

1969

Water Resources Data for California

Part 1. Surface Water Records

Volume 1: Colorado River Basin, Southern
Great Basin, and Pacific Slope Basins
excluding Central Valley.



**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

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

CALENDAR FOR WATER YEAR 1969

OCTOBER 1968

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SEPTEMBER 1969

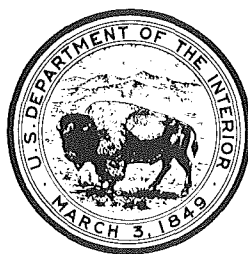
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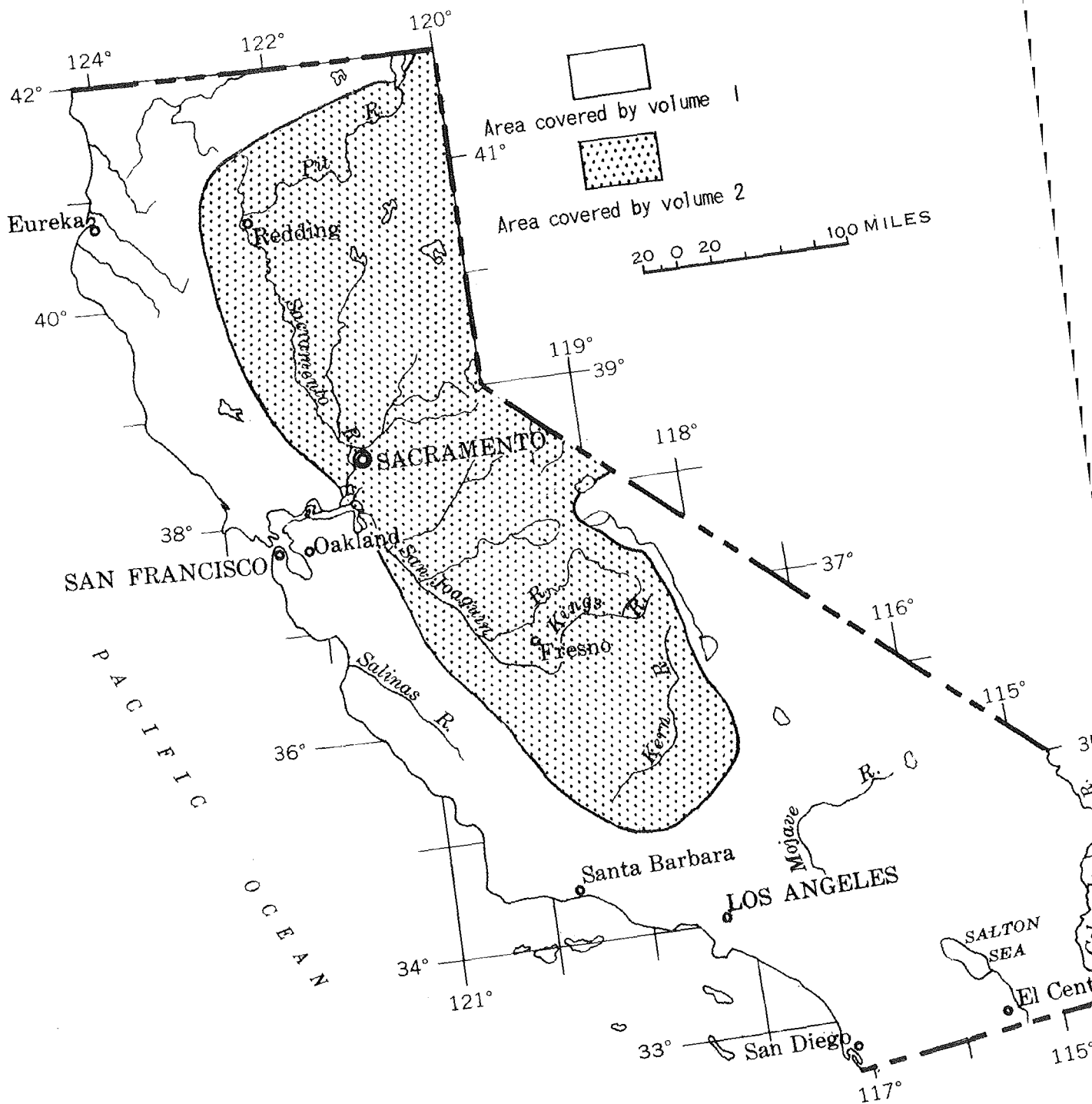
Water-resources records, 1969, for California are in the following reports of the U.S. Geological Survey:

1. Water Resources Data for California
Part 1: Surface Water Records
Volume 1: Colorado River Basin, Southern Great Basin, and Pacific Slope Basins excluding Central Valley
2. Water Resources Data for California
Part 1: Surface Water Records
Volume 2: Northern Great Basin and Central Valley
3. Water Resources Data for California
Part 2: Water Quality Records
4. Water Resources Data for California
Part 3: Ground Water Records

Copies of these reports may be obtained from District Chief,
Water Resources Division
U.S. Geological Survey
855 Oak Grove Avenue
Menlo Park, California 94025

Prepared in cooperation with

California Department of Water Resources
Alameda County Flood Control and Water Conservation District
Alameda County Water District
Antelope Valley-East Kern Water Agency
Bollinas Harbor District
Coachella Valley County Water District
Contra Costa County Flood Control and Water Conservation District
East Bay Municipal Utility District
Georgetown Divide Public Utility District
Imperial Irrigation District
Kings River Conservation District
Lake County Flood Control and Water Conservation District
Montecito County Water District
Monterey County Flood Control and Water Conservation District
Orange County Flood Control District
Paradise Irrigation District
Riverside County Flood Control and Water Conservation District
Sacramento County Department of Public Works, Water Resources Division
San Benito County Water Conservation and Flood Control District
San Bernardino Valley Municipal Water District
San Bernardino Valley Water Conservation District
San Diego (city) Utilities Department
San Luis Obispo County Flood Control and Water Conservation District
San Mateo County
Santa Barbara City Water Department
Santa Barbara County Flood Control District
Santa Barbara County Water Agency
Santa Clara County Flood Control and Water District
Santa Cruz County Flood Control and Water Conservation District
Santa Maria Valley Water Conservation District
Santa Ynez Conservation District
Tehachapi-Cummings County Water District
Terra Bella Irrigation District
University of California (Berkeley)
Ventura River Municipal Water District
Woodbridge Irrigation District
Corps of Engineers, U.S. Army
U.S. Navy
Bureau of Reclamation, U.S. Department of the Interior
Forest Service, U.S. Department of Agriculture
Soil Conservation Service, U.S. Department of Agriculture



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WATER RESOURCES DATA FOR CALIFORNIA, 1969

PART 1. SURFACE-WATER RECORDS

INTRODUCTION

Surface-water records for the 1969 water year for California, including records of streamflow or reservoir storage at gaging stations, partial-record stations, and miscellaneous sites, are given in this report. Records for a few pertinent gaging stations in bordering States also are included. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey under the direction of R. Stanley Lord, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in California.

Through September 30, 1960, the records of discharge and stage of streams and canals and contents and stage of lakes or reservoirs were published in an annual series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States."

Beginning with the 1961 water year, surface-water records have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these reports is limited; they are designed primarily for rapid release of data shortly after the end of the water year to meet local needs. The discharge and reservoir storage records for 1961-65 also will be published in a Geological Survey water-supply-paper series entitled "Surface Water Supply of the United States 1961-65."

COOPERATION

The U.S. Geological Survey and organizations of the State of California have had cooperative agreements for the systematic collection of surface-water 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 Water Resources, William R. Gianelli, director.
Alameda County Flood Control and Water Conservation District,
Paul E. Lanferman, engineer-manager.
Alameda County Water District, M. P. Whitfield, general manager and
chief engineer.
Antelope Valley-East Kern Water Agency, W. G. Spinarski, manager.
Bollinas Harbor District, Gene McDaniel, president.
Coachella Valley County Water District, Lowell O. Weeks, general manager-
chief engineer.
Contra Costa County Flood Control and Water Conservation District,
C. C. Rich, deputy chief engineer.
East Bay Municipal Utility District, J. S. Harnett, chief engineer and
assistant general manager.
Georgetown Divide Public Utility District, J. E. Christensen, manager.
Imperial Irrigation District, R. F. Carter, general manager.
Kings River Conservation District, Vivian D. Kester, secretary.
Lake County Flood Control and Water Conservation District,
Willard D. Hansen, manager.
Montecito County Water District, E. A. Elevatorski, general manager.
Monterey County Flood Control and Water Conservation District,
Loran Bunte, Jr., district engineer.
Orange County Flood Control District, H. G. Osborne, chief engineer.
Paradise Irrigation District, C. Phillip Kelly, manager.
Riverside County Flood Control and Water Conservation District,
John W. Bryant, chief engineer.
Sacramento County Department of Public Works, Water Resources Division,
B. H. Richter, chief.
San Benito County Water Conservation and Flood Control District,
Ralph E. Towle, secretary.
San Bernardino Valley Municipal Water District, Jack A. Beaver, manager.
San Bernardino Valley Water Conservation District, E. F. Dibble, engineer
and secretary.
San Diego (city), Utilities Department, Roy E. Dodson, acting director.
San Luis Obispo County Flood Control and Water Conservation District,
Robert H. Born, county hydraulic engineer.
San Mateo County, Don S. Wilson, county engineer and road commissioner.
Santa Barbara City Water Department, Neil Mendenall, superintendent.
Santa Barbara County Flood Control District, James Stubchaer, flood control
engineer.
Santa Barbara County Water Agency, Francis H. Beattie, chairman.
Santa Clara County Flood Control and Water District, Donald K. Currllin,
manager-counsel.
Santa Cruz County Flood Control and Water Conservation District,
D. A. Porath, district engineer.
Santa Maria Valley Water Conservation District, Maurice F. Twitchell,
secretary.
Santa Ynez River Conservation District, Andrew T. Petersen, president.
Tehachapi-Cummings County Water District, Robert J. Jasper, secretary-
general manager.
Terra Bella Irrigation District, John E. Bourdreau, manager.
University of California (Berkeley), A. Starker Leopold, professor of
zoology.
Ventura River Municipal Water District, Robert McKinney, general manager
and chief engineer.
Woodbridge Irrigation District, Kenneth S. Welsh, superintendent.

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

The following organizations and individuals aided in collecting records: Pacific Power and Light Co., Bear Valley Mutual Water Co., Metropolitan Water District of California, Fontana Union Water Co., Irvine Ranch, Los Angeles City Department of Water and Power, Los Angeles County Flood Control District, Rancho California, Pacific Gas and Electric Co., Placer County Water Agency, Sacramento Municipal Utility District, Southern California Edison Co., Kern County Land and Water Co., United Water Conservation District, Ventura County Flood Control District, Helix, Merced, Modesto, Nevada, Serrano and Carpenter, Turlock, Oroville-Wyandotte, Oakdale-South San Joaquin, and Vista Irrigation Districts, and Yuba County Water Agency.

DEFINITION OF TERMS

Definition of terms related to streamflow and other hydrologic data, as used in this report, are defined as follows:

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 325,851 gallons.

Cfs-day 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, 1.9835 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

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.

Cubic foot per second (cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second, and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

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

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 herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

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 gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

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

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

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

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

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

International Hydrological Decade (IHD) River Stations provide a general index of runoff and materials in the water balance (discharge of water, and dissolved and transported solids) of the world. In the United States, IHD Stations provide indices of runoff and of the general distribution of water in the principal river basins of the conterminous United States and Alaska.

DOWNSTREAM ORDER AND STATION NUMBERS

Records are listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of gaging stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging 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 numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit station number for each station, such as 11-1208.00 includes the part number "11" and a 6-digit station number. In this report, the nonessential zeros are not shown. For example, the complete number 11-1208.00 would appear as 11-1208., just to the left of the station name.

In this report, the records are listed in downstream order by parts. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF SURFACE-WATER DATA

Collection and Computation of Data

The base data collected at gaging stations consists of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that gives a continuous graph of the fluctuations (for digital recorders, a tape punched at 15-, 30-, or 60-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks on the measurement of stream discharge. (See also SELECTED REFERENCES.) Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For a stream-gaging station rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage heights to the rating table gives the daily mean discharge from which the monthly and the yearly mean discharge are computed. 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 by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. Information required for determining 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 determining discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. Discharge over spillways is computed from a stage-discharge relation curve defined by discharge measurements. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

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 on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of basic data. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the 1969 water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging station gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, and general remarks. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey, unless otherwise qualified. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. The maximum discharge (or contents) and the maximum gage height, the minimum discharge

if there is little or no regulation (or the minimum contents), and the minimum gage height if it is significant are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). In the first paragraph headed "Current year:" the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in the PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge or contents, it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water Quality records, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is also given under "REMARKS."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISIONS (WATER YEARS)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations 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 revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

Skeleton rating tables are published for stream-gaging stations where they serve a useful purpose and the dates of applicability can be easily identified.

Skeleton capacity tables are published for all reservoirs for which records of contents are published on a daily basis.

The daily tables for stream-gaging stations give the discharge corresponding to the daily mean gage height unless there are large or rapid changes in the discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharge for several parts of a day. For digital recorders, the daily mean discharge is always the average of the discharges at each punched reading. For stations equipped with nonrecording gages, the daily discharge corresponds to once-daily readings of the gage or to the mean of twice-daily readings; but for periods of rapidly changing stage the discharge is determined from a gage-height graph based on gage readings.

The daily tables for reservoir stations give the contents corresponding to the water-surface elevation at a given time, usually at 2400 each day. For some reservoirs the elevation at a given time is given in the daily table.

The monthly summary is given below the daily table. For stream-gaging stations the line headed "TOTAL" gives the sum of the daily figures; it is the total cubic feet per second per day for the month. 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 expressed in acre-feet (line headed "AC-FT").

For reservoir stations the monthly summary gives the elevation (or gage height) at the end of the month and the change in contents during the month. If elevation or gage height is given in the daily table, the monthly summary gives the contents at the end of the month, rather than the elevation or gage height. For some reservoirs a tabulation of monthly evaporation from the water surface also is included.

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges for the calendar and water years; likewise, the minimums in this summary are the minimum daily discharges.

For reservoir stations the yearly summary gives the change in contents for the calendar year and for the water year. For some reservoirs the yearly evaporation also is included.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below the yearly summary. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

In a general footnote, introduced by the word "NOTE" certain periods are indicated for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs. Footnotes to reservoir tables may be used to explain the use of new capacity tables or for other special conditions.

Accuracy of Data

The accuracy of discharge data 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 observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent; "good" within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures 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, consumptive use, regulation, evaporation, or other factors. 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 unadjusted losses (consumptive use, evaporation, seepage, etc.) are large in comparison with the observed discharge.

Publications

Each volume of the 1960 series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States" contains a listing of the numbers of all water-supply papers in which records of surface-water data were published for the area covered by the individual volumes. Each volume also contains a list of water-supply papers that give detailed information on major floods for the area. A new series of water-supply papers containing surface-water records for the 5-year period October 1, 1960, to September 30, 1965, also will include lists of annual and special reports published as water-supply papers.

Records through September 1950 for the area covered by this report have been compiled and published in Water-Supply Papers 1313(9), 1314(10), and 1315 A and B(11); records for October 1950 to September 1960 have been compiled and published in Water-Supply Papers 1733(9), 1734(10), and 1735(11). These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

Other Data Available

Data collected at partial-record stations and at miscellaneous sites are given in three tables at the end of the surface-water records in this report. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table of discharge measurements at miscellaneous sites. Occasionally, discharge

measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also at the end of this report. Data for most crest-stage partial-record stations in California are not included in this report. They are published separately in an annual report, "Floods from Small Drainage Areas," copies of which may be obtained from the district office.

More detailed information than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Many gaging-station records in California through 1958 have been analyzed to give several statistical summaries: (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year.

At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part 2 of this report. Under the "REMARKS" paragraph of the gaging-station description, reference is made to water-quality records collected on a regular basis.

HYDROLOGIC CONDITIONS

The runoff in 1969 over the State was one of the highest of record, and averaged about $3\frac{1}{2}$ times the 1930-60 median. Precipitation for the year was about $1\frac{1}{2}$ times normal. The high runoff in relation to the total precipitation occurred as a result of very intense tropical-type storms in January and February.

Runoff during October was normal or near normal in all but southern California where it was generally below normal but deficient in the extreme southern part. Localized intense electrical storms produced heavy runoff in some desert areas.

Storms in November produced excessive runoff from the Sierra Nevada and above-normal runoff in the north-coastal area, but the storms did not extend to the southern part of the State and the runoff there was generally below normal. Runoff in December was above or near normal in northern California and generally below normal in southern California.

Streamflow was excessive in January with extreme flooding in the central and south-coastal areas January 20-27. The first of a series of storms that began January 11 was centered in the Russian, Eel, and Sacramento river basins, and precipitation ranged from 7 to 14 inches in those areas January 11-14. A second series of storms that began January 17 brought very heavy rains throughout the State. Precipitation was heaviest in the Coast Ranges extending from Monterey County southward to Los Angeles. Storm totals January 17-27 ranged from 12 to 28 inches. The Sierra Nevada also received heavy precipitation with snow above the 7,000-foot elevation. Peak discharges in many streams from Monterey County southward to Los Angeles exceeded those previously recorded. In southern California 92 lives were lost as a result of drowning, mudslides, automobile accidents, and other causes directly attributable to the storms and floods. Mudslides destroyed many homes in the vicinity of Glendora, 20 miles east of Los Angeles, and floodwaters and mudslides destroyed or damaged many homes in other areas. Large areas of farmland were inundated,

many roads and bridges were destroyed or damaged, and damage to citrus and other crop lands was extensive. Severe floodflows occurred also in the southern San Joaquin Valley, principally in streams draining the foothill areas.

Despite the heavy damage from mudslides in foothill areas the total flood loss in the urbanized areas of Los Angeles was relatively low as a result of the operation of the extensive system of flood-control facilities available. Many reservoirs in basins northwest of Los Angeles were filled, but elsewhere in California storage and regulation afforded by the major reservoirs effectively reduced the flood hazard.

Continuing rains in February, in central and southern California culminated by intense storms February 23-24 caused extreme floods again in substantially the same areas that were affected by the recordbreaking floods in January. The resulting floodflows nearly equaled or exceeded those in January. Damages again were widespread particularly because emergency repairs from the January flood were insufficient to accommodate the high flows, and mud and land slides continued to cause damage. In southern California floodflows generally exceeded the January flows in streams in San Bernardino, Riverside, Orange, and San Diego Counties. In the Santiago Creek basin in Orange County, the floodflows were extreme, and a mudslide in Silverado Canyon caused the loss of at least 11 lives.

Flows in most streams north of Los Angeles, in Los Angeles, Ventura, and Santa Barbara Counties, generally were comparable or less than those in January; in some streams, however, the flows were substantially greater. Flows in some streams in the Santa Clara and Ventura, Santa Ynez, and Santa Maria river basins generally exceeded the previous peak flows. Lake Piru, in the Santa Clara River basin, spilled for the first time since storage began in 1955. Twitchell Reservoir, on the Cuyama River in Santa Barbara County, also filled and spilled for the first time since completion in 1959.

Floods in the Salinas River basin in central-coastal California were substantially above those in January; at Spreckels, near the mouth, the peak discharge of 83,100 cfs February 26 exceeded the prior maximum of 75,000 cfs in 1958 and 70,000 cfs in January 1969. Nacimiento Reservoir, which stored all the inflow in January, spilled about 7,300 cfs to the Salinas River. San Antonio Reservoir on San Antonio River stored all of the inflow in January and February. Flood damage to agricultural lands, bridges, roads, railroads, sewer-treatment plant facilities, and other property was again very severe.

Flooding occurred again in the San Joaquin Valley. Heavy runoff from Sierra Nevada foothill streams and the breaching of canals and levees caused extensive inundation again in the San Joaquin Valley. Floodflows in streams in the Coalinga area on the west side of the San Joaquin Valley in February exceeded the record flows in January. Damage from inundation was severe in Coalinga and in the surrounding agricultural area.

The floods of January and February are described in a preliminary open-file report, "Floods of January and February 1969 in Central and Southern California." A comprehensive report, for publication as a water-supply paper, is under preparation.

Precipitation was deficient in March and streamflow in the north-coastal area decreased considerably. Temperatures remained below normal during the first half of the month but were well above normal during the last half. The heavy snowpack began to thaw and runoff from the Sierra Nevada was near normal in the northern part and above normal in the southern part. Runoff was generally excessive during April because of continued melting of the snowpack and moderate rainfall.

Runoff during May continued to be excessive as a result of snowmelt from the heavy snowpack. Runoff was especially high from the Kings, Kaweah, and Tule river basins where the 1969 snowpack was much greater than normal. Maximum releases were made from reservoirs in the area to allow additional space for the storage of the heavy runoff. Heavy flows from the Kings, Kaweah, and Tule Rivers reached and were stored in Tulare Lake which is generally dry and the lake bottom cultivated; the lake is diked into sections with controlled openings to allow the floodwater to be stored in selected areas. The volume of flood runoff was the greatest for many years. Most reservoirs in the State were full, or nearly full, and releases of water were made to maintain storage space for the expected additional runoff.

Streamflow continued excessive in June although cooler temperatures reduced the runoff from that expected. Snowmelt peaks occurred during the month with normal recession but with above-normal flows. The continuing storage of floodwater into Tulare Lake increased the contents to a record of about 1 million acre-feet, with the associated flooding of about 89,000 acres, and caused Tulare Lake to become the largest lake in area entirely within California.

Streamflow was above normal in July in north-coastal California but remained excessive elsewhere. At the index station Kings River above North Fork the runoff was five times median, indicative of the magnitude of the runoff from the southern end of the Sierra Nevada, and previous maximum monthly and daily mean discharges for May, June, and July were exceeded.

The streamflow in August continued to be above normal in the north-coastal area and the northern part of the State, but was excessive increasing southward from the central to the southern part of the Sierra Nevada. Streamflow continued to be excessive from mountainous areas in southern California.

Runoff generally dwindled in September although at the year's end the runoff in northern California remained above normal while that in southern California remained excessive.

Contents of reservoirs at the end of the year remained high; the contents of major reservoirs in northern California were about 135 percent of those last year and 125 percent of average. Most reservoirs in southern California were full or nearly full.

Figure 1 shows the runoff for index stations in California for the 1969 water year expressed in percentage of the 1930-60 median. The average runoff ranged from about $1\frac{1}{2}$ times median in the north-coastal area to more than 11 times median in the south-coastal area. As an illustration of the variability of runoff over the State from one year to the next the average runoff for the current year was five times that in 1968.

SELECTED REFERENCES

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- Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.

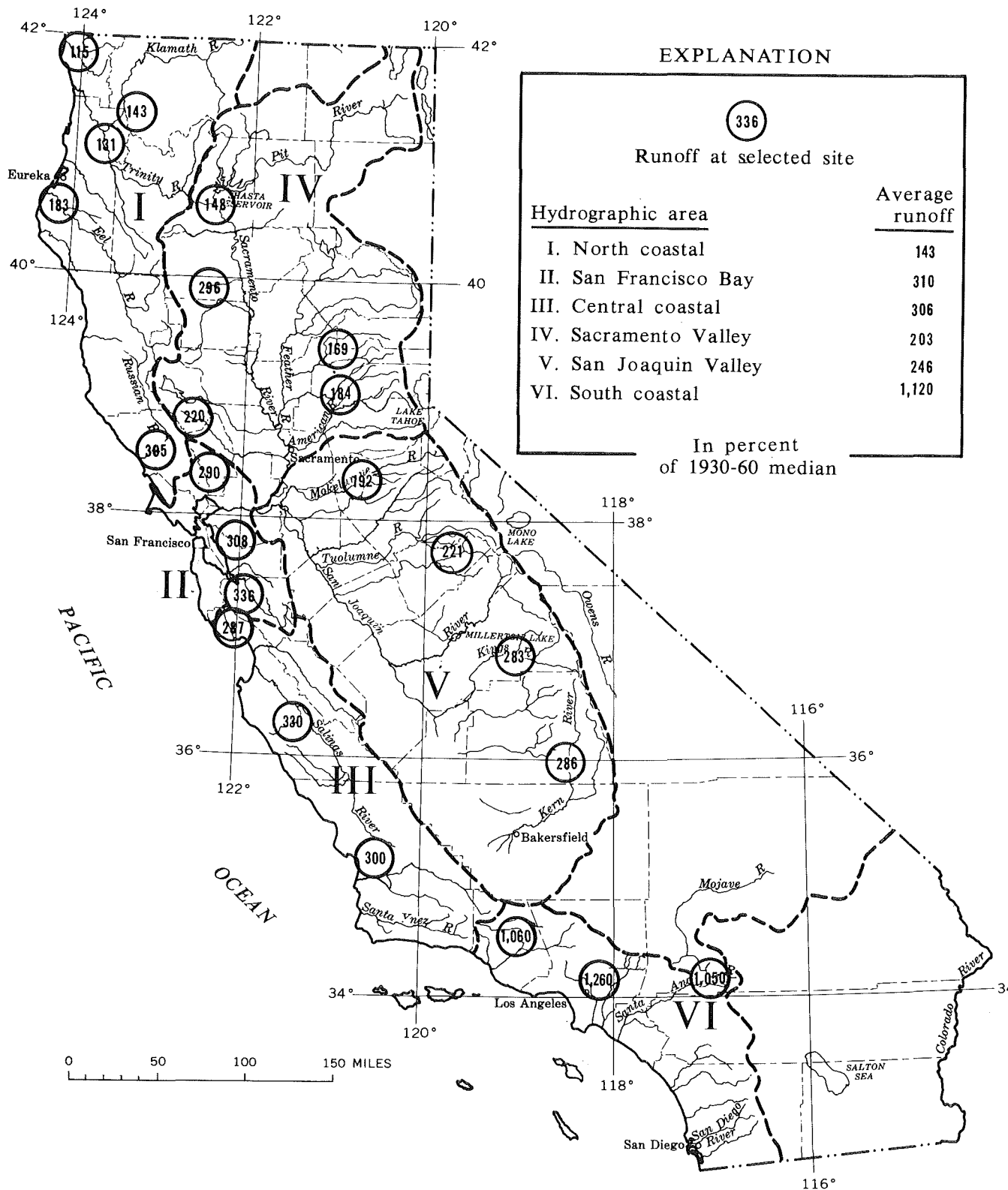


FIGURE 1.-- Runoff for the 1969 water year

COLORADO RIVER MAIN STEM

9-4230. COLORADO RIVER BELOW DAVIS DAM, ARIZ.-NEV.

LOCATION.--Lat 35°11'30", long 114°34'17", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.32 S., R.66 E., Mount Diablo meridian, in Nevada, Clark County, on right bank 0.5 mile downstream from Davis Dam, 29 miles west of Kingman, Ariz., and 68 miles downstream from Hoover Dam.

DRAINAGE AREA.--169,300 sq mi, approximately.

PERIOD OF RECORD.--June 1905 to September 1907 (published as "at Hardyville"), March 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above mean sea level; gage readings have been reduced to elevations above mean sea level. 1905-7, nonrecording gage at site 4.8 miles downstream at datum about 13.4 ft lower. Mar. 16 to May 3, 1949, water-stage recorder at site 0.5 mile downstream at present datum. May 4, 1949, to Feb. 24, 1956, water-stage recorder at site 400 ft upstream at present datum.

AVERAGE DISCHARGE (unadjusted).--20 years, (1949-69), 12,970 cfs (9,397,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 28,000 cfs Sept. 8 (elevation, 506.40 ft); minimum daily, 1,900 cfs Jan. 16.

1905-7: Maximum daily discharge, 116,000 cfs June 20, 1906; minimum daily, 2,850 cfs Jan. 5, 1906.

1949 to current year: Maximum discharge, 31,200 cfs Apr. 22, 1952 (elevation, 513.91 ft); no flow at Davis Dam parts of several days July to September and Dec. 27, 1950, when gates in dam were closed; minimum daily discharge, 285 cfs Aug. 3, 1950.

REMARKS.--Records excellent. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950. Many diversions upstream for irrigation, industrial, and municipal uses.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10,800	8,090	7,810	7,810	8,480	9,920	15,400	12,700	14,700	13,500	15,100	11,500
2	10,800	7,920	7,620	8,650	8,490	9,380	15,300	14,200	14,600	13,400	15,600	10,400
3	7,670	7,500	8,590	8,050	10,500	13,900	14,400	15,000	14,300	14,800	15,600	9,780
4	8,630	7,090	8,470	7,910	9,880	14,100	15,400	14,600	13,400	15,800	16,700	11,100
5	9,310	7,080	7,630	7,870	12,200	14,000	15,900	13,100	12,500	16,900	16,400	12,200
6	9,430	7,470	7,820	8,490	12,500	12,400	16,500	11,300	13,000	16,200	16,000	11,300
7	9,600	7,440	8,510	8,850	12,900	13,500	14,200	8,790	13,900	15,700	15,200	9,120
8	9,720	7,310	7,240	8,420	13,000	13,300	15,400	8,340	14,100	15,600	14,200	11,200
9	8,150	7,370	7,950	7,280	13,000	13,100	15,700	7,550	13,700	13,800	15,200	8,370
10	6,710	6,990	6,930	7,950	12,600	14,500	14,100	10,400	11,900	14,900	15,800	7,880
11	7,580	6,400	6,720	8,930	11,700	13,200	13,400	11,400	11,600	15,100	14,500	9,310
12	8,950	6,320	6,320	8,760	10,800	12,700	13,600	13,300	14,000	15,600	14,000	10,800
13	9,090	6,840	6,460	8,130	10,900	10,700	13,700	12,700	14,600	15,700	11,900	11,700
14	8,760	6,770	6,370	2,980	10,600	10,500	14,000	13,800	14,700	15,900	13,400	10,900
15	7,670	6,870	6,520	2,000	10,500	12,300	13,800	14,200	15,000	15,600	13,300	9,170
16	8,080	6,370	6,360	1,900	10,200	13,100	14,300	13,600	14,800	14,400	13,300	8,950
17	7,650	7,140	7,070	4,490	10,800	15,100	14,600	13,000	13,600	12,500	15,000	7,710
18	8,760	6,630	7,170	3,060	9,240	14,300	14,700	13,200	11,100	13,300	13,800	8,020
19	8,800	6,380	7,740	3,550	9,710	14,900	13,000	13,000	14,500	12,600	14,100	8,110
20	9,290	6,470	8,150	3,510	8,560	15,200	14,600	12,900	14,300	13,600	14,200	8,170
21	8,100	6,560	6,540	2,730	9,890	15,400	14,700	12,700	13,500	14,700	15,100	10,700
22	8,180	6,960	4,750	1,980	9,630	16,000	14,100	14,300	12,900	14,600	14,500	11,000
23	6,740	6,550	5,860	3,050	9,600	16,200	14,200	15,200	14,200	13,300	15,200	10,900
24	7,000	5,980	5,560	3,920	8,930	16,000	14,800	14,500	13,500	13,400	15,300	10,100
25	6,840	7,130	5,570	3,020	9,600	14,800	14,400	14,900	13,400	13,500	13,000	10,600
26	6,670	6,910	6,800	2,620	9,860	15,800	14,700	12,500	13,600	14,300	12,600	12,600
27	6,340	6,620	7,140	1,990	11,200	16,500	15,100	13,200	14,900	15,000	12,800	12,600
28	7,590	6,670	6,120	5,000	10,100	12,900	12,800	12,400	14,000	14,500	13,400	10,100
29	7,870	7,090	6,740	5,420	-----	13,300	12,200	13,500	13,900	13,900	13,700	9,190
30	7,920	7,320	7,410	7,780	-----	15,900	12,100	13,800	13,500	14,600	13,500	10,300
31	7,790	-----	7,980	8,290	-----	16,400	-----	9,890	-----	14,000	12,300	-----
TOTAL	256,490	208,240	217,920	174,390	295,370	429,300	431,100	393,970	411,700	450,700	444,700	303,780
MEAN	8,274	6,941	7,030	5,625	10,550	13,850	14,370	12,710	13,720	14,540	14,350	10,130
MAX	10,800	8,090	8,590	8,930	13,000	16,500	16,500	15,200	15,000	16,900	16,700	12,600
MIN	6,340	5,980	4,750	1,900	8,480	9,380	12,100	7,550	11,100	12,500	11,900	7,710
AC-FT	508,700	413,000	432,200	345,900	585,900	851,500	855,100	781,400	816,600	893,900	882,000	602,500
CAL YR 1968	TOTAL 4,080,060		MEAN 11,150		MAX 18,000		MIN 4,750		AC-FT 8,093,000			
WTR YR 1969	TOTAL 4,017,660		MEAN 11,010		MAX 16,900		MIN 1,900		AC-FT 7,969,000			

COLORADO RIVER MAIN STEM

15

9-4235. COLORADO RIVER AT NEEDLES, CALIF.

LOCATION.--Lat 34°51'06", long 114°36'33", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.9 N., R.23 E., San Bernardino meridian, San Bernardino County, on right bank at Needles, 18 miles upstream from gaging station near Topock, Ariz., 31 miles downstream from Davis Dam, and 98 miles downstream from Hoover Dam. Prior to Feb. 17, 1969, at site 200 ft upstream.

DRAINAGE AREA.--170,600 sq mi, approximately.

PERIOD OF RECORD.--April 1931 to current year (elevations only).

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level. Prior to May 15, 1942, at site 550 ft downstream and May 15, 1942, to Feb. 16, 1969, at site 200 ft upstream; at datum 66.23 ft higher prior to Jan. 12, 1952, and at present datum thereafter.

EXTREMES.--Current year: Maximum elevation, 469.87 ft Aug. 5; minimum, 460.72 ft Feb. 19, 24.
Period of record: Maximum elevation, 475.77 ft Nov. 30, 1944; minimum, about 460.0 ft Dec. 23, 31, 1965.

REMARKS.--Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950.

REVISIONS (WATER YEARS).--WSP 1119: 1931-47.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64.70	63.40	62.86	63.22	63.33	63.15	66.35	64.78	64.40	65.37	65.89	65.31
2	64.65	63.37	63.35	62.99	63.25	63.58	66.31	65.33	66.24	65.82	66.70	64.74
3	64.01	63.20	63.05	63.62	63.88	64.25	66.17	65.92	66.29	66.04	67.01	63.60
4	62.90	63.34	63.30	63.24	64.04	65.89	65.73	66.26	65.73	66.84	66.55	64.22
5	64.53	62.79	63.36	63.61	64.81	65.99	66.79	65.89	65.89	67.26	67.64	64.59
6	63.98	62.99	63.05	62.91	65.26	64.86	66.96	65.46	65.31	67.29	67.35	65.06
7	63.26	63.25	63.28	63.59	65.58	64.93	66.04	63.87	65.33	66.61	66.39	64.39
8	63.91	63.17	63.23	63.50	65.72	65.48	65.78	63.59	65.78	66.85	66.69	63.34
9	63.81	63.05	62.92	63.37	65.69	65.26	66.53	62.51	65.65	66.75	65.98	64.13
10	63.19	62.94	63.16	62.75	65.68	65.40	66.24	63.20	65.66	65.99	66.79	63.02
11	62.75	62.91	62.64	63.49	65.28	65.64	65.71	64.12	64.92	66.51	66.65	62.95
12	63.16	62.57	62.43	63.46	--	65.17	65.09	64.84	65.22	66.60	66.17	63.73
13	63.55	62.54	62.23	64.53	--	64.86	65.96	65.51	66.04	66.84	65.79	64.69
14	63.87	62.77	62.48	62.01	--	63.95	65.29	64.74	66.20	66.74	65.28	64.85
15	63.53	62.96	62.28	--	--	64.05	65.63	66.39	66.12	67.08	65.81	64.57
16	63.16	62.72	62.60	--	--	64.75	65.57	65.59	66.37	65.66	65.61	63.30
17	63.29	62.73	62.28	--	--	65.60	65.85	65.96	66.35	65.03	65.95	63.15
18	63.12	62.91	62.79	--	63.92	65.89	65.67	65.72	65.07	64.68	66.42	62.81
19	63.59	62.61	62.91	--	63.26	65.77	66.00	64.90	65.09	64.60	66.20	63.22
20	63.80	62.50	63.27	--	63.14	66.18	65.44	65.68	66.20	64.76	66.11	63.09
21	63.65	62.49	62.87	--	63.11	65.96	65.87	65.11	65.85	64.73	66.31	62.86
22	63.39	62.72	62.30	--	64.51	66.45	66.05	65.63	65.60	65.37	66.63	64.44
23	63.32	62.91	61.55	--	63.49	66.99	65.68	66.40	65.55	65.28	66.28	64.44
24	62.75	62.30	62.09	--	62.41	66.24	66.13	66.42	65.95	64.49	66.59	64.38
25	62.87	62.23	61.98	--	63.21	66.14	65.73	66.12	65.11	64.96	66.06	64.07
26	62.48	62.77	61.95	--	63.59	66.27	65.89	65.99	65.62	64.79	65.57	64.74
27	62.82	62.68	62.71	--	63.54	66.63	66.14	65.63	65.49	65.27	65.51	65.77
28	62.29	62.54	62.68	--	64.75	66.54	65.78	65.30	65.92	65.50	65.46	65.17
29	63.27	62.59	62.26	61.75	-----	65.40	65.30	62.58	65.67	65.43	65.87	63.28
30	63.34	62.73	62.71	61.64	-----	65.54	64.96	66.13	65.31	64.94	65.72	63.60
31	63.25	-----	63.14	63.20	-----	66.46	-----	65.77	-----	65.40	65.91	-----
MAX	64.70	63.40	63.36	64.53	65.72	66.99	66.96	66.42	66.37	67.29	67.64	65.77
MIN	62.29	62.23	61.55	-	62.41	63.15	64.96	62.51	64.40	64.49	65.28	62.81

COLORADO RIVER MAIN STEM

9-4240. COLORADO RIVER NEAR TOPOCK, ARIZ.

LOCATION.--Lat 34°41'15", long 114°27'43", in SW¼NW¼ sec.13, T.15 N., R.21 W., Gila and Salt River meridian, Mohave County, on left bank in Mohave Canyon, 2.7 miles downstream from Topock, 39.5 miles upstream from Parker Dam, and 49 miles downstream from Davis Dam.

DRAINAGE AREA.--172,300 sq mi, approximately.

PERIOD OF RECORD.--January 1917 to current year. Daily mean elevations published since October 1938.

GAGE.--Water-stage recorder. Datum of gage is 423.02 ft above mean sea level; gage readings have been reduced to elevations above mean sea level. Prior to Dec. 3, 1922, at site about 1 mile upstream at different datum.

AVERAGE DISCHARGE.--17 years (1917-34), 20,260 cfs (14,670,000 acre-ft per year); 35 years (1934-69), 13,280 cfs (9,621,000 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 17,800 cfs Aug. 7; maximum elevation, 455.57 ft July 6; minimum daily discharge, 2,100 cfs Jan. 23; minimum elevation, 448.58 ft Jan. 28.

1917-34: Maximum discharge probably exceeded 200,000 cfs June 22, 1921; minimum, 1,480 cfs Aug. 17, 1934.

1934 to current year: Maximum discharge, 35,700 cfs Jan. 29, 1942; maximum elevation, 457.37 ft July 9, 1959; minimum discharge, 375 cfs Feb. 14, 1935; minimum daily, 422 cfs Feb. 14, 1935.

Discharge of about 300,000 cfs (based on determination at Lees Ferry gaging station) occurred about July 10, 1884. Discharge in excess of 400,000 cfs (estimated) probably occurred within the period 1857-68 and most likely in 1862.

REMARKS.--Records excellent. Many diversions above station for irrigation, municipal, and industrial uses. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950.

REVISIONS (WATER YEARS).--WSP 918: 1921. WSP 1313: 1918-19(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10,700	8,080	7,140	7,810	8,060	9,950	15,200	11,900	11,300	13,600	13,400	12,200
2	10,500	7,940	7,420	7,380	8,030	10,100	14,700	12,400	13,300	13,800	14,200	11,500
3	10,400	7,790	7,470	8,130	8,310	9,950	14,600	13,400	13,900	13,600	14,900	10,400
4	8,120	7,700	7,970	7,760	9,780	13,300	13,900	14,100	13,500	15,000	14,700	9,950
5	9,440	7,260	8,030	8,090	10,000	13,600	15,000	13,800	13,200	15,400	15,700	11,000
6	9,610	7,120	7,630	7,560	11,700	13,100	15,600	13,100	12,700	16,100	15,900	11,600
7	8,940	7,570	7,710	8,130	12,300	12,300	15,000	11,700	12,800	15,100	15,200	11,000
8	9,490	7,430	8,040	8,450	12,700	13,000	13,900	10,500	13,400	15,100	14,600	9,350
9	9,920	7,280	7,320	8,120	12,900	12,800	14,900	9,640	13,600	15,100	13,800	10,500
10	9,080	7,290	7,690	7,310	12,800	12,900	14,900	9,430	13,300	13,800	14,500	8,840
11	7,420	7,040	6,960	7,830	12,500	13,700	14,100	11,000	12,400	14,400	14,900	8,430
12	7,750	6,430	6,560	8,470	11,700	13,000	13,400	11,700	12,200	14,700	14,100	9,370
13	8,770	6,380	6,360	9,320	11,000	12,500	14,000	12,900	13,500	15,000	13,500	10,800
14	9,370	6,590	6,390	7,350	10,800	10,900	13,100	12,400	14,000	15,000	11,900	11,700
15	8,720	6,960	6,250	3,400	10,700	10,800	13,500	13,700	14,000	15,400	12,900	10,900
16	7,920	6,940	6,520	2,360	10,400	11,800	13,400	13,300	14,200	15,100	12,800	9,520
17	8,190	6,470	6,180	2,380	10,300	12,700	13,700	13,800	14,100	14,200	13,100	9,190
18	7,990	7,020	6,790	3,820	10,600	14,000	13,800	13,100	13,000	12,900	14,100	8,340
19	8,540	6,650	7,230	3,270	9,800	13,700	14,000	12,500	12,000	13,300	13,400	8,520
20	8,940	6,360	7,740	3,450	9,780	14,000	12,800	13,100	13,900	12,800	13,500	8,680
21	9,200	6,340	7,360	3,360	9,060	14,400	13,700	12,800	13,800	13,300	13,700	8,480
22	8,290	6,700	6,500	2,820	11,100	14,700	13,900	12,900	13,400	14,100	14,300	10,300
23	8,260	6,950	5,030	2,100	10,300	15,600	13,400	13,900	13,100	14,100	14,100	10,600
24	7,050	6,370	5,670	3,120	9,060	15,000	13,500	14,400	13,900	13,200	14,400	10,600
25	7,280	6,030	5,660	3,560	9,300	15,000	13,500	14,000	13,400	13,300	14,400	9,900
26	7,150	6,660	5,550	3,060	9,800	14,400	13,300	14,100	13,600	13,300	12,900	10,600
27	6,860	6,780	6,510	2,680	9,950	15,100	13,700	12,900	13,900	13,800	12,500	12,500
28	6,710	6,590	6,970	2,230	11,500	15,900	13,800	13,000	14,500	14,300	12,500	12,100
29	7,500	6,630	6,190	4,500	-----	13,200	12,500	12,700	14,000	14,100	13,000	9,370
30	7,920	6,980	6,510	5,020	-----	13,000	12,000	13,700	13,800	13,500	13,100	9,170
31	7,830	-----	7,150	7,130	-----	14,400	-----	13,600	-----	13,900	13,100	-----
TOTAL	263,860	208,330	212,500	169,970	294,230	408,800	416,800	395,470	401,700	440,300	429,100	305,410
MEAN	8,512	6,944	6,855	5,483	10,510	13,190	13,890	12,760	13,390	14,200	13,840	10,180
MAX	10,700	8,080	8,040	9,320	12,900	15,900	15,600	14,400	14,500	16,100	15,900	12,500
MIN	6,710	6,030	5,030	2,100	8,030	9,950	12,000	9,430	11,300	12,800	11,900	8,340
AC-FT	523,400	413,200	421,500	337,100	583,600	810,800	826,700	784,400	796,800	873,300	851,100	605,800
CAL YR 1968	TOTAL 3,957,170			MEAN 10,810	MAX 16,900	MIN 5,030	AC-FT 7,849,000					
WTR YR 1969	TOTAL 3,946,470			MEAN 10,810	MAX 16,100	MIN 2,100	AC-FT 7,828,000					

9-4240. COLORADO RIVER NEAR TOPOCK, ARIZ.--Continued

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52.94	51.94	51.51	51.82	51.80	52.54	54.54	53.63	53.37	54.01	53.97	53.36
2	52.87	51.88	51.64	51.63	51.79	52.60	54.37	53.81	54.18	54.09	54.24	53.08
3	52.79	51.81	51.66	51.95	51.91	52.53	54.33	54.20	54.39	54.03	54.49	52.64
4	51.93	51.77	51.89	51.79	52.51	53.80	54.03	54.46	54.25	54.57	54.41	52.51
5	52.45	51.57	51.91	51.94	52.57	53.92	54.46	54.36	54.12	54.73	54.81	52.88
6	52.51	51.51	51.73	51.70	53.26	53.74	54.71	54.08	53.93	54.99	54.83	53.15
7	52.24	51.71	51.77	51.96	53.42	53.42	54.45	53.55	53.99	54.60	54.55	52.89
8	52.45	51.65	51.92	52.09	53.58	53.68	54.05	53.05	54.22	54.62	54.35	52.29
9	52.63	51.58	51.59	51.95	53.65	53.61	54.42	52.69	54.29	54.60	54.02	52.72
10	52.28	51.58	51.76	51.58	53.62	53.65	54.41	52.61	54.17	54.11	54.29	52.09
11	51.64	51.47	51.43	51.83	53.49	53.98	54.10	53.26	53.80	54.34	54.43	51.94
12	51.77	51.18	51.24	52.11	53.15	53.67	53.83	53.55	53.73	54.43	54.12	52.30
13	52.18	51.15	51.14	52.48	52.92	53.47	54.06	54.02	54.26	54.57	53.90	52.83
14	52.41	51.25	51.15	51.59	52.87	52.85	53.76	53.80	54.43	54.58	53.27	53.19
15	52.17	51.43	51.08	49.54	52.81	52.78	53.94	54.32	54.44	54.70	53.64	52.88
16	51.86	51.42	51.20	48.82	52.71	53.21	53.89	54.17	54.50	54.59	53.61	52.36
17	51.95	51.19	51.05	48.84	52.69	53.56	54.04	54.35	54.49	54.25	53.72	52.22
18	51.87	51.45	51.34	49.80	52.81	54.07	54.10	54.11	54.06	53.76	54.10	51.90
19	52.10	51.28	51.55	49.47	52.48	53.96	54.19	53.86	53.64	53.89	53.86	51.98
20	52.26	51.14	51.78	49.59	52.47	54.11	53.75	54.08	54.35	53.73	53.89	52.04
21	52.35	51.13	51.61	49.52	52.22	54.25	54.13	53.95	54.30	53.89	53.96	51.96
22	51.99	51.30	51.21	49.14	52.96	54.35	54.22	53.99	54.12	54.22	54.21	52.67
23	51.98	51.42	50.45	48.65	52.70	54.71	54.05	54.41	53.99	54.23	54.11	52.77
24	51.46	51.15	50.79	49.34	52.22	54.47	54.12	54.58	54.27	53.87	54.25	52.77
25	51.57	50.98	50.79	49.63	52.32	54.47	54.11	54.42	54.07	53.91	54.25	52.50
26	51.52	51.28	50.73	49.31	52.48	54.26	54.09	54.49	54.12	53.91	53.64	52.74
27	51.38	51.34	51.20	49.04	52.54	54.53	54.24	54.03	54.21	54.09	53.50	53.51
28	51.32	51.25	51.43	48.74	53.11	54.84	54.31	54.03	54.44	54.31	53.50	53.32
29	51.68	51.27	51.05	50.15	-----	53.78	53.82	53.93	54.24	54.21	53.69	52.30
30	51.87	51.44	51.20	50.45	-----	53.70	53.63	54.32	54.14	53.98	53.72	52.21
31	51.83	-----	51.51	51.41	-----	54.25	-----	54.28	-----	54.13	53.71	-----
MAX	52.94	51.94	51.92	52.48	53.65	54.84	54.71	54.58	54.50	54.99	54.83	53.51
MIN	51.32	50.98	50.45	48.65	51.79	52.53	53.63	52.61	53.37	53.73	53.27	51.90
MEAN	52.07	51.42	51.36	50.58	52.75	53.77	54.14	53.95	54.15	54.26	54.03	52.60

Note.--Add 400.00 ft to obtain elevation above mean sea level.

DIVERSIONS FROM LAKE HAVASU

9-4241.5. Colorado River aqueduct near Parker Dam, Ariz.-Calif.

LOCATION.--Lat 34°18'58", long 114°09'23", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.3 N., R.27 E., San Bernardino meridian, in California, San Bernardino County, at intake pumping plant of Metropolitan Water District of Southern California on Lake Havasu, 1.8 miles upstream from Parker Dam and 154 miles downstream from Hoover Dam.

PERIOD OF RECORD.--January 1939 to current year (monthly diversions only since October 1942). Published as a supplement to records for Colorado River below Parker Dam, 1942-50.

GAGE.--Venturi meters in pressure lines at intake pumping plant. Water-stage recorders with weirs on 4 percolation returns; prior to October 1964 miscellaneous measurements only.

AVERAGE DISCHARGE.--30 years, 714 cfs (517,300 acre-ft per year).

EXTREMES.--Period of record: Maximum daily diversion, 3,969 acre-ft (2,001 cfs) July 8 and Sept. 21, 1969; no diversion at times.

REMARKS.--Pumping began Jan. 7, 1939. Figures of monthly diversion shown represent water pumped from Lake Havasu less return surface flow from Gene and Copper Basin Reservoirs. No water returned as surface flow from these reservoirs this year. Percolation return flow from Gene and Copper Basin Reservoirs was measured in 4 washes between pumping plant and Copper Basin Wash, each about 1 mile from the Colorado River. Infrequent storm runoff registered with percolation flow has not been deducted and is considered negligible. The percolation return flow is not subtracted from the diversion record.

COOPERATION.--Diversion records furnished by Metropolitan Water District of Southern California.

MONTHLY DIVERSIONS AND PERCOLATION RETURN FLOW, IN ACRE-FEET, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Month	Total percolation	Diversions			
		Maximum	Minimum	Mean	Total
October.....	404	3,830	3,038	3,450	106,937
November.....	380	3,441	3,268	3,414	102,418
December.....	414	3,582	3,395	3,483	107,979
CAL YR 1968.....	4,540	3,911	150	3,228	1,181,527
January.....	387	3,813	559	3,354	103,975
February.....	335	3,808	2,643	3,295	92,268
March.....	408	3,278	1,229	2,109	65,376
April.....	354	3,313	1,780	2,329	69,858
May.....	380	3,770	2,034	2,888	89,539
June.....	357	3,884	2,196	2,754	82,628
July.....	372	3,969	2,624	3,571	110,705
August.....	415	3,923	3,334	3,551	110,091
September.....	361	3,969	2,665	3,405	102,157
WTR YR 1969.....	4,570	3,969	559	3,134	1,143,931

COLORADO RIVER MAIN STEM

9-4275. Lake Havasu near Parker Dam, Ariz.-Calif.

LOCATION.--Lat 34°18'58", long 114°09'23", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.3 N., R.27 E., San Bernardino meridian, in California, San Bernardino County, at intake pumping plant for Colorado River aqueduct of Metropolitan Water District of Southern California, 1.8 miles upstream from Parker Dam on Colorado River, and 154 miles downstream from Hoover Dam.

DRAINAGE AREA.--178,800 sq mi, approximately.

PERIOD OF RECORD.--July 1938 to current year. Published as Parker Reservoir near Parker Dam 1938.

GAGE.--Water-stage recorder. Datum of gage is 400.54 ft above mean sea level. Gage readings have been reduced to elevations above mean sea level.

EXTREMES.--Current year: Maximum contents, 619,200 acre-ft May 9 (elevation, 450.53 ft); minimum, 525,800 acre-ft Feb. 6 (elevation, 445.60 ft).

Period of record: Maximum contents, 693,000 acre-ft (by temporary use of flashboards) Apr. 18, 1943, June 4, 1953; maximum elevation, 450.77 ft June 26, 1958; minimum contents, 71,400 acre-ft June 25, 1942 (elevation, 412.09 ft).

REMARKS.--Lake is formed by concrete-arch dam; dam was completed and storage began July 1, 1938. Usable capacity (based on April 1957 re-survey by Bureau of Reclamation between elevations 430.54 and 450.54 ft) 619,400 acre-ft between elevations 400.54 ft (sill of regulating gates) and 450.54 ft (top of regulating gates). Prior to Oct. 1, 1956, different capacity table used. Dead storage, 28,600 acre-ft below elevation 400.54 ft (based on original survey). About 0.07 ft fall indicated between gage and Parker Dam under normal operating conditions. Drawdown below elevation 440.54 ft not legally permissible except by consent of the Metropolitan Water District of Southern California or in an emergency affecting the safety of the dam. Lake is used for flood control, power development, reregulation of river for irrigation demand, and as a basin from which water is pumped by Metropolitan Water District of Southern California to Colorado River aqueduct. Figures given herein represent usable contents. For record of diversion to Colorado River aqueduct and return flow, see record for Colorado River aqueduct near Parker Dam (sta 9-4241.5).

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	559,000	550,400	538,900	538,400	532,600	552,600	556,500	599,800	602,800	605,400	582,800	570,500
2	561,300	549,700	537,300	537,100	533,000	546,300	559,200	598,200	602,400	602,600	580,800	572,200
3	566,700	548,100	535,500	538,900	528,700	536,800	564,800	596,800	603,400	600,000	579,600	572,200
4	564,400	547,400	535,500	539,300	526,900	536,400	566,700	599,400	606,000	598,000	577,700	569,600
5	563,700	546,500	538,200	539,300	526,300	540,900	571,300	603,400	610,600	597,000	576,000	567,100
6	563,100	546,300	539,100	538,600	528,700	545,400	575,100	607,800	611,600	597,000	575,200	569,400
7	562,000	547,700	539,100	537,300	528,800	544,000	578,300	612,200	610,000	595,600	575,800	574,100
8	562,500	547,600	540,200	539,100	530,800	542,700	579,000	615,800	607,800	594,600	573,900	573,700
9	564,400	548,100	539,300	540,500	534,200	541,300	581,000	614,200	607,800	599,400	574,100	575,100
10	566,300	548,800	540,400	540,700	536,200	545,400	585,900	610,200	608,600	600,400	574,500	572,800
11	562,900	548,100	541,400	538,600	538,900	549,900	586,100	605,000	607,800	600,000	573,500	570,300
12	560,000	545,900	542,500	536,600	540,900	551,700	586,100	602,600	609,400	599,400	574,300	566,900
13	557,300	545,400	542,700	539,300	543,100	558,100	585,900	603,800	608,600	598,000	574,300	569,600
14	558,100	545,000	541,600	547,600	545,000	557,300	584,200	603,400	609,800	597,000	572,400	569,600
15	557,700	544,900	539,100	547,900	546,100	553,500	582,500	606,200	609,400	596,200	572,800	574,500
16	557,500	545,400	537,300	546,100	546,500	550,400	582,800	608,200	610,000	597,000	572,800	574,700
17	558,100	544,100	535,500	544,000	546,800	549,000	585,500	609,800	612,600	600,800	572,200	575,400
18	555,800	543,600	533,900	545,200	549,400	549,000	586,100	609,200	613,400	600,400	571,100	576,400
19	554,300	544,100	534,200	545,400	549,500	549,400	586,600	607,400	611,800	599,800	571,100	574,300
20	552,800	543,600	534,800	546,300	551,200	551,300	587,000	606,600	611,000	597,000	572,000	571,800
21	553,900	544,100	536,000	546,800	549,500	551,200	585,300	607,000	610,800	595,000	572,000	566,300
22	554,600	545,000	540,900	549,200	550,800	549,900	583,800	605,800	609,400	592,600	571,600	563,700
23	556,500	546,100	540,200	548,100	551,900	551,700	583,400	607,400	606,800	595,200	570,900	562,500
24	557,700	547,900	539,600	547,200	551,700	553,700	586,800	609,400	608,600	596,000	572,400	562,000
25	557,700	547,600	538,700	548,800	550,100	556,000	588,000	611,400	607,000	592,600	573,900	560,900
26	557,700	544,700	539,300	548,600	549,700	557,700	589,100	612,200	608,400	588,900	574,100	560,300
27	557,700	543,200	538,000	549,900	551,900	562,900	591,000	611,400	607,600	587,600	573,500	565,200
28	553,300	543,800	540,000	542,300	553,500	565,800	595,600	611,000	608,000	586,600	572,000	569,000
29	551,200	541,100	540,400	538,200	-----	563,700	597,000	610,600	607,400	587,400	572,400	568,000
30	549,500	539,300	539,100	534,600	-----	558,200	598,800	610,200	607,000	584,800	572,400	565,000
31	550,400	-----	537,700	532,400	-----	554,800	-----	609,800	-----	586,300	572,400	-----
(*)	-6,000	-11,100	-1,600	-5,300	+21,100	+1,300	+44,000	+11,000	-2,800	-20,700	-13,900	-7,400
MAX	566,700	550,400	542,700	549,900	553,500	565,800	598,800	615,800	613,400	605,400	582,800	576,400
MIN	549,500	539,300	533,900	532,400	526,300	536,400	556,500	596,800	602,400	584,800	570,900	560,300

CAL YR 1968.....# -6,300

WTR YR 1969.....# +8,600

* Change in contents, in acre-feet.

COLORADO RIVER MAIN STEM

9-4275. Lake Havasu near Parker Dam, Ariz.-Calif.--Continued

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447.43	446.97	446.33	446.30	445.98	447.09	447.30	449.56	449.71	449.84	448.69	448.04
2	447.55	446.93	446.24	446.23	446.00	446.74	447.44	449.48	449.69	449.70	448.58	448.13
3	447.84	446.84	446.14	446.33	445.76	445.67	447.74	449.41	449.74	449.57	448.52	448.13
4	447.72	446.80	446.14	446.35	445.66	445.65	447.84	449.54	449.87	449.47	448.42	447.99
5	447.68	446.75	446.29	446.35	445.63	445.90	448.08	449.74	450.10	449.42	448.33	447.86
6	447.65	446.74	446.34	446.31	445.76	446.15	448.28	449.96	450.15	449.42	448.29	447.98
7	447.59	446.82	446.34	446.24	445.77	446.07	448.45	450.18	450.07	449.35	448.30	448.23
8	447.62	446.81	446.40	446.34	445.88	446.00	448.49	450.36	449.96	449.30	448.22	448.21
9	447.72	446.84	446.35	446.42	446.07	445.92	448.59	450.28	449.96	449.54	448.23	448.28
10	447.82	446.88	446.41	446.43	446.18	446.15	448.85	450.08	450.00	559.59	448.25	448.16
11	447.64	446.84	446.47	446.31	446.33	446.40	448.86	449.82	449.96	449.57	448.20	448.03
12	447.48	446.72	446.53	446.20	446.44	446.50	448.86	449.70	450.04	449.54	448.24	447.85
13	447.34	446.69	446.54	446.35	446.56	446.84	448.85	449.76	450.00	449.47	448.24	447.99
14	447.38	446.67	446.48	446.81	446.67	447.34	448.76	449.74	450.06	449.42	448.14	447.99
15	447.36	446.66	446.34	446.83	446.73	447.14	448.67	449.88	450.04	449.38	448.16	448.25
16	447.35	446.69	446.24	446.73	446.75	446.97	448.69	449.98	450.07	449.42	448.16	448.26
17	447.38	446.62	446.14	446.61	446.77	446.89	448.83	450.06	450.20	449.61	448.13	448.30
18	447.26	446.59	446.05	446.68	446.91	446.89	448.86	450.03	450.24	449.59	448.07	448.35
19	447.18	446.62	446.07	446.69	446.92	446.91	448.89	449.94	450.16	449.56	448.07	448.24
20	447.10	446.59	446.10	446.74	447.01	447.02	448.91	449.90	450.12	449.42	448.12	448.11
21	447.16	446.62	446.18	446.77	446.92	447.01	448.82	449.92	450.11	449.32	448.12	447.82
22	447.20	446.67	446.44	446.90	446.99	446.94	448.74	449.86	450.04	449.20	448.10	447.68
23	447.30	446.73	446.40	446.84	447.05	447.04	448.72	449.94	449.91	449.33	448.06	447.62
24	447.36	446.83	446.37	446.79	447.04	447.15	448.90	450.04	450.00	449.37	448.14	447.59
25	447.36	446.81	446.32	446.88	446.95	447.27	448.96	450.14	449.92	449.20	448.22	447.53
26	447.36	446.65	446.35	446.87	446.93	447.36	449.02	450.18	449.99	449.01	448.23	447.50
27	447.35	446.57	446.28	446.94	447.05	447.64	449.12	450.14	449.95	448.94	448.20	447.76
28	447.13	446.60	446.39	446.52	447.14	447.79	449.35	450.12	449.97	448.89	448.12	447.96
29	447.01	446.45	446.41	446.29	-----	447.68	449.42	450.10	449.94	448.93	448.14	447.91
30	446.92	446.35	446.34	446.09	-----	447.39	449.51	450.08	449.92	448.79	448.14	447.75
31	446.97	-----	446.26	445.97	-----	447.21	-----	450.06	-----	448.87	448.14	-----
MAX	447.84	446.97	446.54	446.94	447.14	447.79	449.51	450.36	450.24	449.84	448.69	448.35
MIN	446.92	446.35	446.05	445.97	445.63	446.19	447.30	449.41	449.69	448.79	448.06	447.50

9-4275.2 (revised). COLORADO RIVER BELOW PARKER DAM, ARIZ.-CALIF.

LOCATION (revised).--Lat 34°15'30", long 114°09'00", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.16, T.2 N., R.27 E., San Bernardino meridian, in California, San Bernardino County, on north end of powerplant at Parker Dam, 14 miles upstream from Head-gate Rock Dam, and 13 miles northeast of Parker, Ariz.

DRAINAGE AREA.--178,800 sq mi, approximately.

PERIOD OF RECORD.--February to September 1934 (gage heights and fragmentary discharge records), October 1934 to current year. Prior to October 1937, published as "near Parker, Ariz."

GAGE.--Water-stage recorder. Datum of gage is 346.23 ft above mean sea level. Prior to Oct. 1, 1967, water-stage recorder at site 3.8 miles downstream at datum 346.23 ft above mean sea level (now used as supplementary gage).

AVERAGE DISCHARGE (unadjusted).--35 years, 12,580 cfs (9,114,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 18,900 cfs July 13 (gage height, 72.14 ft); minimum daily, 1,550 cfs Jan. 24, 25.

Period of record: Maximum discharge, 42,400 cfs Feb. 8, 1937; no flow at Parker Dam for parts of several days in 1942 when gates in dam were closed; minimum daily discharge, 1,440 cfs Feb. 15, 1935.

An unregulated discharge of probably less than 1,350 cfs occurred Aug. 18, 1934 (lowest unregulated discharge since 1917 and probably since a much earlier date).

REMARKS.--Records excellent. Flow regulated by Lake Mead since Feb. 1, 1935, Lake Mohave since Jan. 17, 1950, and by Lake Havasu since July 1, 1938. Many diversions above station. For record of diversion to Colorado River aqueduct and return flows, see record for Colorado River aqueduct near Park Dam (sta 9-4241.5). Records of chemical analyses and water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1313: 1941(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,970	6,080	5,930	5,810	5,990	10,400	13,200	9,130	11,700	11,800	12,900	11,200
2	7,480	6,440	6,270	6,690	6,100	11,800	12,000	10,500	11,100	12,400	13,300	8,370
3	6,300	6,490	6,430	6,030	7,450	12,000	10,900	11,400	11,000	12,200	13,200	8,050
4	7,490	6,270	6,050	5,860	8,140	11,900	11,700	11,400	10,400	12,900	13,700	8,740
5	7,570	6,030	5,010	6,320	7,610	10,700	11,200	10,400	9,450	13,700	14,200	9,880
6	7,470	5,360	5,370	6,720	8,510	10,200	12,500	8,760	9,920	13,800	13,900	8,900
7	7,680	4,830	5,770	6,870	10,400	11,600	12,500	7,850	11,200	13,800	13,300	6,720
8	7,190	5,210	5,670	6,580	9,980	12,100	12,700	6,450	12,300	13,400	13,300	7,320
9	7,010	5,230	5,940	5,370	9,560	12,000	12,600	7,940	11,800	11,700	11,500	7,360
10	5,800	5,010	5,260	5,730	9,950	9,780	11,300	8,830	10,700	11,000	12,400	7,290
11	6,940	5,320	4,860	7,110	9,560	10,200	12,000	10,600	10,500	12,200	12,600	7,130
12	7,300	5,380	4,240	7,800	9,160	10,700	12,800	11,100	9,350	13,000	12,100	8,530
13	7,650	4,970	4,440	5,840	8,300	8,740	12,800	10,500	11,900	13,500	11,400	8,670
14	7,100	4,550	4,980	2,930	8,300	9,850	13,300	10,600	11,900	13,700	10,600	9,460
15	6,870	4,970	5,390	1,870	8,580	11,000	12,800	10,300	12,500	13,300	10,500	6,560
16	6,080	5,030	5,730	1,870	8,560	12,300	11,900	11,300	12,300	12,900	10,800	7,340
17	5,440	5,260	5,490	1,820	8,350	12,500	11,500	11,200	11,500	11,000	10,900	6,870
18	7,030	5,420	5,110	1,730	7,820	12,900	12,500	11,100	10,900	11,100	11,700	5,640
19	7,070	4,850	5,450	1,600	7,890	12,800	12,700	11,200	10,200	11,500	11,900	7,070
20	7,390	4,530	5,720	1,580	7,360	12,100	11,800	11,000	12,200	11,700	11,500	7,890
21	6,710	4,310	4,850	1,660	8,100	13,700	13,100	10,600	12,000	12,400	11,100	8,720
22	5,850	4,410	2,470	1,620	8,440	14,000	13,300	10,500	11,900	12,500	12,100	9,250
23	5,280	4,230	3,880	1,570	7,890	14,200	12,400	11,400	11,800	11,700	11,900	9,130
24	4,560	3,880	3,940	1,550	7,730	13,500	11,300	11,600	11,500	10,700	11,900	8,860
25	5,120	4,870	4,210	1,550	8,210	12,900	11,500	11,100	11,300	12,500	11,600	8,670
26	5,050	5,490	3,880	1,660	8,700	12,800	11,600	11,500	10,700	12,800	10,900	8,530
27	4,860	5,360	4,800	1,690	8,700	11,800	11,100	10,900	11,700	12,800	10,600	8,140
28	6,810	4,690	4,550	4,150	9,880	13,100	10,700	10,700	12,100	12,700	10,600	8,670
29	6,450	5,530	4,340	5,070	-----	13,500	10,000	10,400	12,100	12,500	10,800	8,580
30	6,940	5,930	5,380	5,260	-----	13,900	9,460	11,100	12,100	12,700	11,200	8,510
31	5,390	-----	6,020	6,080	-----	14,100	-----	11,600	-----	11,600	11,100	-----
TOTAL	203,850	155,930	157,430	127,990	235,220	373,070	359,160	322,960	340,020	385,500	369,500	246,050
MEAN	6,576	5,198	5,078	4,129	8,401	12,030	11,970	10,420	11,330	12,440	11,920	8,202
MAX	7,970	6,490	6,430	7,800	10,400	14,200	13,300	11,600	12,500	13,800	14,200	11,200
MIN	4,560	3,880	2,470	1,550	5,990	8,740	9,460	6,450	9,350	10,700	10,500	5,640
AC-FT	404,300	309,300	312,300	253,900	466,600	740,000	712,400	644,600	674,400	764,600	732,900	488,000
CAL YR 1968	TOTAL 3,348,450		MEAN 9,149		MAX 15,600		MIN 2,470		AC-FT 6,642,000			
WTR YR 1969	TOTAL 3,276,680		MEAN 8,977		MAX 14,200		MIN 1,550		AC-FT 6,499,000			

TRIBUTARIES AND DIVERSIONS BETWEEN PARKER DAM AND PALO VERDE DAM

9-4285.3. ARCH CREEK NEAR EARP, CALIF.

LOCATION.--Lat 34°09'55", long 114°22'20", in NE½ sec.20, T.1 N., R.25 E., San Bernardino County, on right bank on Parker Dam road, 4 miles east of Earp.

DRAINAGE AREA.--1.52 sq mi.

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

GAGE.--Water-stage recorder with rain-gage attachment, and culvert control. Altitude of gage is 600 ft (from topographic map).

AVERAGE DISCHARGE.--9 years, 0.005 cfs (3.6 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 34 cfs July 17 (gage height, 4.62 ft); no flow all year except July 17, Sept. 6.

Period of record: Maximum discharge, 379 cfs July 6, 1968 (gage height, 8.38 ft), from rating curve based on computation of flow through culvert at gage heights 3.98, 5.00, 6.98, and 13.24 ft; no flow for most of each year.

Flood of Sept. 13, 1959, reached a stage of 13.24 ft, from floodmarks (discharge, 674 cfs, based on computation of maximum flow through culvert).

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE. IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	.20
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	1.1	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0	0	0	0	0	0	1.1	0	0.20
MEAN	0	0	0	0	0	0	0	0	0	.036	0	.007
MAX	0	0	0	0	0	0	0	0	0	1.1	0	.20
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	2.2	0	.4
(a)	.4	0	0	1.3	0	0	0	.1	0	1.0	0	.5

CAL YR 1968 TOTAL 8.60
WTR YR 1969 TOTAL 1.30

MEAN .024
MEAN .004

MAX 8.5
MAX 1.1

MIN 0
MIN 0

AC-FT 17
AC-FT 2.6

a Precipitation, in inches.

9-4290. PALO VERDE CANAL NEAR BLYTHE, CALIF.

LOCATION.--Lat 33°43'54", long 114°30'43", in SE¼NE¼NW¼ sec.19, T.5 S., R.24 E., San Bernardino meridian, Riverside County, at canal intake structure on west side of Palo Verde Diversion Dam, 10 miles northeast of Blythe, and 43 miles downstream from Headgate Rock Dam.

PERIOD OF RECORD.--January 1922 to December 1923, January 1925 to current year (prior to October 1950, monthly discharge only).

GAGE.--Recording gages above and below intakes to record head. Since May 18, 1964, recorder to show gate openings. Datum of gage is: Forebay gage, at mean sea level; tailrace gage, 274.13 ft above mean sea level. Aug. 7, 1950, to Nov. 30, 1952, water-stage recorder on tailrace and auxiliary recorder 0.5 mile downstream and Dec. 1, 1952, to Oct. 28, 1957, recording gage above and below former intake structure 0.2 mile upstream, at different datums.

AVERAGE DISCHARGE.--19 years (1950-69), 1,189 cfs (861,400 acre-ft per year).

EXTREMES.--1950 to current year: Maximum daily discharge, 2,180 cfs Aug. 7, 1962; no flow at times in several years.

REMARKS.--Records excellent except those below 300 cfs, which are good. Daily diversions computed on basis of head on intake gates and gate openings. Records published herein represent flow diverted from Colorado River during the 1969 calendar year for irrigation of 91,414 acres. Return flows to Colorado River are measured by 11 wasteways and drains extending throughout the project; 4 of these are equipped with water-stage recorder and Parshall flume, 3 are equipped with Sparling flowmeters. Return flows have not been subtracted; combined monthly return flows are given in table below. Check measurements of return flows are made about once a month by the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1213: 1946-48.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,140	790	855	709	624	1,420	1,380	1,630	1,440	1,640	1,860	1,780
2	1,110	717	794	809	685	1,400	1,420	1,680	1,490	1,700	1,770	1,700
3	1,020	734	887	867	879	1,460	1,470	1,620	1,560	1,830	1,830	1,770
4	911	801	888	23	927	1,420	1,490	1,580	1,640	1,840	1,840	1,830
5	876	800	867	0	926	1,420	1,270	1,480	1,610	1,820	1,940	1,820
6	813	856	745	0	1,070	1,500	1,180	1,440	1,640	1,760	2,000	1,720
7	760	874	710	0	1,120	1,580	1,340	1,440	1,630	1,770	2,030	1,490
8	758	862	719	0	1,090	1,550	1,420	1,330	1,570	1,740	2,010	1,470
9	859	857	728	0	557	1,510	1,490	1,250	1,650	1,750	1,900	1,490
10	845	767	699	0	1,060	1,510	1,450	1,270	1,590	1,820	1,760	1,470
11	761	839	649	83	1,130	1,470	1,310	1,150	1,650	1,810	1,840	1,600
12	754	839	715	727	1,180	1,460	1,330	1,270	1,620	1,830	1,870	1,650
13	801	834	611	780	1,150	1,390	1,190	1,340	1,570	1,840	1,900	1,580
14	872	906	591	480	1,180	1,290	1,230	1,490	1,550	1,960	1,980	1,430
15	880	866	533	333	1,100	1,260	1,350	1,550	1,480	1,970	1,960	1,450
16	881	853	726	302	1,140	1,130	1,500	1,610	1,560	1,960	1,650	1,250
17	865	775	733	286	1,190	1,140	1,560	1,610	1,630	1,610	1,800	1,340
18	834	820	697	260	1,140	1,100	1,660	1,460	1,630	1,440	1,870	1,340
19	817	773	686	266	1,170	1,110	1,590	1,450	1,620	1,250	1,920	1,260
20	742	858	718	211	1,190	1,080	1,470	1,490	1,610	1,240	1,800	1,260
21	833	822	675	200	1,230	1,110	1,610	1,580	1,590	1,420	1,790	1,260
22	800	949	585	256	1,200	1,190	1,630	1,570	1,530	1,580	1,800	1,300
23	811	928	577	350	1,190	1,190	1,670	1,560	1,570	1,700	1,810	1,300
24	783	839	368	370	1,310	1,280	1,540	1,520	1,580	1,730	1,770	1,320
25	701	861	315	394	1,280	1,270	1,550	1,380	1,580	1,740	1,780	1,350
26	694	850	466	370	1,290	1,390	1,530	1,500	1,670	1,830	1,740	1,300
27	651	908	583	429	1,230	1,570	1,480	1,570	1,770	1,870	1,740	1,180
28	726	867	603	485	1,280	1,400	1,450	1,510	1,690	1,860	1,940	982
29	842	942	645	503	-----	1,360	1,470	1,470	1,600	1,850	1,890	980
30	842	931	670	608	-----	1,350	1,560	1,520	1,680	1,850	1,930	980
31	833	-----	766	676	-----	1,370	-----	1,520	-----	1,850	1,840	-----
TOTAL	25,855	25,358	20,804	10,777	30,918	41,680	43,590	45,840	48,000	53,900	57,760	42,692
MEAN	834	845	671	348	1,104	1,345	1,453	1,479	1,600	1,739	1,863	1,423
MAX	1,140	949	888	867	1,310	1,580	1,670	1,680	1,770	1,970	2,030	1,830
MIN	651	717	315	0	624	1,080	1,180	1,150	1,440	1,240	1,740	980
AC-FT	51,280	50,300	41,260	21,380	61,320	82,670	86,460	90,920	95,210	106,900	114,600	84,680
(†)	44,010	37,830	37,470	29,630	29,610	39,820	42,780	46,290	44,860	47,090	49,650	48,850
CAL YR 1968	TOTAL 445,333.00			MEAN 1,217	MAX 2,010	MIN 0	AC-FT 883,300	† 489,800				
WTR YR 1969	TOTAL 447,174.00			MEAN 1,225	MAX 2,030	MIN 0	AC-FT 887,000	† 497,900				

† Return flows, in acre-feet, to Colorado River.

COLORADO RIVER MAIN STEM

9-4290.1. COLORADO RIVER AT PALO VERDE DAM, ARIZ.-CALIF.

LOCATION.--Lat 33°43'55", long 114°30'40", in NW¼NE¼ sec.19, T.5 S., R.24 E., San Bernardino meridian, in California, Riverside County, on west side of Palo Verde Diversion Dam, 10 miles northeast of Blythe, Calif., and 44 miles downstream from Headgate Rock Dam.

DRAINAGE AREA.--182,200 sq mi, approximately.

PERIOD OF RECORD.--April to September 1969. If records for Colorado River Indian Reservation drains (sta 9-4290.3, Palo Verde Drain, and sta 9-4290.6, Lower Main Drain) are added to records for this station, records equivalent to those published 1956-69 as Colorado River below Palo Verde Dam (sta 9-4291) can be obtained.

GAGE.--Water-stage recorders above and below dam to record head and water-stage recorder to record gate opening. Datum of gages is at mean sea level.

EXTREMES.--Maximum daily discharge during period, 11,900 cfs Apr. 22; minimum daily, 4,320 cfs Sept. 19.

REMARKS.--Records excellent. Record does not include diversion to Palo Verde Canal. (See sta 9-4290.) Many diversions above station for irrigation, municipal, and industrial uses. Flow regulated by Lake Mead, Lake Mohave, and Lake Havasu.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1969

DAY	CCT	NCV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							11,300	7,430	9,550	9,420	8,580	8,740
2							10,100	6,840	9,410	9,080	10,300	8,700
3							9,750	8,480	8,900	9,420	10,700	6,050
4							8,790	9,100	8,600	9,330	10,500	5,930
5							9,960	5,500	7,990	10,400	11,300	6,310
6							9,370	8,510	6,960	10,500	11,000	7,480
7							10,900	7,000	7,640	10,700	10,900	6,820
8							10,400	6,030	8,940	10,300	10,500	4,920
9							10,700	4,880	9,590	10,400	10,200	5,100
10							9,840	6,160	9,140	8,510	9,290	5,270
11							9,380	7,050	8,330	8,360	10,000	5,050
12							10,200	8,990	8,090	9,260	9,890	4,900
13							10,500	9,210	7,400	10,100	9,400	6,340
14							10,900	8,300	9,450	10,100	8,820	6,790
15							10,900	8,780	9,570	10,300	8,270	7,800
16							9,950	8,370	10,000	9,870	8,210	5,100
17							9,480	8,710	9,680	10,000	8,520	5,890
18							9,280	9,120	8,920	8,680	8,630	5,360
19							10,300	5,290	8,320	9,010	9,020	4,320
20							9,820	9,170	8,050	9,540	8,530	5,460
21							9,440	8,690	9,380	9,200	8,270	6,220
22							11,900	8,330	9,340	9,750	8,740	7,020
23							9,210	8,600	9,400	9,850	9,310	7,320
24							9,800	9,090	9,220	8,720	9,520	7,000
25							8,400	9,310	8,850	8,090	9,450	7,000
26							9,260	8,980	8,600	9,600	9,080	6,520
27							9,160	9,090	8,150	9,720	8,510	7,210
28							8,850	8,500	9,030	9,790	8,080	6,700
29					-----		8,260	8,430	9,570	9,660	8,080	7,220
30					-----		7,800	8,660	9,590	9,490	8,280	7,010
31		-----			-----		-----	8,940	-----	9,650	8,820	-----
TOTAL							293,900	257,540	265,660	256,800	288,710	191,560
MEAN							9,797	8,308	8,855	9,574	9,313	6,385
MAX							11,900	9,500	10,000	10,700	11,300	8,740
MIN							7,800	4,880	6,960	8,090	8,080	4,320
AC-FT							582,900	510,800	526,900	588,700	572,600	380,000

CAL YR 1968	TOTAL	-	MEAN	-	MAX	-	MIN	-	AC-FT	-
WTR YR 1969	TOTAL	-	MEAN	-	MAX	-	MIN	-	AC-FT	-

COLORADO RIVER MAIN STEM

25

9-4291. COLORADO RIVER BELOW PALO VERDE DAM, ARIZ.-CALIF.

