.0	9.5			---	---	19.5	16.0	20.0	16.5	20.5	18.5
3	12.0	9.5			---	---	20.5	17.5	20.5	17.0	19.5	17.0
4	12.5	10.0			---	---	20.5	18.0	21.0	18.0	17.5	16.5
5	13.0	10.5			---	---	19.5	18.0	21.5	18.0	16.5	15.0
6	13.0	10.0			---	---	20.5	17.5	21.5	18.0	17.0	15.0
7	12.5	10.0			---	---	21.0	18.5	21.0	18.0	17.0	15.0
8	12.0	9.5			---	---	21.0	18.0	21.0	18.0	18.5	15.5
9	12.0	10.0			---	---	20.0	18.5	21.0	18.0	17.5	15.5
10	12.5	9.5			---	---	21.0	18.5	21.0	18.0	16.0	14.0
11	---	---			---	---	21.5	19.0	20.5	17.5	15.5	13.5
12	---	---			18.5	15.0	21.5	18.5	20.5	17.0	14.5	12.0
13	---	---			19.0	16.0	21.0	18.5	20.5	17.5	16.0	12.5
14	---	---			19.0	16.0	21.0	18.0	20.5	17.5	16.5	14.0
15	---	---			19.0	16.5	20.0	18.0	20.5	17.5	17.5	14.5
16	---	---			19.5	16.0	20.5	18.0	21.0	17.5	17.0	14.5
17	---	---			20.0	16.5	21.0	18.0	21.5	18.0	17.0	14.5
18	---	---			20.5	17.5	21.5	19.0	21.0	18.5	16.0	14.5
19	---	---			20.5	17.5	20.0	18.0	20.0	17.5	16.5	13.5
20	---	---			20.0	17.0	20.0	17.5	19.5	16.5	18.5	14.5
21	---	---			19.0	16.0	20.0	17.0	20.0	16.5	16.5	14.0
22	---	---			19.5	16.0	21.5	18.0	20.0	16.5	17.5	14.5
23	---	---			19.0	16.0	21.0	18.5	20.5	17.5	17.0	15.0
24	---	---			19.0	16.5	21.5	19.0	21.5	18.0	18.0	14.5
25	---	---			18.5	15.5	21.5	19.0	22.0	18.5	18.5	15.5
26	---	---			18.5	15.5	21.0	18.5	22.0	19.0	18.5	16.5
27	---	---			19.0	15.5	21.5	18.5	22.0	19.0	18.5	16.0
28	---	---			19.0	16.0	21.0	19.0	21.5	18.5	17.5	15.0
29	---	---			17.5	15.5	21.0	18.5	21.5	18.0	17.5	15.0
30	---	---			17.5	14.5	20.0	17.0	22.0	18.5	16.5	14.0
31	---	---			---	---	20.0	17.0	22.0	19.0	---	---
MONTH	---	---			---	---	21.5	15.0	22.0	16.5	22.0	12.0
YEAR	22.0	0.0										

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)
JAN						
16...	1130	15	123	7.5	4.5	12.2
16...	1135	30	123	7.6	4.0	12.4
16...	1140	45	119	7.6	4.0	12.5
16...	1150	60	123	7.7	3.5	12.5
16...	1200	75	119	7.2	3.5	12.4
16...	1205	90	120	7.4	4.0	12.3
16...	1215	105	119	7.7	4.0	12.3
16...	1220	120	120	7.7	4.0	12.4
16...	1225	135	121	7.6	4.0	12.4
16...	1230	150	120	7.7	4.0	12.3

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV					
19...	1015	361	6.0	3	2.9
JAN					
16...	1200	394	3.5	6	6.4
MAR					
19...	1415	498	7.5	6	8.1
MAY					
15...	1400	2260	14.0	24	146
JUL					
17...	1045	493	19.5	6	8.0
SEP					
11...	1315	285	15.5	3	2.3

11187500 BOREL CANAL BELOW ISABELLA DAM, CA

LOCATION.--Lat 35°38'32", long 118°28'09", in SW 1/4 NE 1/4 sec.30, T.26 S., R.33 E., Kern County, Hydrologic Unit 18030001, on right bank 500 ft downstream from Isabella Dam, and 3 mi upstream from point where canal crosses Erskine Creek.

PERIOD OF RECORD.--January 1910 to September 1914, October 1925 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as Kern River Power Co.'s Canal at or near Kernville 1910-14. Published as "at Tillie Creek" 1925-51.

GAGE.--Water-stage recorder. Elevation of gage is 2,540 ft, above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 29, 1952, at site 4 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Canal diverts from right bank of Kern River 5.5 mi upstream from Isabella Dam, and above South Fork Kern River. When contents of Isabella Reservoir are above 110,000 acre-ft, the diversion is at the dam. Canal is used to supply Borel powerplant of Southern California Edison Co., 6 mi downstream from station, at which point water is returned to the Kern River.

COOPERATION.--Twenty-eight discharge measurements were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--64 years, 387 ft^3/s, 280,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 634 ft^3/s, Mar. 13, 14, 1952; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	579	0	521	504	405	602	604	608	605	605	604	594
2	579	0	521	504	405	603	604	607	605	604	604	594
3	577	0	521	504	405	602	591	607	605	606	604	593
4	579	0	521	504	408	611	589	607	607	606	604	589
5	579	0	570	502	409	616	591	607	606	608	608	592
6	577	0	500	504	463	614	594	607	606	604	604	576
7	577	0	549	502	501	615	587	607	607	607	597	539
8	581	0	549	499	501	615	589	608	607	605	594	543
9	584	0	549	497	502	614	596	607	608	605	595	579
10	582	0	601	497	502	616	598	606	608	607	593	595
11	589	0	600	496	500	616	600	606	608	605	592	555
12	586	0	559	496	496	615	597	606	605	605	592	446
13	588	0	561	496	569	615	600	604	605	605	589	349
14	587	0	558	496	605	616	600	605	606	605	590	324
15	586	0	528	494	614	612	600	606	605	605	590	371
16	586	0	444	494	618	616	600	605	605	604	593	476
17	586	0	444	497	618	617	603	606	605	605	590	554
18	589	0	452	496	616	617	606	605	606	604	591	572
19	587	0	470	494	611	616	606	605	606	605	591	520
20	588	0	492	391	609	616	609	605	604	604	592	508
21	589	0	549	353	605	614	605	605	604	604	593	525
22	586	0	546	399	598	606	605	606	606	604	591	557
23	7.2	133	545	399	598	617	606	605	605	605	592	574
24	0	159	518	400	598	617	606	604	606	604	593	574
25	0	452	507	487	598	609	607	606	604	604	595	573
26	0	494	506	501	598	606	607	607	605	603	593	571
27	0	495	504	501	598	604	606	606	605	605	594	570
28	0	519	504	499	601	604	608	606	604	605	592	534
29	0	521	504	496	---	602	607	606	604	605	594	538
30	0	521	504	449	---	599	606	606	606	604	593	556
31	0	---	504	416	---	602	---	605	---	604	594	---
TOTAL	12848.2	3294	16201	14767	15151	18944	18027	18786	18168	18751	18441	16041
MEAN	414	110	523	476	541	611	601	606	606	605	595	535
MAX	589	521	601	504	618	617	609	608	608	608	608	595
MIN	0	0	444	353	405	599	587	604	604	603	589	324
AC-FT	25480	6530	32130	29290	30050	37580	35760	37260	36040	37190	36580	31820

CAL YR 1984 TOTAL 193051.2 MEAN 527 MAX 611 MIN 0 AC-FT 382900
WTR YR 1985 TOTAL 189419.2 MEAN 519 MAX 618 MIN 0 AC-FT 375700

11189500 SOUTH FORK KERN RIVER NEAR ONYX, CA

LOCATION.--Lat 35°44'22", long 118°10'33", unsurveyed, T.25 S., R.35 E., Kern County, Hydrologic Unit 18030002, on left bank 0.8 mi north of State Highway 178, 1.6 mi upstream from Canebrake Creek, and 5 mi northeast of Onyx.

DRAINAGE AREA.--530 mi^2.

PERIOD OF RECORD.--September 1911 to August 1914, January 1919 to September 1942, October 1947 to current year. Yearly estimate for water year 1927 (incomplete) and monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1151: 1948(M). WSP 1445: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,900 ft above National Geodetic Vertical Datum of 1929, from topographic map. Sept. 12, 1911, to Aug. 31, 1914, nonrecording gage and Jan. 23, 1919, to Apr. 17, 1936, water-stage recorder, at site 140 ft upstream at datum 2.88 ft lower. Apr. 18, 1936, to September 1942, and October 1947 to Feb. 8, 1967, at datum 6.88 ft higher. Feb. 9, 1967, to May 31, 1972, at datum 2.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 12-18, Jan. 8, Mar. 13 to Apr. 2 and June 3-19. Records good except for periods of estimated discharges, which are fair. Lowell and Thomas ditches divert above station for irrigation of 160 acres below station; combined capacity, 7 ft^3/s.

AVERAGE DISCHARGE.--61 years (water years 1912-13, 1920-25, 1927, 1930-42, 1947-85), 128 ft^3/s, 92,740 acre-ft/year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft^3/s, Dec. 6, 1966, gage height, 18.9 ft, from floodmarks, present datum, from rating curve extended above 3,000 ft^3/s on basis of slope-area measurement of peak flow; no flow for several days in 1929, 1934, 1960-61.

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. 28	0830	236	4.80	Apr. 14	0915	*1,080	*6.56
Mar. 27	Unknown	Unknown	Unknown				

Minimum daily, 17 ft^3/s, several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	55	85	80	74	144	209	421	158	55	30	17
2	42	53	79	82	89	149	342	429	153	54	29	17
3	45	53	84	84	79	137	411	435	145	52	28	17
4	47	53	78	82	73	134	449	433	140	49	27	20
5	50	53	81	79	76	129	463	425	134	44	26	32
6	50	53	80	87	81	129	568	410	130	42	25	36
7	49	54	80	97	80	126	653	391	124	41	24	41
8	48	63	81	110	89	120	728	371	120	39	22	38
9	47	56	81	89	93	120	840	358	117	39	21	36
10	46	52	84	92	76	127	889	354	113	39	21	34
11	46	63	99	79	76	131	914	340	111	38	21	33
12	47	73	92	78	77	125	941	325	106	38	20	34
13	47	82	84	77	83	130	981	309	100	38	20	33
14	46	73	87	81	84	128	972	298	96	37	20	32
15	46	61	94	80	87	128	934	290	90	35	20	32
16	47	66	88	84	95	126	827	279	86	34	19	31
17	80	69	85	85	104	123	722	269	82	34	21	30
18	59	66	90	89	110	120	645	262	79	34	23	30
19	59	66	99	92	116	120	620	254	76	46	23	38
20	70	62	87	94	127	125	577	250	73	52	23	39
21	73	66	76	95	118	130	540	239	72	54	22	38
22	72	69	76	96	121	128	516	231	70	51	22	37
23	69	52	79	91	122	131	517	225	67	44	22	35
24	66	90	80	92	124	137	512	221	66	41	22	34
25	64	97	80	89	129	138	491	209	66	40	21	33
26	63	63	83	91	133	137	452	201	66	38	21	32
27	62	63	87	87	138	338	422	190	63	36	19	31
28	61	184	89	81	141	220	406	182	60	35	17	37
29	60	118	87	77	---	202	414	173	55	35	17	35
30	59	91	84	83	---	199	418	167	54	33	17	34
31	58	---	84	76	---	201	---	163	---	31	17	---
TOTAL	1717	2119	2623	2679	2795	4532	18373	9104	2872	1278	680	966
MEAN	55.4	70.6	84.6	86.4	99.8	146	612	294	95.7	41.2	21.9	32.2
MAX	80	184	99	110	141	338	981	435	158	55	30	41
MIN	39	52	76	76	73	120	209	163	54	31	17	17
AC-FT	3410	4200	5200	5310	5540	8990	36440	18060	5700	2530	1350	1920

CAL YR 1984 TOTAL 47058 MEAN 129 MAX 382 MIN 31 AC-FT 93340
WTR YR 1985 TOTAL 49738 MEAN 136 MAX 981 MIN 17 AC-FT 98660

11190500 ISABELLA LAKE NEAR LAKE ISABELLA, CA

LOCATION.--Lat 35°38'46", long 118°28'41", in SE 1/4 SW 1/4 sec.19, T.26 S., R.33 E., Kern County, Hydrologic Unit 18030001, in main control tower near left abutment of main dam on Kern River, 1.5 mi north of town of Lake Isabella, and 2.8 mi upstream from Erskine Creek.

DRAINAGE AREA.--2,074 mi^2.

PERIOD OF RECORD.--October 1953 to current year. Prior to October 1968, published as Isabella Reservoir near Isabella. October 1968 to September 1970 published as "Isabella Reservoir."

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earthfill dam with sidehill spillway and auxiliary earthfill dam completed in 1954. Regulation began Apr. 15, 1954. Usable capacity, 567,891 acre-ft between elevations 2,470.0 ft, invert of main outlet and 2,605.5 ft, spillway crest. Dead storage 184 acre-ft. Surcharge flood control storage, 272,528 acre-ft between ungated spillway crest and elevation 2,627.0 ft, maximum design spillway flood pool. Records, including extremes, represent total contents at 2400 hours. Water is released to Kern River through tunnel in left abutment of main dam and to Borel Canal (station 11187500) through concrete conduit in auxiliary dam.

COOPERATION.--Records were provided by Corps of Engineers, not rounded by Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 630,825 acre-ft, July 6, 1983, elevation, 2,610.84 ft; minimum since reservoir first filled, 34,504 acre-ft, Dec. 14, 16, 1977, elevation, 2,524.35 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 388,621 acre-ft, June 13, elevation, 2,588.42 ft; minimum, 203,510 acre-ft, Sept. 30, elevation, 2,565.71 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

2,500	6,154	2,540	74,802
2,505	9,345	2,550	114,845
2,510	13,612	2,570	233,425
2,515	19,161	2,590	403,846
2,520	26,226	2,620	746,024
2,530	45,919		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	276746	258161	254104	244904	244085	233787	233425	309901	376405	365587	285291	224740
2	275867	257240	253724	244755	244456	233353	234515	312456	377346	363461	282858	223394
3	275230	256856	253115	244606	244680	232990	235899	314935	378663	361432	280839	221982
4	274433	256243	252507	244383	244829	232337	237728	317771	379701	359042	278829	220928
5	273637	255479	251975	244085	244904	231903	239935	320881	380455	356663	276746	220155
6	272765	254485	251143	243787	244904	231830	242376	323917	381969	354470	274035	219594
7	272051	253648	250234	244085	244755	231543	245128	326795	383768	352196	271340	219106
8	271182	252963	249481	244456	245128	231109	247900	329335	385191	349659	268816	218546
9	270392	252355	248576	244531	245502	230748	250991	331269	386429	347129	266541	217778
10	269445	251522	247975	244456	245427	230460	254104	333385	387380	344968	264354	216805
11	268266	250915	247074	244606	245054	229884	257394	335330	388143	342545	262254	216180
12	267794	250083	246251	244309	244680	229310	260783	337193	388525	340042	259932	215833
13	266776	250083	245502	243936	244456	228663	264588	339239	388621	337726	257624	215626
14	265914	250159	244904	243787	244085	228161	268974	340400	388525	335241	255402	215280
15	265134	250083	244606	243564	243564	227805	273321	342456	388525	332325	253267	214934
16	264276	250159	245054	243117	242894	227447	276986	344518	387857	329599	251294	214381
17	264198	250159	245054	242671	242228	227089	280194	346497	387094	326883	249632	213417
18	263808	250234	245128	242302	241634	226732	282858	348663	385953	324352	247900	212797
19	263574	250310	245652	242005	240674	226589	285696	351017	384716	321746	246176	212181
20	263187	250159	245577	242153	240378	226375	288797	353288	383578	319409	244458	211495
21	262798	250159	245577	242671	239640	226163	291011	355475	382251	317340	242671	211015
22	262410	250688	245577	243043	238903	226234	293399	357852	380833	314935	240748	210197
23	262021	250688	245502	243489	238243	226234	295384	360421	379512	312115	238905	209311
24	261789	251673	245502	243862	237508	226304	297126	363277	377626	309390	237215	208360
25	261015	252279	245352	244085	236850	226304	299374	366327	376217	306679	235461	207546
26	260319	252431	245278	243862	236118	226518	301128	368740	374716	303898	233714	206668
27	260010	252583	245352	243862	235315	228520	302804	370882	373217	300877	232047	205724
28	259548	254333	245278	243787	234660	229884	304317	372470	371442	297873	230316	204985
29	259162	254791	245203	243713	---	230748	306004	373779	369579	294307	228951	204313
30	258854	254485	245054	243862	---	231543	308034	374810	367627	291011	227518	203510
31	258546	---	244979	244085	---	232482	---	375559	---	288060	226092	---
MAX	276746	258161	254104	244904	245502	233787	308034	375559	388621	365587	285291	224740
MIN	258546	250083	244606	242005	234660	226163	233425	309901	367627	288060	226092	203510
a	2573.36	2572.83	2571.57	2571.45	2570.17	2569.87	2579.48	2587.04	2586.19	2577.08	2568.98	2565.71
b	-18999	-4061	-9506	-894	-9425	-2178	+75552	+67525	-7932	-79567	-61968	-22582
c	3646	1661	1105	1134	1285	1831	3884	6369	8621	9023	7643	4437

CAL YR 1984 b -67050
WTR YR 1985 b -74035

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.
[c]Evaporation, in acre-feet.

11191000 KERN RIVER BELOW ISABELLA DAM, CA

LOCATION.--Lat 35°38'21", long 118°29'02", in SW 1/4 NW 1/4 sec.30, T.26 S., R.33 E., Kern County, Hydrologic Unit 18030003, on right bank 200 ft downstream from highway bridge, 0.6 mi downstream from Isabella Dam, and 1.6 mi southwest of town of Lake Isabella.

DRAINAGE AREA.--2,074 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1945 to current year. Prior to October 1952, published as "below Isabella damsite."

REVISED RECORDS.--WSP 1515: 1956. WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,435.07 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Mar. 12, 1952, water-stage recorder at site 0.6 mi upstream at different datum. Mar. 12, 1952, to July 26, 1953, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Isabella Lake (station 11190500) beginning Apr. 15, 1954. Borel Canal (station 11187500) diverts above station. Diversion for irrigation of 3,500 acres between head of Isabella Lake and upstream stations. An additional 6,500 acres in the lakebed can be irrigated when the lake is low.

AVERAGE DISCHARGE (adjusted for diversion to Borel Canal since 1945 and for change in contents in and evaporation from Isabella Lake since 1954).--40 years, 995 ft^3/s, 720,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft^3/s, Nov. 19, 1950, gage height, 28.6 ft from floodmarks, present site and datum, from rating curve extended above 6,500 ft^3/s on basis of slope-area measurement of maximum flow; minimum, 2.1 ft^3/s, regulated, Nov. 27, 1951. Maximum discharge since construction of Isabella Dam in 1954, 7,300 ft^3/s, May 3, 1969, gage height, 17.67 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,530 ft^3/s, June 19, gage height, 9.06 ft; minimum daily, 2.5 ft^3/s, Nov. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	657	320	95	5.0	467	153	473	418	1180	1070	206
2	180	722	302	95	4.9	383	232	499	418	1090	941	235
3	150	722	302	127	4.7	327	284	514	376	1090	761	227
4	138	709	313	146	4.8	340	233	425	370	1140	709	165
5	175	730	342	146	4.7	230	136	389	543	1160	777	65
6	209	802	407	146	38	195	79	475	748	1100	933	7.1
7	186	768	388	146	72	227	224	504	827	1100	1100	6.2
8	137	836	426	146	137	252	359	526	827	1160	935	6.1
9	137	816	453	146	166	213	407	511	960	1140	799	6.2
10	166	802	344	146	158	255	471	446	1090	1110	753	25
11	116	798	302	146	223	332	500	365	1130	1210	754	19
12	80	789	328	146	266	350	461	383	1240	1100	803	4.4
13	114	650	300	144	194	343	359	543	1320	1060	826	4.1
14	114	482	300	144	172	263	387	702	1380	1120	814	4.9
15	107	447	225	192	276	228	484	760	1360	1240	762	5.5
16	92	426	4.5	258	344	196	475	760	1360	1260	656	5.4
17	89	404	4.1	258	407	201	409	723	1460	1200	547	37
18	112	416	13	258	450	160	334	678	1480	1170	503	27
19	73	417	41	258	420	114	216	758	1560	1140	503	6.0
20	42	440	76	120	443	127	109	828	1470	1070	503	5.9
21	69	479	32	6.6	436	132	148	814	1370	1080	552	5.8
22	113	430	32	6.5	417	138	239	714	1270	1120	640	61
23	634	300	32	6.5	410	85	250	695	1210	1160	617	105
24	642	260	56	6.5	450	86	273	680	1230	1230	521	97
25	634	3.7	68	42	496	134	336	586	1170	1240	502	67
26	630	4.7	68	100	520	174	319	521	1060	1240	529	67
27	630	22	68	100	549	164	248	571	1060	1230	506	67
28	586	57	79	67	519	63	260	623	1110	1270	448	27
29	576	151	95	5.6	---	13	341	648	1090	1340	384	6.4
30	535	315	95	5.6	---	5	416	616	1120	1300	337	6.3
31	519	---	95	5.2	---	58	---	525	---	1190	232	---
TOTAL	8151	14855.4	5910.6	3614.5	7587.1	6255	9142	18255	32027	36240	20717	1577.3
MEAN	263	495	191	117	271	202	305	589	1068	1169	668	52.6
MAX	642	836	453	258	549	467	500	828	1560	1340	1100	235
MIN	42	3.7	4.1	5.2	4.7	5.0	79	365	370	1060	232	4.1
AC-FT	16170	29470	11720	7170	15050	12410	18130	36210	63530	71880	41090	3130
MEAN a	428	565	577	597	666	807	2241	2397	1685	627	380	282
AC-FT a	26320	33620	35480	36710	36990	49620	133300	147400	100300	38550	23370	16780

CAL YR 1984 TOTAL 206721.1 MEAN 565 MAX 1560 MIN 3.7 AC-FT 410000 MEAN a 1072 AC-FT a 778200
WTR YR 1985 TOTAL 164331.9 MEAN 450 MAX 1560 MIN 3.7 AC-FT 326000 MEAN a 937 AC-FT a 678400

[a]Adjusted for change in contents and evaporation from Isabella Lake and diversion to Borel Canal.

11191000 KERN RIVER BELOW ISABELLA DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-66, 1971 to current year.
CHEMICAL ANALYSES: Water years 1956-66.
WATER TEMPERATURES: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1970 to current year.

INSTRUMENTATION.--Temperatures recorder since November 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1971-85): Maximum recorded, 28.5°C, Aug. 24, 1981; minimum recorded, 4.0°C, Jan. 4, 1972, Feb. 1, 1973, Jan. 30, 31, 1979, Dec. 25, 1984.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 23.5°C, Sept. 6-8; minimum recorded, 4.0°C, Dec. 25.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.5	20.5	14.5	14.0	10.0	9.5	7.0	6.5	8.5	5.5	8.5	8.0
2	21.0	20.5	14.5	14.0	10.0	9.5	7.0	6.5	8.0	5.0	8.0	8.0
3	21.0	20.0	15.5	11.0	9.5	9.5	7.0	6.5	7.5	5.5	8.0	8.0
4	20.5	19.5	14.5	13.5	9.5	9.0	7.0	6.5	9.0	5.5	8.5	8.0
5	20.5	19.5	16.0	12.0	10.0	9.5	7.0	6.5	8.5	5.0	8.5	8.0
6	20.5	20.0	14.5	12.0	10.0	9.5	7.0	7.0	7.0	5.5	8.5	8.0
7	20.5	20.0	15.0	11.5	9.5	9.5	7.0	6.5	7.0	6.0	8.5	8.0
8	20.5	19.5	14.0	13.5	10.0	9.5	7.0	5.0	6.5	6.0	9.0	8.5
9	20.5	19.5	13.5	13.0	10.0	9.5	7.0	6.5	6.5	6.5	9.0	8.5
10	20.0	19.0	14.5	13.0	9.5	9.5	7.0	6.5	6.5	6.0	9.0	8.5
11	19.5	18.5	13.5	13.0	9.5	9.5	7.0	6.5	7.0	6.5	9.0	8.5
12	19.5	18.5	13.5	13.0	9.5	9.0	7.0	6.5	6.5	6.0	9.0	8.5
13	19.0	18.5	13.0	12.5	9.5	7.5	7.0	6.5	7.0	6.0	9.0	8.5
14	19.0	18.0	13.0	12.5	9.5	9.0	7.5	6.5	7.5	6.5	9.5	9.0
15	18.5	18.0	13.0	12.0	9.0	7.5	7.0	6.5	7.0	6.5	9.5	9.0
16	18.0	17.0	13.0	12.0	9.5	6.0	7.0	6.5	7.0	6.5	9.5	9.0
17	17.5	17.0	12.5	12.0	8.5	6.5	6.5	6.5	7.0	6.5	9.5	8.5
18	17.0	16.0	12.5	12.0	8.0	7.0	7.0	6.0	7.5	7.0	9.5	9.0
19	16.5	15.5	12.5	12.0	9.5	7.0	7.0	7.0	7.5	7.0	10.0	9.0
20	16.0	15.0	12.5	12.0	8.5	7.5	9.0	6.5	7.0	7.0	10.0	9.5
21	16.0	15.0	12.0	12.0	8.0	7.0	9.0	6.0	7.5	7.0	10.0	9.5
22	15.5	14.5	12.0	11.5	8.0	6.5	9.0	6.0	7.5	7.0	10.0	9.5
23	15.5	15.0	12.0	11.5	7.0	5.5	8.5	6.0	8.0	7.5	10.5	9.5
24	15.0	14.5	12.0	11.0	7.0	5.5	9.0	6.0	8.0	7.5	11.0	9.5
25	15.0	14.5	11.5	10.0	7.0	4.0	8.5	6.0	8.0	7.5	10.5	9.5
26	15.0	14.5	11.5	9.0	7.0	6.5	7.5	7.0	8.5	8.0	10.5	10.0
27	15.0	14.5	10.5	9.0	8.0	6.0	7.5	7.0	9.0	8.0	10.5	10.0
28	15.0	14.5	10.5	10.0	7.0	6.0	7.0	6.0	8.5	8.0	11.5	10.0
29	15.0	14.5	10.0	9.5	7.0	6.0	9.0	6.0	---	---	13.5	9.5
30	14.5	14.0	10.0	9.5	7.0	6.0	8.0	6.0	---	---	14.0	9.0
31	14.5	14.0	---	---	7.0	6.5	8.0	6.0	---	---	11.5	9.5
MONTH	21.5	14.0	16.0	9.0	10.0	4.0	9.0	5.0	9.0	5.0	14.0	8.0

11191000 KERN RIVER BELOW ISABELLA DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	10.0	13.5	13.0	16.0	15.5	19.0	18.0	21.0	20.0	22.0	21.5
2	11.0	10.5	13.5	13.0	16.5	15.5	18.5	18.0	21.5	20.5	22.0	21.0
3	11.0	10.5	13.5	13.0	16.5	16.0	18.5	18.0	21.5	20.5	22.0	21.5
4	11.0	10.5	14.0	13.0	16.5	16.0	19.5	18.0	21.0	20.5	22.0	21.5
5	11.0	10.5	14.5	13.0	16.5	16.0	19.5	18.0	21.5	20.5	23.0	20.5
6	11.5	10.5	14.5	13.5	17.0	16.5	19.5	18.0	22.0	20.5	23.5	20.5
7	11.5	10.5	14.5	13.5	17.0	16.5	19.5	18.5	22.0	21.0	23.5	20.0
8	11.5	10.5	14.5	13.5	17.0	16.0	19.5	18.5	22.0	20.5	23.5	20.0
9	11.5	10.5	14.5	13.5	17.0	16.5	20.0	18.5	22.0	21.0	23.0	19.5
10	11.5	11.0	14.0	13.5	17.5	16.5	20.0	18.5	22.0	21.0	22.0	19.5
11	11.5	11.0	14.5	13.5	17.5	16.5	20.0	19.0	21.5	21.0	22.0	19.0
12	12.5	11.0	14.5	14.0	17.5	16.5	20.0	18.5	22.0	21.0	23.0	18.0
13	12.0	11.0	15.0	14.0	18.0	16.5	20.5	18.5	22.0	21.0	22.5	18.0
14	12.0	11.0	15.0	14.0	17.5	16.5	20.0	19.0	22.0	21.5	22.0	17.5
15	12.0	11.0	15.0	14.5	18.0	16.5	20.0	19.0	22.0	21.5	22.0	18.0
16	12.5	11.5	15.0	14.0	18.0	17.0	20.0	19.0	22.0	21.5	21.5	18.0
17	12.0	11.5	15.0	14.0	18.0	17.0	20.5	19.0	22.0	21.5	21.5	17.5
18	12.0	11.5	15.0	14.0	18.5	17.0	20.0	19.5	22.0	21.5	19.0	18.0
19	12.5	11.5	15.5	14.0	18.5	16.5	19.5	19.5	22.0	21.5	21.0	18.0
20	12.0	11.0	15.5	14.5	18.0	17.0	20.5	19.5	22.0	21.5	21.5	17.5
21	12.5	11.5	15.5	15.0	18.5	17.5	21.0	19.5	22.0	21.5	21.5	17.5
22	13.0	12.0	15.5	15.0	18.5	17.5	20.5	19.5	22.0	21.5	19.0	17.5
23	13.0	12.5	15.5	14.5	18.0	17.5	20.5	19.5	22.0	21.5	19.0	18.5
24	13.0	12.5	15.5	15.0	18.0	17.5	21.0	20.0	22.0	21.5	19.0	18.5
25	13.0	12.5	16.0	15.0	18.0	17.5	21.0	20.0	22.0	21.5	19.0	18.5
26	13.5	13.0	15.5	14.5	18.5	17.5	21.5	20.0	22.0	21.5	19.0	18.5
27	13.5	13.0	15.5	15.0	18.0	17.5	21.5	20.0	22.0	21.5	19.0	18.5
28	13.5	13.0	15.5	15.0	18.5	18.0	21.5	20.5	22.0	21.5	21.0	18.5
29	13.5	12.5	16.0	15.5	18.5	17.5	21.0	20.5	22.0	21.5	21.0	18.0
30	13.5	13.0	16.5	15.5	18.5	17.5	21.0	20.5	22.0	21.5	21.0	17.5
31	---	---	16.0	15.5	---	---	21.5	20.5	22.0	21.5	---	---
MONTH	13.5	10.0	16.5	13.0	18.5	15.5	21.5	18.0	22.0	20.0	23.5	17.5
YEAR	23.5	4.0										

11192500 KERN RIVER NEAR DEMOCRAT SPRINGS, CA

LOCATION.--Lat 35°31'15", long 118°40'34", in NE 1/4 SE 1/4 sec.6, T.28 S., R.31 E., Kern County, Hydrologic Unit 18030003, on left bank 1.0 mi southwest of Democrat Springs, and 2.1 mi upstream from Cow Creek.

DRAINAGE AREA.--2,258 mi^2.

PERIOD OF RECORD.--July 1950 to current year. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder on river; water-stage recorder for conduit diversion. Datum of gage is 1,837.7 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Kern River No. 1 conduit diverts up to about 420 ft^3/s from left bank of Kern River 0.4 mi upstream from station in sec.13, T.28 S., R.30 E., for power development; water is returned to river 10 mi below station. Flow regulated by Isabella Lake 22 mi upstream beginning in 1954 (station 11190500). Many diversions above station for irrigation. See schematic diagram of Kern River basin. For records of combined discharge of river and conduit, see following page.

COOPERATION.--Gage-height record and 11 discharge measurements for river and gage-height record and 10 discharge measurements for conduit were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only, 35 years, 680 ft^3/s, 492,700 acre-ft/yr.
Combined river and diversion, 35 years, 1,016 ft^3/s, 736,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 40,000 ft^3/s, Nov. 19, 1950, gage height, 30.7 ft, from rating curve extended above 8,700 ft^3/s on basis of computation of peak flow over dam (basic data for computation provided by Southern California Edison Co.); minimum daily, 0.7 ft^3/s, Nov. 17-19, 1951. Maximum discharge since construction of Isabella Dam in 1954, 10,100 ft^3/s, Dec. 6, 1966, gage height, 18.55 ft; no flow May 26-28, 1977.
Combined flow: Maximum discharge, 40,000 ft^3/s, Nov. 19, 1950; minimum daily, 123 ft^3/s, Sept. 22, 1951. Maximum discharge since construction of Isabella Dam in 1954, 10,100 ft^3/s, Dec. 6, 1966; minimum daily, 10 ft^3/s, Dec. 17, 1968.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 2,170 ft^3/s, June 19, gage height, 11.24 ft; minimum daily, 9.4 ft^3/s, Jan. 21.
Combined flow: Maximum discharge, 2,170 ft^3/s, June 19; minimum daily, 323 ft^3/s, Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	326	609	460	188	17	694	352	647	1080	1680	1280	373
2	357	745	434	187	23	675	452	663	1040	1630	1180	392
3	334	746	435	202	23	521	493	688	1030	1700	1000	412
4	305	744	436	239	20	610	477	670	980	1760	829	368
5	322	728	502	238	20	494	371	572	1050	1830	961	281
6	375	806	533	239	47	427	319	641	1240	1740	993	191
7	371	777	538	265	155	442	340	647	1390	1710	1320	135
8	322	868	577	280	217	510	561	675	1400	1800	1160	112
9	297	840	609	257	441	464	600	676	1460	1800	970	155
10	341	833	581	254	293	442	668	662	1660	1720	921	185
11	336	815	505	250	335	585	698	594	1680	1810	874	222
12	255	821	508	248	396	561	686	552	1800	1820	948	113
13	299	756	468	247	385	604	604	645	1920	1690	957	48
14	299	520	462	248	368	511	541	796	1990	1690	959	49
15	296	472	463	255	453	467	626	878	2020	1830	933	52
16	299	468	142	365	565	427	650	880	1940	1900	838	119
17	278	432	59	367	594	403	640	875	2100	1820	716	145
18	325	372	55	365	692	422	567	851	2120	1770	640	236
19	283	59	83	364	632	321	466	862	2140	1760	643	173
20	267	59	165	295	664	342	336	922	2050	1690	639	140
21	250	124	178	9.4	663	324	309	927	1930	1650	642	146
22	336	101	172	18	642	349	417	886	1810	1720	756	189
23	679	63	172	31	628	305	470	1050	1690	1730	795	287
24	670	162	167	62	651	288	476	1240	1730	1830	700	304
25	666	130	173	85	708	328	536	1220	1700	1720	631	264
26	655	173	173	212	721	365	540	1130	1560	1440	692	264
27	664	176	175	222	760	538	528	1130	1510	1450	656	265
28	622	228	175	217	755	375	459	1160	1590	1440	639	243
29	609	226	191	110	---	279	520	1190	1580	1560	550	151
30	570	457	190	79	---	249	583	1190	1560	1540	540	197
31	541	---	188	24	---	257	---	1170	---	1430	414	---
TOTAL	12549	14310	9969	6422.4	11868	13579	15285	26689	48750	52660	25776	6211
MEAN	405	477	322	207	424	438	510	861	1625	1699	831	207
MAX	679	868	609	367	760	694	698	1240	2140	1900	1320	412
MIN	250	59	55	9.4	17	249	309	552	980	1430	414	48
AC-FT	24890	28380	19770	12740	23540	26930	30320	52940	96700	104500	51130	12320

CAL YR 1984 TOTAL 276701 MEAN 756 MAX 1890 MIN 49 AC-FT 548800
WTR YR 1985 TOTAL 244068.4 MEAN 669 MAX 2140 MIN 9.4 AC-FT 484100

11192501 COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF KERN RIVER AND KERN RIVER NO. 1 CONDUIT NEAR DEMOCRAT SPRINGS, CA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	714	609	852	591	411	1100	760	1060	1080	1680	1690	779
2	748	745	826	590	418	1080	860	1080	1040	1630	1590	796
3	724	746	827	606	418	929	901	1100	1030	1700	1400	814
4	694	744	828	643	415	1020	884	1080	980	1760	1240	769
5	711	728	894	642	415	903	779	986	1050	1830	1370	684
6	766	806	926	643	445	838	728	1060	1240	1740	1400	596
7	762	777	934	668	562	851	749	1060	1390	1710	1730	547
8	711	868	969	684	624	918	969	1090	1400	1800	1580	521
9	684	840	1000	662	849	872	1010	1090	1460	1800	1390	561
10	730	833	976	659	702	850	1080	1080	1660	1720	1340	584
11	725	815	900	655	744	992	1110	1010	1680	1810	1290	621
12	639	821	904	653	804	970	1100	965	1800	1820	1370	508
13	684	756	866	652	793	1010	1020	1060	1920	1690	1370	374
14	683	520	861	653	776	919	954	1210	1990	1690	1380	323
15	680	472	862	661	860	875	1040	1290	2020	1830	1350	329
16	682	468	531	770	972	835	1060	1290	1940	1900	1260	451
17	661	432	444	772	1000	811	1050	1290	2100	1820	1130	530
18	708	372	443	770	1100	830	981	1260	2120	1770	1060	628
19	666	439	473	769	1040	729	880	1270	2140	1760	1060	565
20	650	438	562	697	1070	750	751	1330	2050	1690	1050	532
21	632	509	576	338	1070	732	724	1340	1930	1650	1060	538
22	691	483	571	406	1050	757	832	1300	1810	1720	1170	581
23	680	441	570	410	1040	713	885	1190	1690	1730	1210	679
24	670	545	565	410	1060	695	891	1240	1730	1830	1110	697
25	666	508	571	412	1120	735	951	1220	1700	1870	1030	657
26	655	531	571	606	1130	772	955	1130	1560	1850	1090	655
27	664	526	573	617	1170	945	943	1130	1510	1850	1060	655
28	622	620	574	618	1160	783	874	1160	1590	1840	1040	633
29	609	617	591	515	---	688	935	1190	1580	1960	947	540
30	570	848	591	481	---	658	998	1190	1560	1940	939	582
31	541	---	591	420	---	666	---	1170	---	1840	820	---
TOTAL	21022	18857	22222	18673	23218	26226	27654	35921	48750	55230	38526	17729
MEAN	678	629	717	602	829	846	922	1159	1625	1782	1243	591
MAX	766	868	1000	772	1170	1100	1110	1340	2140	1960	1730	814
MIN	541	372	443	338	411	658	724	965	980	1630	820	323
AC-FT	41700	37400	44080	37040	46050	52020	54850	71250	96700	109500	76420	35170

CAL YR 1984 TOTAL 408059 MEAN 1115 MAX 2280 MIN 372 AC-FT 809400
WTR YR 1985 TOTAL 354028 MEAN 970 MAX 2140 MIN 323 AC-FT 702200

11196420 TEHACHAPI CREEK NEAR TEHACHAPI, CA

LOCATION.--Lat 35°10'26", long 118°28'43", in NE 1/4 SW 1/4 sec.6, T.32 S., R.33 E., Kern County, Hydrologic Unit 18030003, on right bank 1.3 mi downstream from Brite Creek, and 3.2 mi northwest of Tehachapi.

DRAINAGE AREA.--53.2 mi^2.

PERIOD OF RECORD.--September 1962 to September 1985 (discontinued).

REVISED RECORDS.--WDR CA-72-2: 1967.

GAGE.--Water-stage recorder and steel-weir in concrete channel. Datum of gage is 3,534.48 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 5, 1964, at site 0.2 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Sept. 18-30. Records good.

AVERAGE DISCHARGE.--23 years, 1.13 ft^3/s, 819 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,560 ft^3/s, Mar. 1, 1983, gage height, 4.51 ft in gage well, 6.50 ft, from floodmarks, from slope-area measurement of peak flow; no flow for parts of most years.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 9	0215	*70	*1.02	Mar. 28	1200	46	0.88

No flow July 17-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.09	.17	.46	.67	.63	.50	.67	.16	.08	.06	.01
2	.10	.11	.17	.46	.67	1.1	.47	.69	.26	.11	.06	.01
3	.10	.12	.21	.46	.67	1.1	.54	.77	.41	.10	.06	.02
4	.08	.12	.17	.46	.67	.92	.56	.73	.15	.10	.06	.04
5	.08	.12	.17	.46	.67	.92	.58	.71	.13	.08	.05	.03
6	.08	.12	.16	.46	.67	.81	.66	.64	.11	.09	.03	.04
7	.08	.12	.17	4.2	.67	.83	.68	.62	.10	.08	.02	.04
8	.08	.14	.17	1.9	1.7	.78	.79	.63	.10	.08	.02	.03
9	.08	.12	.17	.80	13	.79	.79	.64	.10	.08	.03	.02
10	.08	.12	.21	.67	1.2	.79	.79	.66	.09	.07	.03	.03
11	.08	.12	.25	.67	.93	.79	.79	.52	.09	.06	.02	.03
12	.08	.12	.35	.67	.93	1.0	.79	.48	.08	.05	.03	.01
13	.08	.12	.32	.67	.73	.92	.79	.47	.07	.04	.03	.01
14	.08	.12	.29	.67	.67	.93	.79	.42	.06	.03	.01	.01
15	.08	.12	.31	.67	.67	.93	.79	.40	.07	.03	.01	.01
16	.08	.15	.40	.60	.67	.92	.79	.38	.07	.01	.01	.01
17	.08	.17	.38	.66	.67	.92	.81	.39	.06	0	.01	.01
18	.08	.15	.42	.66	.61	1.0	.84	.40	.05	0	.01	.02
19	.08	.12	.89	.65	.63	.97	.79	.40	.05	0	.01	.03
20	.08	.12	.68	.65	.67	.93	.79	.35	.05	.01	.01	.02
21	.08	.15	.53	.65	.62	1.0	.79	.33	.05	.01	.01	.02
22	.08	.16	.44	.65	.59	1.0	.79	.30	.05	.01	.01	.02
23	.08	.12	.46	.65	.56	1.0	.75	.26	.06	.01	.01	.02
24	.08	1.0	.40	.60	.56	.97	.70	.24	.07	.01	.01	.02
25	.08	.27	.41	.56	.56	.69	.67	.23	.08	.01	.01	.02
26	.08	.08	.48	.62	.56	.68	.67	.22	.08	.02	.01	.01
27	.08	.09	4.2	.65	.56	1.3	.67	.22	.07	.02	.01	.01
28	.08	.33	.96	.70	.55	4.5	.67	.22	.06	.02	.01	.01
29	.08	.17	.64	.67	---	1.1	.67	.21	.07	.03	.01	.01
30	.08	.17	.56	.67	---	.57	.67	.18	.08	.05	.01	.01
31	.12	---	.51	.67	---	.32	---	.15	---	.05	.01	---
TOTAL	2.56	5.03	15.65	23.99	32.33	31.11	21.38	13.53	2.93	1.34	0.68	0.58
MEAN	.083	.17	.50	.77	1.15	1.00	.71	.44	.098	.043	.022	.019
MAX	.12	1.0	4.2	4.2	13	4.5	.84	.77	.41	.11	.06	.04
MIN	.08	.08	.16	.46	.55	.32	.47	.15	.05	0	.01	.01
AC-FT	5.1	10	31	48	64	62	42	27	5.8	2.7	1.3	1.2

CAL YR 1984 TOTAL 280.57 MEAN .77 MAX 7.6 MIN .08 AC-FT 557
WTR YR 1985 TOTAL 151.11 MEAN .41 MAX 13 MIN 0 AC-FT 300

11197250 AVENAL CREEK NEAR AVENAL, CA

LOCATION.--Lat 35°51'15", long 120°07'34", in SW 1/4 NW 1/4 sec.10, T.24 S., R.17 E., Kings County, Hydrologic Unit 18030011, on right bank 550 ft downstream from road ford, 0.4 mi downstream from unnamed tributary, and 10 mi south of Avenal.

DRAINAGE AREA.--57.1 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 825 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: June 9 to July 1. Records fair. Minor diversions for stock above station.

AVERAGE DISCHARGE.--24 years, 3.61 ft^3/s, 2,620 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft^3/s, Feb. 24, 1969, gage height, 7.89 ft, from rating curve extended above 510 ft^3/s on basis of slope-area measurements at gage heights 5.72 ft and 7.54 ft; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 19	2045	*0.43	*2.24				

No flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0		0	0						
2			0		0	0						
3			0		0	0						
4			0		0	0						
5			0		0	0						
6			0		0	0						
7			0		0	.11						
8			0		0	.02						
9			0		.02	0						
10			0		0	0						
11			0		0	0						
12			0		0	0						
13			0		0	0						
14			0		0	0						
15			.01		0	0						
16			.08		0	0						
17			0		0	0						
18			.03		0	0						
19			.16		0	0						
20			.14		0	0						
21			.04		0	0						
22			.03		0	0						
23			.02		0	0						
24			.01		0	0						
25			0		0	0						
26			0		0	0						
27			0		0	0						
28			0		0	.01						
29			0		---	.01						
30			0		---	0						
31			0		---	0						
TOTAL	0	0	0.52	0	0.02	0.15	0	0	0	0	0	0
MEAN	0	0	.017	0	.000	.005	0	0	0	0	0	0
MAX	0	0	.16	0	.02	.11	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	1.0	0	.04	.3	0	0	0	0	0	0

CAL YR 1984	TOTAL	219.59	MEAN	.60	MAX	8.0	MIN	0	AC-FT 436
WTR YR 1985	TOTAL	.69	MEAN	.002	MAX	.16	MIN	0	AC-FT 1.4

11197800 POSO CREEK NEAR OILDALE, CA

LOCATION.--Lat 35°30'49", long 118°54'17", in SW 1/4 SW 1/4 sec.6, T.28 S., R.29 E., Kern County, Hydrologic Unit 18030012, on downstream side of highway bridge opposite mouth of Hillvale Canyon, 10 mi northeast of Oildale, and 12 mi northeast of Bakersfield.

DRAINAGE AREA.--230 mi^2.

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

REVISED RECORDS.--WSP 1735: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: June 8 to Aug. 12, Sept. 3-30. Records fair. Oilfield waste comprises most of low flow.

AVERAGE DISCHARGE.--26 years, 39.0 ft^3/s, 28,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,700 ft^3/s, Feb. 25, 1969, gage height, 12.85 ft, from rating curve extended above 1,240 ft^3/s on basis of contracted-opening measurement at gage height 11.57 ft; no flow for many days in 1975-82, and 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 4, 1958, reached a stage of 8.6 ft, from floodmarks, discharge, 2,750 ft^3/s, furnished by Kern County Land Co.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 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	1330	144	7.48	Mar. 28	0115	*201	*8.41
Feb. 9	1400	190	8.33				

No flow Oct. 1, 2, June 22 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	7.7	40	30	26	30	86	16	7.0			
2	0	7.3	35	29	27	31	83	16	7.9			
3	.20	7.8	32	29	28	35	79	15	12			
4	1.6	8.0	30	29	28	33	75	15	18			
5	2.2	8.1	29	28	27	32	68	14	14			
6	2.4	7.7	27	27	25	32	60	15	13			
7	2.6	8.1	26	30	26	32	53	14	10			
8	2.5	9.0	26	54	26	34	48	12	7.9			
9	2.5	10	26	60	117	33	44	12	7.4			
10	2.8	13	26	50	103	33	39	13	6.2			
11	3.2	12	26	45	71	34	37	12	6.2			
12	3.8	12	29	41	59	34	36	12	6.2			
13	5.3	12	31	37	51	33	32	9.9	5.4			
14	5.4	15	31	35	47	32	30	10	5.0			
15	5.1	16	29	34	41	30	28	8.8	4.3			
16	5.6	16	37	32	42	30	25	8.9	4.0			
17	7.8	16	35	30	42	30	27	8.9	3.5			
18	18	16	32	29	41	31	27	9.2	2.8			
19	13	16	34	30	39	34	28	9.7	2.3			
20	11	15	37	29	39	33	28	8.6	.89			
21	11	17	35	29	37	33	27	7.9	.97			
22	9.7	21	33	29	35	33	27	9.0	0			
23	10	25	32	29	31	32	25	7.3	0			
24	9.0	26	32	28	31	30	24	6.4	0			
25	8.6	78	31	27	29	30	23	6.8	0			
26	7.3	49	31	27	32	30	22	5.3	0			
27	6.8	34	31	26	32	67	21	5.7	0			
28	7.3	46	33	27	30	165	19	6.4	0			
29	7.0	81	32	27	---	126	17	6.7	0			
30	6.9	50	32	26	---	99	18	7.0	0			
31	8.5	---	30	27	---	90	---	8.1	---			
TOTAL	187.10	659.7	970	1010	1162	1381	1156	316.6	144.96	0	0	0
MEAN	6.04	22.0	31.3	32.6	41.5	44.5	38.5	10.2	4.83	0	0	0
MAX	18	81	40	60	117	165	86	16	18	0	0	0
MIN	0	7.3	26	26	25	30	17	5.3	0	0	0	0
AC-FT	371	1310	1920	2000	2300	2740	2290	628	288	0	0	0

CAL YR 1984 TOTAL 14285.68 MEAN 39.0 MAX 296 MIN 0 AC-FT 28340
WTR YR 1985 TOTAL 6987.36 MEAN 19.1 MAX 165 MIN 0 AC-FT 13860

11199500 WHITE RIVER NEAR DUCOR, CA

LOCATION.--Lat 35°48'36", long 118°55'03", in NW 1/4 SE 1/4 sec.26, T.24 S., R.28 E., Tulare County, Hydrologic Unit 18030012, on left bank 0.6 mi upstream from Tyler Gulch, and 9.0 mi southeast of Ducor.

DRAINAGE AREA.--90.6 mi^2.

PERIOD OF RECORD.--October 1942 to September 1953, February 1971 to current year. Monthly discharge only for October 1942 to September 1944, published in WSP 1315-A.

GAGE.--Water-stage recorder. Elevation of gage is 715 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1942 to September 1946, site 3,800 ft downstream and October 1946 to September 1953, at site 4,300 ft downstream, and October 1971 to November 1978, at site 4,000 ft downstream, all at different datum.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--25 years (water years 1943-53, 1972-85), 11.0 ft^3/s, 7,970 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft^3/s, estimated by Bureau of Reclamation, Mar. 9, 1943; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 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	0045	70	1.68	Mar. 27	1330	*109	*1.95
Feb. 9	0430	81	1.76				

No flow Oct. 1-4, June 17 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	2.8	5.9	6.3	6.3	7.0	17	8.2	3.3			
2	0	2.7	5.6	6.3	7.0	8.4	16	8.0	3.6			
3	0	2.6	5.5	6.0	7.1	9.5	14	7.8	4.7			
4	0	2.6	5.2	6.0	6.7	8.4	14	7.4	5.4			
5	.75	2.7	5.2	6.4	6.4	8.1	13	7.3	4.2			
6	1.6	2.5	4.9	6.8	6.5	8.4	12	7.0	3.6			
7	1.6	2.5	4.9	9.7	6.4	9.6	12	6.6	3.1			
8	1.3	2.7	5.0	18	7.1	10	12	6.5	2.7			
9	1.2	4.4	5.2	13	44	9.1	12	6.3	2.4			
10	1.0	4.1	5.4	9.4	19	9.3	11	6.2	2.1			
11	1.3	3.4	5.8	7.7	14	9.9	11	6.6	1.8			
12	1.7	3.2	5.9	7.1	11	9.2	11	6.4	1.5			
13	2.0	3.3	7.2	6.8	11	8.7	11	5.7	1.2			
14	2.0	3.7	6.2	6.7	10	8.4	11	5.2	.87			
15	2.1	3.8	6.0	6.6	9.8	8.0	12	4.8	.61			
16	2.2	3.6	13	6.3	9.7	7.9	12	4.7	.06			
17	5.0	3.8	8.4	6.3	9.6	7.9	13	4.7	0			
18	4.6	3.9	6.9	6.3	9.3	11	13	4.8	0			
19	3.1	3.9	7.4	6.3	9.3	12	13	4.8	0			
20	2.7	3.8	8.7	6.3	9.3	10	13	4.5	0			
21	2.7	4.4	7.0	6.3	8.9	10	12	4.3	0			
22	2.7	5.4	6.6	6.3	8.4	10	11	3.9	0			
23	2.6	5.2	6.6	6.3	8.4	9.9	11	3.7	0			
24	2.5	5.9	6.4	6.3	8.0	9.7	11	3.6	0			
25	2.5	31	6.3	6.3	7.6	9.7	11	3.4	0			
26	2.4	9.3	6.3	6.3	7.7	10	10	3.3	0			
27	2.4	6.9	6.3	6.4	7.3	45	9.7	3.3	0			
28	2.7	18	6.4	6.7	7.0	52	8.9	3.3	0			
29	2.7	11	6.3	6.4	---	29	8.4	3.4	0			
30	2.7	6.6	6.3	6.3	---	21	8.4	3.6	0			
31	2.7	---	6.3	6.3	---	18	---	3.5	---			
TOTAL	62.75	169.7	199.1	224.2	282.8	405.1	354.4	162.8	41.14	0	0	0
MEAN	2.02	5.66	6.42	7.23	10.1	13.1	11.8	5.25	1.37	0	0	0
MAX	5.0	31	13	18	44	52	17	8.2	5.4	0	0	0
MIN	0	2.5	4.9	6.0	6.3	7.0	8.4	3.3	0	0	0	0
AC-FT	124	337	395	445	561	804	703	323	82	0	0	0

CAL YR 1984 TOTAL 3239.75 MEAN 8.85 MAX 44 MIN 0 AC-FT 6430
WTR YR 1985 TOTAL 1901.99 MEAN 5.21 MAX 52 MIN 0 AC-FT 3770

11200800 DEER CREEK NEAR FOUNTAIN SPRINGS, CA

LOCATION.--Lat 35°56'30", long 118°49'19", in SE 1/4 NE 1/4 sec.10, T.23 S., R.29 E., Tulare County, Hydrologic Unit 18030005, on left bank 1.0 mi upstream from Pothole Creek, 6.3 mi northeast of Fountain Springs, and 12 mi east of Terra Bella.

DRAINAGE AREA.--83.3 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 980 ft above National Geodetic Vertical Datum 1929, from topographic map.

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

AVERAGE DISCHARGE.--17 years, 38.8 ft^3/s, 28,110 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,340 ft^3/s, Feb. 24, 1969, gage height, 9.85 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurements at gage heights 8.83 ft in gage well, 9.18 ft from floodmarks, and 12.54 ft from floodmarks; no flow for periods in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 6, 1966, reached a stage of 12.54 ft, from floodmarks, discharge, 5,330 ft^3/s.

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)
Nov. 24	2130	324	4.83	Mar. 27	1000	*553	*5.57
Feb. 9	0145	295	4.70				

No flow Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	9.8	28	20	20	22	63	25	17	4.9	2.2	.22
2	5.2	9.8	24	19	21	24	66	24	16	5.5	2.7	0
3	5.7	9.8	23	19	21	25	64	24	26	5.4	2.3	.01
4	5.8	10	22	19	20	24	60	25	22	4.5	2.9	.52
5	6.0	9.1	21	19	20	23	57	25	19	4.3	2.1	2.5
6	6.0	9.5	20	19	20	23	53	23	18	3.7	1.4	3.3
7	6.0	10	20	37	20	26	50	22	17	3.6	1.4	3.3
8	5.7	15	19	70	31	27	46	23	15	3.5	1.6	3.3
9	5.3	24	19	45	155	25	45	23	14	3.3	2.0	3.2
10	5.5	16	19	37	58	25	43	25	13	4.1	1.9	3.2
11	6.2	14	20	32	45	28	42	27	11	4.0	1.4	11
12	8.2	13	22	29	39	27	42	26	10	3.0	1.4	9.4
13	8.7	13	26	26	37	26	40	24	9.7	3.1	1.4	7.2
14	8.7	14	21	25	36	25	38	23	9.2	3.4	1.4	6.0
15	8.7	13	21	24	35	25	34	21	10	3.0	.79	5.6
16	8.9	13	30	23	34	24	35	21	10	2.1	.88	5.4
17	39	13	24	23	33	23	36	20	8.4	1.8	1.2	5.4
18	18	13	22	23	32	26	38	21	7.1	2.0	1.3	5.4
19	13	13	23	23	30	26	37	21	6.5	3.2	2.7	5.6
20	12	13	23	23	29	26	36	20	7.1	3.7	2.8	5.7
21	12	14	22	23	28	25	35	20	6.9	3.6	2.6	5.7
22	12	19	21	22	27	24	33	19	7.1	3.2	1.5	5.4
23	11	19	21	22	26	24	32	18	6.8	2.3	1.2	5.1
24	11	71	21	21	25	23	30	18	6.3	1.9	.94	4.9
25	10	80	20	21	23	22	28	18	6.3	1.9	1.4	4.6
26	9.9	30	20	20	23	22	29	17	6.3	2.0	1.4	4.5
27	9.8	23	20	21	23	253	27	15	6.3	2.0	1.7	4.3
28	9.8	105	20	21	23	139	27	15	5.8	1.8	1.6	4.7
29	9.8	53	20	20	---	86	26	15	5.2	1.4	.93	5.4
30	9.8	35	20	20	---	67	25	16	5.2	1.2	.93	5.4
31	9.8	---	20	20	---	63	---	16	---	1.5	.50	---
TOTAL	302.1	704.0	672	786	934	1248	1217	650	328.2	94.9	50.47	136.25
MEAN	9.75	23.5	21.7	25.4	33.4	40.3	40.6	21.0	10.9	3.06	1.63	4.54
MAX	39	105	30	70	155	253	66	27	26	5.5	2.9	11
MIN	4.6	9.1	19	19	20	22	25	15	5.2	1.2	.50	0
AC-FT	599	1400	1330	1560	1850	2480	2410	1290	651	188	100	270

CAL YR 1984 TOTAL 10878.70 MEAN 29.7 MAX 132 MIN 2.5 AC-FT 21580
WTR YR 1985 TOTAL 7122.92 MEAN 19.5 MAX 253 MIN 0 AC-FT 14130

11201200 DEER CREEK DIVERSION NEAR TERRA BELLA, CA

LOCATION.--Lat 35°59'27", long 118°59'06", in NE 1/4 NE 1/4 sec.30, T.22 S., R.28 E., Tulare County, Hydrologic Unit 18030012, on right bank 1,000 ft downstream from diversion structure, 3.8 mi northeast of Terra Bella.

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

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 510 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Diversion receives water from Deer Creek 1,000 ft upstream. Water is used for ground-water recharge.

AVERAGE DISCHARGE.--15 years, 2.35 ft^3/s, 1,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 16 ft^3/s, Sept. 30, Oct. 2, 1983, Mar. 16, 18, 1985; no flow for several months in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	6.0	5.7	5.6	5.7	0	6.4	6.8			
2	0	0	5.9	5.7	5.8	5.9	0	5.9	7.0			
3	0	0	5.9	5.7	6.0	6.1	0	5.2	6.9			
4	0	0	5.8	5.7	5.9	6.0	0	5.1	7.6			
5	0	0	5.7	5.7	5.8	5.9	0	5.1	6.8			
6	0	0	5.6	5.7	5.7	6.0	0	5.2	6.4			
7	0	0	5.6	6.1	5.8	6.1	0	5.5	6.1			
8	0	0	5.5	1.9	6.1	6.3	0	6.2	5.8			
9	0	0	5.5	0	9.3	7.6	0	6.3	6.0			
10	0	0	5.6	0	7.7	11	0	6.4	5.9			
11	0	0	5.7	0	7.1	11	0	6.4	5.3			
12	0	0	5.7	0	6.8	10	4.9	6.3	4.4			
13	0	0	5.9	0	7.1	9.4	9.4	6.2	3.6			
14	0	0	5.9	0	7.2	8.8	7.1	6.0	2.7			
15	0	0	5.8	0	7.1	14	4.3	5.9	2.7			
16	0	.91	6.2	0	7.1	16	4.3	8.0	3.0			
17	1.1	2.8	6.1	0	7.0	15	4.4	11	2.2			
18	6.5	3.0	6.0	0	7.1	16	4.6	10	1.0			
19	3.8	3.1	6.1	0	7.0	12	4.6	8.5	0			
20	3.9	3.0	6.1	0	6.8	8.1	4.7	5.9	0			
21	4.3	3.9	6.0	0	6.6	8.0	4.9	6.4	0			
22	4.8	4.8	5.9	0	6.5	7.8	4.8	6.1	0			
23	4.9	5.1	5.9	3.3	6.4	7.3	4.7	5.8	0			
24	5.0	5.4	5.9	5.8	6.3	7.2	4.6	6.0	0			
25	4.9	14	5.8	5.7	6.1	7.0	4.7	6.1	0			
26	2.7	8.7	5.8	5.7	6.0	7.7	4.7	6.5	0			
27	.98	7.1	5.7	6.0	6.0	7.6	4.5	6.4	0			
28	.40	9.3	5.8	6.0	5.8	.28	4.6	6.5	0			
29	0	6.7	5.7	5.9	---	0	4.7	6.5	0			
30	0	6.0	5.7	5.9	---	0	4.9	6.9	0			
31	0	---	5.7	5.7	---	0	---	6.8	---			
TOTAL	43.28	83.81	180.5	92.2	183.7	239.78	95.4	201.5	90.2	0	0	0
MEAN	1.40	2.79	5.82	2.97	6.56	7.73	3.18	6.50	3.01	0	0	0
MAX	6.5	14	6.2	6.1	9.3	16	9.4	11	7.6	0	0	0
MIN	0	0	5.5	0	5.6	0	0	5.1	0	0	0	0
AC-FT	86	166	358	183	364	476	189	400	179	0	0	0

CAL YR 1984 TOTAL 1676.80 MEAN 4.58 MAX 15 MIN 0 AC-FT 3330
WTR YR 1985 TOTAL 1210.37 MEAN 3.32 MAX 16 MIN 0 AC-FT 2400

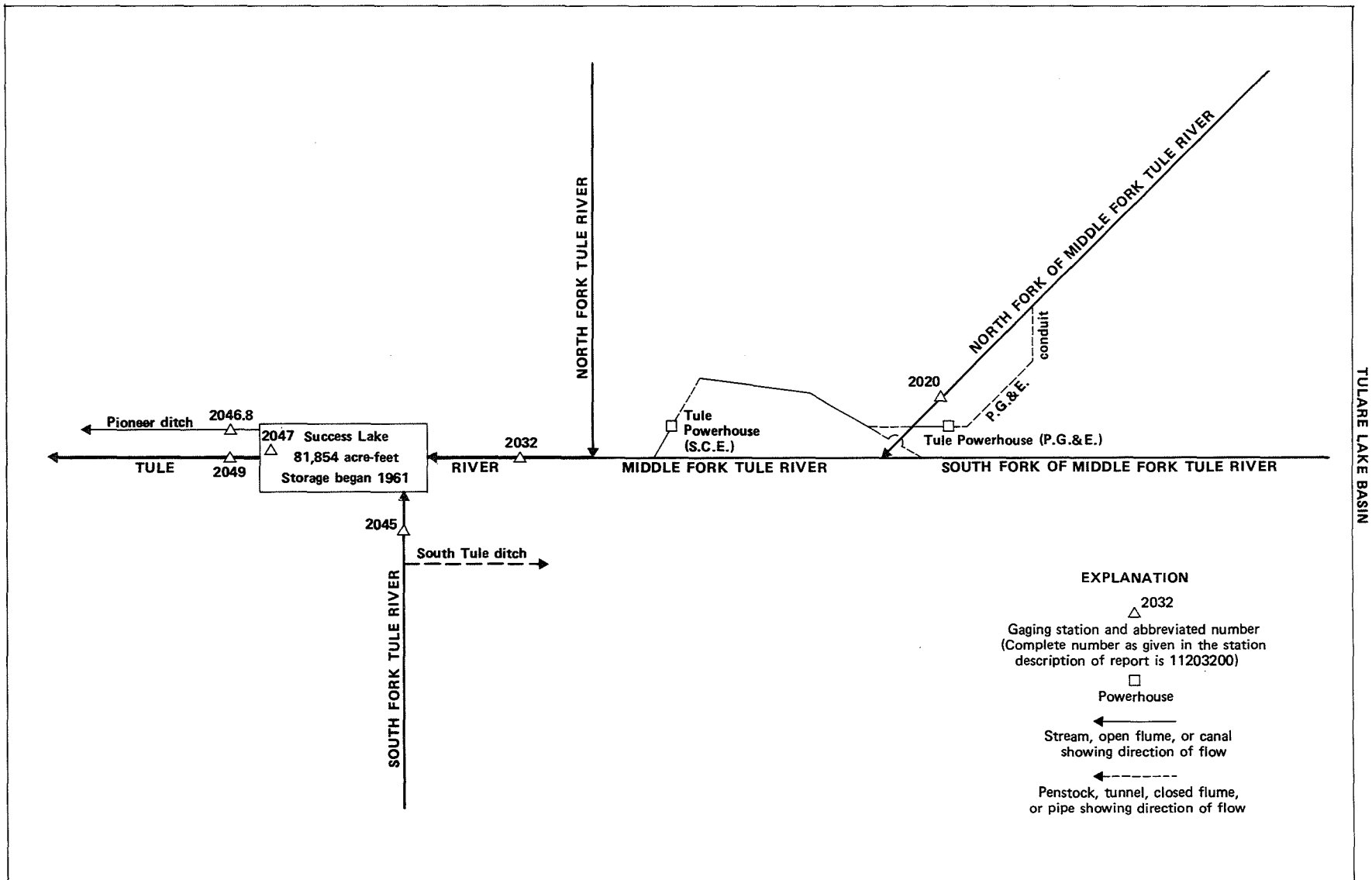


FIGURE 26. — Schematic diagram showing diversions and storage in Tule River basin.

11202000 NORTH FORK OF MIDDLE FORK TULE RIVER NEAR SPRINGVILLE, CA

LOCATION.--Lat 36°10'29", long 118°41'41", unsurveyed, in T.20 S., R.30 E., Tulare County, Hydrologic Unit 18030006, on right bank 1.2 mi upstream from mouth, 2.2 mi downstream from Hossack Creek, and 7.4 mi northeast of Springville.

DRAINAGE AREA.--39.3 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315A. January 1909 to December 1912 at site 2 mi upstream, records not equivalent. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960. Prior to October 1982, combined flow consisted of river and Tule River conduit.

REVISED RECORDS.--WSP 1445: 1951.

GAGE.--Water-stage recorder. Concrete control on river since Aug. 6, 1958. Elevation of gage is 2,920 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--See schematic diagram of Tule River basin. For records of combined discharge of river and powerplant, see following page.

COOPERATION.--Records were provided by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only: 46 years, 28.0 ft^3/s, 20,290 acre-ft/yr.
Combined river and diversion: 46 years, 60.6 ft^3/s, 43,900 acreft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 16,900 ft^3/s, Dec. 6, 1966, gage height, 13.83 ft, from floodmarks, from rating curve extended above 1,820 ft^3/s on basis of critical-depth determinations at gage heights 9.67 ft and 12.47 ft; no flow Sept. 10, 11, 1955.
Combined flow: Maximum discharge, 16,900 ft^3/s, Dec. 6, 1966; minimum daily, 6.7 ft^3/s, Aug. 15, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 247 ft^3/s, Nov. 28, gage height, 4.44 ft; minimum daily, 2.7 ft^3/s, Sept. 14.
Combined flow: Maximum discharge, 276 ft^3/s, Nov. 28; minimum daily, 15 ft^3/s, Aug. 29.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--River only, maximum discharge, 1,360 ft^3/s, Nov. 24, gage height, 6.64 ft; minimum daily, 4.1 ft^3/s, Sept. 12.
Combined flow: Maximum discharge, 1,400 ft^3/s, Nov. 24; minimum daily, 12 ft^3/s, Sept.7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	17	76	10	15	24	28	21	6.3	5.0	16
2	10	9.8	16	64	9.9	12	22	28	16	6.1	5.0	16
3	9.6	7.9	38	56	9.6	12	19	39	12	6.3	5.0	16
4	8.6	7.8	35	51	9.4	12	18	48	9.9	6.2	5.0	18
5	8.4	7.8	24	49	9.4	12	17	45	17	6.0	4.9	19
6	8.0	7.6	20	46	9.3	12	23	48	10	5.8	6.5	15
7	7.8	7.6	18	44	9.1	12	21	54	8.9	5.7	9.3	8.1
8	7.8	7.8	17	42	8.9	11	22	64	7.8	5.7	9.3	7.0
9	7.9	7.4	55	37	14	11	18	73	7.4	5.6	9.3	4.2
10	7.8	7.4	116	34	34	11	19	80	7.4	5.6	9.3	4.2
11	7.7	33	44	31	27	11	23	88	7.1	5.5	9.3	4.2
12	8.0	9.6	28	26	29	11	27	97	7.1	5.5	9.3	4.1
13	8.1	7.3	21	24	38	26	33	100	7.6	5.4	9.3	11
14	8.1	7.1	19	21	50	103	40	99	7.5	5.4	9.2	10
15	8.0	7.7	18	19	37	49	47	81	7.3	5.7	10	5.1
16	8.0	7.5	17	16	96	38	53	65	7.2	6.0	9.6	5.0
17	7.7	27	17	14	57	35	53	59	7.1	6.3	9.3	5.0
18	7.7	26	16	13	48	30	52	56	7.2	5.8	9.2	5.0
19	7.6	14	16	12	44	30	58	57	7.0	5.7	9.2	4.9
20	7.7	117	15	11	43	33	44	63	6.8	5.7	9.0	4.9
21	8.0	26	14	11	42	34	44	67	6.7	5.6	9.0	4.9
22	7.9	15	14	11	40	32	44	66	6.6	5.9	9.1	4.9
23	7.8	14	10	11	37	32	42	65	6.5	5.8	7.6	4.9
24	8.0	288	40	11	36	32	51	64	6.8	5.6	4.9	4.9
25	7.7	176	250	10	35	32	50	56	6.7	5.6	4.7	4.8
26	7.7	50	306	10	33	42	43	49	6.5	5.4	4.6	4.8
27	7.7	32	323	10	32	39	38	45	6.4	5.3	14	4.7
28	7.6	24	192	9.6	31	36	33	40	6.4	5.2	20	4.8
29	7.6	20	138	9.6	23	33	29	35	6.3	5.1	20	4.8
30	8.4	18	110	10	---	29	28	30	6.4	5.1	20	4.8
31	7.7	---	92	9.9	---	28	---	25	---	5.1	20	---
TOTAL	251.6	1001.3	2056	799.1	901.6	855	1035	1814	254.6	176.0	295.9	231.0
MEAN	8.12	33.4	66.3	25.8	31.1	27.6	34.5	58.5	8.49	5.68	9.55	7.70
MAX	11	288	323	76	96	103	58	100	21	6.3	20	19
MIN	7.6	7.1	10	9.6	8.9	11	17	25	6.3	5.1	4.6	4.1
AC-FT	499	1990	4080	1590	1790	1700	2050	3600	505	349	587	458

CAL YR 1983 TOTAL 36775.0 MEAN 101 MAX 517 MIN 7.1 AC-FT 72940
WTR YR 1984 TOTAL 9671.1 MEAN 26.4 MAX 323 MIN 4.1 AC-FT 19180

TULARE LAKE BASIN

11202001 NORTH FORK OF MIDDLE FORK TULE RIVER NEAR SPRINGVILLE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF NORTH FORK OF MIDDLE FORK TULE RIVER AND PACIFIC GAS AND ELECTRIC CO. TULE RIVER POWERHOUSE NEAR SPRINGVILLE, CA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

MEAN VALUES

(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	38	75	144	69	61	92	95	88	38	29	16
2	50	39	73	132	69	53	90	95	83	38	28	16
3	45	35	99	124	68	71	87	106	79	38	28	16
4	43	34	99	120	67	74	86	115	77	41	27	18
5	41	33	80	117	66	73	85	112	84	37	26	19
6	41	34	72	114	67	72	91	115	77	37	26	15
7	41	34	71	113	66	75	89	121	73	36	25	12
8	41	33	72	111	66	78	90	131	70	36	25	15
9	40	32	115	106	58	78	86	141	67	34	24	21
10	40	32	184	102	69	78	87	149	66	34	25	21
11	39	85	113	99	63	78	92	156	63	34	25	15
12	38	46	96	94	64	76	95	165	57	34	25	22
13	37	53	85	92	74	90	100	168	59	31	24	22
14	38	44	82	89	85	171	107	167	57	32	25	21
15	38	41	81	86	72	117	114	149	58	28	25	21
16	37	39	80	84	131	106	120	133	57	35	27	21
17	38	55	80	82	92	103	120	127	54	39	25	21
18	38	81	77	80	84	98	119	124	52	37	24	22
19	37	49	74	78	79	98	125	125	51	35	24	22
20	36	172	72	76	78	101	104	131	49	37	24	21
21	34	94	68	74	77	102	111	135	48	36	24	21
22	35	70	68	73	76	100	111	133	49	36	24	22
23	35	62	66	72	72	100	110	133	45	37	24	22
24	34	329	100	71	71	100	118	132	45	33	25	22
25	34	206	319	70	71	100	117	123	44	29	23	22
26	34	117	374	71	68	110	110	117	42	29	23	21
27	34	98	391	69	67	107	105	113	40	31	23	21
28	33	90	260	69	66	104	100	107	41	29	20	21
29	34	84	206	70	58	101	94	100	39	29	20	21
30	34	79	178	69	---	97	95	97	39	29	20	21
31	34	---	160	68	---	96	---	91	---	30	20	---
TOTAL	1173	2238	3970	2819	2113	2868	3050	3906	1753	1059	757	591
MEAN	37.8	74.6	128	90.9	72.9	92.5	102	126	58.4	34.2	24.4	19.7
MAX	50	329	391	144	131	171	125	168	88	41	29	22
MIN	33	32	66	68	58	53	85	91	39	28	20	12
AC-FT	2330	4440	7870	5590	4190	5690	6050	7750	3480	2100	1500	1170

CAL YR 1983 TOTAL 57883 MEAN 159 MAX 586 MIN 21 AC-FT 114800
WTR YR 1984 TOTAL 26297 MEAN 71.8 MAX 391 MIN 12 AC-FT 52160

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES

(RIVER ONLY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	4.9	6.6	5.1	5.2	6.3	28	62	14	4.9	3.9	7.9
2	8.8	4.7	5.4	5.4	5.6	6.8	53	72	14	4.9	3.9	7.9
3	4.3	4.7	5.0	5.2	5.4	6.4	77	68	15	4.7	3.9	8.0
4	8.8	4.6	4.7	5.0	5.3	6.3	88	71	11	4.6	3.8	8.2
5	7.4	4.3	4.6	5.0	5.2	6.2	101	72	13	4.6	3.7	8.2
6	4.1	4.3	4.5	5.2	5.2	6.3	109	76	19	4.7	3.8	6.5
7	4.0	4.6	4.4	12	5.3	6.6	114	70	20	4.6	4.9	3.4
8	4.2	7.9	4.3	15	35	6.3	112	63	18	4.4	5.4	3.5
9	5.4	5.0	4.2	12	40	6.2	105	55	15	4.6	4.6	3.6
10	4.2	4.6	4.9	9.8	16	6.2	101	49	13	4.3	4.2	3.6
11	6.4	4.4	5.2	8.3	13	6.2	98	37	9.8	4.2	4.3	4.1
12	5.9	4.3	7.9	7.6	11	6.1	97	35	7.3	4.2	7.2	3.3
13	4.1	6.0	6.7	7.1	11	6.0	103	36	6.3	4.2	17	2.8
14	4.3	5.0	5.6	6.7	10	5.9	112	44	6.3	4.1	19	2.7
15	4.5	4.9	6.5	6.5	9.9	5.8	108	51	5.8	4.1	21	3.2
16	8.4	4.8	8.6	6.3	9.6	5.8	91	53	5.6	4.2	19	3.1
17	19	4.1	5.6	6.1	9.2	5.6	80	54	5.2	4.2	18	3.1
18	6.5	4.3	5.5	6.1	8.9	6.6	61	55	4.9	4.1	18	3.6
19	4.7	4.1	5.9	6.1	8.7	6.4	50	53	4.9	4.1	18	3.3
20	4.8	4.1	6.3	6.1	8.7	6.5	42	53	5.1	4.2	18	3.3
21	4.7	4.9	6.0	6.0	8.0	6.5	33	52	5.0	4.1	18	4.1
22	4.5	4.9	5.9	5.9	7.6	6.3	27	54	4.5	4.2	17	3.9
23	4.5	4.5	5.9	5.7	7.4	6.2	27	56	4.2	4.0	17	3.5
24	4.5	33	5.9	5.6	6.9	6.5	32	58	4.7	4.1	17	3.1
25	4.4	11	5.8	5.4	6.7	6.8	33	53	4.7	4.1	17	3.3
26	4.7	6.0	5.8	5.5	6.7	8.2	26	46	4.5	4.0	17	3.3
27	4.7	24	6.0	6.4	6.7	98	25	39	4.3	3.9	17	3.1
28	4.4	96	5.7	5.6	7.5	41	29	32	4.3	3.8	17	3.3
29	4.6	15	5.5	5.6	---	21	36	29	5.1	3.9	15	3.0
30	4.5	6.0	5.2	5.6	---	17	46	23	5.1	3.8	8.5	3.0
31	5.6	---	5.1	5.3	---	18	---	19	---	4.0	7.8	---
TOTAL	177.8	300.9	175.2	209.2	285.7	360.0	2044	1590	259.6	131.8	369.9	126.9
MEAN	5.74	10.0	5.65	6.75	10.2	11.6	68.1	51.3	8.65	4.25	11.9	4.23
MAX	19	96	8.6	15	40	98	114	76	20	4.9	21	8.2
MIN	4.0	4.1	4.2	5.0	5.2	5.6	25	19	4.2	3.8	3.7	2.7
AC-FT	353	597	348	415	567	714	4050	3150	515	261	734	252

CAL YR 1984 TOTAL 7016.1 MEAN 19.2 MAX 103 MIN 4.0 AC-FT 13920
WTR YR 1985 TOTAL 6031.0 MEAN 16.5 MAX 114 MIN 2.7 AC-FT 11960

11202001 NORTH FORK OF MIDDLE FORK TULE RIVER NEAR SPRINGVILLE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF NORTH FORK OF MIDDLE FORK TULE RIVER AND PACIFIC GAS AND ELECTRIC CO. TULE RIVER POWERHOUSE NEAR SPRINGVILLE, CA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	38	30	31	54	96	130	80	35	23	19
2	23	23	37	30	33	56	121	139	81	35	23	19
3	21	23	34	30	31	50	146	136	83	34	23	19
4	22	23	33	31	29	47	156	138	78	33	22	21
5	21	22	33	31	30	46	151	140	80	32	22	21
6	22	22	32	32	29	44	156	144	87	32	21	21
7	21	23	31	60	29	46	182	137	87	31	22	20
8	20	36	32	52	65	42	174	130	86	30	21	21
9	21	30	31	45	90	41	160	123	82	30	22	21
10	20	29	32	42	48	46	169	116	81	29	22	20
11	21	28	34	39	44	44	165	104	77	28	18	26
12	24	29	37	37	42	44	162	102	74	28	19	20
13	22	37	37	36	46	41	172	103	69	27	17	22
14	21	31	32	36	46	42	180	107	67	27	19	21
15	22	29	33	36	52	41	176	117	64	26	21	19
16	24	29	32	36	56	42	160	120	61	26	19	19
17	54	28	29	37	62	41	148	121	57	26	18	19
18	30	28	32	38	60	47	129	122	55	26	18	20
19	27	27	32	43	59	43	118	120	52	26	18	20
20	29	27	31	44	61	48	110	120	50	27	18	17
21	27	28	30	43	54	53	101	119	46	26	18	19
22	26	29	30	41	51	47	95	118	47	26	17	19
23	26	28	31	39	50	50	95	124	44	25	17	19
24	26	64	30	38	49	56	92	115	41	25	17	18
25	25	44	32	35	53	57	101	123	43	26	17	18
26	25	34	31	36	53	54	94	112	42	26	17	18
27	25	50	32	37	55	167	93	106	37	24	17	18
28	25	125	31	34	57	107	94	99	36	23	17	19
29	24	54	30	34	---	79	104	91	36	23	15	19
30	24	39	30	34	---	71	114	84	37	23	16	19
31	24	---	30	30	---	79	---	86	---	23	19	---
TOTAL	765	1042	999	1166	1365	1725	4014	3646	1860	858	593	591
MEAN	24.7	34.7	32.2	37.6	48.8	55.6	134	118	62.0	27.7	19.1	19.7
MAX	54	125	38	60	90	167	182	144	87	35	23	26
MIN	20	22	29	30	29	41	92	84	36	23	15	17
AC-FT	1520	2070	1980	2310	2710	3420	7960	7230	3690	1700	1180	1170

CAL YR 1984 TOTAL 21722 MEAN 59.3 MAX 171 MIN 12 AC-FT 43090
WTR YR 1985 TOTAL 18624 MEAN 51.0 MAX 182 MIN 15 AC-FT 36940

11203201 TULE RIVER NEAR SPRINGVILLE, CA
(Formerly published as station 11203200)

LOCATION.--Lat 36°06'02", long 118°52'07", in NE 1/4 SW 1/4 sec.17, T.21 S., R.29 E., Tulare County, Hydrologic Unit 18030006, on left bank 10 ft downstream from highway bridge, 3.5 mi southwest of Springville, and 4.1 mi upstream from Success Dam.

DRAINAGE AREA.--247 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1984 published as "11203200 Tule River near Springville".

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 680 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 20, 1968, at site 1.9 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Many small diversions above station for irrigation. Power is developed on Middle Fork and tributaries. Diversion to Tule River diversion ditch starts 400 ft upstream most of which is returned to the river 0.5 mi downstream. Records since Mar. 20, 1968, include flow diverted to Tule River diversion ditch.

AVERAGE DISCHARGE.--28 years, 165 ft^3/s, 119,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft^3/s, Dec. 6, 1966, gage height, 17.18 ft in gage well, 19.7 ft from floodmarks, site and datum then in use, from rating curve extended above 7,400 ft^3/s on basis of slope-area measurement of peak flow; no flow many days in 1961 and Aug. 16, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1955 reached a stage of 13.7 ft previous site and datum, from floodmarks, discharge, 21,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	0800	1,190	6.89	Mar. 27	1015	1,640	7.37
Jan. 8	0400	559	5.85	Apr. 6	0115	523	5.76
Feb. 9	0145	*2,080	*7.78				

Minimum daily, 9.2 ft^3/s, Aug. 28.

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	46	129	88	87	132	332	235	140	38	20	9.9
2	28	46	111	88	88	142	404	259	134	36	18	9.6
3	31	44	103	86	92	145	467	260	155	33	17	11
4	27	44	93	86	90	131	476	255	145	31	17	16
5	28	44	84	85	85	127	488	258	131	30	16	18
6	29	44	85	86	84	124	484	252	132	29	16	20
7	29	44	83	208	84	130	484	245	130	28	16	20
8	27	63	82	384	251	129	470	234	127	28	15	19
9	28	90	82	218	917	122	445	221	122	28	13	22
10	28	68	82	172	307	120	419	228	118	27	13	24
11	29	63	94	150	230	124	394	211	107	26	13	55
12	39	61	94	136	196	128	386	200	101	26	14	34
13	43	82	126	123	186	123	384	188	97	25	14	30
14	38	94	100	116	189	118	400	190	90	24	14	27
15	39	77	95	114	191	115	400	203	85	23	13	24
16	40	69	165	112	201	111	361	203	81	24	11	24
17	125	69	117	106	208	109	347	201	76	24	12	24
18	75	67	105	111	201	128	311	205	70	23	12	24
19	58	68	105	118	201	134	280	210	65	23	15	27
20	55	65	115	120	196	130	260	205	60	23	14	23
21	54	74	107	120	178	130	240	198	58	23	13	20
22	51	91	98	120	163	130	220	190	56	22	11	18
23	50	81	97	112	156	130	211	193	55	22	13	19
24	49	235	95	107	147	134	217	196	54	21	13	19
25	48	274	91	103	143	140	219	199	53	21	13	17
26	46	123	92	99	140	142	205	190	53	22	11	17
27	45	106	92	101	138	1050	197	175	49	22	9.7	17
28	45	575	93	101	138	681	195	166	43	20	9.2	21
29	45	252	90	94	---	406	204	159	40	20	10	20
30	44	159	88	90	---	314	217	152	38	20	10	20
31	44	---	88	90	---	306	---	143	---	19	10	---
TOTAL	1342	3218	3081	3844	5287	6085	10117	6424	2665	781	415.9	649.5
MEAN	43.3	107	99.4	124	189	196	337	207	88.8	25.2	13.4	21.6
MAX	125	575	165	384	917	1050	488	260	155	38	20	55
MIN	25	44	82	85	84	109	195	143	38	19	9.2	9.6
AC-FT	2660	6380	6110	7620	10490	12070	20070	12740	5290	1550	825	1290

CAL YR 1984 TOTAL 51991.0 MEAN 142 MAX 703 MIN 18 AC-FT 103100
WTR YR 1985 TOTAL 43909.4 MEAN 120 MAX 1050 MIN 9.2 AC-FT 87090

11203200 TULE RIVER NEAR SPRINGVILLE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, 1969 to current year.
CHEMICAL ANALYSES: Water years 1964-65.
WATER TEMPERATURES: Water years 1966-67, 1969 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1965 to September 1967, October 1968 to current year.

INSTRUMENTATION.--Temperature recorder October 1965 to September 1967, and since October 1968.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 35.5°C, July 1, 1972; minimum recorded, 2.5°C, Jan. 5-8, 1971.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 31.0°C, July 25-28; minimum recorded, 4.5°C, Dec. 17, Feb. 5, 6.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.5	17.0	13.0	11.0	9.5	8.5	8.0	7.0	6.5	5.0	12.5	10.0
2	19.5	15.5	13.0	11.0	8.0	7.0	7.0	5.5	6.5	6.0	11.5	7.5
3	20.0	16.0	14.5	12.5	9.0	8.0	7.0	5.0	7.0	5.5	8.5	6.5
4	20.5	16.5	14.5	12.5	9.0	8.0	7.0	5.5	7.0	5.0	9.0	6.0
5	20.0	16.5	14.0	11.5	10.0	8.5	7.0	5.5	6.5	4.5	8.5	6.5
6	20.0	16.5	14.5	12.5	10.5	9.0	8.0	7.0	6.5	4.5	10.0	7.5
7	21.0	16.5	14.0	12.0	9.5	8.5	8.5	8.0	7.0	5.0	10.5	8.0
8	21.0	17.0	14.0	12.5	11.0	9.5	8.5	8.0	7.5	7.0	9.0	7.5
9	21.0	17.0	12.0	10.0	10.5	9.0	8.5	7.5	7.5	7.0	10.5	7.0
10	21.0	17.0	11.0	9.5	9.5	9.0	8.5	8.0	7.5	5.5	12.0	10.0
11	18.0	16.5	11.5	9.5	10.0	9.0	8.0	7.5	8.0	6.0	12.5	10.5
12	18.0	15.0	12.0	10.5	10.0	9.5	8.0	7.0	9.0	7.0	12.0	9.5
13	18.0	15.0	12.5	11.5	9.5	7.5	7.0	6.0	9.5	7.5	12.5	9.5
14	18.0	16.0	11.5	10.5	7.5	6.0	6.5	5.5	10.5	8.0	11.0	9.5
15	16.5	14.5	11.0	9.5	6.5	5.5	6.0	5.5	11.0	9.0	12.5	9.5
16	14.5	13.0	11.5	10.5	7.5	6.0	7.0	6.0	11.0	9.0	12.5	9.5
17	13.0	12.0	11.5	10.5	6.5	4.5	7.5	5.5	11.0	9.0	13.5	10.5
18	12.5	10.5	11.0	10.5	5.5	5.0	8.0	6.5	11.0	10.0	12.0	9.5
19	13.5	11.5	11.5	10.5	6.0	5.0	8.0	7.0	12.0	10.0	11.0	9.0
20	13.5	13.0	11.0	9.5	7.0	6.0	8.0	7.0	11.5	8.5	12.0	9.0
21	14.0	12.5	10.5	9.5	6.5	5.5	7.5	7.5	9.0	6.5	11.5	10.5
22	14.0	12.0	10.0	9.0	6.5	5.0	8.0	7.0	10.0	7.5	12.0	9.0
23	14.0	12.0	9.5	8.0	6.0	5.0	8.5	7.5	11.0	8.0	12.5	9.5
24	14.5	12.0	9.0	9.0	6.0	5.5	8.5	7.5	11.5	9.0	13.0	10.0
25	14.5	12.0	9.0	8.0	6.0	5.5	8.0	6.0	12.0	9.5	12.5	9.5
26	14.5	12.5	8.0	7.0	6.5	5.0	8.0	7.5	12.5	9.5	9.5	7.5
27	14.0	13.0	9.0	7.0	7.0	6.5	8.5	7.5	12.5	9.5	9.5	8.5
28	14.0	12.0	10.0	9.0	8.0	7.0	7.5	6.5	13.0	10.0	9.0	7.5
29	13.5	11.5	9.5	8.0	8.5	7.5	7.5	7.0	---	---	10.0	7.0
30	13.5	11.5	9.0	8.0	8.0	7.5	7.0	6.0	---	---	10.5	7.0
31	13.5	12.0	---	---	7.5	7.0	7.0	5.5	---	---	12.0	8.5
MONTH	21.0	10.5	14.5	7.0	11.0	4.5	8.5	5.0	13.0	4.5	13.5	6.0

11203200 TULE RIVER NEAR SPRINGVILLE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.5	10.0	17.5	14.0	17.0	13.5	25.5	20.5	27.5	21.5	28.5	22.0
2	14.0	11.0	16.0	14.5	15.5	13.5	27.0	21.5	28.5	21.5	27.0	21.0
3	14.0	11.0	16.5	13.0	15.5	13.0	27.5	22.0	29.0	22.0	24.5	20.5
4	14.0	11.5	15.5	12.5	18.0	13.5	28.0	22.5	29.5	22.5	23.5	19.5
5	14.5	11.5	16.0	12.5	20.0	16.0	26.0	22.5	29.5	23.0	24.0	18.5
6	14.5	11.5	16.0	13.0	21.5	17.5	28.0	22.5	29.5	22.5	24.5	19.5
7	15.0	12.0	15.5	12.5	22.5	18.5	28.0	23.0	29.5	22.5	24.5	20.0
8	15.0	12.5	14.5	12.5	23.0	19.0	29.0	23.0	29.0	23.0	24.5	20.0
9	15.0	12.5	15.0	13.0	23.0	19.5	28.0	23.5	29.0	22.0	22.0	19.5
10	15.0	12.5	14.5	12.0	23.0	19.5	29.0	24.0	29.5	22.0	20.0	17.0
11	15.0	12.5	12.5	10.5	23.5	19.5	29.5	24.0	28.5	22.0	18.5	16.5
12	15.0	12.5	15.5	11.5	24.0	20.0	29.0	23.5	28.5	21.5	20.0	15.5
13	16.0	13.0	16.5	12.5	24.5	20.5	28.5	23.5	28.0	22.0	21.0	16.5
14	16.0	13.5	17.5	14.0	24.5	21.0	29.5	23.0	28.5	22.0	22.0	17.0
15	15.0	13.0	17.5	14.0	25.0	21.0	28.0	23.0	29.0	22.0	22.0	17.5
16	14.0	12.0	17.0	14.0	25.5	21.5	29.0	23.5	28.5	22.0	22.0	17.5
17	12.5	11.5	16.5	13.5	26.0	22.0	29.0	23.0	28.5	22.5	22.0	17.0
18	12.0	10.5	17.0	13.5	26.0	22.5	29.5	23.5	28.5	22.5	19.5	17.5
19	11.0	10.0	18.0	14.0	26.5	22.5	29.0	24.5	27.5	22.0	21.0	17.0
20	10.0	9.0	18.0	14.5	25.0	21.0	29.0	24.5	28.5	21.5	21.5	17.0
21	12.0	8.5	17.5	14.5	25.5	21.0	29.5	23.5	28.5	21.5	22.0	17.0
22	12.5	9.5	18.5	14.5	26.0	21.5	29.5	23.5	28.5	21.5	22.5	17.5
23	14.5	10.5	19.5	16.0	25.5	21.5	29.5	23.5	28.5	22.0	22.5	18.0
24	15.0	12.0	19.5	16.5	25.5	21.5	30.0	24.5	29.0	22.0	23.5	18.5
25	13.5	11.0	19.0	16.5	24.5	20.5	31.0	25.0	29.0	22.5	23.5	19.0
26	13.0	9.5	18.0	15.5	25.0	20.0	31.0	25.5	29.5	22.5	23.5	19.5
27	14.0	10.0	18.0	14.5	26.0	20.5	31.0	25.0	29.0	22.5	21.5	19.0
28	15.0	11.5	18.0	14.5	25.5	21.5	31.0	25.0	29.0	22.5	22.5	19.0
29	15.5	12.5	16.5	14.5	23.5	21.0	29.5	24.0	29.0	22.5	22.5	18.5
30	16.5	13.0	16.0	12.5	25.0	19.5	28.0	22.5	29.0	22.0	22.0	18.0
31	---	---	17.0	13.5	---	---	28.0	22.0	28.5	22.0	---	---
MONTH	16.5	8.5	19.5	10.5	26.5	13.0	31.0	20.5	29.5	21.5	28.5	15.5
YEAR	31.0	4.5										

11204500 SOUTH FORK TULE RIVER NEAR SUCCESS, CA

LOCATION.--Lat 36°02'33", long 118°51'24", in NW 1/4 SW 1/4 sec.4, T.22 S., R.29 E., Tulare County, Hydrologic Unit 18030006, on left bank 0.5 mi upstream from Crew Creek, 4 mi southeast of Success, and 5 mi upstream from mouth.

DRAINAGE AREA.--109 mi^2.

PERIOD OF RECORD.--June 1930 to December 1954, January 1956 to current year. Monthly and yearly discharge only for some periods, published in WSP 1735.

REVISED RECORDS.--WSP 1315-A: 1931-32(M). WSP 1445: 1952-53(P), drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 770 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 26, 1951, at site 0.4 mi downstream at different datum.

REMARKS.--Estimated daily discharges: Aug. 22-27. Records good. Diversions for irrigation of about 640 acres above station.

AVERAGE DISCHARGE.--53 years, 46.1 ft^3/s, 33,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft^3/s, Dec. 6, 1966, gage height, 12.50 ft in gage well, 13.3 ft, from floodmarks, from rating curve extended above 4,300 ft^3/s on basis of slope-area 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. 28	0645	494	4.46	Mar. 27	1045	*996	*5.26
Feb. 9	0130	317	3.98				

Minimum daily, 0.48 ft^3/s, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	8.3	33	23	21	33	99	54	29	7.8	3.2	.48
2	3.6	7.4	28	22	25	39	109	56	29	7.2	3.1	.57
3	3.7	7.2	25	22	23	35	116	57	36	6.7	2.8	1.2
4	3.6	8.3	23	22	20	34	118	56	31	6.0	2.5	2.8
5	4.2	7.7	22	22	20	34	118	56	28	5.6	2.3	3.3
6	4.4	7.0	22	24	21	36	113	55	26	5.6	2.2	3.4
7	5.2	8.0	22	64	21	37	111	53	24	5.5	2.2	3.4
8	4.5	19	22	93	38	35	107	51	23	5.4	2.1	3.8
9	3.3	24	22	60	177	35	102	50	23	5.0	2.1	3.4
10	4.8	15	21	51	72	38	98	61	21	5.0	2.1	3.6
11	5.0	14	30	44	55	44	94	54	20	4.5	2.0	11
12	9.3	12	27	40	47	37	90	50	19	4.2	2.1	7.6
13	8.8	18	35	36	45	35	87	46	18	3.3	2.1	5.7
14	7.1	18	24	33	44	34	87	45	16	3.1	1.7	4.4
15	8.1	13	23	32	43	33	87	43	15	3.0	1.7	3.0
16	8.2	12	40	31	44	32	82	41	15	2.9	1.7	3.4
17	45	13	29	30	46	32	83	41	14	3.1	1.7	3.5
18	18	13	27	30	45	38	78	41	13	3.0	2.0	2.9
19	13	13	28	32	45	36	73	41	13	3.0	2.6	2.8
20	12	11	30	32	44	38	71	40	12	3.4	2.7	3.3
21	12	15	25	32	40	37	66	39	12	3.7	2.4	3.1
22	12	18	26	31	37	36	62	37	12	3.3	1.7	2.9
23	11	17	25	30	35	35	60	36	11	3.3	1.5	2.7
24	10	99	24	29	34	36	61	35	11	2.8	1.6	1.4
25	10	75	24	27	34	37	59	35	11	2.7	1.5	1.5
26	8.4	31	24	26	34	37	56	34	11	2.9	1.6	1.3
27	7.8	24	25	29	34	422	54	33	9.9	2.8	1.3	1.3
28	9.0	165	25	26	33	187	52	33	8.2	2.7	.77	2.2
29	8.8	65	24	25	---	116	53	32	7.9	2.8	.66	2.9
30	7.3	42	23	23	---	95	54	31	8.7	2.7	.57	3.0
31	7.7	---	23	22	---	94	---	30	---	2.8	.60	---
TOTAL	278.4	799.9	801	1043	1177	1847	2500	1366	527.7	125.8	59.10	95.85
MEAN	8.98	26.7	25.8	33.6	42.0	59.6	83.3	44.1	17.6	4.06	1.91	3.20
MAX	45	165	40	93	177	422	118	61	36	7.8	3.2	11
MIN	2.6	7.0	21	22	20	32	52	30	7.9	2.7	.57	.48
AC-FT	552	1590	1590	2070	2330	3660	4960	2710	1050	250	117	190

CAL YR 1984 TOTAL 14667.85 MEAN 40.1 MAX 231 MIN .87 AC-FT 29090
WTR YR 1985 TOTAL 10620.75 MEAN 29.1 MAX 422 MIN .48 AC-FT 21070

11204680 PIONEER DITCH BELOW SUCCESS DAM, CA

LOCATION.--Lat 36°03'34", long 118°55'22", in SW 1/4 NW 1/4 sec.35, T.21 S., R.28 E., Tulare County, Hydrologic Unit 18030006, on left bank 0.1 mi downstream from Success Dam, and 5.5 mi east of Porterville.

PERIOD OF RECORD.--April 1959 to current year. Prior to October 1960, monthly diversions only, published with Tule River near Porterville.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 549.00 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Feb. 1, 1961, at site 0.5 mi downstream at different datum.

REMARKS.--No esimated daily discharges. Records good. Ditch receives water from Success Lake (station 11204700).

AVERAGE DISCHARGE.--26 years, 6.93 ft^3/s, 5,020 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 29 ft^3/s, Apr. 15, 1961; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	5.4	1.1	.92	0	4.3	7.1	10	17	11	12	12
2	12	4.7	1.2	.87	0	3.4	8.5	13	12	16	10	9.3
3	12	3.1	1.1	.83	0	2.2	13	14	9.6	17	11	13
4	8.7	2.2	1.1	.83	0	1.0	16	15	8.5	17	10	15
5	7.0	5.7	1.1	.83	0	.30	17	13	9.0	16	10	11
6	5.2	7.5	1.1	.83	0	.10	13	14	13	13	11	8.8
7	4.3	5.8	1.1	.83	0	.80	8.9	17	15	10	12	8.8
8	6.7	4.1	1.1	.83	0	1.7	8.4	17	14	14	14	7.2
9	9.6	3.7	1.1	.83	0	1.7	8.4	18	13	15	14	9.0
10	8.8	2.6	1.1	.83	0	1.7	9.6	19	15	13	14	13
11	11	2.0	1.1	.82	0	3.2	11	17	17	14	11	14
12	9.1	1.9	1.1	.66	0	4.0	16	9.7	18	14	10	11
13	4.3	2.0	1.1	.61	0	4.0	17	12	18	13	11	9.1
14	2.8	2.1	1.0	.58	0	6.6	17	15	18	13	15	8.5
15	3.5	1.9	1.0	.53	0	9.8	18	15	15	15	18	7.6
16	3.9	5.5	1.0	.50	0	7.8	19	16	12	17	17	9.2
17	1.8	4.4	1.0	.18	0	4.7	19	17	11	17	14	10
18	.92	1.6	1.0	0	0	3.6	18	14	12	14	12	13
19	.92	1.2	1.0	0	0	1.6	16	8.8	16	13	11	14
20	.92	1.2	1.0	0	0	1.6	14	7.9	17	11	10	13
21	.92	1.2	1.0	0	.56	1.6	9.7	9.6	17	13	14	11
22	.92	1.2	1.0	0	1.4	1.4	13	11	13	16	16	6.0
23	.92	1.1	.96	0	1.4	1.9	16	13	11	18	16	3.8
24	3.5	1.1	.92	0	1.4	3.5	13	14	10	16	12	5.0
25	2.3	1.1	.92	0	5.6	8.8	11	17	13	15	8.7	7.1
26	1.1	1.1	.92	0	7.2	12	9.2	18	15	14	8.6	10
27	1.6	1.1	.92	0	4.5	11	7.0	15	16	16	12	12
28	2.0	1.1	.92	0	3.7	8.9	6.5	13	12	17	15	11
29	5.5	1.1	.92	0	---	6.5	7.4	14	8.5	15	16	6.5
30	9.5	1.1	.92	0	---	6.5	7.4	14	7.3	14	16	5.3
31	8.2	---	.92	0	---	7.0	---	16	---	14	16	---
TOTAL	163.92	79.8	31.72	12.31	25.76	133.20	375.1	437.0	402.9	451	397.3	294.2
MEAN	5.29	2.66	1.02	.40	.92	4.30	12.5	14.1	13.4	14.5	12.8	9.81
MAX	14	7.5	1.2	.92	7.2	12	19	19	18	18	18	15
MIN	.92	1.1	.92	0	0	.10	6.5	7.9	7.3	10	8.6	3.8
AC-FT	325	158	63	24	51	264	744	867	799	895	788	584

CAL YR 1984 TOTAL 2636.84 MEAN 7.20 MAX 18 MIN 0 AC-FT 5230
WTR YR 1985 TOTAL 2804.21 MEAN 7.68 MAX 19 MIN 0 AC-FT 5560

11204700 SUCCESS LAKE NEAR SUCCESS, CA

LOCATION.--Lat 36°03'40", long 118°55'18", in SE 1/4 NW 1/4 sec.35, T.21 S., R.28 E., Tulare County, Hydrologic Unit 18030006, in control tower near right abutment of Success Dam on Tule River, 5 mi east of Porterville.

DRAINAGE AREA.--391 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by earthfill dam and dike. Storage began November 1961. Usable capacity, 81,734 acre-ft between elevations 559.0 ft, invert of outlet structure and 652.5 ft, spillway crest. Surcharge flood control storage, 120,413 acre-ft between ungated spillway crest and elevation 686.8 ft, maximum spillway design flood pool. Dead storage, 557 acre-ft. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records were provided by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 101,300 acre-ft, Dec. 7, 1966, elevation, 658.63 ft; minimum since reservoir first filled, 3,406 acre-ft, Oct. 17, 1972, elevation, 579.52 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 55,234 acre-ft, May 30, elevation, 639.51 ft; minimum, 8,316 acre-ft, Jan. 6, elevation, 591.30 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

575	2,975	620	29,183
580	4,241	640	56,084
585	5,813	660	102,684
590	7,747	690	217,100
600	12,902		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19098	9541	13408	9170	13290	15490	27991	47678	54652	44419	23102	18046
2	18769	9349	13390	8999	13546	15587	28864	48010	54193	43007	22846	17811
3	18467	9180	13352	8820	13742	15649	29849	48284	53806	41446	22582	17564
4	18175	9037	13290	8648	13844	15677	30846	48575	53370	39840	22311	17311
5	17872	9013	13135	8474	13953	15704	31844	48851	52872	38272	22035	17083
6	17571	9046	12945	8316	14076	15844	32841	49129	52362	36703	21760	16863
7	17333	9094	12750	8501	14186	16040	33826	49377	51807	35137	21487	16646
8	16885	9199	12552	9127	14566	16210	34762	49579	51274	33563	21217	16423
9	16352	9389	12350	9330	16610	16380	35645	49783	50714	31986	20973	16224
10	15858	9506	12161	9403	17178	16553	36449	50002	50112	30398	20740	16061
11	15373	9615	12004	9418	17534	16783	37192	50175	49424	28864	20550	15998
12	15149	9720	11848	9393	17676	17009	37909	50333	48713	28162	20434	15914
13	15081	9881	11768	9330	17751	17222	38612	50460	48026	27661	20344	15830
14	15027	10019	11614	9257	17826	17415	39324	50603	47348	27165	20254	15753
15	14973	10070	11462	9175	17917	17609	40087	50905	47228	26617	20156	15663
16	14966	10106	11490	9084	18016	17811	40874	51242	47243	26028	20067	15531
17	15101	10142	11406	8989	18130	18023	41566	51580	47228	25439	19969	15360
18	14993	10178	11278	9094	18214	18313	42187	51937	47153	24988	19888	15182
19	14678	10188	11194	9442	18099	18575	42732	52312	47019	24662	19815	15000
20	14290	10188	11112	9805	17841	18847	43229	52658	46856	24367	19743	14805
21	13896	10230	10986	10168	17489	19114	43688	53021	46826	24111	19655	14586
22	13490	10287	10845	10513	17105	19383	44109	53320	46841	23992	19567	14362
23	13104	10313	10689	10839	16776	19647	44519	53587	46870	23920	19471	14134
24	12726	10774	10523	11150	16459	19912	44947	53923	46885	23856	19383	13902
25	12326	11451	10360	11434	16061	20181	45377	54210	46915	23793	19312	13673
26	11917	11660	10194	11711	15559	20484	45783	54481	46915	23738	19240	13440
27	11507	11728	10029	12010	15421	23156	46177	54720	46930	23675	19153	13209
28	11084	12884	9866	12285	15463	24801	46530	54959	46737	23594	19067	13092
29	10656	13265	9695	12552	---	25780	46930	55165	46236	23522	18816	13031
30	10225	13377	9521	12805	---	26530	47303	55234	45508	23459	18536	12945
31	9805	---	9345	13049	---	27254	---	55114	---	23289	18290	---
MAX	19098	13377	13408	13049	18214	27254	47303	55234	54652	44419	23102	18046
MIN	9805	9013	9345	8316	13290	15490	27991	47678	45508	23289	18290	12945
a	594.43	600.77	593.50	600.24	603.95	618.09	634.57	639.44	633.35	613.87	607.84	600.07
b	-9634	+3572	-4032	+3704	+2417	+11791	+20049	+7811	-9606	-22219	-4999	-5345
c	223	79	34	28	92	154	497	846	1076	804	558	304

CAL YR 1984 b -35730
WTR YR 1985 b -6494

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.
[c]Evaporation, in acre-feet.

11204900 TULE RIVER BELOW SUCCESS DAM, CA

LOCATION.--Lat 36°03'23", long 118°55'22", in NW 1/4 SW 1/4 sec.35, T.21 S., R.28 E., Tulare County, Hydrologic Unit 18030012, on right bank 1,000 ft downstream from Success Dam, and 5 mi east of Porterville.

DRAINAGE AREA.--393 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year. Prior to October 1960, published as "at Worth Bridge, near Porterville".

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 536.00 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to October 1960, at site 0.5 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Success Lake beginning Nov. 23, 1961 (station 11204700). Discharge records during periods of high flow include flow over spillway that bypasses the gaging station. Pioneer ditch (station 11204680) diverts above station for irrigation.

AVERAGE DISCHARGE (adjusted for change in contents, evaporation, and diversion).--32 years, 209 ft^3/s, 151,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft^3/s, Dec. 23, 1955, gage height, 21.65 ft, site and datum then in use, from rating curve extended above 1,400 ft^3/s on basis of upstream peaks; no flow at times in 1954-57, 1959-61. Maximum discharge since construction of Success Dam in 1961, 9,050 ft^3/s, Dec. 6, 1966 (includes flow through spillway); no flow at times in 1962, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1950, reached a stage of 26 ft, from floodmarks, site and datum then in use, discharge, 32,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 849 ft^3/s, July 3, gage height, 6.77 ft; minimum daily, 0.40 ft^3/s, several days during January and February.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	169	158	193	.40	163	49	75	365	601	97	114
2	178	138	158	192	.40	163	59	118	373	750	126	114
3	176	131	158	192	32	163	59	140	373	825	133	120
4	175	124	158	190	65	163	59	140	384	844	133	125
5	173	63	188	190	63	163	60	140	393	840	133	120
6	163	30	205	188	54	114	60	136	401	843	133	119
7	153	30	203	188	54	89	61	137	408	842	132	119
8	250	30	203	190	54	90	70	147	407	842	128	118
9	273	30	203	192	92	90	75	147	407	841	118	114
10	252	30	201	192	103	90	75	147	430	843	111	110
11	233	30	203	192	111	71	76	147	459	796	92	89
12	152	31	200	190	173	60	83	148	458	366	52	75
13	80	31	200	190	196	60	86	152	445	260	41	69
14	65	54	198	190	196	60	86	137	428	259	41	65
15	63	67	198	193	196	51	58	61	135	277	38	65
16	60	67	196	196	196	46	45	40	67	300	36	83
17	80	67	196	198	198	46	45	40	72	300	37	101
18	156	67	195	107	208	46	45	41	95	233	37	107
19	216	78	195	.80	313	46	46	41	113	172	37	107
20	216	83	193	.50	385	46	46	41	113	155	37	113
21	257	87	193	.50	411	47	46	44	54	134	37	123
22	254	87	193	.40	404	47	46	55	25	65	37	130
23	241	87	195	.40	364	47	37	60	25	38	37	133
24	235	75	198	.40	355	47	34	56	25	36	37	131
25	243	69	193	.40	381	47	34	50	24	34	37	127
26	245	71	195	.40	442	37	34	50	24	32	37	125
27	245	102	196	.40	256	31	34	50	24	32	37	125
28	243	117	195	.40	164	32	34	49	113	33	37	74
29	241	142	193	.40	---	32	33	52	275	32	110	46
30	239	159	193	.40	---	32	60	112	398	32	133	61
31	235	---	193	.40	---	32	---	202	---	77	114	---
TOTAL	5970	2346	5946	3368.80	5466.80	2251	1635	2955	7313	11734	2345	3122
MEAN	193	78.2	192	109	195	72.6	54.5	95.3	244	379	75.6	104
MAX	273	169	205	198	442	163	86	202	459	844	133	133
MIN	60	30	158	.40	.40	31	33	40	24	32	36	46
AC-FT	11840	4650	11790	6680	10840	4460	3240	5860	14510	23270	4650	6190

CAL YR 1984	TOTAL	80137.4	MEAN	219	MAX	1020	MIN	.90	AC-FT	159000	MEAN a	186	AC-FT a	135000
WTR YR 1985	TOTAL	54452.60	MEAN	149	MAX	844	MIN	.40	AC-FT	108000	MEAN a	154	AC-FT a	111500

a Adjusted for change in contents and evaporation from Success Lake and for diversion to Pioneer Ditch.

11204900 TULE RIVER BELOW SUCCESS DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-69, 1971 to current year.
CHEMICAL ANALYSES: Water years 1962-69, 1971-79.
WATER TEMPERATURES: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1971-85): Maximum recorded, 34.0°C, July 15, Sept. 9, 1977; minimum recorded, 3.0°C, Jan. 3, 1975.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 27.5°C, Aug. 26-28; minimum recorded, 4.5°C, Feb. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	26.0	23.0	18.0	15.0	12.0	11.5	8.5	8.0	14.0	4.5	10.0	8.5
2	24.5	23.5	18.0	15.5	12.0	11.0	8.5	8.0	11.0	8.0	11.5	8.0
3	24.0	23.0	17.5	16.0	12.0	10.5	8.5	8.0	8.0	6.5	10.5	9.5
4	24.0	22.0	18.0	15.0	12.0	11.0	8.5	8.0	8.5	7.5	10.0	9.0
5	24.0	22.5	18.0	16.0	11.5	11.0	8.5	8.0	8.5	7.5	10.5	8.5
6	23.5	22.0	18.0	15.0	11.5	10.5	8.0	8.0	8.5	7.5	10.5	8.0
7	23.5	23.0	18.0	15.0	12.0	10.5	8.5	8.0	8.5	7.5	10.5	9.0
8	23.5	22.0	18.0	15.0	11.5	10.5	8.5	8.0	8.0	7.5	10.5	8.0
9	23.5	23.0	17.5	14.5	12.0	11.0	9.0	8.0	8.0	7.5	10.0	8.5
10	23.5	22.0	17.5	14.5	11.5	10.5	9.0	8.0	---	---	10.0	8.5
11	23.5	22.0	17.5	15.0	12.0	10.0	8.5	8.0	---	---	11.0	9.0
12	23.0	21.5	16.5	14.5	11.5	11.0	9.0	8.0	---	---	10.5	9.5
13	23.5	21.0	17.0	15.0	11.5	11.0	9.0	8.5	---	---	11.0	8.5
14	22.5	21.0	16.5	14.0	11.5	10.5	8.5	8.5	---	---	10.5	9.0
15	22.0	21.0	16.5	14.5	11.0	9.5	8.5	8.0	---	---	11.5	9.0
16	21.5	20.5	15.5	14.0	11.5	9.5	8.5	8.0	---	---	11.5	9.0
17	21.0	20.0	15.5	13.5	10.5	9.5	8.0	7.5	---	---	11.5	9.0
18	22.0	17.0	15.5	14.5	10.5	8.5	9.0	7.5	---	---	11.0	8.5
19	20.0	17.5	15.0	14.5	9.5	9.0	11.0	8.5	---	---	11.0	9.5
20	20.0	18.0	15.0	14.5	9.5	9.0	11.5	8.5	---	---	11.5	9.5
21	19.5	19.0	14.5	14.5	9.5	9.0	11.0	8.5	9.5	8.0	12.0	9.0
22	19.0	18.0	14.5	14.0	9.5	8.5	11.5	8.5	9.0	8.5	11.5	8.5
23	19.5	18.0	14.5	13.5	9.0	8.5	14.5	9.0	9.5	8.5	12.0	9.0
24	19.0	18.0	14.0	13.0	8.5	8.5	14.5	9.0	9.5	9.0	11.5	8.5
25	19.0	18.0	13.5	11.5	8.5	8.5	16.0	6.5	9.5	9.0	12.0	9.0
26	19.5	18.0	13.5	11.5	8.5	8.5	12.0	9.5	10.0	9.0	11.5	9.0
27	18.5	17.5	12.5	11.5	8.5	8.0	12.5	9.5	9.5	9.0	12.5	10.0
28	18.5	17.5	12.5	11.5	8.0	8.0	12.5	6.0	9.5	9.0	12.0	9.0
29	18.0	17.0	12.5	11.5	8.5	8.0	12.5	8.0	---	---	12.5	9.0
30	18.0	17.5	12.0	11.5	8.5	8.0	9.5	8.0	---	---	13.0	9.0
31	18.0	16.0	---	---	8.5	8.0	12.0	5.5	---	---	12.5	8.0
MONTH	26.0	16.0	18.0	11.5	12.0	8.0	16.0	5.5	---	---	13.0	8.0

11204900 TULE RIVER BELOW SUCCESS DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.5	9.0	14.0	9.5	13.5	12.5	16.0	15.5	25.0	20.5	26.5	26.0
2	12.5	8.5	13.5	10.0	13.5	12.5	16.5	16.0	25.5	23.5	26.5	26.0
3	12.5	10.0	13.0	10.0	14.0	12.0	17.0	16.0	25.5	24.5	26.5	26.0
4	12.0	10.0	13.0	9.5	13.5	12.0	17.5	15.5	26.0	25.0	26.5	25.5
5	12.5	9.0	13.5	10.0	15.0	12.5	18.5	14.5	26.0	25.0	26.0	25.0
6	12.0	9.5	12.5	11.0	14.0	12.5	19.0	15.5	26.0	24.5	26.0	25.0
7	13.0	9.5	13.0	11.0	14.0	12.0	19.0	15.0	26.5	25.5	26.0	24.5
8	12.0	10.5	13.0	11.0	14.5	11.5	19.5	16.0	26.5	25.0	26.0	22.5
9	12.5	10.5	13.0	11.5	15.0	12.5	20.0	17.0	26.5	25.0	26.5	21.5
10	12.0	8.5	13.5	10.5	14.5	12.0	21.0	18.5	26.5	25.0	26.0	23.5
11	13.0	8.5	13.0	11.0	15.5	11.5	22.0	20.5	26.5	25.0	24.0	23.0
12	13.0	9.0	13.5	11.0	15.0	12.5	22.0	19.0	26.0	21.5	24.0	23.0
13	13.5	10.0	13.0	10.5	15.5	12.5	20.5	18.5	25.5	23.5	24.0	22.5
14	13.0	9.0	13.0	11.0	15.0	13.0	21.0	20.0	26.5	21.5	24.0	22.5
15	13.0	9.0	14.0	11.0	15.0	12.5	22.0	20.0	26.5	24.0	24.0	23.0
16	13.5	8.5	13.5	10.0	15.5	12.5	24.0	19.5	26.5	25.0	24.0	22.5
17	12.5	9.0	14.0	11.0	15.5	12.5	23.5	21.0	26.0	25.0	24.0	22.5
18	12.5	9.0	14.5	10.5	15.0	12.5	23.0	19.5	26.5	24.5	23.5	23.0
19	13.0	9.5	14.0	10.5	15.0	13.5	23.5	19.5	26.5	24.5	23.5	21.0
20	13.0	8.5	14.0	10.5	15.0	12.5	22.5	21.0	27.0	21.5	23.0	21.5
21	13.0	8.5	14.0	11.0	17.0	13.0	24.5	21.0	26.5	23.5	23.0	21.5
22	13.5	8.5	14.0	11.0	16.5	13.0	22.5	19.5	27.0	25.0	23.0	21.0
23	13.5	8.5	14.0	10.5	16.5	13.0	22.0	19.0	27.0	25.0	23.0	21.0
24	13.5	8.5	14.0	11.0	17.0	12.5	22.0	18.0	27.0	25.0	23.0	20.5
25	13.0	8.5	14.0	12.0	17.0	13.0	22.5	19.0	27.0	25.0	23.5	21.5
26	13.5	9.5	14.0	11.0	16.5	13.5	24.5	19.0	27.5	25.0	23.5	22.0
27	13.5	9.0	14.0	11.0	17.0	12.5	23.5	19.0	27.5	25.5	23.5	20.5
28	14.0	9.5	14.0	10.5	15.5	13.0	25.0	20.0	27.5	25.5	24.0	21.5
29	14.0	9.0	13.5	11.5	15.5	14.0	23.5	19.0	27.0	25.5	23.5	22.0
30	13.5	11.0	13.5	11.0	16.0	14.5	24.0	21.0	26.5	26.0	23.5	21.0
31	---	---	13.5	12.0	---	---	25.5	20.0	27.0	26.0	---	---
MONTH	14.0	8.5	14.5	9.5	17.0	11.5	25.5	14.5	27.5	20.5	26.5	20.5
YEAR	27.5	4.5										

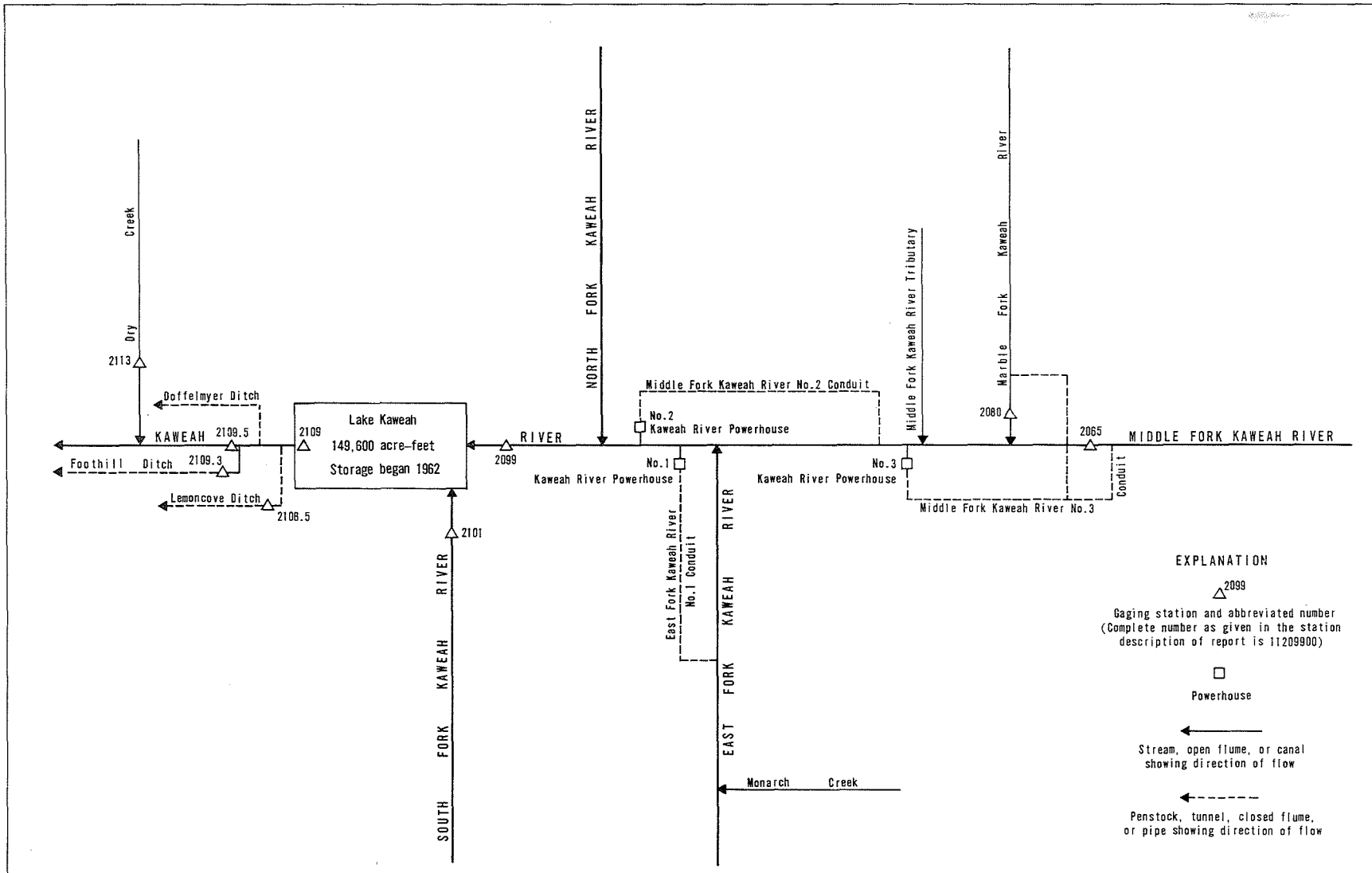


FIGURE 27. — Schematic diagram showing diversions and storage in Kaweah River basin.

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA

LOCATION.--Lat 36°30'48", long 118°47'27", unsurveyed, T.16 S., R.29 E., Tulare County, Hydrologic Unit 18030007, Sequoia National Park, on right bank 0.5 mi southeast of Potwisha Camp, and 0.7 mi upstream from confluence with Marble Fork Kaweah River.

DRAINAGE AREA.--102 mi^2.

PERIOD OF RECORD.--July 1949 to current year. Monthly discharge only for water years 1956-57, published in WSP 1735. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

GAGE.--Water-stage recorder and concrete control on river; water-stage recorder and concrete-lined channel for conduit diversion. Elevation of gage is 2,100 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1955, at datum 0.70 ft higher.

REMARKS.--Estimated daily discharge: Sept. 3. Records fair. Middle Fork No. 3 conduit diverts from left bank of Middle Fork Kaweah River, 0.1 mi upstream from station. Flow from this conduit joins with that of Marble Fork Kaweah River No. 3 conduit, and the combined flow passes through Kaweah River No. 3 powerhouse of Southern California Edison Co. Water is returned to Kaweah River 2.7 mi downstream from confluence of Marble and Middle Forks. See schematic diagram of Kaweah River basin. For records of combined discharge of river and conduit, see following page.

COOPERATION.--Gage-height record and 13 discharge measurements for river and gage-height record and 11 discharge measurements for conduit were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only: 36 years, 145 ft^3/s, 105,100 acre-ft/yr.
Combined river and diversion: 36 years, 187 ft^3/s, 135,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 46,800 ft^3/s, Dec. 23, 1955, gage height, 29.0 ft, from floodmarks, datum then in use, by slope-area measurement of peak flow; minimum daily, 0.1 ft^3/s, Nov. 12-15, 1949.
Combined flow, maximum discharge, 46,800 ft^3/s, Dec. 23, 1955; minimum daily, 7.7 ft^3/s, Oct. 4, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 623 ft^3/s, May 23, gage height, 6.72 ft; minimum daily, 3.2 ft^3/s, Sept. 2.
Combined flow, maximum discharge, 679 ft^3/s, May 23; minimum daily, 16 ft^3/s, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	21	87	14	11	62	208	421	227	46	15	6.0
2	13	19	80	14	12	66	254	447	248	44	15	3.2
3	13	19	76	14	12	51	288	412	221	46	15	7.2
4	12	19	38	14	12	48	307	427	221	46	15	9.1
5	12	20	18	14	11	42	343	446	308	43	15	7.2
6	12	22	17	20	11	42	370	447	373	36	15	7.8
7	12	23	17	104	9.9	45	416	409	420	34	15	7.4
8	11	46	17	66	57	41	438	375	411	32	14	7.2
9	11	29	17	45	83	41	432	332	402	30	14	7.2
10	11	29	19	59	39	45	419	289	379	26	14	6.9
11	11	31	17	52	36	51	413	242	360	27	14	12
12	12	30	20	27	37	46	418	271	347	24	14	12
13	11	59	17	23	42	42	459	338	330	22	14	12
14	11	37	15	22	45	39	511	416	326	19	14	9.9
15	11	30	15	22	49	37	499	454	288	15	14	9.5
16	23	29	14	23	56	36	430	441	258	13	14	9.2
17	88	28	14	26	59	37	379	427	244	13	16	8.8
18	14	32	13	35	60	43	307	453	241	14	18	8.5
19	19	29	11	39	60	40	273	466	226	17	16	9.8
20	17	19	12	41	59	44	241	447	196	22	14	9.9
21	12	10	9.7	41	45	48	207	424	160	20	14	9.5
22	12	11	9.9	39	42	47	185	447	136	17	14	9.2
23	12	27	9.5	34	41	56	204	482	119	16	14	8.8
24	12	110	9.2	29	44	70	244	500	107	16	14	8.4
25	12	99	9.2	25	49	77	236	460	91	16	14	8.2
26	12	77	8.8	23	56	74	190	407	81	16	14	8.9
27	12	91	7.5	22	59	237	186	378	72	16	14	10
28	11	324	6.5	18	62	182	221	352	65	15	14	10
29	11	122	6.3	14	---	143	279	314	58	15	14	9.9
30	12	99	6.2	12	---	135	344	273	50	15	14	9.9
31	17	---	6.4	9.4	---	160	---	259	---	15	14	---
TOTAL	478	1541	623.2	940.4	1158.9	2127	9701	12256	6965	746	449	263.6
MEAN	15.4	51.4	20.1	30.3	41.4	68.6	323	395	232	24.1	14.5	8.79
MAX	88	324	87	104	83	237	511	500	420	46	18	12
MIN	11	10	6.2	9.4	9.9	36	185	242	50	13	14	3.2
AC-FT	948	3060	1240	1870	2300	4220	19240	24310	13820	1480	891	523

CAL YR 1984	TOTAL	47226.7	MEAN	129	MAX	784	MIN	6.2	AC-FT	93670
WTR YR 1985	TOTAL	37249.1	MEAN	102	MAX	511	MIN	3.2	AC-FT	73880

11206501 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF MIDDLE FORK KAWEAH RIVER AND MIDDLE FORK KAWEAH RIVER NO. 3 CONDUIT NEAR POTWISHA CAMP, CA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	56	87	64	64	125	263	475	281	105	45	17
2	40	51	80	65	70	130	309	501	303	105	43	16
3	40	50	76	66	67	114	343	466	275	110	40	19
4	38	49	73	68	64	111	362	481	275	110	38	44
5	37	48	75	69	63	105	398	500	363	107	37	34
6	36	50	73	80	64	105	425	502	428	99	36	30
7	34	51	71	172	63	108	471	465	475	98	35	29
8	31	105	72	129	115	104	493	430	466	96	33	28
9	29	83	69	107	143	104	487	387	457	95	32	26
10	28	85	72	97	98	108	474	344	434	89	30	26
11	30	89	72	91	95	115	469	296	415	91	29	69
12	38	86	74	91	98	110	473	325	402	85	29	61
13	32	122	69	87	105	105	515	392	385	79	28	64
14	31	100	61	86	109	102	566	471	381	75	28	53
15	30	91	65	86	114	100	553	509	343	73	27	46
16	46	89	66	87	121	99	483	495	313	69	26	39
17	139	86	64	90	122	100	434	481	299	67	27	35
18	65	89	68	100	123	107	363	508	296	64	29	34
19	76	83	70	104	123	103	329	522	281	65	27	50
20	73	72	72	106	122	107	296	503	251	86	24	53
21	64	65	67	106	107	111	262	479	215	82	23	44
22	61	69	68	103	104	110	240	502	191	70	23	39
23	62	63	68	98	103	120	259	538	174	63	22	35
24	62	110	66	92	107	134	299	556	162	60	21	30
25	62	99	66	88	112	141	291	515	146	62	21	28
26	62	77	65	85	119	138	244	462	135	61	20	26
27	62	91	64	84	122	297	240	433	127	56	20	26
28	55	324	62	78	125	237	275	407	120	54	20	29
29	52	122	60	74	---	197	333	369	113	52	19	27
30	51	99	60	73	---	189	399	328	106	49	20	26
31	55	---	62	67	---	214	---	313	---	48	19	---
TOTAL	1569	2654	2137	2793	2842	4050	11348	13955	8612	2425	871	1083
MEAN	50.6	88.5	68.9	90.1	102	131	378	450	287	78.2	28.1	36.1
MAX	139	324	87	172	143	297	566	556	475	110	45	69
MIN	28	48	60	64	63	99	240	296	106	48	19	16
AC-FT	3110	5260	4240	5540	5640	8030	22510	27680	17080	4810	1730	2150

CAL YR 1984 TOTAL 65845 MEAN 180 MAX 846 MIN 28 AC-FT 130600
WTR YR 1985 TOTAL 54339 MEAN 149 MAX 566 MIN 16 AC-FT 107800

11206700 EMERALD LAKE OUTFLOW NEAR GIANT FOREST, CA

LOCATION.--Lat 36°35'54", long 118°40'32", in NE 1/4 NE 1/4 sec.25, T.15 S., R.30 E., Tulare County, Hydrologic Unit 18030007, Sequoia National Park, on left bank at outlet of Emerald Lake, and 5.9 mi northeast of Giant Forest.

DRAINAGE AREA.--0.44 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,180 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges for missing and ice-affected periods: Oct. 30-31, Nov. 17 to Apr. 3. Records good except those for November through April, which are poor. No storage or diversion above station.

COOPERATION.--Periodic observations of gage height were provided by National Park Service for acid precipitation research study.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17 ft^3/s, June 7, 1985, gage height, 2.11 ft; minimum daily, 0.01 ft^3/s, occurred during period of ice affect from January to April, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17 ft^3/s, June 7, gage height, 2.11 ft; minimum daily, 0.01 ft^3/s, on many days from January to April.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.17	.15	.13	.01	.01	.01	1.1	2.2	1.6	.15	.06
2	.04	.16	.14	.15	.01	.01	.02	1.0	2.1	1.7	.20	.06
3	.05	.17	.13	.14	.01	.01	.02	.91	1.7	2.1	.24	.04
4	.05	.16	.12	.14	.01	.01	.02	.94	3.0	2.1	.24	.05
5	.05	.18	.11	.14	.01	.01	.03	.46	5.9	1.8	.22	.09
6	.04	.16	.23	.17	.01	.02	.06	.41	9.0	1.6	.26	.09
7	.04	.16	.22	.13	.01	.01	.11	.28	11	1.6	.27	.07
8	.04	.80	.24	.10	.01	.01	.17	.64	9.4	1.6	.22	.07
9	.04	.51	.22	.08	.01	.02	.22	1.2	9.8	1.5	.23	.07
10	.04	.37	.23	.07	.01	.02	.16	1.2	9.0	1.3	.21	.06
11	.04	.26	.16	.06	.01	.02	.09	1.2	9.2	1.4	.19	.27
12	.04	.23	.15	.05	.01	.02	.14	1.7	9.0	1.3	.15	.82
13	.05	.95	.10	.05	.01	.02	.27	3.0	8.3	1.2	.15	1.6
14	.04	.55	.10	.05	.01	.02	.45	4.4	8.8	1.1	.15	2.0
15	.04	.32	.10	.05	.02	.02	.50	4.4	8.7	.97	.13	1.8
16	.06	.25	.06	.05	.02	.02	.19	3.9	7.7	.73	.14	1.7
17	.18	.24	.06	.05	.02	.02	.08	4.2	8.0	.74	.09	1.3
18	.12	.24	.07	.05	.02	.02	.08	5.2	8.4	.68	.08	.91
19	.07	.23	.09	.05	.02	.02	.06	5.5	7.3	.59	.10	.82
20	.07	.23	.11	.05	.01	.02	.04	5.0	5.1	.60	.12	.76
21	.07	.23	.08	.04	.01	.02	.03	5.1	4.3	.58	.13	.71
22	.07	.22	.10	.03	.01	.02	.04	6.3	3.7	.47	.13	.70
23	.08	.20	.11	.03	.01	.02	.08	8.0	3.1	.47	.14	.58
24	.09	.20	.12	.02	.01	.02	.11	7.7	2.3	.40	.17	.47
25	.12	.17	.11	.02	.01	.02	.05	6.8	1.7	.40	.15	.45
26	.14	.15	.12	.01	.01	.02	.05	6.0	1.8	.42	.11	.34
27	.24	.18	.10	.01	.02	.02	.09	4.9	2.0	.33	.08	.18
28	.27	.21	.11	.01	.02	.01	.21	4.3	1.9	.31	.07	.25
29	.22	.18	.13	.01	---	.01	.43	3.2	1.6	.25	.08	.25
30	.15	.16	.13	.01	---	.01	.68	2.9	1.5	.20	.09	.19
31	.15	---	.13	.01	---	.01	---	2.5	---	.15	.08	---
TOTAL	2.74	8.24	4.03	1.96	0.35	0.51	4.49	104.34	167.5	30.19	4.77	16.76
MEAN	.088	.27	.13	.063	.012	.016	.15	3.37	5.58	.97	.15	.56
MAX	.27	.95	.24	.17	.02	.02	.68	8.0	11	2.1	.27	2.0
MIN	.04	.15	.06	.01	.01	.01	.01	.28	1.5	.15	.07	.04
AC-FT	5.4	16	8.0	3.9	.7	1.0	8.9	207	332	60	9.5	33

CAL YR 1984 TOTAL 617.84 MEAN 1.69 MAX 15 MIN .03 AC-FT 1230
WTR YR 1985 TOTAL 345.88 MEAN .95 MAX 11 MIN .01 AC-FT 686

11206700 EMERALD LAKE OUTFLOW NEAR GIANT FOREST, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL ANALYSES: October 1983 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	DIS-CHARGE, IN CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	FILTER PORE SIZE (MICRO-METERS)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT									
16...	1000	--	0.06	--	6.30	7.0	0.1	0.48	0.04
NOV									
19...	1400	--	E0.23	--	6.40	2.5	0.1	0.53	0.08
DEC									
11...	1400	--	E0.16	--	6.10	1.5	0.1	0.54	0.06
JAN									
10...	1445	--	E0.07	--	6.00	--	0.1	1.8	0.1
FEB									
05...	1630	--	E0.01	--	--	--	0.1	0.7	0.1
MAR									
15...	1010	--	E0.02	4	--	0.0	0.1	0.7	0.06
APR									
02...	1410	--	E0.02	6	--	--	0.1	0.6	0.06
28...	1330	0.06	--	--	--	0.0	0.1	0.7	0.07
28...	1335	0.06	--	--	--	0.0	0.1	0.6	0.07
MAY									
15...	1600	4.3	--	5	6.00	1.0	0.1	0.5	0.06
28...	1500	4.8	--	4	6.00	3.5	0.1	0.5	0.05
JUN									
10...	1730	12	--	4	6.10	8.0	0.1	0.41	0.05
25...	1900	1.9	--	2	6.20	--	0.1	0.34	0.04
JUL									
09...	1300	1.6	--	30	6.20	17.0	0.1	0.38	0.04
09...	1310	1.6	--	30	6.20	17.0	0.1	0.37	0.04
23...	1400	0.67	--	3	6.20	13.0	0.1	0.4	0.04
AUG									
06...	1100	0.22	--	4	6.37	--	0.1	0.4	0.05
06...	1110	0.22	--	4	6.40	--	0.1	0.4	0.05
20...	1500	0.15	--	4	6.40	18.0	0.1	--	0.06
SEP									
03...	1130	0.02	--	3	6.40	16.0	0.1	0.39	0.04
03...	1145	0.03	--	3	6.40	16.0	0.1	0.39	0.05
17...	1130	1.0	--	4	6.50	13.0	0.1	1.3	0.19
23...	1230	0.48	--	4	6.20	13.0	0.1	0.56	0.06

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	BROMIDE DIS-SOLVED (MG/L AS BR)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)
OCT								
16...	0.5	0.18	0.3	0.2	0.0	<0.00	1.4	0.00
NOV								
19...	0.4	0.17	0.3	0.2	<0.01	0.01	1.5	0.038
DEC								
11...	0.3	0.14	0.3	0.2	0.01	<0.01	1.7	--
JAN								
10...	0.5	0.2	0.3	0.48	0.01	0.02	1.8	--
FEB								
05...	0.7	0.42	0.3	0.25	0.02	<0.01	2.2	0.078
MAR								
15...	0.6	0.73	0.3	0.22	<0.01	<0.01	1.9	0.074
APR								
02...	0.48	0.19	0.3	0.45	<0.01	<0.01	2.0	0.12
28...	0.07	0.11	0.3	0.17	<0.01	<0.01	2.7	0.21
28...	0.4	0.12	0.3	0.17	<0.01	<0.01	2.7	0.22
MAY								
15...	0.3	0.02	0.3	0.18	0.02	<0.01	2.1	0.21
28...	0.05	0.12	0.3	0.16	0.02	<0.01	1.8	0.18
JUN								
10...	0.27	0.13	--	--	--	--	1.6	--
25...	0.26	0.1	0.3	0.17	0.04	<0.01	1.4	0.07
JUL								
09...	0.31	0.12	0.3	0.15	0.01	<0.01	1.6	0.06
09...	0.27	0.1	0.3	0.14	0.02	<0.01	1.6	0.06
23...	0.3	0.11	0.3	0.13	0.01	<0.01	1.7	0.04
AUG								
06...	0.8	0.07	0.9	0.16	0.03	<0.01	1.5	0.03
06...	0.6	0.18	1.1	0.17	0.04	0.01	1.5	0.03
20...	--	0.04	0.7	0.17	0.02	<0.01	1.7	0.04
SEP								
03...	0.29	0.09	0.3	0.21	0.03	<0.01	1.4	0.02
03...	0.29	0.09	0.3	0.16	0.01	0.01	1.4	0.02
17...	0.41	0.14	0.3	0.15	0.01	<0.01	1.7	0.03
23...	1.3	0.6	0.3	0.17	0.01	0.01	1.6	0.04

See footnotes at end of table.

11206700 EMERALD LAKE OUTFLOW NEAR GIANT FOREST, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
OCT								
16...	<0.002	0.03	0.021	<0.002	10	37	14	1.4
NOV								
19...	0.002	0.04	<0.005	<0.002	--	47	13	1.2
DEC								
11...	--	0.07	<0.005	<0.002	--	75	11	--
JAN								
10...	<0.002	0.09	0.015	<0.002	30	64	11	1.8
FEB								
05...	0.002	0.08	0.143	<0.01	30	46	9	--
MAR								
15...	0.003	0.077	0.017	<0.001	30	34	12	--
APR								
02...	--	--	0.029	0.001	20	24	14	--
28...	--	--	0.003	0.005	30	28	6	--
28...	--	--	0.007	0.005	20	10	5	--
MAY								
15...	--	--	0.009	0.003	20	9	5	3.4
28...	--	--	0.006	0.001	20	15	9	0.7
JUN								
10...	--	--	--	--	20	9	4	--
25...	--	--	0.006	<0.001	10	6	1	1.4
JUL								
09...	--	--	0.016	0.003	20	5	2	2.4
09...	--	--	0.014	0.003	20	4	1	1.8
23...	--	--	0.004	<0.001	20	4	<1	1.2
AUG								
06...	--	--	0.01	0.003	4	6	<1	
06...	--	--	0.013	0.007	<1	5	2	--
20...	--	--	0.003	<0.001	10	9	2	--
SEP								
03...	--	--	0.05	<0.001	9	18	27	0.7
03...	--	--	0.026	<0.001	10	40	28	1.0
17...	--	--	0.015	<0.001	20	51	2	1.0
23...	--	--	0.001	0.015	30	33	2	1.6

E Estimated.

< Actual value is known to be less than the value shown.

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA

LOCATION.--Lat 36°31'08", long 118°48'03", in NE 1/4 SW 1/4 sec.23, T.16 S., R.29 E., Tulare County, Hydrologic Unit 18030007, Sequoia National Park, on left bank 0.1 mi north of Potwisha Camp, 0.3 mi upstream from confluence with Middle Fork Kaweah River, and 7.9 mi northeast of Three Rivers.

DRAINAGE AREA.--51.4 mi^2..

PERIOD OF RECORD.--March 1950 to current year. Monthly discharge only for March 1950, published in WSP 1315-A. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

GAGE.--Water-stage recorder on river; water-stage recorder and concrete control for conduit diversion. Elevation of gage is 2,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Marble Fork Kaweah River No. 3 conduit diverts from left bank of Marble Fork 0.3 mi above station. Water is returned to Kaweah River 2.7 mi downstream from confluence of Marble and Middle Forks. See schematic diagram of Kaweah River basin. For records of combined discharge of river and conduit, see following page.

COOPERATION.--Gage-height record and 12 discharge measurements for river and gage-height record and 11 discharge measurements for conduit were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--River only: 35 years, 80.3 ft^3/s, 58,180 acre-ft/yr.
Combined river and diversion: 35 years, 105 ft^3/s, 76,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 12,500 ft^3/s, Dec. 23, 1955, gage height, 13.4 ft, from rating curve extended above 1,100 ft^3/s on basis of slope-area measurement of peak flow; no flow Sept. 5-15, Oct. 24-28, 1953, Oct. 26-31, 1957.
Combined flow, maximum discharge, 12,500 ft^3/s, Dec. 23, 1955; minimum daily, 0.82 ft^3/s, Oct. 4, 5, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 405 ft^3/s, Apr. 14, gage height, 5.03 ft; minimum daily, 1.1 ft^3/s, Dec. 6-7.
Combined flow, maximum discharge, 442 ft^3/s, Apr. 14; minimum daily, 5.4 ft^3/s, Sept. 1-2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.5	28	7.1	12	38	67	282	110	6.3	6.6	2.2
2	1.4	1.5	23	7.7	17	43	99	284	127	5.1	6.5	1.6
3	1.4	1.6	20	7.9	15	31	125	258	108	5.3	5.5	2.3
4	1.4	1.8	11	8.2	12	26	134	286	109	5.2	5.2	3.6
5	1.4	1.7	1.4	8.2	12	20	161	297	162	4.9	6.0	1.8
6	1.5	1.7	1.1	8.8	9.6	17	185	296	183	4.8	7.6	2.0
7	1.4	1.8	1.1	21	7.5	18	214	264	202	5.0	7.3	2.0
8	1.4	10	1.4	15	17	16	229	226	188	5.5	7.1	1.8
9	1.5	3.1	1.3	11	28	15	232	191	183	5.6	7.2	1.7
10	1.6	4.5	1.8	17	16	16	234	154	172	5.6	7.4	1.7
11	1.6	1.5	1.6	14	11	20	235	130	161	5.7	7.9	4.1
12	2.3	1.8	2.1	7.3	8.0	16	249	155	148	6.1	8.1	2.8
13	1.8	14	1.5	7.0	11	14	285	201	141	6.1	8.1	9.3
14	1.3	4.8	1.8	6.8	14	13	313	244	146	6.2	7.7	5.4
15	1.3	1.5	3.6	7.4	18	13	295	258	123	7.2	7.5	1.3
16	2.7	1.4	4.3	8.0	25	13	242	252	104	7.2	6.9	1.2
17	12	1.4	5.5	8.6	31	16	201	245	98	6.6	6.6	1.2
18	1.3	1.4	3.2	13	32	21	155	260	95	6.8	6.8	1.3
19	1.6	1.4	2.2	17	33	16	144	269	84	6.9	7.4	4.7
20	4.4	1.4	2.3	20	31	23	131	249	72	8.5	7.3	16
21	1.3	1.5	2.1	22	19	29	110	231	54	9.8	6.9	1.3
22	1.3	1.5	2.7	20	16	29	101	253	42	6.5	6.7	1.3
23	1.7	9.2	2.8	16	17	37	127	273	36	6.6	6.6	1.4
24	1.4	45	2.8	14	22	53	157	281	29	6.7	6.6	1.4
25	1.5	32	2.7	11	29	51	144	263	19	7.4	6.2	1.4
26	1.4	28	2.5	10	37	42	113	228	15	7.1	6.2	1.4
27	2.3	31	2.1	11	39	65	115	202	13	7.0	6.3	1.5
28	1.4	102	2.1	11	40	57	148	180	10	8.5	6.5	2.5
29	1.4	46	2.2	9.6	---	42	188	156	8.5	6.8	6.4	2.0
30	1.4	34	2.4	9.7	---	35	233	126	8.3	7.0	6.4	2.1
31	1.5	---	3.0	9.5	---	45	---	125	---	6.7	6.1	---
TOTAL	61.6	390.0	145.6	364.8	579.1	890	5366	7119	2950.8	200.7	211.6	84.3
MEAN	1.99	13.0	4.70	11.8	20.7	28.7	179	230	98.4	6.47	6.83	2.81
MAX	12	102	28	22	40	65	313	297	202	9.8	8.1	16
MIN	1.3	1.4	1.1	6.8	7.5	13	67	125	8.3	4.8	5.2	1.2
AC-FT	122	774	289	724	1150	1770	10640	14120	5850	398	420	167

CAL YR 1984 TOTAL 22261.88 MEAN 60.8 MAX 448 MIN .98 AC-FT 44160
WTR YR 1985 TOTAL 18363.5 MEAN 50.3 MAX 313 MIN 1.1 AC-FT 36420

11208001 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF MARBLE FORK KAWEAH RIVER AND MARBLE FORK KAWEAH RIVER NO. 3 CONDUIT AT POTWISHA CAMP, CA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	16	28	26	22	66	102	319	148	35	12	5.4
2	8.0	15	23	26	27	69	134	320	166	34	11	5.4
3	8.0	14	20	26	25	57	160	295	147	34	10	5.8
4	8.0	14	21	26	22	53	169	322	147	32	9.4	11
5	8.0	14	24	27	23	48	196	333	200	30	9.6	8.8
6	8.1	13	25	29	23	45	221	332	221	28	11	7.8
7	8.0	13	25	44	23	46	250	300	240	27	10	7.5
8	7.9	25	25	39	31	44	267	261	225	26	9.7	7.1
9	7.3	20	25	34	40	43	272	226	219	24	9.7	7.0
10	7.1	28	26	29	32	44	273	190	208	23	9.6	7.1
11	7.4	27	26	24	30	46	272	168	197	22	9.6	14
12	8.2	27	26	21	30	44	285	193	184	20	9.5	17
13	8.3	39	25	21	33	42	322	240	177	19	9.5	26
14	8.6	31	23	23	37	41	350	283	182	18	9.0	24
15	8.3	28	24	27	43	41	332	297	159	17	8.8	18
16	9.1	26	23	29	50	41	279	292	140	16	8.1	15
17	26	24	26	30	56	44	239	285	134	16	7.6	13
18	17	25	25	34	57	49	193	300	130	15	7.6	11
19	22	24	26	39	58	44	182	310	119	15	7.7	21
20	25	24	26	42	57	51	168	288	107	19	7.5	37
21	19	24	24	44	46	57	146	269	89	22	7.1	23
22	18	24	24	42	44	57	137	291	77	19	6.9	17
23	19	23	24	38	45	65	164	311	71	17	6.8	14
24	19	45	24	36	50	81	194	319	64	15	6.8	12
25	21	32	24	33	57	80	180	300	55	17	6.3	11
26	20	28	24	32	65	70	150	264	51	17	6.2	9.9
27	22	31	24	30	67	95	154	239	48	15	6.3	9.8
28	20	102	23	28	68	88	186	218	44	18	6.5	12
29	18	46	23	27	---	75	227	193	40	14	6.4	13
30	17	34	22	28	---	71	271	163	37	13	6.4	12
31	17	---	23	24	---	81	---	162	---	12	6.1	---
TOTAL	428.3	836	751	958	1161	1778	6475	8283	4026	649	258.7	402.6
MEAN	13.8	27.9	24.2	30.9	41.5	57.4	216	267	134	20.9	8.35	13.4
MAX	26	102	28	44	68	95	350	333	240	35	12	37
MIN	7.1	13	20	21	22	41	102	162	37	12	6.1	5.4
AC-FT	850	1660	1490	1900	2300	3530	12840	16430	7990	1290	513	799

CAL YR 1984 TOTAL 32775.2 MEAN 89.5 MAX 488 MIN 7.1 AC-FT 65010
WTR YR 1985 TOTAL 26006.6 MEAN 71.3 MAX 350 MIN 5.4 AC-FT 51580

11209900 KAWEAH RIVER AT THREE RIVERS, CA

LOCATION.--Lat 36°26'38", long 118°54'09", in SW 1/4 SW 1/4 sec.13, T.17 S., R.28 E., Tulare County, Hydrologic Unit 18030007, on right bank opposite schoolhouse in Three Rivers, 0.2 mi downstream from North Fork Kaweah River.

DRAINAGE AREA.--418 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 809.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 23. Records good except for estimated daily discharges, which are fair. Diversions to 200 acres above station. Power is developed on the Middle and East Fork Kaweah River.

AVERAGE DISCHARGE.--27 years, 570 ft^3/s, 413,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,000 ft^3/s, Dec. 5, 1966, gage height, 16.69 ft in gage well, 19.0 ft, from floodmarks, from rating curve extended above 13,000 ft^3/s on basis of slope-area measurements at gage heights 13.68 ft and 16.69 ft; minimum daily, 14 ft^3/s, Sept. 29, Oct. 4, 5, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 17.9 ft, from floodmarks.

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)
Nov. 28	0545	*2,030	*6.60	Apr. 14	2245	1,990	6.57

Minimum daily, 42 ft^3/s, Aug. 29-31, Sept. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	107	236	186	160	355	706	1330	735	211	90	45
2	84	101	211	180	179	386	853	1430	780	205	91	42
3	83	97	196	176	175	324	976	1320	748	203	85	42
4	82	96	185	180	160	314	1020	1380	702	198	80	71
5	82	94	178	182	162	293	1120	1430	861	191	77	70
6	82	92	172	186	164	289	1180	1440	986	179	75	67
7	81	93	169	410	159	302	1300	1340	1070	172	73	65
8	76	171	167	545	346	291	1360	1210	1060	167	71	64
9	74	171	166	450	745	285	1360	1090	1020	163	70	63
10	73	149	164	360	350	287	1350	979	984	157	69	62
11	73	147	187	310	292	303	1340	866	911	158	66	117
12	86	150	175	286	267	296	1360	919	885	149	65	127
13	84	239	192	268	283	280	1470	1060	837	142	61	128
14	81	220	176	252	291	267	1620	1230	831	135	60	117
15	79	172	182	244	308	263	1610	1350	765	130	57	101
16	82	158	258	238	328	259	1400	1330	696	126	63	89
17	316	154	198	232	351	263	1260	1290	646	124	57	80
18	165	149	204	246	342	291	1040	1340	630	118	57	76
19	146	145	222	260	351	279	963	1390	597	113	57	97
20	155	142	252	264	356	295	892	1350	551	126	56	117
21	138	149	234	266	306	312	798	1260	466	143	54	102
22	126	158	226	254	290	308	728	1300	411	136	51	89
23	125	145	218	238	280	325	783	1380	376	123	50	81
24	126	391	208	227	288	374	900	1440	341	114	49	76
25	126	372	202	209	308	404	884	1380	311	110	47	72
26	125	214	200	208	334	376	758	1240	284	116	45	71
27	127	197	198	201	349	1130	742	1130	266	111	44	70
28	118	1020	196	188	355	1000	826	1060	251	107	43	74
29	115	401	194	183	---	687	958	963	236	104	42	76
30	112	281	192	183	---	582	1120	847	221	91	42	74
31	110	---	190	171	---	614	---	823	---	95	42	---
TOTAL	3414	6175	6148	7783	8279	12034	32677	37897	19458	4417	1889	2425
MEAN	110	206	198	251	296	388	1089	1222	649	142	60.9	80.8
MAX	316	1020	258	545	745	1130	1620	1440	1070	211	91	128
MIN	73	92	164	171	159	259	706	823	221	91	42	42
AC-FT	6770	12250	12190	15440	16420	23870	64810	75170	38590	8760	3750	4810

CAL YR 1984 TOTAL 179006 MEAN 489 MAX 2210 MIN 62 AC-FT 355100
WTR YR 1985 TOTAL 142596 MEAN 391 MAX 1620 MIN 42 AC-FT 282800

11209900 KAWEAH RIVER AT THREE RIVERS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-66, 1968 to current year.
CHEMICAL ANALYSES: Water years 1964-66, 1977.
WATER TEMPERATURES: Water years 1966, 1968 to to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPREATURES.--October 1965 to December 1966, January 1968 to current year.

INSTRUMENTATION.--Temperature recorder October 1965 to December 1966, and since January 1968.

REMARKS.--Interruptions in record were due to malfunction of recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1966, 1968-85): Maximum recorded, 30.0°C, July 14, 15, 1972, July 15, 18, 1977; minimum recorded, 0.5°C, Jan. 7, 1971, Dec. 12, 1972.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 26.5°C, July 27, Aug. 24, 25; minimum recorded, 2.5°C, Dec. 17, 18.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.5	16.0	13.5	10.0	8.5	6.5	6.5	4.5	5.5	3.0	11.0	7.5
2	19.0	14.5	13.5	9.5	7.5	5.5	6.0	3.5	5.0	4.5	9.0	5.0
3	19.0	15.0	14.0	10.5	7.5	6.5	6.5	3.5	5.5	4.0	6.5	3.0
4	19.0	15.0	14.0	11.5	8.5	6.0	6.5	3.5	6.5	3.0	7.0	3.0
5	19.5	15.5	13.0	10.0	9.0	6.5	6.0	4.0	5.5	3.0	6.5	4.0
6	19.5	15.5	14.0	11.0	9.0	7.0	7.0	5.5	6.0	3.0	8.0	4.5
7	20.5	15.5	13.5	11.0	9.0	6.5	7.5	7.0	5.0	3.0	8.0	5.0
8	20.5	15.5	12.0	11.0	9.5	7.5	7.5	6.5	6.0	4.5	7.5	4.0
9	20.0	16.0	11.5	9.0	9.0	7.0	7.5	6.0	6.5	5.5	8.5	4.5
10	20.0	16.0	11.0	8.0	8.0	6.5	7.5	5.5	7.0	4.0	10.0	7.0
11	17.5	16.0	11.5	8.0	9.0	7.0	7.0	6.0	7.0	4.0	11.0	7.5
12	18.0	14.0	10.5	9.0	8.5	7.5	7.0	5.5	8.5	5.0	10.5	6.5
13	18.5	14.0	12.0	10.0	8.0	5.5	6.5	4.0	9.0	5.5	11.0	6.5
14	16.0	14.5	10.0	8.5	6.5	4.0	6.0	3.5	10.0	6.0	10.5	6.5
15	16.0	12.5	10.0	7.0	5.0	3.5	5.5	4.0	10.0	6.5	11.5	7.0
16	13.5	11.5	10.0	8.5	6.0	4.0	7.0	5.0	10.0	7.0	11.5	7.5
17	13.0	11.0	10.5	8.0	5.0	2.5	7.5	4.5	10.0	7.0	12.5	8.0
18	13.0	9.5	10.5	8.5	3.5	2.5	8.0	5.0	11.5	8.0	10.0	8.0
19	13.5	10.5	11.0	8.5	4.5	3.0	7.5	5.5	11.0	8.0	9.5	6.5
20	12.5	11.5	10.0	7.5	6.0	4.0	7.5	5.5	9.5	6.5	11.5	6.5
21	13.5	11.0	9.0	8.0	6.0	4.0	7.0	6.0	8.0	4.5	10.0	8.5
22	13.5	10.0	7.5	7.0	5.5	3.0	7.0	6.0	8.5	5.0	11.5	7.5
23	14.0	10.0	8.5	6.0	5.0	3.0	7.5	6.0	9.5	5.5	12.0	7.5
24	13.5	10.0	8.0	7.0	5.5	4.0	8.0	5.5	10.0	6.0	12.5	8.0
25	14.0	10.0	8.0	6.0	5.5	3.0	7.5	5.0	10.5	6.5	10.0	8.0
26	13.5	10.5	7.0	4.5	5.0	3.5	6.5	6.0	11.0	7.0	8.0	5.5
27	13.0	11.0	7.5	5.5	6.0	4.5	7.5	6.0	11.0	7.0	7.5	6.5
28	13.5	10.0	8.5	7.5	6.5	5.0	7.5	5.5	11.0	7.5	8.0	6.0
29	13.0	10.0	8.0	6.0	7.0	5.5	6.0	4.5	---	---	8.0	4.5
30	13.5	10.0	7.5	6.5	5.5	5.0	6.5	4.5	---	---	9.5	5.0
31	13.5	11.0	---	---	6.0	5.0	5.5	4.0	---	---	11.0	6.5
MONTH	20.5	9.5	14.0	4.5	9.5	2.5	8.0	3.5	11.5	3.0	12.5	3.0

11209900 KAWEAH RIVER AT THREE RIVERS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	8.0	14.5	11.0	15.0	11.0	22.0	17.0	25.0	19.5		
2	12.5	9.0	13.5	11.0	13.0	11.0	23.5	18.0	24.5	19.5		
3	12.5	9.0	14.0	10.5	13.0	11.0	24.0	18.5	25.5	19.5		
4	12.5	9.5	13.0	10.0	16.5	11.0	24.5	19.5	26.0	20.5		
5	13.0	10.0	13.5	10.0	18.0	14.5	22.5	19.5	26.0	20.5		
6	13.0	9.5	13.0	10.5	18.5	15.5	24.0	19.5	26.0	20.0		
7	13.5	10.0	12.5	9.5	19.0	16.0	24.5	20.5	26.0	20.5		
8	13.0	10.0	12.5	10.0	19.0	16.0	25.0	20.0	26.0	20.5		
9	13.0	10.0	13.0	10.5	19.5	16.5	24.5	20.5	25.5	20.0		
10	12.5	10.0	12.0	9.0	19.5	16.5	25.5	21.0	25.5	20.0		
11	13.0	10.5	10.5	8.0	20.0	16.5	26.0	21.5	25.0	20.0		
12	13.0	10.0	13.5	9.5	20.0	17.0	25.0	20.5	25.0	19.5		
13	13.5	10.0	14.0	10.5	20.5	17.5	25.0	20.5	25.5	20.0		
14	13.5	10.5	14.5	11.0	21.0	17.5	25.0	20.5	25.5	20.0		
15	12.0	10.0	14.0	11.0	21.5	18.0	24.0	20.5	26.0	20.5		
16	11.0	9.5	14.0	11.0	21.5	18.0	24.5	21.0	26.0	20.5		
17	10.5	9.0	13.5	10.5	22.0	18.5	25.5	20.5	25.5	21.0		
18	9.0	8.0	14.0	11.0	22.5	19.5	25.5	21.0	25.5	20.5		
19	10.0	8.0	14.5	11.5	23.0	19.5	25.0	21.5	25.0	20.5		
20	8.5	7.0	15.0	11.5	22.0	18.5	25.0	21.0	25.5	20.0		
21	11.0	6.5	14.0	11.0	22.0	18.0	25.5	21.0	25.5	20.0		
22	11.0	8.0	15.5	12.0	22.0	18.0	25.5	20.5	25.5	20.0		
23	13.5	9.0	16.0	12.5	22.0	17.5	25.5	20.5	26.0	20.5		
24	14.0	10.5	16.5	13.0	22.5	18.5	25.5	21.5	26.5	20.5		
25	11.5	9.0	16.0	13.0	21.5	17.0	22.5	21.0	26.5	21.0		
26	11.5	7.5	15.0	12.5	22.0	17.0	25.5	20.0	---	---		
27	12.5	8.5	14.5	12.0	22.0	17.0	26.5	21.5	---	---		
28	13.5	9.5	14.5	12.0	21.5	17.0	26.0	21.5	---	---		
29	13.5	10.5	14.5	12.5	21.0	17.0	25.0	21.0	---	---		
30	14.5	11.0	14.0	11.0	22.0	16.5	25.0	19.5	---	---		
31	---	---	14.5	11.5	---	---	24.5	19.5	---	---		
MONTH	14.5	6.5	16.5	8.0	23.0	11.0	26.5	17.0	---	---		

11210100 SOUTH FORK KAWEAH RIVER AT THREE RIVERS, CA

LOCATION.--Lat 36°25'00", long 118°54'48", in SW 1/4 SE 1/4 sec.26, T.17 S., R.28 E., Tulare County, Hydrologic Unit 18030007, on right bank 200 ft upstream from unnamed tributary, 0.5 mi upstream from mouth, and 1.8 mi southwest of Three Rivers.

DRAINAGE AREA.--86.7 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 807.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Several small diversions above station for irrigation.

AVERAGE DISCHARGE.--27 years, 75.8 ft^3/s, 54,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft^3/s, Dec. 6, 1966, gage height, 9.30 ft in gage well, 10.4 ft from floodmarks, from rating curve extended above 2,600 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in 1960-62.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 9.5 ft from floodmarks, discharge, 10,000 ft^3/s.

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)
Feb. 9	0100	*355	*3.27

Minimum daily, 0.37 ft^3/s, Aug. 31 and Sept. 1.

REVISIONS.--The maximum gage height reported for the water year 1984 has been revised to 3.71 ft, superseding figure published in report for 1984 water year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	11	32	24	24	37	99	212	114	14	2.9	.37
2	3.3	9.8	28	23	27	41	116	230	117	13	2.7	.44
3	3.3	10	26	23	27	37	124	206	116	12	2.5	.54
4	3.3	10	24	23	25	37	126	227	113	10	2.4	.79
5	3.3	10	23	23	25	36	134	230	130	9.0	2.2	.91
6	3.5	10	23	24	24	37	138	232	146	8.5	2.1	1.0
7	3.5	11	22	76	24	40	152	213	142	7.7	1.7	1.3
8	3.2	17	22	103	85	38	156	189	134	6.9	1.4	1.7
9	3.2	18	22	59	171	37	156	172	123	6.1	1.3	2.2
10	3.3	15	22	47	66	38	154	148	116	5.6	1.2	2.6
11	3.4	15	25	41	52	40	152	123	102	5.1	1.2	8.5
12	4.8	14	25	37	46	38	157	141	91	4.8	1.2	7.4
13	5.6	26	32	35	45	35	177	174	83	4.5	1.2	6.4
14	5.2	23	25	33	45	34	199	213	77	3.9	1.2	5.3
15	5.1	20	26	31	46	34	208	236	70	4.0	1.1	3.9
16	6.2	18	37	31	48	33	177	228	61	3.6	1.0	3.3
17	45	18	28	30	48	33	155	228	55	3.3	.98	3.1
18	17	17	29	31	47	37	124	237	48	3.2	.96	3.3
19	13	16	31	33	47	36	120	238	42	3.0	.73	3.2
20	13	15	36	34	46	37	111	237	38	3.5	.76	3.2
21	12	20	30	34	42	37	94	226	34	4.6	.69	3.0
22	11	21	29	33	40	37	84	232	30	4.1	.69	2.8
23	10	19	28	31	37	37	101	244	28	3.7	.66	2.6
24	11	48	27	30	36	39	127	254	26	3.4	.59	2.4
25	11	55	26	28	36	41	129	243	26	3.3	.52	2.4
26	12	32	26	28	37	43	103	214	24	4.1	.50	2.2
27	13	28	26	29	37	222	98	191	20	3.5	.46	2.3
28	13	117	26	26	37	178	115	170	18	3.1	.49	2.8
29	12	57	25	26	---	106	141	154	17	3.0	.48	3.2
30	11	39	25	27	---	86	172	135	16	3.0	.46	3.2
31	11	---	24	25	---	86	---	129	---	2.9	.37	---
TOTAL	278.2	739.8	830	1078	1270	1647	4099	6306	2157	170.4	36.64	86.35
MEAN	8.97	24.7	26.8	34.8	45.4	53.1	137	203	71.9	5.50	1.18	2.88
MAX	45	117	37	103	171	222	208	254	146	14	2.9	8.5
MIN	3.0	9.8	22	23	24	33	84	123	16	2.9	.37	.37
AC-FT	552	1470	1650	2140	2520	3270	8130	12510	4280	338	73	171

CAL YR 1984 TOTAL 21655.20 MEAN 59.2 MAX 388 MIN 2.2 AC-FT 42950
WTR YR 1985 TOTAL 18698.39 MEAN 51.2 MAX 254 MIN .37 AC-FT 37090

11210850 LEMONCOVE DITCH BELOW TERMINUS DAM, CA

LOCATION.--Lat 36°24'55", long 119°00'22", in SW 1/4 SW 1/4 sec.25, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030007, on left bank 250 ft downstream from outlet tunnel of Terminus Dam, and 2.4 mi northeast of Lemoncove.

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

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 546.3 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Ditch receives water from Lake Kaweah (station 11210900) which is used for irrigation. At times up to 3 ft^3/s is diverted 200 ft upstream into Doffelmyer ditch for irrigation.

AVERAGE DISCHARGE.--23 years, 4.87 ft^3/s, 3,530 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 8.8 ft^3/s, May 5, 1970; no flow at times in some years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	4.1	1.7	2.0	2.1	.10	3.0	7.0	6.8	7.8	7.6	7.0
2	6.7	4.1	1.7	2.0	2.1	.10	3.0	7.0	6.8	7.7	7.6	7.0
3	6.7	4.2	1.4	2.0	2.1	.10	3.0	7.0	6.8	7.3	7.6	7.0
4	6.7	4.2	1.0	2.0	2.1	.10	3.0	7.0	6.8	7.1	7.6	7.0
5	6.7	4.2	1.0	2.0	2.1	2.0	2.9	7.0	6.8	7.1	7.6	7.3
6	6.7	4.2	.90	2.0	2.1	3.1	2.9	7.0	6.8	7.1	7.6	7.5
7	6.7	4.2	.90	2.0	2.1	3.1	2.9	7.0	6.9	7.1	7.6	7.5
8	6.7	4.2	.90	2.0	2.1	3.1	2.9	7.0	6.9	7.1	7.6	7.5
9	6.7	3.6	.90	2.0	2.1	3.1	4.2	7.0	6.9	7.1	7.5	7.5
10	6.7	3.1	.90	2.0	2.2	3.1	5.0	7.1	7.5	7.1	7.5	7.5
11	6.7	3.1	.90	2.0	2.1	3.1	5.0	7.1	7.9	7.3	7.5	7.5
12	6.7	3.1	.90	2.0	2.1	3.1	5.0	7.1	7.9	7.7	7.5	7.1
13	6.7	3.1	.90	2.0	2.1	3.1	5.0	7.1	7.9	7.7	7.3	6.3
14	6.7	2.6	1.5	2.0	1.9	3.1	5.0	7.1	7.9	7.8	7.6	6.2
15	6.9	1.9	2.0	2.0	1.9	3.0	6.0	7.0	7.9	7.7	7.6	6.2
16	6.9	1.9	2.0	2.0	1.9	2.9	6.9	7.0	8.0	7.7	7.6	6.2
17	6.3	1.9	2.0	2.0	1.9	2.9	7.0	7.0	8.0	7.7	7.6	6.2
18	6.0	1.9	2.0	2.1	1.9	2.9	7.0	7.0	8.0	7.7	7.6	6.2
19	6.0	1.9	2.0	2.1	2.0	3.0	7.0	7.0	8.0	7.6	7.6	5.7
20	6.0	1.9	2.0	2.1	2.0	3.1	7.0	7.0	8.0	7.6	7.6	4.9
21	5.9	1.9	2.0	2.1	2.0	3.1	7.0	7.0	8.0	7.6	7.6	5.0
22	5.9	1.9	2.0	2.2	2.1	3.1	7.0	7.0	8.0	7.6	7.6	5.0
23	5.9	1.9	2.0	2.1	2.1	3.1	7.0	7.0	8.0	7.6	7.2	5.0
24	5.9	1.9	2.0	2.1	2.1	3.1	7.0	7.0	8.0	7.6	7.0	5.5
25	5.9	1.9	2.0	2.1	2.1	3.1	7.0	7.0	8.0	7.6	7.0	5.9
26	5.9	1.9	2.0	2.1	2.1	4.6	7.0	7.0	8.0	7.6	7.0	5.9
27	5.9	1.9	2.0	2.1	2.1	3.7	7.0	7.0	8.0	7.6	7.0	5.9
28	5.9	1.8	2.0	2.1	.80	3.0	7.0	7.0	8.0	7.6	7.0	5.9
29	5.9	1.7	2.0	2.1	---	3.0	7.0	7.0	8.0	7.6	7.0	5.9
30	5.9	1.7	2.0	2.1	---	3.0	7.0	7.0	8.0	7.6	7.0	5.9
31	5.0	---	2.0	2.1	---	3.0	---	6.9	---	7.6	7.0	---
TOTAL	195.9	81.9	49.50	63.5	56.30	83.90	163.7	217.4	228.5	232.6	229.7	191.2
MEAN	6.32	2.73	1.60	2.05	2.01	2.71	5.46	7.01	7.62	7.50	7.41	6.37
MAX	6.9	4.2	2.0	2.2	2.2	4.6	7.0	7.1	8.0	7.8	7.6	7.5
MIN	5.0	1.7	.90	2.0	.80	.10	2.9	6.9	6.8	7.1	7.0	4.9
AC-FT	389	162	98	126	112	166	325	431	453	461	456	379

CAL YR 1984 TOTAL 1887.70 MEAN 5.16 MAX 8.2 MIN .90 AC-FT 3750
WTR YR 1985 TOTAL 1794.10 MEAN 4.92 MAX 8.0 MIN .10 AC-FT 3560

11210900 LAKE KAWEAH NEAR LEMONCOVE, CA

LOCATION.--Lat 36°24'53", long 119°00'07", in SE 1/4 SW 1/4 sec.25, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030007, in control tower near left abutment of Terminus Dam on Kaweah River, 2.1 mi northeast of Lemoncove.

DRAINAGE AREA.--560 mi^2.

PERIOD OF RECORD.--October 1961 to current year. Fragmentary prior to March 1962.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to May 22, 1962, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam and earthfill auxiliary dam, completed in February 1962. Usable capacity, 142,931 acre-ft between elevations 520.0 ft invert of outlet structure, and 694.0 ft spillway crest. Dead storage, 33 acre-ft. Spillway design flood pool elevation, 745.1 ft, capacity, 256,167 acre-ft. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records were provided by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents (based on capacity table then in use, new capacity table put into use Oct. 1, 1978), 160,200 acre-ft, July 3, 4, 1967, elevation, 699.39 ft, storage increased by a temporary sandbag dam in the ungated spillway; minimum since reservoir first filled, 7,559 acre-ft, Oct. 20, 1970, elevation, 568.38 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 143,768 acre-ft, May 24, elevation, 694.42 ft; minimum, 7,847 acre-ft, Sept. 3, elevation, 573.26 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

520	33	580	10,112
525	170	600	19,970
530	436	620	35,541
535	832	640	57,212
540	1,347	660	84,644
550	2,703	680	117,289
560	4,509	700	154,644
570	6,903	720	196,552

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11749	16146	13403	9048	12621	10958	29043	97735	141228	85580	20509	7947
2	11825	16302	12661	9031	12599	11205	30700	100790	140676	83308	19038	7883
3	11900	16453	11770	9212	12577	11342	32673	103508	140107	81065	17796	7847
4	11959	16606	10707	9445	12424	11444	34791	106342	139368	78853	16737	7850
5	12019	16743	9569	9668	12315	11501	37167	109245	138744	76657	15864	7886
6	12078	16881	9144	9899	12276	11567	39670	112167	138216	74407	15103	7938
7	12134	17042	9171	10700	12203	11720	42430	114862	137727	72107	14355	7991
8	12181	17340	9192	11691	12515	11871	45344	117148	137087	69775	13637	8028
9	12177	17687	9209	11998	14054	12015	48237	119101	136281	67375	12992	8059
10	12168	17952	9226	11972	14419	12151	51095	120748	135326	64992	12376	8099
11	12168	18209	9295	11808	14670	12441	53891	122084	134152	62564	11749	8246
12	12173	18492	9323	11621	14820	12785	56732	123569	132945	60146	11109	8450
13	12185	18971	9389	11374	14850	13096	59805	125315	131687	57730	10465	8642
14	12203	19435	9316	11241	14645	13399	63199	127472	130086	55356	9936	8810
15	12211	19769	9271	11217	14556	13693	66638	129884	127818	52942	9701	8944
16	12276	20058	9344	11229	14616	13983	69570	132149	125351	50507	9583	9062
17	12839	20349	9306	11326	14720	14296	72204	134338	122852	48036	9459	9168
18	13137	20618	9340	11481	14805	14695	74336	136637	120287	45539	9333	9254
19	13380	20102	9428	11687	14606	15062	76313	139085	117868	43119	9205	9382
20	13660	19153	9473	11909	14248	15482	78127	140828	115506	40817	9079	9540
21	13911	18297	9375	12113	13768	15959	79729	141971	113028	38592	8950	9675
22	14132	17436	9240	12280	13233	16426	81184	142926	110522	36443	8823	9780
23	14340	16557	9099	12402	12577	16931	82771	143500	107992	34507	8740	9856
24	14556	16093	9058	12498	11871	17533	84614	143768	105404	32832	8678	9910
25	14770	15811	9079	12568	11177	18203	86354	143615	102747	31237	8609	9954
26	14981	15001	9099	12634	10848	18863	87821	143461	99990	29594	8482	10020
27	15199	14107	9113	12692	10770	21466	89237	143424	97268	28089	8380	10101
28	15415	15047	9116	12714	10824	23903	90804	143309	94296	26613	8272	10183
29	15607	14715	9116	12723	---	25423	92762	143002	91288	25125	8158	10269
30	15790	14088	9096	12714	---	26560	95090	142448	88281	23604	8077	10344
31	15975	---	9075	12678	---	27723	---	141914	---	22075	8012	---
MAX	15975	20618	13403	12723	14850	27723	95090	143768	141228	85580	20509	10344
MIN	11749	14088	9058	9031	10770	10958	29043	97735	88281	22075	8012	7847
a	593.10	589.37	577.08	586.32	581.87	610.93	666.74	693.45	662.39	603.23	573.80	580.62
b	+4284	-1887	-5013	+3603	-1854	+16899	+67367	+46824	-53633	-66206	-14063	+2332
c	158	93	31	22	67	107	514	1008	1384	986	348	174

CAL YR 1984 b -54671
WTR YR 1985 b -1347

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet.

11210930 FOOTHILL DITCH BELOW TERMINUS DAM, CA

LOCATION.--Lat 36°24'48", long 119°00'47", in NW 1/4 NW 1/4 sec.35, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030012, on left bank 0.7 mi downstream from Terminus Dam, and 2.1 mi northeast of Lemoncove.

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

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 492.8 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--No estimated daily discharge. Records good. Ditch receives water from Lake Kaweah (station 11210900) which is used for irrigation.

AVERAGE DISCHARGE.--24 years, 16.5 ft^3/s, 11,950 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 50 ft^3/s Apr. 7, 1979; no flow many days in 1975, 1978-85.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	8.9	0	0	8.4	2.5	5.2	11	15	15	15	12
2	14	8.9	0	0	8.7	2.4	7.0	11	15	15	14	11
3	15	8.7	0	0	8.7	2.3	7.7	11	14	15	14	11
4	15	8.4	0	0	3.3	2.3	7.8	12	15	15	13	11
5	15	8.4	0	0	.10	2.2	7.4	11	15	15	13	11
6	15	8.4	0	0	.10	2.2	7.4	11	15	15	13	11
7	15	8.4	0	0	2.4	2.2	7.5	11	15	15	13	11
8	15	8.4	0	0	2.7	2.2	9.7	12	15	15	13	11
9	16	8.4	0	0	2.7	2.2	12	12	15	15	13	11
10	16	8.4	0	0	2.7	2.2	12	12	15	15	13	11
11	16	8.2	2.8	0	2.7	8.3	12	12	14	15	13	11
12	16	8.2	6.7	0	2.7	11	12	12	16	15	13	11
13	16	3.0	6.7	0	2.7	11	12	12	16	15	12	11
14	16	0	7.1	0	2.7	11	12	13	16	15	13	11
15	16	0	4.9	0	2.7	11	11	13	16	14	11	11
16	16	0	0	0	2.7	11	11	13	16	16	11	11
17	6.9	0	0	0	2.5	11	11	13	16	16	11	11
18	0	0	0	0	2.7	5.0	11	13	16	16	11	11
19	0	0	0	0	2.7	2.1	11	13	16	15	10	11
20	0	0	0	0	2.7	1.8	11	13	16	15	10	11
21	0	0	0	0	2.8	1.8	11	14	16	15	10	11
22	5.8	0	0	0	2.7	1.7	11	14	16	15	10	11
23	10	0	0	0	2.7	1.8	10	14	16	14	10	11
24	10	0	0	0	2.7	1.7	11	15	14	15	10	8.4
25	9.9	0	0	0	2.6	1.7	12	15	15	15	10	1.0
26	9.6	0	0	0	2.5	3.1	12	15	15	15	11	.90
27	9.6	0	0	0	2.6	1.0	11	15	15	15	10	.80
28	9.6	0	0	0	2.5	.80	11	15	15	15	10	.70
29	9.4	0	0	4.3	---	.80	11	15	15	15	12	.70
30	8.9	0	0	8.4	---	.70	11	15	15	15	12	.70
31	8.9	---	0	8.4	---	.60	---	15	---	14	12	---
TOTAL	343.6	104.7	28.2	21.1	87.70	121.60	308.7	403	459	465	366	267.20
MEAN	11.1	3.49	.91	.68	3.13	3.92	10.3	13.0	15.3	15.0	11.8	8.91
MAX	16	8.9	7.1	8.4	8.7	11	12	15	16	16	15	12
MIN	0	0	0	0	.10	.60	5.2	11	14	14	10	.70
AC-FT	682	208	56	42	174	241	612	799	910	922	726	530

CAL YR 1984 TOTAL 3259.00 MEAN 8.90 MAX 16 MIN 0 AC-FT 6460
WTR YR 1985 TOTAL 2975.80 MEAN 8.15 MAX 16 MIN 0 AC-FT 5900

11210950 KAWEAH RIVER BELOW TERMINUS DAM, CA

LOCATION.--Lat 36°24'51", long 119°00'42", in SE 1/4 SE 1/4 sec.26, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030012, on left bank 0.6 mi downstream from Terminus Dam, and 2.2 mi northeast of Lemoncove.

DRAINAGE AREA.--561 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR CA-71-2: 1963.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 495.90 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Kaweah (station 11210900). Lemoncove ditch (station 11210850) diverts water from Lake Kaweah for irrigation. Foothill ditch (station 11210930) diverts water from the gage pool for irrigation. Doffelmyer ditch diverts up to 3 ft^3/s above station for irrigation. At times some of this water is returned to the river above the station.

AVERAGE DISCHARGE (adjusted for change in contents, evaporation, and diversion).--24 years, 707 ft^3/s, 512,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,610 ft^3/s, June 3, 1969, gage height, 8.77 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,130 ft^3/s, June 15, gage height, 6.15 ft; minimum daily, 19 ft^3/s, Oct. 25, 26, and Sept. 17, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	20	675	212	227	353	122	107	1160	1480	850	39
2	22	20	666	205	227	335	111	125	1150	1350	807	39
3	22	20	728	126	227	324	88	145	1140	1330	689	32
4	27	21	801	82	276	328	60	170	1160	1310	589	24
5	29	21	821	88	261	333	36	180	1270	1300	485	28
6	29	21	474	85	227	318	39	186	1370	1300	427	26
7	29	21	218	86	234	302	45	202	1440	1320	413	21
8	29	22	218	157	246	284	51	244	1510	1330	400	25
9	50	23	218	256	268	276	55	291	1540	1350	360	30
10	52	25	218	353	284	276	62	298	1560	1350	344	30
11	52	25	216	397	254	219	71	298	1580	1350	343	31
12	58	26	216	394	263	171	76	303	1560	1340	342	34
13	60	26	238	397	343	165	83	311	1520	1320	340	38
14	59	28	230	336	467	157	86	345	1670	1300	286	38
15	55	34	231	270	439	151	83	379	1930	1310	150	33
16	45	34	236	252	371	147	90	406	1940	1320	84	24
17	50	35	240	220	366	137	92	415	1920	1330	83	19
18	52	35	218	198	373	137	85	408	1920	1340	82	20
19	43	407	216	198	530	143	75	407	1810	1310	82	19
20	33	671	261	198	628	126	66	732	1730	1290	79	21
21	31	662	294	216	645	110	66	940	1700	1260	77	25
22	26	658	296	225	654	115	61	1090	1670	1220	76	25
23	21	654	296	232	705	112	55	1370	1640	1100	59	25
24	20	666	246	231	736	109	72	1630	1630	964	48	31
25	19	675	209	227	748	110	113	1730	1640	922	49	39
26	19	723	211	227	588	109	110	1570	1660	915	64	29
27	20	750	211	229	446	77	106	1400	1700	858	60	23
28	20	675	211	227	388	44	103	1330	1730	834	61	23
29	20	710	212	225	---	59	90	1310	1740	822	63	25
30	21	710	212	223	---	92	90	1290	1730	818	48	30
31	20	---	212	227	---	101	---	1190	---	830	38	---
TOTAL	1056	8418	9949	6999	11421	5720	2342	20802	47720	37173	7878	846
MEAN	34.1	281	321	226	408	185	78.1	671	1591	1199	254	28.2
MAX	60	750	821	397	748	353	122	1730	1940	1480	850	39
MIN	19	20	209	82	227	44	36	107	1140	818	38	19
AC-FT	2090	16700	19730	13880	22650	11350	4650	41260	94650	73730	15630	1680
MEAN a	124	257	242	287	381	468	1235	1469	735	161	50.4	85.6
AC-FT a	7620	15290	14880	17650	21160	28780	73490	90330	43790	9900	3100	5090

CAL YR 1984 TOTAL 233713 MEAN 639 MAX 2140 MIN 11 AC-FT 463600 MEAN a 585 AC-FT a 424700
WTR YR 1985 TOTAL 160324 MEAN 439 MAX 1940 MIN 19 AC-FT 318000 MEAN a 458 AC-FT a 331000

a Adjusted for change in contents and evaporation from Lake Kaweah and for diversions to Lemoncove and Foothill ditches.

11210950 KAWEAH RIVER BELOW TERMINUS DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.
CHEMICAL ANALYSES: Water years 1962-79.
WATER TEMPERATURES: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1971-85): Maximum recorded, 30.0°C, Sept. 9, 1984; minimum recorded, 5.0°C, Jan. 9, 10, 1971.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 29.5°C, Aug. 30; minimum recorded, 5.5°C, Mar. 29.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.5	20.0	18.0	14.0	11.0	11.0	8.5	7.5	9.0	7.5	11.0	10.0
2	24.0	19.5	18.0	13.5	11.5	11.0	8.5	7.0	8.5	7.5	10.5	10.0
3	24.0	19.5	18.0	14.5	11.0	11.0	9.5	7.0	8.0	7.5	11.0	9.5
4	23.0	19.5	17.5	14.0	11.0	11.0	9.0	7.0	9.0	7.5	10.5	9.5
5	23.0	20.0	17.0	14.0	11.0	11.0	8.5	7.0	8.5	7.0	10.0	9.5
6	23.0	19.5	18.0	14.5	11.0	10.5	8.0	7.5	8.5	7.0	10.5	9.5
7	23.5	19.5	17.0	14.0	11.5	10.5	8.0	7.5	8.0	7.0	10.5	9.5
8	23.0	19.0	16.5	14.5	11.5	10.5	8.5	8.0	8.0	7.5	10.5	9.5
9	22.5	19.5	17.0	13.0	11.5	10.5	8.5	8.0	8.5	7.0	10.5	9.5
10	23.0	20.0	16.5	13.0	11.0	10.5	8.5	8.0	8.0	7.0	11.0	9.5
11	21.0	19.5	16.5	13.0	11.5	10.5	8.5	8.0	8.0	7.0	11.0	9.5
12	22.0	19.5	15.0	13.5	10.5	10.5	8.5	8.0	8.5	7.0	11.5	9.5
13	22.0	19.0	15.5	14.0	11.0	10.0	9.0	7.5	8.5	7.5	11.5	9.5
14	21.0	19.0	14.5	12.5	11.0	10.0	8.5	8.0	8.5	7.5	11.5	9.5
15	21.0	18.5	15.0	12.0	12.0	9.5	8.0	7.5	8.5	7.5	12.0	10.0
16	19.0	17.5	14.5	13.0	12.0	9.0	8.0	7.0	9.5	6.5	12.0	10.0
17	20.0	17.0	15.0	12.0	11.5	8.5	9.0	7.0	9.0	7.0	12.5	10.0
18	19.0	16.0	14.5	12.5	10.5	9.0	8.5	7.5	9.0	7.0	11.5	10.0
19	19.0	16.0	14.0	13.0	9.5	8.0	8.0	7.5	9.0	8.0	11.5	10.0
20	18.0	16.5	14.0	13.5	9.0	8.0	8.0	7.5	10.0	8.5	13.0	10.5
21	18.5	15.5	14.0	14.0	9.0	8.0	8.5	7.5	9.5	7.5	12.0	10.5
22	19.0	15.0	14.0	13.5	8.5	7.5	8.0	7.5	10.5	8.0	13.0	10.0
23	19.0	15.0	13.5	13.0	9.0	7.5	8.5	7.5	11.0	9.0	13.0	10.5
24	19.0	15.0	14.0	12.5	8.0	7.5	8.5	7.5	10.0	9.5	13.5	10.5
25	19.5	14.5	13.5	12.0	8.0	7.5	9.0	7.5	10.0	8.0	13.0	10.5
26	19.0	14.5	12.5	11.0	8.0	7.5	8.0	8.0	10.5	9.5	12.0	10.0
27	17.5	15.0	12.5	11.0	8.0	7.5	8.5	8.0	10.5	10.0	13.0	10.5
28	18.0	14.5	12.0	11.0	8.0	7.5	8.5	7.0	10.5	9.5	14.0	10.0
29	18.0	14.0	12.0	11.0	8.0	7.5	8.5	7.5	---	---	13.0	5.5
30	17.5	14.0	11.5	11.0	8.0	7.5	8.0	8.0	---	---	12.5	9.0
31	16.0	15.0	---	---	8.0	7.5	8.0	7.5	---	---	12.5	9.0
MONTH	24.0	14.0	18.0	11.0	12.0	7.5	9.5	7.0	11.0	6.5	14.0	5.5

11210950 KAWEAH RIVER BELOW TERMINUS DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	9.5	15.0	10.5	14.0	11.0	17.0	16.5	27.5	26.5	27.5	23.5
2	13.0	9.5	13.5	11.0	15.0	10.5	17.5	16.5	28.0	26.0	27.0	23.0
3	13.0	9.5	14.0	11.0	13.5	11.0	18.5	17.0	28.0	26.0	25.5	23.5
4	15.5	10.0	14.0	10.0	13.5	13.0	18.0	17.5	26.5	26.0	27.0	22.0
5	16.5	10.5	14.0	10.5	13.5	12.5	18.0	17.5	28.5	26.0	26.5	22.5
6	16.5	10.0	13.5	10.5	14.0	12.5	18.5	17.5	27.5	26.0	27.0	23.0
7	16.0	10.5	13.5	10.0	13.5	13.5	19.0	18.5	26.5	26.0	26.5	22.5
8	15.0	10.5	13.0	10.0	14.0	11.5	19.5	18.5	28.5	26.0	26.5	22.5
9	15.0	10.5	13.0	10.0	14.5	11.5	19.5	19.0	27.0	25.5	24.5	22.0
10	14.5	10.5	13.0	10.5	14.0	11.5	20.0	19.0	26.5	25.5	26.0	21.5
11	14.5	10.0	13.0	10.5	14.0	12.5	20.0	19.5	26.5	25.0	24.5	21.0
12	14.5	10.5	13.0	11.5	14.0	12.5	20.5	20.0	27.5	25.0	25.0	20.0
13	14.5	10.5	13.0	10.5	14.5	12.5	21.0	20.5	27.0	25.5	25.0	20.5
14	14.5	10.5	13.0	11.5	14.5	13.0	21.5	20.5	27.0	25.0	25.0	20.0
15	14.0	10.5	13.0	11.0	14.5	14.0	22.0	21.0	28.0	25.0	25.0	20.5
16	13.0	10.5	13.0	10.5	14.5	12.5	22.5	22.0	27.5	24.5	25.0	20.0
17	12.5	10.5	13.0	11.0	14.5	14.0	23.0	22.5	27.5	24.5	25.0	19.5
18	12.5	10.5	13.0	11.5	14.5	13.5	23.5	22.5	27.5	24.5	22.0	20.0
19	13.0	10.5	13.0	11.0	14.5	14.0	24.0	23.0	27.0	24.5	25.0	20.5
20	12.5	10.0	12.5	11.0	15.0	14.5	24.0	23.5	27.5	24.0	25.0	19.5
21	15.0	10.5	12.5	10.5	15.0	14.5	24.5	24.0	27.5	24.0	25.5	19.5
22	14.5	10.5	13.5	11.5	15.0	14.5	25.0	24.5	27.5	24.0	24.5	19.5
23	16.5	11.0	13.5	12.0	15.0	14.5	25.0	24.5	28.0	24.0	24.0	19.5
24	14.5	10.0	13.0	11.0	15.0	15.0	25.0	25.0	28.0	23.5	24.5	19.5
25	13.5	10.5	13.5	11.0	15.5	15.0	25.5	25.0	28.0	23.5	24.0	19.5
26	14.5	10.5	13.0	11.0	15.5	15.0	26.0	25.0	27.5	23.5	24.0	20.0
27	14.5	10.5	14.0	11.0	16.0	15.5	26.0	25.5	28.0	24.0	23.0	20.0
28	15.0	11.0	13.0	11.0	16.0	15.5	26.0	25.5	27.5	23.5	24.0	20.5
29	15.0	11.0	14.5	10.5	16.5	16.0	26.5	26.0	27.5	23.5	24.0	20.5
30	15.0	11.0	13.0	12.0	16.5	16.0	27.0	26.0	29.5	24.0	23.0	20.0
31	---	---	14.5	11.0	---	---	27.5	26.0	28.0	23.0	---	---
MONTH	16.5	9.5	15.0	10.0	16.5	10.5	27.5	16.5	29.5	23.0	27.5	19.5
YEAR	29.5	5.5										

11211300 DRY CREEK NEAR LEMONCOVE, CA

LOCATION.--Lat 36°26'51", long 119°01'38", in NE 1/4 SE 1/4 sec.15, T.17 S., R.27 E., Tulare County, Hydrologic Unit 18030012, on right bank 0.5 mi downstream from Bequette Canyon, 2.9 mi upstream from mouth, and 4.4 mi north of Lemoncove.

DRAINAGE AREA.--75.6 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 570 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 8, 1969, 1.6 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--26 years, 25.6 ft^3/s, 18,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft^3/s, Dec. 6, 1966, gage height, 7.30 ft in gage well, 8.94 ft from floodmarks, site and datum then in use; no flow for several months in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a discharge of 6,070 ft^3/s from slope-area measurement. Flood of 1867 is believed to have exceeded that of December 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 28	1015	109	2.51	Feb. 9	0115	375	3.55
Jan. 8	0715	127	2.61	Mar. 27	1000	*691	*4.24

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	8.4	9.6	7.7	9.9	40	7.3	1.8	.15		
2		0	7.2	8.8	8.4	12	38	6.9	1.9	.06		
3		0	6.6	8.3	9.9	15	34	6.9	2.8	.01		
4		0	6.0	7.9	9.0	12	31	6.7	3.1	0		
5		.28	5.4	7.7	8.3	11	28	6.5	2.8	0		
6		.90	5.4	7.9	8.1	12	25	6.4	2.1	0		
7		1.0	5.4	19	7.9	17	23	6.1	1.7	0		
8		2.4	5.4	89	55	19	21	6.0	1.4	0		
9		5.3	5.1	37	206	15	19	6.0	1.4	0		
10		4.2	5.2	24	67	13	18	6.1	1.4	0		
11		3.0	5.7	19	39	13	17	6.4	1.4	0		
12		2.6	6.8	16	30	14	16	6.4	1.4	0		
13		3.5	8.9	14	25	13	15	6.1	1.5	0		
14		7.2	9.4	13	22	12	14	5.3	1.4	0		
15		5.5	8.6	12	20	12	13	4.7	1.3	0		
16		4.0	21	11	19	11	12	4.5	1.2	0		
17		3.4	14	11	17	11	13	4.0	1.1	0		
18		3.2	12	10	16	13	14	3.8	1.1	0		
19		3.1	13	9.9	15	15	13	3.8	1.0	0		
20		3.1	28	9.6	14	13	12	3.6	1.0	0		
21		4.4	27	9.3	14	12	12	3.4	.98	0		
22		6.3	23	9.1	13	12	11	3.0	.94	0		
23		5.5	15	8.8	12	11	11	2.7	.88	0		
24		8.0	15	8.4	11	11	10	2.6	.78	0		
25		28	15	8.4	11	11	9.9	2.4	.62	0		
26		8.1	13	8.0	11	11	9.7	2.2	.53	0		
27		5.2	9.9	8.2	11	264	9.3	2.2	.57	0		
28		51	9.9	8.0	10	218	8.8	2.2	.50	0		
29		23	9.9	8.0	---	107	8.2	1.9	.43	0		
30		11	9.9	8.0	---	62	7.8	1.9	.32	0		
31		---	9.9	7.9	---	47	---	1.8	---	0		
TOTAL	0	203.18	345.0	436.8	697.3	1028.9	513.7	139.8	39.35	0.22	0	0
MEAN	0	6.77	11.1	14.1	24.9	33.2	17.1	4.51	1.31	.007	0	0
MAX	0	51	28	89	206	264	40	7.3	3.1	.15	0	0
MIN	0	0	5.1	7.7	7.7	9.9	7.8	1.8	.32	0	0	0
AC-FT	0	403	684	866	1380	2040	1020	277	78	.4	0	0

CAL YR 1984 TOTAL 5046.86 MEAN 13.8 MAX 114 MIN 0 AC-FT 10010
WTR YR 1985 TOTAL 3404.25 MEAN 9.33 MAX 264 MIN 0 AC-FT 6750

11211785 COTTONWOOD CREEK ABOVE COLLIER CREEK, NEAR ELDERWOOD, CA

LOCATION.--Lat 36°32'33", long 119°06'40", in NW 1/4 NE 1/4 sec.14, T.16 S., R.26 E., Tulare County, Hydrologic Unit 18030012, on left bank, 4.0 mi north of Elderwood, and 8.0 mi north of Woodlake on State Highway 245.

DRAINAGE AREA.--52.3 mi^2.

PERIOD OF RECORD.--January to September 1985.

GAGE.--Water-stage recorder. Elevation of gage 600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 12-16. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 336 ft^3/s, Mar. 27, 1985, gage height, 3.45 ft; no flow for many days during 1985.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 24, 1969, reached a stage of 10.4 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period January to September, 336 ft^3/s, Mar. 27, gage height, 3.45 ft; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, JANUARY TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	5.2	5.5	14	4.6	1.3			
2				0	5.6	7.0	12	4.4	1.5			
3				0	5.6	7.5	11	4.3	2.9			
4				5.4	5.2	6.0	11	4.2	3.0			
5				5.4	4.8	5.6	10	4.1	1.9			
6				5.5	4.8	5.8	9.3	4.1	1.3			
7				8.8	4.8	9.1	8.8	4.0	.90			
8				18	27	7.1	8.4	4.0	.75			
9				12	36	5.6	8.3	3.9	.63			
10				11	19	5.4	7.7	3.5	.50			
11				10	17	5.3	7.4	3.7	.37			
12				9.4	16	8.0	7.1	4.1	.28			
13				8.6	13	5.5	7.0	3.6	.15			
14				8.0	9.9	5.2	6.7	3.4	.13			
15				7.5	8.1	5.0	6.4	3.1	.12			
16				7.0	7.7	4.9	6.4	2.9	.10			
17				6.7	7.1	4.8	6.7	2.7	.07			
18				6.3	6.8	5.7	7.2	2.7	.06			
19				6.1	6.6	6.0	6.7	2.8	.07			
20				6.0	6.6	5.1	6.5	2.6	.06			
21				5.6	6.3	4.8	6.5	2.2	.05			
22				5.6	6.1	4.8	6.1	1.9	.03			
23				5.6	6.1	4.7	6.0	1.6	.01			
24				5.4	5.4	4.5	5.8	1.4	0			
25				5.4	5.6	4.6	5.5	1.3	0			
26				5.4	5.6	5.3	5.5	1.2	0			
27				5.4	5.7	110	5.4	1.3	0			
28				4.9	5.6	93	5.1	1.4	0			
29				5.2	---	36	4.9	1.4	0			
30				5.2	---	21	4.8	1.2	0			
31				5.2	---	17	---	1.2	---			
TOTAL				200.6	263.2	425.8	224.2	88.8	16.18	0	0	0
MEAN				6.47	9.40	13.7	7.47	2.86	.54	0	0	0
MAX				18	36	110	14	4.6	3.0	0	0	0
MIN				0	4.8	4.5	4.8	1.2	0	0	0	0
AC-FT				398	522	845	445	176	32	0	0	0

WTR YR 1985 TOTAL 1218.78 MEAN 3.34 MAX 110 MIN 0 AC-FT 2420

11211790 COTTONWOOD CREEK NEAR ELDERWOOD, CA

LOCATION.--Lat 36°31'47", long 119°07'33", in SE 1/4 SE 1/4 sec.15, T.16 S., R.26 E., Tulare County, Hydrologic Unit 18030012, on left bank 25 ft upstream from State Highway 65 bridge, 4.0 mi north of Elderwood, and 8.0 mi north of Woodlake.

DRAINAGE AREA.--60.4 mi^2.

PERIOD OF RECORD.--February 1971 to December 1984 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 575 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1 to Dec. 31. Records poor. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,310 ft^3/s, Jan. 22, 1983, gage height, 7.22 ft, maximum gage height, 7.65 ft, Feb. 20, 1980 (backwater from debris); no flow for several months in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 24, 1969, reached a stage of 10.4 ft, from floodmarks.

EXTREMES FOR CURRENT PERIOD.--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)
Oct. 18	Unknown	Unknown	Unknown	Dec. 20	Unknown	Unknown	Unknown
Nov. 28	Unknown	Unknown	Unknown				

Minimum daily, 0.71 ft^3/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER TO DECEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.71	2.8	8.0									
2	.76	2.8	6.4									
3	.82	2.5	5.8									
4	.82	2.5	5.2									
5	.82	2.5	5.0									
6	.82	2.5	4.8									
7	.88	2.5	4.8									
8	.88	2.9	4.8									
9	.80	5.0	4.7									
10	.80	4.0	4.9									
11	.82	3.0	5.4									
12	.85	2.5	6.0									
13	.86	3.7	7.0									
14	1.4	6.4	7.2									
15	1.3	5.1	6.0									
16	1.3	3.8	14									
17	1.5	3.1	10									
18	11	2.9	8.6									
19	4.5	2.8	9.0									
20	3.3	2.8	19									
21	3.3	4.0	19									
22	2.9	5.6	16									
23	2.8	5.0	11									
24	2.5	6.4	10									
25	2.7	24	10									
26	2.7	8.0	9.0									
27	3.1	5.0	7.0									
28	3.8	45	7.0									
29	3.7	21	7.0									
30	3.5	10	6.8									
31	3.3	---	6.8									
TOTAL	69.24	200.1	256.2									
MEAN	2.23	6.67	8.26									
MAX	11	45	19									
MIN	.71	2.5	4.7									
AC-FT	137	397	508									

CAL YR 1984 TOTAL 3187.39 MEAN 8.71 MAX 47 MIN 0 AC-FT 6320
WTR YR 1985 TOTAL 525.54 MEAN 1.44 MAX 45 MIN .71 AC-FT 1040

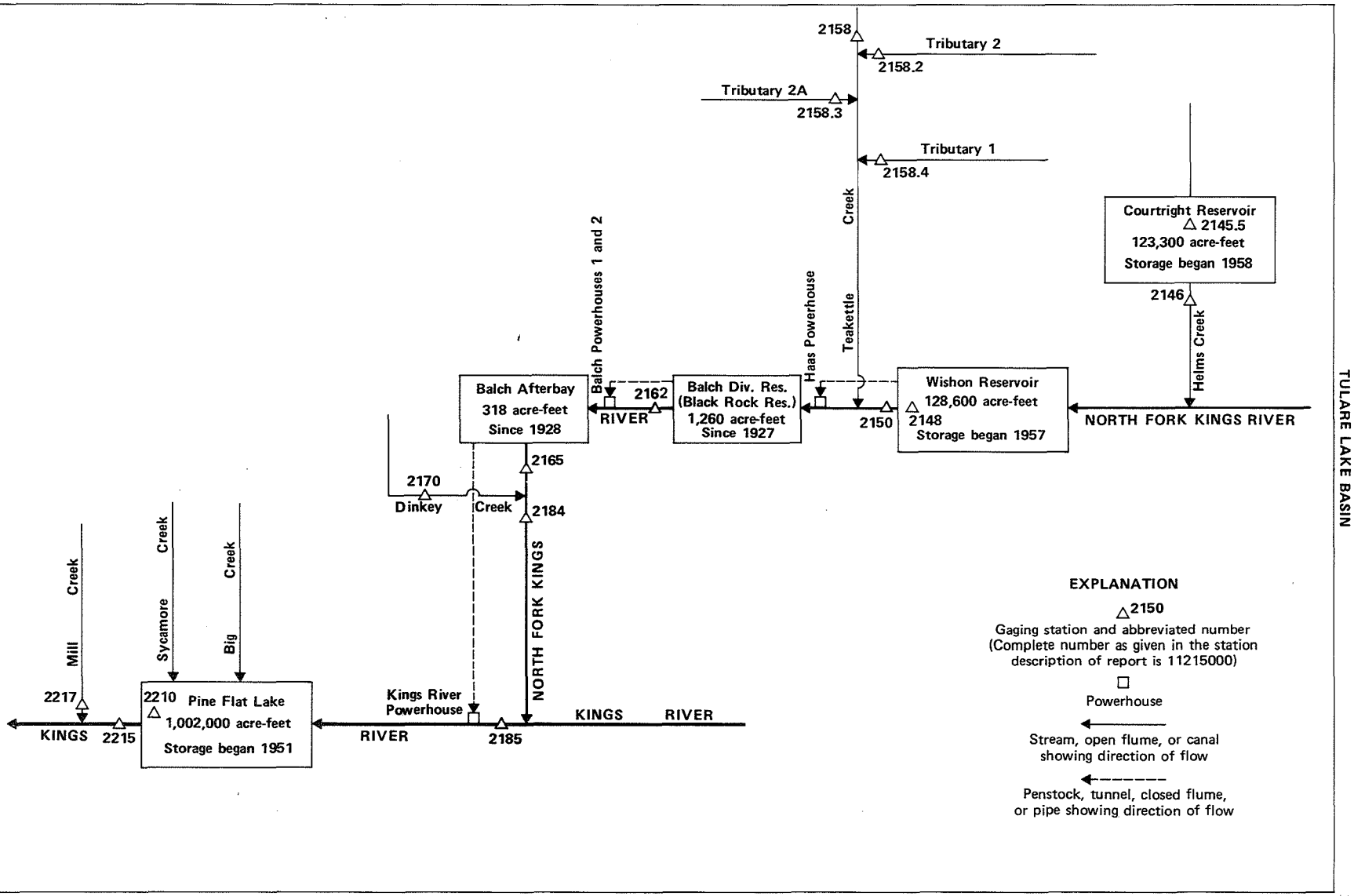


FIGURE 28. — Schematic diagram showing diversions and storage in Kings River basin.

11214550 COURTRIGHT RESERVOIR NEAR NELSON MOUNTAIN, CA

LOCATION.--Lat 37°04'45", long 119°58'07", in NW 1/4 NW 1/4 sec.7, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, at left end of dam on Helms Creek 2.5 mi upstream from mouth, 4.6 mi east of Nelson Mountain, and 9.7 mi west of Blackcap Mountain.

DRAINAGE AREA.--39.7 mi^2.

PERIOD OF RECORD.--October 1958 to September 1982 (monthend elevation and contents only), October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Reservoir is formed by rockfill dam completed in 1958. Usable capacity, 123,300 acre-ft between elevations 7,902 ft, invert of tunnel and 8,184 ft, elevation of spillway. Dead storage negligible. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project. Records not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 124,220 acre-ft, Sept. 26, 1982, elevation, 8,184.57 ft; no contents in 1961-62, 1968, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 118,281 acre-ft, June 3, elevation, 8,180.89 ft; minimum, 890 acre-ft, Oct. 15, elevation, 7,974.50 ft.

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32556	997	29553	55185	55672	56550	58155	62931	112317	109483	113396	95948
2	26540	997	29559	55185	55690	56617	58252	61143	118249	109468	113350	96942
3	20099	2500	29867	55185	55690	56655	58398	60922	118281	106636	113767	96872
4	14986	8469	31394	55185	55709	56674	58584	68871	115760	107082	114917	96984
5	6672	11049	33141	55222	55709	56750	58808	78786	115807	103582	116104	95825
6	4134	11049	34142	55297	55728	56855	59093	78286	113969	107903	114652	94553
7	4128	11066	35989	55353	55747	56951	59438	77187	110971	111520	114553	95509
8	4126	11094	43793	55353	55992	56989	59824	75924	109876	109392	113767	97832
9	4123	11644	51426	55381	56020	57018	60271	74047	112748	108098	111062	97358
10	4117	19305	53679	55390	56039	57075	60721	72110	114263	107858	112840	97358
11	4130	27746	54248	55390	56048	57114	61203	83809	112563	105734	114683	98027
12	3771	30811	55222	55390	56067	57133	61779	94935	111750	104369	115135	97553
13	2407	30875	55185	55390	56086	57190	62430	93604	109180	107470	115104	97067
14	1168	30914	55157	55390	56114	57228	63239	92125	106607	110332	114979	96997
15	890	30031	55241	55390	56124	57248	63983	90425	110301	108683	110088	97150
16	892	30069	55259	55437	56143	57267	64586	88720	114031	107231	106533	97901
17	892	30057	55259	55437	56162	57286	65057	88395	111857	105307	107693	97860
18	935	30069	55297	55437	56199	57372	65435	90941	111658	103844	107529	97206
19	961	30031	55315	55446	56237	57382	65856	96748	111673	102309	103204	96389
20	985	29930	55334	55465	56294	57382	66206	93807	111016	105336	101534	95784
21	981	29943	55343	55484	56275	57343	66482	95126	110849	110210	99261	95756
22	966	29943	55343	55484	56294	57343	66759	96141	112779	109725	98111	95729
23	971	29956	55362	55493	56313	57382	67144	95619	115337	110696	96292	95140
24	978	30031	55297	55531	56332	57440	67659	96748	115932	110681	97497	92984
25	985	30031	55278	55550	56379	57517	67530	102453	115525	110635	98615	92889
26	950	30031	55278	55606	56408	57729	67691	110180	112594	107873	98623	93550
27	958	29509	55278	55615	56436	57874	66471	116041	109846	109241	98194	94499
28	973	29534	55241	55634	56493	57961	65719	116764	107589	113782	96638	95345
29	982	29547	55222	55643	---	58010	66227	116544	109965	114387	95372	96058
30	986	29553	55185	55653	---	58039	65825	113844	111919	114139	94023	96251
31	993	---	55185	55653	---	58078	---	107410	---	113427	94771	---
MAX	32556	30914	55362	55653	56493	58078	67691	116764	118281	114387	116104	98027
MIN	890	997	29553	55185	55672	56550	58155	60922	106607	102309	94023	92889
a	7977.20	8097.15	8130.25	8130.75	8131.64	8133.29	8140.93	8173.83	8176.81	8177.79	8164.97	8166.05
b	-30206	+28560	+25632	+468	+840	+1585	+7747	+41585	+4509	+1508	-18656	+1480

CAL YR 1984 b -46722
WTR YR 1985 b +65052

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.

11214600 HELMS CREEK BELOW COURTRIGHT DAM, CA

LOCATION.--Lat 37°04'35", long 118°58'04", in SW 1/4 NW 1/4 sec.7, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 500 ft downstream from Courtright Dam, 2.5 mi upstream from North Fork Kings River, and 17 mi southeast of town of Huntington Lake.

DRAINAGE AREA.--39.7 mi^2.

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

REVISED RECORDS.--WSP 1715: 1959. WSP 2130: 1959.

GAGE.--Water-stage recorder and broad-crested weir with trapezoidal notch. Elevation of gage is 7,836 ft above National Geodetic Vertical Datum of 1929, from photogrammetry survey.

REMARKS.--Flow regulated since October 1958 by Courtright Reservoir (station 11214550) 500 ft upstream. No diversion above station. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (adjusted for storage).--27 years, 86.8 ft^3/s, 62,890 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,340 ft^3/s, Aug. 29, 1969, gage height, 5.81 ft; maximum gage height, 7.70 ft, Aug. 23, 1978; no flow on several days in 1970.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 679 ft^3/s, Oct. 13; minimum daily, 2.8 ft^3/s, Dec. 3.

EXTREMES FOR 1984 WATER (NOT PREVIOUSLY PUBLISHED).--Maximum daily discharge, 407 ft^3/s, Oct. 18-21; minimum daily, 3.8 ft^3/s, several days in August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	401	4.5	4.4	5.4	6.3	6.5	5.1	6.9	6.2	4.2	4.2
2	10	399	4.5	4.4	5.4	6.3	6.5	4.9	6.9	6.3	4.1	4.2
3	10	399	4.5	4.4	5.5	6.3	6.5	5.1	7.3	6.3	4.0	4.2
4	10	399	4.5	4.4	5.5	6.3	6.5	5.4	7.6	6.2	3.8	5.1
5	10	399	4.5	4.4	5.6	6.3	6.3	5.4	7.8	6.0	3.8	6.5
6	10	399	4.5	4.4	5.6	6.3	6.3	5.4	7.8	5.9	3.8	6.3
7	10	96	4.5	4.4	5.8	6.3	6.3	5.4	7.8	5.8	4.1	6.2
8	10	5.6	4.5	4.4	5.9	6.3	6.3	5.4	7.8	5.8	3.8	6.0
9	8.1	5.6	4.5	4.4	5.9	6.3	6.3	5.4	7.8	5.8	3.8	5.9
10	7.9	5.6	4.5	4.4	6.0	6.3	6.3	5.4	7.8	5.8	4.2	5.8
11	8.1	5.2	4.4	4.4	6.0	6.5	6.3	5.4	7.8	5.8	4.8	5.8
12	8.1	5.5	4.2	4.4	6.2	6.5	6.3	5.4	7.8	5.8	4.7	5.8
13	8.1	5.5	4.2	4.4	6.2	6.5	6.0	5.4	7.8	5.5	4.8	5.8
14	8.1	87	4.2	4.4	6.3	6.5	5.9	5.4	7.8	5.5	4.8	5.8
15	8.1	232	4.2	4.4	6.5	6.5	5.9	5.4	7.8	5.5	4.7	5.8
16	8.1	232	4.2	4.5	6.5	6.5	5.9	5.4	7.8	5.4	4.7	5.8
17	283	232	4.2	4.5	6.5	6.5	5.9	5.4	7.8	5.2	5.1	5.6
18	407	232	4.2	4.5	6.3	6.5	5.7	5.4	7.8	5.2	6.9	5.6
19	407	193	4.2	4.7	6.5	6.5	5.5	5.4	6.9	5.2	6.9	5.6
20	407	160	4.2	4.7	6.5	6.5	5.5	5.4	6.8	5.2	6.9	5.6
21	407	160	4.2	4.7	6.5	6.6	5.5	5.4	6.8	4.8	6.9	5.6
22	405	110	4.2	4.8	6.5	6.6	5.5	5.4	6.8	5.1	6.8	5.6
23	405	12	4.2	4.8	6.5	6.6	5.4	5.4	6.6	4.8	6.8	5.6
24	405	12	4.2	4.8	6.5	6.6	5.2	5.5	6.5	4.8	6.6	5.6
25	405	12	4.2	5.0	6.5	6.6	5.4	5.6	6.5	4.5	6.6	5.6
26	404	12	4.2	5.0	6.5	6.6	5.4	6.0	6.6	4.5	6.8	5.6
27	404	12	4.4	5.1	6.5	6.6	5.4	6.2	6.5	4.4	5.1	5.6
28	402	9.0	4.4	5.1	6.5	6.6	5.4	6.2	6.3	4.1	3.8	5.8
29	402	4.7	4.4	5.2	6.3	6.6	5.3	6.2	6.0	4.2	3.8	5.8
30	402	4.7	4.4	5.2	---	6.5	5.2	6.6	6.2	4.4	4.1	5.8
31	401	---	4.4	5.2	---	6.5	---	6.9	---	4.4	4.2	---
TOTAL	6090.6	4241.4	134.4	143.8	178.4	200.4	176.4	172.3	216.4	164.4	155.4	168.2
MEAN	196	141	4.34	4.64	6.15	6.46	5.88	5.56	7.21	5.30	5.01	5.61
MAX	407	401	4.5	5.2	6.5	6.6	6.5	6.9	7.8	6.3	6.9	6.5
MIN	7.9	4.7	4.2	4.4	5.4	6.3	5.2	4.9	6.0	4.1	3.8	4.2
AC-FT	12080	8410	267	285	354	397	350	342	429	326	308	334

CAL YR 1983 TOTAL 67804.7 MEAN 186 MAX 815 MIN 4.2 AC-FT 134500
WTR YR 1984 TOTAL 12042.1 MEAN 32.9 MAX 407 MIN 3.8 AC-FT 23890

11214600 HELMS CREEK BELOW COURTRIGHT DAM, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	4.7	3.1	3.7	3.6	3.8	3.6	4.1	7.0	7.9	8.4	7.2
2	6.3	4.7	2.9	3.7	3.5	3.9	3.6	3.8	7.0	7.9	8.4	7.2
3	6.0	4.7	2.8	3.7	3.6	3.7	3.8	3.8	7.0	7.9	8.4	7.2
4	5.8	4.8	3.0	3.7	3.6	3.7	3.8	4.0	7.2	7.9	8.3	7.2
5	5.4	5.1	3.1	3.7	3.5	3.7	3.8	4.4	7.2	7.9	8.3	7.2
6	7.4	5.2	3.1	3.7	3.4	3.7	3.8	4.7	7.2	7.9	8.3	7.2
7	6.9	5.2	3.2	3.7	3.6	3.7	3.8	4.8	7.2	7.9	8.3	7.9
8	6.2	5.4	3.4	3.7	3.9	3.7	3.8	4.8	7.2	7.9	8.3	7.2
9	6.2	5.4	3.6	3.7	3.7	3.7	3.8	4.8	7.2	7.9	8.3	7.2
10	6.0	5.6	3.7	3.7	3.7	3.7	3.8	4.5	7.2	7.9	8.1	7.0
11	6.0	6.0	3.7	3.7	3.3	3.7	3.8	4.7	7.3	7.9	8.1	7.0
12	172	6.5	3.8	3.7	3.4	3.7	3.8	5.2	7.9	7.9	8.1	7.0
13	679	6.9	3.7	3.9	3.7	3.7	3.8	5.6	7.9	7.9	8.1	7.0
14	620	6.9	3.6	3.7	3.5	3.7	3.8	5.6	7.9	8.1	8.1	7.0
15	163	6.9	3.7	3.9	3.8	3.7	3.8	5.6	7.9	8.1	8.1	7.0
16	6.1	6.9	3.7	3.5	3.9	3.2	3.8	5.8	7.9	8.1	8.1	7.0
17	4.7	6.9	3.7	3.4	3.7	3.5	3.8	5.8	7.9	8.1	8.1	7.0
18	4.7	6.9	3.7	3.8	3.4	3.7	3.8	5.8	7.9	8.1	8.1	7.0
19	4.7	6.9	3.7	4.1	3.6	3.5	3.8	5.8	7.9	7.9	8.1	7.0
20	4.7	7.0	3.7	3.5	3.9	3.4	3.8	5.8	7.9	7.9	8.0	7.0
21	12	7.0	3.6	3.8	3.6	3.7	3.8	5.8	7.9	8.1	7.9	7.0
22	13	7.0	3.5	4.2	3.9	3.6	3.8	5.8	7.9	8.1	7.9	7.0
23	8.6	7.0	3.6	3.9	3.9	3.0	3.8	5.8	7.9	8.3	7.8	7.0
24	8.6	7.0	3.6	3.8	3.8	3.8	3.8	5.8	7.9	8.3	7.8	7.0
25	8.6	6.8	3.7	3.7	3.8	4.1	3.8	5.8	7.9	8.3	7.8	7.0
26	7.0	4.1	3.7	3.8	3.7	3.8	4.0	5.8	7.9	8.3	7.8	7.0
27	4.7	3.2	3.7	3.8	3.8	3.9	4.0	5.8	7.9	8.3	7.7	7.0
28	4.7	3.6	3.7	3.9	3.5	3.7	4.0	6.5	7.9	8.3	7.5	7.0
29	4.7	3.5	3.7	4.0	---	3.7	4.0	6.8	7.9	8.3	7.3	7.0
30	4.7	3.4	3.7	4.1	---	3.6	4.1	6.9	7.9	8.3	7.3	7.0
31	4.7	---	3.7	3.7	---	3.8	---	6.9	---	8.4	7.2	---
TOTAL	1808.7	171.2	109.1	116.9	102.3	113.8	114.7	167.1	228.8	250.0	248.0	212.5
MEAN	58.3	5.71	3.52	3.77	3.65	3.67	3.82	5.39	7.63	8.06	8.00	7.08
MAX	679	7.0	3.8	4.2	3.9	4.1	4.1	6.9	7.9	8.4	8.4	7.9
MIN	4.7	3.2	2.8	3.4	3.3	3.0	3.6	3.8	7.0	7.9	7.2	7.0
AC-FT	3590	340	216	232	203	226	228	331	454	496	492	421

CAL YR 1984 TOTAL 3664.7 MEAN 10.0 MAX 679 MIN 2.8 AC-FT 7270
WTR YR 1985 TOTAL 3643.1 MEAN 9.98 MAX 679 MIN 2.8 AC-FT 7230

11214800 WISHON RESERVOIR NEAR CLIFF CAMP, CA

LOCATION.--Lat 37°00'19", long 118°58'07", in NW 1/4 NW 1/4 sec.6, T.11 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right end of dam on North Fork Kings River 1.2 mi north of Cliff Camp and 20 mi southeast of Big Creek.

DRAINAGE AREA.--177 mi^2.

PERIOD OF RECORD.--December 1957 to September 1982 (monthend elevation and contents only), October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Reservoir is formed by rockfill dam completed in 1957. Capacity, 128,600 acre-ft between elevations 6,317 ft, bottom of slide gates and 6,550 ft, operating crest of spillway gates. Dead storage negligible. Water is diverted to Haas powerhouse for power. Records, including extremes, represent contents at 2400 hours. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project. Records rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 129,700 acre-ft, July 29, 1958, elevation, 6,551.1 ft; no contents in 1960.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 117,000 acre-ft, June 14, elevation, 6,538.37 ft; minimum, 45,300 acre-ft, Sept. 30, elevation, 6,449.66 ft.

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89400	111000	81800	55300	50100	50700	51000	97100	108000	104000	75900	67900
2	94500	111000	81800	55200	50200	51000	51400	102000	103000	104000	74900	65800
3	100000	110000	81500	55000	50400	51200	51900	105000	103000	106000	73700	65000
4	104000	104000	79800	55100	49900	51100	52500	100000	106000	105000	72000	64100
5	112000	101000	77900	55200	49500	50900	53200	92500	107000	107000	70100	64300
6	114000	101000	76800	55200	49000	50800	54500	96200	109000	102000	70700	64800
7	114000	101000	74800	55200	48600	51000	55900	100000	113000	97900	69900	63100
8	113000	101000	66900	55200	48200	50800	57100	104000	115000	99200	69800	60200
9	113000	99900	59100	55200	48100	50900	58300	108000	112000	99600	71800	59800
10	112000	92000	56900	55400	48100	51100	59700	111000	110000	99100	69400	58800
11	111000	83400	56200	55200	48200	51000	61000	101000	112000	100000	66800	58200
12	111000	80400	55200	55300	48400	50900	62500	90800	112000	101000	65500	57600
13	112000	80300	55100	55400	48500	50700	64700	94400	115000	97000	64500	57300
14	113000	80200	55000	55100	48600	50600	67400	98500	117000	93400	63700	56800
15	113000	81100	55100	54800	48800	50500	69500	103000	113000	94400	67900	56300
16	113000	81300	55200	54600	49100	50700	71100	107000	109000	95200	70700	54800
17	112000	81300	55100	54100	49300	50900	72300	110000	110000	96100	68900	54000
18	112000	81300	55000	53700	49500	50900	73000	110000	111000	96900	68500	53700
19	112000	80100	54900	53800	49800	50800	73800	106000	110000	97500	72000	53600
20	112000	80900	54800	54000	50000	50800	74900	111000	110000	94000	72800	53300
21	111000	80800	54800	53600	50200	50800	75800	111000	108000	88300	74200	52800
22	111000	80900	54900	53200	50300	50800	76100	112000	107000	88100	74400	52400
23	111000	80800	55000	52800	50500	50900	76900	114000	104000	86100	75200	52000
24	111000	81000	55100	52300	50800	50900	77800	115000	103000	85200	73300	53300
25	111000	81100	55200	51900	50700	51000	79200	111000	103000	84200	71400	52500
26	111000	81000	55100	52000	50700	51000	80100	105000	105000	86100	70200	50900
27	111000	81600	55000	52100	50700	51000	83000	99800	107000	84200	70000	49200
28	111000	81600	54900	51600	50700	51000	85700	99800	108000	79000	70600	47800
29	111000	81500	55000	51100	---	50900	87400	101000	106000	77600	70800	46500
30	111000	81700	55100	50600	---	50800	90700	105000	102000	76800	71200	45300
31	111000	---	55200	50400	---	51000	---	112000	---	76700	69900	---
MAX	114000	111000	81800	55400	50800	51200	90700	115000	117000	107000	75900	67900
MIN	89400	80100	54800	50400	48100	50500	51000	90800	102000	76700	63700	45300
a	6532.11	6499.20	6464.90	6457.71	6458.17	6458.63	6509.73	6533.17	6522.42	6493.16	6484.70	6449.66
b	+19400	-29300	-26500	-4800	+300	+300	+39700	+21300	-10000	-25300	-6800	-24600

CAL YR 1984 b +6400
WTR YR 1985 b -46300

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.

11215000 NORTH FORK KINGS RIVER NEAR CLIFF CAMP, CA

LOCATION.--Lat 36°59'38", long 118°58'49", in NE 1/4 NW 1/4 sec.12, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank at Cliff Camp bridge, 1 mi northwest of Cliff Camp, 1.2 mi downstream from Wishon Dam, and 2 mi downstream from Woodchuck Creek.

DRAINAGE AREA.--181 mi^2.

PERIOD OF RECORD.--August 1921 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1715: 1951, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,143.95 ft above National Geodetic Vertical Datum of 1929 (levels by San Joaquin Light and Power Corp.). Prior to Nov. 24, 1922, at site 1 mi upstream at different datum.

REMARKS.--Flow regulated since Dec. 5, 1957, by Wishon Reservoir (station 11214800), 1.2 mi upstream, and since Oct. 17, 1958, by Courtright Reservoir (station 11214550). Water diverted for power from Wishon Reservoir by tunnel to Haas powerhouse since Dec. 10, 1958. See schematic diagram of Kings River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (adjusted for storage and diversion).--64 years, 378 ft^3/s, 273,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (prior to regulation by Wishon Reservoir).--Maximum discharge, 14,000 ft^3/s, Dec. 11, 1937, gage height, 18.0 ft, from floodmarks, from rating curve extended above 4,200 ft^3/s on basis of velocity-area studies; minimum, 0.6 ft^3/s, Dec. 30, 1930.
1957 to current year.--Maximum discharge, 5,110 ft^3/s, Sept. 5, 1978, gage height, 11.96 ft; minimum daily, 0.8 ft^3/s, Dec. 14, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 79.4 ft^3/s, Nov. 28, gage height, 3.69 ft; minimum daily, 17 ft^3/s, Sept. 29-30.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 541 ft^3/s, Nov. 24, gage height, 5.71 ft; minimum daily, 14.0 ft^3/s, Nov. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	23	27	18	19	22	22	25	24	24	24
2	18	14	21	25	18	20	22	22	25	24	24	24
3	23	16	21	24	18	20	22	22	25	24	24	23
4	52	16	22	25	18	20	21	21	25	24	24	23
5	70	16	21	26	18	20	21	21	26	23	24	24
6	52	16	20	25	17	20	21	21	25	24	24	24
7	16	16	20	24	17	20	21	21	25	24	24	24
8	16	16	21	24	17	20	21	21	25	23	24	24
9	16	16	24	23	22	20	21	21	26	23	24	24
10	16	16	26	22	22	21	24	22	25	23	24	24
11	15	48	25	21	20	21	22	22	25	23	24	24
12	16	26	23	21	21	20	22	22	25	23	24	24
13	18	24	23	20	26	69	22	23	24	23	24	24
14	18	21	24	19	26	69	21	23	25	23	24	24
15	17	19	23	19	28	32	21	24	24	23	24	24
16	17	18	22	19	34	29	21	24	24	23	24	24
17	17	43	23	18	24	30	22	24	24	27	24	23
18	17	24	22	18	22	26	22	24	25	25	24	23
19	17	37	21	18	21	24	27	24	25	24	24	23
20	16	44	21	18	20	24	25	24	25	25	24	23
21	16	27	20	18	20	24	24	24	25	25	24	23
22	16	23	19	18	19	23	23	25	25	25	24	23
23	16	25	19	18	19	22	23	25	25	25	24	23
24	16	167	82	18	19	22	22	26	24	24	24	22
25	16	40	174	18	18	22	22	26	24	25	24	23
26	16	29	81	18	18	27	23	26	24	25	24	23
27	16	27	54	17	18	26	23	25	24	25	23	23
28	16	26	34	17	18	23	22	25	25	25	23	23
29	16	24	31	18	19	22	22	25	25	24	23	22
30	17	23	38	18	---	21	22	25	25	24	24	22
31	17	---	32	18	---	22	---	25	---	24	24	---
TOTAL	643	874	1030	632	595	798	667	725	744	746	741	701
MEAN	20.7	29.1	33.2	20.4	20.5	25.7	22.2	23.4	24.8	24.1	23.9	23.4
MAX	70	167	174	27	34	69	27	26	26	27	24	24
MIN	15	14	19	17	17	19	21	21	24	23	23	22
AC-FT	1280	1730	2040	1250	1180	1580	1320	1440	1480	1480	1470	1390

CAL YR 1983 TOTAL 82933 MEAN 227 MAX 2190 MIN 14 AC-FT 164500
WTR YR 1984 TOTAL 8896 MEAN 24.3 MAX 174 MIN 14 AC-FT 17650

11215000 NORTH FORK KINGS RIVER NEAR CLIFF CAMP, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	24	24	20	19	26	35	28	25	23	21	20
2	22	24	23	20	19	25	45	28	25	24	21	20
3	22	24	23	20	19	23	48	29	25	24	20	20
4	22	24	23	20	19	22	45	28	25	24	20	20
5	23	23	23	20	19	22	44	27	25	24	20	19
6	23	23	23	21	19	21	44	27	25	24	20	20
7	23	23	23	22	19	22	44	27	25	23	20	20
8	24	25	23	21	19	22	44	27	25	23	20	19
9	24	24	22	21	18	22	42	27	25	23	20	19
10	24	24	21	20	18	23	40	27	25	23	20	19
11	24	24	21	20	18	24	39	27	24	23	20	20
12	23	23	21	20	19	23	39	26	24	23	20	19
13	23	25	21	20	21	24	38	26	25	23	20	19
14	23	23	20	20	22	25	38	25	25	23	20	19
15	23	22	20	20	23	25	36	26	25	23	20	19
16	24	22	20	20	24	26	32	26	24	23	20	19
17	25	22	20	21	24	27	32	26	24	23	20	18
18	24	23	20	21	25	26	30	26	24	23	20	19
19	24	23	20	22	26	25	29	26	24	23	20	18
20	24	22	20	22	24	26	28	26	24	23	20	18
21	24	22	20	22	22	27	27	26	24	22	20	18
22	24	22	20	21	23	26	27	26	24	22	20	18
23	23	22	20	21	23	27	28	26	24	22	20	18
24	23	23	20	20	24	28	28	26	24	22	20	18
25	23	23	20	20	25	28	28	26	24	22	20	18
26	24	22	20	20	25	25	27	25	24	22	20	18
27	24	24	20	20	26	25	26	25	24	22	20	18
28	24	39	20	20	26	25	27	24	24	21	20	17
29	24	25	20	19	---	24	27	25	24	21	20	17
30	24	24	20	19	---	24	28	24	24	21	20	17
31	24	---	20	19	---	28	---	25	---	21	20	---
TOTAL	727	713	651	632	608	766	1045	813	733	703	622	561
MEAN	23.5	23.8	21.0	20.4	21.7	24.7	34.8	26.2	24.4	22.7	20.1	18.7
MAX	25	39	24	22	26	28	48	29	25	24	21	20
MIN	22	22	20	19	18	21	26	24	24	21	20	17
AC-FT	1440	1410	1290	1250	1210	1520	2070	1610	1450	1390	1230	1110

CAL YR 1984 TOTAL 8440 MEAN 23.1 MAX 69 MIN 17 AC-FT 16740
WTR YR 1985 TOTAL 8574 MEAN 23.5 MAX 48 MIN 17 AC-FT 17010

11216200 NORTH FORK KINGS RIVER BELOW BALCH DIVERSION DAM, CA

LOCATION.--Lat 36°54'10", long 119°03'00", in NE 1/4 sec.8, T.12 S., R.27 E., Fresno County, Hydrologic Unit 18030010, on right bank 2.0 mi downstream from Balch Diversion Dam (Black Rock Reservoir), 400 ft upstream from Weir Creek, and 4 mi east off Balch Camp.

DRAINAGE AREA.--238 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 26 to Nov. 6, Dec. 10-12, 1983, and Aug. 11, 1985. Records good. Flow regulated by Courtright Reservoir (station 11214550), Wishon Reservoir (station 11214800) and Black Rock Reservoir.

COOPERATION.--Records were provided by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,830 ft^3/s, Nov. 24, 1983, gage height, 7.63 ft; minimum daily, 0.89 ft^3/s, Oct. 21, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59 ft^3/s, Nov. 28, gage height, 2.24 ft; minimum daily, 0.89 ft^3/s, Oct. 21.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 2,830 ft^3/s, Nov. 24, gage height, 7.63 ft; minimum daily, 2.1 ft^3/s, May 30, July 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	5.8	6.7	16	6.4	6.0	6.6	4.8	5.8	4.4	5.2	5.4
2	6.5	5.7	5.9	15	6.3	6.0	6.1	4.9	5.7	2.1	5.4	5.4
3	6.1	5.6	5.8	14	6.2	6.0	5.9	4.7	5.6	2.1	5.4	5.4
4	6.0	5.6	5.9	13	6.0	6.0	5.8	4.6	5.9	4.7	5.4	5.3
5	5.9	5.5	20	13	6.0	5.8	5.7	4.5	6.5	4.9	5.3	5.3
6	5.8	5.5	22	12	5.9	5.8	6.1	4.4	6.0	5.7	5.2	5.3
7	5.9	5.6	16	12	5.8	5.6	5.7	4.3	6.0	5.8	5.3	5.3
8	6.0	5.5	12	11	5.7	5.5	5.5	4.2	5.9	5.4	5.3	5.1
9	6.0	5.6	10	11	13	5.5	5.4	4.4	5.7	5.3	5.2	5.1
10	6.0	5.6	10	10	14	5.5	6.3	4.1	5.6	5.5	5.2	5.1
11	5.9	6.1	9.8	10	8.8	5.5	5.7	4.0	5.6	5.7	5.1	5.4
12	5.7	5.8	9.6	9.4	7.9	5.4	5.4	4.0	5.4	5.7	5.2	5.4
13	5.7	6.2	9.3	9.4	12	10	5.7	3.9	5.5	5.6	5.3	5.4
14	5.9	6.0	8.7	9.2	14	34	5.4	3.9	5.7	5.4	5.4	5.4
15	5.9	5.8	8.0	9.0	12	12	5.1	4.0	5.4	5.3	5.5	5.3
16	5.9	5.5	7.4	8.7	25	8.5	5.2	4.0	5.3	5.5	5.5	5.3
17	5.9	16	7.5	8.5	14	9.2	5.4	3.7	5.4	5.4	5.3	5.1
18	5.9	9.4	6.8	8.2	12	7.6	5.5	3.6	5.2	5.3	5.3	5.2
19	5.8	11	6.5	8.1	11	7.0	13	3.5	5.2	5.3	5.3	5.3
20	5.8	27	6.3	7.9	9.9	6.6	7.5	3.3	5.0	5.3	5.2	5.3
21	5.8	12	5.9	7.9	9.7	6.5	6.4	3.2	5.0	5.3	5.1	5.3
22	5.7	8.3	6.1	7.7	9.2	6.3	6.0	3.1	5.0	5.3	5.3	5.3
23	5.8	8.1	6.3	7.6	8.3	6.1	5.5	2.9	5.0	5.3	5.4	5.3
24	5.8	537	19	7.5	6.9	6.0	5.3	2.8	4.9	5.3	5.3	5.2
25	5.8	23	156	7.3	6.8	5.9	5.3	2.7	4.8	5.3	5.3	5.3
26	5.7	13	65	7.2	6.5	7.3	5.3	2.7	4.4	5.3	5.2	5.3
27	5.7	11	48	7.0	6.3	6.7	5.2	2.6	4.6	5.3	5.2	5.4
28	5.7	9.2	25	6.9	6.3	6.1	5.1	2.3	4.8	5.3	5.2	5.3
29	5.7	7.3	21	6.7	6.1	6.7	4.9	2.2	4.8	5.3	5.4	5.2
30	5.8	7.5	19	6.6	---	6.6	4.8	2.1	4.9	5.3	5.4	5.5
31	5.7	---	17	6.5	---	7.3	---	3.1	---	5.3	5.4	---
TOTAL	183.2	791.2	582.5	294.3	268.0	235.0	176.8	112.5	160.6	158.7	164.2	158.9
MEAN	5.91	26.4	18.8	9.49	9.24	7.58	5.89	3.63	5.35	5.12	5.30	5.30
MAX	7.4	537	156	16	25	34	13	4.9	6.5	5.8	5.5	5.5
MIN	5.7	5.5	5.8	6.5	5.7	5.4	4.8	2.1	4.4	2.1	5.1	5.1
AC-FT	363	1570	1160	584	532	466	351	223	319	315	326	315

CAL YR 1983 TOTAL 151168.3 MEAN 414 MAX 3180 MIN 4.8 AC-FT 299800
WTR YR 1984 TOTAL 3285.9 MEAN 8.98 MAX 537 MIN 2.1 AC-FT 6520

11216200 NORTH FORK KINGS RIVER BELOW BALCH DIVERSION DAM, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	6.2	6.9	3.2	2.9	3.3	11	3.5	6.5	5.8	5.7	5.7
2	5.5	6.1	2.8	3.2	3.2	4.3	13	3.5	6.7	5.8	5.7	5.7
3	5.3	6.2	2.8	3.1	3.2	3.5	12	3.4	6.8	5.8	5.7	5.9
4	5.3	6.3	2.5	3.0	3.0	3.4	12	3.4	6.8	5.8	5.8	5.9
5	5.7	6.2	2.3	3.1	3.0	3.4	11	3.4	6.6	5.8	5.7	5.8
6	5.8	6.2	2.2	4.2	3.0	4.2	9.7	3.3	6.5	5.8	5.7	5.8
7	5.8	6.4	2.6	9.3	3.0	5.3	9.0	3.3	6.5	5.8	5.7	5.8
8	5.8	12	2.9	6.4	15	5.2	8.4	3.3	6.2	5.8	5.7	5.8
9	5.8	7.3	2.9	4.7	13	5.0	7.9	3.3	6.1	5.8	5.7	5.9
10	5.8	6.7	3.3	4.2	6.7	5.4	7.6	3.4	6.2	5.8	5.7	5.9
11	6.3	6.6	3.4	3.9	5.3	7.1	7.0	3.3	6.2	5.8	5.7	8.3
12	5.9	6.4	4.0	3.7	5.2	5.8	6.0	3.3	6.1	5.8	5.5	6.0
13	5.8	9.9	3.9	3.6	5.3	5.0	5.6	3.2	6.2	5.8	5.3	5.8
14	5.8	6.9	3.1	3.5	5.3	4.7	5.3	3.1	6.3	5.8	5.5	5.8
15	5.8	6.6	3.1	3.4	5.2	4.6	5.1	3.0	6.1	5.8	5.7	5.9
16	7.4	5.2	3.9	3.3	4.1	4.6	5.0	3.2	6.2	5.8	5.7	5.8
17	7.4	5.2	3.4	3.3	4.3	6.6	5.5	3.3	6.1	5.8	5.7	5.8
18	6.1	5.5	3.5	3.3	4.1	5.4	5.1	3.1	6.2	5.8	5.7	5.9
19	5.9	5.9	3.7	3.3	4.1	4.8	4.9	3.2	6.1	5.8	5.7	6.0
20	2.9	6.4	4.1	3.3	4.1	4.6	4.8	3.1	6.2	5.8	5.7	5.8
21	.89	7.2	3.6	3.3	3.8	4.4	4.7	3.1	6.1	5.8	5.7	5.9
22	5.4	6.7	3.5	3.3	3.7	4.3	4.5	3.0	6.1	5.8	5.7	5.9
23	4.9	6.7	3.5	3.2	3.6	4.2	4.3	2.8	6.0	5.7	5.7	5.8
24	6.2	14	3.6	3.2	3.5	4.1	4.2	2.8	6.0	5.7	5.7	5.8
25	6.3	8.6	3.6	3.1	3.5	4.5	4.2	3.7	6.0	5.8	5.7	5.9
26	12	7.0	3.6	3.2	3.5	6.0	4.1	3.5	5.9	5.7	5.7	5.9
27	6.4	10	3.6	3.2	3.3	24	4.0	3.6	5.8	5.7	5.7	6.0
28	6.2	23	3.5	3.2	3.3	15	3.8	3.7	5.8	5.7	5.7	6.0
29	6.2	9.7	3.4	3.0	---	11	3.6	3.6	5.8	5.7	5.7	6.0
30	6.1	8.6	3.3	3.0	---	9.7	3.7	4.1	5.8	5.7	5.7	6.0
31	6.0	---	3.2	3.0	---	10	---	6.4	---	5.7	5.7	---
TOTAL	182.09	235.7	105.7	113.7	131.2	193.4	197.0	105.9	185.9	179.0	176.0	178.5
MEAN	5.87	7.86	3.41	3.67	4.69	6.24	6.57	3.42	6.20	5.77	5.68	5.95
MAX	12	23	6.9	9.3	15	24	13	6.4	6.8	5.8	5.8	8.3
MIN	.89	5.2	2.2	3.0	2.9	3.3	3.6	2.8	5.8	5.7	5.3	5.7
AC-FT	361	468	210	226	260	384	391	210	369	355	349	354

CAL YR 1984 TOTAL 2252.49 MEAN 6.15 MAX 34 MIN .89 AC-FT 4470
WTR YR 1985 TOTAL 1984.09 MEAN 5.44 MAX 24 MIN .89 AC-FT 3940

11216500 NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CA

LOCATION.--Lat 36°54'12", long 119°07'14", in SE 1/4 NE 1/4 sec.10, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 12 ft downstream from bridge at Balch Camp, 300 ft upstream from Dinkey Creek, and 9.3 mi east of Trimmer.

DRAINAGE AREA.--250 mi^2.

PERIOD OF RECORD.--October 1919 to September 1930 (published as "above Dinkey Creek"), March 1960 to current year. Records for water year 1920 incomplete, yearly estimate and monthly discharge only for some months, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Apr. 15, 1966. Elevation of gage is 1,240 ft above National Geodetic Vertical Datum of 1929, from river-profile map. October 1919 to Sept. 30, 1930, and Mar. 24, 1960, to Apr. 14, 1966, at site 100 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Flow regulated by Courtright Reservoir (station 11214550) and Wishon Reservoir (station 11214800), Black Rock Reservoir, capacity, 1,260 acre-ft, Balch Afterbay, capacity, 318 acre-ft, and Haas and Balch powerplants. Diversion from Balch Afterbay to Kings River powerhouse began Mar. 1, 1962. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (prior to storage and diversion).--11 years (water years 1920-30), 387 ft^3/s, 280,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (prior to regulation by Wishon and Courtright Reservoirs): Maximum discharge, 6,080 ft^3/s, June 4, 1922, gage height, 12.18 ft, site and datum then in use; minimum, 4 ft^3/s, Aug. 29 to Sept. 1, 1924.
1960 to current year: Maximum discharge, 14,000 ft^3/s, Feb. 1, 1963, gage height, 13.24 ft, site and datum then in use, backwater from Dinkey Creek, from rating curve extended above 890 ft^3/s; minimum daily, 0.30 ft^3/s, Nov. 3, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 400 ft^3/s, Nov. 20, gage height, 2.52 ft; minimum daily, 8.0 ft^3/s, Nov. 17.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 621 ft^3/s, Jan. 19, gage height, 2.87 ft^3/s; minimum daily, 8.6 ft^3/s, Jan. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	15	15	16	10	11	11	11	18	16	16	16
2	16	15	11	15	10	10	10	12	15	16	16	16
3	16	15	13	14	10	12	10	12	15	16	16	16
4	16	15	15	14	10	12	10	12	16	16	16	16
5	16	15	12	13	10	12	12	12	16	16	15	16
6	16	15	12	12	10	12	10	11	16	16	15	16
7	16	15	12	11	10	12	10	11	16	16	15	16
8	16	15	11	10	10	12	10	11	16	16	16	16
9	16	15	14	10	13	12	10	11	16	16	16	16
10	16	15	18	10	13	12	11	11	16	16	16	16
11	16	15	15	11	11	12	11	11	16	16	16	17
12	16	15	14	11	11	12	10	11	16	16	16	17
13	16	15	13	11	12	13	10	10	16	16	16	17
14	14	15	12	11	12	36	10	11	16	16	16	16
15	15	15	12	9.9	12	13	10	11	16	16	16	16
16	17	15	11	8.6	17	12	10	11	16	16	16	16
17	19	20	11	10	13	10	10	11	16	16	16	16
18	24	17	10	11	12	11	10	11	16	16	16	16
19	16	17	10	142	11	11	11	11	16	16	16	17
20	16	32	11	23	11	10	11	11	26	16	16	17
21	16	20	10	9.2	11	10	10	11	16	16	16	17
22	15	17	10	9.9	11	10	10	11	15	16	16	17
23	15	16	10	10	11	10	10	11	16	17	16	16
24	16	71	17	10	11	10	10	11	16	16	17	25
25	16	48	137	10	11	10	10	11	16	16	17	18
26	16	20	124	10	11	11	12	11	16	16	17	17
27	15	19	114	10	11	11	12	11	16	16	17	17
28	15	17	33	10	11	10	12	11	16	16	17	17
29	16	17	21	10	12	10	12	11	16	16	17	17
30	15	16	19	10	---	9.5	12	11	15	16	17	17
31	15	---	18	11	---	11	---	14	---	17	16	---
TOTAL	500	587	765	483.6	328	369.5	317	347	488	498	500	503
MEAN	16.1	19.6	24.7	15.6	11.3	11.9	10.6	11.2	16.3	16.1	16.1	16.8
MAX	24	71	137	142	17	36	12	14	26	17	17	25
MIN	14	15	10	8.6	10	9.5	10	10	15	16	15	16
AC-FT	992	1160	1520	959	651	733	629	688	968	988	992	998

CAL YR 1983 TOTAL 147389 MEAN 404 MAX 3150 MIN 10 AC-FT 292300
WTR YR 1984 TOTAL 5686.1 MEAN 15.5 MAX 142 MIN 8.6 AC-FT 11280

11216500 NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	15	11	11	11	13	11	20	17	17	17
2	16	16	11	11	11	12	13	11	19	17	17	17
3	16	16	12	11	11	12	13	11	17	17	17	17
4	16	16	13	11	11	11	13	11	17	17	17	17
5	16	16	13	11	11	11	13	11	17	17	17	17
6	16	16	13	11	11	12	12	11	17	17	17	16
7	15	16	12	13	11	12	12	11	17	17	17	17
8	16	17	12	12	18	12	12	11	17	17	17	17
9	16	15	11	12	15	12	12	11	17	17	17	17
10	16	15	12	12	13	10	12	11	17	17	17	17
11	16	16	12	12	16	12	12	13	17	17	17	18
12	16	17	12	11	16	12	12	13	17	17	26	18
13	16	18	12	11	16	12	12	13	17	17	46	17
14	16	17	12	11	15	11	12	12	17	17	35	17
15	16	17	12	11	16	12	11	13	17	17	31	17
16	16	51	12	11	18	12	11	13	17	17	33	17
17	17	8.0	12	11	110	12	12	13	17	17	35	16
18	16	18	12	11	126	12	12	13	17	17	35	17
19	16	95	12	11	92	12	12	13	17	17	24	17
20	16	18	13	11	111	12	12	13	17	17	14	17
21	15	20	12	11	97	12	12	13	17	17	16	17
22	16	19	12	11	29	11	11	13	17	17	17	17
23	16	19	12	11	18	11	11	13	17	17	18	17
24	16	19	12	11	15	11	11	13	17	17	18	17
25	15	19	11	11	12	11	11	13	17	17	17	17
26	15	19	11	11	11	12	11	13	17	17	17	16
27	16	22	11	11	11	23	11	13	17	17	17	16
28	16	28	11	11	11	21	11	13	17	17	17	17
29	16	21	11	11	---	16	11	12	17	17	17	17
30	16	20	11	11	---	14	11	25	17	17	17	17
31	16	---	11	11	---	14	---	29	---	17	17	---
TOTAL	494	640.0	370	347	863	390	354	409	515	527	654	508
MEAN	15.9	21.3	11.9	11.2	30.8	12.6	11.8	13.2	17.2	17.0	21.1	16.9
MAX	17	95	15	13	126	23	13	29	20	17	46	18
MIN	15	8.0	11	11	11	10	11	11	17	17	14	16
AC-FT	980	1270	734	688	1710	774	702	811	1020	1050	1300	1010

CAL YR 1984 TOTAL 5338.1 MEAN 14.6 MAX 142 MIN 8.0 AC-FT 10590
WTR YR 1985 TOTAL 6071.0 MEAN 16.6 MAX 126 MIN 8.0 AC-FT 12040

11217000 DINKEY CREEK AT DINKEY MEADOW, NEAR SHAVER LAKE, CA

LOCATION.--Lat 37°02'50", long 119°08'52", in SW 1/4 NW 1/4 sec.21, T.10 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank 0.5 mi downstream from Dinkey Meadow, 2.0 mi south of Dinkey Creek Post Office, and 14.4 mi southeast of town of Shaver Lake.

DRAINAGE AREA.--50.7 mi^2.

PERIOD OF RECORD.--September 1910 to September 1915 (fragmentary records), published as "near Ockenden"; October 1921 to September 1935, published as "at Dinkey Meadow"; July 1977 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,440 ft above National Geodetic Vertical Datum of 1929, from topographic map. September 1910 to September 1915, at site 1 mi upstream at different datum. October 1921 to September 1935, at present site at same datum.

REMARKS.--No estimated daily discharges. Records fair. No diversion or regulation above gage.

AVERAGE DISCHARGE.--22 years (water years 1922-35, 1978-85), 119 ft^3/s, 87,220 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft^3/s, Apr. 11, 1982, gage height, 12.07 ft; minimum recorded, 0.2 ft^3/s, Aug. 24-30, 1931, Sept. 7-9, 1934.

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)
Apr. 14	1815	*777	*5.39	May 1	1945	611	4.93
Apr. 23	2015	408	4.25				

Minimum daily, 2.0 ft^3/s, several days during August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	6.4	30	23	24	92	162	430	90	13	4.6	2.0
2	4.2	6.0	28	25	26	88	226	426	95	12	4.1	2.0
3	3.7	6.0	26	24	24	69	267	410	92	12	3.9	2.3
4	3.5	5.9	25	26	24	61	302	399	87	11	3.7	3.6
5	3.6	5.6	26	26	25	55	340	388	94	10	3.4	3.9
6	3.8	5.9	27	28	24	52	375	375	94	9.5	3.3	3.4
7	3.7	6.9	26	32	24	52	419	329	90	9.1	3.2	3.3
8	3.2	19	26	31	23	56	438	284	84	8.6	3.1	3.3
9	3.3	18	26	29	31	55	448	251	76	8.1	3.0	3.5
10	3.7	21	27	28	34	56	458	198	69	8.0	2.9	3.5
11	7.3	25	27	27	33	55	464	175	63	7.9	2.8	7.6
12	7.1	23	27	27	35	54	477	191	56	7.4	2.8	5.9
13	5.3	32	23	28	43	62	511	220	51	7.0	2.8	4.4
14	4.8	28	22	29	53	66	565	255	47	6.6	2.8	3.8
15	4.5	25	23	30	63	68	520	260	43	6.2	2.7	3.3
16	6.5	24	29	33	71	76	432	255	38	6.4	2.6	3.2
17	22	23	27	36	70	86	360	248	35	6.7	2.5	3.0
18	13	27	26	42	70	84	267	248	32	6.2	2.6	3.3
19	23	26	28	46	78	78	258	247	30	5.8	2.6	5.2
20	17	24	26	49	72	97	229	228	28	9.0	2.5	4.1
21	11	24	25	48	58	104	186	202	26	8.4	2.4	3.5
22	9.3	23	24	43	58	102	192	209	24	7.4	2.4	3.2
23	9.1	24	22	38	61	118	266	209	22	6.6	2.3	3.0
24	9.2	28	21	34	70	129	298	206	21	6.4	2.2	2.8
25	9.0	27	20	32	79	118	260	190	20	8.0	2.1	2.7
26	8.0	27	19	31	88	89	219	167	19	6.3	2.1	2.7
27	8.6	34	21	31	90	87	237	148	17	5.5	2.0	2.7
28	7.6	75	23	28	92	83	288	132	16	5.1	2.0	2.8
29	7.1	38	23	28	---	79	307	122	15	4.8	2.0	2.9
30	6.9	33	22	26	---	81	365	105	14	4.6	2.0	2.8
31	6.8	---	23	24	---	110	---	96	---	4.5	2.0	---
TOTAL	240.4	690.7	768	982	1443	2462	10136	7603	1488	238.1	85.4	103.7
MEAN	7.75	23.0	24.8	31.7	51.5	79.4	338	245	49.6	7.68	2.75	3.46
MAX	23	75	30	49	92	129	565	430	95	13	4.6	7.6
MIN	3.2	5.6	19	23	23	52	162	96	14	4.5	2.0	2.0
AC-FT	477	1370	1520	1950	2860	4880	20100	15080	2950	472	169	206

CAL YR 1984 TOTAL 34714.9 MEAN 94.8 MAX 529 MIN 2.7 AC-FT 68860
WTR YR 1985 TOTAL 26240.3 MEAN 71.9 MAX 565 MIN 2.0 AC-FT 52050

11218400 NORTH FORK KINGS RIVER BELOW DINKEY CREEK, NEAR BALCH CAMP, CA

LOCATION.--Lat 36°52'47", long 119°07'40", in NE 1/4 NW 1/4 sec.22, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank 1.1 mi upstream from mouth, 1.7 mi south of Balch Camp, 2.1 mi downstream from Dinkey Creek, and 9 mi east of Trimmer.

DRAINAGE AREA.--387 mi^2.

PERIOD OF RECORD.--March 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,035 ft above National Geodetic Vertical Datum of 1929, from river-profile map.