LOCATION.--Lat 33°43'10", long 114°29'50", in NE¼ sec.2, T.4 N., R.22 W., Gila and Salt River meridian, in California, Riverside County, on right bank 1.2 miles downstream from Palo Verde Diversion Dam, 9.5 miles northeast of Blythe, Calif., and 11.0 miles upstream from Ehrenberg, Ariz.

DRAINAGE AREA.--182,200 sq mi, approximately.

PERIOD OF RECORD.--March 1956 to March 1969 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 260.00 ft above mean sea level.

AVERAGE DISCHARGE.--12 years (1956-68), 8,604 cfs (6,229,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge during period October 1968 to March 1969, 14,000 cfs Mar. 31 (gage height, 15.95 ft); minimum daily, 1,350 cfs Jan. 27.

Period of record: Maximum discharge, 24,300 cfs Mar. 21, 1958; maximum gage height, 17.94 ft Mar. 21, 1958; maximum gage height, 17.94 ft May 4, 1958; minimum daily discharge, 1,350 cfs Jan. 27, 1969.

REMARKS.--Records excellent. Many diversions above station for irrigation, municipal, and industrial uses. Flow regulated by Lake Mead, Lake Mohave, and Lake Havasu.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,280	4,790	4,710	4,810	5,160	7,750						
2	6,530	5,220	4,940	4,810	5,250	8,320						
3	6,670	5,480	5,140	5,360	5,380	9,130						
4	5,860	5,540	5,180	5,860	6,660	9,800						
5	6,710	5,300	4,990	5,750	7,230	8,530						
6	6,630	4,990	4,300	5,920	6,890	8,630						
7	6,310	4,480	4,550	6,220	6,180	8,350						
8	6,680	4,050	4,890	6,270	7,000	9,370						
9	6,270	4,280	4,860	6,080	7,620	9,630						
10	6,130	4,400	5,130	5,220	7,810	9,390						
11	5,270	4,190	4,660	4,960	7,620	7,330						
12	5,770	4,410	4,230	5,710	7,430	8,100						
13	6,360	4,410	3,720	6,280	7,120	8,500						
14	6,510	4,040	3,940	5,120	6,370	7,020						
15	6,130	3,760	4,370	2,620	6,370	7,960						
16	5,880	4,100	4,560	2,070	6,620	9,360						
17	5,290	4,230	4,840	2,010	6,550	10,400						
18	4,800	4,380	4,650	2,120	6,430	10,700						
19	6,000	4,600	4,410	2,060	5,950	10,700						
20	6,230	4,050	4,700	1,660	5,790	10,200						
21	6,250	3,730	4,790	1,660	5,650	10,500						
22	5,890	3,450	4,170	1,590	6,240	11,400						
23	5,170	3,500	2,610	1,460	6,430	11,800						
24	4,720	3,440	3,560	1,390	6,080	11,900						
25	4,170	3,140	3,730	1,370	5,780	10,800						
26	4,580	3,910	3,850	1,390	6,230	10,500						
27	4,620	4,400	3,350	1,350	6,670	10,100						
28	4,390	4,350	4,100	3,270	6,710	10,100						
29	5,760	3,820	4,060	4,580	-----	10,800						
30	5,610	4,510	3,440	4,260	-----	10,600						
31	5,890	-----	4,600	4,370	-----	11,400	-----		-----			-----
TOTAL	180,360	128,950	135,030	117,600	181,220	299,070						
MEAN	5,818	4,298	4,356	3,794	6,472	9,647						
MAX	7,280	5,540	5,180	6,280	7,810	11,900						
MIN	4,170	3,140	2,610	1,350	5,160	7,020						
AC-FT	357,700	255,800	267,800	233,300	359,400	593,200						
CAL YR 1968	TOTAL	2,732,060	MEAN	7,465	MAX	12,300	MIN	2,610	AC-FT	5,419,000		
NTR YR 1969	TOTAL	--	MEAN	--	MAX	--	MIN	--	AC-FT	--		

COLORADO RIVER MAIN STEM

9-4295. COLORADO RIVER AT IMPERIAL DAM, ARIZ.-CALIF.

LOCATION.--Forebay gage: Lat 32°53'29", long 114°27'57", in NW¼SW¼ sec.9, T.15 S., R.24 E., San Bernardino meridian, in California, Imperial County, near All-American Canal headworks at west end of Imperial Dam, 5 miles upstream from Laguna Dam, 15 miles northeast of Yuma, 90 miles downstream from Palo Verde Dam, and 147 miles downstream from Parker Dam.

DRAINAGE AREA.--184,600 sq mi, approximately.

PERIOD OF RECORD.--Flow of Colorado River passing Imperial Dam: October 1960 to current year. Flow of Colorado River reaching Imperial Dam: 1903-34 (yearly discharge only), July 1934 to current year (monthly discharge only since October 1942). Prior to October 1942 published as "near Picacho, Calif."

GAGE.--Water-stage recorder in forebay, 12 calibrated gates on California sluiceway, 8 calibrated gates on Gila sluiceway, and calibrated manometer on each discharge pipe from desilting basin. Datum of forebay gage is 162.00 ft above mean sea level (Bureau of Reclamation bench mark). July 1, 1934, to Sept. 30, 1942, water-stage recorder at site 14.5 miles upstream at datum 167.38 ft above mean sea level. Oct. 1, 1942, to Sept. 30, 1960, no gage on river at this site (see REMARKS).

AVERAGE DISCHARGE (flow reaching Imperial Dam).--35 years (1934-69), 11,700 cfs (8,477,000 acre-ft per year).

EXTREMES (flow reaching Imperial Dam).--1934 to current year: Maximum discharge, 40,800 cfs Sept. 5, 1939; minimum, 538 cfs Aug. 3, 1934; minimum daily since regulation of Hoover Dam began, 1,450 cfs Feb. 17, 1935.

REMARKS.--Records excellent above 500 cfs and good below. Records of daily discharge show flow of Colorado River passing Imperial Dam, and include water released to river through California and Gila sluiceways, sludge from desilting basins returned to river, and leakage through dam. Records of flow reaching Imperial Dam (given in monthly and yearly summaries below) are based on combined monthly total cfs-days of Colorado River at this station and at gaging stations on All-American Canal near Imperial Dam (see sta 9-5230) and Gila Gravity Main Canal at Imperial Dam (see sta 9-5225). Records for October 1942 to September 1960 were computed as combined flow of Colorado River at Yuma (sta 9-5210) and the All-American and Gila Gravity Main Canals, less flow of Gila River near Dome (drainage and waste return flows and channel losses between the gaging stations and Imperial Dam were neglected).

Flow of Colorado River regulated by many reservoirs, principally Lake Mead, since 1935. Many diversions from Colorado River and tributaries above station. Additional regulation, beginning Jan. 31, 1966, to equalize supplies for downstream water users, is provided by pumped storage in reservoir on Senator Wash, about 2 miles upstream from Imperial Dam. Monthend contents of Senator Wash Reservoir (capacity, 13,840 acre-ft) is given in table below.

COOPERATION.--Records of gate openings and contents of Senator Wash Reservoir furnished by Bureau of Reclamation. Records of sludge return flow from desilting basins furnished by Imperial Irrigation District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	403	641	482	242	240	251	351	358	338	325	335	355
2	321	592	498	242	240	251	395	358	238	325	335	607
3	237	583	514	242	240	351	666	358	237	325	335	355
4	237	339	507	241	240	251	673	358	237	325	335	438
5	237	217	487	241	240	251	653	358	236	421	335	355
6	237	217	472	241	240	251	433	529	236	325	335	354
7	237	217	478	241	340	251	542	444	236	325	335	354
8	237	217	488	241	340	251	432	789	335	325	335	609
9	237	217	489	241	240	252	430	357	235	498	335	696
10	237	217	496	241	670	252	388	356	234	566	335	354
11	237	217	681	241	250	352	360	355	334	497	673	354
12	237	317	1,060	240	250	392	360	354	334	325	680	254
13	237	217	1,170	240	250	252	360	353	333	325	345	244
14	237	330	1,180	549	250	252	360	352	333	325	345	244
15	337	485	1,200	1,840	250	252	532	351	332	325	345	244
16	407	407	1,160	1,020	250	252	530	350	332	325	345	244
17	325	403	1,140	240	250	252	618	349	503	452	345	244
18	237	482	1,150	240	429	352	359	348	503	325	512	244
19	237	491	1,150	240	340	352	359	347	675	325	345	244
20	257	476	1,170	240	250	352	359	378	505	325	345	244
21	494	480	1,110	338	350	352	359	345	330	325	345	244
22	217	647	1,150	240	250	352	359	344	330	325	345	234
23	217	483	1,160	240	250	352	444	343	329	453	345	234
24	217	465	1,130	240	250	352	359	342	503	452	345	234
25	352	467	1,090	240	250	689	615	341	329	409	523	652
26	434	534	1,090	240	250	613	359	240	328	325	606	282
27	489	522	1,040	240	250	352	359	239	328	325	355	234
28	583	407	637	240	250	352	530	238	328	325	355	234
29	552	508	242	240	-----	352	621	238	328	325	355	234
30	576	524	242	240	-----	352	359	238	328	325	355	234
31	503	-----	242	240	-----	352	-----	238	-----	325	355	-----
TOTAL	10,042	12,319	25,105	10,241	7,899	10,142	13,524	10,948	10,207	11,343	11,915	9,853
MEAN	324	411	810	330	282	327	451	353	340	366	384	328
MAX	583	647	1,200	1,840	670	689	673	789	675	566	680	696
MIN	217	217	242	240	240	251	351	238	234	325	335	234
AC-FT	19,920	24,420	49,800	20,310	15,670	20,120	26,820	21,720	20,250	22,500	23,620	19,540
(*)	6,484	5,007	4,945	4,398	6,770	9,800	10,720	8,945	9,291	10,110	10,210	7,434
(†)	398,700	297,900	304,100	270,500	376,000	602,500	638,100	550,000	552,900	621,900	627,500	442,400
(‡)	5,880	4,600	5,360	6,860	5,840	6,930	6,820	4,990	5,730	5,740	6,320	5,780
CAL YR 1968	TOTAL 144,795		MEAN 396		MAX 3,240	MIN 147		AC-FT 287,200		* 7,904		† 5,738,000
WTR YR 1969	TOTAL 143,538		MEAN 393		MAX 1,840	MIN 217		AC-FT 284,700		* 7,849		† 5,682,000

* Mean flow reaching Imperial Dam, in cubic feet per second (combined monthly flow of Colorado River, All-American Canal near Imperial Dam, and Gila Gravity Main Canal at Imperial Dam).

† Flow reaching Imperial Dam, in acre-feet.

‡ Senator Wash Reservoir contents, in acre-feet, at end of month.

9-5211. COLORADO RIVER BELOW YUMA MAIN CANAL WASTEWAY, AT YUMA, ARIZ.

LOCATION.--Lat 32°43'54", long 114°37'55", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.16 S., R.22 E., San Bernardino meridian, in California, Imperial County, on right bank 1,000 ft downstream from Yuma Main Canal wasteway, 0.6 mile downstream from former gaging station on Colorado River at Yuma, 1.1 miles northwest of Post Office in Yuma, 5.2 miles downstream from Gila River, and 6.4 miles upstream from northerly international boundary.

DRAINAGE AREA.--242,900 sq mi, approximately, including all closed basins entirely within the drainage boundary.

PERIOD OF RECORD.--October 1963 to current year. If records for Yuma Main Canal wasteway at Yuma (sta 9-5250) and Reservation Main Drain No. 4 (sta 9-5300) are subtracted from records at this station, records equivalent to those published 1902-64 as "Colorado River at Yuma" (sta 9-5210) can be obtained.

GAGE.--Water-stage recorder. Datum of gage is 101.99 ft above mean sea level.

AVERAGE DISCHARGE.--6 years, 917 cfs (664,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,910 cfs Sept. 7 (gage height, 11.87 ft); minimum daily, 388 cfs Jan. 7.

Period of record: Maximum discharge, 4,560 cfs Dec. 21, 1965 (gage height, 14.00 ft); minimum daily, 327 cfs Jan. 10, 1967.

Maximum gage height since at least 1878, 34.0 ft Jan. 22, 1916 (discharge, 250,000 cfs), at former gaging station at Yuma.

REMARKS.--Records excellent. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	660	736	730	498	687	631	696	1,240	1,010	657	695	540
2	617	728	689	485	674	562	1,080	1,330	1,020	627	674	531
3	633	691	702	471	688	584	860	1,370	1,010	621	658	538
4	663	686	742	515	710	608	714	1,370	1,030	668	651	530
5	638	688	733	570	685	552	711	1,370	1,020	627	629	540
6	643	693	704	402	714	548	676	1,400	971	709	650	796
7	656	689	690	388	723	535	623	1,370	916	638	631	1,790
8	666	682	677	401	698	550	645	1,360	923	659	631	1,750
9	684	675	681	403	709	535	1,020	1,380	951	682	656	1,390
10	706	671	717	513	676	525	1,100	1,310	1,130	647	659	1,090
11	696	667	720	480	734	575	723	1,170	539	607	619	976
12	688	733	1,000	480	1,140	624	686	1,130	576	617	611	927
13	694	720	1,320	487	1,120	553	664	1,130	542	738	613	958
14	704	673	1,330	513	536	549	775	1,080	579	959	899	962
15	687	672	1,310	702	667	530	941	1,080	636	1,330	889	941
16	682	682	1,320	1,560	643	525	953	1,020	910	1,220	641	651
17	702	670	1,290	1,280	646	527	806	1,020	887	1,020	583	650
18	712	642	1,290	1,470	576	563	646	1,010	895	937	614	611
19	676	684	1,310	1,290	524	614	610	1,040	921	818	615	596
20	707	688	1,350	1,040	524	603	593	1,020	902	681	575	598
21	714	682	1,320	811	535	601	841	1,040	854	688	583	612
22	698	672	1,270	572	548	592	877	1,050	696	657	564	586
23	725	707	1,340	715	544	609	694	1,050	649	623	665	546
24	675	667	1,340	639	567	599	688	1,060	642	595	592	618
25	673	672	1,270	678	550	591	642	1,060	676	591	591	629
26	656	698	1,270	683	537	615	569	1,050	640	681	587	655
27	639	671	1,250	688	562	558	600	1,010	612	1,010	578	666
28	662	703	1,200	687	677	513	721	1,020	629	934	560	679
29	695	699	882	697	-----	543	1,510	1,050	629	687	535	670
30	648	728	543	695	-----	562	1,200	1,050	634	680	545	639
31	743	-----	515	678	-----	571	-----	1,050	-----	685	555	-----
TOTAL	21,042	20,669	31,505	21,491	18,594	17,647	23,864	35,690	24,029	23,293	19,548	23,665
MEAN	679	689	1,016	693	664	569	795	1,151	801	751	631	789
MAX	743	736	1,350	1,560	1,140	631	1,510	1,400	1,130	1,330	899	1,790
MIN	617	642	515	388	524	513	569	1,010	539	591	535	530
AC-FT	41,740	41,000	62,490	42,630	36,880	35,000	47,330	70,790	47,660	46,200	38,770	46,940

CAL YR 1968 TOTAL 281,310 MEAN 769 MAX 3,170 MIN 419 AC-FT 558,000
WTR YR 1969 TOTAL 281,037 MEAN 770 MAX 1,790 MIN 388 AC-FT 557,400

COLORADO RIVER MAIN STEM

9-5220. COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY
ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.

LOCATION.--Lat 32°43'07", long 114°43'05", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.8 S., R.24 W., Gila and Salt River meridian, in Arizona, Yuma County, on left bank at northerly international boundary, 0.5 mile east of Andrade, 1.1 miles upstream from Morelos Dam, 1.1 miles downstream from Rockwood Gate, and 6.4 miles downstream from gaging station on Colorado River below Yuma Main Canal wasteway.

DRAINAGE AREA.--243,000 sq mi, approximately, including all closed basins entirely within the drainage boundary.

PERIOD OF RECORD.--January 1950 to current year. Prior to October 1958, published as "at international boundary."

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Supplementary water-stage recorder 1,680 ft upstream at same datum.

EXTREMES.--Current year: Maximum discharge, 4,040 cfs Apr. 9; maximum elevation, 105.20 ft Apr. 9; minimum discharge, 539 cfs Sept. 24; minimum elevation, 101.99 ft Sept. 30.

Period of record: Maximum discharge, 25,390 cfs Jan. 1, 1953; maximum elevation, 114.24 ft Jan. 28, 1958; minimum discharge, 539 cfs Sept. 24, 1969; minimum elevation, 101.89 ft Nov. 22, 1966.

REMARKS.--This record shows water passing northerly international boundary. Minor diversions to the United States below this station from river and by pumping from ground water for irrigation in the floodway between river and Yuma levee.

COOPERATION.--Records furnished by International Boundary and Water Commission, U.S. Section (monthly summary figures rounded in accordance with Geological Survey standard practice).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	707	700	781	2,130	733	2,250	3,780	1,410	1,220	2,210	2,910	1,870
2	708	792	720	2,430	740	2,570	3,870	1,480	1,190	2,210	2,890	1,860
3	673	750	716	2,750	722	2,530	3,840	1,440	1,160	2,200	2,930	1,880
4	733	738	777	2,740	775	2,540	3,850	1,440	1,190	2,210	2,920	1,890
5	707	712	761	2,710	744	2,530	3,880	1,420	1,230	2,210	2,940	1,860
6	696	729	746	2,650	735	2,550	3,830	1,430	1,220	2,210	3,000	1,930
7	704	714	740	2,740	781	2,500	3,860	1,410	1,180	2,470	3,000	1,810
8	712	710	730	2,790	743	2,560	3,910	1,410	1,170	2,600	3,000	1,870
9	705	733	720	2,790	763	2,640	3,870	1,430	1,170	2,600	3,010	1,620
10	752	733	750	2,800	770	2,590	3,790	1,340	1,390	2,600	3,010	1,330
11	724	709	758	2,750	851	2,580	3,640	1,210	1,790	2,600	2,990	1,200
12	737	747	1,000	2,800	1,250	2,510	3,600	1,150	1,790	2,590	2,720	1,130
13	739	793	1,340	2,760	1,340	2,510	3,580	1,140	1,950	2,600	2,670	1,170
14	743	735	1,500	2,850	1,680	2,860	3,550	1,100	1,930	2,640	2,640	1,180
15	750	713	1,480	2,930	1,920	3,220	3,520	1,110	2,200	2,640	2,640	1,170
16	711	774	1,470	3,530	1,860	3,300	3,590	1,170	2,230	2,610	2,630	747
17	707	739	1,440	2,080	1,880	3,470	3,590	1,150	2,180	2,620	2,460	736
18	718	682	1,450	1,620	1,860	3,510	3,590	1,130	2,180	2,610	2,250	691
19	736	741	1,450	1,460	1,960	3,570	3,490	1,160	2,230	2,630	2,230	677
20	721	737	1,460	1,230	1,970	3,510	3,360	1,140	2,210	2,630	2,130	677
21	733	740	1,430	982	1,980	3,560	3,460	1,170	2,210	2,630	2,140	677
22	713	722	1,400	622	1,960	3,530	3,230	1,170	2,210	2,630	2,100	666
23	741	771	1,480	790	1,960	3,560	2,940	1,160	2,240	2,630	2,140	596
24	732	743	1,550	722	1,950	3,440	2,900	1,170	2,240	2,630	2,170	666
25	692	720	1,520	735	1,970	3,550	2,860	1,170	2,240	2,640	2,170	741
26	728	709	1,490	752	1,970	3,600	2,540	1,240	2,200	2,670	2,170	728
27	681	694	1,460	747	2,040	3,610	2,290	1,200	2,270	2,670	2,160	746
28	694	726	1,400	756	2,010	3,540	2,030	1,190	2,270	2,670	2,160	752
29	773	705	1,420	795	-----	3,620	1,730	1,200	2,280	2,640	2,170	772
30	688	779	1,490	783	-----	3,600	1,430	1,240	2,220	2,670	1,920	739
31	772	-----	1,780	744	-----	3,520	-----	1,240	-----	2,700	1,910	-----
TOTAL	22,330	21,990	37,209	58,968	39,917	95,430	99,400	38,820	55,190	78,870	78,180	34,381
MEAN	720	733	1,200	1,902	1,426	3,078	3,313	1,252	1,840	2,544	2,522	1,146
MAX	773	793	1,780	3,530	2,040	3,620	3,910	1,480	2,280	2,700	3,010	1,930
MIN	673	682	716	622	722	2,250	1,430	1,100	1,160	2,200	1,910	596
AC-FT	44,290	43,620	73,800	117,000	79,170	189,300	197,200	77,000	109,500	156,400	155,100	68,190
CAL YR 1968	TOTAL 668,805		MEAN 1,827		MAX 4,650		MIN 618		AC-FT 1,327,000			
WTR YR 1969	TOTAL 660,685		MEAN 1,810		MAX 3,910		MIN 596		AC-FT 1,310,000			

9-5225. GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, ARIZ.-CALIF.

LOCATION.--Lat 32°52'34", long 114°27'18", in SE¼SW¼ sec.30, T.6 S., R.21 W., Gila and Salt River meridian, in Arizona, Yuma County, on right bank 3,200 ft downstream from intake at east end of Imperial Dam.

PERIOD OF RECORD.--August 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 160.00 ft above mean sea level.

AVERAGE DISCHARGE.--10 years (1959-69), 1,192 cfs (863,600 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 2,240 cfs May 25, 1965; no flow at canal intake at times in several years when intake gates were closed.

REMARKS.--Records excellent except those below 100 cfs, which are fair. Gila Gravity Main Canal diverts water from Colorado River at left end of Imperial Dam for irrigation of lands on Gila Project in Arizona. Diversion to this canal began Aug. 17, 1943. Diversion to North Gila Valley from this canal began Dec. 16, 1954. During the 1968 calendar year, water was used for irrigation of 96,966 acres divided as follows: North and South Gila Valleys, 16,121 acres; Yuma Mesa Division, 16,786 acres; Wellton-Mohawk Division, 60,758 acres; Yuma Mesa Auxiliary Division, 3,301 acres. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,300	776	419	256	806	872	1,660	1,690	1,340	1,900	2,000	1,720
2	1,600	580	709	527	542	884	1,650	1,630	1,710	2,000	1,810	1,820
3	1,410	373	799	476	536	1,260	1,730	1,510	2,010	1,850	1,620	1,750
4	1,270	858	811	378	581	1,360	1,720	1,360	2,040	1,840	1,950	1,750
5	988	1,020	982	231	488	1,320	1,030	1,500	2,080	1,710	2,040	1,830
6	702	998	947	588	529	1,370	872	1,310	1,770	1,530	2,000	1,540
7	1,210	894	679	883	621	1,240	1,420	1,490	1,670	1,920	1,900	1,280
8	1,520	786	534	882	793	984	1,700	1,310	1,330	1,900	1,880	1,490
9	1,420	795	781	703	704	851	1,680	1,220	1,810	1,740	1,870	1,650
10	1,250	553	922	519	1,200	1,270	1,560	972	1,640	1,780	1,680	1,700
11	1,100	830	804	382	1,260	1,220	1,400	1,050	1,790	1,750	1,920	1,710
12	861	920	724	345	1,220	1,130	1,180	1,550	1,800	1,430	1,950	1,620
13	639	942	674	699	1,220	1,230	913	1,750	1,840	1,210	1,900	1,630
14	1,130	997	422	501	1,060	1,140	1,580	1,770	1,500	1,710	1,850	1,270
15	1,270	944	308	365	971	843	1,780	1,810	1,200	1,850	1,940	1,600
16	1,200	693	663	647	727	728	1,760	1,810	1,740	2,050	1,840	1,710
17	1,160	598	910	346	1,070	1,120	1,830	1,660	1,710	1,890	1,660	1,570
18	964	945	971	136	1,070	1,220	1,740	1,560	1,770	1,910	1,720	1,740
19	599	1,370	992	125	1,130	1,300	1,470	1,840	1,930	1,790	1,860	1,620
20	508	1,460	717	309	1,120	1,380	1,210	1,930	1,790	1,390	1,890	1,370
21	939	987	613	569	1,030	1,170	1,690	1,940	1,630	1,720	1,930	1,210
22	1,070	40	441	690	743	1,250	1,770	1,880	1,330	1,820	1,920	1,540
23	1,050	2.5	532	476	683	866	1,780	1,890	1,610	1,840	1,820	1,550
24	847	0	323	393	1,180	1,250	1,800	1,530	1,740	1,760	1,590	1,570
25	720	0	103	336	1,260	1,160	1,720	1,510	1,950	1,760	1,850	1,490
26	637	0	476	261	1,230	1,470	1,400	1,640	1,710	1,720	1,890	1,300
27	464	209	426	519	1,180	1,390	1,250	1,830	1,700	1,240	1,960	1,240
28	727	615	432	588	1,060	1,180	1,570	1,870	1,610	1,750	1,950	1,080
29	872	708	362	658	-----	1,050	1,590	1,900	1,450	1,820	1,850	1,190
30	897	624	542	892	-----	893	1,750	1,820	1,810	1,870	1,530	1,370
31	961	-----	514	862	-----	1,360	-----	1,560	-----	1,890	1,460	-----
TOTAL	31,285	20,517.5	19,532	15,542	26,014	35,761	46,205	50,092	51,010	54,340	57,030	45,910
MEAN	1,009	684	630	501	929	1,154	1,540	1,616	1,700	1,753	1,840	1,530
MAX	1,600	1,460	992	892	1,260	1,470	1,830	1,940	2,080	2,050	2,040	1,830
MIN	464	0	103	125	488	728	872	972	1,200	1,210	1,460	1,080
AC-FT	62,050	40,700	38,740	30,830	51,600	70,930	91,650	99,360	101,200	107,800	113,100	91,060
CAL YR 1968	TOTAL	440,388.50	MEAN	1,203	MAX	2,140	MIN	0	AC-FT	873,500		
WTR YR 1969	TOTAL	453,238.50	MEAN	1,242	MAX	2,080	MIN	0	AC-FT	899,000		

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

9-5230, ALL-AMERICAN CANAL NEAR IMPERIAL DAM, ARIZ.-CALIF.

LOCATION.--Lat 32°52'17", long 114°28'47", in SE¼NW¼ sec.17, T.15 S., R.24 E., San Bernardino meridian, in California, Imperial County, on left bank 6,000 ft downstream from intake at west end of Imperial Dam, and 13.7 miles (revised) upstream from turnout to Yuma Main Canal.

PERIOD OF RECORD.--October 1938 to current year. Prior to October 1939 monthly discharge only, published in WSP 1313.

GAGE.--Water-stage recorder. Datum of gage is 150.00 ft above mean sea level (subject to undetermined changes caused by earthquake of May 18, 1940). Since Aug. 21, 1952, auxiliary water-stage recorder 18.5 miles downstream from base gage.

AVERAGE DISCHARGE.--28 years (1941-69), 7,038 cfs (5,099,000 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 13,500 cfs Apr. 16, 1938; no flow at times.

REMARKS.--Records excellent. All-American Canal diverts water from Colorado River at Imperial Dam. Water is used for power development and for irrigation in Yuma, Coachella, and Imperial Valleys. Water can be released back to the river through Pilot Knob powerplant and wasteway for power, regulatory purposes, or for downstream use in Mexico. First diversion to All-American Canal began October 1938, but prior to October 1940 was used only for priming canal.

COOPERATION.--Gage-height record furnished by Imperial Irrigation District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,190	4,790	3,330	3,820	4,090	6,160	9,920	7,560	7,080	7,950	8,640	6,560
2	6,040	4,850	3,490	4,400	4,320	6,530	9,740	7,250	6,600	8,200	8,480	6,990
3	6,120	4,420	3,820	5,100	4,690	6,890	9,480	6,860	7,040	8,280	8,000	6,900
4	5,870	4,470	4,050	5,170	5,210	7,190	9,430	6,180	7,440	7,740	7,890	6,830
5	5,880	4,840	4,180	4,770	5,400	7,560	9,110	6,480	7,450	7,580	8,080	6,670
6	5,770	4,740	4,040	5,130	5,960	7,990	8,640	6,820	6,870	7,380	8,390	6,190
7	5,700	4,630	4,080	5,300	6,120	7,990	8,600	7,010	6,630	7,960	9,160	5,070
8	5,470	4,360	3,860	5,700	5,840	7,660	8,950	6,840	6,300	8,320	8,940	5,720
9	5,510	4,110	3,820	6,380	5,490	7,370	8,940	6,250	6,420	8,430	8,820	5,360
10	5,740	3,800	4,020	6,060	5,700	7,420	9,230	6,010	6,860	8,250	8,580	4,940
11	5,560	3,690	3,950	5,660	6,100	7,400	9,150	5,630	7,350	8,320	8,370	4,630
12	5,390	3,880	4,080	4,950	6,440	7,580	9,130	5,990	7,260	8,470	8,340	4,730
13	5,110	3,820	3,730	5,020	6,610	7,520	8,720	6,410	6,770	7,950	8,670	4,930
14	5,270	3,870	3,550	3,990	6,980	7,670	8,340	6,870	6,850	7,930	8,730	4,820
15	5,240	3,710	3,300	3,410	6,690	7,990	8,400	7,510	7,240	7,960	8,360	4,930
16	5,280	3,450	3,260	3,190	5,620	7,020	8,720	7,240	7,200	8,120	7,970	5,050
17	5,230	3,110	3,100	2,480	5,510	7,620	8,950	7,010	7,400	8,300	7,530	5,250
18	5,070	3,230	3,230	2,310	5,410	8,050	8,870	6,810	7,560	8,050	7,300	4,970
19	5,010	3,270	3,700	1,910	5,380	8,450	8,940	6,920	7,590	7,850	7,340	4,960
20	4,830	3,520	3,850	1,660	5,690	9,040	8,440	7,120	7,410	7,800	7,370	4,890
21	4,950	3,870	3,990	1,580	5,350	9,320	8,390	7,240	7,280	7,790	7,740	4,780
22	5,010	3,870	3,730	1,680	5,290	9,820	8,550	7,270	7,330	7,890	7,800	4,920
23	5,140	3,840	3,420	1,760	4,980	9,620	8,370	7,400	7,470	7,930	7,520	5,170
24	5,120	3,380	2,690	1,690	5,180	9,690	8,820	7,480	7,650	8,050	7,550	5,890
25	4,800	3,530	1,810	1,930	5,170	9,830	8,730	7,190	7,680	8,150	7,640	5,920
26	4,220	3,600	2,720	1,930	5,320	9,600	8,620	7,260	7,780	8,100	7,500	6,090
27	3,950	3,880	2,610	2,190	5,600	9,760	8,200	7,350	7,780	7,330	7,680	6,120
28	3,870	3,570	3,000	2,070	5,510	9,940	7,820	7,420	7,920	7,470	7,840	5,950
29	3,870	3,520	3,380	2,540	-----	9,980	7,390	7,540	7,630	7,730	7,480	5,970
30	4,090	3,740	3,330	3,150	-----	9,540	7,360	7,610	7,670	8,030	7,000	6,070
31	4,380	-----	3,540	3,640	-----	9,640	-----	7,740	-----	8,550	6,710	-----
TOTAL	159,680	117,360	108,660	110,570	155,650	257,840	261,950	216,270	217,510	247,860	247,420	167,270
MEAN	5,151	3,912	3,505	3,567	5,559	8,317	8,732	6,976	7,250	7,995	7,981	5,576
MAX	6,190	4,850	4,180	6,380	6,980	9,980	9,920	7,740	7,920	8,550	9,160	6,990
MIN	3,870	3,110	1,810	1,580	4,090	6,160	7,360	5,630	6,300	7,330	6,710	4,630
AC-FT	316,700	232,800	215,500	219,300	308,700	511,400	519,600	429,000	431,400	491,600	490,800	331,800
CAL YR 1968	TOTAL 2,307,620		MEAN 6,305		MAX 10,400		MIN 1,810		AC-FT 4,577,000			
WTR YR 1969	TOTAL 2,268,040		MEAN 6,214		MAX 9,980		MIN 1,580		AC-FT 4,499,000			

9-5270. PILOT KNOB POWERPLANT AND WASTEWAY NEAR PILOT KNOB, CALIF.

LOCATION.--Lat 32°44'15", long 114°42'56", in NW¼SW¼ sec.25, T.16 S., R.21 E., San Bernardino meridian, Imperial County, 2 miles east of summit of Pilot Knob, 6 miles west of Yuma, Ariz., and 20.8 miles downstream from intake of All-American Canal at Imperial Dam.

PERIOD OF RECORD.--February 1939 to current year. Prior to October 1943 monthly discharge only, published in WSP 1313. Prior to October 1956, published as Pilot Knob wasteway near Pilot Knob.

GAGE.--Totalizing flowmeter on each turbine. In addition water-stage recorder in forebay on right bank of All-American Canal (also used as auxiliary gage for sta 9-5275); tailrace gage with remote recorder logged hourly in control house; calibrated wicket gates for turbine flow and calibrated bypass gates for wasteway flow which are logged for each change. Datum of forebay nonrecording gage is 150.00 ft; that of tailrace nonrecording gage is 0.00 ft; elevation of sill of bypass gates is 147.88 ft above mean sea level.

EXTREMES.--Period of record: Maximum daily discharge, 8,350 cfs Jan. 26, 1958; no flow for long periods.

REMARKS.--Records excellent. Daily discharge computed from flowmeter equipment or from head and gate openings on wicket gates. Records show water released through Pilot Knob powerplant and wasteway from All-American Canal and returned to Colorado River through Rockwood gates. Pilot Knob wasteway completed in summer of 1938 and first flow occurred Feb. 5, 1939. Pilot Knob powerplant was completed in January 1957 and first flow occurred Jan. 14, 1957. See table below for monthly return flow by Pilot Knob wasteway only.

COOPERATION.--Midnight readings of flowmeter, recorder graph of forebay, and record of tailrace elevation and gate openings furnished by Imperial Irrigation District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	1,500	0	1,400	2,850	0	0	1,310	2,020	1,020
2	0	0	0	1,800	0	1,770	2,570	0	0	1,310	2,000	1,040
3	0	0	0	2,130	0	1,740	2,650	0	0	1,300	2,040	1,030
4	0	0	0	2,060	0	1,710	2,920	0	0	1,280	2,020	1,040
5	0	0	0	1,870	0	1,800	2,840	0	0	1,300	2,040	1,020
6	0	0	0	2,120	0	1,780	2,850	0	0	1,220	2,100	950
7	0	0	0	2,250	0	1,770	2,950	0	0	1,560	2,110	0
8	0	0	0	2,270	0	1,860	3,060	0	0	1,720	2,100	0
9	0	0	0	2,230	0	1,850	2,640	0	0	1,700	2,070	0
10	0	0	0	2,110	0	1,770	2,390	0	0	1,750	2,050	0
11	0	0	0	2,130	0	1,710	2,800	0	1,100	1,820	2,050	0
12	0	0	0	2,050	0	1,630	2,660	0	1,010	1,800	1,740	0
13	0	0	0	2,070	46	1,730	2,580	0	1,100	1,800	1,750	0
14	0	0	0	2,110	588	2,150	2,490	0	1,080	1,780	1,520	0
15	0	0	0	2,160	1,060	2,480	2,540	0	1,370	1,470	1,500	0
16	0	0	0	2,020	580	2,540	2,620	0	1,050	1,480	1,690	0
17	0	0	0	539	1,000	2,700	2,650	0	1,050	1,690	1,590	0
18	0	0	0	0	1,070	2,730	2,630	0	1,020	1,700	1,350	0
19	0	0	0	0	1,280	2,640	2,540	0	1,010	1,730	1,320	0
20	0	0	0	0	1,270	2,640	2,500	0	1,000	1,680	1,250	0
21	0	0	0	0	1,230	2,660	2,290	0	1,050	1,640	1,260	0
22	0	0	0	0	1,180	2,710	2,090	0	1,190	1,700	1,300	0
23	0	0	0	0	1,180	2,630	1,970	0	1,300	1,720	1,210	0
24	0	0	0	0	1,180	2,610	1,980	0	1,320	1,740	1,260	0
25	0	0	0	0	1,220	2,750	1,970	0	1,260	1,750	1,320	0
26	0	0	0	0	1,250	2,730	1,730	0	1,250	1,760	1,330	0
27	0	0	0	0	1,280	2,730	1,420	0	1,360	1,480	1,320	0
28	0	0	0	0	1,070	2,790	1,140	0	1,330	1,500	1,320	0
29	0	0	391	0	-----	2,850	0	0	1,340	1,670	1,370	0
30	0	0	864	0	-----	2,750	0	0	1,290	1,740	1,070	0
31	0	-----	1,260	0	-----	2,640	-----	0	-----	1,770	1,060	-----
TOTAL	0	0	2,515	33,419	17,284	70,250	68,320	0	23,480	45,870	54,120	6,110
MEAN	0	0	81.1	1,078	617	2,266	2,277	0	783	1,609	1,617	204
MAX	0	0	1,260	2,270	1,280	2,850	3,060	0	1,370	1,820	2,110	1,040
MIN	0	0	0	0	0	1,400	0	0	0	1,220	1,060	0
AC-FT	0	0	4,990	66,290	34,280	139,300	135,500	0	46,570	98,920	96,430	12,120
(*)	0	0	2,390	0	0	0	0	0	0	99	0	0

CAL YR 1968 TOTAL 330,519.00 MEAN 903 MAX 3,150 MIN 0 AC-FT 655,600 *2,530
WTR YR 1969 TOTAL 321,378.00 MEAN 880 MAX 3,060 MIN 0 AC-FT 637,400 *2,490

* Return flow, in acre-feet, by Pilot Knob wasteway (included in daily discharge table).

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

9-5275. ALL-AMERICAN CANAL BELOW PILOT KNOB WASTEWAY, CALIF.

LOCATION.--Lat 32°44'07", long 114°43'23", in NW¼SE¼ sec.26, T.16 S., R.21 E., San Bernardino meridian, Imperial County, on left bank 0.4 mile downstream from Pilot Knob wasteway, 6 miles (revised) west of Yuma, Ariz., 15 miles upstream from turnout to Coachella Canal, and 21.2 miles downstream from intake at Imperial Dam.

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

GAGE.--Water-stage recorder. Datum of gage is 150.00 ft above mean sea level. Auxiliary water-stage recorder on right bank 0.4 mile upstream used to determine head on Pilot Knob check gates (also used as forebay gage for sta 9-5270, Pilot Knob powerplant and wasteway). Datum of auxiliary gage is 150.00 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 4,675 cfs (3,387,000 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 7,220 cfs July 12, 1963; no flow Jan. 4, 1967.

REMARKS.--Records excellent. Water is used for power development at three sites below station, and for irrigation in Coachella and Imperial Valleys.

COOPERATION.--Gage-height record and log of gate operation furnished by Imperial Irrigation District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,100	3,890	2,860	2,010	3,440	3,770	6,270	5,830	5,760	5,530	5,640	5,000
2	5,100	4,070	3,180	2,210	3,740	3,900	6,220	5,650	5,380	5,630	5,590	5,230
3	5,280	3,810	3,490	2,480	4,040	4,280	5,870	5,520	5,520	5,840	5,430	5,170
4	5,110	3,720	3,620	2,600	4,330	4,640	5,650	5,270	5,780	5,480	5,320	5,050
5	5,130	3,900	3,790	2,710	4,350	4,840	5,510	5,350	5,860	5,350	5,400	4,930
6	4,910	3,860	3,750	2,850	4,740	5,210	5,110	5,510	5,460	5,260	5,560	4,580
7	4,830	3,810	3,790	2,910	4,960	5,350	5,040	5,600	5,360	5,350	5,900	4,020
8	4,630	3,630	3,610	3,200	4,920	5,160	5,160	5,440	5,190	5,470	5,690	4,350
9	4,700	3,420	3,520	3,560	4,620	4,970	5,570	4,980	5,240	5,740	5,680	4,190
10	4,870	3,200	3,620	3,380	4,620	5,050	5,910	4,710	5,340	5,640	5,630	3,870
11	4,700	3,080	3,460	3,860	4,720	5,120	5,600	4,570	5,470	5,630	5,420	3,640
12	4,580	3,100	3,670	2,580	4,800	5,280	5,700	4,880	5,480	5,770	5,470	3,700
13	4,360	3,080	3,390	2,630	4,970	5,060	5,460	5,130	4,980	5,470	5,650	3,800
14	4,470	3,230	3,300	1,660	4,860	4,880	5,040	5,440	5,010	5,430	5,890	3,740
15	4,440	3,160	3,110	1,020	4,640	4,870	5,060	5,980	5,250	5,610	5,670	3,780
16	4,520	3,070	2,940	1,030	4,030	4,150	5,250	5,900	5,400	5,690	5,380	4,040
17	4,360	2,960	2,740	1,310	3,920	4,510	5,410	5,850	5,440	5,650	5,300	4,280
18	4,220	3,100	2,910	1,340	3,620	4,810	5,320	5,720	5,580	5,490	5,310	4,140
19	4,270	3,110	3,180	1,000	3,610	5,400	5,440	5,670	5,680	5,340	5,410	4,080
20	4,050	3,240	3,360	1,010	3,650	5,760	5,320	5,800	5,580	5,310	5,500	4,060
21	4,090	3,350	3,550	1,010	3,310	5,960	5,400	5,870	5,440	5,290	5,550	4,000
22	4,080	3,300	3,310	1,340	3,280	6,310	5,690	5,860	5,430	5,300	5,480	4,130
23	4,180	3,370	3,080	1,340	2,970	6,210	5,780	5,970	5,420	5,310	5,300	4,280
24	4,250	3,030	2,460	1,360	3,140	6,170	5,920	6,050	5,470	5,380	5,320	4,700
25	3,990	3,100	1,720	1,490	3,040	6,200	5,980	5,840	5,490	5,470	5,370	4,830
26	3,720	3,140	2,340	1,450	3,150	6,160	6,010	5,840	5,530	5,480	5,340	4,990
27	3,770	3,380	2,320	1,510	3,430	6,350	5,850	5,760	5,420	5,240	5,440	5,010
28	3,680	3,120	2,670	1,830	3,580	6,370	5,660	5,750	5,700	5,340	5,590	4,970
29	3,630	3,110	2,670	2,170	-----	6,310	5,690	5,860	5,550	5,350	5,400	4,930
30	3,680	3,270	2,210	2,720	-----	6,120	5,720	5,890	5,540	5,390	5,190	5,020
31	3,970	-----	2,030	3,090	-----	6,230	-----	6,000	-----	5,710	5,050	-----
TOTAL	136,670	100,610	95,650	64,660	112,480	165,400	167,610	173,490	163,750	169,940	169,870	132,510
MEAN	4,409	3,354	3,085	2,086	4,017	5,335	5,587	5,596	5,458	5,482	5,480	4,417
MAX	5,280	4,070	3,790	3,860	4,970	6,370	6,270	6,050	5,860	5,840	5,900	5,230
MIN	3,630	2,960	1,720	1,000	2,970	3,770	5,040	4,570	4,980	5,240	5,050	3,640
AC-FT	271,100	199,600	189,700	128,300	223,100	328,100	332,400	344,100	324,800	337,100	336,900	262,800
CAL YR 1968	TOTAL 1,685,590		MEAN 4,605		MAX 6,500		MIN 1,720		AC-FT 3,343,000			
WTR YR 1969	TOTAL 1,652,640		MEAN 4,528		MAX 6,370		MIN 1,000		AC-FT 3,278,000			

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, Ariz.-Calif.

Between Imperial Dam and the international boundary return surface flows from irrigated areas enter the Colorado River through many drains and wasteways in Arizona and California. Other return flows enter the Gila River below the gaging station near Dome (9-5205). In addition, return flows collected by the Main Drain and East Main Canal are delivered across the international boundary for use in Mexico.

Diversions for irrigation in the Gila project in Arizona are made at Imperial Dam by the Gila Gravity Main Canal. (See sta 9-5225.) Diversions for the Yuma project in Arizona and California are made at Imperial Dam by the All-American Canal (see sta 9-5230).

9-5270. PILOT KNOB POWERPLANT AND WASTEWAY.--See daily table elsewhere in this report.

9-5286. LAGUNA CANAL WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in $SE\frac{1}{4}SW\frac{1}{4}$ sec.14, T.7 S., R.22 W., 1,000 ft downstream from Laguna Dam and 0.7 mile upstream from outlet to Colorado River.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District returned to Colorado River. Flow record computed from standard weir rating.

9-5288. LEVEE CANAL WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in $SE\frac{1}{4}SW\frac{1}{4}$ sec.4, T.8 S., R.22 W., 1,000 ft upstream from outlet to Colorado River.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District returned to Colorado River.

9-5290. NORTH GILA DRAIN NO. 1.

LOCATION.--Enters Colorado River in $NE\frac{1}{4}NW\frac{1}{4}$ sec.9, T.8 S., R.22 W., 5.6 miles downstream from Laguna Dam.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District returned to Colorado River. There is no gage, but, due to fairly constant drainage, flow record is computed by interpolation between discharge measurements, made monthly.

9-5290.5. NORTH GILA DRAIN NO. 3.

LOCATION.--Drain enters wasteway to Gila River in $NE\frac{1}{4}NE\frac{1}{4}$ sec.18, T.8 S., R.21 W., 1,000 ft upstream from Gila River.

PERIOD OF RECORD.--Monthly discharge April 1962 to current year.

REMARKS.--Record shows seepage from Gila Gravity Main Canal. There is no gage; records are computed by interpolation between discharge measurements made monthly.

9-5291. FORTUNA WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in $NE\frac{1}{4}$ sec.30, T.8 S., R.21 W., 1.3 miles upstream from Gila River.

PERIOD OF RECORD.--Monthly discharge October 1960 to September 1963, October 1964 to current year.

REMARKS.--Record shows waste water spilled from Gila Gravity Main Canal; flow rarely reaches Gila River.

9-5291.5. NORTH GILA MAIN CANAL WASTEWAY.

LOCATION.--Water-stage recorder in $NE\frac{1}{4}NW\frac{1}{4}$ sec.22, T.8 S., R.22 W., 1,000 ft upstream from outlet to Gila River. Prior to July 1966 water-stage recorder and sharp-crested weir, 1 mile upstream from outlet to Gila River.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District. Prior to July 1966 record shows waste water less flow diverted for irrigation between gage and Gila River.

9-5291.6. SOUTH GILA PUMP OUTLET CHANNEL NO. 3.

LOCATION.--Water-stage recorder in $NW\frac{1}{4}SE\frac{1}{4}$ sec.22, T.8 S., R.22 W., 0.5 mile upstream from outlet to Gila River. Prior to Aug. 1, 1965, record obtained by Badger total-flow meter about 500 ft downstream.

PERIOD OF RECORD.--Monthly discharge January 1965 to current year.

REMARKS.--Record shows water pumped from wells in South Gila Valley Unit.

9-5292. BRUCE CHURCH DRAIN.

LOCATION.--Pump in $NW\frac{1}{4}NE\frac{1}{4}$ sec.21, T.8 S., R.22 W., 0.2 mile upstream from outlet to Gila River.

PERIOD OF RECORD.--Monthly discharge April 1962 to current year.

REMARKS.--Record shows seepage water from parts of secs.15, 16, and 21 (Bruce Church Ranch). Flow determined from pump rating.

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

9-5292.4. SOUTH GILA PUMP OUTLET CHANNEL NO. 2.

LOCATION.--Water-stage recorder in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.8 S., R.22 W., 0.6 mile upstream from outlet to Gila River; prior to Oct. 18, 1965, outlet was to Wellton-Mohawk Main Outlet Drain. Prior to Aug. 1, 1965, Sparling meter at outlet to Wellton-Mohawk Main Outlet Drain.

PERIOD OF RECORD.--Monthly discharge January 1962 to current year.

REMARKS.--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete channel to the Gila River.

9-5292.5. BRUCE CHURCH WASTEWAY.

LOCATION.--Water-stage recorder and sharp-crested weir, in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.8 S., R.22 W., 500 ft upstream from outlet to Gila River.

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

REMARKS.--Record shows waste water from North Gila Valley Irrigation District returned to Gila River.

9-5293. WELLTON-MOHAWK MAIN OUTLET DRAIN (CONVEYANCE CHANNEL).

LOCATION.--Water-stage recorder in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.8 S., R.21 W., 8 miles upstream from outlet to Gila River, which is 0.6 mile upstream from mouth of Gila River. Prior to Feb. 20, 1962, gage heights measured from reference point on measuring bridge.

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

REMARKS.--Record shows water pumped from numerous wells in Wellton-Mohawk Irrigation and Drainage District to lower the water table. Drainage is conveyed by concrete and earth channels to Gila River or Colorado River. (See stas 9-5293.5, 9-5318, and 9-5319.)

9-5293.5. MAIN OUTLET DRAIN ABOVE GILA RIVER.

LOCATION.--Water-stage recorder in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.8 S., R.22 W., about 1,000 ft upstream from outlet to Gila River (M.O.D.E. 1), which is 0.6 mile upstream from mouth of Gila River, and 8 miles downstream from sta 9-5293.

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

REMARKS.--Record shows water pumped from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. Above this station flow passes through 8 miles of unlined channel. After completion of the Main Outlet Drain Extension on Nov. 15, 1965, flow can be returned to the Gila or Colorado River by any one of, or combination of, three outlets. These outlets are known as: M.O.D.E. 1 (release to the Gila River about 1,000 ft below sta 9-5293.5); M.O.D.E. 2 (see sta 9-5318), release to Colorado River above Morelos Dam; and M.O.D.E. 3 (see sta 5319), release to Colorado River below Morelos Dam. For the 1969 water year 5,560 acre-ft was released to Gila River through M.O.D.E. 1.

9-5293.6. SOUTH GILA PUMP OUTLET CHANNEL NO. 1.

LOCATION.--Water-stage recorder in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.8 S., R.22 W., 0.2 mile upstream from outlet to Gila River, which is 0.6 mile upstream from mouth of Gila River. Prior to Aug. 1, 1965, Sparling total-flow meter 300 ft upstream.

PERIOD OF RECORD.--Monthly discharge August 1961 to current year.

REMARKS.--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete channel to Gila River.

9-5294. SOUTH GILA DRAIN NO. 2.

LOCATION.--Sparling total-flow meter, near center of sec.24, T.8 S., R.23 W., at outlet to Colorado River.

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

REMARKS.--Record shows ground-water drainage and occasional waste water from South Gila Valley Unit returned to Colorado River. Flow estimated from discharge measurements made monthly, when flow is less than will operate Sparling meter.

9-5294.2. SOUTH GILA TERMINAL WASTEWAY.

LOCATION.--Water-stage recorder and Parshall flume in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.8 S., R.23 W., 2.0 miles upstream from outlet to Colorado River. Prior to Aug. 1, 1965, total-flow meter at same site.

PERIOD OF RECORD.--Monthly discharge March 1965 to current year.

REMARKS.--Record shows waste water from South Gila Canal of South Gila Valley Unit returned to Colorado River.

9-5294.4. SOUTH GILA PUMP OUTLET CHANNEL NO. 4.

LOCATION.--Water-stage recorder and broad-crested weir, in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.26, T.8 S., R.23 W., 1.5 miles upstream from outlet to Colorado River.

PERIOD OF RECORD.--Monthly discharge July 1965 to current year.

REMARKS.--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete-lined channel to Colorado River.

9-5296. RESERVATION DRAIN NO. 7.

LOCATION.--Nonrecording gage at downstream end of culvert on Avenue C in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.15 S., R.23 E., San Bernardino meridian, 0.5 mile upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record shows drainage water from sec.34, T.15 S., R.23 E., and is used with sta 9-5297 to determine seepage from All-American Canal. Flow record computed by interpolation between discharge measurements made monthly. Beginning June 20, 1967, Imperial Irrigation District makes discharge measurements weekly.

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

9-5297. RESERVATION MAIN DRAIN NO. 6.

LOCATION.--Nonrecording gage on upstream right piling of 9th Street Bridge, in $SE\frac{1}{4}SW\frac{1}{4}$ sec.32, T.15 S., R.23 E., San Bernardino meridian.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record shows waste and drainage water from the Reservation Division, and is used with sta 9-5296 to determine seepage from All-American Canal, which parallels drain for 4 miles. Flow record computed by interpolation between discharge measurements made monthly. The Imperial Irrigation District makes discharge measurements weekly.

9-5298. RESERVATION DRAIN NO. 2.

LOCATION.--At upstream side of bridge in $SW\frac{1}{4}NW\frac{1}{4}$ sec.6, T.16 S., R.23 E., San Bernardino meridian, 0.9 mile upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record used to compute seepage from All-American Canal in sec.31, T.15 S., R.22 E. There is no gage; flow record computed by interpolation between discharge measurements made monthly. The Imperial Irrigation District makes discharge measurements weekly.

9-5299. RESERVATION DRAIN NO. 3.

LOCATION.--Nonrecording gage on pier on right side of 5th Street Bridge in $SE\frac{1}{4}SE\frac{1}{4}$ sec.10, T.16 S., R.22 E., San Bernardino meridian, 1.0 mile upstream from outlet to Reservation Main Drain.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record used to compute seepage from All-American Canal upstream from Yuma Main Canal. Flow record computed by interpolation between discharge measurements made monthly. Imperial Irrigation District makes discharge measurements weekly.

9-5300. RESERVATION MAIN DRAIN NO. 4.

LOCATION.--Water-stage recorder in $NW\frac{1}{4}SE\frac{1}{4}$ sec.26, T.16 S., R.22 E., San Bernardino meridian, at upstream side of railroad culvert. Drainage canal enters Yuma Main Canal wasteway 200 ft downstream from spillway structure. Prior to May 1955, it entered 500 ft upstream from outlet of Yuma Main Canal wasteway in $SE\frac{1}{4}SW\frac{1}{4}$ sec.26, T.16 S., R.22 E., San Bernardino meridian.

PERIOD OF RECORD.--Monthly discharge January 1913 to April 1920, October 1921 to March 1925, January 1934 to current year (calendar year discharge only 1934-36). Prior to October 1955, published as California drainage canal. Prior to January 1937, no gage; 1937 to Apr. 16, 1941, nonrecording gages at same site at different datums.

REMARKS.--Record shows waste and drainage water from area east of Yuma Main Canal on Reservation Division. Since 1939, seepage from All-American Canal has caused large increase. Flow is not included in the record of Yuma Main Canal wasteway.

9-5304. RESERVATION DRAIN NO. 11.

LOCATION.--At outlet to Drain 8-B (Araz drain), in $NE\frac{1}{4}NE\frac{1}{4}$ sec.19, T.16 S., R.22 E., San Bernardino meridian.

PERIOD OF RECORD.--Monthly discharge March 1966 to current year.

REMARKS.--Record shows drainage from sec.20, T.16 S., R.22 E. Flow at this station, with that at sta 9-5305, is used to determine seepage from All-American Canal. There is no gage; flow record computed by interpolation between discharge measurements made monthly. Beginning June 20, 1967, Imperial Irrigation District makes discharge measurements weekly.

9-5305. DRAIN 8-B.

LOCATION.--Enters Colorado River in $NE\frac{1}{4}NW\frac{1}{4}$ sec.30, T.16 S., R.22 E., San Bernardino meridian, 4 miles downstream from outlet of Yuma Main Canal wasteway.

PERIOD OF RECORD.--Monthly discharge March 1948 to current year. Prior to October 1955, published as Araz drain.

REMARKS.--Record shows seepage from All-American Canal, and waste and drainage water west of Yuma Main Canal on the Reservation Division. Flow at this station, with that at sta 9-5304, is used to determine seepage from All-American Canal. There is no gage, but due to fairly constant drainage, flow record is computed by interpolation between discharge measurements made monthly. Imperial Irrigation District makes discharge measurements weekly at site 1,000 ft upstream.

9-5318. MAIN OUTLET DRAIN EXTENSION ABOVE MORELOS DAM (M.O.D.E. 2).

LOCATION.--Water-stage recorder and Parshall flume in $NW\frac{1}{4}NW\frac{1}{4}$ sec.36, T.16 S., R.21 E., San Bernardino meridian, at outlet to Colorado River, 1.7 miles upstream from Morelos Dam.

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

REMARKS.--Record shows water conveyed to Colorado River 1.7 miles above Morelos Dam, from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. (See also stas 9-5293, 9-5293.5, 9-5319.)

COOPERATION.--Record furnished by Bureau of Reclamation.

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

9-5319. MAIN OUTLET DRAIN EXTENSION BELOW MORELOS DAM (M.O.D.E. 3).

LOCATION.--Water-stage recorder and Parshall flume in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.8 S., R.24 W., at outlet to Colorado River just downstream from Morelos Dam.

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

REMARKS.--Record shows water conveyed to Colorado River below Morelos Dam, from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. (See also stas 9-5293, 9-5293.5, 9-5318.)

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

9-5320. COOPER WASTEWAY.

LOCATION.--Water-stage recorder and weir, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.8 S., R.24 W., 0.4 mile downstream from Morelos Dam.

PERIOD OF RECORD.--Monthly discharge January 1934 to current year.

REMARKS.--Record shows waste water from Valley Division returned to Colorado River.

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

9-5325. ELEVEN MILE WASTEWAY.

LOCATION.--Water-stage recorder and regulating gate in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.9 S., R.24 W., 3.2 miles downstream from Morelos Dam.

PERIOD OF RECORD.--Monthly discharge January 1924 to current year.

REMARKS.--Record shows waste water from Valley Division returned to Colorado River.

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

9-5330. TWENTY-ONE MILE WASTEWAY.

LOCATION.--Water-stage recorder and Parshall flume in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.10 S., R.25 W., 0.6 mile upstream from outlet to Colorado River, which is 2.4 miles upstream from southerly international boundary and 2.6 miles northwest of San Luis, Ariz.

PERIOD OF RECORD.--Monthly discharge March 1939 to current year.

REMARKS.--Record shows waste water from Valley Division returned to Colorado River.

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

9-5340. MAIN DRAIN.

LOCATION.--Flowmeters in discharge pipes at pumping plant in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.11 S., R.25 W., 0.4 mile west of San Luis, Ariz. Prior to Oct. 1, 1968, rated pumps with forebay and afterbay gages to measure head.

PERIOD OF RECORD.--Monthly discharge January 1919 to current year.

REMARKS.--Record shows flow which consists mostly of drainage water from the Valley Division which is pumped across the Arizona-Sonora boundary for use in Mexico. Flowmeters checked by discharge measurements made by International Boundary and Water Commission (U.S. Section).

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

9-5345. EAST MAIN CANAL WASTEWAY.

LOCATION.--Water-stage recorder, in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.11 S., R.25 W., 0.2 mile east of Main drain pumping plant and 0.2 mile west of San Luis, Ariz.

PERIOD OF RECORD.--Monthly discharge January 1924 to June 1928, January 1932 to December 1933, April 1935 to current year. Calendar year estimates 1934 and 1935, published in WSP 1313.

REMARKS.--Record shows amount of unused water at the extreme end of the Valley Division which is discharged across the Arizona-Sonora boundary for use in Mexico.

COOPERATION.--Record furnished by International Boundary and Water Commission (U.S. Section).

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

MONTHLY RETURN FLOWS, IN ACRE-FEET, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Month	Laguna Canal wasteway (9-5286)	Levee Canal wasteway (9-5288)	North Gila Drain No. 1 (9-5290)	North Gila Drain No. 3 (9-5290.5)	Fortuna wasteway (9-5291)
October.....	0	228	645	12	28
November.....	1.4	274	536	11	28
December.....	.9	114	434	8.5	41
CAL YR 1968.....	25	2,630	6,620	268	294
January.....	0	107	313	8.7	45
February.....	0	155	337	11	48
March.....	0	205	492	22	47
April.....	10	261	585	34	24
May.....	.5	244	631	53	26
June.....	0	277	716	55	22
July.....	.2	229	738	44	33
August.....	13	151	655	37	28
September.....	.3	174	563	36	28
WTR YR 1969.....	26	2,420	6,640	332	398

Month	North Gila Main Canal wasteway (9-5291.5)	South Gila Pump Outlet Channel No. 3 (9-5291.6)	Bruce Church Drain (9-5292)	South Gila Pump Outlet Channel No. 2 (9-5292.4)	Bruce Church wasteway (9-5292.5)
October.....	140	12	2.0	2.4	185
November.....	107	6.0	10	474	412
December.....	97	2.8	116	1,470	282
CAL YR 1968.....	1,700	12,060	228	19,060	3,470
January.....	33	764	0	847	261
February.....	188	1,570	0	1,840	140
March.....	308	2,710	43	2,580	222
April.....	224	2,130	89	2,380	119
May.....	152	18	74	193	257
June.....	136	1,540	60	1,870	271
July.....	117	2,170	31	2,690	322
August.....	53	2,340	19	2,490	293
September.....	77	661	6.0	809	103
WTR YR 1969.....	1,630	13,920	450	17,640	2,870

Month	Wellton-Mohawk Main Outlet Drain (9-5293)	Main Outlet Drain above Gila River (9-5293.5)	South Gila Pump Outlet Channel No. 1 (9-5293.6)	South Gila Drain No. 2 (9-5294)	South Gila Terminal wasteway (9-5294.2)
October.....	19,180	18,190	2,510	0.3	116
November.....	18,760	17,850	2,100	4.2	115
December.....	19,510	18,730	2,020	18	161
CAL YR 1968.....	219,800	210,300	26,330	69	1,500
January.....	19,510	18,930	1,460	14	64
February.....	16,410	16,160	2,090	2.2	127
March.....	18,920	18,580	2,430	8.3	134
April.....	18,750	18,120	2,420	16	133
May.....	17,600	16,880	1,410	33	133
June.....	18,000	17,200	2,120	42	105
July.....	19,080	17,870	2,720	48	113
August.....	18,220	17,270	2,580	67	113
September.....	16,740	15,920	2,060	30	87
WTR YR 1969.....	220,700	211,700	25,910	284	1,400

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

MONTHLY RETURN FLOWS, IN ACRE-FEET, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Month	South Gila Pump Outlet Channel No. 4 (9-5294.4)	Reservation Drain No. 7 (9-5296)	Reservation Main Drain No. 6 (9-5297)	Reservation Drain No. 2 (9-5298)	Reservation Drain No. 3 (9-5299)
October.....	2.9	115	984	27	298
November.....	3.6	96	952	30	253
December.....	18	98	984	28	261
CAL YR 1968.....	7,570	1,660	12,960	389	3,270
January.....	78	83	960	25	226
February.....	661	79	857	25	214
March.....	1,560	110	1,070	37	277
April.....	1,010	121	1,130	43	281
May.....	.7	174	1,170	41	286
June.....	0	190	1,240	41	250
July.....	630	187	1,270	49	323
August.....	1,030	126	1,110	49	315
September.....	4.7	81	1,010	40	321
WTR YR 1969.....	5,000	1,460	12,740	435	3,300

Month	Reservation Main Drain No. 4 (9-5300)	Reservation Drain No. 11 (9-5304)	Drain 8-B (9-5305)	M.O.D.E. 2 (above Morelos Dam) (9-5318)	M.O.D.E. 3 (below Morelos Dam) (9-5319)
October.....	3,000	6.1	55	0	18,220
November.....	2,680	6.0	58	0	17,780
December.....	2,780	6.1	51	3,560	14,990
CAL YR 1968.....	36,060	127	835	97,650	102,600
January.....	2,730	18	47	7,650	11,030
February.....	2,370	22	54	5,060	10,810
March.....	2,980	25	82	15,650	2,750
April.....	2,930	33	89	14,020	1,530
May.....	3,120	29	80	8,560	7,640
June.....	3,200	17	109	12,590	4,310
July.....	3,220	23	129	12,700	1,480
August.....	3,500	25	135	14,430	2,110
September.....	3,090	23	119	4,700	10,650
WTR YR 1969.....	35,600	233	1,010	98,910	103,300

Month	Cooper wasteway (9-5320)	Eleven Mile wasteway (9-5325)	Twenty-one Mile wasteway (9-5330)	Main drain (9-5340)	East Main Canal wasteway (9-5345)
October.....	102	378	230	10,470	481
November.....	128	344	191	9,690	313
December.....	74	232	104	9,750	364
CAL YR 1968.....	1,090	2,940	1,930	123,400	4,570
January.....	94	359	156	8,940	337
February.....	81	193	212	8,500	383
March.....	97	404	186	9,890	426
April.....	126	336	229	11,260	389
May.....	140	238	146	11,910	505
June.....	94	152	140	11,370	357
July.....	91	175	133	11,630	471
August.....	87	297	135	11,500	382
September.....	73	175	257	10,880	569
WTR YR 1969.....	1,190	3,280	2,120	125,800	4,980

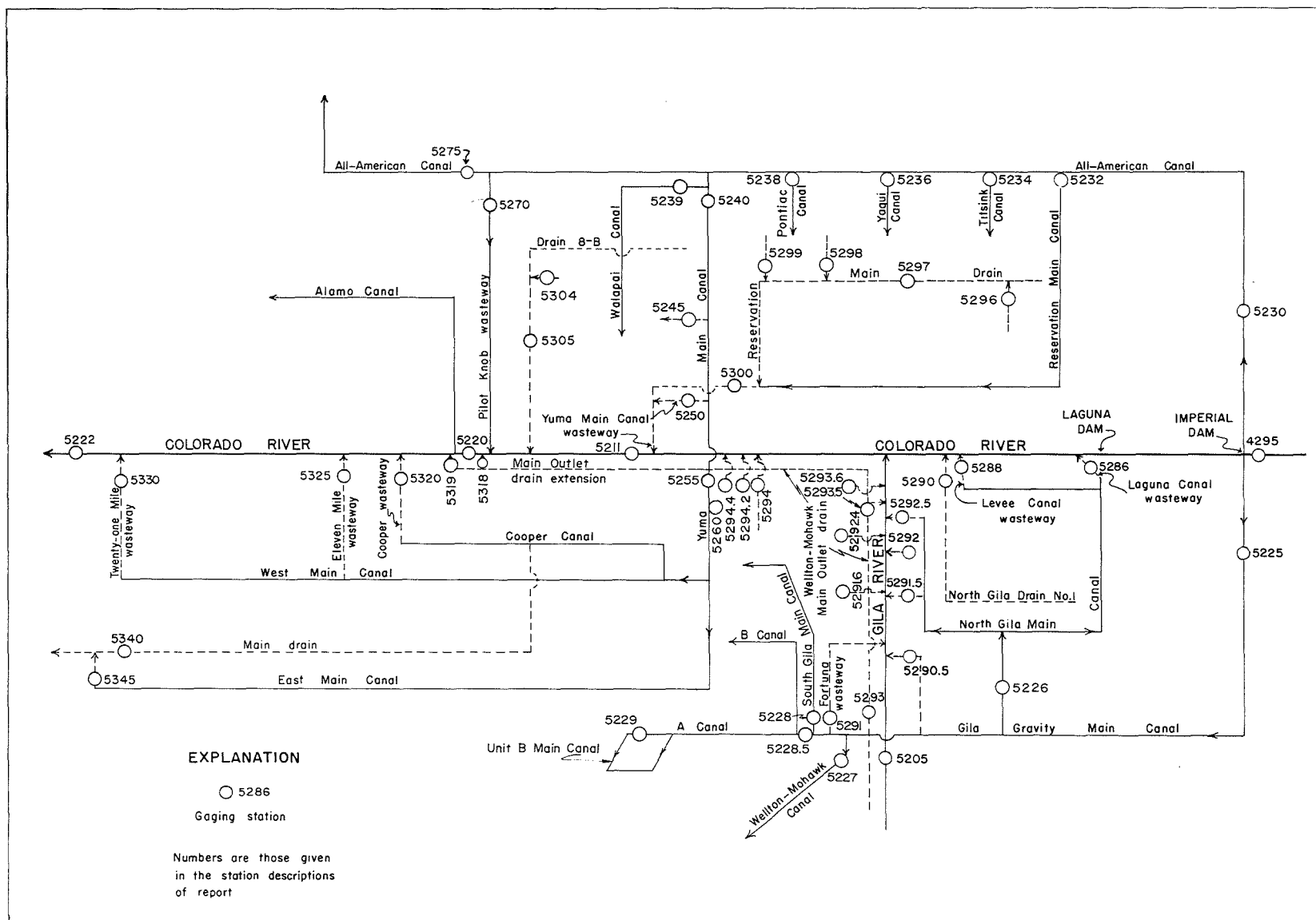


Figure 2.--Schematic diagram showing gaging stations on streams, diversions, and return flows between Imperial Dam and the southerly international boundary

PANAMINT VALLEY

10-2506. WILDROSE CREEK NEAR WILDROSE STATION, CALIF.
(Hydrologic bench-mark station)

LOCATION.--Lat 36°15'54", long 117°10'40", Inyo County, in Death Valley National Monument, on left bank 0.4 mile east of Wildrose Ranger Headquarters, 2 miles east of Wildrose Spring, and 2.5 miles east of Wildrose Station.

DRAINAGE AREA.--23.7 sq mi.

PERIOD OF RECORD.--October 1960 to current year. Weather records since June 1964.

INSTRUMENTATION.--Water-stage recorder with rain-gage attachment at altitude of 4,300 ft (from topographic map). Recording and storage-type precipitation gages, recording anemometer, and maximum-minimum thermometer at altitude of 9,990 ft; similar instruments and 24-inch screened evaporation pan at altitude of 5,750 ft; recording rain gages at altitudes of 7,200, 6,400, 5,200, and 5,300 ft.

AVERAGE DISCHARGE.--9 years, 0.030 cfs (22 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 204 cfs Feb. 25 (gage height, 1.22 ft); no flow for most of year. Period of record: Maximum discharge, 1,060 cfs Sept. 4, 1967 (gage height, 6.24 ft), on basis of slope-area measurement of maximum flow; no flow for most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

Period	Pan evaporation (inches)	Temperature (°C) at altitude:			
		9,990 ft		5,750 ft	
		Maximum	Minimum	Maximum	Minimum
Sept. 10 to Nov. 18...	21.54	-	-	24.4	-2.8
Nov. 18 to Feb. 13....	11.29	-	-	8.9	-1.1
Feb. 13 to Apr. 30....	.94	-	-	18.9	4.4
Apr. 30 to July 9.....	13.76	-	-	34.4	8.9
July 9 to Sept. 3.....	20.94	-	-	35.0	14.4

Precipitation (inches) at location and altitude:							
Month	117°05'05" 36°13'05"	117°04'15" 36°15'30"	117°06'50" 36°13'55"	117°06'40" 36°15'10"	117°08'10" 36°16'15"	117°09'50" 36°14'45"	117°10'40" 36°15'55"
	9,990 ft	7,200 ft	6,400 ft	5,750 ft	5,300 ft	5,200 ft	4,300 ft
October 1968.....	-	0.36	0.48	0.40	0.10	0.47	0.3
November.....	-	0	0	0	0	0	0
December.....	-	.40	.34	.20	.10	.05	.1
CAL YR 1968.....	-	8.01	6.58	5.69	3.68	-	4.7
January 1969.....	-	4.09	5.00	5.25	3.04	4.15	3.7
February.....	-	2.42	5.51	3.85	4.03	5.65	5.6
March.....	-	2.03	1.04	.95	.51	1.13	.8
April.....	-	.31	.80	.75	.64	.56	.6
May.....	-	.21	.26	.40	.23	.08	.1
June.....	-	1.71	1.45	1.08	.15	.48	.3
July.....	-	1.95	2.33	3.70	1.09	.98	.9
August.....	-	.05	0	0	.10	.37	.2
September.....	-	0	0	0	0	0	0
WTR YR 1968-69....	-	13.53	17.21	16.58	9.99	13.92	12.6

Average Wind Velocity (mph) at location and altitude:		
Month	117°05'05", 36°13'05"	117°06'40", 36°15'10"
	9,990 ft	5,750 ft
October 1968....	-	5.79
November.....	-	5.21
December.....	-	5.08
CAL YR 1968...	-	-
January 1969....	-	6.04
February.....	-	5.17
March.....	-	5.42
April.....	-	5.58
May.....	-	5.17
June.....	-	5.00
July.....	-	4.42
August.....	-	5.67
September.....	-	5.75
WTR YR 1968-69	-	-

10-2506. WILDROSE CREEK NEAR WILDROSE STATION, CALIF.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	.64	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	16	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0	16	0	0	0	0	0.64	0	0
MEAN	0	0	0	0	.57	0	0	0	0	.021	0	0
MAX	0	0	0	0	16	0	0	0	0	.64	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	32	0	0	0	0	1.3	0	0

CAL YR 1968	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0
WTR YR 1969	TOTAL	16.64	MEAN	.046	MAX	16	MIN	0	AC-FT	33

PEAK DISCHARGE (BASE, 5.0 CFS).--Feb. 25 (0515) 204 cfs (1.22 ft); July 20 (0100) 10 cfs (0.80 ft).

PANAMINT VALLEY

10-2508. DARWIN CREEK NEAR DARWIN, CALIF.

LOCATION (revised).--Lat 36°19'14", long 117°31'20", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.34, T.18 S., R.41 E., Inyo County, on right bank 700 ft downstream from Darwin Falls, 1.3 miles upstream from unnamed tributary, and 5.4 miles northeast of Darwin.

DRAINAGE AREA.--173 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 2,640 ft (from topographic map). U.S. Weather Bureau non-recording rain gage at Darwin.

AVERAGE DISCHARGE.--7 years, 0.673 cfs (487 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,400 cfs Jan. 25 (gage height, 8.40 ft, from floodmarks), on basis of slope-conveyance measurement of maximum flow; minimum daily, 0.18 cfs Sept. 25-30.
Period of record: Maximum discharge, 4,400 cfs Jan. 25, 1969 (gage height, 8.40 ft, from floodmarks), on basis of slope-conveyance measurement of maximum flow; minimum daily, 0.10 cfs June 19 to July 6, 1968.

REMARKS.--Records good prior to Jan. 25 and poor thereafter. No regulation above station. Town of Darwin pumps water above station for municipal supply.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.25	.30	.40	1.0	5.0	.31	.30	.25	.20	.21	.22
2	.30	.25	.30	.40	.70	2.5	.31	.30	.25	.20	.21	.22
3	.30	.25	.30	.40	.56	1.5	.31	.30	.25	.20	.21	.22
4	.30	.25	.30	.40	.50	1.2	.31	.30	.25	.20	.21	.21
5	.30	.25	.30	.40	.80	1.0	.31	.30	.24	.20	.21	.21
6	.30	.25	.30	.40	.25	.82	.31	.29	.24	.20	.21	.21
7	.30	.25	.30	.40	5.0	.70	.31	.29	.24	.20	.21	.21
8	.30	.25	.30	.40	1.0	.60	.31	.29	.24	.20	.21	.21
9	.30	.25	.35	.40	.40	.53	.31	.29	.24	.20	.21	.21
10	.30	.25	.35	.40	.35	.47	.31	.29	.24	.20	.21	.21
11	.30	.25	.35	.40	.28	.44	.31	.29	.23	.20	.21	.20
12	.30	.25	.35	.40	.27	.42	.31	.28	.23	.20	.21	.20
13	.30	.25	.35	.40	.26	.40	.31	.28	.23	.20	.21	.20
14	.30	.25	.35	.50	.26	.38	.31	.28	.23	.20	.21	.20
15	.30	.25	.40	.45	.26	.37	.31	.28	.23	.20	.21	.20
16	.30	.25	.40	.45	.26	.36	.31	.28	.23	.20	.22	.20
17	.30	.25	.40	.45	.26	.35	.31	.28	.22	.20	.22	.20
18	.30	.25	.35	.45	.26	.35	.31	.27	.22	.20	.22	.19
19	.30	.25	.35	.45	.26	.35	.31	.27	.22	.20	.22	.19
20	.30	.25	.40	.45	.25	.34	.31	.27	.22	.20	.22	.19
21	.30	.25	.40	.21	.25	.34	.31	.27	.22	.20	.22	.19
22	.30	.25	.40	1.1	.25	.34	.30	.27	.22	.20	.22	.19
23	.30	.25	.40	.45	.25	.33	.30	.27	.22	.20	.22	.19
24	.30	.25	.40	.40	.25	.33	.30	.26	.21	.20	.22	.19
25	.30	.25	.40	432	5.0	.33	.30	.26	.21	.20	.22	.18
26	.25	.25	.40	25	50	.33	.30	.26	.21	.20	.22	.18
27	.25	.25	.40	15	15	.33	.30	.26	.21	.20	.22	.18
28	.25	.25	.40	2.5	10	.33	.30	.26	.21	.21	.22	.18
29	.25	.25	.40	3.5	-----	.32	.30	.26	.21	.21	.22	.18
30	.25	.25	.40	2.5	-----	.32	.30	.25	.21	.21	.22	.18
31	.25	-----	.40	1.5	-----	.32	-----	.25	-----	.21	.22	-----
TOTAL	9.00	7.50	11.20	513.35	118.93	21.70	9.21	8.60	6.83	6.24	6.67	5.94
MEAN	.29	.25	.36	16.6	4.25	.70	.31	.28	.23	.20	.22	.20
MAX	.30	.25	.40	432	50	5.0	.31	.30	.25	.21	.22	.22
MIN	.25	.25	.30	.40	.25	.32	.30	.25	.21	.20	.21	.18
AC-FT	18	15	22	1,020	236	43	18	17	14	12	13	12
(b)	.07	0	.11	1.77	1.31	1.03	.16	.16	.90	.01	.12	.16
CAL YR 1968	TOTAL 159.90		MEAN .44	MAX 46	MIN .10	AC-FT 317						
WTR YR 1969	TOTAL 725.17		MEAN 1.99	MAX 432	MIN .18	AC-FT 1,440						

DATE	TIME	G.H.	PEAK DISCHARGE (BASE, 10 CFS)	DATE	TIME	G.H.	DISCHARGE
1-21	1500	3.28	120	2-6	unknown	unknown	a50
1-25	1500	8.40	4,400	2-26	unknown	unknown	a150

NOTE.--No gage-height record Jan. 26 to Sept. 30.
b Precipitation, in inches.

a Estimated.

DEATH VALLEY

43

10-2510. BIG DIP CREEK NEAR STOVEPIPE WELLS, CALIF.

LOCATION.--Lat 36°55'05", long 117°17'35", Inyo County, in Death Valley at culvert on road to Scotty's Castle, 21 miles northwest of Stovepipe Wells.

DRAINAGE AREA.--0.95 sq mi.

PERIOD OF RECORD.--Water years 1959-63 (annual maximum), April 1963 to current year.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,620 ft (from topographic map). Jan. 16, 1959, to Apr. 7, 1963, crest-stage gage only at same site and datum.

AVERAGE DISCHARGE.--6 years, 0.007 cfs (5.1 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 45 cfs July 20 (gage height, 13.41 ft); no flow all year except Feb. 25, July 20.

Period of record: Maximum discharge, 199 cfs Dec. 6, 1966 (gage height, 15.11 ft, from floodmarks), on basis of culvert and road-overflow computation of maximum flow; no flow for most of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	.94	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	.40	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0	0.40	0	0	0	0	0.94	0	0
MEAN	0	0	0	0	.014	0	0	0	0	.030	0	0
MAX	0	0	0	0	.40	0	0	0	0	.94	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	.8	0	0	0	0	1.9	0	0
CAL YR 1968	TOTAL	.40		MEAN	.001	MAX	.40	MIN	0	AC-FT	.80	
WTR YR 1969	TOTAL	1.34		MEAN	.004	MAX	.94	MIN	0	AC-FT	2.6	

DEATH VALLEY

10-2513. AMARGOSA RIVER AT TECOPA, CALIF.

LOCATION.--Lat 35°50'53", long 116°13'43", in NW¼NW¼SE¼ sec.9, T.20 N., R.7 E., Inyo County, on right bank 20 ft upstream from county road, and 0.2 mile west of Tecopa.