REMARKS.--No estimated daily discharges. Flow regulated by Courtright Reservoir (station 11214550), Wishon Reservoir (station 11214800), Black Rock Reservoir, capacity, 1,260 acre-ft, Balch Afterbay, capacity, 318 acre-ft, and Haas and Balch powerplants. Diversion from Balch Afterbay to Kings River powerhouse began Mar. 1, 1962. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft^3/s, Feb. 1, 1963, gage height, 19.20 ft, from rating curve extended above 10,100 ft^3/s; minimum daily, 6.4 ft^3/s, Oct. 3, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,390 ft^3/s, Apr. 14, gage height, 5.91 ft; minimum daily, 30 ft^3/s, Sept. 24.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 8,690 ft^3/s, Nov. 24, gage height, 11.87 ft; minimum daily, 33 ft^3/s, Sept. 5-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	68	234	452	224	219	338	366	288	76	54	36
2	135	76	221	405	218	240	327	388	249	73	49	35
3	102	69	257	381	215	248	326	478	226	71	47	34
4	89	65	260	371	211	257	337	524	225	71	45	34
5	83	63	226	379	217	252	331	490	318	68	44	33
6	79	61	217	369	218	252	345	514	233	66	44	33
7	75	60	203	357	216	258	328	571	208	64	45	33
8	75	62	205	343	213	260	384	652	192	62	44	38
9	72	61	315	321	269	272	327	689	178	60	43	37
10	71	59	407	307	279	278	487	706	168	59	41	34
11	68	733	327	294	240	298	509	772	160	58	41	34
12	67	254	286	280	234	271	491	823	150	57	41	35
13	65	349	253	269	268	383	544	834	144	56	41	36
14	65	194	258	249	299	1130	588	787	140	55	40	36
15	64	165	250	248	272	514	646	578	155	56	41	35
16	64	132	234	244	459	410	643	452	143	70	44	35
17	64	472	233	230	290	402	608	469	127	66	45	34
18	65	344	221	221	266	361	510	490	120	107	42	35
19	63	258	213	358	252	370	504	534	114	79	40	38
20	60	1010	199	223	245	407	426	582	116	140	39	36
21	59	356	182	212	246	428	406	580	104	91	38	35
22	58	249	187	205	226	416	426	556	100	77	38	35
23	57	224	183	203	221	414	494	547	94	92	38	34
24	57	2460	519	205	218	413	580	524	91	79	38	43
25	57	928	2980	211	214	422	556	468	87	69	37	36
26	55	431	1860	215	204	486	427	447	85	63	37	35
27	53	352	1410	203	207	469	382	436	83	58	37	35
28	53	318	737	202	208	445	359	404	80	55	36	34
29	54	277	575	215	211	432	346	372	78	53	35	34
30	61	253	603	225	---	370	355	346	75	52	35	34
31	78	---	567	231	---	376	---	315	---	53	35	---
TOTAL	2207	10403	14822	8628	7060	11753	13330	16694	4531	2156	1274	1056
MEAN	71.2	347	478	278	243	379	444	539	151	69.5	41.1	35.2
MAX	139	2460	2980	452	459	1130	646	834	318	140	54	43
MIN	53	59	182	202	204	219	326	315	75	52	35	33
AC-FT	4380	20630	29400	17110	14000	23310	26440	33110	8990	4280	2530	2090

CAL YR 1983 TOTAL 374823 MEAN 1027 MAX 5200 MIN 53 AC-FT 743500
WTR YR 1984 TOTAL 93914 MEAN 257 MAX 2980 MIN 33 AC-FT 186300

11218400 NORTH FORK KINGS RIVER BELOW DINKEY CREEK, NEAR BALCH CAMP, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	39	85	63	55	167	283	704	180	52	32	34
2	38	38	76	66	69	176	387	707	178	51	32	34
3	38	37	75	65	62	130	454	669	192	49	33	36
4	37	37	71	66	55	125	522	666	172	48	32	40
5	35	37	71	68	59	116	573	643	170	46	32	44
6	34	37	71	70	59	107	621	619	168	45	32	42
7	33	38	70	106	59	115	686	560	159	44	33	41
8	33	86	69	86	100	115	729	485	149	43	33	41
9	32	68	69	80	99	113	739	455	137	41	36	41
10	33	65	71	78	79	114	761	384	128	41	38	42
11	36	65	72	76	80	125	816	338	119	40	38	47
12	44	74	70	70	80	110	785	357	108	39	36	55
13	42	102	69	74	87	117	848	381	101	38	41	46
14	39	88	60	72	94	123	942	423	95	38	34	42
15	36	76	65	75	108	130	887	432	91	36	32	39
16	33	103	70	78	126	130	737	417	86	36	33	38
17	74	61	63	80	220	150	634	406	81	37	33	36
18	60	62	66	88	223	171	471	400	78	36	33	37
19	54	141	70	96	211	136	452	396	75	35	40	39
20	65	69	76	102	236	164	426	382	74	36	44	41
21	51	75	67	103	183	188	360	339	71	40	47	36
22	45	70	67	96	131	185	338	338	68	38	47	32
23	44	68	65	87	120	203	422	335	66	36	45	31
24	43	113	66	85	128	243	504	330	63	35	37	30
25	43	94	67	77	139	243	475	315	63	37	35	31
26	43	76	67	82	154	198	387	287	62	38	35	32
27	44	82	66	73	162	262	406	261	59	34	35	32
28	44	310	64	60	164	251	476	240	57	32	35	33
29	41	123	63	64	---	199	525	223	55	31	34	33
30	40	97	63	68	---	185	595	206	53	32	34	33
31	40	---	64	61	---	212	---	192	---	32	34	---
TOTAL	1309	2431	2128	2415	3342	5003	17241	12890	3158	1216	1115	1138
MEAN	42.2	81.0	68.6	77.9	119	161	575	416	105	39.2	36.0	37.9
MAX	74	310	85	106	236	262	942	707	192	52	47	55
MIN	32	37	60	60	55	107	283	192	53	31	32	30
AC-FT	2600	4820	4220	4790	6630	9920	34200	25570	6260	2410	2210	2260

CAL YR 1984 TOTAL 72350 MEAN 198 MAX 1130 MIN 32 AC-FT 143500
WTR YR 1985 TOTAL 53386 MEAN 146 MAX 942 MIN 30 AC-FT 105900

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA
(National stream-quality accounting network station)

LOCATION.--Lat 36°52'29", long 119°08'27", in SW 1/4 NE 1/4 sec.21, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, on right bank 0.8 mi downstream from North Fork, 2.4 mi southwest of Balch Camp, and 8.5 mi southeast of Trimmer.

DRAINAGE AREA.--1,342 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1951 to current year. Prior to January 1952 monthly discharge only, published in WSP 1735. Published as Kings River below North Fork, October 1951 to September 1965.

REVISED RECORDS.--WSP 1930: Drainage area. WRD CA-72-2: Adjusted data for 1971.

GAGE.--Water-stage recorder. Datum of gage is 942.42 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Courtright and Wishon Reservoirs (stations 11214550, 11214800). Records include flow diverted to Kings River powerplant since Mar. 1, 1962. This station measures inflow to Pine Flat Lake. See schematic diagram of Kings River basin. For records of combined discharge of river and powerplant, see following page.

COOPERATION.--Records of diversion to Kings River powerplant and contents for Courtright and Wishon Reservoirs were provided by Pacific Gas and Electric Co.

AVERAGE DISCHARGE (adjusted for change in contents in Wishon and Courtright Reservoirs).--34 years, 2,332 ft^3/s, 1,690,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,200 ft^3/s, Dec. 23, 1955, gage height, 23.08 ft, from rating curve extended above 22,000 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 86 ft^3/s, Oct. 1, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1950, reached a stage of 21.6 ft from floodmarks, discharge, 74,200 ft^3/s.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 6,490 ft^3/s, Apr. 15, gage height, 8.07 ft; minimum daily, 273 ft^3/s, Sept. 27.
Combined river and powerplant: Maximum daily discharge, 6,230 ft^3/s, Apr. 15; minimum daily, 344 ft^3/s, Nov. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	353	371	701	451	428	813	1430	4800	2740	1230	593	275
2	367	353	648	454	471	861	1770	5530	2750	1230	555	277
3	377	344	633	451	449	738	2040	5000	2680	1260	526	282
4	388	348	600	452	414	786	2290	5370	2490	1280	503	336
5	373	341	585	452	420	701	2520	5410	2780	1290	491	395
6	359	339	558	468	422	680	2880	5530	3600	1240	482	394
7	347	344	544	755	416	709	3390	5280	4440	1230	471	398
8	334	551	536	695	618	683	3880	4590	4880	1220	458	406
9	323	464	529	624	755	694	4190	4120	4720	1230	447	388
10	317	527	533	595	587	690	4380	3520	4780	1180	436	364
11	322	539	562	556	587	710	4400	2980	4450	1260	424	457
12	361	539	548	529	578	670	4460	3100	4440	1230	412	457
13	349	677	539	522	613	662	4840	3600	4470	1090	404	446
14	339	622	497	517	625	653	5430	4430	4460	1010	389	420
15	327	609	523	522	651	659	5690	5000	4070	949	375	381
16	328	607	550	528	694	651	5050	4910	3820	885	364	352
17	559	527	507	522	829	684	4290	5010	3580	923	358	330
18	502	523	541	551	833	729	3500	5200	3630	864	353	316
19	510	592	574	588	833	674	3360	5410	3480	947	353	340
20	542	506	601	610	859	710	3100	5410	3250	1450	346	358
21	492	522	545	629	749	762	2650	4850	2790	1570	335	344
22	468	510	533	621	691	765	2370	4960	2390	1220	325	316
23	450	555	518	589	656	797	2550	5340	2240	1020	315	298
24	435	860	509	578	666	905	2970	5600	2080	899	301	285
25	437	770	502	543	695	955	2950	5590	1850	847	295	276
26	439	682	495	552	734	892	2560	5270	1620	837	292	275
27	450	707	489	521	772	1540	2450	4740	1550	779	291	273
28	431	1510	480	500	791	1580	2630	4260	1490	809	290	292
29	409	874	463	476	---	1330	3180	3680	1370	739	287	311
30	396	820	458	488	---	1140	3830	3040	1270	684	282	292
31	392	---	457	457	---	1220	---	2900	---	640	277	---
TOTAL	12476	17533	16758	16796	17836	26043	101030	144430	94160	33042	12030	10334
MEAN	402	584	541	542	637	840	3368	4659	3139	1066	388	344
MAX	559	1510	701	755	859	1580	5690	5600	4880	1570	593	457
MIN	317	339	457	451	414	651	1430	2900	1270	640	277	273
AC-FT	24750	34780	33240	33310	35380	51660	200400	286500	186800	65540	23860	20500
MEAN a	452	699	650	662	787	1074	4537	5936	3402	1060	351	334
AC-FT a	27790	41590	39970	40700	43710	66040	270000	365000	202400	65080	21580	19870

CAL YR 1984 TOTAL 659530 MEAN 1802 MAX 9060 MIN 317 AC-FT 1308000 MEAN a 2225 AC-FT a 1615000
WTR YR 1985 TOTAL 502468 MEAN 1377 MAX 5690 MIN 273 AC-FT 996600 MEAN a 1669 AC-FT a 1208000

a Adjusted for change in contents in Wishon and Courtright Reservoirs.

11218501 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF KINGS RIVER BELOW NORTH FORK AND KINGS RIVER POWERPLANT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	741	440	797	512	670	1030	1720	5110	2900	1610	988	540
2	958	418	883	641	542	966	2130	5960	2850	1480	1040	538
3	901	344	692	585	449	829	2510	5320	2850	1710	847	710
4	946	439	728	525	681	1040	2740	5720	2750	1640	791	732
5	896	516	754	518	789	864	2930	5810	3100	1680	783	854
6	359	481	745	604	683	860	3130	5790	3820	1540	892	791
7	347	525	722	974	752	845	3640	5460	4790	1550	904	695
8	759	707	644	805	1020	1020	4380	4750	5120	1670	862	674
9	695	680	529	716	1020	694	4610	4300	5010	1670	821	822
10	697	596	673	679	847	846	4910	3690	5320	1560	687	796
11	771	645	730	712	587	906	4850	3130	5000	1770	691	814
12	697	539	748	529	578	835	4980	3200	4920	1660	798	966
13	427	1000	761	600	613	871	5060	3770	4870	1380	868	876
14	415	718	662	820	625	903	5810	4640	4860	1310	799	653
15	535	997	523	719	651	825	6230	5170	4500	1310	773	612
16	687	664	623	736	694	727	5480	5070	4130	1230	782	705
17	854	527	682	821	829	802	4780	5280	4040	1430	610	700
18	708	523	682	907	833	925	3890	5320	3890	1230	616	777
19	1030	592	761	680	833	884	3770	5540	3890	1400	779	817
20	684	689	755	700	859	919	3290	5830	3700	1690	754	787
21	492	703	665	1030	749	951	2860	5290	3180	1850	755	596
22	537	510	655	863	745	1010	2800	5400	2690	1600	755	592
23	542	717	518	1010	765	1030	2990	5720	2470	1480	791	740
24	435	1060	637	883	782	1160	3380	6110	2530	1380	589	727
25	437	770	502	812	896	1190	3410	5910	2290	1310	601	702
26	439	771	642	657	943	1250	2930	5350	2080	1290	688	729
27	558	1030	615	573	1040	1830	2610	4890	1980	1070	730	616
28	511	1810	640	900	975	1820	2860	4660	1920	1070	745	548
29	503	1040	544	754	---	1670	3380	3900	1680	1090	757	611
30	505	886	548	836	---	1320	4120	3190	1660	1190	694	712
31	392	---	529	590	---	1530	---	3020	---	1010	523	---
TOTAL	19458	21337	20589	22691	21450	32352	112180	152300	104790	44860	23713	21432
MEAN	628	711	664	732	766	1044	3739	4913	3493	1447	765	714
MAX	1030	1810	883	1030	1040	1830	6230	6110	5320	1850	1040	966
MIN	347	344	502	512	449	694	1720	3020	1660	1010	523	538
AC-FT	38590	42320	40840	45010	42550	64170	222500	302100	207900	88980	47030	42510

CAL YR 1984 TOTAL 834775 MEAN 2281 MAX 9720 MIN 344 AC-FT 1656000
WTR YR 1985 TOTAL 597152 MEAN 1636 MAX 6230 MIN 344 AC-FT 1184000

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956 to current year.
CHEMICAL ANALYSES: Water years 1956-66, 1973 to current year.
BIOLOGICAL DATA: Water years 1978-81.
WATER TEMPERATURES: Water years 1967 to current year.
SEDIMENT RECORDS: Water years 1978 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1966 to current year.

INSTRUMENTATION.--Temperature recorder since October 1966.

REMARKS.--Quality of water samples are obtained at the gaging station upstream from the powerplant. Temperature recorder located 1 mi downstream from gaging station. Temperature subject to fluctuation because of powerplant operation upstream. Temperature sensor inundated by Pine Flat Lake from May 1 to June 23 when lake elevation exceeded 900.0 ft.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 26.5°C, Sept. 2, 1977; minimum recorded, 0.0°C, several days in 1966 and 1967.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 23.0°C, Sept. 17, 18; minimum recorded, 2.0°C, Jan. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	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 (MG/L AS CACO3)
NOV												
20...	1145	522	39	7.0	8.0	740	1.3	12.3	107	--	44	16
JAN												
17...	1200	527	45	6.9	6.0	740	.40	15.1	125	<1	K1	17
MAR												
20...	1230	711	40	7.1	10.0	735	.90	11.3	104	K1	K1	16
MAY												
22...	1200	5090	20	7.1	13.5	740	1.0	10.0	99	K4	K32	6
JUL												
18...	1215	860	28	7.8	21.0	740	.60	8.9	103	K2	56	9
SEP												
12...	1100	463	44	7.6	15.0	745	.70	9.8	99	K9	K13	16

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CAC03)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV												
20...	0	5.1	.70	3.0	28	.3	.80	--	--	16	3.2	1.4
JAN												
17...	0	5.7	.70	3.3	28	.4	.80	42	34	33	4.2	2.1
MAR												
20...	0	5.3	.70	3.2	29	.4	.70	24	20	19	3.5	1.4
MAY												
22...	0	1.9	.20	1.0	26	.2	.40	8.0	6.0	9	1.9	.30
JUL												
18...	0	3.1	.40	1.7	26	.3	.70	15	13	14	2.4	.90
SEP												
12...	0	5.1	.70	3.0	27	.3	--	22	18	19	4.0	1.4

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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (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)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV												
20...	<.10	10	28	34	.04	39	<.10	.040	<.20	.020	<.010	<.010
JAN												
17...	<.10	12	47	49	.06	67	<.10	.010	.20	.010	.010	<.010
MAR												
20...	<.10	12	29	39	.04	56	<.10	.070	.30	<.010	<.010	<.010
MAY												
22...	<.10	5.0	11	15	.02	151	<.10	.080	.20	.030	<.010	<.010
JUL												
18...	<.10	5.4	28	22	.04	65	<.10	.020	.20	<.010	.020	.010
SEP												
12...	<.10	8.6	33	33	.04	41	<.10	<.010	.20	<.010	<.010	.020

See footnotes at end of table.

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)	LEAD, DISSOLVED (UG/L AS PB)
NOV											
20...	1145	<10	<1	10	1.0	<1	3	<3	1	21	9
MAR											
20...	1230	20	<1	9	<.5	1	<1	<3	2	19	3
MAY											
22...	1200	30	<1	7	<.5	<1	<1	<3	1	10	<1
SEP											
12...	1100	10	1	11	<.5	<1	<1	<3	1	12	<1

DATE	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										
20...	5	<1	<.1	<10	2	<1	<1	33	<6	23
MAR										
20...	<4	<1	<.1	<10	2	<1	<1	34	<6	19
MAY										
22...	<4	1	<.1	<10	1	<1	1	14	<6	14
SEP										
12...	<4	3	<.1	<10	<1	<1	<1	31	<6	39

< Actual value is known to be less than the value shown.
K Results based on colony count outside the acceptable range (non-ideal colony count).

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.5	15.5	16.5	15.5	13.0	11.0	7.0	6.0	5.0	3.5	5.0	4.0
2	16.5	14.5	16.5	14.5	12.5	10.5	6.5	5.0	5.0	3.0	5.5	4.0
3	17.0	15.0	17.0	15.5	12.5	10.0	7.0	6.0	5.5	3.5	5.5	4.5
4	17.0	15.0	17.0	15.0	13.0	10.5	7.5	6.5	5.0	3.5	4.5	3.0
5	17.0	15.0	17.0	15.5	12.5	10.5	8.0	6.5	5.0	3.5	5.0	4.0
6	19.0	15.0	19.0	15.0	12.0	10.0	8.0	7.0	6.5	5.0	5.0	4.0
7	19.0	15.5	19.0	15.5	12.0	10.5	8.0	7.0	6.5	5.5	5.0	2.5
8	17.5	15.5	17.5	15.5	12.5	11.0	8.5	7.0	7.0	6.0	4.0	3.0
9	17.5	15.5	17.5	15.5	12.0	10.5	8.5	7.0	6.0	5.0	4.5	3.0
10	17.0	15.5	17.5	15.5	11.0	9.5	7.5	7.0	6.0	5.0	4.5	3.5
11	17.0	15.5	17.0	15.5	9.5	8.0	8.0	7.0	5.5	5.0	4.5	4.0
12	16.0	14.5	16.0	14.5	11.0	8.0	8.0	7.0	6.0	4.5	6.0	4.5
13	17.0	14.5	17.0	14.5	11.0	9.0	7.5	5.5	5.0	3.5	5.5	4.5
14	17.0	15.0	17.0	15.0	10.5	9.5	6.0	4.0	5.0	3.5	6.5	4.5
15	16.0	14.0	16.0	14.0	9.5	8.5	4.0	3.5	5.0	3.5	8.0	5.5
16	14.0	12.0	14.0	12.0	9.0	7.0	5.0	3.5	5.5	4.5	8.5	6.0
17	14.0	11.5	14.0	11.5	9.5	8.5	8.0	2.5	6.0	4.5	9.5	6.5
18	13.0	10.5	13.5	10.5	10.0	8.0	7.0	2.0	6.0	5.0	9.5	7.0
19	13.5	11.0	13.5	11.5	10.0	8.5	4.5	3.0	7.5	5.0	9.5	7.0
20	13.5	12.0	13.5	12.5	10.0	8.5	5.5	4.5	7.0	5.0	9.0	7.5
21	13.0	11.5	13.5	11.5	9.5	7.5	5.0	4.0	6.5	5.5	10.0	8.0
22	13.5	11.0	13.5	11.0	9.0	8.0	4.0	3.0	6.0	5.5	10.5	8.0
23	13.0	11.0	13.0	11.0	8.0	7.0	4.5	3.0	6.0	5.5	9.5	7.5
24	13.5	11.0	13.5	11.0	8.5	7.0	5.0	4.0	6.0	5.0	8.5	6.0
25	13.5	10.5	13.5	10.5	8.0	7.0	4.5	3.0	6.0	5.0	8.5	6.0
26	12.5	11.0	12.5	11.0	8.0	6.5	5.0	3.5	6.0	5.5	9.5	6.0
27	12.5	11.5	13.0	11.5	6.5	5.0	5.5	4.5	7.0	5.5	10.0	7.0
28	12.5	11.0	13.0	11.0	7.0	5.0	5.5	4.5	6.5	4.5	9.5	7.0
29	12.5	10.0	12.5	10.0	8.0	7.0	6.0	5.0	---	---	9.5	6.5
30	12.5	10.0	12.5	10.0	7.5	6.5	5.0	4.0	---	---	9.5	7.0
31	13.0	10.5	---	---	7.0	6.0	5.5	4.5	---	---	10.0	7.5
MONTH	19.0	10.0	19.0	10.0	13.0	5.0	8.5	2.0	7.5	3.0	10.5	2.5

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.5	7.5			---	---	13.0	11.5	18.0	13.5	19.5	14.0
2	8.5	6.5			---	---	13.5	11.5	19.0	15.0	19.5	14.5
3	7.0	5.0			---	---	13.0	12.0	20.0	14.0	22.0	14.5
4	6.5	5.0			---	---	12.5	11.0	19.5	15.0	22.0	14.5
5	6.5	5.5			---	---	13.5	11.0	19.0	14.5	22.0	15.0
6	6.5	5.5			---	---	15.5	13.0	19.0	15.5	21.5	14.5
7	7.0	4.0			---	---	16.0	14.0	18.5	16.0	21.5	15.0
8	6.5	5.0			---	---	16.0	14.0	20.0	15.0	20.0	14.5
9	8.5	5.5			---	---	16.0	14.0	21.0	15.0	20.5	14.5
10	9.0	6.5			---	---	16.5	14.0	20.5	15.5	20.5	15.0
11	9.0	6.5			---	---	16.5	14.0	19.0	14.5	22.0	15.0
12	9.0	6.5			---	---	16.0	14.0	19.0	14.5	21.0	15.0
13	9.0	6.5			---	---	16.5	14.0	21.5	15.0	21.0	14.5
14	9.5	6.0			---	---	16.5	14.5	22.0	15.5	21.0	15.0
15	9.5	7.5			---	---	17.0	14.5	21.0	15.0	21.0	14.5
16	11.0	8.5			---	---	17.0	14.5	20.0	15.5	21.5	14.5
17	10.5	7.5			---	---	17.0	14.5	18.5	14.0	23.0	14.5
18	10.5	7.5			---	---	17.5	15.5	19.5	15.5	23.0	15.5
19	8.5	7.0			---	---	18.0	15.0	19.0	15.0	22.0	15.0
20	9.0	7.0			---	---	18.0	15.0	21.5	16.0	20.5	14.5
21	10.0	8.0			---	---	17.5	15.5	21.0	15.0	20.0	14.5
22	10.0	7.5			---	---	17.0	14.5	20.0	15.5	21.0	14.5
23	10.5	7.5			---	---	17.5	14.5	20.0	15.0	17.5	14.5
24	11.0	8.0			13.5	12.0	17.5	15.0	20.0	15.5	22.5	15.0
25	10.5	8.0			14.0	11.5	17.5	15.0	18.5	14.5	22.5	16.0
26	8.5	6.5			14.0	12.0	16.5	14.5	18.0	15.0	22.5	14.5
27	7.0	6.0			13.5	11.5	16.0	14.0	21.5	15.0	22.5	14.5
28	7.0	6.0			13.5	11.5	17.5	14.0	20.5	15.5	22.0	14.5
29	6.5	5.0			13.5	12.0	17.0	13.5	20.0	15.5	21.0	14.5
30	8.5	5.5			13.0	11.0	18.5	13.5	17.0	14.5	21.0	15.0
31	---	---			---	---	18.5	13.0	18.0	14.5	---	---
MONTH	11.0	4.0			---	---	18.5	11.0	22.0	13.5	23.0	14.0
YEAR	23.0	2.0										

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)
JAN						
17...	1140	15	47	7.1	6.0	14.6
17...	1145	30	46	7.1	6.0	14.6
17...	1150	45	46	7.2	6.0	15.0
17...	1155	60	45	7.0	6.0	15.0
17...	1200	75	45	6.7	6.0	15.2
17...	1205	90	46	6.8	6.0	14.8
17...	1210	105	45	6.9	6.0	15.3
17...	1215	125	43	6.7	6.0	15.8
17...	1220	145	46	7.0	6.0	15.4
17...	1225	165	47	6.9	6.0	15.6
JUL						
18...	1120	20	26	7.8	21.0	8.8
18...	1125	40	26	7.8	21.0	8.8
18...	1130	60	26	7.8	21.0	9.0
18...	1135	80	26	7.8	21.0	8.8
18...	1140	100	26	7.8	21.0	8.9
18...	1145	120	26	7.8	21.0	8.9
18...	1150	140	26	7.8	21.0	8.8
18...	1155	160	26	7.8	21.0	9.0
18...	1200	180	26	7.8	21.0	8.9
18...	1205	200	26	7.8	21.0	8.8
18...	1210	220	26	7.7	21.0	8.8
18...	1215	240	27	7.7	21.0	8.8

11218500 KINGS RIVER BELOW NORTH FORK, NEAR TRIMMER, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV					
20...	1145	526	8.0	2	2.8
JAN					
17...	1200	526	6.0	2	2.8
MAR					
20...	2045	716	10.0	3	5.8
MAY					
22...	1230	4980	13.5	6	81
JUL					
18...	1045	853	21.0	2	4.6
SEP					
12...	1100	463	15.0	1	1.2

11221000 PINE FLAT LAKE NEAR PIEDRA, CA

LOCATION.--Lat 36°49'58", long 119°19'29", in SE 1/4 NE 1/4 sec.2, T.13 S., R.24 E., Fresno County, Hydrologic Unit 18030010, near center of Pine Flat Dam on Kings River, 1.9 mi upstream from Mill Creek, 3.5 mi northeast of Piedra, and 16 mi northeast of Sanger.

DRAINAGE AREA.--1,545 mi^2.

PERIOD OF RECORD.--October 1951 to current year. Prior to October 1970, published as "Pine Flat Reservoir."

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Apr. 8, 1952, nonrecording mercury gage on dam at same datum.

REMARKS.--Reservoir is formed by gravity-type concrete dam; regulation of discharge from reservoir began Dec. 4, 1951. Total capacity, 1,001,055 acre-ft between elevations 565.5 ft, bottom of lower tier of river outlets, and 951.5 ft, gross pool elevation. No dead storage. Reservoir is used for flood control and conservation storage. Water is released down Kings River for diversion by the Kings River Water Association. Records, including extremes, represent contents at 2400 hours. See schematic diagram of Kings River basin.

COOPERATION.--Records were provided by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,009,000 acre-ft, July 15, 1967, June 8, 9, 1974, elevation, 952.76 ft; minimum since gross pool elevation first obtained, 66,339 acre-ft, Sept. 12, 1977, elevation, 691.29 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 840,273 acre-ft, May 28, elevation, 923.09 ft; minimum, 191,983 acre-ft, Aug. 30, elevation, 756.31 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

690	64,528	820	383,196
700	74,248	840	457,481
710	95,542	860	538,559
720	113,424	890	673,065
740	154,021	920	823,775
760	201,186	950	992,146
780	255,055	960	1,052,445
800	315,716		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	512985	515831	558214	594167	623152	613169	596436	725093	834538	654313	325306	192427
2	512203	516411	559764	595278	622970	611769	598531	732428	831386	643281	318316	192673
3	511503	517030	561057	596257	622697	609875	601032	738455	828241	632945	311120	193464
4	510722	517692	562396	597060	622879	608255	603764	745512	824359	622378	303916	194603
5	509859	518521	563822	597817	623380	606186	606500	752557	820646	611995	296987	196070
6	507972	519267	565121	598754	623654	604167	609290	759231	817894	600943	290450	197467
7	506170	520387	566420	600988	624156	602554	613033	765176	816256	589863	283805	198694
8	504943	521674	567548	602689	626895	601391	618059	769613	814989	579067	276945	199649
9	503841	522879	568504	604122	629458	599335	623425	773090	812564	568417	270024	200984
10	502658	523796	569764	605423	630558	597594	629366	775602	810459	557354	263312	202476
11	502169	524879	571070	606725	630604	596302	635106	777245	807464	546402	256776	203542
12	501924	525796	572420	607714	630236	594701	640966	778890	803690	535354	250582	205094
13	501354	528051	573686	608434	629366	593100	647133	781618	799300	523671	244523	206320
14	500866	529390	574733	609559	628542	591946	654547	785747	794612	512285	239068	207089
15	500621	531192	575607	610416	627672	590838	662711	790561	789317	500744	233379	207576
16	501965	532409	576613	611137	626757	589333	669416	795339	783370	488775	227896	208218
17	503514	533417	577708	611995	626301	587828	675108	800553	777245	476835	222721	208759
18	504739	534343	578847	612763	625752	586901	679013	805785	770634	464109	217821	209300
19	506579	535563	580296	612943	625022	586018	682738	811300	763598	451944	213447	210049
20	507890	536743	582009	613033	624200	585135	685660	816150	755839	440670	209429	210979
21	508915	538263	583329	614073	623197	584342	688108	819481	747772	429993	205886	211575
22	509695	539235	584518	615204	621967	583770	690656	822872	739303	418858	202932	212017
23	510598	540546	585400	616517	620921	583197	693982	826590	729747	407727	200631	212796
24	511215	542918	586459	617741	619693	582669	698236	830852	720356	396427	198394	213760
25	511585	544659	587430	618785	618740	582449	702601	834698	711032	387675	196045	214856
26	512203	546104	588536	619467	617696	582888	706103	837376	701727	378462	195249	216008
27	512861	548362	589553	619875	616427	586459	708883	838984	692679	368981	194479	217058
28	513397	552848	590660	620966	614797	590129	711522	840273	684174	359488	193687	217848
29	513933	554948	591548	621741	---	592257	715098	840219	674727	349819	192723	218849
30	514551	556665	592435	622606	---	593367	719519	838662	664786	341289	191983	220171
31	515171	---	593278	622834	---	594834	---	837001	---	333000	192082	---
MAX	515171	556665	593278	622834	630604	613169	719519	840273	834538	654313	325306	220171
MIN	500621	515831	558214	594167	614797	582449	596436	725093	664786	333000	191983	192427
a	854.40	864.25	872.63	879.20	877.43	872.98	899.61	922.48	888.25	805.32	756.35	767.34
b	+743	+41494	+36613	+29556	-8037	-19963	+124685	+117482	-172215	-331786	-140918	+28089
c	1320	608	368	270	532	782	1639	2796	3674	3262	2266	1334

CAL YR 1984 b -169862
WTR YR 1985 b -294257

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.
[c]Evaporation, in acre-feet.

11221500 KINGS RIVER BELOW PINE FLAT DAM, CA

LOCATION.--Lat 36°49'50", long 119°20'07", in SW 1/4 NW 1/4 sec.2, T.13 S., R.24 E., Fresno County, Hydrologic Unit 18030012, on right bank 0.6 mi downstream from Pine Flat Dam, and 2.9 mi northeast of Piedra.

DRAINAGE AREA.--1,545 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year. Monthly and yearly discharges only and adjusted flow for some periods published in WSP 1735.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder and concrete control since Sept. 1, 1956. Datum of gage is 556.97 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1956, at site 0.2 mi downstream at datum 3.48 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Pine Flat Lake (station 11221000) 0.6 mi upstream and Wishon and Courtright Reservoirs (stations 11214550 and 11214800). See schematic diagram of Kings River basin.

AVERAGE DISCHARGE (adjusted for change in contents and evaporation).--32 years, 2,425 ft^3/s, 1,757,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 ft^3/s, June 3, 4, 8, 9, 1969, gage height, 10.73 ft; minimum daily, 1.1 ft^3/s, Feb. 26, 27, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,970 ft^3/s, July 19, gage height, 7.85 ft; minimum daily, 30 ft^3/s, Nov. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	74	61	88	541	1930	1060	1900	4020	7000	4890	349
2	1340	74	66	88	605	1940	1200	2000	4410	7170	4640	405
3	1330	74	68	94	655	1880	1340	2000	4450	7060	4580	332
4	1310	72	68	101	614	1990	1460	1920	4700	7090	4510	179
5	1310	72	71	108	549	2040	1640	1970	4980	7170	4320	150
6	1300	71	71	110	566	2030	1680	2100	5150	7240	4240	131
7	1290	72	71	95	524	1890	1700	2220	5400	7330	4280	153
8	1260	72	71	51	423	1820	1770	2280	5560	7250	4420	193
9	1180	72	71	62	152	1870	1770	2340	6060	7180	4350	144
10	1220	72	62	79	436	1850	1720	2320	6250	7210	4160	105
11	1030	72	78	91	628	1770	1810	2290	6360	7470	4000	257
12	782	72	84	95	847	1810	1860	2340	6680	7390	3950	247
13	751	66	84	97	1160	1830	1800	2320	6960	7370	4000	274
14	688	63	127	252	1120	1630	1790	2350	7100	7230	3670	325
15	479	63	168	362	1160	1490	1880	2470	7090	7230	3690	362
16	146	49	161	373	1190	1580	1900	2440	7090	7440	3600	347
17	75	46	158	456	1140	1640	1850	2420	7120	7600	3300	437
18	82	46	164	508	1170	1580	1880	2440	7200	7830	3140	517
19	75	45	146	575	1270	1450	1830	2450	7400	7720	3000	462
20	75	41	50	583	1330	1450	1670	3180	7680	7450	2820	364
21	75	39	63	532	1350	1450	1560	3460	7290	7370	2610	338
22	75	36	74	333	1350	1400	1450	3490	7230	7310	2290	360
23	75	40	74	338	1330	1410	1270	3600	7370	7260	2010	320
24	95	41	82	341	1410	1440	1130	3630	7340	7160	1770	263
25	125	36	86	324	1470	1390	1140	3620	7090	5860	1740	177
26	168	35	86	311	1540	1360	1100	3700	6900	6030	1100	158
27	214	34	86	364	1780	780	1140	3800	6630	5950	1040	152
28	216	30	87	353	1930	673	1340	3760	6330	5970	1150	152
29	214	39	87	401	---	842	1560	3800	6520	6000	1240	123
30	182	57	88	436	---	937	1770	3810	6810	5640	1020	73
31	110	---	88	520	---	958	---	3740	---	5270	544	---
TOTAL	18622	1675	2801	8521	28240	48110	47070	86160	191170	216250	96074	7849
MEAN	601	55.8	90.4	275	1009	1552	1569	2779	6372	6976	3099	262
MAX	1350	74	168	583	1930	2040	1900	3810	7680	7830	4890	517
MIN	75	30	50	51	152	673	1060	1900	4020	5270	544	73
AC-FT	36940	3320	5560	16900	56010	95430	93360	170900	379200	428900	190600	15570
MEAN a	459	751	678	689	894	1271	4489	5758	3448	1246	431	368
AC-FT a	28220	44690	41690	42370	49650	78150	267100	354000	205200	76610	26500	21900

CAL YR 1984 TOTAL 950732 MEAN 2598 MAX 6620 MIN 30 AC-FT 1886000 MEAN a 2342 AC-FT a 1700000
WTR YR 1985 TOTAL 752542 MEAN 2062 MAX 7830 MIN 30 AC-FT 1493000 MEAN a 1708 AC-FT a 1237000

a Adjusted for change in contents and in Wishon and Courtright Reservoirs, Pine Flat Lake, and evaporation from Pine Flat Lake.

11221500 KINGS RIVER BELOW PINE FLAT DAM, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-66, 1970 to current year.
CHEMICAL ANALYSES: Water years 1956-66.
WATER TEMPERATURES: Water years 1970 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1969 to current year.

INSTRUMENTATION.--Temperature recorder since October 1969.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 25.0°C, Sept. 21, 1976, Sept. 4, 5, 1985; minimum recorded, 6.5°C, several days in January 1982.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 25.0°C, Sept. 4, 5; minimum recorded, 10.0°C, many days January through April.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.5	16.0	20.0	15.0	16.0	13.0	14.0	10.5	11.5	10.0	10.5	10.0
2	17.0	16.5	20.0	15.0	16.0	12.0	14.5	10.0	11.0	10.0	10.5	10.0
3	17.0	16.5	20.0	15.5	14.5	13.0	14.0	10.0	11.0	10.0	10.5	10.0
4	17.0	16.5	20.0	15.0	16.5	13.5	14.0	10.0	11.0	10.0	10.5	10.0
5	17.5	16.5	19.0	15.0	17.0	13.5	13.0	10.5	11.0	10.0	10.5	10.0
6	17.5	16.5	20.0	15.5	16.5	13.0	12.5	11.5	11.0	10.0	10.5	10.0
7	17.5	16.5	19.5	15.0	16.0	12.5	12.0	11.5	10.5	10.0	10.5	10.0
8	17.5	16.5	18.0	15.5	17.0	13.0	14.5	11.0	10.0	10.0	10.5	10.0
9	17.5	16.5	19.0	14.0	16.5	12.5	14.5	11.0	13.0	10.0	10.5	10.0
10	17.5	17.0	18.5	14.5	15.0	13.0	13.0	10.5	11.5	10.0	10.5	10.0
11	17.5	17.0	19.0	14.5	16.5	12.5	12.0	11.0	11.0	10.0	10.5	10.0
12	18.0	17.0	19.0	15.5	14.0	12.5	14.0	10.5	10.5	10.0	10.5	10.0
13	18.0	17.0	18.0	15.0	15.0	11.0	13.0	10.0	10.5	10.0	10.5	10.0
14	17.5	17.0	17.0	14.0	15.0	11.0	12.5	10.0	10.5	10.0	10.5	10.0
15	18.5	17.0	18.0	14.0	13.5	12.5	11.5	11.5	10.5	10.0	10.5	10.0
16	18.0	16.0	17.0	15.0	14.5	12.5	12.5	11.5	10.5	10.0	10.5	10.0
17	21.0	16.0	18.0	14.5	14.5	11.5	12.5	11.0	10.0	10.0	10.5	10.0
18	20.5	15.0	19.0	15.0	13.0	12.0	12.5	11.5	10.5	10.0	10.5	10.0
19	20.5	16.5	18.0	14.0	14.0	12.5	11.5	11.5	10.5	10.0	10.5	10.0
20	19.5	16.0	18.0	14.0	14.5	11.5	11.5	11.5	10.0	10.0	11.0	10.0
21	20.0	15.5	15.0	14.0	14.5	11.5	11.5	11.0	10.5	10.0	10.5	10.0
22	21.0	15.0	16.0	13.5	14.0	10.5	11.5	11.0	10.5	10.0	11.0	10.0
23	20.5	15.5	17.0	13.5	12.0	10.5	12.0	11.0	10.5	10.0	11.0	10.0
24	20.0	15.5	15.0	14.0	12.5	11.5	12.0	11.0	10.5	10.0	11.0	10.0
25	20.0	16.0	16.5	13.0	14.5	11.0	12.0	10.5	11.0	10.0	11.0	10.0
26	19.5	16.5	16.5	12.0	13.5	11.0	11.5	11.0	10.5	10.0	10.5	10.0
27	19.0	17.0	15.0	13.5	12.5	11.5	12.0	11.0	10.5	10.0	11.0	10.5
28	19.0	16.5	17.0	14.0	13.0	11.0	11.5	10.5	10.5	10.0	11.5	10.0
29	19.0	16.5	16.0	12.5	13.0	11.5	12.0	10.5	---	---	11.5	10.0
30	19.0	17.0	16.0	13.0	12.5	11.5	11.0	10.5	---	---	11.5	10.0
31	17.0	15.5	---	---	12.0	11.5	11.0	10.5	---	---	11.5	10.0
MONTH	21.0	15.0	20.0	12.0	17.0	10.5	14.5	10.0	13.0	10.0	11.5	10.0

11221500 KINGS RIVER BELOW PINE FLAT DAM, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	10.0	11.5	10.5	12.0	11.5	12.0	12.0	18.0	17.5	24.0	23.0
2	11.0	10.0	11.5	11.0	12.0	12.0	12.5	12.0	18.0	17.5	24.5	22.5
3	11.0	10.0	11.5	11.0	12.0	12.0	12.5	12.5	18.0	18.0	24.0	22.0
4	11.0	10.5	12.0	11.0	12.0	11.5	12.5	12.5	18.5	18.0	25.0	22.0
5	11.0	10.0	12.0	11.5	12.5	11.0	12.5	12.5	18.5	18.0	25.0	21.5
6	11.0	10.5	12.0	11.5	12.0	12.0	12.5	12.5	18.0	18.0	24.0	21.5
7	11.0	10.5	12.0	11.5	12.0	12.0	12.5	12.5	18.5	18.0	24.5	21.5
8	11.0	10.5	12.0	11.5	12.0	12.0	12.5	12.5	18.5	18.0	23.0	21.0
9	11.0	10.5	12.0	11.5	12.5	12.0	13.0	12.5	19.0	18.0	22.0	19.5
10	11.0	10.5	12.0	11.5	12.5	12.5	13.0	12.5	19.0	18.0	24.0	19.0
11	11.0	10.5	12.0	11.5	12.5	12.5	13.0	12.5	18.5	18.0	23.0	20.0
12	11.0	10.5	12.0	11.5	12.5	12.5	13.0	12.5	18.5	18.0	23.0	20.0
13	11.0	10.5	12.0	11.5	12.5	12.5	13.0	13.0	19.0	18.0	23.0	20.0
14	11.0	10.5	12.0	11.5	12.5	12.5	13.0	13.0	18.5	18.0	23.0	20.5
15	11.0	10.5	12.0	11.5	12.5	12.5	13.5	13.0	19.0	18.5	23.0	20.5
16	11.0	10.5	12.0	11.5	12.5	12.5	13.5	13.5	19.0	18.5	22.5	20.0
17	11.0	10.5	12.0	11.5	12.5	12.5	13.5	13.5	18.5	18.5	22.5	20.5
18	11.0	10.5	12.0	11.5	12.5	12.5	14.0	13.5	18.5	18.0	21.5	20.5
19	11.0	10.5	12.0	11.5	13.0	12.5	14.0	13.5	19.0	18.5	22.5	20.5
20	11.0	10.5	12.0	12.0	13.0	12.5	14.0	14.0	19.0	18.5	23.0	20.5
21	11.0	10.5	12.0	11.5	13.0	12.5	14.5	14.0	19.0	18.5	22.0	20.0
22	11.5	10.5	12.0	12.0	13.0	12.5	14.5	14.0	19.0	19.0	22.0	20.5
23	11.5	10.5	12.0	12.0	13.0	12.0	14.5	14.5	19.5	19.0	22.0	20.5
24	11.5	10.5	12.0	12.0	12.0	12.0	15.0	14.5	19.5	19.0	22.0	20.5
25	11.5	10.5	12.0	12.0	12.0	11.5	15.0	15.0	19.5	19.0	23.0	20.5
26	12.0	10.5	12.0	11.5	12.0	12.0	15.5	15.0	20.0	19.5	22.5	20.0
27	11.5	10.5	12.0	12.0	12.0	12.0	15.5	15.0	20.0	19.0	23.5	20.0
28	11.5	10.5	12.0	12.0	12.0	12.0	16.0	15.5	19.5	19.5	23.5	20.0
29	11.5	10.5	12.0	12.0	12.0	12.0	16.0	15.5	20.0	19.5	23.5	20.0
30	11.5	11.0	12.0	12.0	12.0	12.0	17.5	16.0	23.5	19.5	23.5	19.0
31	---	---	12.0	12.0	---	---	18.0	17.5	24.0	23.0	---	---
MONTH	12.0	10.0	12.0	10.5	13.0	11.0	18.0	12.0	24.0	17.5	25.0	19.0
YEAR	25.0	10.0										

11221700 MILL CREEK NEAR PIEDRA, CA

LOCATION.--Lat 36°49'07", long 119°20'27", in NE 1/4 NE 1/4 sec.10, T.13 S., R.24 E., Fresno County, Hydrologic Unit 18030008, on left bank 150 ft upstream from road bridge, 0.7 mi upstream from mouth, and 2.3 mi east of Piedra.

DRAINAGE AREA.--127 mi^2.

PERIOD OF RECORD.--October 1957 to current year. November 1938 to September 1957 in reports of Kings River Water Association.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 550 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 14, 1958, at site 150 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 16, 17. Records good, except for period of estimated record, which is fair. Some small diversions above station for irrigation. See schematic diagram of Kings River basin.

AVERAGE DISCHARGE.--28 years, 47.1 ft^3/s, 34,120 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s, Dec. 6, 1966, gage height, 9.53 ft in gage well, 10.2 ft from floodmarks; maximum gage height, 9.65 ft in gage well, Jan. 19, 1969 (backwater from debris); no flow for several months in most years.

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. 9	0100	346	3.56	Mar. 27	0900	*514	*3.82

No flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	3.9	20	16	16	16	68	10	3.6			
2	0	3.9	19	16	16	20	63	9.9	3.8			
3	0	3.9	19	15	16	24	56	9.8	3.9			
4	0	4.2	18	16	16	19	50	9.4	4.4			
5	0	4.6	15	15	16	17	45	9.0	4.3			
6	0	4.6	13	15	15	18	40	8.8	3.8			
7	0	4.6	13	21	15	32	36	8.4	3.2			
8	0	4.6	13	60	74	34	32	8.5	2.7			
9	0	5.5	13	40	214	25	30	9.1	2.4			
10	0	5.9	15	30	82	23	28	8.9	2.1			
11	0	6.4	16	26	56	23	26	9.2	1.9			
12	0	5.9	16	23	43	23	25	9.6	1.6			
13	0	5.9	17	22	37	22	23	9.3	1.4			
14	0	8.6	19	21	32	20	21	8.6	1.3			
15	0	8.0	19	20	30	19	20	7.3	1.5			
16	0	7.0	35	19	28	18	19	6.6	1.2			
17	0	7.0	25	18	27	17	21	5.9	0			
18	0	6.4	19	18	26	19	22	5.2	0			
19	0	5.9	22	17	26	23	20	5.2	0			
20	0	5.9	55	17	26	20	19	5.0	0			
21	0	8.6	35	17	25	18	19	4.7	0			
22	0	11	26	17	23	17	18	4.3	0			
23	1.5	9.2	23	16	20	17	17	4.2	0			
24	2.0	8.6	21	17	19	16	16	4.3	0			
25	2.0	21	20	17	18	16	15	4.2	0			
26	2.0	15	19	17	18	19	14	3.9	0			
27	2.3	12	18	16	17	278	13	3.8	0			
28	2.6	50	18	16	17	270	13	3.9	0			
29	3.0	39	17	16	---	141	12	3.9	0			
30	3.5	23	16	16	---	94	11	3.8	0			
31	3.5	---	16	16	---	76	---	3.7	---			
TOTAL	22.4	310.1	630	626	968	1394	812	208.4	43.1	0	0	0
MEAN	.72	10.3	20.3	20.2	34.6	45.0	27.1	6.72	1.44	0	0	0
MAX	3.5	50	55	60	214	278	68	10	4.4	0	0	0
MIN	0	3.9	13	15	15	16	11	3.7	0	0	0	0
AC-FT	44	615	1250	1240	1920	2760	1610	413	85	0	0	0

CAL YR 1984 TOTAL 10184.15 MEAN 27.8 MAX 652 MIN 0 AC-FT 20200
WTR YR 1985 TOTAL 5014.0 MEAN 13.7 MAX 278 MIN 0 AC-FT 9950

11224500 LOS GATOS CREEK ABOVE NUNEZ CANYON, NEAR COALINGA, CA

LOCATION.--Lat 36°12'53", long 120°28'11", in NW 1/4 SE 1/4 sec.5, T.20 S., R.14 E., Fresno County, Hydrologic Unit 18030012, on right bank 50 ft downstream from highway bridge, 1.1 mi upstream from Nunez Canyon, 3.0 mi downstream from White Creek, and 8.1 mi northwest of Coalinga.

DRAINAGE AREA.--95.8 mi^2.

PERIOD OF RECORD.--May 1945 to current year. Prior to October 1949 monthly discharge only, published in WSP 1315-A.

REVISED RECORDS.--WSP 1215: 1950. WSP 1735: 1952(M), 1956(M). WSP 1930: Drainage area. WDR CA-72-2: 1971(P).

GAGE.--Water-stage recorder. Datum of gage is 1,067.2 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 2, 1959, at site 100 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 8-10 and June 25-30. Records fair except those for estimated daily discharges Jan. 8-10, which are poor. Minor diversion for irrigation and stock ponds.

AVERAGE DISCHARGE.--40 years, 5.86 ft^3/s, 4,250 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1950).--Maximum discharge, 4,360 ft^3/s, Feb. 24, 1969, gage height, 10.34 ft in gage well, 11.30 ft from floodmarks, from rating curve extended above 800 ft^3/s on basis of slope-area measurement at gage height 10.34 ft, maximum gage height, 10.65 ft in gage well, 11.95 ft from floodmarks, Jan. 16, 1978; no flow for several months in most years.

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)
Dec. 16	0230	*32	*1.77

No flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.97	.92	.64	.39	.40	.11	.04			
2		0	.96	.92	.67	.45	.35	.11	.04			
3		0	2.1	.87	.68	.44	.35	.11	.04			
4		0	1.7	.80	.69	.46	.37	.10	.03			
5		0	1.3	.80	.64	.45	.41	.10	.02			
6		0	1.2	.80	.62	.57	.40	.10	.01			
7		0	1.2	.82	.59	2.8	.39	.10	0			
8		0	1.1	.80	.71	1.1	.36	.10	0			
9		0	.99	.79	.74	.73	.31	.10	0			
10		0	1.1	.75	.70	.69	.30	.10	0			
11		0	1.1	.73	.67	.86	.29	.10	0			
12		0	1.0	.73	.64	2.6	.27	.09	0			
13		0	1.1	.75	.63	1.1	.25	.09	0			
14		0	1.1	.74	.54	.74	.22	.08	0			
15		0	1.9	.80	.53	.67	.19	.08	0			
16		.27	12	.80	.53	.61	.21	.08	0			
17		.57	3.6	.80	.52	.57	.25	.08	0			
18		.42	3.4	.80	.51	.54	.26	.08	0			
19		.42	4.3	.80	.52	.53	.26	.07	0			
20		.47	5.9	.80	.50	.50	.27	.07	0			
21		.52	3.7	.83	.48	.46	.27	.06	0			
22		.51	2.6	.87	.47	.44	.26	.05	0			
23		.50	2.2	.87	.46	.41	.22	.05	0			
24		.60	2.0	.87	.44	.41	.19	.05	0			
25		.58	1.6	.84	.44	.36	.17	.05	0			
26		.57	1.5	.80	.44	.43	.16	.05	0			
27		.59	1.2	.80	.42	.51	.17	.05	0			
28		1.2	1.2	.86	.41	.55	.14	.04	0			
29		1.1	1.1	.87	---	.53	.13	.04	0			
30		1.1	1.1	.87	---	.50	.12	.04	0			
31		---	.97	.74	---	.47	---	.04	---			
TOTAL	0	9.42	67.19	25.24	15.83	21.87	7.94	2.37	0.18	0	0	0
MEAN	0	.31	2.17	.81	.57	.71	.26	.076	.006	0	0	0
MAX	0	1.2	12	.92	.74	2.8	.41	.11	.04	0	0	0
MIN	0	0	.96	.73	.41	.36	.12	.04	0	0	0	0
AC-FT	0	19	133	50	31	43	16	4.7	.4	0	0	0

CAL YR 1984 TOTAL 490.56 MEAN 1.34 MAX 12 MIN 0 AC-FT 973
WTR YR 1985 TOTAL 150.04 MEAN .41 MAX 12 MIN 0 AC-FT 298

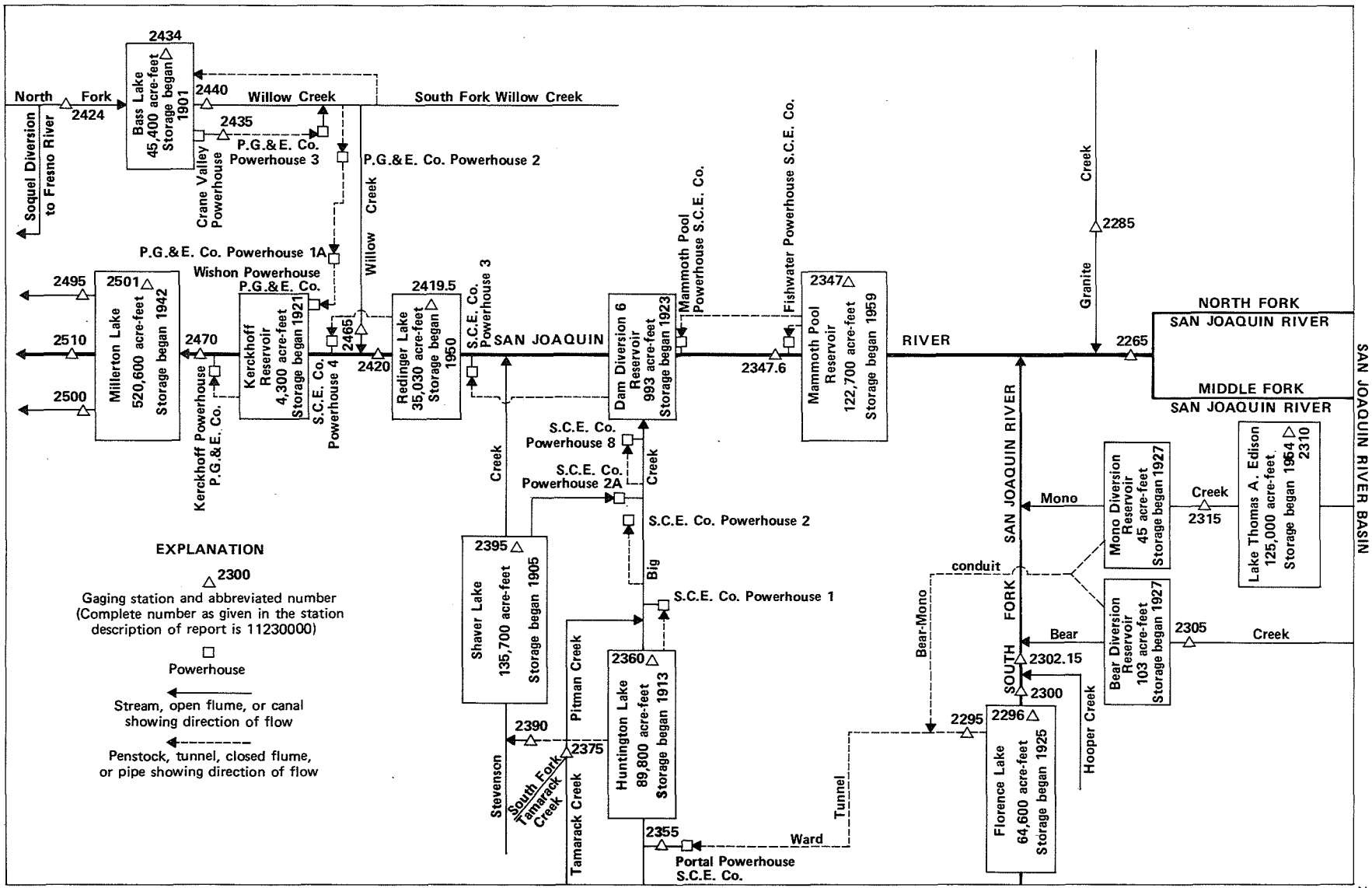


FIGURE 29. — Schematic diagram showing diversions and storage in San Joaquin River basin.

11226500 SAN JOAQUIN RIVER AT MILLER CROSSING, CA

LOCATION.--Lat 37°30'38", long 119°11'47", in SE 1/4 NE 1/4 sec.11, T.5 S., R.25 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank at Miller Crossing, 2.4 mi downstream from North Fork San Joaquin River, 4.6 mi east of Clover Meadow Ranger Station, and 23 mi northeast of town of Bass Lake.

DRAINAGE AREA.--249 mi^2.

PERIOD OF RECORD.--October 1921 to September 1928, October 1951 to current year. Monthly discharge only for some periods, published in WSP 1315A. Prior to October 1954, published as Middle Fork San Joaquin River at Miller Bridge.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,570 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 24, 1922, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and one discharge measurement were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--41 years, 623 ft^3/s, 451,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,600 ft^3/s, Dec. 23, 1955, gage height, 21.28 ft, from rating curve extended above 5,200 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 19 ft^3/s, Nov. 17, 1961.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 14	2115	*2,470	*14.65	May 24	2145	2,190	14.36
May 1	2130	2,350	14.53				

Minimum daily, 91 ft^3/s, Sept. 30.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 24	1645	3,150	15.26	May 23	2030	4,670	16.38
May 13	2000	*5,170	*16.70	July 18	2015	2,550	14.73

Minimum daily, 113 ft^3/s, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	444	244	308	475	260	245	450	690	2570	1210	436	233
2	486	230	293	424	250	276	420	850	2250	1190	413	211
3	434	218	301	389	245	284	455	1220	2010	1190	408	195
4	401	212	312	392	247	296	514	1420	2410	1170	382	191
5	364	187	318	405	259	284	496	1370	2130	1130	364	194
6	322	173	316	405	264	312	542	1400	1760	1060	339	197
7	298	299	297	398	262	334	596	1640	1450	1050	321	204
8	280	252	309	386	257	369	711	2100	1380	993	322	199
9	264	202	359	358	269	401	534	2090	1390	849	323	194
10	246	199	410	344	271	442	733	2180	1420	719	339	190
11	223	918	409	319	248	444	702	2810	1370	671	392	188
12	209	567	361	288	246	381	739	3250	1400	650	362	185
13	204	558	364	269	288	475	924	3670	1410	677	330	182
14	194	426	378	257	285	538	1180	3380	1430	643	319	179
15	187	372	360	248	310	433	1420	2200	1320	651	337	172
16	179	326	337	248	364	367	1450	1780	1360	859	332	174
17	173	779	336	234	280	395	1320	1870	1550	830	322	185
18	168	510	306	221	267	356	1070	2050	1530	1210	310	193
19	163	488	293	223	266	387	907	2650	1520	1440	302	209
20	161	820	268	211	254	499	717	3230	1490	1170	294	207
21	158	486	252	215	263	588	637	3340	1380	999	282	190
22	156	390	247	206	244	571	685	3360	1350	733	291	174
23	155	374	256	204	244	561	957	3600	1380	656	294	162
24	161	1320	502	211	243	619	1240	3550	1400	573	278	150
25	147	769	1200	223	230	621	1130	3280	1410	550	259	136
26	142	513	856	219	223	831	849	3230	1410	521	235	128
27	138	451	825	206	226	781	705	3220	1440	525	219	122
28	137	405	557	213	226	725	626	3250	1480	517	219	117
29	136	358	482	229	230	681	603	3330	1520	477	223	114
30	243	330	493	240	---	536	657	3150	1390	462	233	113
31	261	---	493	257	---	515	---	2970	---	485	241	---
TOTAL	7234	13376	12798	8917	7521	14547	23969	78130	47310	25860	9721	5288
MEAN	233	446	413	288	259	469	799	2520	1577	834	314	176
MAX	486	1320	1200	475	364	831	1450	3670	2570	1440	436	233
MIN	136	173	247	204	223	245	420	690	1320	462	219	113
AC-FT	14350	26530	25380	17690	14920	28850	47540	155000	93840	51290	19280	10490

CAL YR 1983 TOTAL 466322 MEAN 1278 MAX 6310 MIN 136 AC-FT 924900
WTR YR 1984 TOTAL 254671 MEAN 696 MAX 3670 MIN 113 AC-FT 505100

11226500 SAN JOAQUIN RIVER AT MILLER CROSSING, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	113	155	145	115	250	468	1710	790	346	196	110
2	124	113	160	165	185	248	607	1810	818	351	183	115
3	118	115	163	175	118	213	744	1750	845	366	177	113
4	110	111	155	186	118	198	829	1740	901	372	178	147
5	107	110	134	186	119	185	893	1750	1080	354	180	163
6	104	122	154	169	119	174	1070	1780	1310	346	178	147
7	100	148	148	152	118	180	1230	1590	1500	337	175	142
8	97	177	148	137	117	194	1360	1320	1520	342	172	135
9	96	216	148	121	123	204	1380	1230	1460	340	167	139
10	113	212	148	131	140	209	1400	1010	1420	343	161	143
11	133	195	148	140	149	212	1400	870	1310	369	155	191
12	156	193	148	129	173	201	1460	992	1280	333	151	189
13	151	177	148	129	188	197	1640	1210	1260	312	146	208
14	128	175	148	127	192	194	1870	1480	1220	309	144	184
15	117	185	148	131	204	197	1800	1610	1170	301	141	185
16	138	196	148	137	227	203	1520	1590	1130	278	138	165
17	167	185	148	144	244	215	1250	1620	1080	256	138	142
18	180	192	148	165	240	224	980	1720	1040	249	137	130
19	175	303	148	179	248	209	951	1740	985	288	125	144
20	163	236	148	190	244	233	841	1670	942	270	120	133
21	150	229	147	193	200	270	696	1530	810	281	113	117
22	150	202	136	174	200	272	656	1620	717	257	107	110
23	139	185	126	155	192	313	815	1760	662	240	105	106
24	158	179	126	147	200	359	977	1840	584	239	106	103
25	160	168	126	144	221	324	956	1780	527	248	109	101
26	150	167	138	147	240	264	801	1620	475	289	112	97
27	136	166	136	141	251	226	736	1460	453	307	113	102
28	130	163	127	137	248	266	943	1300	427	324	112	107
29	131	158	127	125	---	277	1150	1150	388	298	108	99
30	128	157	128	130	---	301	1400	952	367	244	106	91
31	117	---	136	119	---	366	---	914	---	215	106	---
TOTAL	4158	5248	4446	4650	5133	7378	32823	46118	28471	9404	4359	4058
MEAN	134	175	143	150	183	238	1094	1488	949	303	141	135
MAX	180	303	163	193	251	366	1870	1840	1520	372	196	208
MIN	96	110	126	119	115	174	468	870	367	215	105	91
AC-FT	8250	10410	8820	9220	10180	14630	65100	91480	56470	18650	8650	8050

CAL YR 1984 TOTAL 235115 MEAN 642 MAX 3670 MIN 96 AC-FT 466400
WTR YR 1985 TOTAL 156246 MEAN 428 MAX 1870 MIN 91 AC-FT 309900

11228500 GRANITE CREEK NEAR CATTLE MOUNTAIN, CA

LOCATION.--Lat 37°31'36", long 119°15'28", in NE 1/4 sec.5, T.5 S., R.25 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 0.7 mi downstream from confluence of East and West Forks of Granite Creek, 1.6 mi northwest of Cattle Mountain, and 21 mi northeast of town of Bass Lake.

DRAINAGE AREA.--47.8 mi^2.

PERIOD OF RECORD.--October 1921 to September 1928, May 1952 to current year. No winter records May 1952 to September 1983. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1445: Drainage area. WDR CA-80-3: 1975.

GAGE.--Water-stage recorder. Elevation of gage is 6,800 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 14, 1922, nonrecording gage at same site at different datum.

REMARKS.--Estimated daily discharges: Periods of ice-affect, Jan. 14-28, Feb. 18 to Mar. 12, 1984, and Nov. 26 to Apr. 1, 1985. Records fair except for periods of ice-affect, which are poor. Some regulation by manipulation of stoplogs in controls for fishwater purposes; no diversion above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and one discharge measurement were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--7 years (water years 1922-28), 110 ft^3/s, 79,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 8,610 ft^3/s, Apr. 11, 1982, gage height, 11.55 ft, from rating curve extended above 1,100 ft^3/s; no flow at times in 1924, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft^3/s, May 1, gage height, 7.98 ft; minimum daily, 0.29 ft^3/s, Aug. 8.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 1,600 ft^3/s, May 13, gage height, 8.44 ft; minimum daily, 0.44 ft^3/s, Sept. 12-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	52	68	87	70	52	126	229	443	80	45	1.8
2	152	59	64	83	64	62	119	294	384	82	28	1.4
3	145	58	56	70	63	66	143	498	332	80	19	1.2
4	126	48	86	71	68	68	162	537	665	75	15	1.1
5	102	34	79	82	73	70	160	461	408	79	12	.90
6	71	27	68	84	74	68	177	456	317	62	10	.90
7	56	48	66	84	75	70	216	573	224	52	8.6	.90
8	84	48	65	82	70	73	216	759	224	43	6.8	.77
9	50	33	61	76	73	76	162	740	247	32	6.0	.65
10	37	31	75	74	65	80	255	759	252	28	5.5	.54
11	29	324	69	65	61	88	239	976	221	25	9.1	.54
12	25	202	75	65	56	83	263	1060	216	22	10	.44
13	21	145	73	64	53	111	336	1040	216	25	8.2	.44
14	19	111	100	59	57	119	429	746	207	38	6.8	4.4
15	18	94	99	60	55	93	503	461	166	37	5.5	2.0
16	17	83	92	59	57	83	479	394	207	97	5.5	1.2
17	16	152	68	56	63	82	421	479	266	273	5.2	1.6
18	15	116	63	52	63	76	288	568	234	209	4.1	4.8
19	14	138	57	51	61	100	209	843	197	181	3.5	7.3
20	14	211	54	50	60	149	168	968	179	132	2.5	7.8
21	13	121	54	50	58	181	162	882	152	62	2.2	4.8
22	12	86	54	48	52	181	219	911	149	40	7.8	3.5
23	12	86	54	49	50	202	358	950	147	32	29	3.0
24	13	181	53	52	50	219	443	746	147	27	10	2.2
25	12	151	132	54	49	224	345	720	138	23	6.0	2.0
26	10	108	181	53	48	274	231	713	132	19	4.1	1.8
27	9.5	99	122	52	49	252	179	707	129	17	3.2	1.4
28	9.1	90	102	54	50	247	158	688	132	15	2.5	.90
29	8.6	82	80	63	52	211	181	759	127	13	2.2	1.1
30	23	75	114	64	---	160	231	589	103	47	2.0	.89
31	51	---	119	70	---	154	---	537	---	55	1.8	---
TOTAL	1310.2	3093	2503	1983	1739	3974	7578	21043	6961	2002	287.1	62.27
MEAN	42.3	103	80.7	64.0	60.0	128	253	679	232	64.6	9.26	2.08
MAX	152	324	181	87	75	274	503	1060	665	273	45	7.8
MIN	8.6	27	53	48	48	52	119	229	103	13	1.8	.44
AC-FT	2600	6130	4960	3930	3450	7880	15030	41740	13810	3970	569	124

CAL YR 1983 TOTAL 98322.20 MEAN 398 MAX 1550 MIN 8.6 AC-FT 195000
WTR YR 1984 TOTAL 52535.57 MEAN 144 MAX 1060 MIN .44 AC-FT 104200

11228500 GRANITE CREEK NEAR CATTLE MOUNTAIN, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	19	42	30	23	33	64	664	124	12	3.5	.65
2	2.2	16	39	31	27	31	84	606	151	10	2.5	.65
3	2.5	17	37	32	25	27	134	558	151	10	2.0	.77
4	2.2	19	35	31	23	29	168	547	160	9.1	1.4	1.4
5	2.0	19	34	33	24	31	188	568	219	8.2	1.1	2.0
6	1.8	19	33	34	23	31	214	542	247	7.3	.65	2.0
7	1.6	27	33	36	30	33	266	447	239	6.0	.44	1.8
8	1.4	24	31	35	32	28	348	351	207	5.2	.29	1.8
9	1.2	52	31	38	34	26	384	317	186	4.4	.77	3.2
10	1.1	50	30	40	28	28	405	226	170	3.8	1.6	6.0
11	3.2	46	33	38	28	28	465	197	147	3.8	1.8	6.4
12	6.0	50	30	38	30	29	498	308	131	3.5	1.8	10
13	19	38	28	37	34	29	589	421	119	3.0	1.8	21
14	17	70	27	37	34	28	695	493	109	2.5	1.8	22
15	13	51	29	37	40	26	589	474	99	2.0	1.6	18
16	12	41	27	39	65	26	438	438	90	1.8	1.6	13
17	13	43	24	41	100	27	326	434	84	1.8	1.4	8.6
18	20	41	25	46	80	27	239	452	73	1.6	1.6	7.3
19	26	42	26	46	40	28	258	438	64	1.4	1.8	13
20	32	45	26	44	35	30	221	412	57	9.5	1.6	18
21	31	38	26	44	33	32	164	374	47	9.1	1.4	12
22	25	41	28	40	29	32	177	412	40	5.2	1.1	8.6
23	30	37	30	37	29	39	279	416	35	3.5	.90	6.4
24	28	34	33	37	31	41	326	416	29	2.7	.90	4.8
25	42	43	35	37	33	38	288	377	26	2.0	.90	3.8
26	48	46	33	38	37	30	234	317	22	1.8	.90	3.0
27	37	44	31	34	37	30	268	263	19	1.4	.90	5.2
28	26	39	31	33	37	28	374	216	17	26	.77	8.6
29	25	51	30	32	---	32	447	190	15	16	.77	7.3
30	26	46	29	31	---	40	558	151	13	9.1	.77	5.1
31	23	---	29	27	---	52	---	160	---	5.2	.65	---
TOTAL	520.0	1148	955	1133	1021	969	9688	12185	3090	188.9	41.01	222.37
MEAN	16.8	38.3	30.8	36.5	36.5	31.3	323	393	103	6.09	1.32	7.41
MAX	48	70	42	46	100	52	695	664	247	26	3.5	22
MIN	1.1	16	24	27	23	26	64	151	13	1.4	.29	.65
AC-FT	1030	2280	1890	2250	2030	1920	19220	24170	6130	375	81	441

CAL YR 1984 TOTAL 48262.37 MEAN 132 MAX 1060 MIN .44 AC-FT 95730
WTR YR 1985 TOTAL 31161.28 MEAN 85.4 MAX 695 MIN .29 AC-FT 61810

11229500 WARD TUNNEL INTAKE AT FLORENCE LAKE, CA

LOCATION.--Lat 37°16'27", long 118°58'23", in NW 1/4 sec.1, T.8 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse at entrance to tunnel.

PERIOD OF RECORD.--April 1925 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as Florence Lake tunnel at intake 1925-36 and as Ward tunnel at intake 1937-60.

REVISED RECORDS.--WSP 1515: 1931.

GAGE.--Water-stage recorder, concrete control, and Venturi meter. Datum of gage is 7,213.89 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--No estimated daily discharges. Records good. Ward tunnel diverts from Florence Lake, a reservoir on South Fork San Joaquin River, to Huntington Lake via Portal powerhouse and further used in Big Creek powerplants. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record (no discharge measurements) and rating table for Venturi meter were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--60 years, 282 ft^3/s, 204,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,990 ft^3/s, Apr. 30, 1926; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	469	442	124	181	75	78	133	221	1160	1150	798	398
2	724	554	115	158	74	88	125	225	1170	1160	487	396
3	689	531	108	149	73	91	124	357	1130	1010	408	395
4	635	564	105	145	72	93	133	466	698	1010	407	393
5	485	221	124	153	73	92	145	489	359	1010	345	392
6	404	81	130	152	74	98	141	497	512	865	339	391
7	402	85	122	142	73	105	146	514	691	507	353	390
8	401	88	119	131	72	112	185	564	394	550	353	389
9	398	71	120	116	77	119	161	635	98	700	352	388
10	396	60	126	109	80	124	186	697	96	610	352	387
11	393	90	138	102	82	129	222	751	96	516	345	386
12	389	100	137	93	87	119	228	803	96	516	344	386
13	388	103	143	91	90	118	266	853	338	746	343	385
14	387	107	147	80	90	153	346	906	843	706	343	384
15	384	112	144	80	98	147	425	933	911	581	343	383
16	381	104	136	82	103	118	472	940	908	634	343	383
17	419	66	127	72	95	117	471	828	907	844	343	381
18	486	83	116	68	95	107	417	756	845	1310	342	380
19	481	139	114	70	93	117	321	766	994	1400	343	380
20	533	260	100	66	88	152	268	785	1100	1090	344	379
21	503	196	88	69	89	195	237	808	1030	941	344	379
22	153	164	94	64	80	193	233	572	905	830	343	378
23	590	153	95	63	79	194	280	455	906	1100	343	378
24	621	222	147	66	79	209	402	474	905	806	343	377
25	431	245	475	63	72	212	425	487	906	630	343	266
26	580	207	466	61	69	230	349	498	938	502	342	261
27	565	184	348	59	72	218	287	507	1070	276	341	208
28	548	163	257	62	72	203	246	520	1150	227	341	308
29	530	144	223	66	73	190	227	583	1150	354	380	254
30	511	135	217	70	---	159	222	911	1180	402	398	294
31	482	---	217	74	---	153	---	1150	---	822	398	---
TOTAL	14758	5674	5122	2957	2349	4433	7823	19951	23486	23805	11543	10849
MEAN	476	189	165	95.4	81.0	143	261	644	783	768	372	362
MAX	724	564	475	181	103	230	472	1150	1180	1400	798	398
MIN	153	60	88	59	69	78	124	221	96	227	339	208
AC-FT	29270	11250	10160	5870	4660	8790	15520	39570	46580	47220	22900	21520

CAL YR 1983 TOTAL 103524 MEAN 284 MAX 1540 MIN 4.0 AC-FT 205300
WTR YR 1984 TOTAL 132750 MEAN 363 MAX 1400 MIN 59 AC-FT 263300

11229500 WARD TUNNEL INTAKE AT FLORENCE LAKE, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	489	173	682	65	44	87	164	264	490	477	429	333
2	486	302	670	64	47	87	212	239	514	508	448	332
3	383	685	658	64	45	75	251	385	545	506	474	333
4	252	698	646	64	41	73	274	344	489	504	471	333
5	251	348	669	64	41	67	293	336	498	475	469	305
6	250	343	708	64	41	66	364	346	391	460	466	289
7	250	548	705	68	40	67	429	354	280	458	487	288
8	249	372	697	72	41	67	376	393	222	457	497	286
9	248	308	683	74	41	70	250	467	208	456	469	286
10	215	307	672	73	46	73	269	488	253	455	454	287
11	178	383	681	66	58	73	284	536	330	455	375	287
12	154	290	680	58	61	69	297	501	359	453	280	284
13	123	584	674	55	62	70	311	461	303	452	391	281
14	124	344	687	54	63	69	298	402	290	451	468	279
15	124	290	483	53	67	70	259	337	325	450	465	279
16	125	222	153	53	71	69	268	345	356	448	404	278
17	153	322	101	58	84	68	325	353	372	520	322	276
18	199	321	98	63	85	70	496	278	400	556	322	275
19	132	322	100	69	85	69	534	292	416	515	322	307
20	97	310	103	73	82	71	572	305	418	492	320	322
21	98	613	94	76	68	78	578	308	470	491	319	319
22	40	696	89	73	70	79	592	263	520	442	187	316
23	9.2	685	86	64	68	86	555	145	548	393	302	314
24	9.2	676	83	59	68	100	550	99	591	391	298	310
25	8.9	673	79	55	73	102	566	101	528	390	312	308
26	8.9	302	78	57	79	92	590	164	478	389	343	305
27	9.2	306	77	54	85	83	583	197	508	389	342	303
28	9.2	308	73	49	88	89	531	287	329	387	340	302
29	9.1	468	69	48	---	102	505	366	141	386	338	299
30	8.9	692	68	48	---	114	471	452	398	386	336	293
31	8.9	---	66	45	---	130	---	490	---	415	335	---
TOTAL	4701.5	12891	11412	1902	1744	2485	12047	10298	11970	14007	11785	9009
MEAN	152	430	368	61.4	62.3	80.2	402	332	399	452	380	300
MAX	489	698	708	76	88	130	592	536	591	556	497	333
MIN	8.9	173	66	45	40	66	164	99	141	386	187	275
AC-FT	9330	25570	22640	3770	3460	4930	23900	20430	23740	27780	23380	17870

CAL YR 1984 TOTAL 136200.5 MEAN 372 MAX 1400 MIN 8.9 AC-FT 270200
WTR YR 1985 TOTAL 104251.5 MEAN 286 MAX 708 MIN 8.9 AC-FT 206800

11229600 FLORENCE LAKE NEAR BIG CREEK, CA

LOCATION.--Lat 37°16'26", long 118°58'23", in NW 1/4 sec.1, T.8 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse of Ward tunnel intake near dam on South Fork San Joaquin River, 16 mi northeast of town of Big Creek.

DRAINAGE AREA.--171 mi^2.

PERIOD OF RECORD.--November 1925 to current year. Prior to October 1931, published in WSP 721.

REVISED RECORDS.--WDR CA-78-3: 1977.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Lake is formed by multiple-arch concrete dam; storage began in April 1925. Usable capacity, 64,406 acre-ft between elevations 7,220.94 ft, throat of Venturi tube in Ward Tunnel intake and 7,327.50 ft, top of spillway drum gates, NGVD. Additional storage of 168 acre-ft is not available for diversion. Water is diverted through Ward tunnel to Huntington Lake via Portal powerhouse and used for further power development in Big Creek powerplants. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents at 2400 hours.

COOPERATION.--Records were provided by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 65,990 acre-ft, July 3, 1932, elevation, 7,329.14 ft; minimum occurred during period of no record, Oct. 2-4, 1926, or Nov. 30 to Dec. 2, 1927.
NOTE.--Prior to 1960, maximum and minimum daily contents were published. Maximum and minimum daily contents (water years 1926-39) summarized in WSP 881.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 63,590 acre-ft, June 23, elevation, 7,326.65 ft; minimum, 1,142 acre-ft, Feb. 7, elevation, 7,231.59 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

7,220.94	0	7,235	1,774	7,260	11,608	7,290	31,966
7,222	63	7,240	2,976	7,265	14,580	7,300	39,851
7,224	201	7,245	4,666	7,270	17,755	7,310	48,284
7,227	495	7,250	6,648	7,275	21,097	7,320	57,312
7,230	887	7,255	8,950	7,280	24,588	7,330	66,826

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44190	38910	17834	1171	1153	1212	1316	5768	40480	62395	49504	30225
2	43357	38450	16690	1171	1149	1205	1359	7046	40570	61938	48853	29625
3	42696	37129	15577	1171	1147	1198	1389	7998	40554	61492	48127	29051
4	42321	35845	14458	1170	1144	1195	1397	9136	40652	61046	47414	28509
5	41940	35233	13314	1170	1144	1185	1440	10385	41072	60687	46671	28015
6	41542	34716	12080	1175	1144	1178	1516	11586	42205	60328	45950	27566
7	41138	33705	10829	1180	1142	1181	1635	12695	43928	59988	45190	27098
8	40726	33079	9605	1181	1147	1187	1987	13404	45882	59668	44401	26610
9	40300	32602	8401	1185	1147	1190	2603	13759	47849	59330	43634	26096
10	39933	32135	7233	1178	1161	1190	3216	13820	49645	58992	42821	25576
11	39672	31548	6012	1171	1170	1190	3837	13657	51271	58664	42296	25109
12	39445	31085	4740	1161	1171	1190	4501	13663	52779	58299	41857	24645
13	39291	30165	3391	1159	1171	1188	5385	14074	54528	57889	41261	24205
14	39128	29699	2122	1156	1176	1187	6346	15088	56257	57461	40472	23745
15	38958	29304	1359	1158	1183	1185	7412	16420	57610	57006	39689	23267
16	38805	29043	1230	1163	1193	1183	8268	17729	58936	56525	38966	22785
17	38619	28554	1214	1168	1198	1183	8716	19067	60016	55925	38458	22276
18	38369	28066	1214	1176	1200	1187	8608	20743	61103	55290	37912	21784
19	38288	27537	1217	1181	1200	1185	8391	22505	61957	54785	37375	21234
20	38264	27077	1214	1188	1195	1192	8003	24113	62795	54409	36819	20641
21	38192	26081	1204	1188	1192	1195	7488	25511	63293	54034	36312	20040
22	38224	24902	1202	1181	1190	1198	6903	27237	63513	53659	36003	19455
23	38329	23781	1197	1173	1188	1210	6442	29476	63590	53324	35484	18855
24	38442	22771	1193	1170	1193	1225	6191	32112	63456	52943	34958	18266
25	38539	21702	1190	1166	1200	1217	5820	34568	63274	52563	34412	17671
26	38660	21358	1190	1164	1210	1207	5269	36533	63063	52248	33813	17081
27	38757	21083	1185	1159	1214	1190	4648	38104	62776	51915	33195	16497
28	38853	20777	1180	1158	1212	1216	4307	39234	62719	51557	32594	15924
29	38950	20093	1176	1156	---	1230	4262	39949	63063	51119	31981	15351
30	39031	19034	1176	1154	---	1250	4609	40251	62805	50682	31396	14766
31	39112	---	1173	1154	---	1275	---	40439	---	50122	30775	---
MAX	44190	38910	17834	1188	1214	1275	8716	40439	63590	62395	49504	30225
MIN	38192	19034	1173	1154	1142	1178	1316	5768	40480	50122	30775	14766
a	7299.09	7271.94	7231.77	7231.66	7232.00	7232.35	7244.84	7300.72	7325.83	7312.09	7288.43	7265.30
b	-5933	-20078	-17861	-19	+58	+63	+3334	+35830	+22366	-12683	-19347	-16009

CAL YR 1984 b -155
WTR YR 1985 b -30279

[a] Elevation, in feet NGVD, at end of month.
[b] Change in contents, in acre-feet.

11230215 SOUTH FORK SAN JOAQUIN RIVER BELOW HOOPER CREEK, NEAR FLORENCE LAKE, CA

LOCATION.--Lat 37°18'30", long 118°57'40", unsurveyed, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 0.2 mi downstream from Hooper Creek, 3.2 mi downstream from spillway of Florence Lake Dam, and 17 mi northeast of town of Big Creek.

DRAINAGE AREA.--184 mi^2.

PERIOD OF RECORD.--October 1978 to current year. October 1946 to September 1978, operated as a low-flow station only, in files of the Geological Survey.

GAGE.--Water-stage recorder, Parshall flume, and concrete control. Datum of gage is 6,949.41 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Estimated daily discharges: July 18 to Aug. 3, 1984, Dec. 14, 1984 to Jan. 10, 1985, and periods of ice effect, Jan. 18, 20, 1984, and Jan. 12-16, 23, 25, 27, Feb. 6, 10, and Mar. 8, 1985. Records good except estimated daily discharges, which are poor. Flow regulated by Florence Lake (station 11229600), 3.2 mi upstream, and Hooper Creek diversion dam (capacity less than 2 acre-ft), 0.7 mi upstream. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and 25 discharge measurements were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (combined flow of South Fork San Joaquin River and Ward Tunnel at Intake).--7 years, 452 ft^3/s, 327,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,950 ft^3/s, Sept. 26, 1982, gage height, 11.42 ft, from rating curve extended above 1,300 ft^3/s on basis of spill flow at Florence Lake; minimum daily, 3.9 ft^3/s, Oct. 24, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 38 ft^3/s, Apr. 3; minimum daily, 7.5 ft^3/s, Jan. 9.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum daily discharge, 141 ft^3/s, Dec. 25; minimum daily, 7.3 ft^3/s, Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	19	19	21	24	23	25	31	29	28	64	29
2	18	18	18	18	23	25	25	40	28	28	64	28
3	22	19	23	17	24	25	25	28	29	28	64	28
4	21	19	22	16	24	25	25	28	30	28	64	28
5	22	18	20	15	23	25	25	28	30	28	64	28
6	22	18	19	16	23	25	25	28	29	27	64	28
7	22	18	19	22	23	26	26	28	29	27	64	28
8	22	18	19	24	23	26	25	29	28	27	53	28
9	21	20	21	25	25	27	25	30	28	27	46	28
10	21	25	19	24	25	27	26	31	28	25	45	28
11	21	30	18	24	23	27	26	33	27	22	64	28
12	21	26	18	23	23	26	25	35	28	22	64	28
13	21	26	17	21	25	33	25	36	28	19	28	29
14	21	26	18	21	25	44	25	37	28	23	7.3	28
15	21	26	18	20	26	33	25	40	29	23	25	28
16	21	25	17	20	27	29	26	40	28	31	30	30
17	21	32	17	20	25	29	26	33	27	30	30	29
18	21	21	15	20	24	28	26	20	27	25	29	29
19	21	19	14	19	24	27	23	35	28	52	29	28
20	21	40	14	19	24	28	15	26	27	60	29	28
21	21	27	14	19	24	28	15	28	27	64	32	28
22	21	23	14	19	24	28	16	28	27	64	31	28
23	21	21	14	18	23	27	16	28	27	64	30	28
24	21	57	31	19	23	27	16	28	27	64	29	28
25	20	41	141	21	23	27	16	28	27	64	29	29
26	20	27	59	22	23	27	15	28	26	64	29	28
27	22	23	38	22	22	27	18	29	26	64	29	27
28	20	23	27	23	22	26	16	29	27	64	29	27
29	20	21	24	23	22	26	16	29	28	64	29	27
30	20	21	28	23	---	25	19	29	28	64	29	27
31	20	---	28	23	---	26	---	28	---	64	28	---
TOTAL	654	747	783	637	689	852	657	948	835	1284	1251.3	843
MEAN	21.1	24.9	25.3	20.5	23.8	27.5	21.9	30.6	27.8	41.4	40.4	28.1
MAX	27	57	141	25	27	44	26	40	30	64	64	30
MIN	18	18	14	15	22	23	15	20	26	19	7.3	27
AC-FT	1300	1480	1550	1260	1370	1690	1300	1880	1660	2550	2480	1670

CAL YR 1983 TOTAL 144635.0 MEAN 396 MAX 3310 MIN 14 AC-FT 286900
WTR YR 1984 TOTAL 10180.3 MEAN 27.8 MAX 141 MIN 7.3 AC-FT 20190

11230215 SOUTH FORK SAN JOAQUIN RIVER BELOW HOOPER CREEK, NEAR FLORENCE LAKE, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	17	15	14	16	23	35	23	22	25	23	22
2	16	16	15	14	17	22	37	24	23	24	23	21
3	20	16	15	14	16	20	38	25	24	24	23	22
4	20	16	15	13	16	20	37	25	23	24	23	23
5	20	16	16	14	16	20	37	24	22	24	23	22
6	20	16	19	14	15	20	36	25	23	24	23	22
7	20	16	19	14	17	20	30	25	26	24	23	22
8	20	17	19	8.0	18	20	29	27	26	24	23	22
9	20	16	19	7.5	18	20	27	28	26	24	23	22
10	20	16	19	11	17	20	26	28	25	24	23	23
11	20	16	19	13	17	21	26	28	25	24	22	25
12	20	16	19	13	18	20	25	27	26	24	22	24
13	20	18	18	14	18	21	25	27	26	24	23	23
14	19	16	16	15	18	21	26	27	26	26	24	23
15	19	15	17	17	18	21	26	26	26	23	24	23
16	21	15	15	17	19	21	26	26	26	23	24	23
17	21	15	12	17	20	21	26	26	26	24	24	23
18	21	15	12	18	21	22	25	24	26	24	24	23
19	22	15	13	18	21	22	24	22	26	24	24	23
20	21	15	13	19	21	23	24	23	26	26	24	22
21	21	15	13	19	20	23	24	24	26	25	23	22
22	21	15	13	19	20	24	23	24	26	24	23	21
23	21	14	13	19	21	25	23	24	26	23	23	22
24	21	15	14	19	22	25	22	24	26	23	22	22
25	20	15	15	19	22	25	22	24	25	24	22	22
26	18	14	15	19	23	24	21	24	25	24	22	21
27	18	15	15	19	23	24	21	25	25	24	22	21
28	18	16	15	19	23	24	21	24	25	23	22	21
29	18	15	15	18	---	23	20	23	25	23	22	21
30	18	16	14	19	---	24	20	22	25	23	22	21
31	17	---	14	18	---	29	---	22	---	22	21	---
TOTAL	615	468	481	491.5	531	688	802	770	753	741	709	667
MEAN	19.8	15.6	15.5	15.9	19.0	22.2	26.7	24.8	25.1	23.9	22.9	22.2
MAX	24	18	19	19	23	29	38	28	26	26	24	25
MIN	16	14	12	7.5	15	20	20	22	22	22	21	21
AC-FT	1220	928	954	975	1050	1360	1590	1530	1490	1470	1410	1320

CAL YR 1984 TOTAL 9560.3 MEAN 26.1 MAX 141 MIN 7.3 AC-FT 18960
WTR YR 1985 TOTAL 7716.5 MEAN 21.1 MAX 38 MIN 7.5 AC-FT 15310

11230500 BEAR CREEK NEAR LAKE THOMAS A. EDISON, CA

LOCATION.--Lat 37°20'18", long 118°58'23", in SW 1/4 sec.12, T.7 S., R.27 E., unsurveyed, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 0.2 mi upstream from diversion dam, 1.7 mi upstream from mouth, 2.1 mi south of Lake Thomas A. Edison, and 2.4 mi northeast of Mono Hot Springs.

DRAINAGE AREA.--52.5 mi^2.

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1954, published as "near Vermilion Valley."

REVISED RECORDS.--WSP 611: 1922(M). WSP 1345: 1931-35. WSP 1515: 1922-30. WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,366.94 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Estimated daily discharges: Dec. 2-5, 1983, Feb. 13 to Mar. 8, 1984, and periods of ice-affect, Dec. 14, Dec. 16 to Jan. 5, Jan. 8-9, 11-13, Jan. 23 to Feb. 16, Mar. 1-4, 8-10, 29-31, 1985. Records fair except for estimated daily discharges, which are poor. No storage or diversion above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and three discharge measurements were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--64 years, 93.5 ft^3/s, 67,740 acre-ft/yr

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,660 ft^3/s, Sept. 26, 1982, gage height, 8.35 ft, from rating curve extended above 570 ft^3/s; minimum daily recorded, 1.2 ft^3/s, Sept. 29 to Oct. 5, 1924.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 440 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 7	2300	*417	*5.01				

Minimum daily, 15 ft^3/s, Nov. 8.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 13	2045	814	5.72	July 18	2000	762	5.64
May 23	2145	*847	*5.77				

Minimum daily, 23 ft^3/s, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	28	36	41	32	28	43	64	477	311	150	46
2	82	27	34	41	30	30	41	82	417	310	117	43
3	74	26	32	38	29	32	43	131	369	319	104	40
4	67	26	43	36	30	32	49	149	421	315	95	38
5	62	25	47	38	31	33	45	138	372	279	89	38
6	56	24	41	40	31	35	43	146	295	218	81	38
7	54	28	38	40	31	38	51	197	238	214	77	38
8	53	26	36	39	30	40	63	276	219	215	76	37
9	49	25	35	37	30	43	47	308	215	195	76	36
10	45	26	40	36	30	46	69	341	228	172	78	36
11	41	40	40	34	34	45	71	435	219	164	76	59
12	39	43	43	35	32	38	78	494	224	163	72	51
13	37	38	42	32	32	38	99	557	219	156	67	47
14	35	34	40	33	33	43	126	517	225	155	73	48
15	34	33	40	33	36	41	153	341	225	180	90	43
16	33	32	38	29	47	37	154	282	230	226	99	40
17	32	37	36	29	37	36	129	290	266	293	88	43
18	31	43	36	32	30	36	94	304	291	463	80	44
19	30	50	34	30	29	42	80	423	280	401	75	47
20	30	50	32	30	28	58	70	525	289	294	72	48
21	29	48	37	27	28	66	65	575	286	245	69	44
22	28	45	37	28	27	61	72	610	292	222	72	40
23	27	43	36	27	27	63	101	649	300	266	71	37
24	27	47	38	24	27	68	125	639	299	187	65	34
25	26	47	77	24	26	66	109	593	302	156	57	31
26	25	60	61	25	25	78	78	604	304	140	51	29
27	24	50	62	26	25	64	66	608	327	128	47	28
28	24	45	56	25	26	62	61	617	339	122	46	26
29	24	42	48	29	27	59	58	603	352	113	50	25
30	29	38	47	30	---	49	61	595	348	147	52	23
31	30	---	45	32	---	47	---	537	---	193	49	---
TOTAL	1254	1126	1307	1000	880	1454	2344	12630	8868	6962	2364	1177
MEAN	40.5	37.5	42.2	32.3	30.3	46.9	78.1	407	296	225	76.3	39.2
MAX	82	60	77	41	47	78	154	649	477	463	150	59
MIN	24	24	32	24	25	28	41	64	215	113	46	23
AC-FT	2490	2230	2590	1980	1750	2880	4650	25050	17590	13810	4690	2330

CAL YR 1983 TOTAL 72192 MEAN 198 MAX 1060 MIN 24 AC-FT 143200
WTR YR 1984 TOTAL 41366 MEAN 113 MAX 649 MIN 23 AC-FT 82050

11230500 BEAR CREEK NEAR LAKE THOMAS A. EDISON, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	19	36	27	20	30	51	234	122	75	45	16
2	26	19	34	27	23	28	68	247	131	78	42	16
3	27	19	32	28	22	23	77	234	147	84	40	17
4	28	17	31	27	20	25	78	247	145	87	39	19
5	26	18	30	28	21	27	90	260	190	86	38	21
6	26	17	29	30	20	27	114	253	267	82	36	20
7	25	18	29	31	25	28	136	228	339	77	35	20
8	24	15	27	30	28	22	158	190	354	77	34	20
9	23	25	27	32	30	23	162	164	350	76	32	19
10	22	30	26	35	24	24	159	133	343	78	31	17
11	23	29	28	33	25	24	150	112	316	87	30	20
12	26	26	26	33	30	25	168	131	320	76	28	20
13	27	24	25	32	35	25	209	159	320	68	27	20
14	26	38	23	32	40	24	246	213	313	63	26	20
15	24	34	26	32	46	23	236	243	291	59	25	24
16	23	30	24	34	52	23	186	247	273	58	25	29
17	28	30	21	36	91	23	146	263	265	62	25	28
18	33	29	21	40	62	24	115	295	274	59	26	26
19	37	28	23	40	37	24	108	291	241	61	23	25
20	34	28	23	39	29	26	92	274	239	70	22	23
21	30	24	23	38	29	28	79	247	197	81	20	22
22	27	26	24	35	25	28	73	277	169	77	20	20
23	27	33	26	33	25	33	87	299	157	66	19	19
24	26	35	29	32	27	36	101	328	141	60	19	18
25	25	37	31	32	29	33	94	328	119	58	18	18
26	27	41	28	33	32	26	78	302	103	62	18	17
27	24	39	27	29	32	26	74	270	99	75	18	17
28	23	33	27	29	32	25	98	228	93	69	18	19
29	23	45	26	28	---	24	125	190	82	66	17	18
30	22	40	26	27	---	33	167	157	76	57	17	17
31	20	---	26	24	---	41	---	145	---	50	16	---
TOTAL	808	846	834	986	911	831	3725	7189	6476	2184	829	605
MEAN	26.1	28.2	26.9	31.8	32.5	26.8	124	232	216	70.5	26.7	20.2
MAX	37	45	36	40	91	41	246	328	354	87	45	29
MIN	20	15	21	24	20	22	51	112	76	50	16	16
AC-FT	1600	1680	1650	1960	1810	1650	7390	14260	12850	4330	1640	1200

CAL YR 1984 TOTAL 40167 MEAN 110 MAX 649 MIN 15 AC-FT 79670
WTR YR 1985 TOTAL 26224 MEAN 71.8 MAX 354 MIN 15 AC-FT 52020

11231000 LAKE THOMAS A. EDISON NEAR BIG CREEK, CA

LOCATION.--Lat 37°22'13", long 118°59'13", in sec.26, T.6 S., R.27 E., unsurveyed, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in outlet works of dam on Mono Creek at lower end of Vermillion Valley, 18.1 mi northeast of town of Big Creek.

DRAINAGE AREA.--90.0 mi^2.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Lake is formed by earthfill dam; dam completed and storage began on Oct. 12, 1954. Usable capacity, 125,035 acre-ft between elevations 7,508.9 ft, invert of outlet works and 7,642.50 ft, top of gates in service spillway, NGVD. Dead storage negligible. Water is released for diversion to Ward tunnel via Mono Creek diversion works. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records were provided by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 125,983 acre-ft, Sept. 26, 1982, elevation, 7,643.55 ft; minimum since appreciable storage was attained, 5,080 acre-ft, Mar. 27, 1969, elevation, 7,553.09 ft.
NOTE.--Prior to 1960, maximum and minimum daily contents were published.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 119,709 acre-ft, Dec. 12, elevation, 7,639.61 ft; minimum, 42,137 acre-ft, Apr. 3, elevation, 7,591.32 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

7,508.9	0	7,535	513	7,560	9,521	7,610	68,616
7,515	18	7,540	928	7,570	18,137	7,620	85,006
7,520	64	7,545	1,833	7,580	28,515	7,630	102,367
7,525	156	7,550	3,567	7,590	40,454	7,640	120,424
7,530	297	7,555	6,147	7,600	53,769	7,644	127,820

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118317	117202	119159	114796	89173	66373	42985	55039	78316	96817	100562	91050
2	118244	117202	119196	114378	88297	65616	42369	55808	78897	97044	100456	90497
3	118207	117238	119251	114033	87442	64836	42137	56536	79365	97307	100368	90118
4	118097	117275	119288	113161	86537	64057	42369	57299	79909	97518	100262	89688
5	118043	117293	119379	112275	85686	63302	42651	58136	80461	97763	100139	89259
6	117988	117348	119416	111479	84854	62608	43011	58953	81180	97992	100015	88812
7	117933	117366	119471	110685	84058	61935	43439	59728	82153	98185	99892	88383
8	117878	117476	119508	109802	83416	61220	43920	60391	83196	98378	99751	87904
9	117787	117476	119562	108903	82506	60450	44414	61041	84211	98571	99627	87425
10	117750	117549	119617	107898	81665	59699	44899	61503	85159	98799	99469	86946
11	117677	117640	119654	106984	80845	58938	45410	61965	86010	99098	99328	86537
12	117640	117695	119709	106071	80026	58151	45964	62442	87015	99310	99187	86112
13	117531	117842	119672	105179	79229	57328	46613	62970	87904	99504	99081	85703
14	117366	117896	119672	104305	78382	56521	47358	63664	88812	99680	98940	85261
15	117165	117933	119508	103398	77591	55751	48147	64439	89585	99839	98781	84854
16	117037	118006	118683	102545	76800	54954	48794	65187	90377	99980	98448	84431
17	116800	118043	118189	101694	75998	54164	49375	65972	91136	100139	98027	83957
18	116599	118116	117896	100809	75165	53378	49808	66899	91861	100262	97588	83551
19	116708	118152	117659	99909	74353	52541	50245	67756	92554	100421	97097	83095
20	116763	118171	117531	99010	73494	51753	50668	68663	93212	100650	96607	82624
21	116800	118244	117385	98114	72673	50968	50995	69516	93715	100863	96118	82170
22	116854	118317	117220	97237	71869	50190	51312	70386	94167	101004	95734	81715
23	116891	118390	117074	96345	71072	49415	51643	71375	94602	101022	95262	81263
24	116946	118554	116928	95472	70275	48673	52029	72416	94967	101004	94932	80812
25	116964	118573	116763	94602	69532	47947	52402	73413	95315	100951	94358	80344
26	117037	118646	116581	93784	68758	47278	52695	74402	95612	100933	93889	79893
27	117110	118866	116380	92918	67975	46573	53002	75345	95909	100916	93420	79511
28	117183	118976	116107	92034	67194	45858	53364	76129	96153	100916	92935	79079
29	117202	119031	115852	91171	---	45135	53811	76932	96380	100863	92485	78614
30	117202	119104	115579	90877	---	44388	54333	77459	96572	100792	92000	78134
31	117202	---	115233	89980	---	43686	---	77953	---	100703	91533	---
MAX	118317	119104	119709	114796	89173	66373	54333	77953	96572	101022	100562	91050
MIN	116599	117202	115233	89980	67194	43686	42137	55039	78316	96817	91533	78134
a	7638.24	7639.28	7637.16	7622.91	7609.09	7592.52	7600.40	7615.79	7626.71	7629.06	7623.81	7615.90
b	-1206	+1902	-3871	-25253	-22786	-23508	+10647	+23630	+18619	+4131	-9170	-13399

CAL YR 1984 b +22281
WTR YR 1985 b -40274

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.

11231500 MONO CREEK BELOW LAKE THOMAS A. EDISON, CA

LOCATION.--Lat 37°21'40", long 118°59'26", in SW 1/4 sec.35, T.6 S., R.27 E., unsurveyed, Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 0.6 mi upstream from diversion dam, 1 mi downstream from Lake Thomas A. Edison Dam, and 1.9 mi northeast of Mono Hot Springs.

DRAINAGE AREA.--92.5 mi^2.

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1954, published as "near Vermilion Valley."

REVISED RECORDS.--WSP 1011: 1943. WSP 1515: 1956.

GAGE.--Water-stage recorder. Elevation of gage is 7,400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 14-22 and Aug. 22. Records fair. Beginning Oct. 12, 1954, flow regulated by Lake Thomas A. Edison (station 11231000) 1 mi upstream. No diversion above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and two discharge measurements were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (adjusted for storage).--64 years, 162 ft^3/s, 117,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,160 ft^3/s, Sept. 26, 1982, gage height, 8.87 ft; minimum daily, 0.3 ft^3/s, Nov. 11, 12, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 478 ft^3/s, Jan. 31, gage height, 6.56 ft; minimum daily, 14 ft^3/s, Apr. 5, and several days during June.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 2,130 ft^3/s, July 18, gage height, 8.85 ft; minimum daily, 11 ft^3/s, Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	184	315	461	469	472	85	175	16	194	191	151
2	130	18	314	459	470	472	84	174	17	175	191	150
3	128	15	318	458	469	469	83	93	17	160	191	150
4	128	15	322	456	468	465	83	17	17	163	191	119
5	126	119	319	455	470	465	84	16	17	206	197	157
6	126	322	323	450	467	281	85	16	17	252	170	160
7	126	412	318	453	468	81	85	16	17	115	169	170
8	126	386	314	458	473	81	85	16	17	15	169	170
9	126	365	321	457	470	79	86	17	17	15	113	169
10	128	363	325	458	468	80	86	16	17	15	149	169
11	18	364	324	463	475	81	87	16	17	16	151	169
12	15	361	322	465	473	81	84	16	17	15	150	170
13	11	353	322	463	472	81	85	16	17	15	150	170
14	35	352	321	469	465	81	86	16	18	16	150	171
15	41	342	321	474	462	81	86	17	18	107	150	170
16	22	332	319	473	461	80	42	17	18	311	150	170
17	32	334	320	472	465	80	18	16	18	353	150	171
18	57	333	318	479	461	80	64	16	18	863	149	171
19	57	326	319	473	465	80	131	15	18	403	149	127
20	57	234	317	476	467	80	172	15	18	412	150	19
21	57	315	318	476	466	81	171	15	18	322	150	18
22	70	328	317	471	470	81	170	16	18	297	150	18
23	18	326	272	478	473	81	169	16	18	345	150	47
24	17	288	452	473	477	80	169	16	18	266	150	102
25	17	220	450	476	478	81	175	16	18	266	150	74
26	18	245	464	476	476	83	173	16	18	266	151	73
27	18	279	455	478	474	85	173	16	18	227	150	73
28	18	316	468	477	472	85	173	16	18	191	150	74
29	18	319	466	469	469	86	171	16	18	192	150	68
30	19	315	465	463	---	85	172	16	83	183	150	69
31	97	---	463	466	---	86	---	16	---	191	150	---
TOTAL	1986	8481	10982	14475	13613	4664	3417	891	591	6567	4881	3689
MEAN	64.1	283	354	467	469	150	114	28.7	19.7	212	157	123
MAX	130	412	468	479	478	472	175	175	83	863	197	171
MIN	11	15	272	450	461	79	18	15	16	15	113	18
AC-FT	3940	16820	21780	28710	27000	9250	6780	1770	1170	13030	9680	7320

CAL YR 1983 TOTAL 139506 MEAN 382 MAX 959 MIN 11 AC-FT 276700
WTR YR 1984 TOTAL 74237 MEAN 203 MAX 863 MIN 11 AC-FT 147200

11231500 MONO CREEK BELOW LAKE THOMAS A. EDISON, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	21	20	238	452	425	420	18	39	15	109	250
2	69	21	20	200	452	428	419	18	16	15	109	249
3	69	21	20	244	452	433	186	18	16	15	108	250
4	57	20	20	452	452	432	15	18	16	15	109	252
5	67	21	20	458	452	433	14	18	16	15	108	250
6	66	21	20	453	452	432	15	18	16	15	109	248
7	66	21	20	453	452	431	16	18	16	15	109	248
8	66	21	20	456	452	424	16	17	16	15	109	249
9	66	21	20	456	452	421	16	18	16	15	109	249
10	66	21	20	458	452	415	18	20	15	15	109	251
11	66	20	20	469	444	422	17	19	14	16	109	251
12	66	20	20	465	432	433	18	18	14	16	109	249
13	50	21	21	463	436	441	18	17	14	16	109	247
14	21	21	21	460	432	439	18	17	14	15	109	247
15	21	21	194	460	432	437	19	18	14	15	109	246
16	21	21	422	452	432	436	19	17	14	16	181	247
17	21	21	294	452	432	436	18	17	14	16	247	247
18	21	20	215	452	428	433	18	17	14	16	246	249
19	21	20	155	452	428	435	18	18	14	16	242	247
20	21	21	117	452	428	434	19	18	15	17	244	246
21	21	21	121	452	428	434	19	17	15	16	244	245
22	21	21	121	452	428	433	18	17	15	53	246	244
23	21	21	120	452	428	432	18	17	15	109	247	243
24	21	22	119	452	428	432	18	17	15	109	248	243
25	21	20	119	452	432	432	19	17	15	109	248	242
26	21	21	118	456	428	431	19	17	15	111	248	242
27	21	21	143	452	428	429	17	17	15	110	248	243
28	21	21	163	452	425	429	17	17	15	110	249	245
29	21	20	164	452	---	429	18	17	15	111	249	244
30	21	20	161	182	---	427	18	16	15	109	248	243
31	21	---	193	452	---	420	---	37	---	109	248	---
TOTAL	1221	623	3221	13151	12269	13348	1498	563	473	1365	5516	7406
MEAN	39.4	20.8	104	424	438	431	49.9	18.2	15.8	44.0	178	247
MAX	69	22	422	469	452	441	420	37	39	111	249	252
MIN	21	20	20	182	425	415	14	16	14	15	108	242
AC-FT	2420	1240	6390	26090	24340	26480	2970	1120	938	2710	10940	14690

CAL YR 1984 TOTAL 57853 MEAN 158 MAX 863 MIN 15 AC-FT 114800
WTR YR 1985 TOTAL 60654 MEAN 166 MAX 469 MIN 14 AC-FT 120300

11234700 MAMMOTH POOL RESERVOIR NEAR BIG CREEK, CA

LOCATION.--Lat 37°19'45", long 119°19'40", in SW 1/4 sec.10, T.7 S., R.24 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse of power tunnel intake near dam on San Joaquin River, 10 mi northwest of town of Big Creek.

DRAINAGE AREA.--995 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed by an earthfill dam; storage began Oct. 8, 1959. Usable capacity, 119,940 acre-ft between elevations 3,100.00 ft, invert of power tunnel and 3,330.00 ft, crest of spillway, NGVD. Additional storage of 2,780 acre-ft is not available for release. Water is diverted through tunnel for power development; water is returned to river 8.5 mi downstream from dam. See schematic diagram of San Joaquin River basin.

COOPERATION.--Records were provided by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 126,503 acre-ft, June 2, 3, 1969; maximum elevation, 3,335.86 ft, June 3, 1969; minimum contents since appreciable storage was attained, 2,956 acre-ft, Feb. 6, 1982, elevation, 3,128.81 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 100,909 acre-ft, June 22, elevation, 3,311.65 ft; minimum, 5,786 acre-ft, Mar. 20, elevation, 3,146.80 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

3,100	0	3,130	3,114	3,180	14,060	3,260	56,381
3,105	417	3,140	4,605	3,190	17,414	3,280	72,109
3,110	861	3,150	6,402	3,200	21,400	3,300	89,781
3,115	1,355	3,160	8,618	3,220	31,109	3,320	109,336
3,120	1,900	3,170	11,165	3,240	42,787	3,336	126,661

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45747	44498	33339	31358	15433	11138	6185	19148	77643	96967	93750	82717
2	44833	44023	33178	31023	15556	10357	6244	21336	80116	96690	93466	82367
3	44029	43524	33178	30868	16107	9397	6069	23160	80362	96517	93807	82268
4	43244	42914	33339	29821	15981	8909	6484	25932	80424	96623	94186	81964
5	42592	42297	33556	28521	15776	7691	6402	27654	80318	96488	93864	81713
6	41566	41660	33807	27192	15609	6592	6713	29858	81758	96240	93419	81365
7	40493	41170	33952	25961	15599	6587	7669	31272	83942	96345	93079	81125
8	39633	41083	34086	24704	15847	6567	9142	31396	86484	96192	92740	81445
9	38792	40511	34153	23377	16110	6650	11316	31478	88891	95954	92373	81116
10	38185	40047	34086	22082	16225	6946	12800	32219	90573	95849	92712	80777
11	38149	39354	33868	20684	16286	6882	14233	32423	91903	95753	93042	80442
12	38262	38611	33734	19251	16382	6713	15847	33957	93684	95629	92787	79966
13	38677	37469	33545	18004	16640	6882	18637	35418	94955	96259	92598	78994
14	39105	36887	33189	16786	16920	6244	21899	37707	96613	95935	92664	77927
15	39123	36227	33140	15998	17305	6546	24933	40285	97360	95772	92457	76654
16	39324	35486	32885	15041	17689	6608	26673	42065	98793	95534	91922	75301
17	39645	35287	31337	14992	18331	6587	27237	44190	99251	95220	91499	73677
18	39871	35560	31055	15018	18708	6443	26498	46640	100088	94803	90966	72009
19	40426	35974	31293	15169	18848	5917	25739	49440	100542	94594	90564	70280
20	40978	36466	31581	15389	19156	5786	24625	51964	100602	95211	89846	68588
21	41579	36935	31678	15234	18253	6925	22919	53899	100740	95868	89132	66783
22	41647	37030	31434	15369	17265	6988	21006	56126	100909	95553	88292	65094
23	41710	36947	31429	15290	16361	6925	19716	58766	100720	95106	87464	63593
24	42122	36781	31461	15195	15393	7010	19164	61549	100334	94784	86795	62456
25	42605	35589	31516	15506	14381	6443	18497	64583	99940	94395	85918	61138
26	43130	34874	31559	16215	13522	6484	17207	69259	99290	94167	85282	59692
27	43639	34359	31602	16772	12961	6546	16744	73618	98959	93883	84647	58369
28	43940	34393	31602	16330	11992	6546	16025	75113	99037	94594	84267	56942
29	44254	34047	31608	16049	---	6505	16066	75694	98394	94527	83852	55182
30	44498	33523	31494	15921	---	6505	16857	75566	97389	94385	83463	53977
31	44911	---	31402	15753	---	6443	---	75275	---	94177	83085	---
MAX	45747	44498	34153	31358	19156	11138	27237	75694	100909	96967	94186	82717
MIN	38149	33523	31055	14992	11992	5786	6069	19148	77643	93883	83085	53977
a	3243.32	3224.40	3220.54	3185.22	3172.98	3150.20	3188.45	3283.74	3308.05	3304.68	3292.67	3256.67
b	-1442	-11388	-2121	-15649	-3761	-5549	+10414	+58418	+22144	-3212	-11092	-29108

CAL YR 1984 b -59246
WTR YR 1985 b +7624

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.

11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA

LOCATION.--Lat 37°19'00", long 119°19'37", in NW 1/4 SW 1/4 sec.14, T.7 S., R.24 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 1,500 ft upstream from Shakeflat Creek, 4,900 ft downstream from Mammoth Pool Dam, and 10 mi northwest of town of Big Creek.

DRAINAGE AREA.--1,003 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 2,865.50 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Mammoth Pool Reservoir (station 11234700) 4,900 ft upstream. Flow partly regulated by Florence Lake (station 11229600), Lake Thomas A. Edison (station 11231000) and diversions through Ward tunnel (station 11229500), and through Mono-Bear conduit to Ward tunnel. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and six discharge measurements were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft^3/s, June 3, 1969, gage height, 18.38 ft; minimum daily, 0.3 ft^3/s, Oct. 14, Dec. 5, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33 ft^3/s, May 19, gage height, 0.94 ft; minimum daily, 4.2 ft^3/s, Mar. 26.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 2,780 ft^3/s, May 30, gage height, 9.40 ft; minimum daily, 4.9 ft^3/s, Dec. 10-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	20	12	13	14	13	12	28	1610	29	29	28
2	28	11	12	13	14	14	12	28	958	29	29	28
3	28	11	12	13	14	14	11	29	529	29	29	28
4	28	11	12	13	14	14	11	31	513	29	29	28
5	28	11	12	14	14	14	11	31	1440	29	29	28
6	28	11	12	14	14	14	11	34	718	29	29	29
7	28	11	12	14	14	14	12	36	108	29	29	29
8	28	11	12	14	14	14	12	37	61	29	22	29
9	28	11	6.6	14	14	13	12	38	35	29	24	29
10	28	12	4.9	14	14	14	19	38	28	29	29	29
11	28	12	4.9	9.6	14	15	28	32	28	29	29	29
12	28	11	4.9	14	14	13	28	29	28	29	29	29
13	29	11	4.9	14	14	12	28	29	28	29	29	29
14	29	11	11	14	14	12	29	30	28	29	29	29
15	29	11	13	14	14	12	29	31	28	29	29	29
16	29	11	13	14	14	12	28	30	28	29	29	29
17	29	11	13	14	14	12	28	28	28	29	29	29
18	29	11	13	14	14	12	27	28	28	29	29	26
19	29	11	13	14	14	12	28	28	27	29	29	29
20	28	11	13	14	14	12	27	28	28	29	29	26
21	27	12	13	15	14	12	27	28	31	29	47	28
22	27	12	13	15	14	12	27	29	29	29	52	28
23	27	12	13	15	14	12	27	29	27	29	73	28
24	27	12	13	15	14	12	27	29	28	29	73	28
25	27	12	13	15	14	12	27	29	27	29	73	28
26	29	12	13	14	14	12	27	29	28	29	73	28
27	30	12	13	14	13	12	27	44	27	29	48	28
28	30	12	13	14	13	12	27	61	29	29	28	28
29	30	12	13	14	13	12	27	295	29	29	28	28
30	30	12	13	14	---	12	27	2300	29	29	28	27
31	30	---	13	14	---	12	---	1870	---	29	28	---
TOTAL	881	351	354.2	430.6	403	394	673	5366	6563	899	1119	848
MEAN	28.4	11.7	11.4	13.9	13.9	12.7	22.4	173	219	29.0	36.1	28.3
MAX	30	20	13	15	14	15	29	2300	1610	29	73	29
MIN	27	11	4.9	9.6	13	12	11	28	27	29	22	26
AC-FT	1750	696	703	854	799	781	1330	10640	13020	1780	2220	1680

CAL YR 1983 TOTAL 736467.2 MEAN 2018 MAX 15500 MIN 4.9 AC-FT 1461000
WTR YR 1984 TOTAL 18281.8 MEAN 50 MAX 2300 MIN 4.9 AC-FT 36260

11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	28	11	11	12	13	11	29	32	29	29	31
2	27	19	11	11	12	13	11	29	32	29	29	31
3	27	11	11	11	12	13	11	25	32	29	29	31
4	28	11	11	10	12	13	11	21	29	29	29	31
5	28	11	11	10	12	13	11	28	29	29	29	31
6	28	11	11	10	12	13	11	28	29	29	29	31
7	28	11	11	10	12	13	11	28	29	29	29	32
8	28	11	11	10	12	13	11	28	29	29	29	32
9	28	11	11	10	7.7	13	11	28	30	29	26	32
10	28	11	11	10	4.4	13	11	28	30	29	31	32
11	28	11	11	10	4.4	13	12	28	30	29	31	32
12	28	11	11	10	4.4	13	12	28	29	29	31	32
13	28	11	10	10	4.4	12	12	28	29	29	31	32
14	28	11	11	10	4.4	12	18	29	29	29	31	32
15	28	11	11	10	8.1	12	29	29	29	29	31	32
16	28	11	11	11	13	12	29	29	29	29	31	32
17	28	11	11	11	13	12	29	28	29	29	31	32
18	28	11	11	11	13	12	29	30	29	29	31	32
19	28	11	11	11	13	12	29	33	29	29	31	32
20	28	11	11	11	13	12	29	29	29	29	31	32
21	28	11	11	11	13	12	29	29	29	29	31	32
22	28	10	11	11	13	12	29	28	29	29	31	32
23	28	11	11	11	13	12	29	29	29	29	31	32
24	28	11	11	11	13	12	29	29	29	29	31	31
25	28	11	11	11	13	11	29	30	29	29	31	31
26	28	11	11	11	13	4.2	29	31	29	29	31	31
27	28	11	11	11	13	7.7	29	31	29	29	31	31
28	28	11	11	11	13	11	29	32	29	29	31	31
29	28	11	11	11	---	11	29	32	29	29	31	31
30	28	11	11	11	---	11	29	32	29	29	31	31
31	28	---	11	11	---	11	---	32	---	29	31	---
TOTAL	866	354	340	329	302.8	366.9	628	898	882	899	940	947
MEAN	27.9	11.8	11.0	10.6	10.8	11.8	20.9	29.0	29.4	29.0	30.3	31.6
MAX	28	28	11	11	13	13	29	33	32	29	31	32
MIN	27	10	10	10	4.4	4.2	11	21	29	29	26	31
AC-FT	1720	702	674	653	601	728	1250	1780	1750	1780	1860	1880

CAL YR 1984	TOTAL	18255.6	MEAN	49.9	MAX	2300	MIN	9.6	AC-FT 36210
WTR YR 1985	TOTAL	7752.7	MEAN	21.2	MAX	33	MIN	4.2	AC-FT 15380

11235500 WARD TUNNEL OUTLET AT HUNTINGTON LAKE, CA

LOCATION.--Lat 37°15'25", long 119°09'38", in SE 1/4 SW 1/4 sec.5, T.8 S., R.26 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, at tunnel outlet at east end of Huntington Lake, 0.9 mi east of Lakeshore Post Office, and 6 mi northeast of Big Creek.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1960, published as Ward tunnel at outlet.

GAGE.--Pressure-differential recorder to record discharge through penstock. November 1927 to May 23, 1956, water-stage recorder at datum 6,999.00 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.). May 24, 1956, to Sept. 30, 1968, no recorder, see REMARKS below.

REMARKS.--No estimated daily discharges. Records fair. Daily discharge for the period May 24, 1956, to Sept. 30, 1968, computed as the sum of Ward tunnel at intake, Mono-Bear conduit, Camp Creek conduit, and corrected for change in contents of Portal Forebay. Tunnel diverts from Florence Lake to Huntington Lake via Portal powerhouse, receives diversions from Bear and Mono Creeks and at times from several other small tributaries of South Fork San Joaquin River. See record for station 11229500 Ward tunnel intake at Florence Lake.

COOPERATION.--Records were provided by Southern California Edison Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--58 years, 496 ft^3/s, 359,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,080 ft^3/s, June 21, 1935; no flow at times many years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	747	687	535	741	605	610	505	781	1380	1360	1110	792
2	932	630	490	703	591	636	587	760	1370	1380	909	798
3	898	579	492	703	598	641	532	913	1360	1310	843	789
4	833	607	494	694	606	641	552	909	1170	1320	845	784
5	685	406	526	671	606	650	610	921	964	1310	806	805
6	594	491	542	685	607	581	559	914	962	1260	816	812
7	600	470	527	690	608	198	587	975	949	985	828	845
8	600	538	494	666	608	294	582	1020	888	954	770	802
9	601	514	533	651	608	204	623	1010	607	1120	784	809
10	601	554	530	646	607	371	571	991	662	1180	833	814
11	513	506	549	647	612	172	733	902	592	1250	806	830
12	470	571	545	617	635	360	701	857	642	1240	812	818
13	450	546	575	627	624	245	753	799	833	1150	802	810
14	458	522	550	629	621	219	844	779	1140	1150	778	819
15	467	465	554	630	641	364	923	809	1170	1140	822	811
16	454	513	554	626	715	204	934	903	1180	1060	820	814
17	483	502	550	583	590	211	794	939	1180	1210	807	819
18	493	470	488	581	630	302	853	984	1190	1400	803	812
19	574	575	490	622	640	223	826	894	1230	1360	803	798
20	594	657	492	597	640	316	813	866	1280	1350	798	713
21	625	572	490	589	640	332	775	833	1220	1310	798	709
22	160	621	489	595	640	243	783	975	1180	1260	782	709
23	618	562	489	637	620	260	855	1050	1210	1370	782	702
24	680	598	539	606	612	318	940	1020	1390	1240	782	824
25	665	610	689	606	608	230	948	1120	1230	1110	782	632
26	631	546	651	606	607	345	903	1140	1130	1030	782	608
27	614	533	842	590	607	229	821	1120	1260	873	782	568
28	619	568	664	584	607	354	779	1210	1320	776	782	634
29	587	600	521	585	609	343	755	1240	1330	861	791	595
30	568	572	752	583	---	593	747	1300	1360	894	819	626
31	645	---	769	580	---	566	---	1370	---	1160	822	---
TOTAL	18459	16585	17405	19570	17942	11255	22188	30304	33379	36373	25299	22701
MEAN	595	553	561	631	619	363	740	978	1113	1173	816	757
MAX	932	687	842	741	715	650	948	1370	1390	1400	1110	845
MIN	160	406	488	580	590	172	505	760	592	776	770	568
AC-FT	36610	32900	34520	38820	35590	22320	44010	60110	66210	72150	50180	45030

CAL YR 1983	TOTAL	188624	MEAN	517	MAX	1600	MIN	0	AC-FT	374100
WTR YR 1984	TOTAL	271460	MEAN	742	MAX	1400	MIN	160	AC-FT	538400

11235500 WARD TUNNEL OUTLET AT HUNTINGTON LAKE, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	803	385	926	623	840	825	903	757	729	599	587	623
2	798	641	913	694	810	804	948	689	723	633	610	622
3	791	913	890	485	814	806	895	741	751	655	635	621
4	594	912	894	827	835	803	683	770	746	648	612	619
5	693	629	912	843	778	779	715	755	738	625	640	625
6	676	595	925	827	806	801	808	758	751	605	562	603
7	622	805	934	835	774	773	855	758	744	576	592	591
8	588	679	922	838	760	792	892	617	694	552	597	607
9	603	631	917	838	787	803	760	731	654	564	568	589
10	567	636	918	843	784	802	851	712	692	552	546	597
11	618	665	920	839	797	793	798	732	724	570	483	579
12	482	694	920	830	813	819	815	747	741	564	376	607
13	496	834	920	830	808	813	868	718	732	558	454	626
14	569	646	905	825	785	816	884	752	691	535	567	592
15	525	643	917	834	803	816	858	716	695	532	557	607
16	483	577	865	834	803	800	817	714	701	509	588	587
17	590	665	711	833	830	814	789	736	707	607	566	586
18	584	619	617	830	811	806	726	717	721	637	565	589
19	470	656	476	747	812	806	754	690	741	596	578	621
20	445	634	505	833	811	814	758	735	706	571	565	626
21	421	822	562	841	894	819	758	645	717	586	594	625
22	382	913	549	843	795	819	746	669	727	573	431	601
23	0	915	544	822	795	827	764	552	728	578	664	606
24	270	917	494	796	788	847	738	524	730	561	635	605
25	231	905	452	808	798	844	759	548	658	585	660	579
26	231	601	479	800	814	825	759	578	536	559	700	572
27	233	646	494	801	813	830	757	570	636	577	675	587
28	0	628	570	806	798	813	757	617	510	582	655	584
29	265	700	566	799	---	854	757	663	172	577	617	580
30	0	925	503	591	---	848	757	688	502	552	624	570
31	0	---	592	781	---	864	---	716	---	583	623	---
TOTAL	14030	21431	22712	24576	22556	25275	23929	21315	20297	18001	18126	18026
MEAN	453	714	733	793	806	815	798	688	677	581	585	601
MAX	803	925	934	843	894	864	948	770	751	655	700	626
MIN	0	385	452	485	760	773	683	524	172	509	376	570
AC-FT	27830	42510	45050	48750	44740	50130	47460	42280	40260	35700	35950	35750

CAL YR 1984 TOTAL 277184 MEAN 757 MAX 1400 MIN 0 AC-FT 549800
WTR YR 1985 TOTAL 250274 MEAN 686 MAX 948 MIN 0 AC-FT 496400

11236000 HUNTINGTON LAKE NEAR BIG CREEK, CA

LOCATION.--Lat 37°14'03", long 119°12'41", in SW 1/4 sec.14, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gate tower of dam 1 on Big Creek, 2 mi northeast of town of Big Creek.

DRAINAGE AREA.--80.5 mi^2.

PERIOD OF RECORD.--April 1913 to current year. Prior to October 1926, monthly contents only, published in WSP 1315-A; 1926-31, published in WSP 721.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.). Prior to June 19, 1920, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by four dams; storage began Apr. 11, 1913. Dams were raised in 1914 and again in 1917. Usable capacity, 89,166 acre-ft between elevations 6,819.90 ft, invert of outlet tunnel No. 1 and 6,950.00 ft, spillway crest at dam 1, NGVD. Additional storage of 600 acre-ft is not available for release. Huntington-Shaver conduit (station 11239000) has diverted water from Huntington Lake to Shaver Lake since Apr. 21, 1928. Water is used for power development in Big Creek powerplants. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records were provided by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 90,491 acre-ft, May 31, 1926, elevation, 6,950.92 ft; minimum 2,103 acre-ft, Nov. 6, 1937, elevation, 6,838.53 ft.
NOTE.--Prior to 1960, maximum and minimum daily contents were published. Maximum and minimum daily contents (water years 1913-39) were summarized in WSP 881.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 88,580 acre-ft, Dec. 19, elevation, 6,949.59 ft; minimum, 66,234 acre-ft, Mar. 18, elevation, 6,932.96 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

6,819.90	0	6,835	1,552	6,870	11,293	6,920	50,812
6,820	8	6,840	2,354	6,880	16,370	6,930	62,555
6,822	142	6,845	3,324	6,890	22,882	6,940	75,344
6,825	382	6,850	4,480	6,900	30,861	6,950	89,166
6,830	899	6,860	7,427	6,910	40,216	6,951	90,606

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84811	69360	85965	87310	84657	68426	71127	80377	85754	87452	86331	86743
2	84783	70131	86743	87552	84042	67891	71830	80720	85585	87495	86345	86757
3	84741	71621	87097	87452	83317	67358	72378	81160	85543	87566	86402	86757
4	84196	73006	87027	87651	82609	66814	72482	81683	85430	87608	86402	86814
5	83721	73809	86998	87808	81849	66398	72743	82207	85402	87622	86459	86842
6	83234	74350	87012	87993	81201	66423	73388	82734	85613	87594	86459	86814
7	82776	75624	87012	88222	80474	66473	74138	83150	85909	87537	86516	86785
8	82221	76572	87140	88365	80023	66423	75000	83345	86092	87466	86587	86743
9	81683	77433	87097	88437	79354	66511	75558	83497	86134	87395	86587	86658
10	81077	78201	87112	88322	78771	66473	76198	83456	86233	87324	86743	86629
11	80638	79001	87112	88165	78133	66423	76962	83372	86473	87282	86941	86615
12	79955	79818	87055	88122	77514	66410	77890	83469	86615	87197	86913	86658
13	79273	81119	87041	87993	76908	66360	79069	83609	86743	87126	86729	86686
14	78784	81849	86913	87779	76252	66347	80501	84098	86785	86998	86729	86629
15	78093	82540	87254	87608	75638	66322	81215	84615	86956	86870	86700	86615
16	77608	83039	88008	87452	75053	66284	81146	85134	86970	86700	86743	86572
17	77379	83303	88322	87381	74509	66259	80912	85627	87154	86700	86757	86501
18	77190	83511	88508	87254	73940	66234	80788	86120	87438	86771	86927	86416
19	76841	83805	88580	87225	73362	66625	80720	86501	87736	86743	86941	86473
20	76372	83916	88451	87154	72809	67257	80583	86899	87922	86743	86927	86530
21	75865	84308	88408	87097	72182	67878	80419	87069	87936	86785	86984	86558
22	75304	84182	88351	87083	71582	68528	80214	87296	87936	86757	86601	86558
23	74456	84070	88294	86984	71257	69091	80173	87296	88094	86700	86587	86572
24	73703	84140	88179	86771	70907	69181	80091	87211	88222	86672	86516	86572
25	73033	84056	87951	86615	70545	69283	80050	87097	88408	86615	86501	86544
26	72247	83553	87779	86530	70002	69450	79886	86913	88351	86601	86530	86459
27	71777	83805	87637	86374	69476	69656	79791	86658	88494	86558	86558	86431
28	71270	83986	87594	86176	68924	69758	79763	86431	88394	86558	86572	86431
29	70907	84294	87608	86007	---	69861	79804	86289	87637	86501	86615	86487
30	70079	85120	87466	85331	---	70157	80064	86092	87481	86416	86629	86431
31	69258	---	87452	85008	---	70584	---	85909	---	86360	86743	---
MAX	84811	85120	88580	88437	84657	70584	81215	87296	88494	87622	86984	86842
MIN	69258	69360	85965	85008	68924	66234	71127	80377	85402	86360	86331	86416
a	6935.34	6947.15	6948.80	6947.07	6935.08	6936.37	6943.50	6947.71	6948.82	6948.03	6948.30	6948.08
b	-15595	+15862	+2332	-2444	-16084	+1660	+9480	+5845	+1572	-1121	+383	-312

CAL YR 1984 b +2177
WTR YR 1985 b +1578

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.