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

GAGE.--Water-stage recorder and concrete-culvert control. Altitude of gage is 1,310 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 3.08 cfs (2,230 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,000 cfs (estimated) Feb. 26 (gage height, 18.34 ft, from floodmark); minimum daily, 0.02 cfs Oct. 11-14.

Period of record: Maximum discharge, 5,000 cfs (estimated) Feb. 26, 1969 (gage height, 18.34 ft, from floodmark); no flow for many days in most years.

Flood (date unknown) reached a stage of 8.1 ft, from floodmarks (discharge, 790 cfs, based on computation of maximum flow through culvert).

REMARKS.--Records good except those for Feb. 13 to May 21, which are poor.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.23	1.0	3.3	6.1	40	1.3	.77	.36	.17	.17	.15
2	.06	.23	1.2	3.0	5.4	30	1.3	.76	.34	.17	.14	.14
3	.06	.29	.65	3.2	4.1	20	1.3	.73	.37	.17	.15	.09
4	.09	.29	.91	3.2	3.9	14	1.3	.71	.31	.16	.13	.04
5	.09	.29	1.1	3.2	4.1	10	1.2	.70	.24	.16	.13	.06
6	.09	.29	1.3	3.0	85	6.0	1.2	.90	.18	.15	.12	.09
7	.09	.29	1.7	2.9	30	5.0	1.2	.75	.14	.15	.12	.12
8	.06	.29	1.8	3.2	9.3	3.5	1.2	.65	.11	.15	.11	.12
9	.04	.35	1.8	1.7	6.8	3.0	1.2	.60	.06	.15	.10	.13
10	.04	.35	2.1	1.7	5.6	2.7	1.2	.58	.15	.17	.13	.11
11	.02	.35	1.8	2.1	5.6	2.5	1.1	.57	.23	.18	.15	.09
12	.02	.42	1.7	2.2	5.6	2.3	1.1	.55	.29	.14	.09	.24
13	.02	.49	1.8	2.9	5.6	2.2	1.1	.53	.38	.16	.14	3.7
14	.02	.42	2.1	8.8	5.1	2.1	1.1	.52	.40	.11	.16	.08
15	.04	.49	2.4	4.6	4.6	2.1	1.1	.50	.37	.16	.16	.12
16	.06	.65	2.4	3.5	4.0	2.0	1.0	.48	1.7	.14	.10	.13
17	.06	.57	2.7	3.3	3.6	1.9	1.0	.47	5.5	.05	.08	.15
18	.09	.65	1.8	3.9	3.3	1.9	1.0	.45	45	.14	.09	.15
19	.13	.65	2.1	5.8	3.0	1.8	1.0	.44	16	.20	.11	.11
20	.13	.65	2.2	8.4	2.8	1.7	1.0	.42	1.9	35	.15	.07
21	.13	.57	1.1	64	2.7	1.7	.97	.41	.65	10	.16	.10
22	.13	.65	1.3	19	2.6	1.7	.95	.40	.20	.97	.15	.16
23	.13	.73	2.6	16	2.6	1.6	.93	.36	.20	.23	.15	.17
24	.18	.65	2.9	24	2.5	1.5	.91	.36	.18	.21	.12	.18
25	.18	.73	3.7	396	100	1.5	.88	.30	.20	.23	.10	.20
26	.18	.73	4.1	111	1,500	1.5	.87	.17	.18	.22	.11	.19
27	.18	.35	3.3	56	200	1.5	.85	.14	.18	.14	.12	.17
28	.18	.65	3.3	18	60	1.4	.82	.27	.19	.30	.11	.19
29	.18	.57	3.3	26	-----	1.4	.80	.37	.18	.21	.06	.23
30	.18	.73	3.2	24	-----	1.4	.78	.38	.18	.16	.12	.25
31	.23	-----	3.0	10	-----	1.4	-----	.33	-----	.20	.15	-----
TOTAL	3.15	14.60	66.36	837.9	2,073.9	171.3	31.66	15.57	76.37	50.85	3.88	7.73
MEAN	.10	.49	2.14	27.0	74.1	5.53	1.06	.50	2.55	1.64	.13	.26
MAX	.23	.73	4.1	396	1,500	40	1.3	.90	.45	.35	.17	3.7
MIN	.02	.23	.65	1.7	2.5	1.4	.78	.14	.06	.05	.06	.04
AC-FT	6.3	29	132	1,660	4,110	340	63	31	151	101	7.7	15

CAL YR 1968 TOTAL 611.41 MEAN 1.67 MAX 59 MIN 0 AC-FT 1,210
WTR YR 1969 TOTAL 3,353.27 MEAN 9.19 MAX 1,500 MIN .02 AC-FT 6,650

PEAK DISCHARGE (BASE, 15 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1000	4.51	345	6-18	1400	3.48	201
1-25	1800	8.74	853	7-20	0715	2.87	120
2-6	1330	2.92	126	9-13	0045	1.69	23
2-26	unknown	18.34	5,000				

NOTE.--No gage-height record Feb. 13 to May 21.

10-2513.5, HORSE THIEF CREEK NEAR TECOPA, CALIF.

LOCATION (revised).--Lat 35°46'52", long 115°53'30", T.20 N., R.10 E., San Bernardino County, on left bank 0.6 mile northwest of Horse Thief Springs, and 19.2 miles southeast of Tecopa.

DRAINAGE AREA.--3.06 sq mi.

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

GAGE.--Water-stage recorder with rain-gage attachment. Altitude of gage is 4,600 ft (from topographic map).

AVERAGE DISCHARGE.--9 years, 0.017 cfs (12 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 850 cfs Sept. 6 (gage height, 4.50 ft), on basis of slope-conveyance measurement of maximum flow; no flow most of year.

Period of record: Maximum discharge, 850 cfs Sept. 6, 1969 (gage height, 4.50 ft), on basis of slope-conveyance measurement of maximum flow; no flow for most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	18
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	.08	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	11	15	0	0	0	0	0	0	0
26	0	0	0	.02	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	11.10	15	0	0	0	0	0	0	18
MEAN	0	0	0	.36	.54	0	0	0	0	0	0	.60
MAX	0	0	0	11	15	0	0	0	0	0	0	18
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	22	30	0	0	0	0	0	0	36
(a)	0	.7	.8	7.9	5.6	.7	.4	.8	.9	.7	.3	1.2
CAL YR 1968	TOTAL 0		MEAN 0		MAX 0		MIN 0		AC-FT 0			
WTR YR 1969	TOTAL 44.10		MEAN .12		MAX 18		MIN 0		AC-FT 87			

a Precipitation, in inches.

IVANPAH VALLEY

10-2523. CHINA SPRING CREEK NEAR MOUNTAIN PASS, CALIF.

LOCATION (revised).--Lat 35°28'07", long 115°30'29", in E½ sec.31, T.16 N., R.14 E., San Bernardino County, on upstream right bank of State highway culvert on U.S. Highways 466 and 91, and 2.0 miles east of Mountain Pass.

DRAINAGE AREA.--0.94 sq mi.

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

GAGE.--Water-stage recorder with rain-gage attachment. Culvert control since Oct. 9, 1963. Altitude of gage is 4,400 ft (from topographic map). Prior to Oct. 9, 1963, at different datum.

AVERAGE DISCHARGE.--10 years (1960-69), 0.0009 cfs (0.7 acre-ft per year); median of yearly mean discharges, zero.

EXTREMES.--Current year: Maximum discharge, 28 cfs Sept. 15 (gage height, 2.37 ft), on basis of field estimate of peak flow; no flow all year except Sept. 15, 16.

Period of record: Maximum discharge, 113 cfs Aug. 5, 1964 (gage height, 2.75 ft), by computation of maximum flow through culvert; no flow in most years.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	.29
16	0	0	0	0	0	0	0	0	0	0	0	.01
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0.30
MEAN	0	0	0	0	0	0	0	0	0	0	0	.010
MAX	0	0	0	0	0	0	0	0	0	0	0	.29
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	0	0	.6
(a)	0	.5	0	2.5	2.5	.4	.3	1.6	.3	2.7	1.2	3.1
CAL YR 1968	TOTAL .20		MEAN .0005		MAX .20		MIN 0		AC-FT .4			
WTR YR 1969	TOTAL .30		MEAN .0008		MAX .29		MIN 0		AC-FT .6			

a Precipitation, in inches.

BRISTOL LAKE BASIN

47

10-2525.5. CARUTHERS CREEK NEAR IVANPAH, CALIF.

LOCATION.--Lat 35°14'33", long 115°17'58", in NW¼NW¼NE¼ sec.6, T.13 N., R.16 E., San Bernardino County, on left bank 6.6 miles south of Ivanpah.

DRAINAGE AREA.--1.13 sq mi.

PERIOD OF RECORD.--October 1963 to-current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,640 ft (from topographic map).

AVERAGE DISCHARGE.--6 years, 0.101 cfs (73 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 418 cfs Aug. 25 (gage height, 4.77 ft), on basis of slope-conveyance measurement of maximum flow; no flow for most of year.

Period of record: Maximum discharge, 418 cfs Aug. 25, 1969 (gage height, 4.77 ft), on basis of slope-conveyance measurement of maximum flow; no flow for most of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	.02	.04	0	0	0	.01	0
2	0	0	0	0	0	.01	.02	0	0	0	0	0
3	0	0	0	0	0	.01	.04	0	0	0	0	0
4	0	0	0	0	0	.01	.04	0	0	0	0	0
5	0	0	0	0	0	.01	.04	.01	0	0	0	0
6	0	0	0	0	.09	.01	.04	.03	0	0	0	1.3
7	0	0	0	0	.01	.01	.02	.01	0	0	0	.14
8	0	0	0	0	.07	.01	.01	0	0	0	0	0
9	0	0	0	0	.14	.01	0	0	0	0	0	0
10	0	0	0	0	.14	.02	0	0	0	0	0	0
11	0	0	0	0	.14	.04	0	0	0	0	0	0
12	0	0	0	0	.14	.02	0	0	0	0	0	0
13	0	0	0	0	.07	.01	0	0	0	0	0	0
14	0	0	0	0	.02	.01	0	0	0	0	0	0
15	0	0	0	0	.01	.01	0	0	0	0	0	4.5
16	0	0	0	0	.01	.01	0	0	0	0	0	.02
17	0	0	0	0	.01	.07	0	0	0	0	0	0
18	0	0	0	0	.01	.27	0	0	0	0	0	0
19	0	0	0	0	.02	.27	0	0	0	4.5	0	0
20	0	0	0	.04	.07	.20	0	0	0	1.5	0	0
21	0	0	0	2.8	.10	.14	0	0	0	.02	0	0
22	0	0	0	.44	.10	.14	0	0	0	0	0	0
23	0	0	0	.20	.07	.10	0	0	0	0	0	0
24	0	0	0	.27	1.7	.04	0	0	0	0	0	0
25	0	0	0	9.4	13	.04	0	0	0	0	13	0
26	0	0	0	1.8	3.8	.02	0	0	0	0	.04	0
27	0	0	0	.14	.54	.01	0	0	0	0	0	0
28	0	0	0	.01	.10	.01	0	0	0	8.7	0	0
29	0	0	0	0	-----	.02	0	0	0	1.5	0	0
30	0	0	0	0	-----	.02	0	0	0	.10	0	0
31	0	-----	0	0	-----	.04	-----	0	-----	.04	0	-----
TOTAL	0	0	0	15.10	20.36	1.61	0.25	0.05	0	16.36	13.05	5.96
MEAN	0	0	0	.49	.73	.052	.008	.002	0	.53	.42	.20
MAX	0	0	0	9.4	13	.27	.04	.03	0	8.7	13	4.5
MIN	0	0	0	0	0	.01	0	0	0	0	0	0
AC-FT	0	0	0	30	40	3.2	.5	.10	0	32	26	12
CAL YR 1968	TOTAL	.80	MEAN	.002	MAX	.40	MIN	0	AC-FT	1.6		
WTR YR 1969	TOTAL	72.74	MEAN	.20	MAX	13	MIN	0	AC-FT	144		

PEAK DISCHARGE (BASE, 10 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-25	1345	2.13	32	7-28	1900	2.88	94
2-25	1430	1.88	19	8-25	1300	4.77	518
7-19	1430	3.12	123	9-15	1730	2.43	51

DANBY LAKE BASIN

10-2530.8. SUNFLOWER WASH NEAR ESSEX, CALIF.

LOCATION.--Lat 34°33'00", long 115°06'25", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5, T.5 N., R.18 E., San Bernardino County, on left bank about 0.3 mile downstream from road crossing, and 14.9 miles southeast of Essex.

DRAINAGE AREA.--3.04 sq mi.

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

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 3,040 ft (from topographic map). Recording rain gage 2.3 miles upstream.

AVERAGE DISCHARGE.--7 years, 0.030 cfs (22 acre-ft per year).

EXTREMES.--Current year: No flow.

Period of record: Maximum discharge, 972 cfs Sept. 18, 1963 (gage height, 4.17 ft), on basis of slope-area measurement of maximum flow; no flow for most of each year.

REMARKS.--No flow since Sept. 18, 1963. No regulation or diversion above station. Precipitation record, incomplete.

10-2533.2. QUAIL WASH NEAR JOSHUA TREE, CALIF.

LOCATION (revised).--Lat 34°07'04", long 116°18'27", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.1 S., R.6 E., San Bernardino County, on right bank 0.2 mile downstream from Coyote Hole Spring, and 1.1 miles south of Joshua Tree.

DRAINAGE AREA.--100 sq mi.

PERIOD OF RECORD.--March 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,920 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 0.068 cfs (49 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 0.90 cfs Jan. 25 (gage height, 1.80 ft, from outside gage), on basis of slope-conveyance measurement of peak flow; no flow all year except Jan. 25.
Period of record: Maximum discharge, 2.5 cfs July 6, 1968 (gage height, 1.94 ft, from outside gage), on basis of slope-conveyance measurement of maximum flow; no flow for all or most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	.04	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0.04	0	0	0	0	0	0	0	0
MEAN	0	0	0	.001	0	0	0	0	0	0	0	0
MAX	0	0	0	.04	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	.08	0	0	0	0	0	0	0	0
CAL YR 1968	TOTAL .20		MEAN .0005	MAX .20	MIN 0	AC-FT .4						
WTR YR 1969	TOTAL .04		MEAN .0001	MAX .04	MIN 0	AC-FT .1						

DALE LAKE BASIN

10-2533.5. FORTYNINE PALMS CREEK NEAR TWENTYNINE PALMS, CALIF.

LOCATION (revised).--Lat 34°07'12", long 116°05'43", San Bernardino County, in Joshua Tree National Monument, on left bank 50 ft upstream from North Monument boundary, 1.1 miles downstream from Fortynine Palms Oasis, and 2.6 miles southwest of Twentynine Palms.

DRAINAGE AREA.--8.55 sq mi.

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

GAGE.--Water-stage recorder with rain-gage attachment. Altitude of gage is 2,260 ft (from topographic map).

AVERAGE DISCHARGE.--7 years, 0.104 cfs (75 acre-ft per year).

EXTREMES.--Current year: No flow.

Period of record: Maximum discharge, 1,240 cfs Aug. 7, 1963 (gage height, 4.55 ft, from crest-stage gage), from rating curve extended above 0.2 cfs on basis of slope-area measurement at gage heights 2.55 and 4.55 ft; no flow for most of each year.

Flood in August 1961, reached a stage of 4.9 ft, from profile of floodmarks on left bank (discharge, 1,240 cfs from slope-area measurement).

REMARKS.--No flow since Sept. 2, 1967. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: October, 0.2; December, 0.3; January, 0.6; February, 0.2; April, 0.2; May, 1.0; July, 1.2; August, 0.1; the water year, 3.8.

10-2535.4. CORN SPRINGS WASH NEAR DESERT CENTER, CALIF.

LOCATION.--Lat 33°37'28", long 115°19'20", Riverside County, on right bank 0.1 mile downstream from unnamed tributary, and 7.6 miles southeast of Desert Center.

DRAINAGE AREA.--24.1 sq mi.

PERIOD OF RECORD.--October 1963 to current year..

GAGE.--Water-stage recorder with rain-gage attachment at altitude of 1,600 ft (from topographic map). Recording rain gages at altitudes of 2,720, 2,440, 2,320, and 2,050 ft (discontinued). Prior to Oct. 29, 1966, at datum 1.90 ft higher.

AVERAGE DISCHARGE.--6 years, 0.227 cfs (164 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10,500 cfs Oct. 3 (gage height, 10.48 ft, from floodmark), on basis of slope-area measurement of maximum flow; no flow most of year.

Period of record: Maximum discharge, 10,500 cfs Oct. 3, 1968 (gage height, 10.48 ft, from floodmark), on basis of slope-area measurement of maximum flow; no flow for most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

PRECIPITATION (INCHES) AT LOCATION AND ALTITUDE INDICATED

Month	115°21'40" 33°16'10"	115°25'30" 33°38'25"	115°23'00" 33°37'10"	115°22'35" 33°38'05"
	2,720 ft	2,440 ft	2,320 ft	2,050 ft
October.....	-	-	-	1.17
November.....	0	0	0	0
December.....	.07	.11	.04	.12
CAL YR 1968.....	-	-	-	1.50
January.....	.81	.91	.79	.63
February.....	.10	.08	.04	.03
March.....	0	0	0	0
April.....	0	0	0	0
May.....	.12	.10	0	.09
June.....	0	0	0	0
July.....	.49	0	-	.38
August.....	0	0	-	.02
September.....	0	.66	-	0
WTR YR 1968-69...	-	-	-	2.44

NOTE.--Rain gage at altitude 1,600 ft destroyed by flood of Oct. 3.

CHUCKWALLA VALLEY

10-2535.4. CORN SPRINGS WASH NEAR DESERT CENTER, CALIF.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	C	0
2	0	0	C	0	C	0	0	C	0	0	C	C
3	450	0	0	0	0	0	0	C	0	0	C	0
4	0	0	0	0	0	0	0	0	0	0	C	0
5	0	0	C	0	0	0	0	0	0	0	0	C
6	0	0	C	0	0	0	0	C	0	0	C	0
7	0	0	C	0	0	0	0	0	0	0	C	0
8	0	0	C	0	0	C	0	C	0	0	C	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	C	0	0	0	0	0	0	0	0	C
11	0	0	0	0	0	0	0	C	0	0	C	0
12	0	0	C	0	0	0	0	0	0	0	C	C
13	0	0	C	0	0	0	0	C	0	0	C	0
14	0	0	0	0	0	C	0	C	0	0	C	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	C	0	C	0	0	0	0
17	0	0	C	0	0	0	0	0	0	0	C	C
18	0	0	C	0	0	0	0	0	0	0	0	0
19	0	0	C	0	C	0	0	C	0	0	C	0
20	0	0	C	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	C	0	C	0	0	C	0
22	0	0	0	0	0	0	0	C	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	C	C
24	0	0	0	0	0	0	0	C	0	0	C	C
25	0	0	0	0	0	0	0	C	0	0	C	0
26	0	0	0	0	0	0	0	C	0	0	C	C
27	0	0	C	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	C	C
29	0	0	0	0	-----	0	0	C	0	0	0	0
30	0	0	0	0	-----	C	0	C	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	C	-----
TOTAL	450	0	0	0	0	0	0	0	0	0	C	0
MEAN	14.5	0	C	0	0	0	0	C	0	0	C	C
MAX	450	0	0	0	0	C	0	C	0	0	C	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	893	0	0	0	0	0	0	C	0	0	C	C

CAL YR 1968 TOTAL 451.00 MEAN 1.23 MAX 450 MIN 0 AC-FT 895
WTR YR 1969 TOTAL 450.00 MEAN 1.23 MAX 450 MIN 0 AC-FT 893

PEAK DISCHARGE (BASE, 50 CFS).--Oct. 3 (1500) 10,500 cfs (10.48 ft).

LOCATION.--Lat 33°11'37", long 115°49'54", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.21, T.11 S., R.11 E., Imperial County, at outer end of third mooring pier from western shore at Sandy Beach, and 15.5 miles northwest of Westmorland.

GAGE.--Water-stage recorder. Datum of gage is 250.00 ft below mean sea level; gage readings have been converted to elevations below mean sea level. See WSP 1734 for history of gage changes prior to Mar. 2, 1956.

EXTREMES.--Current year: Maximum elevation, 231.7 ft below mean sea level Mar. 31 to Apr. 26, Apr. 28, 29; minimum, 232.8 ft below mean sea level Oct. 18-22, Dec. 2-10.
Period of record: Maximum elevation, 195.9 ft below mean sea level in February and March 1907; minimum since 1906, 251.6 ft below mean sea level in November 1924.

REMARKS.--Bottom of sea is 277.7 ft below mean sea level. See WSP 300, 735, and 918 for condensed history of Salton Sea.

Date	Elevation (feet)	Date	Elevation (feet)
Sept. 30.....	232.7	Apr. 30.....	231.8
Oct. 31.....	232.7	May 31.....	231.8
Nov. 30.....	232.7	June 30.....	231.9
Dec. 31.....	232.6	July 31.....	232.1
Jan. 31.....	232.2	Aug. 31.....	232.4
Feb. 28.....	232.0	Sept. 30.....	232.7
Mar. 31.....	231.7		

Salton Sea, located near the northeast corner of Imperial County, is a closed basin consisting of 8,360 sq mi. The following table shows monthly and annual inflow, in acre-feet, for the water year October 1968 to September, 1969 and the calendar year January to December 1968. Inflow from Imperial Valley is the sum of flows in Alamo River (see sta 10-2547.3), New River (see sta 10-2555.5), 21 drains and wasteways, and since October 1967 San Felipe Creek (see sta 10-2558.85). Since October 1967 inflow from Coachella Valley is the sum of flows in Whitewater River (see sta 10-2595.4), Salt Creek (see sta 10-2540.5), and 20 drains. Flow in Whitewater River and Salt Creek was measured at gaging stations, that for the drains was furnished by Coachella County Water District (see Salton Sea basin for other flows to the sea). Table also shows amount of flow in Alamo and New Rivers contributed by Mexico as furnished by Imperial Irrigation District.

[illegible]

Alamo River	123	122	139	144	126	157	144	132	118	119	127	137
New River	8,510	7,330	7,250	9,720	7,520	10,220	9,920	10,200	7,260	8,370	9,240	8,710
Cal yr 1968:	Alamo River	1,470	Ac-ft		Wtr yr 1969:	1,590						
Cal yr 1968:	New River	106,000	Ac-ft		Wtr yr 1969:	104,200						

SALTON SEA BASIN

10-2540.5. SALT CREEK NEAR MECCA, CALIF.

LOCATION (revised).--Lat 33°26'49", long 115°50'33", in NE¼SE¼SW¼ sec.28, T.8 S., R.11 E., Riverside County, on pier of Southern Pacific Railroad bridge, 0.3 mile upstream from mouth, and 16 miles southeast of Mecca.

DRAINAGE AREA.--269 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 230 ft below mean sea level (from topographic map).

AVERAGE DISCHARGE.--8 years, 5.94 cfs (4,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 121 cfs Sept. 29 (gage height, 4.94 ft), from rating curve extended as explained below; minimum daily, 2.1 cfs Aug. 23.

Period of record: Maximum discharge, 1,080 cfs July 6, 1968 (gage height, 6.66 ft), from rating curve extended above 10 cfs on basis of slope-area measurement at gage height 6.62 ft; minimum daily, 0.40 cfs Aug. 10, 1966.

REMARKS.--Records good. No regulation or diversion above station. Flow sustained by irrigation seepage.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTERMER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.3	5.5	8.1	7.2	7.8	6.4	3.3	3.0	2.7	2.4	2.8
2	3.3	5.3	6.1	8.1	7.2	7.5	6.4	3.3	3.0	2.7	2.6	3.5
3	3.5	5.3	5.8	8.1	7.5	6.7	6.1	3.5	3.2	2.7	2.7	3.5
4	6.6	5.5	5.1	8.1	7.5	7.5	5.5	3.5	3.2	2.8	2.4	3.5
5	3.5	5.5	6.1	7.8	7.8	7.2	5.5	4.0	3.2	2.7	2.2	3.5
6	4.0	5.5	6.7	7.5	7.8	6.7	5.5	4.8	3.2	2.6	2.4	3.5
7	4.2	5.3	6.7	7.8	7.5	6.7	5.3	5.1	3.2	2.6	2.6	3.7
8	4.2	5.3	7.0	8.1	7.2	6.7	5.1	5.3	3.3	2.8	2.7	4.4
9	4.2	5.1	7.0	8.8	7.2	6.7	5.5	5.3	8.5	2.8	2.8	5.5
10	4.0	5.1	7.0	8.4	7.5	7.2	5.8	5.1	9.6	3.0	2.8	3.7
11	4.2	5.5	7.0	8.4	7.5	7.2	5.8	4.8	3.7	2.8	2.7	3.0
12	4.2	5.5	7.2	8.1	7.5	7.2	5.8	4.2	3.5	3.0	2.7	3.0
13	4.2	6.1	6.4	8.1	8.1	7.2	5.8	3.7	3.5	3.3	2.6	3.3
14	4.2	6.4	6.1	16	8.1	7.5	5.8	3.7	3.3	3.2	2.6	4.2
15	4.2	5.5	6.7	47	7.5	7.0	5.3	3.7	3.2	2.8	2.6	4.4
16	4.2	5.5	7.0	20	7.8	6.4	4.6	3.7	3.2	2.2	2.7	5.3
17	4.3	6.1	7.0	12	7.8	6.7	4.2	3.7	3.2	2.2	2.7	4.8
18	4.4	6.1	7.0	10	7.5	7.2	4.2	3.5	3.0	2.7	2.4	4.4
19	4.8	6.1	6.7	9.8	8.1	7.2	4.0	3.3	3.0	2.8	2.6	4.2
20	5.1	6.1	7.5	9.8	7.8	7.2	3.7	3.2	2.8	2.7	2.6	4.2
21	5.1	5.8	8.1	9.1	7.5	7.0	3.7	3.2	2.8	2.8	2.6	4.6
22	5.1	5.8	7.5	8.8	7.5	7.0	3.7	3.2	2.7	2.7	2.2	5.1
23	5.3	5.8	7.0	7.8	8.4	6.4	3.7	3.2	2.7	2.4	2.1	5.3
24	5.1	5.8	7.5	7.5	7.8	5.8	3.7	3.0	2.7	2.6	2.2	4.0
25	5.1	5.8	8.1	8.1	7.8	5.8	3.7	3.0	2.7	2.6	2.4	4.4
26	5.1	5.5	8.8	14	7.8	5.5	3.5	3.2	3.0	2.4	2.7	4.4
27	5.3	4.4	9.8	11	7.8	5.8	3.3	3.0	3.0	2.6	2.6	4.8
28	5.3	4.2	8.8	7.5	7.5	6.1	3.2	3.0	3.0	2.8	2.7	5.9
29	5.3	5.1	8.1	7.0	-----	6.1	3.5	3.0	2.8	2.7	2.8	86
30	5.3	5.1	8.4	6.7	-----	6.1	3.3	3.0	2.8	2.6	2.8	19
31	5.3	-----	8.1	6.7	-----	6.1	-----	3.2	-----	2.6	2.8	-----
TOTAL	141.8	165.4	221.8	324.2	214.2	209.2	141.6	114.7	104.0	83.9	79.7	221.9
MEAN	4.57	5.51	7.15	10.5	7.65	6.75	4.72	3.70	3.47	2.71	2.57	7.40
MAX	6.6	6.4	9.8	47	8.4	7.8	6.4	5.3	9.6	3.3	2.8	86
MIN	3.2	4.2	5.1	6.7	7.2	5.5	3.2	3.0	2.7	2.2	2.1	2.8
AC-FT	281	328	440	643	425	415	281	228	206	166	158	440
CAL YR 1968	TOTAL 2,107.80			MEAN 5.76		MAX 273	MIN .80	AC-FT 4,180				
WTR YR 1969	TOTAL 2,022.4			MEAN 5.54		MAX 86	MIN 2.1	AC-FT 4,010				

SALTON SEA BASIN

55

10-2547.3. ALAMO RIVER NEAR NILAND, CALIF.

LOCATION.--Lat 33°12'03", long 115°36'07", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.22, T.11 S., R.13 E., Imperial County, on left bank 0.6 mile upstream from mouth, and 5.8 miles southwest of Niland.

PERIOD OF RECORD.--January 1943 to current year. Monthly discharge only for January 1943 to September 1960, published in WSP 1734.

GAGE.--Water-stage recorder. Altitude of gage is 235 ft below mean sea level (from topographic map).

EXTREMES.--Period of record: Maximum daily discharge, 2,080 cfs Nov. 27, 1967; minimum daily, 288 cfs Jan. 2, 1966.

REMARKS.--Discharge represents seepage and return flow from irrigated areas.

COOPERATION.--Records furnished by Imperial Irrigation District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,070	861	719	616	649	790	1,150	927	856	786	856	724
2	1,050	866	696	577	691	781	1,090	927	856	786	833	743
3	1,070	889	724	601	724	809	1,060	932	866	795	829	790
4	1,090	885	719	558	766	833	1,010	875	809	786	833	776
5	1,160	866	700	592	833	903	1,000	871	856	762	809	724
6	1,160	856	762	630	847	932	979	889	842	743	743	724
7	1,140	842	790	691	880	951	975	927	781	729	747	1,120
8	1,080	852	781	667	932	989	970	1,020	786	719	776	899
9	1,050	852	805	691	941	1,020	960	979	795	719	814	762
10	1,080	871	790	710	989	998	1,000	946	771	743	805	653
11	1,070	852	790	696	970	1,050	955	885	781	762	819	658
12	1,070	795	771	691	970	1,070	1,010	842	790	766	842	630
13	1,060	762	776	630	979	1,060	989	856	814	805	771	653
14	1,030	714	805	809	965	1,030	1,020	838	790	790	790	639
15	998	672	762	970	1,060	1,040	922	809	790	786	786	672
16	941	653	752	568	1,050	1,040	913	861	795	776	776	635
17	927	691	766	488	984	1,020	885	871	790	786	781	639
18	917	677	653	469	955	920	889	871	786	833	800	714
19	946	663	667	483	908	1,020	889	871	776	819	805	747
20	960	714	714	488	838	1,060	885	885	805	781	747	781
21	960	757	762	455	852	1,100	899	861	829	805	700	809
22	908	719	776	411	885	1,110	885	903	790	771	705	829
23	903	743	790	402	875	1,120	871	880	776	762	710	856
24	970	743	747	383	861	1,180	866	875	738	800	710	894
25	946	757	663	407	823	1,130	908	913	747	776	719	932
26	913	747	544	450	771	1,150	936	913	710	805	766	922
27	946	667	497	497	766	1,140	913	885	714	829	752	908
28	936	700	563	483	752	1,140	927	866	729	743	757	946
29	917	700	630	459	-----	1,170	941	875	781	757	762	1,060
30	823	686	686	483	-----	1,180	908	875	766	790	790	1,090
31	823	-----	672	597	-----	1,190	-----	889	-----	819	762	-----
TOTAL	30,914	23,052	22,272	17,652	24,516	31,926	28,605	27,617	23,715	24,129	24,095	23,929
MEAN	997	768	718	569	876	1,030	954	891	791	778	777	798
MAX	1,160	889	805	970	1,060	1,190	1,150	1,020	866	833	856	1,120
MIN	823	653	497	383	649	781	866	809	710	719	700	630
AC-FT	61,320	45,720	44,180	35,010	48,630	63,320	56,740	54,780	47,040	47,860	47,790	47,460
CAL YR 1968	TOTAL 283,982			MEAN 776		MAX 1,250	MIN 440	AC-FT 563,300				
WTR YR 1969	TOTAL 302,422			MEAN 829		MAX 1,190	MIN 383	AC-FT 599,800				

SALTON SEA BASIN

10-2552. MYER CREEK TRIBUTARY NEAR JACUMBA, CALIF.

LOCATION.--Lat 32°40'25", long 116°04'50", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.20, T.17 S., R.9 E., San Diego County, at culvert on U.S. Highway 80, 7.8 miles northeast of Jacumba.

DRAINAGE AREA.--0.11 sq mi.

PERIOD OF RECORD.--Water years 1960-66 (annual maximum), February 1966 to current year.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,720 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 0.30 cfs Oct. 15 (gage height 11.29 ft); no flow all year including maximum day, which was less than .01 cfs.

Period of record: Maximum discharge, 41 cfs Aug. 12, 1965 (gage height, 12.97 ft, from crest-stage gage), on basis of computation of maximum flow through culvert; no flow for all or most of each year.

REMARKS.--No flow since Feb. 16, 1966, date of establishment. No regulation or diversion above station.

SALTON SEA BASIN

57

10-2555.5. NEW RIVER NEAR WESTMORLAND, CALIF.

LOCATION.--Lat 33°06'17", long 115°39'49", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.12 S., R.13 E., Imperial County, on right bank 3.5 miles upstream from mouth, and 5.2 miles northwest of Westmorland.

PERIOD OF RECORD.--January 1943 to current year. Monthly discharge only for January 1943 to September 1960, published in WSP 1734.

GAGE.--Water-stage recorder. Altitude of gage is 220 ft below mean sea level (from topographic map).

EXTREMES.--Period of record: Maximum daily discharge, 1,180 cfs Sept. 19, 1963; minimum daily, 293 cfs Jan. 6, 1967.

REMARKS.--Discharge represents seepage and return flow from irrigated areas.

COOPERATION.--Records furnished by Imperial Irrigation District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	592	483	448	451	481	477	672	584	513	519	466	490
2	592	483	449	420	457	526	655	605	532	485	500	498
3	603	519	449	446	483	536	708	601	551	464	502	490
4	572	488	453	438	504	545	693	576	536	470	475	530
5	578	468	485	466	523	521	716	600	545	451	500	498
6	607	479	470	498	525	574	664	645	504	435	492	500
7	600	542	475	490	592	570	630	584	517	436	472	500
8	563	481	494	498	596	561	638	564	490	461	481	543
9	578	442	483	500	643	598	572	601	481	470	513	496
10	598	435	509	517	636	607	582	586	490	475	488	463
11	607	438	470	540	621	649	603	572	487	477	521	496
12	613	429	473	555	588	615	619	534	453	481	523	449
13	622	446	483	490	584	584	622	536	464	466	475	451
14	596	448	487	498	551	590	651	542	502	483	490	431
15	592	424	483	545	543	609	572	526	496	448	457	515
16	540	415	487	498	568	586	549	555	511	436	483	582
17	526	424	485	504	523	603	545	596	519	470	507	488
18	526	451	464	455	547	584	607	632	502	463	545	481
19	532	463	448	442	526	609	615	601	513	466	538	483
20	547	455	431	457	505	607	592	576	494	490	483	473
21	555	435	446	470	490	641	603	572	444	526	481	475
22	521	438	464	464	509	657	582	584	457	553	435	488
23	494	442	500	406	498	710	570	557	500	521	457	494
24	519	459	485	400	498	670	572	576	521	545	472	477
25	532	451	473	404	477	605	559	538	475	500	490	494
26	509	444	433	424	490	621	590	557	457	483	468	534
27	534	468	429	382	509	716	619	545	453	498	457	553
28	543	466	424	418	457	736	624	509	475	496	464	574
29	540	444	453	420	-----	700	615	547	472	504	449	598
30	488	448	502	446	-----	670	596	528	494	468	470	572
31	483	-----	464	444	-----	710	-----	500	-----	470	487	-----
TOTAL	17,302	13,708	14,499	14,386	14,924	18,987	18,435	17,629	14,848	14,910	15,041	15,116
MEAN	558	457	468	464	533	612	615	569	495	481	485	504
MAX	622	542	509	555	643	736	716	645	551	553	545	598
MIN	483	415	424	382	457	477	545	500	444	435	435	431
AC-FT	34,320	27,190	28,760	28,530	29,600	37,660	36,570	34,970	29,450	29,570	29,830	29,980
CAL YR 1968	TOTAL 193,637		MEAN 529		MAX 881		MIN 409		AC-FT 384,100			
WTR YR 1969	TOTAL 189,785		MEAN 520		MAX 736		MIN 382		AC-FT 376,400			

SALTON SEA BASIN

10-2557. SAN FELIPE CREEK NEAR JULIAN, CALIF.

LOCATION.--Lat 33°07'07", long 116°26'04", San Diego County, in Anza Borrego State Park, on left bank under bridge on State Highway 78, in Sentenac Canyon 1.0 mile upstream from Grapevine Canyon, and 10 miles northeast of Julian.

DRAINAGE AREA.--89.2 sq mi.

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

GAGE.--Water-stage recorder and concrete low-water control. Datum of gage is 1,872.69 ft above mean sea level (datum of 1929).

AVERAGE DISCHARGE.--11 years, 0.284 cfs (206 acre-ft per year); median of yearly mean discharges, 0.21 cfs (150 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 100 cfs Feb. 25 (gage height, 2.45 ft, from peak-stage indicator); no flow most of year.

Period of record: Maximum discharge, 1,050 cfs Aug. 22, 1967 (gage height, 4.08 ft), from rating curve extended above 12 cfs on basis of slope-area measurement at gage height 3.50 ft; no flow for many days each year.

REMARKS.--Records good except those periods of no gage-height record, which are poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.13	.24	.29	.60	.50	.31	0	0	0	0
2	0	0	.14	.26	.27	.60	.50	.33	0	0	0	0
3	0	0	.15	.27	.28	.60	.50	.38	0	0	0	0
4	0	0	.17	.25	.28	.60	.49	.42	0	0	0	0
5	0	0	.18	.26	.60	.60	.66	.59	0	0	0	0
6	0	0	.18	.26	1.0	.60	1.0	1.1	0	0	0	1.2
7	0	0	.21	.24	.40	.61	1.1	.85	0	0	0	4.3
8	0	0	.21	.24	.30	.59	1.1	.54	0	0	0	0
9	0	0	.21	.27	.30	.59	1.1	.30	0	0	0	0
10	0	0	.22	.26	.30	1.1	1.2	.23	0	0	0	0
11	0	0	.23	.22	.30	.95	1.2	.16	0	0	0	0
12	0	0	.22	.21	.30	.63	.91	.15	0	0	0	0
13	0	0	.22	.21	.30	.61	.62	.14	0	0	0	0
14	0	0	.24	1.3	.30	.62	.38	.13	0	0	0	0
15	0	0	.24	.63	.30	.58	.38	.12	0	0	0	0
16	0	0	.27	.26	.30	.59	.37	.11	0	0	0	0
17	0	0	.26	.24	.30	.56	.35	.10	0	0	0	0
18	0	0	.24	.22	.30	.55	.32	.08	0	0	0	0
19	0	0	.27	.24	.30	.53	.33	.06	0	0	0	0
20	0	0	.31	.24	.40	.54	.31	.02	0	0	0	0
21	0	0	.28	.43	.30	.55	.30	.04	0	0	0	0
22	0	0	.24	.54	.40	.54	.29	.01	0	0	0	0
23	0	0	.25	.36	.40	.50	.30	0	0	0	0	0
24	0	0	.27	.43	2.0	.50	.32	.01	0	0	0	0
25	0	0	.28	7.7	18	.50	.32	.01	0	0	0	0
26	0	0	.42	11	5.0	.50	.31	0	0	0	0	0
27	0	0	.30	1.7	1.5	.50	.31	0	0	0	0	0
28	0	0	.22	.65	.80	.50	.37	0	0	0	0	0
29	0	0	.22	.72	-----	.50	.38	0	0	0	0	0
30	0	.09	.24	.40	-----	.50	.33	0	0	0	0	0
31	0	-----	.23	.36	-----	.50	-----	0	-----	0	0	-----
TOTAL	0	0.09	7.25	30.61	35.52	18.24	16.55	6.19	0	0	0	5.5
MEAN	0	.003	.23	.99	1.27	.59	.55	.20	0	0	0	.18
MAX	0	.09	.42	11	18	1.1	1.2	1.1	0	0	0	4.3
MIN	0	0	.13	.21	.27	.50	.29	0	0	0	0	0
AC-FT	0	.2	14	61	70	36	33	12	0	0	0	11
CAL YR 1968	TOTAL	46.89	MEAN	.13	MAX	1.3	MIN	0	AC-FT	93		
WTR YR 1969	TOTAL	119.95	MEAN	.33	MAX	18	MIN	0	AC-FT	238		

PEAK DISCHARGE (BASE, 50 CFS).--Jan. 25 (2145) 60 cfs (2.25 ft); Feb. 25 (time unknown) 100 cfs (2.45 ft).

NOTE.--No gage-height record Feb. 4 to Mar. 6.

10-2558. COYOTE CREEK NEAR BORREGO SPRINGS, CALIF.

LOCATION.--Lat 33°22'06", long 116°25'14", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.26, T.9 S., R.5 E., San Diego County, on left bank 0.5 mile downstream from Box Canyon, 1.8 miles northwest of Rancho De Anza, and 8.2 miles northwest of Borrego Springs.

DRAINAGE AREA.--144 sq mi.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for October and November 1950, published in WSP 1734.

GAGE.--Water-stage recorder. Altitude of gage is 1,250 ft (from topographic map). Prior to Mar. 24, 1967, at site 0.6 mile upstream at different datum.

AVERAGE DISCHARGE.--19 years, 2.08 cfs (1,510 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 181 cfs Feb. 25 (gage height, 8.86 ft from inside gage), from rating curve extended above 1.5 cfs on basis of slope-area measurement at gage height 12.86 ft; minimum daily, 0.29 cfs Sept. 3.

Period of record: Maximum discharge, 3,800 cfs July 28, 1951 (gage height, 14.14 ft, from floodmarks, site and datum then in use), on basis of slope-area measurement of maximum flow; minimum daily, 0.29 cfs Sept. 3, 1969.

REMARKS.--Records good except those for periods of no gage-height record, and those above 2.5 cfs, which are poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.0	1.8	2.4	1.6	1.2	1.0	.61	.52	.32	.45	.34
2	1.3	.99	1.9	2.4	1.5	1.1	1.0	.61	.57	.34	.41	.31
3	1.3	.95	1.9	2.4	1.7	1.1	.95	.68	.74	.31	.38	.29
4	1.3	.97	1.8	2.4	1.8	1.1	.95	.76	.43	.30	.35	.36
5	1.1	.94	1.8	2.4	1.8	1.1	1.0	.80	.47	.30	.43	.53
6	1.2	.89	1.9	2.3	3.1	1.1	1.2	.80	.50	.34	.51	1.0
7	1.2	.82	1.9	2.4	5.3	1.1	1.2	.64	.52	.41	.52	1.2
8	1.2	.95	1.9	2.3	1.4	1.1	1.2	.72	.54	.41	.55	1.1
9	1.2	1.1	1.9	2.4	1.4	1.1	1.1	.70	.59	.41	.53	1.1
10	1.1	1.1	1.9	2.4	1.3	1.1	1.2	.64	.63	.40	.52	1.1
11	1.2	1.2	1.9	2.4	1.2	1.3	1.1	.60	.64	.39	.46	1.2
12	1.1	1.2	1.9	2.4	1.2	1.2	1.0	.55	.63	.38	.48	1.2
13	1.2	1.3	1.9	2.4	1.2	1.1	.95	.58	.57	.36	.49	1.1
14	1.4	1.3	2.0	2.9	1.2	1.1	.95	.59	.54	.35	.48	1.1
15	1.6	1.4	2.0	2.6	1.2	1.1	.90	.59	.49	.34	.52	1.1
16	1.6	1.4	2.0	2.6	1.1	1.1	.90	.55	.50	.37	.47	1.1
17	1.5	1.4	2.0	2.6	1.1	1.1	.80	.53	.51	.49	.46	1.1
18	1.4	1.4	2.0	2.6	1.1	1.1	.76	.46	.49	.45	.44	1.1
19	1.4	1.4	2.0	2.5	1.1	1.1	.76	.47	.45	.38	.44	1.1
20	1.2	1.4	1.9	2.5	1.1	1.1	.85	.48	.44	.47	.42	1.1
21	1.3	1.5	1.8	2.9	1.1	1.1	.64	.48	.47	.40	.34	1.1
22	1.3	1.4	1.9	2.8	1.1	1.2	.57	.48	.48	.39	.31	1.0
23	1.2	1.4	1.8	2.6	1.1	1.1	.61	.48	.45	.45	.31	.98
24	1.2	1.4	1.8	2.7	24	1.1	.61	.52	.46	.40	.43	.94
25	1.2	1.5	1.7	9.9	64	1.1	.57	.61	.47	.38	.40	.91
26	1.2	1.6	2.5	2.6	16	1.0	.61	.52	.50	.45	.33	.88
27	1.2	1.6	2.6	1.8	6.0	1.0	.72	.56	.47	.53	.35	.90
28	1.1	1.7	2.5	1.7	2.0	1.0	.76	.56	.46	.45	.36	.88
29	.93	1.8	2.5	1.6	-----	1.0	.72	.55	.42	.48	.41	.75
30	1.0	1.9	2.5	1.6	-----	1.0	.68	.51	.38	.44	.42	.78
31	1.1	-----	2.5	1.6	-----	1.0	-----	.50	-----	.41	.37	-----
TOTAL	38.43	38.91	62.4	81.1	147.7	34.0	26.26	18.13	15.33	12.30	13.34	27.65
MEAN	1.24	1.30	2.01	2.62	5.28	1.10	.88	.58	.51	.40	.43	.92
MAX	1.6	1.9	2.6	9.9	64	1.3	1.2	.80	.74	.53	.55	1.2
MIN	.93	.82	1.7	1.6	1.1	1.0	.57	.46	.38	.30	.31	.29
AC-FT	76	77	124	161	293	67	52	36	30	24	26	55

CAL YR 1968 TOTAL 447.71

MEAN 1.22

MAX 5.3

MIN .80

AC-FT 888

WTR YR 1969 TOTAL 515.55

MEAN 1.41

MAX 64

MIN .29

AC-FT 1,020

PEAK DISCHARGE (50 CFS).--Jan. 25 (1515) 61 cfs (8.01 ft); Feb. 25 (2145) 181 cfs (8.86 ft).

NOTE.--No gage-height record Jan. 25-30, Feb. 9-23, Feb. 26 to Mar. 4.

SALTON SEA BASIN

10-2558.1. BORREGO PALM CREEK NEAR BORREGO SPRINGS, CALIF.

LOCATION.--Lat 33°16'44", long 116°25'45", in Anza-Borrego Desert State Park, San Diego County, on left bank 3.3 miles northwest of Borrego Springs.

DRAINAGE AREA.--21.8 sq mi.

PERIOD OF RECORD.--October 1950 to current year. Prior to October 1960, published as "Palm Canyon Creek near Borrego Springs". Monthly discharge only for October to November 1950, published in WSP 1734.

GAGE.--Water-stage recorder. Altitude of gage is 1,200 ft (from topographic map).

AVERAGE DISCHARGE.--19 years, 0.383 cfs (277 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 39 cfs Feb. 26 (gage height, 3.47 ft), from rating curve extended above 2 cfs on basis of slope-area measurement at gage height 4.44 ft; no flow for much of year.
Period of record: Maximum discharge, 2,000 cfs (estimated) Aug. 23, 1955 (gage height, 9.9 ft, from floodmarks); no flow for several months in each year.

REMARKS.--Records good except those above 5.0 cfs, which are poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.26	1.6	7.6	1.0	.76	0	0	0	0
2	0	0	0	.26	1.3	6.6	1.0	.76	0	0	0	0
3	0	0	0	.26	1.2	5.6	1.3	.82	0	0	0	0
4	0	0	0	.26	1.2	4.9	1.1	.82	0	0	0	0
5	0	0	0	.26	1.6	3.5	1.0	.95	0	0	0	0
6	0	0	0	.29	5.2	3.6	1.2	1.2	0	0	0	0
7	0	0	0	.26	6.4	2.9	1.1	1.1	0	0	0	0
8	0	0	0	.26	4.2	2.7	.95	.88	0	0	0	0
9	0	0	0	.26	3.3	2.5	.95	.76	0	0	0	0
10	0	0	0	.26	2.8	7.7	1.0	.64	0	0	0	0
11	0	0	0	.26	2.1	9.5	.88	.54	0	0	0	0
12	0	0	.06	.32	1.9	7.7	.88	.49	0	0	0	0
13	0	0	.17	.32	1.8	7.7	1.1	.40	0	0	0	0
14	0	0	.13	1.2	1.5	7.2	1.2	.32	0	0	0	0
15	0	0	.13	1.5	1.5	7.1	1.3	.26	0	0	0	0
16	0	0	.18	.82	1.5	6.6	1.2	.20	0	0	0	0
17	0	0	.18	.70	1.3	5.4	1.2	.18	0	0	0	0
18	0	0	.18	.59	1.5	4.5	1.2	.15	0	0	0	0
19	0	0	.20	.70	2.1	3.4	1.2	.13	0	0	0	0
20	0	0	.32	.82	2.0	2.7	1.0	.11	0	0	0	0
21	0	0	.32	2.5	2.0	2.3	1.0	.09	0	0	0	0
22	0	0	.23	4.3	2.8	1.9	1.0	.07	0	0	0	0
23	0	0	.20	2.2	3.0	1.7	1.2	.05	0	0	0	0
24	0	0	.23	2.2	15	1.5	1.2	.03	0	0	0	0
25	0	0	.26	11	26	1.3	1.2	.01	0	0	0	0
26	0	0	.95	7.4	24	1.2	1.0	0	0	0	0	0
27	0	0	.70	5.1	11	1.1	.70	0	0	0	0	0
28	0	0	.44	3.5	9.0	1.0	.59	0	0	0	0	0
29	0	0	.32	2.8	-----	1.0	.76	0	0	0	0	0
30	0	0	.29	2.0	-----	1.0	.76	0	0	0	0	0
31	0	-----	.26	1.9	-----	1.0	-----	0	-----	0	0	-----
TOTAL	0	0	5.75	54.76	138.8	124.4	31.17	11.72	0	0	0	0
MEAN	0	0	.19	1.77	4.96	4.01	1.04	.38	0	0	0	0
MAX	0	0	.95	11	26	9.5	1.3	1.2	0	0	0	0
MIN	0	0	0	.26	1.2	1.0	.59	0	0	0	0	0
AC-FT	0	0	11	109	275	247	62	23	0	0	0	0

CAL YR 1968 TOTAL 61.25 MEAN .17 MAX 2.1 MIN 0 AC-FT 122
WTR YR 1969 TOTAL 366.60 MEAN 1.00 MAX 26 MIN 0 AC-FT 727

PEAK DISCHARGE (BASE, 15 CFS).--Jan. 25 (1730) 26 cfs (3.13 ft); Feb. 26 (0500) 39 cfs (3.47 ft).

SALTON SEA BASIN

61

10-2558.2. YAQUI PASS WASH NEAR BORREGO, CALIF.

LOCATION.--Lat 33°08'50", long 116°21'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.9, T.12 S., R.6 E., San Diego County, on county road, 5.1 miles southwest of Borrego, and 7.6 miles south of Borrego Springs.

DRAINAGE AREA.--0.041 sq mi.

PERIOD OF RECORD.--Water years 1960-65 (annual maximum), February 1965 to September 1969 (discontinued as a continuous record station; converted to a crest-stage partial-record station).

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,720 ft (from topographic map). Jan. 28, 1960, to Feb. 24, 1965, crest-stage gage at same site and datum.

EXTREMES.--No flow during year.

Period of record: Maximum discharge, 28 cfs Oct. 18, 1963 (gage height, 5.67 ft), on basis of computation of maximum flow through culvert; no flow for most of each year.

REMARKS.--No flow since Dec. 6, 1966. No regulation or diversion above station.

SALTON SEA BASIN

10-2558.5. VALLECITO CREEK NEAR JULIAN, CALIF.

LOCATION.--Lat 32°59'10", long 116°25'10", in SW¼NE¼ sec.1, T.14 S., R.5 E., San Diego County, on right bank 0.2 mile downstream from Cottonwood Wash, and 12.6 miles southeast of Julian.

DRAINAGE AREA.--39.7 sq mi.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,950 ft above mean sea level (from topographic map). U.S. Weather Bureau nonrecording rain gage at site 2.0 miles upstream.

AVERAGE DISCHARGE.--6 years, 0.165 cfs (120 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 434 cfs July 17 (gage height, 5.82 ft, from high-water mark in well), from rating curve extended above 160 cfs on basis of velocity-area study of maximum flow; minimum daily, 0.02 cfs Jan. 17, 23, Apr. 17, July 8-16.

Period of record: Maximum discharge, 434 cfs July 17, 1969 (gage height, 5.82 ft, from high-water mark in well), from rating curve extended above 160 cfs on basis of velocity-area study of maximum flow; no flow at times in some years.

REMARKS.--Records good except those above 5 cfs, which are poor. No regulation or diversion above station. Flow is diverted for irrigation 300 ft below gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.07	.07	.03	.20	.30	.09	.06	.05	.03	.06	.04
2	.08	.07	.07	.04	.15	.20	.10	.05	.05	.03	.05	.04
3	.08	.08	.07	.05	.15	.10	.10	.07	.06	.03	.05	.04
4	.08	.07	.07	.04	.15	.10	.05	.08	.05	.03	.04	.05
5	.08	.07	.07	.04	.08	.06	.04	.08	.06	.03	.04	.04
6	.08	.07	.07	.04	.19	.06	.04	.09	.06	.03	.04	.04
7	.08	.08	.07	.04	.19	.04	.04	.08	.05	.03	.04	.04
8	.08	.08	.07	.04	.07	.04	.04	.07	.05	.02	.04	.04
9	.08	.08	.07	.06	.07	.05	.05	.07	.05	.02	.04	.04
10	.08	.07	.07	.05	.12	.05	.04	.06	.06	.02	.04	.04
11	.07	.07	.06	.03	.12	.05	.04	.05	.06	.02	.04	.04
12	.07	.07	.06	.03	.12	.05	.03	.05	.06	.02	.05	.04
13	.07	.07	.06	.03	.12	.05	.04	.05	.06	.02	.04	.04
14	.08	.07	.06	.07	.11	.06	.03	.05	.06	.02	.05	.04
15	.08	.08	.06	.04	.09	.06	.04	.05	.07	.02	.05	.04
16	.08	.08	.06	.04	.10	.06	.05	.05	.06	.02	.04	.04
17	.08	.07	.06	.02	.11	.06	.02	.05	.06	9.9	.04	.04
18	.08	.06	.06	.03	.12	.06	.04	.04	.06	.30	.04	.04
19	.07	.06	.06	.03	.12	.06	.05	.04	.06	.20	.04	.04
20	.07	.06	.06	.03	.12	.07	.05	.04	.06	.10	.04	.04
21	.07	.07	.06	.09	.12	.07	.04	.05	.06	.10	.03	.04
22	.07	.06	.06	.03	.12	.07	.04	.05	.05	.10	.03	.04
23	.07	.06	.06	.02	.12	.07	.05	.05	.05	5.5	.03	.04
24	.07	.06	.06	.06	.49	.06	.06	.06	.05	.20	.04	.04
25	.07	.06	.06	4.7	4.3	.08	.05	.06	.05	.10	.04	.04
26	.07	.07	.06	.60	16	.08	.05	.05	.05	.10	.04	.03
27	.07	.07	.07	.20	1.2	.08	.05	.05	.04	.10	.04	.03
28	.07	.07	.03	.20	.40	.08	.06	.05	.04	.10	.04	.03
29	.07	.07	.04	.20	-----	.08	.06	.06	.04	.09	.04	.03
30	.07	.07	.03	.20	-----	.09	.06	.05	.04	.08	.04	.03
31	.07	-----	.03	.20	-----	.09	-----	.05	-----	.07	.04	-----
TOTAL	2.32	2.09	1.86	7.28	25.25	2.43	1.50	1.76	1.62	17.43	1.28	1.16
MEAN	.075	.070	.060	.23	.90	.078	.050	.057	.054	.56	.041	.039
MAX	.08	.08	.07	4.7	16	.30	.10	.09	.07	9.9	.06	.05
MIN	.07	.06	.03	.02	.07	.04	.02	.04	.04	.02	.03	.03
AC-FT	4.6	4.2	3.7	14	50	4.8	3.0	3.5	3.2	35	2.5	2.3

CAL YR 1968	TOTAL	25.09	MEAN	.069	MAX	1.4	MIN	.02	AC-FT	50
WTR YR 1969	TOTAL	65.98	MEAN	.18	MAX	16	MIN	.02	AC-FT	131

PEAK DISCHARGE (BASE, 15 CFS)			
DATE	TIME	G.H.	DISCHARGE
1-25	1815	2.87	42
2-26	0900	2.84	40

DATE	TIME	G.H.	DISCHARGE
7-17	1515	5.82	434
7-23	1700	3.89	128

NOTE.--No gage-height record Jan. 25 to Feb. 3, Feb. 26 to Mar. 4.

SALTON SEA BASIN

63

10-2558.85. SAN FELIPE CREEK NEAR WESTMORLAND, CALIF.

LOCATION.--Lat 33°07'25", long 115°51'08", in NW¼SW¼ sec.17, T.12 S., R.11 E., Imperial County, on left bank 320 ft downstream from U.S. Highway 99, and 14.6 miles northwest of Westmorland.

DRAINAGE AREA.--1,693 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 190 ft below mean sea level (from topographic map).

AVERAGE DISCHARGE.--8 years (1961-69), 4.49 cfs (3,250 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,500 cfs (estimated) Sept. 7 (gage height, 10.31 ft); no flow for most of year.

Period of record: Maximum discharge, 7,790 cfs Sept. 2, 1967 (gage height, 10.93 ft), from rating curve extended above 6 cfs on basis of slope-area measurements at gage heights 6.56, 10.18, and 10.75 ft; no flow for some months in each year.

REMARKS.--Records poor. No regulation above station. Diversion and pumping for domestic use and irrigation in Borrego Valley 25 miles upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	.12	.07	0	0	0	0	0	0
2	0	0	0	0	.12	.05	0	0	0	0	0	0
3	0	0	0	0	.12	.09	0	0	0	0	0	0
4	4.2	0	0	0	.12	.09	0	0	0	0	0	0
5	.22	0	0	0	.18	.07	0	0	0	0	0	0
6	0	0	0	0	.18	.09	0	0	0	0	0	0
7	.25	0	0	0	.18	.09	0	0	0	0	0	483
8	.23	0	0	0	.18	.09	0	0	0	0	0	12
9	0	0	0	0	.18	.09	0	0	0	0	0	0
10	0	0	0	0	.18	.12	0	0	0	0	0	0
11	0	0	0	0	.18	.12	0	0	0	0	0	.17
12	0	0	0	0	.18	.09	0	0	0	0	0	.18
13	0	0	0	0	.18	.09	0	0	0	0	0	0
14	0	0	0	.05	.18	.07	0	0	0	0	0	.04
15	0	0	.32	.03	.39	.07	0	0	0	0	0	38
16	0	0	.28	.02	.18	.07	0	0	0	0	0	.01
17	0	0	0	.01	.18	.07	0	0	0	0	0	0
18	0	0	0	.12	.22	.07	0	0	0	0	0	0
19	0	0	0	.12	.18	.05	0	0	0	0	0	0
20	0	0	.05	.12	.18	.02	0	0	0	0	0	0
21	0	0	0	.10	.15	.02	0	0	0	0	0	0
22	0	.04	0	.03	.18	0	0	0	0	0	0	0
23	0	0	0	.02	.18	0	0	0	0	0	0	0
24	0	0	0	.12	.15	.01	0	0	0	0	0	0
25	0	0	0	.09	.09	0	0	0	0	0	0	0
26	0	0	0	.07	.07	0	0	0	0	0	0	0
27	0	0	.44	.07	.07	0	0	0	0	0	0	0
28	0	0	0	.07	.07	0	0	0	0	0	0	0
29	0	0	0	.09	-----	0	0	0	0	0	0	0
30	0	0	0	.09	-----	0	0	0	0	0	0	0
31	0	-----	0	.12	-----	0	-----	0	-----	0	0	-----
TOTAL	4.90	0.04	1.09	1.34	4.57	1.60	0	0	0	0	0	533.40
MEAN	.16	.001	.035	.043	.16	.052	0	0	0	0	0	17.8
MAX	4.2	.04	.44	.12	.39	.12	0	0	0	0	0	483
MIN	0	0	0	0	.07	0	0	0	0	0	0	0
AC-FT	9.7	.08	2.2	2.7	9.1	3.2	0	0	0	0	0	1,060

CAL YR 1968 TOTAL 1,648.63 MEAN 4.50 MAX 1,050 MIN 0 AC-FT 3,270
WTR YR 1969 TOTAL 546.94 MEAN 1.50 MAX 483 MIN 0 AC-FT 1,080

PEAK DISCHARGE (BASE, 200 CFS).--Sept. 7 (0500) 2,500 cfs (10.31 ft); Sept. 24 (0300) 269 cfs (8.24 ft).

SALTON SEA BASIN

10-2560. WHITEWATER RIVER AT WHITE WATER, CALIF.

LOCATION (revised).--Lat 33°55'30", long 116°38'07", in NE¼NE¼SE¼ sec.11, T.3 S., R.3 E., Riverside County, on downstream side of Whitewater River cut-off bridge, 0.1 mile east of White Water, and 2.0 miles upstream from San Geronio River. Prior to Aug. 12, 1969, at site 1.5 miles upstream.

DRAINAGE AREA.--57.4 sq mi.

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder on river; water-stage recorder and Cipolletti weir on diversion 500 ft downstream. Altitude of gage is 1,350 ft (from topographic map). Feb. 24, 1950, to Sept. 30, 1952, and Apr. 13, 1960, to June 19, 1968, supplementary gages at different sites and datums within 200 ft of base gage then in use. Prior to Aug. 12, 1969, at site 1.5 miles upstream at different datum.

AVERAGE DISCHARGE (River only).--21 years, 16.5 cfs (11,950 acre-ft per year).

(Combined).--20 years (1949-69), 18.2 cfs (13,190 acre-ft per year); median of yearly mean discharges, 11 cfs (8,000 acre-ft per year).

EXTREMES (River only).--Current year: Maximum discharge during year, 16,200 cfs Jan. 25 (gage height, 10.30 ft), on basis of slope-area measurement of peak flow; minimum daily, 7.0 cfs Oct. 9.

Period of record: Maximum discharge, 24,000 cfs Nov. 22, 1965 (gage height, 13.60 ft, site and datum then in use), from rating curve extended above 660 cfs on basis of field estimate of maximum flow; no flow at times in some years.

Maximum discharge known, 42,000 cfs Mar. 2, 1938, from slope-area measurement of maximum flow, at site 4.0 miles upstream (drainage area, 51.4 sq mi).

REMARKS.--Records poor. White Water Mutual Water Co. diverts 1.5 miles upstream. Diversion added to daily discharge since Aug. 12, 1969. Monthly discharge is combined with flow from infiltration line that bypasses station. No regulation above station. Water is diverted out of basin about 15 miles upstream to powerplants in San Geronio River basin and thence to an area north of Banning for irrigation. One small diversion for domestic use and one for irrigation are made 2 to 3 miles upstream.

COOPERATION.--Records of bypass in infiltration line furnished by White Water Mutual Water Co.; records of diversion, 15 miles upstream, furnished by Southern California Edison Co.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	12	12	8.5	54	300	175	200	161	137	98	50
2	10	11	13	8.5	50	250	178	201	158	137	95	48
3	16	12	18	8.5	45	200	183	202	157	136	92	48
4	78	12	18	9.5	40	150	185	203	156	135	90	47
5	19	12	10	10	100	100	192	204	155	134	88	45
6	8.5	12	10	10	350	80	196	205	154	133	86	45
7	8.0	12	9.0	12	100	85	199	206	153	132	84	42
8	7.5	12	7.5	11	60	90	200	207	152	131	82	42
9	7.0	12	9.0	12	58	95	200	208	151	130	80	42
10	8.0	11	9.0	11	56	100	199	209	151	130	78	39
11	8.5	12	7.5	11	54	102	199	209	150	130	75	39
12	8.5	12	8.0	13	52	105	198	210	150	129	72	40
13	8.5	13	8.5	17	50	108	198	210	149	129	69	41
14	9.0	14	8.0	92	49	109	198	211	149	128	70	41
15	9.5	17	8.0	10	48	111	198	215	148	128	72	42
16	9.5	23	8.5	9.5	47	113	197	213	148	127	68	42
17	9.5	19	8.5	18	46	115	197	211	147	126	60	43
18	11	15	8.5	22	60	117	196	210	147	125	59	44
19	12	12	9.5	11	55	119	196	208	146	123	66	44
20	11	11	10	68	50	122	195	204	145	122	71	45
21	13	10	9.0	233	45	127	194	202	143	121	69	45
22	14	10	9.5	222	100	132	193	199	142	120	66	46
23	14	11	10	60	50	136	192	195	142	118	63	46
24	14	12	9.5	635	535	142	191	192	141	116	61	47
25	14	12	10	4,970	2,230	147	190	188	141	114	60	48
26	13	11	12	1,640	500	151	191	185	140	112	59	49
27	13	12	12	114	410	155	192	181	140	110	57	50
28	13	12	11	65	350	160	194	176	139	107	56	51
29	13	13	10	59	-----	164	196	172	138	104	55	51
30	13	12	9.0	58	-----	169	198	168	138	103	53	52
31	13	-----	9.0	58	-----	173	-----	164	-----	101	54	-----
TOTAL	416.0	381	311.5	8,486.5	5,644	4,227	5,810	6,168	4,431	3,828	2,208	1,354
MEAN	13.4	12.7	10.0	274	202	136	194	199	148	123	71.2	45.1
MAX	78	23	18	4,970	2,230	300	200	215	161	137	98	52
MIN	7.0	10	7.5	8.5	40	80	175	164	138	101	53	39
AC-FT	825	756	618	16,830	11,190	8,380	11,520	12,230	8,790	7,590	4,380	2,690
(b)	906	844	710	16,920	11,270	8,470	11,600	12,320	8,870	7,670	4,450	2,760
(c)	81	88	92	92	80	90	84	87	80	77	73	65

CAL YR 1968 TOTAL 5,432.2 MEAN 14.8 MAX 87 MIN 7.0 AC-FT 10,770 AC-FT b11,820
WTR YR 1969 TOTAL 43,265.0 MEAN 119 MAX 4,970 MIN 7.0 AC-FT 85,810 AC-FT b86,790

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10- 4	1100	a8.09	311	2- 6	unknown	unknown	unknown
1-14	1100	a8.08	305	2-25	1700	a12.56	13,500
1-21	0800	a8.69	948	5-15	unknown	unknown	225
1-25	1000	a10.30	16,200				

NOTE.--No gage-height record Feb. 1-23, Feb. 26 to Aug. 11.

b Combined discharge of River and infiltration line.

c Discharge diverted from basin 15 miles upstream.

a Site and datum then in use.

10-2564. SAN GORGONIO RIVER NEAR WHITE WATER, CALIF.

LOCATION.--Lat 33°55'14", long 116°41'45", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.8, T.3 S., R.3 E., Riverside County, on right bank 0.25 mile south of Interstate Highway 10, and 3.4 miles west of town of White Water.

DRAINAGE AREA.--154 sq mi.

PERIOD OF RECORD.--February 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,320 ft (from topographic map). Prior to Mar. 19, 1968, flood-hydrograph recorder.

EXTREMES.--Current year: Maximum discharge during year, 7,250 cfs Jan. 25 (gage height, 6.0 ft, from floodmarks), on basis of slope-area measurement of maximum flow; no flow for most of year.

Period of record: Maximum discharge, 7,250 cfs Jan. 25, 1969 (gage height, 6.0 ft, from floodmarks), on basis of slope-area measurement of maximum flow; no flow for most of each year.

Flood of Nov. 23, 1965, reached a stage of 6.10 ft, from floodmarks (discharge, 4,500 cfs on basis of slope-area measurement.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1.5	40	.57	.29	0	0	0	0
2	0	0	0	0	.90	25	.55	.27	0	0	0	0
3	0	0	0	0	.80	16	15	.25	0	0	0	0
4	0	0	0	0	.70	11	10	.24	0	0	0	0
5	0	0	0	0	5.0	8.0	7.0	.22	0	0	0	0
6	0	0	0	0	150	6.0	5.0	.21	0	0	0	0
7	0	0	0	0	20	5.0	4.0	.20	0	0	0	0
8	0	0	0	0	10	4.0	3.0	.18	0	0	0	0
9	0	0	0	0	7.0	3.2	2.5	.17	0	0	0	0
10	0	0	0	0	6.0	2.9	2.1	.16	0	0	0	0
11	0	0	0	0	5.0	2.6	1.8	.15	0	0	0	0
12	0	0	0	0	4.0	2.3	1.5	.14	0	0	0	0
13	0	0	0	0	3.5	2.0	1.3	.13	0	0	0	0
14	0	0	0	10	3.0	1.7	1.1	.12	0	0	0	0
15	0	0	0	0	2.5	1.6	1.0	.11	0	0	0	0
16	0	0	0	0	2.0	1.4	.90	.10	0	0	0	0
17	0	0	0	0	1.5	1.3	.84	.10	0	0	0	0
18	0	0	0	0	1.0	1.2	.78	.09	0	0	0	0
19	0	0	0	15	.95	1.1	.72	.09	0	0	0	0
20	0	0	0	50	.90	1.0	.66	.08	0	0	0	0
21	0	0	0	170	.80	.93	.61	.08	0	0	0	0
22	0	0	0	100	.70	.89	.58	.07	0	0	0	0
23	0	0	0	1.0	.60	.83	.53	.06	0	0	0	0
24	0	0	0	40	100	.78	.50	.05	0	0	0	0
25	0	0	0	1,500	800	.76	.46	.04	0	0	0	0
26	0	0	.71	100	275	.73	.42	.03	0	0	0	0
27	0	0	0	10	150	.70	.39	.02	0	0	0	0
28	0	0	0	5.0	70	.67	.36	.01	0	0	0	0
29	0	0	0	4.0	-----	.65	.34	0	0	0	0	0
30	0	0	0	2.5	-----	.63	.32	0	0	0	0	0
31	0	-----	0	2.0	-----	.60	-----	0	-----	0	0	-----
TOTAL	0	0	0.71	2,009.5	1,623.35	145.47	64.83	3.66	0	0	0	0
MEAN	0	0	.023	64.8	58.0	4.69	2.16	.12	0	0	0	0
MAX	0	0	.71	1,500	800	40	15	.29	0	0	0	0
MIN	0	0	0	0	.60	.60	.32	0	0	0	0	0
AC-FT	0	0	1.4	3,990	3,220	289	129	7.3	0	0	0	0

CAL YR 1968 TOTAL 6.11 MEAN .017 MAX 3.8 MIN 0 AC-FT 12
WTR YR 1969 TOTAL 3,847.52 MEAN 10.5 MAX 1,500 MIN 0 AC-FT 7,630

PEAK DISCHARGE (BASE, 50 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-21 1900 1.27 266 2- 6 unknown - unknown
1-25 unknown a6.0 7,250 2-25 unknown a3.84 1,670

NOTE.--No gage-height record
Jan. 9 to June 27.

a From floodmarks.

SALTON SEA BASIN

10-2565. SNOW CREEK NEAR WHITE WATER, CALIF.

LOCATION.--Lat 33°52'12", long 116°40'49", in SE¼NW¼ sec.33, T.3 S., R.3 E., Riverside County, on left bank 50 ft upstream from Southern Pacific Railroad diversion dam, 500 ft downstream from unnamed tributary, 2.8 miles upstream from mouth, and 4.5 miles southwest of White Water.

DRAINAGE AREA.--10.8 sq mi.

PERIOD OF RECORD.--July to December 1921, May 1922 to February 1927, December 1927 to September 1931, October 1959 to current year. Yearly discharge only for 1930, published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 2,100 ft (from topographic map). Prior to September 1931, at various sites within 500 ft of present site at different datums.

AVERAGE DISCHARGE.--17 years (1922-26, 1928-31, 1959-69), 8.70 cfs (6,300 acre-ft per year); median of yearly mean discharges, 6.1 cfs (4,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,000 cfs Jan. 25 (gage height, 13.8 ft, from profile of floodmarks), from rating curve extended above 55 cfs on basis of slope-area measurement of maximum flow; minimum daily, 3.2 cfs Sept. 9, 10.

Period of record: Maximum discharge, 13,000 cfs Jan. 25, 1969 (gage height, 13.8 ft, from profile of floodmarks), from rating curve extended above 55 cfs on basis of slope-area measurement of maximum flow; minimum daily, 2.1 cfs June 23-27, Sept. 5-11, 1961.

REMARKS.--Records good below 50 cfs and poor above. No regulation or diversion above station. Palm Springs Water Company diverts 50 ft downstream, generally taking the entire base flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	3.7	3.4	4.0	38	49	51	28	37	14	12	7.0
2	3.2	3.7	3.6	4.0	35	41	36	29	35	15	12	7.0
3	4.1	3.5	3.4	4.0	33	36	44	26	33	15	12	7.0
4	4.4	3.5	3.5	4.1	36	32	46	25	33	14	11	7.0
5	3.5	3.5	3.4	4.1	37	28	46	27	32	12	11	6.6
6	3.3	3.5	3.4	4.1	75	25	62	34	32	12	10	7.8
7	3.2	3.5	3.4	4.1	45	23	42	32	30	13	10	7.8
8	3.2	3.5	3.3	4.2	31	22	32	33	27	12	11	7.4
9	3.2	3.4	3.2	4.5	28	21	32	35	24	12	11	7.4
10	3.2	3.4	3.2	4.7	25	21	32	38	22	12	10	7.0
11	3.2	3.4	3.3	4.5	28	19	35	41	21	12	9.7	6.6
12	3.2	3.4	3.4	4.4	22	17	40	40	21	12	9.5	6.6
13	3.2	3.4	3.4	11	20	17	40	38	20	13	9.4	6.6
14	3.3	3.4	3.4	194	17	17	39	36	21	12	9.6	7.0
15	3.5	4.2	3.4	39	16	17	38	34	22	12	9.5	7.0
16	3.4	4.4	3.6	15	15	17	35	35	21	12	9.4	7.4
17	3.4	4.1	3.7	10	13	17	35	38	20	12	8.9	7.3
18	3.4	3.8	3.7	8.5	15	20	36	38	19	12	8.8	7.2
19	3.3	3.7	3.6	61	13	21	34	37	18	12	8.3	7.0
20	3.2	3.4	4.0	173	12	21	34	35	17	12	7.8	6.7
21	3.2	3.2	4.0	378	11	14	37	35	16	12	7.8	6.6
22	3.3	3.2	3.9	138	11	10	40	36	16	12	7.4	6.6
23	3.2	3.2	3.8	53	15	11	36	36	16	12	7.4	6.6
24	3.3	3.2	3.8	375	215	13	33	36	16	12	7.4	7.0
25	3.4	3.5	4.3	3,490	672	16	31	35	15	11	7.4	7.0
26	3.3	3.5	8.2	248	187	13	28	35	14	11	7.0	7.1
27	3.2	3.4	5.1	100	87	14	26	35	14	17	7.0	6.9
28	3.2	3.4	4.6	40	56	18	25	35	14	15	7.0	7.0
29	3.2	3.4	4.5	44	-----	24	26	36	14	13	7.0	7.1
30	3.6	3.4	4.2	44	-----	30	29	38	14	13	6.6	7.0
31	3.7	-----	4.1	33	-----	51	-----	37	-----	12	7.0	-----
TOTAL	104.3	105.8	119.8	5,505.2	1,808	695	1,100	1,073	654	392	279.9	210.3
MEAN	3.36	3.53	3.86	178	64.6	22.4	36.7	34.6	21.8	12.6	9.03	7.01
MAX	4.4	4.4	8.2	3,490	672	51	62	41	37	17	12	7.8
MIN	3.2	3.2	3.2	4.0	11	10	25	25	14	11	6.6	6.6
AC-FT	207	210	238	10,920	3,590	1,380	2,180	2,130	1,300	778	555	417

CAL YR 1968 TOTAL 1,890.7 MEAN 5.17 MAX 16 MIN 2.7 AC-FT 3,750
WTR YR 1969 TOTAL 12,047.3 MEAN 33.0 MAX 3,490 MIN 3.2 AC-FT 23,900

PEAK DISCHARGE (BASE, 50 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	1115	4.05	360	2-6	1430	4.16	152
1-21	1045	5.38	852	2-25	1145	7.87	1,770
1-25	1030	13.8	13,000	4-5	2400	4.91	96

a From profile of floodmarks.

SALTON SEA BASIN

67

10-2576. MISSION CREEK NEAR DESERT HOT SPRINGS, CALIF.

LOCATION.--Lat 34°00'40", long 116°37'38", in NE¼SW¼ sec.12, T.2 S., R.3 E., Riverside County, in Mission Creek Indian Reservation, 0.6 mile downstream from West Fork, and 6.8 miles northwest of Desert Hot Springs.

DRAINAGE AREA.--35.7 sq mi.

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

GAGE.--Water-stage recorder with rain-gage attachment. Altitude of gage is 2,400 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 1,660 cfs Jan. 25 (gage height, 6.40 ft), on basis of slope-area measurement of maximum flow; no flow for much of year.

Period of record: Maximum discharge, 1,660 cfs Jan. 25, 1969 (gage height, 6.40 ft), on basis of slope-area measurement of maximum flow; no flow for much of each year.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	.01	38	29	22	14	7.8	7.2	3.5
2	0	0	0	0	.01	37	27	21	14	7.8	7.2	3.5
3	0	0	0	0	.01	37	24	21	14	7.8	6.6	3.5
4	0	0	0	0	.01	37	22	22	14	7.8	6.6	3.5
5	0	0	0	0	.01	37	21	23	14	7.8	6.3	3.8
6	0	0	0	0	.01	24	19	22	14	7.8	6.3	3.8
7	0	0	0	0	.01	20	19	22	14	7.6	6.3	3.5
8	0	0	0	0	.01	25	19	22	14	7.6	6.0	3.5
9	0	0	0	0	.01	27	18	20	14	7.6	5.5	3.5
10	0	0	0	0	.01	30	19	19	14	7.6	5.2	3.5
11	0	0	0	0	.01	27	18	19	14	7.6	4.9	3.5
12	0	0	0	0	.01	28	21	20	13	7.5	4.9	4.0
13	0	0	0	0	.01	28	23	19	13	7.5	4.6	4.0
14	0	0	0	0	.01	26	23	20	13	7.5	4.6	4.0
15	0	0	0	0	0	25	26	20	11	7.5	4.6	4.0
16	0	0	0	0	.01	22	26	19	11	7.5	4.3	4.0
17	0	0	0	0	0	22	26	19	11	7.5	4.3	3.8
18	0	0	0	0	0	20	25	18	11	7.5	4.0	3.8
19	0	0	0	0	0	21	22	17	11	7.3	4.0	3.8
20	0	0	0	0	0	23	23	17	11	8.2	4.0	3.8
21	0	0	0	21	0	24	22	18	11	7.6	3.8	3.8
22	0	0	0	0	0	25	24	17	11	7.2	3.8	3.5
23	0	0	0	0	0	25	23	17	11	7.2	3.8	3.5
24	0	0	0	2.8	2.6	27	25	17	9.9	7.2	3.8	3.5
25	0	0	0	419	150	28	25	15	9.9	7.2	3.8	3.3
26	0	0	0	110	80	28	22	16	9.9	7.2	3.8	3.3
27	0	0	0	20	45	28	24	16	9.9	7.2	3.5	3.3
28	0	0	0	.04	40	29	22	15	9.9	7.2	3.5	3.3
29	0	0	0	.02	-----	29	20	14	9.2	7.2	3.5	3.3
30	0	0	0	.01	-----	30	22	14	8.4	7.2	3.5	3.3
31	0	-----	0	.01	-----	32	-----	14	-----	7.2	3.5	-----
TOTAL	0	0	0	572.88	317.75	859	679	575	359.1	232.4	147.7	108.4
MEAN	0	0	0	18.5	11.3	27.7	22.6	18.5	12.0	7.50	4.76	3.61
MAX	0	0	0	419	150	38	29	23	14	8.2	7.2	4.0
MIN	0	0	0	0	0	20	18	14	8.4	7.2	3.5	3.3
AC-FT	0	0	0	1,140	630	1,700	1,350	1,140	712	461	293	215
(a)	0	.2	.8	9.9	3.8	.5	0	.1	0	0	0	0

CAL YR 1968 TOTAL 43.80 MEAN .12 MAX 21 MIN 0 AC-FT 87
WTR YR 1969 TOTAL 3,851.23 MEAN 10.6 MAX 419 MIN 0 AC-FT 7,640

PEAK DISCHARGE (BASE, 50 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-21 0900 2.79 229 2-25 1530 3.46 b500
1-25 2200 6.40 1,660 3- 5 1500 2.64 58

NOTE.--No gage-height record or stage-discharge relation indefinite Jan. 26 to Apr. 8.

a Precipitation, in inches.
b Estimated.