11237500 PITMAN CREEK BELOW TAMARACK CREEK, CA

LOCATION.--Lat 37°11'54", long 119°12'48", in NW 1/4 NW 1/4 sec.35, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 250 ft upstream from Huntington-Shaver conduit tunnel, 0.8 mi downstream from confluence of Tamarack Creek and South Fork Tamarack Creek, 1.4 mi upstream from mouth, and 1.9 mi east of town of Big Creek.
DRAINAGE AREA.--22.9 mi^2.
PERIOD OF RECORD.--October 1927 to current year. Records for water year 1928 incomplete, yearly estimate published in WSP 1315-A.
REVISED RECORDS.--WSP 931: 1940. WSP 1315-A: 1944. WSP 1395: 1928-29, 1938. WSP 1515: 1929.
GAGE.--Water-stage recorder, Parshall flume, and concrete control. Elevation of gage is 7,005 ft above National Geodetic Vertical Datum of 1929, from Southern California Edison Co. contour map. Prior to Sept. 29, 1940, at site 10 ft downstream at same datum.
REMARKS.--Estimated daily discharges: Nov. 25-26, Dec. 25, Jan. 2, Mar. 20-21, Mar. 23, and Mar. 26-29. Records fair except for estimated daily discharges, which are poor. No diversion above station; practically all flow is diverted below station to Huntington-Shaver conduit. See schematic diagram of San Joaquin River basin.
COOPERATION.--Gage-height record and four discharge measurements were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.
AVERAGE DISCHARGE.--58 years, 41.9 ft^3/s. 30,360 acre-ft/yr.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft^3/s, Dec. 23, 1955, gage height, 11.20 ft, from rating curve extended above 1,100 ft^3/s, on basis of slope-area measurement at gage height 10.77 ft; no flow Oct. 15-18, 1931.
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)
Apr. 14	1930	*298	*5.85				

Minimum daily, 0.16 ft^3/s, Aug. 30.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 24	1600	387	6.23	Apr. 15	1900	281	5.77
Dec. 25	0545	*772	*7.37				

Minimum daily, 0.49 ft^3/s, Sept. 11, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	6.7	33	60	33	29	74	106	50	8.5	4.7	.77
2	14	8.0	31	54	33	31	66	135	42	8.0	3.5	.72
3	11	6.6	25	51	32	32	70	156	38	7.7	2.9	.67
4	9.2	5.9	33	51	32	33	76	160	48	7.3	2.5	.61
5	8.4	4.7	33	52	32	34	77	155	53	6.8	2.2	.58
6	7.8	4.3	30	50	34	36	77	153	40	6.4	2.0	.56
7	7.4	5.3	28	49	33	39	87	166	36	6.0	2.0	.55
8	7.3	6.1	27	45	33	42	88	182	32	5.7	1.9	.54
9	7.0	5.3	28	42	35	45	79	184	30	5.1	1.7	.51
10	6.9	5.5	29	41	26	50	144	184	28	4.7	1.6	.51
11	6.5	74	28	36	35	52	136	201	27	4.3	1.6	.49
12	6.1	30	30	38	33	46	142	203	25	3.9	1.5	.59
13	5.7	29	30	34	32	52	158	207	24	3.9	1.4	.67
14	5.8	21	29	38	32	49	178	175	24	4.3	1.3	.61
15	5.9	17	28	36	32	47	194	136	24	6.0	1.4	.53
16	5.8	15	27	35	32	51	190	114	23	8.9	1.8	.49
17	5.7	46	26	30	35	47	176	115	20	9.6	1.7	.53
18	5.7	36	26	33	33	50	140	116	18	11	1.4	.72
19	5.4	58	25	27	32	58	120	131	17	7.4	1.2	.63
20	4.8	102	24	27	32	72	111	135	16	9.5	1.1	.60
21	4.5	52	25	30	30	79	110	132	15	7.0	1.0	.64
22	4.4	38	24	28	30	83	127	126	15	6.7	1.5	.63
23	4.3	34	23	29	29	87	160	119	14	8.9	1.4	.59
24	4.3	144	35	29	28	92	178	112	13	7.0	1.2	.62
25	4.2	104	450	29	28	97	150	99	12	5.7	1.0	.60
26	4.0	70	186	29	29	103	117	95	11	4.3	1.0	.55
27	3.8	53	133	28	29	105	99	92	11	3.6	.87	.53
28	3.7	42	87	29	29	109	97	79	10	3.3	.78	.51
29	3.6	38	74	29	29	102	95	72	9.5	3.0	.74	.50
30	6.0	35	75	32	---	81	103	65	9.1	2.8	.72	.54
31	6.6	---	74	33	---	70	---	57	---	4.3	.76	---
TOTAL	203.8	1096.4	1756	1154	912	1903	3619	4162	734.6	191.6	50.37	17.59
MEAN	6.57	36.5	56.6	37.2	31.4	61.4	121	134	24.5	6.18	1.62	.59
MAX	18	144	450	60	35	109	194	207	53	11	4.7	.77
MIN	3.6	4.3	23	27	26	29	66	57	9.1	2.8	.72	.49
AC-FT	404	2170	3480	2290	1810	3770	7180	8260	1460	380	100	35

CAL YR 1983 TOTAL 42625.10 MEAN 117 MAX 847 MIN 3.6 AC-FT 84550
WTR YR 1984 TOTAL 15800.36 MEAN 43.2 MAX 450 MIN .49 AC-FT 31340

11237500 PITMAN CREEK BELOW TAMARACK CREEK, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	1.6	3.5	2.9	6.6	15	28	196	36	5.1	.85	.17
2	.75	1.6	3.2	2.9	6.6	16	34	188	38	4.6	.86	.17
3	.79	1.7	3.3	2.9	6.6	17	42	184	38	4.2	.77	.21
4	.77	1.6	3.2	3.0	6.6	17	52	174	34	3.8	.70	.32
5	.75	1.5	3.3	3.3	6.6	16	67	171	34	3.4	.62	.40
6	.74	1.7	3.3	3.8	6.6	16	89	168	32	3.2	.52	.46
7	.66	1.9	3.4	4.0	6.6	18	104	152	30	3.0	.49	.55
8	.59	2.2	3.4	4.2	6.6	19	119	138	28	2.7	.47	.56
9	.56	2.5	3.4	4.1	6.6	19	129	128	25	2.5	.47	.57
10	.56	2.3	3.4	4.1	6.6	18	138	107	23	2.6	.43	.57
11	1.8	2.5	3.6	4.1	6.6	16	145	95	20	2.5	.41	1.4
12	1.5	2.7	3.5	4.1	6.6	15	154	104	18	2.3	.41	1.5
13	1.1	2.6	3.4	4.1	6.6	14	173	115	17	2.2	.38	.92
14	.90	2.8	3.1	4.1	6.6	14	200	124	16	2.0	.37	.70
15	.79	3.1	3.0	4.1	6.6	13	185	122	14	1.8	.33	.57
16	1.1	3.1	3.2	4.4	6.6	13	159	117	13	1.9	.30	.53
17	1.9	2.9	2.8	4.7	6.6	14	129	112	12	2.1	.28	.51
18	1.6	3.0	2.7	5.4	6.6	16	105	111	11	1.8	.31	.87
19	2.9	3.0	3.7	6.4	6.9	15	109	107	10	1.6	.33	1.4
20	2.7	2.9	3.9	6.8	7.4	16	97	98	9.7	2.5	.32	.86
21	2.3	3.0	3.6	7.0	7.6	18	77	86	9.0	2.6	.29	.74
22	2.1	3.1	3.0	7.0	7.7	29	86	86	8.3	2.1	.27	.66
23	2.0	3.1	2.5	6.8	7.8	21	120	85	7.9	1.8	.25	.58
24	2.0	2.7	2.5	6.6	7.9	25	137	81	7.7	1.5	.23	.49
25	2.2	2.2	2.5	6.6	8.6	25	123	74	7.7	1.5	.21	.45
26	2.2	2.9	2.7	6.6	9.7	21	109	65	7.3	1.7	.20	.40
27	2.2	3.5	3.1	6.6	11	23	117	58	6.8	1.3	.18	.39
28	1.9	3.5	3.2	6.6	13	28	137	52	6.4	1.2	.18	.41
29	1.8	4.1	3.3	6.6	---	27	141	49	6.0	1.1	.17	.44
30	1.8	3.9	3.0	6.6	---	23	167	42	5.7	.94	.16	.45
31	1.8	---	3.0	6.6	---	24	---	39	---	.88	.17	---
TOTAL	45.56	79.2	98.7	157.0	206.4	581	3472	3428	531.5	72.42	11.93	18.25
MEAN	1.47	2.64	3.18	5.06	7.37	18.7	116	111	17.7	2.34	.38	.61
MAX	2.9	4.1	3.9	7.0	13	29	200	196	38	5.1	.86	1.5
MIN	.56	1.5	2.5	2.9	6.6	13	28	39	5.7	.88	.16	.17
AC-FT	90	157	196	311	409	1150	6890	6800	1050	144	24	36

CAL YR 1984 TOTAL 12967.62 MEAN 35.4 MAX 207 MIN .49 AC-FT 25720
WTR YR 1985 TOTAL 8701.96 MEAN 23.8 MAX 200 MIN .16 AC-FT 17260

11239000 HUNTINGTON-SHAVER CONDUIT OUTLET NEAR SHAVER LAKE, CA

LOCATION.--Lat 37°09'18", long 119°13'53", in NW 1/4 NW 1/4 sec.15, T.9 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank at tunnel outlet, 2.3 mi northeast of Shaver Lake, and 3.5 mi south of town of Big Creek.

PERIOD OF RECORD.--October 1928 to July 24, 1985 (discontinued). Monthly discharge only for October 1928, published in WSP 1315-A. Prior to October 1960, published as Huntington-Shaver conduit at outlet.

REVISED RECORDS.--WSP 931: 1940.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,680 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Conduit diverts from Huntington Lake to Shaver Lake with additions from Pitman Creek and seepage en route. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record was provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--56 years (Water years 1929-84), 230 ft^3/s, 166,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,780 ft^3/s, June 3, 4, 1938; no flow Oct. 19, 1978, July 1, 1981.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	37	104	411	351	527	192	245	1440	1280	783	2.4
2	375	37	102	398	349	527	190	272	1380	1170	117	2.4
3	372	36	97	393	348	527	194	301	1120	927	34	2.4
4	370	35	98	399	346	527	199	311	509	928	34	2.4
5	262	35	87	299	345	525	199	303	92	927	34	2.4
6	193	34	95	390	344	354	198	301	297	754	34	2.4
7	192	35	91	387	345	189	202	315	764	296	33	2.4
8	99	35	93	386	343	190	209	339	445	293	17	2.4
9	38	35	93	374	499	192	196	644	149	535	3.2	2.4
10	37	34	94	372	665	196	255	869	109	197	3.0	2.4
11	36	104	93	367	637	197	255	886	107	72	3.0	2.4
12	35	64	92	363	636	191	258	906	104	72	2.9	2.4
13	35	63	94	360	559	194	280	919	316	294	2.9	2.4
14	35	52	95	353	404	232	301	983	864	403	2.9	2.4
15	35	49	94	362	331	206	323	1280	959	456	2.9	2.4
16	35	22	93	366	331	193	318	1400	959	614	3.0	2.4
17	35	38	93	356	328	189	306	1120	957	1170	3.0	2.4
18	35	55	91	356	327	186	270	949	875	1330	3.0	2.4
19	35	77	92	357	325	193	249	967	1090	1040	2.9	2.4
20	36	144	86	357	325	207	235	981	1290	1200	2.8	2.4
21	35	71	182	357	324	213	237	1200	1160	1130	2.7	2.4
22	35	38	604	355	441	215	252	1410	723	916	2.9	2.4
23	35	51	445	355	543	218	288	1280	656	1080	3.1	2.4
24	35	164	73	353	540	222	317	1130	656	807	2.9	2.4
25	35	495	148	353	537	226	296	1120	656	613	2.8	2.4
26	34	706	413	352	534	230	254	1060	722	449	2.7	2.4
27	34	334	548	351	532	233	224	1020	852	213	2.7	2.4
28	34	62	481	351	530	236	218	1010	853	35	2.7	2.4
29	34	60	425	351	528	229	232	1000	920	34	2.5	2.4
30	35	82	424	351	---	214	241	1200	1150	34	2.4	2.4
31	36	---	423	351	---	207	---	1440	---	716	2.4	---
TOTAL	2908	3084	6043	11286	12647	8185	7388	27161	22174	19985	1151.3	72.0
MEAN	93.8	103	195	364	436	264	246	876	739	645	37.1	2.40
MAX	375	706	604	411	665	527	323	1440	1440	1330	783	2.4
MIN	34	22	73	299	324	186	190	245	92	34	2.4	2.4
AC-FT	5770	6120	11990	22390	25090	16230	14650	53870	43980	39640	2280	143

CAL YR 1983	TOTAL	142166.0	MEAN	389	MAX	1590	MIN	22	AC-FT 282000
WTR YR 1984	TOTAL	122084.3	MEAN	334	MAX	1440	MIN	2.4	AC-FT 242200

11237500 PITMAN CREEK BELOW TAMARACK CREEK, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	1.6	3.5	2.9	6.6	15	28	196	36	5.1	.85	.17
2	.75	1.6	3.2	2.9	6.6	16	34	188	38	4.6	.86	.17
3	.79	1.7	3.3	2.9	6.6	17	42	184	38	4.2	.77	.21
4	.77	1.6	3.2	3.0	6.6	17	52	174	34	3.8	.70	.32
5	.75	1.5	3.3	3.3	6.6	16	67	171	34	3.4	.62	.40
6	.74	1.7	3.3	3.8	6.6	16	89	168	32	3.2	.52	.46
7	.66	1.9	3.4	4.0	6.6	18	104	152	30	3.0	.49	.55
8	.59	2.2	3.4	4.2	6.6	19	119	138	28	2.7	.47	.56
9	.56	2.5	3.4	4.1	6.6	19	129	128	25	2.5	.47	.57
10	.56	2.3	3.4	4.1	6.6	18	138	107	23	2.6	.43	.57
11	1.8	2.5	3.6	4.1	6.6	16	145	95	20	2.5	.41	1.4
12	1.5	2.7	3.5	4.1	6.6	15	154	104	18	2.3	.41	1.5
13	1.1	2.6	3.4	4.1	6.6	14	173	115	17	2.2	.38	.92
14	.90	2.8	3.1	4.1	6.6	14	200	124	16	2.0	.37	.70
15	.79	3.1	3.0	4.1	6.6	13	185	122	14	1.8	.33	.57
16	1.1	3.1	3.2	4.4	6.6	13	159	117	13	1.9	.30	.53
17	1.9	2.9	2.8	4.7	6.6	14	129	112	12	2.1	.28	.51
18	1.6	3.0	2.7	5.4	6.6	16	105	111	11	1.8	.31	.87
19	2.9	3.0	3.7	6.4	6.9	15	109	107	10	1.6	.33	1.4
20	2.7	2.9	3.9	6.8	7.4	16	97	98	9.7	2.5	.32	.86
21	2.3	3.0	3.6	7.0	7.6	18	77	86	9.0	2.6	.29	.74
22	2.1	3.1	3.0	7.0	7.7	29	86	86	8.3	2.1	.27	.66
23	2.0	3.1	2.5	6.8	7.8	21	120	85	7.9	1.8	.25	.58
24	2.0	2.7	2.5	6.6	7.9	25	137	81	7.7	1.5	.23	.49
25	2.2	2.2	2.5	6.6	8.6	25	123	74	7.7	1.5	.21	.45
26	2.2	2.9	2.7	6.6	9.7	21	109	65	7.3	1.7	.20	.40
27	2.2	3.5	3.1	6.6	11	23	117	58	6.8	1.3	.18	.39
28	1.9	3.5	3.2	6.6	13	28	137	52	6.4	1.2	.18	.41
29	1.8	4.1	3.3	6.6	---	27	141	49	6.0	1.1	.17	.44
30	1.8	3.9	3.0	6.6	---	23	167	42	5.7	.94	.16	.45
31	1.8	---	3.0	6.6	---	24	---	39	---	.88	.17	---
TOTAL	45.56	79.2	98.7	157.0	206.4	581	3472	3428	531.5	72.42	11.93	18.25
MEAN	1.47	2.64	3.18	5.06	7.37	18.7	116	111	17.7	2.34	.38	.61
MAX	2.9	4.1	3.9	7.0	13	29	200	196	38	5.1	.86	1.5
MIN	.56	1.5	2.5	2.9	6.6	13	28	39	5.7	.88	.16	.17
AC-FT	90	157	196	311	409	1150	6890	6800	1050	144	24	36

CAL YR 1984 TOTAL 12967.62 MEAN 35.4 MAX 207 MIN .49 AC-FT 25720
WTR YR 1985 TOTAL 8701.96 MEAN 23.8 MAX 200 MIN .16 AC-FT 17260

11239000 HUNTINGTON-SHAVER CONDUIT OUTLET NEAR SHAVER LAKE, CA

LOCATION.--Lat 37°09'18", long 119°13'53", in NW 1/4 NW 1/4 sec.15, T.9 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank at tunnel outlet, 2.3 mi northeast of Shaver Lake, and 3.5 mi south of town of Big Creek.

PERIOD OF RECORD.--October 1928 to July 24, 1985 (discontinued). Monthly discharge only for October 1928, published in WSP 1315-A. Prior to October 1960, published as Huntington-Shaver conduit at outlet.

REVISED RECORDS.--WSP 931: 1940.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,680 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Conduit diverts from Huntington Lake to Shaver Lake with additions from Pitman Creek and seepage en route. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record was provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--56 years (Water years 1929-84), 230 ft^3/s, 166,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,780 ft^3/s, June 3, 4, 1938; no flow Oct. 19, 1978, July 1, 1981.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	37	104	411	351	527	192	245	1440	1280	783	2.4
2	375	37	102	398	349	527	190	272	1380	1170	117	2.4
3	372	36	97	393	348	527	194	301	1120	927	34	2.4
4	370	35	98	399	346	527	199	311	509	928	34	2.4
5	262	35	87	299	345	525	199	303	92	927	34	2.4
6	193	34	95	390	344	354	198	301	297	754	34	2.4
7	192	35	91	387	345	189	202	315	764	296	33	2.4
8	99	35	93	386	343	190	209	339	445	293	17	2.4
9	38	35	93	374	499	192	196	644	149	535	3.2	2.4
10	37	34	94	372	665	196	255	869	109	197	3.0	2.4
11	36	104	93	367	637	197	255	886	107	72	3.0	2.4
12	35	64	92	363	636	191	258	906	104	72	2.9	2.4
13	35	63	94	360	559	194	280	919	316	294	2.9	2.4
14	35	52	95	353	404	232	301	983	864	403	2.9	2.4
15	35	49	94	362	331	206	323	1280	959	456	2.9	2.4
16	35	22	93	366	331	193	318	1400	959	614	3.0	2.4
17	35	38	93	356	328	189	306	1120	957	1170	3.0	2.4
18	35	55	91	356	327	186	270	949	875	1330	3.0	2.4
19	35	77	92	357	325	193	249	967	1090	1040	2.9	2.4
20	36	144	86	357	325	207	235	981	1290	1200	2.8	2.4
21	35	71	182	357	324	213	237	1200	1160	1130	2.7	2.4
22	35	38	604	355	441	215	252	1410	723	916	2.9	2.4
23	35	51	445	355	543	218	288	1280	656	1080	3.1	2.4
24	35	164	73	353	540	222	317	1130	656	807	2.9	2.4
25	35	495	148	353	537	226	296	1120	656	613	2.8	2.4
26	34	706	413	352	534	230	254	1060	722	449	2.7	2.4
27	34	334	548	351	532	233	224	1020	852	213	2.7	2.4
28	34	62	481	351	530	236	218	1010	853	35	2.7	2.4
29	34	60	425	351	528	229	232	1000	920	34	2.5	2.4
30	35	82	424	351	---	214	241	1200	1150	34	2.4	2.4
31	36	---	423	351	---	207	---	1440	---	716	2.4	---
TOTAL	2908	3084	6043	11286	12647	8185	7388	27161	22174	19985	1151.3	72.0
MEAN	93.8	103	195	364	436	264	246	876	739	645	37.1	2.40
MAX	375	706	604	411	665	527	323	1440	1440	1330	783	2.4
MIN	34	22	73	299	324	186	190	245	92	34	2.4	2.4
AC-FT	5770	6120	11990	22390	25090	16230	14650	53870	43980	39640	2280	143

CAL YR 1983 TOTAL 142166.0 MEAN 389 MAX 1590 MIN 22 AC-FT 282000
WTR YR 1984 TOTAL 122084.3 MEAN 334 MAX 1440 MIN 2.4 AC-FT 242200

11239000 HUNTINGTON-SHAVER CONDUIT OUTLET NEAR SHAVER LAKE, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO JULY 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.2	68	32	150	311	49	750	444	4.0		
2	2.4	1.2	68	32	334	310	57	744	445	3.6		
3	2.4	1.2	285	50	334	307	65	740	446	3.4		
4	2.4	1.2	495	70	334	304	77	731	440	3.2		
5	2.4	1.2	494	91	334	206	93	730	358	3.1		
6	2.4	1.2	494	109	334	34	114	728	233	3.0		
7	2.4	1.2	494	109	334	33	127	710	181	2.9		
8	2.4	1.3	495	109	330	34	141	695	178	2.7		
9	2.4	1.4	495	109	330	34	150	684	175	2.5		
10	2.4	1.4	495	109	330	33	161	664	173	2.5		
11	2.4	1.5	495	109	328	33	168	654	170	2.5		
12	2.2	1.7	495	109	320	33	179	660	167	2.4		
13	1.4	1.4	495	109	320	33	197	670	166	2.2		
14	1.4	1.6	494	109	320	33	224	584	164	2.2		
15	1.4	1.7	325	109	318	33	453	520	163	2.1		
16	1.4	1.9	33	109	318	33	708	516	162	2.1		
17	1.4	1.8	33	109	317	35	676	513	161	2.2		
18	1.4	1.8	33	82	317	36	654	512	160	2.1		
19	1.4	1.8	33	74	316	36	657	510	159	2.1		
20	1.3	1.8	33	74	315	37	648	504	159	2.4		
21	1.3	146	33	74	314	40	632	496	158	2.7		
22	1.3	558	33	74	312	41	637	497	158	2.4		
23	.66	537	32	74	311	42	669	495	157	2.2		
24	.40	507	32	74	312	46	684	493	90	2.1		
25	1.1	507	32	74	312	46	670	487	22	---		
26	1.2	316	32	74	312	43	655	478	5.5	---		
27	1.3	67	32	74	312	40	663	470	5.0	---		
28	1.3	67	32	74	312	42	683	463	4.5	---		
29	1.2	67	32	74	---	43	688	459	4.3	---		
30	1.2	67	32	74	---	42	718	451	4.1	---		
31	1.2	---	32	74	---	44	---	446	---	---		
TOTAL	51.86	2868.5	6706	2627	8830	2417	12297	18054	5312.4	---		
MEAN	1.67	95.6	216	84.7	315	78.0	410	582	177	---		
MAX	2.4	558	495	109	334	311	718	750	446	---		
MIN	.40	1.2	32	32	150	33	49	446	4.1	---		
AC-FT	103	5690	13300	5210	17510	4790	24390	35810	10540	---		

CAL YR 1984 TOTAL 119675.66 MEAN 327 MAX 1440 MIN .40 AC-FT 237400

11239500 SHAVER LAKE NEAR BIG CREEK, CA

LOCATION.--Lat 37°08'40", long 119°18'08", in SE 1/4 sec.13, T.9 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, near center of dam on Stevenson Creek, 6 mi southwest of town of Big Creek.

DRAINAGE AREA.--29.1 mi^2.

PERIOD OF RECORD.--November 1909 to current year. Prior to January 1927, monthly contents only, published in WSP 1315-A, January 1927 to September 1931, published in WSP 721. Maximum and minimum daily contents (water years 1928-39) were summarized in WSP 881. Prior to 1960, maximum and minimum daily contents were published.

REVISED RECORDS.--WSP 1565: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.). Prior to Jan. 11, 1927, gage on rockfilled dam a short distance upstream at different datum.

REMARKS.--Storage began prior to 1905. Original lake formed by rockfilled dam, usable capacity, 5,500 acre-ft. Water diverted by Fresno Flume and Lumber Co.'s flumes Nos. 1 and 2 beginning prior to 1907 and discontinued July 7, 1920. Present lake formed by concrete-arch dam; dam completed Nov. 18, 1927. Usable capacity of present lake, 135,568 acre-ft between elevations 5,225 ft, trash-rack foundation and 5,370.13 ft, crest of spillway, NGVD. Additional storage of 92 acre-ft is not available for release. Water is received from Pitman Creek (since Feb. 22, 1928) and Huntington Lake (since Apr. 21, 1928) through Huntington-Shaver conduit and released for power development in Big Creek plants. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records were provided by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project. Contents not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 135,897 acre-ft, July 5, 1946, Aug. 4, 1978; maximum elevation, 5,370.28 ft, Aug. 4, 1978; minimum contents, 652 acre-ft, Mar. 7, 1942, elevation, 5,249.38 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 81,372 acre-ft, June 4, elevation, 5,342.72 ft; minimum, 38,755 acre-ft, Feb. 19, elevation, 5,313.65 ft.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum contents, 134,435 acre-ft, Oct. 1, elevation, 5,369.61 ft; minimum, 36,626 acre-ft, Apr. 9, elevation, 5,311.87 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

5,225	0	5,250	700	5,280	9,189	5,330	60,942
5,230	42	5,255	1,254	5,290	15,598	5,340	76,741
5,235	97	5,260	2,070	5,300	24,004	5,350	94,568
5,240	191	5,265	3,206	5,310	34,455	5,360	114,220
5,245	379	5,270	4,748	5,320	46,797	5,371	137,476

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134435	104995	83479	71616	59601	55681	41347	42743	96626	123715	127198	99927
2	134022	103913	82641	71342	59201	55594	40726	43381	99369	124872	126266	99099
3	133587	102838	82117	71085	58728	55493	40097	44046	101553	125505	125188	98310
4	133152	101786	81303	70827	58683	55377	39472	44706	102701	126139	124282	97411
5	132526	100680	80407	70312	58210	55290	38864	45354	102877	126752	123380	96263
6	131750	99638	79568	69992	57754	54873	38284	45996	103404	127134	122289	95254
7	130952	98560	78716	69754	57329	54132	37851	46666	104897	126794	121184	94115
8	129989	97507	77870	69420	56947	53465	37255	47376	105784	126076	120330	93152
9	128920	96416	77668	69182	57020	52793	36626	48713	106080	125991	119439	92009
10	127836	95501	77870	68737	57358	52151	36743	50411	106298	125231	118549	90873
11	126752	95120	77364	68343	57578	51505	37124	52164	106497	124177	117765	89733
12	125653	94247	76574	67967	57813	50874	37744	53975	106557	123149	116983	88598
13	124703	93360	75774	67669	58077	50846	38042	55811	106955	122498	116120	87417
14	123757	92382	74974	67121	57915	50683	38260	57783	108029	122414	115262	86446
15	122666	91357	74166	66733	57725	50288	38719	60182	109311	122414	114424	85246
16	121601	90284	73359	66378	57769	49812	38948	62837	110375	122645	113570	84096
17	120705	89824	72560	65976	57475	49499	39558	64933	111827	124093	112698	82938
18	119646	89053	71761	65559	57563	48957	39803	66363	112799	125738	111908	81942
19	118549	88398	70924	65131	57211	48415	40060	67967	114037	126667	111121	80752
20	117436	88144	70072	64704	56844	47861	40256	69754	115650	127857	110234	79620
21	116757	87290	69373	64277	56507	47322	40478	71989	117066	128877	109391	78494
22	115691	86338	69690	64079	56348	46771	40726	74611	117292	129497	108529	77348
23	114629	85460	69547	63639	56319	46206	40763	77129	117951	130460	107691	76174
24	113510	86589	69373	63215	56275	45615	41099	79296	118362	130888	106756	75057
25	112434	86786	70956	62776	56188	45082	41759	81338	118901	130952	105883	73919
26	111343	87254	71552	62308	56101	44589	42087	83130	119398	130674	105074	72788
27	110234	86984	72038	61858	56014	44085	41546	84769	120143	129904	104206	71664
28	109150	86105	72119	61407	55927	43573	41123	86625	120621	128749	103365	70537
29	108069	85193	72021	60972	55855	43048	41620	88543	121247	127687	102486	69420
30	106975	84344	71940	60525	---	42478	42162	90985	122331	126561	101611	68312
31	105903	---	71826	60063	---	41948	---	93775	---	126667	100719	---
MAX	134435	104995	83479	71616	59601	55681	42162	93775	122331	130952	127198	99927
MIN	105903	84344	69373	60063	55855	41948	36626	42743	96626	122414	100719	68312
a	5355.86	5344.42	5337.02	5329.41	5326.55	5316.24	5316.41	5349.58	5363.93	5365.99	5353.21	5334.82
b	-29206	-21559	-12518	-11763	-4208	-13907	+214	+51613	+28556	+4336	-25948	-32407

CAL YR 1983 b +52540
WTR YR 1984 b -66797

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.

11239500 SHAVER LAKE NEAR BIG CREEK, CA--Continued

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67199	43944	47673	49458	43598	44304	46259	66795	80286	77617	72772	59795
2	66347	43957	47390	49458	43112	45004	46337	68061	81165	77314	72380	59304
3	65513	43957	47565	49567	42592	45655	46521	69214	81321	77044	72331	58876
4	64689	43957	48117	49404	42074	46246	46534	70119	81372	77044	72315	58447
5	63866	43969	48700	49242	41533	46679	46639	71310	81131	76859	71793	58018
6	63245	43982	49282	49187	41012	46905	46679	72462	80821	76825	71294	57578
7	62610	44110	49866	49120	40825	47107	46731	73605	80665	76808	70843	57255
8	61753	44265	50343	48957	40887	47161	46758	74628	80993	76808	70247	57241
9	60868	44278	50901	48862	40751	47376	46851	75540	81338	76808	69706	56874
10	60033	44291	51547	48740	40577	47565	46945	75874	81165	76775	69706	56464
11	59216	44304	52192	48551	40354	47673	47120	76191	80907	76775	69675	56101
12	58358	44395	52807	48185	40121	47403	47282	76876	80614	76724	69198	55580
13	57549	44550	53325	47807	39901	47268	47430	77314	80441	76724	68705	54916
14	56786	44576	53890	47471	39705	47107	47821	77617	80303	76724	68171	54246
15	55754	44576	54246	47322	39509	47120	48415	77466	80012	76674	67669	53577
16	55030	44615	54018	47161	39325	47255	49798	77297	80012	76524	67152	52933
17	54189	44641	53676	47201	39130	47417	51121	77129	79705	76191	66656	52401
18	53297	44265	53437	46999	38973	47268	52289	77129	79534	75840	66193	51849
19	52387	43867	53255	46744	38755	46878	53437	77095	79432	75523	65683	51244
20	51190	43457	53003	46508	38900	46851	54602	77162	79091	75507	65147	50765
21	50071	43406	52709	46653	39178	46587	55768	77230	79040	75490	64643	50234
22	48889	44110	52387	46416	39668	46364	56859	77331	78835	75140	64049	49730
23	48740	45069	52068	46219	40305	46088	58004	77398	79091	74875	63442	49133
24	48401	46272	51739	46377	40987	46127	59156	77533	79074	74628	63064	48632
25	47794	47309	51423	46534	41658	46311	60346	77432	78818	74331	62564	48171
26	47174	47996	51107	46718	42301	46154	61452	78325	78477	74084	62143	47780
27	46548	48374	50792	46891	42984	46180	62098	79227	78156	73787	61738	47390
28	45904	48578	50452	47066	43637	46206	63230	79313	77954	73754	61332	47201
29	45315	48347	50180	46364	---	46167	64369	79722	77954	73490	60882	47013
30	44706	48104	49880	45393	---	46141	65497	79739	77937	73245	60421	46613
31	44072	---	49553	44382	---	46180	---	79466	---	73033	60197	---
MAX	67199	48578	54246	49567	43637	47673	65497	79739	81372	77617	72772	59795
MIN	44072	43406	47390	44382	38755	44304	46259	66795	77937	73033	60197	46613
a	5317.91	5320.97	5322.04	5318.15	5317.57	5319.53	5333.01	5341.61	5340.71	5337.76	5329.50	5319.86
b	-24240	+4032	+1449	-5171	-745	+2543	+19317	+13969	-1529	-4909	-12836	-13584

CAL YR 1984 b -22273
WTR YR 1985 b -21699

[a] Elevation, in feet NGVD, at end of month.
[b] Change in contents, in acre-feet.

11241950 REDINGER LAKE NEAR AUBERRY, CA

LOCATION.--Lat 37°08'42", long 119°26'58", in SW 1/4 sec.15, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on upstream face of dam No. 7 on San Joaquin River, 4.2 mi northeast of Auberry.

DRAINAGE AREA.--1,295 mi^2.

PERIOD OF RECORD.--November 1950 to current year. Prior to October 1965, monthend contents only, published in WSP 1930.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Lake is formed by a concrete dam; storage began Nov. 19, 1950. Usable capacity, 26,120 acre-ft between elevations 1,320.00 ft, invert of tunnel and 1,403.00 ft, top of radial gates, NGVD. Additional storage of 8,914 acre-ft is not available for release. Water is used for power development in Big Creek powerhouse No. 4. See schematic diagram of San Joaquin River basin. Figures given herein represent usable contents.

COOPERATION.--Records were provided by Southern California Edison Co. in connection with a Federal Energy Regulatory Commission Project. Contents not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 26,586 acre-ft, Aug. 5, 1978, elevation, 1,404.00 ft; minimum since appreciable storage was attained, 5,985 acre-ft, Nov. 22, 1981, elevation, 1,346.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,620 acre-ft, May 15, elevation, 1,401.92 ft; minimum, 14,499 acre-ft, Feb. 15, elevation, 1,374.69 ft.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum contents, 26,054 acre-ft, May 7, elevation, 1,402.86 ft; minimum, 16,142 acre-ft, Oct. 1, elevation, 1,379.17 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

1,320	0	1,330	2,014	1,355	8,196	1,380	16,455
1,322	384	1,335	3,116	1,360	9,651	1,385	18,396
1,324	778	1,340	4,282	1,365	11,203	1,390	20,427
1,326	1,180	1,345	5,515	1,370	12,858	1,400	24,748
1,328	1,592	1,350	6,809	1,375	14,610	1,405	27,058

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16142	24140	24820	24658	25069	25146	24198	25745	25520	25150	24947	24582
2	16844	23874	24784	24893	25055	25046	24502	25754	25123	25182	24988	24906
3	18080	23963	24087	24942	25319	25378	24020	25916	25301	25019	24969	24933
4	19932	24331	24412	24789	25791	25323	24497	25842	25584	25168	25119	25055
5	21579	24596	24461	24105	25796	25447	24448	25980	25671	25314	25001	25301
6	22806	25246	24434	23958	25773	25429	24960	25814	25611	25479	25024	25346
7	23777	24502	24247	23816	25726	25598	24569	26054	25424	25429	25073	25492
8	23954	24591	24251	23768	25447	25406	24100	25957	25415	25328	25305	25511
9	23980	25019	24345	23680	24893	25708	23963	25953	25442	25497	25096	25424
10	24614	25114	24564	24300	25055	25488	24807	25634	25273	25652	24933	25579
11	25497	24933	25101	24915	25150	25223	24875	25488	24997	25740	24829	25570
12	25397	24145	25620	25543	25200	24875	25015	25749	25291	25369	24367	25538
13	24875	23923	25374	25575	25337	24649	24969	25643	25415	25128	24605	25465
14	24947	23909	25675	25680	25561	25566	24969	25796	25488	24893	25137	25387
15	25042	23918	24291	25749	25611	25648	24969	25611	25506	24947	25028	25101
16	25051	23967	23759	25630	25856	25146	25310	25680	25273	25037	24233	25042
17	24807	24287	24025	25552	25662	24757	25497	25543	25291	25037	24636	25137
18	25101	24748	24105	25301	25474	24614	25101	25534	25328	25191	25177	25087
19	25246	24717	24176	24870	25497	24421	24929	25689	25273	24929	25218	25146
20	24924	24627	24180	24399	25529	24118	25064	25860	25060	25101	24906	25319
21	24582	24807	24247	23976	25534	23399	25209	25796	25630	25223	24875	25346
22	24951	25082	24158	24938	25465	24789	25223	25566	25675	25110	24875	25397
23	25227	25082	23535	23958	25255	25209	25073	25520	25369	25195	25168	24739
24	25860	25754	23438	23768	25186	25255	25273	25506	25763	25146	25246	24838
25	25722	24820	25823	24256	25264	25287	25410	25378	25433	24757	24974	24811
26	25768	24820	25976	24340	25237	25419	25378	24784	25447	25060	24861	24884
27	25782	24811	24425	24202	25078	25502	25078	24242	25415	25087	25055	24960
28	25607	24825	24114	24564	24997	25520	24951	23667	24969	24861	25223	25096
29	25369	24856	23878	24798	25146	25355	25515	23180	25301	25195	25010	25369
30	24924	24906	24198	25006	---	24762	25680	25579	25259	24811	25087	24394
31	24461	---	24448	25019	---	24300	---	25703	---	25273	25191	---
MAX	25860	25754	25976	25749	25856	25708	25680	26054	25763	25740	25305	25579
MIN	16142	23874	23438	23680	24893	23399	23963	23180	24969	24757	24233	24394
a	1399.36	1400.35	1399.33	1400.60	1400.88	1399.00	1402.05	1402.10	1401.13	1401.16	1400.98	1399.21
b	+10789	+445	-458	+571	+127	-846	+1380	+23	-444	+14	-82	-797

CAL YR 1983 b -237
WTR YR 1984 b +10722

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.

11241950 REDINGER LAKE NEAR AUBERRY, CA--Continued

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24385	24870	24893	24960	23228	24591	24502	25114	21566	24753	25246	25264
2	24412	24793	24929	24938	22676	24663	24681	25110	19425	25177	25223	25305
3	24256	24663	24866	24694	22014	24596	24893	25119	20473	25092	24866	25255
4	24965	24766	24847	24929	21252	24632	25301	25033	21911	25042	24708	25164
5	24658	24757	24825	24739	20727	24605	25223	24965	24114	25028	24924	25273
6	24573	24847	24866	24681	20163	24627	25191	25101	24784	25351	25060	25328
7	24403	24838	24992	24623	19389	24331	25232	25524	24649	25186	24992	25278
8	24363	24578	24938	24667	18771	24394	25209	25314	24358	25119	25227	25246
9	24242	23649	25006	24712	18108	24372	25141	25150	23715	25392	25406	25259
10	24452	23799	24915	24703	17419	24198	25150	25073	23963	25182	25092	25259
11	24997	23927	24870	24640	16844	24318	25060	25205	24331	25200	24681	25365
12	24856	24114	24780	24681	16478	23508	25046	25346	24448	25337	24992	25141
13	24546	23768	24780	24645	15850	24542	24965	25232	24573	24703	25214	25042
14	24965	24367	24676	24690	15175	24748	25110	25205	24269	24983	25010	25006
15	24820	24412	24906	24596	14499	24703	25337	25620	24798	25037	24938	25001
16	24825	24515	24789	24479	17481	24614	25392	25200	24605	24879	25024	24915
17	24947	24699	24735	24309	20303	24573	25360	25218	24237	25287	25082	24915
18	25001	24870	24511	24345	22750	24739	25282	25305	24264	25310	25073	25019
19	24640	24929	24506	24309	23337	24582	25218	25378	24109	25182	25078	25177
20	24965	24938	24506	24304	23592	24600	25132	25269	24717	24546	25042	25114
21	24573	24632	24690	24291	23945	23618	25024	24983	24762	24025	25337	25082
22	24694	24843	25051	24278	24511	23570	25064	24591	24811	24533	25310	25191
23	24537	24861	25001	24313	24600	23632	25055	24381	24524	24942	25282	25447
24	24403	24578	25001	24381	24807	23711	25182	23350	24591	25287	25310	25195
25	24712	24924	24997	24336	24820	24434	25218	23667	24667	25296	25296	25173
26	25042	25246	24942	24345	24171	24649	25296	22232	24838	25369	25296	25182
27	24434	24807	25037	24291	24390	25024	24902	20010	24748	25410	25296	25195
28	24542	24974	25042	24327	24614	24956	25019	21426	24555	24685	25333	25186
29	24614	25019	24969	24256	---	24685	25101	22641	24452	24938	25319	25205
30	24676	24997	25001	24167	---	24533	25205	22858	24502	25096	25310	24992
31	24775	---	24979	23790	---	24591	---	23544	---	25269	25296	---
MAX	25042	25246	25051	24960	24820	25024	25392	25620	24838	25410	25406	25447
MIN	24242	23649	24506	23790	14499	23508	24502	20010	19425	24025	24681	24915
a	1400.06	1400.55	1400.51	1397.85	1399.70	1399.65	1401.01	1397.29	1399.45	1401.15	1401.21	1400.54
b	+381	+222	-18	-1189	+824	-23	+614	-1661	+958	+767	+27	-304

CAL YR 1984 b +531
WTR YR 1985 b +598

[a] Elevation, in feet NGVD, at end of month.
[b] Change in contents, in acre-feet.

11242000 SAN JOAQUIN RIVER ABOVE WILLOW CREEK, NEAR AUBERRY, CA

LOCATION.--Lat 37°08'40", long 119°27'13", in SW 1/4 SW 1/4 sec.15, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 1,000 ft downstream from Redinger Lake Dam, 0.4 mi upstream from Willow Creek, and 4.2 mi northeast of Auberry.

DRAINAGE AREA.--1,295 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,175.54 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by nine powerplants and six reservoirs with combined capacity of about 559,900 acre-ft. Conduit to powerhouse No. 4 diverts 1,000 ft above station. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and nine discharge measurements were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--34 years, 489 ft^3/s, 354,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,200 ft^3/s, Dec. 23, 1955, gage height, 54.2 ft, from floodmarks, from rating curve extended above 7,000 ft^3/s, on basis of computed flow over dam; no flow Sept. 25, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 53 ft^3/s, Sept. 23, gage height, 4.67 ft; minimum daily, 2.9 ft^3/s, Nov. 30.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 5,340 ft^3/s, Dec. 25, gage height, 14.74 ft; minimum daily, 3.1 ft^3/s, for several days in October, February, and April.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	15	4.3	3.3	5.7	6.3	6.1	3.2	1240	14	16	20
2	3.4	15	4.3	3.4	5.7	6.3	6.0	3.2	770	14	15	20
3	6.2	14	5.0	3.4	4.9	6.3	4.9	3.2	32	14	15	20
4	10	14	5.0	3.7	3.1	6.3	3.2	724	11	13	15	20
5	3.7	14	5.2	3.8	3.1	6.3	3.3	1200	863	13	15	19
6	3.2	14	5.1	3.8	3.1	6.3	3.4	1340	201	13	15	17
7	3.1	14	5.2	4.0	3.1	6.3	3.4	1190	9.1	13	15	17
8	3.1	14	5.1	4.0	3.1	6.3	3.3	1340	9.1	13	15	17
9	3.8	14	5.2	12	3.1	6.3	3.3	1340	9.1	13	15	17
10	3.1	16	5.4	15	3.1	6.3	3.3	523	12	14	15	17
11	3.1	12	6.2	10	3.1	6.3	3.3	3.4	12	14	15	17
12	3.1	5.1	5.8	10	3.1	6.3	3.3	3.4	11	14	15	17
13	3.1	5.0	5.8	11	3.1	6.5	3.2	3.4	11	14	15	17
14	6.3	5.0	5.6	10	3.1	6.2	3.2	3.4	11	14	15	17
15	10	5.1	5.6	11	5.4	6.3	3.2	3.4	11	14	15	17
16	11	6.3	5.6	11	7.8	6.3	3.2	3.4	11	15	15	17
17	11	7.6	5.8	10	6.3	6.3	3.2	3.6	11	15	15	17
18	8.9	13	5.9	10	6.7	6.3	3.2	4.7	13	15	15	17
19	6.0	13	5.8	10	6.7	6.3	3.3	6.7	14	15	15	16
20	4.3	7.3	5.9	10	6.8	6.3	3.2	6.5	14	15	16	16
21	9.2	5.0	5.8	10	6.8	6.1	3.2	6.6	14	15	17	12
22	11	4.8	5.8	10	6.9	5.9	3.2	6.6	14	15	17	14
23	11	4.6	5.6	10	6.8	5.9	3.2	7.2	14	15	17	15
24	12	5.2	5.8	6.5	6.3	5.9	3.2	7.6	14	16	18	16
25	12	4.6	836	6.3	6.3	5.9	3.2	7.6	14	16	20	14
26	14	4.6	1730	5.7	6.3	5.9	3.2	8.4	15	16	20	14
27	16	4.5	765	5.7	6.3	6.0	3.1	8.8	15	16	20	15
28	16	4.5	4.0	5.6	6.3	6.0	3.1	9.5	15	16	20	16
29	16	4.3	3.3	5.6	6.3	6.0	3.1	19	15	16	20	17
30	16	4.3	3.4	5.6	---	6.0	3.2	517	14	16	20	17
31	16	---	3.4	5.6	---	6.1	---	1300	---	16	20	---
TOTAL	259.0	269.8	3475.9	236.0	148.4	191.8	104.2	9606.8	3419.3	452	511	502
MEAN	8.35	8.99	112	7.61	5.12	6.19	3.47	310	114	14.6	16.5	16.7
MAX	16	16	1730	15	7.8	6.5	6.1	1340	1240	16	20	20
MIN	3.1	4.3	3.3	3.3	3.1	5.9	3.1	3.2	9.1	13	15	12
AC-FT	514	535	6890	468	294	380	207	19060	6780	897	1010	996

CAL YR 1983	TOTAL	973195.9	MEAN	2392	MAX	15100	MIN	3.1	AC-FT 1732000
WTR YR 1984	TOTAL	19176.2	MEAN	52.4	MAX	1730	MIN	3.1	AC-FT 38040

11242000 SAN JOAQUIN RIVER ABOVE WILLOW CREEK, NEAR AUBERRY, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	10	5.9	13	13	7.8	3.7	4.3	13	16	22	22
2	15	10	6.6	13	12	6.1	3.4	4.3	13	16	22	22
3	14	10	7.4	13	12	7.1	3.7	4.3	11	16	22	22
4	15	10	7.6	13	11	8.7	3.4	4.1	12	16	22	22
5	16	10	8.1	13	14	8.9	3.3	4.1	12	16	22	22
6	16	10	8.9	13	13	9.3	3.7	4.1	13	16	22	22
7	16	11	9.7	11	13	8.3	4.0	4.4	13	16	22	22
8	16	12	9.8	5.0	9.9	8.4	4.0	4.6	14	16	22	22
9	16	11	9.8	9.1	3.2	8.3	4.5	6.2	14	17	22	22
10	16	5.2	10	10	3.3	8.2	4.4	6.4	14	18	22	22
11	17	9.3	8.1	11	4.9	5.2	4.3	5.3	14	20	22	22
12	17	10	7.1	11	8.7	7.1	4.3	8.1	14	20	22	22
13	17	6.1	7.4	15	9.2	8.2	4.3	7.0	15	19	22	22
14	17	3.1	8.7	12	9.7	7.6	4.0	8.1	15	21	22	21
15	17	4.9	9.6	12	9.9	6.7	3.7	9.2	15	21	22	19
16	17	8.3	12	12	10	7.1	3.9	9.6	16	21	22	19
17	13	11	13	12	10	4.3	4.3	9.6	16	21	22	18
18	12	11	12	12	10	4.3	4.1	9.6	16	21	22	15
19	14	11	11	12	9.7	4.1	4.1	9.6	16	21	22	17
20	15	11	10	12	7.8	3.8	4.1	9.6	17	21	22	16
21	15	9.7	9.6	12	8.2	3.4	4.1	9.6	16	21	22	17
22	15	8.7	11	12	8.9	3.3	4.1	11	16	21	22	17
23	16	9.0	12	12	8.9	3.3	4.1	12	16	21	22	20
24	16	11	12	12	9.1	4.2	4.2	12	16	21	22	19
25	16	4.0	12	13	9.2	4.5	3.6	12	16	21	22	19
26	16	8.0	12	13	8.3	4.5	4.0	12	16	22	22	20
27	15	9.2	12	13	7.3	3.4	4.3	13	16	22	22	20
28	15	6.0	12	13	6.8	3.7	4.3	13	16	22	22	20
29	15	3.0	13	13	---	3.7	4.3	13	16	22	22	20
30	15	2.9	13	13	---	3.7	4.3	13	16	22	22	19
31	12	---	13	13	---	3.7	---	13	---	22	22	---
TOTAL	479	256.4	314.3	373.1	261.0	180.9	120.5	266.1	443	606	682	602
MEAN	15.5	8.55	10.1	12.0	9.32	5.84	4.02	8.58	14.8	19.5	22.0	20.1
MAX	17	12	13	15	14	9.3	4.5	13	17	22	22	22
MIN	12	2.9	5.9	5.0	3.2	3.3	3.3	4.1	11	16	22	15
AC-FT	950	509	623	740	518	359	239	528	879	1200	1350	1190

CAL YR 1984 TOTAL 16221.2 MEAN 44.3 MAX 1340 MIN 2.9 AC-FT 32170
WTR YR 1985 TOTAL 4584.3 MEAN 12.6 MAX 22 MIN 2.9 AC-FT 9090

11242400 NORTH FORK WILLOW CREEK NEAR SUGAR PINE, CA

LOCATION.--Lat 37°23'52", long 119°33'55", in SW 1/4 NE 1/4 sec.21, T.6 S., R.22 E., Madera County, Hydrologic Unit 18040006, on right bank at road bridge 0.6 mi downstream from Soquel Campground, 3.0 mi upstream from Chilkoot Creek, and 4.7 mi southeast of Sugar Pine.

DRAINAGE AREA.--16.9 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 5,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good, except for periods of ice-effect, which are fair and not adjusted. No storage above station.

AVERAGE DISCHARGE.--20 years, 27.3 ft^3/s, 19,780 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,750 ft^3/s, Jan. 13, 1980, gage height, 7.41 ft, from rating curve extended above 300 ft^3/s on basis of a step-backwater survey; minimum daily, 0.29 ft^3/s, Sept. 11, Oct. 3-5, 12-17, 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)
Nov. 28	0015	*132	*3.92	Apr. 14	1845	102	3.82

Minimum daily, 1.8 ft^3/s, Aug. 29 to Sept. 2.

REVISIONS.--The peak discharges and annual maximum (*) reported for water years 1983 and 1984 have been revised as shown in the following table. They supersede figures published in the reports for 1983 and 1984.

Water Year	Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Water Year	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
1983	Oct. 26	0400	297	4.32	1983	May 29	2045	386	4.48
1983	Nov. 18	2200	369	4.45	1983	June 16	2000	314	4.35
1983	Dec. 22	1645	*796	*5.05	1984	Nov. 24	1515	*600	*4.80
1983	Mar. 1	0315	330	4.38	1984	Dec. 25	1615	454	4.59
1983	Mar. 13	1615	386	4.48					

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	6.0	14	9.4	9.9	18	26	73	31	8.1	3.4	1.8
2	3.6	5.7	12	8.8	12	18	34	75	34	7.9	3.4	1.8
3	4.0	6.8	12	8.7	9.4	18	43	75	34	7.5	3.3	4.6
4	3.6	6.1	12	8.6	11	15	49	74	31	7.3	3.2	5.7
5	3.6	5.7	12	8.6	10	14	51	74	30	7.5	2.9	5.5
6	3.6	6.6	11	10	9.3	19	54	74	29	7.3	2.8	4.5
7	3.6	7.2	11	14	8.7	22	58	69	28	7.2	2.8	4.5
8	3.2	17	11	11	22	18	62	63	26	6.7	3.0	4.5
9	3.2	12	10	10	45	16	64	59	24	6.3	3.8	8.9
10	3.2	11	12	10	21	17	65	52	23	6.3	3.7	7.0
11	10	12	12	9.8	14	18	65	48	21	6.3	3.5	5.7
12	6.4	12	12	9.7	12	17	68	47	20	5.8	3.4	5.1
13	5.3	24	9.9	9.4	11	17	75	50	19	5.6	3.4	4.4
14	4.5	14	10	9.5	12	18	84	55	19	5.2	3.3	3.6
15	4.5	11	12	9.4	12	19	79	55	18	4.7	3.0	3.2
16	7.8	14	21	9.4	13	20	70	55	17	4.7	2.7	3.2
17	20	12	12	9.6	14	21	70	55	16	4.7	3.0	3.2
18	8.6	12	12	10	15	20	55	55	15	4.3	3.6	4.2
19	11	11	13	11	15	19	51	55	14	4.2	3.2	5.5
20	8.4	10	11	12	14	21	47	52	14	4.8	2.7	4.3
21	7.4	11	10	12	15	22	44	48	13	4.6	2.5	3.5
22	6.9	9.9	9.4	11	15	21	42	49	12	4.2	2.5	3.2
23	6.8	9.7	9.4	10	15	22	42	49	12	4.1	2.3	3.2
24	6.7	19	9.4	10	16	23	46	48	11	4.0	2.3	3.1
25	6.7	15	9.4	9.8	16	22	46	46	11	3.9	2.0	2.8
26	6.5	12	8.8	9.7	17	21	45	43	10	3.6	2.0	2.8
27	6.5	22	8.8	9.5	17	40	49	41	9.5	3.3	2.0	2.8
28	6.1	50	8.2	9.3	18	44	53	38	9.0	5.6	1.9	3.1
29	6.1	20	8.8	9.8	---	34	56	36	8.7	3.6	1.8	3.2
30	6.1	16	8.2	9.3	---	25	64	33	8.3	3.4	1.8	3.2
31	6.1	---	8.8	10	---	24	---	31	---	3.4	1.8	---
TOTAL	193.6	400.7	341.1	309.3	419.3	663	1657	1677	567.5	166.1	87.0	122.1
MEAN	6.25	13.4	11.0	9.98	15.0	21.4	55.2	54.1	18.9	5.36	2.81	4.07
MAX	20	50	21	14	45	44	84	75	34	8.1	3.8	8.9
MIN	3.2	5.7	8.2	8.6	8.7	14	26	31	8.3	3.3	1.8	1.8
AC-FT	384	795	677	613	832	1320	3290	3330	1130	329	173	242

CAL YR 1984 TOTAL 9299.9 MEAN 25.4 MAX 85 MIN 2.4 AC-FT 18450
WTR YR 1985 TOTAL 6603.7 MEAN 18.1 MAX 84 MIN 1.8 AC-FT 13100

11243400 BASS LAKE NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'33", long 119°31'43", in SE 1/4 NE 1/4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, at outlet tower at dam on North Fork Willow Creek, 2.2 mi southeast of town of Bass Lake, and 5 mi north of North Fork.

DRAINAGE AREA.--50.4 mi^2.

PERIOD OF RECORD.--January 1911 to September 1982 (monthend contents only), October 1982 to current year. Bass Lake was formerly called Crane Valley Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Reservoir formed by earthfill and rockfill dam; completed in 1901 and raised in 1910. Since 1910 usable contents 45,100 acre-ft between elevations, 3,280.22 ft, invert of outlet conduit No. 3 and 3,376.40 ft, top of spillway gates. Additional storage of 300 acre-ft not available for release. Water is released through Crane Valley powerhouse below dam for use in three small powerhouses before being discharged into Kerckhoff Reservoir at Wishon powerhouse. Water is diverted from South Fork Willow Creek via Browns Creek ditch into Bass Lake near left end of dam. Madera Irrigation District has water rights to divert up to 50 ft^3/s from North Fork Willow Creek through Soquel ditch into Nelder Creek (Fresno River basin) during October and from March to July each year. Chilkoot ditch can divert up to 7 ft^3/s from Chilkoot Creek into North Fork Willow Creek just upstream from diversion dam from Oct. 1 to Aug. 1 each water year, if available. See schematic diagram of San Joaquin River basin.

COOPERATION.--Records were provided by Pacific Gas and Electric Co. in connection with a Federal Energy Regulatory Commission Project. Contents rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 45,960 acre-ft, June 17, 1923, elevation, 3,376.8 ft; minimum, 35 acre-ft, Nov. 19, 1953, elevation, 3,270.2 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 45,300 acre-ft, June 3-5, elevation, 3,376.30 ft; minimum, 21,300 acre-ft, Oct. 26-29, elevation, 3,352.13 ft.

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24300	21400	24900	24500	25100	28700	32400	40200	45000	43100	37900	29900
2	24300	21500	25000	24500	25200	28800	32700	40600	45100	42900	37700	29600
3	23900	21500	25000	24300	25300	29000	33100	40900	45300	42600	37400	29300
4	23700	21500	25100	24200	25300	28900	33400	41200	45300	42400	37200	29100
5	23500	21500	25100	24300	25400	28800	33800	41500	45300	42300	36900	28800
6	23500	21600	25200	24300	25400	28700	34100	41800	45200	42300	36700	28700
7	23500	21600	25300	24300	25500	28600	34500	42100	45200	42300	36400	28400
8	23400	21900	25300	24200	25600	28500	34800	42400	45100	42100	36200	28100
9	23200	22000	25400	24000	26200	28700	35000	42700	45000	41900	35900	27900
10	22900	22000	25600	23900	26400	28900	35200	42900	44900	41700	35700	27600
11	22700	22100	25600	23800	26500	29000	35400	43200	44800	41500	35500	27400
12	22600	22200	25800	23900	26600	28900	35500	43400	44600	41300	35200	27100
13	22700	22500	25800	24000	26700	28800	35700	43600	44500	41300	35000	26800
14	22700	22600	25800	23900	26700	28700	35900	43800	44400	41300	34700	26500
15	22500	22600	26000	23900	26900	28800	36100	44100	44300	41200	34500	26200
16	22400	22700	26000	23900	27000	28900	36300	44300	44400	40900	34300	26100
17	22300	22900	26000	24000	27100	29100	36600	44500	44300	40700	34100	26100
18	22100	22900	25800	24100	27300	29300	36800	44700	44200	40400	33800	26100
19	22000	22900	25700	24200	27400	29500	37000	45000	43900	40300	33600	26100
20	22100	23000	25500	24300	27600	29700	37300	45200	43800	40300	33300	26200
21	22100	23200	25400	24300	27600	29800	37600	45200	43600	40300	33000	26200
22	22000	23200	25200	24400	27700	30000	37800	45200	43700	40100	32700	26200
23	21800	23300	25000	24500	27900	30200	38100	45200	43700	39900	32500	26200
24	21600	23600	24900	24600	28000	30400	38300	45100	43700	39700	32200	26200
25	21400	23700	24700	24700	28100	30600	38600	45100	43700	39400	31900	26200
26	21300	23800	24500	24800	28300	30900	38800	45000	43700	39300	31600	26200
27	21300	24100	24300	24800	28400	31200	39100	45000	43600	39100	31300	26200
28	21300	24400	24200	24900	28500	31500	39300	44900	43200	38900	31100	26200
29	21300	24400	24300	25000	---	31700	39600	44900	43200	38600	30800	26200
30	21400	24400	24300	25000	---	31900	39900	44900	43300	38400	30500	26200
31	21400	---	24500	25100	---	32100	---	44900	---	38100	30200	---
MAX	24300	24400	26000	25100	28500	32100	39900	45200	45300	43100	37900	29900
MIN	21300	21400	24200	23800	25100	28500	32400	40200	43200	38100	30200	26100
a	3352.26	3355.85	3355.97	3356.66	3360.41	3364.17	3371.54	3375.95	3374.60	3369.89	3362.21	3357.90
b	-2900	+3000	+100	+600	+3400	+3600	+7800	+5000	-1600	-5200	-7900	-4000

CAL YR 1984 b -9600
WTR YR 1985 b +1900

[a] Elevation, in feet NGVD, at end of month.
[b] Change in contents, in acre-feet.

11243500 PACIFIC GAS AND ELECTRIC CO. CONDUIT NO. 3 NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'21", long 119°31'44", in NE 1/4 SE 1/4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 1,000 ft downstream from Crane Valley powerhouse and dam, and 2.5 mi southeast of town of Bass Lake.

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1954, published as "near Crane Valley Reservoir."

GAGE.--Water-stage recorder and concrete flume. Elevation of gage is 3,300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Conduit diverts from Bass Lake in sec.26, T.7 S., R.22 E. Water passes through Crane Valley power house, then to powerhouse No. 3, and is stored temporarily at Manzanita Lake on North Fork Willow Creek; flow then diverts to powerhouses No. 2 and 1A before it enters San Joaquin River at Kerckhoff Reservoir through Wishon powerhouse No. 1. See schematic diagram of San Joaquin River basin.

COOPERATION.--Records were provided by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--45 years, 72.0 ft^3/s, 52,160 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 167 ft^3/s, June 23, 24, 1965; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	147	150	154	154	144	153	136	79	.53	123	151
2	.03	147	150	154	154	145	135	136	.06	96	122	150
3	.03	147	151	153	154	132	125	136	.03	153	64	151
4	.03	147	151	151	154	137	128	136	.03	147	0	151
5	.03	147	151	151	154	119	128	136	.06	148	0	151
6	.06	147	151	152	152	87	128	136	.06	102	74	152
7	.06	147	151	152	127	88	128	62	11	.39	120	152
8	.06	147	152	153	112	88	129	.06	.06	.39	124	152
9	.03	147	152	153	113	90	129	.06	.03	74	123	152
10	.03	147	152	153	113	91	52	.06	.03	123	123	152
11	.03	147	152	153	113	91	46	7.5	0	123	123	152
12	.03	147	152	153	114	111	125	.06	0	106	123	150
13	.03	147	152	153	114	33	126	.06	2.6	95	123	151
14	.81	147	153	153	114	60	132	2.6	.06	45	123	79
15	.81	147	153	152	114	154	136	.06	.03	.03	125	0
16	.92	147	153	152	114	154	136	.06	5.4	57	125	0
17	79	148	153	152	121	154	136	2.4	.06	112	125	70
18	133	148	153	152	143	154	136	.06	56	124	125	129
19	138	148	153	152	158	154	136	7.8	128	124	121	128
20	151	149	153	152	159	154	136	.06	45	65	136	124
21	148	148	153	153	159	154	136	.06	.06	.39	153	44
22	148	149	154	153	158	150	136	.53	.71	.39	153	0
23	147	149	154	153	157	153	136	1.3	1.6	.45	151	0
24	147	150	154	153	157	152	79	1.3	1.6	.45	153	43
25	147	150	154	154	158	152	135	1.3	1.6	.45	152	119
26	147	150	153	145	158	152	136	1.3	1.6	.45	152	120
27	147	150	134	154	159	153	136	1.3	76	.45	152	118
28	147	150	154	154	159	153	136	1.3	104	.45	152	114
29	147	150	154	154	159	152	136	58	54	.39	151	40
30	147	150	154	154	---	153	136	123	.53	75	151	0
31	147	---	154	154	---	153	---	127	---	123	151	---
TOTAL	2123.05	4441	4710	4731	4075	4017	3782	1215.23	569.21	1897.21	3793	3095
MEAN	68.5	148	152	153	141	130	126	39.2	19.0	61.2	122	103
MAX	151	150	154	154	159	154	153	136	128	153	153	152
MIN	.03	147	134	145	112	33	46	.06	0	.03	0	0
AC-FT	4210	8810	9340	9380	8080	7970	7500	2410	1130	3760	7520	6140

CAL YR 1983 TOTAL 49963.35 MEAN 137 MAX 159 MIN .03 AC-FT 99100
WTR YR 1984 TOTAL 38448.70 MEAN 105 MAX 159 MIN 0 AC-FT 76260

11243500 PACIFIC GAS AND ELECTRIC CO. CONDUIT NO. 3 NEAR BASS LAKE, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.92	0	2.4	.53	0	.92	.03	76	119	138
2	109	0	.92	65	4.7	3.3	0	.92	0	118	118	139
3	114	.10	2.0	65	4.7	5.6	0	.92	0	118	117	139
4	114	.10	.03	0	1.7	96	3.1	1.0	46	118	117	138
5	59	.16	0	0	0	122	.53	1.0	70	58	117	139
6	0	.16	0	0	0	122	0	1.0	70	.03	117	140
7	0	2.0	0	65	0	123	0	1.0	70	0	117	139
8	67	1.3	0	119	1.3	84	44	1.0	70	76	117	139
9	114	0	0	119	4.7	0	99	.92	70	117	116	139
10	114	0	0	119	1.5	0	100	.92	95	117	116	140
11	114	0	1.6	58	0	101	98	.92	120	117	116	141
12	59	0	0	0	0	122	101	.92	119	51	116	133
13	0	0	1.8	0	0	118	111	.92	119	.03	116	131
14	0	0	7.7	117	0	114	117	.92	119	.03	116	138
15	71	0	.81	46	.81	60	108	.92	37	73	115	138
16	117	0	4.5	0	0	.71	98	.92	0	121	114	49
17	117	0	54	0	3.0	.71	98	.92	62	121	114	0
18	117	0	117	.16	.61	2.4	69	.92	120	122	117	0
19	61	0	117	.71	.61	1.6	62	.92	120	53	118	.25
20	0	0	117	.71	.16	0	.03	.92	120	.03	129	.53
21	0	0	117	3.5	0	0	0	49	53	.03	137	.16
22	69	0	117	.81	0	0	0	107	.10	76	137	0
23	113	0	117	.61	0	0	0	107	.10	119	138	.06
24	113	0	117	.61	0	6.7	0	107	.10	121	139	.10
25	113	0	117	.61	0	.25	6.8	108	1.3	122	139	.16
26	43	0	117	.61	5.7	1.5	1.3	107	.10	62	139	5.0
27	5.2	0	117	.61	.53	4.8	1.3	107	77	74	138	0
28	5.2	0	61	2.6	.53	4.8	1.3	86	118	123	138	0
29	10	10	0	4.7	---	1.3	1.2	71	32	124	138	0
30	.25	.71	0	4.7	---	0	.92	71	.03	123	137	0
31	0	---	0	4.7	---	0	---	36	---	121	137	---
TOTAL	1818.65	14.53	1305.28	798.64	32.95	1096.20	1121.48	974.80	1708.76	2521.15	3859	2126.26
MEAN	58.7	.48	42.1	25.8	1.18	35.4	37.4	31.4	57.0	81.3	124	70.9
MAX	117	10	117	119	5.7	123	117	108	120	124	139	141
MIN	0	0	0	0	0	0	0	.92	0	0	114	0
AC-FT	3610	29	2590	1580	65	2170	2220	1930	3390	5000	7650	4220

CAL YR 1984 TOTAL 30313.11 MEAN 82.8 MAX 159 MIN 0 AC-FT 60130
WTR YR 1985 TOTAL 17377.70 MEAN 47.6 MAX 141 MIN 0 AC-FT 34470

11244000 NORTH FORK WILLOW CREEK NEAR BASS LAKE, CA

LOCATION.--Lat 37°17'20", long 119°31'45", in SE 1/4 SE 1/4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank 1,500 ft downstream from Bass Lake spillway, and 2.5 mi southeast of town of Bass Lake.

DRAINAGE AREA.--50.8 mi^2.

PERIOD OF RECORD.--May 1940 to current year. Prior to October 1944, published as Willow Creek below Crane Valley Reservoir. October 1944 to September 1954, published as "below Crane Valley Reservoir."

GAGE.--Water-stage recorder. Broad-crested weir with V-notch Dec. 21, 1961, to Jan. 16, 1969, and since Mar. 26, 1971. Elevation of gage is 3,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: June 26 to July 3, 1985. Flow regulated by Bass Lake (station 11243400) 1,500 ft upstream and by diversion into Pacific Gas and Electric Co. conduit No. 3 near Bass Lake (station 11243500). Soquel ditch diverts up to 50 ft^3/s, from North Fork Willow Creek into Nelder Creek in Fresno River basin. Brown's Creek ditch diverted 17,760 acre-ft from South Fork Willow Creek into Bass Lake during the 1984 water year (not previously published), and 15,050 acre-ft during the current year. See schematic diagram of San Joaquin River basin.

COOPERATION.--Records were provided by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--45 years, 13.8 ft^3/s, 10,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,950 ft^3/s, Apr. 11, 1982, gage height, 7.78 ft; minimum daily, 0.1 ft^3/s, Nov. 13-16, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 207 ft^3/s, Feb. 15, gage height, 3.00 ft; minimum daily, 0.22 ft^3/s, on Oct. 1 and Sept. 23.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge 701 ft^3/s, Dec. 27, gage height, 4.19 ft; minimum daily, 0.29 ft^3/s, Sept. 15-16, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.65	.80	98	6.1	.73	1.1	.98	1.5	1.5	1.0	.42
2	1.3	.51	.76	69	5.2	.73	1.0	.99	1.5	1.5	1.0	.40
3	1.1	.48	1.6	54	5.2	.73	1.0	.97	1.5	1.5	.99	.40
4	1.0	.46	1.4	45	5.2	.73	.96	.96	1.6	1.5	.91	.38
5	1.0	.45	1.1	38	5.2	.72	.87	1.0	1.6	1.4	.92	.38
6	1.0	.43	.92	29	3.3	.69	.94	1.1	1.6	1.4	.92	.37
7	1.0	.42	.84	21	.60	.69	.88	1.1	1.6	1.3	.94	.37
8	1.1	.41	.78	15	.58	.71	.84	1.1	1.6	1.3	.92	.36
9	1.2	.40	1.8	10	.74	.73	.86	1.4	1.7	1.3	.90	.36
10	1.2	.42	1.6	6.6	1.0	.73	.87	1.6	1.7	1.3	.87	.36
11	.86	1.8	1.6	5.8	.74	.73	1.2	1.7	1.7	1.3	.85	.36
12	.88	.97	1.4	5.7	.68	.73	1.3	1.8	1.7	1.3	.82	.36
13	.88	1.2	1.1	5.7	.88	2.6	.94	1.9	1.7	1.2	.82	.35
14	3.7	1.1	1.0	5.7	1.1	2.6	.90	1.7	1.7	1.2	.81	.33
15	.75	.65	.95	5.7	1.5	1.3	.90	1.7	1.7	1.1	.83	.29
16	.73	.53	.88	5.7	1.8	1.2	.90	1.7	1.7	1.2	.82	.29
17	.73	1.7	.86	5.7	1.2	1.5	.94	1.7	1.7	1.2	.80	5.9
18	21	1.1	.81	5.7	1.0	1.3	.94	1.7	1.7	1.1	.75	.39
19	43	1.4	.78	5.5	.92	1.3	1.1	1.7	1.7	1.1	.71	.36
20	18	2.9	.75	5.2	.88	1.3	1.1	1.7	1.6	1.1	.71	3.8
21	.72	1.4	.71	5.2	.88	1.2	1.0	1.7	1.6	1.1	.67	4.3
22	.64	1.0	.70	5.2	.87	1.2	1.0	1.7	1.6	1.1	.65	5.0
23	.64	.90	.69	5.2	.83	1.1	1.0	1.6	1.6	1.1	.62	3.8
24	.60	4.5	1.2	5.0	.82	1.1	1.0	1.6	1.6	1.1	.59	1.5
25	.57	1.8	22	4.8	.80	1.1	1.2	1.7	1.6	1.1	.56	.36
26	.56	1.2	314	3.7	.79	1.1	1.1	1.6	1.6	1.1	.54	.34
27	.55	1.1	549	5.8	.76	1.1	1.0	1.6	1.6	1.1	.51	.34
28	.52	.97	376	6.2	.76	1.0	1.0	1.6	1.6	1.0	.50	.33
29	.51	.91	218	6.2	.75	1.0	1.0	1.6	1.5	1.0	.48	.31
30	.50	.85	152	6.4	---	1.0	.99	1.5	1.5	1.1	.45	.29
31	.49	---	136	6.7	---	1.1	---	1.5	---	1.1	.44	---
TOTAL	108.03	32.61	1792.03	502.4	51.08	33.75	29.83	46.20	48.6	37.7	23.30	32.80
MEAN	3.48	1.09	57.8	16.2	1.76	1.09	.99	1.49	1.62	1.22	.75	1.09
MAX	43	4.5	549	98	6.1	2.6	1.3	1.9	1.7	1.5	1.0	5.9
MIN	.49	.40	.69	3.7	.58	.69	.84	.96	1.5	1.0	.44	.29
AC-FT	214	65	3550	997	101	67	59	92	96	75	46	65

CAL YR 1983 TOTAL 31017.23 MEAN 85.0 MAX 756 MIN .40 AC-FT 61520
WTR YR 1984 TOTAL 2738.33 MEAN 7.48 MAX 549 MIN .29 AC-FT 5430

11244000 NORTH FORK WILLOW CREEK NEAR BASS LAKE, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.28	1.5	.37	.30	.35	.97	1.4	1.4	.95	.59	.26
2	.30	.27	1.2	.37	.32	.43	.90	1.5	1.5	.93	.55	.25
3	.31	.27	.87	.37	.31	.43	.88	1.5	1.5	.90	.56	.28
4	.31	.27	.64	.37	.30	.46	.87	1.5	1.4	.88	.54	.27
5	.29	.27	.41	.35	.30	.48	.87	1.6	1.4	.88	.54	.26
6	.26	.27	.38	.37	.30	.51	.87	1.6	1.4	.82	.53	.25
7	.26	.27	.37	.73	.29	.57	.90	1.6	1.4	.82	.52	.25
8	.32	.71	.36	.55	2.8	.56	1.6	1.6	1.4	.83	.52	.25
9	.36	.42	.35	.45	1.5	.57	2.2	1.6	1.4	.84	.51	.26
10	.36	.43	.55	.41	.70	.84	1.7	1.6	1.4	.84	.49	.26
11	.36	.43	.41	.39	.52	1.1	1.0	1.6	1.4	.84	.49	.26
12	.32	.42	.40	.37	.94	.87	1.0	1.6	1.3	.80	.48	.25
13	.27	.82	.37	.37	.43	.62	1.0	1.6	1.3	.79	.47	.24
14	.27	.48	.37	.35	.40	.53	1.0	1.6	1.3	.79	.46	.26
15	.29	.47	.37	.35	4.0	.49	1.1	2.7	1.3	.81	.45	.25
16	.46	.47	.37	.34	.41	.45	1.1	2.3	1.2	.81	.44	.25
17	.54	.46	.36	.33	.39	.44	1.2	3.0	1.3	.78	.44	.33
18	.37	.45	.37	.33	.38	.48	1.1	3.0	1.2	.76	.43	.35
19	.34	.44	.42	.33	.37	.46	1.2	3.0	1.2	.73	.42	.30
20	.31	.43	.46	.32	.37	.47	1.2	3.3	1.2	.73	.40	.23
21	.30	.67	.45	.32	.40	.45	1.2	3.2	1.2	.71	.39	.23
22	.30	.53	.43	.33	.40	.45	1.3	3.2	1.3	.71	.37	.23
23	.32	.49	.42	.32	.39	.45	1.3	3.2	1.3	.70	.35	.22
24	.32	.98	.42	.31	.36	.45	1.3	3.1	1.4	1.4	.34	.24
25	.32	.84	.42	.30	.38	.48	1.2	2.2	1.3	1.5	.32	.24
26	.31	.56	.42	.30	.38	.55	1.2	1.5	1.1	13	.32	.29
27	.29	.53	.40	.30	.35	2.7	1.2	1.5	1.1	.67	.31	.36
28	.29	3.4	.40	.30	.35	2.3	1.2	1.5	1.0	.65	.30	.36
29	.29	2.1	.38	.30	---	1.4	1.3	1.4	1.0	.62	.29	.36
30	.29	1.8	.37	.30	---	1.2	1.4	1.4	.98	.60	.27	.36
31	.28	---	.37	.29	---	1.1	---	1.4	---	.59	.26	---
TOTAL	9.83	20.23	15.01	11.19	18.34	22.64	35.26	62.8	38.58	37.68	13.35	8.20
MEAN	.32	.67	.48	.36	.66	.73	1.18	2.03	1.29	1.22	.43	.27
MAX	.54	3.4	1.5	.73	4.0	2.7	2.2	3.3	1.5	13	.59	.36
MIN	.22	.27	.35	.29	.29	.35	.87	1.4	.98	.59	.26	.22
AC-FT	19	40	30	22	36	45	70	125	77	75	26	16

CAL YR 1984 TOTAL 850.73 MEAN 2.32 MAX 98 MIN .22 AC-FT 1690
WTR YR 1985 TOTAL 293.11 MEAN .80 MAX 13 MIN .22 AC-FT 581

11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CA

LOCATION.--Lat 37°09'03", long 119°27'34", in SE 1/4 NE 1/4 sec.16, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank 40 ft upstream from bridge, 0.4 mi upstream from mouth, 1.3 mi downstream from Whiskey Creek, and 4.3 mi northeast of Auberry.

DRAINAGE AREA.--130 mi^2.

PERIOD OF RECORD.--January 1952 to current year.

REVISED RECORDS.--WSP 2130: 1956-58(M).

GAGE.--Water-stage recorder. Concrete control since Oct. 22, 1964. Datum of gage is 1,174.69 ft above National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Estimated daily discharges: Sept. 14 to Sept. 30, 1985. Records fair. Flow regulated by Bass Lake (station 11243400) 10 mi upstream and diversion into Pacific Gas and Electric Co. conduit No. 1. See schematic diagram of San Joaquin River basin.

COOPERATION.--Gage-height record and twelve discharge measurements were provided by Southern California Edison Co., in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--33 years, 69.2 ft^3/s, 50,140 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft^3/s, Dec. 23, 1955, gage height, 28.5 ft, from floodmarks, from rating curve extended above 4,700 ft^3/s; no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 404 ft^3/s, Nov. 28, gage height, 7.94 ft; minimum daily, 0.13 ft^3/s, Aug. 13-14.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 4,400 ft^3/s, Nov. 24, gage height, 14.96 ft; minimum daily, 0.58 ft^3/s, Sept. 9-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	12	65	427	65	39	65	26	9.8	4.7	2.5	1.2
2	20	13	62	328	66	39	57	30	9.6	4.5	2.6	1.1
3	13	9.6	113	284	65	39	41	27	9.3	4.2	2.8	1.1
4	13	8.8	138	261	58	38	39	26	10	4.0	2.9	.89
5	24	8.5	84	244	54	37	38	25	17	4.0	2.9	.63
6	25	8.5	72	235	52	36	44	24	13	3.8	2.8	.68
7	26	8.4	66	191	37	35	40	23	12	3.7	2.7	.68
8	28	8.5	56	168	34	35	38	22	12	3.6	2.7	.63
9	20	12	93	151	38	34	38	20	11	3.5	2.6	.58
10	31	11	359	139	57	34	43	20	10	3.4	2.5	.58
11	28	155	231	130	40	34	41	19	9.9	3.2	2.5	.58
12	23	39	193	121	38	34	42	21	9.5	3.2	2.4	.58
13	22	54	130	119	44	43	36	19	9.1	3.1	2.3	.89
14	15	51	118	109	75	327	34	18	9.0	3.1	2.3	1.2
15	10	24	101	105	57	161	32	18	9.0	3.0	2.3	1.1
16	9.6	17	91	103	298	179	32	18	8.5	2.9	2.3	.78
17	9.3	291	87	99	75	134	32	17	8.2	2.8	2.2	.73
18	28	214	83	91	59	115	32	16	7.8	2.7	2.0	1.2
19	25	49	78	87	54	116	38	16	8.1	2.6	1.7	15
20	36	613	72	84	50	159	36	15	7.1	2.6	1.4	12
21	12	175	67	81	49	149	36	14	7.1	2.5	1.2	8.2
22	9.0	61	65	80	47	145	35	14	7.1	2.3	1.3	6.4
23	8.8	41	65	78	45	131	32	14	7.2	2.4	1.2	5.3
24	8.7	1190	125	76	44	121	30	13	7.1	3.4	1.5	8.4
25	8.5	592	1870	78	43	119	29	13	5.8	3.5	1.4	8.1
26	7.9	187	1780	80	40	114	29	13	5.7	3.3	1.2	7.9
27	7.4	86	2130	63	40	79	30	12	5.3	3.2	1.1	3.0
28	7.2	61	1120	70	39	70	28	11	6.6	3.0	.94	2.1
29	7.1	78	704	68	39	65	27	11	5.3	2.8	.83	1.7
30	7.5	72	615	67	---	63	27	14	4.8	2.7	.89	2.6
31	7.9	---	556	66	---	65	---	10	---	2.6	1.1	---
TOTAL	520.9	4150.3	11389	4283	1702	2789	1101	559	261.9	100.3	61.06	95.83
MEAN	16.8	138	367	138	58.7	90.0	36.7	18.0	8.73	3.24	1.97	3.19
MAX	36	1190	2130	427	298	327	65	30	17	4.7	2.9	15
MIN	7.1	8.4	56	63	34	34	27	10	4.8	2.3	.83	.58
AC-FT	1030	8230	22590	8500	3380	5530	2180	1110	519	199	121	190

CAL YR 1983 TOTAL 128532.40 MEAN 352 MAX 2490 MIN 5.4 AC-FT 254900
WTR YR 1984 TOTAL 27013.29 MEAN 73.8 MAX 2130 MIN .58 AC-FT 53580

11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	10	15	6.9	7.2	15	33	25	7.9	2.2	.27	.22
2	2.5	9.8	14	6.9	8.8	18	38	25	8.1	2.1	.38	.20
3	2.2	9.4	13	6.8	8.4	15	43	23	9.4	1.9	.46	.29
4	2.0	9.3	12	7.2	9.0	14	50	22	8.7	1.8	.42	.80
5	1.8	9.6	13	7.2	7.2	13	48	21	7.8	1.8	.35	1.3
6	1.6	9.6	12	7.3	7.5	13	50	19	7.2	1.8	.29	1.6
7	1.5	9.0	12	19	7.6	15	53	18	6.6	1.7	.27	1.6
8	1.3	19	12	19	35	15	54	17	5.9	1.5	.24	1.6
9	1.7	22	11	13	78	14	54	17	5.7	1.5	.22	1.8
10	.87	15	13	11	23	15	55	16	5.3	1.5	.20	1.8
11	1.2	12	14	9.6	16	17	50	15	5.1	1.3	.16	2.1
12	2.1	12	13	9.4	14	15	52	15	4.6	1.2	.15	2.1
13	2.0	21	14	8.7	13	14	53	14	4.4	.46	.13	2.0
14	1.8	24	12	8.5	12	15	53	13	4.1	.87	.13	2.0
15	1.7	15	14	8.5	12	15	52	12	3.9	.80	.16	2.0
16	1.9	12	15	8.4	12	16	47	12	3.5	.74	.15	2.0
17	8.8	11	16	8.5	12	17	57	12	3.0	.74	.16	2.0
18	5.9	9.9	11	8.7	12	22	46	11	3.2	.74	.16	2.0
19	3.6	9.8	11	8.8	14	18	37	11	3.0	.69	.18	2.0
20	3.9	9.6	15	9.1	15	19	34	11	3.0	.69	.24	2.0
21	3.5	13	12	9.3	12	20	32	9.9	3.0	.80	.27	2.0
22	3.3	12	9.6	9.0	13	19	30	9.4	3.0	.80	.32	2.0
23	3.5	11	8.8	8.8	13	19	30	8.8	3.0	.63	.58	2.0
24	3.4	15	8.7	8.5	14	21	32	8.4	2.8	.58	.42	2.0
25	3.5	22	8.4	8.4	14	21	31	8.5	2.7	.50	.35	2.0
26	3.5	14	8.5	9.0	15	21	27	7.9	2.8	.46	.54	2.0
27	4.2	348	7.9	9.1	15	102	24	7.9	2.6	.42	.50	2.0
28	3.4	50	7.8	8.5	15	94	25	8.1	2.5	.32	.42	2.0
29	4.8	30	7.0	7.9	---	41	25	8.7	2.4	.29	.35	2.0
30	9.1	19	7.0	7.9	---	32	25	8.4	2.2	.24	.32	2.0
31	12	---	7.2	8.7	---	30	---	7.9	---	.24	.29	---
TOTAL	105.17	793.0	354.9	287.6	434.7	735	1240	422.9	137.4	31.31	9.08	51.41
MEAN	3.39	26.4	11.4	9.28	15.5	23.7	41.3	13.6	4.58	1.01	.29	1.71
MAX	12	348	16	19	78	102	57	25	9.4	2.2	.58	2.1
MIN	.87	9.0	7.0	6.8	7.2	13	24	7.9	2.2	.24	.13	.20
AC-FT	209	1570	704	570	862	1460	2460	839	273	62	18	102

CAL YR 1984 TOTAL 12206.16 MEAN 33.2 MAX 427 MIN .58 AC-FT 24210
WTR YR 1985 TOTAL 4602.47 MEAN 12.6 MAX 348 MIN .13 AC-FT 9130

11249500 MADERA CANAL AT FRIANT, CA

LOCATION.--Lat 37°00'10", long 119°42'21", in NW 1/4 SW 1/4 sec.5, T.11 S., R.21 E., Madera County, Hydrologic Unit 18040006, at Friant Dam 0.9 mi northeast of Friant.

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for October 1943 to September 1950 published in WSP 1315-A. October 1954 to September 1966 published as Friant-Madera Canal at Friant.

REVISED RECORDS.--WSP 1151: 1944-48.

GAGE.--Discharge computed on basis of valve openings in dam and head on valves. Prior to Oct. 1, 1948, water-stage recorder at several sites at various datums. Oct. 1, 1948, to Sept. 30, 1949, water-stage recorder at site 8.8 mi downstream.

REMARKS.--Canal diverts from Millerton Lake (station 11250100) at right end of Friant Dam for irrigation between San Joaquin and Chowchilla Rivers.

COOPERATION.--Records were provided by Bureau of Reclamation and reviewed by the Geological Survey, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--42 years, 332 ft^3/s, 240,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,330 ft^3/s, July 2, 1973, May 21, 1983; no flow many days in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	815				0	999	0	0	533	394	925	330
2	794				0	996	0	0	533	392	881	329
3	788				0	993	0	0	495	424	789	328
4	217				0	990	135	0	443	439	745	313
5	0				0	987	203	0	377	436	770	301
6	0				0	921	204	0	349	488	852	300
7	0				0	880	205	0	349	433	877	300
8	0				0	877	73	0	348	433	908	299
9	0				0	873	0	0	347	416	984	298
10	0				0	837	0	0	374	413	998	277
11	0				0	756	0	0	389	491	985	249
12	0				0	819	0	0	421	635	972	241
13	0				0	876	0	0	472	399	990	244
14	0				0	891	0	0	490	584	958	246
15	0				252	899	0	0	488	904	925	249
16	0				401	896	0	0	486	1070	864	252
17	0				398	893	0	0	484	1020	828	253
18	0				395	890	0	0	481	971	774	255
19	0				583	889	0	0	479	951	677	256
20	0				707	935	0	0	476	950	373	257
21	0				633	938	0	0	474	948	231	414
22	0				581	851	0	0	472	929	260	544
23	0				687	806	0	0	444	943	294	525
24	0				691	778	0	0	430	950	321	501
25	0				696	328	0	0	450	940	330	500
26	0				784	0	0	0	459	972	329	534
27	0				872	0	0	189	420	966	327	618
28	0				975	0	0	365	399	924	326	698
29	0				---	0	0	593	397	937	325	695
30	0				---	0	0	592	396	945	329	465
31	0				---	0	---	555	---	988	330	---
TOTAL	2614	0	0	0	8655	21798	820	2294	13155	22685	20477	11071
MEAN	84.3	0	0	0	309	703	27.3	74.0	438	732	661	369
MAX	815	0	0	0	975	999	205	593	533	1070	998	698
MIN	0	0	0	0	0	0	0	0	347	392	231	241
AC-FT	5180	0	0	0	17170	43240	1630	4550	26090	45000	40620	21960

CAL YR 1984 TOTAL 155677 MEAN 425 MAX 1270 MIN 0 AC-FT 308800
WTR YR 1985 TOTAL 103569 MEAN 284 MAX 1070 MIN 0 AC-FT 205400

11250000 FRIANT-KERN CANAL AT FRIANT, CA

LOCATION.--Lat 36°59'53", long 119°42'11", in SE 1/4 SW 1/4 sec.5, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040006, at Friant Dam 0.9 mi northeast of Friant.

PERIOD OF RECORD.--March 1949 to current year.

GAGE.--Discharge computed on basis of valve openings in dam and head on valves. Prior to July 8, 1949, nonrecording gages at various sites and datums. July 8 to Sept. 30, 1949, water-stage recorder at site 0.2 mi downstream.

REMARKS.--Canal diverts from Millerton Lake (station 11250100) at left end of Friant Dam for irrigation in upper San Joaquin Valley.

COOPERATION.--Records of discharge were provided by Bureau of Reclamation and reviewed by Geological Survey, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--36 years, 1,417 ft^3/s, 1,027,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 5,330 ft^3/s, June 25, 1982; no flow for several months in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1660	884		0	688	1860	944	2080	1750	2740	2050	903
2	1660	689		0	1840	1680	1140	2250	1780	2860	1930	951
3	1680	562		0	2000	1640	1360	2220	1840	2980	1720	1020
4	1620	633		0	1840	1670	1430	1950	1990	2950	1480	1020
5	1450	704		0	1710	1630	1340	1820	2260	2770	1520	1020
6	1210	700		0	1540	1680	1280	1830	2380	2540	1660	983
7	1200	717		0	1410	1710	1400	1820	2380	2530	1760	874
8	1190	724		0	1360	1580	1530	1820	2410	2620	1690	855
9	1170	574		0	1170	1560	1640	1790	2560	2590	1520	828
10	1160	419		0	1080	1530	1840	1750	2740	2260	1290	810
11	1270	385		0	1210	1610	1890	1610	2870	2160	1350	717
12	1280	388		0	1540	1770	1820	1630	2950	2070	1470	596
13	1170	398		0	1940	1800	1550	1640	2790	1970	1580	495
14	1150	362		0	2100	1610	1330	1530	2500	2000	1820	446
15	1390	330		0	2300	1390	1300	1520	2570	2010	1740	552
16	1680	334		0	2280	1230	1320	1560	3040	2050	1520	748
17	1520	338		0	2430	1210	1400	1470	3380	2220	1320	864
18	1210	369		0	2530	1120	1350	1330	3380	2310	1390	1040
19	1130	352		0	2430	1090	1230	1410	3290	2220	1420	1110
20	1080	324		0	2510	1080	1170	1480	3230	2090	1400	1060
21	1080	257		0	2590	994	1180	1500	3070	2120	1390	995
22	1130	205		0	2550	908	1140	1590	2690	2180	1290	1080
23	1220	207		0	2440	907	1190	1720	2470	2230	1280	1200
24	1300	212		0	2500	992	1310	1700	2120	2270	1310	1260
25	1310	217		0	2620	1020	1320	1580	1990	2240	1370	1340
26	1240	148		0	2690	974	1150	1580	1980	2130	1410	1350
27	1170	0		0	2870	879	1000	1620	2060	1890	1340	1290
28	1220	0		0	2470	821	1190	1670	2220	1930	1150	1200
29	1230	0		0	---	724	1460	1750	2300	1980	1110	1220
30	1270	0		75	---	754	1780	1850	2550	1990	1050	1360
31	1110	---		0	---	904	---	1810	---	2040	895	---
TOTAL	40160	11432	0	75	56638	40327	40984	52880	75540	70940	45225	29187
MEAN	1295	381	0	2.42	2023	1301	1366	1706	2518	2288	1459	973
MAX	1680	884	0	75	2870	1860	1890	2250	3380	2980	2050	1360
MIN	1080	0	0	0	688	724	944	1330	1750	1890	895	446
AC-FT	79660	22680	0	149	112300	79990	81290	104900	149800	140700	89700	57890

CAL YR 1984 TOTAL 667347 MEAN 1823 MAX 4670 MIN 0 AC-FT 1324000
WTR YR 1985 TOTAL 463388 MEAN 1270 MAX 3380 MIN 0 AC-FT 919100

11250100 MILLERTON LAKE AT FRIANT, CA

LOCATION.--Lat 37°00'00", long 119°42'13", in SW 1/4 SW 1/4 sec.5, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040006, near center of Friant Dam on San Joaquin River just upstream from Cottonwood Creek, 0.9 mi northeast of Friant.

DRAINAGE AREA.--1,638 mi^2.

PERIOD OF RECORD.--October 1941 to current year. Monthend contents only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to May 29, 1944, nonrecording gage on left bank at same datum.

REMARKS.--Reservoir is formed by gravity-type concrete dam with spillway near center, completed in December 1942. Control valves installed in February 1944 and spillway gates installed in November 1947. Usable capacity, 503,200 acre-ft between elevations 375.4 ft invert of river outlet, and 578.0 ft top of drum-type spillway gates. Not available for release, 17,400 acre-ft. Millerton Lake is one of the storage units in Central Valley Project. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records were provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 528,700 acre-ft, June 12, 1973, elevation, 579.66 ft; minimum since lake first filled, 133,600 acre-ft, Apr. 11, 1969, elevation, 467.81 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 427,300 acre-ft, May 25, elevation, 557.92 ft; minimum, 150,600 acre-ft, Nov. 7, elevation, 475.35 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

400	36,400	500	215,600
420	57,000	520	279,400
440	83,300	540	353,000
460	117,500	560	436,500
480	161,700	580	530,400

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160800	152600	185200	243800	331600	289800	273800	374400	423000	339400	218700	163000
2	159300	152100	187100	245900	331900	288300	276200	376400	421600	335100	215500	162600
3	158000	152000	189200	247400	331300	286800	279100	378400	420200	331100	212200	162300
4	157600	151800	190600	250300	331500	284800	281000	380400	418900	326300	209400	162000
5	157900	151400	192500	253200	332100	283800	284100	383400	417000	322400	207100	161600
6	158800	151100	194100	256500	332600	282400	287400	386000	414500	317900	205000	161300
7	159600	150600	195300	260800	333500	280500	290300	388000	412900	313800	202100	161200
8	160700	150900	196900	264900	335800	278400	294100	390900	410600	310100	199200	160300
9	161500	152300	198500	268500	338500	276200	296800	393800	408300	306100	197100	160500
10	162400	152700	200700	272200	340000	273700	299500	396000	405500	303100	193400	160600
11	162100	153000	202700	276400	341200	272600	302500	397800	402300	299600	190200	161100
12	162200	153700	204800	280100	341600	271500	305300	398200	398600	296200	187200	162200
13	162400	156000	206600	283800	341200	268800	308100	400100	395500	293200	184000	164100
14	161600	156500	208700	287700	340700	267100	311800	401800	392900	289900	181000	166100
15	161600	157200	210600	291000	339300	265200	315700	404000	389900	295800	178000	168200
16	160900	158200	212600	294300	334200	263600	319500	407100	385700	282200	175800	169700
17	160100	158900	216100	296400	328800	262100	323600	410000	381500	277900	173800	170800
18	160200	159500	218700	298900	324100	261300	327500	412500	377300	273900	172000	172000
19	160400	160000	220700	301200	321000	260900	331500	414500	373200	270000	170200	172700
20	159800	160600	222700	303500	317400	259000	335300	416700	369000	265800	169500	173600
21	160600	161700	224200	305700	314200	257600	339200	419100	365300	261300	168700	174400
22	160600	162900	226100	308200	311000	256800	343300	421300	362100	256900	168600	174900
23	160100	164100	228000	310600	307800	256600	347300	423200	359200	252800	168300	174600
24	159200	166200	230000	312700	304700	256300	351100	426200	356900	248600	167600	174500
25	158200	168600	231800	314700	301600	256400	354300	427300	355100	244600	166900	173900
26	157200	170000	233700	315900	299000	257800	358500	427100	353000	241200	166200	173300
27	156900	172800	235400	317200	295300	261200	362100	426800	350900	237700	165300	172600
28	155600	177500	237100	319300	292200	264700	366000	426000	348500	234000	164900	171800
29	154400	180100	238800	322500	---	267400	369400	424800	345900	230100	164100	171200
30	153600	182800	240600	325300	---	269300	372100	424900	343100	226000	163700	170600
31	153300	---	242200	329100	---	270900	---	424300	---	222500	163200	---
MAX	162400	182800	242200	329100	341600	289800	372100	427300	423000	339400	218700	174900
MIN	153300	150600	185200	243800	292200	256300	273800	374400	343100	222500	163200	160300
a	476.48	488.27	508.71	533.80	523.68	517.52	544.28	557.24	537.47	502.32	480.58	483.55
b	-9000	+29500	+59400	+86900	-36900	-21300	+101200	+52200	-81200	-120600	-59300	+7400
c	690	370	230	130	254	732	759	2560	1557	2850	1850	1090

CAL YR 1984 b -178400
WTR YR 1985 b +8300

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet.

11251000 SAN JOAQUIN RIVER BELOW FRIANT, CA

LOCATION.--Lat 36°59'04", long 119°43'24", in SW 1/4 SW 1/4 sec.7, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040001, on left bank 0.5 mi west of Friant, 1.5 mi downstream from Cottonwood Creek, 2 mi downstream from Friant Dam, and at mile 268.1.

DRAINAGE AREA.--1,676 mi^2.

PERIOD OF RECORD.--October 1907 to current year. Published as "near Pollasky" October 1907 to December 1908, and as "near Friant" January 1909 to September 1938. Monthly discharge only for October 1907 to November 1908, published in WSP 1315-A.

REVISED RECORDS.--WSP 843: 1914(M).

GAGE.--Water-stage recorder. Datum of gage is 294.00 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Oct. 18, 1907, to Nov. 9, 1913, nonrecording gage at site 4.5 mi upstream at different datum. Nov. 10, 1913, to Sept. 30, 1968, water-stage recorder at site 2.5 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Millerton Lake (station 11250100) beginning in 1941, and by reservoirs described in REMARKS for San Joaquin River below Kerckhoff powerhouse (station 11247000). Diversion for irrigation through Madera and Friant-Kern Canals (stations 11249500, 11250000) began in 1944 and 1949, respectively. See schematic diagram of San Joaquin River basin.

AVERAGE DISCHARGE (adjusted for change in contents in and evaporation from Millerton Lake and for diversions to Madera and Friant-Kern Canals).--78 years, 2,442 ft^3/s, 1,769,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,200 ft^3/s, Dec. 11, 1937, gage height, 23.8 ft site and datum then in use; minimum, 38 ft^3/s, regulated, July 29, 1940. Maximum discharge since construction of Friant Dam in 1941, 12,400 ft^3/s, June 6, 1969; minimum, 5.5 ft^3/s, Oct. 20, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 180 ft^3/s, June 13, gage height 2.71 ft; minimum daily, 31 ft^3/s, Mar. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	68	34	33	39	37	32	93	124	129	140	132
2	82	61	34	33	40	38	39	94	125	129	142	133
3	82	62	33	33	40	34	56	109	125	152	142	134
4	83	62	34	34	41	31	62	123	124	169	118	135
5	84	62	35	33	40	32	76	123	124	169	115	135
6	84	62	35	34	40	32	88	122	123	169	114	135
7	84	69	35	37	41	33	87	125	121	168	114	118
8	84	83	35	39	45	34	85	126	121	165	116	109
9	84	82	36	37	55	34	104	126	120	148	114	109
10	85	83	37	35	45	32	119	128	126	137	114	110
11	85	82	37	35	42	33	126	127	151	137	115	112
12	85	82	37	35	41	33	139	127	164	136	115	112
13	84	85	36	35	40	32	139	128	163	137	137	113
14	84	77	36	34	39	32	139	128	160	137	147	113
15	84	55	37	34	38	39	140	125	161	136	146	115
16	85	55	39	34	38	66	150	124	161	154	146	117
17	85	54	37	34	38	68	149	122	163	166	146	119
18	84	55	36	35	37	69	144	121	163	165	146	120
19	80	54	37	34	37	70	128	121	160	169	145	121
20	68	54	42	34	38	70	111	121	154	169	148	121
21	68	50	39	34	38	69	113	123	146	168	147	121
22	69	34	36	35	37	57	113	122	146	156	146	121
23	69	32	36	35	36	47	116	121	146	141	146	118
24	69	32	36	36	35	62	109	120	146	139	145	117
25	69	32	36	36	34	66	89	119	137	141	145	117
26	71	32	36	37	35	40	91	120	134	141	145	119
27	72	33	35	37	36	43	91	123	129	141	139	121
28	73	34	36	37	36	47	91	125	129	139	128	121
29	73	34	36	37	---	37	91	125	129	147	130	120
30	74	34	36	38	---	34	93	125	128	142	132	118
31	70	---	35	40	---	33	---	124	---	141	132	---
TOTAL	2436	1694	1119	1094	1101	1384	3110	3760	4203	4637	4155	3606
MEAN	78.6	56.5	36.1	35.3	39.3	44.6	104	121	140	150	134	120
MAX	85	85	42	40	55	70	150	128	164	169	148	135
MIN	68	32	33	33	34	31	32	93	120	129	114	109
AC-FT	4830	3360	2220	2170	2180	2750	6170	7460	8340	9200	8240	7150
MEAN a	1324	940	1006	1453	1717	1714	3220	2792	1784	1254	1319	1605
AC-FT a	81410	55930	61860	89340	95360	105400	191600	171700	106200	77110	81100	95500

CAL YR 1984 TOTAL 169104 MEAN 462 MAX 4600 MIN 32 AC-FT 335400
WTR YR 1985 TOTAL 32299 MEAN 88.5 MAX 169 MIN 31 AC-FT 64070

[a]Adjusted for change in contents and evaporation from Millerton Lake and for diversions to Madera and Friant-Kern canals.

11253310 CANTUA CREEK NEAR CANTUA CREEK, CA

LOCATION.--Lat 36°24'08", long 120°25'57", in SE 1/4 SE 1/4 sec.34, T.17 S., R.14 E., Fresno County, Hydrologic Unit 18030012, on left bank 9.2 mi southwest of town of Cantua Creek, and 19 mi north of Coalinga.

DRAINAGE AREA.--46.4 mi^2.

PERIOD OF RECORD.--Water years 1958-65 (annual maximum), October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 680 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1966, crest-stage gage at datum 2.00 ft lower.

REMARKS.--No estimated daily discharges. Records good. Some small dams for stock use above station.

AVERAGE DISCHARGE.--19 years, 3.41 ft^3/s, 2,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,420 ft^3/s, Mar. 1, 1983, gage height, 5.72 ft; maximum gage height, 6.60 ft, Feb. 24, 1969; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 11	2045	*16	*2.03

No flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.02	.44	.34	.80	.08	.03			
2			0	.02	.44	.40	.71	.07	.04			
3			0	.02	.46	.53	.62	.07	.04			
4			0	.02	.48	.55	.61	.07	.03			
5			0	.02	.47	.53	.58	.06	.02			
6			0	.03	.43	.56	.54	.06	.01			
7			0	.11	.44	1.4	.53	.06	0			
8			0	.28	.47	1.1	.55	.07	0			
9			0	.30	1.8	.92	.50	.08	0			
10			0	.36	1.1	.94	.44	.09	0			
11			0	.25	.88	2.6	.44	.15	0			
12			0	.24	.75	2.7	.42	.13	0			
13			0	.25	.69	1.6	.36	.10	0			
14			0	.28	.68	1.3	.31	.06	0			
15			.05	.28	.63	1.2	.29	.05	0			
16			.18	.31	.58	1.1	.34	.04	0			
17			.02	.27	.55	1.0	.45	.04	0			
18			.02	.28	.52	1.0	.56	.05	0			
19			.03	.31	.50	1.0	.58	.04	0			
20			.14	.35	.45	.99	.54	.04	0			
21			.04	.35	.42	.89	.58	.03	0			
22			.02	.34	.45	.85	.57	.02	0			
23			.02	.37	.42	.82	.46	.02	0			
24			.02	.39	.39	.80	.37	.02	0			
25			.02	.41	.39	.77	.31	.02	0			
26			.02	.39	.39	.80	.29	.02	0			
27			.02	.41	.39	.97	.29	.02	0			
28			.02	.46	.37	1.2	.22	.02	0			
29			.02	.46	---	1.2	.14	.02	0			
30			.02	.43	---	.98	.13	.02	0			
31			.02	.42	---	.87	---	.03	---			
TOTAL	0	0	0.68	8.43	15.98	31.91	13.53	1.65	0.17	0	0	0
MEAN	0	0	.022	.27	.57	1.03	.45	.053	.006	0	0	0
MAX	0	0	.18	.46	1.8	2.7	.80	.15	.04	0	0	0
MIN	0	0	0	.02	.37	.34	.13	.02	0	0	0	0
AC-FT	0	0	1.3	17	32	63	27	3.3	.3	0	0	0

CAL YR 1984 TOTAL 275.54 MEAN .75 MAX 8.0 MIN 0 AC-FT 547
WTR YR 1985 TOTAL 72.35 MEAN .20 MAX 2.7 MIN 0 AC-FT 144

11253500 JAMES BYPASS NEAR SAN JOAQUIN, CA

LOCATION.--Lat 36°39'09", long 120°10'49", in NE 1/4 SW 1/4 sec.1, T.15 S., R.16 E., Fresno County, Hydrologic Unit 18030012, on right bank 3.2 mi north of San Joaquin.

PERIOD OF RECORD.--October 1947 to current year. Published as "Fresno Slough bypass" in WSP 1315-A and 1735. Daily discharge for period October 1954 to September 1972 are in files of Bureau of Reclamation. Monthly totals published in WDR CA-72-2.

GAGE.--Water-stage recorder. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Diversion above station for irrigation. James Bypass carries overflow from Kings River to San Joaquin River. No flow during the 1985 water year.

COOPERATION.--Records were provided by Bureau of Reclamation, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--38 years, 272 ft^3/s, 197,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 5,570 ft^3/s, June 7, 1969; no flow for all or most of each year.

11257500 FRESNO RIVER NEAR KNOWLES, CA

LOCATION.--Lat 37°14'14", long 119°46'26", in SE 1/4 NW 1/4 sec.15, T.8 S., R.20 E., Madera County, Hydrologic Unit 18040007, on left bank at Fresno Crossing, 0.1 mi downstream from Bean Gulch, and 6 mi northeast of Knowles.

DRAINAGE AREA.--133 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to August 1913, November 1915 to current year.

REVISED RECORDS.--WSP 1515: 1916-19, 1920(M), 1921-23, 1925-26(M), 1932(M), 1935-36(M).

GAGE.--Water-stage recorder. Datum of gage is 1,086.4 ft above National Geodetic Vertical Datum of 1929. Prior to June 13, 1930, nonrecording gage 10 ft upstream and June 13, 1930, to Jan. 13, 1931, water-stage recorder at site 40 ft upstream at datum 0.34 ft lower.

REMARKS.--Estimated daily discharges: Nov. 19-28, Feb. 2-18, and Mar. 16-20. Records good except for periods of estimated daily record, which are fair. Diversions for irrigation of 160 acres above station. Diversions into Fresno River basin above station of up to 60 ft^3/s at times since 1888 from the Merced River basin. Diversions are for irrigation downstream from station.

AVERAGE DISCHARGE.--70 years (water years 1912, 1917-85), 85.0 ft^3/s, 61,580 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft^3/s, Dec. 23, 1955, gage height, 11.52 ft, from rating curve extended above 4,500 ft^3/s, on basis of slope-area measurement of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 590 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 8	Unknown	*581	*3.05				

Minimum daily, 0.03 ft^3/s, Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	22	48	31	28	47	168	64	33	8.0	.47	.46
2	5.9	23	38	31	33	61	173	62	35	7.8	.36	.20
3	7.2	23	34	30	33	60	163	61	44	7.1	.52	.66
4	6.0	23	31	29	33	48	145	59	40	6.9	.75	.82
5	6.5	24	29	30	32	44	133	59	34	7.1	.59	1.5
6	6.7	24	27	31	30	49	118	59	31	6.8	.41	1.6
7	8.3	24	28	67	28	114	107	59	28	6.5	.31	2.0
8	9.3	89	27	107	490	97	104	58	26	6.0	.61	1.9
9	10	109	31	61	330	70	98	59	25	6.1	.34	1.8
10	13	26	46	50	240	80	90	59	25	6.2	.38	5.0
11	18	25	65	45	150	191	87	59	22	5.5	.37	6.8
12	20	24	49	42	115	233	83	58	20	4.7	.22	5.5
13	20	58	44	40	98	158	86	57	19	4.3	1.2	4.6
14	20	93	38	39	88	129	85	57	17	4.1	2.0	4.1
15	20	30	42	37	78	117	82	55	16	3.7	1.9	3.8
16	21	25	59	36	73	112	80	53	15	3.6	2.1	3.5
17	58	36	44	35	68	100	105	52	14	3.2	2.5	3.3
18	42	25	36	35	62	117	98	53	12	2.0	.96	3.4
19	24	24	48	36	59	136	84	52	12	1.6	.48	4.6
20	23	20	58	37	60	110	79	47	11	1.2	.57	8.1
21	23	22	50	37	57	103	79	42	11	.89	1.9	5.4
22	22	32	40	36	50	93	76	40	12	.96	2.4	4.7
23	22	28	38	35	47	92	74	38	11	1.2	1.4	4.6
24	22	30	36	33	46	90	72	36	10	.93	.84	4.3
25	22	64	36	33	46	88	72	37	11	.87	.56	4.3
26	22	42	35	32	47	84	70	39	9.7	1.7	.29	4.3
27	22	24	35	33	47	347	68	40	8.9	.94	.15	4.3
28	22	255	34	33	45	371	66	39	8.3	.57	.07	6.1
29	22	140	33	33	---	241	64	36	8.1	.67	.03	7.1
30	22	74	32	31	---	192	64	35	8.0	.52	.69	8.3
31	22	---	31	31	---	170	---	34	---	.42	1.0	---
TOTAL	586.4	1458	1222	1216	2513	3944	2873	1558	577.0	112.07	26.37	117.04
MEAN	18.9	48.6	39.4	39.2	89.8	127	95.8	50.3	19.2	3.62	.85	3.90
MAX	58	255	65	107	490	371	173	64	44	8.0	2.5	8.3
MIN	4.5	20	27	29	28	44	64	34	8.0	.42	.03	.20
AC-FT	1160	2890	2420	2410	4980	7820	5700	3090	1140	222	52	232

CAL YR 1984 TOTAL 23898.0 MEAN 65.3 MAX 435 MIN 1.7 AC-FT 47400
WTR YR 1985 TOTAL 16202.88 MEAN 44.4 MAX 490 MIN .03 AC-FT 32140

NOTE.--Beaver activity affected stage-discharge relationship.

11257500 FRESNO RIVER NEAR KNOWLES, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: July 1971 to current year.

INSTRUMENTATION.--Temperature recorder since July 1971.

REMARKS.--Interruptions in record were due to malfunction of recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1972-85): Maximum recorded, 33.5°C, July 5, 1984; minimum recorded, 0.0°C, Jan. 5, 7, 1973, Dec. 8, 9, 1978.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 31.0°C, June 17, Aug. 28; minimum recorded, 2.0°C, Dec. 17, 18, 25, Jan. 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	14.0	10.0	9.5	7.0	6.0	3.0	7.0	3.0	14.0	9.5
2	20.5	15.0	14.0	9.5	8.5	6.5	6.0	2.0	7.0	4.5	11.5	8.0
3	21.0	15.5	15.0	11.5	9.0	7.5	6.0	2.5	6.0	3.5	9.5	6.5
4	21.0	16.0	14.0	10.0	10.0	8.0	6.0	2.5	6.5	2.5	11.0	6.0
5	21.0	15.5	13.5	10.0	10.5	8.5	5.5	3.0	6.5	3.0	9.0	7.5
6	22.0	16.0	14.5	11.5	10.5	8.0	6.5	4.5	7.5	3.5	10.0	7.0
7	22.0	16.0	14.0	11.0	9.0	6.5	7.5	6.0	6.0	4.0	9.5	7.0
8	22.0	16.0	13.0	10.5	10.0	6.5	7.0	5.5	7.0	5.5	9.0	6.0
9	21.5	16.0	11.0	8.5	10.0	7.0	8.0	5.5	7.5	6.5	10.0	6.5
10	21.0	15.5	11.0	8.5	9.5	7.5	8.0	5.0	7.0	5.0	12.0	9.0
11	19.0	16.5	13.0	9.5	10.0	8.0	6.5	5.5	7.5	5.0	11.5	9.5
12	19.0	13.5	13.0	10.5	9.5	7.5	8.0	5.0	9.5	5.5	10.5	7.5
13	19.0	14.0	13.0	10.5	7.5	5.0	7.0	4.0	10.0	6.5	12.5	9.0
14	17.0	14.5	10.5	8.5	6.0	3.5	6.0	3.0	11.0	6.5	12.0	9.5
15	16.0	11.5	10.0	7.5	4.5	3.0	5.5	4.5	11.5	7.5	13.0	9.5
16	13.5	11.5	11.0	9.0	5.0	3.5	7.0	4.5	11.5	8.0	13.0	10.5
17	14.5	11.5	11.0	8.0	4.5	2.0	7.5	3.5	11.5	9.0	13.5	10.5
18	13.5	10.0	12.0	9.0	3.5	2.0	8.0	4.0	13.0	9.0	12.5	10.0
19	15.5	11.5	11.5	8.5	5.0	3.0	8.0	4.5	13.0	9.0	10.0	9.0
20	16.5	12.0	10.0	8.0	6.5	4.5	8.0	4.5	11.0	8.0	13.0	8.5
21	14.5	11.0	9.0	7.5	6.5	4.5	6.0	5.0	10.0	6.0	13.0	10.0
22	15.5	10.5	8.5	6.5	6.5	4.0	7.0	4.0	11.5	7.0	13.0	9.5
23	15.0	10.5	8.5	5.5	5.0	2.5	7.5	5.0	12.0	7.5	14.0	9.5
24	15.5	11.0	8.0	7.0	5.0	3.5	8.5	5.5	12.5	8.0	14.0	10.5
25	15.5	11.0	8.0	6.0	5.0	2.0	7.0	4.5	13.5	8.5	14.5	11.0
26	14.5	11.5	7.0	4.0	4.0	2.5	7.0	5.5	14.0	9.0	11.5	8.0
27	14.0	11.0	8.0	5.5	5.0	2.5	8.0	5.0	14.0	9.0	10.0	8.5
28	13.5	9.0	9.0	8.0	5.5	3.0	6.5	5.5	14.0	9.0	10.5	8.5
29	14.0	10.0	9.0	7.5	6.0	4.0	7.5	4.0	---	---	10.5	7.0
30	15.5	11.5	8.0	7.0	5.0	4.0	6.5	4.5	---	---	11.5	8.5
31	14.0	10.5	---	---	5.5	4.0	7.0	3.5	---	---	13.0	9.5
MONTH	22.0	9.0	15.0	4.0	10.5	2.0	8.5	2.0	14.0	2.5	14.5	6.0

11257500 FRESNO RIVER NEAR KNOWLES, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.5	10.5	20.5	15.5	21.5	13.5	26.5	20.5	26.0	21.0	25.0	21.5
2	15.5	11.5	19.5	17.0	20.5	16.5	27.0	21.5	25.5	20.5	25.0	19.5
3	16.0	12.0	20.0	14.5	20.0	14.5	27.5	21.5	26.0	20.5	21.5	19.0
4	16.5	13.0	19.5	14.0	23.0	16.5	26.5	21.5	26.5	20.5	22.0	19.0
5	17.0	13.5	20.0	15.0	25.0	18.5	27.5	22.0	27.0	21.0	22.5	20.0
6	17.0	13.5	20.0	15.5	26.0	19.5	27.0	23.0	27.0	21.0	22.5	20.5
7	18.0	14.0	19.5	15.0	26.5	20.5	26.5	22.5	27.5	21.0	23.5	20.0
8	18.5	14.5	18.5	15.0	27.5	20.5	28.0	21.5	27.0	21.0	22.0	20.0
9	18.5	15.0	18.5	14.5	28.0	20.5	29.0	22.5	27.5	19.5	20.5	18.5
10	18.5	15.0	17.5	14.5	28.0	21.0	28.5	24.0	27.0	19.5	19.5	16.5
11	18.0	14.5	16.0	12.5	28.5	21.0	29.0	23.5	26.5	20.0	20.5	17.5
12	18.5	14.0	18.5	12.5	29.5	22.0	29.0	22.5	26.0	20.5	21.0	15.5
13	19.5	15.5	20.0	14.5	29.5	21.5	29.5	22.0	26.0	19.5	21.5	17.0
14	20.0	16.0	21.5	15.5	29.5	21.5	30.0	22.5	26.0	20.0	22.5	17.0
15	18.5	16.5	21.5	16.0	30.0	21.5	29.0	22.0	26.0	20.5	22.0	17.0
16	16.5	14.0	21.5	16.5	30.5	22.5	28.0	22.5	26.5	20.5	22.0	16.5
17	16.0	14.5	21.0	16.0	31.0	23.0	28.5	22.0	26.0	21.0	22.0	16.5
18	14.5	12.5	21.0	16.0	30.5	23.0	29.0	22.5	26.0	20.5	20.5	17.5
19	15.0	11.5	22.0	16.5	30.5	23.0	29.0	22.5	26.0	20.5	21.0	16.5
20	14.0	11.5	22.5	17.0	29.0	22.0	28.5	23.5	26.5	20.5	21.5	17.0
21	15.0	10.0	22.5	16.5	29.5	21.5	28.0	21.5	26.5	20.0	22.0	17.5
22	16.5	12.0	24.0	18.0	29.0	21.5	28.5	21.5	25.5	20.0	23.0	17.5
23	17.5	12.5	24.0	18.5	29.5	21.0	29.5	22.0	26.0	20.5	23.5	18.0
24	18.0	13.5	25.0	19.0	28.0	21.0	29.5	23.0	26.5	21.0	24.5	18.5
25	16.0	12.5	24.5	19.0	27.5	20.5	30.5	24.0	27.0	21.0	24.5	18.5
26	15.5	11.0	23.5	18.0	26.5	20.0	28.5	23.0	27.5	21.0	24.5	18.5
27	17.0	12.5	23.0	17.0	27.5	20.0	30.5	23.0	27.5	20.5	22.5	19.0
28	18.0	13.5	23.0	17.0	25.5	21.0	30.5	23.5	31.0	20.0	23.0	18.0
29	17.5	14.0	23.0	17.5	26.0	21.0	30.0	21.5	29.5	19.0	23.0	19.0
30	19.5	14.5	22.0	15.0	26.0	19.5	28.0	20.5	26.0	17.5	21.5	18.0
31	---	---	20.5	16.0	---	---	27.0	20.5	26.5	21.0	---	---
MONTH	20.0	10.0	25.0	12.5	31.0	13.5	30.5	20.5	31.0	17.5	25.0	15.5
YEAR	31.0	2.0										

11257950 HENSLEY LAKE NEAR DAULTON, CA

LOCATION.--Lat 37°06'34", long 119°53'05", in NE 1/4 NW 1/4 sec.34, T.9 S., R.19 E., Madera County, Hydrologic Unit 18040007, in control tower at center of Hidden Dam on Fresno River, and 5.3 mi southeast of Daulton.

DRAINAGE AREA.--236 mi^2.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Lake is formed by earthfill dam. Storage began Oct. 1, 1975, usable capacity, 85,289 acre-ft, between elevations 448.0 ft lowest outlet, and 540.0 ft crest of spillway. Dead storage, 4,970 acre-ft. Records, including extremes, represent total contents at 2400 hours. Reservoir is used for flood control, irrigation, recreation, and wildlife enhancement.

COOPERATION.--Records provided by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 89,509 acre-ft, June 6, 1979, elevation, 539.52 ft; minimum since reservoir first filled, 8,790 acre-ft, Sept. 30 and Oct. 1, 1984, elevation, 459.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 35,517 acre-ft, May 29, elevation, 497.45 ft; minimum, 8,790 acre-ft, Oct. 1, elevation, 459.06 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

435	2,134	490	28,556
445	4,173	500	38,094
455	7,217	510	49,115
460	9,185	520	61,525
470	14,138	530	75,247
480	20,569	540	90,259

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8790	8940	10594	12958	15314	19885	27643	33258	35171	24064	11649	9768
2	8794	8957	10655	13012	15380	20012	27963	33373	34974	23764	11376	9759
3	8794	8978	10726	13038	15452	20126	28267	33469	34758	23365	11118	9768
4	8803	8999	10778	13098	15524	20225	28573	33584	34504	22923	10835	9759
5	8803	9016	10830	13152	15585	20354	28855	33690	34144	22487	10570	9754
6	8807	9037	10882	13217	15651	20454	29111	33786	33815	22071	10329	9754
7	8811	9007	10944	13347	15718	20663	29342	33882	33488	21674	10050	9750
8	8815	8965	10997	13501	16091	20873	29574	33989	33162	21290	9947	9741
9	8823	8965	11040	13622	17104	20997	29781	34076	32810	20888	9933	9737
10	8828	8928	11132	13722	17446	21209	29969	34173	32479	20461	9929	9724
11	8865	8869	11230	13800	17675	21452	30141	34270	32150	20033	9920	9724
12	8877	8869	11308	13884	17839	21816	30313	34367	31804	19576	9911	9719
13	8894	8894	11391	13969	17984	22094	30486	34465	31432	19125	9906	9719
14	8911	8982	11460	14036	18137	22290	30659	34562	31035	18681	9902	9719
15	8915	9028	11559	14115	18264	22479	30824	34641	30650	18244	9893	9719
16	8944	9087	11674	14183	18411	22662	30989	34719	30241	17839	9884	9715
17	8961	9138	11759	14263	18526	22823	31247	34797	29826	17459	9879	9710
18	9016	9189	11845	14320	18647	23054	31478	34876	29396	17053	9875	9710
19	9049	9236	11936	14401	18797	23256	31645	34964	28925	16646	9870	9706
20	9066	9275	12053	14464	18926	23435	31804	35033	28477	16258	9866	9706
21	9087	9326	12160	14550	19043	23615	31972	35102	28024	15883	9857	9710
22	9091	9391	12243	14614	19160	23764	32131	35171	27575	15512	9852	9710
23	9058	9434	12331	14684	19270	23914	32262	35230	27138	15130	9843	9710
24	9032	9504	12409	14753	19353	24072	32404	35289	26732	14742	9835	9715
25	8999	9648	12477	14824	19464	24223	32526	35339	26312	14343	9830	9710
26	8965	9746	12539	14894	19583	24398	32649	35378	25862	13935	9821	9710
27	8936	9821	12618	14970	19674	25100	32772	35428	25459	13545	9812	9710
28	8898	10136	12687	15029	19765	26120	32896	35477	25083	13125	9808	9706
29	8894	10375	12766	15112	---	26630	33019	35517	24687	12697	9799	9706
30	8911	10505	12830	15183	---	27011	33143	35497	24350	12300	9786	9701
31	8923	---	12883	15231	---	27309	---	35378	---	11951	9781	---
MAX	9091	10505	12883	15231	19765	27309	33143	35517	35171	24064	11649	9768
MIN	8790	8869	10594	12958	15314	19885	27643	33258	24350	11951	9781	9701
a	459.38	462.96	467.72	471.88	478.87	488.56	495.01	497.31	484.98	465.93	461.37	461.19
b	+133	+1582	+2378	+2348	+4534	+7544	+5834	+2235	-11028	-12399	-2170	-80
c	180	83	46	31	99	175	409	654	786	676	440	274

CAL YR 1984 b -23442
WTR YR 1985 b +911

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet.

11258000 FRESNO RIVER BELOW HIDDEN DAM, NEAR DAULTON, CA

LOCATION.--Lat 37°06'16", long 119°53'13", in NE 1/4 SW 1/4 sec.34, T.9 S., R.19 E., Madera County, Hydrologic Unit 18040007, on left bank 350 ft upstream from Willow Creek, 2,000 ft downstream from Hidden Dam, and 5.2 mi southeast of Daulton.

DRAINAGE AREA.--237 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1975, published as "near Daulton".

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 385 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WDR CA-75-3 for history of changes prior to Oct. 1, 1975.

REMARKS.--Estimated daily discharges: Sept. 3-9. Records fair. Flow completely regulated by Hensley Lake (station 11257950) since October 1975.

AVERAGE DISCHARGE.--44 years, 118 ft^3/s, 85,490 acre-ft/yr, adjusted for change in contents and evaporation from Hensley Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft^3/s, Dec. 23, 1955, gage height, 17.64 ft, site and datum then in use, from rating curve extended above 6,400 ft^3/s on basis of slope-area measurement at gage height 17.60, ft site and datum then in use; maximum gage height, 17.69 ft, Feb. 24, 1969, site and datum then in use; no flow at times most years. Maximum discharge since construction of Hidden Dam in 1975, 4,190 ft^3/s, Mar. 1, 1983, gage height, 8.83 ft; no flow for many days in 1975-78, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 3, 1938, reached a discharge of 15,000 ft^3/s, provided by Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 237 ft^3/s, June 18, gage height, 5.10 ft; minimum, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	2.2	0	.10	.30	.40	.50	.80	121	147	149	.10
2	0	2.1	0	.10	.50	.20	.40	.70	139	146	137	.10
3	0	2.1	0	.10	.60	.30	.60	.70	138	187	134	.10
4	0	2.0	.10	.10	.60	.30	.60	.70	156	211	144	.10
5	1.2	2.4	0	.10	.60	.30	.90	.60	199	209	134	.10
6	.20	2.8	0	0	.50	.30	.70	.60	190	199	125	.10
7	.10	28	.10	0	.60	.40	.30	.50	178	192	142	.10
8	.10	51	0	.10	1.0	.30	.30	.40	176	182	60	.10
9	0	52	0	.10	.70	.20	.40	.30	189	191	.90	.10
10	0	52	0	.10	.50	.30	.60	.30	180	206	.40	.10
11	.10	52	.10	.10	.50	.40	.50	.20	176	209	.20	0
12	.10	35	.10	.10	.50	.50	.40	.30	183	218	.20	0
13	.10	14	.10	.10	.50	.50	.40	.20	195	218	.20	0
14	.10	2.1	.10	.10	.60	.50	.40	.20	201	211	.20	0
15	.10	.50	.20	.10	.50	.40	.40	.10	199	209	.20	0
16	.10	.40	.40	.10	.40	.30	.40	.10	207	196	.20	0
17	.80	.40	.20	.10	.30	.30	.60	.10	209	181	.30	0
18	.80	.10	.20	.10	.30	.40	.60	.10	221	191	.50	0
19	1.0	.10	.20	.10	.30	.40	.40	.20	227	197	.70	1.3
20	1.1	.10	.30	.10	.20	.50	.50	.20	225	183	.80	.20
21	1.1	.20	.30	.10	.20	.50	.50	.20	225	176	.70	.10
22	8.1	.20	.20	.10	.20	.60	.50	.20	224	176	.60	.10
23	27	.20	.20	.10	.20	.50	.50	.30	219	182	.20	.10
24	27	.10	.20	.10	.30	.40	.60	.10	200	187	.20	0
25	27	.10	.20	.10	.30	.50	.80	.10	211	194	.20	0
26	27	0	.20	.10	.30	.70	.80	.10	220	197	.20	0
27	27	0	.30	.20	.30	1.0	.80	.10	200	190	.10	0
28	27	0	.20	.20	.50	1.0	.70	.10	186	201	.10	0
29	13	0	.20	.20	---	1.0	.70	.10	196	207	.10	0
30	1.7	.10	.20	.30	---	.60	.70	29	165	195	.10	1.5
31	2.1	---	.10	.30	---	.50	---	77	---	171	.10	---
TOTAL	193.90	302.20	4.40	3.60	12.30	14.50	16.50	114.60	5755	5959	1032.40	4.30
MEAN	6.25	10.1	.14	.12	.44	.47	.55	3.70	192	192	33.3	.14
MAX	27	52	.40	.30	1.0	1.0	.90	77	227	218	149	1.5
MIN	0	0	0	0	.20	.20	.30	.10	121	146	.10	0
AC-FT	385	599	8.7	7.1	24	29	33	227	11420	11820	2050	8.5

CAL YR 1984	TOTAL	37710.7	MEAN	103	MAX	1190	MIN	0	AC-FT	74480	MEAN	a	76.7	AC-FT a 55680
WTR YR 1985	TOTAL	13412.70	MEAN	36.7	MAX	227	MIN	0	AC-FT	26600	MEAN	a	43.3	AC-FT a 31350

a Adjusted for change in contents and evaporation from Hensley Lake.

NOTE.--Backwater from beaver dams Nov. 15, 1984 to May 23, 1985.

11258000 FRESNO RIVER BELOW HIDDEN DAM, NEAR DAULTON, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1975 to current year.

INSTRUMENTATION.--Temperature recorder since Oct. 29, 1975.

REMARKS.--Water temperatures are affected by regulation from Hidden Dam.