SALTON SEA BASIN

10-2578, LONG CREEK NEAR DESERT HOT SPRINGS, CALIF.

LOCATION.--Lat 33°57'53", long 116°26'35", in NW¼SE¼SE¼ sec.27, T.2 S., R.5 E., Riverside County, on left bank 0.4 mile downstream from Metropolitan Water District aqueduct, and 3.3 miles east of Desert Hot Springs.

DRAINAGE AREA.--19.4 sq mi.

PERIOD OF RECORD.--April 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,520 ft (from topographic map).

AVERAGE DISCHARGE.--6 years, 0.002 cfs (1.4 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 19 cfs Jan. 25 (gage height, 1.10 ft, from floodmarks), on basis of slope-conveyance measurement of peak flow; no flow most of year.

Period of record: Maximum discharge, 9,270 cfs Aug. 7, 1963 (gage height, 8.0 ft, from floodmarks), on basis of field estimate of maximum flow; no flow for most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	.27	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	.53	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	.79	.35	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	1.32	0.35	0	0	0.27	0	0	0	0
MEAN	0	0	0	.043	.013	0	0	.009	0	0	0	0
MAX	0	0	0	.79	.35	0	0	.27	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	2.6	.7	0	0	.5	0	0	0	0
CAL YR 1968	TOTAL 1.50		MEAN .004		MAX 1.5		MIN 0		AC-FT 3.0			
WTR YR 1969	TOTAL 1.94		MEAN .005		MAX .79		MIN 0		AC-FT 3.8			

SALTON SEA BASIN

69

10-2580. TAHQUITZ CREEK NEAR PALM SPRINGS, CALIF.

LOCATION.--Lat 33°48'18", long 116°33'30", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.4 S., R.4 E., Riverside County, on left bank 2.2 miles southwest of Palm Springs, and 7 miles upstream from mouth.

DRAINAGE AREA.--16.8 sq mi.

PERIOD OF RECORD.--October 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 764.5 ft above mean sea level (levels by Riverside County Flood Control District).

AVERAGE DISCHARGE.--22 years, 4.24 cfs (3,070 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,900 cfs Jan. 25 (gage height, 11.28 ft, top of surge; 10.32 ft, mean of surge), on basis of slope-conveyance measurement of peak flow; no flow Oct. 1-30.

Period of record: Maximum discharge, 2,900 cfs Nov. 22, 1965, Jan. 25, 1969 (gage height, 10.34 ft), from rating curve extended above 80 cfs on basis of slope-area measurements at gage heights 8.45 and 10.34 ft; no flow for parts of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.03	.24	.28	48	43	42	70	77	21	8.1	2.9
2	0	.01	.24	.28	43	36	40	72	72	21	7.3	3.0
3	0	.05	.24	.30	39	32	44	70	67	20	6.9	3.2
4	0	.08	.24	.30	36	28	43	64	64	19	6.2	3.1
5	0	.10	.24	.30	36	26	46	57	63	18	5.7	2.9
6	0	.12	.24	.32	43	23	50	59	60	18	5.7	3.0
7	0	.12	.24	.34	38	21	46	56	57	17	5.7	3.2
8	0	.14	.24	.38	32	20	48	57	53	17	6.0	3.0
9	0	.14	.24	.40	30	20	48	63	51	16	5.7	2.7
10	0	.16	.24	.38	28	20	50	71	48	15	5.7	2.4
11	0	.16	.24	.38	27	18	50	76	46	15	5.5	2.3
12	0	.18	.24	.40	26	18	56	82	46	16	5.1	2.9
13	0	.18	.24	.38	25	17	59	84	44	15	4.9	4.0
14	0	.20	.24	11	23	17	63	84	42	14	4.8	3.5
15	0	.20	.24	5.9	23	16	59	82	42	13	4.8	3.3
16	0	.20	.26	1.9	22	15	56	84	41	13	4.6	3.2
17	0	.20	.26	1.0	21	15	57	88	39	13	4.4	3.1
18	0	.20	.26	.66	21	17	60	91	38	14	4.2	3.0
19	0	.20	.26	5.2	20	18	59	91	36	13	4.0	2.9
20	0	.22	.32	20	19	20	64	89	34	13	3.8	2.7
21	0	.22	.26	55	19	21	70	89	32	12	3.6	2.6
22	0	.22	.22	28	19	19	75	91	31	10	3.5	2.5
23	0	.22	.22	14	20	19	74	88	30	10	3.5	2.4
24	0	.22	.24	170	38	20	68	88	29	9.8	3.6	2.4
25	0	.22	.40	1,080	162	21	65	85	28	9.0	3.6	2.2
26	0	.24	.72	450	109	22	65	85	27	8.6	3.4	2.2
27	0	.24	.36	200	66	23	63	84	26	9.8	3.3	2.1
28	0	.24	.32	115	51	26	64	83	25	11	3.2	2.1
29	0	.24	.30	76	-----	30	65	82	23	9.9	3.1	1.9
30	0	.24	.30	62	-----	36	70	81	22	9.4	3.0	1.9
31	.06	-----	.28	54	-----	42	-----	80	-----	8.8	2.9	-----
TOTAL	0.06	5.19	8.58	2,354.10	1,084	719	1,719	2,426	1,293	429.3	145.8	82.6
MEAN	.002	.17	.28	75.9	38.7	23.2	57.3	78.3	43.1	13.8	4.70	2.75
MAX	.06	.24	.72	1,080	162	43	75	91	77	21	8.1	4.0
MIN	0	.01	.22	.28	19	15	40	56	22	8.6	2.9	1.9
AC-FT	.1	10	17	4,670	2,150	1,430	3,410	4,810	2,560	852	289	164
CAL YR 1968	TOTAL	618.73	MEAN	1.69	MAX	6.2	MIN	0	AC-FT	1,230		
WTR YR 1969	TOTAL	10,266.63	MEAN	28.1	MAX	1,080	MIN	0	AC-FT	20,360		

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1300	4.55	88	2-6	1700	3.70	58
1-25	1500	11.28	2,900	2-25	1600	5.54	278

SALTON SEA BASIN

10-2581. PALM CANYON CREEK TRIBUTARY NEAR ANZA, CALIF.

LOCATION.--Lat 33°34'08", long 116°30'43", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.7 S., Riverside County, on left bank at culvert on State Highway 74, or Pines to Palms Highway, 9.4 miles northeast of Anza.

DRAINAGE AREA.--0.47 sq mi.

PERIOD OF RECORD.--Water years 1962-67 (annual maximum), February 1967 to current year.

GAGE.--Water-stage recorder with rain-gage attachment and crest-stage gage. Altitude of gage is 4,500 ft (from topographic map). Nov. 8, 1961, to Feb. 15, 1967, crest-stage gage only at same site and datum.

EXTREMES.--Current year: Maximum discharge, 4.1 cfs Jan. 25 (gage height, 4.92 ft); no flow for most of year.

Period of record: Maximum discharge, 28 cfs Aug. 30, 1967 (gage height, 6.23 ft, 5.92 ft from crest-stage gage), on basis of computation of maximum flow through culvert; no flow for most of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	.08	0	0	0	0	0	0
2	0	0	0	0	0	.07	0	0	0	0	0	0
3	0	0	0	0	0	.07	0	0	0	0	0	0
4	0	0	0	0	0	.06	0	0	0	0	0	0
5	0	0	0	0	0	.06	0	0	0	0	0	0
6	0	0	0	0	.08	.06	0	0	0	0	0	0
7	0	0	0	0	.07	.05	0	0	0	0	0	0
8	0	0	0	0	.04	.05	0	0	0	0	0	0
9	0	0	0	0	.03	.05	0	0	0	0	0	0
10	0	0	0	0	0	.05	0	0	0	0	0	0
11	0	0	0	0	0	.05	0	0	0	0	0	0
12	0	0	0	0	0	.05	0	0	0	0	0	0
13	0	0	0	0	0	.05	0	0	0	0	0	0
14	0	0	0	0	0	.04	0	0	0	0	0	0
15	0	0	0	0	0	.04	0	0	0	0	0	0
16	0	0	0	0	0	.04	0	0	0	0	0	0
17	0	0	0	0	0	.03	0	0	0	.01	0	0
18	0	0	0	0	0	.03	0	0	0	.01	0	0
19	0	0	0	0	0	.03	0	0	0	0	0	0
20	0	0	0	0	0	.02	0	0	0	0	0	0
21	0	0	0	0	0	.02	0	0	0	0	0	0
22	0	0	0	0	0	.02	0	0	0	0	0	0
23	0	0	0	0	0	.01	0	0	0	0	0	0
24	0	0	0	0	.11	.01	0	0	0	0	0	0
25	0	0	0	.75	.15	.01	0	0	0	0	0	0
26	0	0	0	.11	.13	.01	0	0	0	0	0	0
27	0	0	0	.06	.11	.01	0	0	0	0	0	0
28	0	0	0	0	.09	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0.92	0.81	1.07	0	0	0	0.02	0	0
MEAN	0	0	0	.030	.029	.035	0	0	0	.0006	0	0
MAX	0	0	0	.75	.15	.08	0	0	0	.01	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	1.8	1.6	2.1	0	0	0	.04	0	0
(a)	.4	.5	1.3	6.1	4.1	2.2	0	0	0	2.1	0	0

CAL YR 1968	TOTAL 0	MEAN 0	MAX 0	MIN 0	AC-FT 0
WTR YR 1969	TOTAL 2.82	MEAN .008	MAX .75	MIN 0	AC-FT 5.6

a Precipitation, in inches.

SALTON SEA BASIN

71

10-2585. PALM CANYON CREEK NEAR PALM SPRINGS, CALIF.

LOCATION.--Lat 33°44'42", long 116°32'05", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.5 S., R.4 E., Riverside County, on right bank 0.8 mile upstream from Murray Canyon Creek, and 6 miles south of Palm Springs.

DRAINAGE AREA.--93.3 sq mi.

PERIOD OF RECORD.--January 1930 to January 1942, October 1947 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 700 ft (from topographic map). Prior to Jan. 14, 1942, at datum 0.2 ft higher.

AVERAGE DISCHARGE.--33 years (1930-41, 1947-69), 3.78 cfs (2,740 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,490 cfs Jan. 25 (gage height, 5.58 ft), from rating curve extended above 550 cfs on basis of slope-area measurement at 5.61 ft; no flow for much of year.
Period of record: Maximum discharge, 3,850 cfs Feb. 6, 1937 (gage height, 5.80 ft, present datum), from rating curve extended above 120 cfs on basis of velocity-area measurement of maximum flow; no flow for several months in most years.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	GCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	4.3	62	11	4.8	.42	0	C	0
2	0	0	C	0	2.8	49	11	4.5	.42	0	0	C
3	0	C	0	0	1.6	41	14	4.8	.36	0	C	C
4	0	0	C	0	1.4	36	12	5.1	.42	0	C	C
5	0	0	0	0	2.2	32	11	6.7	.36	0	C	0
6	0	0	0	0	167	31	12	8.5	.30	0	0	0
7	0	0	0	0	73	30	11	7.0	.30	0	C	0
8	0	0	0	0	24	28	11	5.1	.30	0	0	C
9	0	0	0	0	16	26	10	3.5	.30	0	C	C
10	0	0	C	0	15	25	10	2.8	.36	0	C	C
11	0	0	0	0	15	24	9.7	2.6	.42	0	C	0
12	0	0	C	0	14	23	8.9	2.4	.42	0	0	0
13	0	0	0	0	14	22	8.5	2.4	.30	0	0	0
14	0	0	C	0	12	20	8.1	2.2	.13	0	C	0
15	0	0	C	1.4	11	20	8.1	2.4	.07	0	C	0
16	0	0	0	0	10	18	7.7	2.0	.07	0	0	0
17	0	0	0	0	8.1	17	7.3	1.9	.07	0	C	C
18	0	0	C	0	8.1	16	7.3	1.7	.03	0	C	C
19	0	0	0	1.4	10	15	7.3	1.7	.03	0	C	C
20	0	0	C	5.1	9.3	15	6.3	1.7	.02	0	C	0
21	0	0	C	7.9	7.7	16	6.3	1.7	.02	0	0	C
22	0	0	0	10	9.7	17	6.0	1.4	.02	0	C	C
23	0	0	0	3.5	10	15	6.0	1.4	.01	0	0	0
24	0	0	C	19	104	14	6.0	1.3	.01	0	C	0
25	0	0	0	389	238	12	5.7	1.2	.01	0	C	0
26	0	0	0	86	191	12	5.7	1.0	0	0	C	0
27	0	0	C	48	90	11	5.4	.84	0	0	0	C
28	0	0	C	21	68	10	5.1	.49	0	0	C	0
29	0	0	0	16	-----	10	5.1	.42	0	0	C	0
30	0	0	C	12	-----	11	4.8	.49	0	0	0	C
31	0	-----	0	8.1	-----	11	-----	.42	-----	0	0	-----
TOTAL	0	0	C	628.4	1,137.2	689	248.3	84.46	5.17	0	C	C
MEAN	0	0	C	20.3	40.6	22.2	8.28	2.72	.17	0	0	0
MAX	0	0	C	389	238	62	14	8.5	.42	0	C	0
MIN	0	0	0	0	1.4	10	4.8	.42	0	0	0	0
AC-FT	0	0	0	1,250	2,260	1,370	493	168	10	0	C	C
CAL YR 1968	TOTAL	89.30	MEAN	.24	MAX	8.3	MIN	0	AC-FT	177		
WTR YR 1969	TOTAL	2,792.53	MEAN	7.65	MAX	389	MIN	0	AC-FT	5,540		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-25	1400	5.58	1,490	2-25	2100	4.05	520
2-6	1900	4.05	540				

SALTON SEA BASIN

10-2590. ANDREAS CREEK NEAR PALM SPRINGS, CALIF.

LOCATION.--Lat 33°45'36", long 116°32'57", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.5 S., R.4 E., Riverside County, on left bank at Bureau of Indian Affairs diversion dam, 1.1 miles above mouth, and 5.1 miles south of Palm Springs.

DRAINAGE AREA.--8.61 sq mi.

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 800 ft (from topographic map). Prior to Mar. 25, 1949, reference point at same site at different datum.

AVERAGE DISCHARGE.--21 years, 2.23 cfs (1,620 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 540 cfs Jan. 25 (gage height, 3.77 ft), from rating curve extended above 80 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.47 cfs Nov. 20.
Period of record: Maximum discharge, 1,960 cfs Aug. 31, 1954 (gage height, 7.11 ft), from rating curve extended above 80 cfs on basis of slope-area measurement of maximum flow; no flow at times in some years.

REMARKS.--Records good. No regulation above station. One small diversion for domestic use about one mile above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	.84	1.3	1.8	6.5	33	10	6.2	4.7	5.7	3.1	2.4
2	.57	.88	1.6	1.8	5.4	30	10	6.2	4.9	5.6	3.0	2.4
3	.73	.91	1.6	1.8	4.4	25	10	5.8	4.8	5.4	3.0	2.4
4	.67	.93	1.6	1.8	3.5	22	10	5.8	4.8	5.3	2.9	2.4
5	.57	1.1	1.6	1.8	2.8	19	10	8.5	4.5	5.5	2.9	2.4
6	.54	1.1	1.6	1.8	33	18	10	9.8	4.4	5.6	2.9	2.4
7	.54	1.1	1.8	1.8	23	17	11	8.6	4.7	5.7	2.8	2.4
8	.59	1.1	1.8	1.8	16	16	11	7.8	4.7	5.6	2.8	2.4
9	.59	1.1	1.7	1.8	14	16	11	7.3	4.7	4.9	2.8	2.4
10	.64	.96	1.6	1.8	13	15	11	7.0	4.8	4.2	2.8	2.4
11	.71	.87	1.7	1.8	12	15	12	7.7	4.8	4.8	2.7	2.4
12	.74	.98	1.8	1.8	12	14	13	8.4	4.8	4.4	2.7	2.4
13	.65	1.0	1.8	1.9	10	14	11	7.9	4.5	4.3	2.7	2.4
14	.60	1.1	1.8	22	9.0	13	9.4	7.7	4.4	4.3	2.7	2.4
15	.65	1.3	1.7	4.1	8.2	13	9.0	7.7	4.4	4.2	2.7	2.4
16	.60	1.1	1.8	2.2	7.4	13	8.5	7.2	4.4	4.1	2.6	2.3
17	.58	.87	1.7	2.0	6.4	12	8.5	7.2	4.6	4.0	2.6	2.3
18	.61	.67	1.7	1.8	6.7	12	8.5	6.9	4.4	3.9	2.6	2.3
19	.59	.55	1.7	5.4	6.3	12	7.5	6.4	4.1	3.8	2.6	2.3
20	.56	.47	1.9	13	5.6	12	7.5	6.4	4.0	3.8	2.6	2.3
21	.58	.52	2.0	66	5.2	12	8.5	6.4	4.3	3.7	2.6	2.3
22	.60	.50	1.9	21	4.8	11	8.5	6.2	5.3	3.6	2.6	2.3
23	.61	.50	1.8	8.7	4.4	11	8.5	6.0	5.7	3.5	2.5	2.3
24	.59	.48	1.8	70	4.1	11	8.5	5.9	5.9	3.5	2.5	2.3
25	.59	.60	2.0	220	141	11	7.5	5.8	5.4	3.4	2.5	2.3
26	.58	.58	3.1	138	108	11	7.5	5.6	5.7	3.3	2.5	2.3
27	.56	.60	2.0	66	56	11	7.1	5.3	5.6	3.3	2.5	2.3
28	.59	.98	1.9	32	42	11	6.6	5.1	5.6	3.2	2.5	2.3
29	.62	1.3	1.9	20	-----	11	6.6	4.9	5.4	3.2	2.5	2.3
30	.75	1.4	1.7	13	-----	11	6.6	5.1	5.5	3.1	2.5	2.3
31	.84	-----	1.8	9.2	-----	11	-----	5.1	-----	3.1	2.5	-----
TOTAL	19.19	26.39	55.7	737.9	570.7	463	274.8	207.9	145.8	132.0	83.2	70.5
MEAN	.62	.88	1.80	23.8	20.4	14.9	9.16	6.71	4.86	4.26	2.68	2.35
MAX	.84	1.4	3.1	220	141	33	13	9.8	5.9	5.7	3.1	2.4
MIN	.54	.47	1.3	1.8	2.8	11	6.6	4.9	4.0	3.1	2.5	2.3
AC-FT	38	52	110	1,460	1,130	918	545	412	289	262	165	140

CAL YR 1968 TOTAL 500.44 MEAN 1.37 MAX 6.3 MIN .20 AC-FT 993
WTR YR 1969 TOTAL 2,787.08 MEAN 7.64 MAX 220 MIN .47 AC-FT 5,530

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	1215	2.39	75	2-6	1845	2.32	66
1-21	1200	2.68	118	2-25	1915	3.28	243
1-25	1245	3.77	540				

NOTE.--No gage-height record July 16 to Sept. 30.

SALTON SEA BASIN

73

10-2592. DEEP CREEK NEAR PALM DESERT, CALIF.

LOCATION (revised).--Lat 33°37'52", long 116°23'29", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.6 S., R.6 E., Riverside County, on left bank 500 ft downstream from unnamed tributary, and 6.3 miles south of Palm Desert.

DRAINAGE AREA.--30.6 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,440 ft (from topographic map).

AVERAGE DISCHARGE.--7 years, 0.779 cfs (564 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 420 cfs Jan. 25 (gage height, 4.00 ft), from rating curve extended as explained below; no flow for much of year.

Period of record: Maximum discharge, 1,300 cfs Nov. 23, 1965 (gage height, 5.15 ft in gage well, 6.15 ft from profile of floodmarks), from rating curve extended above 3.3 cfs on basis of slope-area measurements at gage heights 2.68 and 5.15 ft; no flow for much of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1.4	6.6	3.7	.86	.11	.09	.05	0
2	0	0	0	0	1.3	5.1	3.4	.86	.11	.09	.04	0
3	0	0	0	0	1.2	4.3	3.4	.80	.11	.09	.03	0
4	0	0	0	0	1.1	3.7	3.4	.92	.11	.07	.02	0
5	0	0	0	0	1.0	3.3	3.2	1.3	.09	.07	.01	0
6	0	0	0	0	1.8	3.0	3.0	1.9	.09	.07	.01	0
7	0	0	0	0	10	2.8	2.9	1.6	.09	.07	0	0
8	0	0	0	0	2.0	2.5	2.6	1.4	.09	.06	0	0
9	0	0	0	0	1.5	2.4	2.4	1.2	.09	.06	0	0
10	0	0	0	0	1.4	2.6	2.4	1.1	.09	.06	0	0
11	0	0	0	0	1.4	2.2	2.2	1.0	.09	.06	0	0
12	0	0	0	0	1.3	2.1	2.1	.92	.09	.06	0	0
13	0	0	0	0	1.3	2.0	2.0	.75	.09	.06	0	0
14	0	0	0	0	1.3	2.0	2.0	.65	.09	.06	0	0
15	0	0	0	0	1.3	1.9	2.0	.60	.09	.06	0	0
16	0	0	0	0	1.2	1.8	1.8	.52	.09	.06	0	0
17	0	0	0	0	1.2	1.7	1.7	.40	.09	.06	0	0
18	0	0	0	0	1.2	1.7	1.6	.36	.09	.09	0	0
19	0	0	0	0	1.2	2.0	1.5	.27	.09	.06	0	0
20	0	0	0	0	1.2	2.3	1.5	.24	.09	.05	0	0
21	0	0	0	0	1.2	2.6	1.4	.24	.09	.05	0	0
22	0	0	0	0	1.3	2.7	1.3	.24	.09	.05	0	0
23	0	0	0	0	1.2	2.5	1.2	.24	.09	.04	0	0
24	0	0	0	0	1.6	2.5	1.2	.21	.09	.04	0	0
25	0	0	0	114	67	2.5	1.2	.19	.09	.02	0	0
26	0	0	0	21	66	2.4	1.2	.15	.09	.01	0	0
27	0	0	0	5.0	18	2.3	1.1	.11	.09	6.1	0	0
28	0	0	0	4.0	9.6	2.5	1.0	.11	.09	.19	0	0
29	0	0	0	3.0	-----	2.6	.98	.11	.09	.09	0	0
30	0	0	0	2.0	-----	2.9	.92	.11	.09	.07	0	0
31	0	-----	0	1.5	-----	3.4	-----	.11	-----	.06	0	-----
TOTAL	0	0	0	150.5	201.2	84.9	60.30	19.47	2.78	8.07	0.16	0
MEAN	0	0	0	4.85	7.19	2.74	2.01	.63	.093	.26	.005	0
MAX	0	0	0	114	67	6.6	3.7	1.9	.11	6.1	.05	0
MIN	0	0	0	0	1.0	1.7	.92	.11	.09	.01	0	0
AC-FT	0	0	0	299	399	168	120	39	5.5	16	.3	0
CAL YR 1968	TOTAL	58.50	MEAN	.16	MAX	1.3	MIN	0	AC-FT	116		
WTR YR 1969	TOTAL	527.38	MEAN	1.44	MAX	114	MIN	0	AC-FT	1,050		

PEAK DISCHARGE (BASE, 20 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-25	1130	4.00	420	2-25	2100	3.56	236
2-7	0300	2.33	25	7-27	1500	2.78	64

SALTON SEA BASIN

10-2593. WHITEWATER RIVER AT INDIO, CALIF.

LOCATION.--Lat 33°44'06", long 116°14'39", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.5 S., R.7 E., Riverside County, at center bridge pier on Interstate Highway 10, 2 miles northwest of Indio.

DRAINAGE AREA.--1,073 sq mi.

PERIOD OF RECORD.--March 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 5 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 11,400 cfs Jan. 25 (gage height, 14.41 ft), from rating curve extended as explained below; no flow for most of year.

Period of record: Maximum discharge, 11,400 cfs Jan. 25, 1969 (gage height, 14.41 ft), from rating curve extended above 1,300 cfs on basis of slope-area measurement at gage height 15.3 ft; no flow for most of each year.

Flood of Nov. 22, 1965 reached a stage of 15.3 ft, from floodmarks (discharge, 14,100 cfs, on basis of slope-area measurement of maximum flow).

REMARKS.--Records good. No regulation above station. Water diverted from tributary streams for municipal supply in vicinity of Palm Springs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	2.5	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	14	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	29	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	2.0	26	0	0
22	0	0	0	66	0	0	0	0	27	12	0	0
23	0	0	0	5.0	0	0	0	0	2.2	.03	0	0
24	0	0	0	0	455	0	0	0	0	0	0	0
25	0	0	0	3,080	1,350	0	0	0	0	0	0	0
26	0	0	0	1,160	371	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	9.8	0	-----
TOTAL	0	0	0	4,311.0	2,176	0	0	0	31.2	90.83	2.5	0
MEAN	0	0	0	139	77.7	0	0	0	1.04	2.93	.081	0
MAX	0	0	0	3,080	1,350	0	0	0	27	29	2.5	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	8,550	4,320	0	0	0	62	180	5.0	0
CAL YR 1968	TOTAL	10.50	MEAN	.029	MAX	3.9	MIN	0	AC-FT	21		
WTR YR 1969	TOTAL	6,611.53	MEAN	18.1	MAX	3,080	MIN	0	AC-FT	13,110		

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-22	0315	7.22	219	2-25	2045	11.13	4,200
1-25	2000	14.41	11,400				

SALTON SEA BASIN

75

10-2595.4. WHITEWATER RIVER NEAR MECCA, CALIF.

LOCATION.--Lat 33°31'00", long 116°04'02", in NW¼NW¼SE¼ (revised) sec.32, T.7 S., R.9 E., Riverside County, on left bank 0.9 mile upstream from mouth, and 3.9 miles south of Mecca.

DRAINAGE AREA.--1,299 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 229.88 ft below mean sea level (levels by Coachella Valley County Water District). Prior to Mar. 23, 1967, at site 0.6 mile downstream at different datum.

EXTREMES.--Period of record: Maximum daily discharge, 2,500 cfs (estimated) Jan. 25, 1969; minimum daily, 37 cfs Nov. 25-29, 1960.

REMARKS.--Records fair. Most of the flow represents seepage and return flow from irrigated areas.

COOPERATION.--Forty-eight discharge measurements furnished by Coachella Valley County Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	92	101	104	90	172	127	103	107	96	112	121
2	112	90	101	104	90	158	128	105	102	96	112	121
3	98	88	107	106	90	137	128	108	101	96	112	119
4	95	86	107	108	93	133	128	109	100	96	111	119
5	94	84	107	107	94	129	128	109	100	96	111	119
6	97	84	109	101	96	122	128	109	100	96	109	118
7	98	83	111	100	98	118	128	109	102	98	106	118
8	97	81	113	101	102	112	125	108	103	99	104	117
9	94	81	115	100	106	109	125	105	106	99	102	111
10	94	81	116	100	109	109	122	103	108	99	100	109
11	88	83	110	102	112	109	119	99	108	99	101	109
12	85	85	107	100	118	110	118	98	108	99	102	109
13	87	84	113	97	120	111	118	98	108	100	103	110
14	88	84	113	101	124	115	117	98	107	102	104	112
15	88	84	110	101	130	119	113	96	103	103	104	117
16	85	87	107	98	132	120	110	96	102	104	105	118
17	81	87	107	101	137	122	108	96	102	105	105	118
18	88	87	106	104	134	123	106	96	102	105	105	117
19	97	87	102	99	128	123	105	98	101	108	108	115
20	102	87	107	99	121	125	105	101	101	108	110	113
21	107	91	106	99	112	125	104	103	101	110	111	112
22	107	91	110	99	108	125	103	107	99	110	113	111
23	104	91	107	140	102	125	102	110	98	110	113	109
24	104	91	106	740	200	125	100	112	98	110	115	108
25	98	91	106	2,500	1,100	127	98	113	98	108	118	107
26	98	94	106	1,150	350	127	98	115	98	108	119	104
27	100	100	106	160	240	127	98	115	98	108	120	102
28	104	101	107	102	195	127	98	115	97	108	120	100
29	100	101	107	96	-----	127	100	113	96	108	122	99
30	97	102	101	94	-----	127	102	112	96	109	122	99
31	94	-----	102	92	-----	126	-----	108	-----	110	121	-----
TOTAL	2,993	2,658	3,333	7,305	4,631	3,864	3,389	3,267	3,050	3,203	3,420	3,361
MEAN	96.5	88.6	108	236	165	125	113	105	102	103	110	112
MAX	112	102	116	2,500	1,100	172	128	115	108	110	122	121
MIN	81	81	101	92	90	109	98	96	96	96	100	99
AC-FT	5,940	5,270	6,610	14,490	9,190	7,660	6,720	6,480	6,050	6,350	6,780	6,670

CAL YR 1968 TOTAL 40,320
WTR YR 1969 TOTAL 44,474

MEAN 110
MEAN 122

MAX 148
MAX 2,500

MIN 80
MIN 81
AC-FT 79,970
AC-FT 88,210

NOTE.--No gage-height record Jan. 20 to Sept. 30.

SALTON SEA BASIN

10-2596. COTTONWOOD WASH NEAR COTTONWOOD SPRING, CALIF.

LOCATION.--Lat 33°44'53", long 115°49'26", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.10, T.5 S., R.11 E., Riverside County, on right bank on Cottonwood Spring road, 1 mile northwest of Cottonwood Spring.

DRAINAGE AREA.--0.71 sq mi.

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

GAGE.--Water-stage recorder with rain-gage attachment, crest-stage gage, and corrugated-pipe culvert control. Altitude of gage is 3,100 ft (from topographic map).

AVERAGE DISCHARGE.--10 years, 0.0007 cfs (0.5 acre-ft per year); median of yearly mean discharges, zero.

EXTREMES.--Current year: Maximum discharge, 13 cfs (estimated) Oct. 3 (gage height, 3.39 ft); no flow all year except Oct. 3.

Period of record: Maximum discharge, 34 cfs Oct. 3, 1966 (gage height, 3.77 ft, from crest-stage gage), on basis of culvert computation of maximum flow; no flow for most of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	C	0	C	C	C	C	0	0	C	0
2	C	0	C	C	C	C	C	C	C	0	C	C
3	.54	C	C	0	0	0	C	C	0	0	C	0
4	0	0	C	C	0	C	0	0	0	0	C	C
5	0	0	C	C	C	C	C	C	0	0	C	0
6	0	C	C	C	0	0	0	0	0	0	C	0
7	0	0	C	0	0	0	C	C	0	0	C	0
8	C	0	C	C	C	0	C	C	0	0	C	0
9	0	C	0	C	0	C	0	0	0	0	C	C
10	C	0	C	0	0	C	0	C	0	0	C	C
11	0	C	C	C	C	C	0	C	C	0	C	0
12	C	0	C	0	0	0	0	0	0	0	C	0
13	0	0	C	C	0	C	C	C	0	0	C	0
14	0	0	C	C	C	0	C	C	0	0	C	0
15	0	0	C	C	0	0	0	0	0	0	C	0
16	C	0	C	C	C	C	0	C	C	0	C	0
17	C	0	C	0	0	0	0	0	0	0	C	C
18	0	C	C	C	C	C	0	C	0	0	C	C
19	0	C	C	C	C	0	C	C	0	0	C	0
20	0	0	C	C	C	C	0	C	C	0	C	C
21	0	C	C	0	C	C	0	C	0	0	C	C
22	0	0	C	C	C	C	C	C	C	0	C	0
23	0	C	C	0	0	0	0	0	0	0	C	C
24	0	0	C	0	C	C	0	C	0	0	C	C
25	C	0	C	0	C	C	C	C	C	C	C	0
26	0	0	C	0	0	C	0	0	0	0	C	0
27	0	0	C	C	C	C	0	C	C	C	C	C
28	C	0	C	0	0	C	C	C	C	0	C	C
29	0	C	C	0	-----	0	0	0	0	0	C	C
30	0	C	C	0	-----	C	0	C	C	0	C	C
31	0	-----	C	C	-----	C	-----	C	-----	0	0	-----
TOTAL	0.54	C	C	0	0	C	0	C	C	0	0	0
MEAN	.017	0	C	0	0	0	0	C	0	C	C	C
MAX	.54	0	C	0	0	0	C	C	0	0	C	C
MIN	C	C	C	0	0	C	C	C	C	0	C	0
AC-FT	1.1	0	C	0	0	0	0	0	0	0	C	C
(a)	.7	.1	0	1.0	.2	0	.1	.1	0	0	0	0

CAL YR 1968	TOTAL .64	MEAN .002	MAX .54	MIN 0	AC-FT 1.2
WTR YR 1969	TOTAL .54	MEAN .002	MAX .54	MIN 0	AC-FT 1.0

a Precipitation, in inches.

10-2599.2. WASTEWAY NO. 1 NEAR MECCA, CALIF.

LOCATION.--Lat 33°31'40", long 115°58'23", in NW¼SW¼SW¼ sec.29, T.7 S., R.10 E., Riverside County, on right bank of channel, 1,000 ft upstream from mouth, 2,250 ft downstream from State Highway 111, and 6.6 miles southeast of Mecca.

PERIOD OF RECORD.--February 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 220 ft below mean sea level (from topographic map).

EXTREMES.--Period of record: Maximum daily discharge, 55 cfs Mar. 29, 1966; minimum daily, 2.6 cfs Jan. 23, 24, 1968.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Discharge represents seepage and return flows from irrigated areas. At times, water is wasted from Coachella Canal.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	3.0	3.5	3.2	3.0	2.8	4.1	5.0	5.4	6.5	4.7	4.7
2	4.1	3.2	3.2	3.2	3.0	2.8	4.4	5.0	4.7	4.1	4.7	4.7
3	5.0	3.2	3.2	3.2	3.0	2.8	4.4	5.0	4.7	4.1	4.7	4.7
4	5.7	3.5	3.2	3.2	3.2	2.8	4.7	5.0	4.4	4.7	4.7	4.7
5	5.0	4.1	3.2	3.2	3.2	2.8	4.7	5.0	4.7	10	4.7	4.7
6	5.7	4.1	3.2	3.0	3.0	3.0	5.0	4.7	4.7	11	4.7	4.7
7	4.1	4.1	3.5	3.0	3.0	3.2	5.0	4.1	6.1	6.5	4.7	4.7
8	4.1	4.1	3.8	3.0	3.0	3.2	5.0	4.4	5.7	5.4	4.7	4.7
9	4.1	4.1	3.8	3.0	3.2	3.2	5.0	4.7	10	5.0	4.7	4.7
10	4.1	3.8	3.8	3.0	3.2	3.2	5.0	4.7	4.1	5.0	4.7	4.7
11	4.0	3.5	3.8	3.0	3.2	3.2	5.0	4.4	4.1	5.0	4.7	4.9
12	4.0	3.8	3.8	3.0	3.5	3.2	5.0	4.1	3.8	5.0	4.7	4.9
13	4.0	3.8	3.8	3.0	3.2	3.2	5.0	4.1	3.8	5.0	4.7	4.9
14	3.9	3.5	3.5	3.0	3.0	3.2	5.0	4.4	4.1	5.0	4.7	4.9
15	3.9	3.5	3.5	3.0	3.0	3.2	5.0	4.4	4.4	5.0	4.7	4.8
16	3.8	3.5	4.1	3.0	3.2	3.0	5.0	4.7	4.4	5.0	4.7	4.8
17	3.8	3.2	3.8	3.0	3.2	2.8	5.0	5.0	4.4	5.0	4.7	4.7
18	3.8	3.2	3.8	3.0	3.2	2.6	5.0	5.0	5.4	5.0	4.7	4.7
19	3.8	3.2	3.8	3.0	3.0	2.6	5.0	5.0	5.7	5.0	4.7	4.7
20	3.5	3.5	3.8	3.0	3.2	2.8	5.0	5.4	4.7	5.0	4.7	4.7
21	3.2	3.8	3.8	2.8	3.2	3.0	4.4	5.7	4.7	5.0	4.7	4.7
22	3.2	3.8	4.1	2.8	3.0	3.0	4.4	5.4	4.7	5.0	4.7	4.1
23	3.2	3.8	3.8	2.8	3.0	3.0	4.7	4.7	5.0	5.0	4.7	4.4
24	3.2	3.8	3.8	2.8	3.0	3.0	5.4	4.7	4.1	5.0	4.7	4.4
25	3.2	3.5	3.8	3.0	2.8	3.2	6.1	4.6	3.8	5.0	4.7	4.4
26	3.2	4.1	3.2	3.0	2.8	3.8	5.4	4.4	4.4	5.0	4.7	4.4
27	3.2	4.7	3.0	3.0	2.6	3.8	4.7	4.4	4.7	5.0	4.7	4.4
28	3.0	3.8	3.2	3.0	2.8	3.5	4.4	5.0	4.4	5.0	4.7	4.7
29	3.0	3.5	3.2	3.0	-----	3.8	4.7	5.0	3.8	5.0	4.7	4.7
30	3.0	3.5	3.2	2.8	-----	4.1	4.7	5.4	3.8	5.0	4.7	4.7
31	3.0	-----	3.2	3.0	-----	4.4	-----	5.4	-----	5.0	4.7	-----
TOTAL	118.9	110.2	110.4	93.0	85.7	98.2	146.2	148.8	142.7	167.3	145.7	139.9
MEAN	3.84	3.67	3.56	3.00	3.06	3.17	4.87	4.80	4.76	5.40	4.70	4.66
MAX	5.7	4.7	4.1	3.2	3.5	4.4	6.1	5.7	10	11	4.7	4.9
MIN	3.0	3.0	3.0	2.8	2.6	2.6	4.1	4.1	3.8	4.1	4.7	4.1
AC-FT	236	219	219	184	170	195	290	295	283	332	289	277

CAL YR 1968 TOTAL 1,641.7 MEAN 4.49 MAX 23 MIN 2.6 AC-FT 3,260
 WTR YR 1969 TOTAL 1,507.0 MEAN 4.13 MAX 11 MIN 2.6 AC-FT 2,990

NOTE.--No gage-height record July 9 to Sept. 19.

EMERSON LAKE BASIN

10-2602. PIPES CREEK NEAR YUCCA VALLEY, CALIF.

LOCATION.--Lat 34°10'19", long 116°32'45", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.1 N., R.4 E., San Bernardino County, on left bank 2.8 miles upstream from Antelope Wash, and 6.8 miles northwest of Yucca Valley.

DRAINAGE AREA.--15.1 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 4,435.40 ft above mean sea level.

AVERAGE DISCHARGE.--11 years, 0.041 cfs (30 acre-ft per year); median of yearly mean discharges, zero.

EXTREMES.--Current year: Maximum discharge, 252 cfs Feb. 25 (gage height, 3.84 ft), from rating curve extended above 6.0 cfs on basis of slope-conveyance measurement of peak flow; no flow for most of year.
Period of record: Maximum discharge, 350 cfs Dec. 29, 1965 (gage height, 3.52 ft), on basis of field estimate of maximum flow; no flow for all or most of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	.68	.24	.20	0	0	0	0
2	0	0	0	0	0	.60	.34	.20	0	0	0	0
3	0	0	0	0	0	.53	.29	.20	0	0	0	0
4	0	0	0	0	0	.50	.20	.20	0	0	0	0
5	0	0	0	0	0	.50	.34	.20	0	0	0	0
6	0	0	0	0	0	.48	.20	.34	0	0	0	0
7	0	0	0	0	0	.46	.20	.34	0	0	0	0
8	0	0	0	0	0	.34	.20	.34	0	0	0	0
9	0	0	0	0	0	.29	.20	.34	0	0	0	0
10	0	0	0	0	0	.29	.20	.20	0	0	0	0
11	0	0	0	0	0	.20	.24	.11	0	0	0	0
12	0	0	0	0	0	.24	.20	.11	0	0	0	0
13	0	0	0	0	0	.78	.20	.11	0	0	0	0
14	0	0	0	0	0	1.2	.17	.07	0	0	0	0
15	0	0	0	0	0	1.2	.14	.07	0	0	0	0
16	0	0	0	0	0	.68	.09	.07	0	0	0	0
17	0	0	0	0	0	.34	.07	.07	0	0	0	0
18	0	0	0	0	0	.78	.14	.07	0	0	0	0
19	0	0	0	0	0	.78	.14	.07	0	0	0	0
20	0	0	0	0	0	.24	.14	.07	0	.02	0	0
21	0	0	0	0	0	.09	.14	.07	0	0	0	0
22	0	0	0	0	0	.17	.14	.07	0	0	0	0
23	0	0	0	0	0	.17	.14	.07	0	0	0	0
24	0	0	0	0	9.9	.14	.17	.07	0	0	0	0
25	0	0	0	1.3	53	.20	.17	.07	0	0	0	0
26	0	0	0	0	3.5	.14	.29	.07	0	0	0	0
27	0	0	0	0	2.3	.17	.40	.06	0	0	0	0
28	0	0	0	0	.78	.17	.20	.06	0	0	0	0
29	0	0	0	0	-----	.17	.20	.06	0	0	0	0
30	0	0	0	0	-----	.20	.20	.06	0	0	0	0
31	0	-----	0	0	-----	.20	-----	.03	-----	0	0	-----
TOTAL	0	0	0	1.3	69.48	12.93	5.99	4.07	0	0.02	0	0
MEAN	0	0	0	.042	2.48	.42	.20	.13	0	.0006	0	0
MAX	0	0	0	1.3	53	1.2	.40	.34	0	.02	0	0
MIN	0	0	0	0	0	.09	.07	.03	0	0	0	0
AC-FT	0	0	0	2.6	138	26	12	8.1	0	.04	0	0
CAL YR 1968	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0		
WTR YR 1969	TOTAL	93.79	MEAN	.26	MAX	53	MIN	0	AC-FT	186		

LUCERNE DRY LAKE BASIN

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10-2604. CUSHENBURY CREEK NEAR LUCERNE VALLEY, CALIF.

LOCATION (revised).--Lat 34°21'52", long 116°50'42", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.3 N., R.1 E., San Bernardino County, on right bank 0.3 mile upstream from San Bernardino National Forest boundary, and 9 miles southeast of Lucerne Valley.

DRAINAGE AREA.--6.36 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,750 ft (from topographic map).

AVERAGE DISCHARGE.--12 years, 0.037 cfs (27 acre-ft per year); median of yearly mean discharges, 0.0004 cfs (0.4 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 530 cfs Feb. 25 (gage height, 5.20 ft), from rating curve extended above 160 cfs; no flow for most of year.
Period of record: Maximum discharge, 530 cfs Feb. 25, 1969 (gage height, 5.20 ft), from rating curve extended above 160 cfs; no flow in most years.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	.58	0	0	0	0
6	0	0	0	0	0	0	0	4.1	0	0	0	0
7	0	0	0	0	0	0	0	2.1	0	0	0	0
8	0	0	0	0	0	0	0	1.4	0	0	0	0
9	0	0	0	0	0	0	0	.76	0	0	0	0
10	0	0	0	0	0	0	0	.32	0	0	0	0
11	0	0	0	0	0	0	0	.12	0	0	0	0
12	0	0	0	0	0	0	0	.06	0	0	0	0
13	0	0	0	0	0	0	0	.02	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	25	108	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	25	108	0	0	9.46	0	0	0	0
MEAN	0	0	0	.81	3.86	0	0	.31	0	0	0	0
MAX	0	0	0	25	108	0	0	4.1	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	50	214	0	0	19	0	0	0	0
CAL YR 1968	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0		
WTR YR 1969	TOTAL	142.46	MEAN	.39	MAX	108	MIN	0	AC-FT	283		

NOTE.--No gage-height record Jan. 25.

MOJAVE RIVER BASIN

10-2605. DEEP CREEK NEAR HESPERIA, CALIF.

LOCATION.--Lat 34°20'28", long 117°13'39", in NW¼NE¼SE¼ sec.18, T.3 N., R.3 W., San Bernardino County, on right bank 0.5 mile upstream from confluence with West Fork Mojave River, and 7 miles southeast of Hesperia.

DRAINAGE AREA.--136 sq mi.

PERIOD OF RECORD.--October 1904 to September 1922, October 1929 to current year. Monthly discharge only prior to January 1930, published in WSP 1314.

GAGE.--Water-stage recorder. Broad-crested weir since December 1938. Altitude of gage is 3,050 ft (from topographic map). See WSP 1314 for history of changes prior to Dec. 10, 1938.

AVERAGE DISCHARGE.--58 years, 70.3 cfs (50,930 acre-ft per year); median of yearly mean discharges, 51 cfs (36,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 23,000 cfs Jan. 25 (gage height, 12.83 ft), from rating curve extended above 3,400 cfs on basis of slope-area measurement at gage height, 11.30 ft; minimum daily, 2.2 cfs Oct. 1.

Period of record: Maximum discharge, 46,600 cfs Mar. 2, 1938, based on slope-area measurement of maximum flow; no flow July 17, 18, 1961.

REMARKS.--Records good. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft), used principally for recreation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	6.8	4.2	9.1	270	1,060	754	281	77	33	20	9.6
2	10	6.0	3.8	8.8	218	798	672	267	78	32	20	9.7
3	6.3	5.5	5.6	8.6	193	735	829	256	78	30	17	9.6
4	3.0	6.1	4.4	8.5	178	636	682	251	75	29	18	9.8
5	2.4	6.5	4.4	9.4	172	525	758	242	72	29	15	9.8
6	2.5	6.1	4.2	9.3	353	450	912	457	70	29	14	10
7	4.1	6.2	5.3	9.1	383	375	654	416	68	28	13	11
8	4.4	6.2	6.2	8.9	398	308	645	370	64	28	13	12
9	4.6	6.4	5.5	8.7	363	290	547	285	60	28	15	11
10	5.1	6.4	6.3	8.5	289	297	590	278	57	27	16	10
11	5.1	6.4	6.2	7.4	229	323	654	260	58	27	13	9.6
12	5.3	6.6	6.4	6.4	220	323	675	254	58	28	12	9.6
13	5.3	6.6	7.3	6.0	210	314	653	230	58	27	11	9.6
14	5.0	6.7	8.0	137	200	272	634	209	53	26	10	9.7
15	4.2	7.6	7.6	58	280	204	553	188	52	25	10	9.9
16	6.0	8.3	7.2	34	300	212	459	181	61	25	10	10
17	4.7	8.4	7.8	23	250	247	470	177	59	22	10	10
18	4.1	7.9	8.1	18	284	331	491	172	57	25	10	10
19	4.0	7.9	8.4	19	270	419	486	163	56	24	10	10
20	3.7	21	8.8	610	162	468	488	157	54	24	9.8	9.7
21	3.6	20	9.4	4,450	162	519	497	151	53	29	10	9.9
22	3.5	13	9.6	1,200	169	429	491	138	52	25	9.8	10
23	3.4	10	9.8	335	235	435	453	126	45	22	9.6	10
24	3.2	8.1	9.8	963	5,990	457	399	116	47	21	9.6	9.8
25	3.2	6.1	10	14,700	13,300	419	357	112	43	20	9.5	9.6
26	3.5	6.5	10	7,860	4,530	420	339	106	41	20	9.5	9.5
27	3.7	6.4	10	3,230	1,880	497	315	100	39	20	9.5	9.4
28	4.0	5.7	9.8	1,090	1,280	586	305	94	38	28	9.5	9.4
29	5.0	5.4	9.5	671	-----	627	295	91	37	24	9.5	9.3
30	4.3	5.0	9.4	431	-----	637	284	85	35	25	9.6	9.3
31	3.8	-----	9.3	354	-----	717	-----	79	-----	23	9.6	-----
TOTAL	133.2	235.7	232.3	36,291.7	32,768	14,330	16,341	6,292	1,695	803	372.5	296.8
MEAN	4.30	7.86	7.49	1,171	1,170	462	545	203	56.5	25.9	12.0	9.89
MAX	10	21	10	14,700	13,300	1,060	912	457	78	33	20	12
MIN	2.2	5.0	3.8	6.0	162	204	284	79	35	20	9.5	9.3
AC-FT	264	468	461	71,980	64,990	28,420	32,410	12,480	3,360	1,590	739	589
CAL YR 1968	TOTAL	6,814.0	MEAN	18.6	MAX	162	MIN	1.8	AC-FT	13,520		
WTR YR 1969	TOTAL	109,791.2	MEAN	301	MAX	14,700	MIN	2.2	AC-FT	217,800		

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0945	8.00	10,400	3-20	2315	3.07	575
1-25	1145	12.83	23,000	4-5	2330	4.05	1,700
2-6	1800	2.91	480	5-6	1645	3.12	618
2-25	1100	10.75	17,600				

10-2610. WEST FORK MOJAVE RIVER NEAR HESPERIA, CALIF.

LOCATION.--Lat 34°20'27", long 117°14'24", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.3 N., R.3 W., San Bernardino County, on left bank at highway bridge, 0.5 mile upstream from confluence with Deep Creek, and 6.5 miles southeast of Hesperia.

DRAINAGE AREA.--74.6 sq mi.

PERIOD OF RECORD.--October 1904 to September 1922, October 1929 to current year. Prior to February 1930, monthly discharge only, published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 3,050 ft (from topographic map). Prior to June 30, 1922, staff gage and water-stage recorder several hundred feet downstream at different datum. June 30, 1942, to Apr. 14, 1966, at datum 2.00 ft higher.

AVERAGE DISCHARGE.--58 years, 42.5 cfs (30,770 acre-ft per year); median of yearly mean discharges, 24 cfs (17,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 20,000 cfs Feb. 25 (gage height, 17.75 ft, from floodmarks), from rating curve extended above 2,700 cfs on basis of slope-area measurement of peak flow; no flow Oct. 1 to Jan. 12, Jan. 14-19, Aug. 10 to Sept. 30.

Period of record: Maximum discharge, 26,100 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--Records fair. No regulation above station. Water diverted from Lake Gregory for domestic use and fire protection. One small diversion for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	168	500	184	64	25	13	.03	0
2	0	0	0	0	140	420	186	62	24	13	.03	0
3	0	0	0	0	116	370	272	60	23	12	.02	0
4	0	0	0	0	109	350	177	59	22	12	.02	0
5	0	0	0	0	252	325	166	79	21	11	.02	0
6	0	0	0	0	1,610	315	180	104	20	11	.01	0
7	0	0	0	0	636	305	136	90	20	10	.01	0
8	0	0	0	0	343	290	116	76	19	9.0	.01	0
9	0	0	0	0	252	280	110	70	19	8.0	.01	0
10	0	0	0	0	214	275	102	66	18	7.0	0	0
11	0	0	0	0	204	265	98	62	18	6.0	0	0
12	0	0	0	0	200	260	94	58	18	5.0	0	0
13	0	0	0	.1	190	250	91	54	17	4.0	0	0
14	0	0	0	0	168	245	88	52	17	3.0	0	0
15	0	0	0	0	287	240	86	49	17	2.5	0	0
16	0	0	0	0	392	235	84	47	16	2.0	0	0
17	0	0	0	0	238	230	82	45	16	1.6	0	0
18	0	0	0	0	273	228	81	43	16	1.2	0	0
19	0	0	0	0	249	224	80	41	15	.90	0	0
20	0	0	0	213	222	216	80	39	15	.60	0	0
21	0	0	0	1,480	210	238	79	38	15	.40	0	0
22	0	0	0	760	221	226	78	37	15	.30	0	0
23	0	0	0	265	1,290	212	76	35	14	.20	0	0
24	0	0	0	342	6,260	202	75	33	14	.10	0	0
25	0	0	0	7,190	11,100	192	74	32	14	.09	0	0
26	0	0	0	3,980	4,520	178	72	31	14	.08	0	0
27	0	0	0	1,040	1,500	182	71	30	14	.07	0	0
28	0	0	0	503	1,000	184	70	29	13	.06	0	0
29	0	0	0	346	-----	184	68	28	13	.05	0	0
30	0	0	0	256	-----	186	66	27	13	.04	0	0
31	0	-----	0	205	-----	192	-----	26	-----	.04	0	-----
TOTAL	0	0	0	16,580.1	32,364	7,999	3,222	1,566	515	134.23	0.16	0
MEAN	0	0	0	535	1,156	258	107	50.5	17.2	4.33	.005	0
MAX	0	0	0	7,190	11,100	500	272	104	25	13	.03	0
MIN	0	0	0	0	109	178	66	26	13	.04	0	0
AC-FT	0	0	0	32,890	64,190	15,870	6,390	3,110	1,020	266	.3	0
CAL YR 1968	TOTAL	2,417.30	MEAN	6.60	MAX	200	MIN	0	AC-FT	4,790		
WTR YR 1969	TOTAL	62,380.49	MEAN	171	MAX	11,100	MIN	0	AC-FT	123,700		

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1000	9.22	5,820	2-15	2300	3.90	705
1-25	1200	12.85	13,200	2-25	0900	17.75	20,000
2- 6	0800	7.40	4,100				

NOTE.--No gage-height record Feb. 27 to Mar. 17, Apr. 9 to Aug. 9.

MOJAVE RIVER BASIN

10-2615. MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CALIF.

LOCATION (revised).--Lat 34°34'23", long 117°19'11", in SW¼SW¼SE¼ sec.29, T.6 N., R.4 W., San Bernardino County, on left bank 650 ft upstream from bridge on county road, formerly U.S. Highway 66, 0.6 mile downstream from Atchison, Topeka and Santa Fe Railway bridge, and 3 miles northwest of Victorville. Prior to July 17, 1969, at site 350 ft upstream at datum 3.00 ft higher.

DRAINAGE AREA.--514 sq mi.

PERIOD OF RECORD.--February 1899 to September 1906, October 1930 to current year. Monthly discharge only for January to September 1906, October, November 1930, published in WSP 1314. Prior to October 1936, published as "at Victorville" and as "near Victorville" in 1937.

GAGE.--Water-stage recorder. Altitude of gage is 2,650 ft (from topographic map). See WSP 1314 for history of gage changes prior to Mar. 28, 1938. Mar. 28, 1938, to Apr. 14, 1966, at site 350 ft upstream at datum 5.00 ft higher; Apr. 14, 1966, to July 17, 1969, at site 350 ft upstream at datum 3.00 ft higher.

AVERAGE DISCHARGE.--46 years, 77.8 cfs (56,320 acre-ft per year); median of yearly mean discharges, 39 cfs (28,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 34,500 cfs Feb. 25 (gage height, 12.8 ft, from floodmarks); minimum daily, 14 cfs Oct. 27.

Period of record: Maximum discharge, 70,600 cfs Mar. 2, 1938 (gage height, 23.7 ft, present datum), from rating curve extended above 10,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 6 cfs Aug. 19, 21, 26, 1951.

REMARKS.--Records good prior to Jan. 27 and fair thereafter. Periodic regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 5,000 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	22	25	43	160	2,300	700	225	34	32	31	28
2	24	23	24	39	140	2,100	750	210	32	31	31	28
3	25	24	22	37	128	1,800	780	200	30	31	30	28
4	26	24	19	37	117	1,550	780	190	28	30	30	28
5	23	23	21	37	250	1,390	820	205	27	30	30	28
6	23	21	23	37	1,300	1,210	840	350	26	30	30	27
7	22	22	27	37	900	1,100	720	330	26	31	30	27
8	21	22	27	37	670	1,000	640	300	25	31	29	27
9	21	23	29	37	470	920	610	250	25	31	29	27
10	22	23	29	36	410	840	630	215	24	32	29	26
11	22	23	23	37	360	770	640	195	24	32	29	26
12	21	22	17	39	320	720	640	175	24	32	29	26
13	20	22	21	39	280	670	600	160	24	33	29	26
14	20	22	23	42	240	630	520	150	24	33	29	26
15	23	24	27	43	330	600	470	138	40	34	29	26
16	25	22	29	42	500	560	440	128	30	34	29	26
17	25	22	31	39	410	530	430	119	70	35	29	26
18	25	22	32	44	330	510	420	110	45	35	29	26
19	25	22	36	44	310	490	410	101	42	35	29	26
20	24	22	36	44	300	600	400	94	38	35	29	26
21	24	22	39	1,230	270	680	380	87	37	34	29	27
22	23	23	39	881	250	680	360	81	36	34	29	27
23	23	23	39	290	800	680	350	75	35	34	29	27
24	22	22	39	94	7,000	660	330	69	34	34	29	27
25	21	21	42	17,500	21,000	640	310	63	34	33	29	27
26	15	21	40	8,480	11,500	580	290	58	33	33	29	27
27	14	22	40	3,950	4,500	560	280	53	33	33	29	27
28	15	25	42	2,420	2,800	560	265	47	33	32	29	27
29	16	26	39	1,310	-----	580	250	44	32	32	29	27
30	17	25	42	552	-----	630	240	41	32	32	29	27
31	19	-----	43	200	-----	670	-----	37	-----	31	28	-----
TOTAL	669	680	965	37,697	56,045	27,210	15,295	4,500	977	1,009	907	804
MEAN	21.6	22.7	31.1	1,216	2,002	878	510	145	32.6	32.5	29.3	26.8
MAX	26	26	43	17,500	21,000	2,300	840	350	70	35	31	28
MIN	14	21	17	36	117	490	240	37	24	30	28	26
AC-FT	1,330	1,350	1,910	74,770	111,200	53,970	30,340	8,930	1,940	2,000	1,800	1,590
CAL YR 1968	TOTAL	8,830.4	MEAN	24.1	MAX	45	MIN	8.7	AC-FT	17,510		
WTR YR 1969	TOTAL	146,758	MEAN	402	MAX	21,000	MIN	14	AC-FT	291,100		

PEAK DISCHARGE (BASE, 200 CFS)					
DATE	TIME	G.H.	DISCHARGE	DATE	TIME
1-21	1400	a10.00	6,800	2-25	b1200
1-25	1500	a16.5	33,800	4- 6	unknown
2- 6	b1400	unknown	b3,500	5- 6	unknown
					unknown
					DISCHARGE
					34,500
					b900
					b400

NOTE.--No gage-height record or stage-discharge relation indefinite Jan. 27 to Sept. 9.

- a Present datum.
- b Estimated.
- c From floodmarks.

10-2619. MOJAVE RIVER AT WILD CROSSING, NEAR HELENDALE, CALIF.

LOCATION.--Lat 34°46'58", long 117°16'35", in NE¼NE¼SE¼ sec.15, T.8 N., R.4 W., San Bernardino County, on downstream wingwall of bridge on Indian Trail road at Wild Crossing, 4.7 miles northeast of Helendale.

DRAINAGE AREA.--960 sq mi.

PERIOD OF RECORD.--March 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,360 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 32,200 cfs (estimated) Feb. 25 (gage height, 6.79 ft); no flow for most of year.

Period of record: Maximum discharge, 32,200 cfs (estimated) Feb. 25, 1969 (gage height, 6.79 ft); no flow for most of each year.

REMARKS.--Records poor. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 10,000 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	142	2,600	700	150	0	0	0	0
2	0	0	0	0	126	2,000	730	161	0	0	0	0
3	0	0	0	0	115	1,600	700	142	0	0	0	0
4	0	0	0	0	105	1,350	684	155	0	0	0	0
5	0	0	0	0	97	1,150	744	179	0	0	0	0
6	0	0	0	0	581	1,000	764	232	0	0	0	0
7	0	0	0	0	561	900	534	310	0	0	0	0
8	0	0	0	0	460	800	526	197	0	0	0	0
9	0	0	0	0	400	720	428	191	0	0	0	0
10	0	0	0	0	350	660	456	170	0	0	0	0
11	0	0	0	0	300	600	470	158	0	0	0	0
12	0	0	0	0	270	560	428	142	0	0	0	0
13	0	0	0	0	250	520	428	130	0	0	0	0
14	0	0	0	0	230	490	380	120	0	0	0	0
15	0	0	0	0	210	460	414	110	8.7	0	0	0
16	0	0	0	0	324	440	340	100	0	0	0	0
17	0	0	0	0	266	420	274	88	44	0	0	0
18	0	0	0	0	300	400	215	45	0	0	0	0
19	0	0	0	0	266	390	232	46	0	0	0	0
20	0	0	0	0	209	498	300	65	0	0	0	0
21	0	0	0	326	161	604	300	60	0	0	0	0
22	0	0	0	762	155	744	300	46	0	0	0	0
23	0	0	0	246	191	652	258	36	0	0	0	0
24	0	0	0	40	2,610	652	240	10	0	0	0	0
25	0	0	0	11,900	17,000	668	220	0	0	0	0	0
26	0	0	0	9,760	12,000	526	200	38	0	0	0	0
27	0	0	0	4,480	6,000	510	180	26	0	0	0	0
28	0	0	0	789	3,500	500	170	5.2	0	0	0	0
29	0	0	0	310	-----	550	160	0	0	0	0	0
30	0	0	0	203	-----	600	150	0	0	0	0	0
31	0	-----	0	161	-----	670	-----	0	-----	0	0	-----
TOTAL	0	0	0	28,977	47,179	24,234	11,925	3,112.2	52.7	0	0	0
MEAN	0	0	0	935	1,685	782	398	100	1.76	0	0	0
MAX	0	0	0	11,900	17,000	2,600	764	310	44	0	0	0
MIN	0	0	0	0	97	390	150	0	0	0	0	0
AC-FT	0	0	0	57,480	93,580	48,070	23,650	6,170	105	0	0	0
CAL YR 1968	TOTAL	3.80	MEAN	.010	MAX	3.	MIN	0	AC-FT	7.5		
WTR YR 1969	TOTAL	115,479.90	MEAN	316	MAX	17,000	MIN	0	AC-FT	229,100		

PEAK DISCHARGE (BASE, 100 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1630	4.86	a4,200	2-25	1500	6.79	a32,200
1-25	2045	7.10	a31,000	4- 6	1100	3.45	1,600
2- 6	1700	3.65	a1,900	6-16	2400	1.64	203

NOTE.--No gage-height record or stage-discharge relation indefinite Jan. 26-29, Feb. 2-5, 8-15, Feb. 26 to Mar. 17, Mar. 27 to Apr. 3, Apr. 25-30, May 10-15.

a Estimated.

MOJAVE RIVER BASIN

10-2625. MOJAVE RIVER AT BARSTOW, CALIF.

LOCATION (revised).--Lat 34°54'25", long 117°01'19", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.10 N., R.1 W., San Bernardino County, on left bank 75 ft upstream from bridge on U.S. Highway 91 at Barstow.

DRAINAGE AREA.--1,290 sq mi.

PERIOD OF RECORD.--October 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,089.80 ft above mean sea level.

AVERAGE DISCHARGE.--39 years, 26.1 cfs (18,900 acre-ft per year); median of yearly mean discharges, zero.

EXTREMES.--Current year: Maximum discharge, 30,000 cfs Feb. 25 (gage height, 6.80 ft); no flow for most of year.

Period of record: Maximum discharge, 64,300 cfs Mar. 3, 1938 (gage height, 8.60 ft), on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--Records fair. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 15,000 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	70	2,000	444	0	0	0	0	0
2	0	0	0	0	30	1,000	523	0	0	0	0	0
3	0	0	0	0	10	400	412	0	0	0	0	0
4	0	0	0	0	0	250	364	0	0	0	0	0
5	0	0	0	0	0	195	364	0	0	0	0	0
6	0	0	0	0	50	155	396	0	0	0	0	1.2
7	0	0	0	0	348	130	425	40	0	0	0	0
8	0	0	0	0	22	113	400	103	0	0	0	0
9	0	0	0	0	5.0	100	380	103	0	0	0	0
10	0	0	0	0	0	90	350	30	0	0	0	0
11	0	0	0	0	0	81	320	10	0	0	0	0
12	0	0	0	0	0	73	300	0	0	0	0	0
13	0	0	0	0	0	67	270	0	0	0	0	0
14	0	0	0	0	0	62	255	0	0	0	0	0
15	0	0	0	0	0	58	240	0	0	0	0	0
16	0	0	0	0	0	54	220	0	0	0	0	0
17	0	0	0	0	0	51	200	0	0	0	0	0
18	0	0	0	0	0	42	180	0	0	0	0	0
19	0	0	0	0	0	58	165	0	0	0	0	0
20	0	0	0	0	0	160	150	0	0	.79	0	0
21	0	0	0	66	0	204	132	0	0	0	0	0
22	0	0	0	212	0	180	118	0	0	0	0	0
23	0	0	0	92	5.0	160	100	0	0	0	0	0
24	0	0	0	0	1,100	192	84	0	0	0	0	0
25	0	0	0	5,390	14,800	170	70	0	0	0	0	0
26	0	0	0	11,100	10,300	170	60	0	0	0	0	0
27	0	0	0	4,790	5,000	170	50	0	0	0	0	0
28	0	0	0	910	4,300	204	40	0	0	0	0	0
29	0	0	0	310	-----	240	20	0	0	0	0	0
30	0	0	0	170	-----	264	10	0	0	0	0	0
31	0	-----	0	120	-----	288	-----	0	-----	0	0	-----
TOTAL	0	0	0	23,160	36,040.0	7,381	7,042	286	0	0.79	0	1.2
MEAN	0	0	0	747	1,287	238	235	9.23	0	.026	0	.040
MAX	0	0	0	11,100	14,800	2,000	523	103	0	.79	0	1.2
MIN	0	0	0	0	0	42	10	0	0	0	0	0
AC-FT	0	0	0	45,940	71,480	14,640	13,970	567	0	1.6	0	2.4
CAL YR 1968	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0		
WTR YR 1969	TOTAL	73,910.99	MEAN	202	MAX	14,800	MIN	0	AC-FT	146,600		

PEAK DISCHARGE (BASE, 100 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	2300	3.00	1,300	2- 6	2300	2.25	800
1-25	2400	6.75	29,000	2-25	1900	6.80	30,000

NOTE.--Stage-discharge relation indefinite Feb. 24-26, Apr. 7-26.

MOJAVE RIVER BASIN

85

10-2626. BOOM CREEK NEAR BARSTOW, CALIF.

LOCATION.--Lat 34°54'20", long 116°56'57", in NE¼NW¼NE¼ sec.2, T.9 N., R.1 W., San Bernardino County, at culvert on U.S. Highways 91 and 466, 4.3 miles east of Barstow.

DRAINAGE AREA.--0.24 sq mi.

PERIOD OF RECORD.--Water years 1959-66 (annual maximum); October 1966 to current year.

GAGE.--Water-stage recorder with rain-gage attachment and culvert control. Altitude of gage is 2,280 ft (from topographic map). Jan. 13, 1959, to Feb. 8, 1967, non-recording crest-stage gage at same site and datum.

EXTREMES.--Current year: Maximum discharge, 43 cfs Sept. 6 (gage height, 10.53 ft), from rating curve based on computations of flow through culvert; no flow all year except Sept. 6.

Period of record: Maximum discharge, 125 cfs Sept. 1, 1960 (gage height, 14.23 ft), on basis of computation of maximum flow through culvert; no flow for most of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	.94
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0.94
MEAN	0	0	0	0	0	0	0	0	0	0	0	.031
MAX	0	0	0	0	0	0	0	0	0	0	0	.94
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	0	0	1.9
(a)	.1	.2	.1	.9	1.4	.2	.3	.2	.2	.2	0	.8

CAL YR 1968 TOTAL .47 MFAN .001 MAX .47 MIN 0 AC-FT 1.0
WTR YR 1969 TOTAL .94 MFAN .003 MAX .94 MIN 0 AC-FT 1.8

a Precipitation, in inches.

MOJAVE RIVER BASIN

10-2630. MOJAVE RIVER AT AFTON, CALIF.

LOCATION (revised).--Lat 35°02'14", long 116°23'00", in SW¼NW¼SE¼ sec.18, T.11 N., R.6 E., San Bernardino County, on downstream end of right pier of Union Pacific Railroad bridge, 0.3 mile west of Afton.

DRAINAGE AREA.--2,120 sq mi.

PERIOD OF RECORD.--October 1929 to September 1932, October 1952 to current year. Records for the 1930 water year incomplete, yearly estimate published in WSP 1314.

GAGE.--Water-stage recorder. Datum of gage is 1,400.15 ft above mean sea level. Dec. 21, 1929, to Sept. 30, 1932, at site 1.7 miles downstream at different datum.

AVERAGE DISCHARGE.--20 years, 6.95 cfs (5,030 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 18,000 cfs Jan. 26 (gage height, 10.40 ft), from rating curve extended as explained below; no flow Oct. 1 to Dec. 4.

Period of record: Maximum discharge, 18,000 cfs Jan. 26, 1969 (gage height, 10.40 ft), from rating curve extended above 3,200 cfs on basis of slope-area measurement of maximum flow; no flow for some days in many years.

REMARKS.--Records poor. Natural flow affected by ground-water withdrawals, diversions, municipal use, and storage in two small reservoirs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.67	6.8	1,100	57	1.2	.92	.70	.53	.34
2	0	0	0	.67	5.0	880	72	1.2	.91	.69	.53	.34
3	0	0	0	.67	4.0	560	86	1.2	.90	.68	.53	.34
4	0	0	0	.97	3.3	400	94	1.2	.89	.67	.53	.34
5	0	0	.05	.97	2.8	300	112	1.2	.89	.66	.53	.34
6	0	0	.10	.97	2.5	230	118	1.2	.88	.65	.52	.34
7	0	0	.15	.97	1.7	190	140	1.2	.87	.64	.52	.34
8	0	0	.21	.81	9.7	150	118	1.2	.86	.64	.52	.32
9	0	0	.28	.97	3.3	62	114	1.1	.85	.64	.52	.32
10	0	0	.28	.67	1.2	43	112	1.1	.84	.64	.52	.32
11	0	0	.21	.67	.97	30	67	1.1	.83	.63	.51	.30
12	0	0	.21	.67	.89	21	76	1.1	.82	.63	.51	.30
13	0	0	.36	.67	.89	15	95	1.1	.81	.63	.50	.30
14	0	0	.36	.81	.89	11	120	1.1	.80	.62	.50	.30
15	0	0	.45	.67	.89	8.0	122	1.1	.80	.62	.50	.29
16	0	0	.45	.67	.89	5.8	106	1.1	.79	.62	.48	3.0
17	0	0	.45	.67	.89	4.2	25	1.1	.79	.61	.48	.66
18	0	0	.45	.67	1.0	3.5	13	1.0	.78	.61	.46	.66
19	0	0	.55	.81	.82	2.9	10	1.0	.78	.60	.46	.64
20	0	0	.55	.97	.82	2.4	8.0	1.0	.77	.60	.44	.64
21	0	0	.55	.97	.75	2.0	6.0	1.0	.76	.59	.44	.64
22	0	0	.45	.67	.82	29	4.5	1.0	.75	.59	.42	.62
23	0	0	.55	.50	.82	37	3.5	1.0	.74	.58	.42	.62
24	0	0	.55	.36	.89	25	2.8	.99	.73	.58	.42	.62
25	0	0	.67	6.7	9,500	26	2.2	.98	.73	.56	.40	.60
26	0	0	.81	6,050	5,500	31	1.8	.97	.72	.56	.40	.60
27	0	0	.67	3,430	3,000	30	1.6	.96	.72	.54	.38	.58
28	0	0	.67	870	1,700	24	1.4	.95	.71	.54	.38	.58
29	0	0	1.1	292	-----	26	1.3	.94	.71	.54	.38	.56
30	0	0	.81	69	-----	35	1.3	.93	.70	.54	.35	.56
31	0	-----	.67	9.4	-----	47	-----	.92	-----	.54	.35	-----
TOTAL	0	0	12.61	10,745.22	19,752.53	4,330.8	1,691.4	33.14	24.05	18.94	14.43	45.12
MEAN	0	0	.41	347	705	140	56.4	1.07	.80	.61	.47	1.50
MAX	0	0	1.1	6,050	9,500	1,100	140	1.2	.92	.70	.53	.29
MIN	0	0	0	.40	.80	2.0	1.3	.92	.70	.54	.35	.30
AC-FT	0	0	25	21,310	39,180	8,590	3,350	66	48	38	29	89

CAL YR 1968 TOTAL 105.91 MEAN .29 MAX 4.9 MIN 0 AC-FT 210
WTR YR 1969 TOTAL 36,668.89 MEAN 100 MAX 9,500 MIN 0 AC-FT 72,730

PEAK DISCHARGE (BASE, 100 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-26 1400 10.40 18,000 9-15 0100 3.33 213
2-25 1300 10.00 16,400

NOTE.--No gage-height record
Apr. 17 to Sept. 14, Sept. 17-30.

ANTELOPE VALLEY

87

10-2635. BIG ROCK CREEK NEAR VALYERMO, CALIF.

LOCATION.--Lat 34°25'15", long 117°50'19", in NW¼SE¼NE¼ sec.20, T.4 N., R.9 W., Los Angeles County, on left bank 0.1 mile upstream from Punchbowl Canyon, and 1.9 miles southwest of Valyermo.

DRAINAGE AREA.--22.9 sq mi.

PERIOD OF RECORD.--January 1923 to current year. Monthly discharge only for October 1937 to January 1939, published in WSP 1314. Prior to October 1954, published as Rock Creek near Valyermo.

GAGE.--Water-stage recorder. Altitude of gage is 4,050 ft (from topographic map). Prior to May 4, 1938, at same site at different datums. May 4, 1938, to Jan. 26, 1939, at site 0.2 mile downstream (below Punchbowl Canyon) at different datum.

AVERAGE DISCHARGE.--46 years, 16.5 cfs (11,950 acre-ft per year); median of yearly mean discharges, 9.2 cfs (6,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,760 cfs Jan. 25 (gage height, 7.70 ft), from rating curve extended above 190 cfs on basis of slope-area measurement of peak flow; minimum daily, 3.2 cfs Nov. 12, Dec. 18.

Period of record: Maximum discharge, 8,300 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 0.70 cfs Nov. 5, 1951.

REMARKS.--Records fair except those for Aug. 28 to Sept. 30, which are poor. No regulation or diversion above station. Some infiltration into the streambed in the immediate vicinity of station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

COOPERATION.--One discharge measurement furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	4.1	4.7	3.9	120	173	127	92	88	38	22	12
2	5.2	3.7	4.9	3.8	110	149	115	89	94	36	21	12
3	5.3	3.7	5.0	3.8	91	132	117	87	89	35	20	12
4	5.3	3.7	4.9	3.8	63	129	111	85	93	33	19	12
5	5.2	3.8	4.9	3.8	48	133	119	84	89	33	18	12
6	5.0	3.9	4.9	3.8	122	137	124	90	84	33	18	12
7	4.9	3.5	4.9	3.8	88	135	118	102	77	32	18	12
8	4.9	3.5	4.9	3.8	70	123	116	118	74	30	17	12
9	4.7	3.4	5.0	4.0	57	112	114	118	71	30	17	12
10	4.4	3.4	5.7	4.1	48	110	112	115	68	30	17	12
11	4.4	3.4	5.2	4.1	44	106	111	112	64	30	16	12
12	4.1	3.2	5.0	4.1	40	100	111	109	62	30	16	12
13	4.1	3.4	4.7	4.2	35	95	110	107	60	29	16	12
14	4.3	3.5	4.4	4.8	33	92	110	105	57	29	15	12
15	4.3	3.9	4.1	4.8	33	90	110	103	54	28	15	12
16	4.3	4.1	3.8	5.8	33	90	106	101	52	26	15	12
17	3.9	3.8	3.5	5.4	31	89	103	100	51	25	14	12
18	4.0	3.8	3.2	5.3	31	91	105	97	51	25	14	12
19	3.9	3.6	3.4	9.0	31	94	101	96	56	25	14	12
20	3.9	3.5	3.5	177	27	98	105	95	60	25	13	12
21	3.9	3.5	3.5	876	24	91	118	94	57	24	13	12
22	3.6	3.6	3.5	309	23	89	126	94	54	24	13	12
23	3.6	3.7	3.5	250	59	86	130	94	50	24	13	12
24	3.6	3.9	3.5	262	392	84	119	97	48	23	13	12
25	3.6	4.1	4.1	2,370	1,670	83	112	99	45	24	12	12
26	3.6	4.2	4.2	1,800	456	82	108	93	44	25	12	12
27	3.3	4.2	4.1	683	246	82	104	94	42	27	12	12
28	3.3	4.2	3.8	344	194	67	102	91	41	26	12	12
29	3.5	4.1	3.8	180	-----	81	98	100	38	24	12	12
30	3.9	4.3	3.8	148	-----	101	94	99	36	23	12	12
31	4.1	-----	3.8	125	-----	114	-----	92	-----	23	12	-----
TOTAL	131.2	112.7	132.2	7,610.1	4,219	3,238	3,356	3,052	1,849	869	471	360
MEAN	4.23	3.76	4.26	245	151	104	112	98.5	61.6	28.0	15.2	12.0
MAX	5.3	4.3	5.7	2,370	1,670	173	130	118	94	38	22	12
MIN	3.3	3.2	3.2	3.8	23	67	94	84	36	23	12	12
AC-FT	260	224	262	15,090	8,370	6,420	6,660	6,050	3,670	1,720	934	714

CAL YR 1968 TOTAL 3,389.4 MEAN 9.26 MAX 30 MIN 3.2 AC-FT 6,720
WTR YR 1969 TOTAL 25,400.2 MEAN 69.6 MAX 2,370 MIN 3.2 AC-FT 50,380

PEAK DISCHARGE (BASE, 50 CFS)					
DATE	TIME	G.H.	DISCHARGE	DATE	TIME
1-21	0730	4.92	1,570	2-6	0530
1-25	1000	7.70	4,760	2-25	0600
				6.25	2,850

NOTE.--No gage-height record Aug. 28 to Sept. 30.

ANTELOPE VALLEY

10-2640. LITTLE ROCK CREEK NEAR LITTLE ROCK, CALIF.

LOCATION.--Lat 34°27'47", long 118°01'04", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.4 N., R.11 W., Los Angeles County, on right bank 0.3 mile upstream from Santiago Creek, 1.6 miles upstream from Little Rock Palmdale Irrigation District's dam, and 5 miles south of Little Rock.

DRAINAGE AREA.--49.0 sq mi.

PERIOD OF RECORD.--October 1930 to February 1938, May to September 1938, April 1939 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,290 ft (from topographic map). Prior to May 1943, at site 500 ft downstream at different datums (datum changed in March 1939).

AVERAGE DISCHARGE.--37 years (1930-37, 1939-69), 17.3 cfs (12,530 acre-ft per year); median of yearly mean discharges, 9.1 cfs (6,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,900 cfs Jan. 25 (gage height, 14.40 ft), from rating curve extended above 750 cfs on basis of slope-area measurement of peak flow; no flow Oct. 1-30.