EXTREMES FOR PERIOD OF RECORD.--
WATER TEMPERATURES: Maximum recorded, 32.0°C, June 15, 1976; minimum recorded, 3.5°C, Jan. 1 1976, Nov. 26, 1980.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 29.5°C, May 24; minimum recorded, 5.5°C, Jan. 5.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	14.5	13.0	---	---	7.5	7.0	7.5	7.0	15.5	14.5
2	---	---	15.5	13.0	---	---	7.0	6.5	8.5	7.5	15.0	13.5
3	---	---	16.5	14.5	---	---	6.5	6.0	8.5	7.5	13.0	12.0
4	---	---	15.0	13.0	11.5	11.0	6.5	6.0	7.5	7.0	12.5	11.5
5	18.0	14.5	14.0	13.0	---	---	6.0	5.5	7.5	7.0	12.5	12.0
6	18.0	17.0	15.0	13.5	---	---	---	---	7.5	7.0	13.0	12.0
7	17.5	17.0	16.0	14.0	11.0	10.0	---	---	8.5	8.0	12.5	12.0
8	17.0	16.5	16.0	15.5	---	---	8.0	7.5	9.5	8.5	12.0	11.5
9	---	---	16.0	15.0	---	---	8.5	8.0	10.5	9.0	12.0	11.5
10	---	---	15.5	15.0	---	---	8.5	8.0	9.5	8.5	13.5	12.0
11	16.5	16.0	15.5	15.0	12.0	11.0	8.0	8.0	9.0	8.5	14.5	13.5
12	16.5	15.5	16.0	15.0	11.5	10.0	8.0	8.0	9.5	9.0	14.5	14.0
13	15.5	15.0	16.0	14.5	10.0	8.5	8.0	7.0	10.5	9.5	14.0	14.0
14	15.5	15.0	14.5	12.5	8.5	7.5	7.5	7.5	11.0	10.5	14.5	14.0
15	15.0	13.5	13.0	11.5	8.0	7.5	7.5	7.5	12.0	11.0	15.0	14.0
16	13.5	13.0	13.5	12.5	8.0	7.0	7.5	7.0	12.5	12.0	15.0	14.5
17	13.0	12.5	12.5	11.5	7.0	6.0	7.0	6.0	13.0	12.5	15.0	15.0
18	12.5	11.5	14.0	12.0	7.0	6.5	7.0	6.0	13.5	13.0	15.0	14.5
19	12.5	11.5	13.0	12.0	7.0	6.5	7.5	7.0	14.0	13.5	14.5	14.0
20	12.5	12.5	12.0	11.0	8.0	7.0	7.5	7.0	14.0	13.0	14.0	13.5
21	12.5	12.0	12.0	10.5	7.5	7.0	7.5	7.5	13.0	12.0	14.5	13.5
22	14.0	12.0	10.5	10.0	7.5	7.0	7.5	7.0	12.5	12.0	14.5	13.0
23	16.5	14.5	11.0	9.0	7.5	6.5	8.0	7.5	13.0	12.5	14.0	13.5
24	17.0	16.0	11.0	10.5	7.0	6.5	8.0	7.5	13.5	13.0	14.5	14.0
25	17.0	16.0	10.5	9.0	7.0	6.5	8.5	7.5	14.0	13.5	14.5	13.5
26	17.0	16.0	---	---	7.0	6.0	8.5	8.0	14.0	14.0	13.5	12.0
27	17.0	16.0	---	---	7.0	7.0	8.5	8.0	14.5	14.0	12.5	12.0
28	17.0	16.0	---	---	7.0	7.0	8.5	8.0	15.0	14.5	12.5	12.0
29	18.0	15.5	---	---	7.5	7.0	8.0	7.0	---	---	12.5	12.0
30	18.0	15.5	10.0	9.0	7.5	7.0	8.0	7.5	---	---	13.0	12.0
31	16.5	14.5	---	---	7.5	7.5	7.5	7.0	---	---	13.0	12.5
MONTH	---	---	---	---	---	---	---	---	15.0	7.0	15.5	11.5

11258000 FRESNO RIVER BELOW HIDDEN DAM, NEAR DAULTON, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.5	13.0	---	---	12.5	11.5	14.5	13.5	24.5	23.5	21.5	19.5
2	14.0	13.5	---	---	12.0	11.5	15.0	14.0	24.5	23.5	21.5	18.5
3	14.5	14.0	---	---	12.5	11.5	15.5	14.0	25.0	23.5	19.5	18.0
4	---	---	---	---	12.5	11.5	15.5	15.0	25.0	24.0	20.0	18.0
5	---	---	---	---	12.5	11.5	16.0	15.0	25.0	24.0	21.0	19.0
6	---	---	---	---	12.5	11.5	16.0	15.5	25.5	24.0	20.5	19.5
7	---	---	---	---	12.5	12.0	16.5	15.5	25.5	24.0	21.0	19.5
8	---	---	---	---	12.5	12.0	16.5	16.0	28.0	24.5	21.0	19.5
9	---	---	---	---	12.5	12.0	17.0	16.0	25.5	21.0	19.5	18.0
10	---	---	---	---	12.5	12.0	17.5	16.5	24.5	21.0	18.0	16.5
11	---	---	---	---	12.5	12.0	18.0	17.0	23.5	21.0	---	---
12	---	---	---	---	13.0	12.0	18.5	17.5	23.0	20.5	---	---
13	---	---	---	---	13.0	12.0	18.5	18.0	22.0	20.5	---	---
14	---	---	---	---	13.0	12.0	19.0	18.0	22.5	20.5	---	---
15	---	---	---	---	13.0	12.0	19.5	18.5	22.0	20.5	---	---
16	---	---	---	---	13.0	12.0	19.5	19.0	22.5	20.5	---	---
17	---	---	---	---	13.0	12.5	19.5	19.0	22.0	20.0	---	---
18	---	---	---	---	13.0	12.5	20.0	19.0	21.0	19.5	---	---
19	---	---	---	---	13.0	12.5	20.5	19.5	21.5	19.5	22.0	16.5
20	---	---	---	---	13.5	12.5	21.0	20.0	21.0	19.5	20.5	18.5
21	---	---	---	---	13.5	12.5	21.0	20.5	21.0	19.5	20.0	18.0
22	---	---	---	---	13.5	13.0	21.5	20.5	21.0	19.5	19.0	18.0
23	---	---	---	---	13.5	13.0	22.0	21.0	21.0	19.5	20.5	18.0
24	---	---	29.5	22.5	13.5	13.0	22.5	21.5	21.5	19.5	---	---
25	---	---	28.5	21.0	14.0	13.0	23.5	22.0	22.0	19.5	---	---
26	---	---	27.5	20.0	14.0	13.5	23.5	22.5	22.0	19.5	---	---
27	---	---	27.5	19.5	14.0	13.5	24.0	23.0	22.0	19.5	---	---
28	---	---	27.0	20.0	14.0	13.5	24.5	23.0	22.5	19.5	---	---
29	---	---	25.0	18.5	14.5	13.5	24.5	23.5	22.5	20.0	---	---
30	---	---	20.0	11.5	14.5	13.5	24.5	24.0	22.0	19.0	24.0	17.0
31	---	---	12.5	11.5	---	---	24.5	23.5	22.5	19.5	---	---
MONTH	---	---	---	---	14.5	11.5	24.5	13.5	28.0	19.0	---	---

11258960 CHOWCHILLA RIVER ABOVE WILLOW CREEK, NEAR RAYMOND, CA

LOCATION.--Lat 37°16'23", long 119°52'49", in NE 1/4 NW 1/4 sec.3, T.8 S., R.19 E., Madera County, Hydrologic Unit 18040007, on left bank 0.9 mi upstream from Willow Creek, and 4.7 mi northeast of Raymond.

DRAINAGE AREA.--173 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1980 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 680 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No large storage or diversions above station.

AVERAGE DISCHARGE.--5 years, 146 ft^3/s, 105,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft^3/s, Dec. 22, 1982, gage height, 14.08 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 660 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 8	1945	*2,170	*8.63	Mar. 28	0915	878	7.05

No flow July 9 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.51	4.1	29	19	18	23	111	23	6.1	.07		
2	.57	4.4	24	19	21	27	105	22	6.4	.04		
3	.74	4.5	22	18	21	33	97	21	7.9	.03		
4	.71	4.5	21	18	21	29	88	20	8.9	.03		
5	.86	4.5	20	18	20	27	80	20	8.2	.03		
6	1.1	4.9	18	18	19	30	71	19	6.6	.02		
7	1.2	5.0	17	24	18	69	63	18	5.5	.01		
8	1.3	8.9	17	47	566	85	58	18	4.6	.01		
9	1.3	22	16	33	567	67	54	17	3.9	0		
10	1.3	18	18	27	146	72	50	16	3.5	0		
11	2.4	12	25	24	88	124	45	16	3.0	0		
12	3.3	10	23	23	68	188	42	17	2.7	0		
13	2.9	12	22	22	58	102	40	17	2.3	0		
14	2.9	26	20	21	51	81	37	17	2.0	0		
15	2.8	21	20	21	46	70	34	14	1.7	0		
16	2.8	16	39	21	43	63	32	13	1.3	0		
17	5.1	18	28	20	40	57	51	12	1.1	0		
18	9.5	17	25	19	37	64	64	12	.95	0		
19	6.9	15	26	19	34	75	46	11	.80	0		
20	5.3	12	28	19	32	61	39	11	.69	0		
21	4.6	13	27	19	31	54	37	10	.59	0		
22	4.3	19	25	19	29	49	37	9.5	.50	0		
23	4.1	17	24	19	28	45	34	8.6	.43	0		
24	4.1	18	23	18	27	43	32	8.0	.38	0		
25	4.1	54	22	18	26	40	29	7.3	.35	0		
26	4.1	30	22	18	25	40	29	6.9	.28	0		
27	4.1	21	22	18	25	428	28	6.5	.22	0		
28	4.1	222	21	18	24	554	26	6.5	.17	0		
29	4.1	91	20	19	---	249	24	6.6	.12	0		
30	4.1	42	20	19	---	145	24	6.2	.10	0		
31	4.1	---	19	19	---	119	---	5.9	---	0		
TOTAL	99.29	766.8	703	654	2129	3113	1507	416.0	81.28	0.24	0	0
MEAN	3.20	25.6	22.7	21.1	76.0	100	50.2	13.4	2.71	.008	0	0
MAX	9.5	222	39	47	567	554	111	23	8.9	.07	0	0
MIN	.51	4.1	16	18	18	23	24	5.9	.10	0	0	0
AC-FT	197	1520	1390	1300	4220	6170	2990	825	161	.5	0	0

CAL YR 1984 TOTAL 17213.63 MEAN 47.0 MAX 436 MIN .01 AC-FT 34140
WTR YR 1985 TOTAL 9469.61 MEAN 25.9 MAX 567 MIN 0 AC-FT 18780

11258960 CHOWCHILLA RIVER ABOVE WILLOW CREEK, NEAR RAYMOND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: July 1980 to current year.

INSTRUMENTATION.--Temperature recorder since July 9, 1980.

REMARKS.--No temperatures shown for period of no flow July 9 to Sept. 30.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1981-85): Maximum recorded, 38.0°C, July 2, 1985; minimum recorded, 1.5°C, Dec. 10-14, 1980.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 38.0°C, July 2; minimum recorded, 3.0°C, Jan. 3, 4.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	22.0	15.5	15.0	11.5	10.5	8.0	7.5	5.5	8.0	4.0	16.0	11.0
2	22.0	16.5	15.0	12.0	10.0	8.0	6.5	3.5	8.0	5.5	13.5	10.5
3	22.0	16.5	16.0	13.0	10.5	9.0	6.5	3.0	7.5	5.0	12.5	9.0
4	22.5	17.0	15.5	12.5	11.5	10.0	6.5	3.0	7.0	4.0	12.5	8.5
5	22.0	16.5	15.0	12.5	12.0	10.0	6.5	4.0	7.0	3.5	11.0	9.0
6	23.0	17.5	16.0	13.5	11.5	9.5	7.5	6.0	8.0	4.0	12.0	9.0
7	23.5	18.0	15.5	13.5	10.5	8.0	8.5	7.5	7.0	5.0	12.5	9.0
8	23.0	18.0	15.5	13.5	11.0	8.5	8.5	6.5	8.0	7.0	10.5	8.0
9	23.0	18.0	13.5	10.5	11.0	8.0	9.5	7.0	8.5	7.0	11.5	8.0
10	23.0	17.5	13.0	10.0	11.5	9.0	8.5	6.5	8.0	5.5	13.5	10.5
11	20.5	18.5	14.5	11.5	12.0	9.5	8.0	7.0	8.5	5.5	12.5	10.5
12	19.5	16.0	14.5	12.0	11.0	9.5	9.5	7.0	10.0	7.0	11.5	8.0
13	21.0	16.5	15.0	13.0	9.0	6.5	8.0	5.5	11.0	7.5	13.5	9.5
14	19.5	16.5	13.5	11.0	7.5	5.0	7.0	5.5	12.0	8.0	14.5	10.5
15	17.0	14.0	12.0	9.5	6.5	4.5	6.5	6.0	12.5	8.5	15.5	11.0
16	15.0	14.0	13.0	11.0	6.5	4.5	8.0	6.0	13.5	9.5	16.0	12.0
17	17.0	13.0	12.5	9.5	6.0	4.0	8.0	4.5	13.5	10.5	16.5	12.5
18	15.5	12.0	14.0	10.5	5.5	3.5	8.0	4.5	14.5	10.5	14.0	12.0
19	17.5	14.0	12.5	9.5	6.5	4.5	8.0	5.5	15.0	11.0	12.5	11.0
20	17.5	14.5	11.5	9.5	8.0	6.0	8.0	6.0	12.5	10.5	15.5	10.0
21	16.0	13.5	11.5	10.5	8.5	6.5	7.5	7.0	12.0	8.0	15.5	12.0
22	16.5	13.0	10.0	8.5	7.5	6.0	7.5	5.5	13.0	8.5	16.0	11.0
23	16.5	13.0	10.0	7.0	5.5	4.5	7.5	6.5	13.5	9.0	17.0	11.5
24	16.5	14.0	9.5	9.0	6.5	5.0	9.5	7.0	14.5	9.5	17.5	12.5
25	17.0	13.5	9.5	7.5	7.0	5.0	9.0	6.5	15.0	10.0	17.5	13.0
26	16.0	14.0	9.0	6.5	6.0	4.0	8.5	7.5	15.5	10.5	13.5	10.5
27	15.0	13.0	10.0	7.0	6.0	4.0	9.5	6.5	16.0	11.0	11.0	9.0
28	14.5	11.5	10.5	9.5	6.5	5.0	8.0	6.5	16.0	11.0	11.5	8.5
29	15.5	12.5	9.5	7.5	7.0	6.0	8.0	5.0	---	---	12.0	7.5
30	16.5	14.0	9.5	7.5	6.5	5.5	8.0	6.5	---	---	13.0	9.0
31	16.0	13.0	---	---	7.0	6.0	8.0	5.0	---	---	15.0	10.5
MONTH	23.5	11.5	16.0	6.5	12.0	3.5	9.5	3.0	16.0	3.5	17.5	7.5

11258960 CHOWCHILLA RIVER ABOVE WILLOW CREEK, NEAR RAYMOND, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	12.5	25.0	18.5	25.0	18.0	35.0	21.0				
2	18.5	14.0	23.5	20.0	21.0	19.5	38.0	22.0				
3	19.5	14.5	23.5	18.0	25.0	18.0	35.5	22.0				
4	20.0	16.0	23.5	17.5	27.0	20.0	34.5	22.5				
5	21.5	16.5	24.0	18.0	28.5	22.0	37.5	23.0				
6	21.5	16.5	23.5	18.5	29.5	23.0	37.0	24.0				
7	22.0	17.5	23.5	18.0	30.5	24.0	33.5	23.5				
8	23.0	18.0	22.5	18.0	30.0	23.5	37.0	22.5				
9	24.0	18.5	22.5	17.5	30.5	23.5	---	---				
10	23.0	18.5	21.5	17.0	31.0	23.5	---	---				
11	23.0	17.5	20.5	16.0	31.5	24.5	---	---				
12	23.5	17.0	23.0	16.5	32.0	25.5	---	---				
13	25.0	18.0	24.5	18.0	32.5	25.5	---	---				
14	25.5	19.0	25.5	19.5	32.5	25.0	---	---				
15	23.5	19.5	26.0	19.5	33.0	25.0	---	---				
16	20.0	17.5	25.5	20.0	34.5	25.5	---	---				
17	21.0	15.5	25.0	19.5	35.0	25.5	---	---				
18	18.5	15.5	25.5	19.5	34.5	25.0	---	---				
19	20.0	15.0	26.0	19.5	34.0	25.5	---	---				
20	16.5	14.5	26.5	20.5	32.5	24.0	---	---				
21	19.0	13.5	26.5	20.0	32.5	23.0	---	---				
22	21.0	15.0	27.5	21.5	32.5	23.5	---	---				
23	22.5	16.0	28.5	21.5	33.0	23.0	---	---				
24	22.0	16.5	28.5	22.5	31.0	22.5	---	---				
25	20.0	15.0	28.0	22.0	31.0	21.5	---	---				
26	20.0	14.0	27.0	21.0	33.0	21.0	---	---				
27	22.0	15.0	26.5	20.5	34.5	21.5	---	---				
28	22.5	16.5	26.5	20.0	34.0	22.5	---	---				
29	22.5	17.5	26.0	20.5	33.0	22.5	---	---				
30	24.0	17.5	26.0	19.0	33.0	20.5	---	---				
31	---	---	23.0	19.5	---	---	---	---				
MONTH	25.5	12.5	28.5	16.0	35.0	18.0	---	---				
YEAR	38.0	3.0										

11258990 H. V. EASTMAN LAKE NEAR RAYMOND, CA

LOCATION.--Lat 37°13'00", long 119°59'04", in SW 1/4 SE 1/4 sec.22, T.8 S., R.18 E., Madera County, Hydrologic Unit 18040007, in intake structure at center of dam on Chowchilla River, 4.4 mi west of Raymond.

DRAINAGE AREA.--235 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by earth and rockfill dam. Dam was completed in December 1975, capacity, 150,604 acre-ft, between elevations, 410.0 ft invert elevation to outlet tunnel, and 587.0 ft crest of ungated spillway. Inactive pool, 10,150 acre-ft. Reservoir is used for flood control, irrigation, recreation, and fish and wildlife enhancement. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records were provided by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 145,687 acre-ft, June 4, 5, 1979, elevation, 584.22 ft; minimum since initial season of normal operation, 1,978 acre-ft Nov. 20, 1977, elevation, 440.81 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,330 acre-ft, May 23, 24, elevation, 506.65 ft; minimum, 10,546 acre-ft, Sept. 30, elevation, 466.81 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

438	1,519	480	18,213
442	2,197	490	25,520
446	3,043	500	34,039
450	4,069	520	54,354
455	5,620	540	78,560
460	7,485	560	106,476
465	9,673	580	138,394
470	12,190	600	174,809
475	15,038		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24546	21201	23001	24500	26014	30899	37394	40065	40232	24593	11032	10725
2	24523	21201	23053	24640	26070	30951	37622	40095	40251	23523	11027	10715
3	24500	21208	23114	24679	26110	31012	37832	40105	40251	22447	11017	10715
4	24121	21216	23174	24710	26150	30942	38023	40124	40251	21397	11006	10710
5	23538	21223	23204	24764	26190	31003	38186	40154	40261	20358	10991	10705
6	22956	21237	23242	24796	26222	31073	38330	40173	40261	19297	10976	10705
7	22388	21259	23272	24866	26262	31212	38455	40183	40271	18253	10966	10700
8	21842	21317	23310	24968	27178	31396	38570	40193	40271	17213	10956	10695
9	21331	21346	23341	25046	28804	31536	38676	40202	40261	16162	10941	10685
10	21122	21382	23401	25109	29175	31712	38763	40212	40261	15128	10931	10675
11	21158	21404	23454	25156	29395	31959	38840	40222	40251	14091	10920	10665
12	21151	21455	23500	25212	29557	32331	38908	40232	40251	13060	10910	10660
13	21136	21477	23538	25259	29701	32589	38995	40261	40232	12057	10900	10650
14	21136	21513	23576	25298	29812	32749	39072	40281	40212	11344	10890	10645
15	21122	21564	23683	25346	29915	32902	39130	40301	40202	11210	10880	10640
16	21158	21608	23767	25385	30018	33027	39179	40310	40193	11200	10870	10630
17	21151	21644	23836	25425	30112	33153	39285	40320	39548	11184	10865	10620
18	21158	21681	23897	25457	30207	33306	39402	40320	38474	11174	10855	10615
19	21172	21710	23966	25496	30284	33459	39470	40320	37670	11159	10845	10610
20	21179	21739	24036	25536	30353	33594	39528	40310	36779	11159	10840	10600
21	21179	21776	24097	25575	30422	33703	39597	40320	35703	11159	10840	10596
22	21179	21790	24151	25615	30483	33803	39665	40320	34550	11154	10825	10591
23	21187	21827	24205	25647	30543	33893	39723	40330	33386	11154	10820	10586
24	21187	21915	24252	25695	30604	33975	39762	40330	32233	11134	10810	10581
25	21194	22018	24298	25726	30664	34047	39801	40320	31108	11118	10810	10576
26	21194	22092	24352	25766	30742	34148	39840	40320	29992	11103	10785	10571
27	21194	22165	24399	25798	30794	34944	39889	40310	28905	11093	10780	10566
28	21194	22551	24438	25846	30846	36038	39938	40291	27820	11083	10770	10556
29	21201	22813	24484	25878	---	36582	39977	40261	26739	11067	10760	10551
30	21208	22918	24500	25918	---	36892	40016	40251	25671	11057	10745	10546
31	21208	---	24500	25958	---	37157	---	40232	---	11042	10740	---
MAX	24546	22918	24500	25958	30846	37157	40016	40330	40271	24593	11032	10725
MIN	21122	21201	23001	24500	26014	30899	37394	40065	25671	11042	10740	10546
a	483.31	486.63	488.70	490.55	496.41	503.36	506.33	506.55	490.19	467.80	467.20	466.81
b	-3354	+1710	+1582	+1458	+4888	+6311	+2859	+216	-14561	-14629	-302	-194
c	260	119	74	49	111	178	401	638	789	543	434	269

CAL YR 1984 b -91171
WTR YR 1985 b -14016

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.
[c]Evaporation, in acre-feet.

11259000 CHOWCHILLA RIVER BELOW BUCHANAN DAM, NEAR RAYMOND, CA

LOCATION.--Lat 37°12'56", long 119°59'25", in SE 1/4 SW 1/4 sec.22, T.8 S., R.18 E., Madera County, Hydrologic Unit 18040007, on left bank 1,800 ft downstream from Buchanan Dam, and 4.6 mi west of Raymond.

DRAINAGE AREA.--236 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to September 1923, October 1930 to September 1972, October 1975 to current year. Prior to Oct. 1, 1962, published as "at Buchanan damsite."

REMARKS.--Estimated daily discharges: Sept. 3-30. Records good, except for June 18 to Aug. 2, which are fair. Flow completely regulated by H. V. Eastman Lake (station 11258990) 1,800 ft upstream beginning Jan. 1, 1976.

GAGE.--Water-stage recorder and concrete control since October 1975. Elevation of gage is 420 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1921 to September 1923, at site 2.4 mi upstream at different datum. October 30 to May 17, 1972, at site 0.3 mi upstream at datum 407.32 ft above National Geodetic Vertical Datum of 1929. May 18, 1972, to Sept. 30, 1972, at site 500 ft downstream at different datum. Oct. 1, 1975, to Mar. 2, 1982, at datum 1.00 ft higher.

AVERAGE DISCHARGE (adjusted for change in contents in and evaporation from H. V. Eastman Lake since 1976).--54 years (water years 1922-23, 1931-72, 1976-85), 106 ft^3/s, 76,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s, Dec. 23, 1955, gage height, 16.50 ft site and and datum then in use, from rating curve extended above 6,000 ft^3/s on basis of slope-area measurement at gage height, 15.06 ft; no flow for part of each year except 1937-38, 1940-43. Maximum discharge since construction of Buchanan Dam in 1975, 5,020 ft^3/s, Mar. 1, 1983, gage height, 11.67 ft; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 633 ft^3/s, June 24, gage height, 6.41 ft; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	0	0	0	0	0	.10	0	0	538		
2	5.3	0	0	0	.10	.10	.10	0	.10	537		
3	5.3	0	.10	0	.10	.10	.10	0	0	537		
4	179	0	0	0	.10	.80	.20	0	0	509		
5	284	0	0	.10	.10	.10	.10	0	0	515		
6	281	0	0	0	.10	.20	.10	0	0	511		
7	277	.10	.10	0	0	.30	.10	0	0	515		
8	261	.10	0	.10	.30	.10	.10	0	0	512		
9	259	0	0	0	.10	.10	0	0	0	517		
10	103	0	.10	0	.10	.20	0	.10	0	519		
11	.70	.10	0	.10	.10	.10	0	0	0	524		
12	.30	0	0	0	.10	0	0	0	2.3	521		
13	.20	0	0	.10	.10	.10	0	0	.10	508		
14	.10	0	.10	.10	.10	.10	0	.10	0	361		
15	.10	0	.10	0	0	0	0	0	0	68		
16	.20	.10	.10	.10	0	0	0	0	0	.40		
17	.10	0	.10	0	.10	0	.10	0	299	.20		
18	.10	0	0	.10	0	.20	.10	0	518	.10		
19	.10	0	0	.10	.10	.10	0	0	403	.10		
20	.10	0	.10	0	0	.10	0	0	443	.10		
21	.10	0	0	.10	.10	.10	0	0	544	0		
22	0	.10	0	.10	.10	.10	0	.10	582	0		
23	0	0	.10	0	.10	.10	0	0	589	0		
24	0	.10	0	.10	.10	.10	0	0	572	0		
25	0	0	0	.10	.10	.10	0	0	549	0		
26	0	.10	0	0	0	.10	0	0	550	0		
27	0	0	0	.10	0	.20	0	0	545	0		
28	0	.10	.10	0	0	.10	0	0	558	0		
29	0	0	0	.10	---	.10	0	0	551	0		
30	0	.10	0	0	---	.10	0	0	547	0		
31	0	---	.10	.10	---	0	---	0	---	0		
TOTAL	1662.00	0.90	1.10	1.50	2.10	3.80	1.10	0.30	7252.50	7192.90	0	0
MEAN	53.6	.030	.035	.048	.075	.12	.037	.010	242	232	0	0
MAX	284	.10	.10	.10	.30	.80	.20	.10	589	538	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	3300	1.8	2.2	3.0	4.2	7.5	2.2	.6	14390	14270	0	0

CAL YR 1984	TOTAL	60544.0	MEAN	165	MAX	793	MIN	0	AC-FT	120100	MEAN a	30.1	AC-FT a	21790
WTR YR 1985	TOTAL	16118.20	MEAN	44.2	MAX	589	MIN	0	AC-FT	31970	MEAN a	47.7	AC-FT a	34630

a Adjusted for change in contents and evaporation from H. V. Eastman Lake.

11259000 CHOWCHILLA RIVER BELOW BUCHANAN DAM, NEAR RAYMOND, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-65, 1976 to current year.
CHEMICAL ANALYSES: Water years 1958-65. Published as "at Buchanan Damsite."
WATER TEMPERATURES: Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1975 to current year.

INSTRUMENTATION.--Temperature recorder since October 1975.

REMARKS.--Water temperatures are affected by regulation from Buchanan Dam. Water temperatures for periods of no flow are not shown.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 33.5°C, June 7, 1977; minimum recorded, 0.0°C, Jan. 2, 4, 1976.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 30.5°C, July 18; minimum recorded, 2.5°C Jan. 18.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	21.0	17.5	---	---	---	---	---	---	---	---	---	---
2	21.5	18.0	---	---	---	---	---	---	9.0	6.0	---	---
3	21.0	18.0	---	---	---	---	---	---	8.5	3.5	---	---
4	20.5	18.0	---	---	---	---	---	---	10.0	4.0	12.0	7.5
5	20.5	20.5	---	---	---	---	---	---	8.5	3.5	12.0	8.5
6	21.0	20.5	---	---	---	---	---	---	9.5	3.5	13.0	8.0
7	21.0	20.5	17.5	13.5	---	---	---	---	7.5	5.0	14.5	8.5
8	21.0	20.5	15.5	12.0	---	---	---	---	8.5	7.0	14.0	7.0
9	21.0	21.0	15.0	9.5	---	---	---	---	10.5	6.5	15.5	7.5
10	23.0	21.0	---	---	13.0	10.0	---	---	11.5	5.0	16.5	10.0
11	21.0	17.5	---	---	13.5	9.5	---	---	11.5	5.0	16.5	10.0
12	22.0	15.5	---	---	11.5	7.5	---	---	12.5	6.5	18.0	9.5
13	22.5	15.5	---	---	9.0	5.0	10.0	4.5	14.0	7.0	16.5	9.5
14	20.0	15.5	---	---	9.5	4.0	7.5	6.0	15.5	7.5	18.0	10.0
15	19.0	12.5	---	---	7.5	5.5	6.5	6.0	15.5	8.0	19.0	10.0
16	14.0	12.0	---	---	9.0	5.0	8.5	5.0	15.5	9.0	19.0	10.0
17	18.0	12.0	---	---	8.5	3.0	9.0	3.0	15.0	10.0	18.5	10.0
18	17.5	10.0	---	---	7.0	4.0	9.0	2.5	16.5	10.0	13.0	10.5
19	19.0	13.5	---	---	---	---	7.5	5.5	16.0	10.0	13.0	10.5
20	19.0	13.5	---	---	---	---	7.0	6.0	13.5	9.0	19.0	9.0
21	17.0	11.5	---	---	---	---	7.0	5.5	---	---	16.5	10.0
22	---	---	10.0	8.5	---	---	7.5	5.5	---	---	18.0	8.0
23	---	---	12.0	7.0	6.0	3.5	7.0	6.0	---	---	19.0	9.5
24	---	---	10.0	9.0	7.0	5.5	10.0	6.0	---	---	19.0	9.5
25	---	---	12.0	7.0	8.0	5.0	9.5	5.5	---	---	16.5	8.0
26	---	---	11.0	5.5	8.0	4.5	8.5	7.0	---	---	9.5	7.0
27	---	---	12.0	8.5	7.0	6.0	9.5	6.0	---	---	14.0	8.0
28	---	---	---	---	7.5	5.5	---	---	---	---	15.5	8.0
29	---	---	---	---	---	---	---	---	---	---	17.0	7.0
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	19.0	7.0

11259000 CHOWCHILLA RIVER BELOW BUCHANAN DAM, NEAR RAYMOND, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	---	---	13.5	13.0				
2	---	---	---	---	---	---	13.5	13.5				
3	23.0	13.0	---	---	---	---	14.0	13.5				
4	23.0	13.0	---	---	---	---	15.0	14.0				
5	24.0	15.0	---	---	---	---	15.5	15.0				
6	24.0	14.0	---	---	---	---	16.5	15.5				
7	23.0	14.0	---	---	---	---	17.0	16.5				
8	---	---	---	---	---	---	18.0	17.0				
9	---	---	---	---	---	---	19.5	18.0				
10	---	---	---	---	---	---	20.5	19.5				
11	---	---	---	---	---	---	21.5	20.5				
12	---	---	---	---	25.0	16.0	23.0	21.5				
13	---	---	25.0	16.0	29.5	20.5	24.0	23.0				
14	---	---	25.0	17.0	---	---	24.0	24.0				
15	23.0	17.5	25.0	17.0	---	---	27.5	24.0				
16	19.0	14.5	---	---	---	---	29.0	23.0				
17	19.5	14.5	---	---	27.0	11.0	30.0	22.5				
18	18.0	13.0	---	---	11.0	11.0	30.5	22.0				
19	19.5	13.0	---	---	11.5	11.0	30.0	23.0				
20	---	---	---	---	11.5	11.0	27.5	23.5				
21	---	---	---	---	11.5	11.0	---	---				
22	---	---	---	---	11.5	11.0	---	---				
23	---	---	---	---	11.5	11.5	---	---				
24	---	---	---	---	11.5	11.5	---	---				
25	---	---	---	---	12.0	11.5	---	---				
26	---	---	---	---	12.0	12.0	---	---				
27	---	---	---	---	12.0	12.0	---	---				
28	---	---	---	---	12.5	12.0	---	---				
29	---	---	---	---	12.5	12.5	---	---				
30	---	---	---	---	13.0	12.5	---	---				
31	---	---	---	---	---	---	---	---				
MONTH	---	---	---	---	---	---	---	---				

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA
(Hydrologic bench-mark station)

LOCATION.--Lat 37°43'54", long 119°33'28", unsurveyed, Mariposa County, Hydrologic Unit 18040008, Yosemite National Park, on right bank 10 ft downstream from footbridge at Happy Isles, 0.4 mi downstream from Illilouette Creek, and 2.0 mi southeast of Yosemite National Park Headquarters.

DRAINAGE AREA.--181 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1915 to current year.

REVISED RECORDS.--WSP 1215: 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 4,016.58 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1916, nonrecording gage at datum 0.55 ft lower.

REMARKS.--Estimated daily discharges for the following ice-affected periods: Dec. 16-18 and Jan. 30 to Feb. 6. Records good, except for periods of ice-affect, which are poor. Up to 5 ft^3/s can be diverted above station for Yosemite Valley water supply.

AVERAGE DISCHARGE.--70 years, 353 ft^3/s, 255,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,860 ft^3/s Dec. 23, 1955, gage height, 12.73 ft, from rating curve extended above 4,000 ft^3/s on basis of contracted-opening measurements at gage heights 10.4 ft and 11.55 ft; minimum, 1.5 ft^3/s Sept. 30, 1926, Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 14	2300	*1,600	*5.72				

Minimum daily, 27 ft^3/s, Aug. 25-27, 31, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	65	105	57	51	149	242	1200	439	137	84	27
2	39	60	99	58	56	150	337	1380	455	134	71	28
3	39	78	95	59	54	123	423	1280	472	143	63	30
4	38	79	90	59	51	118	478	1190	500	152	60	38
5	36	72	90	59	52	108	533	1150	587	150	58	40
6	33	72	87	62	50	102	647	1210	731	142	57	42
7	32	79	84	64	51	103	775	1080	830	138	55	45
8	32	93	83	64	52	107	871	831	854	134	54	46
9	31	90	83	64	57	104	892	768	772	137	52	47
10	29	114	87	62	58	106	908	610	748	137	50	50
11	35	122	90	59	62	108	906	509	675	134	47	58
12	39	124	89	59	65	104	944	581	670	127	45	62
13	42	135	71	58	70	105	1120	759	648	115	43	61
14	48	126	71	58	76	105	1330	975	597	108	42	61
15	52	122	73	59	84	106	1340	1080	540	105	41	58
16	55	125	77	65	97	109	1050	1060	527	103	40	58
17	74	116	70	71	107	106	834	1060	504	96	39	54
18	72	121	76	80	106	111	656	1150	492	86	39	52
19	101	113	88	88	111	108	593	1200	470	91	37	55
20	106	114	75	95	108	116	522	1140	455	129	35	55
21	93	121	72	99	96	131	466	959	393	118	33	53
22	81	116	69	93	101	132	426	1070	344	102	30	48
23	76	112	68	80	99	147	477	1170	313	88	29	43
24	73	125	67	81	108	172	551	1220	277	84	28	40
25	81	119	65	75	119	167	537	1190	245	94	27	38
26	91	108	65	74	130	144	463	1020	209	133	27	37
27	97	124	63	68	138	140	486	883	187	182	27	38
28	85	137	61	67	143	150	631	765	178	169	28	44
29	78	119	59	62	---	147	760	658	163	188	28	44
30	76	115	59	58	---	149	926	528	146	143	28	41
31	73	---	58	56	---	177	---	513	---	105	27	---
TOTAL	1880	3216	2389	2113	2352	3904	21124	30189	14421	3904	1324	1393
MEAN	60.6	107	77.1	68.2	84.0	126	704	974	481	126	42.7	46.4
MAX	106	137	105	99	143	177	1340	1380	854	188	84	62
MIN	29	60	58	56	50	102	242	509	146	84	27	27
AC-FT	3730	6380	4740	4190	4670	7740	41900	59880	28600	7740	2630	2760

CAL YR 1984 TOTAL 150606 MEAN 411 MAX 2410 MIN 29 AC-FT 298700
WTR YR 1985 TOTAL 88209 MEAN 242 MAX 1380 MIN 27 AC-FT 175000

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.
CHEMICAL ANALYSES: Water years 1968 to current year.
BIOLOGICAL DATA: Water years 1973-81.
WATER TEMPERATURES: Water years 1966-77, 1979 to current year.
SEDIMENT RECORDS: Water years 1970-71, 1973 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1965 to September 1977, October 1978 to current year.

INSTRUMENTATION.--Temperature recorder October 1965 to September 1977 and since October 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 20.0°C, July 15, 1979; minimum recorded, 0.0°C, many days during winter period most years.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 17.0°C, Aug. 23-25, 30; minimum recorded, 0.0°C, several days during January through March.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	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 (MG/L AS CACO3)
NOV												
21...	1045	109	19	6.3	2.0	665	1.0	12.0	99	K9	K6	6
JAN												
18...	1000	80	43	6.4	2.0	660	.70	11.8	99	<1	<1	7
MAY												
13...	1200	1320	6	6.7	6.5	655	.70	14.0	133	K2	<1	3
JUL												
19...	1145	84	23	7.1	17.0	665	1.1	8.4	100	K8	46	5

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CAC03)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV												
21...	0	2.1	.20	1.7	36	.3	.40	--	--	6	1.3	3.0
JAN												
18...	0	2.5	.20	2.3	40	.4	.40	8.0	7.0	7	1.1	4.2
MAY												
13...	0	1.0	.10	.80	34	.2	.40	6.0	5.0	5	1.7	.60
JUL												
19...	0	1.6	.20	1.1	31	.2	.40	5.0	4.0	6	1.6	1.6

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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (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)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV												
21...	<.10	5.4	17	18	.02	5.0	<.10	.030	<.20	<.010	<.010	<.010
JAN												
18...	<.10	7.9	32	23	.04	6.9	<.10	.040	.50	.010	<.010	<.010
MAY												
13...	<.10	4.8	14	12	.02	50	<.10	.030	.50	<.010	<.010	<.010
JUL												
19...	<.10	3.2	14	12	.02	3.2	<.10	.040	1.2	<.010	.010	.020

See footnotes at end of table.

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)	LEAD, DISSOLVED (UG/L AS PB)
NOV											
21...	1045	20	<1	5	<.5	<1	2	<3	<1	73	2
MAY											
13...	1200	40	<1	7	<.5	<1	<1	<3	<1	26	3

DATE	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										
21...	7	<1	<.1	<10	1	<1	<1	32	<6	18
MAY										
13...	<4	1	--	<10	<1	<1	<1	14	<6	11

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than the value shown.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	9.0	6.0	4.0	1.5	0.5	1.0	1.0	0.5	0.0	3.5	2.5
2	10.0	8.5	6.0	4.0	1.5	1.0	1.0	1.0	1.0	0.0	2.5	0.5
3	10.0	9.0	6.5	5.5	2.5	1.5	1.0	1.0	0.5	0.0	0.5	0.5
4	11.0	9.5	5.5	3.5	2.0	1.0	1.0	1.0	0.5	0.0	0.5	0.5
5	11.0	10.0	6.5	4.5	3.5	2.0	1.5	1.0	0.5	0.0	1.0	0.5
6	11.0	9.5	7.0	5.5	4.0	2.5	1.5	1.5	0.5	0.0	0.5	0.5
7	11.0	10.5	7.0	5.5	3.0	2.0	2.0	1.0	1.0	0.0	0.5	0.5
8	11.0	10.0	5.5	2.5	3.5	2.5	1.0	1.0	---	---	0.5	0.5
9	10.5	9.5	2.5	1.0	3.0	2.0	1.0	1.0	---	---	1.5	0.5
10	10.5	9.5	4.5	2.5	2.5	1.0	---	---	---	---	2.5	1.5
11	10.0	8.5	6.5	4.5	2.5	1.5	---	---	---	---	2.0	2.0
12	9.0	7.5	5.5	4.5	3.5	1.0	---	---	---	---	2.0	2.0
13	11.0	9.0	5.0	3.0	1.0	0.5	---	---	---	---	3.0	2.0
14	11.0	8.0	3.5	1.5	1.0	0.5	---	---	---	---	3.0	2.5
15	7.5	5.0	3.5	2.0	1.0	0.5	---	---	---	---	2.5	2.0
16	6.0	3.0	4.0	3.0	0.5	0.5	---	---	2.0	1.0	3.0	2.0
17	4.5	3.5	3.5	2.0	0.5	0.5	---	---	2.5	1.5	3.0	2.5
18	5.0	2.5	4.0	3.0	0.5	0.5	---	---	2.5	1.5	3.5	2.5
19	7.5	5.0	3.0	1.5	0.5	0.5	---	---	3.0	1.5	2.5	2.5
20	7.5	6.0	3.5	2.0	0.5	0.5	---	---	2.5	0.5	3.5	2.5
21	7.0	5.0	2.0	2.0	0.5	0.5	---	---	2.5	0.5	3.5	2.5
22	6.5	4.0	3.5	2.0	0.5	0.5	---	---	4.0	2.0	3.5	1.5
23	6.5	4.0	3.5	2.5	0.5	0.5	---	---	4.5	2.0	2.0	2.0
24	7.0	5.0	3.5	1.5	1.0	0.5	---	---	4.5	2.0	4.5	2.0
25	7.0	5.0	1.5	0.5	1.0	0.5	---	---	4.5	2.0	4.5	3.0
26	7.0	6.0	0.5	0.5	1.0	0.5	1.0	1.0	5.0	2.5	3.0	0.0
27	6.0	4.0	2.0	0.5	1.0	0.5	1.0	1.0	5.5	3.0	1.0	0.5
28	6.0	3.0	2.5	1.5	1.0	1.0	1.0	1.0	5.0	2.5	0.5	0.5
29	7.5	5.5	2.0	0.5	1.0	0.5	1.0	0.5	---	---	1.0	0.0
30	7.0	5.5	2.0	1.0	1.0	1.0	0.5	0.5	---	---	1.5	0.5
31	6.5	5.0	---	---	1.0	1.0	0.5	0.0	---	---	2.0	1.5
MONTH	11.0	2.5	7.0	0.5	4.0	0.5	---	---	---	---	4.5	0.0

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.0	2.0	11.0	6.0	---	---	---	---	---	---	16.5	15.0
2	5.5	3.5	11.0	7.0	---	---	---	---	---	---	15.0	13.0
3	5.5	5.5	10.0	6.0	---	---	---	---	---	---	14.0	12.5
4	5.5	3.5	10.0	5.0	---	---	---	---	---	---	13.5	12.5
5	5.0	4.0	10.5	6.5	---	---	---	---	---	---	13.5	13.0
6	5.0	4.0	10.0	6.0	14.5	9.0	---	---	---	---	14.5	13.5
7	5.0	4.0	9.0	5.5	15.5	10.0	---	---	---	---	15.0	14.5
8	5.0	5.0	9.5	5.0	14.5	10.0	---	---	---	---	14.5	13.0
9	5.5	3.5	7.0	5.5	16.0	11.0	---	---	---	---	13.5	12.0
10	5.0	4.0	6.5	5.5	15.5	10.0	19.0	17.0	---	---	13.5	11.0
11	5.5	5.0	8.0	4.5	16.5	12.5	18.5	16.0	---	---	14.5	11.0
12	5.5	4.5	9.5	5.0	---	---	18.0	15.0	---	---	10.5	10.5
13	5.5	5.5	---	---	---	---	19.0	15.0	---	---	12.5	10.0
14	5.5	5.5	---	---	---	---	---	---	---	---	12.0	9.5
15	5.5	5.5	---	---	---	---	---	---	---	---	12.0	10.0
16	5.5	5.0	---	---	---	---	---	---	16.0	12.5	12.0	9.5
17	5.5	4.0	---	---	---	---	---	---	15.5	14.0	11.5	9.5
18	5.5	3.5	---	---	---	---	---	---	15.5	14.0	11.0	10.0
19	5.5	4.5	---	---	---	---	---	---	16.0	11.5	11.5	9.5
20	5.5	5.5	---	---	---	---	---	---	15.0	11.5	12.5	10.0
21	5.5	3.5	---	---	---	---	---	---	15.0	11.5	12.5	10.5
22	5.5	4.0	---	---	---	---	---	---	15.0	12.5	13.0	11.0
23	6.0	4.5	---	---	---	---	---	---	16.5	14.0	13.0	11.5
24	6.0	4.0	---	---	---	---	---	---	17.0	14.5	13.5	12.0
25	---	---	---	---	---	---	---	---	17.0	14.5	15.0	12.5
26	8.0	2.5	---	---	---	---	---	---	17.0	15.0	15.0	12.5
27	10.0	5.0	---	---	---	---	---	---	16.5	14.5	13.5	12.5
28	10.0	5.5	---	---	---	---	---	---	16.5	14.5	13.5	11.5
29	10.0	6.0	---	---	---	---	---	---	16.0	13.5	13.5	12.5
30	11.0	6.0	---	---	---	---	---	---	16.5	14.0	13.0	11.0
31	---	---	---	---	---	---	---	---	17.0	15.0	---	---
MONTH	11.0	2.0	---	---	---	---	---	---	---	---	16.5	9.5

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)
JAN						
18...	0940	5.0	44	5.9	2.0	12.2
18...	0945	10.0	44	6.1	2.0	12.0
18...	0950	15.0	45	6.4	2.0	12.2
18...	0955	20.0	41	6.5	2.0	12.0
18...	1000	25.0	48	6.4	2.0	11.5
18...	1005	30.0	45	6.6	2.0	11.2
18...	1010	35.0	43	6.4	2.0	12.2
18...	1015	40.0	41	6.6	2.0	11.8
18...	1020	45.0	41	6.6	2.0	11.6
18...	1025	50.0	45	6.7	2.0	12.2

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV					
21...	1100	106	2.0	2	0.57
MAY					
13...	1200	1320	6.5	3	11
JUL					
19...	1130	84	17.0	2	0.45

11266500 MERCED RIVER AT POHONO BRIDGE, NEAR YOSEMITE, CA

LOCATION.--Lat 37°43'01", long 119°39'55", Mariposa County, Hydrologic Unit 18040008, Yosemite National Park, on left bank 150 ft upstream from Pohono bridge, 0.4 mi upstream from Artist Creek, and 4.8 mi southwest of Yosemite National Park headquarters.

DRAINAGE AREA.--321 mi^2.

PERIOD OF RECORD.--October 1916 to current year. Monthly discharge only for October and November 1916, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is 3,861.66 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 5, 1918, at datum 1.8 ft higher. Sept. 5, 1918, to Sept. 30, 1955, at datum 1.0 ft higher.

REMARKS.--No estimated daily discharges. Records good. No diversions between stations at Happy Isles bridge and Pohono bridge.

AVERAGE DISCHARGE.--69 years, 622 ft^3/s, 450,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,400 ft^3/s, Dec. 23, 1955, gage height, 21.52 ft from floodmarks in well, from rating curve extended above 17,000 ft^3/s on basis of computation of flow over diversion dam for Yosemite powerhouse, 1 mi downstream at gage heights 20.1 ft and 21.98 ft, present datum; minimum, 3.3 ft^3/s, Sept. 29, Oct. 1, 1924.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 14	2330	*3,060	7.14				

Minimum daily, 37 ft^3/s, Aug. 31, Sept. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	97	200	118	100	298	444	2210	786	197	115	37
2	52	89	186	119	113	298	656	2540	800	189	99	37
3	51	112	184	121	106	237	850	2440	838	191	89	39
4	49	124	170	122	101	246	966	2240	851	196	82	45
5	46	109	172	124	101	220	1050	2130	931	196	79	50
6	45	108	166	132	100	204	1250	2270	1070	186	76	53
7	43	133	161	138	104	206	1470	2110	1170	180	75	55
8	41	164	159	125	104	208	1670	1740	1200	175	72	57
9	40	155	158	129	122	218	1740	1600	1090	173	70	61
10	39	199	166	124	112	235	1790	1280	1050	173	68	63
11	47	207	168	119	124	240	1790	1090	948	170	65	67
12	52	233	167	120	133	225	1830	1160	927	163	63	73
13	50	237	152	119	140	226	2130	1400	887	151	61	72
14	60	218	147	116	149	227	2480	1740	815	140	58	74
15	63	207	165	118	161	234	2550	1900	738	136	57	70
16	68	211	154	130	181	250	2110	1870	702	133	55	69
17	92	195	130	142	203	247	1740	1870	665	127	54	68
18	87	203	141	157	207	254	1330	1970	639	117	54	64
19	117	189	158	173	220	238	1220	2040	605	112	52	66
20	145	191	155	184	227	257	1090	1960	577	153	50	66
21	140	198	144	189	192	292	974	1670	518	152	48	66
22	120	191	137	175	203	288	895	1780	450	135	45	61
23	112	186	137	157	201	317	993	1880	408	120	43	56
24	107	213	137	157	220	362	1140	1940	365	110	41	51
25	115	192	135	147	244	341	1120	1890	329	115	41	49
26	129	178	137	148	264	284	988	1660	292	147	40	47
27	143	223	130	128	279	264	1020	1480	261	201	38	46
28	124	265	128	137	284	269	1280	1290	245	216	38	51
29	110	224	122	119	---	265	1490	1140	229	209	38	54
30	107	218	123	117	---	285	1770	954	209	184	38	52
31	106	---	119	111	---	331	---	907	---	140	37	---
TOTAL	2553	5469	4708	4215	4695	8066	41826	54151	20595	4987	1841	1719
MEAN	82.4	182	152	136	168	260	1394	1747	686	161	59.4	57.3
MAX	145	265	200	189	284	362	2550	2540	1200	216	115	74
MIN	39	89	119	111	100	204	444	907	209	110	37	37
AC-FT	5060	10850	9340	8360	9310	16000	82960	107400	40850	9890	3650	3410

CAL YR 1984 TOTAL 261623 MEAN 715 MAX 4300 MIN 39 AC-FT 518900
WTR YR 1985 TOTAL 154825 MEAN 424 MAX 2550 MIN 37 AC-FT 307100

11269500 LAKE McCLURE AT EXCHEQUER, CA

LOCATION.--Lat 37°35'02", long 120°16'09", in NW 1/4 SE 1/4 sec.13, T.4 S., R.15 E., Mariposa County, Hydrologic Unit 18040008, on left end of New Exchequer Dam on Merced River, 0.9 mi east of Exchequer, and 5.5 mi northeast of Merced Falls.

DRAINAGE AREA.--1,037 mi^2.

PERIOD OF RECORD.--April 1926 to September 1930 (daily gage heights; also summary of yearly contents in WSP 881), October 1930 to current year.

REVISED RECORDS.--WSP 881: 1926-32 (yearly summaries only). WSP 1345: 1951(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Merced Irrigation District). Prior to Oct. 1, 1964, indicator in powerhouse at same datum. Oct. 1, 1964, to July 31, 1966, nonrecording gage at center of upstream face of dam at same datum.

REMARKS.--Reservoir is formed by a rockfill dam with a reinforced concrete face completed in March 1967. Dam is downstream from and connected to the original concrete arch and gravity-type dam which was completed in April 1926. Usable capacity, 1,024,000 acre-ft between elevations 440.0 ft invert entrance to outlet tunnel, and 867.0 ft top of spillway gates. Dead storage, 300 acre-ft. Water is released through a series of powerplants down the Merced River to a diversion dam for Merced Irrigation District's main canal. Records, including extremes, represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,026,000 acre-ft, July 14, 15, 1969, elevation, 867.2 ft; practically no storage at times in 1926, 1930-31, 1964-65 when reservoir was drained for inspection or construction. Minimum since construction of New Exchequer Dam in 1966, and since lake first filled, 72,200 acre-ft, Dec. 14, 1977, elevation, 593.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 592,000 acre-ft, May 28, elevation, 792.8 ft; minimum, 241,800 acre-ft, Sept. 30, elevation, 691.4 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

590	67,900	720	317,800
600	79,900	750	415,900
610	92,800	780	534,500
620	106,700	820	729,600
640	137,800	840	845,800
660	173,500	860	975,700
680	215,200	870	1,046,000
700	263,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	567700	526300	515300	463800	451100	474000	477600	537600	587900	523800	406300	311100
2	565400	526800	514000	460700	451100	473600	478400	542300	586500	520400	401300	308500
3	562300	526800	512800	458800	451500	474000	480000	546700	586000	516100	398500	306200
4	559600	526800	510700	457600	451100	474000	481600	550700	585500	512400	393700	303900
5	557400	527200	509000	456900	451100	473600	483200	553800	583700	508200	390200	301700
6	555100	527600	507800	457200	451100	472100	484800	558300	583200	504400	386400	299100
7	553400	528100	505700	456100	451500	472100	487200	561400	582800	501100	382700	296900
8	550700	528500	504400	456100	457600	472100	490900	563600	582800	497400	378600	294700
9	547600	528900	502400	456100	461100	470900	494100	565000	581800	493700	374900	292700
10	545900	528900	501100	456100	462300	470500	497400	565000	582300	490100	372300	290200
11	542800	529300	499500	454900	463100	472100	500700	564500	581400	486400	368000	288100
12	539700	529800	497400	454900	463100	472500	504000	564500	579500	482400	364400	285100
13	537600	530600	495800	454200	463800	472900	507800	564500	577700	478800	361100	283200
14	535800	531100	493700	453800	464200	472500	513200	565900	575400	474800	357600	281600
15	532400	531900	491700	453000	464600	472100	518700	569100	572700	470900	354700	278900
16	531500	530600	490900	453000	465000	471700	522100	571300	570400	467000	351800	276300
17	530600	529800	489700	453000	465800	470900	525100	572700	567700	463100	348900	273900
18	529300	530600	488500	452300	466600	471300	526300	574500	565900	459600	346400	271100
19	526800	530200	486800	452300	467300	470900	527200	577700	562700	455300	344500	269000
20	525900	528900	486400	453000	468100	470100	528100	579500	560000	452300	341100	266400
21	524600	526300	486000	452600	468900	470500	528500	580900	557400	448400	338600	264000
22	524200	524200	483600	452600	468500	469700	528100	582800	554300	443900	336100	261500
23	524600	522500	481600	452300	469300	469700	528100	584600	551100	440500	333100	258800
24	524600	521200	479600	451900	470100	469300	528900	586900	548500	436800	330600	256500
25	525100	520400	478000	451900	471300	469700	528900	589200	544500	432300	327900	254500
26	525100	519100	476000	451900	472100	469300	529300	590600	542300	429000	325500	251800
27	525100	517800	474000	451900	472100	471300	530600	591600	538400	424600	322800	249200
28	525500	518700	472100	451500	473300	474800	530600	592000	534100	420600	320500	246800
29	525900	517800	470100	451500	---	476000	533200	591600	530200	417000	318400	244200
30	525900	516600	467700	451100	---	477200	534500	590200	526800	413400	315500	241800
31	525900	---	465800	451100	---	477600	---	589700	---	410200	313100	---
MAX	567700	531900	515300	463800	473300	477600	534500	592000	587900	523800	406300	311100
MIN	524200	516600	465800	451100	451100	469300	477600	537600	526800	410200	313100	241800
a	778.0	775.8	763.3	759.5	765.2	766.3	780.0	792.3	778.2	748.4	708.4	691.4
b	-43600	-9300	-50800	-14700	+22200	+4300	+56900	+55200	-62900	-116600	-97100	-71300

CAL YR 1984 b -290500
WTR YR 1985 b -327700

a Elevation, in feet NGVD, at end of the month.
b Change in contents, in acre-feet.

11270900 MERCED RIVER BELOW MERCED FALLS DAM, NEAR SNELLING, CA

LOCATION.--Lat 37°31'18", long 120°19'53", in SE 1/4 SW 1/4 sec.4, T.5 S., R.15 E., Merced County, Hydrologic Unit 18040008, on right bank 0.1 mi south of Merced Falls, 0.2 mi downstream from Merced Falls Dam, and 5.8 mi east of Snelling.

DRAINAGE AREA.--1,061 mi^2.

PERIOD OF RECORD.--April 1901 to current year. Records for water years 1914-16 incomplete, yearly estimates published in WSP 1315-A. Published as "near Merced Falls" 1901-13; as "at Exchequer" 1916-64. Records at present site are about equivalent when adjusted for diversion to North Side Canal and change in contents in Lake McClure and McSwain Reservoir.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 310.55 ft above National Geodetic Vertical Datum of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1964.

REMARKS.--No estimated daily discharges. Records excellent. Merced Falls Dam diverts water to North Side Canal to irrigate 4,100 acres below station. Flow regulated by Exchequer, McSwain, and Merced Falls powerplants, Lake McClure (station 11269500) since 1926, and McSwain Reservoir since 1966, capacity, 9,200 acre-ft.

AVERAGE DISCHARGE (adjusted for diversion to North Side Canal and change in contents in Lake McClure since 1965, and change in contents in McSwain Reservoir since 1969).--84 years, 1,371 ft^3/s, 993,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (water years 1901-13, 1916-85): Maximum discharge observed, 47,700 ft^3/s, Jan. 31, 1911, gage height, 23.3 ft, site and datum then in use; no flow for part of Nov. 21, 1901. Maximum discharge since construction of Exchequer Dam in 1926, 46,200 ft^3/s, Dec. 4, 1950, gage height, 22.6 ft, from floodmarks, site and datum then in use, from rating curve extended above 16,000 ft^3/s, on basis of computation of peak flow over dam; minimum daily, 3.4 ft^3/s, Mar. 5, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,200 ft^3/s, May 28, gage height, 9.20 ft; minimum daily, 187 ft^3/s, Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	195	1200	1380	330	312	870	1640	1750	1970	1960	1120
2	1240	192	1200	1390	187	390	934	1680	1710	1960	1970	1120
3	1250	188	1190	1400	189	564	1030	1730	1660	1970	1950	1150
4	1250	194	1200	836	190	821	1060	1740	1610	1940	1910	1180
5	1250	198	1190	507	194	897	1200	1750	1610	1950	1890	1190
6	1250	198	1200	500	189	903	1270	1740	1620	1950	1870	1190
7	1250	198	1210	495	188	915	1260	1760	1670	1960	1860	1190
8	1210	214	1220	497	249	898	1250	1800	1700	1950	1880	1190
9	1190	223	1210	492	201	912	1320	1820	1700	1950	1840	1180
10	1200	228	1210	486	190	950	1430	1840	1750	1980	1790	1190
11	1710	224	1210	496	193	919	1450	1820	1810	2000	1790	1180
12	1460	228	1210	501	194	897	1480	1810	1870	1960	1690	1220
13	1160	220	1210	504	191	896	1500	1800	1910	1950	1550	1240
14	1170	217	1210	497	192	919	1470	1840	1920	1960	1510	1230
15	1120	220	1210	497	196	923	1530	1850	1930	1990	1490	1230
16	1040	224	1220	434	191	911	1580	1850	1920	1990	1420	1230
17	914	247	1010	384	196	900	1560	1810	1890	1990	1370	1230
18	830	238	913	387	189	825	1540	1810	1870	1990	1320	1230
19	795	368	900	388	193	765	1530	1750	1920	1970	1280	1220
20	784	919	766	388	188	783	1530	1750	1990	1960	1300	1250
21	748	1200	896	384	194	772	1520	1750	2020	1970	1310	1280
22	362	1200	1170	386	191	827	1530	1720	1990	1980	1300	1270
23	202	1190	1200	387	194	865	1530	1690	1970	1970	1300	1280
24	200	1190	1200	386	195	863	1530	1720	1950	1960	1310	1280
25	205	1180	1210	391	190	864	1600	1750	2000	1960	1300	1280
26	203	1190	1200	389	190	924	1630	1740	2030	1970	1300	1280
27	199	1200	1200	388	191	968	1620	1800	2000	1970	1270	1270
28	203	1220	1310	388	193	975	1620	1810	2010	1980	1220	1270
29	195	1200	1390	386	---	911	1620	1910	1990	1980	1210	1280
30	193	1200	1390	388	---	879	1610	1810	1970	1970	1170	1280
31	197	---	1400	390	---	873	---	1760	---	1950	1130	---
TOTAL	26240	17103	36455	16722	5568	26021	42604	55050	55740	61000	47460	36730
MEAN	846	570	1176	539	199	839	1420	1776	1858	1968	1531	1224
MAX	1710	1220	1400	1400	330	975	1630	1910	2030	2000	1970	1280
MIN	193	188	766	384	187	312	870	1640	1610	1940	1130	1120
AC-FT	52050	33920	72310	33170	11040	51610	84510	109200	110600	121000	94140	72850
a	1530	0	79	123	115	1500	3640	4110	4250	4750	3350	2390

CAL YR 1984 TOTAL 570744 MEAN 1559 MAX 4390 MIN 188 AC-FT 1132000 MEAN b 1200 AC-FT b 871200
WTR YR 1985 TOTAL 426693 MEAN 1169 MAX 2030 MIN 187 AC-FT 846300 MEAN b 752 AC-FT b 544400

a Diversion in acre-feet, to Northside Canal provided by Merced Irrigation District.
b Adjusted for diversion to Northside Canal and change in contents in Lake McClure and McSwain Reservoir.

11269500 LAKE McCLURE AT EXCHEQUER, CA

LOCATION.--Lat 37°35'02", long 120°16'09", in NW 1/4 SE 1/4 sec.13, T.4 S., R.15 E., Mariposa County, Hydrologic Unit 18040008, on left end of New Exchequer Dam on Merced River, 0.9 mi east of Exchequer, and 5.5 mi northeast of Merced Falls.

DRAINAGE AREA.--1,037 mi^2.

PERIOD OF RECORD.--April 1926 to September 1930 (daily gage heights; also summary of yearly contents in WSP 881), October 1930 to current year.

REVISED RECORDS.--WSP 881: 1926-32 (yearly summaries only). WSP 1345: 1951(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Merced Irrigation District). Prior to Oct. 1, 1964, indicator in powerhouse at same datum. Oct. 1, 1964, to July 31, 1966, nonrecording gage at center of upstream face of dam at same datum.

REMARKS.--Reservoir is formed by a rockfill dam with a reinforced concrete face completed in March 1967. Dam is downstream from and connected to the original concrete arch and gravity-type dam which was completed in April 1926. Usable capacity, 1,024,000 acre-ft between elevations 440.0 ft invert entrance to outlet tunnel, and 867.0 ft top of spillway gates. Dead storage, 300 acre-ft. Water is released through a series of powerplants down the Merced River to a diversion dam for Merced Irrigation District's main canal. Records, including extremes, represent total contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,026,000 acre-ft, July 14, 15, 1969, elevation, 867.2 ft; practically no storage at times in 1926, 1930-31, 1964-65 when reservoir was drained for inspection or construction. Minimum since construction of New Exchequer Dam in 1966, and since lake first filled, 72,200 acre-ft, Dec. 14, 1977, elevation, 593.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 592,000 acre-ft, May 28, elevation, 792.8 ft; minimum, 241,800 acre-ft, Sept. 30, elevation, 691.4 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

590	67,900	720	317,800
600	79,900	750	415,900
610	92,800	780	534,500
620	106,700	820	729,600
640	137,800	840	845,800
660	173,500	860	975,700
680	215,200	870	1,046,000
700	263,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	567700	526300	515300	463800	451100	474000	477600	537600	587900	523800	406300	311100
2	565400	526800	514000	460700	451100	473600	478400	542300	586500	520400	401300	308500
3	562300	526800	512800	458800	451500	474000	480000	546700	586000	516100	398500	306200
4	559600	526800	510700	457600	451100	474000	481600	550700	585500	512400	393700	303900
5	557400	527200	509000	456900	451100	473600	483200	553800	583700	508200	390200	301700
6	555100	527600	507800	457200	451100	472100	484800	558300	583200	504400	386400	299100
7	553400	528100	505700	456100	451500	472100	487200	561400	582800	501100	382700	296900
8	550700	528500	504400	456100	457600	472100	490900	563600	582800	497400	378600	294700
9	547600	528900	502400	456100	461100	470900	494100	565000	581800	493700	374900	292700
10	545900	528900	501100	456100	462300	470500	497400	565000	582300	490100	372300	290200
11	542800	529300	499500	454900	463100	472100	500700	564500	581400	486400	368000	288100
12	539700	529800	497400	454900	463100	472500	504000	564500	579500	482400	364400	285100
13	537600	530600	495800	454200	463800	472900	507800	564500	577700	478800	361100	283200
14	535800	531100	493700	453800	464200	472500	513200	565900	575400	474800	357600	281600
15	532400	531900	491700	453000	464600	472100	518700	569100	572700	470900	354700	278900
16	531500	530600	490900	453000	465000	471700	522100	571300	570400	467000	351800	276300
17	530600	529800	489700	453000	465800	470900	525100	572700	567700	463100	348900	273900
18	529300	530600	488500	452300	466600	471300	526300	574500	565900	459600	346400	271100
19	526800	530200	486800	452300	467300	470900	527200	577700	562700	455300	344500	269000
20	525900	528900	486400	453000	468100	470100	528100	579500	560000	452300	341100	266400
21	524600	526300	486000	452600	468900	470500	528500	580900	557400	448400	338600	264000
22	524200	524200	483600	452600	468500	469700	528100	582800	554300	443900	336100	261500
23	524600	522500	481600	452300	469300	469700	528100	584600	551100	440500	333100	258800
24	524600	521200	479600	451900	470100	469300	528900	586900	548500	436800	330600	256500
25	525100	520400	478000	451900	471300	469700	528900	589200	544500	432300	327900	254500
26	525100	519100	476000	451900	472100	469300	529300	590600	542300	429000	325500	251800
27	525100	517800	474000	451900	472100	471300	530600	591600	538400	424600	322800	249200
28	525500	518700	472100	451500	473300	474800	530600	592000	534100	420600	320500	246800
29	525900	517800	470100	451500	---	476000	533200	591600	530200	417000	318400	244200
30	525900	516600	467700	451100	---	477200	534500	590200	526800	413400	315500	241800
31	525900	---	465800	451100	---	477600	---	589700	---	410200	313100	---
MAX	567700	531900	515300	463800	473300	477600	534500	592000	587900	523800	406300	311100
MIN	524200	516600	465800	451100	451100	469300	477600	537600	526800	410200	313100	241800
a	778.0	775.8	763.3	759.5	765.2	766.3	780.0	792.3	778.2	748.4	708.4	691.4
b	-43600	-9300	-50800	-14700	+22200	+4300	+56900	+55200	-62900	-116600	-97100	-71300

CAL YR 1984 b -290500
WTR YR 1985 b -327700

a Elevation, in feet NGVD, at end of the month.
b Change in contents, in acre-feet.

11270900 MERCED RIVER BELOW MERCED FALLS DAM, NEAR SNELLING, CA

LOCATION.--Lat 37°31'18", long 120°19'53", in SE 1/4 SW 1/4 sec.4, T.5 S., R.15 E., Merced County, Hydrologic Unit 18040008, on right bank 0.1 mi south of Merced Falls, 0.2 mi downstream from Merced Falls Dam, and 5.8 mi east of Snelling.

DRAINAGE AREA.--1,061 mi^2.

PERIOD OF RECORD.--April 1901 to current year. Records for water years 1914-16 incomplete, yearly estimates published in WSP 1315-A. Published as "near Merced Falls" 1901-13; as "at Exchequer" 1916-64. Records at present site are about equivalent when adjusted for diversion to North Side Canal and change in contents in Lake McClure and McSwain Reservoir.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 310.55 ft above National Geodetic Vertical Datum of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1964.

REMARKS.--No estimated daily discharges. Records excellent. Merced Falls Dam diverts water to North Side Canal to irrigate 4,100 acres below station. Flow regulated by Exchequer, McSwain, and Merced Falls powerplants, Lake McClure (station 11269500) since 1926, and McSwain Reservoir since 1966, capacity, 9,200 acre-ft.

AVERAGE DISCHARGE (adjusted for diversion to North Side Canal and change in contents in Lake McClure since 1965, and change in contents in McSwain Reservoir since 1969).--84 years, 1,371 ft^3/s, 993,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (water years 1901-13, 1916-85): Maximum discharge observed, 47,700 ft^3/s, Jan. 31, 1911, gage height, 23.3 ft, site and datum then in use; no flow for part of Nov. 21, 1901. Maximum discharge since construction of Exchequer Dam in 1926, 46,200 ft^3/s, Dec. 4, 1950, gage height, 22.6 ft, from floodmarks, site and datum then in use, from rating curve extended above 16,000 ft^3/s, on basis of computation of peak flow over dam; minimum daily, 3.4 ft^3/s, Mar. 5, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,200 ft^3/s, May 28, gage height, 9.20 ft; minimum daily, 187 ft^3/s, Feb. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	195	1200	1380	330	312	870	1640	1750	1970	1960	1120
2	1240	192	1200	1390	187	390	934	1680	1710	1960	1970	1120
3	1250	188	1190	1400	189	564	1030	1730	1660	1970	1950	1150
4	1250	194	1200	836	190	821	1060	1740	1610	1940	1910	1180
5	1250	198	1190	507	194	897	1200	1750	1610	1950	1890	1190
6	1250	198	1200	500	189	903	1270	1740	1620	1950	1870	1190
7	1250	198	1210	495	188	915	1260	1760	1670	1960	1860	1190
8	1210	214	1220	497	249	898	1250	1800	1700	1950	1880	1190
9	1190	223	1210	492	201	912	1320	1820	1700	1950	1840	1180
10	1200	228	1210	486	190	950	1430	1840	1750	1980	1790	1190
11	1710	224	1210	496	193	919	1450	1820	1810	2000	1790	1180
12	1460	228	1210	501	194	897	1480	1810	1870	1960	1690	1220
13	1160	220	1210	504	191	896	1500	1800	1910	1950	1550	1240
14	1170	217	1210	497	192	919	1470	1840	1920	1960	1510	1230
15	1120	220	1210	497	196	923	1530	1850	1930	1990	1490	1230
16	1040	224	1220	434	191	911	1580	1850	1920	1990	1420	1230
17	914	247	1010	384	196	900	1560	1810	1890	1990	1370	1230
18	830	238	913	387	189	825	1540	1810	1870	1990	1320	1230
19	795	368	900	388	193	765	1530	1750	1920	1970	1280	1220
20	784	919	766	388	188	783	1530	1750	1990	1960	1300	1250
21	748	1200	896	384	194	772	1520	1750	2020	1970	1310	1280
22	362	1200	1170	386	191	827	1530	1720	1990	1980	1300	1270
23	202	1190	1200	387	194	865	1530	1690	1970	1970	1300	1280
24	200	1190	1200	386	195	863	1530	1720	1950	1960	1310	1280
25	205	1180	1210	391	190	864	1600	1750	2000	1960	1300	1280
26	203	1190	1200	389	190	924	1630	1740	2030	1970	1300	1280
27	199	1200	1200	388	191	968	1620	1800	2000	1970	1270	1270
28	203	1220	1310	388	193	975	1620	1810	2010	1980	1220	1270
29	195	1200	1390	386	---	911	1620	1910	1990	1980	1210	1280
30	193	1200	1390	388	---	879	1610	1810	1970	1970	1170	1280
31	197	---	1400	390	---	873	---	1760	---	1950	1130	---
TOTAL	26240	17103	36455	16722	5568	26021	42604	55050	55740	61000	47460	36730
MEAN	846	570	1176	539	199	839	1420	1776	1858	1968	1531	1224
MAX	1710	1220	1400	1400	330	975	1630	1910	2030	2000	1970	1280
MIN	193	188	766	384	187	312	870	1640	1610	1940	1130	1120
AC-FT	52050	33920	72310	33170	11040	51610	84510	109200	110600	121000	94140	72850
a	1530	0	79	123	115	1500	3640	4110	4250	4750	3350	2390

CAL YR 1984 TOTAL 570744 MEAN 1559 MAX 4390 MIN 188 AC-FT 1132000 MEAN b 1200 AC-FT b 871200
WTR YR 1985 TOTAL 426693 MEAN 1169 MAX 2030 MIN 187 AC-FT 846300 MEAN b 752 AC-FT b 544400

a Diversion in acre-feet, to Northside Canal provided by Merced Irrigation District.
b Adjusted for diversion to Northside Canal and change in contents in Lake McClure and McSwain Reservoir.

11271290 MERCED RIVER AT SHAFFER BRIDGE, NEAR CRESSEY, CA

LOCATION.--Lat 37°27'15", long 120°36'28", in NW 1/4 SW 1/4 sec.36, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, near center of span on downstream side of county road bridge, 0.6 mi upstream from Dry Creek, and 4.0 mi northeast of Cressey.

DRAINAGE AREA.--1,117 mi^2.

PERIOD OF RECORD.--October 1965 to current year (low flow only).

GAGE.--Water-stage recorder. Datum of gage is 116.79 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: June 22 to Sept. 17. Records good, except for estimated daily discharges, which are poor. Most water released from Lake McClure (station 11269500) is diverted upstream into the Main Canal of Merced Irrigation District. Flow past station consists of releases from diversion dam, irrigation return flow, and tributary inflow. No records computed above 200 ft^3/s.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		196			---	---	---	---	186	142	112	110
2		---			---	---	---	---	---	135	120	109
3		---			---	192	170	---	---	137	115	110
4		200			---	179	169	---	---	125	103	104
5		---			---	186	173	---	---	121	101	99
6		---			---	189	196	---	167	114	102	102
7		---			---	---	---	---	164	117	104	106
8		---			---	---	---	---	164	115	110	107
9		---			---	192	---	---	153	114	105	105
10		---			---	---	---	---	145	115	105	100
11		---			---	---	---	---	142	117	111	98
12		---			---	---	---	---	147	108	109	93
13		---			---	---	---	---	161	114	109	98
14		---			---	196	---	---	158	117	111	96
15		---			---	---	---	---	150	109	112	96
16		---			---	---	---	---	167	114	110	95
17		---			---	---	---	---	176	114	117	102
18		---			---	---	---	---	173	114	119	95
19		---			---	---	---	---	137	109	113	92
20		---			---	---	---	---	137	111	118	96
21		---			---	---	---	182	147	115	121	110
22		---			---	---	---	196	144	117	119	133
23		---			189	196	---	179	149	114	119	133
24		---			---	192	---	147	148	113	122	142
25		---			---	189	---	158	150	112	118	158
26		---			---	---	---	156	155	115	118	150
27		---			---	---	---	173	152	115	117	150
28		---			---	---	---	179	158	118	114	161
29		---			---	---	---	---	150	118	114	158
30		---			---	---	---	186	142	117	114	---
31		---			---	---	---	182	---	110	112	---
a	39100	357	369	704	526	37970	68810	90680	94600	109200	82970	62760

a Diversion, in acre-feet, to Main Canal near diversion dam, near Merced Falls, were provided by Merced Irrigation District.

11271320 DRY CREEK NEAR SNELLING, CA

LOCATION.--Lat 37°33'18", long 120°27'44", in NE 1/4 SE 1/4 sec.30, T.4 S., R.14 E., Merced County, Hydrologic Unit 18040002, on left bank 650 ft downstream from Fields Road, and 2.8 mi northwest of Snelling.

DRAINAGE AREA.--67.6 mi^2.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Small weir upstream from gage regulates storage for stock pond and irrigation pumping.

AVERAGE DISCHARGE.--19 years, 22.7 ft^3/s, 16,450 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,710 ft^3/s, Jan. 21, 1969, gage height, 17.01 ft; no flow for several months in most 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. 8	2015	*1,180	*8.45				

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	5.1	1.1	3.2	1.3	4.5					
2		0	3.8	1.1	3.3	1.8	3.3					
3		0	5.1	1.1	9.6	3.3	2.4					
4		.05	6.1	1.1	5.8	3.3	1.7					
5		.10	4.8	1.0	3.9	2.6	1.1					
6		.11	3.6	.97	3.0	2.4	.86					
7		.12	2.8	1.3	2.7	2.8	.77					
8		.31	2.7	13	369	4.6	.62					
9		.55	2.3	7.5	138	4.3	.50					
10		1.2	14	4.9	26	19	.44					
11		.78	15	3.5	15	74	.33					
12		.42	7.7	2.8	11	32	.25					
13		1.3	5.2	2.5	9.8	13	.21					
14		1.3	3.6	2.2	8.6	8.0	.20					
15		.99	4.3	1.9	7.8	5.4	.17					
16		1.2	29	1.7	7.2	3.8	.13					
17		1.0	12	1.5	6.8	2.8	.15					
18		1.2	7.2	1.4	6.2	3.2	.13					
19		1.0	5.5	1.3	4.9	7.2	.12					
20		.97	4.5	1.3	3.8	6.4	.11					
21		.94	3.6	1.3	3.0	4.2	.11					
22		.74	3.0	1.2	2.8	2.8	.10					
23		.73	2.8	1.1	2.5	2.0	.09					
24		9.2	2.6	1.1	2.3	1.5	.08					
25		19	2.4	1.2	2.1	1.1	.06					
26		7.7	2.3	.97	1.9	1.0	.04					
27		4.9	2.1	.97	1.7	26	.03					
28		20	1.9	1.2	1.6	48	.02					
29		14	1.7	5.5	---	21	.01					
30		7.3	1.5	6.6	---	10	0					
31		---	1.2	4.3	---	6.3	---					
TOTAL	0	97.11	169.4	78.61	663.5	325.1	18.53	0	0	0	0	0
MEAN	0	3.24	5.46	2.54	23.7	10.5	.62	0	0	0	0	0
MAX	0	20	29	13	369	74	4.5	0	0	0	0	0
MIN	0	0	1.2	.97	1.6	1.0	0	0	0	0	0	0
AC-FT	0	193	336	156	1320	645	37	0	0	0	0	0

CAL YR 1984 TOTAL 2447.44 MEAN 6.69 MAX 369 MIN 0 AC-FT 4850
WTR YR 1985 TOTAL 1352.25 MEAN 3.70 MAX 369 MIN 0 AC-FT 2680

11272500 MERCED RIVER NEAR STEVINSON, CA

LOCATION.--Lat 37°22'15", long 120°55'46", in SW 1/4 NE 1/4 sec.36, T.6 S., R.9 E., Merced County, Hydrologic Unit 18040002, on right bank 4.4 mi upstream from mouth, and 5.3 mi northwest of Stevinson.

DRAINAGE AREA.--1,273 mi^2.

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. October 1940 to Aug. 15, 1955, at datum 55.74 ft higher, Aug. 16, 1955, to Sept. 30, 1959, at datum 54.74 ft higher.

REMARKS.--No estimated daily discharges. Records good. Practically entire flow is diverted above station for irrigation of 120,000 acres during low runoff years. Some return flow enters above station. Flow regulated by three reservoirs, combined capacity, 1,035,000 acre-ft, the largest of which is Lake McClure (station 11269500).

AVERAGE DISCHARGE.--45 years, 734 ft^3/s, 531,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s, Dec. 5, 1950, elevation, 73.79 ft present datum; no flow July 19 to Aug. 21, 1961, result of temporary dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,370 ft^3/s, Jan. 5, elevation, 61.29 ft; minimum daily, 142 ft^3/s, Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370	292	1180	1350	436	243	358	309	279	282	196	178
2	380	285	1180	1360	436	250	340	303	259	236	188	215
3	364	282	1190	1350	394	261	313	292	301	203	186	231
4	364	284	1200	1360	345	261	276	311	293	220	199	205
5	376	282	1190	1270	327	256	247	294	266	258	221	209
6	356	279	1180	904	316	260	248	305	270	245	183	210
7	350	279	1180	790	311	276	267	289	251	241	153	186
8	361	285	1190	745	308	285	279	268	260	252	142	199
9	378	292	1190	711	332	277	254	272	278	223	163	213
10	386	298	1210	682	517	284	241	298	270	191	198	218
11	399	300	1230	656	421	309	244	290	222	199	194	218
12	578	301	1220	634	357	410	274	309	205	210	194	230
13	866	301	1210	616	330	405	272	362	189	243	172	239
14	635	303	1210	602	314	351	302	338	199	236	181	228
15	585	305	1210	586	305	329	328	310	202	228	170	222
16	563	304	1230	571	296	314	298	320	227	197	185	250
17	619	306	1260	540	290	314	298	302	239	191	191	219
18	625	310	1210	489	286	344	356	281	221	186	190	205
19	596	320	1060	472	282	374	331	253	199	176	201	222
20	544	315	1010	465	277	350	322	261	217	158	171	226
21	480	492	969	459	275	306	314	275	248	209	168	214
22	476	885	888	454	272	277	333	249	258	230	189	216
23	471	1020	996	455	271	267	315	273	265	205	205	234
24	395	1060	1110	452	263	299	319	260	283	191	234	230
25	378	1110	1170	448	256	320	338	244	265	214	230	231
26	360	1120	1180	446	249	274	344	249	260	183	215	233
27	363	1130	1190	443	246	288	301	277	263	161	201	245
28	335	1150	1190	442	248	362	274	283	250	203	186	252
29	309	1230	1210	439	---	393	275	272	237	205	182	273
30	300	1190	1290	440	---	395	285	258	262	198	184	281
31	294	---	1330	437	---	373	---	275	---	208	169	---
TOTAL	13856	16310	36263	21068	8960	9707	8946	8882	7438	6582	5841	6732
MEAN	447	544	1170	680	320	313	298	287	248	212	188	224
MAX	866	1230	1330	1360	517	410	358	362	301	282	234	281
MIN	294	279	888	437	246	243	241	244	189	158	142	178
AC-FT	27480	32350	71930	41790	17770	19250	17740	17620	14750	13060	11590	13350

CAL YR 1984 TOTAL 285424 MEAN 780 MAX 4360 MIN 228 AC-FT 566100
WTR YR 1985 TOTAL 150585 MEAN 413 MAX 1360 MIN 142 AC-FT 298700

11274000 SAN JOAQUIN RIVER NEAR NEWMAN, CA

LOCATION.--Lat 37°21'02", long 120°58'34", in NW 1/4 SW 1/4 sec.3, T.7 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 600 ft downstream from bridge on Hills Ferry Road, 650 ft downstream from Merced River, and 3.5 mi northeast of Newman.

DRAINAGE AREA.--9,520 mi^2.

PERIOD OF RECORD.--April 1912 to current year. Prior to Oct. 1, 1937, and subsequent to Oct. 1, 1943, flow that bypassed station at discharges above 9,000 ft^3/s not included in records.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. See WSP 1930 for history of changes prior to Aug. 9, 1960.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by storage reservoirs, ground-water withdrawals, diversions for irrigation, and imported water; low flows consist mainly of return water from irrigated areas.

AVERAGE DISCHARGE.--73 years, 2,132 ft^3/s, 1,545,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (river only), 30,700 ft^3/s, Mar. 4, 1983, elevation, 65.78 ft; river and Merced River Slough, 34,400 ft^3/s, Feb 26, 1969, elevation, 65.90 ft present datum; minimum, 15 ft^3/s, Aug. 9, 10, 1924.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 2, 1868, reached a stage of 21.7 ft from floodmarks; flood of February 1886, reached a stage of 19.8 ft from floodmarks; and flood of 1911 reached a stage of 19 ft from floodmarks. All stages referred to datum in use from 1931 to 1959. Discharges unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,380 ft^3/s, Jan. 1-3, elevation, 51.77 ft; minimum daily, 432 ft^3/s, July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	692	573	1280	1370	831	648	1320	766	688	688	702	574
2	711	545	1250	1370	823	640	1280	732	685	731	664	612
3	707	521	1230	1380	782	639	1070	710	780	697	619	666
4	693	506	1240	1370	732	639	934	740	881	679	628	627
5	701	499	1260	1290	704	643	880	712	928	663	634	564
6	692	480	1260	960	665	685	888	720	922	634	583	589
7	711	473	1260	861	653	713	911	730	814	637	526	553
8	757	476	1280	833	652	727	920	718	751	663	505	572
9	770	473	1290	836	715	780	853	705	716	671	572	659
10	748	484	1310	829	1050	873	836	711	680	660	585	743
11	743	498	1330	822	1130	947	858	715	616	591	547	705
12	826	500	1330	811	1130	1100	897	736	554	537	528	635
13	1160	500	1330	818	1010	1190	890	807	506	555	555	633
14	1070	495	1310	853	874	1150	909	824	509	593	556	603
15	1040	493	1290	877	776	1050	926	814	538	592	502	584
16	1040	493	1280	881	730	968	889	842	542	551	526	640
17	1070	497	1310	849	722	924	883	784	545	515	544	654
18	1100	511	1310	804	724	955	942	736	566	468	608	642
19	1110	532	1190	793	714	1040	946	704	547	452	636	600
20	1080	563	1150	798	706	1080	920	705	508	432	669	645
21	1010	680	1130	793	693	1010	893	744	525	466	737	610
22	951	978	1040	752	685	975	898	738	522	515	735	547
23	926	1080	1160	742	678	942	912	721	506	553	703	640
24	918	1130	1230	749	665	955	932	684	552	544	734	696
25	904	1170	1260	757	660	960	933	654	548	521	748	749
26	841	1180	1260	765	658	897	847	649	574	515	725	714
27	857	1180	1260	774	657	936	768	679	599	458	745	694
28	860	1190	1270	783	656	1070	773	733	599	552	719	666
29	775	1260	1270	796	---	1200	775	733	578	662	634	651
30	685	1300	1330	832	---	1310	754	715	604	685	631	662
31	613	---	1360	835	---	1330	---	702	---	717	621	---
TOTAL	26761	21260	39060	27983	21475	28976	27437	22663	18883	18197	19421	19129
MEAN	863	709	1260	903	767	935	915	731	629	587	626	638
MAX	1160	1300	1360	1380	1130	1330	1320	842	928	731	748	749
MIN	613	473	1040	742	652	639	754	649	506	432	502	547
AC-FT	53080	42170	77480	55500	42600	57470	54420	44950	37450	36090	38520	37940

CAL YR 1984 TOTAL 702246 MEAN 1919 MAX 14500 MIN 473 AC-FT 1393000
WTR YR 1985 TOTAL 291245 MEAN 798 MAX 1380 MIN 432 AC-FT 577700

11274500 ORESTIMBA CREEK NEAR NEWMAN, CA

LOCATION.--Lat 37°18'56", long 121°07'27", in NE 1/4 NE 1/4 sec.19, T.7 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on right bank 20 ft downstream from bridge at California Aqueduct siphon, 3 mi downstream from Oso Creek, and 5.5 mi west of Newman.

DRAINAGE AREA.--134 mi^2.

PERIOD OF RECORD.--January 1932 to current year.

REVISED RECORDS.--WSP 1445: 1932(M), 1938(P), 1940-41(M), 1945, 1951(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 216.01 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1958, at site 1,080 ft downstream at datum 24.14 ft lower. Oct. 1, 1958, to Aug. 13, 1969, at site 960 ft downstream at datum 27.14 ft lower. Aug. 13, 1969 to Feb. 6, 1984, at site 240 ft upstream, present datum.

REMARKS.--Estimated daily discharges: May 28 to June 20. Records good. No storage or diversion above station except for minor stock ponds.

AVERAGE DISCHARGE.--53 years, 16.9 ft^3/s, 12,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft^3/s, Apr. 2, 1958, gage height, 6.57 ft site and datum then in use, from rating curve extended above 5,000 ft^3/s; no flow for all or parts of each year.

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. 9	0145	*50	*4.08				

Minimum, no flow for many months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	0	7.3					
2					0	0	6.3					
3					0	0	4.8					
4					0	0	3.2					
5					0	0	2.0					
6					0	.05	.68					
7					0	5.5	.33					
8					0	11	.29					
9					30	7.8	.20					
10					14	7.2	.04					
11					10	7.4	0					
12					8.1	7.7	0					
13					5.9	7.2	0					
14					2.8	6.2	0					
15					2.1	4.0	0					
16					1.5	2.1	0					
17					.73	1.3	0					
18					.48	1.4	0					
19					.29	.86	0					
20					.28	.88	0					
21					.09	.33	0					
22					0	.17	0					
23					0	.14	0					
24					0	.09	0					
25					0	.01	0					
26					0	.42	0					
27					0	7.5	0					
28					0	17	0					
29					---	17	0					
30					---	11	0					
31					---	8.6	---					
TOTAL	0	0	0	0	76.27	132.85	25.14	0	0	0	0	0
MEAN	0	0	0	0	2.72	4.29	.84	0	0	0	0	0
MAX	0	0	0	0	30	17	7.3	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	151	264	50	0	0	0	0	0

CAL YR 1984	TOTAL	1148.62	MEAN	3.14	MAX 47	MIN 0	AC-FT	2280
WTR YR 1985	TOTAL	234.26	MEAN	.64	MAX 30	MIN 0	AC-FT	465

11274630 DEL PUERTO CREEK NEAR PATTERSON, CA

LOCATION.--Lat 37°29'12", long 121°12'29", in SE 1/4 NW 1/4 sec.21, T.5 S., R.7 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 1.0 mi upstream from California Aqueduct crossing, and 4.4 mi west of Patterson.

DRAINAGE AREA.--72.6 mi^2.

PERIOD OF RECORD.--October 1958 to May 1965 (maximums only), June 1965 to current year.

REVISED RECORDS.--WSP 1930: 1959-60(M), drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 1965, crest-stage gage at site 1.0 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Some stock ponds and small diversions above station.

AVERAGE DISCHARGE.--20 years, 7.48 ft^3/s, 5,420 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft^3/s, Feb. 16, 1959, gage height, 14.68 ft site and datum then in use, from rating curve extended above 690 ft^3/s; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 28	1000	*74	*2.76				

No flow for several months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	2.4	1.9	1.3	1.5	5.2	.65	.29			
2		0	2.2	2.0	1.4	1.7	4.4	.63	.32			
3		0	2.9	2.3	1.2	1.7	3.8	.62	.36			
4		0	2.4	2.3	1.3	1.7	3.4	.57	.25			
5		0	2.2	2.1	1.1	1.9	3.0	.50	.20			
6		0	2.0	2.0	1.2	2.9	2.8	.49	.17			
7		0	1.8	2.3	1.2	7.4	2.7	.50	.14			
8		0	1.7	2.8	15	5.8	2.6	.50	.12			
9		0	1.5	2.4	10	4.3	2.5	.49	.09			
10		0	2.6	2.5	4.9	4.2	2.3	.68	.07			
11		0	3.3	2.4	3.0	4.4	2.1	.84	.04			
12		0	2.7	2.1	2.3	4.0	2.0	.63	.02			
13		0	2.2	2.0	1.8	3.7	1.8	.54	.01			
14		0	1.9	1.9	1.7	3.5	1.7	.55	0			
15		0	2.3	1.8	1.5	3.4	1.7	.49	0			
16		0	3.3	1.8	1.5	3.1	1.6	.48	0			
17		0	3.2	1.7	1.4	2.8	1.9	.52	0			
18		0	2.8	1.7	1.3	3.2	2.4	.53	0			
19		0	2.5	1.7	1.3	3.2	2.1	.53	0			
20		.08	2.3	1.7	1.2	2.8	1.8	.46	0			
21		.56	2.4	1.6	1.0	2.4	2.0	.42	0			
22		.57	2.0	1.5	.97	2.3	2.1	.37	0			
23		.54	1.9	1.5	.95	2.2	1.7	.35	0			
24		.79	1.8	1.5	1.0	2.0	1.5	.33	0			
25		1.5	1.9	1.4	1.3	2.0	1.3	.31	0			
26		1.4	2.1	1.5	1.3	2.6	1.2	.31	0			
27		1.4	2.3	1.5	1.5	18	.93	.29	0			
28		5.9	2.3	1.7	1.5	39	.95	.32	0			
29		6.1	2.1	1.9	---	15	.83	.32	0			
30		3.2	2.2	1.6	---	9.1	.71	.26	0			
31		---	2.0	1.4	---	6.9	---	.24	---			
TOTAL	0	22.04	71.2	58.5	65.12	168.7	65.02	14.72	2.08	0	0	0
MEAN	0	.73	2.30	1.89	2.33	5.44	2.17	.47	.069	0	0	0
MAX	0	6.1	3.3	2.8	15	39	5.2	.84	.36	0	0	0
MIN	0	0	1.5	1.4	.95	1.5	.71	.24	0	0	0	0
AC-FT	0	44	141	116	129	335	129	29	4.1	0	0	0

CAL YR 1984 TOTAL 804.54 MEAN 2.20 MAX 20 MIN 0 AC-FT 1600
WTR YR 1985 TOTAL 467.38 MEAN 1.28 MAX 39 MIN 0 AC-FT 927

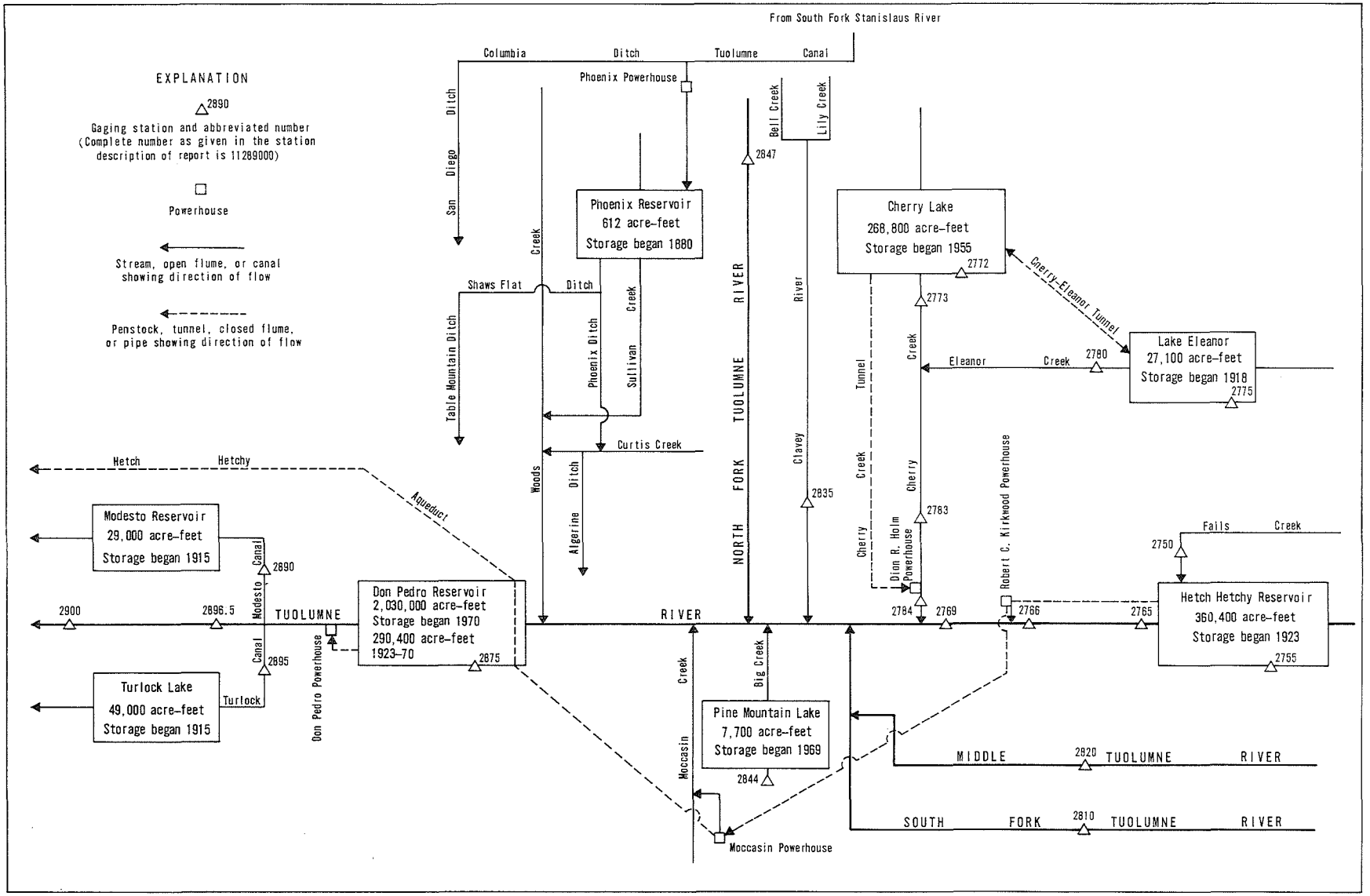


FIGURE 30. — Schematic diagram showing diversions and storage in Tuolumne River basin.

11275500 HETCH HETCHY RESERVOIR AT HETCH HETCHY, CA

LOCATION.--Lat 37°56'52", long 119°47'13", in NW 1/4 NW 1/4 sec.16, T.1 N., R.20 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, near center of O'Shaughnessy Dam on Tuolumne River at Hetch Hetchy, 1.5 mi downstream from Falls Creek.

DRAINAGE AREA.--455 mi^2.

PERIOD OF RECORD.--May 1923 to current year. Prior to October 1930 monthend contents, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 1.84 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1927, nonrecording gage at same site and datum. Oct. 1, 1927, to July 9, 1972, water-stage recorder at same site and datum. Prior to October 1974, datum published as at mean sea level.

REMARKS.--Reservoir is formed by concrete gravity-type dam, completed to crest gage height 3,726.5 ft in 1923 and raised to 3,812.0 ft in 1937. Storage began Apr. 6, 1923. Ten-foot drum gates were installed on spillway in 1949. Capacity, 360,400 acre-ft between gage heights 3,512.0 ft bottom outlet, and 3,806.0 ft top of drum-type spillway gates. Water is diverted from reservoir through tunnel to Robert C. Kirkwood powerplant 15 mi downstream. Flow is diverted from powerplant tailrace in a closed conduit through Hetch Hetchy aqueduct to Moccasin Creek powerplant with flows in excess of aqueduct capacity being spilled to the river. At Moccasin Creek diversion dam, water re-enters Hetch Hetchy aqueduct and flows into Crystal Springs Reservoir, which supplies city of San Francisco. Surplus water is spilled into Don Pedro Reservoir (station 11287500) at Red Mountain Bar. Flow down river is for State Department of Fish and Game and Raker Act requirements. Hetch Hetchy Reservoir is main storage unit of Hetch Hetchy water-supply system for San Francisco. See schematic diagram of Tuolumne River basin. Records, including extremes, represent contents at 0800 hours.

COOPERATION.--Record of gage heights were provided by city and county of San Francisco.

EXTREMES (AT 0800) FOR PERIOD OF RECORD.--Maximum contents, 369,100 acre-ft, Dec. 3, 1950, gage height, 3,810.4 ft; no contents at times in 1929-31.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents, 346,800 acre-ft, June 22, gage height, 3,799.1 ft; minimum, 96,100 acre-ft, Apr. 1, gage height, 3,639.1 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)

3,512	0	3,540	8,700	3,640	97,000	3,740	238,900
3,513	51	3,560	22,900	3,660	119,900	3,760	273,700
3,515	154	3,580	39,500	3,680	146,200	3,780	310,400
3,520	410	3,600	57,400	3,700	175,000	3,800	348,600
3,530	3,300	3,620	76,500	3,720	206,000	3,810.4	369,100

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	265200	225200	202500	175200	140700	115000	96100	165800	301400	340800	303700	257500
2	263600	224000	201700	174100	139600	114300	96600	171400	304200	339900	302200	256400
3	262200	222900	201300	172900	138400	113800	97600	177900	305500	338900	300700	255000
4	260600	222000	200300	171700	137300	113100	98900	184000	306600	337900	299400	253500
5	259400	221100	199400	170600	136100	112300	100400	188800	306600	337000	298100	252300
6	257800	219700	198400	169500	134900	111500	101900	194600	309300	335800	296600	250900
7	256400	218800	197800	168300	133600	110500	103900	200200	313900	334900	295000	249500
8	255000	217900	197200	167500	132700	109700	106900	204400	318700	333700	293700	248100
9	253700	217100	196400	166300	131700	108900	110200	208100	323000	332700	292200	246900
10	251900	216300	195700	165100	130700	108100	113700	210800	326800	331400	290600	245700
11	250500	215700	195100	163900	129500	107600	117200	212400	329700	330300	289100	244400
12	249300	215300	194500	162900	128500	107100	120700	213400	332600	329100	287800	243200
13	248000	214800	193800	161500	127600	106300	124900	215500	335200	328000	286400	241800
14	246600	214500	192900	160300	126600	105600	130000	218900	337700	326800	284700	240600
15	245400	213900	192100	159200	125700	105000	136300	223500	339700	325700	283300	239600
16	244000	213100	191500	158100	124800	104300	142200	228500	341200	324300	281800	238100
17	243000	212300	190700	157000	124100	103600	146200	233500	342800	323200	280200	236900
18	241800	211500	189900	155900	123400	102900	149300	238900	343900	321700	278700	235700
19	240600	210600	189300	154900	122500	102300	151000	245200	344900	320500	277300	234300
20	239600	209800	188500	154000	121800	101600	152200	251800	345700	319200	276000	233000
21	238400	209000	187600	153100	121100	101000	153100	257100	346300	317900	274200	231700
22	237400	208200	186600	152100	120300	100500	153600	262000	346800	316800	272800	230300
23	236000	207300	185600	151100	119300	99900	154000	267000	346600	315400	271200	229200
24	234700	206500	184400	150000	118500	99500	154700	272800	346500	314100	269800	227800
25	233500	206000	183300	148900	117700	99000	155900	279100	346100	312800	268200	226200
26	232300	205400	182100	147700	117000	98600	156700	284500	345500	311500	266600	224800
27	231200	204400	181100	146600	116300	98100	157000	289500	344700	310400	265200	223400
28	230200	204600	180000	145500	115600	97700	157800	293700	343900	309100	263600	222000
29	229000	204100	178800	144200	---	97100	159500	296600	343000	307900	262200	220700
30	227700	203500	177600	143200	---	96500	162100	298500	342000	306500	260600	219400
31	226500	---	176200	141900	---	96200	---	300100	---	305000	259100	---
MAX	265200	225200	202500	175200	140700	115000	162100	300100	346800	340800	303700	257500
MIN	226500	203500	176200	141900	115600	96200	96100	165800	301400	305000	259100	219400
a	3732.6	3718.4	3700.8	3676.8	3656.3	3639.2	3691.3	3774.5	3796.6	3777.1	3751.7	3728.3
b	-40100	-23000	-27300	-34300	-26300	-19400	+65900	+138000	+41900	-37000	-45900	-39700

CAL YR 1984 b -137700
WTR YR 1985 b -47200

[a]Gage height, in feet, at end of month.
[b]Change in contents, in acre-feet.

11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°56'15", long 119°47'50", in SW 1/4 SE 1/4 sec.17, T.1 N., R.20 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on left bank 0.9 mi downstream from O'Shaughnessy Dam at Hetch Hetchy, and 2.5 mi downstream from Falls Creek.

DRAINAGE AREA.--457 mi^2.

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "at Hetch Hetchy damsite, near Sequoia" 1910-14 and as "below Hetch Hetchy damsite, near Sequoia" 1915-18.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder with concrete control since May 5, 1970. Elevation of gage is 3,480 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 1, 1915, water-stage recorder at site 1 mi upstream, at damsite, at different datum. Jan. 1, 1915, to Sept. 30, 1968, water-stage recorder, at same site and datum. Oct. 1, 1968, to May 4, 1970, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 1 mi upstream beginning in April 1923. Flow diverted above station through tunnel to Robert C. Kirkwood powerplant and Hetch Hetchy aqueduct beginning Apr. 26, 1967. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE (prior to diversion to Robert C. Kirkwood powerplant and Hetch Hetchy aqueduct).--57 years (water years 1911-67), 999 ft^3/s, 723,800 acre-ft/yr; 18 years (water years 1968-85), 432 ft^3/s, 313,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft^3/s, June 1, 1943, gage height, 13.90 ft; no flow at times in 1968-70.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 133 ft^3/s, June 1, gage height, 3.67 ft; minimum daily, 49 ft^3/s, for several days in December and January.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	65	55	53	56	60	75	94	109	109	110	88
2	67	65	49	53	58	60	75	101	112	108	110	73
3	67	65	49	53	58	60	75	102	112	111	110	73
4	67	64	49	53	58	60	77	103	112	112	110	73
5	66	64	49	52	58	60	77	105	112	110	110	73
6	66	64	49	52	58	60	77	105	112	110	110	73
7	66	64	54	53	58	60	78	105	112	110	110	73
8	66	66	56	52	60	60	77	105	113	110	110	72
9	66	64	56	52	61	60	77	106	114	110	110	72
10	66	64	56	52	60	63	77	106	114	110	110	72
11	68	64	56	52	60	69	78	106	115	110	110	72
12	66	64	56	52	59	66	79	107	115	110	110	72
13	65	66	55	52	59	62	80	107	113	110	110	72
14	65	65	55	52	59	61	82	107	111	110	110	72
15	65	65	55	52	59	61	82	104	114	110	110	68
16	66	65	55	52	58	62	83	102	116	110	110	63
17	66	65	55	52	58	62	86	103	117	110	110	63
18	66	65	55	51	58	61	81	104	116	109	109	62
19	66	65	55	51	58	61	77	105	116	109	109	63
20	66	65	55	51	63	61	77	105	117	109	109	63
21	66	65	55	51	63	61	77	106	117	109	109	63
22	66	65	55	51	62	61	77	106	117	109	110	63
23	66	64	54	51	62	61	77	106	117	109	110	63
24	65	67	54	51	62	61	77	107	117	109	110	63
25	65	66	54	51	62	61	77	104	116	109	110	63
26	65	65	54	51	62	61	78	100	115	109	110	63
27	65	66	54	50	59	65	78	100	114	109	110	63
28	65	72	54	50	59	64	78	100	113	111	110	63
29	65	66	54	50	---	64	78	100	112	110	108	63
30	65	65	53	50	---	63	78	100	111	110	107	63
31	65	---	53	49	---	62	---	101	---	110	107	---
TOTAL	2047	1955	1668	1597	1667	1913	2345	3212	3421	3401	3398	2042
MEAN	66.0	65.2	53.8	51.5	59.5	61.7	78.2	104	114	110	110	68.1
MAX	73	72	56	53	63	69	86	107	117	112	110	88
MIN	65	64	49	49	56	60	75	94	109	108	107	62
AC-FT	4060	3880	3310	3170	3310	3790	4650	6370	6790	6750	6740	4050

CAL YR 1984 TOTAL 231631 MEAN 633 MAX 6860 MIN 49 AC-FT 459400
WTR YR 1985 TOTAL 28666 MEAN 78.5 MAX 117 MIN 49 AC-FT 56860

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA

LOCATION.--Lat 37°52'46", long 119°56'46", in SE 1/4 SW 1/4 sec.1, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 0.5 mi upstream from Early Intake, 2.4 mi upstream from Cherry Creek, and 5.0 mi west of Mather.

DRAINAGE AREA.--484 mi^2.

PERIOD OF RECORD.--October 1970 to current year. Records for the period October 1939 to September 1970 in the files of the California district office of the Geological Survey.

GAGE.--Water-stage recorder. Elevation of gage is 2,420 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 12 mi upstream.

AVERAGE DISCHARGE.--15 years, 467 ft^3/s, 338,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft^3/s, July 7, 1983, gage height, 21.38 ft; minimum daily, 33 ft^3/s, Aug. 17, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1943, reached a stage of 22.1 ft, discharge, 12,900 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 241 ft^3/s, Nov. 28, gage height, 13.26 ft; minimum daily, 64 ft^3/s, Jan. 30 to Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	71	91	69	64	79	143	101	118	119	120	114
2	72	72	76	69	74	84	156	121	127	117	120	82
3	72	74	73	68	72	83	142	122	127	120	120	80
4	71	72	72	68	71	82	135	122	126	121	120	80
5	71	71	71	68	71	82	127	123	126	121	120	80
6	72	72	70	68	71	90	120	124	126	121	120	81
7	73	72	69	72	71	94	117	124	126	121	120	80
8	73	103	73	72	119	93	114	124	126	121	120	80
9	72	87	72	70	135	96	112	125	127	120	119	85
10	73	76	78	69	101	119	110	125	127	120	119	80
11	86	74	77	69	92	166	109	126	127	120	119	79
12	75	75	75	68	91	134	108	126	127	120	119	78
13	74	110	75	68	92	118	107	125	127	120	119	78
14	73	93	73	68	90	111	107	125	123	119	119	78
15	73	80	74	68	90	106	108	124	125	119	118	78
16	79	84	77	68	89	103	108	118	128	119	118	73
17	87	80	73	67	88	101	121	119	130	119	119	71
18	75	80	73	66	87	101	116	119	127	119	119	71
19	75	78	73	66	85	98	106	120	127	119	118	70
20	74	78	73	65	84	95	105	120	128	119	118	71
21	73	91	73	65	88	93	106	120	129	119	118	71
22	73	85	71	65	86	91	105	121	129	118	121	71
23	73	82	71	65	85	90	103	121	129	118	121	71
24	73	102	71	65	84	88	101	122	128	118	120	71
25	72	115	70	65	84	88	100	122	125	120	120	71
26	73	93	70	65	83	91	99	113	124	119	120	71
27	72	91	70	65	82	135	99	114	123	118	120	71
28	71	182	70	65	74	144	99	115	122	120	119	71
29	71	116	69	65	---	133	98	115	121	120	119	71
30	72	98	69	64	---	125	98	115	119	120	118	70
31	71	---	69	64	---	134	---	115	---	120	118	---
TOTAL	2300	2657	2261	2079	2403	3247	3379	3726	3774	3704	3698	2298
MEAN	74.2	88.6	72.9	67.1	85.8	105	113	120	126	119	119	76.6
MAX	87	182	91	72	135	166	156	126	130	121	121	114
MIN	71	71	69	64	64	79	98	101	118	117	118	70
AC-FT	4560	5270	4480	4120	4770	6440	6700	7390	7490	7350	7330	4560

CAL YR 1984 TOTAL 244883 MEAN 669 MAX 7130 MIN 69 AC-FT 485700
WTR YR 1985 TOTAL 35526 MEAN 97.3 MAX 182 MIN 64 AC-FT 70470

11276900 TUOLUMNE RIVER BELOW EARLY INTAKE, NEAR MATHER, CA

LOCATION.--Lat 37°52'54", long 119°58'09", in NW 1/4 SW 1/4 sec.2, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 0.6 mi upstream from Cherry Creek, 0.7 mi downstream from Robert C. Kirkwood powerplant and Hetch Hetchy aqueduct, and 6.3 mi west of Mather.

DRAINAGE AREA.--487 mi^2.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Feb. 20-27, June 1 to July 1. Records fair. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 13 mi upstream and Robert C. Kirkwood powerplant beginning Apr. 26, 1967. Water is diverted to Hetch Hetchy aqueduct from the tailrace of the powerplant through a closed conduit. Flow in excess of aqueduct capacity is diverted to river. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--19 years, 575 ft^3/s, 416,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft^3/s, June 4, 1969, gage height, 9.82 ft; minimum daily, 12 ft^3/s, Nov. 28-30, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 415 ft^3/s, Apr. 8, gage height, 4.37 ft; minimum daily, 69 ft^3/s, Dec. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	139	128	150	88	120	222	367	204	183	137	132
2	140	133	124	147	95	130	226	369	159	162	128	99
3	131	133	153	138	103	145	208	360	246	154	127	124
4	122	143	142	130	133	165	197	360	235	151	140	118
5	115	165	130	127	124	156	304	304	223	147	164	113
6	115	158	95	128	116	156	368	387	218	143	155	103
7	134	151	69	166	111	152	309	376	208	155	145	97
8	152	174	74	156	144	142	396	365	190	177	134	113
9	143	157	74	145	167	145	389	359	149	168	127	141
10	135	143	81	137	135	169	380	347	235	159	125	126
11	144	140	83	129	160	232	372	345	233	150	132	116
12	124	180	81	126	148	194	363	303	223	143	162	107
13	119	201	80	121	142	187	363	384	211	139	153	100
14	127	184	77	162	133	175	292	378	188	146	143	99
15	159	163	78	152	125	163	378	373	190	177	134	103
16	153	157	80	144	121	158	374	373	190	168	127	129
17	154	150	78	138	136	171	379	373	233	158	126	121
18	133	164	77	132	159	187	365	346	220	149	141	113
19	127	181	77	129	151	176	347	346	211	138	164	108
20	125	169	77	144	138	166	341	371	204	138	157	97
21	142	171	85	166	138	157	359	365	197	151	150	96
22	161	163	115	156	136	147	375	358	194	174	141	113
23	151	154	121	148	129	145	365	349	186	166	137	133
24	142	165	155	140	135	159	355	334	225	161	131	123
25	134	178	150	133	157	177	344	326	218	156	145	114
26	126	193	145	132	147	170	334	332	230	147	171	113
27	127	184	137	148	138	200	334	362	211	144	161	101
28	131	242	130	170	120	202	351	353	206	151	152	99
29	164	191	125	160	---	188	369	342	190	180	145	115
30	154	164	137	150	---	180	361	337	179	173	134	135
31	145	---	155	141	---	201	---	326	---	163	129	---
TOTAL	4291	4990	3313	4445	3729	5215	10120	10970	6206	4871	4417	3401
MEAN	138	166	107	143	133	168	337	354	207	157	142	113
MAX	164	242	155	170	167	232	396	387	246	183	171	141
MIN	115	133	69	121	88	120	197	303	149	138	125	96
AC-FT	8510	9900	6570	8820	7400	10340	20070	21760	12310	9660	8760	6750

CAL YR 1984 TOTAL 299540 MEAN 818 MAX 7590 MIN 69 AC-FT 594100
WTR YR 1985 TOTAL 65968 MEAN 181 MAX 396 MIN 69 AC-FT 130800

11277200 CHERRY LAKE NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'33", long 119°54'47", in SE 1/4 NW 1/4 sec.5, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on upstream face of Cherry Valley Dam on Cherry Creek, 4.2 mi upstream from Eleanor Creek, 7 mi north of Early Intake, and 7.3 mi northwest of Hetch Hetchy.

DRAINAGE AREA.--117 mi^2.

PERIOD OF RECORD.--August 1956 to current year. Prior to October 1959, published as Lake Lloyd near Hetch Hetchy.

GAGE.--Water-stage recorder. Datum of gage is 2.42 ft above National Geodetic Vertical Datum of 1929. Prior to October 1974, datum published as at mean sea level.

REMARKS.--Reservoir is formed by a rockfill dam completed in 1956. Storage began in December 1955. Capacity, 268,800 acre-ft between gage heights 4,430 ft bottom of sluice gates, and 4,700 ft top of spillway gates. No dead storage. Water is released down Cherry Creek for power development and domestic supply as part of Hetch Hetchy system of city and county of San Francisco. Unmeasured diversion from Lake Eleanor into Cherry Lake began Mar. 6, 1960. Diversion from Cherry Lake through tunnel to Cherry powerhouse near mouth of Cherry Creek began Aug. 1, 1960. See schematic diagram of Tuolumne River basin. Records, including extremes, represent contents at 2400 hours.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 274,100 acre-ft, July 4, 1983, gage height, 4,702.9 ft; normal minimum since reservoir first filled, 7,660 acre-ft, Jan. 24, 1960, gage height, 4,502.1 ft. Reservoir drained for inspection in 1961 and 1964.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 201,600 acre-ft, June 16, gage height, 4,660.3 ft; minimum, 91,000 acre-ft, Mar. 22, gage height, 4,584.5 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)

4,440	0	4,490	3,020	4,560	60,800	4,660	201,100
4,450	75	4,500	6,030	4,580	85,100	4,680	234,100
4,460	250	4,510	11,700	4,600	111,800	4,700	268,800
4,470	675	4,520	19,700	4,620	139,900	4,705	277,900
4,480	1,530	4,540	38,900	4,640	169,700		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	182700	168300	166100	148900	119000	94900	92700	155200	195800	196200	176400	155300
2	181900	167900	166400	148000	117900	94700	93600	158100	196300	195400	175600	155500
3	181300	167900	165900	147000	117100	95300	95000	160800	196200	194600	174800	154600
4	180500	168300	165500	145900	115700	95000	96600	163200	196000	194600	175100	153400
5	179800	167700	164900	144800	114400	94500	98400	166100	196000	193800	174300	152500
6	179100	167300	164400	144500	113100	94100	100400	168200	196800	193100	173300	151700
7	179300	167000	163800	143400	112000	93600	103700	170200	197600	193300	172600	150600
8	180100	167000	163200	142400	110700	93000	106300	171600	198700	192500	171900	150200
9	177800	166800	162900	141400	109600	92700	108900	172600	200100	191700	170900	150000
10	178500	166700	162300	140100	108900	93200	111800	173100	200500	190900	170300	149300
11	176800	167600	163000	139100	107800	92800	114400	173300	200800	190000	170500	148100
12	176200	167900	160800	137900	106600	93700	117200	174500	200900	189200	169500	147300
13	175600	168500	160000	137500	105500	92000	120400	175400	201300	188500	168800	146100
14	175700	168300	159100	136500	104400	91600	124700	177000	201300	188700	167900	145100
15	175000	168000	158500	135400	103500	91400	128100	178700	201300	187900	167100	144800
16	174700	167700	158800	134700	102600	91200	131400	180200	201600	187300	166200	144000
17	174000	167400	157900	133700	102400	91800	134200	181600	201400	186500	165800	142700
18	173400	168000	157200	132500	101900	91500	135900	183300	201100	185500	165300	141400
19	173100	167700	156200	131700	101100	91200	137400	185800	200800	184700	165000	139900
20	173100	167600	155500	131000	100200	91100	138600	187300	200500	184100	164300	138900
21	173400	167000	154700	130400	99300	91100	140500	188100	200100	184100	163200	138100
22	172800	167000	154300	129400	98400	91000	141400	189300	199800	183500	162400	137400
23	172200	166700	154400	128400	97900	91100	142600	190600	199800	182700	161200	136500
24	171600	166700	153900	127400	97600	91900	143700	192000	199500	182100	160900	135400
25	170900	167300	153300	126300	96900	91900	145100	193300	198900	181200	160600	134200
26	170600	166800	152500	125300	96300	91900	145800	195100	198400	180400	160200	133100
27	170300	167300	151900	124800	95600	91900	147000	195800	197800	179800	159100	131700
28	170500	167100	151200	123700	95000	91600	149000	196300	197100	179800	158200	130500
29	170000	166800	150500	122600	---	91500	150600	196300	196800	179300	157300	130100
30	169200	166400	150500	121400	---	91400	152500	196200	196800	178500	156400	129000
31	168900	---	149700	120300	---	92100	---	196000	---	177100	155600	---
MAX	182700	168500	166400	148900	119000	95300	152500	196300	201600	196200	176400	155500
MIN	168900	166400	149700	120300	95000	91000	92700	155200	195800	177100	155600	129000
a	4639.5	4637.8	4626.7	4606.1	4587.6	4585.4	4628.6	4656.8	4657.3	4644.8	4630.7	4612.3
b	-14600	-2500	-16700	-29400	-25300	-2900	+60400	+43500	+800	-19700	-21500	-26600

CAL YR 1984 b -46000
WTR YR 1985 b -54500

[a] Gage height, in feet, at end of month.
[b] Change in contents, in acre-feet.

11277300 CHERRY CREEK BELOW CHERRY VALLEY DAM, NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'04", long 119°54'59", in SE 1/4 SW 1/4 sec.5, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 0.7 mi downstream from Cherry Valley Dam, 3.5 mi upstream from Eleanor Creek, 6.7 mi north of Early Intake, and 7.2 mi west of Hetch Hetchy.

DRAINAGE AREA.--118 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,337.08 ft above National Geodetic Vertical Datum of 1929 (levels by city and county of San Francisco).

REMARKS.--Estimated daily discharges: Jan. 26 to Feb. 22. Records good. Flow regulated by Cherry Lake (station 11277200) 0.7 mi upstream. Diversion between Lake Eleanor (station 11277500) and Cherry Lake began Mar. 6, 1960. Diversion from Cherry Lake to Dion R. Holm powerplant began Aug. 1, 1960. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE (since diversion to Dion R. Holm powerplant).--25 years (water years 1961-85), 34.6 ft^3/s, 25,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,210 ft^3/s, July 10, 1974, gage height, 10.53 ft; minimum daily, 1.6 ft^3/s, Apr. 10, 1957, Oct. 12, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31 ft^3/s, July 2, gage height, 3.85 ft; minimum daily, 4.8 ft^3/s, May 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	5.4	6.0	5.4	5.2	5.6	7.6	6.0	5.9	11	14	15
2	5.6	5.7	5.9	5.4	5.2	5.7	7.7	6.0	5.9	18	14	15
3	5.5	6.2	5.9	5.4	5.2	5.6	7.9	5.5	5.9	21	14	15
4	5.4	9.6	5.9	5.4	5.2	5.6	8.0	4.8	5.9	21	14	15
5	5.4	10	5.8	5.4	5.2	5.5	8.0	5.4	5.9	20	14	15
6	5.4	5.2	5.6	5.5	5.2	5.6	8.0	6.0	5.8	20	14	15
7	5.4	5.2	5.6	5.7	5.2	5.6	7.6	6.0	5.5	19	14	16
8	5.4	6.3	5.6	5.6	5.6	5.5	7.4	6.0	5.0	18	14	15
9	5.4	5.6	5.6	5.4	5.4	5.5	7.1	5.9	5.7	18	14	15
10	5.4	5.4	5.9	5.4	5.2	6.1	6.9	5.9	5.6	18	14	15
11	5.8	5.4	5.7	5.4	5.2	6.1	6.9	6.1	5.6	18	14	15
12	5.4	5.5	5.6	5.4	5.2	6.1	6.9	6.1	5.6	18	14	15
13	5.4	6.7	5.6	5.4	5.2	6.1	6.8	6.3	5.7	18	14	15
14	5.4	5.8	5.6	5.4	5.2	6.1	6.7	6.4	5.6	18	15	15
15	5.4	5.6	5.8	5.4	5.2	6.1	6.6	6.4	5.6	18	15	15
16	6.2	5.7	5.7	5.4	5.2	6.1	6.6	6.2	5.6	17	15	16
17	6.2	5.5	5.6	5.4	5.2	6.1	7.2	6.1	5.6	17	15	15
18	5.7	5.5	5.6	5.4	5.2	6.1	6.8	6.1	5.6	19	15	16
19	5.7	5.4	5.6	5.4	5.2	6.0	6.6	6.1	5.6	18	15	16
20	5.6	5.5	5.6	5.4	5.4	6.0	6.6	5.9	5.6	17	15	15
21	5.5	5.6	5.6	5.4	5.4	5.9	6.6	5.9	5.6	17	15	15
22	5.4	5.4	5.6	5.4	5.5	5.9	6.5	5.9	5.6	17	15	15
23	5.4	5.4	5.6	5.4	5.6	5.9	6.1	5.9	5.6	17	15	15
24	5.4	6.7	5.6	5.3	5.6	5.9	6.1	5.9	5.6	17	15	15
25	5.4	6.1	5.6	5.2	5.6	5.9	6.1	6.1	5.6	17	15	15
26	5.4	5.8	5.6	5.4	5.6	6.2	6.1	6.9	5.6	17	15	15
27	5.4	6.8	5.6	5.2	5.6	6.2	6.1	7.2	5.6	15	15	15
28	5.4	8.2	5.4	5.2	5.6	6.1	6.1	6.4	5.6	14	15	15
29	5.4	6.7	5.4	5.2	---	6.0	6.1	5.9	5.6	15	15	15
30	5.5	6.1	5.4	5.2	---	6.3	6.1	5.9	5.6	14	15	15
31	5.4	---	5.4	5.2	---	7.0	---	5.9	---	14	15	---
TOTAL	175.0	184.0	175.0	166.7	149.3	184.4	205.8	187.1	169.2	536	452	454
MEAN	5.65	6.13	5.65	5.38	5.33	5.95	6.86	6.04	5.64	17.3	14.6	15.1
MAX	9.7	10	6.0	5.7	5.6	7.0	8.0	7.2	5.9	21	15	16
MIN	5.4	5.2	5.4	5.2	5.2	5.5	6.1	4.8	5.0	11	14	15
AC-FT	347	365	347	331	296	366	408	371	336	1060	897	901

CAL YR 1984 TOTAL 3754.3 MEAN 10.3 MAX 18 MIN 5.2 ACFT 7450
WTR YR 1985 TOTAL 3038.5 MEAN 8.32 MAX 21 MIN 4.8 AC-FT 6030

11277500 LAKE ELEANOR NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'27", long 119°52'48", in SE 1/4 NW 1/4 sec.3, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, 720 ft from left bank on downstream side of dam on Eleanor Creek, 1.7 mi upstream from Miguel Creek, and 5.5 mi northwest of Hetch Hetchy.

DRAINAGE AREA.--78.1 mi^2.

PERIOD OF RECORD.--June 1918 to current year. Prior to October 1930, published in WSP 1315-A. Published as "near Sequoia" 1919-20.

REVISED RECORDS.--WSP 1445: 1938(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2.46 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1927, nonrecording gage on upstream side of dam at same site and datum.

REMARKS.--Reservoir is formed by multiple-arch dam completed in 1918; storage began June 23, 1918. Usable capacity, 26,110 acre-ft between gage heights, 4,620.9 ft, natural outlet of old lake and 4,660.0 ft, top of 5-ft flashboards. Records, including extremes, represent usable contents at 2400 hours. See schematic diagram of Tuolumne River basin.

COOPERATION.--Periodic observations of gage height were provided by city and county of San Francisco.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,000 acre-ft, Dec. 11, 1937, from capacity table then in use, gage height, 4,663.4 ft; no usable contents at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 27,100 acre-ft, June 13-18, gage height, 4,661.1 ft; minimum, 594 acre-ft, Sept. 30, gage height, 4,626.1 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)

4,608	0	4,620	36	4,628	1,480	4,646	13,500
4,610	6	4,622	49	4,630	2,450	4,650	17,000
4,612	12	4,624	92	4,632	3,580	4,655	21,500
4,614	18	4,625	211	4,635	5,270	4,660	26,100
4,616	24	4,626	550	4,638	7,330	4,663	29,100
4,618	27	4,627	996	4,642	10,300		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17900	10100	10200	2510	1770	2730	3130	7810	24900	24600	13700	3180
2	17500	9980	10100	2350	1720	2790	3580	8570	25200	24300	13400	3010
3	17300	10100	9900	2260	1720	2730	4030	9420	25500	23900	12900	2790
4	16900	9980	9740	2210	1670	2620	4420	10100	25800	23600	12600	2560
5	16600	9820	9500	2160	1670	2510	4700	10600	26100	23400	12300	2350
6	16200	9660	9340	2110	1620	2450	5040	11300	26300	23000	12000	2160
7	16000	9580	9100	2110	1670	2400	5480	11900	26300	22600	11600	1960
8	15500	9660	8870	2110	1770	2350	5890	12400	26500	22400	11300	1820
9	15200	9740	8640	2110	1770	2350	6300	12700	26600	22100	10900	1720
10	14800	9740	8500	2060	1770	2400	6640	12900	26800	21700	10500	1620
11	14600	9900	8290	1960	1800	2450	6920	13000	26900	21300	10100	1580
12	14300	10200	8090	1920	1820	2450	7060	13200	27000	21000	9820	1530
13	14100	10600	7810	1870	1870	2510	7540	13500	27100	20700	9420	1430
14	13700	10800	7540	1820	1920	2510	8090	13900	27100	20300	9100	1330
15	13400	10800	7260	1820	1960	2510	8640	14500	27100	20000	8710	1290
16	13200	10800	7060	1820	2060	2560	9020	15100	27100	19700	8360	1190
17	13000	10700	6710	1820	2160	2680	9180	15800	27100	19200	8020	1140
18	12900	10600	6510	1870	2260	2680	8870	16500	27100	18900	7680	1090
19	12800	10500	6160	1960	2350	2680	8500	17300	27000	18500	7400	996
20	12600	10500	5820	2010	2400	2730	8160	18100	26900	18200	7060	950
21	12400	10400	5480	2060	2450	2790	7680	19000	26800	17700	6780	906
22	12300	10300	5100	2060	2680	2840	7260	19800	26600	17300	6370	861
23	12000	10100	4820	2060	2450	2900	7060	20400	26400	17100	6020	817
24	11900	10100	4590	2010	2510	3010	6920	21200	26200	16600	5680	817
25	11600	10100	4310	2010	2560	2960	6780	22000	26100	16300	5340	772
26	11400	10100	4030	1960	2620	2960	6580	22600	25900	16000	5040	728
27	11300	10200	3750	1920	2680	2900	6370	23200	25600	15600	4760	683
28	11000	10500	3460	1920	2730	2900	6440	23600	25300	15200	4420	639
29	10900	10500	3180	1870	---	2790	6710	24100	25000	14800	4140	639
30	10600	10400	2960	1820	---	2730	7130	24800	24800	14500	3800	594
31	10400	---	2730	1770	---	2840	---	24700	---	14100	3460	---
MAX	17900	10800	10200	2510	2730	3010	9180	24800	27100	24600	13700	3180
MIN	10400	9580	2730	1770	1620	2350	3130	7810	24800	14100	3460	594
a	4642.1	4642.1	4630.5	4628.6	4630.5	4630.7	4637.7	4658.4	4658.5	4646.6	4631.8	4626.1
b	-7800	0	-7670	-960	+960	+110	+4270	+17570	+100	-10700	-10640	-2866

CAL YR 1984 b -23370
WTR YR 1985 b -17606

[a] Gage height, in feet, at end of month.
[b] Change in contents, in acre-feet.