Period of record: Maximum discharge, 17,000 cfs (estimated) Mar. 2, 1938; no flow at times in most years.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.10	1.5	2.2	15	299	197	71	19	7.0	2.8	5.5
2	0	.10	1.5	2.2	11	261	166	69	18	7.0	1.6	5.0
3	0	.20	1.5	2.2	21	256	149	64	18	6.2	1.6	4.4
4	0	.20	1.5	2.2	42	216	135	62	18	6.2	.60	3.8
5	0	.30	1.7	3.4	61	151	137	60	18	6.2	1.1	3.3
6	0	.30	1.7	3.9	130	135	142	62	18	7.0	1.1	3.3
7	0	.30	1.7	3.4	87	130	125	66	19	7.0	.60	2.8
8	0	.40	1.7	2.8	73	124	122	63	19	6.2	.60	2.8
9	0	.40	1.7	2.8	70	120	120	63	19	5.5	1.1	1.6
10	0	.40	1.7	2.2	71	116	125	62	19	5.5	1.1	.60
11	0	.50	1.7	1.7	71	113	128	60	19	6.2	1.6	.60
12	0	.50	1.7	1.7	70	109	128	59	19	9.2	1.6	.60
13	0	.60	1.7	1.7	68	113	125	56	17	8.5	2.2	.60
14	0	.60	1.7	12	67	116	120	53	15	7.0	3.3	.60
15	0	1.1	1.7	11	67	119	116	50	15	7.0	3.3	.60
16	0	1.4	1.7	6.2	66	120	110	48	17	6.2	3.3	.60
17	0	1.5	1.7	4.5	62	125	106	46	15	5.5	3.8	.60
18	0	1.5	2.2	3.4	64	128	104	44	14	5.5	4.4	.60
19	0	1.5	2.2	19	60	132	97	41	12	4.4	4.4	.60
20	0	1.4	2.8	159	57	139	97	39	12	4.4	5.0	.60
21	0	1.4	2.8	1,440	55	122	102	37	12	5.0	5.5	1.1
22	0	1.4	2.2	244	57	100	99	35	12	5.0	5.5	1.1
23	0	1.4	2.2	165	87	102	95	31	12	3.3	5.5	1.1
24	0	1.4	2.2	235	328	104	86	29	11	2.8	6.2	1.6
25	0	1.4	2.8	1,730	1,390	116	81	27	10	2.8	7.0	1.1
26	0	1.5	9.0	580	682	139	78	26	10	2.8	7.8	1.1
27	0	1.5	6.7	407	508	153	75	24	9.2	2.8	8.5	1.1
28	0	1.5	4.5	401	351	113	72	23	10	5.5	8.5	.60
29	0	1.5	3.4	331	-----	119	73	21	8.5	5.0	7.8	.60
30	0	1.5	2.8	125	-----	139	73	20	8.5	4.4	7.0	.60
31	0	-----	2.8	42	-----	177	-----	19	-----	3.9	6.2	-----
TOTAL	0	27.80	76.7	5,947.5	4,691	4,406	3,383	1,430	443.2	171.0	120.60	49.10
MEAN	0	.93	2.47	192	168	142	113	46.1	14.8	5.52	3.89	1.64
MAX	0	1.5	9.0	1,730	1,390	299	197	71	19	9.2	8.5	5.5
MIN	0	.10	1.5	1.7	11	100	72	19	8.5	2.8	.60	.60
AC-FT	0	55	152	11,800	9,300	8,740	6,710	2,840	879	339	239	97

CAL YR 1968 TOTAL 2,861.80 MEAN 7.82 MAX 90 MIN 0 AC-FT 5,680
WTR YR 1969 TOTAL 20,745.90 MEAN 56.8 MAX 1,730 MIN 0 AC-FT 41,150

10-2645.6. SPENCER CANYON CREEK NEAR FAIRMONT, CALIF.

LOCATION.--Lat 34°46'33", long 118°34'08", in SE¼SW¼SW¼ sec.15, T.8 N., R.16 W., Los Angeles County, on county road culvert, 8.5 miles northwest of Fairmont.

DRAINAGE AREA.--3.60 sq mi.

PERIOD OF RECORD.--Water years 1959-64 (annual maximum), August 1964 to current year.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 2,950 ft (from topographic map). Jan. 19, 1959, to Aug. 26, 1964, nonrecording and crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--5 years (1964-69), 0.090 cfs (65 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 290 cfs Feb. 25 (gage height, 12.50 ft, from crest-stage gage), from rating curve extended as explained below; no flow all year except Jan. 25, Feb. 25. Period of record: Maximum discharge, 290 cfs Feb. 25, 1969 (gage height, 12.50 ft, from crest-stage gage), from rating curve based on computation of flow through culvert at gage heights 11.11, 11.29, and 11.90 ft; no flow for most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	2.8	12	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	2.8	12	0	0	0	0	0	0	0
MEAN	0	0	0	.090	.43	0	0	0	0	0	0	0
MAX	0	0	0	2.8	12	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	5.6	24	0	0	0	0	0	0	0
CAL YR 1968	TOTAL 0		MEAN 0		MAX 0		MIN 0		AC-FT 0			
WTR YR 1969	TOTAL 14.80		MEAN .041		MAX 12		MIN 0		AC-FT 25			

ANTELOPE VALLEY

10-2645.9. COTTONWOOD CREEK NEAR ROSAMOND, CALIF.

LOCATION.--Lat 34°53'08", long 118°26'11", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.9 N., R.15 W., Kern County, on right side of culvert on dirt road 1.3 miles southeast of West Antelope Aqueduct Station, 8.2 miles west of town of Willow Springs, and 15.3 miles west of Rosamond.

DRAINAGE AREA.--35.7 sq mi.

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

GAGE.--Flood-hydrograph recorder. Altitude of gage is 2,880 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 260 cfs Feb. 25 (gage height, 22.17 ft), from computation of flow through culvert; no flow for most of year.

Period of record: Maximum discharge, 260 cfs Feb. 25, 1969 (gage height, 22.17 ft), from computation of flow through culvert; no flow for most of each year.

REMARKS.--Records poor. No regulation above station. Some pumping at Tejon Ranch Company headquarters for domestic use.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	1.7	0	0	0	0	0	0
19	0	0	0	0	0	1.6	0	0	0	0	0	0
20	0	0	0	0	0	1.5	0	0	0	0	0	0
21	0	0	0	0	0	1.4	0	0	0	0	0	0
22	0	0	0	0	0	1.0	0	0	0	0	0	0
23	0	0	0	0	0	.50	0	0	0	0	0	0
24	0	0	0	0	5.0	0	0	0	0	0	0	0
25	0	0	0	.50	11	0	0	0	0	0	0	0
26	0	0	0	0	2.0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0.50	18.0	7.70	0	0	0	0	0	0
MEAN	0	0	0	.016	.64	.25	0	0	0	0	0	0
MAX	0	0	0	.50	11	1.7	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	1.0	36	15	0	0	0	0	0	0
CAL YR 1968	TOTAL 0		MEAN 0		MAX 0		MIN 0		AC-FT 0			
WTR YR 1969	TOTAL 26.20		MEAN .072		MAX 11		MIN 0		AC-FT 52			

ANTELOPE VALLEY

91

10-2646, OAK CREEK NEAR MOJAVE, CALIF.

LOCATION.--Lat 35°03'00", long 118°21'25", in NW¼ sec.15, T.11 N., R.14 W., Kern County, on upstream right wingwall of culvert, 100 ft downstream from unnamed tributary, 0.1 mile west of junction of Oak Creek and Willow Springs Roads, and 10.5 miles west of Mojave.

DRAINAGE AREA.--15.8 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,100 ft (from topographic map).

AVERAGE DISCHARGE.--12 years, 0.736 cfs (533 acre-ft per year); median of yearly mean discharges, 0.35 cfs (250 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 97 cfs Feb. 25 (gage height, 2.39 ft), from rating curve extended above 14 cfs; minimum daily, 0.20 cfs Jan. 15-17.

Period of record: Maximum discharge, 97 cfs Feb. 25, 1969 (gage height, 2.39 ft), from rating curve extended above 14 cfs; no flow for some months in most years.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.03	.03	.03	.18	4.4	17	7.6	4.2	.63	.76	.68
2	.09	.03	.03	.03	.14	3.5	17	7.8	4.1	.62	.70	.67
3	.08	.03	.03	.03	.14	4.5	20	7.5	4.0	.64	.72	.67
4	.07	.03	.03	.03	.14	4.2	18	7.6	3.9	.62	.71	.67
5	.06	.03	.03	.03	.15	3.6	21	7.3	3.3	.63	.68	.67
6	.05	.03	.03	.03	.36	4.2	21	7.2	3.2	.66	.69	.72
7	.04	.03	.03	.03	.20	4.2	18	7.0	2.8	.70	.67	.84
8	.03	.03	.03	.03	.19	4.2	17	6.7	2.9	.76	.64	.78
9	.03	.03	.03	.03	.19	4.8	16	6.7	3.1	.78	.64	.74
10	.03	.03	.03	.03	.18	5.1	15	6.8	3.3	.80	.76	.80
11	.03	.03	.03	.03	.19	4.5	15	6.5	3.2	.88	.75	.78
12	.03	.03	.03	.03	.19	4.6	13	6.3	3.0	1.4	.70	.77
13	.03	.03	.03	.03	.19	4.0	11	6.3	2.7	2.2	.69	.78
14	.03	.03	.03	.03	.18	3.2	11	6.3	2.3	1.7	.64	.76
15	.03	.03	.03	.03	.22	2.6	13	6.1	2.5	1.5	.71	.78
16	.03	.03	.03	.03	.20	1.5	12	6.3	2.7	1.4	.69	.81
17	.03	.03	.03	.03	.19	1.6	12	6.1	2.6	1.4	.69	.79
18	.03	.03	.03	.03	.29	2.3	12	6.0	2.4	1.3	.64	.77
19	.03	.03	.03	.03	.22	6.0	11	6.3	2.3	1.2	.65	.82
20	.03	.03	.03	.03	.20	6.6	9.8	6.1	2.1	.83	.65	.88
21	.03	.03	.03	.03	.21	6.9	10	6.0	2.3	.83	.63	.88
22	.03	.03	.03	.03	.23	6.7	11	5.8	2.2	.81	.62	.82
23	.03	.03	.03	.03	.29	7.2	11	5.7	2.3	.78	.59	.77
24	.03	.03	.03	.03	7.3	7.7	11	5.5	2.4	.76	.58	.79
25	.03	.03	.03	2.8	45	8.4	10	5.4	2.4	.78	.60	.79
26	.03	.03	.03	2.2	7.5	8.4	9.4	5.2	2.3	.73	.59	.77
27	.03	.03	.03	.94	4.1	8.8	8.6	5.1	2.3	.91	.58	.77
28	.03	.03	.03	.43	4.2	9.5	8.1	4.9	1.9	.90	.66	.77
29	.03	.03	.03	.27	-----	11	8.1	4.7	.71	.83	.67	.77
30	.03	.03	.03	.25	-----	15	7.7	4.5	.66	.78	.68	.75
31	.03	-----	.03	.21	-----	17	-----	4.4	-----	.74	.68	-----
TOTAL	1.21	0.90	0.93	7.82	72.77	186.2	394.7	191.7	80.07	29.50	20.66	23.06
MEAN	.039	.030	.030	.25	2.60	6.01	13.2	6.18	2.67	.95	.67	.77
MAX	.10	.03	.03	2.8	45	17	21	7.8	4.2	2.2	.76	.88
MIN	.03	.03	.03	.03	.14	1.5	7.7	4.4	.66	.62	.58	.67
AC-FT	2.4	1.8	1.8	16	144	369	783	380	150	59	41	46

CAL YR 1968 TOTAL 123.44 MEAN .34 MAX 1.3 MIN 0 AC-FT 245
WTR YR 1969 TOTAL 1,009.52 MEAN 2.77 MAX 45 MIN .03 AC-FT 2,000

PEAK DISCHARGE (BASE, 10 CFS).--Feb. 25 (0315) 97 cfs (2.39 ft); Apr. 5 (1930) 32 cfs (1.83 ft).

KOEHN LAKE BASIN

10-2647.1. GOLER GULCH NEAR RANDSBURG, CALIF.

LOCATION.--Lat 35°23'34", long 117°47'43", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.29 S., R.39 E., Kern County, on Garlock Road, 500 ft east of Southern Pacific Railroad, and 8.0 miles west of Randsburg.

DRAINAGE AREA.--41.3 sq mi (including 3.03 sq mi in closed dry lake basin).

PERIOD OF RECORD.--March 1966 to current year.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 2,100 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 776 cfs Feb. 25 (gage height, 6.94 ft), from rating curve based on computation of flow through culvert and road overflow; no flow all year except Feb. 25, July 20.
 Period of record: Maximum discharge, 776 cfs Feb. 25, 1969 (gage height, 6.94 ft), from rating curve based on computation of flow through culvert and road overflow; no flow most of each year.
 Flood of Sept. 19, 1963, reached a stage of 7.42 ft, from floodmarks (discharge, 972 cfs, based on computation of flow through culvert and road overflow).

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	1.5	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	15	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0	15	0	0	0	0	1.5	0	0
MEAN	0	0	0	0	.54	0	0	0	0	.048	0	0
MAX	0	0	0	0	15	0	0	0	0	1.5	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	30	0	0	0	0	3.0	0	0

CAL YR 1968 TOTAL .20 MEAN .0005 MAX .20 MIN 0 AC-FT .40
 WTR YR 1969 TOTAL 16.50 MEAN .045 MAX 15 MIN 0 AC-FT 33

NOTE.--Record from nonrecording and crest-stage gages only.

10-2647.4. CACHE CREEK NEAR MOJAVE, CALIF.

LOCATION.--Lat 35°07'01", long 118°12'05", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.27, T.32 S., R.35 E., Kern County, on left wing-wall of Cache Creek bridge on State Highway 58, 4.7 miles northwest of Mojave.

DRAINAGE AREA.--96.5 sq mi.

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

GAGE.--Flood-hydrograph recorder. Altitude of gage is 3,280 ft (from topographic map). Recording rain gage at site 12 miles upstream.

EXTREMES.--Current year: Maximum discharge, 65 cfs (estimated) Jan. 25; no flow for most of year.

Period of record: Maximum discharge, 75 cfs Dec. 6, 1966 (gage height, 9.16 ft, from floodmarks), on basis of slope-conveyance measurement of maximum flow; no flow for most of each year.

REMARKS.--Records poor. No regulation above station. Pumping for domestic supply by Tehachapi, Monolith, and Cache Creek Park.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	C	C	C	0	3.4	0	0	0	0	C	0
2	0	0	C	C	C	3.3	0	C	0	0	C	0
3	0	0	C	C	0	3.2	C	C	0	0	C	0
4	0	0	0	0	0	3.1	0	C	0	0	C	0
5	0	0	C	C	C	3.0	0	0	0	0	C	0
6	C	0	0	0	0	2.9	0	C	0	0	C	0
7	0	0	C	0	0	2.8	0	0	0	0	C	0
8	0	0	C	C	C	2.7	0	C	0	0	C	0
9	0	C	C	C	C	2.6	0	0	0	0	C	0
10	0	0	C	0	0	2.5	0	0	0	0	C	0
11	0	0	C	0	C	2.4	0	C	0	0	C	0
12	0	0	C	0	0	2.3	0	C	0	0	C	0
13	0	0	C	C	C	2.2	0	C	0	0	0	0
14	0	0	C	C	C	2.1	0	C	0	0	0	0
15	0	0	C	C	0	2.0	0	0	0	C	C	0
16	0	0	C	0	C	1.9	0	C	0	0	0	0
17	0	C	C	0	0	1.8	0	0	0	0	0	0
18	0	0	C	0	0	1.7	0	0	0	0	C	0
19	0	0	C	C	0	1.6	0	C	0	0	0	0
20	0	0	C	C	0	1.5	0	0	0	0	C	0
21	0	0	0	0	0	1.4	0	0	0	0	0	0
22	0	0	0	0	0	1.3	0	0	0	0	0	0
23	0	0	0	C	0	1.2	0	C	0	0	0	C
24	0	0	0	1.0	1.0	1.1	0	C	0	0	0	0
25	0	C	0	30	25	1.0	0	0	0	0	0	0
26	0	0	0	5.0	5.0	.80	0	0	0	0	0	0
27	0	0	0	3.0	4.0	.60	0	0	0	0	0	0
28	0	0	0	1.0	3.5	.40	0	0	0	0	C	0
29	0	0	0	.50	-----	.20	0	C	0	0	0	0
30	0	0	0	0	-----	.10	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	C	40.50	38.5	57.10	0	0	0	0	0	0
MEAN	0	0	C	1.31	1.38	1.84	0	0	0	0	0	0
MAX	0	0	0	30	25	3.4	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	80	76	113	0	0	0	0	0	0
(a)	0	.55	.79	3.79	4.56	.23	0	.03	.15	.14	0	0

CAL YR 1968 TOTAL .40 MEAN .001 MAX .40 MIN 0 AC-FT .80
 WTR YR 1969 TOTAL 136.10 MEAN .37 MAX 30 MIN 0 AC-FT 270

a Precipitation, in inches.

NOTE.--No gage-height record for periods of flow.

KOEHN LAKE BASIN

10-2647.5. PINE TREE CREEK NEAR MOJAVE, CALIF.

LOCATION.--Lat 35°13'50", long 118°05'07", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.31 S., R.36 E., Kern County, on downstream side of city of Los Angeles aqueduct-siphon pier near right bank, 0.5 mile downstream from unnamed tributary, and 13 miles northeast of Mojave.

DRAINAGE AREA.--33.5 sq mi.

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

GAGE.--Water-stage recorder with rain-gage attachment. Altitude of gage is 2,700 ft (from topographic map). Prior to Oct. 1, 1961, at datum 3.0 ft higher.

AVERAGE DISCHARGE.--11 years, 0.269 cfs (195 acre-ft per year); median of yearly mean discharges, 0.03 cfs (22 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 76 cfs Feb. 25 (gage height, 5.43 ft), from rating curve extended above 100 cfs on basis of slope-area measurement at gage height 5.6 ft; no flow for most of year.

Period of record: Maximum discharge, 30,000 cfs Aug. 23, 1961, on basis of field estimate of maximum flow; no flow for most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	.38	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	.06	4.0	0	0	0	0	0	0	0
25	0	0	0	1.3	21	0	0	0	0	0	0	0
26	0	0	0	2.0	.02	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	3.74	25.02	0	0	0	0	0	0	0
MEAN	0	0	0	.12	.89	0	0	0	0	0	0	0
MAX	0	0	0	2.0	21	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	7.4	50	0	0	0	0	0	0	0
(a)	0	0	0	1.7	2.0	.2	.2	0	.1	0	0	0

CAL YR 1968 TOTAL 0 MEAN 0 MAX 0 MIN 0 AC-FT 0
 WTR YR 1969 TOTAL 28.76 MEAN .079 MAX 21 MIN 0 AC-FT 57

a Precipitation, in inches.

10-2647.7. COTTONWOOD CREEK NEAR CANTIL, CALIF.

LOCATION.--Lat 35°18'50", long 118°02'38", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.19, T.30 S., R.36 E., Kern County, on downstream side of city of Los Angeles aqueduct-siphon pier, 4.3 miles west of Cantil.

DRAINAGE AREA.--163 sq mi.

PERIOD OF RECORD.--March 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 2,400 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 210 cfs Jan. 25 (gage height, 2.59 ft); no flow for most of year.

Period of record: Maximum discharge, 1,170 cfs Aug. 7, 1968 (gage height, 4.14 ft, from crest-stage gage), on basis of slope-area measurement of maximum flow; no flow for most of each year.

Flood of Aug. 8, 1963, 5,150 cfs, result of slope-area measurement.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	C	0	0	0	0	0	0	0	0	0
2	C	0	0	0	0	0	C	C	0	0	0	0
3	0	0	C	0	0	0	0	0	0	0	0	0
4	0	0	0	C	0	0	0	0	0	0	0	0
5	C	C	C	0	0	0	0	C	0	0	0	0
6	0	0	0	0	.30	0	0	0	0	C	C	0
7	0	C	C	C	0	0	0	C	0	0	0	0
8	0	0	C	0	0	0	0	0	0	0	C	0
9	0	0	C	C	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	C	0	0	C	0
11	0	0	0	0	0	0	0	0	0	0	C	0
12	0	0	C	0	0	0	0	C	0	0	C	0
13	0	0	0	0	0	0	0	C	C	0	C	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	C	0	0	C	0	0	0	0	C	0
16	0	0	0	0	.15	0	0	0	0	0	C	0
17	0	0	C	C	0	0	0	C	0	0	0	0
18	0	0	0	0	.82	0	0	C	0	0	C	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	C	C	0	C	0	0	0	0	0	0
21	0	0	0	0	0	0	0	C	C	0	0	0
22	0	0	C	0	0	0	0	0	0	0	C	0
23	0	0	C	C	.73	0	0	0	0	0	0	0
24	0	0	C	.09	1.4	0	0	0	0	C	C	0
25	0	0	C	6.8	14	0	0	0	0	0	C	0
26	0	0	0	0	0	0	0	0	0	0	C	0
27	0	0	C	0	0	0	0	0	0	0	0	0
28	0	C	0	0	0	0	0	C	0	C	C	0
29	0	0	0	0	-----	0	0	0	0	0	C	0
30	0	0	0	0	-----	0	0	0	0	0	C	0
31	0	-----	C	0	-----	0	-----	0	-----	0	0	-----
TOTAL	C	C	0	6.89	17.40	0	0	C	0	0	C	0
MEAN	0	0	C	.22	.62	0	0	C	0	0	C	0
MAX	0	0	C	6.8	14	0	0	0	0	0	C	0
MIN	0	0	C	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	14	35	0	0	C	0	0	C	0
CAL YR 1968	TOTAL 49.00		MEAN .13		MAX 49		MIN 0		AC-FT 97			
WTR YR 1969	TOTAL 24.29		MEAN .067		MAX 14		MIN 0		AC-FT 48			

INDIAN WELLS VALLEY

10-2648.78. NINEMILE CREEK NEAR BROWN, CALIF.

LOCATION.--Lat 35°50'35", long 117°55'35", Inyo County, on left bank 600 ft upstream from Los Angeles aqueduct, and 6.4 miles northwest of Brown.

DRAINAGE AREA.--10.4 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,350 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 0.725 cfs (525 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 238 cfs Jan. 25; maximum gage height, 7.43 ft Feb. 16; no flow Oct. 1 to Jan. 17.

Period of record: Maximum discharge, 437 cfs Oct. 17, 1963 (gage height, 6.50 ft), from rating curve extended above 20 cfs on basis of slope-area measurement of maximum flow; no flow for most of each year.

REMARKS.--Records poor prior to Mar. 14 and good thereafter. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1962 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	C	0	4.0	6.5	5.9	3.7	1.8	1.1	.26	.22
2	0	0	C	0	4.0	6.4	6.2	3.7	1.8	1.1	.22	.22
3	0	0	C	0	4.0	6.3	6.2	3.7	1.6	1.1	.11	.18
4	0	0	C	0	3.8	6.2	5.9	3.7	1.6	1.3	.08	.18
5	0	0	C	0	3.8	6.1	6.2	3.7	1.5	1.5	.06	.22
6	0	0	C	0	8.8	6.0	6.2	3.7	1.5	1.6	.04	.26
7	0	0	C	0	3.6	5.8	5.9	3.5	1.5	1.6	.04	.31
8	0	0	0	0	3.6	5.6	5.6	3.3	1.6	1.6	.03	.31
9	0	0	0	C	3.6	5.4	5.4	3.1	1.8	1.6	.03	.26
10	0	0	C	0	3.6	5.2	4.8	3.1	1.8	1.6	.04	.26
11	0	0	0	0	3.6	5.0	4.6	3.0	1.8	1.5	.05	.31
12	0	0	C	0	3.4	4.8	4.6	3.0	2.3	1.6	.05	.31
13	0	0	C	0	3.4	6.0	4.6	3.0	1.5	1.8	.04	.26
14	0	0	C	0	3.4	5.4	4.6	3.0	1.4	1.6	.05	.31
15	0	0	C	0	7.5	4.8	4.4	3.0	1.4	1.5	.05	.31
16	0	0	0	0	7.0	4.4	4.4	3.0	1.8	1.4	.08	.36
17	0	0	0	0	5.5	4.2	4.4	3.0	1.6	1.4	.08	.42
18	0	C	C	.38	5.0	4.0	4.4	3.0	1.4	1.4	.08	.36
19	0	0	0	7.5	4.5	3.9	4.4	2.8	1.3	1.4	.11	.36
20	0	0	0	6.2	4.5	3.9	4.4	2.8	1.1	1.4	.14	.48
21	0	0	C	33	4.0	4.2	4.4	2.6	1.2	1.3	.14	.54
22	C	C	C	66	4.0	3.9	4.4	2.5	1.1	1.3	.14	.48
23	0	0	0	29	3.8	3.9	4.4	2.0	1.1	1.2	.18	.31
24	0	0	C	24	3.8	3.7	4.4	2.0	1.0	1.0	.18	.31
25	0	C	C	127	25	3.5	4.4	2.0	.93	.84	.18	.31
26	0	0	C	142	10	3.7	4.4	2.0	.93	.76	.22	.31
27	0	0	0	25	7.5	3.9	4.2	2.0	1.0	1.0	.22	.31
28	0	0	C	7.5	7.0	4.6	4.0	2.0	1.1	1.0	.26	.31
29	0	0	0	5.0	-----	5.4	4.0	2.0	1.1	.76	.26	.36
30	0	0	0	4.5	-----	5.1	3.9	1.9	1.1	.68	.31	.26
31	0	-----	0	4.0	-----	4.8	-----	1.8	-----	.36	.31	-----
TOTAL	0	0	C	481.08	155.7	152.6	145.6	87.6	42.66	39.30	4.04	9.40
MEAN	0	0	0	15.5	5.56	4.92	4.85	2.83	1.42	1.27	.13	.31
MAX	0	0	C	142	25	6.5	6.2	3.7	2.3	1.8	.31	.54
MIN	0	0	C	0	3.4	3.5	3.9	1.8	.93	.36	.03	.18
AC-FT	0	0	C	954	309	303	289	174	85	78	8.0	19

CAL YR 1968 TOTAL 36.50 MEAN .10 MAX 3.5 MIN 0 AC-FT 72
WTR YR 1969 TOTAL 1,117.98 MEAN 3.06 MAX 142 MIN 0 AC-FT 2,220

PEAK DISCHARGE (BASE, 10 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-21 1900 4.57 82 2-25 unknown - (a)
1-25 0900 5.55 238

NOTE.--No gage-height record Jan. 27 to Mar. 13.

a Probably less than 50 cfs.

OWENS LAKE BASIN

97

10-2652. CONVICT CREEK NEAR MAMMOTH LAKES, CALIF.

LOCATION.--Lat 37°36'26", long 118°50'52", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.4 S., R.28 E., Mono County, on right bank 1.1 miles downstream from Convict Lake, 2.0 miles upstream from U.S. Highway 395, and 7.0 miles southeast of Mammoth Lakes (Ranger Station).

DRAINAGE AREA.--18.7 sq mi.

PERIOD OF RECORD.--July 1925 to current year. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and wood control. Altitude of gage is 7,450 ft (from topographic map). Prior to Nov. 15, 1926, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--44 years, 24.4 cfs (17,680 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 206 cfs June 4 (gage height, 2.95 ft); minimum daily, 8.7 cfs Oct. 13.

Period of record: Maximum discharge, 290 cfs June 29, 1932 (gage height, 4.43 ft); minimum daily, 1.3 cfs Jan. 10, 1951.

REMARKS.--Some regulation by Convict Lake above station. No diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	9.1	9.5	11	25	28	10	23	168	146	142	52
2	9.1	9.1	8.9	11	22	24	11	23	180	151	142	51
3	9.1	12	9.1	11	20	22	12	24	193	155	140	49
4	9.1	11	9.1	10	18	20	12	25	202	160	138	47
5	9.1	10	9.1	10	18	20	14	26	199	155	132	46
6	9.1	9.9	9.1	10	22	22	13	26	196	150	116	46
7	8.9	9.5	9.3	8.9	20	16	12	27	198	150	108	46
8	8.9	9.3	9.5	10	18	24	12	30	197	150	103	48
9	8.9	9.1	9.1	9.3	17	15	12	33	196	150	96	48
10	8.9	9.3	9.7	9.3	16	15	12	38	183	145	92	47
11	8.9	9.3	9.7	10	16	16	12	44	164	154	91	46
12	9.1	10	9.3	10	14	14	12	49	151	156	93	45
13	8.7	9.5	9.5	9.5	14	13	12	54	137	169	93	43
14	9.9	8.7	10	9.7	14	12	12	59	132	169	90	42
15	9.3	9.9	10	9.7	16	13	12	60	157	191	86	40
16	9.3	11	11	9.7	16	12	13	76	153	183	86	39
17	9.7	10	10	9.7	15	11	14	78	164	163	86	39
18	9.9	10	10	10	15	11	14	80	163	161	86	38
19	9.9	10	11	14	14	14	14	83	159	173	85	36
20	9.9	10	10	14	14	13	14	85	159	181	79	36
21	9.9	9.9	10	16	14	10	14	86	162	181	70	36
22	9.7	9.9	9.9	16	13	10	15	88	168	181	69	35
23	9.7	9.7	9.9	20	14	10	16	91	181	175	67	35
24	9.7	9.9	11	16	53	12	17	96	184	177	66	34
25	9.7	9.3	11	21	96	16	18	106	182	177	65	31
26	9.7	9.3	11	22	27	10	19	121	177	170	64	30
27	9.5	9.5	11	24	25	10	19	130	167	161	64	30
28	9.3	9.5	11	19	25	10	19	145	158	153	63	28
29	9.5	9.5	11	19	-----	10	20	157	153	144	61	28
30	9.3	9.5	11	18	-----	10	20	156	147	141	60	27
31	9.1	-----	11	17	-----	10	-----	163	-----	143	59	-----
TOTAL	290.1	292.7	310.7	414.8	611	453	426	2,282	5,130	5,015	2,792	1,198
MEAN	9.36	9.76	10.0	13.4	21.8	14.6	14.2	73.6	171	162	90.1	39.9
MAX	9.9	12	11	24	96	28	20	163	202	191	142	52
MIN	8.7	8.7	8.9	8.9	13	10	10	23	132	141	59	27
AC-FT	575	581	616	823	1,210	899	845	4,530	10,180	9,950	5,540	2,380
CAL YR 1968	TOTAL	6,381.3	MEAN	17.4	MAX	58	MIN	8.7	AC-FT	12,660		
WTR YR 1969	TOTAL	19,215.3	MEAN	52.6	MAX	202	MIN	8.7	AC-FT	38,110		

OWENS LAKE BASIN

10-2657. ROCK CREEK AT LITTLE ROUND VALLEY, NEAR BISHOP, CALIF.

LOCATION.--Lat 37°33'15", long 118°41'03", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.32, T.4 S., R.30 E., Mono County, on right bank just upstream from diversion to Little Round Valley, 0.6 mile south of Toms Place, and 20 miles northwest of Bishop.

DRAINAGE AREA.--35.8 sq mi.

PERIOD OF RECORD.--January to December 1918, January 1920 to current year. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder. Parshall flume since May 1953. Altitude of gage is 7,280 ft (from topographic map). See WSP 1734 for history of gage changes prior to May 28, 1953.

AVERAGE DISCHARGE.--49 years (1920-69), 30.2 cfs (21,880 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 312 cfs May 30 (gage height, 5.00 ft); minimum daily, 7.0 cfs Nov. 30.

1926 to current year: Maximum discharge, 312 cfs May 30, 1969 (gage height, 5.00 ft); minimum daily, 3.2 cfs Mar. 11, 1926.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	9.2	8.2	11	19	15	13	33	282	131	129	35
2	9.5	10	16	11	15	15	13	34	284	138	125	33
3	9.5	11	11	11	15	15	13	35	286	149	126	31
4	9.2	9.0	9.2	11	15	15	13	34	288	152	122	31
5	9.2	8.7	9.2	11	15	14	13	35	290	144	116	31
6	9.2	9.0	9.5	11	15	13	13	37	278	141	109	31
7	9.0	9.5	9.0	11	15	12	13	42	261	139	95	31
8	8.7	9.5	9.0	11	15	12	12	49	252	135	85	31
9	8.5	9.5	9.0	10	15	11	12	60	237	137	80	30
10	8.5	9.5	8.7	10	14	10	12	73	199	141	79	28
11	8.5	9.5	9.8	10	12	10	13	91	158	144	83	29
12	8.7	10	13	10	11	10	14	108	141	146	89	28
13	9.0	10	14	10	10	10	14	121	135	172	90	28
14	11	14	14	10	11	10	14	122	136	190	83	26
15	10	12	12	11	11	10	14	122	162	183	75	26
16	10	12	13	11	11	10	14	126	178	167	71	25
17	10	10	13	12	11	9.8	14	136	165	157	68	26
18	10	10	13	13	11	9.8	14	146	145	155	72	27
19	10	9.9	13	7.7	10	9.8	15	148	147	163	68	28
20	10	9.8	13	11	11	10	18	144	155	167	65	27
21	9.8	9.8	13	14	11	10	20	152	158	174	64	26
22	9.5	9.8	13	14	11	10	23	167	159	182	59	26
23	9.5	9.8	13	18	8.0	10	24	181	178	177	55	25
24	9.5	9.5	13	19	16	10	22	199	202	174	50	24
25	9.5	12	12	18	15	10	21	222	197	171	49	24
26	9.5	11	12	17	15	10	20	231	171	153	49	24
27	9.5	9.8	12	29	15	10	21	234	149	134	47	23
28	9.2	7.2	12	32	15	11	22	251	135	120	45	22
29	9.2	7.2	12	29	-----	11	26	268	129	116	41	22
30	9.2	7.0	12	25	-----	11	28	286	133	118	38	23
31	9.0	-----	12	22	-----	13	-----	280	-----	126	36	-----
TOTAL	291.4	295.2	362.6	450.7	368.0	347.4	498	4,167	5,790	4,696	2,363	821
MEAN	9.40	9.84	11.7	14.5	13.1	11.2	16.6	134	193	151	76.2	27.4
MAX	11	14	16	32	19	15	28	286	290	190	129	35
MIN	8.5	7.0	8.2	7.7	8.0	9.8	12	33	129	116	36	22
AC-FT	578	586	719	894	730	689	988	8,270	11,480	9,310	4,690	1,630
CAL YR 1968	TOTAL	5,976.9	MEAN	16.3	MAX	53	MIN	7.0	AC-FT	11,860		
WTR YR 1969	TOTAL	20,450.3	MEAN	56.0	MAX	290	MIN	7.0	AC-FT	40,560		

OWENS LAKE BASIN

99

10-2670. PINE CREEK AT DIVISION BOX, NEAR BISHOP, CALIF.

LOCATION.--Lat 37°24'59", long 118°37'15", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.19, T.6 S., R.31 E., Inyo County, on right bank 0.2 mile upstream from division box (at Rovana), 1.9 miles west of Round Valley schoolhouse, and 13 miles northwest of Bishop.

DRAINAGE AREA.--37.9 sq mi.

PERIOD OF RECORD.--October 1921 to current year. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder. Parshall flume since November 1938. Altitude of gage is 5,280 ft (from topographic map).

AVERAGE DISCHARGE.--48 years, 45.0 cfs (32,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 472 cfs June 3 (gage height, 6.60 ft); minimum daily, 12 cfs Feb. 25, 26.

Period of record: Maximum discharge, 509 cfs July 2, 1967 (gage height, 6.05 ft); minimum daily, 10 cfs Jan. 8, 1930, Jan. 21, 1935.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	26	26	28	29	27	34	62	402	237	212	70
2	26	26	26	26	28	27	33	67	413	251	204	70
3	26	28	26	26	28	27	32	67	443	252	202	71
4	26	27	26	26	27	27	33	66	426	240	195	71
5	26	27	26	25	27	26	34	63	413	242	167	75
6	26	27	26	25	28	26	32	63	396	247	123	78
7	26	26	26	25	28	25	32	69	376	240	115	78
8	26	26	26	25	26	24	32	86	345	244	105	78
9	26	26	26	25	26	24	32	108	265	258	102	77
10	26	26	26	25	26	24	33	130	109	272	118	75
11	26	26	26	25	26	24	35	131	141	268	133	71
12	26	27	26	25	26	24	36	147	135	281	133	68
13	26	27	26	26	26	24	36	159	141	346	105	66
14	27	27	27	26	26	24	36	161	177	321	97	64
15	26	27	26	25	26	24	34	152	219	274	98	62
16	26	27	26	25	26	25	33	160	250	253	97	62
17	26	27	26	25	26	25	35	177	204	255	100	60
18	26	27	26	26	26	25	36	187	179	272	96	58
19	26	27	26	28	26	25	36	182	222	294	81	57
20	26	27	26	28	26	25	39	176	242	314	71	56
21	26	27	26	31	26	25	44	183	275	302	65	55
22	26	27	26	30	26	25	51	212	300	307	60	55
23	26	27	26	30	26	26	52	211	330	275	60	53
24	26	26	27	30	19	26	50	241	315	289	60	53
25	26	26	28	18	12	27	48	301	272	263	61	53
26	26	26	28	21	12	27	48	295	219	225	58	52
27	26	26	26	27	21	28	48	286	199	211	53	51
28	26	26	27	42	28	29	50	281	192	181	48	51
29	26	26	26	33	-----	30	55	308	188	201	62	51
30	26	26	26	31	-----	30	58	360	212	216	76	51
31	26	-----	27	30	-----	34	-----	375	-----	225	72	-----
TOTAL	807	797	814	838	703	809	1,187	5,466	8,000	8,056	3,229	1,892
MEAN	26.0	26.6	26.3	27.0	25.1	26.1	39.6	176	267	260	104	63.1
MAX	27	28	28	42	29	34	58	375	443	346	212	78
MIN	26	26	26	18	12	24	32	62	109	181	48	51
AC-FT	1,600	1,580	1,610	1,660	1,390	1,600	2,350	10,840	15,870	15,980	6,400	3,750
CAL YR 1968	TOTAL 14,444		MEAN 39.5		MAX 137		MIN 26		AC-FT 28,650			
WTR YR 1969	TOTAL 32,598		MEAN 89.3		MAX 443		MIN 12		AC-FT 64,660			

OWENS LAKE BASIN

10-2687. SILVER CANYON CREEK NEAR LAWS, CALIF.

LOCATION.--Lat 37°24'16", long 118°18'30", in NW $\frac{1}{4}$ sec.25, T.6 S., R.33 E., Inyo County, on right bank at mouth of canyon, 2.0 miles east of Laws.

DRAINAGE AREA.--22.4 sq mi.

PERIOD OF RECORD.--March 1930 to current year. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and Parshall flume (Cipolletti weir used during low flow). Altitude of gage is 4,600 ft (from topographic map). See WSP 1734 for history of gage changes prior to Feb. 24, 1943.

AVERAGE DISCHARGE.--39 years, 1.58 cfs (1,140 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9.6 cfs June 16 (gage height, 1.65 ft); minimum daily, 1.1 cfs Oct. 1.

Period of record: Maximum discharge, 9.6 cfs June 16, 1969 (gage height, 1.65 ft); no flow at times in some years.

REMARKS.--No regulation; occasional diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.4	1.6	1.6	1.8	1.8	2.1	3.1	5.8	3.0	5.7	6.8
2	1.2	1.4	1.6	1.6	1.8	1.8	2.1	3.2	5.8	3.0	5.8	6.6
3	1.2	1.4	1.6	1.6	1.8	1.8	2.1	3.4	5.0	3.0	5.8	6.8
4	1.1	1.4	1.6	1.6	1.8	1.8	2.2	3.3	4.3	3.0	5.9	6.8
5	1.2	1.4	1.6	1.6	1.8	1.8	2.2	3.3	4.2	3.0	6.3	6.5
6	1.2	1.4	1.6	1.6	1.8	1.8	2.3	3.2	4.6	3.0	5.9	6.0
7	1.2	1.4	1.6	1.6	1.8	1.8	2.4	4.2	4.8	3.0	5.6	6.2
8	1.2	1.4	1.6	1.6	1.8	1.8	2.5	4.2	4.8	3.0	5.6	6.8
9	1.2	1.5	1.6	1.6	1.8	1.8	2.5	4.1	4.6	3.3	5.4	7.0
10	1.2	1.5	1.6	1.6	1.8	1.8	2.5	4.1	4.7	3.6	5.4	7.0
11	1.2	1.5	1.6	1.6	1.8	1.8	2.6	4.2	4.7	3.9	5.6	7.0
12	1.2	1.5	1.6	1.6	1.8	1.8	2.6	4.2	4.4	4.2	5.6	7.0
13	1.2	1.5	1.6	1.6	1.8	1.8	2.6	4.2	4.4	4.5	5.6	6.9
14	1.3	1.5	1.6	1.6	1.8	1.8	2.6	4.1	4.0	4.8	5.6	6.8
15	1.3	1.5	1.6	1.6	1.9	1.8	2.6	4.1	4.0	5.1	6.0	6.6
16	1.4	1.5	1.6	1.6	1.9	1.8	2.6	4.3	8.1	5.2	5.8	6.1
17	1.4	1.5	1.6	1.6	1.9	1.9	2.7	4.3	4.3	5.4	5.6	5.8
18	1.4	1.5	1.6	1.6	1.8	1.9	2.8	4.3	3.4	5.5	5.8	5.8
19	1.4	1.5	1.6	1.9	1.8	1.8	2.8	4.4	3.1	5.6	5.9	6.0
20	1.4	1.5	1.6	1.7	1.8	1.7	2.8	4.4	3.2	5.8	6.5	6.1
21	1.4	1.5	1.6	1.9	1.8	1.8	2.9	4.2	3.5	5.9	6.8	6.3
22	1.4	1.5	1.6	1.7	1.8	1.8	2.9	4.1	4.0	6.0	7.1	6.3
23	1.4	1.5	1.6	1.7	1.8	1.8	2.9	4.4	3.6	5.9	6.5	6.2
24	1.4	1.5	1.6	1.7	1.9	1.9	3.0	4.5	4.0	5.8	6.2	5.8
25	1.4	1.6	1.6	1.9	1.9	1.9	3.0	4.5	3.9	5.7	6.1	6.0
26	1.4	1.6	1.6	2.0	1.8	1.9	3.1	4.5	3.7	5.6	6.0	6.0
27	1.4	1.6	1.6	1.9	1.8	1.9	3.1	5.8	3.6	5.6	6.0	6.0
28	1.4	1.6	1.6	1.7	1.8	1.9	3.2	5.8	3.4	5.5	5.9	5.9
29	1.4	1.6	1.6	1.7	-----	1.9	3.2	5.8	3.3	5.5	5.8	5.9
30	1.4	1.6	1.6	1.8	-----	2.0	3.2	6.0	3.1	5.6	6.4	5.8
31	1.4	-----	1.6	1.8	-----	2.0	-----	6.1	-----	5.6	6.3	-----
TOTAL	40.5	44.8	49.6	52.2	50.9	56.9	80.1	134.3	128.3	143.6	184.5	190.8
MEAN	1.31	1.49	1.60	1.68	1.82	1.84	2.67	4.33	4.28	4.63	5.95	6.36
MAX	1.4	1.6	1.6	2.0	1.9	2.0	3.2	6.1	8.1	6.0	7.1	7.0
MIN	1.1	1.4	1.6	1.6	1.8	1.7	2.1	3.1	3.1	3.0	5.4	5.8
AC-FT	80	89	98	104	101	113	159	266	254	285	366	378

CAL YR 1968 TOTAL 540.1
WTR YR 1969 TOTAL 1,156.5

MEAN 1.48
MEAN 3.17

MAX 1.9
MAX 8.1

MIN 1.0
MIN 1.1

AC-FT 1,070
AC-FT 2,290

10-2760. BIG PINE CREEK NEAR BIG PINE, CALIF.

LOCATION.--Lat 37°08'42", long 118°18'52", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.24, T.9 S., R.33 E., Inyo County, on left bank 0.3 mile downstream from Little Pine Creek, 0.5 mile downstream from powerhouse No. 3, and 2.2 miles south-west of Big Pine.

DRAINAGE AREA.--39.0 sq mi.

PERIOD OF RECORD.--November 1907 to February 1911, January 1920 to current year; combined records of creek and diversions, June 1930 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and Parshall flume since April 1949 on creek; water-stage recorder and Parshall flume on each diversion. Altitude of gage is 4,500 ft (from topographic map). Prior to January 1923, non-recording gage at same site and datum.

AVERAGE COMBINED DISCHARGE.--39 years (1930-69), 41.4 cfs (29,990 acre-ft per year), including diversion to upper and lower Giroux ditches.

EXTREMES (Creek only).--Current year: Maximum discharge, 391 cfs July 22 (gage height, 5.63 ft); minimum daily, 8.2 cfs Jan. 25.
 Period of record: Maximum discharge, 458 cfs July 3, 1932 (gage height, 6.55 ft); no flow Dec. 3-12, 1935.
 (Combined).--Current year: Maximum discharge, 397 cfs July 22; minimum daily, 9.3 cfs Jan. 25.
 Period of record: Maximum discharge, 458 cfs July 3, 1932; minimum daily, 6.4 cfs Dec. 11, 12, 1935.

REMARKS.--No regulation above station. Diversions above station for power and irrigation. Since 1962 discharge from Little Pine Creek has been spread in nearby meadows and does not reach gage as surface flow. For records of combined discharge of Big Pine Creek and Giroux ditches which divert above station, see following page.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	15	14	14	17	18	22	40	300	212	272	69
2	16	15	14	14	17	16	22	42	320	225	255	69
3	16	15	14	14	16	16	22	41	325	223	241	72
4	16	16	14	14	16	15	22	40	310	212	255	70
5	16	16	14	14	16	15	24	38	304	216	216	62
6	17	15	14	14	17	15	23	39	296	225	171	62
7	17	15	14	14	17	15	22	42	289	229	141	65
8	16	15	14	16	16	15	22	47	285	222	129	77
9	16	15	14	14	16	15	22	56	238	232	127	77
10	16	15	14	14	16	15	23	68	166	246	160	66
11	16	15	14	14	15	14	24	74	102	250	203	55
12	15	16	15	14	15	15	25	77	112	251	189	49
13	17	15	14	15	15	15	26	83	102	308	150	44
14	19	15	14	13	15	15	26	86	183	306	136	43
15	16	17	14	13	15	15	25	83	238	287	131	42
16	16	16	14	13	15	15	23	88	247	276	123	42
17	16	16	13	13	15	15	26	96	207	273	122	40
18	16	16	15	13	15	15	27	101	179	281	114	44
19	16	15	13	16	15	15	27	101	198	311	103	47
20	16	15	13	10	15	15	31	99	211	322	84	46
21	16	15	14	21	15	16	31	104	222	350	77	44
22	15	15	14	13	15	16	38	115	250	344	75	42
23	15	15	15	12	15	16	38	122	281	326	78	42
24	15	14	14	16	11	16	31	136	267	324	81	40
25	15	14	15	8.2	8.5	16	28	164	248	281	81	40
26	15	14	15	15	20	16	30	195	214	241	76	41
27	15	14	15	12	22	17	31	197	196	203	68	40
28	15	14	15	21	19	18	32	195	188	177	62	39
29	15	14	14	26	-----	19	35	212	181	219	54	39
30	15	14	14	27	-----	21	36	240	190	250	50	38
31	15	-----	14	18	-----	23	-----	261	-----	271	49	-----
TOTAL	488	451	438	465.2	439.5	498	814	3,282	6,849	8,093	4,073	1,546
MEAN	15.7	15.0	14.1	15.0	15.7	16.1	27.1	106	228	261	131	51.5
MAX	19	17	15	27	22	23	38	261	325	350	272	77
MIN	13	14	13	8.2	8.5	14	22	38	102	177	49	38
AC-FT	968	895	869	923	872	988	1,610	6,510	13,580	16,050	8,080	3,070
CAL YR 1968	TOTAL 10,070.1		MEAN 27.5		MAX 166		MIN 7.4		AC-FT 19,970			
WTR YR 1969	TOTAL 27,436.7		MEAN 75.2		MAX 350		MIN 8.2		AC-FT 54,420			

OWENS LAKE BASIN

10-2760, BIG PINE CREEK NEAR BIG PINE, CALIF.--Continued

Combined discharge, in cubic feet per second, of Big Pine Creek and upper and lower Giroux ditches, near Big Pine, Calif.; water year October 1968 to September 1969

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	16	16	18	19	23	43	305	220	278	76
2	19	17	16	16	18	17	23	44	325	233	262	77
3	19	17	16	16	17	17	23	44	334	231	249	80
4	19	18	16	16	17	16	23	43	324	220	263	78
5	19	18	16	16	17	16	25	41	316	224	224	70
6	20	17	16	16	18	16	24	41	308	233	179	69
7	20	17	15	16	18	16	23	44	300	237	148	71
8	18	17	15	18	17	16	23	49	296	230	136	83
9	18	17	15	16	17	16	23	57	248	240	134	82
10	18	17	15	16	17	16	24	69	176	254	167	71
11	18	17	15	16	16	15	25	75	112	257	210	60
12	17	18	16	16	16	15	26	78	122	258	199	54
13	19	17	16	17	16	16	27	87	111	316	164	49
14	22	17	16	15	16	16	27	89	192	314	151	48
15	18	19	16	15	16	16	26	85	296	295	146	47
16	18	18	16	15	16	16	24	90	256	284	138	47
17	18	18	15	15	16	16	27	99	216	281	136	45
18	18	18	17	14	16	16	28	104	187	289	128	49
19	19	17	15	17	16	16	28	104	206	319	116	52
20	19	17	15	11	16	16	32	102	219	328	95	51
21	18	17	16	22	16	17	32	108	230	357	88	49
22	17	17	16	14	16	17	38	119	258	350	85	47
23	17	17	17	13	16	17	39	128	288	332	88	47
24	17	16	16	17	12	17	35	139	274	330	91	45
25	17	16	17	9.3	9.4	17	34	167	255	287	92	45
26	17	16	17	16	21	17	34	201	221	247	86	46
27	17	16	17	13	23	18	35	202	204	209	77	45
28	17	16	17	22	20	19	36	199	196	183	70	44
29	17	16	16	27	-----	20	38	216	189	225	62	44
30	17	16	16	28	-----	22	39	244	198	256	58	43
31	17	-----	16	19	-----	24	-----	265	-----	277	57	-----
TOTAL	562	511	494	513.3	467.4	528	864	3,376	7,162	8,316	4,377	1,714
MEAN	18.1	17.0	15.9	16.6	16.7	17.0	28.8	109	239	268	141	57.1
MAX	22	19	17	28	23	24	39	265	334	357	278	83
MIN	17	16	15	9.3	9.4	15	23	41	111	183	57	43
AC-FT	1,110	1,010	980	1,020	927	1,050	1,710	6,700	14,210	16,490	8,680	3,400
CAL YR 1968	TOTAL 12,424		MEAN 33.9		MAX 181		MIN 14		AC-FT 24,640			
WTR YR 1969	TOTAL 28,884.7		MEAN 79.1		MAX 357		MIN 9.3		AC-FT 57,290			

LOCATION.--Lat 37°00'55", long 118°13'25", in NW¼SE¼ sec.2, T.11 S., R.34 E., Inyo County, on left bank 0.1 mile downstream from Little Seeley Spring, 0.15 mile downstream from Charlies Butte, and 10.8 miles southeast of Big Pine.

PERIOD OF RECORD.--January 1906 to current year. Monthly discharge only for some periods, published in WSP 1314. Published as "near Tinemaha" prior to 1912.

GAGE.--Water-stage recorder. Rock control since October 1958. Altitude of gage is 3,800 ft (from topographic map). Prior to Oct. 8, 1922, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum daily discharge, 1,480 cfs June 18, 19; minimum daily, 3.0 cfs Oct. 1-13.
Period of record: Maximum discharge, 3,220 cfs (estimated) Jan. 26, 1914 (gage height, 11.2 ft), from
rating curve extended above 1,100 cfs; no flow Jan. 9-13, 21-26, 1937.

REMARKS.--Flow regulated since 1941 by Lake Crowley (capacity, 183,500 acre-ft) and several small reservoirs (combined capacity, 41,400 acre-ft). Diversions from both main stream and tributaries. Water imported from Mono Lake basin since 1941 for diversion to Los Angeles aqueduct which diverts 4 miles downstream.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DAY	GCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	358	484	425	784	1,130	1,030	922	1,100	1,250	1,130	418
2	3.0	356	483	425	782	1,120	1,030	917	1,120	1,230	1,130	430
3	3.0	354	475	427	731	1,120	1,030	911	1,140	1,220	1,130	456
4	3.0	352	475	427	671	1,110	1,030	908	1,150	1,200	1,130	454
5	3.0	351	481	424	672	1,110	1,030	904	1,170	1,200	1,110	464
6	3.0	354	493	424	675	1,120	1,030	906	1,180	1,190	860	477
7	3.0	353	524	424	693	1,110	1,040	904	1,190	1,180	852	478
8	3.0	352	535	424	721	1,100	1,040	904	1,200	1,180	850	478
9	3.0	352	525	424	719	1,100	1,040	904	1,210	1,180	848	478
10	3.0	351	520	425	721	1,100	1,040	908	1,220	1,170	850	423
11	3.0	351	521	425	744	1,080	1,040	913	1,290	1,140	846	369
12	3.0	350	525	425	775	1,080	1,040	915	1,260	1,150	840	314
13	3.0	353	524	424	772	1,070	1,030	922	1,370	1,140	844	259
14	108	355	523	424	782	1,060	1,030	934	1,360	1,130	824	204
15	420	426	528	425	822	1,060	1,030	938	1,390	1,120	732	150
16	583	492	528	425	809	1,060	1,020	945	1,440	1,110	728	77
17	589	494	525	424	797	1,060	1,010	950	1,460	1,110	724	129
18	590	494	523	427	809	1,050	1,010	961	1,480	1,100	664	218
19	593	494	503	367	806	1,050	998	975	1,480	1,090	625	250
20	586	496	472	250	806	1,050	989	980	1,440	1,090	619	250
21	593	495	451	299	802	1,050	984	991	1,400	1,090	600	247
22	598	496	449	289	807	1,050	977	998	1,410	1,100	580	246
23	500	495	448	338	806	1,050	975	1,000	1,430	1,100	576	245
24	372	450	449	429	840	1,060	973	1,010	1,450	1,100	572	244
25	371	444	450	492	897	1,060	966	1,010	1,440	1,110	568	242
26	366	441	449	545	833	1,060	957	1,020	1,390	1,110	655	242
27	361	445	447	798	962	1,060	950	1,040	1,350	1,120	655	241
28	362	462	446	1,040	1,120	1,060	942	1,040	1,340	1,120	505	240
29	360	477	447	1,040	-----	1,060	942	1,060	1,300	1,130	430	207
30	357	481	445	1,030	-----	1,060	933	1,070	1,260	1,130	424	99
31	361	-----	442	793	-----	1,060	-----	1,080	-----	1,130	419	-----
TOTAL	8,109.0	12,524	15,090	15,358	22,158	33,370	30,136	29,840	39,420	35,420	23,320	9,029
MEAN	262	417	487	495	791	1,076	1,005	963	1,314	1,143	752	301
MAX	598	496	535	1,040	1,120	1,130	1,040	1,080	1,480	1,250	1,130	478
MIN	3.0	350	442	250	671	1,050	933	904	1,100			

OWENS LAKE BASIN

10-2818. INDEPENDENCE CREEK BELOW PINYON CREEK, NEAR INDEPENDENCE, CALIF.

LOCATION.--Lat 36°46'43", long 118°15'49", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.27, T.13 S., R.34 E., Inyo County, on right bank 0.2 mile downstream from Pinyon Creek, and 4.0 miles southwest of Independence.

DRAINAGE AREA.--18.2 sq mi.

PERIOD OF RECORD.--January 1923 to current year. Prior to October 1959, monthly discharge only, published in WSP 1734.

GAGE.--Water-stage recorder and Parshall flume (Cipolletti weir used during low flow). Altitude of gage is 5,300 ft (from topographic map). See WSP 1734 for history of gage changes prior to Dec. 13, 1936.

AVERAGE DISCHARGE.--46 years, 13.0 cfs (9,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 169 cfs June 1 (gage height, 4.45 ft); minimum daily, 2.6 cfs Dec. 12, 20, 21.

Period of record: Maximum discharge, 169 cfs June 1, 1969 (gage height, 4.45 ft); minimum daily, 0.70 cfs Jan. 25, 1926, Dec. 15, 1935.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.1	3.4	3.4	6.6	4.7	20	22	145	79	65	25
2	3.6	3.2	3.2	3.4	6.3	4.7	18	23	140	82	63	24
3	3.6	3.5	3.2	3.4	4.7	4.7	16	24	138	87	61	24
4	3.6	3.2	3.4	3.4	4.6	4.5	16	24	140	88	60	24
5	3.6	3.2	3.2	3.2	4.6	4.2	15	22	145	88	55	23
6	3.5	3.4	3.2	3.2	4.5	4.1	15	22	138	87	47	22
7	3.5	3.7	3.0	3.0	4.4	4.7	12	23	130	84	41	22
8	3.5	3.6	3.2	2.8	4.6	4.8	13	25	124	81	39	21
9	3.5	3.6	3.2	2.8	4.7	4.6	16	29	113	78	40	21
10	3.3	3.6	3.0	2.8	4.7	4.6	16	35	90	78	44	20
11	3.3	3.6	3.0	2.8	4.6	4.7	17	43	75	77	53	20
12	3.2	3.6	2.6	3.0	4.6	4.1	17	51	69	78	51	19
13	3.5	3.4	2.8	3.2	4.5	4.1	18	58	66	87	47	18
14	4.4	3.2	3.2	3.2	4.4	4.4	20	62	75	88	43	18
15	4.1	4.1	3.4	3.2	4.6	4.4	16	60	89	86	40	18
16	3.9	4.1	3.2	3.0	4.7	4.5	13	61	91	86	39	18
17	3.8	4.0	2.8	3.0	4.7	5.0	13	67	85	84	40	17
18	3.8	4.0	2.8	3.2	4.7	5.5	13	71	82	84	37	17
19	3.6	3.9	3.0	6.3	4.7	5.9	13	75	81	87	34	16
20	3.5	3.9	2.6	6.0	4.6	6.2	14	77	94	86	31	16
21	3.3	3.8	2.6	11	4.5	6.4	18	78	103	101	29	16
22	3.2	3.7	4.0	7.6	4.5	6.3	19	83	113	98	27	15
23	3.2	3.6	3.8	7.1	4.2	6.6	19	83	124	86	26	15
24	3.1	3.5	3.0	5.4	4.7	7.0	18	92	130	82	25	14
25	3.1	3.2	3.5	7.5	5.4	7.5	18	105	118	80	29	14
26	3.1	3.2	3.8	11	5.2	7.0	17	114	97	72	31	13
27	3.1	3.2	3.8	11	5.3	8.9	17	117	84	65	30	13
28	3.1	3.2	3.8	9.4	4.9	11	17	118	75	59	30	13
29	3.1	3.2	3.7	8.2	-----	13	18	133	71	60	29	13
30	3.1	3.2	3.6	7.9	-----	15	20	134	71	60	27	12
31	2.9	-----	3.4	7.2	-----	19	-----	138	-----	64	26	-----
TOTAL	106.9	105.7	100.4	161.6	134.5	202.1	492	2,069	3,096	2,502	1,239	541
MEAN	3.45	3.52	3.24	5.21	4.80	6.52	16.4	66.7	103	80.7	40.0	18.0
MAX	4.4	4.1	4.0	11	6.6	19	20	138	145	101	65	25
MIN	2.9	3.1	2.6	2.8	4.2	4.1	12	22	66	59	25	12
AC-FT	212	210	199	321	267	401	976	4,100	6,140	4,960	2,460	1,070
CAL YR 1968	TOTAL	2,775.1	MEAN	7.58	MAX	30	MIN	2.6	AC-FT	5,500		
WTR YR 1969	TOTAL	10,750.2	MEAN	29.5	MAX	145	MIN	2.6	AC-FT	21,320		

OWENS LAKE BASIN

105

10-2824.8. MAZOURKA CREEK NEAR INDEPENDENCE, CALIF.

LOCATION.--Lat 36°50'50", long 118°05'05", in NE $\frac{1}{4}$ lot 11, N $\frac{1}{2}$ sec.5, T.13 S., R.36 E., Inyo County, on right bank 7 miles northeast of Independence.

DRAINAGE AREA.--15.6 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,800 ft (from topographic map).

AVERAGE DISCHARGE.--9 years, 0.093 cfs (67 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 600 cfs Jan. 25 (gage height, 2.74 ft), from rating curve extended above 1.0 cfs on basis of slope-area measurement of maximum flow; no flow all year except Jan. 25.
Period of record: Maximum discharge, 1,300 cfs Dec. 6, 1966 (gage height, 2.46 ft, from inside gage, 3.10 ft from profile of floodmarks), from rating curve extended above 1.0 cfs on basis of slope-area measurement of maximum flow; no flow for all or most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	75	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	75	0	0	0	0	0	0	0	0
MEAN	0	0	0	2.42	0	0	0	0	0	0	0	0
MAX	0	0	0	75	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	149	0	0	0	0	0	0	0	0
CAL YR 1968	TOTAL 0		MEAN 0		MAX 0		MIN 0		AC-FT 0			
WTR YR 1969	TOTAL 75.00		MEAN .21		MAX 75		MIN 0		AC-FT 149			

OWENS LAKE BASIN

10-2848. INYO CREEK NEAR LONE PINE, CALIF.

LOCATION.--Lat 36°35'50", long 118°10'55", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T.15 S., R.35 E., Inyo County, at culvert on Mount Whitney Road, in Inyo National Forest, and 7 miles west of Lone Pine.

DRAINAGE AREA.--1.54 sq mi.

PERIOD OF RECORD.--Water years 1963-68 (annual maximum), May 1968 to current year.

GAGE.--Water-stage recorder with rain-gage attachment. Altitude of gage is 6,000 ft (from topographic map).

EXTREMES.--1968: Maximum discharge during period May to September, 11 cfs Aug. 8 (gage height, 5.45 ft); no flow most of period.

Current year: Maximum discharge, 42 cfs Aug. 2 (gage height, 7.57 ft), from rating curve extended as explained below; no flow most of year.

Period of record: Maximum discharge, 42 cfs Aug. 2, 1969 (gage height, 7.57 ft), from rating curve extended above 6.6 cfs on basis of culvert computations of flow at gage heights 4.9 and 7.57 ft; no flow most of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, PERIOD MAY TO SEPTEMBER 1968

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1								0	.91	.01	0	0
2								0	.91	0	0	0
3								0	.91	0	0	0
4								0	.87	0	0	0
5								0	.83	0	0	0
6								0	.75	0	0	0
7								0	.69	0	0	0
8								0	.75	0	.60	0
9								0	.75	0	.21	0
10								0	.66	0	0	0
11								0	.66	0	0	0
12								0	.66	0	0	0
13								0	.63	0	0	0
14								0	.60	0	0	0
15								0	.51	0	0	0
16								0	.54	0	0	0
17								0	.51	0	0	0
18								.04	.51	0	0	0
19								.64	.48	0	0	0
20								.91	.42	0	0	0
21								.83	.39	0	0	0
22								.72	.36	0	0	0
23								.66	.33	0	0	0
24								.66	.33	0	0	0
25								.69	.30	0	0	0
26								.91	.26	0	0	0
27								.99	.22	0	0	0
28								1.0	.16	.45	0	0
29								.99	.12	.24	0	0
30								.91	.06	.38	0	0
31		-----			-----		-----	.83	-----	0	0	-----
TOTAL								10.78	16.08	1.08	0.81	0
MEAN								.35	.54	.035	.026	0
MAX								1.0	.91	.45	.60	0
MIN								0	.06	0	0	0
AC-FT								21	32	2.1	1.6	0
(a)								.2	.1	.6	.3	0

a Precipitation, in inches.

OWENS LAKE BASIN

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10-2848. INYO CREEK NEAR LONE PINE, CALIF.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	2.2	7.6	2.1	2.2	.04
2	0	0	0	0	0	0	0	2.3	7.6	2.1	7.2	.02
3	0	0	0	0	0	0	0	2.5	7.2	2.0	5.0	.02
4	0	0	0	0	0	0	0	2.4	7.4	2.0	4.0	.01
5	0	0	0	0	0	0	0	2.5	6.6	2.0	3.1	.01
6	0	0	0	0	0	0	.15	2.2	6.2	2.1	2.4	.01
7	0	0	0	0	0	0	.08	2.4	5.7	2.0	2.0	0
8	0	0	0	0	0	0	.87	2.6	5.4	2.0	1.7	0
9	0	0	0	0	0	0	1.2	3.2	5.1	2.0	1.8	0
10	0	0	0	0	0	0	1.4	4.1	3.9	2.0	1.9	0
11	0	0	0	0	0	0	1.5	4.2	3.4	2.0	3.7	0
12	0	0	0	0	0	0	1.6	4.4	3.1	2.0	1.3	0
13	0	0	0	0	0	0	1.7	5.1	2.6	2.1	.99	0
14	0	0	0	0	0	0	1.8	5.6	2.5	2.1	.91	0
15	0	0	0	0	0	0	1.8	5.2	2.4	2.0	.87	0
16	0	0	0	0	0	0	1.8	5.0	2.2	2.0	.87	0
17	0	0	0	0	0	0	1.8	5.6	2.0	2.0	.83	0
18	0	0	0	0	0	0	1.8	6.2	2.0	2.0	.79	0
19	0	0	0	0	0	0	1.8	6.2	2.0	2.0	.72	0
20	0	0	0	0	0	0	1.8	6.3	2.2	2.0	.51	0
21	0	0	0	0	0	0	2.0	6.4	2.2	2.0	.16	0
22	0	0	0	0	0	0	2.0	6.4	2.0	2.0	.13	0
23	0	0	0	0	0	0	2.1	6.1	2.6	2.0	.12	0
24	0	0	0	0	0	0	2.1	7.2	2.8	2.0	.10	0
25	0	0	0	0	0	0	2.1	7.6	2.2	2.0	.10	0
26	0	0	0	0	0	0	2.1	8.0	2.1	2.0	.12	0
27	0	0	0	0	0	0	2.1	7.8	2.0	2.1	.10	0
28	0	0	0	0	0	0	2.0	7.6	2.0	2.2	.09	0
29	0	0	0	0	-----	0	2.1	7.5	2.0	2.2	.09	0
30	0	0	0	0	-----	0	2.1	7.6	2.0	4.0	.07	0
31	0	-----	0	0	-----	0	-----	7.4	-----	2.2	.06	-----
TOTAL	0	0	0	0	0	0	41.80	159.8	109.0	65.2	43.93	0.11
MEAN	0	0	0	0	0	0	1.39	5.15	3.63	2.10	1.42	.004
MAX	0	0	0	0	0	0	2.1	8.0	7.6	4.0	7.2	.04
MIN	0	0	0	0	0	0	0	2.2	2.0	2.0	.06	0
AC-FT	0	0	0	0	0	0	83	317	216	129	87	.2
(a)	0	.1	.4	6.8	3.25	.20	.10	.40	0	.24	.74	0

CAL YR 1968 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1969 TOTAL 419.84 MEAN 1.15 MAX 8.0 MIN 0 AC-FT 833

a Precipitation, in inches.

OWENS LAKE BASIN

10-2857. OWENS RIVER AT KEELER BRIDGE, NEAR LONE PINE, CALIF.

LOCATION.--Lat 36°34'46", long 118°01'06", in NE¼NW¼ sec.1, T.16 S., R.36 E., Inyo County, on left bank under old timber bridge 0.5 mile upstream from bridge on State Highway 190, and 3.4 miles southeast of Lone Pine.

DRAINAGE AREA.--2,604 sq mi.

PERIOD OF RECORD.--January 1927 to current year. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and Cipolletti weir. Altitude of gage is 3,600 ft (from topographic map). See WSP 1734 for history of gage changes prior to Feb. 14, 1935. Feb. 14, 1935, to Nov. 22, 1964, water-stage recorder and Cipolletti weir at same site and datum. Nov. 23, 1964, to June 26, 1967, nonrecording gage and Cipolletti weir at same site and datum.

EXTREMES.--Current year: Maximum daily discharge, 1,360 cfs June 19 (gage height, 5.98 ft); minimum daily, 2.6 cfs Oct. 1-3.

Period of record: Maximum daily discharge, 1,360 cfs June 19, 1969 (gage height, 5.98 ft); no flow at times in some years.

REMARKS.--Natural flow affected by storage in several reservoirs, many natural lakes, diversions for irrigation, and return flow from irrigated areas. Major portion of discharge from basin is diverted through Los Angeles aqueduct. Discharge reported herein is wasted into Owens Lake.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.7	7.0	9.8	328	388	426	329	574	959	776	53
2	2.6	3.7	7.0	9.8	385	422	434	306	649	872	820	37
3	2.6	4.0	7.0	9.8	471	421	460	155	715	791	858	40
4	2.8	4.2	7.0	10	483	428	444	133	739	755	928	46
5	2.8	4.5	7.0	10	479	433	428	134	748	734	959	41
6	2.8	4.7	7.3	14	482	435	424	139	805	713	818	49
7	2.8	4.7	7.6	13	456	426	424	145	947	692	892	63
8	3.0	5.3	7.6	12	384	419	423	163	967	671	656	66
9	3.0	5.3	7.9	12	337	411	423	188	1,270	641	498	67
10	3.0	5.3	7.9	11	294	414	424	196	1,310	617	452	69
11	3.0	5.3	7.9	11	274	419	421	195	1,100	596	408	87
12	3.0	5.5	8.2	11	262	414	421	212	954	563	412	133
13	3.0	5.5	8.2	11	245	400	420	228	990	542	396	94
14	3.0	5.8	8.2	11	226	426	413	249	954	536	365	53
15	2.8	5.8	8.2	11	202	418	396	259	886	605	328	50
16	2.8	6.1	8.2	11	196	412	386	243	998	620	322	49
17	2.8	6.1	8.5	11	195	407	384	236	1,060	632	328	47
18	2.8	6.4	8.5	11	205	404	369	248	1,180	644	296	45
19	2.8	6.4	8.5	12	245	398	360	284	1,350	635	258	43
20	2.8	6.4	8.8	14	266	395	361	303	1,330	584	212	41
21	2.8	6.4	8.8	21	267	390	360	316	1,310	698	178	47
22	3.0	6.4	8.8	48	267	394	356	329	1,340	704	150	49
23	3.0	6.4	8.5	31	260	394	349	312	1,320	662	135	57
24	3.0	6.4	8.5	26	259	392	343	337	1,320	614	118	59
25	3.0	6.4	8.8	37	315	390	343	369	1,330	701	108	61
26	3.0	6.4	9.2	103	417	385	342	426	1,340	614	103	63
27	3.0	6.7	9.2	396	414	381	341	512	1,350	560	95	65
28	3.0	7.0	9.2	206	366	380	339	567	1,290	533	83	65
29	3.0	7.0	9.2	75	-----	379	338	540	1,180	515	83	65
30	3.2	7.0	9.2	161	-----	383	337	521	1,090	617	83	65
31	3.5	-----	9.2	111	-----	384	-----	523	-----	536	75	-----
TOTAL	90.3	170.8	255.1	1,440.4	8,980	12,542	11,689	9,097	32,396	20,156	12,193	1,769
MEAN	2.91	5.69	8.23	46.5	321	405	390	293	1,080	650	393	59.0
MAX	3.5	7.0	9.2	396	483	435	460	567	1,350	959	959	133
MIN	2.6	3.7	7.0	9.8	195	379	337	133	574	515	75	37
AC-FT	179	339	506	2,860	17,810	24,880	23,180	18,040	64,260	39,980	24,180	3,510
CAL YR 1968	TOTAL	3,082.80	MEAN	8.42	MAX	77	MIN	.80	AC-FT	6,110		
WTR YR 1969	TOTAL	110,778.6	MEAN	304	MAX	1,350	MIN	2.6	AC-FT	219,700		

10-2860. COTTONWOOD CREEK NEAR OLANCHA, CALIF.

LOCATION.--Lat 36°26'20", long 118°04'48", Inyo County, in Inyo National Forest, just downstream from intake to Cottonwood powerhouse, and 11.2 miles north of Olancha.

DRAINAGE AREA.--39.9 sq mi.

PERIOD OF RECORD.--January 1906 to March 1911, January 1914 to current year; combined records of creek and flow through powerhouse, November 1938 to current year. January 1914 to September 1959 monthly discharge only, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and Parshall flume (Cipolletti weir used during low flow) on creek; water-stage and Cipolletti weir on powerhouse diversion. Altitude of gage is 4,660 ft (from topographic map). See WSP 1734 for history of gage changes prior to Oct. 31, 1938.

AVERAGE COMBINED DISCHARGE.--59 years (1906-10, 1914-69), 23.1 cfs (16,750 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 520 cfs June 3 (gage height, unknown); minimum daily, 0.04 cfs on several days.

Period of record: Maximum discharge, 520 cfs June 3, 1969 (gage height, unknown); no flow for some days in some years.

(Combined).--Current year: Maximum discharge, 520 cfs June 3; minimum daily, 4.3 cfs Dec. 12.

Period of record: Maximum discharge, 520 cfs June 3, 1969; minimum daily, 1.0 cfs July 22, 23, 1961.

REMARKS.--No regulation above station. Cottonwood powerhouse (maximum capacity, 22 cfs) has diverted since Nov. 13, 1908. For records of combined discharge of Cottonwood Creek and powerhouse, see following page.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.09	.12	.09	.99	4.7	1.3	92	424	126	64	7.7
2	.04	.09	.09	.09	.89	4.7	8.2	104	447	129	62	8.0
3	.04	.09	.09	.09	.89	3.4	19	104	476	125	66	6.4
4	1.9	.09	.09	.09	1.1	.99	19	101	467	122	62	5.8
5	.04	.09	.09	.09	1.1	.89	21	93	486	119	56	5.4
6	.04	.09	.09	.09	1.2	1.3	18	93	450	115	53	4.8
7	1.8	.09	.09	.09	1.6	.89	17	106	421	112	46	5.6
8	.04	.09	.09	.09	1.6	.79	16	123	428	109	40	5.0
9	.04	.09	.09	.09	1.3	.79	16	149	372	105	36	4.4
10	.04	.09	.09	.09	.99	.79	16	186	379	100	37	4.0
11	.04	.09	.09	.09	.99	.79	19	204	377	98	66	7.5
12	.04	.09	.09	.09	.99	1.3	25	208	334	97	52	16
13	.04	.09	.09	.09	.89	.89	24	225	329	107	36	16
14	.04	.09	.09	.09	.79	.79	20	237	320	98	30	16
15	.04	.09	.09	.09	.69	.79	21	248	321	92	29	15
16	.04	.09	.09	.09	.60	.79	20	271	323	88	29	16
17	.04	.09	.09	.09	.52	.79	22	295	289	84	28	15
18	.04	.09	.09	.09	.44	.79	26	305	171	82	25	14
19	.04	.12	.09	.09	.36	.89	29	320	364	83	22	15
20	.04	.12	.09	.09	.29	1.1	37	342	144	116	21	13
21	.04	.12	.09	.09	.23	1.1	45	375	148	91	19	13
22	.04	.12	.09	.09	.29	1.1	61	400	154	104	18	13
23	.04	.12	.09	.09	.36	.99	72	410	169	107	16	13
24	.04	.12	.09	.09	.44	.99	70	420	154	95	14	13
25	.04	.12	.09	10	.52	.99	66	428	134	89	14	13
26	.04	.12	.09	7.5	2.8	1.3	62	440	134	83	13	13
27	.04	.12	.09	1.7	4.0	2.1	63	458	134	86	12	12
28	.04	.12	.09	1.1	4.7	2.5	65	433	144	83	11	11
29	.04	.12	.09	1.6	-----	4.0	73	433	144	86	11	11
30	.04	.12	.09	1.3	-----	4.0	85	450	134	160	9.9	11
31	.04	-----	.09	1.1	-----	1.2	-----	410	-----	75	9.2	-----
TOTAL	4.86	3.06	2.82	26.46	31.56	48.43	1,056.5	8,463	8,771	3,166	1,007.1	323.6
MEAN	.16	.10	.091	.85	1.13	1.56	35.2	273	292	102	32.5	10.8
MAX	1.9	.12	.12	10	4.7	4.7	85	458	486	160	66	16
MIN	.04	.09	.09	.09	.23	.79	1.3	92	134	75	9.2	4.0
AC-FT	9.6	6.1	5.6	52	63	96	2,100	16,790	17,400	6,280	2,000	642
CAL YR 1968	TOTAL	1,819.14	MEAN	4.97	MAX	39	MIN	0	AC-FT	3,610		
WTR YR 1969	TOTAL	22,904.39	MEAN	62.8	MAX	486	MIN	.04	AC-FT	45,430		

OWENS LAKE BASIN

10-2860. COTTONWOOD CREEK NEAR OLANCHA, CALIF.--Continued

Combined discharge, in cubic feet per second, of Cottonwood Creek and powerhouse
near Olancho, Calif., water year October 1968 to September 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	7.2	6.1	8.1	12	8.7	11	95	426	140	67	23
2	6.0	6.9	5.1	8.1	12	8.7	23	107	450	143	67	23
3	6.3	7.2	4.8	8.1	12	10	33	107	478	139	71	21
4	6.1	6.7	5.3	8.6	12	13	32	104	470	134	66	21
5	6.0	6.7	5.1	8.3	12	13	36	96	488	133	62	22
6	6.0	6.4	5.3	7.8	12	9.8	33	96	452	129	59	22
7	7.8	6.7	5.6	7.8	13	12	31	108	423	125	57	23
8	4.5	6.7	5.8	6.9	13	12	26	126	430	121	52	21
9	6.3	6.7	5.8	6.9	12	12	30	152	374	118	52	20
10	6.3	6.4	5.6	6.4	12	12	30	189	381	115	53	20
11	6.3	6.4	5.3	6.4	12	12	31	208	379	110	73	12
12	6.0	6.4	4.3	6.4	11	7.0	39	211	337	113	54	16
13	6.3	6.1	5.6	6.4	12	11	34	228	333	123	50	16
14	10	5.1	5.8	6.9	12	12	36	241	326	111	46	16
15	8.0	6.9	6.1	6.4	12	12	37	251	328	108	41	15
16	7.7	7.8	6.4	6.4	12	12	30	275	332	104	45	16
17	7.7	7.8	5.8	6.1	12	13	38	299	300	100	44	15
18	7.4	8.6	5.6	6.9	11	13	41	308	184	98	38	14
19	7.4	6.1	6.4	9.3	11	14	42	323	379	98	38	15
20	7.4	7.5	5.6	8.3	11	14	50	345	159	131	37	13
21	7.1	5.6	5.6	9.9	10	14	55	378	163	91	35	13
22	7.1	7.8	5.6	9.3	10	15	65	403	169	104	32	13
23	7.1	7.8	5.8	9.3	10	14	76	412	184	110	31	13
24	6.0	6.9	6.1	11	9.6	15	74	422	170	101	29	13
25	6.8	6.1	6.4	21	7.9	15	70	430	150	95	29	13
26	6.8	5.6	6.7	17	14	16	66	442	150	89	27	13
27	6.8	6.1	6.9	11	11	17	66	460	146	92	27	12
28	6.5	5.3	7.2	12	12	18	69	435	148	89	26	11
29	6.5	5.3	7.5	13	-----	19	77	435	148	87	24	11
30	11	6.1	7.8	12	-----	19	88	452	141	160	25	11
31	7.1	-----	8.1	12	-----	15	-----	412	-----	75	24	-----
TOTAL	214.3	198.9	185.1	284.0	322.5	408.2	1,369	8,550	8,998	3,486	1,381	487
MEAN	6.91	6.63	5.97	9.16	11.5	13.2	45.6	276	300	112	44.5	16.2
MAX	11	8.6	8.1	21	14	19	88	460	488	160	73	23
MIN	4.5	5.1	4.3	6.1	7.9	7.0	11	95	141	75	24	11
AC-FT	425	395	367	563	640	810	2,720	16,960	17,850	6,910	2,740	966
CAL YR 1968	TOTAL	5,190.8	MEAN	14.2	MAX	42	MIN	4.3	AC-FT	10,300		
WTR YR 1969	TOTAL	25,884.0	MEAN	70.9	MAX	488	MIN	4.3	AC-FT	51,340		

MONO LAKE BASIN

111

10-2870. MONO LAKE NEAR MONO LAKE, CALIF.

LOCATION.--Lat 37°58'46", long 119°08'11", in NW¼ sec.5, T.2 N., R.26 E., Mono County, on west bank 1 mile south of town of Mono Lake.

DRAINAGE AREA.--785 sq mi.

PERIOD OF RECORD.--June 1912 to current year. Records prior to September 1934 are published in WSP 765.

GAGE.--Nonrecording gage or reference point read once a week. Gage heights prior to October 1944 are converted to elevations above mean sea level in WSP 1314. Gage readings have been reduced to elevations above mean sea level.

EXTREMES.--Period of record: Maximum elevation observed, 6,428.1 ft July 18, 1919, present datum; minimum observed, 6,386.67 ft Jan. 10, 1969.

REMARKS.--Since 1941 water diverted to Owens Lake basin via Mono tunnel (capacity, 200 cfs).

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power.

ELEVATION, IN FEET, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date	Elevation	Date	Elevation	Date	Elevation	Date	Elevation
Oct. 3	6,387.15	Jan. 2	6,386.69	Apr. 15	6,388.04	July 14	6,389.75
10	6,387.10	10	6,386.67	21	6,388.17	22	6,389.88
17	6,387.00	14	6,386.68	28	6,388.26	28	6,389.99
24	6,386.99	23	6,387.06	May 5	6,388.32	Aug. 5	6,390.02
31	6,386.93	Feb. 5	6,387.19	12	6,388.49	11	6,389.99
Nov. 14	6,386.87	12	6,387.19	19	6,388.61	19	6,389.94
22	6,387.11	Mar. 5	6,387.60	27	6,388.75	26	6,389.88
27	6,386.78	18	6,387.67	June 2	6,388.92	Sept. 2	6,389.78
Dec. 4	6,386.75	19	6,387.64	11	6,389.13	8	6,389.73
4	6,386.74	25	6,387.78	16	6,389.31	16	6,389.65
13	6,386.73	28	6,387.83	23	6,389.46	22	6,389.56
18	6,386.69	Apr. 1	6,387.75	30	6,389.56	30	6,389.50
23	6,386.68	8	6,387.97	July 7	6,389.63		

MONO LAKE BASIN

10-2874. RUSH CREEK ABOVE GRANT LAKE, NEAR JUNE LAKE, CALIF.

LOCATION.--Lat 37°48'23", long 119°06'29", in NE¼ sec.4, T.2 S., R.26 E., Mono County, on left bank in narrows, 0.6 mile upstream from Grant Lake, and 2.7 miles northwest of town of June Lake.

DRAINAGE AREA.--51.2 sq mi.

PERIOD OF RECORD.--December 1936 to current year. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 7,200 ft (from topographic map).

AVERAGE DISCHARGE.--32 years (1937-69), 82.8 cfs (59,990 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 519 cfs June 16 (gage height, 3.94 ft); minimum daily, 28 cfs Dec. 10-13, 18, 19.

Period of record: Maximum discharge, 1,070 cfs July 14, 1967 (gage height, 6.20 ft); minimum daily, 5.5 cfs Sept. 6-8, 14, 1954.

REMARKS.--Flow regulated by Gem Lake, Lake Agnew, Waugh Lake (combined capacity, 23,400 acre-ft), and by many natural lakes. No diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	34	30	34	38	61	105	143	433	381	218	111
2	36	33	30	34	48	61	106	146	443	341	192	109
3	34	44	30	34	60	61	106	155	455	341	188	109
4	33	39	30	31	53	61	106	163	457	342	191	108
5	33	34	30	30	56	61	112	163	457	341	181	108
6	32	33	30	30	62	61	107	172	459	339	164	107
7	32	32	30	29	64	72	104	184	455	335	151	107
8	32	31	30	30	56	70	102	194	451	334	139	107
9	31	32	30	29	53	68	96	207	433	334	133	108
10	31	33	28	29	53	64	74	219	394	337	131	108
11	32	33	28	29	53	62	75	222	362	339	131	108
12	33	33	28	29	52	60	80	228	402	341	129	108
13	36	33	28	35	52	60	84	236	410	355	128	107
14	42	33	29	39	52	60	85	238	427	404	126	106
15	37	33	33	34	55	58	84	230	461	453	124	106
16	37	33	33	31	53	54	84	230	508	423	123	106
17	37	33	29	30	59	50	85	270	479	387	125	106
18	36	33	28	33	53	77	90	325	451	364	129	105
19	35	33	28	54	53	53	90	328	449	348	124	105
20	33	32	30	50	53	54	96	321	453	370	123	105
21	33	31	39	52	53	55	107	328	453	379	121	105
22	33	31	34	48	52	54	115	341	463	402	120	105
23	33	31	30	48	55	53	134	357	477	412	119	106
24	33	31	34	46	63	54	129	372	465	400	118	105
25	33	30	36	60	67	60	131	387	445	342	118	104
26	33	30	36	65	61	63	129	385	427	260	117	104
27	33	30	36	50	61	71	125	381	414	257	115	104
28	32	30	34	47	61	77	126	376	404	242	114	104
29	35	31	34	49	-----	82	134	381	400	227	112	105
30	42	30	34	42	-----	88	140	406	400	230	112	105
31	36	-----	33	45	-----	93	-----	417	-----	235	111	-----
TOTAL	1,072	979	972	1,226	1,551	1,978	3,141	8,505	13,187	10,595	4,227	3,191
MEAN	34.6	32.6	31.4	39.5	55.4	63.8	105	274	440	342	136	106
MAX	44	44	39	65	67	93	140	417	508	453	218	111
MIN	31	30	28	29	38	50	74	143	362	227	111	104
AC-FT	2,130	1,940	1,930	2,430	3,080	3,920	6,230	16,870	26,160	21,010	8,380	6,330
CAL YR 1968	TOTAL 19,734		MEAN 53.9		MAX 112		MIN 28		AC-FT 39,140			
WTR YR 1969	TOTAL 50,624		MEAN 139		MAX 508		MIN 28		AC-FT 100,400			

10-2879. LEE VINING CREEK NEAR LEE VINING, CALIF.

LOCATION.--Lat 37°55'46", long 119°10'10", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.24, T.1 N., R.25 E., Mono County, on right bank 0.8 mile upstream from Gibbs Canyon, and 3.3 miles southwest of Lee Vining.

DRAINAGE AREA.--35.2 sq mi.

PERIOD OF RECORD.--April 1934 to current year. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Water-stage recorder and partial concrete control. Altitude of gage is 7,400 ft (from topographic map). See WSP 1734 for history of gage changes prior to Aug. 6, 1944.

AVERAGE DISCHARGE.--35 years, 67.2 cfs (48,690 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 515 cfs June 4 (gage height, 4.17 ft); minimum daily, 13 cfs Nov. 17.

Period of record: Maximum discharge, 590 cfs July 4, 1967 (gage height, 4.42 ft); no flow Nov. 29, 1935.

REMARKS.--Flow regulated by Ellery, Saddlebag, Tioga Lakes (combined capacity, 13,269 acre-ft), and by several small natural lakes. No diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	21	29	24	28	54	49	113	410	287	179	100
2	26	23	28	24	28	73	45	112	398	293	158	62
3	26	27	28	24	38	86	46	102	410	269	147	62
4	26	24	28	25	42	73	48	79	418	250	177	68
5	26	23	31	24	35	49	52	75	400	245	174	85
6	26	23	34	30	32	40	48	89	408	245	168	120
7	26	24	34	42	26	28	45	150	402	242	164	86
8	26	24	34	34	24	37	45	191	387	238	142	66
9	26	24	31	26	24	42	45	163	362	243	113	82
10	26	25	28	26	24	29	43	211	302	245	114	82
11	26	43	27	26	25	33	47	211	270	256	132	73
12	26	68	27	25	26	40	51	216	270	264	156	75
13	26	31	28	37	26	54	54	223	300	292	156	81
14	27	15	34	34	26	30	54	231	370	287	139	81
15	26	14	27	33	29	28	77	226	375	264	127	56
16	26	14	27	32	23	28	53	228	395	235	127	52
17	26	13	28	32	22	58	54	245	342	220	132	59
18	40	14	30	32	22	28	58	260	298	228	156	60
19	22	15	28	48	23	56	76	264	330	228	155	73
20	23	15	28	26	37	59	80	255	338	240	120	91
21	24	15	28	26	41	42	91	262	342	245	78	73
22	25	16	28	26	22	29	103	279	370	238	84	45
23	25	17	28	26	22	28	61	298	405	245	123	46
24	28	18	28	27	20	55	102	320	362	264	142	45
25	25	18	25	64	33	42	116	337	342	250	92	65
26	25	37	28	54	44	26	80	342	300	223	93	75
27	25	28	26	43	46	17	78	333	275	206	107	75
28	23	28	28	33	46	18	76	323	250	185	102	68
29	31	31	27	25	-----	20	71	335	240	194	101	63
30	26	31	27	29	-----	66	114	361	255	186	105	45
31	24	-----	27	29	-----	63	-----	372	-----	186	92	-----
TOTAL	830	719	889	986	834	1,331	1,962	7,206	10,326	7,493	4,055	2,114
MEAN	26.8	24.0	28.7	31.8	29.8	42.9	65.4	232	344	242	131	70.5
MAX	47	68	34	64	46	86	116	372	418	293	179	120
MIN	22	13	25	24	20	17	43	75	240	185	78	45
AC-FT	1,650	1,430	1,760	1,960	1,650	2,640	3,890	14,290	20,480	14,860	8,040	4,190
CAL YR 1968	TOTAL 17,108			MEAN 46.7	MAX 180	MIN 13	AC-FT 33,930					
WTR YR 1969	TOTAL 38,745			MEAN 106	MAX 418	MIN 13	AC-FT 76,850					

TIJUANA RIVER BASIN

11-0109. WILSON CREEK TRIBUTARY NEAR DULZURA, CALIF.

LOCATION.--Lat 32°43'22", long 116°42'06", in NE¼SE¼NW¼ sec.5, T.17 S., R.3 E., San Diego County, on right bank on Japatul Lyons Valley road, 6.6 miles northeast of Dulzura.

DRAINAGE AREA.--0.61 sq mi.

PERIOD OF RECORD.--Water years 1962-67 (annual maximum), October 1967 to current year.

GAGE.--Water-stage recorder with rain-gage attachment and culvert control. Altitude of gage is 2,200 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 49 cfs Feb. 25 (gage height, 10.17 ft), from rating curve extended as explained below; no flow for most of year.

Period of record: Maximum discharge, 98 cfs Dec. 6, 1966 (gage height, 12.22 ft, from crest-stage gage), from rating curve extended above 1.6 cfs on basis of computation of flow through culvert at gage heights 8.0, 10.67, and 12.22 ft; no flow all or most of each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	2.6	0	0	0	0	0	0
2	0	0	0	0	0	1.3	0	0	0	0	0	0
3	0	0	0	0	0	.63	0	0	0	0	0	0
4	0	0	0	0	0	.34	0	0	0	0	0	0
5	0	0	0	0	0	.09	0	0	0	0	0	0
6	0	0	0	0	.84	0	0	0	0	0	0	0
7	0	0	0	0	.23	0	0	0	0	0	0	0
8	0	0	0	0	.07	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	.29	0	0	0	0	0	0
11	0	0	0	0	0	.22	0	0	0	0	0	0
12	0	0	0	0	0	.17	0	0	0	0	0	0
13	0	0	0	0	0	.37	0	0	0	0	0	0
14	0	0	0	.02	0	.26	0	0	0	0	0	0
15	0	0	0	.02	0	.19	0	0	0	0	0	0
16	0	0	0	0	0	.16	0	0	0	0	0	0
17	0	0	0	0	0	.06	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	.81	0	0	0	0	0	0	0
20	0	0	0	0	.45	0	0	0	0	0	0	0
21	0	0	0	.12	.09	0	0	0	0	0	0	0
22	0	0	0	.01	.29	.05	0	0	0	0	0	0
23	0	0	0	0	1.1	0	0	0	0	0	0	0
24	0	0	0	1.3	3.2	0	0	0	0	0	0	0
25	0	0	0	11	14	0	0	0	0	0	0	0
26	0	0	0	3.2	14	0	0	0	0	0	0	0
27	0	0	0	1.0	5.2	0	0	0	0	0	0	0
28	0	0	0	.15	3.4	0	0	0	0	0	0	0
29	0	0	0	.10	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	16.92	43.68	6.73	0	0	0	0	0	0
MEAN	0	0	0	.55	1.56	.22	0	0	0	0	0	0
MAX	0	0	0	11	14	2.6	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	34	87	13	0	0	0	0	0	0
(a)	0	.66	.35	8.43	4.40	1.41	0	0	0	0	0	0

CAL YR 1968 TOTAL 0 MEAN 0 MAX 0 MIN 0 AC-FT 0
WTR YR 1969 TOTAL 67.33 MEAN .18 MAX 14 MIN 0 AC-FT 133

a Precipitation, in inches.

11-0119. POTRERO CREEK TRIBUTARY NEAR BARRETT JUNCTION, CALIF.

LOCATION.--Lat 32°46'04", long 116°41'04", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.16, T.18 S., R.3 E., San Diego County, at culvert on State Highway 94, 1.4 miles southeast of Barrett Junction.

DRAINAGE AREA.--0.78 sq mi.

PERIOD OF RECORD.--Water years 1962-66 (annual maximum), February 1966 to September 1969 (discontinued as a continuous record station; converted to a crest-stage partial record station).

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,220 ft (from topographic map). Dec. 12, 1961, to Feb. 17, 1966, crest-stage gage at same site and datum.

EXTREMES.--Current year: Maximum discharge, 7.0 cfs Jan. 25 (gage height, 10.82 ft); no flow for most of year.

Period of record: Maximum discharge, 294 cfs Nov. 22, 1965 (gage height, 15.25 ft, from crest-stage gage), from rating curve extended above 0.2 cfs on basis of culvert computation of maximum flow; no flow for most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Jan. 14.....0.8	Feb. 26.....0.60	Mar. 6.....0.20
25.....2.8	27......50	7......20
26.....1.2	28......40	8......20
27......60	Mar. 1......30	9......10
28......30	2......30	10......10
29......20	3......30	11......10
30......10	4......30	12......10
Feb. 25......90	5......30	

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
January 1969.....	5.28	2.8	0	0.270	10
February.....	2.40	.90	0	.086	4.8
March.....	2.50	.30	0	.081	5.0
Calendar year 1968.....	-	8.3	0	.022	17
Water year 1968-69.....	-	2.8	0	.003	20

Note.--Flow occurred only on days listed above.

TIJUANA RIVER BASIN

11-0120. COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA, CALIF.

LOCATION.--Lat 32°34'30", long 116°45'11", in NW¼NW¼SW¼ sec.26, T.18 S., R.2 E., San Diego County, on right bank 0.8 mile upstream from confluence with Tecate Creek, and 5.1 miles south of Dulzura.

DRAINAGE AREA.--310 sq mi.

PERIOD OF RECORD.--October 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 569.40 ft above mean sea level (levels by International Boundary and Water Commission).

AVERAGE DISCHARGE.--33 years, 6.95 cfs (5,040 acre-ft per year); median of yearly mean discharges, 1.0 cfs (720 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 791 cfs Feb. 26 (gage height, 5.58 ft); no flow for most of year.

Period of record: Maximum discharge, 4,340 cfs Feb. 7, 1937 (gage height, 9.65 ft), from rating curve extended above 1,500 cfs; no flow for part of each year.

REMARKS.--Records good. Flow regulated by Morena Reservoir (capacity, 50,210 acre-ft) and Barrett Reservoir (capacity, 44,760 acre-ft). Water released from Barrett Reservoir through Dulzura conduit is diverted to Lower Otay Reservoir.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	4.8	81	5.1	.30	0	0	0	0
2	0	0	0	0	3.4	73	4.8	.30	0	0	0	0
3	0	0	0	0	2.3	59	4.8	.30	0	0	0	0
4	0	0	0	0	1.9	52	4.6	.40	0	0	0	0
5	0	0	0	0	2.0	42	4.4	.50	0	0	0	0
6	0	0	0	0	9.9	35	4.4	.60	.10	0	0	0
7	0	0	0	0	12	33	4.4	.80	.10	0	0	0
8	0	0	0	0	9.1	29	4.1	.60	.10	0	0	0
9	0	0	0	0	7.4	24	3.9	.50	0	0	0	0
10	0	0	0	0	5.8	32	3.9	.30	0	0	0	0
11	0	0	0	0	5.1	50	4.1	.30	.10	0	0	0
12	0	0	0	0	4.1	32	3.9	.20	.20	0	0	0
13	0	0	0	0	3.7	47	3.7	.20	.20	0	0	0
14	0	0	0	0	3.2	51	3.6	.20	.20	0	0	0
15	0	0	0	.20	2.8	33	3.2	.20	.10	0	0	0
16	0	0	0	0	2.7	28	2.7	.10	.10	0	0	0
17	0	0	0	0	2.2	26	2.0	.10	0	0	0	0
18	0	0	0	0	4.1	24	1.7	.10	0	0	0	0
19	0	0	0	0	13	19	1.6	.10	0	0	0	0
20	0	0	0	.10	13	16	1.2	.10	0	0	0	0
21	0	0	0	1.2	16	17	1.0	.10	0	0	0	0
22	0	0	0	1.3	56	29	1.0	.10	0	0	0	0
23	0	0	0	.60	80	24	1.0	.10	0	0	0	0
24	0	0	0	6.5	76	16	.90	.10	0	0	0	0
25	0	0	0	56	112	12	.80	0	0	0	0	0
26	0	0	0	48	472	8.8	.70	0	0	0	0	0
27	0	0	0	29	160	8.3	.50	0	0	0	0	0
28	0	0	0	18	102	7.7	.40	0	0	0	0	0
29	0	0	0	13	-----	6.9	.40	0	0	0	0	0
30	0	0	0	9.1	-----	5.8	.40	0	0	0	0	0
31	0	-----	0	6.6	-----	5.4	-----	0	-----	0	0	-----
TOTAL	0	0	0	189.60	1,186.5	926.9	79.20	6.60	1.20	0	0	0
MEAN	0	0	0	6.12	42.4	29.9	2.64	.21	.040	0	0	0
MAX	0	0	0	56	472	81	5.1	.80	.20	0	0	0
MIN	0	0	0	0	1.9	5.4	.40	0	0	0	0	0
AC-FT	0	0	0	376	2,350	1,840	157	13	2.4	0	0	0
CAL YR 1968	TOTAL	58.90	MEAN	.16	MAX	2.0	MIN	0	AC-FT	117		
WTR YR 1969	TOTAL	2,390.00	MEAN	6.55	MAX	472	MIN	0	AC-FT	4,740		

TIJUANA RIVER BASIN

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11-0125. CAMPO CREEK NEAR CAMPO, CALIF.

LOCATION.--Lat 32°35'28", long 116°31'29", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.24, T.18 S., R.4 E., San Diego County, on left bank just upstream from bridge on State Highway 94, 3.5 miles southwest of Campo.

DRAINAGE AREA.--85.0 sq mi, of which 3 sq mi are in Mexico.

PERIOD OF RECORD.--October 1936 to current year.

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 2,178.92 ft above mean sea level, datum of 1929. Prior to Dec. 1, 1954, at datum 1 ft higher.

AVERAGE DISCHARGE.--33 years, 1.92 cfs (1,390 acre-ft per year); median of yearly mean discharges, 0.1 cfs (72 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10 cfs Feb. 26 (gage height, 1.78 ft); no flow for much of year. Period of record: Maximum discharge, 880 cfs Feb. 6, 1937 (gage height, 4.80 ft, present datum), from rating curve extended above 110 cfs on basis of velocity mean-depth relation and cross-sectional area at control; no flow for part of most years.

REMARKS.--Records good except those for Mar. 1 to Apr. 9, which are poor. Flow partly regulated since August 1956 by small conservation reservoir. No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	.70	1.0	.70	.60	.20	.20	.20
2	0	0	0	0	0	.50	1.0	.70	.50	.20	.20	.20
3	0	0	0	0	0	.40	1.0	.70	.50	.20	.20	.20
4	0	0	0	0	0	.40	1.0	.80	.50	.20	.20	.20
5	0	0	0	0	0	.40	1.0	.90	.50	.20	.20	.20
6	0	0	0	0	0	.40	1.0	1.0	.50	.20	.20	.20
7	0	0	0	0	0	.40	1.0	1.0	.60	.20	.20	.20
8	0	0	0	0	0	.40	1.0	.80	.60	.20	.30	.20
9	0	0	0	0	0	.40	1.0	.80	.60	.20	.20	.20
10	0	0	0	0	0	2.0	1.0	.70	.60	.20	.20	.20
11	0	0	0	0	0	1.3	1.0	.70	.60	.20	.20	.20
12	0	0	0	0	0	1.2	1.0	.70	.70	.20	.20	.20
13	0	0	0	0	0	1.3	1.0	.60	.60	.20	.20	.20
14	0	0	0	0	0	1.2	1.0	.60	.50	.20	.20	.20
15	0	0	0	0	0	1.1	1.0	.60	.40	.20	.20	.20
16	0	0	0	0	0	1.1	.80	.60	.40	.20	.20	.20
17	0	0	0	0	0	1.1	.80	.60	.40	.20	.20	.20
18	0	0	0	0	0	1.0	.80	.60	.30	.20	.20	.20
19	0	0	0	0	0	1.0	.80	.60	.30	.20	.20	.20
20	0	0	0	0	0	1.0	.80	.60	.30	.30	.20	.20
21	0	0	0	0	0	1.1	.80	.70	.30	.20	.20	.20
22	0	0	0	0	0	1.1	.80	.70	.30	.20	.20	.20
23	0	0	0	0	0	1.0	.80	.70	.30	.20	.20	.20
24	0	0	0	0	0	1.0	.80	.70	.30	.20	.20	.20
25	0	0	0	.20	0	1.0	.80	.80	.30	.20	.20	.20
26	0	0	0	0	2.2	1.0	.80	.80	.30	.20	.20	.20
27	0	0	0	0	4.9	1.0	.70	.80	.20	.20	.20	.20
28	0	0	0	0	1.8	1.0	.70	.80	.20	.20	.20	.20
29	0	0	0	0	-----	1.0	.70	.80	.20	.20	.20	.20
30	0	0	0	0	-----	1.0	.70	.70	.20	.20	.20	.20
31	0	-----	0	0	-----	1.0	-----	.60	-----	.20	.20	-----
TOTAL	0	0	0	0.20	8.9	28.50	26.60	22.40	12.60	6.30	6.30	6.00
MEAN	0	0	0	.007	.32	.92	.89	.72	.42	.20	.20	.20
MAX	0	0	0	.20	4.9	2.0	1.0	1.0	.70	.30	.30	.20
MIN	0	0	0	0	0	.40	.70	.60	.20	.20	.20	.20
AC-FT	0	0	0	.4	18	57	53	44	25	13	13	12

CAL YR 1968 TOTAL 0 MEAN 0 MAX 0 MIN 0 AC-FT 0
WTR YR 1969 TOTAL 117.80 MEAN .32 MAX 4.9 MIN 0 AC-FT 234

PEAK DISCHARGE (BASE, 20 CFS).--No peak above base.

NOTE.--No gage-height record Mar. 1 to Apr. 9.

TIJUANA RIVER BASIN

11-0130. TIJUANA RIVER NEAR DULZURA, CALIF.

LOCATION.--Lat 32°33'56", long 116°46'27", in E½ sec.33, T.18 S., R.2 E., San Diego County, on left bank 0.5 mile downstream from confluence of Cottonwood and Tecate Creeks, and 5.5 miles south of Dulzura.

DRAINAGE AREA.--481 sq mi, of which 70 sq mi are in Mexico.

PERIOD OF RECORD.--October 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 542.42 ft above mean sea level (levels by International Boundary and Water Commission). Prior to Sept. 19, 1939, at datum 2.00 ft higher.

AVERAGE DISCHARGE.--33 years, 11.2 cfs (8,110 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,330 cfs Feb. 26 (gage height, 5.45 ft), from rating curve extended above 520 cfs on basis of slope-area measurement at gage height 5.56 ft; no flow Nov. 20, 21, Nov. 24 to Dec. 3. Period of record: Maximum discharge, 4,700 cfs Feb. 7, 1937 (gage height, 8.50 ft, present datum), from rating curve extended above 300 cfs on basis of velocity, mean-depth, and area studies; no flow for part of most years.

REMARKS.--Records good except those above 150 cfs, which are poor. Flow regulated by Morena Reservoir (capacity, 50,210 acre-ft) and Barrett Reservoir (capacity, 44,760 acre-ft). Water diverted from Cottonwood Creek at Barrett Dam by Dulzura conduit to Jamul Creek.

COOPERATION.--Nine discharge measurements furnished by International Boundary and Water Commission.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	0	.10	11	94	7.2	1.0	.40	.10	.20	.10
2	.20	.10	0	.10	8.2	77	7.2	1.0	.50	.10	.20	.10
3	.20	.20	0	.10	5.9	66	7.8	.90	.30	.10	.10	.10
4	.20	.30	.10	.10	5.3	60	7.5	1.0	.30	.10	.10	.10
5	.10	.30	.10	.10	5.6	50	6.8	1.1	.30	.10	.10	.10
6	.10	.20	.10	.10	22	44	7.5	1.1	.60	.20	.10	.10
7	.10	.20	.10	.10	30	42	6.8	1.1	.60	.20	.10	.10
8	.10	.20	.10	.10	19	38	6.8	1.0	.50	.20	.10	.10
9	.20	.10	.10	.10	16	31	6.8	.90	.40	.20	.10	.10
10	.20	.20	.10	.10	13	44	7.2	.80	.40	.20	.10	.10
11	.20	.10	.10	.10	11	62	7.2	.80	.40	.20	.10	.10
12	.20	.10	.10	.10	10	43	6.5	.60	.50	.20	.10	.10
13	.20	.10	.10	.10	8.6	60	5.9	.60	.50	.20	.10	.10
14	.10	.20	.10	.20	7.2	66	5.1	.60	.40	.20	.10	.10
15	.10	.20	.10	.10	6.5	45	4.5	.60	.40	.20	.10	.10
16	.20	.20	.10	.10	6.2	38	4.1	.60	.30	.20	.10	.10
17	.10	.10	.10	.10	4.8	33	3.6	.60	.20	.20	.10	.10
18	.10	.10	.10	.10	11	31	3.6	.50	.20	.20	.10	.10
19	.20	.10	.10	.10	43	26	3.4	.50	.10	.20	.10	.10
20	.10	0	.20	.10	33	21	3.4	.50	.10	.20	.10	.10
21	.10	0	.20	.10	31	22	3.2	.60	.10	.20	.10	.10
22	.10	.10	.20	1.7	104	42	3.2	.60	.10	.20	.10	.10
23	.10	.10	.10	1.3	112	32	3.2	.70	.10	.20	.10	.10
24	.20	0	.10	8.2	96	21	3.0	.60	.10	.20	.10	.10
25	.20	0	.10	82	150	15	2.7	.60	.10	.20	.10	.10
26	.20	0	.20	95	814	11	1.9	.60	.10	.20	.10	.10
27	.10	0	.10	47	239	9.4	1.4	.40	.10	.20	.10	.10
28	.10	0	.10	27	123		1.0	.40	.10	.20	.10	.10
29	.10	0	.10	24	-----		1.0	.40	.10	.20	.10	.10
30	.10	0	.10	16	-----		7.5	1.0	.40	.10	.20	.10
31	.10	-----	.10	12	-----		7.2	-----	.40	-----	.20	-----
TOTAL	4.50	3.40	3.20	316.40	1,946.3	1,155.3	140.5	21.50	8.40	5.70	3.30	3.00
MEAN	.15	.11	.10	10.2	69.5	37.3	4.68	.69	.28	.18	.11	.10
MAX	.20	.30	.20	95	814	94	7.8	1.1	.60	.20	.20	.10
MIN	.10	0	0	.10	4.8	7.2	1.0	.40	.10	.10	.10	.10
AC-FT	8.9	6.7	6.4	628	3,860	2,290	279	43	17	11	6.6	6.0

CAL YR 1968 TOTAL 596.30
WTR YR 1969 TOTAL 3,611.50

MEAN 1.63
MEAN 9.89

MAX 364
MAX 814

MIN 0
MIN 0

AC-FT 1,180
AC-FT 7,160

11-0132. RODRIGUEZ RESERVOIR AT RODRIGUEZ DAM, BAJA CALIFORNIA, MEXICO

LOCATION.--Lat 32°26'40", long 116°54'25", Baja California, Mexico, at Rodriguez Dam on Rio de las Palmas, 0.2 mile upstream from Arroyo Matanuco, and 10 miles southeast of Tijuana.

DRAINAGE AREA.--977 sq mi, of which 10 sq mi are in the United States.

PERIOD OF RECORD.--April 1937 to current year. Published with record for Tijuana River near Nestor, Calif., October 1953 to September 1957. Month-end contents for April 1937 to September 1950 published in WSP 1315-B and for October 1950 to September 1960 in WSP 1735.

GAGE.--Nonrecording gage read once a day. Altitude of gage is 250 ft (from topographic map).

EXTREMES.--Current year: Maximum contents, 7,210 acre-ft Mar. 24-28, 31, Apr. 6-20; minimum contents, 71 acre-ft Jan. 25.

Period of record: Reservoir spilled during March 1938, September 1940, February to May 1941, March 1942, and February, March 1944; reservoir dry Apr. 2, 1964, to Apr. 9, 1965, Aug. 21 to Nov. 22, 1965.

REMARKS.--Reservoir is formed by thin-shell concrete arch dam completed in 1936; storage began in 1937. Capacity table is based on surveys made in 1927. Maximum storage at of spillway gates (elevation, 410.10 ft), 111,070 acre-ft; at spillway lip (elevation, 380.08 ft), 74,580 acre-ft; dead storage below outlet (elevation, 267.39 ft), 1,650 acre-ft included in contents. Reservoir stores water for irrigation of 3,000 acres on both banks 0.5 to 5.5 miles downstream and municipal supply for city of Tijuana.

COOPERATION.--Records furnished by Ministry of Hydraulic Resources, Government of Mexico, through International Boundary and Water Commission, United States Section.

MONTH-END CONTENTS, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date	Contents (acre- feet)	Change in contents (acre- feet)
Sept. 30.....	404	-
Oct. 31.....	269	-135
Nov. 30.....	175	-94
Dec. 31.....	110	-65
CAL YR 1968.....	-	-1,197
Jan. 31.....	872	+762
Feb. 28.....	6,290	+5,418
Mar. 31.....	7,210	+920
Apr. 30.....	7,150	-60
May 31.....	6,960	-190
June 30.....	6,730	-230
July 31.....	6,310	-420
Aug. 31.....	5,900	-410
Sept. 30.....	5,630	-270
WTR YR 1968-69.....	-	+5,226

TIJUANA RIVER BASIN

11-0135. TIJUANA RIVER NEAR NESTOR, CALIF.

LOCATION.--Lat 32°33'06", long 117°05'00", on line between secs. 3 and 4, T.19 S., R.2 W., San Diego County, on downstream side of county highway bridge, 1.7 miles south of Nestor, and 2.9 miles upstream from mouth.

DRAINAGE AREA.--1,690 sq mi, of which 1,236 sq mi are in Mexico.

PERIOD OF RECORD.--October 1914 to September 1915, October 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 15.14 ft above mean sea level, datum of 1929. Oct. 1, 1914, to Sept. 30, 1915, reference point at same site at mean sea level datum. Oct. 1, 1936, to Apr. 9, 1953, water-stage recorder at different datum. Apr. 10, 1953, to Aug. 5, 1958, at site 2 miles upstream at different datum.

AVERAGE DISCHARGE.--34 years, 33.0 cfs (23,910 acre-ft per year); median of yearly mean discharges, 2.9 cfs (2,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 553 cfs Feb. 26 (gage height, 5.43 ft), from rating curve extended above 190 cfs on basis of slope-area measurement at gage height 8.5 ft; no flow for most of year.
1936 to current year: Maximum discharge, 17,700 cfs Feb. 7, 1937 (gage height, 8.20 ft, datum then in use), from rating curve extended above 2,000 cfs on basis of velocity-depth relation and cross section after peak; no flow in parts of each year.

REMARKS.--Records good. Flow regulated by Morena Reservoir (capacity, 50,210 acre-ft) and Barrett Reservoir (capacity, 44,760 acre-ft) in the United States, and Rodriguez Reservoir (see sta 11-0132) in Mexico. Water diverted from Cottonwood Creek at Barrett Dam by Dulzura conduit to Jamul Creek. Average Discharge represents flow to the ocean regardless of upstream development.

COOPERATION.--Three discharge measurements furnished by International Boundary and Water Commission.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	124	0	0	0	0	0	0
2	0	0	0	0	0	83	0	0	0	0	0	0
3	0	0	0	0	0	64	0	0	0	0	0	0
4	0	0	0	0	0	47	0	0	0	0	0	0
5	0	0	0	0	0	34	0	0	0	0	0	0
6	0	0	0	0	8.6	25	0	0	0	0	0	0
7	0	0	0	0	4.1	18	0	0	0	0	0	0
8	0	0	0	0	.10	12	0	0	0	0	0	0
9	0	0	0	0	0	8.6	0	0	0	0	0	0
10	0	0	0	0	0	3.4	0	0	0	0	0	0
11	0	0	0	0	0	1.4	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	15	0	0	0	0	0	0
14	0	0	0	2.0	0	28	0	0	0	0	0	0
15	0	0	0	.40	0	27	0	0	0	0	0	0
16	0	0	0	0	0	28	0	0	0	0	0	0
17	0	0	0	0	0	18	0	0	0	0	0	0
18	0	0	0	0	0	12	0	0	0	0	0	0
19	0	0	0	0	5.1	8.3	0	0	0	0	0	0
20	0	0	0	0	.20	6.1	0	0	0	0	0	0
21	0	0	0	6.4	.10	2.7	0	0	0	0	0	0
22	0	0	0	1.1	56	.30	0	0	0	0	0	0
23	0	0	0	0	151	2.4	0	0	0	0	0	0
24	0	0	0	0	119	7.2	0	0	0	0	0	0
25	0	0	0	8.3	86	4.7	0	0	0	0	0	0
26	0	0	0	6.2	334	.20	0	0	0	0	0	0
27	0	0	0	11	329	0	0	0	0	0	0	0
28	0	0	0	.90	182	0	0	0	0	0	0	0
29	0	0	0	.70	-----	0	0	0	0	0	0	0
30	0	0	0	.20	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	37.20	1,275.20	580.30	0	0	0	0	0	0
MEAN	0	0	0	1.20	45.5	18.7	0	0	0	0	0	0
MAX	0	0	0	11	334	124	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	74	2,530	1,150	0	0	0	0	0	0
CAL YR 1968	TOTAL	20.50	MEAN	.056	MAX	13	MIN	0	AC-FT	41		
WTR YR 1969	TOTAL	1,892.70	MEAN	5.19	MAX	334	MIN	0	AC-FT	3,750		

OTAY RIVER BASIN

121

11-0140. JAMUL CREEK NEAR JAMUL, CALIF.

LOCATION.--Lat 32°38'15", long 116°53'00", in NE¼ sec.4, T.18 S., R.1 E., San Diego County, on right bank 300 ft upstream from county road crossing at upper end of Lower Otay Reservoir, 1.4 miles downstream from Dulzura Creek, and 5.5 miles south of Jamul.

DRAINAGE AREA.--70.3 sq mi.

PERIOD OF RECORD.--April 1940 to current year.

GAGE.--Water-stage recorder and broad-crested weir control with low-water Parshall flume. Datum of gage is 511.64 ft above mean sea level. Prior to Oct. 1, 1951, at datum 1.00 ft higher.

EXTREMES.--Current year: Maximum discharge, 1,060 cfs Feb. 26 (gage height, 4.07 ft); no flow for much of year.

Period of record: Maximum discharge, 4,000 cfs Dec. 1, 1947 (gage height, 6.42 ft, present datum), from rating curve extended above 1,200 cfs; no flow at times in some years.

REMARKS.--Records good. No regulation above station. Water diverted from Cottonwood Creek by Dulzura conduit discharges into Jamul Creek via Dulzura Creek and is included in discharge for this station (see sta 11-0120).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	3.0	65	36	30	31	28	19	2.9
2	0	0	0	0	2.4	48	35	31	31	29	23	2.4
3	0	0	0	0	2.0	41	36	32	31	28	25	1.8
4	0	0	0	0	2.1	35	35	34	31	29	25	1.0
5	0	0	0	0	2.0	30	33	35	31	28	28	.30
6	0	0	0	0	35	26	35	37	30	25	27	.16
7	0	0	0	0	56	24	34	37	30	25	27	.16
8	0	0	0	0	23	22	33	36	30	25	27	.16
9	0	0	0	0	13	21	34	35	30	21	27	.11
10	0	0	0	0	9.6	28	34	35	30	20	29	.10
11	0	0	0	0	7.2	26	34	34	33	21	29	.09
12	0	0	0	0	6.1	20	34	34	34	21	29	.04
13	0	0	0	0	4.5	30	34	36	34	20	29	.04
14	0	0	0	3.2	3.8	27	34	36	33	20	29	.02
15	0	0	0	.33	3.7	23	33	36	33	20	29	0
16	0	0	0	.16	3.5	20	31	35	32	20	28	0
17	0	0	0	.17	3.3	19	31	35	33	19	28	0
18	0	0	0	.23	17	18	34	34	32	20	28	0
19	0	0	0	.24	64	20	32	33	31	19	28	0
20	0	0	.08	.30	63	21	31	33	31	20	27	0
21	0	0	.16	.45	41	27	31	33	31	20	26	0
22	0	0	.10	.34	248	40	31	34	30	19	29	0
23	0	0	.10	.30	125	38	32	32	30	19	34	0
24	0	0	.04	.77	123	37	31	32	30	19	25	0
25	0	0	.04	68	271	36	31	32	30	20	25	0
26	0	0	.23	68	673	37	30	32	29	21	25	0
27	0	0	.24	46	163	38	30	32	29	18	25	0
28	0	0	.16	13	90	38	29	32	29	18	25	0
29	0	0	.10	11	-----	38	29	32	29	19	11	0
30	0	0	0	5.9	-----	38	30	32	28	18	5.8	0
31	0	-----	0	3.5	-----	36	-----	31	-----	19	3.8	-----
TOTAL	0	0	1.25	221.89	2,058.2	967	977	1,042	926	668	775.6	9.28
MEAN	0	0	.040	7.16	73.5	31.2	32.6	33.6	30.9	21.5	25.0	.31
MAX	0	0	.24	68	673	65	36	37	34	29	34	2.9
MIN	0	0	0	0	2.0	18	29	30	28	18	3.8	0
AC-FT	0	0	2.5	440	4,080	1,920	1,940	2,070	1,840	1,320	1,540	18
CAL YR 1968	TOTAL	296.85	MEAN	.81	MAX	36	MIN	0	AC-FT	589		
WTR YR 1969	TOTAL	7,646.22	MEAN	20.9	MAX	673	MIN	0	AC-FT	15,170		

SWEETWATER RIVER BASIN

11-0150. SWEETWATER RIVER NEAR DESCANSO, CALIF.

LOCATION.--Lat 32°50'05", long 116°37'20", in NW¼SE¼ sec.25, T.15 S., R.3 E., San Diego County, on right bank at county road bridge, 0.7 mile downstream from unnamed tributary, and 1.3 miles south of Descanso.

DRAINAGE AREA.--45.5 sq mi.

PERIOD OF RECORD.--October 1905 to September 1927, October 1956 to current year. Monthly discharge only for October to December 1905, January to February 1916, February, March, June to September 1927, published in WSP 1315-B. Combined records of river and diversion, October 1956 to current year.

GAGE.--Water-stage recorder on river; water-stage recorder on concrete diversion. Datum of gage is 3,269.24 ft above mean sea level. Prior to June 25, 1927, nonrecording gages at several sites within 0.1 mile upstream at various datums.

AVERAGE DISCHARGE (Creek only).--35 years, 11.4 cfs (8,260 acre-ft per year); median of yearly mean discharges, 7.1 cfs (5,100 acre-ft per year).

(Combined).--13 years, 4.34 cfs (3,140 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 1,750 cfs Feb. 25 (gage height, 7.62 ft), from rating curve extended above 360 cfs; no flow for much of year.

Period of record: Maximum discharge, 11,200 cfs Feb. 16, 1927 (gage height, 13.2 ft, from floodmarks, site and datum then in use), on basis of slope-area measurement of maximum flow; no flow for many days in most years.

(Combined).--Current year: Maximum discharge, 1,750 cfs Feb. 25; no flow for much of year.

Period of record: Maximum discharge, 3,890 cfs Dec. 8, 1966; no flow for many days in each year.

REMARKS.--Records good. No regulation above station. Sweetwater River diversion diverts 0.3 mile above station for irrigation below. For records of combined discharge of river and diversion, see following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.25	.56	14	132	35	16	8.4	.80	0	0
2	0	0	.19	.56	12	100	34	16	8.0	.90	.08	0
3	0	0	.17	.42	10	80	40	16	7.6	1.0	.20	0
4	0	0	.25	.38	9.2	67	39	19	7.6	.90	.07	0
5	0	0	.25	.51	13	61	34	19	7.8	1.1	0	0
6	0	0	.17	.51	62	58	37	21	7.4	1.2	0	0
7	0	0	.17	.51	92	54	34	21	7.2	1.1	0	0
8	0	0	.19	.51	49	50	31	20	7.1	.20	0	0
9	0	0	.31	.51	42	54	29	17	6.8	.50	.04	0
10	0	0	.25	.34	35	79	28	16	6.8	.30	.27	0
11	0	0	.28	.38	32	82	28	15	6.7	.30	.18	0
12	0	0	.25	.51	31	81	26	14	6.4	.81	0	0
13	0	0	.22	.56	29	93	26	12	5.1	.81	0	0
14	0	0	.19	4.9	27	82	24	11	4.2	.34	0	0
15	0	.09	.19	2.5	26	76	24	10	3.4	.17	0	0
16	0	0	.25	1.4	29	75	24	9.9	3.4	.30	0	0
17	0	.09	.51	1.1	24	69	22	9.9	3.4	.23	0	0
18	0	.11	.34	1.0	28	66	21	9.6	3.2	.15	0	0
19	0	.11	.22	1.4	39	63	21	9.2	2.9	.30	0	0
20	0	.09	.61	1.8	40	58	20	8.6	2.9	.55	0	0
21	0	.09	.66	8.2	39	64	19	8.8	2.9	.34	0	0
22	0	.07	.56	2.5	43	74	19	9.0	2.9	.20	0	0
23	0	.05	.42	2.0	74	58	18	8.6	2.4	.17	0	0
24	0	.05	.28	21	385	51	18	9.1	1.8	.12	0	0
25	0	.05	.42	382	698	48	18	9.0	2.1	.05	0	0
26	0	.05	1.7	163	607	46	17	8.5	2.0	.17	0	0
27	0	.09	1.0	119	178	46	16	8.2	2.0	.34	0	0
28	0	.19	.84	46	122	44	16	8.5	2.0	.17	0	0
29	0	.17	.72	32	-----	42	16	8.3	1.8	.05	0	0
30	0	.19	.66	21	-----	40	16	7.9	1.4	.03	0	0
31	0	-----	.61	18	-----	39	-----	8.2	-----	.01	0	-----
TOTAL	0	1.49	13.13	835.06	2,789.2	2,032	750	384.3	137.6	13.61	0.84	0
MEAN	0	.050	.42	26.9	99.6	65.5	25.0	12.4	4.59	.44	.027	0
MAX	0	.19	1.7	382	698	132	40	21	8.4	1.2	.27	0
MIN	0	0	.17	.34	9.2	39	16	7.9	1.4	.01	0	0
AC-FT	0	3.0	26	1,660	5,530	4,030	1,490	762	273	27	1.7	0

CAL YR 1968 TOTAL 271.62 MEAN .74 MAX 4.7 MIN 0 AC-FT 539
WTR YR 1969 TOTAL 6,957.23 MEAN 19.1 MAX 698 MIN 0 AC-FT 13,800

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-25	1700	6.92	1,160	2-25	2300	7.62	1,750
2-6	2400	4.90	195				

11-0150. SWEETWATER RIVER NEAR DESCANSO, CALIF.--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SWEETWATER RIVER AND
SWEETWATER DIVERSION NEAR DESCANSO, CALIF., WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.25	.57	14	132	36	16	8.4	1.8	.82	.10
2	0	0	.24	.57	12	100	35	16	8.3	1.7	.59	.13
3	0	.05	.21	.57	10	80	40	16	8.2	1.6	.31	.15
4	0	.07	.28	.50	9.2	67	39	19	8.0	1.4	.38	.15
5	0	0	.27	.56	13	61	34	19	7.8	1.4	.45	.16
6	0	.06	.24	.55	62	58	37	21	7.6	1.3	.47	.17
7	0	.08	.24	.55	92	54	35	21	7.4	1.2	.49	.16
8	0	.01	.24	.55	49	50	31	20	7.3	1.1	.54	.13
9	0	0	.34	.59	42	54	29	18	7.2	.98	.32	.10
10	0	0	.33	.54	35	79	29	17	7.0	1.0	.31	.08
11	0	0	.40	.46	32	82	28	15	7.0	.98	.33	.08
12	0	0	.35	.52	31	81	26	14	6.7	.83	.30	.11
13	0	0	.32	.56	29	93	26	12	5.4	.83	.30	.24
14	0	0	.31	5.0	27	82	24	11	4.4	1.0	.28	.22
15	0	.09	.31	2.6	26	76	25	10	3.6	1.2	.31	.30
16	0	0	.33	1.4	29	75	24	10	3.6	.94	.49	.22
17	0	.09	.51	1.1	24	69	22	9.9	3.7	.96	.26	.08
18	0	.11	.40	1.0	28	66	21	9.6	3.6	1.1	.24	.25
19	0	.11	.38	1.4	39	63	21	9.8	3.3	.77	.24	.25
20	0	.09	.72	1.8	40	58	20	9.6	3.1	.57	.20	.25
21	0	.09	.66	8.2	39	64	19	9.5	2.9	.82	.17	.13
22	0	.09	.56	2.5	43	74	20	9.4	2.9	.95	.12	.16
23	0	.13	.51	2.0	74	58	18	9.3	2.8	.89	.10	.28
24	0	.13	.43	21	385	51	18	9.2	2.8	.89	.12	.24
25	0	.14	.50	382	698	48	18	9.1	2.8	1.0	.12	.20
26	0	.14	1.8	163	607	46	17	9.0	2.6	.56	.11	.18
27	0	.12	1.0	119	178	46	16	8.9	2.4	.35	.10	.17
28	0	.19	.86	46	122	45	16	8.8	2.0	.64	.12	.16
29	0	.17	.74	32	-----	42	17	8.7	1.8	.82	.12	.17
30	0	.19	.68	21	-----	40	17	8.7	1.8	.85	.12	.17
31	0	-----	.63	18	-----	39	-----	8.4	-----	.83	.11	-----
TOTAL	0	2.15	15.04	836.09	2,789.2	2,033	758	392.9	146.4	31.26	8.94	5.19
MEAN	0	.072	.49	27.0	99.6	65.6	25.3	12.7	4.88	1.01	.29	.17
MAX	0	.19	1.8	382	698	132	40	21	8.4	1.8	.82	.30
MIN	0	0	.21	.46	9.2	39	16	8.4	1.8	.35	.10	.08
AC-FT	0	4.3	30	1,660	5,530	4,030	1,500	779	290	62	18	10

CAL YR 1968 TOTAL 299.89 MEAN .82 MAX 5.1 MIN 0 AC-FT 595
 WTR YR 1969 TOTAL 7,018.17 MEAN 19.2 MAX 698 MIN 0 AC-FT 13,920

PEAK DISCHARGE (BASE, 100 CFS).--(Same as those listed on previous page).

SAN DIEGO RIVER BASIN

11-0225. SAN DIEGO RIVER NEAR SANTEE, CALIF.

LOCATION.--Lat 32°49'29", long 117°03'17", in Ex Mission San Diego Grant, San Diego County, on right bank in Mission Gorge, 0.2 mile upstream from left tributary, and 6 miles west of Santee.

DRAINAGE AREA.--377 sq mi.

PERIOD OF RECORD.--May 1912 to December 1915, March 1916 to current year. Monthly discharge only for some periods and yearly estimates only for 1924-25, published in WSP 1315-B.

GAGE.--Water-stage recorder and unfinished rubble dam control. Altitude of gage is 180 ft (from topographic map). Prior to Nov. 10, 1920, nonrecording gage at site 1.5 miles upstream at different datum. Nov. 10, 1920 to Dec. 1, 1954, water-stage recorder at present site at datum 1.0 ft higher.

AVERAGE DISCHARGE.--56 years, 23.5 cfs (17,010 acre-ft per year); median of yearly mean discharges, 4.8 cfs (3,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,830 cfs Feb. 25 (gage height, 7.59 ft); no flow Oct. 1-8. Period of record: Maximum discharge, 70,200 cfs Jan. 27, 1916 (gage height, 25.1 ft, site and datum then in use), based on slope-conveyance computation; no flow at times in most years.

REMARKS.--Records fair. Flow regulated by Cuyamaca Reservoir (capacity, 11,540 acre-ft), El Capitan Reservoir (capacity, 112,810 acre-ft), and San Vicente Reservoir (capacity, 90,230 acre-ft). Diversions by city of San Diego for municipal supply and by Helix Irrigation District. AVERAGE DISCHARGE represents flow to ocean during period of record, regardless of upstream development.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.99	1.2	3.2	27	101	6.6	2.8	1.7	1.7	.12	.01
2	0	.80	1.4	3.2	21	57	6.7	3.1	1.7	1.1	.10	.01
3	0	.86	1.5	3.0	17	44	7.8	3.1	1.5	.72	.07	.01
4	0	.88	1.2	3.0	13	37	7.1	4.1	.94	.50	.06	.02
5	0	1.1	1.4	2.8	11	29	6.1	4.6	.81	.83	.12	.02
6	0	1.1	1.3	3.0	261	24	12	5.1	.73	1.1	.08	.02
7	0	.81	1.4	2.8	125	21	7.4	5.2	.94	1.1	.05	.02
8	0	.91	1.3	2.7	51	16	5.3	3.6	1.7	.92	.03	.02
9	.01	.85	1.6	2.5	38	18	4.7	3.2	1.9	.64	.02	.02
10	.58	.71	1.5	2.3	33	76	6.6	3.0	2.5	.38	.02	.02
11	.76	.75	1.4	2.0	27	40	6.6	3.4	2.5	.27	.02	.02
12	.74	.80	1.9	1.8	25	18	6.9	3.9	2.2	.21	.10	.02
13	.74	.67	2.8	1.8	24	75	8.1	3.2	1.7	.12	.28	.02
14	.84	1.1	2.0	235	19	34	8.6	2.6	1.5	.18	.36	.02
15	1.2	1.2	1.8	66	13	16	7.5	2.1	2.1	.50	.50	.02
16	2.2	12	2.1	21	18	13	5.1	1.8	2.3	.19	.43	.02
17	1.6	4.3	2.4	15	16	12	3.2	1.8	2.5	.12	.08	.02
18	1.3	2.6	2.3	13	60	10	3.9	2.3	2.0	.09	.04	.02
19	1.2	2.0	2.9	20	182	11	4.2	2.5	1.4	.08	.33	.02
20	1.1	1.7	3.3	21	291	9.9	4.7	2.0	1.3	.06	.25	.02
21	1.3	1.7	3.4	98	76	25	5.0	1.6	1.2	.04	.16	.02
22	1.2	1.7	2.7	29	577	78	4.6	2.0	1.6	.03	.04	.02
23	.97	1.4	2.8	14	174	20	3.7	2.1	2.3	.02	.03	.47
24	.75	1.5	2.7	50	313	15	3.8	2.2	2.1	.02	.02	.40
25	.68	1.5	2.8	517	490	8.6	4.1	1.9	1.6	.02	.02	.11
26	.56	1.3	23	447	622	7.0	4.1	2.0	1.3	.27	.02	.08
27	.86	1.5	7.7	332	166	4.5	3.9	1.9	1.3	.29	.01	.10
28	.88	1.1	3.3	106	102	6.9	3.6	1.6	.96	.44	.01	.30
29	.85	1.1	2.9	96	-----	6.3	3.2	1.0	1.1	.52	.01	.81
30	.91	1.0	2.7	56	-----	6.1	2.6	1.2	1.5	.21	.01	1.0
31	.97	-----	2.7	40	-----	7.0	-----	1.7	-----	.14	.01	-----
TOTAL	22.20	49.93	93.4	2,210.1	3,792	846.3	167.7	82.6	48.88	12.81	3.40	3.68
MEAN	.72	1.66	3.01	71.3	135	27.3	5.59	2.66	1.63	.41	.11	.12
MAX	2.2	12	23	517	622	101	12	5.2	2.5	1.7	.50	1.0
MIN	0	.67	1.2	1.8	11	4.5	2.6	1.0	.73	.02	.01	.01
AC-FT	44	99	185	4,380	7,520	1,680	333	164	97	25	6.7	7.3
CAL YR 1968	TOTAL	534.14	MEAN	1.46	MAX	45	MIN	0	AC-FT	1,060		
WTR YR 1969	TOTAL	7,333.00	MEAN	20.1	MAX	622	MIN	0	AC-FT	14,540		

LOS PENASQUITOS CREEK BASIN

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11-0233.4. LOS PENASQUITOS CREEK NEAR POWAY, CALIF.

LOCATION.--Lat $32^{\circ}56'35''$, long $117^{\circ}07'15''$, in Los Penasquitos Grant, San Diego County, on left bank 1.0 mile downstream from Cypress Creek, and 5.5 miles southwest of Poway.

DRAINAGE AREA.--42.1 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 260 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 4.81 cfs (3,480 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 963 cfs Feb. 25 (gage height, 5.97 ft, from outside gage), from rating curve extended as explained below; minimum daily, 0.48 cfs Aug. 8.

Period of record: Maximum discharge, 2,100 cfs Dec. 6, 1966 (gage height, 6.90 ft, in gage well, 7.70 ft, from profile of floodmarks), from rating curve extended above 400 cfs on basis of slope-area measurement at gage height 6.23 ft in gage well, 7.40 ft, from outside gage; no flow May 16, 17, 1968.

REMARKS.--Records good except those above 100 cfs, which are fair. Flow partly regulated by several conservation reservoirs above station. Pumping from wells along stream for irrigation. Flow augmented by reclaimed water from Poway area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.64	1.1	.71	5.8	33	4.4	2.8	1.2	1.2	1.1	1.4
2	.70	.69	1.1	.80	4.4	22	4.3	2.8	1.3	1.2	.99	1.5
3	.70	.82	1.2	.75	2.4	19	5.4	2.8	1.2	1.2	.95	1.3
4	.70	.81	.81	.62	1.8	16	4.8	3.4	1.2	1.1	.93	1.2
5	.72	.74	.88	.78	1.6	12	4.4	3.5	1.2	1.1	.71	1.2
6	.76	.71	.94	.86	88	11	5.5	2.8	1.2	1.1	.55	1.2
7	.81	.70	1.2	.84	33	9.4	4.4	3.0	1.2	1.1	.49	1.3
8	.75	.76	.88	.80	14	8.6	4.2	2.4	1.2	1.1	.48	1.3
9	.69	.71	.88	.75	8.4	7.7	4.3	2.0	1.3	1.2	.51	1.3
10	.68	.79	.97	.71	6.3	17	4.8	2.0	1.2	1.2	.58	1.3
11	.70	.75	.79	.75	5.3	13	5.1	1.7	1.4	1.2	.57	1.3
12	.71	.84	.79	.78	4.7	7.8	5.0	1.7	1.8	1.2	.66	1.3
13	.69	.76	.70	.78	4.2	21	5.2	1.6	1.6	1.1	.71	1.2
14	.82	.79	.70	17	3.5	15	4.6	1.5	1.5	1.1	.66	1.2
15	.72	1.1	.70	7.0	3.1	8.6	4.4	1.6	1.4	1.0	.68	1.3
16	.65	1.0	.70	2.0	3.6	7.6	4.2	1.5	1.4	1.0	.81	1.2
17	.62	.91	.70	1.6	2.6	6.9	4.0	1.4	1.4	.98	.92	1.3
18	.64	.92	.80	1.6	8.3	6.1	4.0	1.5	1.3	.99	1.1	1.2
19	.70	.96	.73	1.6	29	5.5	4.1	1.4	1.3	1.2	1.1	1.2
20	.76	.89	.95	1.7	37	5.7	3.9	1.4	1.3	1.3	1.1	1.2
21	.75	.83	.70	14	17	14	4.0	1.4	1.3	1.3	1.0	1.2
22	.70	.92	.73	5.7	119	17	3.8	1.4	1.3	1.2	1.0	1.2
23	.67	.91	.77	2.1	34	7.5	4.0	1.4	1.3	1.2	1.2	1.2
24	.67	.99	.81	6.5	179	6.0	3.8	1.4	1.3	1.2	1.1	1.1
25	.71	1.0	1.3	196	312	5.0	3.7	1.3	1.3	1.1	1.2	1.1
26	.75	.92	1.9	105	175	4.4	3.4	1.4	1.2	.99	1.2	1.1
27	.80	.96	.90	89	51	4.2	3.1	1.3	1.2	1.1	1.2	1.1
28	.76	.94	.85	37	35	4.1	2.8	1.3	1.2	1.2	1.3	1.1
29	.72	.95	.90	36	-----	4.0	2.7	1.2	1.1	1.2	1.3	1.1
30	.83	1.1	.87	15	-----	4.2	2.6	1.2	1.2	1.1	1.3	1.1
31	.75	-----	.73	7.7	-----	4.5	-----	1.2	-----	1.1	1.4	-----
TOTAL	22.33	25.81	27.98	556.43	1,189.0	327.8	124.9	57.3	39.0	35.26	28.80	36.7
MEAN	.72	.86	.90	17.9	42.5	10.6	4.16	1.85	1.30	1.14	.93	1.22
MAX	.83	1.1	1.9	196	312	33	5.5	3.5	1.8	1.3	1.4	1.5
MIN	.62	.64	.70	.62	1.6	4.0	2.6	1.2	1.1	.98	.48	1.1
AC-FT	44	51	56	1,100	2,360	650	248	114	77	70	57	73

CAL YR 1968 TOTAL 478.23 MEAN 1.31 MAX 52 MIN 0 AC-FT 949
WTR YR 1969 TOTAL 2,471.31 MEAN 6.77 MAX 312 MIN .48 AC-FT 4,900

PEAK DISCHARGE (BASE, 60 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-25	1415	a5.04	632	2-22	0600	3.78	291
2-6	1700	a3.78	291	2-25	2030	a5.97	963
2-19	2300	3.02	138				

a From outside gage.

SAN DIEGUITO RIVER BASIN

11-0240. SANTA YSABEL CREEK AT SUTHERLAND DAM, CALIF.

LOCATION.--Lat 33°07'06", long 116°47'11", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.21, T.12 S., R.2 E., San Diego County, on face of Sutherland Dam, 1.6 miles upstream from Black Canyon Creek, and 7 miles northeast of Ramona.

DRAINAGE AREA.--53.9 sq mi.

PERIOD OF RECORD.--December 1912 to September 1928, October 1936 to current year. Prior to October 1953, published as "near Mesa Grande."

GAGE.--Water-stage recorder. Datum of gage is 1,912.00 ft above mean sea level (levels by city of San Diego). See WSP 1735 for history of changes prior to Nov. 29, 1954.

AVERAGE DISCHARGE.--48 years (1913-28, 1936-69), 17.2 cfs (12,470 acre-ft per year); median of yearly mean discharges, 8.4 cfs (6,100 acre-ft per year).

REMARKS.--Records of discharge represent all water reaching Sutherland Reservoir including precipitation on reservoir. Discharge computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Monthly evaporation from lake surface computed on basis of evaporation from Colorado land pan using coefficient of 0.80. Sutherland Dam was completed and storage began in October 1953. Area and capacity tables for the reservoir are based on an aerial survey made in 1949. Capacity of reservoir at spillway level (gage height, 145.00 ft), 29,680 acre-ft. Dead storage, 176 acre-ft below lowest outlet at gage height 28.00 ft, included in these records. Small diversion above reservoir. Water is released as required for municipal use.

COOPERATION.--Records computed in cooperation with city of San Diego.

MONTHLY DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Month	Gage height (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Evaporation (acre-feet)	Spill plus leakage (acre-feet)	Discharge (acre-feet)
Sutherland Reservoir							
Sept. 30.....	60.18	2,046	-	-	-	-	-
Oct. 31.....	59.84	2,007	-39	0	41	0	2
Nov. 30.....	59.69	1,990	-17	0	32	0	15
Dec. 31.....	60.06	2,032	+42	0	25	0	67
CAL YR 1968.....	-	-	-448	665	580	0	797
Jan. 31.....	79.58	5,125	+3,093	0	24	0	3,117
Feb. 28.....	105.92	12,269	+7,144	0	26	0	7,170
Mar. 31.....	110.79	13,951	+1,682	2,796	108	0	4,586
Apr. 30.....	110.29	13,773	-178	1,381	117	0	1,320
May 31.....	109.54	13,508	-265	1,427	150	0	1,312
June 30.....	93.66	8,538	-4,970	5,104	112	0	246
July 31.....	67.20	2,961	-5,577	5,739	124	0	286
Aug. 31.....	64.75	2,618	-343	282	92	0	31
Sept. 30.....	64.39	2,570	-48	0	69	0	21
WTR YR 1968-69.....	-	-	+524	16,729	920	0	18,173

^a Gage height at 0800.

NOTE.--For months when discharge to the reservoir was small and other elements were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing discharge as a residual of several larger quantities which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

SAN DIEGUITO RIVER BASIN

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11-0255. SANTA YSABEL CREEK NEAR RAMONA, CALIF.

LOCATION.--Lat 33°06'25", long 116°51'55", in SW¼NW¼NE¼ sec.27, T.12 S., R.1 E., San Diego County, on left bank 1.6 miles downstream from Temescal Creek, and 4.5 miles north of Ramona.

DRAINAGE AREA.--112 sq mi.

PERIOD OF RECORD.--February 1912 to February 1923, October 1943 to current year. Monthly discharge only for February 1912, published in WSP 1315-B.

GAGE.--Water-stage recorder and concrete cutoff wall, repaired at times. Datum of gage is 847.88 ft above mean sea level (levels by city of San Diego Water Department). See WSP 1315-A for history of changes prior to Feb. 3, 1923.

EXTREMES.--Current year: Maximum discharge, 6,180 cfs Jan. 25 (gage height, 11.55 ft), from rating curve extended above 1,300 cfs on basis of slope-area measurement at gage height 10.06 ft; no flow for many days.
Period of record: Maximum discharge, 28,400 cfs Jan. 27, 1916 (gage height, 14.0 ft, datum then in use), from rating curve extended above 1,500 cfs based on slope-conveyance computation of maximum flow; no flow at times in some years.

REMARKS.--Records good. Flow regulated since July 1954 by Sutherland Reservoir (see sta 11-0240). Some small diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.01	.08	17	200	26	11	5.5	3.0	.01	0
2	0	0	.01	.09	13	133	26	11	5.5	2.8	0	0
3	0	0	.01	.09	12	117	37	11	5.5	2.6	0	0
4	0	0	.01	.09	11	103	37	14	5.5	2.5	0	0
5	0	0	.01	.09	12	89	26	16	5.5	2.3	0	0
6	0	0	.02	.09	141	77	29	16	5.5	2.2	0	0
7	0	0	.01	.09	114	72	28	16	6.1	2.0	0	0
8	0	0	.01	.09	47	65	27	12	5.8	1.6	0	0
9	0	0	.01	.09	30	55	24	11	6.1	1.4	0	0
10	0	0	.01	.09	22	77	24	11	7.1	1.2	0	0
11	0	0	.02	.09	18	70	25	10	9.5	1.2	0	0
12	0	0	.02	.10	15	60	24	9.5	8.7	1.1	0	0
13	0	0	.02	.13	14	64	22	9.5	7.9	.98	0	0
14	0	0	.02	1.6	13	60	20	8.7	7.1	.87	0	.02
15	0	0	.02	.08	12	58	19	8.3	7.1	.66	0	.06
16	0	0	.02	.04	16	52	18	8.3	6.8	.48	0	.06
17	0	0	.02	.02	13	49	17	7.9	6.8	.41	0	.06
18	0	0	.02	.02	38	46	16	7.1	6.8	.28	0	.06
19	0	0	.03	.09	82	44	16	6.4	6.8	.17	0	.04
20	0	0	.03	.08	73	41	15	6.8	6.4	.09	0	.04
21	0	0	.02	35	48	48	15	7.1	6.4	.09	0	.06
22	0	0	.02	78	72	85	14	7.1	6.1	.04	0	.06
23	0	0	.02	13	109	60	13	7.1	6.1	.02	0	.06
24	0	0	.02	81	1,550	50	13	6.8	5.8	.02	0	.06
25	0	0	.05	1,810	1,970	40	12	6.4	5.8	.01	0	.06
26	0	.01	.06	349	687	35	12	6.4	5.5	.01	0	.06
27	0	.01	.06	208	339	30	11	6.1	5.5	.01	0	.06
28	0	.01	.06	80	250	30	11	6.1	4.9	.01	0	.02
29	0	.01	.06	76	-----	29	11	5.8	4.1	.01	0	.01
30	0	.01	.06	40	-----	28	11	5.8	3.5	.01	0	0
31	0	-----	.08	25	-----	27	-----	5.5	-----	.01	0	-----
TOTAL	0	0.05	0.84	2,798.14	5,738	1,994	599	281.7	185.7	28.08	0.01	0.79
MEAN	0	.002	.027	90.3	205	64.3	20.0	9.09	6.19	.91	.0003	.026
MAX	0	.01	.08	1,810	1,970	200	37	16	9.5	3.0	.01	.06
MIN	0	0	.01	.02	11	27	11	5.5	3.5	.01	0	0
AC-FT	0	.10	1.7	5,550	11,380	3,960	1,190	559	368	56	.02	1.6
CAL YR 1968	TOTAL	97.19	MEAN	.27	MAX	9.8	MIN	0	AC-FT	193		
WTR YR 1969	TOTAL	11,626.31	MEAN	31.9	MAX	1,970	MIN	0	AC-FT	23,060		

SAN DIEGUITO RIVER BASIN

11-0260. SANTA YSABEL CREEK NEAR SAN PASQUAL, CALIF.

LOCATION.--Lat 33°05'10", long 116°54'56", in NE¼NW¼SE¼ sec.31, T.12 S., R.1 E., San Diego County, on left bank 1.1 miles downstream from Clevenger Canyon, and 2 miles east of San Pasqual.

DRAINAGE AREA.--128 sq mi.

PERIOD OF RECORD.--December 1905 to September 1910 and May 1911 to September 1912 (published as "near Escondido"), April 1947 to November 1955 (irrigation seasons only), April 1956 to current year. Records for October to December 1910, published in WSP 447, have been found to be in error and should not be used.

GAGE.--Water-stage recorder. Concrete control since April 1947. Altitude of gage is 510 ft (from topographic map). Dec. 17, 1905, to Sept. 30, 1912, nonrecording gage at site 0.2 mile downstream at different datum.

AVERAGE DISCHARGE.--17 years (1906-10, 1912, 1957-69), 16.3 cfs (11,810 acre-ft per year); median of yearly mean discharges, 6.8 cfs (4,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,120 cfs Jan. 25 (gage height, 12.19 ft), from rating curve extended above 610 cfs on basis of slope-area measurements at gage heights 9.78 and 10.98 ft; no flow Oct. 1 to Dec. 29, Aug. 8, Aug. 10 to Sept. 30.
1905-12, 1947 to current year: Maximum discharge observed, 8,000 cfs Mar. 24, 1906 (gage height, 6.3 ft, site and datum then in use); no flow at times in most years.

REMARKS.--Records good. Flow regulated since July 1954 by Sutherland Reservoir (see sta 11-0240). Small diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.01	17	188	28	12	4.9	2.2	.02	0
2	0	0	0	.02	14	131	28	12	4.9	2.2	.01	0
3	0	0	0	.02	11	113	40	12	5.0	2.1	.01	0
4	0	0	0	.02	12	99	33	15	4.9	1.9	.02	0
5	0	0	0	.02	15	84	27	18	5.3	1.9	.01	0
6	0	0	0	.02	139	78	31	19	6.1	1.9	.01	0
7	0	0	0	.01	175	72	28	19	5.9	1.9	.01	0
8	0	0	0	.02	52	65	26	16	5.6	1.7	0	0
9	0	0	0	.02	29	62	26	14	5.5	1.5	.01	0
10	0	0	0	.02	22	81	27	12	6.3	1.4	.01	0
11	0	0	0	.03	18	77	27	11	8.6	1.2	0	0
12	0	0	0	.02	17	63	25	11	10	1.1	0	0
13	0	0	0	.02	15	71	23	9.8	9.7	.98	0	0
14	0	0	0	.20	13	68	25	9.3	8.3	.84	0	0
15	0	0	0	.06	13	57	24	9.0	7.2	.76	0	0
16	0	0	0	.04	19	52	22	8.6	6.6	.64	0	0
17	0	0	0	.03	14	49	20	8.2	6.9	.57	0	0
18	0	0	0	.03	18	47	21	6.9	6.7	.48	0	0
19	0	0	0	.04	88	45	19	6.5	5.8	.43	0	0
20	0	0	0	.06	86	42	17	7.0	5.0	.38	0	0
21	0	0	0	21	45	49	15	7.3	4.6	.30	0	0
22	0	0	0	101	84	87	15	7.6	4.5	.26	0	0
23	0	0	0	9.3	104	54	15	7.3	4.5	.21	0	0
24	0	0	0	36	1,640	45	15	6.9	4.7	.18	0	0
25	0	0	0	1,850	2,120	38	15	6.7	6.0	.15	0	0
26	0	0	0	427	849	35	14	6.3	5.2	.11	0	0
27	0	0	0	242	297	34	13	6.1	4.1	.08	0	0
28	0	0	0	72	207	33	12	5.8	3.5	.06	0	0
29	0	0	0	66	-----	31	12	5.3	2.8	.05	0	0
30	0	0	.01	31	-----	29	12	5.1	2.3	.03	0	0
31	0	-----	.01	21	-----	29	-----	5.0	-----	.02	0	-----
TOTAL	0	0	0.02	2,877.01	6,133	2,008	655	305.7	171.4	27.53	0.11	0
MEAN	0	0	.0006	92.8	219	64.8	21.8	9.86	5.71	.89	.004	0
MAX	0	0	.01	1,850	2,120	188	40	19	10	2.2	.02	0
MIN	0	0	0	.01	11	29	12	5.0	2.3	.02	0	0
AC-FT	0	0	.04	5,710	12,160	3,980	1,300	606	340	55	.2	0
CAL YR 1968	TOTAL	89.72	MEAN	.25	MAX	10	MIN	0	AC-FT	178		
WTR YR 1969	TOTAL	12,177.77	MEAN	33.4	MAX	2,120	MIN	0	AC-FT	24,150		

11-0270. GUEJITO CREEK NEAR SAN PASQUAL, CALIF.

LOCATION.--Lat 33°06'57", long 116°57'08", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.23, T.12 S., R.1 W., San Diego County, on left bank 0.3 mile upstream from Rockwood Canyon Creek, and 1.8 miles north of San Pasqual.

DRAINAGE AREA.--22.5 sq mi.

PERIOD OF RECORD.--December 1946 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 560 ft (from topographic map).

AVERAGE DISCHARGE.--22 years (1947-69), 1.64 cfs (1,190 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,100 cfs Jan. 25 (gage height, 6.20 ft), from rating curve extended as explained below; minimum daily, 0.01 cfs on many days.
Period of record: Maximum discharge, 2,920 cfs Dec. 6, 1966 (gage height, 6.78 ft), from rating curve extended above 440 cfs on basis of slope-area measurements at gage heights 5.83 and 6.30 ft; no flow at times in most years.

REMARKS.--Records fair. No regulation above station. Diversion for irrigation 0.2 mile upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.01	.01	7.6	40	6.1	2.9	1.5	.75	.16	.04
2	.01	.01	.01	.01	6.1	30	6.0	2.9	1.6	.72	.16	.04
3	.01	.01	.01	.01	5.0	26	9.0	3.1	1.6	.69	.12	.04
4	.01	.01	.01	.01	4.4	24	7.5	3.5	1.5	.63	.10	.04
5	.01	.01	.01	.01	5.0	21	7.0	3.7	1.7	.65	.08	.03
6	.01	.01	.01	.01	50	20	8.0	3.8	1.9	.73	.08	.03
7	.01	.01	.01	.01	26	19	7.6	3.7	1.7	.73	.07	.03
8	.01	.01	.01	.01	12	18	7.5	3.3	1.6	.63	.08	.03
9	.01	.01	.01	.01	9.4	18	7.3	2.9	1.6	.56	.10	.03
10	.01	.01	.01	.01	7.2	22	7.1	2.7	1.8	.52	.17	.03
11	.01	.01	.01	.01	6.1	26	6.8	2.5	2.2	.53	.08	.03
12	.01	.01	.01	.01	5.7	22	6.4	2.4	2.3	.63	.07	.03
13	.01	.01	.01	.01	5.1	25	6.0	2.4	2.1	.44	.07	.03
14	.01	.01	.01	6.5	4.5	23	5.4	2.4	1.9	.40	.06	.03
15	.01	.01	.01	2.3	4.8	19	4.8	2.3	1.8	.38	.06	.03
16	.01	.01	.01	.93	6.3	16	4.5	2.2	1.7	.37	.08	.03
17	.01	.01	.01	.63	4.2	14	4.2	2.1	1.9	.35	.06	.03
18	.01	.01	.01	.52	8.0	13	4.3	2.0	1.8	.29	.06	.03
19	.01	.01	.01	1.2	27	12	4.1	1.9	1.5	.27	.05	.03
20	.01	.01	.02	2.0	18	12	3.8	1.9	1.5	.33	.05	.03
21	.01	.01	.01	31	11	11	3.7	2.0	1.4	.53	.05	.02
22	.01	.01	.01	24	28	23	3.8	2.0	1.5	.33	.05	.02
23	.01	.01	.01	3.1	26	16	3.8	1.9	1.5	.26	.04	.02
24	.01	.01	.01	57	607	8.0	3.7	1.9	1.6	.24	.04	.02
25	.01	.01	.02	727	718	7.9	3.7	1.8	1.8	.25	.04	.02
26	.01	.01	.02	150	181	7.7	3.3	1.7	1.5	.28	.04	.02
27	.01	.01	.02	50	45	7.3	3.0	1.7	1.3	.33	.04	.02
28	.01	.01	.02	17	35	6.9	2.9	1.6	1.2	.30	.04	.02
29	.01	.01	.01	24	-----	6.7	2.9	1.5	1.1	.30	.04	.02
30	.01	.01	.01	13	-----	6.5	3.0	1.5	.90	.24	.04	.02
31	.01	-----	.01	10	-----	6.3	-----	1.5	-----	.17	.04	-----
TOTAL	0.31	0.30	0.36	1,120.31	1,873.4	527.3	157.2	73.7	49.00	13.83	2.22	0.84
MEAN	.010	.010	.012	36.1	66.9	17.0	5.24	2.38	1.63	.45	.072	.028
MAX	.01	.01	.02	727	718	40	9.0	3.8	2.3	.75	.17	.04
MIN	.01	.01	.01	.01	4.2	6.3	2.9	1.5	.90	.17	.04	.02
AC-FT	.6	.6	.7	2,220	3,720	1,050	312	146	97	27	4.4	1.7
CAL YR 1968	TOTAL	74.36	MEAN	.20	MAX	4.5	MIN	.01	AC-FT	148		
WTR YR 1969	TOTAL	3,818.77	MEAN	10.5	MAX	727	MIN	.01	AC-FT	7,570		

PEAK DISCHARGE (BASE, 30 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1315	2.96	112	2-19	1545	2.62	55
1-25	1330	6.20	2,100	2-25	1900	5.92	1,760
2-6	2100	3.03	126	3-10	1645	2.43	35

SAN DIEGUITO RIVER BASIN

11-0285. SANTA MARIA CREEK NEAR RAMONA, CALIF.

LOCATION.--Lat 33°03'08", long 116°56'41", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.13 S., R.1 W., San Diego County, on left bank 3.8 miles northwest of Ramona, and 4.6 miles upstream from mouth.

DRAINAGE AREA.--57.6 sq mi.

PERIOD OF RECORD.--November 1912 to September 1920, October 1946 to current year.

GAGE.--Water-stage recorder. Concrete control since October 1946. Datum of gage is 1,294.44 ft above mean sea level. Prior to Oct. 1, 1946, at datum 1.78 ft lower.

AVERAGE DISCHARGE.--30 years (1913-20, 1946-69), 3.86 cfs (2,800 acre-ft per year); median of yearly mean discharges, 0.08 cfs (58 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,400 cfs Feb. 25 (gage height, 4.80 ft), from rating curve extended above 170 cfs on basis of slope-area measurement at gage height 4.56 ft; no flow for much of year. Period of record: Maximum discharge, 7,140 cfs Jan. 27, 1916 (gage height, 14.1 ft, from floodmarks, present datum), from rating curve extended above 600 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--Records good. No regulation above station. City of Ramona pumps water from stream above station for municipal supply.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1.5	66	3.4	.26	.15	.01	.01	.01
2	0	0	0	0	1.1	44	3.2	.26	.15	.01	.01	0
3	0	0	0	0	.78	35	6.8	.32	.13	.02	.01	0
4	0	0	0	0	.73	28	4.7	.45	.07	.01	.02	0
5	0	0	0	0	.85	23	5.7	.47	.08	.02	.02	0
6	0	0	0	0	104	21	4.1	.53	.08	.02	.04	0
7	0	0	0	0	50	19	3.6	.51	.06	.02	.04	0
8	0	0	0	0	9.7	15	3.2	.39	.04	.02	.06	0
9	0	0	0	0	5.0	14	2.9	.28	.03	.02	.04	0
10	0	0	0	0	3.1	50	2.9	.23	.04	.02	.06	0
11	0	0	0	0	2.6	49	3.0	.18	.07	.02	.05	0
12	0	0	0	0	2.5	25	2.6	.21	.02	.02	.07	0
13	0	0	0	0	2.2	46	2.4	.16	.02	.02	.05	0
14	0	0	0	1.1	1.7	34	2.4	.11	.02	.03	.05	0
15	0	0	0	.04	1.6	20	2.2	.10	.02	.03	.06	0
16	0	0	0	.01	1.9	15	1.9	.09	.04	.03	.05	0
17	0	0	0	.01	1.6	13	1.5	.08	.05	.02	.06	0
18	0	0	0	.01	16	12	1.5	.08	.03	.02	.05	0
19	0	0	0	.01	64	12	1.3	.08	.02	.02	.03	0
20	0	0	0	.01	59	11	1.1	.07	.02	.02	.02	0
21	0	0	0	8.2	13	22	.93	.05	.03	.02	.02	0
22	0	0	0	2.4	138	44	.73	.05	.02	.01	.01	0
23	0	0	0	.21	47	21	.77	.06	.01	.01	0	0
24	0	0	0	1.0	269	13	.63	.07	.02	.01	0	0
25	0	0	0	270	582	7.5	.54	.07	.02	.03	0	.01
26	0	0	0	59	278	6.5	.39	.08	.03	.03	0	.01
27	0	0	0	24	80	5.4	.29	.12	.01	.02	0	.01
28	0	0	0	11	58	5.4	.22	.14	.01	.02	0	0
29	0	0	0	17	-----	4.6	.23	.15	.01	.03	0	0
30	0	0	0	4.1	-----	3.8	.26	.12	.01	.03	.01	0
31	0	-----	0	2.1	-----	3.7	-----	.15	-----	.04	.01	-----
TOTAL	0	0	0	400.20	1,794.86	688.9	65.39	5.92	1.31	0.65	0.85	0.04
MEAN	0	0	0	12.9	64.1	22.2	2.18	.19	.044	.021	.027	.001
MAX	0	0	0	270	582	66	6.8	.53	.15	.04	.07	.01
MIN	0	0	0	0	.73	3.7	.22	.05	.01	.01	0	0
AC-FT	0	0	0	794	3,560	1,370	130	12	2.6	1.3	1.7	.08
CAL YR 1968	TOTAL	8.90	MEAN	.024	MAX	1.9	MIN	0	AC-FT	18		
WTR YR 1969	TOTAL	2,958.12	MEAN	8.10	MAX	582	MIN	0	AC-FT	5,870		

PEAK DISCHARGE (BASE, 20 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1100	1.76	27	2-25	2000	4.80	1,400
1-25	1445	4.62	1,220	3-10	1430	2.18	93
2-20	0100	2.46	155				

SAN LUIS REY RIVER BASIN

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11-0315. AGUA CALIENTE CREEK NEAR WARNER SPRINGS, CALIF.