11278000 ELEANOR CREEK NEAR HETCH HETCHY, CA

LOCATION.--Lat 37°58'09", long 119°52'52", in NW 1/4 SW 1/4 sec.3, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on right bank 0.5 mi downstream from Lake Eleanor Dam, 1.1 mi upstream from Miguel Creek, and 5.5 mi northwest of Hetch Hetchy.

DRAINAGE AREA.--78.4 mi^2.

PERIOD OF RECORD.--October 1909 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "near Sequoia" 1910-18.

REVISED RECORDS.--WSP 1315-A: 1923(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,500 ft above National Geodetic Vertical Datum of 1929, from topographic map. November 1909 to November 1915, nonrecording gage and water-stage recorder at site 1 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Eleanor (station 11277500) 0.5 mi upstream beginning in 1918. Diversion from Lake Eleanor to Cherry Lake began in March 1960. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE (prior to diversion to Cherry Lake).--50 years (water years 1910-59), 223 ft^3/s, 161,400 acre-ft/yr; 26 years (water years 1960-85), 86.6 ft^3/s, 62,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft^3/s, Nov. 19, 1950, gage height, 14.95 ft, from rating curve extended above 1,600 ft^3/s on basis of slope-area measurements at gage heights 9.94 ft and 12.24 ft; no flow at times in 1910, 1930-31, 1933, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft^3/s, Nov. 27, gage height, 2.09 ft; minimum daily, 5.1 ft^3/s, Jan. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	5.8	6.3	5.9	5.6	6.3	9.1	7.5	9.1	12	16	16
2	7.2	6.1	6.2	5.9	5.6	6.6	8.3	8.2	9.4	16	16	16
3	6.6	5.9	6.0	5.9	5.6	6.9	7.2	7.8	11	16	16	16
4	6.3	5.9	5.9	5.9	5.6	6.7	6.8	8.0	11	15	16	16
5	6.1	5.9	6.0	5.9	5.6	6.0	6.7	8.5	9.8	16	16	16
6	5.9	5.9	5.9	5.7	5.6	6.3	6.7	8.5	9.4	17	16	17
7	5.9	6.0	5.9	6.1	5.8	6.7	6.7	8.5	8.6	17	16	16
8	5.9	8.0	5.9	6.1	5.9	6.7	6.7	9.2	7.8	16	16	16
9	5.9	6.4	5.9	6.3	5.9	6.6	6.7	9.3	7.2	16	16	16
10	5.9	6.2	6.3	6.3	5.7	8.3	6.7	9.2	6.6	16	16	16
11	6.3	6.2	6.3	6.3	5.8	7.8	6.7	9.1	6.4	16	16	16
12	5.9	6.6	6.3	6.3	6.0	6.6	6.7	8.9	6.1	16	16	16
13	5.9	9.8	5.8	6.4	6.0	6.3	6.8	8.9	6.0	16	16	16
14	5.8	6.4	6.0	5.7	6.2	6.3	7.2	8.9	6.1	16	17	16
15	5.6	5.9	6.4	5.6	6.5	6.0	7.2	9.2	6.1	16	16	16
16	6.6	6.3	6.3	5.1	6.6	5.9	7.6	9.2	5.8	16	16	16
17	6.3	6.3	6.3	5.3	6.7	5.9	8.2	9.3	6.3	16	16	16
18	5.9	6.4	6.3	5.6	6.7	6.0	8.1	9.4	8.7	16	16	16
19	5.9	6.3	6.6	5.6	6.7	5.9	8.1	9.4	9.5	16	16	16
20	5.8	6.4	6.4	5.6	6.6	5.9	8.1	9.4	7.2	16	16	16
21	5.6	6.9	6.2	5.6	6.4	6.3	7.9	9.5	6.4	15	16	16
22	5.6	6.7	6.3	5.9	6.6	6.3	7.6	10	6.7	15	16	16
23	5.6	6.7	6.0	5.9	6.7	6.3	7.6	9.8	6.2	15	16	16
24	5.8	9.5	6.3	5.9	6.7	6.0	7.6	9.8	6.3	16	16	16
25	5.9	6.8	6.3	5.7	6.7	5.9	6.7	10	6.1	16	16	16
26	5.9	6.3	6.3	5.9	7.0	6.3	6.8	8.9	5.9	16	16	16
27	5.9	8.6	6.2	5.9	6.6	6.6	7.2	7.7	5.9	16	16	16
28	5.9	8.8	5.9	5.9	6.3	6.8	7.1	8.2	5.6	16	16	16
29	5.9	6.8	5.9	5.6	---	6.9	7.2	9.7	6.7	16	16	16
30	5.9	6.3	6.3	5.6	---	7.5	7.6	11	7.6	16	16	16
31	5.9	---	6.0	5.6	---	8.8	---	11	---	16	16	---
TOTAL	190.6	202.1	190.7	181.0	173.7	203.4	219.6	282.0	221.5	490	497	481
MEAN	6.15	6.74	6.15	5.84	6.20	6.56	7.32	9.10	7.38	15.8	16.0	16.0
MAX	11	9.8	6.6	6.4	7.0	8.8	9.1	11	11	17	17	17
MIN	5.6	5.8	5.8	5.1	5.6	5.9	6.7	7.5	5.6	12	16	16
AC-FT	378	401	378	359	345	403	436	559	439	972	986	954

CAL YR 1984 TOTAL 28379.4 MEAN 77.5 MAX 1070 MIN 5.2 AC-FT 56290
WTR YR 1985 TOTAL 3332.6 MEAN 9.13 MAX 17 MIN 5.1 AC-FT 6610

11278300 CHERRY CREEK NEAR EARLY INTAKE, CA

LOCATION.--Lat 37°53'40", long 119°57'42", in NW 1/4 SE 1/4 sec.35, T.1 N., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 1.2 mi upstream from mouth, 1.3 mi north of Early Intake, and 10.3 mi southwest of Hetch Hetchy.

DRAINAGE AREA.--226 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 2,272.00 ft above National Geodetic Vertical Datum of 1929 (levels by city and county of San Francisco).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Cherry Lake (station 11277200) 10 mi upstream and Lake Eleanor (station 11277500) 9.8 mi upstream. Diversion from Cherry Lake to Dion R. Holm powerplant began Aug. 1, 1960. Water is returned to creek 1.2 mi below station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE (since diversion to Dion R. Holm powerplant).--25 years (water years 1961-85), 144 ft^3/s, 104,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft^3/s, Feb. 1, 1963, gage height, 14.50 ft, from rating curve extended above 4,600 ft^3/s; minimum daily, 0.30 ft^3/s, Apr. 5, 6, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 163 ft^3/s, Apr. 3, gage height, 4.40 ft; minimum daily, 13 ft^3/s, for several days in October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	14	32	21	21	35	98	32	25	15	32	31
2	17	14	29	21	23	39	130	32	24	32	32	31
3	15	19	27	21	22	37	135	31	26	40	32	31
4	14	15	26	21	21	36	122	30	25	39	31	32
5	14	14	26	21	21	35	104	29	25	39	31	32
6	13	15	25	22	21	37	90	30	23	40	32	34
7	13	15	24	27	22	38	79	30	23	39	32	33
8	13	35	24	27	44	36	71	30	21	38	32	33
9	13	26	23	25	38	38	64	30	20	37	31	37
10	13	19	28	25	29	53	59	30	19	37	31	33
11	22	18	29	24	27	76	56	30	19	37	31	33
12	16	17	27	23	28	68	52	29	18	37	30	32
13	14	38	27	23	30	64	50	29	18	36	30	31
14	14	32	25	22	32	64	47	28	17	36	31	31
15	13	21	26	22	35	61	45	27	17	35	32	32
16	18	22	27	22	38	59	43	27	16	35	32	32
17	31	19	24	21	41	59	57	27	16	35	32	32
18	17	20	24	22	43	60	56	27	16	35	32	33
19	17	19	25	22	44	55	50	26	19	39	32	33
20	16	18	24	22	45	51	47	26	19	34	31	33
21	15	22	23	22	40	50	48	26	16	34	31	32
22	14	21	23	22	40	47	47	26	16	34	31	32
23	14	19	23	22	42	44	43	25	15	34	31	32
24	14	36	23	21	40	42	41	25	15	33	31	32
25	14	36	23	21	39	41	39	25	15	35	31	32
26	14	25	23	22	38	44	38	25	14	35	31	32
27	14	24	23	22	37	58	36	23	14	34	31	32
28	14	84	22	22	36	57	35	23	14	32	30	32
29	14	53	22	22	---	52	34	23	14	32	30	32
30	14	37	22	21	---	52	33	24	15	32	30	32
31	14	---	21	21	---	65	---	25	---	32	30	---
TOTAL	492	767	770	692	937	1553	1849	850	554	1082	966	969
MEAN	15.9	25.6	24.8	22.3	33.5	50.1	61.6	27.4	18.5	34.9	31.2	32.3
MAX	34	84	32	27	45	76	135	32	26	40	32	37
MIN	13	14	21	21	21	35	33	23	14	15	30	31
AC-FT	976	1520	1530	1370	1860	3080	3670	1690	1100	2150	1920	1920

CAL YR 1984	TOTAL	42255	MEAN 115	MAX 1070	MIN 13	AC-FT	83810	
WTR YR 1985	TOTAL	11481	MEAN 31.5	MAX 135	MIN 13	AC-FT	22770	

11278400 CHERRY CREEK BELOW DION R. HOLM POWERHOUSE, NEAR MATHER, CA

LOCATION.--Lat 37°53'24", long 119°58'08", in NE 1/4 NW 1/4 sec.2, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 600 ft upstream from mouth, 0.5 mi downstream from powerhouse, 0.8 mi northwest of Early Intake, and 6.2 mi west of Mather.

DRAINAGE AREA.--234 mi^2.

PERIOD OF RECORD.--March 1963 to current year. Prior to October 1965, published as "below Cherry powerhouse, near Mather".

GAGE.--Water-stage recorder. Elevation of gage is 2,150 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: May 17-25. Records good. Flow regulated by Cherry Lake (station 11277200) 11 mi upstream and Lake Eleanor (station 11277500) 10 mi upstream. Prior to May 1971, Cherry Creek Canal diverted 2 mi upstream from station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--22 years, 704 ft^3/s, 510,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft^3/s, Apr. 11, 1982, gage height, 15.36 ft, from rating curve extended above 4,400 ft^3/s on basis of combined peak flow for Cherry Creek near Early Intake (station 11278300) and Dion R. Holm powerplant; minimum daily, 1.6 ft^3/s, June 4, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 974 ft^3/s, Sept. 6, gage height, 8.30 ft; minimum daily, 24 ft^3/s, Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	577	580	643	745	779	599	641	593	414	593	611	25
2	562	593	208	745	727	545	681	590	136	614	612	27
3	558	525	642	741	566	157	677	589	513	621	567	663
4	546	129	641	741	779	588	603	533	517	161	24	666
5	554	592	639	741	780	591	667	146	517	624	610	663
6	472	594	636	438	784	595	614	581	518	582	611	662
7	128	592	645	750	785	605	209	577	514	32	612	621
8	558	620	724	754	823	598	646	577	414	622	613	30
9	560	608	508	745	753	546	111	581	135	619	607	667
10	563	523	744	754	571	177	614	574	512	618	571	663
11	567	134	781	745	792	638	599	532	515	618	25	664
12	548	516	785	754	793	585	599	148	514	614	609	652
13	470	623	775	454	794	620	565	578	515	575	613	655
14	130	618	773	745	801	628	168	583	516	30	613	610
15	555	598	760	754	807	622	595	577	416	615	614	25
16	596	595	233	745	755	569	576	577	133	614	611	656
17	584	515	777	745	555	185	610	573	499	616	567	657
18	565	140	772	741	590	618	603	533	518	616	28	656
19	563	589	777	750	815	613	587	159	522	618	613	659
20	475	591	777	432	817	608	565	572	521	573	613	662
21	130	596	777	745	814	617	171	570	519	28	614	617
22	563	520	650	741	814	603	576	571	416	615	618	27
23	562	592	211	735	763	551	572	570	132	616	614	665
24	561	533	659	738	541	164	580	567	515	617	587	656
25	560	157	663	738	815	603	583	522	519	624	26	663
26	565	598	659	739	818	602	572	138	501	623	616	656
27	476	596	659	435	819	619	544	518	517	573	624	664
28	132	664	663	739	818	628	170	563	517	25	626	620
29	552	627	667	738	---	615	567	564	417	611	618	28
30	560	612	205	738	---	563	570	568	131	607	614	663
31	562	---	654	737	---	193	---	563	---	612	569	---
TOTAL	15354	15770	19707	21842	21068	16445	15835	15887	13043	16126	16470	15842
MEAN	495	526	636	705	752	530	528	512	435	520	531	528
MAX	596	664	785	754	823	638	681	593	522	624	626	667
MIN	128	129	205	432	541	157	111	138	131	25	24	25
AC-FT	30450	31280	39090	43320	41790	32620	31410	31510	25870	31990	32670	31420

CAL YR 1984 TOTAL 267590 MEAN 731 MAX 1690 MIN 128 AC-FT 530800
WTR YR 1985 TOTAL 203389 MEAN 557 MAX 823 MIN 24 AC-FT 403400

11281000 SOUTH FORK TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP, CA

LOCATION.--Lat 37°49'18", long 120°00'43", in SE 1/4 SE 1/4 sec.29, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 75 ft downstream from highway bridge on Big Oak Flat Road, 0.5 mi southwest of Oakland Recreation Camp, and 0.6 mi upstream from Middle Tuolumne River.

DRAINAGE AREA.--87.0 mi^2.

PERIOD OF RECORD.--March 1923 to current year.

REVISED RECORDS.--WSP 1445: 1923, 1925(M), 1926-28, 1929-30(M), 1932(M), 1935-36(M), 1937-38, 1943(M), 1945(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,800 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 22, 1931, at site 50 ft upstream and Nov. 22, 1931, to July 19, 1977, at datum 1.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. No diversion above station. One small recreation reservoir (capacity unknown) is located approximately 3.5 mi upstream. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--62 years, 98.7 ft^3/s, 71,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft^3/s, Dec. 23, 1955, gage height, 11.9 ft, from floodmarks, present datum, from rating curve extended above 3,300 ft^3/s on basis of slope-area measurements at gage heights 9.08 ft and 11.9 ft; minimum, 0.3 ft^3/s, Aug 23, 1934.

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)
Nov. 28	0030	*519	*5.46				

Minimum daily, 4.0 ft^3/s, Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	17	50	26	27	56	127	208	58	15	8.3	4.1
2	11	17	44	28	32	59	160	222	56	14	8.1	4.5
3	11	18	42	28	29	59	181	213	61	14	7.8	5.4
4	11	18	38	27	26	55	190	196	58	13	7.5	6.9
5	10	17	37	28	26	51	194	178	56	13	7.0	8.8
6	10	18	35	30	27	49	198	193	54	13	6.6	11
7	10	18	34	44	29	50	203	181	51	12	6.4	11
8	17	78	33	44	156	50	213	169	48	12	5.7	10
9	15	43	32	37	113	53	216	152	44	11	5.4	12
10	12	28	43	35	66	70	218	128	41	11	5.4	15
11	32	27	44	31	56	93	210	112	36	12	5.1	12
12	24	28	40	28	48	83	209	110	34	11	5.7	11
13	16	109	38	32	47	80	231	122	31	10	6.6	9.6
14	15	73	32	30	47	83	250	141	29	9.7	5.3	8.6
15	14	42	34	31	48	81	253	143	27	9.4	5.5	8.0
16	18	42	34	30	51	82	231	137	25	8.9	5.2	7.7
17	56	36	29	31	53	84	224	138	23	8.5	5.4	7.5
18	22	35	35	32	54	94	174	135	22	8.3	6.8	9.0
19	21	32	35	34	55	82	157	136	21	9.0	7.0	13
20	20	29	33	36	56	83	145	128	20	8.7	6.3	10
21	19	35	31	36	55	86	134	108	20	9.0	6.2	8.9
22	18	34	28	36	52	82	126	111	19	8.8	5.5	8.2
23	17	31	29	33	51	79	128	114	18	8.4	5.2	7.7
24	17	84	30	32	52	84	145	108	18	8.1	4.9	7.3
25	16	82	29	33	53	83	145	98	17	10	4.7	7.0
26	17	44	30	32	54	83	132	89	17	15	4.4	6.8
27	17	57	29	31	55	113	132	82	16	11	4.3	6.8
28	17	256	29	32	55	101	161	74	16	9.0	5.2	6.8
29	17	97	28	29	---	92	170	69	16	8.3	5.1	7.2
30	16	60	28	27	---	87	178	66	15	8.1	4.1	7.2
31	17	---	26	24	---	101	---	63	---	8.3	4.0	---
TOTAL	543	1505	1059	987	1473	2388	5435	4124	967	327.5	180.7	259.0
MEAN	17.5	50.2	34.2	31.8	52.6	77.0	181	133	32.2	10.6	5.83	8.63
MAX	56	256	50	44	156	113	253	222	61	15	8.3	15
MIN	10	17	26	24	26	49	126	63	15	8.1	4.0	4.1
AC-FT	1080	2990	2100	1960	2920	4740	10780	8180	1920	650	358	514

CAL YR 1984	TOTAL	34103.6	MEAN	93.2	MAX	455	MIN	8.0	ACFT	67640
WTR YR 1985	TOTAL	19248.2	MEAN	52.7	MAX	256	MIN	4.0	AC-FT	38180

11282000 MIDDLE TUOLUMNE RIVER AT OAKLAND RECREATION CAMP, CA

LOCATION.--Lat 37°49'42", long 120°00'38", in SW 1/4 NW 1/4 sec.28, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank 1,000 ft downstream from Oakland Recreation Camp, 0.8 mi upstream from South Fork Tuolumne River, and 2.7 mi east of Buck Meadows Post Office.

DRAINAGE AREA.--73.5 mi^2.

PERIOD OF RECORD.--October 1916 to current year. Monthly discharge only for October and November 1916, published in WSP 1315-A. Published as Middle Fork of Tuolumne River near Buck Meadows 1917-32 and as "near Buck Meadows" 1933-40.

REVISED RECORDS.--WSP 1395: 1919(M), 1938(M), 1951(P). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 4-10, Apr. 2 to May 22. Records good except for estimated daily discharges, which are fair. No regulation but small diversion above station for irrigation. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--69 years, 79.0 ft^3/s, 57,240 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,920 ft^3/s, Dec. 23, 1955, gage height, 11.75 ft from flood profile, 11.05 ft from floodmarks inside gage well, from rating curve extended above 2,300 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in 1924, 1931, 1934, 1961, and 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 380 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 15	Unknown	*382	*4.06				

Minimum daily, 1.5 ft^3/s, Aug. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	9.0	21	14	13	29	69	220	82	11	3.7	1.6
2	4.3	8.6	19	14	16	32	96	240	81	10	3.3	1.8
3	4.6	9.0	19	14	15	26	120	235	93	9.9	3.0	1.9
4	4.4	11	17	14	14	30	170	220	87	9.3	2.7	3.2
5	4.2	10	17	14	15	28	210	180	80	9.0	2.6	4.9
6	4.0	9.7	16	15	15	27	220	210	76	8.6	2.3	6.1
7	3.9	10	16	20	15	27	230	195	70	8.2	2.1	6.4
8	3.8	32	15	19	151	27	235	175	63	7.6	2.1	5.8
9	3.8	18	15	17	56	30	240	160	58	7.3	2.3	6.4
10	3.7	13	20	17	28	63	240	155	52	6.9	2.3	7.7
11	7.9	14	20	16	25	63	235	145	46	6.8	2.3	7.8
12	11	16	18	14	23	49	230	140	42	6.6	2.2	6.6
13	7.8	50	16	16	24	45	250	180	38	6.3	2.1	5.9
14	6.5	25	14	15	24	45	280	220	35	5.9	2.2	5.6
15	5.8	18	17	15	24	44	290	215	32	5.4	2.3	5.1
16	7.3	17	15	15	25	43	260	205	29	5.1	2.1	4.6
17	12	16	12	15	26	44	250	210	27	4.8	2.2	4.2
18	9.1	16	15	16	26	47	190	200	25	4.7	2.6	4.9
19	8.9	16	18	16	26	41	170	210	23	4.5	2.6	4.9
20	10	15	16	17	27	41	160	185	21	4.4	2.7	4.4
21	11	17	15	17	25	43	145	175	21	4.4	2.5	4.3
22	9.6	16	14	17	25	42	140	180	19	4.5	2.1	4.1
23	8.7	15	14	16	25	41	140	175	18	4.4	2.0	3.8
24	8.1	32	15	17	26	44	160	171	17	4.2	1.9	3.5
25	7.8	25	14	16	27	45	155	159	16	5.0	1.8	3.3
26	7.9	16	15	16	27	53	150	141	15	5.3	1.6	3.2
27	8.1	38	15	16	28	83	145	131	14	4.8	1.6	3.1
28	8.5	95	15	17	28	72	170	118	13	4.5	1.6	3.3
29	8.2	35	14	14	---	55	185	107	12	4.2	1.6	3.2
30	8.7	25	14	14	---	53	195	95	11	4.1	1.5	3.4
31	8.7	---	14	13	---	59	---	90	---	4.3	1.5	---
TOTAL	222.6	647.3	495	486	799	1371	5730	5442	1216	192.0	69.4	135.0
MEAN	7.18	21.6	16.0	15.7	28.5	44.2	191	176	40.5	6.19	2.24	4.50
MAX	12	95	21	20	151	83	290	240	93	11	3.7	7.8
MIN	3.7	8.6	12	13	13	26	69	90	11	4.1	1.5	1.6
AC-FT	442	1280	982	964	1580	2720	11370	10790	2410	381	138	268

CAL YR 1984 TOTAL 33373.6 MEAN 91.2 MAX 444 MIN 3.0 AC-FT 66200
WTR YR 1985 TOTAL 16805.3 MEAN 46.0 MAX 290 MIN 1.5 AC-FT 33330

11284400 BIG CREEK ABOVE WHITES GULCH, NEAR GROVELAND, CA

LOCATION.--Lat 37°50'31", long 120°11'02", in SW 1/4 NE 1/4 sec.23, T.1 S., R.16 E., Tuolumne County, Hydrologic Unit 18040009, on right bank 500 ft upstream from Whites Gulch, and 2.5 mi east of Groveland.

DRAINAGE AREA.--16.4 mi^2.

PERIOD OF RECORD.--May 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,561.79 ft above National Geodetic Vertical Datum of 1929 (levels by Boise-Cascade Corp.).

REMARKS.--Estimated daily discharges: May 16-20. Records good. No storage or diversion above station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--16 years, 10.1 ft^3/s, 7,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,180 ft^3/s, revised, Jan. 5, 1982, gage height, 6.69 ft from rating curve extended above 700 ft^3/s on basis of slope-area measurement at gage height 6.51 ft; no flow many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1964 reached a stage of 6.4 ft from floodmarks, discharge, 1,850 ft^3/s, revised.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 8	1515	*634	*4.87	Mar. 27	2330	249	3.91

No flow for many days.

REVISIONS.--The peak discharges and annual maximum (*) reported for water years 1980, 1982, 1983, and 1984 have been revised as shown in the following table. They supersede figures published in the reports for 1980, 1982, 1983, and 1984.

Water year	Date	Time	Discharge (ft^3/s)	Gage height (ft)	Water year	Date	Time	Discharge (ft^3/s)	Gage height (ft)
1980	Jan. 13	1600	*1,970	*6.51	1983	Dec. 22	1500	1,330	5.91
1980	Feb. 19	1930	1,200	5.76	1983	Jan. 27	0600	1,510	6.09
1982	Jan. 5	0130	*2,180	*6.69	1983	Mar. 1	0400	1,340	5.92
1982	Feb. 16	0515	1,240	5.80	1983	Mar. 13	1330	1,440	6.02
1982	Apr. 11	Unknown	1,050	5.56	1984	Dec. 25	1600	*1,660	*6.24
1983	Nov. 30	0500	*1,780	*6.35					

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	2.8	1.8	1.6	1.9	25	2.1	.75	.04		
2		0	2.3	1.7	1.9	2.6	18	2.1	.84	.04		
3		0	2.2	1.7	1.9	2.6	13	2.1	.93	.03		
4		0	2.0	1.7	1.7	2.7	9.6	2.1	.82	.03		
5		.13	1.9	1.7	1.7	2.6	7.3	2.1	.72	.02		
6		.43	1.7	1.8	1.7	4.0	6.0	2.0	.65	.01		
7		.42	1.6	3.8	1.9	7.7	5.2	1.9	.56	0		
8		5.7	1.6	4.4	257	6.6	4.7	1.9	.48	0		
9		2.9	1.5	3.0	83	6.0	4.2	1.8	.41	0		
10		1.3	4.4	2.5	20	23	3.8	1.8	.34	0		
11		.99	3.4	2.2	11	52	3.5	1.9	.28	0		
12		.80	2.5	2.1	7.4	29	3.3	1.8	.22	0		
13		7.4	2.2	2.1	5.7	15	3.1	1.8	.18	0		
14		3.8	2.0	1.9	4.7	9.7	2.9	1.7	.14	0		
15		1.8	2.0	1.9	4.1	7.2	2.8	1.6	.11	0		
16		1.6	2.3	1.8	3.7	5.7	2.6	1.4	.09	0		
17		1.3	2.1	1.7	3.2	4.8	3.9	1.3	.08	0		
18		1.5	2.0	1.7	2.9	5.6	3.4	1.2	.07	0		
19		1.4	2.3	1.7	2.7	5.1	2.9	1.1	.07	0		
20		1.2	2.5	1.6	2.7	4.3	2.8	.98	.06	0		
21		1.5	2.6	1.6	2.5	3.8	2.8	.95	.06	0		
22		1.4	2.4	1.5	2.3	3.5	2.7	.90	.06	0		
23		1.2	2.3	1.5	2.2	3.2	2.5	.84	.06	0		
24		7.0	2.3	1.4	2.2	3.0	2.3	.80	.05	0		
25		6.5	2.2	1.4	2.3	2.9	2.3	.81	.05	0		
26		3.0	2.2	1.5	2.2	6.8	2.2	.78	.05	0		
27		12	2.2	1.5	2.0	118	2.2	.77	.05	0		
28		48	2.1	1.7	1.9	157	2.1	.76	.05	0		
29		7.9	2.0	2.0	---	66	2.2	.76	.05	0		
30		4.0	1.9	1.8	---	39	2.2	.73	.04	0		
31		---	1.9	1.6	---	29	---	.73	---	0		
TOTAL	0	125.17	69.4	60.3	438.1	630.3	151.5	43.51	8.32	0.17	0	0
MEAN	0	4.17	2.24	1.95	15.6	20.3	5.05	1.40	.28	.005	0	0
MAX	0	48	4.4	4.4	257	157	25	2.1	.93	.04	0	0
MIN	0	0	1.5	1.4	1.6	1.9	2.1	.73	.04	0	0	0
AC-FT	0	248	138	120	869	1250	301	86	17	.3	0	0

CAL YR 1984 TOTAL 1750.29 MEAN 4.78 MAX 91 MIN 0 AC-FT 3470
WTR YR 1985 TOTAL 1526.77 MEAN 4.18 MAX 257 MIN 0 AC-FT 3030

11284700 NORTH FORK TUOLUMNE RIVER NEAR LONG BARN, CA

LOCATION.--Lat 38°05'56", long 120°05'55", in NW 1/4 SW 1/4 sec.22, T.3 N., R.17 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank 0.6 mi upstream from small tributary, 1.5 mi east of Long Barn, and 3.8 mi upstream from Wrights Creek.

DRAINAGE AREA.--23.1 mi^2.

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

REVISED RECORDS.--WRD CA-81-3: 1963, 1980 (M).

GAGE.--Water-stage recorder. Elevation of gage is 4,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Apr. 3 to June 11, and periods with ice effect, Dec. 15 to Feb. 13, and Mar. 6-9. Records good except estimated daily discharges, which are poor. No storage or diversion above station. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--23 years, 31.5 ft^3/s, 22,820 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,190 ft^3/s, Jan. 13, 1980, gage height, 8.80 ft from floodmarks, from rating curve extended above 1,000 ft^3/s; minimum daily, 0.07 ft^3/s, July 29, 1976, and many days during 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 9.52 ft from floodmarks, discharge, 2,560 ft^3/s by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 27	2230	*142	*4.00				

Minimum daily, 0.44 ft^3/s, Aug. 25 to Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	3.1	17	8.0	8.8	18	46	50	6.3	2.0	.49	.44
2	1.3	3.8	15	8.0	8.4	18	61	74	6.0	1.7	.47	.44
3	1.3	5.8	14	7.9	8.0	19	70	70	6.8	1.6	.49	.48
4	1.3	4.3	12	8.0	7.0	16	73	68	6.4	1.8	.49	.54
5	1.3	3.8	12	7.6	7.2	15	75	60	6.0	1.7	.49	.54
6	1.3	4.6	11	7.8	7.2	14	74	64	5.8	1.7	.50	.54
7	1.3	4.7	11	9.4	7.3	14	76	60	5.0	1.6	.54	.60
8	1.3	16	10	8.0	18	15	79	58	4.6	1.4	.54	1.3
9	1.3	8.4	10	7.2	46	16	80	52	4.3	1.6	.54	7.5
10	1.3	8.0	13	7.2	26	17	80	45	3.9	1.7	.54	4.0
11	6.8	9.3	13	8.4	19	20	76	38	3.7	1.7	.54	3.9
12	4.3	10	13	7.6	14	21	76	31	3.7	1.7	.54	2.6
13	2.5	41	12	10	11	23	84	40	3.8	1.4	.54	2.1
14	2.1	18	12	8.3	11	25	92	38	3.7	1.3	.53	1.6
15	1.9	11	12	8.2	12	26	95	38	3.5	1.2	.54	1.2
16	6.2	13	11	8.2	14	28	90	39	3.4	1.1	.54	1.1
17	11	9.9	9.0	8.4	15	29	86	37	3.1	1.0	.54	1.1
18	5.3	11	10	8.7	16	31	84	39	2.4	1.0	.54	1.1
19	5.8	9.2	11	9.2	18	29	72	40	2.0	.99	.54	1.2
20	5.1	8.5	10	9.5	18	30	58	34	2.5	.99	.54	1.2
21	4.3	9.1	9.4	9.6	17	31	44	28	2.8	.96	.54	1.1
22	3.8	8.4	9.0	9.5	17	29	40	29	2.6	.88	.54	1.0
23	3.6	7.7	9.1	9.2	18	28	37	30	2.4	.86	.54	1.0
24	4.0	24	9.1	8.8	18	29	35	27	2.6	.86	.50	1.0
25	3.6	17	9.1	8.7	18	28	36	22	2.4	1.2	.44	1.0
26	3.4	15	9.4	8.5	19	25	39	17	2.3	.86	.44	1.0
27	3.5	37	9.0	8.4	19	30	37	13	2.2	.70	.44	1.0
28	3.3	70	8.8	8.2	19	35	35	9.3	2.1	.60	.44	1.6
29	3.1	29	8.7	7.8	---	30	38	8.0	2.1	.55	.44	1.5
30	3.2	21	8.6	7.2	---	25	44	7.0	2.0	.51	.44	1.3
31	3.2	---	8.3	7.0	---	32	---	6.3	---	.50	.44	---
TOTAL	103.0	441.6	336.5	258.5	436.9	746	1912	1171.6	110.4	37.66	15.68	44.98
MEAN	3.32	14.7	10.9	8.34	15.6	24.1	63.7	37.8	3.68	1.21	.51	1.50
MAX	11	70	17	10	46	35	95	74	6.8	2.0	.54	7.5
MIN	1.3	3.1	8.3	7.0	7.0	14	35	6.3	2.0	.50	.44	.44
AC-FT	204	876	667	513	867	1480	3790	2320	219	75	31	89

CAL YR 1984	TOTAL	8339.12	MEAN	22.8	MAX 139	MIN .92	AC-FT	16540
WTR YR 1985	TOTAL	5614.82	MEAN	15.4	MAX 95	MIN .44	AC-FT	11140

11287500 DON PEDRO RESERVOIR NEAR LA GRANGE, CA

LOCATION.--Lat 37°42'06", long 120°25'16", in NE 1/4 SW 1/4 sec.3, T.3 S., R.14 E., Tuolumne County, Hydrologic Unit 18040009, on left end of New Don Pedro Dam on Tuolumne River, 500 ft downstream from Mexican Gulch, and 3.4 mi northeast of La Grange.

DRAINAGE AREA.--1,533 mi^2.

PERIOD OF RECORD.--September 1923 to current year. Year-end contents only 1923-24 and October 1924 to September 1930 monthend contents, published in WSP 1315-A.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Turlock Irrigation District). Prior to Feb. 1, 1941, nonrecording gage at site 1.5 mi upstream at same datum. Feb. 2, 1941, to Nov. 3, 1970, water-stage recorder at site 1.5 mi upstream at same datum. Nov. 4, 1970, to Apr. 26, 1972, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam completed June 23, 1971. Storage began Nov. 3, 1970. Total capacity, 2,030,000 acre-ft at elevation 830.0 ft top of uncontrolled spillway, of which 309,000 acre-ft below elevation 600.0 ft, mutually agreed-upon minimum, is not available for release. Water passes through powerplant at dam and down Tuolumne River to La Grange Dam, 2.5 mi downstream, where it is diverted into Turlock and Modesto Canals (stations 11289500 and 11289000) for irrigation. This reservoir is operated jointly by Turlock and Modesto Irrigation Districts. Prior to June 1971, reservoir was formed by a concrete gravity-type dam completed Jan. 1, 1923, capacity, 290,400 acre-ft. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Tuolumne River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,025,000 acre-ft, Aug. 4-6, 13, 1983, elevation, 829.6 ft; minimum, 29,200 acre-ft, Sept. 13, 5, 1934; minimum elevation, 475.0 ft, Sept. 1, 2, 1934. Minimum since reservoir first filled, 302,600 acre-ft, Oct. 14, 15, 1977, elevation, 598.2 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,565,000 acre-ft, May 6-8, elevation, 790.4 ft; minimum, 1,212,000 acre-ft, Sept. 25-28, 30, elevation, 753.9 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

550	158,700	650	517,400	770	1,359,000
570	212,900	680	679,000	800	1,669,000
590	274,800	710	869,700	830	2,030,000
620	384,100	740	1,095,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1508000	1504000	1523000	1487000	1496000	1536000	1546000	1555000	1535000	1453000	1321000	1238000
2	1506000	1504000	1524000	1487000	1497000	1536000	1546000	1556000	1534000	1449000	1317000	1238000
3	1505000	1505000	1521000	1484000	1499000	1537000	1546000	1557000	1532000	1443000	1311000	1235000
4	1504000	1506000	1518000	1484000	1499000	1535000	1547000	1559000	1529000	1440000	1309000	1232000
5	1504000	1505000	1515000	1487000	1499000	1531000	1548000	1562000	1526000	1434000	1304000	1231000
6	1504000	1506000	1514000	1489000	1498000	1530000	1549000	1565000	1524000	1428000	1299000	1228000
7	1503000	1506000	1512000	1489000	1498000	1530000	1552000	1565000	1520000	1426000	1296000	1226000
8	1502000	1506000	1512000	1491000	1508000	1530000	1554000	1565000	1518000	1420000	1293000	1226000
9	1502000	1507000	1513000	1491000	1512000	1530000	1554000	1563000	1518000	1415000	1290000	1225000
10	1501000	1508000	1512000	1492000	1514000	1533000	1554000	1563000	1515000	1409000	1287000	1224000
11	1502000	1508000	1510000	1492000	1515000	1535000	1556000	1561000	1512000	1404000	1288000	1223000
12	1503000	1510000	1508000	1493000	1516000	1536000	1557000	1561000	1508000	1399000	1285000	1221000
13	1504000	1512000	1506000	1494000	1517000	1536000	1557000	1560000	1507000	1394000	1283000	1219000
14	1504000	1513000	1504000	1494000	1518000	1537000	1558000	1559000	1505000	1391000	1281000	1218000
15	1504000	1512000	1503000	1494000	1519000	1537000	1559000	1558000	1502000	1385000	1278000	1218000
16	1502000	1513000	1505000	1494000	1521000	1537000	1559000	1557000	1503000	1381000	1276000	1217000
17	1502000	1513000	1503000	1494000	1524000	1538000	1559000	1555000	1500000	1378000	1272000	1215000
18	1502000	1514000	1500000	1494000	1526000	1538000	1559000	1554000	1497000	1375000	1269000	1215000
19	1502000	1514000	1498000	1494000	1527000	1538000	1559000	1554000	1494000	1372000	1265000	1215000
20	1503000	1513000	1496000	1496000	1528000	1537000	1559000	1553000	1492000	1369000	1263000	1215000
21	1503000	1512000	1494000	1496000	1529000	1537000	1559000	1551000	1489000	1367000	1259000	1215000
22	1503000	1514000	1493000	1495000	1530000	1536000	1558000	1550000	1485000	1362000	1256000	1215000
23	1503000	1514000	1494000	1495000	1531000	1536000	1557000	1548000	1485000	1359000	1254000	1215000
24	1503000	1515000	1492000	1495000	1533000	1537000	1555000	1546000	1481000	1353000	1252000	1213000
25	1504000	1516000	1494000	1495000	1533000	1537000	1555000	1544000	1477000	1351000	1252000	1212000
26	1504000	1516000	1492000	1495000	1535000	1535000	1554000	1542000	1473000	1347000	1248000	1212000
27	1504000	1516000	1492000	1496000	1536000	1538000	1553000	1542000	1469000	1342000	1246000	1212000
28	1504000	1520000	1487000	1497000	1537000	1541000	1555000	1541000	1465000	1340000	1243000	1212000
29	1504000	1521000	1486000	1497000	---	1542000	1556000	1539000	1461000	1335000	1241000	1213000
30	1504000	1523000	1486000	1497000	---	1543000	1555000	1538000	1459000	1330000	1240000	1212000
31	1504000	---	1485000	1496000	---	1546000	---	1536000	---	1325000	1238000	---
MAX	1508000	1523000	1524000	1497000	1537000	1546000	1559000	1565000	1535000	1453000	1321000	1238000
MIN	1501000	1504000	1485000	1484000	1496000	1530000	1546000	1536000	1459000	1325000	1238000	1212000
a	784.6	786.4	782.8	783.8	787.8	788.6	789.5	787.7	780.2	766.4	756.8	753.9
b	-6000	-119000	-38000	+11000	+41000	+9000	+9000	-19000	-77000	-134000	-87000	-26000

CAL YR 1984 b -281000
WTR YR 1985 b -298000

[a] Elevation, in feet NGVD, at end of month.
[b] Change in contents, in acre-feet.

11289000 MODESTO CANAL NEAR LA GRANGE, CA

LOCATION.--Lat 37°40'04", long 120°27'26", in SE 1/4 SW 1/4 sec.17, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 0.5 mi northeast of La Grange, and 1.4 mi downstream from intake at La Grange Dam.

PERIOD OF RECORD.--April 1903 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1315-A: 1904-9 (monthly figures only).

GAGE.--Water-stage recorder. V-notch sharp-crested weir since Mar. 19, 1963. Datum of gage is 272.4 ft above National Geodetic Vertical Datum of 1929 (levels by Modesto Irrigation District). See WSP 1930 for history of changes prior to March 1932. March 1932 to Aug. 14, 1975, on right bank at same datum.

REMARKS.--No estimated daily discharges. Records good. Canal diverts from right bank of Tuolumne River at La Grange Dam for irrigation in Modesto and Waterford Irrigation Districts. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--82 years, 415 ft^3/s, 300,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,820 ft^3/s, July 1, 1935; no flow at times most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	527	560	510	.02	0	257	804	926	1020	1030	541	33
2	685	528	29	.02	0	438	847	870	154	1130	806	.13
3	626	154	38	.01	0	61	880	783	1010	1100	861	619
4	557	22	38	.01	0	.09	819	767	1020	163	164	687
5	563	591	37	.01	0	.08	690	142	1020	1130	887	720
6	306	537	837	0	0	.08	499	764	1020	1110	881	727
7	146	561	787	0	0	484	141	940	1010	167	839	351
8	685	627	37	0	.27	753	900	968	1010	1100	775	31
9	567	556	12	0	.35	428	908	994	153	1130	863	383
10	454	273	.09	0	.20	158	815	1020	1020	1130	718	381
11	431	22	.08	0	.13	737	846	1010	1020	1140	164	408
12	433	21	.08	0	.10	745	870	147	1000	1130	745	500
13	144	578	.07	0	.09	685	739	1020	990	1100	671	534
14	143	609	.07	0	.08	710	145	1000	992	164	692	336
15	229	676	.06	0	.08	650	921	990	988	1130	695	166
16	356	841	.06	0	.08	457	807	1010	154	1100	614	804
17	341	285	.05	0	.07	155	742	1030	931	1110	459	912
18	341	26	.05	0	.07	867	757	1030	991	1120	163	908
19	311	734	.05	0	.07	784	696	155	889	1060	661	882
20	23	808	.05	0	.06	718	477	1020	863	1080	735	858
21	24	755	.04	0	.06	794	128	1020	873	162	736	658
22	322	30	.04	0	.06	691	758	1040	611	1110	784	145
23	329	515	.04	0	.05	438	767	1020	164	1100	826	758
24	324	644	.03	0	.05	144	737	1010	814	1100	755	973
25	298	28	.03	0	.05	819	714	1010	983	1080	162	1010
26	310	844	.03	0	.05	1030	740	155	1000	1070	864	817
27	23	818	.03	0	7.7	881	821	151	1030	1060	910	810
28	20	705	.03	0	22	803	118	1000	1030	163	835	491
29	337	839	.02	0	---	718	880	994	1030	1060	764	165
30	334	577	.02	0	---	442	928	1020	161	1070	751	859
31	345	---	.02	0	---	145	---	1030	---	1090	719	---
TOTAL	10534	14764	2326.04	0.07	31.67	15992.25	20894	26036	24951	29389	21040	16926.13
MEAN	340	492	75.0	.002	1.13	516	696	840	832	948	679	564
MAX	685	844	837	.02	22	1030	928	1040	1030	1140	910	1010
MIN	20	21	.02	0	0	.08	118	142	153	162	162	.13
AC-FT	20890	29280	4610	.1	63	31720	41440	51640	49490	58290	41730	33570

CAL YR 1984 TOTAL 205793.05 MEAN 562 MAX 1530 MIN 0 AC-FT 408200
WTR YR 1985 TOTAL 182884.16 MEAN 501 MAX 1140 MIN 0 AC-FT 362800

11289500 TURLOCK CANAL NEAR LA GRANGE, CA

LOCATION.--Lat 37°39'49", long 120°26'23", in NW 1/4 NW 1/4 sec.21, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on right bank 3,460 ft downstream from intake at La Grange Dam, and 1.2 mi east of La Grange.

PERIOD OF RECORD.--October 1898 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1315-A: 1899-1908 (monthly figures only). WSP 1445: 1917-20, 1922.

GAGE.--Electromagnetic flow meter and concrete control. Datum of gage is 274.98 ft above National Geodetic Vertical Datum of 1929 (levels by Turlock Irrigation District). See WSP 1930 for history of changes prior to Apr. 17, 1924. Prior to May 17, 1984, water-stage recorder at site 0.2 mi upstream at datum 2.72 ft higher.

REMARKS.--Estimated daily discharge: Oct. 14, Feb. 14-26, Mar. 12-18, Apr. 15, 16, May 1 to June 20, 23, Aug. 25, 26, Sept. 1-3, 6 and 7. Records fair except for estimated daily discharges, which are poor. Canal diverts from left bank of Tuolumne River at La Grange Dam for irrigation in Turlock Irrigation District and to supply town of La Grange. Capacity of canal increased in March 1980, and in March 1984. During fall and winter some unmeasured flow is diverted from canal at tunnel 0.3 mi upstream from gage, passed through La Grange powerplant and returned to river. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--87 years, 642 ft^3/s, 465,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,400 ft^3/s several days in May 1984; no diversion for irrigation during some periods in some years. Prior to 1939, unmeasured small discharge during winter called zero. No flow Jan. 27, 1984 to Mar. 14, 1984, when canal was drained for construction and installation of electromagnetic flow meter.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1510	388	753	16	12	1390	1660	1070	1230	2090	2500	170
2	1070	340	8.7	8.0	5.6	1130	1660	1000	771	2200	2640	4.0
3	445	86	3.4	5.0	9.8	41	1480	847	1370	2450	2640	1930
4	391	29	4.7	5.6	13	1930	1400	509	1640	2240	1330	1660
5	389	379	4.2	4.7	24	2780	1350	13	1750	2460	2600	1490
6	237	350	4.8	5.3	23	1960	1140	791	1750	2580	2180	1940
7	3.6	385	3.0	1.2	14	1410	116	1000	1620	1290	1860	1660
8	324	355	5.6	1.7	2.1	1040	1410	1430	1220	2470	1500	64
9	332	367	9.6	3.8	3.2	827	1400	1530	11	2450	1430	1210
10	406	167	3.5	6.8	5.0	19	1440	1480	1560	2620	1380	1240
11	198	16	5.0	8.3	5.7	1010	1270	1460	1680	2560	13	1310
12	174	19	5.7	13	7.7	918	1900	1300	1600	2550	1260	1230
13	7.9	313	20	6.9	10	784	1790	1540	1310	2120	1450	1350
14	7.9	431	21	11	15	934	1380	1550	1220	2000	1430	1150
15	53	462	13	26	19	871	1910	1590	1170	1990	1440	9.6
16	214	436	2.7	24	18	679	1790	1530	19	1660	1500	1290
17	306	223	12	14	22	45	1830	1470	1370	1660	2030	713
18	318	15	14	7.3	22	943	1830	1460	1490	1600	1970	134
19	214	457	2.2	5.8	20	983	1820	1310	1410	1580	2080	292
20	27	604	2.8	6.6	17	914	1560	1540	1250	1410	2130	296
21	32	515	6.2	5.6	11	1110	1300	1560	1340	1290	2060	125
22	364	16	9.2	10	13	1050	1940	1750	1670	1940	1700	18
23	272	329	7.6	11	11	838	2040	1740	634	1600	1330	624
24	181	210	7.7	13	20	52	1610	1560	1820	1650	989	647
25	250	16	14	22	180	1170	1530	1490	1760	1650	2	563
26	243	450	5.0	22	242	1210	1560	1310	1980	1740	1330	325
27	44	413	4.6	29	369	1140	1350	1280	2000	2120	1560	326
28	38	255	7.0	6.0	472	1090	21	1490	2000	1350	1380	64
29	254	334	6.1	4.5	---	1030	1650	1360	1900	2100	1260	17
30	255	321	11	8.1	---	731	1600	1090	1270	2120	1250	17
31	314	---	17	11	---	48	---	1010	---	2060	1150	---
TOTAL	8874.4	8681	994.3	323.2	1586.1	30077	44737	40060	41815	61600	49374	21868.6
MEAN	286	289	32.1	10.4	56.6	970	1491	1292	1394	1987	1593	729
MAX	1510	604	753	29	472	2780	2040	1750	2000	2620	2640	1940
MIN	3.6	15	2.2	1.2	2.1	19	21	13	11	1290	2.0	4.0
AC-FT	17600	17220	1970	641	3150	59660	88740	79460	82940	122200	97930	43380

CAL YR 1984 TOTAL 354902 MEAN 970 MAX 3400 MIN 0 AC-FT 703900
WTR YR 1985 TOTAL 309990.6 MEAN 849 MAX 2780 MIN 1.2 AC-FT 614900

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA

LOCATION.--Lat 37°39'59", long 120°26'28", in NW 1/4 NW 1/4 sec.21, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 0.5 mi downstream from La Grange Dam, and 1.1 mi east of La Grange.

DRAINAGE AREA.--1,538 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 170.19 ft above National Geodetic Vertical Datum of 1929 (levels by Turlock Irrigation District).

REMARKS.--No estimated daily discharges. Records good. Flow diverted into Modesto Canal (station 11289000) and Turlock Canal (station 11289500) at La Grange Dam. Flow regulated by Don Pedro powerplant, Don Pedro Reservoir (station 11287500), 4.5 mi upstream, Hetch Hetchy Reservoir (station 11275500), Cherry Lake (station 11277200), and Lake Eleanor (station 11277500). Tuolumne Canal (station 11297500) diverts water from the Stanislaus River basin into the Tuolumne River basin for power, irrigation, and domestic supply in the vicinity of Sonora, upstream from station. Diversion through Hetch Hetchy aqueduct to San Francisco began Oct. 19, 1934; an average of 341 ft^3/s was diverted during the current year. See schematic diagram of Tuolumne River basin. For records of combined discharge of river and Modesto and Turlock canals, see following page.

AVERAGE DISCHARGE (River only).--15 years, 1,094 ft^3/s, 792,600 acre-ft/yr.
(Combined river and canals).--15 years, 2,428 ft^3/s, 1,759,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 10,400 ft^3/s, Apr. 24, 1983, gage height, 15.09 ft; no flow for several days during September and October 1977.
Combined flow, maximum daily discharge, 13,800 ft^3/s, May 26, 1983; minimum daily, 0.45 ft^3/s, Nov. 2, 1970.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 4,860 ft^3/s, Dec. 3, gage height, 10.73 ft; minimum daily, 9.3 ft^3/s, Sept. 15.
Combined flow, maximum daily discharge, 3,780 ft^3/s, July 9; minimum daily, 15 ft^3/s, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	476	562	418	1340	488	138	61	12	192	18	22
2	381	478	481	1560	923	419	133	14	13	154	25	11
3	461	470	2790	1720	409	412	132	14	12	156	32	36
4	461	476	2820	1540	1490	574	132	14	12	18	17	41
5	460	480	2690	1120	1590	561	132	14	12	137	31	40
6	444	481	2020	414	1580	521	131	13	12	21	25	208
7	254	490	1920	1520	1720	413	131	14	13	20	23	41
8	456	491	1760	1500	1520	418	131	14	33	150	17	25
9	464	483	477	1540	930	407	131	14	46	196	117	37
10	466	483	2590	1580	421	404	131	14	222	17	26	39
11	464	479	2610	1610	1430	407	131	14	227	16	16	31
12	460	478	2740	955	1280	407	131	14	176	16	19	9.5
13	386	480	2780	418	1250	407	130	13	96	16	17	9.4
14	259	492	2530	1840	1250	409	131	13	70	15	19	9.5
15	867	496	2240	1760	1120	410	130	13	18	124	18	9.3
16	1360	480	414	1690	759	410	130	13	18	110	16	9.6
17	1090	476	2480	1430	420	407	130	13	95	18	127	9.8
18	554	473	2750	1680	419	409	145	13	53	16	14	9.8
19	555	474	2700	1150	1170	409	154	13	17	16	13	10
20	481	474	2670	450	1380	410	153	13	17	16	22	10
21	478	475	2640	1860	1310	409	153	13	16	15	15	10
22	558	474	2040	1810	1250	409	150	13	16	43	13	10
23	558	476	417	1840	887	408	148	13	16	116	13	10
24	559	477	2330	1780	409	407	147	13	16	210	180	10
25	554	475	414	1570	1040	422	148	13	16	87	15	11
26	552	602	2350	986	928	479	148	13	16	107	109	11
27	474	592	2510	430	897	410	148	12	132	17	97	11
28	478	558	2580	1630	712	410	146	12	18	16	17	29
29	556	561	2080	1670	---	410	145	12	16	18	20	43
30	551	561	419	1680	---	409	235	12	16	113	14	40
31	515	---	2380	1590	---	407	---	12	---	23	14	---
TOTAL	16438	14861	62184	42741	29834	13282	4255	456	1452	2189	1119	802.9
MEAN	530	495	2006	1379	1066	428	142	14.7	48.4	70.6	36.1	26.8
MAX	1360	602	2820	1860	1720	574	235	61	227	210	180	208
MIN	254	470	414	414	409	404	130	12	12	15	13	9.3
AC-FT	32600	29480	123300	84780	59180	26340	8440	904	2880	4340	2220	1590

CAL YR 1984 TOTAL 525422 MEAN 1436 MAX 8010 MIN 13 AC-FT 1042000
WTR YR 1985 TOTAL 189613.9 MEAN 519 MAX 2820 MIN 9.3 AC-FT 376100

11289651 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF TUOLUMNE RIVER, MODESTO CANAL NEAR LA GRANGE, AND TURLOCK CANAL NEAR LA GRANGE, CA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2320	1420	1820	434	1350	2140	2600	2060	2260	3310	3060	225
2	2140	1350	519	1570	929	1990	2640	1880	938	3480	3480	15
3	1530	710	2830	1730	419	514	2490	1640	2390	3710	3530	2590
4	1410	527	2860	1550	1500	2500	2350	1290	2670	2420	1510	2390
5	1410	1450	2730	1120	1610	3340	2170	169	2780	3730	3520	2250
6	987	1370	2860	419	1600	2480	1770	1570	2780	3710	3090	2880
7	404	1440	2710	1520	1730	2300	388	1950	2640	1480	2720	2050
8	1470	1470	1800	1500	1520	2210	2440	2410	2260	3720	2300	120
9	1360	1410	499	1540	934	1670	2440	2530	210	3780	2410	1630
10	1330	923	2590	1590	426	581	2390	2510	2800	3770	2130	1660
11	1090	517	2620	1620	1440	2160	2250	2480	2930	3720	193	1750
12	1070	518	2750	968	1290	2070	2900	1460	2780	3700	2030	1740
13	538	1370	2800	425	1260	1880	2660	2570	2400	3240	2140	1890
14	410	1530	2550	1850	1270	2050	1660	2560	2280	2180	2140	1500
15	1150	1640	2250	1790	1140	1930	2960	2590	2180	3240	2160	185
16	1930	1760	417	1710	777	1550	2730	2550	191	2870	2130	2100
17	1740	984	2490	1440	442	607	2700	2510	2400	2790	2620	1640
18	1210	514	2760	1690	441	2220	2740	2500	2530	2740	2140	1050
19	1080	1660	2700	1160	1190	2180	2670	1480	2320	2660	2750	1180
20	531	1880	2670	457	1400	2040	2190	2570	2130	2510	2890	1160
21	534	1750	2650	1870	1320	2310	1580	2590	2230	1470	2820	793
22	1240	520	2050	1820	1260	2150	2850	2800	2300	3090	2490	173
23	1160	1320	425	1850	898	1690	2960	2770	814	2820	2170	1390
24	1060	1330	2340	1790	429	603	2500	2580	2650	2960	1920	1630
25	1100	519	428	1590	1220	2410	2390	2510	2760	2820	179	1580
26	1110	1890	2360	1010	1170	2720	2450	1480	3000	2920	2300	1150
27	541	1820	2510	459	1270	2430	2320	1440	3160	3200	2570	1150
28	536	1520	2590	1640	1210	2300	285	2500	3050	1530	2240	584
29	1150	1730	2090	1670	---	2160	2680	2360	2950	3180	2040	225
30	1140	1460	430	1690	---	1580	2770	2120	1450	3300	2010	916
31	1170	---	2400	1600	---	600	---	2050	---	3170	1880	---
TOTAL	35851	38302	65498	43072	31445	59365	69923	66479	68233	93220	71562	39596
MEAN	1156	1277	2113	1389	1123	1915	2331	2144	2274	3007	2308	1320
MAX	2320	1890	2860	1870	1730	3340	2960	2800	3160	3780	3530	2880
MIN	404	514	417	419	419	514	285	169	191	1470	179	15
AC-FT	71110	75970	129900	85430	62370	117800	138700	131900	135300	184900	141900	78540

CAL YR 1984 TOTAL 1086279 MEAN 2968 MAX 8810 MIN 62 AC-FT 2155000
WTR YR 1985 TOTAL 682546 MEAN 1870 MAX 3780 MIN 15 AC-FT 1354000

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1970 to current year.

INSTRUMENTATION.--Temperature recorder since November 1970.

REMARKS.--Interruptions of record were due to malfunction of recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1971-85): Maximum recorded, 29.0°C, Sept. 27, Oct. 15, 1977; minimum recorded, 6.0°C, Feb. 6-8, 10, 1971.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 21.0°C, June 6, 7; minimum recorded, 9.5°C, many days in March and April.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.5	12.5	13.0	12.5	13.0	12.5	---	---	11.5	10.5	11.0	10.0
2	13.5	12.0	12.5	12.5	12.5	12.5	---	---	11.0	11.0	11.0	10.0
3	13.0	12.0	13.0	12.5	13.0	12.5	---	---	11.0	10.5	11.0	10.0
4	13.0	12.0	12.5	12.0	13.0	12.5	---	---	---	---	11.0	10.0
5	13.0	12.0	13.0	12.0	13.0	12.5	---	---	---	---	11.0	10.0
6	13.0	12.5	13.0	12.5	13.0	12.5	---	---	---	---	11.0	10.0
7	13.5	12.5	13.0	12.5	---	---	---	---	---	---	11.0	10.0
8	13.0	12.5	13.0	12.5	---	---	---	---	---	---	11.0	10.0
9	13.0	12.0	13.0	12.5	---	---	---	---	---	---	11.0	10.0
10	13.0	12.0	12.5	12.5	---	---	---	---	---	---	11.0	10.0
11	13.0	12.5	13.0	12.5	---	---	11.5	11.5	---	---	11.0	10.0
12	13.0	12.0	12.5	12.5	---	---	11.5	11.0	---	---	11.0	10.0
13	13.5	12.5	13.0	12.5	---	---	11.5	11.0	---	---	11.0	10.0
14	13.0	12.0	12.5	12.5	---	---	11.5	11.0	---	---	11.0	9.5
15	14.0	12.0	12.5	12.5	---	---	11.5	11.0	---	---	11.0	9.5
16	12.5	12.0	13.0	12.5	---	---	11.5	11.0	---	---	11.0	9.5
17	13.0	12.0	13.0	12.5	---	---	11.5	11.0	---	---	10.5	9.5
18	13.0	12.0	13.0	12.5	---	---	11.5	11.0	---	---	10.5	10.0
19	13.0	12.5	12.5	12.5	---	---	11.5	11.0	---	---	10.0	9.5
20	13.0	12.5	12.5	12.5	---	---	11.0	11.0	---	---	11.0	9.5
21	12.5	12.0	13.0	12.5	---	---	11.5	11.0	---	---	10.5	9.5
22	13.0	12.0	12.5	12.5	---	---	11.5	11.0	---	---	10.5	9.5
23	13.0	12.0	12.5	12.0	---	---	11.5	11.0	---	---	11.0	9.5
24	13.0	12.0	12.5	12.5	---	---	11.5	11.0	---	---	10.5	9.5
25	13.0	12.0	12.5	12.0	---	---	11.5	11.0	---	---	10.5	9.5
26	12.5	12.5	13.0	12.0	---	---	11.5	11.0	---	---	10.0	9.5
27	13.0	12.0	12.5	12.5	---	---	11.5	11.0	---	---	10.0	9.5
28	12.5	12.0	13.0	12.5	---	---	11.0	11.0	---	---	10.5	9.5
29	13.0	12.5	13.0	12.5	---	---	11.5	11.0	---	---	10.5	9.5
30	13.0	12.5	13.0	12.5	---	---	11.5	11.0	---	---	10.5	9.5
31	13.0	12.0	---	---	---	---	11.5	11.0	---	---	10.5	9.5
MONTH	14.0	12.0	13.0	12.0	---	---	---	---	---	---	11.0	9.5

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	9.5	16.0	10.0	18.0	13.0	17.5	11.0	19.5	14.5	18.5	14.0
2	11.5	9.5	16.5	13.0	15.5	14.0	17.0	11.0	19.0	14.0	20.0	15.5
3	12.0	9.5	17.5	13.0	18.5	13.0	16.0	11.0	20.0	14.5	18.5	14.0
4	11.5	9.5	16.5	12.5	20.0	14.5	17.5	11.0	19.5	14.0	15.0	13.0
5	11.5	9.5	18.0	12.5	20.5	15.5	17.0	11.0	19.0	14.5	14.0	12.5
6	11.5	9.5	18.0	13.0	21.0	15.5	16.0	11.5	19.5	14.0	12.5	11.5
7	11.5	9.5	17.0	13.0	21.0	16.0	18.5	13.0	19.5	14.0	14.0	12.0
8	12.0	9.5	17.0	12.5	17.5	12.5	17.5	11.0	19.0	13.5	14.0	12.5
9	12.0	9.5	16.5	13.0	15.5	11.5	15.5	11.0	15.5	11.5	14.0	12.5
10	11.5	9.5	16.0	12.5	15.0	10.5	15.0	11.5	18.5	12.0	14.0	12.0
11	11.5	9.5	17.0	12.0	14.0	10.5	16.5	13.0	19.0	13.5	14.5	11.5
12	11.5	9.5	18.0	12.5	14.0	10.5	19.0	13.5	19.0	14.5	17.0	12.0
13	12.0	9.5	18.5	13.5	18.0	11.0	19.5	14.0	19.0	14.0	16.5	13.5
14	12.0	10.0	19.0	14.0	18.0	11.0	19.5	14.5	19.0	14.0	17.5	13.5
15	11.5	9.5	19.0	13.5	18.0	11.5	18.5	11.0	19.0	14.0	17.5	13.5
16	10.5	9.5	18.5	13.5	19.0	14.0	17.0	11.5	19.0	14.0	17.5	13.5
17	11.5	9.5	18.5	13.5	19.5	11.5	17.5	11.5	16.0	11.5	17.5	13.5
18	11.0	9.5	18.5	14.0	18.0	12.0	20.0	14.5	17.5	11.5	17.0	14.0
19	11.5	9.5	19.0	14.0	19.0	13.5	19.0	14.5	18.5	13.5	17.5	13.5
20	10.5	9.5	19.0	14.5	18.5	14.5	17.0	14.5	18.5	13.5	17.5	13.5
21	11.0	9.5	19.0	14.0	19.5	14.0	20.0	14.0	19.5	14.5	17.5	14.0
22	12.0	9.5	19.5	14.5	19.5	14.5	20.0	12.5	19.5	14.0	17.5	14.0
23	12.0	9.5	20.5	15.0	19.5	14.5	20.0	11.5	19.5	14.5	17.5	14.0
24	11.5	9.5	20.0	15.5	19.5	14.5	16.0	11.0	16.5	11.5	18.0	14.5
25	11.5	9.5	19.5	15.0	19.0	14.0	18.0	11.5	18.0	11.5	17.5	14.5
26	11.5	9.5	19.5	14.5	19.5	14.0	18.0	11.0	18.0	11.5	18.0	14.5
27	12.0	10.0	19.5	14.5	18.5	11.0	18.0	11.5	17.0	11.5	18.0	15.0
28	12.0	10.0	19.0	14.5	16.0	11.5	20.0	14.5	17.0	11.5	16.5	13.0
29	12.0	10.5	18.5	14.5	19.0	13.0	19.0	14.5	15.5	13.0	14.5	12.0
30	12.0	9.5	19.0	14.0	19.0	13.5	17.0	12.0	18.0	13.5	14.5	12.0
31	---	---	16.5	14.0	---	---	18.5	12.5	18.5	14.0	---	---
MONTH	12.0	9.5	20.5	10.0	21.0	10.5	20.0	11.0	20.0	11.5	20.0	11.5

11290000 TUOLUMNE RIVER AT MODESTO, CA

LOCATION.--Lat 37°37'38", long 120°59'11", in SE 1/4 SW 1/4 sec.33, T.3 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on left bank at bridge on Ninth Street in Modesto, and 0.2 mi downstream from Dry Creek.

DRAINAGE AREA.--1,884 mi^2.

PERIOD OF RECORD.--1878-84, 1891-94, 1897 (gage heights only), January 1895 to December 1896, April 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Modesto Irrigation District). Prior to July 11, 1947, at site 1,700 ft downstream at same datum, July 11, 1947, to Nov. 16, 1953, at site 1,000 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good, except for Feb. 8-22 and Aug. 8, 9, which are fair. Flow regulated by reservoirs and powerplants above station. In addition to diversions into Modesto and Turlock Canals (stations 11289000, 11289500), there are diversions for irrigation of about 1,300 acres between station above La Grange Dam and at Modesto. See REMARKS for station 11289650 for Tuolumne River below La Grange Dam. See schematic diagram of Tuolumne River basin.

AVERAGE DISCHARGE.--45 years (water years 1896, 1941-85), 1,467 ft^3/s, 1,063,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD (water years 1895-96, 1941-85).--Maximum discharge observed, 57,000 ft^3/s, Dec. 9, 1950, elevation, 69.19 ft; minimum, 56 ft^3/s, Aug. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,330 ft^3/s, Feb. 9, elevation, 47.55 ft; minimum daily, 217 ft^3/s, June 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	455	1300	926	2210	1710	961	696	485	334	242	278	234
2	523	1150	720	940	1490	780	480	415	405	232	251	236
3	689	1130	681	1970	1120	641	408	317	372	312	254	249
4	807	1120	2260	1960	724	637	385	299	338	319	239	247
5	895	1110	2710	1850	1450	826	366	315	343	299	245	262
6	1070	1110	2680	1340	1700	867	353	300	334	269	241	267
7	1060	1120	2210	782	1710	898	350	299	354	299	224	309
8	986	1150	2040	1490	1870	790	392	288	332	257	236	326
9	1010	1110	1840	1620	2930	726	381	284	360	243	233	298
10	1030	1080	921	1690	1950	849	335	270	365	299	230	282
11	1000	1070	2340	1720	944	832	317	279	464	319	259	265
12	1020	1060	2690	1730	1490	813	333	313	608	268	277	278
13	1010	1150	2770	1170	1590	779	341	329	612	259	254	286
14	999	1150	2840	721	1510	722	331	352	479	238	238	265
15	941	1140	2790	1750	1490	710	334	367	347	238	236	247
16	1330	1200	2570	1880	1330	703	334	374	301	231	237	259
17	1790	1190	1300	1840	996	701	412	395	265	300	235	250
18	1610	1200	2600	1940	721	732	430	416	233	301	258	237
19	1270	1180	2980	1880	625	718	393	398	258	262	314	238
20	1010	1170	2930	1310	1110	712	373	367	254	266	326	239
21	844	1180	2910	764	1570	672	419	340	233	250	263	241
22	821	1160	2810	1710	1570	641	395	300	219	256	246	259
23	1060	1150	2270	1870	1500	651	367	287	223	241	231	238
24	933	1180	964	1910	1140	665	370	319	225	251	246	230
25	851	1210	2250	1880	722	637	383	313	224	311	242	230
26	871	1220	944	1700	1190	671	422	320	222	323	268	235
27	1120	1260	2480	1180	1150	802	403	328	217	288	299	231
28	1060	1270	2800	727	1160	759	380	330	226	315	300	233
29	1060	1230	2750	1520	---	1030	408	334	281	276	304	250
30	1190	1250	2270	1730	---	800	418	342	263	246	260	269
31	1160	---	920	1780	---	724	---	329	---	233	246	---
TOTAL	31475	35000	66166	48564	38462	23449	11709	10404	9691	8443	7970	7690
MEAN	1015	1167	2134	1567	1374	756	390	336	323	272	257	256
MAX	1790	1300	2980	2210	2930	1030	696	485	612	323	326	326
MIN	455	1060	681	721	625	637	317	270	217	231	224	230
AC-FT	62430	69420	131200	96330	76290	46510	23220	20640	19220	16750	15810	15250

CAL YR 1984 TOTAL 635037 MEAN 1735 MAX 8500 MIN 237 AC-FT 1260000
WTR YR 1985 TOTAL 299023 MEAN 819 MAX 2980 MIN 217 AC-FT 593100

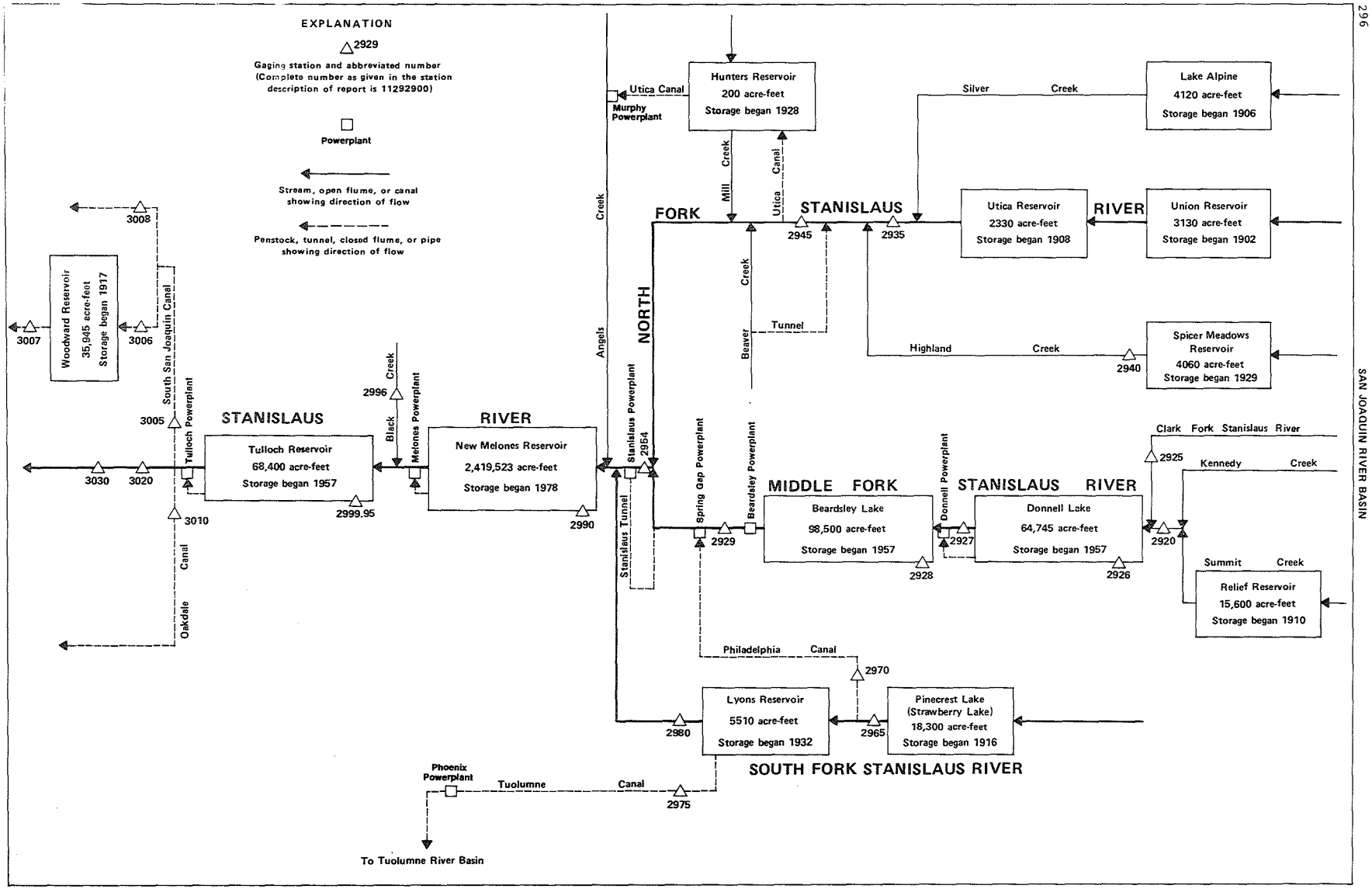


FIGURE 31. – Schematic diagram showing diversions and storage in Stanislaus River basin.

11292600 DONNELL LAKE NEAR DARDANELLE, CA

LOCATION.--Lat 38°19'46", long 119°57'37" unsurveyed, T.6 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank in hoist house of Donnell Dam on Middle Fork Stanislaus River, 1.2 mi downstream from Niagara Creek, and 6.9 mi west of Dardanelle.

DRAINAGE AREA.--230 mi^2.

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1960, published as Donnells Reservoir near Dardanelle.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4.84 ft above National Geodetic Vertical Datum of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.--Lake is formed by concrete arch-type dam completed in 1957. Usable capacity, 64,745 acre-ft, between gage heights 4,720.0 ft, minimum operating head and 4,917.0 ft, top of spillway gates. Lake is for power and conservation storage. Water passes through a 7.2 mi tunnel to a powerplant and down the Middle Fork Stanislaus River to Beardsley Lake (station 11292800). Records, including extremes, represent total contents at 2400 hours of which 2,150 acre-ft is below minimum operating head. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 64,900 acre-ft, May 8, 1963, gage height, 4,917.3 ft; minimum since reservoir first filled, 2,220 acre-ft, Apr. 15, 1983, gage height, 4,720.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 64,300 acre-ft, June 11, gage height, 4,915.9 ft; minimum, 2,920 acre-ft, Mar. 29, gage height, 4,725.4 ft.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum contents, 64,300 acre-feet, for several days in June and July, gage height, 4,915.9 ft; minimum, 8,490 acre-feet, Mar. 9, gage height, 4,751.1 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)

4,720	2,150	4,780	16,200
4,725	2,850	4,790	19,100
4,730	3,730	4,800	22,100
4,735	4,730	4,820	28,400
4,740	5,830	4,850	38,700
4,750	8,220	4,880	49,800
4,760	10,800	4,917.3	64,900
4,770	13,400		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45300	38400	50800	46600	30600	14000	9970	18000	64000	64300	56800	45000
2	44800	38100	50300	46500	29800	13100	9820	18200	64100	64300	56300	44500
3	44300	37700	49900	46300	29100	12300	9690	18900	64100	64300	55900	43900
4	43700	37300	49200	46200	28400	11500	9640	19900	64100	64100	55400	43400
5	43300	37800	48700	46000	27600	11000	9540	20600	64000	64300	54800	43000
6	43000	38200	48100	45900	26900	10400	9430	21200	64100	64200	54300	42500
7	42700	38100	47500	45700	26100	9720	9410	22200	64100	64200	53900	42000
8	42400	37800	46800	45400	25400	9020	9590	23900	64100	64200	53500	41600
9	42200	37300	46400	45100	24600	8490	9540	26100	64100	63900	52900	41200
10	41900	36900	45900	44800	23900	8700	9540	28700	64100	63600	52300	40700
11	41600	38300	45500	44400	23100	8870	9480	31900	64300	63200	51800	40300
12	41300	39700	45000	44000	22300	9130	9510	35200	64100	62900	51200	39800
13	41000	40700	44400	43500	22600	9640	9770	39000	64300	62300	51100	39400
14	40700	40600	44000	43000	23200	10000	10500	41700	64200	61700	50700	38900
15	41200	40400	43600	42400	24000	10000	11600	45400	64100	61200	50200	38500
16	41700	40800	43000	41900	24800	9820	13000	46900	64300	60700	49700	38100
17	41300	44200	42500	41300	24800	9510	14300	48400	64300	60600	49100	37600
18	41000	44800	41800	40600	24100	9130	15100	49600	64200	60700	48500	37000
19	40600	47000	41200	40000	23200	8850	15600	52400	64200	60500	48000	36500
20	40100	49600	40600	39300	22500	8750	15900	55600	64100	60400	47500	36000
21	39700	50000	39900	38600	21700	8750	16100	59600	64200	60300	46900	35400
22	40100	49700	39300	37900	20900	8700	16400	62400	64200	60100	46700	34700
23	40600	49400	38600	37200	20100	8640	17000	63700	64200	60300	46600	34000
24	40100	51900	38600	36400	19200	8750	17700	63400	64200	60000	46900	33100
25	39700	52500	41700	35700	18400	8870	18100	63500	64300	59700	47400	32300
26	39200	52400	44100	35000	17500	9360	18300	63700	64300	59500	47800	31500
27	38600	52200	45300	34200	16600	9660	18200	63600	64300	59100	47600	30700
28	38200	52200	45600	33500	15800	9870	18100	63900	64300	58700	47200	29900
29	38500	51700	45700	32800	14800	10100	17900	63900	64300	58200	46600	29200
30	38800	51300	46200	32100	---	10100	17900	64000	64200	57800	45900	28400
31	38500	---	46600	31300	---	10100	---	64000	---	57300	45400	---
MAX	45300	52500	50800	46600	30600	14000	18300	64000	64300	64300	56800	45000
MIN	38200	36900	38600	31300	14800	8490	9410	18000	64000	57300	45400	28400
a	4849.4	4883.9	4871.5	4828.7	4775.1	4757.4	4785.9	4915.2	4915.8	4898.9	4868.5	4819.8
b	-7300	+12800	-4700	-15300	-16500	-4700	+7800	+46100	+200	-6900	-11900	-17000

CAL YR 1983 b +25900
WTR YR 1984 b -17400

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11292600 DONNELL LAKE NEAR DARDANELLE, CA--Continued

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27600	20900	11800	11700	11800	5560	3900	28400	57700	59000	50800	39800
2	26700	21200	11100	11500	12000	5160	4420	30400	57900	58700	50500	39800
3	25900	21500	10700	11500	12200	4920	4800	32500	58300	58300	50200	39300
4	25100	21800	10200	11700	11800	4840	4880	34300	58900	58000	49900	38700
5	24200	22000	9720	11900	11300	5230	5210	36000	60100	57600	49500	38100
6	24200	22100	9230	11900	10800	5320	5850	37500	60800	57200	49200	37500
7	24300	22400	8770	12000	10400	5160	6690	38900	62000	56900	48800	37500
8	23500	22600	9020	12200	9870	4880	7700	40000	62900	56600	48500	37600
9	22600	22800	9250	12400	10100	5250	8900	40900	63600	56300	48200	37200
10	21800	23000	9540	12500	10300	5650	10200	41500	64200	56100	47800	36600
11	21100	23300	9790	12500	9920	5030	11300	41900	64300	55900	47400	36100
12	20300	23700	10100	12600	9640	4840	12500	42300	64200	55700	47100	35500
13	20300	23400	10300	12800	9380	4530	14200	42900	64200	55400	46700	34900
14	20400	23000	10400	12900	9020	4160	16200	43700	64200	55200	46300	35000
15	20000	22400	10700	12900	8750	3850	18100	44700	64200	55000	45900	35100
16	20000	21500	10900	12900	9020	3920	19800	45700	64100	54800	45500	34600
17	19800	20600	11100	12800	9330	4080	21100	46800	64000	54600	45200	33900
18	19800	19700	11300	12700	9180	4140	21800	48200	63900	54300	44700	33300
19	19700	18900	11300	13000	9020	4160	22300	49500	63700	54100	44300	32800
20	19800	18200	10900	13200	8900	4020	22600	50500	63400	53800	43900	32300
21	20000	17500	10500	13100	8770	3710	22800	51400	63100	53600	43600	32200
22	19800	17800	10700	12700	8640	3380	22900	52400	62600	53400	43100	32200
23	19700	17100	10900	12900	8600	3510	23100	53700	62100	53100	42700	32200
24	19800	16500	11100	13100	8950	3710	23500	55000	61600	52800	42300	28100
25	20000	15800	11300	13300	8290	3560	23700	55900	61400	52600	41900	31000
26	20200	15000	11100	13600	7260	3450	23700	56400	61000	52300	41500	29700
27	20300	14500	11000	13900	6570	3280	23900	57000	60600	52100	41100	29100
28	20500	13900	10900	13400	6130	3050	24400	57400	60200	52000	40600	29200
29	20600	13200	11100	12900	---	2920	25200	57500	59800	51700	40200	29300
30	20600	12500	11300	12400	---	3220	26600	57700	59400	51400	39600	28600
31	20800	---	11500	12000	---	3640	---	57600	---	51200	39700	---
MAX	27600	23700	11800	13900	12200	5650	26600	57700	64300	59000	50800	39800
MIN	19700	12500	8770	11500	6130	2920	3900	28400	57700	51200	39600	28100
a	4795.8	4766.4	4762.8	4764.8	4741.3	4729.5	4814.3	4899.8	4904.2	4883.5	4852.8	4820.6
b	-7600	-8300	-1000	+500	-5870	-2490	+22960	+31000	+1800	-8200	-11500	-11100

CAL YR 1984 b -35100
WTR YR 1985 b +200

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11292700 MIDDLE FORK STANISLAUS RIVER AT HELLS HALF ACRE BRIDGE, NEAR PINECREST, CA

LOCATION.--Lat 38°14'50", long 120°02'01", in NW 1/4 NE 1/4 sec.31, T.5 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, on left bank 200 ft upstream from Donnell powerplant, 800 ft downstream from Hells Half Acre bridge, 1.1 mi upstream from Cow Creek, and 4.7 mi northwest of Pinecrest.

DRAINAGE AREA.--287 mi^2.

PERIOD OF RECORD.--February 1956 to current year. Prior to October 1965, published as Middle Fork Stanislaus River at Hells Half Acre bridge.

GAGE.--Water-stage recorder. Datum of gage is 3,418.31 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to Aug. 9, 1961, at site 1,600 ft upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Relief Reservoir since 1909, capacity, 15,600 acre-ft, by Donnell Lake (station 11292600), and by diversion around station through Donnell powerplant. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--29 years, 274 ft^3/s, 198,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft^3/s, Dec. 24, 1964, gage height, 13.64 ft in gage well, 14.2 ft outside, from floodmarks, from rating curve extended above 5,200 ft^3/s on basis of slope-area measurement at gage height 12.20 ft; minimum daily, 3.3 ft^3/s, Nov. 9, 10, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1905, 23 ft, Dec. 23, 1955, from floodmarks, at present site, discharge, 26,600 ft^3/s by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 653 ft^3/s, Apr. 14, gage height, 5.89 ft; minimum daily, 28 ft^3/s, Oct. 4-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	39	55	43	45	98	158	346	112	62	52	47
2	29	31	53	42	47	95	213	359	115	62	52	47
3	29	49	51	44	45	84	258	340	115	62	52	47
4	28	35	50	46	45	83	281	306	108	61	51	47
5	28	30	48	43	43	80	309	297	106	60	51	47
6	28	33	45	46	43	77	351	295	103	60	51	47
7	28	35	45	52	45	78	385	280	100	59	51	47
8	28	54	44	49	53	78	409	259	97	59	51	50
9	28	41	44	51	50	79	426	238	95	58	51	65
10	43	39	50	51	47	82	444	216	94	58	50	54
11	51	52	54	51	47	87	424	201	175	58	50	51
12	55	60	52	52	49	84	433	196	286	57	50	49
13	81	94	50	52	52	86	489	199	258	56	50	47
14	81	63	46	43	54	89	525	205	166	56	50	47
15	74	54	47	44	58	95	517	200	111	55	50	46
16	56	54	48	46	63	99	457	193	107	55	49	46
17	69	50	46	48	68	106	419	189	100	55	50	46
18	53	53	47	52	71	112	352	187	79	54	50	44
19	55	49	46	55	78	102	323	185	75	54	50	43
20	55	50	46	57	80	114	292	175	75	54	49	42
21	54	48	46	59	72	129	266	162	75	54	49	42
22	52	45	45	57	78	129	259	158	72	54	48	42
23	49	45	44	52	84	126	273	154	70	54	48	42
24	48	67	46	50	89	135	280	149	69	53	48	41
25	49	53	45	52	90	128	262	143	67	53	48	41
26	50	49	46	54	89	122	235	137	66	53	48	40
27	51	97	47	54	93	122	240	132	65	53	47	40
28	50	86	45	56	96	118	273	127	64	52	47	40
29	49	66	44	47	---	109	276	124	64	52	47	40
30	40	59	41	46	---	108	300	117	63	52	47	39
31	40	---	42	46	---	126	---	112	---	52	47	---
TOTAL	1461	1580	1458	1540	1774	3160	10129	6381	3152	1737	1534	1366
MEAN	47.1	52.7	47.0	49.7	63.4	102	338	206	105	56.0	49.5	45.5
MAX	81	97	55	59	96	135	525	359	286	62	52	65
MIN	28	30	41	42	43	77	158	112	63	52	47	39
AC-FT	2900	3130	2890	3050	3520	6270	20090	12660	6250	3450	3040	2710

CAL YR 1984 TOTAL 89920 MEAN 246 MAX 2760 MIN 18 AC-FT 178400
WTR YR 1985 TOTAL 35272 MEAN 96.6 MAX 525 MIN 28 AC-FT 69960

11292800 BEARDSLEY LAKE NEAR STRAWBERRY, CA

LOCATION.--Lat 38°12'17", long 120°04'31", in SE 1/4 NW 1/4 sec.14, T.4 N., R.17 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, in hoist house of Beardsley Dam on Middle Fork Stanislaus River, 2.4 mi upstream from Spring Gap powerhouse, 3.9 mi west of Strawberry, and 4.7 mi west of Pinecrest.

DRAINAGE AREA.--309 mi^2.

PERIOD OF RECORD.--June 1957 to current year. Prior to October 1960, published as Lake Hartley near Strawberry.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.84 ft above National Geodetic Vertical Datum of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.--Reservoir is formed by rockfill, earth-core dam completed in 1957. Capacity, 98,500 acre-ft between gage heights 3,145.0 ft, tunnel invert and 3,398.0 ft, top of spillway gates. No dead storage. Reservoir is used for power and conservation storage. Water passes through Beardsley powerplant and down Middle Fork Stanislaus River to Melones Reservoir (station 11299000). Records, including extremes, represent contents at 2400 hours. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 98,700 acre-ft, June 27, 1957, gage height, 3,398.2 ft; minimum since reservoir first filled, 3 acre-ft, Sept. 23, 1976, gage height, 3,154.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 88,000 acre-ft, on July 6, 7, gage height, 3,383.1 ft; minimum, 22,300 acre-ft, Mar. 19, gage height, 3,266.6 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)

3,154	2	3,240	11,600
3,160	41	3,260	19,500
3,170	267	3,290	33,100
3,180	693	3,320	48,800
3,190	1,370	3,350	66,400
3,200	2,373	3,370	79,200
3,210	3,790	3,398	98,500
3,220	5,720		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87200	75600	70200	44000	30000	25800	23600	60400	77200	87600	82800	72100
2	87200	75600	70100	43600	29600	26200	24000	61100	77600	87700	82500	71200
3	87200	75600	69800	43000	28200	26100	24800	61800	77500	87800	82200	71000
4	87300	75700	69200	42200	28000	25900	26100	62500	77300	87900	81900	70700
5	87500	75700	68900	41400	27800	25200	27300	63000	77100	87900	81500	70500
6	86600	75700	68400	40700	27400	24700	28800	63700	77100	88000	81300	70200
7	85700	75800	67900	40000	27200	24500	30200	64500	77200	88000	81000	69400
8	85700	76000	66800	39200	27200	24400	31700	65100	77800	87900	80700	68600
9	85800	75700	65600	38400	26400	23600	33100	65700	78300	87800	80400	68500
10	85900	74900	64600	37800	25900	22900	34700	66200	78800	87600	80100	68200
11	86000	74100	63600	37100	26000	23100	36200	66600	79600	87600	79700	68000
12	86200	73300	62400	36400	25800	22900	37700	67200	80400	87400	79400	67700
13	85400	73200	61300	35900	25700	22800	39400	67700	81300	87200	79000	67500
14	84600	73200	60200	35600	25500	22900	41100	68100	82000	87000	78700	66600
15	84300	73000	59200	35200	25400	23000	42800	68700	82600	87000	78300	65800
16	83800	73000	58100	35000	25400	22800	44300	69200	83100	86700	77800	65500
17	83300	73100	57000	34900	25600	22500	45700	69700	83800	86400	77400	65300
18	82800	73100	55900	34700	25900	22400	47000	70100	84300	86300	77200	65000
19	82200	73000	55100	34200	26000	22300	48300	70600	84800	85900	77000	64800
20	81300	72800	54700	33700	25800	22400	49300	71100	85300	85700	76700	64500
21	80500	72700	54100	33600	25400	22800	50500	71600	85700	85300	76400	63700
22	79900	71500	53100	33900	25100	23100	51700	72000	86400	85100	76100	62800
23	79300	71200	52000	33400	24700	23100	52800	72500	86800	84800	75900	62600
24	78500	71100	51000	32900	23900	23100	53900	72900	87000	85100	75600	62300
25	77600	70900	49900	32400	24200	23300	55100	73600	87100	84800	75300	62200
26	76900	70800	49300	31600	24900	23500	56000	74100	87300	84500	75000	62000
27	76000	70700	48600	31300	25400	23700	57000	74800	87400	84200	74800	61700
28	75200	70700	47800	31100	25500	23900	58000	75500	87400	83800	74500	60800
29	75200	70600	46700	30900	---	24000	59000	76000	87500	83600	74300	59900
30	75400	70500	45700	30900	---	23700	59600	76400	87600	83300	74000	59800
31	75500	---	44800	30500	---	23400	---	76900	---	83100	73100	---
MAX	87500	76000	70200	44000	30000	26200	59600	76900	87600	88000	82800	72100
MIN	75200	70500	44800	30500	23900	22300	23600	60400	77100	83100	73100	59800
a	3364.4	3356.6	3312.8	3284.5	3273.8	3269.1	3338.9	3366.6	3382.5	3375.9	3360.7	3339.1
b	-11800	-5000	-25700	-14300	-5000	-2100	+36200	+17300	+10700	-4500	-10000	-13300

CAL YR 1984 b -33800
WTR YR 1985 b -27500

[a]Gage height, in feet, at end of month.
[b]Change in contents, in acre-feet.

11292900 MIDDLE FORK STANISLAUS RIVER BELOW BEARDSLEY DAM, CA

LOCATION.--Lat 38°11'36", long 120°05'53", in NW 1/4 NW 1/4 sec.22, T.4 N., R.17 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 0.5 mi downstream from Beardsley afterbay dam, 1.5 mi downstream from Beardsley Dam, and 5.7 mi west of Pinecrest.

DRAINAGE AREA.--316 mi^2.

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

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,044.7 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--No estimated daily discharges. Records good. No diversion above station. Flow regulated by Relief Reservoir, capacity, 15,600 acre-ft, Donnell Lake since April 1957 (station 11292600), and by Beardsley Lake since January 1957 (station 11292800). See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--28 years (water years 1958-85), 671 ft^3/s, 486,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,080 ft^3/s, May 30, 1983, gage height, 12.30 ft; minimum daily, 3.0 ft^3/s, Oct. 10, 11, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft^3/s, Nov. 28, gage height, 6.76 ft; minimum daily, 31 ft^3/s, Nov. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	550	42	1200	449	491	450	441	438	474	467	517	528
2	549	32	1200	458	492	364	421	442	463	450	517	528
3	477	38	1190	461	500	440	408	442	469	445	521	528
4	467	36	1180	454	496	450	420	439	466	439	513	528
5	462	32	1180	459	496	450	419	440	455	441	517	528
6	462	32	644	457	496	450	419	464	462	445	517	521
7	462	31	644	455	496	450	419	478	467	450	517	528
8	462	32	643	458	491	450	419	494	472	454	504	528
9	462	60	640	437	408	450	419	475	462	453	532	412
10	464	456	638	434	315	450	419	487	464	458	556	528
11	461	462	636	430	315	450	404	473	443	426	548	528
12	462	462	631	431	362	450	412	466	445	415	548	528
13	462	471	628	391	405	447	416	468	458	479	548	517
14	462	470	619	309	405	446	413	469	458	462	572	517
15	460	563	619	309	381	446	426	472	460	434	605	517
16	460	662	616	307	64	446	438	465	462	372	605	517
17	460	662	614	305	34	446	445	454	445	513	601	504
18	459	662	611	309	77	446	442	454	439	504	560	544
19	472	662	606	306	286	446	439	455	449	500	532	517
20	483	659	603	307	422	445	441	452	451	532	544	517
21	476	662	601	307	458	444	442	465	452	528	544	509
22	470	654	601	307	458	446	363	472	443	915	544	504
23	470	654	597	307	461	446	447	446	448	990	544	504
24	470	662	595	307	460	446	456	459	446	310	544	504
25	470	1210	590	305	453	446	442	451	451	438	528	504
26	470	1200	589	315	450	446	439	455	441	513	528	504
27	470	1220	581	311	450	447	441	458	434	517	528	504
28	470	1290	579	405	450	450	442	455	451	513	528	504
29	80	1240	576	504	---	447	441	460	451	513	528	504
30	67	1210	572	466	---	446	442	458	459	517	528	499
31	70	---	495	480	---	447	---	450	---	517	528	---
TOTAL	13441	16528	21718	11940	11072	13783	12835	14256	13640	15410	16746	15403
MEAN	434	551	701	385	395	445	428	460	455	497	540	513
MAX	550	1290	1200	504	500	450	456	494	474	990	605	544
MIN	67	31	495	305	34	364	363	438	434	310	504	412
AC-FT	26660	32780	43080	23680	21960	27340	25460	28280	27050	30570	33220	30550

CAL YR 1984 TOTAL 313542 MEAN 857 MAX 3460 MIN 31 AC-FT 621900
WTR YR 1985 TOTAL 176772 MEAN 484 MAX 1290 MIN 31 AC-FT 350600

11293500 NORTH FORK STANISLAUS RIVER BELOW SILVER CREEK, CA

LOCATION.--Lat 38°26'22", long 120°00'53", unsurveyed, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 270 ft (revised) downstream from Silver Creek, and 5.6 mi northeast of Big Meadows.

DRAINAGE AREA.--27.8 mi^2.

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1930: 1954(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,677.3 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Estimated daily discharges: Feb. 8-10. Low and medium flow regulated by Lake Alpine, Union, and Utica Reservoirs, combined capacity, 9,580 acre-ft. No diversion upstream from station. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--33 years, 82.6 ft^3/s, 59,840 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,780 ft^3/s, Dec. 24, 1964, gage height, 11.16 ft, from floodmarks, from rating curve extended above 700 ft^3/s; minimum daily, 0.19 ft^3/s, Oct. 14, 1982.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1950, reached a stage of 11.17 ft, from Pacific Gas and Electric Co. recorder chart, discharge, 2,790 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 570 ft^3/s, May 1, gage height, 6.67 ft; minimum daily, 5.5 ft^3/s, Sept. 15-17.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 1220 ft^3/s, May 13, gage height, 7.62 ft; minimum daily, 6.8 ft^3/s, July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	135	68	141	65	41	108	216	240	30	49	25
2	18	95	68	112	59	52	96	237	209	27	39	25
3	17	85	101	97	57	55	120	351	187	25	32	25
4	15	81	90	98	59	56	148	380	379	23	31	23
5	13	81	63	112	63	55	131	305	296	21	31	21
6	12	80	60	114	63	71	128	290	254	19	32	21
7	25	93	55	110	61	89	172	346	190	17	32	21
8	35	85	57	101	57	103	206	486	159	14	32	21
9	27	85	79	89	61	116	137	541	147	12	31	21
10	22	115	102	82	69	125	138	561	141	11	28	21
11	18	318	101	73	54	115	119	636	121	9.1	25	28
12	15	163	78	66	52	92	143	628	120	8.0	25	37
13	38	117	71	62	66	138	199	735	119	7.2	25	37
14	58	103	102	60	69	149	292	583	149	7.0	25	39
15	57	103	109	55	69	107	393	338	146	7.0	25	41
16	57	135	92	59	79	78	440	206	122	6.8	25	41
17	66	261	87	55	55	83	413	260	129	11	25	41
18	74	102	72	47	47	67	267	327	121	12	25	41
19	74	153	65	44	43	86	193	446	107	11	25	40
20	74	124	60	43	43	147	144	536	93	24	25	39
21	76	58	55	43	53	173	133	481	75	55	26	35
22	77	41	52	41	49	143	167	447	67	54	26	24
23	77	48	62	40	43	145	245	493	64	53	26	23
24	77	487	113	42	40	172	303	439	63	52	26	23
25	76	242	571	50	38	178	245	377	57	52	25	24
26	76	131	467	56	38	275	165	361	49	51	25	24
27	76	105	193	45	37	221	133	354	43	50	25	31
28	76	95	150	50	39	180	120	388	40	50	25	38
29	76	83	127	57	38	176	144	398	38	50	25	37
30	88	75	160	61	---	139	178	364	34	49	25	38
31	128	---	195	66	---	142	---	308	---	49	25	---
TOTAL	1634	3879	3725	2171	1566	3769	5820	12818	3959	867.1	866	905
MEAN	52.7	129	120	70.0	54.0	122	194	413	132	28.0	27.9	30.2
MAX	128	487	571	141	79	275	440	735	379	55	49	41
MIN	12	41	52	40	37	41	96	206	34	6.8	25	21
AC-FT	3240	7690	7390	4310	3110	7480	11540	25420	7850	1720	1720	1800

CAL YR 1983	TOTAL	66701.5	MEAN 183	MAX 1400	MIN 5.4	AC-FT	132300	
WTR YR 1984	TOTAL	41979.1	MEAN 115	MAX 735	MIN 6.8	AC-FT	83270	

11293500 NORTH FORK STANISLAUS RIVER BELOW SILVER CREEK, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	36	22	18	17	31	53	407	52	6.3	7.4	6.0
2	37	53	22	19	17	27	102	428	56	7.5	7.5	5.8
3	37	64	22	19	17	22	201	371	61	7.5	7.5	12
4	36	40	21	20	14	18	199	292	55	7.5	7.4	21
5	32	38	22	20	9.1	16	235	277	61	7.4	7.3	21
6	24	44	21	19	8.9	15	270	303	65	7.4	7.3	21
7	23	46	21	20	9.0	15	295	272	66	7.4	7.3	22
8	23	49	21	19	9.0	14	317	232	64	7.4	7.3	23
9	23	48	21	19	9.0	14	325	196	53	7.3	16	24
10	23	46	22	19	9.3	16	336	151	46	7.3	26	22
11	25	68	21	19	10	15	309	121	39	7.4	26	22
12	24	65	21	18	11	14	321	136	33	7.3	26	21
13	24	53	20	18	13	16	384	168	30	7.3	26	16
14	25	52	21	19	16	18	416	211	27	7.3	26	5.6
15	24	49	20	20	18	20	407	218	24	7.2	26	5.5
16	25	48	20	21	22	23	337	198	22	7.0	26	5.5
17	25	47	20	22	23	25	266	196	20	7.1	26	5.5
18	25	48	19	26	21	25	180	202	19	6.9	26	5.6
19	26	47	19	27	23	23	172	205	16	6.9	25	11
20	27	47	19	27	23	33	143	185	14	6.2	25	20
21	26	45	19	26	18	35	127	160	14	5.8	25	21
22	25	45	19	24	17	32	121	165	11	6.1	25	21
23	26	45	19	22	21	37	128	165	9.6	7.0	25	23
24	26	45	19	21	25	37	128	167	8.4	7.3	25	25
25	26	44	20	20	28	26	128	151	7.4	8.1	25	25
26	33	34	19	19	30	19	120	132	6.8	7.0	25	25
27	39	23	19	19	31	17	118	115	6.5	6.6	25	17
28	37	23	19	19	31	17	128	99	6.3	7.1	25	5.9
29	38	22	18	19	---	16	176	84	6.1	7.0	25	5.9
30	38	22	19	18	---	17	301	67	6.0	7.0	16	6.2
31	37	---	19	17	---	30	---	60	---	7.4	6.0	---
TOTAL	896	1336	624	633	500.3	683	6743	6134	905.1	220.0	606.0	470.5
MEAN	28.9	44.5	20.1	20.4	17.9	22.0	225	198	30.2	7.10	19.5	15.7
MAX	39	68	22	27	31	37	416	428	66	8.1	26	25
MIN	23	22	18	17	8.9	14	53	60	6.0	5.8	6.0	5.5
AC-FT	1780	2650	1240	1260	992	1350	13370	12170	1800	436	1200	933

CAL YR 1984 TOTAL 35597.1 MEAN 97.3 MAX 735 MIN 6.8 AC-FT 70610
WTR YR 1985 TOTAL 19750.9 MEAN 54.1 MAX 428 MIN 5.5 AC-FT 39180

11294000 HIGHLAND CREEK BELOW SPICER MEADOWS RESERVOIR, CA

LOCATION.--Lat 38°23'34", long 119°59'50", in NW 1/4 NE 1/4 sec.9, T.6 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 500 ft downstream from Spicer Meadows Reservoir dam, 5.8 mi upstream from mouth, and 7 mi east of Big Meadow.

DRAINAGE AREA.--42.4 mi^2.

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1930: 1953.

GAGE.--Water-stage recorder. Datum of gage is 6,382.2 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Low and medium flows regulated by Spicer Meadows Reservoir 500 ft upstream, capacity, 4,060 acre-ft. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--33 years, 127 ft^3/s, 92,010 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,860 ft^3/s, Jan. 31, 1963, gage height, 11.88 ft, from rating curve extended above 1,200 ft^3/s; no flow some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 20, 1950, reached a stage of 11.50 ft from Pacific Gas and Electric Co. recorder chart, discharge, 8,800 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 869 ft^3/s, Apr. 14, gage height, 5.64 ft; minimum daily, 4.7 ft^3/s, Sept. 29, 30.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 2440 ft^3/s, Nov. 24, gage height, 7.67 ft; minimum daily, 5.3 ft^3/s, Sept. 21-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	9.3	111	203	94	70	115	247	478	106	5.6	12
2	58	9.7	109	175	85	82	104	288	405	102	14	12
3	60	9.8	110	150	84	85	111	391	365	93	19	12
4	59	10	105	158	88	85	131	416	535	87	13	8.3
5	58	10	104	165	94	83	124	359	421	84	13	5.6
6	56	10	97	171	92	102	117	359	392	65	13	5.5
7	55	11	91	160	89	118	132	420	305	65	13	5.5
8	55	11	94	149	84	130	180	550	272	58	13	5.4
9	53	11	112	136	95	142	125	623	272	54	13	5.4
10	52	11	102	125	85	151	128	675	267	60	13	5.4
11	51	330	141	115	79	143	118	773	240	68	13	5.4
12	47	334	118	108	79	119	120	789	237	66	12	5.4
13	23	245	119	97	97	291	147	936	252	66	12	5.4
14	6.9	163	145	90	140	238	207	850	275	66	12	5.4
15	7.0	150	138	84	100	155	305	540	267	66	12	5.4
16	7.1	283	122	88	97	124	332	384	266	66	12	5.4
17	7.2	1090	121	80	72	116	388	415	262	67	12	5.4
18	7.2	279	109	72	80	104	352	481	296	67	12	5.4
19	7.3	402	101	70	76	118	278	625	269	66	12	5.4
20	7.3	496	95	68	75	161	225	747	255	40	12	5.4
21	7.3	219	87	66	80	179	211	702	216	5.7	12	5.3
22	7.3	158	83	64	70	150	240	683	199	5.7	12	5.3
23	7.3	147	88	62	69	148	310	814	201	5.7	12	5.3
24	7.5	958	188	77	67	174	358	764	199	5.7	12	5.3
25	7.5	360	984	80	62	183	318	634	188	5.6	12	5.3
26	7.6	211	617	77	60	271	234	532	169	5.6	12	5.3
27	7.6	169	337	71	64	221	198	587	155	5.6	12	5.3
28	7.6	152	224	81	65	181	176	612	155	5.6	12	5.3
29	7.6	134	195	88	62	177	182	681	150	5.6	12	5.3
30	7.8	121	299	90	---	140	208	662	122	5.6	12	5.3
31	8.4	---	270	97	---	137	---	591	---	5.6	12	---
TOTAL	818.5	6503.8	5616	3317	2384	4578	6174	18130	8085	1474.0	382.6	184.1
MEAN	26.4	217	181	107	82.2	148	206	585	270	47.5	12.3	6.14
MAX	60	1090	984	203	140	291	388	936	535	106	19	12
MIN	6.9	9.3	83	62	60	70	104	247	122	5.6	5.6	5.3
AC-FT	1620	12900	11140	6580	4730	9080	12250	35960	16040	2920	759	365

CAL YR 1983 TOTAL 96351.3 MEAN 264 MAX 1690 MIN 6.9 AC-FT 191100
WTR YR 1984 TOTAL 57647.0 MEAN 158 MAX 1090 MIN 5.3 AC-FT 114300

11294000 HIGHLAND CREEK BELOW SPICER MEADOWS RESERVOIR, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	30	20	20	25	86	157	547	119	30	15	5.3
2	5.3	30	20	20	25	80	226	592	123	16	15	5.3
3	5.3	30	20	20	25	62	265	546	113	16	15	5.3
4	5.3	30	20	20	32	57	278	453	120	16	15	15
5	5.3	30	20	20	38	56	325	445	131	16	12	15
6	5.3	30	20	20	38	53	377	471	145	16	5.3	15
7	5.3	30	20	20	37	52	420	435	160	16	5.3	15
8	5.3	30	20	20	37	47	455	383	160	16	5.4	15
9	5.3	30	20	20	37	49	470	325	141	16	5.4	15
10	5.2	30	20	20	37	57	482	249	126	16	5.4	15
11	5.4	30	20	20	37	53	459	212	111	16	5.4	15
12	5.2	31	20	20	36	48	479	226	106	16	5.4	15
13	5.2	31	20	20	36	51	554	276	98	16	5.3	15
14	5.2	31	20	20	36	53	620	339	86	16	5.3	8.7
15	5.2	32	20	20	36	58	622	345	75	16	5.3	6.4
16	5.2	32	20	21	37	64	534	335	69	16	5.3	6.4
17	5.2	32	20	21	37	69	440	346	64	16	5.4	6.4
18	5.2	32	20	21	37	73	327	359	61	16	5.4	6.4
19	5.2	27	20	21	38	67	298	362	54	16	5.3	6.4
20	5.2	18	20	22	40	87	253	333	50	16	5.3	15
21	5.2	19	20	22	40	101	213	295	54	16	5.3	19
22	8.2	19	20	23	44	95	205	307	56	16	5.3	19
23	10	19	20	23	56	107	251	322	55	15	5.3	18
24	11	19	20	24	66	121	277	337	55	15	5.3	20
25	11	19	20	24	74	97	254	315	54	15	5.3	20
26	11	19	20	25	80	83	213	280	53	15	5.3	20
27	11	19	20	25	86	70	247	247	53	15	5.4	20
28	11	19	20	25	85	69	348	211	47	15	5.4	11
29	20	19	20	25	---	69	363	179	43	15	5.4	4.7
30	30	19	20	25	---	71	429	151	43	15	5.3	4.7
31	30	---	20	25	---	103	---	142	---	15	5.3	---
TOTAL	263.5	786	620	672	1232	2208	10841	10365	2625	501	210.8	378.0
MEAN	8.50	26.2	20.0	21.7	44.0	71.2	361	334	87.5	16.2	6.80	12.6
MAX	30	32	20	25	86	121	622	592	160	30	15	20
MIN	5.2	18	20	20	25	47	157	142	43	15	5.3	4.7
AC-FT	523	1560	1230	1330	2440	4380	21500	20560	5210	994	418	750

CAL YR 1984 TOTAL 46378.2 MEAN 127 MAX 936 MIN 5.2 AC-FT 91990
WTR YR 1985 TOTAL 30702.3 MEAN 84.1 MAX 622 MIN 4.7 AC-FT 60900

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA

LOCATION (REVISED).--Lat 38°14'38", long 120°17'24", in SW 1/4 NE 1/4 sec.35, T.5 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 700 ft upstream from intake of Utica Canal, 3.3 mi upstream from Beaver Creek, and 5.1 mi northeast of Avery.

DRAINAGE AREA.--163 mi^2.

PERIOD OF RECORD.--July 1914 to September 1925, November 1928 to current year. Yearly discharge only for some years, published in WSP 1315-A.

REVISED RECORDS.--WSP 1215: 1938(M). WSP 1515: 1915(M), 1932(M), 1936(M), 1938, 1940(M).

GAGE.--Water-stage recorder. Datum of gage is 3,388.3 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to September 1922, nonrecording gage at same site at datum 0.05 ft lower.

REMARKS.--Estimated daily discharges: Nov. 18-26. Low and medium flows regulated by Lake Alpine, Spicer Meadows, Union, and Utica Reservoirs, combined capacity, 13,600 acre-ft. Diversion of a maximum of 15 ft^3/s during summer from Beaver Creek into river upstream from station. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--68 years, 431 ft^3/s, 312,300 acre-ft/yr .

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,000 ft^3/s, Jan. 31, 1963, gage height, 15.00 ft, from floodmarks, from rating curve extended above 14,000 ft^3/s on basis of slope-area measurement at gage height 13.8 ft; minimum daily, 5.5 ft^3/s, Dec. 6, 7, 1929.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,480 ft^3/s, Apr. 14, gage height, 6.46 ft; minimum daily, 21 ft^3/s, Sept. 2-4.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 14,400 ft^3/s, Nov. 24, gage height, 11.12 ft; minimum daily, 31 ft^3/s, Sept. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	533	522	1140	368	279	644	939	1060	209	69	44
2	125	272	531	969	328	333	571	1210	906	187	68	43
3	118	175	643	891	308	347	586	1290	841	173	61	43
4	112	152	615	889	312	351	756	1500	1030	160	66	43
5	106	143	496	932	326	323	706	1260	1300	147	58	41
6	101	136	463	894	329	371	656	1200	1030	134	57	33
7	97	157	420	849	320	447	785	1250	898	123	57	32
8	118	160	440	781	300	496	1010	1570	734	116	57	32
9	119	145	649	695	321	549	759	1790	660	104	56	31
10	110	169	870	640	341	593	763	1850	652	98	55	31
11	100	2060	913	577	303	579	706	2000	573	105	53	32
12	93	1090	747	525	298	484	705	2100	561	106	50	36
13	87	1040	611	482	498	963	879	2240	551	103	49	51
14	88	602	768	451	526	1330	1140	2280	569	102	51	51
15	86	551	771	425	527	909	1390	1610	676	105	49	52
16	85	1040	657	439	670	676	1580	1080	561	103	49	54
17	84	6110	727	374	424	665	1670	1100	587	104	48	53
18	94	1420	598	341	365	570	1290	1210	592	111	46	58
19	98	2030	526	348	355	601	1070	1410	538	106	46	66
20	98	2760	483	320	342	845	895	1700	500	102	45	62
21	97	1050	431	324	372	971	809	1750	431	88	45	55
22	102	749	401	299	329	837	900	1550	388	81	47	51
23	105	669	408	285	320	772	1080	1630	373	80	47	38
24	108	5110	1070	286	311	905	1230	1660	371	79	46	36
25	104	1970	7350	328	284	931	1150	1400	353	77	46	35
26	103	1120	4850	326	269	1170	888	1370	324	76	45	37
27	101	906	2870	293	282	1150	748	1260	295	74	45	36
28	101	792	1610	302	284	939	627	1340	277	73	44	41
29	101	664	1250	340	276	958	648	1350	276	72	45	51
30	130	581	1480	346	---	779	785	1380	246	70	44	53
31	215	---	1510	366	---	776	---	1210	---	70	44	---
TOTAL	3321	34356	35680	16457	10288	21899	27426	46489	18153	3338	1588	1321
MEAN	107	1145	1151	531	355	706	914	1500	605	108	51.2	44.0
MAX	215	6110	7350	1140	670	1330	1670	2280	1300	209	69	66
MIN	84	136	401	285	269	279	571	939	246	70	44	31
AC-FT	6590	68150	70770	32640	20410	43440	54400	92210	36010	6620	3150	2620

CAL YR 1983 TOTAL 404514 MEAN 1108 MAX 7350 MIN 74 AC-FT 802400
WTR YR 1984 TOTAL 220316 MEAN 602 MAX 7350 MIN 31 AC-FT 437000

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	88	128	89	98	316	520	1520	310	73	33	22
2	56	91	121	90	104	315	800	1650	299	64	33	21
3	53	243	120	90	96	251	1020	1560	324	47	33	21
4	53	124	112	92	93	224	1060	1330	286	45	32	21
5	52	103	109	94	98	209	1160	1220	292	44	31	40
6	49	106	105	96	101	192	1310	1300	306	44	31	44
7	38	126	104	110	103	185	1410	1240	313	43	24	44
8	36	170	103	105	131	171	1510	1120	324	42	22	49
9	35	139	103	102	111	180	1540	1010	292	41	22	90
10	36	134	117	98	112	209	1610	852	263	41	22	68
11	57	182	129	92	111	222	1530	691	232	41	37	60
12	59	251	120	92	111	198	1520	698	209	41	38	53
13	42	354	114	97	119	208	1750	795	192	39	37	48
14	41	214	98	96	130	221	1920	932	173	38	37	45
15	42	177	112	97	147	242	1930	975	154	37	37	27
16	57	177	108	102	169	264	1750	924	138	36	37	23
17	88	163	97	107	185	288	1510	920	129	36	37	22
18	65	167	103	117	180	319	1150	925	119	37	41	22
19	65	171	103	128	204	290	1090	937	111	36	39	22
20	66	159	95	135	218	332	961	894	103	36	37	22
21	63	140	95	140	178	403	849	768	99	37	36	43
22	55	135	93	132	194	377	797	769	101	36	35	47
23	52	131	95	117	213	378	912	761	98	34	35	46
24	56	128	95	112	249	454	1010	777	94	34	34	48
25	58	128	96	122	278	382	958	734	92	36	34	53
26	61	128	96	114	293	322	814	636	90	43	34	52
27	78	162	94	101	313	295	792	565	88	38	33	52
28	74	293	92	119	320	277	1070	500	86	34	33	48
29	72	164	91	97	---	262	1160	446	79	33	34	26
30	81	137	90	102	---	257	1200	380	75	33	33	22
31	91	---	90	102	---	332	---	342	---	33	32	---
TOTAL	1794	4885	3228	3287	4659	8575	36613	28171	5471	1252	1033	1201
MEAN	57.9	163	104	106	166	277	1220	909	182	40.4	33.3	40.0
MAX	91	354	129	140	320	454	1930	1650	324	73	41	90
MIN	35	88	90	89	93	171	520	342	75	33	22	21
AC-FT	3560	9690	6400	6520	9240	17010	72620	55880	10850	2480	2050	2380

CAL YR 1984 TOTAL 156866 MEAN 429 MAX 2280 MIN 31 AC-FT 311100
WTR YR 1985 TOTAL 100169 MEAN 274 MAX 1930 MIN 21 AC-FT 198700

11295400 STANISLAUS RIVER NEAR HATHAWAY PINES, CA

LOCATION.--Lat 38°08'29", long 120°22'19", in NW 1/4 SW 1/4 sec.6, T.3 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, on right bank 1,000 ft upstream from Stanislaus powerplant, and 3.6 mi south of Hathaway Pines.

DRAINAGE AREA.--629 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR CA-80-3: 1979.

GAGE.--Water-stage recorder. Datum of gage is 1,077.21 ft above National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.). Prior to Oct. 1, 1982, published at datum 47.21 ft higher.

REMARKS.--No estimated daily discharges. Records good. Many diversions above station for hydroelectric powerplants. Small diversions for domestic water supply. Stanislaus tunnel diverts from left bank of Middle Fork Stanislaus River 13.7 mi upstream from station in SE 1/4 sec.24, T.4 N., R.16 E., to Stanislaus powerplant 1,000 ft downstream from station. See schematic diagram of Stanislaus River basin. For records of combined discharge of river and tunnel, see following page.

COOPERATION.--Records of diversion to Stanislaus powerplant were provided by Pacific Gas and Electric Co.

AVERAGE DISCHARGE.--River only: 18 years, 942 ft^3/s, 682,500 acre-ft/yr.
Combined river and powerplant: 18 years, 1,413 ft^3/s, 1,024,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--River only, maximum discharge, 37,000 ft^3/s, Feb. 16, 1982, gage height, 22.5 ft from outside highwater mark, from rating curve extended above 10,000 ft^3/s on basis of computation of peak flow over a weir; minimum daily, 9.4 ft^3/s, Aug. 7, 1977.
Combined flow, maximum discharge, 37,500 ft^3/s, Feb. 16, 1982; minimum daily, 27 ft^3/s, July 20, 1977.

EXTREMES FOR CURRENT YEAR.--River only, maximum discharge, 3,200 ft^3/s, Apr. 15, gage height, 11.77 ft; minimum daily, 30 ft^3/s, several days during July and August, Sept. 1.
Combined flow, maximum discharge, 3,730 ft^3/s, Apr. 15; minimum daily, 75 ft^3/s, Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	95	367	112	101	391	774	1820	287	36	33	30
2	40	87	342	115	103	469	1110	2000	260	37	32	31
3	63	195	330	91	86	337	1440	1920	293	35	34	39
4	40	122	327	94	77	292	1530	1610	249	34	36	51
5	38	84	303	89	79	271	1650	1430	242	34	33	57
6	37	75	297	88	86	269	1900	1530	253	33	32	59
7	37	95	290	127	95	272	2020	1460	266	33	33	43
8	36	223	286	161	475	250	2140	1290	267	33	36	36
9	35	153	281	119	326	257	2170	1120	242	32	35	72
10	35	109	325	104	216	323	2260	907	209	31	51	67
11	49	135	346	98	173	450	2160	756	178	31	59	50
12	57	250	323	93	148	389	2100	728	151	31	56	50
13	41	594	311	92	165	349	2370	786	137	31	59	59
14	38	368	292	93	140	347	2590	932	122	31	58	55
15	36	233	285	92	196	364	2590	1010	106	30	84	55
16	43	397	286	95	196	386	2390	946	92	32	93	58
17	146	350	264	104	236	450	2110	924	83	30	97	64
18	67	361	261	121	250	540	1610	918	75	31	98	54
19	51	352	261	128	324	522	1480	940	234	30	47	53
20	51	328	198	141	352	559	1240	889	83	31	32	59
21	55	324	196	149	242	643	1020	763	55	35	31	49
22	53	310	213	149	276	612	947	747	49	37	32	45
23	47	294	226	132	281	588	1040	737	49	32	32	42
24	45	418	228	119	326	661	1210	739	45	39	32	41
25	44	424	223	116	389	598	1130	708	42	33	35	40
26	44	345	222	112	367	549	932	626	41	35	37	40
27	44	358	217	109	416	601	865	561	45	37	31	40
28	55	894	210	114	406	585	1220	495	39	32	30	40
29	83	515	201	103	---	521	1380	428	38	31	30	40
30	125	405	193	91	---	483	1370	367	36	30	30	43
31	112	---	190	86	---	550	---	313	---	32	30	---
TOTAL	1687	8893	8294	3437	6527	13878	48748	30400	4268	1019	1388	1462
MEAN	54.4	296	268	111	233	448	1625	981	142	32.9	44.8	48.7
MAX	146	894	367	161	475	661	2590	2000	293	39	98	72
MIN	35	75	190	86	77	250	774	313	36	30	30	30
AC-FT	3350	17640	16450	6820	12950	27530	96690	60300	8470	2020	2750	2900

CAL YR 1984 TOTAL 326742 MEAN 893 MAX 4300 MIN 32 AC-FT 648100
WTR YR 1985 TOTAL 130001 MEAN 356 MAX 2590 MIN 30 AC-FT 257900

11295401 STANISLAUS RIVER NEAR HATHAWAY PINES, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF STANISLAUS RIVER AND STANISLAUS POWERPLANT AT STANISLAUS, NEAR HATHAWAY PINES, CA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	569	95	895	637	618	922	1310	2340	823	573	569	562
2	570	87	870	650	635	1000	1650	2520	797	569	568	562
3	593	195	858	627	607	790	1970	2450	832	560	569	570
4	569	122	854	627	592	826	2060	2130	786	556	572	582
5	568	84	830	580	594	804	2190	1950	776	555	569	588
6	567	75	824	581	600	802	2440	2050	785	554	567	589
7	567	95	818	618	610	805	2560	2000	802	557	568	573
8	564	275	814	653	1000	784	2680	1830	805	556	571	566
9	565	243	809	598	826	790	2710	1660	778	532	569	538
10	565	559	853	572	549	857	2790	1450	745	530	584	597
11	579	671	874	561	511	985	2690	1290	711	515	592	588
12	586	785	851	556	533	922	2620	1260	676	491	590	588
13	570	1130	839	532	628	875	2890	1320	672	540	592	595
14	567	901	821	410	630	852	3110	1470	655	534	590	590
15	565	765	813	409	684	893	3120	1550	639	514	616	590
16	572	929	814	409	397	922	2920	1480	625	455	625	593
17	676	881	793	417	342	987	2650	1460	612	560	630	597
18	595	891	790	437	378	1080	2150	1450	591	570	631	586
19	584	882	790	445	638	1060	2010	1470	698	564	577	588
20	586	858	727	458	836	1090	1770	1420	610	574	563	594
21	589	853	724	468	780	1180	1550	1290	582	576	562	583
22	587	839	742	463	813	1150	1390	1280	576	575	564	578
23	581	822	755	447	816	1120	1570	1270	570	570	563	575
24	578	946	757	433	859	1200	1750	1270	572	431	564	573
25	577	952	752	429	921	1130	1670	1240	569	453	568	572
26	577	872	751	435	899	1080	1460	1150	567	572	569	572
27	576	886	747	429	948	1140	1400	1090	564	576	562	572
28	587	1420	739	485	937	1120	1750	1020	558	570	561	572
29	217	1040	730	631	---	1060	1910	958	566	567	562	571
30	125	932	722	601	---	1020	1900	899	569	568	562	574
31	112	---	719	590	---	1090	---	836	---	569	561	---
TOTAL	16683	20085	24675	16188	19181	30336	64640	46853	20111	16886	17910	17378
MEAN	538	670	796	522	685	979	2155	1511	670	545	578	579
MAX	676	1420	895	653	1000	1200	3120	2520	832	576	631	597
MIN	112	75	719	409	342	784	1310	836	558	431	561	538
AC-FT	33090	39840	48940	32110	38050	60170	128200	92930	39890	33490	35520	34470

CAL YR 1984 TOTAL 513924 MEAN 1404 MAX 4830 MIN 75 AC-FT 1019000
WTR YR 1985 TOTAL 310926 MEAN 852 MAX 3120 MIN 75 AC-FT 616700

11296500 SOUTH FORK STANISLAUS RIVER AT STRAWBERRY, CA

LOCATION (REVISED).--Lat 38°11'51", long 120°00'27", in SW 1/4 SW 1/4 sec.16, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 0.4 mi downstream from bridge on State Highway 108 at Strawberry, 0.6 mi downstream from Herring Creek, and 1.2 mi downstream from Pinecrest Lake.

DRAINAGE AREA.--44.8 mi^2.

PERIOD OF RECORD.--October 1911 to January 1917, August 1938 to current year. Monthly discharge only for October 1913 and yearly estimates for 1912-13, published in WSP 1315-A. Published as "near Confidence" 1911-13.

REVISED RECORDS.--WSP 1215: 1945(M). WSP 1515: 1916, 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 5,235.1 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). October 1911 to January 1917, nonrecording gage at site 1 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Low and medium flows regulated beginning in 1916 by Pinecrest Lake 1.2 mi upstream, capacity, 18,300 acre-ft. No diversion upstream from station. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--52 years (water years 1912-16, 1939-85), 130 ft^3/s, 94,180 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft^3/s, Nov. 21, 1950, gage height, 9.25 ft, from rating curve extended above 1,100 ft^3/s, on basis of contracted-opening measurement of peak flow at bridge 0.3 mi downstream from station; minimum, 1.3 ft^3/s, Nov. 22, 23, 1946.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 611 ft^3/s, May 19, gage height, 4.21 ft; minimum daily, 6.5 ft^3/s, Aug. 22.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 1200 ft^3/s, May 13, gage height, 5.49 ft; minimum daily, 6.9 ft^3/s, Sept. 2-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	101	113	162	97	87	118	194	639	118	65	7.7
2	86	84	112	142	95	89	115	209	490	114	66	6.9
3	80	76	108	132	94	89	115	345	425	110	66	6.9
4	76	73	106	133	95	90	118	479	688	107	68	6.9
5	74	72	107	141	96	90	116	413	724	103	68	6.9
6	73	70	106	137	96	93	115	395	511	92	67	7.7
7	72	79	102	133	96	96	120	469	327	64	67	8.2
8	73	75	102	127	94	99	130	648	318	67	67	8.2
9	71	73	106	121	95	102	120	738	327	63	66	8.6
10	71	76	105	117	93	105	113	775	324	66	66	8.6
11	70	217	112	115	94	105	94	859	296	68	66	8.6
12	69	137	107	113	93	101	102	879	316	66	66	8.6
13	68	120	107	110	95	111	120	948	335	67	67	8.6
14	68	106	112	107	93	117	145	927	353	68	67	8.6
15	68	100	109	108	97	108	168	617	328	69	67	8.6
16	67	105	105	106	95	106	181	394	379	74	67	8.2
17	67	197	106	101	94	102	179	434	403	93	67	7.7
18	67	132	102	100	93	102	153	529	379	89	67	8.2
19	66	193	100	101	91	106	134	694	337	71	67	8.2
20	66	478	99	98	91	116	124	844	292	70	9.5	8.2
21	65	241	97	99	91	121	134	849	216	69	9.5	8.2
22	65	163	97	96	90	119	170	815	185	68	8.2	8.2
23	65	147	95	95	89	120	245	873	195	67	7.7	8.2
24	65	546	122	95	88	126	349	882	199	69	7.7	8.2
25	64	379	610	95	87	129	310	815	189	67	7.7	8.2
26	64	195	596	94	86	140	201	786	171	69	7.7	8.5
27	64	159	341	93	86	136	168	776	153	70	7.7	8.2
28	63	142	199	93	86	133	148	831	145	72	7.7	8.2
29	63	128	169	95	85	134	143	860	145	69	7.7	8.5
30	67	119	194	96	---	126	164	817	130	67	7.7	8.3
31	79	---	199	97	---	124	---	748	---	66	7.7	---
TOTAL	2165	4783	4845	3452	2675	3422	4612	20842	9919	2392	1363.5	242.8
MEAN	69.8	159	156	111	92.2	110	154	672	331	77.2	44.0	8.09
MAX	89	546	610	162	97	140	349	948	724	118	68	8.6
MIN	63	70	95	93	85	87	94	194	130	63	7.7	6.9
AC-FT	4290	9490	9610	6850	5310	6790	9150	41340	19670	4740	2700	482

CAL YR 1983 TOTAL 97058.0 MEAN 266 MAX 1370 MIN 39 AC-FT 192500
WTR YR 1984 TOTAL 60713.3 MEAN 166 MAX 948 MIN 6.9 AC-FT 120400

11296500 SOUTH FORK STANISLAUS RIVER AT STRAWBERRY, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	20	85	57	29	91	82	195	142	67	22	23
2	52	20	86	57	21	89	99	205	142	64	22	23
3	68	32	87	57	12	86	115	197	141	62	21	23
4	67	24	86	37	11	84	120	179	148	61	21	23
5	67	22	85	12	11	82	108	182	180	60	21	23
6	67	22	84	12	11	80	110	250	201	60	21	47
7	67	19	84	13	11	79	124	381	221	60	21	52
8	74	65	84	12	15	79	133	389	224	47	21	49
9	88	82	85	12	11	79	140	269	193	27	21	51
10	83	82	86	12	21	79	147	197	162	24	21	52
11	85	88	85	12	31	78	146	168	137	24	20	71
12	85	93	85	12	31	54	157	178	143	24	20	83
13	83	91	84	12	50	37	183	283	134	24	20	83
14	82	86	84	12	64	52	196	455	113	23	20	83
15	82	84	83	12	61	62	202	516	92	23	20	82
16	82	84	84	12	61	63	176	461	84	23	20	81
17	82	83	83	13	62	63	146	473	78	23	20	45
18	66	83	82	13	63	64	117	495	62	23	12	53
19	85	82	56	14	64	63	107	514	64	23	7.2	80
20	85	82	37	14	65	66	95	482	73	23	6.8	79
21	84	82	47	23	64	70	83	389	78	23	6.6	78
22	83	81	66	35	65	69	78	434	66	23	6.5	78
23	84	81	60	34	66	72	93	458	65	23	6.7	77
24	85	82	60	30	68	77	111	472	66	23	18	77
25	84	81	59	30	77	72	107	432	65	23	23	77
26	84	80	59	30	88	69	95	385	65	25	23	76
27	85	83	59	30	90	65	111	342	66	23	23	76
28	82	84	59	30	91	65	137	255	65	23	23	76
29	82	82	58	29	---	66	143	199	64	22	23	77
30	55	86	58	29	---	68	163	169	65	22	23	78
31	22	---	57	29	---	72	---	171	---	22	23	---
TOTAL	2306	2066	2257	736	1314	2195	3824	10175	3399	1017	576.8	1876
MEAN	74.4	68.9	72.8	23.7	46.9	70.8	127	328	113	32.8	18.6	62.5
MAX	88	93	87	57	91	91	202	516	224	67	23	83
MIN	22	19	37	12	11	37	78	168	62	22	6.5	23
AC-FT	4570	4100	4480	1460	2610	4350	7580	20180	6740	2020	1140	3720

CAL YR 1984 TOTAL 55549.3 MEAN 152 MAX 948 MIN 6.9 AC-FT 110200
WTR YR 1985 TOTAL 31741.8 MEAN 87.0 MAX 516 MIN 6.5 AC-FT 62960

11297000 PHILADELPHIA CANAL NEAR STRAWBERRY, CA

LOCATION (REVISED).--Lat 38°10'42", long 120°02'44", in NW 1/4 NW 1/4 sec.30, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank 250 ft downstream from diversion dam on South Fork Stanislaus River, and 2.8 mi southwest of Strawberry.