LOCATION.--Lat 33°17'19", long 116°39'11", in San Jose del Valle Grant, San Diego County, on downstream end of right pier of bridge on State Highway 79, 1.2 miles upstream from Canada Verde Creek, and 1.2 miles northwest of Warner Springs.

DRAINAGE AREA.--19.0 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 2,950 ft (from topographic map). Prior to Jan. 29, 1966, at site 120 ft upstream at same datum, used as supplementary gage since Dec. 12, 1968.

AVERAGE DISCHARGE.--8 years, 1.58 cfs (1,140 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 564 cfs Feb. 25 (gage height, 6.36 ft); no flow for much of year. Period of record: Maximum discharge, 1,200 cfs Dec. 6, 1966 (gage height, 5.18 ft), from rating curve extended above 240 cfs; no flow for much of each year.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	21	114	7.5	3.4	1.3	.37	.11	.05
2	0	0	0	0	20	30	7.2	3.4	1.3	.48	.13	.05
3	0	0	0	0	18	28	7.8	3.6	1.4	.48	.13	.05
4	0	0	0	0	16	26	7.2	4.2	1.3	.48	.13	.05
5	0	0	0	0	20	25	6.6	4.9	1.2	.46	.11	9.2
6	0	0	0	0	56	24	6.9	6.3	1.0	.48	.11	5.5
7	0	0	0	0	32	22	6.4	4.7	1.0	.48	.11	2.9
8	0	0	0	0	21	20	6.1	3.8	1.0	.42	.13	1.9
9	0	0	0	0	18	18	5.8	3.4	1.1	.42	.13	1.0
10	0	0	0	0	16	20	6.1	3.4	1.2	.37	.13	.62
11	0	0	0	0	15	18	5.5	2.9	1.3	.42	.13	.33
12	0	0	0	0	14	16	4.9	2.7	1.2	.42	.11	.28
13	0	0	0	0	13	15	4.9	2.7	1.0	.37	.11	.38
14	0	0	0	1.1	12	14	4.9	2.7	.92	.37	.11	.33
15	0	0	0	.11	11	13	4.9	2.7	.76	.37	.11	.33
16	0	0	0	0	10	12	4.7	2.6	.76	.32	.11	.28
17	0	0	0	0	9.1	12	4.5	2.6	.76	.48	.11	.28
18	0	0	0	0	8.1	12	4.5	2.4	.60	.37	.11	.28
19	0	0	0	0	7.0	11	4.2	2.3	.54	.27	.08	.28
20	0	0	0	.25	6.5	10	3.8	2.3	.48	.27	.06	.23
21	0	0	0	5.5	8.8	12	3.8	2.3	.42	.27	.05	.23
22	0	0	0	1.2	11	16	3.8	2.1	.37	.27	.05	.23
23	0	0	0	.23	25	14	3.8	2.1	.37	.27	.05	.19
24	0	0	0	2.0	263	12	3.8	2.1	.37	.27	.05	.15
25	0	0	0	178	318	10	3.8	2.0	.37	.27	.05	.15
26	0	0	0	122	281	10	3.4	1.9	.37	.27	.05	.15
27	0	0	0	60	114	8.9	3.1	1.9	.37	7.4	.05	.15
28	0	0	0	46	126	8.2	3.1	1.9	.37	.32	.05	.11
29	0	0	0	40	-----	7.8	3.4	1.6	.37	.13	.05	.08
30	0	0	0	32	-----	7.8	3.4	1.6	.37	.13	.05	.06
31	0	-----	0	25	-----	7.5	-----	1.4	-----	.11	.05	-----
TOTAL	0	0	0	513.39	1,490.5	574.2	149.8	87.9	23.87	17.83	2.81	25.82
MEAN	0	0	0	16.6	53.2	18.5	4.99	2.84	.80	.58	.091	.86
MAX	0	0	0	178	318	114	7.8	6.3	1.4	7.4	.13	9.2
MIN	0	0	0	0	6.5	7.5	3.1	1.4	.37	.11	.05	.05
AC-FT	0	0	0	1,020	2,960	1,140	297	174	47	35	5.6	51

CAL YR 1968	TOTAL	6.90	MEAN	.019	MAX	.20	MIN	0	AC-FT	14
WTR YR 1969	TOTAL	2,886.12	MEAN	7.91	MAX	318	MIN	0	AC-FT	5,720

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-25	1430	5.92	495	2-25	2300	6.36	564
2- 6	1900	4.93	116	9- 5	1900	5.23	114

SAN LUIS REY RIVER BASIN

11-0330. WEST FORK SAN LUIS REY RIVER NEAR WARNER SPRINGS, CALIF.

LOCATION.--Lat 33°17'50", long 116°45'30", in San Jose del Valle Grant, San Diego County, on left bank 0.1 mile downstream from small unnamed tributary, 2.5 miles upstream from mouth, and 7.5 miles west of Warner Springs.

DRAINAGE AREA.--25.5 sq mi.

PERIOD OF RECORD.--January 1913 to November 1915, October 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (from topographic map). Prior to Oct. 1, 1956, at different datum.

AVERAGE DISCHARGE.--14 years (1913-15, 1957-69), 8.76 cfs (6,350 acre-ft per year); median of yearly mean discharges, 2.5 cfs (1,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,900 cfs Jan. 25 (gage height, 10.12 ft, from floodmark), from rating curve extended above 240 cfs on basis of slope-area measurement of peak flow; minimum daily, 0.03 cfs Dec. 11-19.

Period of record: Maximum discharge, 4,200 cfs Dec. 6, 1966 (gage height, 11.87 ft), from rating curve extended above 250 cfs on basis of slope-area measurement of maximum flow; no flow at times in most years.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.12	.07	.17	35	163	42	20	5.4	1.2	.25	.16
2	.11	.12	.06	.17	31	125	42	20	5.4	1.2	.22	.16
3	.13	.12	.06	.17	26	115	42	19	5.5	1.1	.20	.16
4	.13	.12	.06	.17	23	101	41	18	5.4	.93	.19	.15
5	.13	.12	.05	.17	50	87	41	18	5.2	.86	.18	.19
6	.13	.12	.05	.17	240	85	40	22	5.0	.89	.18	.18
7	.13	.12	.05	.17	108	78	39	17	5.0	.78	.20	.24
8	.13	.12	.04	.17	68	73	39	15	5.1	.70	.20	.23
9	.11	.12	.04	.17	57	72	38	13	5.5	.64	.20	.25
10	.11	.12	.04	.17	49	76	37	13	6.2	.60	.20	.24
11	.11	.12	.03	.17	45	78	36	12	6.5	.64	.20	.23
12	.11	.12	.03	.17	43	79	35	11	6.8	.68	.21	.18
13	.11	.12	.03	.17	39	75	34	11	5.7	.59	.22	.18
14	.11	.13	.03	31	35	69	33	10	4.6	.46	.22	.18
15	.13	.16	.03	11	38	64	32	10	4.3	.41	.22	.18
16	.12	.13	.03	3.4	54	61	31	9.3	4.3	.35	.19	.18
17	.12	.13	.03	2.0	36	59	31	8.9	4.3	.39	.18	.18
18	.12	.13	.03	1.5	47	57	30	7.7	3.7	.41	.18	.18
19	.12	.13	.03	6.7	48	57	29	7.5	3.3	.45	.18	.18
20	.12	.12	.05	23	49	56	29	7.5	3.0	.48	.16	.18
21	.12	.09	.05	137	47	95	28	7.5	3.2	.46	.15	.18
22	.12	.09	.05	48	46	90	27	7.3	3.2	.46	.12	.22
23	.12	.09	.04	16	121	66	26	6.8	3.0	.46	.12	.22
24	.12	.09	.04	180	932	59	25	6.5	2.7	.46	.11	.22
25	.12	.09	.05	856	1,480	54	25	6.5	2.5	.46	.11	.22
26	.12	.08	4.3	450	342	51	24	5.9	2.2	.46	.10	.22
27	.12	.08	1.3	200	194	49	23	6.4	2.1	.46	.09	.22
28	.12	.08	.26	100	167	47	22	6.3	2.1	.43	.09	.22
29	.12	.07	.20	58	-----	46	22	6.1	1.9	.37	.18	.22
30	.12	.07	.18	46	-----	44	21	5.5	1.6	.33	.18	.22
31	.12	-----	.17	40	-----	42	-----	5.4	-----	.32	.16	-----
TOTAL	3.71	3.32	7.48	2,211.81	4,452	2,273	964	340.1	124.7	18.43	5.39	5.97
MEAN	.12	.11	.24	71.3	159	73.3	32.1	11.0	4.16	.59	.17	.20
MAX	.13	.16	4.3	856	1,480	163	42	22	6.8	1.2	.25	.25
MIN	.11	.07	.03	.17	23	42	21	5.4	1.6	.32	.09	.15
AC-FT	7.4	6.6	15	4,390	8,830	4,510	1,910	675	247	37	11	12

CAL YR 1968 TOTAL 731.38 MEAN 2.00 MAX 73 MIN .03 AC-FT 1,450
WTR YR 1969 TOTAL 10,409.91 MEAN 28.5 MAX 1,480 MIN .03 AC-FT 20,650

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1100	5.85	260	2-25	1730	9.50	3,180
1-25	1330	10.12	3,900	3-21	1545	4.33	158
2-6	1145	5.70	485				

NOTE.--No gage-height record Jan. 26-28, Apr. 3 to May 5.

11-0377. PAUMA CREEK NEAR PAUMA VALLEY, CALIF.

LOCATION.--Lat 33°20'10", long 116°58'25", in Pauma Grant, San Diego County, on right bank 0.3 mile downstream from unnamed tributary, and 2.2 miles north of Pauma Valley.

DRAINAGE AREA.--11.0 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder; water-stage recorder and Parshall flume on diversion. Altitude of gage is 1,240 ft (from topographic map).

AVERAGE DISCHARGE (Creek only).--5 years, 5.59 cfs (4,050 acre-ft per year).
(Combined).--5 years, 6.40 cfs (4,640 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 1,450 cfs Feb. 25 (gage height, 7.41 ft), from rating curve extended above 110 cfs on basis of slope-area measurement at gage height 7.26 ft; no flow for much of year.

Period of record: Maximum discharge, 2,100 cfs Dec. 6, 1966 (gage height, 8.60 ft), from rating curve extended above 110 cfs on basis of slope-area measurement at gage height 7.26 ft; no flow for much of each year.

(Combined).--Current year: Maximum discharge, 1,450 cfs Feb. 25; minimum daily, 0.47 cfs Oct. 24.

Period of record: Maximum discharge, 2,100 cfs Dec. 6, 1966; minimum daily, 0.10 cfs for some days in most years.

REMARKS.--Records good. No regulation above station. Pauma Valley Water Co. diverts from a site 0.2 mile upstream. For records of combined discharge of Pauma Creek and Pauma Valley Water Co.'s diversion, see following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.02	.80	17	76	21	12	4.0	1.7	.04	0
2	0	0	.02	.80	16	63	20	12	3.7	1.4	.02	0
3	0	0	.02	.80	15	60	39	11	3.2	1.3	.01	0
4	0	0	.02	.46	15	53	25	11	3.1	1.2	0	0
5	0	0	.02	.20	22	50	23	10	3.0	1.3	0	0
6	0	0	.01	.20	62	48	38	10	2.8	1.4	0	0
7	0	0	.01	.16	50	41	25	9.4	2.7	1.4	0	0
8	0	0	.01	.12	34	38	23	9.0	2.7	1.1	0	0
9	0	0	.01	.12	28	36	21	8.5	2.8	.35	0	0
10	0	0	.01	.12	23	37	23	8.0	3.0	.72	0	0
11	0	0	.01	.12	23	36	20	7.7	3.5	.64	.08	0
12	0	0	0	.12	21	36	18	7.3	3.5	.80	.13	0
13	0	0	0	.20	20	36	18	7.0	3.2	.72	.05	0
14	0	0	0	14	18	32	17	6.5	2.8	.60	.01	0
15	0	0	0	6.5	18	33	17	6.3	2.6	.56	.01	0
16	0	0	0	2.9	32	32	17	6.0	2.6	.52	.01	0
17	0	0	0	1.8	18	31	17	5.6	2.6	.49	.01	0
18	0	0	0	1.5	19	30	16	5.5	2.2	.46	.01	0
19	0	0	0	3.8	19	29	16	5.2	2.0	.42	.01	0
20	0	0	.01	9.8	18	29	16	5.1	1.9	.46	.01	.01
21	0	0	.05	29	18	42	15	5.0	2.7	.49	.01	.02
22	0	0	.06	14	19	47	16	4.9	2.8	.26	.01	.02
23	0	0	.05	7.9	28	37	15	4.5	2.2	.21	.01	.02
24	0	.01	.04	84	275	31	15	4.4	2.1	.17	0	.03
25	0	.01	.04	455	694	29	15	4.3	2.2	.17	0	.03
26	0	.02	3.7	193	135	27	14	4.0	2.0	.17	0	.03
27	0	.02	2.0	96	90	26	13	3.9	1.9	.15	0	.03
28	0	.02	1.3	50	77	25	13	3.7	1.8	.15	0	.03
29	0	.02	1.1	35	-----	24	13	3.6	1.8	.11	0	.02
30	0	.02	.86	23	-----	23	13	3.4	1.9	.08	0	.01
31	0	-----	.86	20	-----	22	-----	3.4	-----	.07	0	-----
TOTAL	0	0.12	10.23	1,051.42	1,824	1,159	572	208.2	79.3	20.67	0.43	0.25
MEAN	0	.004	.33	33.9	65.1	37.4	19.1	6.72	2.64	.65	.014	.008
MAX	0	.02	3.7	455	694	76	39	12	4.0	1.7	.13	.03
MIN	0	0	0	.12	15	22	13	3.4	1.8	.07	0	0
AC-FT	0	.2	20	2,090	3,620	2,300	1,130	413	157	40	.9	.5

CAL YR 1968 TOTAL 406.75 MEAN 1.11 MAX 29 MIN 0 AC-FT 807
WTR YR 1969 TOTAL 4,925.02 MEAN 13.5 MAX 694 MIN 0 AC-FT 9,770

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1200	3.30	53	2-25	1830	7.41	1,450
1-25	1315	7.26	1,360	3-21	1730	3.29	73
2-6	1830	3.56	105	4-3	0800	3.23	67

SAN LUIS REY RIVER BASIN

11-0377. PAUMA CREEK NEAR PAUMA VALLEY, CALIF.--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF PAUMA CREEK AND PAUMA VALLEY WATER CO.'S
DIVERSION NEAR PAUMA VALLEY, CALIF., WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.79	.86	.97	17	76	22	14	5.6	3.9	1.2	.62
2	.71	.75	.96	.97	16	63	21	14	4.8	3.6	1.2	.57
3	.96	.71	.86	.97	15	60	40	13	5.0	3.5	1.1	.55
4	.95	.75	.77	.96	15	53	26	13	5.0	3.4	1.1	.55
5	.77	.81	.78	1.0	22	50	23	12	4.9	3.5	1.1	.54
6	.53	.75	.77	1.3	63	48	38	12	4.7	3.6	1.1	.55
7	.54	.69	.76	1.3	51	41	25	12	4.6	3.6	1.1	.54
8	.68	.66	.75	1.1	34	38	23	11	4.6	3.3	1.1	.54
9	.69	.64	.75	1.1	28	37	22	11	4.7	3.0	1.3	.54
10	.67	.63	.76	1.1	24	38	24	10	4.9	2.9	1.0	.54
11	.72	.61	.86	1.1	24	37	21	10	5.4	2.9	.77	.51
12	.65	.66	.96	1.1	22	37	19	9.5	5.4	3.2	1.0	.54
13	.54	.81	.91	1.2	21	37	19	9.2	5.1	2.9	1.0	.57
14	.77	.89	.81	15	19	33	18	8.7	4.7	2.8	1.0	.69
15	1.0	1.4	.80	7.3	19	34	18	8.5	4.5	2.8	.99	.83
16	.73	1.2	1.1	3.7	33	33	18	8.2	4.5	2.7	.98	.89
17	.55	1.0	1.3	2.6	18	32	18	7.8	4.5	2.7	.95	.86
18	.53	.87	1.1	2.3	19	31	17	7.7	4.1	2.6	.95	.82
19	.53	.75	1.2	4.6	19	30	17	7.4	3.9	2.4	.93	.75
20	.54	.70	1.4	11	18	30	17	7.3	3.7	2.5	.88	.79
21	.56	.68	1.4	29	18	43	16	7.2	4.0	2.5	.79	.93
22	.51	.71	1.3	14	19	47	17	7.1	3.6	2.1	.72	.98
23	.49	.71	1.2	8.1	28	37	16	6.7	3.4	1.8	.65	.87
24	.47	.71	1.1	84	275	31	16	6.6	3.8	1.6	.64	.80
25	.48	.74	1.2	455	694	29	17	6.5	4.1	1.5	.67	.76
26	.48	.74	4.3	193	135	27	16	6.2	3.9	1.6	.65	.73
27	.49	.75	2.2	96	90	26	15	6.1	3.9	1.6	.68	.69
28	.51	.75	1.4	50	77	25	15	5.9	3.9	1.6	.69	.61
29	.53	.73	1.2	35	-----	24	15	5.8	4.0	1.4	.70	.57
30	.83	.76	1.0	23	-----	23	15	5.6	4.1	1.4	.68	.55
31	.86	-----	1.0	20	-----	23	-----	5.6	-----	1.4	.66	-----
TOTAL	19.89	23.35	35.76	1,067.77	1,833	1,173	604	275.6	133.3	80.3	28.28	20.28
MEAN	.64	.78	1.15	34.4	65.5	37.8	20.1	8.89	4.44	2.59	.91	.68
MAX	1.0	1.4	4.3	455	694	76	40	14	5.6	3.9	1.3	.98
MIN	.47	.61	.75	.96	15	23	15	5.6	3.4	1.4	.64	.51
AC-FT	39	46	71	2,120	3,640	2,330	1,200	547	264	159	56	40
CAL YR 1968	TOTAL	761.42	MEAN	2.08	MAX	30	MIN	.21	AC-FT	1,510		
WTR YR 1969	TOTAL	5,294.53	MEAN	14.5	MAX	694	MIN	.47	AC-FT	10,500		

PEAK DISCHARGE (BASE, 50 CFS).--(Same as those listed on previous page).

11-0391. SAN LUIS REY RIVER TRIBUTARY NEAR PALA, CALIF.

LOCATION.--Lat 33°21'37", long 117°02'33", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.9 S., R.2 W., San Diego County, on upstream right bank at culvert on State Highway 76, 1.9 miles east of Pala.

DRAINAGE AREA.--1.01 sq mi.

PERIOD OF RECORD.--Water years 1962-65 (annual maximum), September 1965 to current year.

GAGE.--Water-stage recorder with rain-gage attachment and corrugated-pipe control. Altitude of gage is 520 ft (from topographic map). Dec. 8, 1961, to Sept. 20, 1965, crest-stage gage only at same site and datum.

EXTREMES.--Current year: Maximum discharge, 10 cfs Feb. 25 (gage height, 15.95 ft), from rating curve as explained below; no flow for most of year.

Period of record: Maximum discharge, 25 cfs Nov. 22, 1965 (gage height, 16.77 ft), from rating curve defined by computation of flow through culvert at gage heights 15.12, 15.58, 15.70, and 16.38 ft; no flow for most of each year.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	.03	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	.02	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	.05	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	.03	0	0	0	0	0	0	0
23	0	0	0	0	.08	0	0	0	0	0	0	0
24	0	0	0	0	.25	0	0	0	0	0	0	0
25	0	0	0	1.0	3.5	0	0	0	0	0	0	0
26	0	0	0	.01	.48	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	1.04	4.41	0	0	0	0	0	0	0
MEAN	0	0	0	.034	.16	0	0	0	0	0	0	0
MAX	0	0	0	1.0	3.5	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	2.1	8.8	0	0	0	0	0	0	0
(a)	.4	.2	1.1	8.7	5.3	1.8	.6	.1	0	0	0	.1
CAL YR 1968 TOTAL	.20											
WTR YR 1969 TOTAL	5.45											
MEAN	.0005											
MAX	.20											
MIN	0											
AC-FT	.4											
AC-FT 11												

a Precipitation, in inches.

SAN LUIS REY RIVER BASIN

11-0400. SAN LUIS REY RIVER AT MONSERATE NARROWS, NEAR PALA, CALIF.

LOCATION (revised).--Lat 33°20'14", long 117°08'07", in SW¼SE¼NW¼ sec.6, T.10 S., R.2 W., San Diego County, on left bank 4 miles southwest of Pala, and 6 miles northeast of Bonsall.

DRAINAGE AREA.--373 sq mi.

PERIOD OF RECORD.--December 1935 to March 1938 (fragmentary), April 1938 to November 1941, October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270.82 ft above mean sea level (levels by State of California). Prior to October 1946, at same site at different datum. Oct. 22, 1946, to Nov. 30, 1954, at datum 1.0 ft higher.

AVERAGE DISCHARGE.--26 years (1938-41, 1946-69), 7.75 cfs (5,610 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,250 cfs Feb. 25 (gage height, 7.26 ft); no flow Oct. 1 to Jan. 23, July 14 to Sept. 30.
Period of record: Maximum gage height, 8.7 ft Feb. 7, 1937, datum then in use (discharge not determined); no flow at times in most years.

REMARKS.--Records good. Flow regulated by Lake Henshaw (see sta 11-0350). Several diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	10	135	16	2.6	.35	.15	0	0
2	0	0	0	0	10	113	16	2.3	.35	.10	0	0
3	0	0	0	0	10	113	18	2.3	.43	.05	0	0
4	0	0	0	0	9.5	96	16	2.6	.27	.05	0	0
5	0	0	0	0	11	94	16	3.1	.35	.05	0	0
6	0	0	0	0	53	88	16	2.8	.43	.10	0	0
7	0	0	0	0	70	76	14	2.3	.35	.10	0	0
8	0	0	0	0	22	72	14	1.8	.27	.15	0	0
9	0	0	0	0	17	68	13	1.6	.35	.21	0	0
10	0	0	0	0	16	67	12	1.4	.43	.21	0	0
11	0	0	0	0	14	54	12	1.2	.43	.10	0	0
12	0	0	0	0	13	45	12	1.1	.43	.05	0	0
13	0	0	0	0	13	41	10	1.1	.43	.05	0	0
14	0	0	0	0	11	37	9.5	1.0	.35	0	0	0
15	0	0	0	0	10	28	8.6	1.0	.35	0	0	0
16	0	0	0	0	12	20	8.2	.85	.43	0	0	0
17	0	0	0	0	11	16	7.9	.73	.43	0	0	0
18	0	0	0	0	15	16	7.5	.63	.43	0	0	0
19	0	0	0	0	20	16	7.2	.63	.43	0	0	0
20	0	0	0	0	18	14	6.2	.63	.35	0	0	0
21	0	0	0	0	15	17	5.6	.63	.35	0	0	0
22	0	0	0	0	29	20	5.6	.63	.35	0	0	0
23	0	0	0	0	30	19	4.9	.63	.43	0	0	0
24	0	0	0	19	654	17	4.9	.53	.53	0	0	0
25	0	0	0	836	1,780	17	4.4	.53	.53	0	0	0
26	0	0	0	241	782	17	4.1	.53	.53	0	0	0
27	0	0	0	109	149	17	3.9	.53	.35	0	0	0
28	0	0	0	22	141	15	3.6	.53	.27	0	0	0
29	0	0	0	14	-----	14	3.6	.43	.21	0	0	0
30	0	0	0	12	-----	16	3.1	.53	.15	0	0	0
31	0	-----	0	10	-----	15	-----	.35	-----	0	0	-----
TOTAL	0	0	0	1,263	3,945.5	1,393	283.8	37.52	11.34	1.37	0	0
MEAN	0	0	0	40.7	141	44.9	9.46	1.21	.38	.044	0	0
MAX	0	0	0	836	1,780	135	18	3.1	.53	.21	0	0
MIN	0	0	0	0	9.5	14	3.1	.35	.15	0	0	0
AC-FT	0	0	0	2,510	7,830	2,760	563	74	22	2.7	0	0
CAL YR 1968	TOTAL	82.00	MEAN	.22	MAX	28	MIN	0	AC-FT	163		
WTR YR 1969	TOTAL	6,935.53	MEAN	19.0	MAX	1,780	MIN	0	AC-FT	13,760		

SAN LUIS REY RIVER BASIN

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11-0410. SAN LUIS REY RIVER NEAR BONSALE, CALIF.

LOCATION.--Lat 33°15'13", long 117°14'48", in SW¼NE¼ sec.1, T.11 S., R.4 W., San Diego County, on left bank 0.7 mile downstream from bridge on State Highway 76, and 2.8 miles southwest of Bonsale.

DRAINAGE AREA.--512 sq mi.

PERIOD OF RECORD.--July 1916 to September 1918 (gage heights and discharge measurements only), October 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 108.10 ft above mean sea level. See WSP 1315-B, 1735 for history of changes prior to Sept. 16, 1946.

AVERAGE DISCHARGE.--40 years (1929-69), 18.9 cfs (13,680 acre-ft per year); median of yearly mean discharges, 4.8 cfs (3,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,700 cfs Feb. 25 (gage height, 11.43 ft), from rating curve extended above 2,000 cfs on basis of slope-conveyance measurement of peak flow; no flow Oct. 1 to Nov. 14. Period of record: Maximum discharge, 18,100 cfs Mar. 3, 1938 (gage height, 16.04 ft, present datum), from rating curve extended above 2,400 cfs; no flow for part of each year.

REMARKS.--Records poor. Flow regulated by Lake Henshaw (capacity, 194,300 acre-ft). Several diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.04	2.5	48	150	35	8.4	4.3	2.2	.50	.70
2	0	0	.04	2.4	42	100	50	8.0	4.2	1.9	.50	.72
3	0	0	.04	2.3	39	75	44	7.9	4.2	1.7	.50	.74
4	0	0	.04	2.1	37	60	41	7.7	4.2	1.6	.50	.76
5	0	0	.04	2.0	33	50	40	7.5	4.1	1.5	.50	.79
6	0	0	.04	1.9	238	48	45	7.3	4.1	1.4	.50	.81
7	0	0	.04	1.8	103	46	40	7.1	4.1	1.3	.50	.83
8	0	0	.04	1.7	80	44	36	6.9	4.0	1.2	.50	.86
9	0	0	.04	1.6	70	90	32	6.7	4.0	1.1	.50	.88
10	0	0	.04	1.5	60	60	30	6.6	4.0	1.1	.50	.91
11	0	0	.10	1.4	55	50	28	6.4	4.0	1.0	.50	.94
12	0	0	.08	1.3	50	70	25	6.2	3.9	.94	.51	.97
13	0	0	.07	1.2	47	55	23	6.1	3.9	.90	.51	1.0
14	0	0	.06	5.0	46	48	21	6.0	3.9	.85	.52	1.0
15	0	.10	.05	4.0	45	45	19	5.8	3.8	.81	.52	1.0
16	0	.10	.05	3.0	44	42	18	5.7	3.8	.77	.52	1.1
17	0	.10	.05	2.8	43	40	17	5.6	3.8	.74	.53	1.1
18	0	.10	.04	2.6	42	38	16	5.5	3.7	.71	.54	1.2
19	0	.09	.05	5.0	70	37	15	5.4	3.7	.68	.55	1.2
20	0	.09	2.5	7.5	80	36	14	5.2	3.7	.65	.56	1.2
21	0	.09	2.0	10	68	120	13	5.1	3.6	.63	.56	1.3
22	0	.08	1.8	5.0	143	60	12	5.0	3.6	.61	.57	1.4
23	0	.08	1.6	4.0	49	50	12	4.9	3.6	.59	.58	1.4
24	0	.07	1.4	10	1,870	45	11	4.8	3.5	.58	.60	1.5
25	0	.07	2.0	1,390	3,160	40	11	4.8	3.3	.56	.61	1.5
26	0	.06	3.0	500	847	39	10	4.7	3.2	.54	.62	1.6
27	0	.06	3.0	167	346	38	9.4	4.6	3.1	.53	.63	1.7
28	0	.05	2.8	83	249	37	9.1	4.5	2.9	.52	.64	1.8
29	0	.05	2.7	75	-----	36	8.9	4.5	2.7	.51	.66	1.8
30	0	.05	2.6	63	-----	36	8.6	4.4	2.5	.50	.67	1.9
31	0	-----	2.5	55	-----	35	-----	4.4	-----	.50	.68	-----
TOTAL	0	1.24	28.85	2,415.6	8,004	1,720	694.0	183.7	111.4	29.12	17.08	34.61
MEAN	0	.041	.93	77.9	286	55.5	23.1	5.93	3.71	.94	.55	1.15
MAX	0	.10	3.0	1,390	3,160	150	50	8.4	4.3	2.2	.68	1.9
MIN	0	0	.04	1.2	33	35	8.6	4.4	2.5	.50	.50	.70
AC-FT	0	2.5	57	4,790	15,880	3,410	1,380	364	221	58	34	69

CAL YR 1968 TOTAL 768.19 MEAN 2.10 MAX 148 MIN 0 AC-FT 1,520
WTR YR 1969 TOTAL 13,239.60 MEAN 36.3 MAX 3,160 MIN 0 AC-FT 26,260

NOTE.--No gage-height record Nov. 15 to Jan. 24, Feb. 8-21, Feb. 27 to Sept. 30.

SAN LUIS REY RIVER BASIN

11-0420. SAN LUIS REY RIVER AT OCEANSIDE, CALIF.

LOCATION.--Lat 33°12'48", long 117°22'33", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.11 S., R.5 W., San Diego County, on right bank 0.7 mile upstream from bridge on U.S. Highway 101, 1.1 miles upstream from mouth, and 1.2 miles north of Oceanside.

DRAINAGE AREA.--557 sq mi.

PERIOD OF RECORD.--April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (from topographic map). April 1912 to September 1914, nonrecording gage at site 0.8 mile upstream at different datum. January 1916, nonrecording gage 0.2 mile downstream at different datum.

AVERAGE DISCHARGE.--37 years (1912-14, 1929-41, 1946-69), 15.6 cfs (11,290 acre-ft per year); median of yearly mean discharges, zero.

EXTREMES.--Current year: Maximum discharge, 11,500 cfs Feb. 26 (gage height, unknown), on basis of slope-area measurement of peak flow; minimum daily, 0.34 cfs Sept. 30.

Period of record: Maximum discharge, 95,600 cfs Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in most years.

REMARKS.--Records poor. Flow regulated by Lake Henshaw (capacity, 194,300 acre-ft). Several diversions for irrigation and domestic use above station. Average Discharge represents flow to ocean during period of record regardless of upstream development.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.9	1.5	2.6	30	82	20	5.8	3.4	2.5	1.9	1.1
2	1.4	1.9	1.5	2.6	28	66	18	5.6	3.3	2.5	1.9	1.1
3	1.4	1.9	1.5	2.4	27	60	35	5.4	3.3	2.5	1.8	1.0
4	1.4	1.9	1.5	2.3	27	58	20	5.2	3.2	2.4	1.8	1.0
5	1.4	1.9	1.5	2.4	27	56	18	5.0	3.2	2.4	1.8	.97
6	1.4	2.0	1.6	2.6	105	55	23	4.9	3.2	2.4	1.8	.94
7	1.4	2.0	1.5	2.4	197	54	18	4.7	3.1	2.4	1.7	.91
8	1.4	2.0	1.4	2.4	76	53	17	4.6	3.1	2.4	1.7	.90
9	1.4	2.0	1.2	2.4	59	52	16	4.6	3.0	2.4	1.7	.87
10	1.4	2.0	1.1	2.4	52	51	15	4.5	3.0	2.4	1.7	.84
11	1.5	2.0	1.2	2.4	48	50	14	4.5	3.0	2.3	1.6	.81
12	1.5	2.0	1.2	2.4	42	50	13	4.5	2.9	2.3	1.6	.77
13	1.5	2.0	1.6	2.4	40	65	12	4.4	2.9	2.3	1.6	.75
14	1.5	2.0	1.8	3.5	38	117	12	4.3	2.9	2.3	1.6	.73
15	1.5	2.0	1.8	3.0	37	34	12	4.2	2.8	2.3	1.5	.70
16	1.6	2.0	1.8	2.5	36	25	11	4.2	2.8	2.3	1.5	.67
17	1.6	1.9	1.8	2.5	37	20	11	4.1	2.8	2.3	1.5	.65
18	1.6	1.8	1.6	3.1	46	20	10	4.0	2.8	2.2	1.5	.62
19	1.6	1.7	1.6	4.8	66	17	10	4.0	2.8	2.2	1.4	.59
20	1.6	1.7	1.6	3.9	93	17	10	3.9	2.7	2.2	1.4	.56
21	1.7	1.6	1.8	3.4	61	48	9.4	3.9	2.7	2.2	1.4	.54
22	1.7	1.6	1.8	3.0	129	164	8.8	3.8	2.7	2.1	1.4	.52
23	1.7	1.6	1.9	2.9	106	67	8.4	3.7	2.7	2.1	1.3	.50
24	1.7	1.6	2.1	3.1	1,280	53	8.0	3.7	2.6	2.1	1.3	.47
25	1.7	1.5	2.3	491	2,340	34	7.5	3.6	2.6	2.1	1.3	.45
26	1.8	1.5	2.6	738	3,340	28	7.2	3.6	2.6	2.0	1.2	.42
27	1.8	1.5	2.6	184	202	27	6.8	3.5	2.6	2.0	1.2	.40
28	1.8	1.5	2.8	71	117	25	6.5	3.5	2.6	2.0	1.2	.38
29	1.8	1.5	3.0	40	-----	23	6.3	3.5	2.5	2.0	1.2	.36
30	1.8	1.5	2.8	35	-----	23	6.0	3.4	2.5	2.0	1.1	.34
31	1.8	-----	2.8	32	-----	22	-----	3.4	-----	1.9	1.1	-----
TOTAL	48.7	54.0	56.8	1,658.4	8,686	1,516	389.9	132.0	86.3	69.5	46.7	20.86
MEAN	1.57	1.80	1.83	53.5	310	48.9	13.0	4.26	2.88	2.24	1.51	.70
MAX	1.8	2.0	3.0	738	3,340	164	35	5.8	3.4	2.5	1.9	1.1
MIN	1.3	1.5	1.1	2.3	27	17	6.0	3.4	2.5	1.9	1.1	.34
AC-FT	97	107	113	3,290	17,230	3,010	773	262	171	138	93	41
CAL YR 1968	TOTAL	968.70	MEAN	2.65	MAX	77	MIN	.30	AC-FT	1,920		
WTR YR 1969	TOTAL	12,765.16	MEAN	35.0	MAX	3,340	MIN	.34	AC-FT	25,320		

11-0424. TEMECULA CREEK NEAR AGUANGA, CALIF.

LOCATION.--Lat 33°27'33", long 116°55'22", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.8 S., R.1 E., Riverside County, on right bank 1.6 miles downstream from Long Canyon, and 3.5 miles northwest of Aguanga.

DRAINAGE AREA.--131 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 1,590 ft (from topographic map).

AVERAGE DISCHARGE.--12 years, 5.28 cfs (3,830 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,550 cfs Jan. 25, Feb. 25 (gage height, 7.44 ft (inside gage), Jan. 25; 10.6 ft, from floodmarks, Feb. 25), on basis of slope-area measurements of peak flow; no flow Oct. 1-9, 17.

Period of record: Maximum discharge, 3,540 cfs Apr. 3, 1958 (gage height, 6.57 ft), from rating curve extended above 1,200 cfs; no flow at times in each year.

REMARKS.--Records poor. No regulation above station. Pumping for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.06	.15	.96	5.5	150	14	8.4	4.4	1.9	.29	.18
2	0	.06	.15	.96	4.5	110	13	8.2	4.3	1.7	.31	.17
3	0	.06	.15	.93	4.0	95	19	8.0	4.3	1.6	.29	.14
4	0	.07	.16	.93	3.5	80	15	9.0	4.2	1.4	.29	.14
5	0.	.07	.17	.92	10	62	14	8.1	4.1	1.4	.26	.13
6	0	.07	.18	.93	280	55	17	9.0	4.0	1.6	.22	.12
7	0	.07	.19	.93	50	46	14	10	4.0	1.8	.22	.15
8	0	.07	.16	.95	35	45	13	9.4	3.9	1.7	.25	.19
9	0	.07	.16	1.0	25	44	16	8.3	3.8	1.4	.23	.16
10	.01	.08	.19	1.0	18	62	15	7.6	3.8	1.2	.22	.17
11	.01	.08	.20	1.0	14	50	14	7.3	3.7	1.2	.24	.17
12	.01	.09	.20	1.0	12	45	13	7.0	3.7	1.3	.20	.16
13	.01	.11	.21	1.2	12	38	12	6.7	3.7	1.2	.19	.15
14	.02	.11	.21	8.1	11	35	12	6.5	3.6	1.2	.20	.21
15	.02	.13	.22	5.0	11	33	12	6.3	3.6	1.0	.18	.23
16	.01	.12	.22	2.0	10	30	11	6.1	3.5	.92	.16	.23
17	0	.12	.22	1.5	11	27	11	6.0	3.5	.91	.17	.23
18	.01	.10	.22	1.4	14	25	11	5.9	3.4	.88	.18	.20
19	.01	.10	.23	1.7	22	24	11	5.8	3.4	.81	.18	.25
20	.02	.10	.32	41	30	23	11	5.7	3.3	.76	.18	.28
21	.02	.10	.31	19	60	78	10	5.6	3.3	.80	.16	.31
22	.01	.11	.50	7.0	120	50	10	5.4	3.2	.38	.14	.28
23	.01	.11	.49	5.0	210	35	10	5.3	3.2	.61	.11	.21
24	.01	.11	.59	8.2	1,070	31	9.8	5.2	3.1	.67	.12	.21
25	.02	.12	.73	950	2,200	25	9.6	5.1	3.1	.57	.15	.15
26	.02	.12	1.9	300	550	24	9.4	5.0	3.0	.53	.15	.18
27	.02	.12	2.0	100	290	22	9.2	4.9	3.0	.57	.16	.16
28	.02	.13	1.5	42	200	21	9.0	4.8	2.8	.57	.19	.20
29	.03	.13	1.3	20	-----	19	8.8	4.7	2.4	.47	.19	.18
30	.05	.13	1.2	10	-----	18	8.6	4.6	2.1	.37	.20	.16
31	.05	-----	1.2	7.2	-----	17	-----	4.5	-----	.34	.21	-----
TOTAL	0.39	2.92	15.63	1,541.81	5,282.5	1,419	362.4	204.4	105.4	31.76	6.24	5.70
MEAN	.013	.097	.50	49.7	189	45.8	12.1	6.59	3.51	1.02	.20	.19
MAX	.05	.13	2.0	950	2,200	150	19	10	4.4	1.9	.31	.31
MIN	0	.06	.15	.92	3.5	17	8.6	4.5	2.1	.34	.11	.12
AC-FT	.8	5.8	31	3,060	10,480	2,810	719	405	209	63	12	11
CAL YR 1968	TOTAL	437.13	MEAN	1.19	MAX	23	MIN	0	AC-FT	867		
WTR YR 1969	TOTAL	8,978.15	MEAN	24.6	MAX	2,200	MIN	0	AC-FT	17,810		

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	unknown	unknown	a100	2- 6	1030	3.39	424
1-25	unknown	b7.44	2,550	2-25	unknown	c10.6	2,550

NOTE.--No gage-height record Jan. 15 to June 25.

a Estimated.
b From inside gage.
c From floodmarks.

SANTA MARGARITA RIVER BASIN

11-0425. TEMECULA CREEK AT VAIL DAM, CALIF.

LOCATION.--Lat 33°29'44", long 116°58'33", in Pauba Grant, Riverside County, at Vail Dam 0.2 mile downstream from Arroyo Seco, and 10 miles east of Temecula.

DRAINAGE AREA.--320 sq mi.

PERIOD OF RECORD.--October 1948 to current year. January 1923 to October 1930 at site 200 ft downstream and October 1930 to September 1948 at site 500 ft downstream, published as "at Nigger Canyon, near Temecula"; records not equivalent owing to change in natural water loss resulting from creation of Vail Lake. October 1948 to September 1951 published as "at Nigger Canyon, near Temecula"; records are for draft and spill only from Vail Lake. October 1951 to September 1955, published as "at Vail Dam, near Temecula."

GAGE.--Water-stage recorder with rain-gage attachment. U.S. Weather Bureau non-recording rain gage 0.2 mile upstream. Datum of gage is 1,350.0 ft above mean sea level (levels by Bureau of Reclamation). Water-stage recorder at site 500 ft downstream measures release and spill.

AVERAGE DISCHARGE.--25 years (1923-48), 14.5 cfs (10,500 acre-ft per year); median of yearly mean discharges, 8.3 cfs (6,000 acre-ft per year), see Period of Record; 21 years (1948-69), 5.93 cfs (4,290 acre-ft per year); median of yearly mean discharges, 2.2 cfs (1,600 acre-ft per year).

REMARKS.--Records of discharge represent all water reaching Vail Lake, including precipitation on lake surface. Discharge computed on basis of records of storage, release (draft), spill and evaporation. Monthly evaporation from lake surface computed on basis of evaporation from a class A evaporation pan using coefficient of 0.77, excepting the period June 1964 to September 1965, when a 24-inch diameter sunken screen pan with a coefficient of 0.98 was used. Area-capacity tables for lake are based on a survey made in 1947. Vail Dam completed in June 1949. Capacity of lake at spillway level (elevation, 1,470.00 ft), 49,370 acre-ft. Dead storage, 2.4 acre-ft below lowest outlet at elevation 1,352.5 ft included in these records. There has been no spill since Nov. 13, 1948, date of closure. Water is released as required down Temecula Creek for diversion about 1 mile below dam. Monthly precipitation, in inches, from U.S. Weather Bureau non-recording rain gage is as follows: October, 0.17; November, 0.47; December, 1.16; January, 7.18; February, 8.98; April, 1.08; June, 0.16; the water year, 19.2.

MONTHLY DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Month	Elevation (feet) ^a	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Evapo- ration (acre- feet)	Discharge (acre- feet)
Vail Lake						
Sept. 30.....	1,420.42	11,578	-	-	-	-
Oct. 31.....	1,420.18	11,474	-104	0	161	57
Nov. 30.....	1,420.07	11,426	-48	0	109	61
Dec. 31.....	1,420.19	11,478	+52	0	89	141
CAL YR 1968.....	-	-	-1,498	398	2,315	1,215
Jan. 31.....	1,428.90	15,769	+4,291	0	128	4,419
Feb. 28.....	1,449.19	29,756	+13,987	0	150	14,137
Mar. 31.....	1,452.60	32,606	+2,850	0	278	3,128
Apr. 30.....	1,453.00	32,950	+344	168	319	831
May 31.....	1,452.80	32,778	-172	229	380	437
June 30.....	1,452.37	32,408	-370	182	370	182
July 31.....	1,451.65	31,796	-612	118	644	150
Aug. 31.....	1,450.79	31,076	-720	0	613	-107
Sept. 30.....	1,450.52	30,852	-224	0	497	273
WTR YR 1968-69.....	-	-	+19,274	697	3,738	23,709

^a Elevation at 2400 hours.

^b Estimated.

NOTE.--For months when inflow to the lake was small and other quantities were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing discharge as a residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

SANTA MARGARITA RIVER BASIN

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11-0430. MURRIETA CREEK AT TEMECULA, CALIF.

LOCATION.--Lat 33°28'47", long 117°08'35", in Temecula Grant, Riverside County, on right bank 0.4 mile upstream from mouth, and 1.0 mile south of Temecula.

DRAINAGE AREA.--222 sq mi.

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only October 1924 to September 1930, published in WSP 1315-B.

GAGE.--Water-stage recorder and concrete low-water control since August 1962. Altitude of gage is 970 ft (from topographic map). See WSP 1735 for history of gage changes prior to Dec. 16, 1938.

AVERAGE DISCHARGE.--45 years, 9.36 cfs (6,780 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10,400 cfs Feb. 25 (gage height, 12.34 ft), from rating curve extended above 1,850 cfs on basis of slope-area measurements at gage heights 9.90 and 12.34 ft; minimum daily, 0.02 cfs June 10.

Period of record: Maximum discharge, 17,500 cfs Jan. 23, 1943 (gage height, 13.82 ft); minimum daily, 0.02 cfs June 10, 1969.

REMARKS.--Records good. No regulation above station. Pumping above station for irrigation of about 2,500 acres.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.7	1.5	1.3	2.0	38	.40	.50	.41	.10	.08	.12
2	2.2	1.7	1.3	1.2	2.0	29	.40	.50	.23	.10	.08	.12
3	2.2	1.7	1.1	1.1	2.0	24	.50	.70	.20	.10	.08	.12
4	2.2	1.6	1.3	1.1	1.1	23	.50	.40	.46	.14	.08	.12
5	2.1	1.7	1.2	1.1	75	22	.50	.40	.55	.12	.08	.12
6	2.0	1.8	1.2	1.1	1,380	21	.60	.40	.29	.14	.10	.12
7	2.0	1.8	1.2	1.0	147	21	.50	.40	.16	.14	.08	.12
8	2.0	1.8	1.2	1.0	24	20	.40	.30	.10	.14	.08	.14
9	1.9	1.8	1.5	1.0	7.6	20	.40	.30	.06	.14	.08	.14
10	1.8	1.8	1.8	1.0	3.0	17	.40	.30	.02	.14	.08	.14
11	1.8	1.9	1.8	1.0	1.1	15	.40	.30	.04	.14	.08	.14
12	1.8	1.9	1.8	1.1	.6	15	.50	.30	.04	.14	.08	.16
13	1.8	1.9	1.7	1.1	.5	12	.40	.30	.06	.14	.08	.18
14	1.8	1.9	1.7	1.7	.4	14	.40	.30	.08	.14	.08	.18
15	1.8	1.9	1.7	.89	.4	5.5	.40	.30	.10	.14	.10	.18
16	1.7	1.8	1.7	.89	.4	4.5	.50	.20	.10	.14	.10	.18
17	1.7	1.8	1.7	.89	.4	3.8	.50	.20	.20	.12	.10	.18
18	1.7	1.8	1.7	.92	7.9	3.5	.50	.20	.46	.12	.10	.18
19	1.8	1.7	1.5	.95	45	3.2	.40	.20	.38	.14	.10	.18
20	1.8	1.7	.90	1.3	29	2.9	.40	.20	.60	.14	.10	.18
21	1.8	1.7	1.0	85	7.6	4.9	.40	.12	.50	.14	.10	.18
22	1.8	1.7	1.0	3.3	206	9.8	.50	.12	.41	.14	.10	.18
23	1.8	1.7	1.0	.21	799	3.0	.50	.12	.16	.14	.10	.18
24	1.8	1.7	1.0	9.6	5,740	2.0	.70	.12	.16	.14	.10	.20
25	1.8	1.7	1.0	2,530	7,050	1.1	.70	.20	.23	.12	.10	.20
26	1.8	1.5	1.1	520	1,150	.82	.60	.90	.12	.06	.10	.16
27	1.8	1.2	1.0	119	164	.80	.46	.50	.35	.06	.10	.16
28	1.8	1.4	1.0	8.4	68	.70	.46	.32	.23	.06	.10	.14
29	1.8	1.4	1.0	3.3	-----	.60	.46	.32	.12	.06	.10	.14
30	1.8	1.4	1.0	2.6	-----	.50	.50	.32	.12	.06	.10	.14
31	1.8	-----	1.1	2.2	-----	.40	-----	.55	-----	.06	.12	-----
TOTAL	58.1	51.1	40.70	3,305.25	16,914.0	339.02	14.28	10.29	6.94	3.66	2.86	4.68
MEAN	1.87	1.70	1.31	107	604	10.9	.48	.33	.23	.12	.092	.16
MAX	2.2	1.9	1.8	2,530	7,050	38	.70	.90	.60	.14	.12	.20
MIN	1.7	1.2	.90	.21	.40	.40	.40	.12	.02	.06	.08	.12
AC-FT	115	101	81	6,560	33,550	672	28	20	14	7.3	5.7	9.3

CAL YR 1968 TOTAL 310.30 MEAN .85 MAX 13 MIN .10 AC-FT 615
WTR YR 1969 TOTAL 20,750.88 MEAN 56.9 MAX 7,050 MIN .02 AC-FT 41,160

PEAK DISCHARGE (BASE, 55 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1300	3.35	530	2-6	0900	9.70	6,320
1-25	1500	9.94	6,660	2-25	1500	12.34	10,400

SANTA MARGARITA RIVER BASIN

11-0440. SANTA MARGARITA RIVER NEAR TEMECULA, CALIF.

LOCATION.--Lat 33°28'26", long 117°08'29", in Temecula Grant, Riverside County, on left bank at upper end of Temecula Canyon, 0.1 mile downstream from Murrieta Creek, and 1.4 miles south of Temecula.

DRAINAGE AREA.--588 sq mi.

PERIOD OF RECORD.--January 1923 to current year. Prior to October 1952, published as Temecula Creek at Railroad Canyon, near Temecula.

GAGE.--Water-stage recorder. Altitude of gage is 950 ft (from topographic map). Prior to Nov. 3, 1966, at site 100 ft downstream at same datum.

AVERAGE DISCHARGE.--25 years (1923-48), 28.2 cfs (20,420 acre-ft per year), 21 years (1948-69), 11.1 cfs (8,040 acre-ft per year); median of yearly mean discharges (1923-48), 13 cfs (9,400 acre-ft per year); (1948-69), 5.5 cfs (4,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 14,600 cfs Feb. 25 (gage height, 15.32 ft), on basis of slope-area measurement of peak flow; minimum daily, 1.8 cfs Sept. 2, 5-12.
Period of record: Maximum discharge, 25,000 cfs Feb. 16, 1927 (gage height, 14.6 ft, at site 100 ft downstream), from rating curve extended above 10,000 cfs; minimum daily, 0.30 cfs Aug. 18-22, 1965, regulation by construction work above station.

REMARKS.--Records good except those for Jan. 28 to Feb. 4, Feb. 26 to Mar. 31, which are poor. Flow partly regulated since November 1948 by Vail Lake (see sta 11-0425). Pumping above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	2.2	2.4	5.6	6.4	65	4.8	4.0	2.6	2.6	2.1	2.0
2	3.4	2.2	2.2	5.6	6.0	60	4.8	4.0	2.2	2.4	2.1	1.8
3	3.4	2.4	2.1	5.6	5.8	55	6.0	4.0	2.0	2.6	1.9	1.9
4	3.2	2.4	2.0	5.6	5.4	50	5.0	4.0	2.6	2.6	1.9	1.9
5	3.2	2.8	2.0	5.6	43	45	6.3	4.2	2.8	2.6	1.9	1.8
6	3.0	2.8	1.9	5.6	1,240	40	6.6	4.0	2.6	2.5	2.0	1.8
7	3.0	2.8	1.9	5.6	177	30	5.3	3.8	2.6	2.5	2.1	1.8
8	3.0	2.8	2.0	5.6	30	20	5.0	4.0	2.8	2.5	2.4	1.8
9	2.8	2.8	2.4	5.6	10	10	5.3	4.0	3.2	2.5	2.6	1.8
10	2.7	3.0	3.0	5.8	6.0	10	5.3	4.0	2.8	2.5	2.2	1.8
11	2.7	3.0	2.7	5.8	4.0	7.5	4.6	4.0	2.8	2.4	2.1	1.8
12	2.7	3.2	2.6	5.8	2.6	7.0	5.0	4.0	2.8	2.4	2.4	1.8
13	2.7	3.2	2.6	6.0	2.5	7.0	4.8	4.0	2.8	2.4	2.6	1.9
14	2.7	3.2	2.4	12	2.4	6.5	4.8	4.0	2.8	2.4	2.6	1.9
15	2.7	4.4	2.4	6.6	2.4	6.0	4.6	4.0	3.2	2.4	2.4	1.9
16	2.6	3.6	2.7	6.0	2.4	5.4	4.6	3.8	3.6	2.3	2.2	1.9
17	2.4	3.6	2.6	6.0	2.4	5.2	4.6	3.8	3.4	2.3	2.2	1.9
18	2.4	3.6	2.7	5.9	10	5.0	4.6	3.8	3.6	2.3	2.2	1.9
19	2.4	3.6	2.8	6.0	48	4.8	4.4	3.8	3.6	2.3	2.4	1.9
20	2.4	3.8	2.7	7.0	33	4.6	4.4	3.4	4.4	2.3	2.2	2.1
21	2.4	3.6	2.7	118	10	19	4.4	3.0	4.0	2.2	2.1	2.1
22	2.4	3.6	2.6	15	248	7.5	4.4	2.8	4.0	2.2	1.9	2.4
23	2.4	3.4	2.8	6.3	657	5.6	4.2	2.6	3.6	2.2	2.1	2.6
24	2.2	3.4	3.2	25	5,940	5.4	4.2	2.6	3.6	2.2	2.1	2.4
25	2.2	3.6	4.2	2,520	7,730	5.4	4.2	2.4	3.8	2.2	2.1	2.4
26	2.2	3.2	4.6	575	1,300	5.2	4.0	2.4	3.2	2.1	2.2	2.6
27	2.2	2.2	3.2	151	250	5.2	3.8	2.6	3.6	2.1	2.4	2.6
28	2.2	2.4	3.2	33	100	5.0	4.0	2.4	3.6	2.1	2.4	2.6
29	2.4	2.4	3.6	16	-----	5.0	4.0	2.4	3.0	2.1	2.4	2.6
30	2.4	2.4	3.6	9.8	-----	4.8	4.0	2.4	3.0	2.1	2.4	2.6
31	2.4	-----	5.0	6.7	-----	4.8	-----	2.6	-----	2.1	2.2	-----
TOTAL	82.2	91.6	86.8	3,599.1	17,874.3	516.9	142.0	106.8	94.6	72.4	68.8	62.3
MEAN	2.65	3.05	2.80	116	638	16.7	4.73	3.45	3.15	2.34	2.22	2.08
MAX	3.4	4.4	5.0	2,520	7,730	65	6.6	4.2	4.4	2.6	2.6	2.6
MIN	2.2	2.2	1.9	5.6	2.4	4.6	3.8	2.4	2.0	2.1	1.9	1.8
AC-FT	163	182	172	7,140	35,450	1,030	282	212	188	144	136	124
CAL YR 1968	TOTAL	1,075.4	MEAN	2.94	MAX	20	MIN	1.8	AC-FT	2,130		
WTR YR 1969	TOTAL	22,797.8	MEAN	62.5	MAX	7,730	MIN	1.8	AC-FT	45,220		

NOTE.--No gage-height record or stage-discharge relation indefinite Jan. 28 to Feb. 4, Feb. 26 to Mar. 31.

SANTA MARGARITA RIVER BASIN

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11-0445. SANTA MARGARITA RIVER NEAR FALLBROOK, CALIF.

LOCATION.--Lat 33°23'54", long 117°15'44", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.9 S., R.4 W., San Diego County, on right bank 180 ft upstream from De Luz Road, 1.3 miles northwest of Fallbrook, and 1.9 miles downstream from Sandia Canyon.

DRAINAGE AREA.--644 sq mi.

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for October to November 1924, published in WSP 1315-B.

GAGE.--Water-stage recorder. Concrete-road control since October 1955. Datum of gage is 267.96 ft above mean sea level (levels by U.S. Bureau of Reclamation). Prior to Oct. 1, 1955, at site 1.7 miles upstream at different datum. Records equivalent except those for extreme low flows.

AVERAGE DISCHARGE.--24 years (1924-48), 35.4 cfs (25,630 acre-ft per year); 21 years (1948-69), 13.6 cfs (9,860 acre-ft per year); median of yearly mean discharges (1924-48), 17 cfs (12,300 acre-ft per year); (1948-69), 5.0 cfs (3,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 20,000 cfs Feb. 25 (gage height, 14.18 ft), from rating curve extended above computation of flow over road at gage height 12.50 ft; no flow Aug. 23, 25, 26.

Period of record: Maximum discharge, 33,100 cfs Feb. 16, 1927 (gage height, 15.6 ft, site and datum then in use), from rating curve extended above 8,800 cfs on basis of slope-area measurement of maximum flow; no flow at times in recent years.

REMARKS.--Records good. Flow partly regulated since November 1948 by Vail Lake (see sta 11-0425). Several small diversions above station for irrigation. The Fallbrook Public Utility District pumped 249 acre-ft of water during the year from a well in the streambed 2.1 miles upstream from the station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.1	2.6	2.9	31	670	28	14	8.2	4.3	1.4	.95
2	2.1	2.1	2.7	3.2	26	558	27	14	8.4	3.9	1.2	.73
3	2.1	2.0	2.7	2.9	22	437	28	14	8.0	3.4	1.1	.48
4	2.4	2.1	2.6	2.9	20	282	27	15	7.3	3.2	1.1	.20
5	2.3	2.0	2.4	3.0	49	198	29	16	7.5	3.3	.90	.15
6	2.3	2.0	2.5	3.1	1,380	161	39	20	8.9	3.4	.85	.12
7	2.3	2.0	2.6	2.9	549	140	28	17	8.3	3.6	1.1	.06
8	2.2	.72	2.6	2.9	146	116	25	15	7.9	3.2	1.5	.05
9	2.1	1.1	2.7	2.9	77	103	23	14	8.5	2.9	1.2	.06
10	2.3	1.8	2.9	2.9	57	123	24	13	8.0	2.7	.90	.05
11	2.1	1.8	3.3	2.9	44	140	23	12	8.0	2.8	.76	.05
12	2.1	1.9	3.5	2.9	38	92	21	12	8.0	3.2	.57	.08
13	2.1	2.1	3.4	2.9	33	104	21	12	8.0	2.7	.45	.05
14	2.1	2.3	3.3	5.6	27	112	20	12	7.7	2.3	.44	.14
15	2.2	3.0	3.0	6.9	25	76	19	11	7.5	2.1	.70	.39
16	2.0	3.5	3.0	4.3	62	64	18	11	7.5	2.1	.73	.66
17	1.9	3.1	3.1	3.6	32	59	17	11	7.5	1.9	.48	.73
18	1.8	2.8	3.1	3.4	84	55	17	11	7.5	1.9	.41	.73
19	1.6	2.8	3.1	4.1	243	50	17	11	7.2	1.7	.44	.73
20	1.7	2.7	3.4	6.3	243	47	16	11	7.2	1.8	.38	.72
21	1.8	2.6	3.3	20	106	64	16	11	7.2	2.2	.21	.77
22	1.8	2.7	2.9	71	435	114	16	11	7.0	2.1	.11	1.0
23	1.7	2.8	2.8	10	363	65	16	10	7.0	1.8	0	1.3
24	1.6	2.8	2.8	11	7,080	50	15	10	7.0	1.9	.01	1.6
25	1.6	2.9	3.4	3,110	10,100	40	15	10	6.5	2.2	0	1.7
26	1.7	2.8	4.4	1,080	2,410	36	14	9.7	6.0	2.1	0	1.7
27	1.7	2.8	4.4	545	1,110	33	13	8.9	5.7	2.4	.04	1.8
28	1.8	2.6	3.7	139	762	31	13	8.9	5.4	2.1	.20	1.6
29	1.8	2.3	3.3	77	-----	30	13	8.2	5.1	2.0	.53	1.5
30	2.0	2.5	3.3	50	-----	29	13	8.1	4.6	1.9	.83	1.4
31	2.1	-----	2.9	38	-----	30	-----	8.1	-----	1.7	1.0	-----
TOTAL	61.4	70.72	95.7	5,223.5	25,554	4,109	611	369.9	218.6	78.8	19.54	21.50
MEAN	1.98	2.36	3.09	169	913	133	20.4	11.9	7.29	2.54	.63	.72
MAX	2.4	3.5	4.4	3,110	10,100	670	39	20	8.9	4.3	1.5	1.8
MIN	1.6	.72	2.4	2.9	20	29	13	8.1	4.6	1.7	0	.05
AC-FT	122	140	190	10,360	50,690	8,150	1,210	734	434	156	39	43

CAL YR 1968 TOTAL 933.10 MEAN 2.55 MAX 34 MIN 0 AC-FT 1,850
WTR YR 1969 TOTAL 36,433.66 MEAN 99.8 MAX 10,100 MIN 0 AC-FT 72,270

SANTA MARGARITA RIVER BASIN

11-0460. SANTA MARGARITA RIVER AT YSIDORA, CALIF.

LOCATION.--Lat 33°14'38", long 117°22'56", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.11 S., R.5 W., San Diego County, on right bank 1 mile downstream from Ysidora, and about 2.5 miles upstream from mouth.

DRAINAGE AREA.--739 sq mi.

PERIOD OF RECORD.--February 1923 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 10 ft (from topographic map). See WSP 1735 for history of gage changes prior to Nov. 27, 1935.

AVERAGE DISCHARGE.--46 years, 29.5 cfs (21,360 acre-ft per year); median of yearly mean discharges, 8.4 cfs (6,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 19,200 cfs Feb. 25 (gage height, 15.89 ft); no flow Oct. 1 to Jan. 24.

Period of record: Maximum discharge, 33,600 cfs Feb. 16, 1927 (gage height, 18.00 ft, site and datum then in use), on basis of slope-area measurement of maximum flow; no flow for part of most years.

REMARKS.--Records fair. Flow partly regulated by Vail Lake since November 1948 (see sta 11-0425). Diversions for irrigation on Rancho California (formerly Santa Margarita Ranch and Pauba Ranch). Conservation pools, 300 ft upstream, detains low flow. Average Discharge represents flow to ocean during period of record, regardless of upstream development.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	88	484	76	25	3.3	.65	.38	.35
2	0	0	0	0	72	439	74	24	3.1	.64	.37	.35
3	0	0	0	0	66	400	72	23	3.0	.62	.37	.35
4	0	0	0	0	45	361	71	22	2.8	.61	.37	.35
5	0	0	0	0	39	322	69	21	2.5	.60	.37	.35
6	0	0	0	0	1,880	290	68	20	2.4	.59	.37	.33
7	0	0	0	0	1,570	260	66	18	2.3	.58	.37	.33
8	0	0	0	0	463	240	65	17	2.1	.56	.37	.33
9	0	0	0	0	258	230	63	16	1.9	.55	.37	.33
10	0	0	0	0	177	219	62	14	1.8	.54	.37	.33
11	0	0	0	0	150	200	60	14	1.7	.53	.37	.30
12	0	0	0	0	102	185	59	13	1.5	.52	.37	.30
13	0	0	0	0	88	170	56	12	1.4	.51	.37	.30
14	0	0	0	0	72	158	54	11	1.4	.50	.37	.30
15	0	0	0	0	64	148	52	10	1.3	.49	.37	.30
16	0	0	0	0	117	138	50	9.6	1.2	.47	.36	.28
17	0	0	0	0	100	130	47	9.0	1.1	.47	.36	.28
18	0	0	0	0	111	118	45	8.0	1.0	.47	.36	.28
19	0	0	0	0	300	108	43	7.5	1.0	.47	.36	.28
20	0	0	0	0	447	103	40	6.9	1.0	.47	.36	.28
21	0	0	0	0	283	111	38	6.7	.94	.46	.36	.26
22	0	0	0	0	427	130	37	6.1	.90	.46	.36	.26
23	0	0	0	0	521	110	35	5.4	.86	.45	.36	.26
24	0	0	0	0	14,400	90	34	5.3	.84	.43	.36	.26
25	0	0	0	3,850	16,400	86	33	5.0	.79	.43	.36	.28
26	0	0	0	4,530	1,030	84	31	4.7	.76	.43	.36	.30
27	0	0	0	1,480	514	82	30	4.5	.73	.42	.36	.33
28	0	0	0	509	500	80	29	4.3	.71	.41	.35	.27
29	0	0	0	282	-----	78	28	4.0	.68	.40	.35	.24
30	0	0	0	159	-----	77	27	3.8	.66	.39	.35	.22
31	0	-----	0	118	-----	76	-----	3.5	-----	.39	.35	-----
TOTAL	0	0	0	10,928	40,284	5,707	1,514	354.3	45.67	15.51	11.28	8.98
MEAN	0	0	0	353	1,439	184	50.5	11.4	1.52	.50	.36	.30
MAX	0	0	0	4,530	16,400	484	76	25	3.3	.65	.38	.35
MIN	0	0	0	0	39	76	27	3.5	.66	.39	.35	.22
AC-FT	0	0	0	21,680	79,900	11,320	3,000	703	91	31	22	18

CAL YR 1968 TOTAL 0 MEAN 0 MAX 0 MIN 0 AC-FT 0
WTR YR 1969 TOTAL 58,868.74 MEAN 161 MAX 16,400 MIN 0 AC-FT 116,800

NOTE.--No gage-height record Feb. 27 to Sept. 30.

11-0465. SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO, CALIF.

LOCATION.--Lat 33°31'08", long 117°37'27", in NE¼NE¼SE¼ sec.32, T.7 S., R.7 W., Orange County, on right pier of bridge on State Highway 74, 2.5 miles northeast of San Juan Capistrano.

DRAINAGE AREA.--106 sq mi.

PERIOD OF RECORD.--October 1928 to current year. Combined records of creek and diversion, October 1954 to current year.

GAGE.--Water-stage recorder on creek; water-stage recorder and Parshall flume on diversion. Altitude of gage is 150 ft (from topographic map). Prior to Feb. 28, 1934, at site 2.5 miles downstream at different datum. Feb. 28, 1934, to Dec. 10, 1938, at present site at different datum. Dec. 11, 1938, to Dec. 17, 1941, at present site at datum 2.00 ft higher.

AVERAGE DISCHARGE (Creek only).--41 years, 14.0 cfs (10,140 acre-ft per year); median of yearly mean discharges, 2.8 cfs (2,000 acre-ft per year).
(Combined).--15 years, 15.3 cfs (11,080 acre-ft per year); median of yearly mean discharges, 3.2 cfs (2,300 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 22,400 cfs Feb. 25 (gage height, 5.6 ft, from floodmarks), from rating curve extended above 1,200 cfs as explained below; no flow Oct. 1 to Nov. 14.
Period of record: Maximum discharge, 22,400 cfs Feb. 25, 1969 (gage height, 5.6 ft, from floodmarks), from rating curve extended above 1,200 cfs on basis of slope-area measurement of maximum flow; no flow at times in most years.
(Combined).--Current year: Maximum discharge, 22,400 cfs Feb. 25; no flow Oct. 1 to Nov. 14.
Period of record: Maximum discharge, 22,400 cfs Feb. 25, 1969; no flow for many days in 1961-69.

REMARKS.--Records poor. No regulation above station. See following page for records of combined discharge of creek and Capistrano Water Co.'s canal, which diverts 500 ft upstream from station.

COOPERATION.--Thirty-seven discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	1.2	2.5	157	650	69	33	11	8.1	4.5	1.7
2	0	0	1.4	2.5	117	500	66	32	11	7.4	4.5	1.6
3	0	0	1.4	2.5	92	420	100	31	12	6.3	4.5	1.5
4	0	0	.92	2.5	87	342	80	30	12	6.1	4.6	1.4
5	0	0	.70	2.5	86	310	110	28	12	5.8	4.8	1.4
6	0	0	.63	2.6	600	283	90	27	12	5.5	4.8	1.5
7	0	0	1.0	2.5	306	265	79	25	12	5.3	4.8	1.6
8	0	0	1.1	2.5	120	250	71	24	13	5.0	4.8	1.6
9	0	0	.96	2.4	100	230	65	23	13	4.8	4.8	1.7
10	0	0	1.1	2.0	99	215	58	22	13	4.6	4.5	1.8
11	0	0	1.4	2.1	98	200	55	22	14	4.5	4.7	1.8
12	0	0	2.2	2.0	97	191	52	21	14	4.6	4.6	1.8
13	0	0	2.2	2.2	97	175	49	20	14	4.7	4.6	1.9
14	0	0	2.1	6.0	96	165	47	19	14	4.8	4.6	2.0
15	0	3.0	2.1	4.2	95	155	45	18	13	4.8	4.5	2.0
16	0	2.0	2.2	3.3	94	148	44	18	13	4.9	4.5	2.0
17	0	1.8	2.4	2.8	92	140	42	17	12	5.0	4.5	2.1
18	0	1.6	2.3	2.5	90	130	40	17	12	5.0	4.5	2.1
19	0	1.5	2.5	4.0	159	122	38	16	12	5.0	4.5	2.1
20	0	1.4	2.1	7.5	135	115	37	16	11	5.0	3.1	2.1
21	0	1.2	1.8	439	83	110	36	17	11	5.1	4.0	2.1
22	0	1.3	2.1	179	165	106	35	18	11	5.1	4.8	2.2
23	0	1.4	1.9	35	583	101	34	17	11	5.1	4.6	2.2
24	0	1.4	2.0	300	3,500	95	34	16	10	5.1	4.4	2.2
25	0	1.5	3.1	5,400	6,600	91	34	15	10	5.1	4.3	2.3
26	0	1.3	10	2,000	4,000	86	33	14	9.7	5.1	4.1	2.3
27	0	.93	3.8	650	1,500	82	33	13	9.4	5.1	3.9	2.3
28	0	.97	3.1	703	870	79	33	12	9.1	4.0	3.8	2.3
29	0	.77	2.9	165	-----	75	33	11	9.0	2.7	4.3	2.3
30	0	.89	2.8	156	-----	74	33	11	8.8	3.5	3.1	2.3
31	0	-----	2.6	196	-----	72	-----	11	-----	4.4	1.9	-----
TOTAL	0	22.96	68.01	9,784.1	20,118	5,977	1,575	614	349.0	157.5	133.9	58.2
MEAN	0	.77	2.19	316	719	193	52.5	19.8	11.6	5.08	4.32	1.94
MAX	0	3.0	10	5,400	6,600	650	110	33	14	8.1	4.8	2.3
MIN	0	0	.63	2.0	83	72	33	11	8.8	2.7	1.9	1.4
AC-FT	0	46	135	19,410	39,900	11,860	3,120	1,220	692	312	266	115
CAL YR 1968	TOTAL	656.66	MEAN	1.79	MAX	87	MIN	0	AC-FT	1,300		
WTR YR 1969	TOTAL	38,857.67	MEAN	106	MAX	6,600	MIN	0	AC-FT	77,070		

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1700	3.33	1,160	2-6	1415	2.97	2,200
1-25	1300	5.42	13,000	2-25	1100	5.6	22,400

a From Floodmark.

NOTE.--No gage-height record Jan. 24-27, Feb. 24 to Sept. 30.

SAN JUAN CREEK BASIN

11-0465. SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO, CALIF.--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SAN JUAN CREEK AND CAPISTRANO WATER CO.'S CANAL
NEAR SAN JUAN CAPISTRANO, CALIF., WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	1.2	2.5	157	650	69	33	11	9.6	6.6	3.7
2	0	0	1.4	2.5	117	500	66	32	11	8.8	6.5	3.5
3	0	0	1.4	2.5	92	420	100	31	12	8.0	6.5	3.4
4	0	0	.92	2.5	87	342	80	30	12	7.9	6.5	3.2
5	0	0	.70	2.5	86	310	110	28	14	7.6	6.4	3.2
6	0	0	.63	2.6	600	283	90	27	13	7.2	6.3	3.3
7	0	0	1.0	2.5	306	265	79	25	13	6.8	6.1	3.5
8	0	0	1.1	2.5	120	250	71	24	14	6.7	5.8	3.5
9	0	0	.96	2.4	100	230	65	23	14	6.9	6.1	3.5
10	0	0	1.1	2.0	99	215	58	22	14	6.5	6.0	3.4
11	0	0	1.4	2.1	98	200	55	22	14	6.4	5.7	3.5
12	0	0	2.2	2.0	97	191	52	21	14	6.5	5.9	3.7
13	0	0	2.2	2.2	97	175	49	20	14	6.4	5.8	3.8
14	0	0	2.1	6.0	96	165	47	19	14	6.3	5.8	3.9
15	0	3.0	2.1	4.2	95	155	45	18	13	6.3	5.6	3.9
16	0	2.0	2.2	3.3	94	148	44	18	13	6.4	5.6	3.9
17	0	1.8	2.4	2.8	92	140	42	17	12	6.5	5.7	4.0
18	0	1.6	2.3	2.5	90	130	40	17	13	7.0	5.6	4.0
19	0	1.5	2.5	4.0	159	122	38	16	13	7.0	6.0	3.9
20	0	1.4	2.1	7.5	135	115	37	16	12	6.9	6.2	4.0
21	0	1.2	1.8	439	83	110	36	17	12	7.1	5.5	4.0
22	0	1.3	2.1	179	165	106	35	18	12	7.3	4.9	4.1
23	0	1.4	1.9	35	583	101	34	17	12	7.2	4.7	4.1
24	0	1.4	2.0	300	3,500	95	34	16	11	7.2	4.6	4.1
25	0	1.5	3.1	5,400	6,600	91	34	15	11	8.0	4.5	4.2
26	0	1.3	10	2,000	4,000	86	33	14	11	8.2	4.3	4.3
27	0	.93	3.8	650	1,500	82	33	13	11	7.9	4.1	4.3
28	0	.97	3.1	203	870	79	33	12	11	6.5	3.9	4.5
29	0	.77	2.9	165	-----	75	33	11	11	4.8	4.4	4.4
30	0	.89	2.8	156	-----	74	33	11	11	6.0	4.2	4.3
31	0	-----	2.6	196	-----	72	-----	11	-----	6.7	3.8	-----
TOTAL	0	22.96	68.01	9,784.1	20,118	5,977	1,575	614	373	218.6	169.6	115.1
MEAN	0	.77	2.19	316	719	193	52.5	19.8	12.4	7.05	5.47	3.84
MAX	0	3.0	10	5,400	6,600	650	110	33	14	9.6	6.6	4.5
MIN	0	0	.63	2.0	83	72	33	11	11	4.8	3.8	3.2
AC-FT	0	46	135	19,410	39,900	11,860	3,120	1,220	740	434	336	228

CAL YR 1968 TOTAL 731.57 MEAN 2.00 MAX 88 MIN 0 AC-FT 1,450
WTR YR 1969 TOTAL 39,035.37 MEAN 107 MAX 6,600 MIN 0 AC-FT 77,430

PEAK DISCHARGE (BASE, 200 CFS).--(Same as those for creek).

SAN JUAN CREEK BASIN

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11-0470, ARROYO TRABUCO NEAR SAN JUAN CAPISTRANO, CALIF.

LOCATION.--Lat 33°31'36", long 117°40'08", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.7 S., R.8 W., Orange County, on downstream side of right pier of county road bridge (formerly U.S. Highway 101), 1.8 miles north of San Juan Capistrano.

DRAINAGE AREA.--35.7 sq mi.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1956, published as Trabuco Creek near San Juan Capistrano.

GAGE.--Water-stage recorder. Altitude of gage is 180 ft (from topographic map).

AVERAGE DISCHARGE (Combined).--39 years, 5.95 cfs (4,310 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,000 cfs Feb. 24 (gage height, 5.42 ft), from rating curve extended above 3,200 cfs on basis of slope-area measurement at gage height 5.20 ft; no flow for many days. Period of record: Maximum discharge, 9,240 cfs Feb. 6, 1937; no flow at times in each year.

REMARKS.--No regulation above station. Diversion to spreading grounds by Orange County Flood Control District, at site 0.8 mile upstream, began in February 1966. No diversion during year.

COOPERATION.--Records furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	0	0	0	65	275	33	16	7.0	3.3	3.5	0
2	.20	0	0	0	57	215	33	14	7.0	6.1	3.8	.40
3	.20	.10	0	0	49	178	44	16	7.0	7.3	3.6	.70
4	0	.10	0	0	49	148	36	15	7.0	7.6	4.0	2.0
5	0	0	0	0	62	125	41	16	7.0	5.3	4.5	1.3
6	0	0	0	0	514	112	47	19	6.6	4.5	4.5	.30
7	0	0	0	0	330	103	40	18	6.6	4.8	4.2	0
8	0	0	0	0	232	94	35	16	6.6	5.6	4.2	.40
9	0	0	.20	0	142	88	34	16	6.6	6.7	1.8	1.3
10	0	.40	.10	0	110	85	32	16	6.6	7.6	.50	1.7
11	0	0	.20	0	86	82	31	15	6.6	7.0	.90	.80
12	0	0	.10	0	72	80	30	15	6.6	6.1	1.8	.70
13	0	0	0	0	57	80	27	14	6.7	3.6	2.0	0
14	0	0	.20	.30	44	80	27	14	5.6	3.6	.70	0
15	0	0	0	0	44	78	24	14	3.3	5.3	2.3	.70
16	.10	0	0	0	44	75	26	12	5.9	5.6	1.1	2.4
17	0	0	0	0	39	68	22	9.2	5.9	4.3	.50	2.0
18	0	0	0	0	72	58	20	8.0	6.7	4.5	.70	2.6
19	0	0	0	2.1	90	55	19	8.3	6.4	3.6	1.1	3.5
20	0	0	0	3.8	83	60	17	8.9	5.3	3.2	.90	5.9
21	0	0	0	69	66	80	17	9.6	4.3	2.9	.80	5.1
22	.10	0	0	34	175	67	18	11	3.1	3.1	.90	5.3
23	.20	0	0	7.1	460	58	17	11	4.2	2.9	0	6.4
24	.20	0	0	87	3,360	58	18	11	5.1	4.8	0	6.0
25	.20	0	.10	1,650	2,960	55	21	10	5.1	3.8	.50	5.1
26	.20	0	0	1,100	1,560	50	20	9.8	6.4	3.6	.70	4.5
27	.20	0	0	420	564	49	20	9.5	7.1	7.0	.70	4.8
28	.20	0	0	237	378	50	20	9.2	4.2	5.1	.70	3.6
29	.10	0	0	133	-----	40	18	8.9	2.9	5.3	1.3	4.3
30	0	0	0	100	-----	35	18	8.6	2.2	5.9	.60	5.3
31	0	-----	0	80	-----	35	-----	8.3	-----	4.3	0	-----
TOTAL	2.00	0.60	0.90	3,923.30	11,764	2,716	805	387.3	171.6	154.3	52.80	77.10
MEAN	.065	.020	.029	127	420	87.6	26.8	12.5	5.72	4.98	1.70	2.57
MAX	.20	.40	.20	1,650	3,360	275	47	19	7.1	7.6	4.5	6.4
MIN	0	0	0	0	39	35	17	8.0	2.2	2.9	0	0
AC-FT	4.0	1.2	1.8	7,780	23,330	5,390	1,600	768	340	306	105	153

CAL YR 1968 TOTAL 75.10 MEAN .21 MAX 4.6 MIN 0 AC-FT 149
WTR YR 1969 TOTAL 20,054.90 MEAN 54.9 MAX 3,360 MIN 0 AC-FT 39,780

NOTE.--No gage-height record Feb. 24 to Mar. 20.