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,960 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Estimated daily discharges: Dec. 11 to Jan. 9. Canal diverts from right bank of South Fork Stanislaus River for power development at Spring Gap powerplant of Pacific Gas and Electric Co.; tailrace empties into Middle Fork Stanislaus River. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--46 years, 42.9 ft^3/s, 31,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 66 ft^3/s, June 16, 1984; no flow at times in some years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	61	61	59	61	61	60	61	62	62	62	0
2	60	60	61	58	60	61	60	60	61	63	62	0
3	59	61	57	59	61	61	61	63	64	62	62	0
4	60	61	58	60	61	60	61	61	65	61	62	0
5	60	61	61	60	61	61	60	60	63	61	63	0
6	60	61	61	60	60	61	60	61	60	61	63	0
7	60	61	60	60	60	60	61	62	60	59	62	0
8	60	60	61	61	60	61	61	63	61	62	62	.62
9	60	60	61	61	61	61	60	62	62	62	62	1.2
10	61	61	60	61	61	61	61	63	64	62	62	1.2
11	60	59	61	37	61	61	60	63	63	63	62	.99
12	60	61	61	60	61	61	61	62	63	63	62	.99
13	61	61	61	61	61	61	63	62	61	63	62	.92
14	61	60	61	61	61	61	63	61	63	63	62	.82
15	60	60	61	61	61	60	62	58	64	63	62	.91
16	60	61	61	61	61	60	61	60	66	62	62	.86
17	60	59	61	61	60	60	61	62	63	63	62	.69
18	60	57	60	60	61	60	60	64	61	63	62	.69
19	60	59	60	51	61	60	60	64	61	62	62	.68
20	60	57	60	40	61	61	60	64	61	32	12	.90
21	60	57	61	40	61	61	61	64	57	36	.25	1.1
22	60	59	61	40	60	61	61	62	64	62	0	.78
23	60	60	61	39	60	61	61	62	65	62	0	.46
24	61	59	62	40	60	61	61	63	64	62	0	.57
25	61	56	63	40	60	61	60	63	53	62	0	.59
26	60	58	56	40	61	61	59	63	60	62	0	.39
27	60	60	55	40	61	61	61	63	60	62	0	1.2
28	61	60	58	49	61	60	61	62	61	62	0	1.8
29	61	60	59	60	60	61	62	62	62	62	0	1.8
30	61	60	60	61	---	60	62	62	62	62	0	1.8
31	61	---	60	61	---	60	---	62	---	62	0	---
TOTAL	1868	1790	1864	1662	1759	1881	1825	1924	1856	1868	1192.25	21.96
MEAN	60.3	59.7	60.1	53.6	60.7	60.7	60.8	62.1	61.9	60.3	38.5	.73
MAX	61	61	63	61	61	61	63	64	66	63	63	1.8
MIN	59	56	55	37	60	60	59	58	53	32	0	0
AC-FT	3710	3550	3700	3300	3490	3730	3620	3820	3680	3710	2360	44

CAL YR 1983 TOTAL 21043.42 MEAN 57.7 MAX 64 MIN 0 AC-FT 41740
WTR YR 1984 TOTAL 19511.21 MEAN 53.3 MAX 66 MIN 0 AC-FT 38700

11297000 PHILADELPHIA CANAL NEAR STRAWBERRY, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	2.6	61	57	16	14	58	60	59	60	18	18
2	39	1.3	61	57	21	15	58	60	59	58	18	18
3	61	1.3	62	57	11	15	58	60	60	57	18	18
4	61	1.3	61	36	13	15	58	60	60	56	17	18
5	61	1.2	60	11	15	15	59	60	59	56	17	18
6	61	1.1	60	11	12	15	59	61	59	56	17	20
7	61	1.1	60	14	6.3	15	60	59	61	56	17	20
8	61	32	61	12	6.6	15	59	59	59	46	17	19
9	61	59	61	11	8.4	15	59	58	59	23	17	22
10	60	60	61	10	17	15	59	58	58	20	17	25
11	59	60	60	10	29	15	59	59	59	20	17	39
12	60	61	60	8.4	24	16	59	60	59	20	16	53
13	60	61	60	6.8	37	20	60	61	59	20	17	53
14	60	60	60	8.3	58	29	60	59	60	20	18	53
15	60	60	60	10	58	60	60	59	60	20	20	52
16	61	60	60	10	39	60	59	58	60	20	19	52
17	61	60	60	11	14	60	58	59	59	20	19	26
18	46	60	60	11	14	60	58	60	58	19	8.8	21
19	61	61	29	12	15	60	59	58	60	19	0	47
20	61	61	15	12	15	60	59	58	60	18	0	47
21	61	61	15	13	14	59	59	58	60	19	0	48
22	61	60	59	9.6	15	59	59	60	60	19	0	48
23	60	60	59	11	15	59	60	60	60	19	0	48
24	59	61	60	11	15	59	60	59	60	19	11	48
25	59	60	59	11	15	58	59	60	60	20	19	47
26	60	61	59	11	15	59	58	59	60	20	19	46
27	60	61	59	10	14	59	60	59	60	19	19	46
28	60	61	58	11	14	58	61	58	60	19	19	46
29	59	60	58	10	---	59	59	59	60	19	18	46
30	36	61	58	9.9	---	58	60	59	60	19	18	47
31	3.4	---	58	9.9	---	58	---	60	---	18	18	---
TOTAL	1701.1	1370.9	1734	492.9	546.3	1234	1773	1837	1787	894	448.8	1109
MEAN	54.9	45.7	55.9	15.9	19.5	39.8	59.1	59.3	59.6	28.8	14.5	37.0
MAX	61	61	62	57	58	60	61	61	61	60	20	53
MIN	3.4	1.1	15	6.8	6.3	14	58	58	58	18	0	18
AC-FT	3370	2720	3440	978	1080	2450	3520	3640	3540	1770	890	2200

CAL YR 1984 TOTAL 18795.21 MEAN 51.4 MAX 66 MIN 0 AC-FT 37280
WTR YR 1985 TOTAL 14928.00 MEAN 40.9 MAX 62 MIN 0 AC-FT 29610

11297500 TUOLUMNE CANAL NEAR LONG BARN, CA

LOCATION.--Lat 38°05'35", long 120°10'03", in SE 1/4 SW 1/4 sec.24, T.3 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 300 ft downstream from intake, 350 ft downstream from Lyons Reservoir on South Fork Stanislaus River, 2 mi west of Long Barn, and 15 mi northeast of Sonora.

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 4,110.0 ft above National Geodetic Vertical Datum of 1929 (river-profile survey). Prior to June 1938, at site 200 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Canal diverts from left bank of South Fork Stanislaus River into Tuolumne River basin for power and domestic supply in vicinity of Sonora. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--48 years, 28.7 ft^3/s, 20,790 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 59 ft^3/s, May 11, 1975; no flow at times in some years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	31	41	39	43	42	43	43	50	50	31	32
2	49	14	41	40	43	42	43	43	51	48	31	33
3	49	20	41	40	42	42	42	44	50	32	31	33
4	49	46	41	40	42	42	42	44	51	32	32	33
5	49	46	42	40	42	42	42	44	53	34	32	32
6	49	48	40	40	42	42	42	44	50	38	32	32
7	48	46	40	40	42	29	43	45	50	31	32	32
8	48	46	40	40	42	43	43	45	50	31	32	32
9	48	46	41	40	42	43	43	45	50	33	32	32
10	48	46	41	40	43	43	43	45	51	32	32	32
11	48	42	40	40	43	43	42	46	51	31	32	32
12	49	40	40	40	42	42	42	46	51	32	32	32
13	50	41	40	40	43	43	42	46	51	32	32	32
14	50	41	40	40	43	43	43	47	51	32	32	32
15	49	41	40	40	42	42	43	45	51	32	32	32
16	49	41	40	40	42	42	43	44	51	31	32	33
17	7.8	37	40	40	41	42	43	44	51	31	33	33
18	0	39	40	40	43	42	42	45	50	32	33	33
19	0	45	41	40	42	42	42	46	50	32	33	32
20	0	32	41	40	42	43	41	48	50	32	33	32
21	6.4	0	41	41	42	42	42	47	49	32	33	32
22	29	0	41	41	30	42	43	47	50	32	32	32
23	32	13	41	41	15	42	43	47	51	32	32	32
24	4.8	34	40	41	42	42	43	45	51	31	32	32
25	0	33	41	41	42	43	42	45	51	31	32	32
26	0	36	37	41	42	43	42	46	51	31	32	31
27	1.8	38	35	41	42	43	42	47	51	31	32	31
28	22	34	35	41	42	43	43	48	50	32	32	31
29	46	40	38	40	42	43	44	49	50	32	32	31
30	45	40	38	40	---	43	44	49	50	32	32	31
31	47	---	38	41	---	43	---	49	---	32	32	---
TOTAL	1022.8	1056	1235	1248	1185	1303	1277	1418	1517	1026	994	961
MEAN	33.0	35.2	39.8	40.3	40.9	42.0	42.6	45.7	50.6	33.1	32.1	32.0
MAX	50	48	42	41	43	43	44	49	53	50	33	33
MIN	0	0	35	39	15	29	41	43	49	31	31	31
AC-FT	2030	2090	2450	2480	2350	2580	2530	2810	3010	2040	1970	1910

CAL YR 1983 TOTAL 15173.8 MEAN 41.6 MAX 53 MIN 0 AC-FT 30100
WTR YR 1984 TOTAL 14242.8 MEAN 38.9 MAX 53 MIN 0 AC-FT 28250

11297500 TUOLUMNE CANAL NEAR LONG BARN, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	29	28	43	18	41	41	47	49	31	33	33
2	30	29	27	43	18	40	41	47	49	32	33	33
3	30	28	27	43	18	40	41	47	49	32	33	33
4	30	28	27	37	18	40	41	46	49	32	33	33
5	30	28	28	28	18	40	42	46	48	33	33	32
6	29	28	28	27	17	40	41	46	49	33	33	32
7	29	28	27	27	15	40	41	45	49	33	33	32
8	29	28	27	27	15	40	41	43	49	33	33	32
9	29	27	27	27	15	40	41	46	49	33	33	32
10	29	27	27	27	15	40	42	46	48	33	33	31
11	29	27	27	27	15	40	42	46	49	33	33	31
12	29	27	27	27	15	40	42	46	49	33	33	30
13	29	28	27	27	15	40	41	47	49	33	33	29
14	29	28	27	27	15	41	41	49	50	33	33	29
15	3.6	28	27	27	15	41	44	46	49	33	33	29
16	0	28	27	27	15	41	44	46	50	33	33	29
17	0	28	27	27	15	40	44	49	50	33	33	29
18	0	27	27	27	16	40	44	46	36	33	32	28
19	8.7	27	27	27	15	40	46	46	29	33	32	27
20	40	27	27	27	15	40	46	46	31	33	32	27
21	40	27	37	26	15	40	46	47	30	33	33	27
22	4.4	27	44	24	15	40	45	49	30	33	34	27
23	0	27	43	22	16	40	44	49	30	33	34	26
24	0	27	43	21	15	40	45	49	30	33	34	25
25	0	27	43	21	22	40	46	49	30	33	33	25
26	6.5	27	43	21	32	40	45	49	31	34	33	25
27	30	27	43	21	34	40	45	48	30	33	34	23
28	30	28	43	21	38	40	47	48	30	33	33	23
29	30	28	42	21	---	40	47	49	30	33	33	23
30	30	28	42	20	---	40	47	49	31	33	33	23
31	30	---	43	19	---	39	---	49	---	33	33	---
TOTAL	665.2	828	1009	836	505	1243	1303	1461	1232	1019	1024	858
MEAN	21.5	27.6	32.5	27.0	18.0	40.1	43.4	47.1	41.1	32.9	33.0	28.6
MAX	40	29	44	43	38	41	47	49	50	34	34	33
MIN	0	27	27	19	15	39	41	43	29	31	32	23
AC-FT	1320	1640	2000	1660	1000	2470	2580	2900	2440	2020	2030	1700

CAL YR 1984 TOTAL 13431.2 MEAN 36.7 MAX 53 MIN 0 AC-FT 26640
WTR YR 1985 TOTAL 11983.2 MEAN 32.8 MAX 50 MIN 0 AC-FT 23770

11298000 SOUTH FORK STANISLAUS RIVER NEAR LONG BARN, CA

LOCATION (REVISED).--Lat 38°05'33", long 120°10'04", in NE 1/4 NW 1/4 sec.25, T.3 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank 600 ft downstream from Lyons Dam, 1.9 mi west of Long Barn, and 15 mi northeast of Sonora.

DRAINAGE AREA.--66.9 mi^2.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 1215: 1938(M).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 4,073.4 ft above National Geodetic Vertical Datum of 1929 (river-profile survey).

REMARKS.--Estimated daily discharges: Nov. 10-25, Jan. 15-23, Mar. 23 to Apr. 10. Flow regulated by Lyons Reservoir 600 ft upstream, capacity, 5,510 acre-ft and Pinecrest Lake, capacity, 18,300 acre-ft. Tuolumne Canal (station 11297500) diverts at Lyons Dam; other diversions, see schematic diagram of Stanislaus River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--48 years, 86.7 ft^3/s, 62,810 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,900 ft^3/s, Nov. 21, 1950, gage height, 9.3 ft, from rating curve extended above 1,100 ft^3/s, on basis of computation of peak flow over Lyons Dam; no flow at times in 1937-39, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 456 ft^3/s, May 24, gage height, 3.89 ft; minimum daily, 1.8 ft^3/s, Jan. 23.

EXTREMES FOR 1984 WATER YEAR (NOT PREVIOUSLY PUBLISHED).--Maximum discharge, 1240 ft^3/s, Dec. 27, gage height, 5.67 ft; minimum daily, 1.8 ft^3/s, Oct. 23, Nov. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.5	62	295	15	27	48	105	602	21	2.4	2.3
2	2.2	2.1	46	201	15	27	41	155	513	11	2.4	2.2
3	2.2	1.8	42	152	13	26	37	182	303	5.2	2.4	2.2
4	2.1	1.8	87	114	11	25	38	392	235	9.9	2.4	2.2
5	2.0	2.4	134	169	9.0	23	38	342	804	5.6	2.4	2.2
6	2.0	2.8	78	107	8.2	37	36	305	542	2.2	2.4	2.2
7	2.0	2.7	63	97	8.2	25	34	321	281	2.2	2.5	2.2
8	2.0	2.6	56	83	7.7	25	51	445	169	2.4	2.4	2.2
9	2.0	2.6	52	68	9.3	26	43	590	199	2.3	2.2	2.2
10	2.0	2.5	64	60	16	27	42	668	225	2.2	2.2	2.2
11	2.0	2.6	201	52	10	25	26	811	206	2.2	2.2	2.3
12	2.0	2.6	184	48	9.7	44	17	821	189	2.2	2.2	2.4
13	2.2	2.4	208	45	26	99	21	949	231	2.2	2.3	2.4
14	2.1	2.5	139	45	49	101	44	730	248	2.2	2.3	2.4
15	2.4	2.4	118	45	51	89	76	408	243	2.3	2.3	2.5
16	2.4	2.4	104	46	136	93	111	302	252	2.4	2.2	2.4
17	2.7	2.4	85	34	76	81	102	357	275	2.4	2.2	2.5
18	2.7	2.8	80	31	61	75	94	468	317	2.4	2.2	2.4
19	2.7	2.4	68	36	53	76	90	661	307	2.4	2.3	2.4
20	2.7	2.5	57	42	46	81	87	708	246	2.0	2.4	2.4
21	2.7	357	51	43	62	78	52	367	109	2.3	2.4	2.4
22	2.0	359	45	40	64	73	76	524	49	2.5	2.4	2.4
23	1.8	207	41	40	77	66	146	726	47	2.2	2.4	2.4
24	2.7	135	43	37	45	65	264	848	103	2.2	2.4	2.4
25	4.0	444	84	36	42	67	271	797	122	2.2	2.4	2.4
26	2.9	724	654	36	37	73	166	761	89	2.7	2.4	2.4
27	2.8	297	1130	34	33	75	123	673	45	2.8	2.4	2.2
28	2.6	176	920	33	30	65	82	701	32	2.3	2.4	2.2
29	2.5	120	529	20	28	65	63	726	36	2.4	2.4	2.3
30	2.6	80	342	16	---	56	68	771	33	2.4	2.3	2.6
31	2.5	---	287	16	---	55	---	623	---	2.4	2.4	---
TOTAL	73.7	2947.8	6054	2121	1048.1	1770	2387	17237	7052	113.1	72.6	69.9
MEAN	2.38	98.3	195	68.4	36.1	57.1	79.6	556	235	3.65	2.34	2.33
MAX	4.0	724	1130	295	136	101	271	949	804	21	2.5	2.6
MIN	1.8	1.8	41	16	7.7	23	17	105	32	2.0	2.2	2.2
AC-FT	146	5850	12010	4210	2080	3510	4730	34190	13990	224	144	139

CAL YR 1983 TOTAL 89888.1 MEAN 246 MAX 1390 MIN 1.8 AC-FT 178300
WTR YR 1984 TOTAL 40946.2 MEAN 112 MAX 1130 MIN 1.8 AC-FT 81220

11298000 SOUTH FORK STANISLAUS RIVER NEAR LONG BARN, CA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.6	2.6	2.4	2.4	2.4	2.2	80	37	2.2	2.4	2.2
2	2.6	2.6	2.6	2.4	2.4	2.4	2.2	113	56	2.2	2.4	2.2
3	2.6	2.5	2.6	2.4	2.4	2.4	2.2	116	43	2.2	2.3	2.4
4	2.6	2.4	2.6	2.4	2.4	2.4	2.2	110	18	2.2	2.2	2.4
5	2.6	2.4	2.5	2.4	2.4	2.4	2.2	89	9.7	2.3	2.2	2.4
6	2.6	2.4	2.4	2.4	2.4	2.4	2.2	107	42	2.5	2.2	2.6
7	2.6	2.6	2.4	2.4	2.4	2.4	2.4	263	130	2.5	2.2	2.4
8	2.6	2.5	2.4	2.4	2.6	2.4	2.2	286	168	2.4	2.2	2.3
9	2.6	2.4	2.4	2.4	2.6	2.4	2.2	237	142	2.4	2.2	2.3
10	2.6	2.4	2.5	2.4	2.5	2.4	2.2	90	58	2.3	2.2	2.1
11	2.6	2.4	2.6	2.4	2.4	2.5	2.4	3.0	17	2.2	2.2	2.1
12	2.6	2.4	2.5	2.4	2.4	2.5	2.5	3.0	9.8	2.2	2.2	2.3
13	2.6	2.4	2.2	2.4	2.4	2.4	2.4	3.0	19	2.2	2.2	2.5
14	2.6	2.4	2.0	2.4	2.4	2.3	2.7	145	16	2.2	2.2	2.5
15	3.3	2.4	2.2	2.4	2.4	2.2	98	354	8.8	2.2	2.2	2.4
16	3.5	2.4	2.4	2.4	2.4	2.2	109	354	7.0	2.2	2.2	2.4
17	3.5	2.4	2.4	2.4	2.4	2.2	93	346	5.9	2.2	2.2	2.3
18	3.5	2.4	2.4	2.4	2.4	2.2	52	349	3.9	2.2	2.2	2.3
19	3.1	2.4	2.4	2.4	2.4	2.2	28	357	2.6	2.3	2.2	2.6
20	1.9	2.4	2.5	2.4	2.4	2.2	15	378	2.2	2.4	2.2	2.6
21	2.9	2.4	2.6	2.4	2.4	2.2	7.2	273	2.2	2.2	2.2	2.6
22	3.7	2.4	2.6	2.4	2.4	2.1	3.1	234	2.2	2.2	2.2	2.6
23	3.5	2.4	2.6	1.8	2.4	2.2	2.3	304	2.2	2.2	2.2	2.6
24	3.5	2.7	2.6	2.2	2.4	2.2	2.5	392	2.2	2.2	2.2	2.5
25	3.5	2.2	2.6	2.2	2.4	2.2	4.3	383	2.2	2.2	2.2	2.3
26	3.3	2.1	2.5	2.3	2.6	2.2	4.7	280	2.2	2.2	2.2	2.0
27	2.7	2.5	2.4	2.4	2.5	2.2	3.8	215	2.2	2.2	2.2	2.4
28	2.7	2.6	2.4	2.4	2.4	2.2	13	200	2.2	2.3	2.2	2.4
29	2.7	2.6	2.4	2.4	---	2.2	38	140	2.2	2.4	2.2	2.5
30	2.7	2.6	2.4	2.4	---	2.2	47	61	2.2	2.4	2.4	2.5
31	2.7	---	2.4	2.4	---	2.4	---	38	---	2.4	2.5	---
TOTAL	89.1	73.3	76.1	73.3	68.0	71.2	553.1	6303.0	817.9	70.4	69.2	71.7
MEAN	2.87	2.44	2.45	2.36	2.43	2.30	18.4	203	27.3	2.27	2.23	2.39
MAX	3.7	2.7	2.6	2.4	2.6	2.5	109	392	168	2.5	2.5	2.6
MIN	1.9	2.1	2.0	1.8	2.4	2.1	2.2	3.0	2.2	2.2	2.2	2.0
AC-FT	177	145	151	145	135	141	1100	12500	1620	140	137	142

CAL YR 1984 TOTAL 32109.2 MEAN 87.7 MAX 949 MIN 1.9 AC-FT 63690
WTR YR 1985 TOTAL 8336.3 MEAN 22.8 MAX 392 MIN 1.8 AC-FT 16540

11299000 NEW MELONES RESERVOIR NEAR SONORA, CA

LOCATION.--Lat 37°57'02", long 120°30'49", in NW 1/4 SE 1/4 sec.11, T.1 N., R.13 E., Tuolumne County, Hydrologic Unit 18040010, at right abutment of New Melones Dam on Stanislaus River, 0.1 mi downstream from the old Melones Dam, and 7.6 mi southwest of Sonora.

DRAINAGE AREA.--904 mi^2.

PERIOD OF RECORD.--1926 (year-end content only, published in WSP 1315-A), June 1927 to current year. Prior to October 1970, published as Melones Reservoir at Melones Dam. October 1970 to September 1978, published as Melones Lake near Sonora.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Feb. 28, 1961, nonrecording gage and Mar. 1, 1961, to Nov. 26, 1978, water-stage recorder at site on left side of old Melones Dam, at same datum.

REMARKS.--Reservoir is formed by earth and rockfill dam completed in November 1978. Dam is downstream from the original concrete dam which was completed in December 1926. Usable capacity 2,420,000 acre-ft between elevations 543.0 ft invert entrance to outlet tunnel, and 1,088.0 ft gross pool elevation. No dead storage. When elevation is above 808.0 ft water is released through a powerplant to Tulloch Reservoir where it is used for irrigation. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

COOPERATION.--Records were provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,400,000 acre-ft, July 8-10, 1983, elevation, 1,086.42 ft; minimum since reservoir first filled in July 1983, 1,508,000 acre-ft, Sept. 30, 1985, elevation, 1,003.99 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,930,000 acre-ft, Apr. 17-20, elevation, 1,045.90 ft; minimum, 1,508,000 acre-ft, Sept. 30, elevation, 1,003.99 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

700	53,900	760	160,500	880	611,500	1,000	1,471,000
710	66,950	780	212,300	900	723,000	1,020	1,662,000
720	81,800	800	272,800	920	846,500	1,040	1,867,000
730	98,530	820	342,400	940	982,600	1,060	2,087,000
740	117,200	840	421,800	960	1,132,000	1,088	2,420,000
750	137,800	860	511,200	980	1,295,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1839000	1825000	1875000	1884000	1866000	1868000	1905000	1921000	1898000	1817000	1663000	1538000
2	1838000	1825000	1877000	1883000	1865000	1870000	1907000	1922000	1896000	1812000	1658000	1537000
3	1837000	1826000	1879000	1883000	1866000	1870000	1910000	1922000	1894000	1807000	1653000	1535000
4	1835000	1826000	1881000	1882000	1866000	1870000	1914000	1922000	1892000	1802000	1648000	1533000
5	1835000	1826000	1882000	1882000	1866000	1870000	1915000	1921000	1889000	1798000	1644000	1531000
6	1834000	1826000	1883000	1881000	1867000	1871000	1916000	1921000	1887000	1793000	1641000	1530000
7	1833000	1826000	1884000	1881000	1866000	1872000	1918000	1920000	1885000	1788000	1636000	1528000
8	1832000	1827000	1886000	1881000	1873000	1872000	1919000	1919000	1885000	1793000	1631000	1526000
9	1830000	1827000	1888000	1881000	1875000	1872000	1920000	1918000	1884000	1778000	1626000	1525000
10	1830000	1828000	1888000	1881000	1877000	1873000	1920000	1916000	1882000	1773000	1622000	1525000
11	1829000	1829000	1890000	1881000	1877000	1875000	1921000	1914000	1880000	1768000	1618000	1524000
12	1828000	1831000	1892000	1880000	1876000	1876000	1921000	1911000	1878000	1762000	1614000	1523000
13	1827000	1836000	1894000	1880000	1876000	1877000	1923000	1910000	1876000	1757000	1609000	1522000
14	1826000	1838000	1895000	1879000	1875000	1878000	1924000	1909000	1873000	1752000	1605000	1522000
15	1825000	1839000	1895000	1879000	1875000	1879000	1927000	1909000	1870000	1747000	1600000	1520000
16	1824000	1842000	1895000	1879000	1873000	1880000	1929000	1909000	1867000	1741000	1596000	1520000
17	1823000	1844000	1895000	1878000	1872000	1881000	1930000	1910000	1863000	1736000	1590000	1519000
18	1822000	1846000	1895000	1878000	1870000	1883000	1930000	1910000	1859000	1732000	1585000	1518000
19	1821000	1847000	1895000	1877000	1870000	1884000	1930000	1911000	1856000	1727000	1580000	1517000
20	1822000	1848000	1894000	1876000	1870000	1885000	1930000	1912000	1853000	1722000	1575000	1516000
21	1823000	1850000	1894000	1875000	1869000	1887000	1928000	1911000	1850000	1717000	1572000	1515000
22	1824000	1852000	1894000	1874000	1869000	1888000	1928000	1911000	1847000	1713000	1568000	1515000
23	1826000	1854000	1892000	1872000	1868000	1890000	1926000	1910000	1844000	1708000	1566000	1514000
24	1826000	1856000	1892000	1871000	1868000	1891000	1926000	1909000	1841000	1703000	1563000	1514000
25	1826000	1859000	1891000	1870000	1867000	1892000	1926000	1909000	1838000	1697000	1559000	1513000
26	1825000	1861000	1890000	1870000	1867000	1894000	1924000	1908000	1835000	1692000	1555000	1512000
27	1826000	1864000	1889000	1869000	1867000	1897000	1923000	1907000	1833000	1688000	1552000	1511000
28	1827000	1868000	1888000	1868000	1868000	1900000	1922000	1906000	1830000	1682000	1549000	1510000
29	1826000	1871000	1887000	1868000	---	1901000	1922000	1905000	1827000	1678000	1546000	1509000
30	1826000	1873000	1886000	1867000	---	1902000	1921000	1903000	1823000	1673000	1542000	1508000
31	1826000	---	1885000	1866000	---	1903000	---	1900000	---	1668000	1540000	---
MAX	1839000	1873000	1895000	1884000	1877000	1903000	1930000	1922000	1898000	1817000	1663000	1538000
MIN	1821000	1825000	1875000	1866000	1865000	1868000	1905000	1900000	1823000	1668000	1540000	1508000
a	1036.07	1040.57	1041.72	1039.95	1040.06	1043.41	1045.06	1043.12	1035.79	1020.57	1007.42	1003.99
b	-15000	+47000	+12000	-19000	+2000	+35000	+18000	-21000	-77000	-155000	-128000	-32000
c	3360	1810	790	580	1490	2110	4710	6670	8510	8550	7510	3940

CAL YR 1984 b -167000
WTR YR 1985 b -333000

[a]Elevation, in feet NGVD, at end of month.
[b]Change in contents, in acre-feet.
[c]Evaporation, in acre-feet.

11299600 BLACK CREEK NEAR COPPEROPOLIS, CA

LOCATION.--Lat 37°57'40", long 120°36'51", in SE 1/4 SE 1/4, sec.2, T.1 N., R.12 E., Calaveras County, Hydrologic Unit 18040010, on left bank 100 ft upstream from O'Byrnes Ferry Road bridge, 1,300 ft upstream from Copper Creek, and 2.1 mi southeast of Copperopolis.

DRAINAGE AREA.--14.4 mi^2.

PERIOD OF RECORD.--August 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 746.13 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion above station. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,290 ft^3/s, Nov. 24, 1983, gage height, 6.34 ft, from rating curve extended above 240 ft^3/s on basis of contracted-opening measurement of peak flow; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 13	0230	119	3.22	Feb. 8	1230	*965	*4.64
Nov. 27	2115	925	4.50	Mar. 10	1800	88	3.09
Dec. 15	2030	213	3.45	Mar. 28	0215	94	3.12

No flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	7.0	2.8	2.3	3.0	9.4	1.9	.70			
2	0	.02	5.6	2.7	6.0	5.3	7.8	1.8	1.3			
3	0	.25	8.5	2.6	5.2	3.8	6.8	1.7	1.3			
4	0	.18	6.0	2.5	4.6	3.5	6.3	1.7	.65			
5	0	.16	5.1	2.5	4.1	3.9	5.9	1.7	.36			
6	0	.17	4.5	2.5	3.9	7.1	5.3	1.6	.23			
7	0	.19	4.0	5.0	4.2	33	4.9	1.7	.15			
8	0	1.3	3.7	4.4	548	11	4.6	1.6	.11			
9	0	.78	3.3	3.5	104	8.2	4.2	1.5	.08			
10	0	.46	12	3.0	39	27	4.1	1.5	.05			
11	0	.66	6.5	2.8	24	28	3.9	1.7	.03			
12	0	.50	5.6	2.8	17	19	3.6	1.6	.01			
13	0	30	4.8	2.7	13	14	3.4	1.5	0			
14	0	3.4	4.3	2.6	11	11	3.2	1.3	0			
15	0	1.6	41	2.6	10	9.6	3.0	1.2	0			
16	.26	2.1	41	2.6	8.9	8.1	3.0	1.2	0			
17	.77	1.7	16	2.4	7.8	7.1	3.5	1.2	0			
18	.35	3.1	12	2.3	6.8	11	3.3	1.3	0			
19	.27	2.0	9.7	2.2	6.3	8.1	2.9	1.3	0			
20	.14	1.7	7.5	2.2	5.5	6.8	2.8	1.1	0			
21	.11	2.6	6.2	2.3	5.0	6.0	3.2	.98	0			
22	.06	1.9	5.6	2.3	4.8	5.4	2.9	.87	0			
23	0	1.7	5.0	2.3	4.5	4.7	2.5	.80	0			
24	0	66	4.7	2.2	4.0	4.6	2.2	.80	0			
25	0	11	4.5	2.1	4.0	4.5	2.0	.73	0			
26	0	5.0	4.2	2.1	3.8	10	2.1	.70	0			
27	0	125	3.9	2.0	3.7	44	2.0	.75	0			
28	0	114	3.6	3.9	3.4	56	2.0	.97	0			
29	0	17	3.4	3.4	---	22	1.9	.96	0			
30	0	10	3.0	2.6	---	14	1.9	.81	0			
31	0	---	3.0	2.3	---	11	---	.64	---			
TOTAL	1.96	404.47	255.2	84.2	864.8	410.7	114.6	39.11	4.97	0	0	0
MEAN	.063	13.5	8.23	2.72	30.9	13.2	3.82	1.26	.17	0	0	0
MAX	.77	125	41	5.0	548	56	9.4	1.9	1.3	0	0	0
MIN	0	0	3.0	2.0	2.3	3.0	1.9	.64	0	0	0	0
AC-FT	3.9	802	506	167	1720	815	227	78	9.9	0	0	0

CAL YR 1984 TOTAL 2121.71 MEAN 5.80 MAX 125 MIN 0 AC-FT 4210
WTR YR 1985 TOTAL 2180.01 MEAN 5.97 MAX 548 MIN 0 AC-FT 4320

11299995 TULLOCH RESERVOIR NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°52'34", long 120°36'12", in Rancheria Del Rio Estanislao Grant, T.1 S., R.12 E., Tuolumne County, Hydrologic Unit 18040010, in center of Tulloch Dam on Stanislaus River, 1.9 mi upstream from Goodwin Dam, and 5.3 mi northeast of Knights Ferry.

DRAINAGE AREA.--980 mi^2.

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

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.--Reservoir is formed by gravity-type concrete dam completed in October 1957. Usable capacity, 56,840 acre-ft between elevations 431.0 ft normal minimum water surface, and 511.0 ft top of radial gates. Dead storage, 11,560 acre-ft. Reservoir is used for irrigation and power. Water passes down Stanislaus River, some first passing through Tulloch powerplant at dam. Part of flow is diverted at Goodwin Dam to Oakdale Canal (station 11301000) and South San Joaquin Canal (station 11300500). Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 69,500 acre-ft, Jan. 7, 1965, elevation, 512.0 ft; minimum, 4,580 acre-ft, Oct. 3, 1960, elevation, 404.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 66,100 acre-ft, Oct. 3, 4, May 14, 15, and July 18, elevation, 509.6 ft; minimum, 57,600 acre-ft, Dec. 3, 8, 9, elevation, 502.1 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

404	4,580	460	23,600
411	6,020	475	33,100
420	8,200	490	45,300
430	11,100	512	69,500
445	16,400		

CONTENTS, IN ACRE-FEET, AT 2400 HOURS, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65700	62700	58400	58700	58200	59500	60100	62600	65200	65200	65100	64900
2	66000	62800	57900	58800	59000	59100	60200	62400	65000	65400	65500	64900
3	66100	62300	57600	58700	59000	58800	59800	62600	65000	65700	65400	64900
4	66100	61800	57700	58700	59100	58700	58200	62600	65100	65500	65500	64900
5	65600	61800	57800	58400	59100	58600	58600	62600	65500	65400	65800	65000
6	65000	62000	57900	58400	58500	58800	58400	62700	65800	65200	64700	65100
7	65000	62100	58000	58500	58200	59200	58400	62800	65800	65200	65400	65400
8	65100	62200	57600	58500	60900	59300	59400	62900	65500	65200	65600	65600
9	65100	62300	57600	58600	60200	59300	60400	62600	65100	65200	65700	65700
10	65100	62300	59500	58600	58200	59600	61000	63300	65000	65100	65100	65600
11	65200	61800	59300	58500	58200	60200	61800	64500	65100	65000	65000	65400
12	65500	61400	59000	58400	58000	60200	62800	65500	65100	65600	65000	65200
13	65600	61300	58500	58400	58000	60300	63000	65700	65200	65700	65200	65200
14	65600	60800	58500	58500	58000	60000	63400	66100	65000	65800	65500	65100
15	65000	60300	60300	58500	58300	59500	63300	66100	64900	65800	65700	65100
16	64700	59900	60200	58500	58600	59400	63200	66000	64900	66000	65500	65100
17	63900	59400	57800	58400	59300	60000	63200	65600	65000	66000	65600	65200
18	62900	59500	59200	58200	59500	60000	63300	65200	65200	66100	65700	65000
19	62600	59600	58600	58000	58700	60200	62700	64600	65200	65600	65400	65000
20	62600	59800	58300	57900	58600	59800	62300	64400	65400	65400	65400	65200
21	62100	59300	57900	58400	58400	59400	62400	64900	65200	65100	65200	65400
22	61600	58800	58000	58600	58400	59200	62600	65100	65500	65000	65100	65400
23	61100	58400	58000	58600	58400	59000	62900	65500	65600	65000	65100	65200
24	61700	59000	58200	58800	58500	58800	62600	65800	65800	65200	65100	65200
25	62200	58500	58300	58800	58500	58600	62200	65700	65800	65200	65100	65200
26	62700	58000	58300	58700	59100	58700	62200	65700	65800	65100	65400	65200
27	62200	59400	58400	58600	59900	59000	62300	65800	65700	65100	65200	65200
28	61700	59500	58500	58800	59800	59400	62600	66000	65500	65000	65200	65200
29	62200	59200	58500	58500	---	59600	62700	66000	65100	65000	65400	65200
30	62600	58800	58600	58500	---	59800	62600	65700	64700	64900	65100	65100
31	62700	---	58600	58200	---	59900	---	65500	---	64900	65200	---
MAX	66100	62800	60300	58800	60900	60300	63400	66100	65800	66100	65800	65700
MIN	61100	58000	57600	57900	58000	58600	58200	62400	64700	64900	64700	64900
a	506.5	503.2	503.0	502.6	504.0	504.1	506.4	508.8	508.2	508.3	508.6	508.5
b	-2800	-3900	-200	-400	+1600	+100	+2700	+2900	-800	+200	+300	-100

CAL YR 1984 b -700
WTR YR 1985 b -400

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°52'34", long 120°36'15", in Rancheria del Rio Estanislao Grant, T.1 S., R.12 E., on Calaveras-Tuolumne County line, Hydrologic Unit 18040010, temperature recorder in south corner of Tulloch powerplant at downstream side of Tulloch Dam, 5.2 mi northeast of Knights Ferry.

DRAINAGE AREA.--980 mi².

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1972 to current year.

INSTRUMENTATION.--Temperature recorder since June 1972.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1973-85): Maximum recorded, 27.5°C, Aug. 30, 1977; minimum recorded, 5.0°C, Jan. 13, 1973.

EXTREMES FOR CURRENT YEAR.
WATER TEMPERATURES: Maximum recorded, 13.0°C, Sept. 30; minimum recorded, 9.5°C, many days during January and February.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.5	12.5	12.5	12.0	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0
2	12.5	12.5	12.0	12.0	12.0	12.0	10.5	10.0	10.0	9.5	10.5	10.0
3	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	10.0	9.5	10.5	10.5
4	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
5	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
6	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
7	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
8	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
9	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
10	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
11	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
12	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
13	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
14	12.5	12.5	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
15	12.5	12.5	12.5	12.0	11.5	11.5	10.0	10.0	9.5	9.5	10.5	10.5
16	12.5	12.5	12.5	12.0	11.5	11.5	10.0	10.0	9.5	9.5	10.5	10.5
17	12.5	12.5	12.5	12.0	11.5	11.0	10.0	10.0	9.5	9.5	10.5	10.5
18	12.5	12.5	12.5	12.0	11.0	11.0	10.0	10.0	9.5	9.5	10.5	10.5
19	12.5	12.5	12.5	12.0	11.0	11.0	10.0	10.0	10.0	9.5	10.5	10.5
20	12.5	12.0	12.5	12.5	11.0	11.0	10.0	10.0	10.0	9.5	10.5	10.5
21	12.5	12.0	12.5	12.5	11.0	11.0	10.0	10.0	10.0	9.5	10.5	10.5
22	12.5	12.0	12.5	12.5	11.0	11.0	10.0	10.0	10.0	10.0	10.5	10.5
23	12.5	12.0	12.5	12.0	11.0	11.0	10.0	10.0	10.0	10.0	10.5	10.5
24	12.0	12.0	12.0	12.0	11.0	10.5	10.0	10.0	10.0	10.0	10.5	10.5
25	12.5	12.0	12.5	12.0	10.5	10.5	10.0	9.5	10.0	10.0	10.5	10.5
26	12.0	12.0	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0	10.5	10.5
27	12.0	12.0	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0	10.5	10.5
28	12.0	12.0	12.5	12.0	10.5	10.5	10.0	10.0	10.5	10.0	10.5	10.5
29	12.0	12.0	12.0	12.0	10.5	10.5	10.0	10.0	---	---	10.5	10.5
30	12.5	12.0	12.0	12.0	10.5	10.5	10.0	10.0	---	---	10.5	10.5
31	12.5	12.0	---	---	10.5	10.5	10.0	10.0	---	---	10.5	10.5
MONTH	12.5	12.0	12.5	12.0	12.0	10.5	10.5	9.5	10.5	9.5	10.5	10.0

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.5	10.5	10.5	10.5	11.5	11.5	12.0	12.0	11.5	11.5	12.0	12.0
2	10.5	10.5	10.5	10.5	11.5	11.5	12.0	11.5	11.5	11.5	12.0	12.0
3	10.5	10.5	10.5	10.5	11.5	11.5	11.5	11.5	11.5	11.5	12.0	12.0
4	10.5	10.5	10.5	10.5	11.5	11.5	11.5	11.5	11.5	11.5	12.5	12.0
5	10.5	10.5	10.5	10.5	11.5	11.5	11.5	11.0	11.5	11.5	12.5	12.0
6	10.5	10.5	10.5	10.5	11.5	11.5	11.0	10.5	11.5	11.5	12.5	12.0
7	10.5	10.5	11.0	10.5	11.5	11.5	10.5	10.5	11.5	11.5	12.5	12.0
8	11.0	10.5	11.0	11.0	11.5	11.5	10.5	10.5	11.5	11.5	12.5	12.0
9	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	11.5	11.5	12.5	12.5
10	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	11.5	11.5	12.5	12.5
11	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	11.5	11.5	12.5	12.5
12	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	12.0	11.5	12.5	12.5
13	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	12.0	11.5	12.5	12.5
14	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	12.0	11.5	12.5	12.5
15	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	12.0	11.5	12.5	12.5
16	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	12.0	12.0	12.5	12.5
17	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	12.0	12.0	12.5	12.5
18	10.5	10.5	11.0	11.0	11.5	11.5	10.5	10.5	12.0	12.0	12.5	12.5
19	10.5	10.5	11.0	11.0	12.0	11.5	10.5	10.5	12.0	12.0	12.5	12.5
20	10.5	10.5	11.0	11.0	12.0	12.0	11.0	10.5	12.0	12.0	12.5	12.5
21	10.5	10.5	11.0	11.0	12.0	12.0	11.0	10.5	12.0	12.0	12.5	12.5
22	10.5	10.5	11.0	11.0	12.0	12.0	11.0	11.0	12.0	12.0	12.5	12.5
23	10.5	10.5	11.0	11.0	12.0	12.0	11.0	11.0	12.0	12.0	12.5	12.5
24	10.5	10.5	11.0	11.0	12.0	12.0	11.0	11.0	12.0	12.0	12.5	12.5
25	10.5	10.5	11.0	11.0	12.0	12.0	11.0	11.0	12.0	12.0	12.5	12.5
26	10.5	10.5	11.5	11.0	12.0	12.0	11.0	11.0	12.0	12.0	12.5	12.5
27	10.5	10.5	11.5	11.0	12.0	12.0	11.0	11.0	12.0	12.0	12.5	12.5
28	10.5	10.5	11.5	11.5	12.0	12.0	11.0	11.0	12.0	12.0	12.5	12.5
29	10.5	10.5	11.5	11.5	12.0	12.0	11.5	11.0	12.0	12.0	12.5	12.5
30	10.5	10.5	11.5	11.5	12.0	12.0	11.5	11.0	12.0	12.0	13.0	12.5
31	---	---	11.5	11.5	---	---	11.5	11.0	12.0	12.0	---	---
MONTH	11.0	10.5	11.5	10.5	12.0	11.5	12.0	10.5	12.0	11.5	13.0	12.0
YEAR	13.0	9.5										

11300500 SOUTH SAN JOAQUIN CANAL NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°51'16", long 120°38'14", in Rancheria Del Rio Estanislao Grant, Calaveras County, Hydrologic Unit 18040010, on left bank 0.8 mi downstream from headgate at Goodwin Dam, and 3.0 mi northeast of Knights Ferry.

PERIOD OF RECORD.--May 1914 to current year. Monthly and yearly discharge only for some periods, published in WSP 1315-A.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 334.18 ft above National Geodetic Vertical Datum of 1929 (levels by Oakdale Irrigation District). Prior to Mar. 12, 1915, nonrecording gage 100 ft downstream. Mar. 12, 1915, to July 1, 1921, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Oct. 1-31, Mar. 1-31. Records good. Canal diverts from right bank of Stanislaus River at Goodwin Dam for irrigation in Oakdale and South San Joaquin Irrigation Districts. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--71 years, 440 ft^3/s, 318,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,320 ft^3/s, Aug. 10-17, 1978; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	467	1.9	1.9	1.5	0	196	565	1140	1080	1100	1130	648
2	395	1.9	1.9	1.6	0	271	567	1170	1080	1100	1080	646
3	395	1.9	1.9	8.8	0	315	723	1170	1080	1100	1030	644
4	395	1.9	1.9	2.4	1.4	350	832	1180	1050	1100	1030	641
5	395	1.9	1.9	2.4	1.4	475	953	1180	1010	1100	1050	638
6	395	1.9	1.9	2.4	309	570	983	1180	988	1100	1120	594
7	395	1.8	1.8	2.5	588	571	1020	1180	985	1100	1140	556
8	370	2.4	1.7	2.4	592	449	1060	1180	984	1170	1090	555
9	363	2.3	1.7	1.6	589	351	1100	1160	983	1190	1000	469
10	363	2.2	1.7	0	589	351	1100	1130	982	1190	963	421
11	340	2.3	1.7	0	589	252	1100	1130	982	1190	959	421
12	327	2.3	1.7	0	588	171	1100	1130	983	1190	951	421
13	330	2.3	1.2	0	588	172	1100	1090	985	1190	927	412
14	333	2.3	.10	0	588	215	1100	1050	1080	1190	928	407
15	21	2.3	.41	.10	588	284	1110	1050	1150	1180	926	407
16	3.5	2.3	.18	.22	588	283	851	1010	1150	1130	924	406
17	2.9	2.3	.30	.14	588	283	1070	972	1190	1130	921	406
18	2.6	2.3	1.7	0	588	282	1070	973	1210	1050	919	404
19	2.6	2.3	1.7	0	589	279	1110	973	1180	1130	837	403
20	2.3	2.3	1.5	0	619	339	1110	973	1180	1130	813	379
21	2.3	2.3	1.5	.20	679	389	1110	995	1170	1140	782	361
22	2.2	2.2	1.5	.37	679	389	1040	1010	1170	1130	760	361
23	1.9	2.1	1.5	.33	679	389	895	1020	1170	1130	758	361
24	1.7	2.3	1.5	.25	680	389	924	1020	1130	1130	756	360
25	1.8	2.1	1.5	0	681	463	927	1020	1080	1140	754	359
26	2.0	2.2	1.5	0	449	480	928	1020	1080	1130	731	359
27	2.0	2.4	1.5	0	167	191	930	1020	1080	1130	699	359
28	1.7	2.1	1.5	0	169	190	932	1020	1080	1130	682	359
29	1.5	1.9	1.5	0	---	385	980	1040	1090	1130	680	358
30	1.8	1.9	1.6	0	---	556	1070	1070	1100	1130	676	354
31	2.0	---	1.6	0	---	555	---	1070	---	1130	659	---
TOTAL	5318.8	64.6	45.49	27.21	12765.8	10835	29360	33326	32462	35210	27675	13469
MEAN	172	2.15	1.47	.88	456	350	979	1075	1082	1136	893	449
MAX	467	2.4	1.9	8.8	681	571	1110	1180	1210	1190	1140	648
MIN	1.5	1.8	.10	0	0	171	565	972	982	1050	659	354
AC-FT	10550	128	90	54	25320	21490	58240	66100	64390	69840	54890	26720

CAL YR 1984 TOTAL 234657.89 MEAN 641 MAX 1220 MIN 0 AC-FT 465400
WTR YR 1985 TOTAL 200558.90 MEAN 549 MAX 1210 MIN 0 AC-FT 397800

11300600 SOUTH SAN JOAQUIN CANAL BELOW DIVISION POINT, NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°49'54", long 120°40'24", in Rancheria del Rio Estanislao Grant, Stanislaus County, Hydrologic Unit 18040002, on left bank 600 ft downstream from division point, and 0.85 mi north of Knights Ferry.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 325 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Aug. 13 to Sept. 11. Records good. Canal diverts 600 ft upstream from South San Joaquin Canal (station 11300500) for irrigation in South San Joaquin Irrigation District. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 890 ft^3/s, Apr. 19, 1983; no flow for many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	247	0	0	0	0	196	555	761	672	733	775	382
2	9.3	0	.01	0	.08	271	555	800	673	727	723	383
3	9.2	0	.14	.22	0	315	720	801	672	728	671	383
4	9.1	0	0	.16	0	350	854	801	645	726	671	383
5	9.0	0	0	0	0	475	821	800	581	726	689	383
6	8.9	0	0	0	293	570	837	799	550	726	769	384
7	16	.02	0	.40	601	571	840	799	548	725	788	291
8	21	.14	0	.21	617	449	843	799	547	799	680	291
9	23	0	0	.09	604	351	845	774	546	822	605	203
10	23	0	.21	0	602	351	846	746	547	822	605	184
11	16	0	0	0	601	252	848	742	547	823	606	184
12	9.7	.03	0	0	601	171	848	739	548	823	600	185
13	7.9	.59	0	0	600	172	849	700	549	823	601	183
14	7.7	0	0	0	600	215	850	659	650	824	600	183
15	.90	0	.61	0	600	284	853	658	739	810	600	184
16	.49	.29	.02	0	599	283	534	591	738	767	601	184
17	.28	0	0	0	599	283	841	537	779	767	601	184
18	0	.18	0	0	598	282	833	537	818	679	602	184
19	0	0	0	0	598	279	838	537	821	763	495	184
20	0	.14	0	0	632	339	782	537	819	763	492	162
21	0	.16	0	0	706	389	783	568	818	763	642	138
22	0	0	0	0	706	389	709	600	818	763	433	137
23	0	0	0	0	707	389	525	600	817	763	435	137
24	0	.76	0	0	708	389	535	600	777	763	435	137
25	0	.06	0	0	709	463	540	600	720	765	435	137
26	0	0	0	0	466	480	540	600	719	776	435	137
27	0	.19	0	0	141	191	540	600	719	776	388	137
28	0	.13	0	.32	142	190	541	601	718	776	385	138
29	0	0	0	.04	---	385	598	631	730	776	385	138
30	0	0	0	0	---	556	692	668	741	776	385	136
31	0	---	0	0	---	555	---	672	---	776	387	---
TOTAL	418.47	2.69	0.99	1.44	13030.08	10835	21795	20857	20566	23849	17519	6456
MEAN	13.5	.090	.032	.046	465	350	726	673	686	769	565	215
MAX	247	.76	.61	.40	709	571	854	801	821	824	788	384
MIN	0	0	0	0	0	171	525	537	546	679	385	136
AC-FT	830	5.3	2.0	2.9	25850	21490	43230	41370	40790	47300	34750	12810

CAL YR 1984 TOTAL 159468.27 MEAN 436 MAX 848 MIN 0 AC-FT 316300
WTR YR 1985 TOTAL 135330.67 MEAN 371 MAX 854 MIN 0 AC-FT 268400

11300700 SOUTH SAN JOAQUIN CANAL BELOW WOODWARD RESERVOIR, NEAR OAKDALE, CA

LOCATION.--Lat 37°51'38", long 120°52'45", in Eight Square Leagues On Stanislaus River Grant, Stanislaus County, Hydrologic Unit 18040002, on left bank 500 ft downstream from Woodward Reservoir, and 7.0 mi north of Oakdale.

PERIOD OF RECORD.--July 1982 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 175 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Canal diverts from right bank of Stanislaus River 500 ft downstream from Woodward Reservoir for irrigation in South San Joaquin Irrigation District. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 934 ft^3/s, July 15, 1984; no flow at times each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	361	0	0	0	0	187	244	627	472	573	511	403
2	330	0	.90	.58	0	227	330	677	455	656	581	353
3	345	0	20	1.1	0	282	422	696	445	752	613	400
4	408	0	0	1.6	.39	427	439	708	429	814	617	350
5	406	0	0	2.1	0	434	460	648	437	863	699	309
6	404	0	0	.35	0	409	466	645	469	919	675	247
7	403	0	0	3.3	0	370	450	647	454	827	595	254
8	404	0	0	0	9.6	319	480	643	474	811	500	203
9	399	0	0	1.6	0	308	572	645	500	697	538	184
10	395	0	0	0	0	246	608	591	493	702	591	181
11	373	0	0	0	0	128	670	574	418	721	596	160
12	366	0	0	0	0	119	694	563	619	716	622	273
13	355	21	0	0	0	174	723	562	726	662	660	286
14	349	47	0	0	0	277	742	543	762	648	663	186
15	343	1.3	0	0	0	261	731	402	828	737	684	220
16	334	.93	0	0	0	248	689	489	808	784	681	226
17	347	0	0	0	0	265	649	493	805	692	617	245
18	383	17	0	0	0	290	568	480	734	617	498	205
19	365	0	0	0	.09	282	480	510	651	536	401	161
20	383	0	1.2	0	147	321	454	534	588	591	396	171
21	389	0	2.8	0	175	302	440	530	555	611	416	196
22	341	0	5.9	0	119	328	464	556	596	622	469	208
23	99	0	7.4	0	99	361	493	558	586	667	435	240
24	54	22	6.0	0	98	371	409	527	597	719	409	279
25	4.9	3.0	0	0	100	460	445	557	702	778	282	286
26	0	0	2.5	0	102	499	418	505	699	844	334	289
27	0	5.6	4.2	0	103	274	545	528	649	834	372	271
28	0	19	6.6	0	137	259	596	534	583	737	350	239
29	0	39	9.6	0	---	229	614	583	588	658	359	184
30	0	.58	11	0	---	202	604	628	574	611	338	138
31	0	---	7.7	0	---	208	---	542	---	477	422	---
TOTAL	8340.9	176.41	85.80	10.63	1090.08	9067	15899	17725	17696	21876	15924	7347
MEAN	269	5.88	2.77	.34	38.9	292	530	572	590	706	514	245
MAX	408	47	20	3.3	175	499	742	708	828	919	699	403
MIN	0	0	0	0	0	119	244	402	418	477	282	138
AC-FT	16540	350	170	21	2160	17980	31540	35160	35100	43390	31590	14570

CAL YR 1984 TOTAL 145749.12 MEAN 398 MAX 934 MIN 0 AC-FT 289100
WTR YR 1985 TOTAL 115237.82 MEAN 316 MAX 919 MIN 0 AC-FT 228600

11300800 NORTH MAIN CANAL BELOW DIVISION POINT, NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°50'01", long 120°40'21", in Rancheria del Rio Estanislao Grant, Stanislaus County, Hydrologic Unit 18040002, on left bank at Parshall flume, 600 ft downstream from division point and 1.0 mi north of Knights Ferry.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 310 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Canal diverts 600 ft upstream from South San Joaquin Canal (station 11300500) for irrigation in Oakdale Irrigation District. See schematic diagram of Stanislaus River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 410 ft^3/s, June 18, 19, 1984; no flow for many days from October through April 1983.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214	1.7	.15	.04	.02	.03	.15	393	397	361	360	276
2	369	1.7	.16	.03	.03	.03	.15	391	396	366	360	277
3	368	1.7	.19	.42	.03	.03	6.5	391	397	366	359	277
4	368	1.7	.15	.09	.04	.04	22	393	398	364	360	277
5	368	1.7	.15	.09	.05	.07	179	394	398	363	360	277
6	367	1.7	.15	.09	.05	.10	210	396	396	363	359	276
7	362	1.8	.15	.10	.05	.11	240	396	396	363	361	275
8	349	2.1	.15	.09	1.1	.04	282	396	396	364	361	276
9	340	1.8	.22	.09	.06	.03	326	396	396	367	361	261
10	340	2.0	.28	.06	.05	.05	326	394	393	368	361	241
11	324	1.8	.09	.03	.05	.03	325	394	393	369	360	242
12	317	1.8	.09	.03	.05	.02	325	393	393	369	355	242
13	322	3.4	.09	.02	.05	.01	325	391	393	369	342	236
14	325	2.5	.39	.02	.05	.01	324	391	392	369	343	231
15	20	2.4	3.4	.02	.07	.02	325	391	391	368	344	231
16	3.0	2.7	3.3	.02	.09	.03	342	393	394	368	344	231
17	2.7	2.5	.91	.03	.09	.03	281	393	378	367	344	231
18	2.6	2.9	.09	.02	.09	.06	284	393	378	367	344	229
19	2.6	2.6	.09	.02	.09	.03	328	392	348	367	332	228
20	2.3	2.7	.07	.02	.12	.04	375	394	348	367	331	225
21	2.3	2.9	.05	.02	.15	.07	375	396	348	367	328	226
22	2.2	2.5	.05	.02	.18	.09	374	394	346	367	330	228
23	1.9	2.5	.05	.02	.23	.09	376	394	345	368	332	228
24	1.7	6.1	.05	.02	.23	.09	386	394	346	369	331	228
25	1.8	3.1	.05	.14	.24	.11	385	393	347	368	332	228
26	2.0	2.8	.05	.03	.16	.24	386	391	347	362	333	231
27	2.0	3.8	.05	.03	.03	.09	385	391	350	362	317	231
28	1.7	4.5	.05	.60	.03	.04	385	391	351	362	302	231
29	1.5	2.2	.05	.25	---	.04	385	391	353	359	303	232
30	1.8	.15	.05	.09	---	.12	387	394	355	359	298	229
31	2.0	---	.05	.04	---	.15	---	398	---	360	279	---
TOTAL	4787.1	73.75	10.82	2.59	3.48	1.94	8649.80	12192	11259	11328	10526	7331
MEAN	154	2.46	.35	.084	.12	.063	288	393	375	365	340	244
MAX	369	6.1	3.4	.60	1.1	.24	387	398	398	369	361	277
MIN	1.5	.15	.05	.02	.02	.01	.15	391	345	359	279	225
AC-FT	9500	146	21	5.1	6.9	3.8	17160	24180	22330	22470	20880	14540

CAL YR 1984	TOTAL	75612.24	MEAN	207	MAX	410	MIN	.02	AC-FT	150000
WTR YR 1985	TOTAL	66165.48	MEAN	181	MAX	398	MIN	.01	AC-FT	131200

11301000 OAKDALE CANAL NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°51'32", long 120°37'56", in SW 1/4 SE 1/4 sec.10, T.1 S., R.12 E., Tuolumne County, Hydrologic Unit 18040010, on left bank 0.3 mi downstream from headgate at Goodwin Dam, and 3.4 mi northeast of Knights Ferry.

PERIOD OF RECORD.--May 1914 to current year. Records for water years 1933-36 incomplete, monthly and yearly estimates published in WSP 1315-A.

GAGE.--Water-stage recorder. Elevation of gage is 350 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Apr. 29, 1916, nonrecording gage at site 1,000 ft upstream at different datum. Apr. 29, 1916, to July 3, 1925, nonrecording gage and July 4, 1925, to Apr. 3, 1949, water-stage recorder at present site at datum 0.18 ft higher.

REMARKS.--Estimated daily discharges: Dec. 18 to Apr. 9. Records good above 8.7 ft^3/s and poor below. Canal diverts water from left bank of Stanislaus River at Goodwin Dam 0.3 mi upstream for irrigation in Oakdale Irrigation District. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--71 years, 170 ft^3/s, 123,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 556 ft^3/s, July 8-11, 1967; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	435	0	0	0	0		0	495	493	489	473	375
2	419	0	.03	0	0		0	494	473	489	472	371
3	414	0	.18	0	0		0	494	474	489	472	371
4	414	0	.16	0	.45		0	494	480	489	471	365
5	413	0	.11	0	.45		0	493	472	488	473	359
6	407	0	.11	0	.45		0	492	490	488	472	357
7	388	0	.04	0	.52		0	490	491	488	471	355
8	379	0	0	0	.81		0	489	491	487	471	347
9	372	0	0	0	.61		0	491	484	486	471	337
10	358	0	.03	0	.55		144	495	476	486	471	319
11	334	0	.04	0	.53		226	492	481	486	471	314
12	318	0	0	0	.49		226	472	487	486	460	311
13	310	.09	0	0	.49		255	462	489	483	415	311
14	310	0	0	.34	.49		275	460	489	462	415	311
15	2.8	0	.08	.34	.49		290	452	490	474	418	311
16	.09	0	0	.34	.49		302	466	490	484	423	311
17	0	0	.01	.34	.49		301	499	488	483	423	310
18	0	.01	0	.34	.49		325	499	479	483	416	310
19	0	0	0	.34	.49		363	499	451	480	410	310
20	0	0	0	.34	.49		372	499	451	478	410	310
21	0	0	0	.34	.49		373	498	451	477	404	310
22	0	0	0	.35	.49		374	498	451	476	399	310
23	0	0	0	.48	.49		376	498	451	476	399	310
24	0	.25	0	.45	.49		407	499	450	476	399	310
25	0	.01	0	.46	.49		421	504	451	476	399	310
26	0	0	0	.45	.49		433	511	451	475	399	310
27	0	.15	0	0	.49		455	511	450	475	394	310
28	0	.34	0	0	0		467	511	450	475	389	310
29	0	.14	0	0	---		478	506	458	475	389	310
30	0	.06	0	0	---		494	500	468	474	384	307
31	0	---	0	0	---		---	495	---	474	377	---
TOTAL	5273.89	1.05	0.79	4.91	12.21	0	7357	15258	14150	14907	13310	9762
MEAN	170	.035	.025	.16	.44	0	245	492	472	481	429	325
MAX	435	.34	.18	.48	.81	0	494	511	493	489	473	375
MIN	0	0	0	0	0	0	0	452	450	462	377	307
AC-FT	10460	2.1	1.6	9.7	24	0	14590	30260	28070	29570	26400	19360

CAL YR 1984 TOTAL 98171.00 MEAN 268 MAX 522 MIN 0 AC-FT 194700
WTR YR 1985 TOTAL 80036.85 MEAN 219 MAX 511 MIN 0 AC-FT 158800

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA

LOCATION.--Lat 37°51'06", long 120°38'13", in Rancheria del Rio Estanislao Grant, Calaveras County, Hydrologic Unit 18040010, on right bank 250 ft upstream from Owl Creek, 0.9 mi downstream from Goodwin Dam, and 2.9 mi northeast of Knights Ferry.

DRAINAGE AREA.--986 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1957 to current year. Records equivalent to those published as Stanislaus River at Knights Ferry, 1903-14, and as Stanislaus River near Knights Ferry, 1915-32, if adjusted for diversions in Stanislaus and San Joaquin Water Company's canal and Oakdale and South San Joaquin canals.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 252.83 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by New Melones Reservoir (station 11299000) since 1978 and Tulloch Reservoir (station 11299995). South San Joaquin Canal (station 11300500) and Oakdale Canal (station 11301000) divert at Goodwin Dam. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--28 years, 806 ft^3/s, 583,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,200 ft^3/s, Dec. 24, 1964, gage height, 28.85 ft in gage well, 31.2 ft outside, from floodmarks; minimum daily, 0.12 ft^3/s, Feb. 8, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 23, 1955, reached a stage of 37.7 ft, from floodmarks, discharge, 62,900 ft^3/s, by computation of flow over Goodwin Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,440 ft^3/s, Jan. 31, gage height, 11.49 ft; minimum daily, 162 ft^3/s, June 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	353	229	226	1250	1010	506	209	673	525	1320	1270	278
2	339	230	226	1250	671	507	210	673	537	1330	1260	283
3	339	230	226	1090	502	504	217	673	520	1330	1260	283
4	338	230	226	993	502	500	278	681	525	1340	1270	285
5	338	229	226	993	503	502	452	670	431	1330	1120	277
6	334	230	225	992	541	501	669	675	257	1330	531	268
7	340	232	213	995	502	505	691	676	165	1330	1240	261
8	339	248	214	980	535	510	688	678	163	1280	1270	249
9	338	237	214	661	515	499	678	671	162	1290	1280	260
10	337	239	219	694	508	503	667	653	200	1300	1300	259
11	345	238	217	753	502	510	670	508	230	1300	1280	264
12	349	239	216	752	502	505	671	382	335	1310	1280	267
13	353	244	210	752	503	502	661	362	427	1320	1280	275
14	422	236	221	753	503	504	653	318	458	1340	1290	281
15	1430	236	838	754	504	505	668	267	614	1310	1290	282
16	1610	232	1250	754	505	396	663	228	613	1300	1290	256
17	1610	223	1240	754	506	351	656	209	623	1300	1290	211
18	1600	225	1250	846	496	354	660	212	566	1320	1300	212
19	1180	223	1250	1010	504	244	660	210	383	1330	1260	211
20	289	223	1260	1010	504	208	652	208	362	1320	1250	219
21	210	233	1270	1010	509	209	645	204	324	1310	1280	226
22	210	237	1260	1010	505	209	648	203	325	1280	1270	226
23	226	237	1260	1010	505	207	662	208	327	1270	1270	226
24	230	246	1260	1010	506	207	672	216	318	1300	1270	225
25	227	239	1260	1020	506	206	674	213	324	1320	1270	226
26	228	217	1250	1010	508	210	672	205	324	1320	1270	225
27	229	236	1250	1020	508	219	673	205	323	1320	985	226
28	228	236	1250	1020	503	213	684	211	321	1320	794	225
29	228	227	1250	1010	---	213	674	215	815	1320	780	224
30	229	226	1250	1020	---	208	673	355	1290	1320	644	222
31	229	---	1250	1170	---	209	---	524	---	1320	264	---
TOTAL	15057	6987	23977	29346	14868	11426	18050	12386	12787	40730	35708	7432
MEAN	486	233	773	947	531	369	602	400	426	1314	1152	248
MAX	1610	248	1270	1250	1010	510	691	681	1290	1340	1300	285
MIN	210	217	210	661	496	206	209	203	162	1270	264	211
AC-FT	29870	13860	47560	58210	29490	22660	35800	24570	25360	80790	70830	14740

CAL YR 1984 TOTAL 336151 MEAN 918 MAX 5380 MIN 127 AC-FT 666800
WTR YR 1985 TOTAL 228754 MEAN 627 MAX 1610 MIN 162 AC-FT 453700

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: February 1966 to current year.

INSTRUMENTATION.--Temperature recorder since February 1966.

REMARKS.--Temperature recorder located 2,300 ft upstream from gaging station.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1967-85): Maximum recorded, 30.5°C, July 25, 1974; minimum recorded, 5.5°C, Feb. 3, 1972.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 14.5°C, July 1, minimum recorded, 9.0°C, Feb. 9-11.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.5	13.0	13.0	12.5	12.5	12.0	10.5	10.0	10.0	9.5	10.5	10.5
2	13.5	13.0	13.0	13.0	12.0	12.0	10.5	10.0	10.0	9.5	10.5	10.5
3	13.5	13.0	13.0	13.0	12.0	12.0	10.5	10.0	9.5	9.5	10.5	10.0
4	13.5	13.0	13.0	12.5	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
5	13.5	13.0	13.0	12.5	12.5	12.0	10.0	10.0	9.5	9.5	10.5	10.5
6	13.5	13.0	13.0	13.0	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
7	13.5	13.0	13.0	12.5	12.0	12.0	10.0	10.0	9.5	9.5	10.5	10.5
8	13.5	13.0	13.0	12.5	12.0	12.0	10.0	10.0	9.5	9.5	11.0	10.5
9	13.5	13.0	12.5	12.0	12.0	12.0	10.0	10.0	9.5	9.0	11.0	10.5
10	13.5	13.0	12.5	12.5	12.5	12.0	10.0	10.0	9.5	9.0	11.0	11.0
11	13.5	13.0	12.5	12.5	12.5	12.0	10.0	10.0	9.5	9.0	11.0	10.5
12	13.5	13.0	12.5	12.5	12.0	12.0	10.0	10.0	10.0	9.5	11.0	11.0
13	13.5	13.0	12.5	12.5	12.0	11.5	10.0	10.0	10.0	9.5	11.5	11.0
14	13.5	13.0	12.5	12.5	11.5	11.0	10.0	10.0	10.0	9.5	11.5	11.0
15	13.0	12.5	12.5	12.0	11.5	11.0	10.0	10.0	10.0	9.5	11.5	11.0
16	13.0	12.5	12.5	12.5	11.5	11.5	10.0	10.0	10.0	9.5	11.5	11.0
17	13.0	12.5	12.5	12.0	11.5	11.5	10.0	9.5	10.0	9.5	11.5	11.0
18	13.0	12.5	13.0	12.5	11.5	11.5	10.0	9.5	10.0	9.5	11.5	11.0
19	13.0	13.0	12.5	12.5	11.5	11.0	10.0	10.0	10.0	9.5	11.0	11.0
20	13.0	13.0	12.5	12.5	11.0	11.0	10.0	10.0	10.0	9.5	11.5	11.0
21	13.0	12.5	12.5	12.0	11.0	11.0	10.0	9.5	10.0	9.5	11.5	11.0
22	13.0	12.5	12.0	12.0	11.0	11.0	10.0	9.5	10.5	10.0	11.5	11.0
23	13.0	12.5	12.0	12.0	11.0	10.5	10.0	10.0	10.5	9.5	11.5	11.0
24	13.0	13.0	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0	11.5	11.0
25	13.0	13.0	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0	11.0	11.0
26	13.0	13.0	12.0	11.5	10.5	10.5	10.0	10.0	10.5	10.0	11.0	10.5
27	13.0	12.5	12.0	12.0	10.5	10.5	10.0	9.5	11.0	10.5	11.0	10.5
28	12.5	12.5	12.0	12.0	10.5	10.5	10.0	9.5	11.0	10.5	11.5	11.0
29	13.0	12.5	12.0	12.0	10.5	10.5	10.0	9.5	---	---	12.0	11.5
30	13.0	13.0	12.0	12.0	10.5	10.5	10.0	9.5	---	---	12.0	11.0
31	13.0	13.0	---	---	10.5	10.5	10.0	9.5	---	---	12.5	11.5
MONTH	13.5	12.5	13.0	11.5	12.5	10.5	10.5	9.5	11.0	9.0	12.5	10.0

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.5	11.5	12.5	12.0	12.5	11.5	14.5	13.5	13.5	12.5	12.5	12.0
2	13.0	12.0	12.5	12.0	12.0	12.0	14.0	13.5	13.5	12.5	12.5	12.0
3	13.0	12.0	12.5	12.0	12.5	12.0	14.0	13.0	13.5	12.5	12.5	12.0
4	12.5	11.5	12.5	12.0	13.0	12.0	14.0	13.0	13.5	12.5	12.5	12.0
5	12.5	11.5	12.5	12.0	12.5	12.0	14.0	13.0	13.5	12.5	12.5	12.0
6	12.0	11.5	12.5	12.0	13.0	11.5	13.5	13.0	13.0	12.0	12.5	12.0
7	12.0	11.5	12.5	11.5	13.0	12.0	13.5	13.0	13.5	12.5	12.5	12.0
8	12.5	11.5	12.5	11.5	13.0	12.0	13.5	13.0	13.5	12.5	12.5	12.0
9	12.5	11.5	12.5	11.5	13.0	12.0	13.5	13.0	13.0	12.5	12.0	12.0
10	12.5	11.5	12.0	11.5	13.0	12.0	13.0	13.0	13.0	12.5	12.0	11.5
11	12.5	11.5	12.0	11.5	13.0	12.0	13.0	13.0	13.0	12.5	12.0	11.5
12	12.5	11.5	12.0	11.5	12.5	12.0	13.5	13.0	13.0	12.5	12.5	11.5
13	12.5	11.5	12.0	11.5	13.0	12.0	13.5	12.5	13.0	12.5	12.5	12.0
14	12.5	11.5	12.0	11.5	13.0	12.0	13.5	12.5	13.0	12.5	12.5	12.0
15	12.0	11.5	12.0	11.5	13.5	12.5	13.5	12.5	13.0	12.5	12.5	12.0
16	11.5	11.5	12.0	11.5	13.5	12.5	13.0	12.5	13.0	12.5	12.5	12.0
17	12.0	11.5	12.0	11.0	13.5	12.5	13.5	12.5	12.5	12.5	12.5	12.0
18	12.0	11.5	12.0	11.0	13.5	12.5	13.0	12.5	13.0	12.5	13.0	12.0
19	12.0	11.5	12.5	11.0	13.0	12.5	13.0	12.5	13.0	12.5	12.5	12.0
20	11.5	11.5	12.5	11.5	13.0	12.5	13.0	12.5	13.0	12.0	12.5	12.0
21	12.0	11.5	12.5	11.5	13.0	12.5	13.5	12.5	13.0	12.0	13.0	12.0
22	12.0	11.5	12.5	11.5	13.0	12.5	13.5	12.5	13.0	12.0	13.0	12.0
23	12.0	11.0	12.5	11.5	13.0	12.5	13.5	12.5	13.0	12.0	13.0	12.5
24	12.0	11.0	12.5	11.5	13.0	12.5	13.5	12.5	13.0	12.0	13.0	12.5
25	12.0	11.0	12.5	11.5	13.0	12.0	13.5	12.5	13.0	12.0	13.0	12.5
26	12.0	11.0	12.5	11.5	13.0	12.0	13.5	12.5	13.0	12.0	13.0	12.5
27	12.5	11.5	12.5	11.5	13.0	12.0	13.5	12.5	12.5	12.0	13.0	12.5
28	12.5	11.5	12.5	11.5	13.0	12.5	13.5	12.5	12.5	11.5	12.5	12.5
29	12.5	11.5	12.5	11.5	13.5	12.0	13.5	12.5	12.0	11.5	12.5	12.0
30	12.5	11.5	12.5	11.0	14.0	13.5	13.5	12.5	12.5	12.0	12.5	12.0
31	---	---	12.0	11.5	---	---	13.5	12.5	12.5	12.0	---	---
MONTH	13.0	11.0	12.5	11.0	14.0	11.5	14.5	12.5	13.5	11.5	13.0	11.5
YEAR	14.5	9.0										

11303000 STANISLAUS RIVER AT RIPON, CA

LOCATION.--Lat 37°43'47", long 121°06'34", in NW 1/4 SE 1/4 sec.29, T.2 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on left bank 15 ft downstream from railroad bridge, 1.1 mi southeast of Ripon, and 15 mi upstream from mouth.

DRAINAGE AREA.--1,075 mi^2.

PERIOD OF RECORD.--October 1940 to current year. April to September 1940 in reports of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is 0.72 ft above National Geodetic Vertical Datum of 1929. October 1940 to Nov. 17, 1953, at site 100 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by reservoirs and powerplants above station (see REMARKS for station 11302000). South San Joaquin and Oakdale Canals (stations 11300500, 11301000) divert at Goodwin Dam 34 mi upstream. Diversions for irrigation of 57,250 acres in vicinity of Oakdale. See schematic diagram of Stanislaus River basin.

AVERAGE DISCHARGE.--45 years, 1,044 ft^3/s, 756,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,500 ft^3/s, Dec. 24, 1955, gage height, 63.25 ft; minimum daily, 0.11 ft^3/s, Aug. 4-6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 12, 1938, reached a stage of 64.4 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,810 ft^3/s, Oct. 19, gage height, 44.45 ft; minimum daily, 325 ft^3/s, Dec. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	880	376	357	1280	1180	680	372	826	650	1130	1340	619
2	712	366	347	1290	1110	656	369	856	725	1260	1310	551
3	682	362	361	1280	903	659	372	895	778	1270	1300	516
4	680	358	388	1200	731	709	368	869	743	1290	1290	510
5	722	354	358	1110	693	671	394	923	736	1320	1300	487
6	787	352	341	1100	678	656	555	929	666	1320	1230	491
7	792	353	336	1100	692	663	759	864	689	1350	859	478
8	738	366	329	1110	695	666	804	861	475	1360	1200	487
9	676	367	325	1080	1030	656	775	918	417	1350	1280	475
10	618	357	332	901	815	670	772	920	427	1290	1290	488
11	690	359	367	855	711	740	762	888	363	1310	1320	499
12	731	355	367	889	680	662	809	820	382	1340	1360	466
13	712	385	341	885	665	647	805	777	450	1380	1370	486
14	709	418	330	880	656	676	838	661	567	1410	1320	495
15	752	405	332	881	653	658	837	610	554	1420	1300	472
16	1240	372	712	881	647	632	843	542	696	1330	1320	488
17	1580	366	1200	878	641	582	841	518	764	1350	1360	462
18	1690	359	1210	878	637	578	875	500	758	1370	1390	415
19	1790	369	1230	928	629	545	912	518	747	1350	1410	399
20	1620	351	1230	1060	629	484	931	508	612	1370	1390	401
21	1020	349	1250	1080	705	423	946	461	601	1370	1320	413
22	821	349	1260	1080	745	393	951	455	546	1370	1290	426
23	707	352	1260	1090	696	421	893	461	543	1330	1320	414
24	540	364	1260	1090	696	428	838	447	536	1300	1300	411
25	484	459	1270	1100	685	391	861	419	470	1310	1310	403
26	444	420	1270	1100	671	353	941	479	473	1330	1310	383
27	410	368	1270	1100	659	421	864	482	476	1350	1320	381
28	394	376	1270	1100	658	425	887	406	522	1370	1150	409
29	387	416	1280	1100	---	462	939	406	538	1390	969	423
30	379	397	1280	1100	---	425	867	418	698	1360	925	444
31	371	---	1280	1100	---	387	---	483	---	1370	848	---
TOTAL	24758	11200	24743	32506	20590	17419	22980	20120	17602	41420	39001	13792
MEAN	799	373	798	1049	735	562	766	649	587	1336	1258	460
MAX	1790	459	1280	1290	1180	740	951	929	778	1420	1410	619
MIN	371	349	325	855	629	353	368	406	363	1130	848	381
AC-FT	49110	22220	49080	64480	40840	34550	45580	39910	34910	82160	77360	27360

CAL YR 1984 TOTAL 416517 MEAN 1138 MAX 5100 MIN 325 AC-FT 826200
WTR YR 1985 TOTAL 286131 MEAN 784 MAX 1790 MIN 325 AC-FT 567500

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA
(National stream-quality accounting network station)

LOCATION.--Lat 37°40'34", long 121°15'55", in El Pescadero Grant, San Joaquin County, Hydrologic Unit 18040003, on left bank 12 ft downstream from Durham Ferry highway bridge, 2.6 mi downstream from Stanislaus River, and 3.2 mi northeast of Vernalis.

DRAINAGE AREA.--13,536 mi^2, includes about 2,100 mi^2 in James Bypass.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1922 to current year (1922-23 and 1925-29, low-water records only).

REVISED RECORDS.--WSP 831: 1936. WSP 931: 1940. WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. See WSP 2130 for history of changes prior to Nov. 30, 1967.

REMARKS.--Estimated daily discharges: Feb. 28 to Mar. 7, May 23 to June 1, June 8-21. Records good, except for periods of estimated record, which are fair. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, and diversions for irrigation; low flows consist mainly of return flow from irrigated areas.

AVERAGE DISCHARGE.--57 years (water years 1924, 1930-85), 4,755 ft^3/s, 3,445,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 79,000 ft^3/s, Dec. 9, 1950, elevation, 32.81 ft present datum, including flow through breaks in levee; maximum elevation, 34.55 ft Jan. 27, 1969; minimum discharge, 19 ft^3/s, Aug. 10, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,920 ft^3/s, Dec. 20, elevation, 14.91 ft; minimum daily, 1,280 ft^3/s, June 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3280	2980	3530	4710	4070	2720	3180	2320	1920	2040	2690	2130
2	3180	2920	3250	5100	4000	2490	2850	2330	2140	2430	2790	1980
3	3190	2740	3140	4590	3710	2310	2480	2320	2450	2400	2740	1890
4	3260	2650	3320	5090	3160	2270	2180	2260	2360	2460	2780	1880
5	3370	2590	4470	5040	2810	2340	1980	2380	2260	2480	2770	1750
6	3520	2570	4770	4740	3290	2510	1900	2550	2230	2540	2570	1770
7	3680	2550	4730	4140	3370	2670	2160	2380	2110	2520	2180	1780
8	3710	2620	4440	3710	3410	2720	2360	2290	1810	2660	1990	1960
9	3620	2670	4260	4110	3910	2640	2270	2270	1720	2650	2290	2150
10	3560	2610	4070	4090	4670	2680	2150	2350	1780	2490	2330	2170
11	3640	2610	3720	3960	3660	3190	2150	2350	1670	2540	2620	2170
12	3800	2570	4700	3970	3310	3100	2180	2490	1570	2660	2780	2070
13	3890	2570	4890	3860	3670	2990	2320	2580	1510	2630	2660	1950
14	4110	2610	5000	3470	3550	3050	2370	2420	1560	2730	2550	1930
15	4110	2610	5060	3340	3380	3010	2510	2260	1580	2860	2400	1870
16	4150	2620	5000	4010	3260	2850	2340	2150	1610	2650	2380	1920
17	5000	2670	5170	4080	3060	2800	2340	2100	1840	2460	2530	1930
18	5480	2620	4760	4060	2760	2820	2560	2040	1760	2540	2790	1830
19	5540	2590	5660	4060	2490	2850	2720	2020	1720	2490	3000	1780
20	5400	2570	5790	3980	2460	2790	2760	2150	1760	2440	2890	1710
21	4690	2580	5730	3640	2890	2710	2780	2040	1720	2530	2760	1840
22	4050	2630	5690	3420	3170	2520	2920	1920	1660	2640	2720	1900
23	3790	2880	5450	4010	3170	2430	2770	1810	1590	2600	2650	1900
24	3700	3110	4980	4090	3050	2450	2540	1740	1650	2520	2690	1840
25	3420	3280	4540	4120	2760	2540	2460	1700	1560	2420	2800	1850
26	3280	3430	5030	4080	2450	2320	2630	1750	1410	2440	2870	1870
27	3220	3430	4610	3870	2640	2610	2700	1860	1280	2580	2770	1900
28	3290	3450	5560	3500	2630	2880	2460	1870	1280	2650	2650	1920
29	3150	3440	5760	3320	---	3070	2540	1820	1440	2770	2440	2050
30	3100	3500	5660	3850	---	3260	2430	1780	1480	2730	2290	2060
31	3060	---	5170	4000	---	3230	---	1800	---	2730	2250	---
TOTAL	118240	84670	147910	126010	90760	84820	73990	66100	52430	79280	80620	57750
MEAN	3814	2822	4771	4065	3241	2736	2466	2132	1748	2557	2601	1925
MAX	5540	3500	5790	5100	4670	3260	3180	2580	2450	2860	3000	2170
MIN	3060	2550	3140	3320	2450	2270	1900	1700	1280	2040	1990	1710
AC-FT	234500	167900	293400	249900	180000	168200	146800	131100	104000	157300	159900	114500

CAL YR 1984 TOTAL 2204110 MEAN 6022 MAX 32800 MIN 1710 AC-FT 4372000
WTR YR 1985 TOTAL 1062580 MEAN 2911 MAX 5790 MIN 1280 AC-FT 2108000

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER-QUALITY DATA

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL ANALYSES: Water years 1951 to current year.
BIOLOGICAL DATA: Water years 1974-81.
SPECIFIC CONDUCTANCE: Water years 1951-63, 1973-81, June to September 1985.
WATER TEMPERATURES: Water years 1951 to current year.
SUSPENDED SEDIMENT DISCHARGE: Water years 1957 to current year.
TURBIDITY: Water years 1972-84.

PERIOD OF DAILY RECORD.--
CHEMICAL ANALYSES: March 1951 to May 1963.
SPECIFIC CONDUCTANCE: March 1951 to May 1963, January 1973 to October 1981.
WATER TEMPERATURES: March 1951 to current year.
SUSPENDED SEDIMENT DISCHARGE: November 1956 to current year.

INSTRUMENTATION.--Conductivity recorder January 1973 to October 1981. Temperature recorder October 1961 to September 1963, and since December 1972.

REMARKS.--Mean daily specific conductance records January 1973 to October 1981, provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,350 microsiemens, Aug. 11, 1961; minimum daily, 60 microsiemens, June 21, 1953.
WATER TEMPERATURES: Maximum recorded, 30.0°C, July 7, 1970, July 30, 1977; minimum recorded, 3.0°C, Jan. 24, 1962.
SEDIMENT CONCENTRATION: Maximum daily mean, 1,590 mg/L, Dec. 25, 1964; minimum daily mean, 9 mg/L, Jan. 4, 1960, Nov. 18, 1961.
SEDIMENT LOAD: Maximum daily, 54,100 tons, Dec. 25, 1964; minimum daily, 2 tons, Aug. 10, 1961.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 774 microsiemens, June 28; minimum recorded, 435 microsiemens, Aug. 3.
WATER TEMPERATURES: Maximum recorded, 28.0°C, June 27; minimum recorded, 8.5°C, several days from December through February.
SEDIMENT CONCENTRATION: Maximum daily mean, 179 mg/L, June 12; minimum daily mean, 22 mg/L, Jan. 22.
SEDIMENT LOAD: Maximum daily, 1,610 tons, Oct. 18; minimum daily, 203 tons, Jan. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	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 (MG/L AS CACO3)
NOV												
16...	1100	2570	490	7.6	13.0	765	12	8.9	84	--	--	130
JAN												
15...	1215	3310	616	7.4	9.5	765	4.8	9.5	83	K70	K40	140
FEB												
25...	1315	2700	645	7.6	15.5	760	8.0	9.8	99	K110	K150	160
MAY												
14...	1130	2420	658	7.9	20.0	750	33	8.0	90	K320	110	170
JUN												
28...	0930	1260	652	8.1	24.5	760	--	6.5	78	--	--	200
JUL												
16...	1250	2700	514	7.8	23.5	760	40	10.0	118	140	410	--
30...	1430	2780	531	7.9	21.5	760	--	7.7	88	--	--	120
AUG												
13...	0900	2760	484	7.8	19.5	760	--	7.2	79	--	--	120
26...	1000	2910	532	7.9	20.0	765	--	7.4	81	--	--	120
SEP												
10...	1210	2200	609	8.0	19.5	765	32	9.4	102	>200	780	150
25...	0830	1850	560	7.7	21.0	760	--	6.7	76	--	--	140

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV												
16...	36	28	14	62	51	2	3.1	--	95	92	67	67
JAN												
15...	43	30	15	71	53	3	2.3	--	94	94	78	83
FEB												
25...	70	35	17	77	51	3	2.5	107	88	86	110	81
MAY												
14...	65	38	18	75	49	3	3.2	127	104	105	96	89
JUN												
28...	77	44	21	89	49	3	3.3	--	120	120	97	110
JUL												
16...	--	--	--	--	--	--	2.6	112	92	91	59	60
30...	40	28	13	59	50	2	2.8	--	84	84	64	68
AUG												
13...	18	27	12	51	48	2	2.7	--	99	99	53	59
26...	25	27	12	51	48	2	2.8	--	92	92	55	59
SEP												
10...	35	34	16	69	49	3	4.1	142	116	121	72	78
25...	26	31	15	62	48	2	3.4	--	113	113	49	65

See footnotes at end of table.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

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)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 DISSOLVED (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)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
NOV												
16...	<.10	17	314	310	.43	2180	1.6	.330	1.2	.300	.190	.180
JAN												
15...	<.10	16	370	350	.50	3310	1.3	.290	.70	.170	.110	.110
FEB												
25...	<.10	14	403	390	.55	2940	1.7	.320	--	--	.130	.140
MAY												
14...	.10	17	407	400	.55	2660	1.9	.090	1.2	.260	.160	.130
JUN												
28...	.10	20	455	460	.62	1540	2.0	.140	.90	.300	.190	.190
JUL												
16...	<.10	--	293	--	.40	2140	1.3	.060	.80	.270	.160	.120
30...	.10	17	313	300	.43	2350	1.3	.140	1.1	.200	.140	.120
AUG												
13...	<.10	16	271	280	.37	2020	1.2	.110	.80	.350	.100	.080
26...	.10	17	280	280	.38	2200	1.2	.080	1.3	.250	.140	.120
SEP												
10...	.10	21	373	370	.51	2220	1.8	.100	1.0	.330	.170	.140
25...	.10	20	322	310	.44	1610	1.6	.120	.90	.320	.160	.190

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	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											
16...	1100	40	2	53	<.5	--	2	1	<3	3	50
FEB											
25...	1315	20	<1	47	<.5	--	2	<1	<3	1	12
MAY											
14...	1130	10	<1	53	<.5	--	<1	<1	<3	2	27
JUN											
28...	0930	--	2	67	<.5	390	<1	<1	--	2	12
JUL											
16...	1250	30	1	--	--	--	--	1	--	4	--
30...	1430	<10	5	48	<.5	170	<1	<1	--	1	21
AUG											
13...	0900	20	2	38	<.5	220	<1	<1	--	1	28
26...	1000	20	2	45	<.5	230	<1	<1	--	2	21
SEP											
10...	1210	10	2	54	<.5	--	<1	<1	<3	2	17
25...	0830	10	2	54	<.5	170	<1	<1	--	3	19

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											
16...	4	11	57	<.1	<10	2	<1	<1	330	<6	19
FEB											
25...	<1	9	42	<.1	<10	<1	2	<1	400	<6	20
MAY											
14...	<1	14	27	<.1	<10	1	1	<1	420	<6	11
JUN											
28...	<2	14	52	<.1	2	<2	1	<2	--	--	<3
JUL											
16...	1	--	--	<.1	--	2	<1	<1	--	--	--
30...	1	9	34	<.1	2	<1	<1	<1	--	--	6
AUG											
13...	3	8	19	<.1	3	<1	1	<1	--	--	--
26...	2	9	21	<.1	2	3	<1	<1	--	--	<3
SEP											
10...	<1	7	38	<.1	<10	1	1	<1	390	<6	5
25...	<1	8	30	<.1	2	5	<1	<1	--	--	6

K Results based on colony count outside the acceptable range (non-ideal colony count).
> Actual value is known to be greater than the value shown.
< Actual value is known to be less than the value shown.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1			---	---	12.0	12.0	9.5	9.0	9.5	8.5	14.5	13.0
2			---	---	12.0	11.5	9.0	8.5	10.0	9.0	13.5	11.5
3			---	---	12.0	11.5	9.0	8.5	10.0	9.0	12.0	10.5
4			---	---	11.5	11.5	9.0	8.5	10.0	9.5	12.5	11.0
5			---	---	12.0	11.5	9.0	9.0	10.0	9.0	12.0	11.5
6			---	---	12.5	12.0	9.0	9.0	9.5	9.0	12.0	11.0
7			---	---	12.0	11.5	10.0	9.0	9.5	9.5	12.5	11.0
8			---	---	12.0	11.5	11.0	10.0	10.0	9.5	13.0	11.5
9			---	---	12.5	12.0	11.0	10.5	10.5	9.5	13.5	11.5
10			---	---	13.0	12.5	11.0	10.0	10.0	9.5	14.0	13.0
11			---	---	13.0	12.5	10.5	10.0	10.5	9.5	14.0	13.0
12			---	---	13.0	12.0	10.0	10.0	11.0	9.5	15.0	13.5
13			---	---	12.0	11.0	9.5	9.0	12.0	10.5	15.5	14.0
14			---	---	11.0	10.0	9.5	9.0	12.0	11.0	16.0	14.5
15			---	---	10.0	10.0	9.0	9.0	13.0	11.5	16.5	15.0
16			---	---	10.0	10.0	9.0	9.0	13.5	12.0	16.5	15.0
17			---	---	10.0	9.0	9.0	8.5	13.5	12.5	16.0	15.0
18			---	---	10.0	9.0	8.5	8.5	14.0	12.5	16.0	15.0
19			---	---	10.0	9.5	9.0	8.5	14.0	13.0	16.0	15.0
20			---	---	10.5	10.0	9.0	8.5	13.5	12.5	16.0	14.5
21			---	---	10.5	10.5	8.5	8.5	12.5	11.5	15.5	14.5
22			---	---	10.5	10.0	9.0	8.5	12.5	11.5	15.5	14.0
23			---	---	10.5	10.0	9.0	8.5	13.0	11.5	16.5	14.5
24			---	---	10.0	9.5	9.0	9.0	13.5	12.0	15.5	14.5
25			---	---	9.5	9.0	9.5	9.0	14.0	13.0	15.0	13.5
26			---	---	9.5	9.0	9.5	9.5	14.5	13.0	14.0	12.5
27			---	---	9.5	8.5	10.5	9.5	14.5	13.5	13.0	12.0
28			---	---	9.5	9.0	10.5	10.0	14.5	13.5	13.5	12.5
29			12.0	11.5	9.5	9.5	10.0	9.5	---	---	14.0	12.5
30			12.0	11.5	10.0	9.5	9.5	9.0	---	---	15.0	13.0
31			---	---	10.0	9.5	9.5	8.5	---	---	16.5	14.5
MONTH			---	---	13.0	8.5	11.0	8.5	14.5	8.5	16.5	10.5

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	15.5	21.5	19.5	---	---	26.0	23.0	23.5	19.0	---	---
2	19.5	17.0	21.0	19.5	---	---	26.0	22.5	25.0	19.5	---	---
3	20.5	18.5	20.5	19.0	21.0	18.0	26.0	22.5	26.5	20.0	---	---
4	20.5	19.0	19.5	18.0	22.5	19.5	26.0	22.5	26.5	21.0	---	---
5	21.5	19.0	20.0	18.0	24.0	21.0	26.0	22.5	24.5	20.5	---	---
6	21.5	19.5	20.5	18.5	25.0	22.0	25.5	22.5	24.0	21.0	---	---
7	21.0	19.5	20.5	18.5	---	---	25.0	21.5	25.0	21.0	---	---
8	21.0	19.0	20.0	18.0	---	---	26.0	21.5	24.0	21.0	---	---
9	21.0	19.0	19.5	18.0	---	---	26.5	22.5	23.5	20.5	---	---
10	20.5	19.0	18.0	17.0	---	---	24.5	22.0	24.0	20.0	---	---
11	20.5	18.5	18.5	16.5	---	---	23.0	21.0	23.5	20.5	---	---
12	20.5	18.5	19.5	17.0	---	---	24.5	20.0	23.5	20.5	---	---
13	21.5	19.0	21.0	18.5	---	---	25.5	20.5	24.0	20.0	---	---
14	22.5	20.0	22.0	19.5	---	---	26.0	21.5	23.5	19.0	---	---
15	22.5	21.0	22.0	20.0	---	---	25.5	22.0	22.0	20.0	---	---
16	20.5	19.5	---	---	---	---	25.5	22.0	21.5	20.0	---	---
17	19.5	18.5	---	---	---	---	25.0	21.5	20.5	19.5	---	---
18	19.5	17.5	---	---	---	---	25.0	21.5	20.5	19.0	---	---
19	19.0	17.5	---	---	26.5	23.5	24.5	21.5	21.0	19.0	---	---
20	18.0	17.0	---	---	27.0	22.0	22.5	21.0	21.5	20.0	---	---
21	17.5	16.0	---	---	27.0	23.5	24.0	20.0	21.5	20.0	22.5	20.0
22	18.0	16.0	---	---	26.5	23.5	25.0	21.0	21.5	20.0	22.5	20.0
23	19.5	17.0	---	---	27.0	23.0	25.5	21.5	21.5	20.0	22.5	19.5
24	19.0	17.5	---	---	26.0	22.5	26.5	22.0	22.0	20.5	22.5	19.5
25	18.0	16.0	---	---	25.5	22.5	26.0	22.5	22.5	20.5	22.0	19.0
26	16.5	14.5	---	---	27.0	22.5	26.0	22.0	---	---	---	---
27	18.5	15.5	---	---	28.0	24.0	26.5	22.0	---	---	---	---
28	20.0	17.5	---	---	27.5	25.0	25.5	21.5	---	---	---	---
29	20.0	18.5	---	---	26.5	23.5	24.0	20.0	---	---	---	---
30	21.0	18.5	---	---	26.5	23.0	24.0	19.5	---	---	---	---
31	---	---	---	---	---	---	23.5	19.0	---	---	---	---
MONTH	22.5	14.5	---	---	---	---	26.5	19.0	26.5	19.0	---	---

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	85	753	91	732	80	762	56	712	34	374	72	529
2	86	738	114	899	82	720	47	647	33	356	76	511
3	96	827	90	666	61	517	47	582	41	411	70	437
4	80	704	92	658	78	699	50	687	26	222	78	478
5	83	755	89	622	130	1570	48	653	29	220	54	341
6	81	770	70	486	124	1600	64	819	54	480	55	373
7	75	745	82	565	116	1480	55	615	40	364	66	476
8	102	1020	66	467	79	947	44	441	47	433	97	712
9	143	1400	93	670	93	1070	56	621	45	475	99	706
10	94	904	95	669	74	813	48	530	91	1150	66	478
11	75	737	94	662	83	834	57	609	95	939	93	801
12	77	790	76	527	100	1270	60	643	98	876	171	1430
13	77	809	64	444	84	1110	48	500	93	922	153	1240
14	82	910	65	458	87	1170	48	450	85	815	107	881
15	90	999	75	529	90	1230	30	271	79	721	107	870
16	103	1150	80	566	80	1080	43	466	70	616	109	839
17	113	1530	69	497	87	1210	39	430	75	620	106	801
18	109	1610	69	488	80	1030	34	373	71	529	96	731
19	95	1420	61	427	89	1360	30	329	77	518	91	700
20	101	1470	69	479	77	1200	27	290	71	472	102	768
21	94	1190	60	418	78	1210	25	246	77	601	100	732
22	90	984	59	419	67	1030	22	203	70	599	91	619
23	101	1030	81	630	69	1020	28	303	68	582	98	643
24	94	939	99	831	71	955	29	320	66	544	101	668
25	103	951	85	753	77	944	27	300	49	365	95	652
26	104	921	101	935	64	869	34	375	67	443	97	608
27	104	904	73	676	50	622	28	293	77	549	99	698
28	112	995	82	764	62	931	28	265	81	575	109	848
29	98	833	74	687	64	995	26	233	---	---	103	854
30	84	703	87	822	52	795	34	353	---	---	121	1070
31	89	735	---	---	50	698	31	335	---	---	113	985
TOTAL	---	30226	---	18446	---	31741	---	13894	---	15771	---	22479

DAY	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN-TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	118	1010	94	589	142	736	130	716	90	654	129	742
2	108	831	96	604	143	826	114	748	99	746	128	684
3	114	763	85	532	112	741	110	713	101	747	112	572
4	109	642	88	537	94	599	138	917	103	773	103	523
5	105	561	104	668	114	696	126	844	108	808	107	506
6	82	421	94	647	145	873	131	898	91	631	93	444
7	93	542	94	604	158	900	123	837	89	524	94	452
8	101	644	76	470	151	738	120	862	97	521	95	503
9	75	460	74	454	161	748	119	851	100	618	98	569
10	105	610	102	647	163	783	136	914	98	617	100	586
11	125	726	83	527	157	708	139	953	105	743	88	516
12	120	706	98	524	179	759	127	912	120	901	83	464
13	112	702	99	690	171	697	124	881	121	869	87	458
14	116	742	124	810	152	640	124	914	112	771	79	412
15	108	732	127	775	160	683	117	903	102	661	79	399
16	104	657	131	760	151	656	109	780	99	636	77	399
17	109	689	141	799	152	755	131	870	104	710	94	490
18	118	816	153	843	150	713	126	864	109	821	84	415
19	116	852	130	709	169	785	122	820	101	818	82	394
20	113	842	137	795	165	784	117	771	85	663	80	369
21	112	841	118	650	175	813	121	827	80	596	78	388
22	114	899	137	710	163	731	100	713	78	573	81	416
23	123	920	130	635	164	704	98	688	77	551	68	349
24	115	789	109	512	162	722	82	558	84	610	69	343
25	95	631	118	542	175	737	97	634	85	643	82	410
26	105	746	151	713	163	621	117	771	90	697	79	399
27	101	736	141	708	127	439	128	892	105	785	82	421
28	94	624	104	525	154	532	110	787	115	823	98	508
29	99	679	110	541	156	607	122	912	92	606	88	487
30	89	584	104	500	135	539	118	870	112	692	89	495
31	---	---	144	700	---	---	98	722	112	680	---	---
TOTAL	---	21397	---	19720	---	21265	---	25342	---	21488	---	14113

TOTAL LOAD FOR YEAR: 255882 TONS.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA--Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)
JAN						
15...	1155	145	618	7.3	10.0	9.4
15...	1205	175	626	7.3	10.0	10.0
15...	1215	215	629	7.5	9.5	9.4
15...	1225	265	609	7.5	10.0	9.0
15...	1235	315	599	7.4	9.5	9.5
JUL						
16...	1230	217	520	7.8	23.0	9.9
16...	1240	158	514	7.8	23.5	9.9
16...	1250	96	514	7.6	23.5	10.0
16...	1300	76	514	7.6	23.5	10.0
16...	1330	48	517	7.6	24.0	10.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN						
15...	1215	3310	9.5	24	214	--
FEB						
25...	1200	2400	13.0	38	246	--
MAY						
14...	1430	2360	21.0	127	809	--
JUN						
28...	0930	1260	24.5	119	403	98
JUL						
16...	1135	2700	21.5	96	700	--
30...	1430	2780	21.5	86	646	94
AUG						
13...	0900	2760	19.5	98	730	96
26...	1000	2910	20.0	94	739	88
SEP						
10...	1110	2240	18.5	98	593	--
25...	0830	1850	21.0	96	480	93

11308600 CALAVERAS RIVER ABOVE NEW HOGAN LAKE, NEAR SAN ANDREAS, CA

LOCATION.--Lat 38°11'48", long 120°43'18", in NW¼SW¼ sec.13, T.4 N., R.11 E., Calaveras County, Hydrologic Unit 18040011, on right bank 600 ft below confluence of the North and South Forks of the Calaveras River, and 2.3 mi west of San Andreas.

DRAINAGE AREA.--307 mi².

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1970 to current year.

INSTRUMENTATION.--Temperature recorder since October 1970.

REMARKS.--Temperature sensor out of water or no flow July 22 to Sept. 30.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 31.5°C, Aug. 8, 9, 1978; minimum recorded, 2.0°C, Jan. 7, 1973, Jan. 4, 1976.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 30.0°C, July 14, minimum recorded, 3.5°C, Jan. 2-4, Feb. 5, 6.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.5	16.5	14.0	11.5	9.5	8.5	5.5	4.5	5.5	4.0	11.0	10.0
2	20.5	16.5	13.0	12.5	9.0	8.5	5.0	3.5	6.0	5.0	11.0	10.0
3	20.0	16.5	14.5	12.5	9.5	8.5	5.0	3.5	5.0	4.5	10.0	8.5
4	20.0	17.0	13.5	11.5	10.0	9.5	5.0	3.5	5.5	4.0	9.0	8.5
5	20.5	16.5	13.0	11.0	11.0	9.5	5.5	4.0	5.5	3.5	9.0	8.0
6	20.5	16.5	13.0	12.0	10.5	9.0	6.5	5.5	5.5	3.5	8.5	8.0
7	21.0	17.0	13.0	11.5	9.5	8.5	7.5	6.5	6.0	5.0	9.0	8.0
8	20.5	17.0	12.5	11.5	9.0	8.0	7.5	7.0	7.5	6.0	8.5	7.0
9	20.5	17.0	11.5	10.0	9.0	8.0	7.5	7.0	7.0	5.5	9.0	7.0
10	19.0	15.5	10.5	10.0	10.0	9.0	8.0	7.0	6.5	5.0	9.5	8.5
11	19.0	16.5	12.0	10.5	10.0	9.0	7.0	6.5	6.5	5.5	9.5	7.5
12	18.5	15.5	12.0	11.0	9.5	9.0	7.0	6.5	7.5	6.0	10.0	8.0
13	18.5	16.0	12.5	11.0	8.5	7.5	6.5	5.0	8.0	7.0	11.0	9.0
14	18.0	15.5	11.0	10.0	7.0	6.0	6.0	4.5	8.5	7.5	11.0	10.0
15	16.5	13.5	10.5	9.5	6.5	6.0	6.0	5.5	9.0	8.0	11.0	10.0
16	14.0	12.5	11.0	10.0	7.0	6.0	7.0	5.5	9.5	8.0	11.5	10.5
17	14.0	12.0	10.5	9.5	6.0	5.0	7.0	5.0	9.5	8.5	---	---
18	12.5	11.0	11.5	10.0	5.5	4.5	6.5	5.0	10.0	9.0	---	---
19	14.5	12.0	11.5	10.0	6.0	5.5	6.0	5.0	10.0	9.5	---	---
20	15.5	13.0	10.5	10.0	6.0	5.0	6.0	5.0	10.0	9.0	---	---
21	14.0	12.0	10.5	9.5	6.5	5.5	6.0	6.0	9.5	8.5	---	---
22	14.5	11.0	10.0	9.0	5.5	4.5	6.5	6.0	10.0	8.5	---	---
23	14.5	11.5	9.0	8.0	5.0	4.0	7.0	6.0	10.5	8.5	---	---
24	14.5	11.5	9.5	9.0	5.5	5.0	8.0	6.5	10.5	9.0	---	---
25	15.0	12.0	9.0	7.5	6.0	5.0	7.5	6.5	11.0	9.5	---	---
26	13.5	12.5	7.5	6.5	5.5	5.0	7.5	7.0	11.0	9.5	---	---
27	14.0	11.5	9.0	7.5	5.5	4.5	8.0	7.0	11.5	10.0	---	---
28	13.0	11.0	9.5	8.5	5.5	4.5	7.5	7.0	11.5	10.0	---	---
29	14.5	12.0	9.5	8.5	6.0	5.0	7.5	6.5	---	---	---	---
30	15.0	13.0	9.0	8.0	5.5	5.0	7.0	5.5	---	---	---	---
31	15.0	12.5	---	---	6.0	5.0	6.0	4.5	---	---	---	---
MONTH	21.0	11.0	14.5	6.5	11.0	4.0	8.0	3.5	11.5	3.5	---	---

SAN JOAQUIN RIVER BASIN

11308600 CALAVERAS RIVER ABOVE NEW HOGAN LAKE, NEAR SAN ANDREAS, CA

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	18.5	16.5	19.5	16.5	28.5	18.0				
2	---	---	18.5	17.0	18.5	18.0	28.0	20.0				
3	---	---	19.0	17.0	20.0	17.0	27.5	19.0				
4	---	---	19.0	17.0	21.5	18.0	27.0	18.5				
5	---	---	19.0	16.5	22.5	19.5	29.5	19.5				
6	---	---	19.0	17.0	23.5	20.5	26.0	21.0				
7	---	---	18.5	16.5	24.0	21.0	27.0	19.5				
8	---	---	18.0	16.0	24.5	21.5	28.0	19.5				
9	---	---	18.0	16.0	25.0	21.5	28.0	19.5				
10	---	---	17.0	16.0	25.0	22.0	24.5	21.0				
11	16.5	15.0	17.5	15.0	26.0	22.0	25.0	19.5				
12	17.0	15.0	18.0	15.5	26.5	23.0	26.5	18.0				
13	18.0	15.5	19.0	16.0	26.5	23.0	28.5	18.5				
14	19.0	16.5	19.5	17.0	26.5	23.0	30.0	19.0				
15	19.0	17.5	20.0	17.5	27.0	23.0	29.0	19.5				
16	18.0	16.5	20.0	18.0	28.5	23.5	29.0	20.0				
17	16.5	15.5	20.0	17.5	27.0	24.0	29.0	20.0				
18	15.5	14.5	20.0	17.5	27.5	22.5	29.0	19.5				
19	16.0	14.5	20.5	17.5	26.5	23.0	27.5	20.0				
20	15.0	14.0	21.0	18.0	26.0	21.5	23.5	21.0				
21	14.0	13.0	21.0	18.5	26.5	22.0	28.5	19.0				
22	15.5	13.0	22.0	19.0	26.0	21.5	---	---				
23	16.5	14.0	22.5	20.0	26.0	21.0	---	---				
24	16.0	14.5	22.5	20.0	26.0	21.0	---	---				
25	15.5	14.0	22.5	20.0	25.5	20.0	---	---				
26	15.5	13.5	22.0	20.0	27.0	19.5	---	---				
27	16.5	14.0	21.5	19.5	27.5	20.0	---	---				
28	17.5	15.0	21.0	19.0	26.0	20.5	---	---				
29	17.0	15.5	21.0	18.5	26.5	19.5	---	---				
30	18.0	15.5	20.5	18.0	25.5	17.5	---	---				
31	---	---	19.0	18.0	---	---	---	---				
MONTH	---	---	22.5	15.0	28.5	16.5	---	---				

11308700 NEW HOGAN LAKE NEAR VALLEY SPRINGS, CA

LOCATION.--Lat 38°09'01", long 120°48'45", in SW 1/4 SW 1/4 sec.31, T.4 N., R.11 E., Calaveras County, Hydrologic Unit 18040011, in control house at New Hogan Dam on the Calaveras River, 3.0 mi south of Valley Springs.

DRAINAGE AREA.--362 mi^2.

PERIOD OF RECORD.--December 1963 to current year. Prior to October 1971, published as "New Hogan Reservoir."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Reservoir is formed by an earthfill dam and four earthfill dikes. Storage began Dec. 20, 1963. Total capacity, 317,055 acre-ft between elevations 534.5 ft, invert of outlet valve, and 713.0 ft, top of spillway gates. Elevation of spillway crest is 679.5 ft. No dead storage. The reservoir is operated for flood control according to existing downstream channel conditions. Reservoir releases limited, insofar as possible, to amounts that will not cause flows greater than 6,000 ft^3/s at Bellota. Records, including extremes, show contents at 2400 hours.

COOPERATION.--Records provided by Corps of Engineers, not rounded to Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 278,798 acre-ft, May 15, 16, 1982, elevation, 703.75 ft; minimum since initial season of normal operation, 9,360 acre-ft, Oct. 27, 1964, elevation, 576.81 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 176,748 acre-ft, Apr. 12, elevation, 674.55 ft; minimum, 100,807 acre-ft, Sept. 30, elevation, 645.87 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

545	588	600	26,851
550	1,117	610	38,252
555	1,892	630	68,795
560	2,960	650	110,300
570	6,149	670	163,134
580	11,013	700	264,177
590	17,835	713	317,123

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127597	124373	130376	135239	138456	153687	174282	172345	159613	144630	127291	110465
2	127368	124347	130635	135292	138536	153885	174767	171984	159324	144137	126807	109994
3	127189	124272	130842	135371	138590	153942	175162	171562	159006	143645	126322	109500
4	127036	124247	131050	135397	138696	154027	175467	171142	158689	143127	125814	109055
5	126882	124146	131128	135424	138803	154311	175742	170751	158372	142637	125206	108610
6	126756	124146	131206	135477	138911	154823	175954	170361	158027	142066	124625	108237
7	126603	124222	131310	135821	138937	156535	176199	170031	157624	141497	124020	107841
8	126424	124347	131361	136218	146362	157108	176352	169673	157194	140956	123417	107422
9	126271	124423	131439	136537	149051	157595	176504	169254	156706	140389	122840	107074
10	126094	124524	131804	136722	150084	158545	176596	168807	156191	139851	122290	106727
11	126170	124524	132038	136855	150728	160163	176657	168359	155677	139287	121767	106472
12	126018	124524	132221	136988	151205	161266	176748	167913	155136	138750	121219	106241
13	125891	125409	132377	137121	151542	162024	176718	167498	154566	138215	120698	105988
14	125713	125840	132456	137175	151823	162520	176657	167111	153942	137627	120202	105734
15	125536	126043	132847	137255	152048	162900	176566	166697	153347	137042	119634	105482
16	125561	126119	133423	137334	152302	163251	176352	166223	152725	136457	119092	105229
17	125561	126196	133738	137441	152471	163427	176015	165780	152105	135847	118699	104977
18	125511	126271	133896	137494	152612	163808	175803	165338	151514	135239	118061	104748
19	125434	126348	134053	137574	152782	164248	175559	164866	150924	134606	117596	104496
20	125358	126475	134211	137627	152895	164366	175315	164366	150419	134001	117108	104267
21	125282	126552	134369	137654	153036	164689	175072	163925	149888	133476	116621	103926
22	125232	126577	134474	137734	153121	164807	174889	163544	149358	132926	116087	103629
23	125105	126603	134554	137814	153262	164866	174737	163134	148856	132403	115506	103311
24	125080	127036	134658	137868	153347	164954	174524	162754	148355	131882	114926	102948
25	124954	127445	134764	137868	153432	165101	174191	162345	147883	131336	114324	102518
26	124878	127649	134843	137974	153517	165603	173918	161965	147357	130790	113724	102111
27	124802	128007	134922	138081	153574	167705	173645	161616	146803	130221	113149	101773
28	124726	129266	135001	138188	153659	170751	173342	161237	146224	129627	112576	101458
29	124600	129859	135054	138268	---	172255	173040	160831	145645	129008	112028	101121
30	124524	130143	135160	138348	---	173191	172738	160395	145123	128417	111505	100807
31	124448	---	135186	138429	---	173887	---	159989	---	127828	111008	---
MAX	127597	130143	135186	138429	153659	173887	176748	172345	159613	144630	127291	110465
MIN	124448	124146	130376	135239	138456	153687	172738	159989	145123	127828	111008	100807
a	655.80	658.03	659.96	661.18	666.71	673.61	673.23	668.92	663.65	657.13	650.30	645.87
b	-3380	+5695	+5043	+3243	+15230	+20228	-1149	-12749	-14866	-17295	-16820	-10201
c	776	338	208	154	425	539	1055	1444	1908	1986	1720	1078

CAL YR 1984 b -22237
WTR YR 1985 b -27021

a Elevation, infeet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet.

11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM, NEAR VALLEY SPRINGS, CA

LOCATION.--Lat 38°08'53", long 120°49'26", in NW 1/4 NE 1/4 sec.1, T.3 N., R.10 E., Calaveras County, Hydrologic Unit 18040011, on right bank at county road bridge, 0.5 mi upstream from Cosgrove Creek, 0.8 mi downstream from New Hogan Dam, and 3.0 mi south of Valley Springs.

DRAINAGE AREA.--363 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 519.8 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Auxiliary nonrecording gage 300 ft downstream at different datum used May 1, 1962, to Jan. 26, 1963.

REMARKS.--No estimated daily discharge. Records good. Flow regulated by New Hogan Lake (station 11308700). Some seepage of North Fork Stanislaus River water enters basin from diversion canals and reservoirs, normally not over 1.5 ft^3/s. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--(adjusted for change in contents in and evaporation from New Hogan Lake).--24 years, 252 ft^3/s, 182,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft^3/s, Jan. 22, 1980, gage height, 10.52 ft; no flow many days in 1961-65, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 317 ft^3/s, June 15, gage height, 1.84 ft; minimum daily, 8.6 ft^3/s, Feb. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	48	34	34	38	43	47	224	199	236	262	259
2	84	48	34	34	38	43	48	226	185	225	251	244
3	75	49	35	37	38	43	47	237	174	214	241	232
4	73	49	34	40	38	43	51	241	174	230	248	232
5	73	49	34	40	38	44	54	224	184	244	265	220
6	73	49	34	40	38	46	54	200	197	257	275	210
7	73	49	34	41	38	49	54	186	207	263	286	210
8	73	49	34	24	24	44	54	196	227	276	289	196
9	73	49	34	19	8.6	44	54	218	236	263	275	182
10	73	48	35	27	10	47	61	230	251	255	269	165
11	74	48	34	29	10	46	67	246	252	261	252	135
12	73	48	34	29	20	44	81	239	262	270	245	117
13	73	50	34	32	28	44	127	232	281	282	245	117
14	73	49	34	33	31	44	111	225	289	295	250	117
15	73	41	29	33	31	44	111	219	309	283	265	117
16	73	35	17	33	33	45	194	223	301	276	267	117
17	65	35	28	33	34	45	231	235	290	284	255	119
18	54	35	35	33	34	45	198	252	273	298	247	117
19	54	35	35	33	34	45	184	253	256	299	236	117
20	54	35	35	33	34	45	179	245	246	284	236	117
21	54	35	35	33	34	44	179	236	247	272	248	150
22	54	35	35	33	34	81	179	223	247	264	265	164
23	54	35	35	33	34	91	152	211	234	255	274	174
24	54	36	35	33	39	70	176	202	223	255	295	197
25	54	35	35	33	41	46	175	194	223	255	300	194
26	54	35	34	33	40	47	175	178	237	258	296	194
27	54	36	34	33	40	50	177	171	260	265	281	179
28	54	27	34	33	42	51	195	184	263	264	274	157
29	54	24	34	33	---	48	206	201	260	267	269	157
30	54	32	34	36	---	48	211	210	243	276	260	157
31	51	---	34	38	---	47	---	206	---	270	260	---
TOTAL	2042	1228	1036	1028	901.6	1516	3832	6767	7230	8196	8181	5063
MEAN	65.9	40.9	33.4	33.2	32.2	48.9	128	218	241	264	264	169
MAX	115	50	35	41	42	91	231	253	309	299	300	259
MIN	51	24	17	19	8.6	43	47	171	174	214	236	117
AC-FT	4050	2440	2050	2040	1790	3010	7600	13420	14340	16260	16230	10040

CAL YR 1984	TOTAL	57367	MEAN	157	MAX	3440	MIN	17	AC-FT	113800	MEAN a	145	AC-FT a	105400
WTR YR 1985	TOTAL	47020.6	MEAN	129	MAX	309	MIN	8.6	AC-FT	93270	MEAN a	108	AC-FT a	77950

a Adjusted for change in contents and evaporation from New Hogan Lake

11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM, NEAR VALLEY SPRINGS, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-66, 1971 to current year.
CHEMICAL ANALYSES: Water years 1964-66.
WATER TEMPERATURES: Water years 1971 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1970 to current year.

INSTRUMENTATION.--Temperature recorder since October 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 24.0°C, Aug. 10, 28, 29, 1977; minimum recorded, 5.5°C, Dec. 17, 1971, Jan. 1, 1973.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 14.0°C, many days during October and November; minimum recorded, 6.0°C, Feb. 9.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.0	13.0	14.0	12.5	12.5	12.0	9.5	8.5	8.5	7.5	9.5	8.0
2	14.0	12.5	13.5	13.0	12.0	11.0	9.5	8.5	8.5	7.5	9.0	7.5
3	14.0	13.0	14.0	13.0	12.5	11.5	9.5	8.5	8.5	7.5	9.5	6.5
4	14.0	13.0	14.0	12.5	12.0	11.5	9.5	8.5	8.5	7.5	9.0	8.0
5	14.0	12.5	13.5	13.0	12.5	11.5	9.5	8.5	8.5	7.5	9.5	8.0
6	14.0	13.0	13.5	13.0	12.5	11.0	9.0	9.0	8.5	7.5	9.5	8.0
7	14.0	12.0	13.5	13.0	12.0	11.0	9.5	9.0	8.0	8.0	10.0	8.0
8	14.0	13.0	13.5	12.5	12.5	11.5	9.5	8.5	10.0	7.5	9.5	8.0
9	14.0	12.5	13.5	12.5	12.5	11.5	9.5	8.5	9.5	6.0	10.0	8.0
10	14.0	12.5	13.0	13.0	12.5	11.5	9.5	8.5	9.5	6.5	10.0	8.5
11	13.5	12.5	13.5	13.0	12.5	11.5	8.5	8.0	9.5	7.0	10.5	8.5
12	14.0	13.0	13.5	13.0	12.0	11.5	9.0	8.0	9.5	7.0	10.0	8.5
13	13.5	12.5	14.0	13.0	12.0	10.5	9.0	8.0	9.5	7.5	10.5	8.5
14	13.5	12.0	13.5	13.0	12.0	10.5	8.5	8.0	9.5	7.5	10.5	8.5
15	13.5	12.0	13.5	13.0	11.5	9.5	8.5	8.0	9.5	7.5	10.5	8.5
16	13.0	12.5	13.5	13.0	11.5	10.0	8.5	8.0	9.5	7.5	10.5	8.5
17	14.0	12.5	14.0	13.0	11.5	10.0	9.0	8.0	9.0	7.5	10.5	8.5
18	13.5	12.5	14.0	13.0	11.5	10.5	9.0	8.0	9.5	7.5	9.5	8.5
19	14.0	13.0	14.0	13.0	11.0	10.0	8.5	8.0	9.0	7.5	10.0	8.5
20	14.0	12.5	13.5	13.5	11.0	10.0	8.5	8.0	9.0	7.5	10.0	8.5
21	13.5	12.5	14.0	13.0	11.0	9.5	8.5	8.0	9.5	7.5	10.5	8.5
22	14.0	13.0	14.0	13.0	10.5	9.5	8.5	8.0	9.5	8.0	10.0	8.5
23	14.0	13.0	14.0	13.0	10.5	9.5	8.5	8.0	9.5	8.0	10.0	8.5
24	14.0	13.0	13.5	13.0	10.0	9.5	9.0	8.0	9.5	8.0	9.5	8.5
25	14.0	13.0	13.5	12.5	10.0	9.5	9.0	8.0	9.5	8.0	10.5	8.5
26	14.0	13.0	13.5	12.5	10.0	9.0	8.5	8.0	10.0	8.0	9.0	8.5
27	13.5	12.5	13.0	12.5	10.0	9.0	9.0	8.0	10.0	8.0	10.0	8.5
28	13.5	12.5	13.5	12.5	10.0	9.0	8.5	8.0	9.5	8.0	10.5	9.0
29	14.0	13.0	13.0	12.0	9.5	9.0	9.0	7.5	---	---	11.0	8.5
30	13.5	13.0	13.0	12.0	9.5	9.0	9.0	7.5	---	---	11.0	9.0
31	13.5	12.5	---	---	9.5	8.5	9.0	7.5	---	---	11.0	9.0
MONTH	14.0	12.0	14.0	12.0	12.5	8.5	9.5	7.5	10.0	6.0	11.0	6.5

11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM, NEAR VALLEY SPRINGS, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	9.5	10.5	10.0	11.0	10.0	11.5	10.5	12.0	11.0	12.5	12.0
2	11.5	9.5	10.5	10.0	10.5	10.0	11.5	10.5	12.0	11.0	12.5	11.5
3	11.5	9.5	10.5	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.5	12.0
4	11.0	9.5	10.5	10.0	11.5	10.0	11.5	10.5	12.0	11.0	13.0	12.0
5	11.5	9.5	10.5	10.0	11.5	9.5	11.5	10.5	12.0	11.0	12.5	12.0
6	11.0	9.5	10.5	10.0	11.0	9.5	11.5	11.0	12.0	11.5	12.5	12.0
7	11.0	9.0	10.5	9.5	11.0	10.0	11.5	11.0	12.0	11.0	12.5	12.0
8	11.5	9.5	10.5	9.5	11.0	10.0	11.5	11.0	12.0	11.0	12.5	12.0
9	11.5	9.5	10.5	9.5	11.0	10.5	11.5	11.0	12.0	10.5	12.5	12.0
10	11.0	9.0	10.5	9.5	11.5	10.5	11.5	11.0	12.0	11.5	12.5	12.0
11	11.0	9.0	10.5	10.0	11.0	10.0	11.5	11.0	12.0	11.0	12.5	11.5
12	11.0	9.0	10.5	10.0	11.5	10.0	11.5	11.0	12.0	11.0	13.0	12.0
13	10.5	9.5	10.5	10.0	11.5	10.5	11.5	11.0	12.0	11.0	12.5	12.0
14	11.0	9.5	10.5	10.0	11.5	10.5	11.5	11.0	12.0	11.5	13.0	11.5
15	10.5	9.5	10.5	10.0	11.5	11.0	12.0	10.5	12.5	11.5	13.0	11.5
16	10.0	9.5	10.5	10.0	11.5	10.5	11.5	10.5	12.5	11.5	13.0	11.5
17	10.5	9.5	10.5	10.0	11.5	10.5	11.5	11.0	12.0	11.5	13.0	12.0
18	10.0	9.5	10.5	10.0	11.5	10.5	12.0	11.0	12.5	11.5	13.0	12.0
19	10.5	9.5	11.0	9.5	11.5	10.5	12.0	11.0	12.5	11.5	13.0	12.0
20	10.0	9.5	11.0	9.5	11.5	10.5	11.5	11.0	12.5	11.5	13.0	12.0
21	10.0	9.5	11.0	10.0	11.5	10.5	11.5	11.0	12.5	11.0	12.5	12.0
22	10.5	9.5	11.0	9.5	11.5	10.5	12.0	11.0	12.5	12.0	13.0	12.0
23	12.0	9.5	11.0	10.0	11.5	10.5	12.0	10.5	12.5	12.0	13.0	12.0
24	10.5	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.5	13.0	12.5
25	10.5	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.5	13.0	12.0
26	10.5	9.5	11.0	10.0	11.5	10.0	12.0	11.0	12.5	11.5	13.0	12.5
27	10.5	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.5	11.0	13.0	12.0
28	10.0	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.5	12.0	13.0	12.0
29	10.5	9.5	11.0	10.0	11.5	10.5	12.0	11.0	12.5	12.0	13.0	12.0
30	10.5	10.0	11.0	10.0	11.5	10.5	12.0	11.0	12.5	12.0	13.0	12.0
31	---	---	10.5	9.5	---	---	12.0	11.0	13.0	11.5	---	---
MONTH	12.0	9.0	11.0	9.5	11.5	9.5	12.0	10.5	13.0	10.5	13.0	11.5
YEAR	14.0	6.0										

11312000 BEAR CREEK NEAR LOCKEFORD, CA

LOCATION.--Lat 38°09'10", long 121°08'17", in NW 1/4 SE 1/4 sec.31, T.4 N., R.8 E., San Joaquin County, Hydrologic Unit 18040005, on right bank 15 ft downstream from county road bridge, and 0.8 mi southeast of Lockeford.

DRAINAGE AREA.--47.4 mi^2.

PERIOD OF RECORD.--October 1930 to September 1985 (discontinued). Monthly discharge only for some periods, published in WSP 1315-A. October 1926 to November 1930 at site 3 mi downstream; records not equivalent.

REVISED RECORDS.--WSP 1635: Drainage area.

GAGE.--Water-stage recorder and low-water concrete control. Datum of gage is 80.68 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Estimated daily discharges: Oct. 1-12. Records fair. No storage or diversion above station. Occasionally water is released from East Bay Municipal Utility District aqueduct into Bear Creek above station. Summer discharge influenced by return flows from irrigated areas.

AVERAGE DISCHARGE.--55 years, 12.9 ft^3/s, 9,350 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,930 ft^3/s, Apr. 3, 1958, gage height, 15.13 ft, from rating curve extended above 2,800 ft^3/s; no flow for several months 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. 8	1915	*494	*8.82				

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.54	7.2	1.6	2.1	.65	4.0	.39	.46	.18	.06	.01
2	0	.78	3.8	1.6	2.4	.64	3.0	.54	.46	.01	.04	.14
3	0	1.0	93	1.4	3.0	.69	2.1	1.8	.88	0	.08	.08
4	0	1.1	45	1.4	3.7	.64	1.5	1.5	.75	0	.28	.04
5	0	1.8	19	1.4	2.8	.79	1.3	.27	.66	.01	.18	.36
6	0	1.8	11	1.4	2.2	1.1	5.4	.07	.30	.25	.41	.26
7	0	2.0	6.2	1.8	2.0	17	5.1	.02	.80	.12	.62	.35
8	0	5.2	3.7	23	178	14	2.7	.01	.61	.07	.12	.39
9	0	5.0	2.6	20	154	4.1	2.7	.02	.06	.17	.01	1.5
10	.30	1.9	45	11	45	2.8	3.1	.13	.49	.24	.73	2.1
11	.20	1.3	47	5.6	22	34	1.7	.03	1.1	.66	2.9	1.0
12	.05	1.5	19	4.1	13	15	1.4	.16	.37	.17	2.6	1.0
13	0	10	11	3.2	8.4	7.2	1.2	.26	.01	.68	.59	2.1
14	0	18	5.5	2.8	5.8	4.4	.78	.16	0	.29	.18	2.3
15	0	4.6	4.0	2.4	3.5	2.8	.94	1.4	0	2.0	.62	2.3
16	.01	1.2	51	2.3	2.5	2.5	.79	.49	0	.80	1.2	1.8
17	.13	.65	28	2.2	2.0	1.5	.39	.11	0	.31	.92	.39
18	.01	.61	14	2.0	1.5	1.0	.30	.27	.02	.05	.53	.06
19	.06	.57	9.3	1.8	1.4	1.3	.45	.19	0	.05	.12	.01
20	.31	.39	5.9	1.7	1.3	1.8	.55	.09	0	.25	.09	0
21	.42	.87	4.3	1.9	1.2	1.3	.84	.47	.03	.32	.16	0
22	.54	2.2	3.5	1.9	.78	1.9	.68	.38	.11	.51	.42	.51
23	.50	1.1	2.8	1.8	.70	1.1	.74	.07	.01	.24	.30	.51
24	.43	26	2.2	2.0	.90	.72	.15	.64	0	.08	.03	.11
25	.38	44	2.3	2.3	.83	.63	1.0	.73	.01	.37	.18	.96
26	.38	13	2.0	1.9	.74	1.8	.54	.15	.02	.37	.09	.35
27	.43	6.4	2.0	1.5	.79	47	.02	.71	.01	.31	.03	.04
28	.43	35	2.1	1.8	.71	52	.18	.58	.02	.42	.03	.01
29	.62	27	2.1	2.0	---	30	.04	.03	.26	.48	.36	0
30	.73	13	2.0	2.8	---	13	.42	.22	.23	.47	.18	0
31	.64	---	1.8	2.7	---	6.8	---	.04	---	.41	.23	---
TOTAL	6.57	228.51	458.3	115.3	463.25	270.16	44.01	11.93	7.67	10.29	14.29	18.68
MEAN	.21	7.62	14.8	3.72	16.5	8.71	1.47	.38	.26	.33	.46	.62
MAX	.73	44	93	23	178	52	5.4	1.8	1.1	2.0	2.9	2.3
MIN	0	.39	1.8	1.4	.70	.63	.02	.01	0	0	.01	0
AC-FT	13	453	909	229	919	536	87	24	15	20	28	37

CAL YR 1984 TOTAL 2081.20 MEAN 5.69 MAX 179 MIN 0 AC-FT 4130
WTR YR 1985 TOTAL 1648.96 MEAN 4.52 MAX 178 MIN 0 AC-FT 3270

11313000 DELTA-MENDOTA CANAL AT TRACY PUMPING PLANT, NEAR TRACY, CA

LOCATION.--Lat 37°47'49", long 121°35'03", in SW 1/4 SW 1/4 sec.31, T.1 S., R.4 E., Alameda County, Hydrologic Unit 18040003, at Tracy pumping plant at intake to canal, 6 mi southeast of Byron, and 10 mi northwest of Tracy.

PERIOD OF RECORD.--June 1951 to current year. Prior to October 1959, published as "near Tracy".

GAGE.--Water-stage recorder on forebay, pressure gages on pump discharge lines, and operating time of pumps. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Discharge computed from records of operation of pumps. Water is diverted from Sacramento-San Joaquin Delta by way of Old River and a dredged channel to the Tracy pumping plant where it is lifted 200 ft into canal. Water, less intermediate diversions, flows into Mendota Pool on San Joaquin River to replace water diverted at Friant Dam. The canal is a part of the Central Valley Project.

COOPERATION.--Records were provided by Bureau of Reclamation, rounded to Geological Survey standards.

AVERAGE DISCHARGE.--34 years, 2,349 ft^3/s, 1,702,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,935 ft^3/s, Aug. 11, 1969; no flow many days in some years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3150	3180	3960	3940	3990	4250	4220	3100	3130	4610	4480	4270
2	3150	3190	3960	3920	4000	4240	3550	3080	3150	4480	4460	4290
3	3160	3600	3980	3920	4000	4270	3510	2650	3110	4480	4440	4280
4	3160	3920	3990	3940	4000	4170	3290	2500	3140	4470	4460	4220
5	3160	3900	3990	3930	3980	3990	3150	2500	3150	4500	4440	4260
6	3150	3980	4000	3930	3980	4010	3030	2390	3140	4510	4430	4260
7	3130	3970	4000	3940	3960	4000	3020	2500	2920	4500	4470	4260
8	3170	3820	4010	3930	4020	3980	3010	2480	3150	4560	4510	4280
9	3130	3950	4000	3940	3990	3990	3010	2510	3130	4570	4490	4240
10	3150	4020	4000	3920	3960	3990	3030	2980	3130	4580	4560	4240
11	3160	4030	4040	3720	3940	3980	4320	3150	3140	4570	4530	4200
12	3500	4050	4000	3690	3950	3980	4630	3140	3050	4600	4550	4210
13	3910	4060	4000	3690	3970	3990	4470	3140	2950	4620	4350	4180
14	3910	4040	3980	3810	3960	4000	4570	3130	2950	4620	4370	4070
15	3920	4020	3980	3890	3970	4020	4560	3140	2950	4620	4380	4070
16	3910	3810	3950	3900	3970	4020	4480	3180	2840	4620	4460	4060
17	3800	3790	3730	3910	3980	3990	4500	3170	2980	4630	4400	4000
18	3650	3780	4050	3910	3960	3900	4510	3170	2980	4620	4340	3860
19	3930	3900	4060	3920	3970	3970	4530	3130	2970	4610	4360	3950
20	3940	3990	4070	3930	4040	3950	4510	3130	2990	4600	4400	3970
21	3940	4000	3940	3820	4160	3970	4520	3130	2970	4580	4380	4000
22	3740	3990	4050	3520	4150	4040	4000	3140	2940	4630	4360	3980
23	3950	4020	4050	3050	4170	4230	4020	3130	2990	4560	4160	3990
24	3950	3990	4040	3670	4140	4110	4000	3150	2940	4660	4290	3990
25	3960	4050	4040	3990	4190	3480	4010	3150	2840	4670	4240	3980
26	3970	3940	3520	3980	4250	3150	4000	3150	2880	4660	4220	4000
27	3950	4000	3470	3980	4220	3140	3980	3160	2890	4430	4230	3980
28	3950	3990	4000	3980	4240	3540	4010	3140	2840	4650	4160	3950
29	3970	3900	3970	3970	---	3590	3600	3140	3020	4570	4240	3940
30	3920	3940	3920	4000	---	4240	3120	3120	2750	4490	4210	3930
31	3440	---	3880	3990	---	4230	---	3120	---	4470	4270	---
TOTAL	111880	116820	122630	119630	113110	122410	117160	92700	90010	141740	135640	122910
MEAN	3609	3894	3956	3859	4040	3949	3905	2990	3000	4572	4375	4097
MAX	3970	4060	4070	4000	4250	4270	4630	3180	3150	4670	4560	4290
MIN	3130	3180	3470	3050	3940	3140	3010	2390	2750	4430	4160	3860
AC-FT	221900	231700	243200	237300	224400	242800	232400	183900	178500	281100	269000	243800

CAL YR 1984 TOTAL 1312680 MEAN 3587 MAX 4780 MIN 1040 AC-FT 2604000
WTR YR 1985 TOTAL 1406640 MEAN 3854 MAX 4670 MIN 2390 AC-FT 2790000

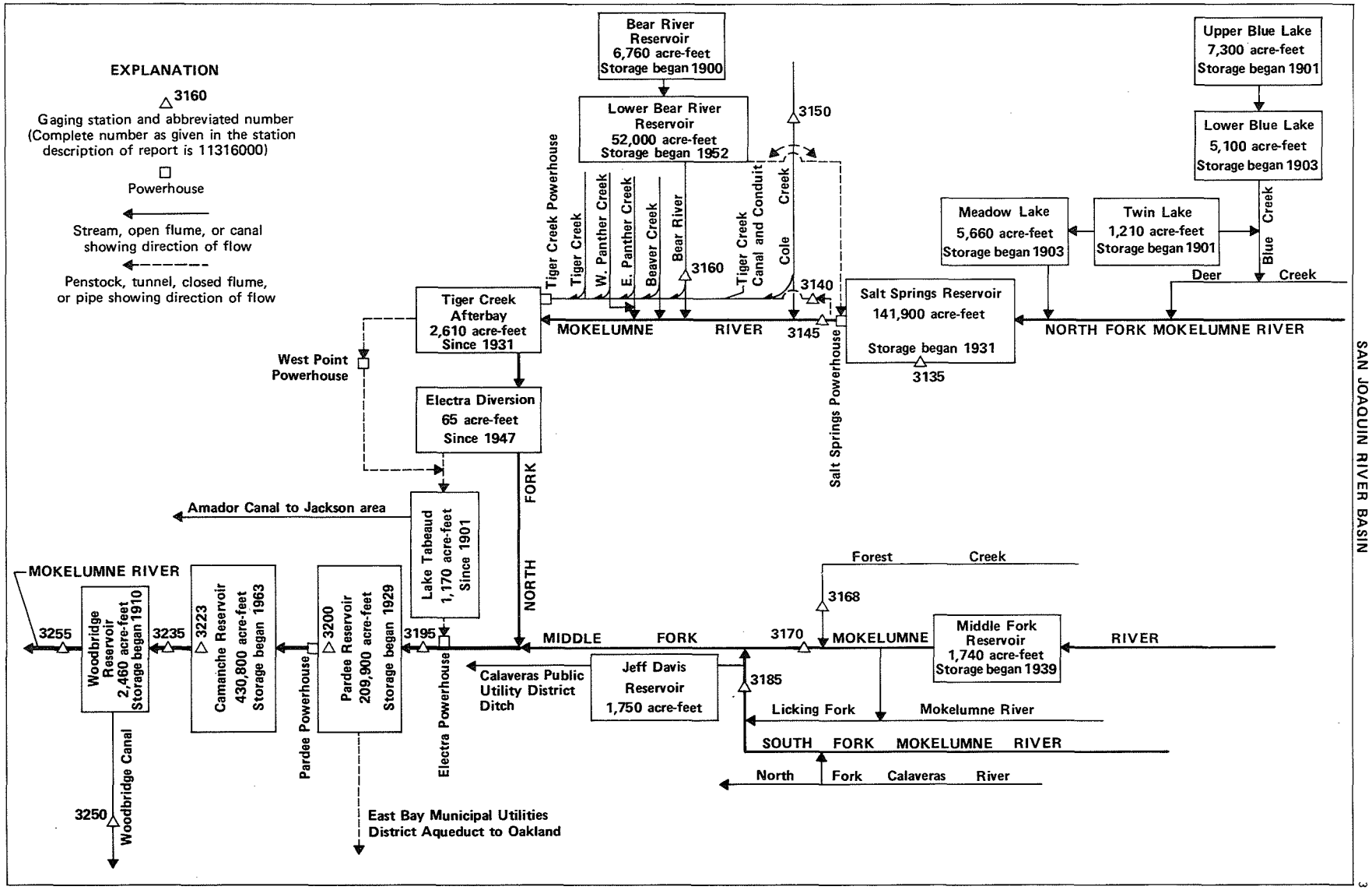


FIGURE 32. — Schematic diagram showing diversions and storage in Mokelumne River basin.

11313500 SALT SPRINGS RESERVOIR NEAR WEST POINT, CA

LOCATION.--Lat 38°29'55", long 120°12'52", in NW 1/4 SE 1/4 sec.33, T.8 N., R.16 E., Calaveras County, Hydrologic Unit 18040012, Eldorado National Forest, near center of Salt Springs Dam on North Fork Mokelumne River, 1.8 mi upstream from Cole Creek, and 18 mi northeast of West Point.

DRAINAGE AREA.--169 mi^2.

PERIOD OF RECORD.--March 1931 to current year. Prior to October 1964, records published as usable contents.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Nonrecording gage read once daily. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pacific Gas and Electric Co.).

REMARKS.--Reservoir is formed by concrete-faced, rockfill dam, completed in 1931; storage began in March 1931. Capacity, 141,857 acre-ft between elevations 3,667.75 ft, outlet drain, and 3,958.0 ft, top of radial gates. Storage of 1,860 acre-ft available for release to river only. Water is released through Salt Springs powerplant just downstream from dam and discharged into Tiger Creek powerhouse conduit (station 11314000). Figures given herein, including extremes, represent total contents at 1400 hours. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project. Contents not rounded to Geological Survey standards.

EXTREMES (AT 1400) FOR PERIOD OF RECORD.--Maximum contents, 141,857 acre-ft, several days during June or July of most years, elevation, 3,958.0 ft; no contents at times in 1932-33, 1945, 1962.

EXTREMES (AT 1400) FOR CURRENT YEAR.--Maximum contents, 137,365 acre-ft, June 15-17, elevation, 3,953.3 ft; minimum, 5,778 acre-ft, Mar. 21, elevation, 3,732.8 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

3,667.75	45	3,740.0	7,324
3,700.0	1,251	3,750.0	9,799
3,705.0	1,679	3,760.0	12,689
3,710.0	2,199	3,780.0	19,632
3,715.0	2,812	3,800.0	28,017
3,720.0	3,519	3,850.0	54,852
3,725.0	4,324	3,900.0	90,786
3,730.0	5,229	3,958.0	141,857
3,735.0	6,230		

RESERVOIR STORAGE (AC-FT), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 1400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71382	52680	40629	21789	16510	9927	6085	61079	130513	130420	113991	92063
2	70879	52068	40041	21588	16510	9799	7098	64545	130885	129864	113377	91424
3	70520	52007	39458	21388	16089	9666	8513	68384	131350	129401	112502	90627
4	70019	51399	39141	21189	15485	9144	10123	71671	131909	128847	111455	89993
5	69449	50614	38773	20912	15741	8637	12076	74947	132469	128294	110500	89518
6	68667	49895	38354	20676	15741	8267	13963	77761	133312	127742	109893	88965
7	67819	49241	37989	20403	15845	7906	15984	81224	134155	127282	109375	88020
8	67064	48533	37368	20247	16123	7554	18688	84285	135001	126915	108791	87002
9	66486	48064	37110	19823	15880	7256	21071	86846	135661	126366	108168	86378
10	65998	47598	36088	19442	15466	7053	23431	88807	136228	125817	107053	86067
11	65651	46788	35683	19176	15261	6964	26004	90389	136701	125361	106020	85600
12	65097	46328	35381	18801	14957	6831	27926	91983	136891	124632	105092	84980
13	64338	47482	35030	18502	14856	6766	30801	93751	137175	124359	104414	84285
14	63448	47598	34631	18465	14722	6657	34283	96002	137270	124086	103907	83669
15	62631	47192	33987	18465	14555	6549	38250	99474	137365	123723	103316	82672
16	62089	47018	33007	18059	14192	6126	42087	102224	137365	123179	102727	81832
17	61819	46443	32329	17912	13671	6126	44683	105177	137365	122636	101721	81224
18	61348	45757	31753	17729	13318	6126	46443	107310	137175	122004	100636	80617
19	61012	45190	31371	17475	13002	5920	47714	110066	136985	121553	99805	79937
20	60278	44908	30943	17223	12689	5819	48769	112240	136701	121553	99225	79560
21	59484	44459	30330	17364	12503	5778	50015	114254	136512	121193	98647	79034
22	58695	43901	29489	17079	12472	5920	50734	116195	136133	120833	97987	78584
23	58109	43292	28428	17007	12076	5982	51399	118238	135755	120205	97412	77985
24	57590	42688	27790	16829	11895	6085	52190	120474	135284	119667	97412	77389
25	57139	42250	26979	16616	11568	6188	52987	122727	134907	119130	97412	76868
26	56689	41598	26490	16334	11422	6188	53605	124723	134248	118684	96757	76423
27	55861	41166	25523	16158	11160	6126	54039	126549	133685	117704	96103	75979
28	54852	40951	24616	16019	10704	6126	54977	127834	133217	116727	95452	75979
29	54039	41328	23767	16158	---	6023	56753	128940	132282	115753	94883	76053
30	53605	41220	22849	16228	---	5920	58369	129586	131350	115135	94235	76053
31	53234	---	22112	16439	---	5819	---	130142	---	114606	93187	---
MAX	71382	52680	40629	21789	16510	9927	58369	130142	137365	130420	113991	92063
MIN	53234	40951	22112	16019	10704	5778	6085	61079	130513	114606	93187	75979
a	3847.4	3826.6	3786.3	3771.3	3753.3	3733.0	3855.5	3945.6	3946.9	3928.4	3903.0	3880.8
b	-18870	-12014	-19108	-5673	-5735	-4885	+52550	+71773	+1208	-16744	-21419	-17134

CAL YR 1984 b -96304
WTR YR 1985 b +3949

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11314000 TIGER CREEK POWERHOUSE CONDUIT BELOW SALT SPRINGS DAM, CA

LOCATION.--Lat 38°29'45", long 120°13'11", in SE 1/4 SW 1/4 sec.33, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank 1,000 ft downstream from Salt Springs Dam and powerplant, and 18 mi northeast of West Point.

PERIOD OF RECORD.--June 1931 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,700 ft above National Geodetic Vertical Datum of 1929, from topographic map. Auxiliary nonrecording gages in stilling wells upstream and downstream from control.

REMARKS.--No estimated daily discharges. Conduit conveys water of North Fork Mokelumne River from tailrace of Salt Springs powerplant to forebay of Tiger Creek powerplant. Since December 1952, records include Bear River and Cole Creek diversion to Salt Springs powerplant. This diversion averaged 112 ft^3/s during current year. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--54 years, 365 ft^3/s, 264,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 577 ft^3/s, June 22, 1945; no flow at times in many years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	562	562	498	199	252	436	468	515	335	548	550	549
2	568	565	499	284	251	398	364	455	325	550	550	550
3	570	561	506	255	250	396	231	302	395	550	550	551
4	569	560	530	234	250	397	141	6.6	414	550	547	552
5	564	560	543	250	250	397	78	2.4	428	456	548	551
6	555	558	535	251	251	453	239	0	430	301	549	551
7	553	553	515	253	251	487	296	0	442	302	524	551
8	563	555	544	252	233	485	329	0	401	477	550	552
9	569	499	543	251	220	485	427	0	402	550	550	498
10	569	491	534	250	255	485	446	0	448	550	550	553
11	569	551	539	249	320	486	444	0	441	550	550	552
12	560	552	546	253	403	487	450	0	418	415	549	551
13	547	425	546	251	402	486	455	0	417	201	550	550
14	543	522	543	249	402	485	456	0	393	202	551	549
15	560	547	544	250	401	424	370	0	328	439	551	549
16	572	546	545	250	400	301	409	0	328	550	546	548
17	306	545	543	250	401	302	456	184	410	551	543	549
18	567	545	545	249	399	419	455	498	404	550	542	551
19	551	545	545	250	428	497	455	498	404	389	541	551
20	528	546	546	250	449	480	457	500	404	86	539	551
21	526	546	546	249	450	472	250	524	407	201	537	551
22	547	542	545	248	449	472	469	549	332	444	536	551
23	560	545	543	250	448	470	489	549	331	551	344	550
24	561	535	542	250	449	470	500	550	417	552	11	550
25	560	546	542	249	474	471	506	550	432	552	9.0	550
26	560	546	542	251	497	470	506	551	432	550	522	551
27	561	547	541	252	490	451	506	550	432	549	548	164
28	561	527	543	250	484	370	511	472	491	550	549	1.7
29	560	522	545	251	---	413	514	397	550	550	549	32
30	561	510	543	251	---	470	515	388	551	550	549	302
31	561	---	403	251	---	471	---	396	---	550	550	---
TOTAL	17063	16154	16524	7732	10209	13786	12192	8437.0	12342	14366	15634.0	14761.7
MEAN	550	538	533	249	365	445	406	272	411	463	504	492
MAX	572	565	546	284	497	497	515	551	551	552	551	553
MIN	306	425	403	199	220	301	78	0	325	86	9.0	1.7
AC-FT	33840	32040	32780	15340	20250	27340	24180	16730	24480	28490	31010	29280

CAL YR 1984 TOTAL 190601.91 MEAN 521 MAX 572 MIN 0 AC-FT 378100
WTR YR 1985 TOTAL 159200.70 MEAN 436 MAX 572 MIN 0 AC-FT 315800

SAN JOAQUIN RIVER BASIN

11314500 NORTH FORK MOKELUMNE RIVER BELOW SALT SPRINGS DAM, CA

LOCATION.--Lat 38°29'37", long 120°13'08", in NE 1/4 NW 1/4 sec.4, T.7 N., R.16 E., Calaveras County, Hydrologic Unit 18040012, Stanislaus National Forest, on left bank 0.5 mi downstream from Salt Springs Dam, 1.3 mi upstream from Cole Creek, and 18 mi northeast of West Point.

DRAINAGE AREA.--170 mi^2.

PERIOD OF RECORD.--September 1926 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "above Moore Creek" 1926-30.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,590 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 12, 1928, at site 100 ft upstream and Sept. 12, 1928, to Sept. 23, 1940, at present site at datum 2.0 ft higher.

REMARKS.--No estimated daily discharges. Flow regulated since 1931 by Salt Springs Reservoir (station 11313500) 0.5 mi upstream. Water is imported from Bear River and Cole Creek to Salt Springs powerplant above the station since December 1952. Then most of the water is diverted through Tiger Creek powerhouse conduit (station 11314000). See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE (combined flow of North Fork Mokelumne River and Tiger Creek powerhouse conduit minus Bear River and Cole Creek diversion).--59 years, 484 ft^3/s, 350,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft^3/s, Nov. 21, 1950, gage height, 17.20 ft, from rating curve extended above 3,900 ft^3/s on basis of computations of flow over dam and discharge through powerplant; minimum daily, 0.3 ft^3/s, Mar. 31, Apr. 1, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 248 ft^3/s, Apr. 23, gage height, 3.24 ft; minimum daily, 5.6 ft^3/s, Dec. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	7.3	5.9	6.5	6.9	8.7	21	22	21	16	40
2	16	12	7.0	6.0	6.4	6.8	8.0	15	20	21	16	39
3	17	8.3	6.8	5.8	6.4	6.6	6.8	14	20	21	16	38
4	17	8.0	6.9	5.9	6.4	6.4	10	19	20	20	16	39
5	15	8.1	7.0	6.4	6.4	6.5	7.8	18	20	20	29	39
6	16	8.2	7.8	6.4	6.2	6.7	7.1	13	20	19	38	38
7	16	8.0	6.9	6.7	6.4	6.8	7.1	14	20	18	39	37
8	18	9.3	6.1	7.0	8.6	6.5	7.5	13	21	20	37	38
9	19	7.5	6.1	6.8	7.9	6.8	96	13	21	20	37	39
10	19	6.8	6.8	6.7	7.4	7.6	99	13	21	20	38	38
11	19	7.0	6.8	6.7	7.2	8.0	36	13	21	19	37	37
12	17	6.8	6.7	6.7	7.4	8.0	36	12	21	18	39	36
13	15	9.3	7.0	6.7	7.6	7.8	65	12	21	18	38	36
14	16	8.6	6.5	6.7	7.7	7.7	61	13	21	18	38	35
15	17	7.2	6.5	6.7	7.7	7.4	7.6	14	21	18	39	35
16	17	6.7	6.4	6.7	7.7	6.9	82	14	21	18	40	36
17	10	6.4	6.3	6.4	7.6	6.7	18	16	21	18	39	37
18	19	6.3	6.2	6.5	7.4	7.1	51	17	21	18	38	37
19	18	6.2	6.1	6.4	7.4	7.2	103	17	21	20	39	38
20	16	6.3	6.2	6.4	7.4	7.0	95	17	21	22	39	36
21	16	6.3	6.1	6.5	7.3	7.0	70	18	21	17	39	36
22	18	6.5	5.9	6.4	7.3	6.9	110	19	21	17	40	35
23	18	6.5	5.8	6.4	7.2	6.7	220	19	21	17	39	36
24	17	7.9	5.8	6.4	7.0	6.7	234	19	21	17	39	35
25	19	7.4	5.8	6.4	7.1	6.7	150	20	21	17	39	35
26	20	7.3	5.8	6.5	7.1	7.1	152	20	21	17	40	35
27	21	8.7	5.9	6.4	7.0	7.6	178	21	20	17	39	35
28	21	9.9	5.9	6.5	7.0	7.3	80	20	21	16	40	35
29	18	8.3	5.8	6.4	---	7.1	23	20	21	16	38	35
30	18	7.6	5.8	6.4	---	7.5	23	20	21	16	43	37
31	18	---	5.6	6.4	---	8.3	---	20	---	16	46	---
TOTAL	537	239.4	197.6	200.2	200.7	220.3	2052.6	514	624	570	1110	1102
MEAN	17.3	7.98	6.37	6.46	7.17	7.11	68.4	16.6	20.8	18.4	35.8	36.7
MAX	21	16	7.8	7.0	8.6	8.3	234	21	22	22	46	40
MIN	10	6.2	5.6	5.8	6.2	6.4	6.8	12	20	16	16	35
AC-FT	1070	475	392	397	398	437	4070	1020	1240	1130	2200	2190

CAL YR 1984 TOTAL 118261.0 MEAN 323 MAX 2960 MIN 5.6 AC-FT 234600
WTR YR 1985 TOTAL 7567.8 MEAN 20.7 MAX 234 MIN 5.6 AC-FT 15010

11315000 COLE CREEK NEAR SALT SPRINGS DAM, CA

LOCATION.--Lat 38°31'09", long 120°12'42", in SW 1/4 NE 1/4 sec.28, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank 200 ft downstream from bridge, 0.3 mi upstream from diversion dam, 1.4 mi north of Salt Springs Dam, 3.2 mi upstream from mouth, and 6.5 mi southwest of Mokelumne Peak.

DRAINAGE AREA.--21.0 mi^2.

PERIOD OF RECORD.--July 1927 to November 1942, October 1943 to current year. Prior to October 1958, published as Cold Creek near Mokleumne Peak. October 1958 to September 1960, published as "near Mokelumne Peak."

REVISED RECORDS.--WSP 1515: 1928, 1930-31, 1938(M), 1944, 1947. WSP 1930: Drainage area.

GAGE.--Water-stage recorder and concrete control since Oct. 30, 1974. Elevation of gage is 5,920 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 30, 1974, at site 0.4 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 25, 26, Dec. 2, 4, 5, 7, 8, 13, 14, 22-26, Jan. 11, 12, 24, 27-31, Feb. 1, 5-7, July 10-12. Occasional pumping upstream from station for domestic use in summer-home tract began in September 1961. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--57 years, 65.9 ft^3/s, 47,740 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,140 ft^3/s, Dec. 23, 1964, gage height, 10.21 ft site and datum then in use, from rating curve extended above 900 ft^3/s on basis of slope-area measurement at gage height 9.69 ft site and datum then in use; no flow many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 873 ft^3/s, Nov. 2, gage height, 3.82 ft; minimum daily, 0.09 ft^3/s, Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	10	21	15	15	49	87	304	44	2.5	.38	.48
2	.45	140	21	16	14	41	132	316	57	2.2	.39	.40
3	.34	197	21	18	14	33	145	252	57	2.0	.36	.50
4	.29	38	21	20	14	31	149	208	57	1.8	.32	.95
5	.27	24	20	20	14	26	189	228	63	1.7	.40	.97
6	.25	29	20	19	14	22	207	233	62	1.5	.48	.99
7	.24	36	20	19	14	20	222	200	62	1.4	.59	1.2
8	.23	32	20	18	14	24	232	170	55	1.3	.59	2.2
9	.21	34	21	17	14	23	247	139	48	1.2	.40	3.9
10	.20	29	22	17	16	26	252	95	41	1.1	.28	5.4
11	1.8	115	22	17	16	23	221	83	36	1.1	.30	11
12	.84	82	22	16	16	23	242	118	32	1.0	.25	5.2
13	.52	53	20	16	20	26	303	168	28	.97	.24	7.0
14	.43	44	21	16	28	29	345	193	24	.85	.19	5.1
15	.35	39	19	18	45	32	330	180	20	.73	.18	4.6
16	.88	31	19	21	73	35	246	173	18	.68	.17	2.9
17	1.7	29	20	20	55	37	186	179	16	.67	.19	1.8
18	3.0	30	20	29	40	37	137	184	14	.62	.28	1.7
19	6.8	29	19	31	51	33	129	181	12	.58	.22	2.8
20	14	30	17	31	46	41	104	157	10	.58	.19	2.3
21	15	28	17	32	32	55	90	147	9.5	.60	.17	1.5
22	9.5	25	17	29	30	51	96	158	7.9	.60	.16	1.1
23	12	24	17	27	31	59	128	160	7.0	.56	.16	.78
24	8.9	25	17	23	36	66	144	151	5.9	.52	.15	.61
25	16	25	17	20	42	45	126	134	5.1	.49	.15	.48
26	27	24	17	18	45	33	106	118	4.5	.69	.11	.38
27	27	23	17	17	48	31	140	97	3.9	.56	.11	.33
28	12	23	17	16	48	32	200	78	3.4	.50	.10	.30
29	22	23	16	16	---	34	190	65	3.0	.41	.09	.29
30	23	21	16	16	---	32	255	56	2.7	.38	.19	.26
31	18	---	15	15	---	46	---	55	---	.38	.34	---
TOTAL	224.00	1292	589	623	845	1095	5580	4980	808.9	30.17	8.13	67.42
MEAN	7.23	43.1	19.0	20.1	30.2	35.3	186	161	27.0	.97	.26	2.25
MAX	27	197	22	32	73	66	345	316	63	2.5	.59	11
MIN	.20	10	15	15	14	20	87	55	2.7	.38	.09	.26
AC-FT	444	2560	1170	1240	1680	2170	11070	9880	1600	60	16	134

CAL YR 1984 TOTAL 23821.62 MEAN 65.1 MAX 448 MIN .10 AC-FT 47250
WTR YR 1985 TOTAL 16142.62 MEAN 44.2 MAX 345 MIN .09 AC-FT 32020

11316000 BEAR RIVER NEAR SALT SPRINGS DAM, CA

LOCATION.--Lat 38°29'36", long 120°17'18", in NE 1/4 NW 1/4 sec.2, T.7 N., R.15 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank 200 ft upstream from diversion to Tiger Creek powerhouse conduit and highway bridge, 1.5 mi upstream from mouth, and 4 mi west of Salt Springs Dam.

DRAINAGE AREA.--48.0 mi^2.

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

GAGE.--Water-stage recorder and broad-crested weir. Elevation of gage is 3,727 ft above National Geodetic Vertical Datum of 1929, from photogrammetric map.

REMARKS.--No estimated daily discharges. Flow regulated since 1900 by Bear River Reservoir, capacity, 6,760 acre-ft, and since December 1952 by Lower Bear River Reservoir 4 mi upstream, capacity, 49,100 acre-ft. Water diverted for power since December 1952 from Lower Bear River Reservoir through tunnel to Salt Springs powerplant on North Fork Mokelumne River. Water diverted occasionally from Cole Creek into Lower Bear River Reservoir. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were collected by Pacific Gas and Electric Co., under general supervision of the Geological Survey, in connection with a Federal Energy Regulatory Commission Project.

AVERAGE DISCHARGE.--34 years, 55.8 ft^3/s, 40,430 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s, Dec. 24, 1964, gage height, 10.11 ft in gage well, 11.8 ft from flood profile, from rating curve extended above 560 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.53 ft^3/s, Sept. 7, 13, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1950 reached a stage of 11.2 ft, from floodmarks, discharge, 10,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 125 ft^3/s, Apr. 7, gage height, 1.70 ft; minimum daily, 4.6 ft^3/s, Aug. 29-31, Sept. 1, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	5.3	13	7.3	8.2	23	38	32	8.9	6.0	5.1	4.6
2	5.2	14	12	7.2	9.1	24	55	31	10	5.9	5.1	4.7
3	5.1	16	11	7.3	7.5	20	63	30	9.2	5.9	5.0	4.9
4	5.1	6.0	10	7.5	7.5	19	71	27	8.7	5.8	5.0	5.1
5	5.0	5.2	11	7.6	7.4	18	92	26	8.3	5.8	4.9	4.9
6	5.0	7.1	10	7.9	6.6	19	100	25	8.2	5.7	4.9	4.9
7	5.0	6.4	9.9	10	8.0	20	104	24	7.9	5.7	4.9	5.0
8	4.9	13	9.6	9.2	9.2	20	94	23	7.8	5.7	4.8	7.9
9	4.9	8.9	9.5	8.7	10	25	87	22	7.7	5.6	4.9	11
10	4.8	9.2	13	8.3	9.6	28	87	21	7.4	5.7	4.8	6.0
11	10	20	13	8.1	9.1	27	80	19	7.3	5.7	4.7	5.5
12	5.3	13	13	7.9	10	27	76	19	7.1	5.6	4.7	5.2
13	5.3	32	10	7.8	11	28	79	17	6.9	5.7	4.7	5.1
14	5.1	16	9.8	8.0	12	28	82	15	6.8	5.6	4.7	5.0
15	5.0	12	9.5	8.2	13	27	78	14	6.7	5.6	6.5	5.0
16	9.5	13	10	8.7	14	29	67	14	6.6	5.5	6.7	5.0
17	13	10	10	9.3	15	32	71	13	6.6	5.5	5.2	4.9
18	6.2	13	9.6	10	16	36	59	13	6.5	5.5	5.4	5.1
19	7.5	10	9.5	11	18	33	54	12	6.5	5.4	5.0	5.1
20	6.9	9.5	8.6	12	18	32	48	12	6.5	5.5	4.9	4.9
21	6.1	10	8.5	12	17	29	52	11	6.4	5.5	4.9	4.8
22	5.7	8.9	8.0	12	18	28	48	11	6.4	5.4	4.8	4.8
23	5.6	8.5	8.2	11	19	28	45	11	6.4	5.4	4.8	4.7
24	5.4	15	8.2	11	20	30	42	12	6.3	5.2	4.8	4.7
25	5.6	12	8.0	10	21	27	37	13	6.2	5.4	4.7	4.6
26	7.1	9.3	7.9	11	22	25	34	11	6.2	5.4	4.7	4.7
27	6.0	16	7.7	10	23	26	34	11	6.1	5.9	4.7	4.7
28	5.7	30	7.6	11	23	30	33	9.5	6.1	6.4	4.7	4.7
29	6.3	16	7.5	9.7	---	22	32	9.3	6.0	5.0	4.6	4.7
30	5.8	14	7.4	8.9	---	24	33	8.9	6.0	5.1	4.6	4.7
31	5.6	---	7.3	9.1	---	29	---	9.0	---	5.2	4.6	---
TOTAL	190.7	379.3	298.3	287.7	382.2	813	1875	525.7	213.7	173.3	153.8	156.9
MEAN	6.15	12.6	9.62	9.28	13.7	26.2	62.5	17.0	7.12	5.59	4.96	5.23
MAX	13	32	13	12	23	36	104	32	10	6.4	6.7	11
MIN	4.8	5.2	7.3	7.2	6.6	18	32	8.9	6.0	5.0	4.6	4.6
AC-FT	378	752	592	571	758	1610	3720	1040	424	344	305	311

CAL YR 1984 TOTAL 20383.1 MEAN 55.7 MAX 655 MIN 4.6 AC-FT 40430
WTR YR 1985 TOTAL 5449.6 MEAN 14.9 MAX 104 MIN 4.6 AC-FT 10810

11316800 FOREST CREEK NEAR WILSEYVILLE, CA

LOCATION.--Lat 38°24'12", long 120°26'45", in SW 1/4 NW 1/4 sec.4, T.6 N., R.14 E., Calaveras County, Hydrologic Unit 18040012, on left bank 1.0 mi downstream from Lion Creek, 1.8 mi upstream from mouth, and 4 mi northeast of Wilseyville.

DRAINAGE AREA.--20.8 mi^2.

PERIOD OF RECORD.--July 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,950 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Feb. 20-26, Apr. 1-8, and Apr. 14 to May 14. Records fair except for periods of estimated discharge, which are poor. No regulation. Minor diversions above station for irrigation and domestic use. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--25 years, 25.2 ft^3/s, 18,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft^3/s, Dec. 24, 1964, gage height, 7.68 ft, from rating curve extended above 500 ft^3/s on basis of slope-area measurement at gage height 7.41 ft; minimum daily discharge, 0.11 ft^3/s, Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 120 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 13	1100	*92	*3.78				

Minimum daily, 1.7 ft^3/s, Aug. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	5.1	16	8.8	9.3	14	36	21	8.1	4.1	2.7	2.1
2	4.9	5.9	14	8.9	10	15	38	22	8.7	4.1	2.7	2.1
3	4.5	9.4	13	8.7	9.1	14	41	22	8.9	3.3	2.7	2.6
4	4.5	6.2	12	8.5	8.7	14	43	21	8.2	3.2	2.6	3.3
5	4.5	5.5	12	8.7	9.1	14	45	20	7.6	3.3	2.3	3.0
6	4.4	6.6	11	9.0	8.9	14	46	19	7.3	3.7	2.3	3.2
7	4.4	6.4	11	13	10	14	45	18	6.9	3.9	2.1	3.3
8	4.4	22	10	13	56	15	44	17	6.4	3.5	2.3	5.4
9	4.5	10	10	12	29	17	43	17	6.3	3.3	2.6	10
10	4.5	8.9	16	11	19	25	44	16	6.2	3.6	2.8	5.9
11	9.8	12	15	11	15	27	41	15	5.9	4.0	2.8	4.6
12	6.2	9.6	14	10	14	25	40	14	5.8	3.9	2.7	4.0
13	5.3	44	13	9.9	14	23	40	13	6.1	3.0	2.7	3.7
14	5.2	20	12	10	14	22	41	13	5.8	3.0	2.2	3.5
15	5.0	14	12	9.9	14	22	40	12	5.6	3.0	2.1	3.4
16	7.7	12	12	9.8	14	22	39	12	5.4	3.2	2.0	3.3
17	15	11	11	10	14	22	39	11	5.1	3.2	1.9	3.2
18	7.6	11	11	9.7	14	24	36	11	5.2	3.1	2.4	3.3
19	7.2	10	11	9.6	14	23	33	11	5.2	2.9	2.5	3.4
20	7.3	9.7	11	9.6	14	24	31	11	5.2	3.2	2.5	3.2
21	6.6	10	11	9.6	15	24	30	10	5.7	3.2	2.3	3.2
22	6.1	9.6	10	9.5	14	23	29	10	5.8	3.1	1.9	3.2
23	6.0	9.0	10	9.1	14	22	27	9.7	5.5	2.8	1.8	3.1
24	5.4	18	10	9.0	14	23	26	9.1	5.0	2.6	2.3	2.6
25	5.4	16	9.9	9.6	14	22	25	7.8	4.5	2.6	2.2	2.4
26	5.8	12	9.9	9.6	14	25	24	7.5	4.7	2.4	2.0	2.6
27	6.0	20	9.7	9.3	14	32	23	7.5	4.5	2.6	1.7	3.2
28	5.5	45	9.5	10	14	31	22	7.4	4.4	2.5	1.7	3.1
29	5.4	25	9.2	9.2	---	31	22	7.8	4.5	2.5	2.1	3.1
30	5.4	19	9.2	8.6	---	33	21	7.7	4.3	2.5	2.2	3.1
31	5.3	---	9.0	9.2	---	34	---	7.9	---	2.6	2.1	---
TOTAL	185.4	422.9	354.4	303.8	423.1	690	1054	408.4	178.8	97.9	71.2	106.1
MEAN	5.98	14.1	11.4	9.80	15.1	22.3	35.1	13.2	5.96	3.16	2.30	3.54
MAX	15	45	16	13	56	34	46	22	8.9	4.1	2.8	10
MIN	4.4	5.1	9.0	8.5	8.7	14	21	7.4	4.3	2.4	1.7	2.1
AC-FT	368	839	703	603	839	1370	2090	810	355	194	141	210

CAL YR 1984 TOTAL 7802.5 MEAN 21.3 MAX 132 MIN 3.0 AC-FT 15480
WTR YR 1985 TOTAL 4296.0 MEAN 11.8 MAX 56 MIN 1.7 AC-FT 8520

11317000 MIDDLE FORK MOKELUMNE RIVER AT WEST POINT, CA

LOCATION.--Lat 38°23'23", long 120°31'32", in SE 1/4 NE 1/4 sec.10, T.6 N., R.13 E., Calaveras County, Hydrologic Unit 18040012, on right bank 200 ft downstream from highway bridge, 0.6 mi south of West Point, and 4.5 mi upstream from South Fork Mokelumne River.

DRAINAGE AREA.--68.4 mi^2.

PERIOD OF RECORD.--October 1911 to current year. Monthly discharge only for October 1911, published in WSP 1315-A.

REVISED RECORDS.--WSP 1515: 1919-20, 1927-28(M), 1936(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,450 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 6, 1926, nonrecording gage at site 1,200 ft upstream at different datum. Oct. 6, 1926, to Aug. 18, 1928, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records fair. Flow slightly regulated by Middle Fork Reservoir, capacity, 1,740 acre-ft, 6 mi above station, since January 1940. Several small diversions above station. At times water diverted 4 mi above station to South Fork Mokelumne River via Middle Fork ditch, capacity, 10 ft^3/s and Licking Fork Mokelumne River. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--74 years, 64.6 ft^3/s, 46,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,510 ft^3/s, Feb. 16, 1982, gage height, 8.67 ft, from rating curve extended above 3100 ft^3/s; maximum gage height, 8.98 ft, Dec. 23, 1955; no flow many days in 1931, and Sept. 9, 1934.

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)
Feb. 8	1300	*385	*3.16				

Minimum daily, 4.9 ft^3/s, Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	19	45	16	70	43	116	63	82	8.9	6.3	7.3
2	14	36	39	16	16	49	126	64	83	9.2	6.5	7.4
3	12	82	36	15	14	41	138	64	82	8.4	6.1	8.8
4	12	76	32	16	19	43	142	61	56	7.9	5.9	9.9
5	12	73	48	15	27	40	142	57	14	7.9	5.9	9.2
6	12	53	104	16	13	49	143	55	13	7.7	5.9	9.1
7	12	14	72	35	17	52	140	54	13	8.1	5.8	9.1
8	11	68	26	38	217	48	139	52	12	8.4	6.0	10
9	12	122	25	40	94	58	135	50	12	8.1	5.7	15
10	12	115	50	40	53	88	133	48	12	7.7	6.2	12
11	20	97	44	36	38	97	126	46	12	8.4	6.2	10
12	18	32	38	34	31	84	118	44	11	7.7	6.3	9.5
13	15	131	68	32	27	77	119	43	12	6.2	6.2	8.8
14	14	60	100	32	34	73	122	41	12	5.4	5.9	8.4
15	14	39	67	30	46	71	121	41	12	5.2	5.7	8.4
16	19	33	26	30	46	70	115	39	11	5.9	5.6	8.2
17	41	29	22	30	47	71	114	37	10	6.7	5.9	8.0
18	21	33	22	30	47	80	103	36	10	7.5	6.4	8.0
19	19	56	23	30	48	77	95	35	11	7.5	6.2	8.2
20	19	103	22	29	50	77	89	34	11	7.6	6.0	8.1
21	18	78	21	52	46	77	85	32	12	7.4	5.9	7.9
22	16	27	20	94	44	74	81	32	12	7.1	5.2	7.8
23	16	25	20	93	44	69	78	31	11	7.3	4.9	7.7
24	15	89	20	91	44	71	76	30	11	7.3	5.6	7.6
25	15	115	19	75	45	69	71	27	9.5	5.6	5.9	7.1
26	16	84	19	14	44	85	68	26	8.9	6.2	6.2	7.3
27	18	52	18	14	45	156	65	25	9.1	5.7	6.3	8.0
28	17	120	17	16	43	133	65	25	8.4	5.6	6.3	8.2
29	18	91	16	14	---	114	64	25	8.8	5.4	6.5	8.2
30	18	107	16	13	---	107	63	24	9.6	5.8	7.4	7.7
31	18	---	17	39	---	111	---	43	---	5.9	7.4	---
TOTAL	508	2059	1112	1075	1309	2354	3192	1284	591.3	219.7	188.3	260.9
MEAN	16.4	68.6	35.9	34.7	46.8	75.9	106	41.4	19.7	7.09	6.07	8.70
MAX	41	131	104	94	217	156	143	64	83	9.2	7.4	15
MIN	11	14	16	13	13	40	63	24	8.4	5.2	4.9	7.1
AC-FT	1010	4080	2210	2130	2600	4670	6330	2550	1170	436	373	517

CAL YR 1984 TOTAL 24700 MEAN 67.5 MAX 401 MIN 11 AC-FT 48990
WTR YR 1985 TOTAL 14153.2 MEAN 38.8 MAX 217 MIN 4.9 AC-FT 28070

11318500 SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT, CA

LOCATION.--Lat 38°22'06", long 120°32'40", in SE 1/4 SE 1/4 sec.16, T.6 N., R.13 E., Calaveras County, Hydrologic Unit 18040012, on right bank 500 ft upstream from highway bridge, 2.4 mi southwest of West Point, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--75.1 mi^2.

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 1315-A: 1934(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,950 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1933 to Sept. 19, 1957, at site 1,100 ft downstream at different datum.

REMARKS.--Estimated daily discharges: Apr. 14 to May 14. Records good. Several small diversions above station for domestic use and for irrigation of about 100 acres. Diversions into South Fork Mokelumne River basin above station at times from North Fork Calaveras River and from Middle Fork Mokelumne River for use below station. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--52 years, 86.9 ft^3/s, 62,960 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,920 ft^3/s, Dec. 23, 1955, gage height, 14.8 ft from floodmarks, site and datum then in use, from rating curve extended above 2,700 ft^3/s on basis of slope-area measurement of peak flow; no flow Aug. 6, 7, Aug. 12 to Sept. 26, 1934.

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. 8	1400	*636	*5.24				

Minimum daily, 1.8 ft^3/s, Sept. 27

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	18	48	28	22	45	115	64	26	6.3	6.1	3.9
2	12	19	43	28	25	50	130	64	27	6.2	6.1	3.9
3	14	31	40	28	23	44	142	64	28	7.2	6.2	6.7
4	13	23	37	27	22	45	147	62	25	6.4	5.7	7.8
5	14	20	37	27	22	45	149	58	23	6.4	5.4	6.5
6	14	23	35	28	22	54	151	56	22	5.9	4.8	7.2
7	14	24	33	47	28	60	149	54	23	5.9	4.9	7.7
8	13	76	32	53	366	57	147	52	21	5.0	4.9	10
9	13	43	31	41	147	61	143	49	20	5.1	5.0	30
10	13	32	52	37	77	102	142	47	19	4.7	5.0	20
11	25	40	48	35	59	117	133	45	18	6.0	4.9	14
12	24	34	43	33	53	95	126	43	16	6.1	4.8	12
13	20	148	41	32	49	83	124	41	15	4.5	4.2	9.4
14	19	72	37	31	47	77	123	39	14	4.1	4.6	5.4
15	17	46	38	30	47	74	120	37	14	3.9	4.7	5.8
16	23	41	40	30	47	71	119	34	14	3.5	5.1	5.1
17	45	37	35	29	47	72	118	34	15	3.6	5.5	4.7
18	24	40	35	29	47	80	117	33	14	3.2	6.4	4.5
19	22	34	36	29	47	76	108	35	10	3.4	5.1	4.8
20	22	31	35	28	48	76	102	33	9.8	3.8	5.5	4.6
21	21	35	33	26	47	77	97	31	9.4	3.2	5.4	4.5
22	20	32	32	24	45	73	94	30	9.5	2.9	5.6	4.4
23	19	30	32	23	45	70	88	28	10	3.1	4.9	4.1
24	18	67	32	23	45	71	84	28	9.2	3.1	4.7	3.7
25	18	62	31	23	45	69	80	28	8.6	2.3	4.6	3.9
26	18	45	31	23	45	102	78	27	8.4	2.1	4.4	2.1
27	20	60	31	24	46	225	74	27	8.6	4.2	4.5	1.8
28	19	141	30	27	46	204	70	26	7.4	3.0	4.6	2.5
29	18	76	30	26	---	142	67	27	6.5	3.3	4.3	2.7
30	19	57	29	24	---	115	64	26	6.5	5.6	4.3	3.5
31	18	---	29	22	---	109	---	26	---	6.0	4.4	---
TOTAL	579	1437	1116	915	1609	2641	3401	1248	457.9	140.0	156.6	207.2
MEAN	18.7	47.9	36.0	29.5	57.5	85.2	113	40.3	15.3	4.52	5.05	6.91
MAX	45	148	52	53	366	225	151	64	28	7.2	6.4	30
MIN	10	18	29	22	22	44	64	26	6.5	2.1	4.2	1.8
AC-FT	1150	2850	2210	1810	3190	5240	6750	2480	908	278	311	411

CAL YR 1984	TOTAL	24042.2	MEAN	65.7	MAX	418	MIN	4.9	AC-FT 47690
WTR YR 1985	TOTAL	13907.7	MEAN	38.1	MAX	366	MIN	1.8	AC-FT 27590

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CA

LOCATION.--Lat 38°18'46", long 120°43'09", in SW 1/4 SW 1/4 sec.1, T.5 N., R.11 E., Calaveras County, Hydrologic Unit 18040012, on downstream side of bridge 1.2 mi northwest of Mokelumne Hill, and 8 mi downstream from confluence of North and South Forks of Mokelumne River.

DRAINAGE AREA.--544 mi^2.

PERIOD OF RECORD.--January to June 1901, May 1903 to December 1904, October 1927 to current year. Yearly estimate only for water year 1928 (incomplete), published in WSP 1315-A. Published as "at Electra" 1901, 1903-4.

REVISED RECORDS.--WSP 1445: 1903-4, 1928(M), 1936(M), 1938(M), 1940(M), 1943(M), 1945(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 584.88 ft above National Geodetic Vertical Datum of 1929 (levels by California Division of Highways). Jan. 1 to June 30, 1901, and May 11, 1903, to Dec. 31, 1904, nonrecording gage at site 3 mi upstream at different datum. Nov. 10, 1927, to Aug. 26, 1952, water stage recorder at site 40 ft upstream at datum 5.00 ft higher. Aug. 27, 1952, to Oct. 14, 1977, at present site at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Salt Springs Reservoir (station 11313500) beginning in 1931, several smaller reservoirs, and four powerplants. Diversion above station for irrigation and domestic use. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--59 years (water years 1904, 1928-85), 1,011 ft^3/s, 732,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,700 ft^3/s, Dec. 3, 1950, gage height, 23.5 ft, present datum; minimum observed, 5 ft^3/s, Aug. 13-15, 17, 18, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,120 ft^3/s, Feb. 8, gage height, 10.14 ft; minimum daily, 99 ft^3/s, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	500	548	797	255	480	740	983	933	607	590	607	603
2	632	717	654	328	348	674	971	972	481	603	682	559
3	615	843	721	450	383	611	962	724	576	675	469	569
4	618	843	655	372	395	651	957	448	650	531	476	656
5	619	692	712	371	431	605	846	450	468	640	662	550
6	669	759	637	300	357	669	916	391	504	348	588	566
7	560	551	659	482	418	852	1010	227	563	310	645	595
8	616	941	765	411	1250	765	987	343	580	442	486	653
9	603	790	664	373	902	752	1220	292	456	615	555	630
10	516	637	702	487	640	741	1140	257	454	389	626	717
11	703	821	794	515	487	1000	1190	227	562	633	633	604
12	669	714	702	283	617	898	1200	204	560	675	534	664
13	696	955	707	386	656	876	1090	238	525	139	606	559
14	599	825	791	465	562	822	1240	163	401	165	604	550
15	581	677	730	273	652	831	1090	327	392	385	534	573
16	630	831	718	420	712	658	1190	206	351	642	534	633
17	629	655	684	357	673	656	994	240	487	584	620	707
18	590	674	722	384	630	695	1160	653	449	457	651	525
19	671	740	647	389	585	859	1010	666	500	508	509	672
20	618	667	667	367	718	877	994	849	473	112	582	542
21	586	816	639	421	671	897	836	591	398	246	658	642
22	651	703	735	386	720	836	930	777	398	338	565	529
23	592	628	702	432	680	860	1050	695	424	687	374	675
24	689	828	623	440	711	821	1090	719	465	601	116	545
25	603	844	722	448	700	775	1060	689	488	460	117	573
26	585	761	649	341	722	835	1090	773	446	603	385	616
27	638	763	671	395	750	1160	1070	689	534	498	632	492
28	689	1010	672	373	703	1190	968	660	444	621	617	241
29	634	990	605	518	---	1060	895	567	607	605	563	154
30	591	811	688	333	---	1000	798	568	565	553	641	99
31	693	---	615	291	---	897	---	425	---	535	544	---
TOTAL	19285	23034	21449	12046	17553	25563	30937	15963	14808	15190	16815	16693
MEAN	622	768	692	389	627	825	1031	515	494	490	542	556
MAX	703	1010	797	518	1250	1190	1240	972	650	687	682	717
MIN	500	548	605	255	348	605	798	163	351	112	116	99
AC-FT	38250	45690	42540	23890	34820	50700	61360	31660	29370	30130	33350	33110

CAL YR 1984 TOTAL 451988 MEAN 1235 MAX 4380 MIN 485 AC-FT 896500
WTR YR 1985 TOTAL 229336 MEAN 628 MAX 1250 MIN 99 AC-FT 454900

11320000 PARDEE RESERVOIR NEAR VALLEY SPRINGS, CA

LOCATION.--Lat 38°15'25", long 120°50'59", in NW 1/4 SW 1/4 sec.26, T.5 N., R.10 E., Amador County, Hydrologic Unit 18040012, at Pardee Dam on the Mokelumne River, 4.5 mi north of Valley Springs.

DRAINAGE AREA.--578 mi^2.

PERIOD OF RECORD.--October 1961 to current year. March 1929 to September 1930 (Lake elevation only), October 1930 to September 1933, published in reports of the Geological Survey. October 1933 to September 1961 in files of East Bay Municipal Utility District.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District).

REMARKS.--Reservoir is formed by a curved concrete gravity dam, completed in 1929. Storage began Mar. 9, 1929. Usable capacity, 194,100 acre-ft between elevations 393.50 ft diversion tunnel invert, and 567.65 ft spillway crest. Dead storage, 15,800 acre-ft. Water is released from reservoir for municipal use in the area on the east side of San Francisco Bay. Small intermittent diversions are made to Jackson Valley Irrigation District. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records provided by East Bay Municipal Utility District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 219,300 acre-ft, Dec. 23, 1955, elevation, 571.72 ft; minimum, 47,000 acre-ft, Mar. 25, 1977, elevation, 454.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 195,900 acre-ft, several days in September, elevation, 561.30 ft; minimum, 173,100 acre-ft, Jan. 25, elevation, 550.20 ft.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

450	43,400	520	120,400
460	50,900	530	136,500
470	59,500	540	153,800
480	69,200	550	172,700
490	80,100	560	193,200
500	92,900	570	215,300
510	105,700	580	239,100

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184500	188400	190100	178900	174300	192800	192200	183800	191100	188300	187300	192700
2	184600	188700	190000	177400	174400	193500	191500	184800	191400	188300	187700	193200
3	184700	188700	189600	176200	174500	194100	190800	185400	191700	188600	188000	193200
4	184600	189600	189100	176000	174600	193900	190400	185500	192200	188900	188100	193500
5	184800	189600	188700	176000	174900	193400	189800	185500	192300	189100	188300	193700
6	184900	189600	188300	175800	174900	193200	189400	185500	192400	189000	188400	194000
7	185300	189300	187800	176000	175200	193300	189700	185200	192700	188800	188600	194500
8	185400	189600	187500	175700	177400	193100	189300	185200	193100	188500	188500	195200
9	185400	189700	187400	175400	178800	192900	189300	185100	193200	188600	188500	195400
10	185300	189500	186800	175400	179400	193300	189200	185000	192800	188300	189300	195500
11	185700	190400	186300	175500	179800	193600	189700	184800	192600	188500	189800	195500
12	185900	191200	185600	175200	180500	193600	189300	184600	192400	188700	189900	195600
13	186100	191900	184800	175200	181100	194200	189000	184400	192100	188400	190100	195100
14	186600	191800	184600	175000	181600	193900	189500	184100	191600	187900	190300	195500
15	186500	191400	184200	174600	182300	193500	189100	184100	191600	187500	190400	195900
16	186800	191200	184300	174500	183200	193100	188900	183800	191400	187700	190500	195900
17	186800	190800	184200	174100	183900	193400	188500	183500	191100	187900	191000	195700
18	186900	191300	184100	173700	184500	192900	188200	184000	190600	187600	191600	195400
19	187100	190800	184000	173700	185100	192700	187800	184500	190300	187700	191700	195200
20	187200	190400	183800	173700	185800	192500	187200	185400	190000	187200	191800	195000
21	187600	190200	183600	173500	186600	192100	187400	185700	189400	186900	192200	194900
22	187700	190800	183700	173300	187300	191600	186500	186500	189400	186300	192400	195300
23	187700	190300	183400	173200	188100	191400	186100	187100	189400	186600	192100	195900
24	188000	190300	182500	173200	188900	191900	185700	187700	188700	186600	191700	195800
25	188000	191200	183200	173100	189600	191400	185400	188300	188100	186500	191200	195900
26	188000	190900	182600	173200	190400	191200	184900	189100	188000	186600	190900	195800
27	188100	190500	182000	173400	191200	191600	184500	189700	188000	186900	191200	195600
28	188700	190200	181400	173600	192000	191900	184600	190100	187600	187300	191400	195400
29	188800	191000	180600	174000		191800	183900	190400	187900	187300	191600	195000
30	188800	190300	180400	174000	---	191600	183000	190700	188300	187300	191800	193900
31	188900	---	180100	174000	---	192100	---	190800	---	187300	192300	---
MAX	188900	191900	190100	178900	192000	194200	192200	190800	193200	189100	192400	195900
MIN	184500	188400	180100	173100	174300	191200	183000	183500	187600	186300	187300	192700
a	557.98	558.56	553.70	550.65	559.45	559.51	555.12	558.87	557.68	557.22	559.57	560.36
b	+4200	+1400	-10200	-6100	+18000	+100	-9100	+7800	-2500	-1000	+5000	+1600
c	382	157	90	62	209	297	649	1079	1379	1433	1096	648
d	18583	17746	15267	18202	16485	19271	21167	22385	23507	22150	19269	18337

CAL YR 1984 b -31100
WTR YR 1985 b +9200

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet.
d Diversion, in acre-feet, from Pardee Reservoir to East Bay Municipal Utility District and to Jackson Valley Irrigation District.

11322300 CAMANCHE RESERVOIR NEAR CLEMENTS, CA

LOCATION.--Lat 38°13'31", long 121°01'17", in NE 1/4 SE 1/4 sec.6, T.4 N., R.9 E., San Joaquin County, Hydrologic Unit 18040005, at Camanche Dam on the Mokelumne River, 4.3 mi northeast of Clements.

DRAINAGE AREA.--621 mi^2.

PERIOD OF RECORD.--December 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District).

REMARKS.--Reservoir is formed by earthfill dam. Storage began Dec. 18, 1963. Usable capacity, 430,300 acre-ft between elevations 104.00 ft invert of emergency valve release, and 235.50 ft spillway crest. Dead storage, 534 acre-ft. Camanche Reservoir provides holdover storage to meet downstream water requirements and flood control on the Mokelumne River. Records, including extremes, represent total contents at 0800 hours. Prior to July 1, 1984, records, including extremes, represent total contents at 2400 hours. See schematic diagram of Mokelumne River basin.

COOPERATION.--Records were provided by East Bay Municipal Utility District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 430,300 acre-ft, June 6, 1979, elevation, 235.42 ft; minimum since reservoir first filled, 234,700 acre-ft, Jan. 16, 1984, elevation, 205.78 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 350,100 acre-ft, Oct. 1, elevation, 224.34 ft; minimum, 246,200 acre-ft, Sept. 30, elevation, 207.82 ft.

REVISIONS.--Revised figures of contents for the water year 1984, superseding those published in the report for 1984 are given below.

Capacity table (elevation, in feet NGVD, and contents, in acre-feet)

120	4,970	120	82,600
130	13,600	190	156,200
140	25,000	220	320,900
150	38,900	235.5	430,900
160	57,100		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	351700	303100	271700	261400	236100	249300	267000	287300	367800	407200	405600	387600
2	349400	301800	267900	259100	235800	249300	267200	288500	370600	407100	405200	386100
3	347500	300500	266000	256300	235700	249400	267400	289600	371800	407100	404700	384600
4	346000	299300	265000	255200	235800	249600	267900	290800	375600	406800	403700	383000
5	344300	296600	262100	253900	236100	249200	268300	291900	382200	406900	403000	382100
6	342500	294100	259100	251100	236400	249100	269500	293000	385300	406700	402100	380900
7	340700	292300	256400	248000	237000	249300	270700	294200	388000	406600	401500	379800
8	338800	290500	253100	246900	237800	249400	272100	295400	389900	406300	401100	378800
9	336400	289100	250300	245500	238400	249400	272700	296600	390800	406200	400600	377600
10	334500	288700	250500	241700	239000	250000	273300	297700	391500	406300	400000	376400
11	332800	288900	249200	239800	239600	250500	273600	298900	392500	406400	399400	375100
12	331000	288100	248600	237200	239800	250900	274100	300100	393300	406500	398800	373600
13	329300	286800	247400	236400	240200	251900	275000	301300	394000	406600	398200	372400
14	327300	284900	245100	235700	240300	252900	275400	302400	394900	406300	397700	371400
15	325400	283700	243000	235500	240300	254300	275800	303600	396000	406100	397200	370000
16	322800	281500	241900	234700	240200	256000	276100	305200	397100	406000	396700	368400
17	321200	280100	240500	234800	239900	257800	277200	308100	398500	406000	396900	367200
18	319900	277400	239700	236800	239700	259700	278400	310300	399800	406100	396800	366300
19	318600	274300	238400	238800	239400	261600	279700	311700	400900	406100	396300	365100
20	317600	274200	237100	238000	239900	262300	280000	313000	401800	406100	395400	364200
21	316500	275400	236200	238400	242400	262700	280500	314100	402600	405900	394100	363000
22	315200	275900	235900	237700	244300	263300	280900	315400	403300	405600	393900	361800
23	313800	276200	235900	237800	245600	263800	281300	318500	404000	405300	393900	360800
24	312700	277500	239400	237400	246600	264200	281500	324000	404800	405400	393700	358600
25	311400	278500	243600	237700	247400	264800	281800	329600	405300	405400	392000	357400
26	310100	279300	250900	237200	248100	265300	282200	334000	405800	405500	390800	356200
27	308800	280400	259000	237500	248700	265800	282900	338600	406300	405900	389700	354600
28	307500	280400	262200	237400	249300	265700	284000	343800	406800	405800	389100	354300
29	306300	278400	262600	238100	249300	265500	285000	350200	407200	405500	389100	353400
30	305200	275300	262500	237400	---	266000	286200	357000	407700	405000	388800	351700
31	304300	---	262200	236800	---	266600	---	363200	---	405200	387600	---
MAX	351700	303100	271700	261400	249300	266600	286200	363200	407700	407200	405600	387600
MIN	304300	274200	235900	234700	235700	249100	267000	287300	367800	405000	387600	351700
a	217.44	212.77	210.59	206.16	208.37	211.32	214.55	226.24	232.42	232.08	229.83	224.58
b	-48900	-29000	-13100	-25400	+12500	+17300	+19600	+77000	+44500	-2500	-17600	-35900
c	2380	1069	507	383	825	1841	2585	5018	5987	7147	5653	5430

CAL YR 1983 b -2400
WTR YR 1984 b -1500

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet.

NOTE.--As of July 1, 1984, Camanche Reservoir instantaneous observations are at 0800.

11322300 CAMANCHE RESERVOIR NEAR CLEMENTS, CA--Continued

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
INSTANTANEOUS OBSERVATIONS AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	350100	321400	309600	298200	295800	290800	316000	346700	318900	298000	273000	253500
2	349200	321200	309300	298100	295600	290600	317000	346000	318100	297500	272500	252700
3	348200	321000	309200	298400	295300	290300	318600	345200	317000	296900	271900	251900
4	347400	320800	308900	299000	295100	290100	320100	344300	316300	296200	270900	251500
5	346700	319700	308700	298800	294500	290700	321300	343600	315600	295300	270100	251200
6	345800	318700	307500	298600	294300	291900	322600	342800	314700	294600	269400	250600
7	345400	318500	307000	298400	294200	292900	323700	341800	313900	293600	268800	250000
8	343600	319100	307100	298000	294100	293700	324300	340900	313000	292500	268100	249300
9	342600	318800	306900	297900	294200	294400	325700	340100	312200	291800	267500	248600
10	341800	318400	306700	297900	294300	295300	326900	339300	311400	291100	266700	248500
11	341400	318000	306000	297700	294300	297000	328100	338200	311100	290200	265800	248300
12	340500	317600	306000	297700	294300	297700	328900	337400	310700	289400	264900	248100
13	339700	317400	305500	297600	294300	298700	330500	336700	310200	288800	264100	248400
14	338800	316600	306000	297500	294100	299000	331800	336100	309700	287900	263700	248400
15	336400	316200	305500	297500	293900	300100	332500	335200	309100	286800	263000	247900
16	335200	315900	305200	297300	293800	300800	333500	334500	308300	286200	262500	247400
17	334700	315700	304700	297300	293600	301300	334600	333300	307500	285400	261900	247700
18	333900	315400	304600	297500	293300	302500	335500	332400	307000	284600	260800	247800
19	333000	314100	304500	297500	293100	303200	336600	331500	306400	283800	260000	248100
20	332000	313700	304200	297300	292800	304300	337400	330600	305500	282800	259500	248000
21	331000	313600	303700	297100	292600	305300	338400	329600	305100	281700	259100	248100
22	329000	313300	302900	297000	292400	306300	338600	328800	304900	280800	258500	248300
23	329400	313000	302400	297000	292300	307600	340100	328000	303500	280100	258100	247800
24	328400	312000	301500	297200	292200	308600	341100	327100	302500	279600	257800	247400
25	327700	311700	301200	297200	292100	308800	341800	326000	302200	279000	257100	247500
26	326800	310000	300400	297200	291800	309700	342400	325000	302000	278200	256200	247400
27	325900	309900	300300	297000	291800	311100	343500	324000	301300	277500	256000	247300
28	324900	310000	299900	296700	291100	312400	344500	322900	300700	276400	255600	247300
29	323900	310000	299300	296500	---	313400	345000	321800	300100	275200	255100	246800
30	322900	309400	298800	296400	---	314500	345600	320800	299000	274300	254500	246200
31	322000	---	298400	296300	---	316000	---	320000	---	273600	254200	---
MAX	350100	321400	309600	299000	295800	316000	345600	346700	318900	298000	273000	253500
MIN	322000	309400	298400	296300	291100	290100	316000	320000	299000	273600	254200	246200
a	220.17	218.23	216.51	216.18	215.35	219.25	223.69	219.86	216.60	212.50	209.21	207.82
b	-29700	-12600	-11000	-2100	-5200	+24900	+29600	-25600	-21000	-25400	-19400	-8000
c	2241	1223	1052	715	1003	1871	3017	4060	5008	4809	4112	2774

CAL YR 1984 b +36200
WTR YR 1985 b -105500

a Elevation, in feet NGVD, at end of month.
b Change in contents, in acre-feet.
c Evaporation, in acre-feet.

11323500 MOKELUMNE RIVER BELOW CAMANCHE DAM, CA

LOCATION.--Lat 38°13'14", long 121°02'19", in NW 1/4 NW 1/4 sec.7, T.4 N., R.9 E., San Joaquin County, Hydrologic Unit 18040005, on left bank 0.7 mi downstream from Murphy Creek, 1.0 mi downstream from Camanche Dam, and 3.4 mi northeast of Clements.

DRAINAGE AREA.--627 mi^2.

PERIOD OF RECORD.--October 1904 to current year. Monthly discharge only for some periods, published in WSP 1315-A, and 1735. Prior to October 1961, published as "near Clements."

REVISED RECORDS.--WSP 751: Drainage area. WSP 881: 1905-9 (yearly summaries only). WSP 1445: 1911, 1917(M), 1925(M).

GAGE.--Water-stage recorder. Datum of gage is 82.71 ft above National Geodetic Vertical Datum of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1961.

REMARKS.--Estimated daily discharges: Feb. 6 to Mar. 7, and Aug. 16 to Sept. 4. Records good except for periods of estimated record, which are fair. Flow regulated by Camanche Reservoir (station 11322300) 1 mi upstream beginning December 1963, Salt Springs Reservoir (station 11313500) beginning March 1931, Pardee Reservoir (station 11320000) beginning March 1929, several small reservoirs, and four powerplants. East Bay Municipal Utility District aqueducts are the largest of several diversions above the station. Maximum capacity is 511 ft^3/s with Pardee Reservoir full. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--24 years (water years 1905-28), 1,111 ft^3/s, 804,300 acre-ft/yr; 57 years (water years 1929-85), 838 ft^3/s, 607,100 acre-ft/yr, adjusted for change in contents in and evaporation from Camanche Reservoir since 1963. Storage and diversion by East Bay Municipal Utility District began in March 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,800 ft^3/s, Nov. 21, 1950, gage height, 24.40 ft, site and datum then in use; no flow on several days in 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 970 ft^3/s, Dec. 29, gage height, 5.22 ft; minimum daily, 102 ft^3/s, several days in February and March.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	787	673	814	629	152	104	201	360	429	446	436	340
2	712	638	819	517	152	104	201	355	426	443	436	341
3	712	643	838	442	152	104	201	349	429	443	436	340
4	715	646	826	330	153	104	201	353	428	446	436	336
5	710	639	824	254	128	104	205	352	430	463	439	332
6	711	638	823	254	104	104	207	348	431	486	437	326
7	712	640	820	256	104	105	206	351	433	486	432	319
8	712	642	820	261	106	105	207	353	431	487	430	319
9	694	639	823	258	104	102	211	356	431	486	438	322
10	705	650	841	241	102	107	206	355	431	486	432	323
11	720	651	829	219	102	103	208	353	431	486	431	333
12	720	649	825	215	104	102	209	356	437	486	433	326
13	720	662	823	216	104	107	204	355	443	489	411	295
14	720	746	823	217	104	105	200	407	438	487	396	275
15	720	795	830	219	104	105	198	441	436	490	387	277
16	724	791	831	219	104	105	229	440	436	492	385	277
17	728	780	827	208	102	104	263	437	440	485	380	276
18	729	791	819	205	104	105	259	436	436	479	375	277
19	733	791	832	206	104	109	261	437	435	480	375	276
20	735	794	837	209	102	113	259	437	435	484	373	277
21	726	794	834	212	102	113	259	438	440	486	375	279
22	720	793	834	177	102	111	260	441	442	485	380	279
23	734	797	838	151	102	112	259	444	434	482	340	268
24	734	817	840	153	104	112	314	443	437	484	338	243
25	738	805	840	155	104	151	358	443	437	486	341	245
26	739	796	840	156	104	207	361	443	440	486	340	245
27	738	806	841	156	104	212	358	443	445	486	340	243
28	741	815	848	156	104	213	358	445	443	492	342	242
29	744	808	868	157	---	205	359	446	443	489	338	242
30	744	809	855	159	---	201	360	442	446	481	339	240
31	746	---	738	157	---	201	---	432	---	437	340	---
TOTAL	22523	21938	25700	7364	3117	3939	7582	12491	13073	14824	12111	8713
MEAN	727	731	829	238	111	127	253	403	436	478	391	290
MAX	787	817	868	629	153	213	361	446	446	492	439	341
MIN	694	638	738	151	102	102	198	348	426	437	338	240
AC-FT	44670	43510	50980	14610	6180	7810	15040	24780	25930	29400	24020	17280

CAL YR 1984	TOTAL	340599	MEAN	931	MAX	4130	MIN	499	AC-FT	675600	MEAN a	1030	AC-FT a	751200
WTR YR 1985	TOTAL	153375	MEAN	420	MAX	868	MIN	102	AC-FT	304200	MEAN a	319	AC-FT a	230600

a Adjusted for change in contents and evaporation from Camanche Reservoir.

11325000 WOODBRIDGE CANAL AT WOODBRIDGE, CA

LOCATION.--Lat 38°09'07", long 121°18'00", in NE 1/4 SE 1/4 sec.34, T.4 N., R.6 E., San Joaquin County, Hydrologic Unit 18040005, on right bank at Woodbridge, at point of diversion from Woodbridge Reservoir.

PERIOD OF RECORD.--April 1926 to current year.

GAGE.--Water-stage recorder. Datum of gage is 32.18 ft above National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District). Prior to Mar. 15, 1931, water-stage recorder at site 0.2 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Discharge computed from records of gate openings and effective head as shown by differential recorder. Canal diverts from Woodbridge Reservoir on Mokelumne River for irrigation south and west of Woodbridge. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE.--59 years, 131 ft^3/s, 94,910 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 482 ft^3/s, July 8, 1953; no flow at times in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129					0	32	174	197	242	275	192
2	122					0	39	183	194	265	255	174
3	130					0	38	176	194	291	252	176
4	130					0	37	164	212	299	262	194
5	114					0	34	153	217	304	294	205
6	90					0	31	161	215	301	304	178
7	87					0	33	173	208	298	286	180
8	85					0	40	175	209	292	282	163
9	82					0	49	178	217	281	278	137
10	78					0	58	187	219	291	273	119
11	89					0	65	189	240	299	256	115
12	87					0	65	179	264	293	240	108
13	84					0	65	189	281	275	256	110
14	66					0	65	214	281	256	271	112
15	60					0	72	209	279	259	257	106
16	84					0	92	217	265	274	237	96
17	85					0	92	229	269	281	226	93
18	85					0	102	225	287	294	223	85
19	85					0	106	222	291	295	223	87
20	85					0	112	224	294	307	228	90
21	85					0	106	224	312	311	223	87
22	84					0	110	218	307	306	190	84
23	84					0	142	226	293	307	175	84
24	84					0	170	226	295	316	171	107
25	84					0	188	221	269	311	164	109
26	79					25	186	218	254	301	168	105
27	79					24	179	207	258	286	187	86
28	78					23	171	205	257	276	197	74
29	26					22	170	218	247	269	205	76
30	0					22	175	218	242	264	196	88
31	0					22	---	203	---	276	194	---
TOTAL	2540	0	0	0	0	138	2824	6205	7567	8920	7248	3620
MEAN	81.9	0	0	0	0	4.45	94.1	200	252	288	234	121
MAX	130	0	0	0	0	25	188	229	312	316	304	205
MIN	0	0	0	0	0	0	31	153	194	242	164	74
AC-FT	5040	0	0	0	0	274	5600	12310	15010	17690	14380	7180

CAL YR 1984 TOTAL 45576 MEAN 125 MAX 332 MIN 0 AC-FT 90400
WTR YR 1985 TOTAL 39062 MEAN 107 MAX 316 MIN 0 AC-FT 77480

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA
(National stream-quality accounting network station)

LOCATION.--Lat 38°09'31", long 121°18'09", in NW 1/4 NE 1/4 sec.34, T.4 N., R.6 E., San Joaquin County, Hydrologic Unit 18040005, on right bank at Woodbridge, 0.4 mi downstream from county highway bridge, and 0.5 mi downstream from dam and canal intake of Woodbridge Irrigation District.

DRAINAGE AREA.--661 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1924 to current year (low-water records only 1924-25).

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 14.9 ft above National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District). See WSP 2130 for history of changes prior to July 26, 1968.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 14, Jan. 6-9, 23-31. Records good except for estimated daily discharges, which are fair. Concerning regulation and diversions see REMARKS for Mokelumne River below Camanche Dam (station 11323500). Between Woodbridge and Camanche Dam there are many additional diversions for irrigation, including Woodbridge Canal (station 11325000). Nearest diversion is 0.5 mi upstream. See schematic diagram of Mokelumne River basin.

AVERAGE DISCHARGE (since start of diversion through East Bay Municipal Utility District aqueduct).--56 years (water years 1929-85), 628 ft^3/s, 455,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft^3/s, Nov. 22, 1950, gage height, 29.58 ft, from rating curve extended above 6,200 ft^3/s on basis of contracted-opening measurement of peak flow; minimum daily, 0.23 ft^3/s, Nov. 15, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,780 ft^3/s, Oct. 29, gage height, 14.08 ft; minimum daily, 16 ft^3/s, Mar. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	623	650	756	640	117	47	134	111	131	70	44	55
2	538	580	756	602	120	16	114	97	144	43	73	70
3	488	574	753	483	115	20	115	103	147	29	65	68
4	511	564	753	446	114	25	120	137	111	22	51	40
5	545	562	753	324	108	21	117	135	99	19	29	47
6	561	562	753	291	97	21	124	108	98	37	47	71
7	549	568	750	288	85	21	127	104	114	53	47	72
8	549	603	750	282	116	27	107	100	88	67	38	99
9	540	561	750	279	126	32	90	100	91	68	40	140
10	521	564	750	271	89	33	87	100	97	44	40	140
11	594	571	750	233	79	33	73	98	47	42	72	135
12	550	563	750	207	78	34	80	108	29	72	78	141
13	548	604	750	199	75	36	86	75	31	77	43	132
14	557	589	747	195	74	37	82	75	48	83	22	93
15	574	716	757	192	74	38	67	115	60	100	53	80
16	616	748	760	189	73	37	58	86	54	59	73	85
17	620	736	752	180	72	38	108	67	37	43	70	98
18	604	741	744	176	71	38	106	98	34	45	71	109
19	602	739	741	176	71	37	90	107	46	51	66	97
20	602	746	748	174	72	35	99	97	37	35	50	83
21	601	753	748	194	73	33	105	88	18	38	64	85
22	591	763	748	177	70	32	95	97	37	69	97	86
23	586	770	750	150	69	33	74	96	50	47	86	76
24	594	792	750	130	69	32	40	95	44	31	64	44
25	592	783	750	120	69	31	75	96	77	33	59	30
26	595	770	750	120	69	75	108	110	52	66	61	63
27	593	773	751	120	69	173	119	140	43	73	36	76
28	590	791	752	120	68	158	137	121	43	81	19	83
29	1020	773	757	120	---	162	132	87	64	93	36	83
30	749	762	766	120	---	144	125	99	64	66	46	72
31	662	---	757	120	---	130	---	127	---	49	44	---
TOTAL	18465	20271	23302	7318	2382	1629	2994	3177	2035	1705	1684	2553
MEAN	596	676	752	236	85.1	52.5	99.8	102	67.8	55.0	54.3	85.1
MAX	1020	792	766	640	126	173	137	140	147	100	97	141
MIN	488	561	741	120	68	16	40	67	18	19	19	30
AC-FT	36630	40210	46220	14520	4720	3230	5940	6300	4040	3380	3340	5060

CAL YR 1984 TOTAL 263062 MEAN 719 MAX 3920 MIN 201 AC-FT 521800
WTR YR 1985 TOTAL 87515 MEAN 240 MAX 1020 MIN 16 AC-FT 173600

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.
CHEMICAL ANALYSES: Water years 1951 to current year.
BIOLOGICAL DATA: Water years 1975-81.
SPECIFIC CONDUCTANCE: Water years 1952-58, 1975-77.
WATER TEMPERATURES: Water years 1951-58, 1961 to current year.
SEDIMENT RECORDS: Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
CHEMICAL ANALYSES: March 1951 to September 1958.
SPECIFIC CONDUCTANCE: March 1951 to September 1958, October 1974 to September 1977.
WATER TEMPERATURES: March 1951 to September 1958, November 1960 to current year.

INSTRUMENTATION.--Temperature recorder since November 1960.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 28.5°C, July 17, 1951; minimum recorded, 1.5°C, Jan. 29, 30, 1954.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 23.5°C, July 5; minimum recorded, 7.5°C, Feb. 5, 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUC-TANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	TUR-BID-ITY (NTU)	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 (MG/L AS CACO3)
DEC												
18...	1055	745	40	7.5	10.5	760	2.4	9.4	84	490	>200	17
FEB												
25...	1045	69	52	7.7	13.0	770	3.4	10.6	100	58	K9	19
JUN												
11...	1015	36	58	6.3	19.0	760	2.3	8.8	95	42	220	19
SEP												
17...	1015	106	47	7.0	18.0	760	--	9.6	102	150	84	--

DATE	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CAC03)	ALKA-LINITY FIELD (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
DEC												
18...	0	4.6	1.4	2.3	22	.2	.80	21	17	18	2.0	1.6
FEB												
25...	0	5.1	1.6	4.4	32	.5	.90	26	21	21	2.5	4.0
JUN												
11...	0	5.2	1.5	2.5	21	.3	.90	24	19	18	2.6	1.9
SEP												
17...	--	--	--	--	--	--	--	23	19	19	--	--

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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (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)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
DEC												
18...	<.10	10	33	33	.04	66	<.10	<.010	.20	.050	.010	<.010
FEB												
25...	<.10	8.9	45	40	.06	8.4	<.10	.020	.50	.060	.060	.050
JUN												
11...	<.10	9.7	22	36	.03	2.1	<.10	.040	.20	.020	.020	<.010
SEP												
17...	--	--	--	--	--	--	--	--	--	--	--	--

See footnotes at end of table.

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	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)	LEAD, DISSOLVED (UG/L AS PB)
DEC 18...	1055	20	<1	24	.8	<1	2	<3	2	14	2
FEB 25...	1045	<10	<1	20	.9	<1	<1	<3	2	43	<1
JUN 11...	1015	30	<1	24	<.5	<1	<1	<3	3	49	<1

DATE	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 18...	<4	5	<.1	<10	3	<1	<1	45	<6	10
FEB 25...	<4	10	<.1	<10	2	<1	<1	51	<6	8
JUN 11...	<4	10	<.1	<10	<1	<1	1	51	<6	6

> Actual value is known to be greater than the value shown.
< Actual value is known to be less than the value shown.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.5	17.0	16.0	15.5	14.0	13.5	11.0	10.5	8.5	8.0	12.5	11.5
2	20.5	17.5	16.0	15.5	13.5	13.0	11.0	10.0	8.5	8.0	11.5	11.0
3	21.0	17.0	16.0	15.5	13.5	13.0	10.5	10.0	8.5	8.0	11.5	9.5
4	21.0	17.0	16.0	15.5	13.5	13.0	10.5	10.0	8.5	8.0	12.0	10.0
5	21.0	17.0	16.0	15.5	13.5	13.0	10.5	9.5	8.5	7.5	11.0	10.0
6	21.0	17.0	16.0	15.5	13.5	13.0	10.5	10.0	8.5	7.5	11.0	9.5
7	20.5	17.5	16.0	15.5	13.5	13.0	11.0	10.5	9.0	8.5	11.5	9.5
8	19.5	16.0	16.0	15.5	13.5	13.0	11.0	10.5	9.0	8.5	12.0	9.0
9	19.5	17.5	15.5	15.0	13.5	13.0	11.0	10.5	9.0	8.0	12.0	9.5
10	17.5	16.0	15.5	15.0	13.5	13.5	10.5	10.0	9.0	8.0	12.0	11.0
11	17.5	17.0	15.5	15.0	13.5	13.0	10.5	10.0	9.0	8.0	13.0	10.5
12	17.5	17.0	15.5	15.5	13.5	13.0	10.0	9.0	9.5	8.5	13.0	11.0
13	17.5	17.0	15.5	15.0	13.0	12.5	9.5	9.0	10.0	9.0	14.0	12.0
14	17.5	17.0	15.5	15.0	12.5	12.0	9.5	9.0	10.0	9.0	14.5	12.0
15	17.0	16.0	15.0	15.0	12.5	12.0	9.5	9.0	10.5	9.5	15.0	12.5
16	16.5	15.5	15.0	15.0	12.5	11.5	9.5	9.0	11.0	10.0	14.5	13.0
17	15.5	15.0	15.0	15.0	12.0	11.5	9.5	8.5	11.0	10.5	14.5	13.0
18	16.0	15.5	15.5	15.0	12.0	11.5	9.0	9.0	11.5	10.5	14.5	13.5
19	16.0	15.5	15.5	15.0	12.0	11.5	9.0	9.0	11.5	10.5	15.0	13.5
20	16.0	16.0	15.0	15.0	12.0	11.5	9.0	8.5	11.5	10.5	15.0	13.5
21	16.0	16.0	15.0	14.5	12.0	11.5	9.0	8.5	11.5	10.0	15.0	13.0
22	16.0	15.5	14.5	14.5	11.5	11.5	9.0	8.5	11.5	10.0	15.0	12.5
23	16.0	15.5	14.5	14.0	11.5	11.0	9.0	8.5	11.5	10.5	16.0	13.0
24	16.0	16.0	14.5	14.0	11.5	11.0	9.0	9.0	11.5	10.5	14.5	13.5
25	16.0	16.0	14.0	13.5	11.5	11.0	9.5	9.0	12.0	11.0	14.5	12.5
26	16.0	16.0	14.0	13.5	11.5	11.0	9.5	9.0	12.5	11.0	13.0	12.5
27	16.0	15.5	14.0	13.5	11.0	11.0	9.5	8.5	12.5	11.5	12.5	12.0
28	16.0	15.5	14.0	13.5	11.0	11.0	9.5	9.0	12.5	11.5	12.5	11.0
29	16.0	15.5	14.0	13.5	11.5	11.0	9.0	8.5	---	---	11.5	10.5
30	16.0	16.0	13.5	13.0	11.0	11.0	9.0	8.0	---	---	13.0	11.0
31	16.0	15.5	---	---	11.0	11.0	8.5	8.0	---	---	14.5	12.5
MONTH	21.0	15.0	16.0	13.0	14.0	11.0	11.0	8.0	12.5	7.5	16.0	9.0

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.0	14.0	18.0	15.5	17.0	15.0	20.5	18.5	20.0	15.5	20.0	16.0
2	17.0	15.0	18.0	16.0	16.0	14.5	21.5	17.0	19.5	16.0	19.5	16.0
3	18.0	16.0	18.0	16.0	18.0	14.5	22.0	17.0	21.0	17.5	19.5	16.0
4	18.5	17.0	17.0	15.5	18.0	15.5	22.5	17.0	21.0	16.5	19.5	16.0
5	20.0	17.5	17.5	16.0	19.5	16.5	23.5	17.0	22.0	17.0	19.0	15.0
6	19.5	17.5	18.5	15.5	20.5	17.0	21.5	17.0	21.0	16.5	18.5	15.5
7	18.5	17.0	18.0	15.5	20.5	18.0	21.0	17.0	21.5	16.5	18.5	15.0
8	19.0	17.0	17.5	15.5	20.5	18.0	20.5	16.5	20.0	16.0	18.0	15.0
9	19.5	17.0	16.5	15.0	20.5	18.5	22.0	17.0	20.0	16.0	17.5	14.5
10	19.0	16.5	15.5	15.0	20.0	18.5	20.5	18.0	20.5	16.0	17.0	14.0
11	18.5	16.5	16.0	14.5	22.0	18.5	19.5	16.5	19.5	16.0	16.5	15.0
12	18.5	16.5	16.5	14.0	23.0	18.5	19.0	14.5	20.0	16.0	16.5	14.0
13	19.5	17.0	18.0	15.0	22.5	19.0	19.5	15.0	20.0	16.0	17.0	14.0
14	20.5	17.5	18.0	16.0	21.5	18.5	21.0	16.5	20.0	15.5	18.0	14.0
15	20.0	18.0	18.0	16.5	21.0	18.5	21.5	16.5	20.0	15.5	18.0	14.0
16	19.0	17.0	18.0	16.5	22.0	19.0	21.0	16.5	19.5	16.0	18.5	14.5
17	18.5	17.5	18.0	16.0	23.0	19.0	21.0	16.5	19.0	16.0	18.5	15.0
18	18.5	16.5	17.5	16.0	22.5	18.5	20.5	16.5	19.0	15.5	18.5	15.0
19	16.5	15.0	18.0	15.5	21.5	18.0	20.5	16.5	19.0	15.5	18.5	14.5
20	15.5	14.0	19.0	16.0	22.0	17.5	19.5	16.5	19.5	15.0	18.5	15.0
21	14.5	14.0	18.5	16.0	22.0	18.0	20.5	15.5	19.5	15.5	18.5	14.5
22	14.5	13.0	19.5	16.5	21.0	17.5	20.0	15.5	19.5	16.0	19.0	15.0
23	15.0	13.0	20.0	17.0	20.5	17.5	21.5	16.0	19.5	16.5	19.5	15.5
24	16.0	13.5	20.0	17.0	21.0	18.0	23.0	17.0	20.5	16.5	19.5	15.5
25	16.0	14.0	19.0	17.0	20.0	18.0	21.5	17.5	20.5	16.5	20.0	16.0
26	15.0	14.0	19.0	16.5	22.0	18.0	21.0	17.0	21.0	16.5	20.0	16.0
27	16.5	14.0	17.5	16.0	21.5	18.5	20.5	16.5	20.5	16.5	19.5	16.0
28	17.0	14.5	18.0	15.5	22.0	19.0	20.0	16.5	20.5	15.5	19.5	15.5
29	17.0	15.5	16.5	15.0	22.0	19.0	19.5	16.5	19.5	15.5	19.0	15.0
30	17.0	15.5	17.0	15.0	20.5	18.0	20.0	15.5	19.0	15.5	18.0	14.5
31	---	---	17.0	15.5	---	---	19.5	15.5	19.5	15.5	---	---
MONTH	20.5	13.0	20.0	14.0	23.0	14.5	23.5	14.5	22.0	15.0	20.0	14.0
YEAR	23.5	7.5										

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)
FEB						
05...	1140	10	49	7.7	7.5	9.9
05...	1150	20	49	7.7	7.0	9.9
05...	1200	27	49	7.7	7.0	9.9
05...	1210	35	45	7.7	7.0	9.9
05...	1220	45	45	7.7	7.0	9.9
05...	1230	50	46	7.9	7.0	9.9
JUN						
11...	1120	10	60	6.5	19.5	8.8
11...	1130	18	60	6.3	19.0	8.9
11...	1145	25	58	6.3	19.0	8.9
11...	1155	35	58	6.4	19.0	8.8
11...	1210	45	57	6.3	19.0	8.8
11...	1215	50	58	6.3	19.0	8.8

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
(NOT PREVIOUSLY PUBLISHED)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUN					
12...	1030	363	15.5	7	6.9
SEP					
12...	1115	530	18.0	5	7.2

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
DEC					
18...	1055	745	10.5	11	22
FEB					
25...	1045	69	13.0	7	1.3
JUN					
11...	1015	36	19.0	4	0.39
SEP					
17...	1015	106	18.0	6	1.7

11329500 DRY CREEK NEAR GALT, CA

LOCATION.--Lat 38°14'53", long 121°13'33", in NE 1/4 NE 1/4 sec.32, T.5 N., R.7 E., San Joaquin County, Hydrologic Unit 18040005, on left bank of main channel 35 ft downstream from county road bridge, 2 mi downstream from Coyote Creek, and 4 mi east of Galt.

DRAINAGE AREA.--324 mi^2.

PERIOD OF RECORD.--October 1926 to September 1933, October 1944 to current year. Monthly figures only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WDR CA-78-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 42.83 ft above National Geodetic Vertical Datum of 1929 (levels by East Bay Municipal Utility District). Dec. 4, 1926, to Sept. 30, 1933, at site 4 mi downstream at different datum. Oct. 1, 1944, to Sept. 30, 1945, on left bank at datum 13.00 ft higher. Oct. 1, 1945, to June 14, 1966, on right bank and June 15, 1966, to Dec. 4, 1978, on left bank both at datum 10.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Many small diversions above station for irrigation. Total storage of many small reservoirs, 1,000 acre-ft.

AVERAGE DISCHARGE.--48 years, 134 ft^3/s 97,080 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maxium discharge, 24,000 ft^3/s, Apr. 3, 1958, gage height, 25.28 ft, site then in use, present datum; maximum gage height, 25.74 ft, Apr. 1, 1982; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 8	2300	*3,420	*20.95				

Minimum, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	104	36	29	31	210	13	4.9	1.5	0	0
2	0	0	84	39	43	33	182	14	6.6	.25	0	0
3	0	0	272	37	43	38	156	13	5.8	1.2	1.1	0
4	0	0	207	37	44	47	141	4.4	4.4	5.0	1.1	0
5	.01	5.1	111	34	34	76	134	6.6	8.0	5.8	.64	0
6	1.3	4.2	82	34	38	106	111	10	6.3	7.1	1.0	0
7	.85	2.8	65	38	38	360	93	6.3	2.2	6.9	.02	0
8	.04	54	60	76	1030	363	87	11	1.6	8.5	1.5	0
9	0	133	53	80	1450	314	75	14	.74	6.5	1.9	.32
10	0	55	219	59	470	318	63	8.3	4.2	6.6	.32	4.1
11	0	51	275	51	296	526	64	10	6.2	7.0	0	2.9
12	0	48	131	52	218	297	61	9.5	7.4	3.6	0	1.2
13	0	267	93	48	178	218	53	8.3	8.3	.14	.11	.28
14	0	318	72	46	152	180	43	7.8	7.2	2.1	1.1	0
15	0	128	77	42	130	156	39	10	2.3	3.1	.05	0
16	0	95	286	40	124	139	37	12	.44	2.4	.01	0
17	0	91	208	39	113	126	38	10	4.3	1.6	0	0
18	2.1	90	119	40	106	121	39	.02	4.2	5.0	.36	0
19	14	85	90	38	100	120	38	.94	5.1	2.1	.29	0
20	9.4	65	80	35	95	109	36	4.1	8.3	3.8	0	0
21	8.8	124	73	31	74	102	36	8.9	6.5	7.1	0	0
22	6.3	91	67	32	67	74	38	3.6	7.7	6.6	0	0
23	5.2	71	63	31	56	56	32	1.6	11	7.7	.80	0
24	4.5	243	59	31	43	53	30	.04	6.9	8.0	.10	0
25	.71	320	57	29	40	53	21	.29	6.3	4.8	.02	0
26	.41	165	53	28	37	56	27	.25	2.8	3.2	0	0
27	0	93	49	28	35	437	24	.52	2.1	2.5	0	0
28	0	380	47	29	33	843	11	3.7	4.0	.17	0	0
29	0	275	42	35	---	513	13	2.5	9.1	.14	0	0
30	0	156	43	36	---	327	15	5.2	5.4	.83	0	0
31	0	---	42	32	---	253	---	12	---	.99	0	---
TOTAL	53.62	3410.1	3283	1243	5116	6445	1947	211.86	160.28	122.22	10.42	8.80
MEAN	1.73	114	106	40.1	183	208	64.9	6.83	5.34	3.94	.34	.29
MAX	14	380	286	80	1450	843	210	14	11	8.5	1.9	4.1
MIN	0	0	42	28	29	31	11	.02	.44	.14	0	0
AC-FT	106	6760	6510	2470	10150	12780	3860	420	318	242	21	17

CAL YR 1984 TOTAL 41763.1 MEAN 114 MAX 1760 MIN 0 AC-FT 82840
WTR YR 1985 TOTAL 22011.30 MEAN 60.3 MAX 1450 MIN 0 AC-FT 43660

11333000 CAMP CREEK NEAR SOMERSET, CA

LOCATION.--Lat 38°39'26", long 120°39'46", in SW 1/4 SW 1/4 sec.4, T.9 N., R.12 E., El Dorado County, Hydrologic Unit 18040013, on right bank 0.2 mi upstream from mouth, 1.3 mi northeast of Somerset, and 5.6 mi south of Camino.

DRAINAGE AREA.--62.6 mi^2.

PERIOD OF RECORD.--February to May 1924 (published as "near Pleasant Valley"), October 1954 to current year.

REVISED RECORDS.--WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. Feb. 1 to May 31, 1924, nonrecording gage at site 0.2 mi upstream at different datum.

REMARKS.--Estimated daily discharges during water year: Oct. 16-18. Records excellent. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft. Water is released from Jenkinson Lake through Camino conduit for irrigation and domestic supply in North Fork Cosumnes and South Fork American river basins. Some water is released from Jenkinson Lake for irrigation downstream from station.

AVERAGE DISCHARGE (adjusted for change in contents, evaporation, and diversion from Jenkinson Lake).--31 years (water years 1955-85), 88.2 ft^3/s, 63,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,680 ft^3/s, Feb. 16, 1982, gage height, 14.50 ft, from rating curve extended above 5000 ft^3/s; no flow Aug. 7-18, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 148 ft^3/s, Feb. 8, gage height, 3.57 ft; minimum daily, 3.4 ft^3/s, Aug. 27 to Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	12	17	13	12	13	28	12	5.9	3.9	4.9	3.4
2	14	13	15	14	14	14	26	12	6.2	5.5	5.0	3.4
3	14	21	14	13	14	13	23	12	6.8	7.2	4.9	3.6
4	13	12	13	13	12	14	21	12	6.6	7.3	4.8	3.8
5	13	11	14	13	12	14	19	12	6.3	7.2	4.6	4.1
6	13	14	15	14	13	17	18	11	6.0	7.0	4.4	4.3
7	12	15	15	20	15	19	17	11	5.7	6.9	4.2	4.5
8	12	34	15	22	89	16	16	11	5.5	6.9	4.1	5.3
9	12	20	14	18	56	17	15	11	5.3	6.6	4.0	16
10	12	15	22	17	32	22	15	11	5.1	6.4	3.9	16
11	22	20	18	16	26	31	14	11	5.0	6.5	3.8	11
12	18	16	17	16	23	27	15	11	4.8	6.6	3.7	9.6
13	16	49	17	15	21	24	15	11	4.7	6.5	3.7	8.3
14	14	27	16	15	20	22	15	11	4.6	6.2	3.7	7.4
15	13	17	17	14	20	21	14	11	4.5	5.9	3.7	6.7
16	23	15	18	14	19	19	14	11	4.4	5.5	3.7	6.2
17	21	13	15	14	18	18	14	11	4.4	5.3	3.8	5.9
18	19	14	15	14	18	19	14	11	4.4	5.3	4.3	5.7
19	18	13	16	13	17	18	14	11	4.3	5.3	4.6	5.8
20	18	12	16	13	17	17	13	11	4.2	5.1	4.6	6.0
21	17	15	15	13	16	16	14	11	4.2	5.2	4.3	6.0
22	16	13	15	13	16	15	14	11	4.4	5.3	4.1	5.9
23	16	12	14	13	15	15	13	11	4.4	5.3	3.9	5.6
24	15	17	14	13	15	16	13	10	4.1	5.3	3.8	5.4
25	15	19	14	13	15	16	13	10	4.0	5.1	3.7	5.2
26	16	16	14	13	14	18	13	9.8	4.0	4.8	3.5	5.0
27	16	17	14	13	14	33	13	9.6	4.1	4.8	3.4	5.2
28	16	36	14	15	14	37	13	6.8	4.3	4.8	3.4	5.3
29	16	32	14	15	---	33	13	6.3	4.4	4.7	3.4	5.3
30	16	21	14	14	---	29	13	6.2	4.4	4.8	3.4	5.2
31	16	---	14	12	---	28	---	5.9	---	4.8	3.4	---
TOTAL	486	561	475	448	587	631	472	322.6	147.0	178.0	124.7	191.1
MEAN	15.7	18.7	15.3	14.5	21.0	20.4	15.7	10.4	4.90	5.74	4.02	6.37
MAX	23	49	22	22	89	37	28	12	6.8	7.3	5.0	16
MIN	12	11	13	12	12	13	13	5.9	4.0	3.9	3.4	3.4
AC-FT	964	1110	942	889	1160	1250	936	640	292	353	247	379
a	-1672	+1692	+570	+140	+1583	+2982	+6040	-636	-3446	-4811	-4351	-2592
b	1661	938	1045	820	786	896	1246	3296	3943	4684	4232	2586
c	63	29	4	9	29	32	138	201	255	286	231	95

CAL YR 1984 TOTAL 22118 MEAN 60.4 MAX 510 MIN 10 AC-FT 43870 MEAN d 77.0 AC-FT d 55,900
WTR YR 1985 TOTAL 4623.4 MEAN 12.7 MAX 89 MIN 3.4 AC-FT 9170 MEAN d 44.4 AC-FT d 32,170

a Change in contents, in acre-feet, in Jenkinson Lake, provided by Bureau of Reclamation.
b Diversion, in acre-feet, from Jenkinson Lake, provided by Bureau of Reclamation.
c Evaporation, in acre-feet, from Jenkinson Lake, provided by Bureau of Reclamation.
d Adjusted for change in contents, evaporation, and diversion from Jenkinson Lake.

11333500 NORTH FORK COSUMNES RIVER NEAR EL DORADO, CA

LOCATION.--Lat 38°35'20", long 120°50'38", in NE 1/4 SW 1/4 sec.35, T.9 N., R.10 E., El Dorado County, Hydrologic Unit 18040013, on downstream side of left abutment of county road bridge, 0.8 mi north of Nashville, 2.6 mi upstream from mouth, and 6 mi south of El Dorado.

DRAINAGE AREA.--205 mi^2.

PERIOD OF RECORD.--August 1911 to December 1941, October 1948 to current year.

REVISED RECORDS.--WSP 1315-A: 1914(M), 1925(M), 1928(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 840 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1933, nonrecording gage at site 1.5 mi upstream at different datum. October 1933 to December 1941, water-stage recorder at site 1,000 ft upstream at different datum.

REMARKS.--Estimated daily discharges: June 25 to Sept. 30. Records good except for estimated daily discharges, which are fair. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft. Camino conduit above the station diverts water out of the basin. See REMARKS for Camp Creek near Somerset (station 11333000). Numerous small diversions above station for irrigation and domestic use.

AVERAGE DISCHARGE.--67 years, 209 ft^3/s, 151,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft^3/s, Dec. 23, 1955, gage height, 14.8 ft, from rating curve extended above 7,500 ft^3/s on basis of slope-area measurement of peak flow; no flow for part of 1924, 1926, 1931, 1933-34, 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. 8	1530	*2,030	*7.18				

Minimum daily, 3.6 ft^3/s, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	38	118	60	56	104	200	137	51	14	5.6	3.9
2	32	39	101	59	66	112	209	139	54	14	5.6	3.6
3	31	77	96	58	65	105	233	140	62	13	5.6	3.7
4	30	65	87	57	59	101	255	132	56	13	5.6	3.9
5	31	45	82	57	55	104	270	125	49	13	5.7	4.2
6	31	47	80	57	59	130	283	123	46	13	5.8	4.4
7	31	60	75	71	64	218	287	120	44	12	6.0	5.2
8	29	166	72	111	1060	158	284	115	42	12	6.0	9.0
9	27	121	69	83	496	147	279	108	40	12	5.4	20
10	26	68	122	76	226	207	276	102	38	12	4.9	44
11	43	91	115	71	165	292	267	98	36	11	4.7	35
12	56	93	93	67	137	238	245	93	34	11	4.5	28
13	42	365	91	65	122	183	241	91	33	10	4.5	17
14	37	229	83	62	112	162	246	91	31	10	4.5	14
15	34	115	85	62	106	151	243	88	29	10	4.5	13
16	35	88	105	61	103	145	235	85	28	9.9	4.4	12
17	73	76	90	60	104	143	225	83	26	9.7	4.4	11
18	60	86	81	59	103	151	210	83	26	9.1	4.5	10
19	45	81	83	59	103	153	192	82	25	8.2	4.8	10
20	46	70	82	59	105	147	179	79	24	7.7	5.4	11
21	45	91	78	59	105	148	172	79	24	7.3	5.8	10
22	42	78	74	59	104	145	170	75	21	7.2	6.4	10
23	41	67	71	58	104	140	159	72	21	7.1	6.1	9.8
24	39	151	71	57	104	144	156	70	19	7.2	5.7	9.6
25	37	159	69	57	104	157	148	68	18	7.3	5.3	8.9
26	37	105	69	58	106	154	140	65	17	7.0	5.0	8.7
27	41	107	67	60	108	298	133	63	16	6.5	4.7	8.6
28	41	316	65	61	106	350	135	60	15	5.9	4.5	8.6
29	40	228	63	72	---	262	136	58	15	5.6	4.4	8.4
30	41	149	62	61	---	216	132	55	14	5.6	4.2	8.2
31	40	---	61	56	---	201	---	50	---	5.6	4.1	---
TOTAL	1210	3471	2560	1972	4207	5366	6340	2829	954	296.9	158.6	353.7
MEAN	39.0	116	82.6	63.6	150	173	211	91.3	31.8	9.58	5.12	11.8
MAX	73	365	122	111	1060	350	287	140	62	14	6.4	44
MIN	26	38	61	56	55	101	132	50	14	5.6	4.1	3.6
AC-FT	2400	6880	5080	3910	8340	10640	12580	5610	1890	589	315	702

CAL YR 1984	TOTAL	69788	MEAN	191	MAX	1220	MIN	18	AC-FT 138400
WTR YR 1985	TOTAL	29718.2	MEAN	81.4	MAX	1060	MIN	3.6	AC-FT 58950

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA

LOCATION.--Lat 38°30'01", long 121°02'39", in NW 1/4 SE 1/4 sec.36, T.8 N., R.8 E., Sacramento County, Hydrologic Unit 18040013, on downstream side of midstream pier of highway bridge at Michigan Bar, 5.5 mi southwest of Latrobe, and 12 mi downstream from confluence of North and Middle Forks of Cosumnes River.

DRAINAGE AREA.--536 mi^2.

PERIOD OF RECORD.--October 1907 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WSP 331: 1911-12. WSP 1315-A: 1908-9, 1911(M). WSP 1930: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 168.09 ft above National Geodetic Vertical Datum of 1929. Prior to July 10, 1930, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft. See REMARKS for Camp Creek near Somerset (station 11333000) for diversion out of basin. Numerous small diversions above station for irrigation and domestic use.

AVERAGE DISCHARGE.--78 years, 503 ft^3/s, 364,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,000 ft^3/s, Dec. 23, 1955, gage height, 14.59 ft, from rating curve extended above 32,000 ft^3/s on basis of area-velocity study of peak flow; no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1907 reached a stage of 16.3 ft, discharge unknown.

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)
Feb. 8	1700	*6,290	*7.39				

Minimum daily, 7.7 ft^3/s, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	73	391	135	123	285	604	380	124	29	12	8.7
2	35	69	314	129	131	286	612	389	127	29	12	7.7
3	43	95	296	128	150	298	685	398	137	29	12	8.0
4	48	154	263	126	147	276	777	383	141	28	12	8.0
5	46	106	231	123	133	280	812	360	120	27	12	8.4
6	45	91	214	123	124	329	833	347	109	28	12	8.8
7	45	99	198	127	136	782	837	340	97	25	13	9.3
8	44	192	184	193	2990	688	824	326	92	25	13	11
9	43	352	173	227	1900	513	802	309	80	25	12	22
10	41	198	286	201	837	685	794	289	82	24	11	74
11	50	184	389	181	641	1110	774	272	77	23	10	79
12	85	226	303	167	502	783	724	255	70	22	9.8	54
13	107	721	256	157	416	643	696	245	63	22	9.7	41
14	79	702	233	148	363	548	708	241	59	22	9.7	33
15	68	370	217	143	330	489	717	241	53	22	9.7	29
16	65	256	304	139	310	455	697	236	51	21	9.4	27
17	81	200	293	135	302	437	650	232	51	20	9.4	25
18	153	195	249	132	300	438	630	227	51	18	9.7	24
19	105	198	224	130	300	464	563	224	51	17	9.7	22
20	87	170	216	130	303	447	523	219	45	16	11	22
21	90	197	203	130	304	442	495	213	43	15	12	22
22	86	204	189	131	298	441	481	205	41	15	13	23
23	79	164	176	130	290	427	453	195	40	15	14	22
24	75	359	169	129	289	413	431	186	39	15	13	21
25	68	541	166	125	288	438	418	179	38	15	12	21
26	64	365	161	125	288	432	398	172	37	15	11	19
27	67	283	158	125	291	872	375	165	34	14	11	19
28	74	799	154	128	292	1150	362	159	33	13	10	19
29	76	722	148	139	---	851	371	148	32	12	9.9	19
30	75	516	143	144	---	708	370	143	30	12	9.4	18
31	75	---	139	135	---	634	---	129	---	12	9.0	---
TOTAL	2131	8801	7040	4415	12778	17044	18416	7807	2047	625	343.4	724.9
MEAN	68.7	293	227	142	456	550	614	252	68.2	20.2	11.1	24.2
MAX	153	799	391	227	2990	1150	837	398	141	29	14	79
MIN	32	69	139	123	123	276	362	129	30	12	9.0	7.7
AC-FT	4230	17460	13960	8760	25350	33810	36530	15490	4060	1240	681	1440

CAL YR 1984 TOTAL 167576 MEAN 458 MAX 3190 MIN 28 AC-FT 332400
WTR YR 1985 TOTAL 82172.3 MEAN 225 MAX 2990 MIN 7.7 AC-FT 163000

11336580 MORRISON CREEK NEAR SACRAMENTO, CA

LOCATION.--Lat 38°29'55", long 121°27'06", in SW 1/4 SE 1/4 sec.32, T.8 N., R.5 E., Sacramento County, Hydrologic Unit 18020109, on right bank 750 ft upstream from Florin Road, 1.6 mi upstream from Elder Creek, and 3.8 mi south of State Capitol Building in Sacramento.

DRAINAGE AREA.--53.4 mi^2.

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

REVISED RECORDS.--WDR CA-72-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.60 ft above National Geodetic Vertical Datum of 1929. Prior to June 29, 1960, at site 650 ft downstream at datum 1.55 ft higher. June 29, 1960, to Sept. 12, 1965, at site 475 ft upstream at datum 2.71 ft higher.

REMARKS.--Estimated daily discharges: Dec. 3 to Jan. 10. Records fair below 100 ft^3/s and poor above. No regulation or diversion above station. Summer flow is sustained by waste water from domestic and industrial use.

AVERAGE DISCHARGE.--26 years, 20.6 ft^3/s, 14,920 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,520 ft^3/s, Jan. 5, 1982, gage height, 9.93 ft; no flow at times in 1960, 1962, 1965.

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)
Oct. 11	0200	597	4.64	Feb. 8	0930	609	4.68
Nov. 12	2315	*928	*5.71				

Minimum daily, 1.1 ft^3/s, Apr. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	18	17	6.1	3.6	4.4	3.8	5.6	2.2	6.0	5.3	1.8
2	4.6	18	16	6.4	3.7	2.3	4.8	4.8	11	6.4	5.4	1.8
3	4.1	18	45	6.2	3.7	1.2	4.5	5.3	4.3	6.5	2.2	3.9
4	3.9	16	27	6.0	3.4	1.5	4.3	1.9	5.9	2.9	3.0	4.8
5	3.8	16	19	5.6	3.6	15	1.8	1.7	5.9	3.5	5.7	4.9
6	2.0	25	15	6.0	3.9	22	1.6	4.3	5.9	2.8	5.4	5.1
7	1.7	49	12	6.2	18	27	1.4	6.4	6.4	3.9	5.4	2.0
8	1.4	77	10	13	339	11	3.6	5.9	5.6	7.1	5.6	2.4
9	3.5	24	9.2	13	75	11	4.8	5.9	6.4	7.3	5.3	25
10	15	38	38	9.2	19	76	5.0	5.9	6.7	7.1	3.2	6.4
11	138	32	44	7.2	13	34	4.5	2.2	6.7	6.8	2.1	4.2
12	23	121	25	2.5	11	12	4.3	1.7	5.7	5.6	2.2	3.6
13	15	223	17	1.8	9.9	9.2	1.9	4.8	5.8	3.3	2.5	3.6
14	11	28	12	1.9	8.6	7.2	1.6	5.9	7.5	4.3	2.2	2.6
15	13	20	13	1.9	7.2	6.0	3.0	5.9	4.5	6.6	2.3	2.1
16	52	35	47	4.1	3.5	2.1	4.3	6.1	3.9	6.4	2.4	3.2
17	22	26	30	4.9	2.6	1.3	11	6.1	6.7	6.2	1.5	4.2
18	21	26	24	4.7	2.0	4.0	4.3	2.6	7.5	6.3	1.5	19
19	19	21	19	4.1	2.1	1.6	3.8	2.4	7.5	5.5	2.1	4.2
20	17	34	16	4.9	4.7	3.6	1.4	5.6	6.1	2.6	2.2	4.1
21	17	24	14	4.7	5.3	4.3	1.1	7.0	5.9	3.6	1.8	2.8
22	17	18	12	4.1	5.1	4.3	2.8	7.0	2.9	6.3	2.8	2.0
23	17	15	11	4.5	4.9	4.3	4.3	6.4	2.1	6.5	2.8	4.7
24	17	59	10	4.1	4.9	3.8	5.0	6.4	5.2	6.4	2.7	4.7
25	17	24	9.2	4.1	4.7	4.5	3.8	2.6	5.6	5.8	2.2	4.7
26	19	17	8.6	1.9	4.6	66	2.8	1.9	6.0	5.3	4.3	4.6
27	15	75	8.1	1.3	4.3	12	1.9	1.7	6.7	2.3	6.1	4.4
28	14	47	7.6	2.9	4.5	11	1.8	4.0	6.0	2.5	5.6	2.2
29	16	25	7.2	1.6	---	7.6	4.0	5.9	2.4	4.9	5.6	1.2
30	16	20	6.8	2.9	---	3.0	5.0	6.4	2.2	4.9	4.8	3.6
31	17	---	6.6	3.5	---	1.6	---	6.4	---	5.1	2.4	---
TOTAL	558.1	1189	556.3	151.3	575.8	374.8	108.2	146.7	167.2	160.7	108.6	143.8
MEAN	18.0	39.6	17.9	4.88	20.6	12.1	3.61	4.73	5.57	5.18	3.50	4.79
MAX	138	223	47	13	339	76	11	7.0	11	7.3	6.1	25
MIN	1.4	15	6.6	1.3	2.0	1.2	1.1	1.7	2.1	2.3	1.5	1.2
AC-FT	1110	2360	1100	300	1140	743	215	291	332	319	215	285

CAL YR 1984 TOTAL 4044.3 MEAN 11.0 MAX 223 MIN 1.4 AC-FT 8020
WTR YR 1985 TOTAL 4240.5 MEAN 11.6 MAX 339 MIN 1.1 AC-FT 8410

11337000 CONTRA COSTA CANAL NEAR OAKLEY, CA

LOCATION.--Lat 37°59'44", long 121°42'03", in NW 1/4 NE 1/4 sec.25, T.2 N., R.2 E., Contra Costa County, Hydrologic Unit 18040003, at pumping plant No. 1, 0.7 mi east of Oakley, and 2.6 mi northwest of Knightsen.

PERIOD OF RECORD.--February 1950 to current year.

GAGE.--Recording flowmeters on pumps. Prior to Jan. 1, 1953, water-stage recorder at site 3.2 mi downstream at datum 121.72 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Water is diverted from Sacramento-San Joaquin Delta by way of Old River, Rock Slough, and a dredged channel. A series of four pumps lift the water 115 ft into the canal. Water is used for municipal, agricultural, and industrial purposes. The canal is a part of the Central Valley Project.

COOPERATION.--Records of daily discharge were provided by Bureau of Reclamation.

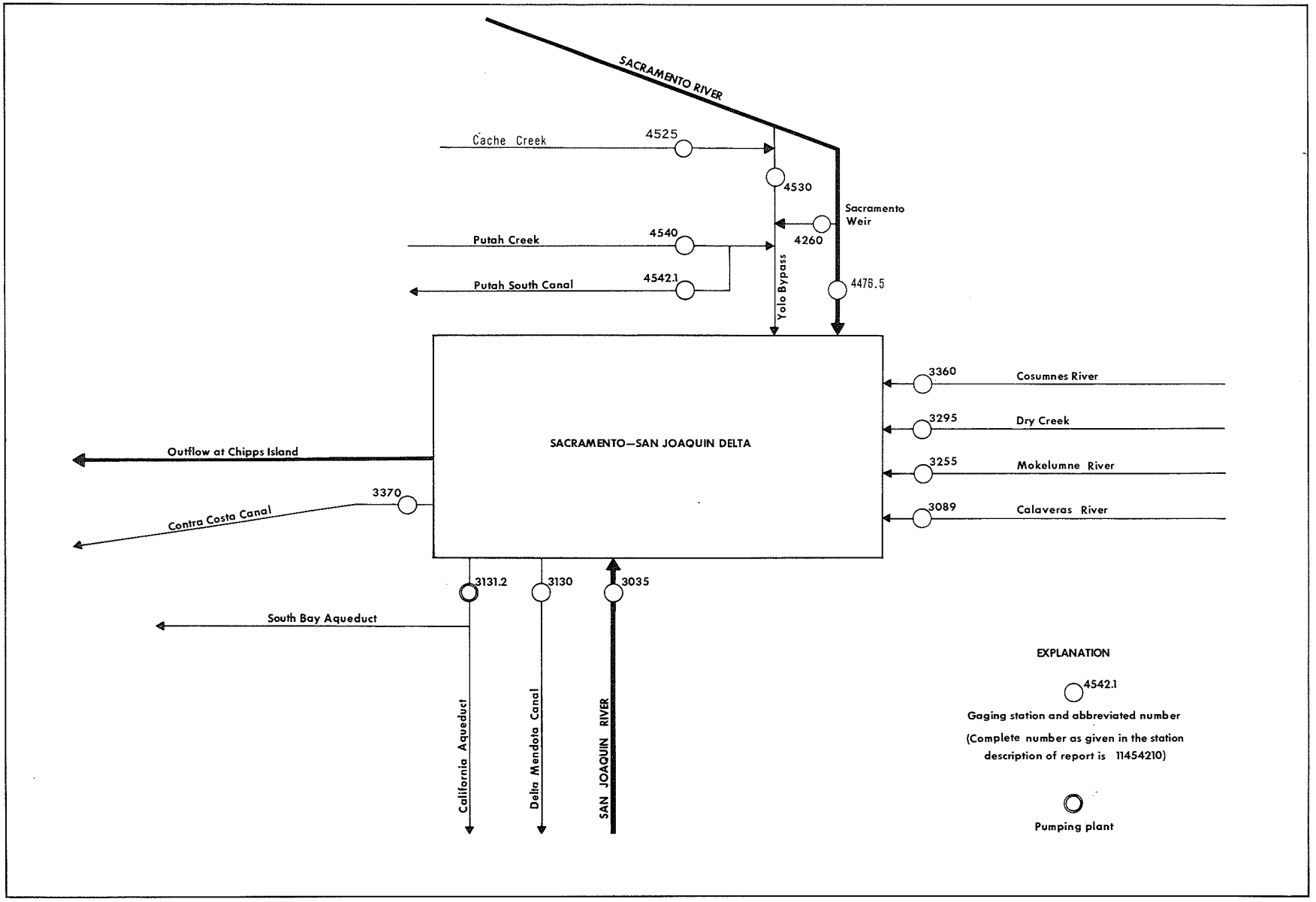
AVERAGE DISCHARGE.--35 years, 104 ft^3/s, 75,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 291 ft^3/s, July 15, 16, 1984; minimum daily, 1.0 ft^3/s, Jan. 19, 26, 1983, Feb. 29, 1984, Jan. 8, 1985.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	97	59	58	89	130	116	195	227	236	242	213
2	174	103	58	57	88	127	112	194	227	241	228	211
3	173	99	61	60	92	132	123	194	240	243	231	199
4	161	101	53	82	89	129	125	194	235	246	240	192
5	162	104	58	97	94	129	128	192	208	250	236	190
6	160	103	54	96	94	128	127	193	221	245	233	181
7	158	100	52	24	88	127	128	200	226	246	240	185
8	149	95	50	1.0	86	122	115	206	227	249	239	179
9	177	110	54	4.0	81	126	134	210	228	247	234	174
10	178	116	57	48	91	128	139	207	234	256	240	172
11	179	117	57	92	92	131	154	217	237	273	235	162
12	173	126	58	86	93	147	171	215	223	264	231	158
13	166	101	58	90	96	160	158	216	220	260	232	159
14	163	96	58	93	94	158	167	217	223	259	232	158
15	185	94	52	93	94	159	156	227	230	261	229	162
16	166	96	55	93	92	149	151	232	228	265	231	160
17	157	96	55	88	88	146	154	225	236	263	222	166
18	158	106	56	95	94	138	152	224	235	257	219	170
19	151	115	57	87	95	134	148	220	239	262	228	171
20	145	116	60	94	98	137	149	230	236	260	223	173
21	146	116	58	93	97	123	146	225	234	260	225	173
22	153	100	54	94	107	115	154	228	233	267	221	166
23	151	96	57	93	105	109	156	229	228	265	222	178
24	146	93	59	89	107	114	167	236	236	266	221	179
25	121	98	56	94	104	113	163	240	233	262	218	177
26	104	110	61	90	115	116	162	237	233	255	223	169
27	101	115	62	90	129	114	167	239	236	250	224	167
28	100	113	62	89	124	111	163	231	238	253	220	162
29	101	86	57	88	---	112	167	233	233	257	217	163
30	98	69	59	93	---	109	178	234	227	259	211	163
31	101	---	59	90	---	111	---	229	---	252	207	---
TOTAL	4629	3087	1766	2441.0	2716	3984	4430	6769	6911	7929	7054	5232
MEAN	149	103	57.0	78.7	97.0	129	148	218	230	256	228	174
MAX	185	126	62	97	129	160	178	240	240	273	242	213
MIN	98	69	50	1.0	81	109	112	192	208	236	207	158
AC-FT	9180	6120	3500	4840	5390	7900	8790	13430	13710	15730	13990	10380

CAL YR 1984 TOTAL 52526.0 MEAN 144 MAX 291 MIN 1.0 AC-FT 104200
WTR YR 1985 TOTAL 56948.0 MEAN 156 MAX 273 MIN 1.0 AC-FT 113000


SACRAMENTO RIVER
Cache Creek
4525
4530
Sacramento Weir
4260
Putah Creek
4540
Putah South Canal
4542.1
Yolo Bypass
4476.5
SACRAMENTO—SAN JOAQUIN DELTA
3360
Cosumnes River
3295
Dry Creek
3255
Mokelumne River
3089
Calaveras River
Outflow at Chipps Island
3370
Contra Costa Canal
3131.2
3130
3035
South Bay Aqueduct
California Aqueduct
Delta Mendota Canal
SAN JOAQUIN RIVER
EXPLANATION
4542.1
Gaging station and abbreviated number
(Complete number as given in the station description of report is 11454210)
Pumping plant

LOCATION.--See schematic diagram of inflows and diversions, Sacramento-San Joaquin Delta.
DRAINAGE AREA.--Total drainage area of inflow streams tabulated below is 39,511 mi².
PERIOD OF RECORD.--October 1971 to current year. Data for periods prior to October 1971 can be obtained from published records for stations tabulated below.
COOPERATION.--Records for Delta-Mendota, Contra Costa, and Putah South Canals provided by Bureau of Reclamation, California Aqueduct by California Department of Water Resources.

SUMMARY OF PRINCIPAL INFLOWS AND DIVERSIONS IN THE SACRAMENTO-SAN JOAQUIN DELTA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Inflows, in thousands of acre-feet

Month												
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water Year
11303500 SAN JOAQUIN RIVER NEAR VERNALIS												
234.5	167.9	293.4	249.9	180.0	168.2	146.8	131.1	104.0	157.3	159.9	114.5	2108
11308900 CALAVERAS RIVER BELOW NEW HOGAN DAM												
4.05	2.44	2.05	2.04	1.79	3.01	7.59	13.42	14.34	16.26	16.23	10.04	93.3
11325500 MOKELUMNE RIVER AT WOODBRIDGE												
36.63	40.21	46.22	14.52	4.72	3.23	5.94	6.03	4.04	3.38	3.34	5.06	173.6
11329500 DRY CREEK NEAR GALT												
0.11	6.76	6.51	2.47	10.15	12.78	3.86	.42	.32	.24	.02	.02	43.7
11335000 COSUMNES RIVER AT MICHIGAN BAR												
4.23	17.46	13.96	8.76	25.35	33.81	36.53	15.49	4.06	1.24	.68	1.44	163.0
11426000 SACRAMENTO WEIR SPILL												
0	0	0	0	0	0	0	0	0	0	0	0	0
11447650 SACRAMENTO RIVER AT FREEPORT												
813.8	1564	2002	1032	1015	879.9	743.5	825.9	792.0	986.0	826.9	725.5	12210
11453000 YOLO BYPASS NEAR WOODLAND[1]												
86.52	67.32	0	5.34	0	0	0	0	0	0	0	0	159.2
11454000 PUTAH CREEK NEAR WINTERS												
11.50	5.75	6.17	6.53	6.42	5.99	22.23	41.22	40.86	44.76	36.71	23.35	251.5
TOTAL												
1191	1872	2370	1322	1243	1107	966.5	1034	959.6	1209	1044	879.9	15198

Diversions, in thousands of acre-feet

Month												
Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water Year
11313000 DELTA-MENDOTA CANAL												
222.2	231.7	243.3	237.2	224.3	242.8	232.1	183.9	178.5	281.2	269.0	243.7	2790
11313120 CALIFORNIA AQUEDUCT (DELTA PUMPING PLANT)												
114.9	238.2	273.1	115.6	199.5	278.0	196.8	184.0	195.5	282.8	338.3	265.6	2682
11337000 CONTRA COSTA CANAL												
9.19	6.12	3.50	4.84	5.39	7.90	8.77	13.43	13.71	15.73	13.99	10.38	113.0
11454210 PUTAH SOUTH CANAL												
9.48	3.64	3.69	4.07	3.94	4.12	18.15	35.67	35.33	38.36	31.81	20.44	208.7
TOTAL												
355.8	479.7	523.6	361.7	433.1	532.8	455.8	417.0	423.0	618.1	653.1	540.1	5794

[1]Flow not computed below 1,000 ft³/s.
NOTE.--Minor inflow streams and diversions are not included.

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 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-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. 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.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at miscellaneous sites are given in separate tables.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage station is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current year year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 1985

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Tulare Lake basin					
11205680	Frazier Creek near Strathmore, CA	Lat 36°08'33", long 118°57'17", in NE 1/4 SE 1/4 sec.32, T.20 S., R.28 E., Tulare County, Hydrologic Unit 18030012, at culvert on county road No. J28, 5.9 mi east of Strathmore.	3.05	1974-85	11-30-84	5.07	12
11205690	Lewis Creek near Lindsay, CA	Lat 36°11'11", long 118°59'46", in NW 1/4 NE 1/4 sec.13, T.20 S., R.27 E., Tulare County, Hydrologic Unit 18030012, at culvert on Road 258, 0.2 mi downstream from unnamed tributary, and 7.0 mi southeast of Lindsay.	21.5	1969a, 1974-85	11-30-84	22.05	189
11210970	Antelope Creek at Woodlake, CA	Lat 36°25'42", long 119°06'22', in SE 1/4 SE 1/4, sec.24, T.17 S., R.26 E., Tulare County, Hydrologic Unit 18030012, at culverts on two separate channels at Cajon Avenue, and 1.1 mi northwest of town of Woodlake.	19.2	1969a, 1974-85	12-26-83 1-8-85	10.51 8.94	55* 8.2
11212000	Sand Creek near Orange Cove, CA	Lat 36°37'36", long 119°14'48", in SW 1/4 NW 1/4 sec.15, T.15 S., R.25 E., Tulare County, Hydrologic Unit 18030012, on right bank 3.8 mi east of Orange Cove.	31.6	1944-54, 1956b, 1967b, 1969b, 1971-84b, 1985	2-8-85	2.59	46

a Published as a miscellaneous measurement.
b Computed as continuous record.
* Not previously published.

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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). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

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)
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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