ALISO CREEK BASIN

11-0475, ALISO CREEK AT EL TORO, CALIF.

LOCATION.--Lat 33°37'34", long 117°41'03", in Canada de los Alisos Grant, Orange County, near center of channel on upstream side of Second Street Bridge at El Toro.

DRAINAGE AREA.--7.97 sq mi.

PERIOD OF RECORD.--October 1930 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 440 ft (from topographic map). Prior to July 1962, at different datum.

EXTREMES.--Current year: Maximum discharge, 2,500 cfs Feb. 24 (gage height, 11.00 ft, from floodmark), from rating curve extended above 220 cfs on basis of slope-area measurement of maximum flow; no flow for much of year.

Period of record: Maximum discharge, 2,500 cfs Feb. 24, 1969 (gage height, 11.00 ft, from floodmark), from rating curve extended above 220 cfs on basis of slope-area measurement of maximum flow; no flow for most of each year.

REMARKS.--No regulation or diversion above station; some pumping from wells along stream. At times since 1964, Metropolitan Water District water has been released to creek.

COOPERATION.--Records furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.80	.30	0	1.0	8.0	.60	.70	0	0	0	0
2	.10	.80	.30	0	.80	1.5	.60	.70	0	0	0	0
3	.10	.90	.40	0	.70	.60	.70	.70	0	0	0	0
4	.30	.90	0	.10	.60	.20	.70	.70	0	0	0	0
5	.40	.70	.10	.10	.70	.20	12	.80	0	0	0	0
6	.40	.70	0	0	126	.20	.20	.90	0	0	0	0
7	.50	.80	0	0	7.1	.20	.20	.90	0	0	0	0
8	.60	.70	.10	0	.80	.20	.20	.80	0	0	0	0
9	.50	.70	.20	0	.60	.20	.20	.80	.10	0	0	0
10	.40	.70	.20	0	.60	2.0	.20	.80	.20	0	0	0
11	.40	.70	0	0	.60	.60	.20	.80	.30	0	0	0
12	.30	.60	0	0	.60	1.0	.20	.80	.40	0	0	0
13	.20	.60	0	0	.60	1.0	.10	.80	.30	0	0	0
14	.20	.70	0	0	.50	1.0	.10	.80	.30	0	0	0
15	.30	.70	0	0	.30	.50	.10	.80	.30	0	0	0
16	.60	.70	0	0	.60	.50	.10	.70	.20	0	0	0
17	1.0	.60	0	0	.60	.50	.10	.70	.20	0	0	0
18	1.5	.60	0	0	30	.50	.10	.70	0	0	0	0
19	1.5	.60	0	0	9.0	.50	0	.70	0	0	0	0
20	1.5	.60	0	6.6	2.0	.50	.10	.60	0	0	0	0
21	1.5	.30	0	46	8.0	10	.10	.60	0	0	0	0
22	1.4	.10	0	5.1	10	2.0	.10	.50	0	0	0	0
23	1.2	.10	0	0	370	.50	.10	.20	0	0	0	0
24	.90	.10	0	76	500	.50	.20	0	0	0	0	0
25	.80	.10	.10	331	220	.60	.20	0	0	0	0	0
26	.80	0	.20	61	150	.50	.20	0	0	0	0	0
27	.90	0	.10	12	50	.50	.20	0	0	0	0	0
28	.90	.10	.20	7.5	15	.50	.50	0	0	0	0	0
29	.80	.40	.10	2.8	-----	.50	.50	0	0	0	0	0
30	.80	.30	.10	1.6	-----	.50	.60	0	0	0	0	0
31	.80	-----	0	1.3	-----	.50	-----	0	-----	0	0	-----
TOTAL	21.70	15.60	2.40	551.10	1,506.70	36.50	19.40	16.50	2.30	0	0	0
MEAN	.70	.52	.077	17.8	53.8	1.18	.65	.53	.077	0	0	0
MAX	1.5	.90	.40	331	500	10	12	.90	.40	0	0	0
MIN	.10	0	0	0	.30	.20	0	0	0	0	0	0
AC-FT	43	31	4.8	1,090	2,990	72	38	33	4.6	0	0	0

CAL YR 1968 TOTAL 71.30 MEAN .19 MAX 5.3 MIN 0 AC-FT 141
WTR YR 1969 TOTAL 2,172.20 MEAN 5.95 MAX 500 MIN 0 AC-FT 4,310

NOTE.--No gage-height record Feb. 13 to Mar. 24.

PETERS CANYON WASH BASIN

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11-0485. SAN DIEGO CREEK NEAR IRVINE, CALIF.

LOCATION.--Lat 33°40'20", long 117°47'10", in San Joaquin Grant, Orange County, on left bank 200 ft downstream from Jeffrey Road Bridge, and 1.5 miles west of Irvine.

DRAINAGE AREA.--40.3 sq mi.

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 102.86 ft above mean sea level (levels by Orange County Flood Control District).

AVERAGE DISCHARGE.--20 years, 3.12 cfs (2,260 acre-ft per year); median of yearly mean discharges, 1.3 cfs (940 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,700 cfs Feb. 24 (gage height, 11.46 ft), from rating curve extended as explained below; no flow for some days.

Period of record: Maximum discharge, 6,700 cfs Feb. 24, 1969 (gage height, 11.46 ft), from rating curve extended above 510 cfs on basis of slope-area measurements at gage heights 9.20 and 11.46 ft; no flow for much of each year.

REMARKS.--Records good. Pumping from wells along stream causes low-flow fluctuation in discharge.

COOPERATION.--Fourteen discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	2.2	.97	1.2	3.2	16	0	.06	.55	1.1	.57	.82
2	.82	1.6	2.0	1.5	2.8	9.5	0	.01	.96	1.2	.72	.88
3	1.1	1.3	2.0	.87	2.5	4.0	3.6	.01	1.2	.75	.69	1.5
4	1.5	1.5	2.0	.60	2.2	1.4	.23	.01	1.6	.46	.79	1.2
5	1.9	1.9	2.1	.89	2.0	1.3	7.8	.07	1.3	.30	1.2	.87
6	1.2	1.7	2.1	.98	200	.06	7.5	.16	1.3	.62	1.1	.66
7	1.4	2.7	1.6	1.1	21	.01	2.2	.04	1.2	.69	1.0	.47
8	1.4	2.2	1.6	.99	3.5	0	.03	.09	1.5	.74	1.2	.65
9	1.8	1.6	3.2	.96	1.7	.01	.08	.05	1.5	1.1	1.2	.92
10	2.0	1.3	2.8	.41	1.4	14	.14	.02	1.3	1.8	1.3	1.0
11	2.2	1.1	2.4	.12	1.1	4.5	.04	.02	1.5	2.3	1.1	.83
12	2.1	1.6	2.0	.22	1.2	.35	.07	.01	.84	2.0	1.4	.62
13	1.7	1.9	1.6	3.1	.79	.02	.03	.03	.19	1.7	1.4	.70
14	.80	2.2	1.1	12	.56	0	.09	.05	.63	1.5	1.2	1.1
15	2.2	3.4	1.6	.96	.71	0	.07	.06	.80	1.4	1.7	.85
16	2.3	1.8	2.1	.36	.67	0	.06	.06	.59	1.3	.75	.64
17	2.9	1.1	1.3	.48	.29	0	.07	.07	.97	1.5	.79	.49
18	2.1	1.6	1.5	7.6	13	0	.05	.04	1.0	1.5	.93	.34
19	1.9	2.4	2.1	15	23	.03	0	.05	1.4	1.5	1.2	.31
20	1.5	2.5	2.6	64	4.4	.05	0	.08	2.4	1.4	1.1	.38
21	1.3	1.8	2.0	113	1.3	41	0	.19	2.3	1.7	1.1	.36
22	1.9	1.9	2.1	23	208	19	.04	.15	1.8	1.6	1.3	.58
23	1.3	1.7	2.6	11	959	.08	.11	.22	1.8	1.6	1.3	.44
24	1.8	1.3	1.8	215	2,170	0	.24	.23	1.7	2.0	1.3	.56
25	2.1	1.6	22	1,470	1,540	.13	.14	.19	1.8	1.3	1.4	.41
26	2.1	1.9	8.2	166	202	.21	.15	.29	2.9	.82	1.1	.45
27	1.3	1.7	1.4	38	35	0	.09	.36	2.7	.34	1.5	.25
28	1.9	1.5	1.0	20	33	0	.09	.32	2.4	.08	1.2	.18
29	2.6	1.5	.90	6.0	-----	0	.03	.29	2.4	.11	.78	.20
30	4.0	1.4	1.7	5.0	-----	0	.04	.48	1.7	.41	.93	.22
31	3.3	-----	1.2	4.0	-----	0	-----	.58	-----	.45	1.5	-----
TOTAL	56.88	53.9	83.57	2,184.34	5,434.32	111.65	22.99	4.29	44.23	35.27	34.75	18.88
MEAN	1.83	1.80	2.70	70.5	194	3.60	.77	.14	1.47	1.14	1.12	.63
MAX	4.0	3.4	22	1,470	2,170	41	7.8	.58	2.9	2.3	1.7	1.5
MIN	.46	1.1	.90	.12	.29	0	0	.01	.19	.08	.57	.18
AC-FT	113	107	166	4,330	10,780	221	46	8.5	88	70	69	37
CAL YR 1968	TOTAL	607.51	MEAN	1.66	MAX	103	MIN	0	AC-FT	1,200		
WTR YR 1969	TOTAL	8,085.07	MEAN	22.2	MAX	2,170	MIN	0	AC-FT	16,040		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-25	1615	3.22	398	2-24	0145	11.46	6,700
1-21	0815	4.12	746	3-21	1545	2.30	126
1-25	1245	9.20	4,650	4- 5	1915	2.20	105
2- 6	1130	2.65	250				

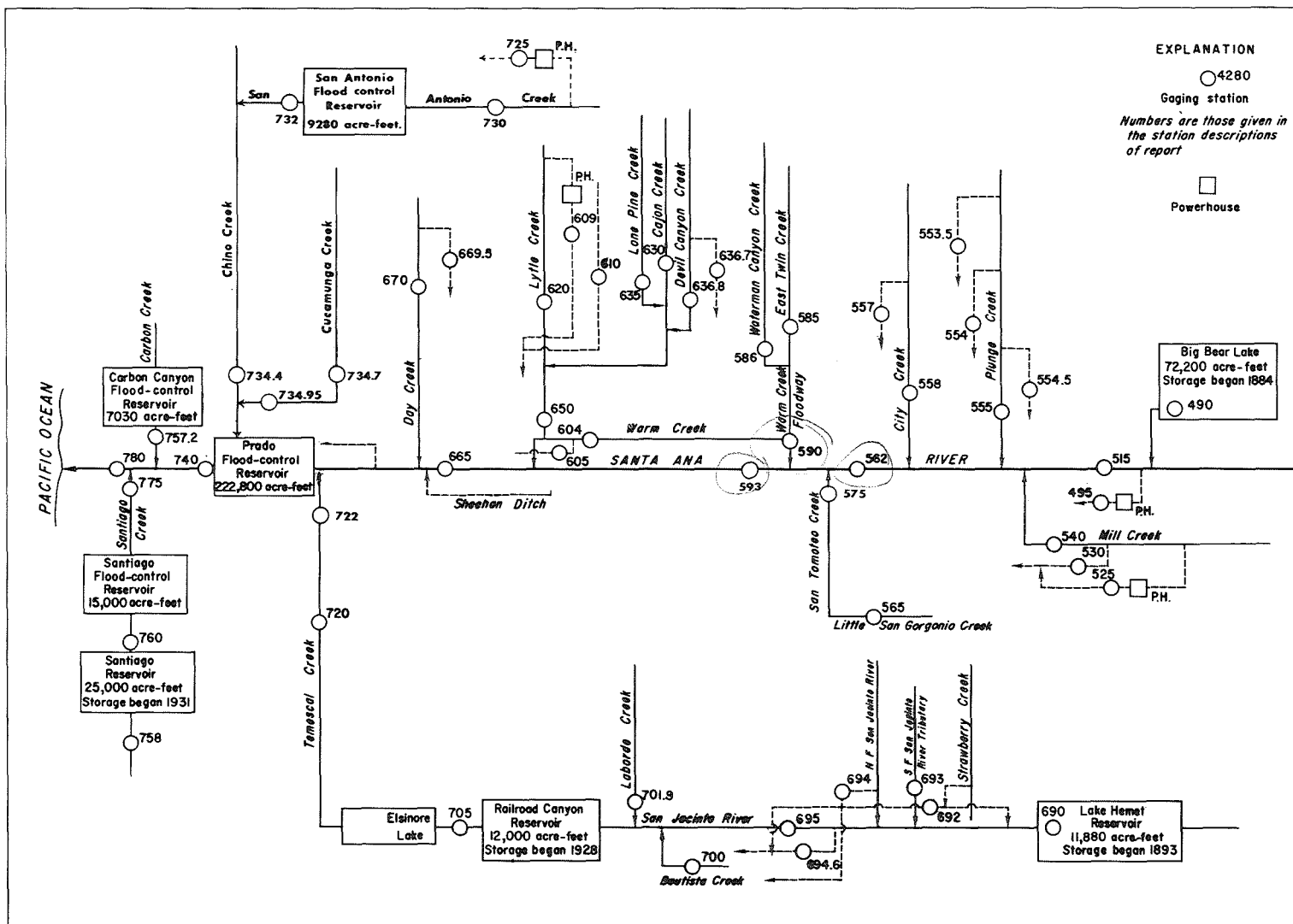


Figure 3.-- Schematic diagram showing diversions and storage in Santa Ana River basin.

11-0490. BIG BEAR LAKE NEAR BIG BEAR LAKE, CALIF.

LOCATION (revised).--Lat 34°14'33", long 116°58'33", in SW $\frac{1}{4}$ sec.22, T.2 N., R.1 W., San Bernardino County, at Big Bear Lake Dam on Bear Creek, 4 miles west of town of Big Bear Lake, and 7.5 miles upstream from mouth.

DRAINAGE AREA.--71.5 sq mi.

PERIOD OF RECORD.--October 1950 to current year in reports of Geological Survey. February 1884 to September 1950 in files of Bear Valley Mutual Water Co.

GAGE.--Non-recording gage. Datum of gage is 6,670.9 ft above mean sea level (levels by Bear Valley Mutual Water Co.). Prior to 1912, at old dam 200 ft upstream at same datum (spillway at gage height, 52.4 ft).

EXTREMES.--Current year: Maximum contents observed, 72,200 acre-ft Apr. 30, May 31; minimum contents, 39,430 acre-ft Nov. 27.

Period of record: Maximum contents unknown, lake spilled in 1916, 1917, 1922, 1923, 1938, 1939, 1969; lake dry October, November 1898, August to November 1899, October, November 1904.

REMARKS.--Lake is formed by multiple-arch concrete dam, completed in 1912, replacing existing lower dam built in 1884; storage began in spring of 1884. Capacity, 72,200 acre-ft at elevation 6,743.2 ft (top of dam). Capacity table based on survey made in 1883. No dead storage. Water used for irrigation only. See schematic diagram of Santa Ana River basin.

COOPERATION.--Record of contents furnished by Bear Valley Mutual Water Co.

MONTH-END CONTENTS, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	40,500	-
Oct. 31.....	39,600	-900
Nov. 30.....	39,600	0
Dec. 31.....	39,800	+200
CAL YR 1968.....	-	-2,693
Jan. 31.....	60,000	+20,200
Feb. 28.....	63,000	+3,000
Mar. 31.....	66,100	+3,100
Apr. 30.....	72,200	+6,100
May 31.....	72,200	0
June 30.....	71,900	-300
July 31.....	71,700	-200
Aug. 31.....	69,100	-2,600
Sept. 30.....	65,100	-4,000
WTR YR 1968-69.....	-	+ 24,600

SANTA ANA RIVER BASIN

11-0515. SANTA ANA RIVER NEAR MENTONE, CALIF.

LOCATION (revised).--Lat 34°06'30", long 117°05'59", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.1 S., R.2 W., San Bernardino County, on right bank at diversion near mouth of canyon, 1.6 miles upstream from Mill Creek, and 3.2 miles north-east of Mentone. Prior to May 28, 1969, at site 0.2 mile upstream.

DRAINAGE AREA.--209 sq mi (including area tributary to Baldwin Lake at head of Bear Valley).

PERIOD OF RECORD.--July 1896 to current year. Prior to October 1914, observed records not equivalent owing to Greenspot pipeline diversion between sites and exclusion of discharge from Warm Springs Canyon. Monthly discharge only for January 1910, January, February 1916, published in WSP 1315-B.

GAGE.--Water-stage recorder on river; graphic water-stage recorder on powerhouse diversion. Altitude of gage is 1,950 ft (from topographic map). Prior to Sept. 2, 1917, nonrecording gages at several sites within 1.5 miles upstream at various datums. Sept. 3, 1917, to May 27, 1969, water-stage recorder at site 0.2 mile upstream at different datum.

AVERAGE DISCHARGE (river only).--55 years (1914-69), 33.4 cfs (24,180 acre-ft per year); median of yearly mean discharges, 9.4 cfs (6,800 acre-ft per year).

(combined).--72 years, 96.1 cfs (69,570 acre-ft per year); median of yearly mean discharges, 68 cfs (49,200 acre-ft per year).

EXTREMES (River only).--Current year: Maximum discharge, 15,300 cfs Jan. 25 (gage height, 14.68 ft, site and datum then in use), from rating curve extended above 810 cfs on basis of slope-area measurement of maximum flow; no flow for many days.

Period of record: Maximum discharge, 52,300 cfs Mar. 2, 1938 (gage height, 14.3 ft, site and datum then in use), on basis of slope-area measurement of maximum flow; no flow at times in some years.

(Combined).--Current year: Maximum discharge, 15,300 cfs Jan. 25; minimum daily, 21 cfs Dec. 21.

Period of Record: Maximum discharge, 52,300 cfs Mar. 2, 1938; minimum daily, 3 cfs Nov. 21, 22, 1909.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (see sta 11-0490). For records of combined discharge of Santa Ana River and Southern California Edison Co.'s canal below powerplant No. 2, which diverts above station, see following page. Bear Valley Mutual Water Company pumped 325 acre-ft into canal below canal gage. Prior to Oct. 1, 1952, pumped water entered canal above gage. See schematic diagram for Santa Ana River basin.

COOPERATION.--Six discharge measurements on Southern California Edison Co.'s canal below powerplant No. 2 furnished by that agency in connection with a Federal Power Commission project.

DISCHARGE. IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.20	0	0	300	1,750	550	386	346	192	152	82
2	0	.10	0	0	270	1,000	500	420	364	192	150	104
3	0	.10	0	0	250	600	470	490	337	192	147	155
4	.10	.10	0	0	450	520	440	600	302	192	144	155
5	.10	.10	0	0	600	480	410	960	302	192	141	155
6	0	.20	0	0	620	440	390	880	298	192	144	168
7	0	.10	0	0	620	420	440	774	290	192	141	170
8	0	0	0	0	540	400	500	640	286	186	165	155
9	0	0	0	1.0	450	380	390	560	282	180	180	150
10	0	0	0	0	360	365	335	500	274	173	158	147
11	0	0	0	0	340	350	325	450	274	170	150	147
12	0	0	0	0	320	340	315	400	270	167	147	144
13	0	0	0	0	310	330	310	370	258	167	138	147
14	0	0	0	91	400	325	400	340	254	164	132	147
15	0	.10	0	46	520	320	600	320	272	164	129	147
16	0	.20	0	.8	500	320	550	305	364	164	120	136
17	0	0	0	.1	470	325	520	290	364	167	116	138
18	0	0	0	.1	440	330	490	285	337	180	112	138
19	0	0	0	1.0	410	335	460	275	328	198	108	138
20	0	0	0	409	390	340	440	270	309	257	106	138
21	0	0	0	1,250	370	335	420	265	278	209	104	138
22	0	0	0	1,010	350	330	400	262	254	167	102	135
23	0	0	0	314	330	325	380	262	240	161	100	129
24	0	0	0	1,800	320	320	360	262	230	150	100	129
25	0	0	0	5,720	4,500	320	335	265	220	147	98	110
26	0	0	.60	2,320	4,200	315	320	280	210	138	98	110
27	0	0	.50	2,760	3,900	310	315	300	202	161	96	108
28	0	0	.20	1,180	2,500	305	310	318	198	155	94	106
29	0	0	.10	665	-----	300	340	330	194	150	92	96
30	0	0	.10	451	-----	300	370	340	188	144	90	96
31	.10	-----	0	352	-----	300	-----	350	-----	144	86	-----
TOTAL	0.30	1.20	1.50	18,371.0	25,030	13,130	12,385	12,749	8,325	5,407	3,840	4,018
MEAN	.010	.040	.048	593	894	424	413	411	278	174	124	134
MAX	.10	.20	.60	5,720	4,500	1,750	600	960	364	257	180	170
MIN	0	0	0	0	250	300	310	262	188	138	86	82
AC-FT	.6	2.4	3.0	36,440	49,650	26,040	24,570	25,290	16,510	10,720	7,620	7,970

CAL YR 1968	TOTAL	1,464.90	MEAN	4.00	MAX	139	MIN	0	AC-FT	2,910
WTR YR 1969	TOTAL	103,258.00	MEAN	283	MAX	5,720	MIN	0	AC-FT	204,800

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	1030	9.87	158	2-6	unknown	unknown	unknown
1-21	1130	11.62	2,410	2-25	unknown	12.3	10,000
1-25	1200	14.68	15,300	5-5	unknown	unknown	unknown

NOTE.--No gage-height record Jan. 26 to May 31.

11-0515. SANTA ANA RIVER NEAR MENTONE, CALIF.--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SANTA ANA RIVER AND SOUTHERN CALIFORNIA EDISON CO.'S CANAL
NEAR MENTONE, CALIF., WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	30	28	27	300	1,750	550	386	346	192	152	82
2	32	29	28	27	270	1,000	500	420	364	192	150	104
3	34	28	28	28	250	600	470	490	337	192	147	155
4	33	28	28	28	450	520	440	600	302	192	144	155
5	32	28	27	28	600	480	410	960	302	192	141	155
6	32	27	27	28	620	440	390	880	298	192	144	168
7	32	27	27	28	620	420	440	774	290	192	141	170
8	29	27	27	27	540	400	500	640	286	186	165	155
9	28	27	27	21	450	380	390	560	280	180	180	152
10	28	26	27	28	360	365	335	500	274	173	158	151
11	28	26	28	28	340	350	325	450	274	170	150	151
12	27	27	28	28	320	340	315	400	270	167	147	148
13	27	28	28	35	310	330	310	370	258	167	138	151
14	28	28	27	104	400	325	400	340	254	164	132	151
15	28	35	26	60	520	320	600	320	272	164	129	151
16	28	32	28	44	500	320	550	305	364	164	120	140
17	28	30	26	38	470	325	520	290	364	167	116	142
18	27	29	25	37	440	330	490	285	337	180	112	142
19	26	28	26	48	410	335	460	275	328	198	108	142
20	26	28	28	438	390	340	440	270	309	257	106	142
21	26	28	21	1,250	370	335	420	265	278	209	104	142
22	26	28	23	1,010	350	330	400	262	254	167	102	139
23	26	28	26	314	330	325	380	262	240	161	100	133
24	26	28	27	1,800	320	320	360	262	230	150	100	133
25	25	28	31	4,530	4,500	320	335	265	220	147	98	114
26	26	27	36	2,320	4,200	315	320	280	210	138	98	114
27	30	28	28	2,760	3,900	310	315	300	202	161	96	111
28	33	28	30	1,180	2,500	305	310	318	198	155	94	109
29	34	28	29	665	-----	300	340	330	194	150	92	99
30	37	28	28	451	-----	300	370	340	188	144	90	99
31	30	-----	27	352	-----	300	-----	350	-----	144	86	-----
TOTAL	904	847	850	17,762	25,030	13,130	12,385	12,749	8,323	5,407	3,840	4,100
MEAN	29.2	28.2	27.4	573	894	424	413	411	277	174	124	137
MAX	37	35	36	4,530	4,500	1,750	600	960	364	257	180	170
MIN	25	26	21	21	250	300	310	262	188	138	86	82
AC-FT	1,790	1,680	1,690	35,230	49,650	26,040	24,570	25,290	16,510	10,720	7,620	8,130
CAL YR 1968	TOTAL 14,989		MEAN 41.0		MAX 166	MIN 21		AC-FT 29,730				
WTR YR 1969	TOTAL 105,327		MEAN 289		MAX 4,530	MIN 21		AC-FT 208,900				

PEAK DISCHARGE (BASE, 150 CFS).--(Same as those listed on previous page).

SANTA ANA RIVER BASIN

11-0540. MILL CREEK NEAR YUCAIPA, CALIF.

LOCATION.--Lat 34°05'27", long 117°02'12", in NW¼NE¼NE¼ sec.13, T.1 S., R.2 W., San Bernardino County, on left bank 50 ft downstream from bridge on State Highway 190-D, 3.9 miles north of Yucaipa, and 5.3 miles upstream from mouth.

DRAINAGE AREA.--38.1 sq mi.

PERIOD OF RECORD.--January 1919 to September 1938, October 1947 to current year. Monthly figures only for April and May 1923, published in WSP 1315-B. Prior to October 1954, published "near Craftonville."

GAGE.--Water-stage recorder on creek; water-stage recorder and sharp-crested weir on power canal No. 1; water-stage recorder and Parshall flume on power canals Nos. 2 and 3. Datum of gage is 2,916.36 ft above mean sea level (Southern California Edison Co. bench mark). See WSP 1735 for history of gage changes prior to Mar. 2, 1938.

AVERAGE DISCHARGE (Creek only).--41 years, 14.4 cfs (10,420 acre-ft per year); median of yearly mean discharges, 1.1 cfs (800 acre-ft per year).

(Combined).--41 years, 35.2 cfs (25,500 acre-ft per year); median of yearly mean discharges, 22 cfs (15,900 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 35,400 cfs Jan. 25 (gage height, 16.8 ft, from floodmark); minimum daily, 0.02 cfs on many days.

Period of record: Maximum discharge, 35,400 cfs Jan. 25, 1969, from rating curve extended above 1,100 cfs on basis of 2 field estimates at gage height 14.5 ft and slope-area measurement of maximum flow; no flow at times in some years.

(Combined).--Current year: Maximum discharge, 35,400 cfs Jan. 25; minimum daily, 14 cfs Jan. 18.

Period of record: Maximum discharge, 35,400 cfs Jan. 25, 1969; minimum daily, 2.7 cfs Feb. 23, 1949.

REMARKS.--Records poor. No regulation above station. Mill Creek power canals Nos. 1, 2, and 3 divert from points 100 ft, 3 miles, and 6 miles above station, respectively. Combined flow of Mill Creek and Mill Creek power canals Nos. 1, 2, and 3 is given on following page. See schematic diagram of Santa Ana River basin.

COOPERATION.--Water-stage recorder graph and eleven discharge measurements for Mill Creek power canals Nos. 2 and 3 furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	.04	.04	0	162	400	246	392	435	139	54	13
2	3.7	.04	.04	.5	130	380	246	400	450	133	51	12
3	3.9	.06	.02	0	127	450	258	400	430	132	49	12
4	1.8	.06	.02	0	125	410	240	408	410	131	47	11
5	1.6	.06	.02	0	138	380	249	408	390	127	46	9.0
6	1.7	.04	.02	0	151	360	282	408	370	125	45	9.0
7	1.7	.04	.02	0	128	350	243	412	368	123	45	7.9
8	1.7	.04	.02	0	127	340	230	412	356	122	45	7.0
9	3.4	.04	.04	0	125	330	235	416	346	123	44	6.7
10	3.5	.04	.04	0	125	320	240	420	320	116	40	7.0
11	.82	.04	.04	0	123	310	243	424	300	113	38	5.7
12	.37	.04	.02	0	122	300	240	428	270	110	37	5.7
13	.31	.04	.02	.2	120	294	240	432	249	110	36	6.0
14	.50	.04	.02	53	120	288	238	435	246	110	36	5.2
15	.37	.04	.02	22	122	282	246	438	232	110	36	5.2
16	.20	.02	.02	16	118	276	246	442	222	110	32	5.2
17	.37	.02	.02	14	118	270	258	450	220	106	32	4.7
18	.57	.02	.02	9.6	123	268	267	454	215	101	32	4.5
19	.25	.02	.02	35	123	264	276	460	205	95	29	4.7
20	.16	.02	.02	63	122	261	303	468	197	91	22	4.5
21	.12	.02	.02	291	122	255	306	470	194	88	21	4.5
22	.09	.02	.02	94	122	249	306	473	188	83	19	4.5
23	.06	.02	.02	38	134	240	321	476	179	77	18	4.1
24	.04	.02	.02	321	261	235	330	480	172	74	17	3.7
25	.02	.04	.06	5,310	1,990	230	330	456	164	71	16	3.7
26	.37	.04	.31	4,290	1,460	225	345	440	164	71	16	3.7
27	1.0	.04	.02	2,140	1,060	220	351	425	158	71	16	4.5
28	.37	.04	.02	280	500	220	357	400	150	64	16	3.3
29	.20	.04	.02	232	-----	218	368	395	148	59	16	2.8
30	.06	.04	.02	172	-----	232	380	400	140	59	14	3.3
31	.02	-----	.02	164	-----	243	-----	415	-----	56	13	-----
TOTAL	31.27	1.08	1.05	13,545.3	8,198	9,100	8,420	13,337	7,888	3,100	978	184.1
MEAN	1.01	.036	.034	437	293	294	281	430	263	100	31.5	6.14
MAX	3.9	.06	.31	5,310	1,990	450	380	480	450	139	54	13
MIN	.02	.02	.02	0	118	218	230	392	140	56	13	2.8
AC-FT	62	2.1	2.1	26,870	16,260	18,050	16,700	26,450	15,650	6,150	1,940	365

CAL YR 1968 TOTAL 410.00 MEAN 1.12 MAX 38 MIN 0 AC-FT 813
WTR YR 1969 TOTAL 64,783.80 MEAN 177 MAX 5,310 MIN 0 AC-FT 128,500

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	0745	7.83	102	2-25	0630	13.5	7,500
1-21	1000	9.98	848	5-24	2000	8.03	540
1-25	1630	a16.8	35,400				

a From floodmark.

11-0540. MILL CREEK NEAR YUCAIPA, CALIF.--Continued

Combined discharge, in cubic feet per second, of Mill Creek and Mill Creek power canals Nos. 1, 2, and 3 near Yucaipa, Calif., water year October 1968 to September 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	22	21	17	162	400	254	415	458	162	90	59
2	24	22	21	15	130	380	254	423	473	156	90	59
3	24	22	21	17	127	450	266	423	453	155	90	57
4	25	22	20	18	125	410	250	431	433	154	89	56
5	26	22	20	18	138	380	261	431	413	150	89	54
6	26	22	20	17	151	360	296	431	393	148	88	54
7	26	22	20	17	128	350	262	434	391	146	82	53
8	25	21	20	17	127	340	253	435	379	145	81	52
9	22	21	20	17	125	330	258	439	369	146	82	51
10	22	21	20	16	125	320	262	443	343	139	82	51
11	23	21	20	16	123	310	266	447	322	136	84	50
12	23	21	19	16	122	300	263	451	292	133	83	51
13	23	21	19	20	120	294	263	454	259	133	82	51
14	24	21	19	53	120	288	261	456	246	133	78	49
15	22	23	19	22	122	290	268	461	232	135	74	49
16	22	23	19	16	118	284	268	464	222	142	74	49
17	22	23	19	16	118	278	281	472	234	144	75	49
18	23	22	19	14	123	276	290	476	237	139	74	48
19	22	22	19	39	123	272	299	482	227	134	69	49
20	22	22	19	66	122	269	326	490	219	130	69	48
21	22	22	19	294	122	263	329	490	216	126	68	48
22	22	21	19	96	122	257	329	493	210	121	66	46
23	22	21	19	40	134	248	344	499	201	115	65	45
24	22	21	19	326	261	243	353	503	195	111	65	46
25	22	21	19	5,310	1,990	238	353	480	187	107	63	46
26	21	21	19	4,290	1,460	233	368	462	187	107	63	45
27	22	21	17	2,140	1,060	228	374	448	181	107	63	44
28	21	21	17	280	500	228	380	422	173	102	63	44
29	21	21	17	232	-----	226	391	418	171	97	63	44
30	23	21	17	172	-----	240	403	423	163	96	61	44
31	22	-----	17	164	-----	251	-----	438	-----	92	60	-----
TOTAL	707	647	593	13,791	8,198	9,236	9,025	14,034	8,479	4,041	2,325	1,491
MEAN	22.8	21.6	19.1	445	293	298	301	453	283	130	75.0	49.7
MAX	26	23	21	5,310	1,990	450	403	503	473	162	90	59
MIN	21	21	17	14	118	226	250	415	163	92	60	44
AC-FT	1,400	1,280	1,180	27,350	16,260	18,320	17,900	27,840	16,820	8,020	4,610	2,960
CAL YR 1968	TOTAL	10,057	MEAN	27.5	MAX	65	MIN	17	AC-FT	19,950		
WTR YR 1969	TOTAL	72,567	MEAN	199	MAX	5,310	MIN	14	AC-FT	143,900		

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	0745		102	2-25	0630		7,500
1-21	1000		848	5-24	2300		563
1-25	1630		35,400				

11-0555. PLUNGE CREEK NEAR EAST HIGHLANDS, CALIF.

LOCATION.--Lat 34°07'06", long 117°08'27", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.1 S., R.3 W., San Bernardino County, on left bank at mouth of canyon at crossing of North Fork ditch siphon, 1.8 miles northeast of East Highlands.

DRAINAGE AREA.--16.9 sq mi.

PERIOD OF RECORD.--January 1919 to current year; combined records of creek and diversions, March 1951 to current year.

GAGE.--Water-stage recorder and since December 1938 broad-crested weir on creek; water-stage recorder and weir on upper diversion; water-stage recorder and concrete-lined canal on middle diversion; water-stage recorder and sharp-crested weir on lower diversion. Altitude of gage is 1,590 ft (from topographic map).

AVERAGE DISCHARGE (Creek only).--50 years, 6.36 cfs (4,600 acre-ft per year); median of yearly mean discharges, 3.7 cfs (2,700 acre-ft per year).
(Combined).--18 years, 8.31 cfs (6,020 acre-ft per year); median of yearly mean discharges, 4.0 cfs (2,900 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 4,610 cfs Jan. 25 (gage height, 5.96 ft), from rating curve extended above 220 cfs on basis of slope-area measurement of peak flow; no flow Oct. 17 to Nov. 29, Dec. 11-24.

Period of record: Maximum discharge, 5,340 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow for part of each year.

(Combined).--Current year: Maximum discharge, 4,610 cfs Jan. 25; minimum daily, 0.72 cfs Oct. 27.

Period of record: Maximum discharge, 4,770 cfs Dec. 6, 1966; no flow Nov. 12, 1964, Sept. 29, 1965.

REMARKS.--Records poor. No regulation above station. Diversions for irrigation are made at sites 0.5, 1.0, and 2.5 miles above station. Water has been diverted above station for irrigation during entire period of record. Combined discharge of Plunge Creek and upper, middle, and lower diversions is given on following page. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.06	.32	55	300	65	20	9.6	4.1	2.3	.50
2	0	0	.06	.18	40	250	65	20	9.6	3.6	1.8	.40
3	0	0	.06	.15	35	210	80	21	9.6	3.6	1.8	.24
4	0	0	.08	.15	30	180	65	21	9.2	3.6	1.7	.24
5	0	0	.08	.15	30	150	60	22	9.2	2.8	1.8	.24
6	0	0	.10	.12	180	140	56	22	8.7	3.6	1.7	.40
7	0	0	.10	.08	100	130	52	23	8.7	3.3	1.7	.50
8	.28	0	.10	.02	75	120	48	22	8.7	2.8	1.6	.50
9	.71	0	.08	0	65	110	45	21	8.7	2.8	1.5	.31
10	.48	0	.02	0	60	100	41	19	9.6	2.8	1.4	.24
11	.22	0	0	.46	55	95	40	18	10	2.5	1.3	.17
12	.18	0	0	.15	52	90	40	17	11	3.3	1.2	.17
13	.15	0	0	.31	50	84	39	16	11	3.0	1.1	.17
14	.12	0	0	32	50	80	39	15	8.7	3.0	1.1	.24
15	.10	0	0	9.0	130	75	38	14	8.2	3.0	1.0	.16
16	.04	0	0	5.2	90	72	38	14	8.7	3.0	1.0	.16
17	0	0	0	4.4	70	70	36	13	9.2	3.0	.90	.16
18	0	0	0	4.2	107	68	34	13	8.2	3.3	.80	.16
19	0	0	0	11	107	64	32	12	7.8	3.3	.70	.16
20	0	0	0	137	107	64	31	12	7.5	3.3	.60	.16
21	0	0	0	206	133	64	30	11	7.5	3.3	.50	.15
22	0	0	0	188	109	64	28	11	7.5	3.3	.40	.15
23	0	0	0	67	225	64	26	11	7.1	3.0	.40	.15
24	0	0	0	366	942	64	25	11	7.1	2.8	.40	.15
25	0	0	.02	1,840	1,720	64	24	10	7.5	2.8	.40	.15
26	0	0	3.1	510	706	63	23	10	7.1	2.5	.65	.14
27	0	0	2.4	257	543	64	22	10	6.4	2.5	.65	.14
28	0	0	1.9	152	400	64	22	10	5.7	2.5	.31	.14
29	0	0	1.9	108	-----	64	21	10	5.0	2.5	.50	.14
30	0	.05	1.9	82	-----	65	20	9.6	4.6	2.5	.31	.14
31	0	-----	1.3	66	-----	65	-----	10	-----	2.5	.50	-----
TOTAL	2.28	0.05	13.26	4,046.89	6,266	3,157	1,185	468.6	247.4	93.9	32.02	6.73
MEAN	.074	.002	.43	131	224	102	39.5	15.1	8.25	3.03	1.03	.22
MAX	.71	.05	3.1	1,840	1,720	300	80	23	11	4.1	2.3	.50
MIN	0	0	0	0	30	63	20	9.6	4.6	2.5	.31	.14
AC-FT	4.5	.10	26	8,030	12,430	6,260	2,350	929	491	186	64	13
CAL YR 1968 TOTAL	568.49		MEAN 1.55		MAX 73	MIN 0		AC-FT 1,130				
WTR YR 1969 TOTAL	15,519.13		MEAN 42.5		MAX 1,840	MIN 0		AC-FT 30,780				

PEAK DISCHARGE (BASE, 130 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1000	2.24	733	2-6	unknown	unknown	a500
1-25	1030	5.96	4,610	2-25	0900	4.60	3,400

NOTE.--No gage-height record Jan. 26 to Feb. 20, Feb. 29 to May 26.

a Estimated.

11-0555. PLUNGE CREEK NEAR EAST HIGHLANDS, CALIF.--Continued

Combined discharge, in cubic feet per second, of Plunge Creek and diversions
near East Highlands, Calif., water year October 1968 to September 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.83	.84	1.2	2.0	55	300	65	23	13	7.8	6.3	4.2
2	.84	.85	1.7	1.7	40	250	65	23	13	7.3	5.8	3.9
3	.88	.84	1.2	1.6	35	210	80	24	13	7.4	5.7	3.7
4	.87	.87	1.2	1.6	30	180	65	24	13	7.5	5.5	3.7
5	.83	.89	1.2	1.6	30	150	60	25	13	7.0	5.7	3.7
6	.80	.87	1.2	1.6	180	140	56	24	12	8.0	5.6	4.0
7	.83	.85	1.2	1.6	100	130	52	24	12	7.9	5.6	4.1
8	.94	.94	1.2	1.6	75	120	48	23	12	7.6	5.6	4.1
9	1.3	.81	1.1	1.6	65	110	45	21	12	7.6	5.5	3.8
10	1.2	.81	1.1	1.5	60	100	41	19	13	7.6	5.2	3.7
11	1.1	.80	1.1	1.9	55	95	40	18	14	7.2	5.1	3.7
12	1.0	.85	1.1	1.8	52	90	40	18	15	8.0	5.1	3.7
13	.97	.87	1.1	2.5	50	84	39	17	15	7.5	5.0	2.8
14	.96	.83	.88	33	50	80	39	17	12	7.2	4.8	3.3
15	.97	1.2	1.1	9.0	130	75	38	16	12	7.1	4.7	4.1
16	.90	1.6	1.5	5.2	90	72	38	16	12	7.0	4.7	4.2
17	.84	1.2	1.4	4.4	70	70	36	15	13	7.0	4.6	4.2
18	.81	1.1	1.4	4.2	107	68	34	15	12	7.2	4.5	4.0
19	.79	1.1	1.4	11	107	64	32	15	11	7.2	4.5	4.0
20	.79	1.0	1.5	137	107	64	31	15	11	7.3	4.3	4.1
21	.79	1.0	1.5	206	133	64	30	14	11	7.3	4.3	4.1
22	.76	1.0	1.4	188	109	64	30	14	11	7.1	4.1	4.1
23	.73	.98	1.4	67	225	64	29	14	11	6.8	4.1	3.8
24	.73	.99	1.4	366	942	64	28	14	11	6.6	4.1	3.6
25	.74	.94	1.9	1,840	1,720	64	27	13	11	6.5	4.1	3.6
26	.73	.90	5.9	510	706	63	26	13	11	6.4	4.2	3.5
27	.72	1.0	3.0	257	543	64	25	14	10	6.7	4.2	3.4
28	.73	1.1	2.3	152	400	64	25	14	9.4	6.6	4.1	3.4
29	.75	1.1	2.2	108	-----	64	24	14	8.6	6.5	4.3	3.3
30	.85	1.2	2.2	82	-----	65	23	13	8.3	6.6	4.1	3.3
31	.83	-----	2.3	66	-----	65	-----	14	-----	6.4	4.2	-----
TOTAL	26.81	29.23	49.78	4,068.4	6,266	3,157	1,211	543	355.3	221.9	149.6	113.1
MEAN	.86	.97	1.61	131	224	102	40.4	17.5	11.8	7.16	4.83	3.77
MAX	1.3	1.6	5.9	1,840	1,720	300	80	25	15	8.0	6.3	4.2
MIN	.72	.80	.88	1.5	30	63	23	13	8.3	6.4	4.1	2.8
AC-FT	53	58	99	8,070	12,430	6,260	2,400	1,080	705	440	297	224

CAL YR 1968 TOTAL 1,042.82 MEAN 2.85 MAX 74 MIN .70 AC-FT 2,070
WTR YR 1969 TOTAL 16,191.12 MEAN 44.4 MAX 1,840 MIN .72 AC-FT 32,110

PEAK DISCHARGE (BASE, 130 CFS).--(Same as those listed on previous page).

SANTA ANA RIVER BASIN

11-0558. CITY CREEK NEAR HIGHLAND, CALIF.

LOCATION.--Lat 34°08'38", long 117°11'16", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.27, T.1 N., R.3 W., San Bernardino County, on right bank 0.6 mile upstream from Highland Avenue, and 1.5 miles northeast of Highland.

DRAINAGE AREA.--19.6 sq mi.

PERIOD OF RECORD.--October 1919 to current year; combined records of creek and canal, June 1924 to current year.

GAGE.--Water-stage recorder on creek; water-stage recorder on canal. Altitude of gage is 1,580 ft (from topographic map). Prior to Mar. 1, 1939, at site 0.2 mile downstream at different datum.

AVERAGE DISCHARGE (Creek only).--50 years, 9.15 cfs (6,630 acre-ft per year); median of yearly mean discharges, 5.1 cfs (3,700 acre-ft per year).

(Combined).--45 years, 10.9 cfs (7,900 acre-ft per year); median of yearly mean discharges, 6.6 cfs (4,800 acre-ft per year)

EXTREMES (Creek only).--Current year: Maximum discharge, 7,000 cfs Feb. 25 (gage height, 9.39 ft), from rating curve extended as explained below; minimum daily, 0.06 cfs Oct. 1, 2, 6.

Period of record: Maximum discharge, 7,000 cfs Feb. 25, 1969, from rating curve extended above 580 cfs on basis of slope-area measurement at gage height 8.83 ft; no flow for several months in some years.

(Combined).--Current year: Maximum discharge, 7,000 cfs Feb. 25; minimum daily, 0.92 cfs Oct. 10.

Period of record: Maximum discharge, 7,000 cfs Feb. 25, 1969; no flow at times in some years.

REMARKS.--Records good. No regulation above station. City Creek Water Co.'s canal has diverted from point 0.5 mile above station for irrigation throughout period of record. See schematic diagram of Santa Ana River basin. Combined discharge of City Creek and canal is given on following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.17	.31	2.0	85	886	86	28	16	6.9	2.7	.78
2	.06	.17	.31	1.9	78	620	75	28	16	5.7	2.5	.81
3	.08	.17	.30	1.8	72	445	104	28	15	5.5	2.5	.83
4	.08	.17	.29	1.7	68	330	79	31	15	5.7	2.8	.84
5	.07	.17	.28	1.6	65	248	81	30	14	5.7	5.4	.90
6	.06	.17	.27	1.6	160	238	82	36	14	7.0	3.1	.83
7	.08	.17	.26	1.6	90	217	69	32	13	6.9	3.1	.91
8	.08	.17	.26	1.6	80	197	63	29	12	6.2	3.0	1.4
9	.08	.17	.26	1.6	74	182	59	27	12	6.5	3.8	1.0
10	.07	.17	.25	1.7	69	189	56	26	15	4.7	2.8	.70
11	.08	.17	.25	1.7	66	166	52	26	13	4.7	2.4	.58
12	.10	.18	.26	1.7	60	155	51	25	11	5.3	2.3	.47
13	.10	.19	.26	2.9	58	148	50	25	11	4.8	2.1	.38
14	.10	.19	.26	22	54	138	49	24	11	4.5	1.9	.48
15	.10	1.3	.26	7.6	52	136	47	24	10	5.2	1.7	1.8
16	.10	1.5	.32	5.4	54	134	46	23	11	4.6	1.8	2.2
17	.10	1.1	.24	4.5	58	134	45	22	11	4.6	1.8	2.2
18	.10	1.1	.23	4.3	66	132	45	21	12	4.5	1.9	2.0
19	.10	.98	.25	7.9	76	123	42	21	11	4.0	1.9	1.9
20	.10	.96	1.7	120	82	104	41	21	11	5.1	1.7	2.0
21	.13	.75	2.2	308	71	118	39	20	12	5.3	1.7	2.3
22	.13	.59	.52	302	64	105	36	20	11	3.9	1.4	2.2
23	.13	.47	.52	45	190	100	35	20	11	3.7	1.3	1.8
24	.13	.43	.54	269	1,020	97	31	20	11	3.4	1.1	1.5
25	.14	.40	.63	2,070	3,360	95	29	19	11	3.2	1.1	1.4
26	.14	.38	5.9	1,460	2,900	94	28	19	11	3.0	1.0	1.3
27	.14	.36	4.1	642	2,220	93	28	19	11	4.3	.87	1.2
28	.14	.35	3.4	268	1,340	93	29	18	10	4.0	.85	1.1
29	.14	.33	3.2	162	-----	91	29	18	9.0	3.5	.84	1.0
30	.17	.32	3.1	120	-----	91	28	17	7.3	3.1	.84	.99
31	.17	-----	2.5	98	-----	90	-----	17	-----	2.8	.85	-----
TOTAL	3.26	13.75	33.43	5,939.1	12,632	5,989	1,534	734	358.3	148.3	70.05	37.80
MEAN	.11	.46	1.08	192	451	193	51.1	23.7	11.9	4.78	2.26	1.26
MAX	.17	1.6	5.9	2,070	3,360	886	104	36	16	7.0	9.8	2.3
MIN	.06	.17	.23	1.6	52	90	28	17	7.3	2.8	.84	.38
AC-FT	6.5	27	66	11,780	25,060	11,880	3,040	1,460	711	294	139	75

CAL YR 1968 TOTAL 874.75 MEAN 2.39 MAX 44 MIN .05 AC-FT 1,740

WTR YR 1969 TOTAL 27,492.99 MEAN 75.3 MAX 3,360 MIN .06 AC-FT 54,530

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0800	4.43	1,290	2-25	1400	9.39	7,000
1-25	1600	8.83	3,240	4- 3	0245	3.35	175
2- 6	unknown	unknown	a350				

NOTE.--No gage-height record Jan. 28 to Feb. 3, Feb. 27 to Mar. 5.

a Estimated.

SANTA ANA RIVER BASIN

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11-0558. CITY CREEK NEAR HIGHLAND, CALIF.--Continued

Combined discharge, in cubic feet per second, of City Creek and City Creek Water Co.'s Canal
near Highland, Calif., water year October 1968 to September 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.1	2.8	3.2	85	886	86	31	17	14	8.6	5.0
2	1.7	2.1	2.9	3.2	78	620	75	31	18	13	8.2	4.9
3	1.9	2.0	2.9	3.1	72	445	104	31	16	13	7.9	4.7
4	1.9	2.2	2.9	3.2	68	330	79	34	16	13	13	4.7
5	1.6	2.3	2.9	3.2	65	248	81	33	15	14	10	4.8
6	1.4	2.2	2.9	3.2	160	238	82	37	15	15	8.5	4.8
7	1.6	2.1	2.9	3.2	90	217	69	32	14	15	8.5	4.9
8	1.7	2.0	2.7	3.3	80	197	63	29	14	14	8.5	5.2
9	1.5	1.9	2.7	3.4	74	182	59	27	14	15	9.5	4.6
10	.92	1.8	2.4	3.5	69	189	56	26	16	13	8.2	4.1
11	1.2	1.8	2.4	3.4	66	166	52	26	18	13	7.7	4.0
12	1.4	1.9	2.4	3.5	60	155	51	25	17	14	7.6	4.1
13	1.4	2.1	2.4	4.0	58	148	50	25	17	13	7.4	4.1
14	1.6	2.3	2.6	22	54	138	49	24	17	12	7.2	4.4
15	1.7	3.3	2.8	7.6	52	136	47	24	16	13	6.9	6.3
16	1.3	3.0	3.3	5.4	54	134	46	24	18	12	6.9	7.1
17	1.2	2.8	3.1	4.5	58	134	45	24	18	12	6.9	7.1
18	1.2	2.5	3.0	4.3	66	132	45	23	18	12	6.9	6.8
19	1.2	2.2	3.2	7.9	76	123	42	23	17	11	6.8	6.8
20	1.3	2.1	2.9	120	82	104	41	23	17	12	6.4	6.9
21	1.3	2.0	3.0	308	71	118	41	22	18	12	6.2	7.3
22	1.2	2.1	3.4	302	64	105	40	22	17	11	5.7	7.2
23	1.2	2.1	3.5	45	190	100	39	22	17	10	5.5	6.7
24	1.1	2.2	3.4	269	1,020	97	34	22	17	10	5.3	6.4
25	1.1	2.4	4.3	2,070	3,360	95	32	21	17	9.7	5.4	6.3
26	1.1	2.6	9.7	1,460	2,900	94	31	21	17	9.4	5.3	6.1
27	1.1	2.6	4.1	642	2,220	93	31	20	17	11	5.3	6.1
28	1.1	2.6	3.4	268	1,340	93	32	20	16	10	5.2	5.9
29	1.3	2.6	3.2	162	-----	91	32	19	15	9.7	5.4	5.7
30	1.8	2.7	3.1	120	-----	91	31	18	13	9.2	5.3	5.7
31	2.1	-----	3.1	98	-----	90	-----	18	-----	8.8	5.2	-----
TOTAL	43.62	68.6	100.3	5,959.1	12,632	5,989	1,565	777	492	373.8	221.4	168.7
MEAN	1.41	2.29	3.24	192	451	193	52.2	25.1	16.4	12.1	7.14	5.62
MAX	2.1	3.3	9.7	2,070	3,360	886	104	37	18	15	13	7.3
MIN	.92	1.8	2.4	3.1	52	90	31	18	13	8.8	5.2	4.0
AC-FT	87	136	199	11,820	25,060	11,880	3,100	1,540	976	741	439	335
CAL YR 1968	TOTAL	1,567.60	MEAN	4.28	MAX	52	MIN	.61	AC-FT	3,110		
WTR YR 1969	TOTAL	28,390.52	MEAN	77.8	MAX	3,360	MIN	.92	AC-FT	56,310		

PEAK DISCHARGE (BASE, 150 CFS).--(Same as those listed on previous page).

SANTA ANA RIVER BASIN

11-0562. SANTA ANA RIVER AT WATERMAN AVENUE, AT SAN BERNARDINO, CALIF.

LOCATION.--Lat 34°04'14", long 117°16'41", in San Bernardino Grant, San Bernardino County, on downstream end of fifth pier from left bank of south bound traffic bridge on Waterman Avenue, 0.1 mile upstream from San Timoteo Creek, and 2.7 miles southeast of San Bernardino.

DRAINAGE AREA.--354 sq mi.

PERIOD OF RECORD.--October 1954 to December 1961, January 1964 to current year. Prior to January 1964, published as "near San Bernardino." Records, except Extremes, for October 1928 to September 1937 at site 1.6 miles upstream not equivalent owing to discharge of Mission ditch.

GAGE.--Water-stage recorder. Altitude of gage is 995 ft (from topographic map). Prior to Jan. 21, 1964, at different datum.

AVERAGE DISCHARGE.--12 years (1954-61, 1964-69), 30.1 cfs (21,810 acre-ft per year); median of yearly mean discharges, 2.4 cfs (1,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 20,000 cfs (estimated) Jan. 25 (gage height, 8.5 ft); no flow for many days.

Period of record: Maximum discharge, 20,000 cfs (estimated) Jan. 25, 1969 (gage height, 8.5 ft); no flow for much of each year.

Maximum discharge known, 75,700 cfs Mar. 2, 1938, from combined discharges of Santa Ana River near Men-tone, Mill Creek near Yucaipa, and Plunge Creek near East Highlands.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (see sta 11-0490). Natural flow of stream affected by ground-water withdrawals and diversions for domestic use and irrigation above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.4	30	1,400	480	450	300	182	96	30
2	0	0	0	.6	25	1,200	680	540	300	178	91	29
3	0	.20	0	.2	20	1,000	650	580	305	170	87	29
4	0	0	0	0	18	600	630	650	305	160	83	28
5	0	0	0	0	10	400	575	730	300	154	80	28
6	0	0	0	0	400	280	540	710	295	148	75	115
7	0	0	0	0	150	260	530	710	285	148	72	175
8	0	0	0	0	50	250	490	685	280	145	69	155
9	0	0	0	0	40	240	460	640	275	145	65	125
10	0	0	0	0	30	750	430	590	270	145	62	115
11	0	0	0	0	10	650	410	585	270	145	59	95
12	0	0	3.5	0	3.0	580	400	560	270	145	56	78
13	0	0	0	10	2.0	540	390	530	270	145	53	65
14	0	0	0	54	1.0	500	380	510	270	145	50	55
15	0	16	0	0	5.0	480	730	480	270	140	48	49
16	0	0	0	0	3.0	450	720	465	270	140	46	43
17	0	0	0	0	2.0	430	710	460	270	138	44	38
18	0	0	4.7	1.6	200	420	700	455	270	132	42	35
19	0	0	11	2.7	100	410	650	450	265	130	40	32
20	0	0	10	141	50	400	580	445	260	130	39	29
21	0	0	5.7	1,200	110	530	520	440	255	130	38	27
22	0	0	2.6	690	60	450	480	425	250	130	37	25
23	0	0	1.0	70	100	425	430	420	240	135	36	24
24	0	0	1.0	1.0	1,500	420	400	410	235	140	35	23
25	0	0	19	6,500	8,200	410	360	370	230	155	34	21
26	0	0	40	2,800	5,250	410	355	330	220	145	33	20
27	0	0	.40	1,600	4,700	390	350	310	215	130	32	19
28	0	0	.50	600	1,750	370	345	300	205	115	32	18
29	0	0	1.0	200	-----	360	340	290	200	108	31	17
30	0	0	.60	60	-----	350	345	300	190	105	31	16
31	0	-----	.40	35	-----	340	-----	305	-----	100	30	-----
TOTAL	0	16.20	101.40	13,966.5	22,819.0	15,695	15,060	15,125	7,840	4,358	1,626	1,558
MEAN	0	.54	3.27	451	815	506	502	488	261	141	52.5	51.9
MAX	0	16	40	6,500	8,200	1,400	730	730	305	182	96	175
MIN	0	0	0	0	1.0	240	340	290	190	100	30	16
AC-FT	0	32	201	27,700	45,260	31,130	29,870	30,000	15,550	8,640	3,230	3,090

CAL YR 1968 TOTAL 558.39 MEAN 1.53 MAX 91 MIN 0 AC-FT 1,110
WTR YR 1969 TOTAL 98,165.10 MEAN 269 MAX 8,200 MIN 0 AC-FT 194,700

NOTE.--No gage-height record or stage-discharge relation indefinite Jan. 21 to Sept. 30.

SANTA ANA RIVER BASIN

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11-0565, LITTLE SAN GORGONIO CREEK NEAR BEAUMONT, CALIF.

LOCATION.--Lat 34°01'45", long 116°56'43", in NW¼SW¼NW¼ sec.1, T.2 S., R.1 W., San Bernardino County, on downstream side of left abutment of bridge on Oak Glen Road, 3.0 miles upstream from Wallace Creek, and 7 miles north of Beaumont.

DRAINAGE AREA.--3.23 sq mi.

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,320 ft (from topographic map).

AVERAGE DISCHARGE.--21 years, 0.493 cfs (357 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,000 cfs Feb. 25 (gage height, 8.50 ft, from floodmarks), from rating curve extended as explained below; no flow Oct. 1 to Nov. 14, Nov. 17 to Jan. 12.
Period of record: Maximum discharge, 11,000 cfs Feb. 25, 1969 (gage height, 8.50 ft, from floodmarks), from rating curve extended above 32 cfs on basis of slope-area measurements at gage heights 2.18, 3.45, 8.50 ft; no flow for several months in each year.

REMARKS.--Records good except those above 100 cfs, which are poor. No regulation above station. Several small diversions above station for irrigation. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1.0	9.0	8.5	8.5	5.2	3.8	3.5	1.4
2	0	0	0	0	1.0	8.5	8.5	9.8	5.2	3.8	3.5	1.2
3	0	0	0	0	1.4	8.3	8.5	9.8	5.2	4.2	3.5	1.2
4	0	0	0	0	1.4	8.1	7.9	9.8	4.7	4.7	3.5	1.2
5	0	0	0	0	8.5	8.0	14	9.8	4.7	4.7	3.5	1.2
6	0	0	0	0	13	7.9	7.3	9.8	4.7	4.2	3.2	1.2
7	0	0	0	0	2.9	7.8	6.7	8.5	5.2	4.2	3.2	1.4
8	0	0	0	0	2.1	7.6	6.7	7.9	5.2	4.2	3.2	1.4
9	0	0	0	0	2.1	7.4	6.7	7.9	5.2	4.2	3.2	1.4
10	0	0	0	0	2.6	7.3	6.7	7.9	5.2	3.8	3.2	1.4
11	0	0	0	0	2.4	7.3	7.3	7.9	5.2	3.8	2.9	1.4
12	0	0	0	0	2.6	7.3	7.3	7.9	5.2	3.8	2.9	1.4
13	0	0	0	.02	2.6	7.3	7.3	7.3	4.7	3.8	2.6	1.6
14	0	0	0	2.9	2.4	7.3	7.3	7.3	4.7	3.8	2.4	1.6
15	0	.35	0	.50	3.2	7.3	7.9	7.3	4.7	3.8	2.1	1.9
16	0	.17	0	.40	2.9	7.3	8.5	7.3	4.7	3.8	2.1	1.9
17	0	0	0	.32	2.9	7.3	8.5	7.3	4.7	4.2	1.9	1.9
18	0	0	0	.22	3.5	7.3	8.5	7.3	4.7	4.2	1.9	1.9
19	0	0	0	.40	4.2	7.3	7.9	6.7	4.7	4.2	1.9	1.9
20	0	0	0	3.2	3.8	7.3	7.3	6.2	4.7	4.2	1.9	1.9
21	0	0	0	48	4.2	7.9	7.3	6.2	4.7	4.2	1.9	1.9
22	0	0	0	1.9	4.7	7.9	7.3	6.2	4.7	3.8	1.9	1.9
23	0	0	0	1.2	5.2	8.5	7.9	6.2	4.7	3.8	1.9	1.9
24	0	0	0	59	114	8.5	7.9	5.7	5.2	3.8	1.6	1.9
25	0	0	0	359	1,180	9.8	8.5	5.7	5.2	3.8	1.6	1.9
26	0	0	0	54	22	9.8	8.5	5.7	4.7	3.5	1.6	1.9
27	0	0	0	29	11	8.5	8.5	5.7	5.2	3.5	1.6	1.9
28	0	0	0	1.2	10	8.5	8.5	5.2	5.7	3.5	1.6	1.9
29	0	0	0	1.2	-----	8.5	8.5	5.2	4.7	3.5	1.4	1.9
30	0	0	0	1.0	-----	8.5	8.5	4.7	4.2	3.5	1.4	1.6
31	0	-----	0	.86	-----	8.5	-----	4.7	-----	3.5	1.4	-----
TOTAL	0	0.52	0	564.32	1,417.6	247.8	240.7	223.4	147.5	121.8	74.0	49.1
MEAN	0	.017	0	18.2	50.6	7.99	8.02	7.21	4.92	3.93	2.39	1.64
MAX	0	.35	0	359	1,180	9.8	14	9.8	5.7	4.7	3.5	1.9
MIN	0	0	0	0	1.0	7.3	6.7	4.7	4.2	3.5	1.4	1.2
AC-FT	0	1.0	0	1,120	2,810	492	477	443	293	242	147	97
CAL YR 1968	TOTAL	60.92	MEAN	.17	MAX	13	MIN	0	AC-FT	121		
WTR YR 1969	TOTAL	3,086.74	MEAN	8.46	MAX	1,180	MIN	0	AC-FT	6,120		

PEAK DISCHARGE (BASE, 10 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	0900	1.40	14	2- 6	1000	1.50	21
1-21	0900	2.02	162	2-25	1600	8.50	11,000
1-25	1100	3.45	1,990	4- 5	1900	1.69	77

NOTE.--No gage-height record Jan. 26-30, Feb. 26 to Mar. 10.

a From floodmark.

SANTA ANA RIVER BASIN

11-0575. SAN TIMOTEO CREEK NEAR LOMA LINDA, CALIF.

LOCATION.--Lat 34°03'49", long 117°16'19", in San Bernardino Grant, San Bernardino County, on right bank 50 ft downstream from west bound lane of Interstate Highway 10, and 0.8 mile northwest of Loma Linda.

DRAINAGE AREA.--125 sq mi.

PERIOD OF RECORD.--October 1954 to September 1965, February 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,040 ft (from topographic map). Prior to February 1968, at site 0.5 mile downstream at different datum.

AVERAGE DISCHARGE.--12 years (1954-65, 1968-69), 3.05 cfs (2,210 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 15,000 cfs Feb. 25 (gage height, 8.2 ft, from floodmark), from rating curve extended above 2,100 cfs on basis of slope-conveyance measurement of maximum flow; no flow for several days.

Period of record: Maximum discharge, 15,000 cfs Feb. 25, 1969 (gage height, 8.2 ft, from floodmark), from rating curve extended above 2,100 cfs on basis of slope-conveyance measurement of maximum flow; no flow for several days in 1968, 1969.

REMARKS.--Records poor. No regulation above station. Natural flow affected by pumping and return flow from irrigated areas.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	.31	.10	.22	.02	8.0	.01	.03	.10	.46	.42	.16
2	1.5	.16	.03	.22	.01	2.5	.01	.03	.10	.43	.31	.14
3	1.2	.31	0	.16	0	1.3	20	15	.10	.41	.10	.13
4	.68	.10	.03	1.0	0	.70	5.0	30	.10	.40	.16	.68
5	.85	.06	.31	.22	10	.50	1.0	35	.10	.40	.16	.85
6	2.0	0	.16	.06	100	.30	1.0	20	.10	.40	.22	13
7	1.0	.03	.16	.10	20	.10	.05	10	.10	.50	.31	1.1
8	1.0	.06	.22	.22	5.0	.09	.03	.10	.10	.70	.31	.68
9	1.2	.06	.54	.68	1.0	.07	.03	.10	.10	1.3	.31	.68
10	1.5	0	.10	.03	.50	5.0	.02	.10	.10	1.3	.22	.42
11	1.2	0	.31	.22	.40	1.0	.01	.10	.10	1.2	.22	.16
12	.54	.03	1.0	.10	.30	.10	.01	.10	.10	1.1	.16	.22
13	.42	.06	2.8	5.2	.30	.03	.01	.12	.15	1.0	.22	.31
14	.42	0	1.5	19	.20	.03	.01	.12	.15	.95	.22	.31
15	.31	1.2	1.0	5.2	.20	.03	0	.15	.15	.90	.16	.32
16	.31	0	.54	3.6	.20	.03	0	.15	.17	.86	.22	.31
17	.22	0	.31	1.2	.10	.03	0	.12	.20	.82	.31	.14
18	.31	0	.22	4.2	.08	.03	0	.12	.25	.80	.54	.31
19	.42	0	.54	5.3	.05	.02	0	.12	.40	.50	.85	.22
20	.54	.16	.85	24	.02	.02	0	.12	.50	.35	.68	.15
21	.68	.42	.42	317	.02	.02	0	.10	.70	.20	.54	.54
22	.85	.85	.31	43	1.0	.02	0	.10	.90	.15	.31	.68
23	.85	.16	.10	.30	50	.01	0	.10	1.2	.12	0	1.0
24	.42	.06	.06	192	1,050	.01	0	.10	1.7	.10	.15	1.2
25	.42	.03	5.1	1,810	3,500	.01	.02	.10	1.0	.07	.07	1.0
26	.31	.03	7.1	10	350	.01	.02	.10	.80	.07	.10	.68
27	.22	.06	.54	5.0	60	.01	.02	.20	.70	.22	.16	1.0
28	.54	.10	.22	1.0	50	.01	.02	.30	.60	.22	.16	1.2
29	1.0	.06	.22	.10	-----	.01	.02	.20	.55	.42	.22	1.5
30	1.5	.10	.68	.05	-----	.01	.03	.15	.50	.42	.11	1.5
31	1.8	-----	.42	.03	-----	.01	-----	.10	-----	.54	.16	-----
TOTAL	25.71	4.41	25.89	2,449.41	5,199.40	20.01	27.32	113.13	11.82	17.31	8.08	30.59
MEAN	.83	.15	.84	79.0	186	.65	.91	3.65	.39	.56	.26	1.02
MAX	2.0	1.2	7.1	1,810	3,500	8.0	20	35	1.7	1.3	.85	13
MIN	.22	0	0	.03	0	.01	0	.03	.10	.07	0	.13
AC-FT	51	8.8	51	4,860	10,310	40	54	224	23	34	16	61

CAL YR 1968 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1969 TOTAL 7,933.08 MEAN 21.7 MAX 3,500 MIN 0 AC-FT 15,740

NOTE.--No gage-height record Jan. 26 to July 24.

11-0585. EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CALIF.

LOCATION.--Lat 34°10'45", long 117°15'53", in NW¼NE¼NE¼ sec.14, T.1 N., R.4 W., San Bernardino County, on right bank 100 ft upstream from Del Rosa Water Co.'s diversion dam, 0.5 mile south of Arrowhead Springs, and 1.0 mile downstream from Strawberry Creek.

DRAINAGE AREA.--8.80 sq mi.

PERIOD OF RECORD.--December 1919 to current year. Prior to October 1952, published as Strawberry Creek near Arrowhead Springs.

GAGE.--Water-stage recorder. Broad-crested weir since September 1938. Altitude of gage is 1,590 ft (from topographic map).

AVERAGE DISCHARGE.--49 years (1920-69), 4.64 cfs (3,360 acre-ft per year); median of yearly mean discharges, 2.9 cfs (2,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,300 cfs Jan. 25 (gage height, 7.45 ft, from inside gage); minimum daily, 0.66 cfs Oct. 19.

Period of record: Maximum discharge, 3,360 cfs Mar. 2, 1938, based on rainfall-runoff studies; practically no flow at times in 1929, 1931-35.

REMARKS.--Records good except those for Jan. 21-25, which are poor. No regulation above station. One small diversion for domestic use above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	.98	1.3	1.7	57	100	21	17	16	7.3	4.8	3.9
2	.78	.92	1.3	1.7	52	87	20	17	16	6.9	4.8	3.7
3	.77	.93	1.3	1.7	36	78	31	17	16	6.9	4.7	3.7
4	.80	.97	1.3	1.7	30	70	21	21	16	6.9	4.4	3.7
5	.78	.97	1.3	1.7	39	65	23	19	16	6.9	4.4	3.7
6	.81	.95	1.3	1.9	93	66	22	21	16	6.9	4.4	4.1
7	.89	.88	1.3	1.6	64	60	20	19	15	6.9	4.5	4.1
8	.89	.83	1.2	1.7	33	55	19	18	13	6.7	4.5	4.0
9	.86	.85	1.2	1.7	28	50	19	17	12	6.5	4.6	4.0
10	.93	.81	1.1	1.6	26	53	18	17	12	6.5	4.5	3.8
11	.92	.79	1.1	1.8	26	47	18	17	13	6.4	4.4	3.7
12	.94	.87	1.1	1.7	27	44	17	17	12	6.2	4.4	3.8
13	.93	.95	1.1	3.4	24	42	18	17	11	6.0	4.4	3.9
14	.99	1.0	1.2	16	20	38	18	16	10	5.9	4.4	4.0
15	.94	1.5	1.2	5.4	31	35	17	16	10	5.9	4.3	3.6
16	.85	1.4	1.5	4.7	33	33	18	16	11	5.9	4.2	3.7
17	.83	1.2	1.3	4.1	30	31	17	16	10	5.9	4.2	3.6
18	.85	1.1	1.3	4.0	38	31	17	16	9.7	5.6	4.2	3.5
19	.66	.98	1.4	12	43	30	17	16	9.5	5.7	4.1	3.5
20	.68	.93	1.7	34	39	28	17	16	9.3	5.8	4.0	3.5
21	.73	.94	1.6	40	37	31	17	15	9.5	5.7	3.9	3.4
22	.71	.96	1.5	47	40	28	17	15	9.4	5.5	3.9	3.4
23	.70	.92	1.5	15	151	26	17	15	8.8	5.3	3.7	3.4
24	.67	1.0	1.3	70	386	24	17	15	8.9	5.2	3.7	3.4
25	.67	1.1	2.6	540	795	22	17	16	8.9	5.2	3.8	3.3
26	.69	1.2	5.7	230	259	22	17	15	8.4	5.2	3.9	3.3
27	.68	1.2	2.2	150	169	21	16	15	8.1	5.4	3.8	3.3
28	.71	1.2	1.8	91	125	21	16	15	8.0	5.4	3.9	3.3
29	.73	1.2	1.7	42	-----	21	17	15	7.7	5.0	4.0	3.3
30	.85	1.2	2.1	41	-----	21	17	16	7.5	4.9	4.0	3.2
31	.92	-----	1.7	62	-----	21	-----	15	-----	4.9	4.0	-----
TOTAL	24.93	30.73	49.2	1,432.1	2,731	1,301	556	513	338.7	185.4	130.8	108.8
MEAN	.80	1.02	1.59	46.2	97.5	42.0	18.5	16.5	11.3	5.98	4.22	3.63
MAX	.99	1.5	5.7	540	795	100	31	21	16	7.3	4.8	4.1
MIN	.66	.79	1.1	1.6	20	21	16	15	7.5	4.9	3.7	3.2
AC-FT	49	61	98	2,840	5,420	2,580	1,100	1,020	672	368	259	216
CAL YR 1968	TOTAL	664.02	MEAN	1.81	MAX	29	MIN	.53	AC-FT	1,320		
WTR YR 1969	TOTAL	7,401.66	MEAN	20.3	MAX	795	MIN	.66	AC-FT	14,680		

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	unknown	a4.06	424	2-25	1315	6.52	1,700
1-25	unknown	a7.45	2,300	4- 3	0145	3.17	67
2- 6	0730	3.53	236				

NOTE.--No gage-height record Jan. 21-25.

a From inside gage.

SANTA ANA RIVER BASIN

11-0586. WATERMAN CANYON CREEK NEAR ARROWHEAD SPRINGS, CALIF.

LOCATION.--Lat 34°11'36", long 117°16'25", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.11, T.1 N., R.4 W., San Bernardino County, on left bank 0.8 mile northwest of Arrowhead Springs, and 1.3 miles north of San Bernardino National Forest boundary.

DRAINAGE AREA.--4.65 sq mi.

PERIOD OF RECORD.--November 1911 to October 1914 (published as "near San Bernardino"), December 1919 to current year.

GAGE.--Water-stage recorder. Broad-crested weir since September 1938. Datum of gage is 2,045.46 ft above mean sea level. Prior to December 1919, nonrecording gage at site 300 ft downstream at different datum.

AVERAGE DISCHARGE.--51 years (1912-14, 1920-69), 2.67 cfs (1,930 acre-ft per year); median of yearly mean discharges, 1.7 cfs (1,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,160 cfs Jan. 25 (gage height, 5.53 ft), from rating curve extended above 140 cfs on basis of slope-area measurement at gage height 4.82 ft; minimum daily, 0.25 cfs Oct. 27. 1920 to current year: Maximum discharge, 2,350 cfs Mar. 2, 1938, based on rainfall-runoff studies; no flow at times in most years.

REMARKS.--Records good. No regulation above station. One small diversion for domestic use above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	.45	.53	.67	16	80	16	9.2	5.6	3.8	2.9	1.8
2	.45	.44	.50	.66	14	65	17	9.1	5.6	3.6	2.7	1.8
3	.45	.43	.49	.68	13	61	38	9.1	5.4	3.6	2.6	1.7
4	.45	.49	.46	.64	12	55	30	11	5.4	3.5	2.6	1.7
5	.38	.53	.48	.63	16	47	29	9.9	5.4	3.7	3.0	1.7
6	.35	.48	.50	.61	36	44	28	11	5.2	3.8	2.8	2.1
7	.42	.46	.50	.66	18	41	26	9.9	5.0	3.8	2.8	1.9
8	.43	.41	.50	.68	17	38	24	9.3	5.0	3.6	2.9	1.7
9	.38	.37	.52	.75	14	36	22	8.8	5.2	3.6	2.9	1.8
10	.41	.37	.50	.72	13	36	20	8.3	5.2	3.4	2.8	1.7
11	.43	.38	.57	.67	13	33	18	8.0	5.5	3.3	2.9	1.7
12	.40	.45	.56	.65	13	30	16	8.0	5.4	3.4	2.8	1.6
13	.39	.49	.56	1.7	12	28	15	8.0	5.1	3.2	2.7	1.6
14	.47	.51	.56	5.5	12	28	13	8.0	5.0	3.1	2.6	1.6
15	.42	.85	.59	1.3	23	27	12	7.7	4.9	3.2	2.6	1.7
16	.35	.78	.76	1.0	15	26	11	7.4	5.0	3.1	2.6	1.8
17	.31	.67	.65	.86	12	26	10	6.8	5.2	3.2	2.6	1.8
18	.31	.64	.63	1.0	17	25	10	6.8	4.9	3.0	2.5	1.7
19	.32	.58	.67	6.5	16	24	10	6.8	4.6	3.0	2.5	1.7
20	.34	.53	.74	23	15	23	9.9	6.8	4.8	3.2	2.4	1.8
21	.38	.51	.73	29	14	23	9.7	6.8	5.2	3.1	2.3	1.8
22	.35	.53	.73	32	15	23	9.7	6.5	5.1	3.0	2.3	1.8
23	.32	.47	.74	9.9	59	22	9.7	6.5	4.8	3.0	2.2	1.7
24	.29	.51	.62	34	191	21	9.7	6.0	5.2	3.0	2.2	1.5
25	.33	.52	3.2	438	590	20	9.6	6.0	5.2	2.9	2.1	1.5
26	.31	.45	3.2	138	159	20	9.8	5.8	4.8	3.0	2.0	1.5
27	.25	.45	1.1	52	110	19	9.4	5.8	4.4	3.1	2.0	1.5
28	.27	.44	.88	29	90	19	9.3	5.8	4.3	2.9	1.9	1.5
29	.29	.45	.81	24	-----	18	9.2	5.6	4.1	2.9	1.9	1.5
30	.39	.46	.78	22	-----	17	9.1	5.6	4.0	2.9	1.8	1.5
31	.42	-----	.73	18	-----	16	-----	5.4	-----	3.0	1.8	-----
TOTAL	11.51	15.10	24.79	874.78	1,545	991	470.1	235.7	150.5	100.9	76.7	50.7
MEAN	.37	.50	.80	28.2	55.2	32.0	15.7	7.60	5.02	3.25	2.47	1.69
MAX	.47	.85	3.2	438	590	80	38	11	5.6	3.8	3.0	2.1
MIN	.25	.37	.46	.61	12	16	9.1	5.4	4.0	2.9	1.8	1.5
AC-FT	23	30	49	1,740	3,060	1,970	932	468	299	200	152	101

CAL YR 1968 TOTAL 407.79 MEAN 1.11 MAX 21 MIN .23 AC-FT 809
WTR YR 1969 TOTAL 4,546.78 MEAN 12.5 MAX 590 MIN .25 AC-FT 9,020

PEAK DISCHARGE (BASE, 35 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0745	3.24	140	2-15	2000	2.91	72
1-25	1545	5.53	1,160	2-25	0700	5.13	926
2-6	0615	3.26	145	4-3	0030	3.14	128

SANTA ANA RIVER BASIN

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11-0590. WARM CREEK FLOODWAY AT SAN BERNARDINO, CALIF.

LOCATION.--Lat 34°05'45", long 117°16'30", in San Bernardino Grant, San Bernardino County, on left bank 0.4 mile upstream from Mill Street, and 1.8 miles upstream from mouth.

DRAINAGE AREA.--47.8 sq mi.

PERIOD OF RECORD.--January 1961 to current year. Prior to October 1965, published as "near San Bernardino."

GAGE.--Water-stage recorder. Altitude of gage is 1,000 ft (from topographic map). Prior to Dec. 21, 1967, site 0.4 mile downstream at different datum.

EXTREMES.--Current year: Maximum discharge, 9,600 cfs Feb. 25 (gage height, 6.75 ft), from rating curve extended above 3,000 cfs; no flow for most of year.

Period of record: Maximum discharge, 9,600 cfs Feb. 25, 1969 (gage height, 6.75 ft), from rating curve extended above 3,000 cfs; no flow for most of each year.

REMARKS.--Records good prior to Feb. 26, poor thereafter. Flow partly regulated by percolation basins above Marshall Boulevard. Del Rosa Water Co. diverts from East Twin Creek for domestic use and irrigation. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	0	0	0	5.7	196	10	7.0	0	0	0	0
2	.02	0	0	0	5.3	117	10	7.0	0	0	0	0
3	0	0	0	0	4.8	75	50	23	0	0	0	0
4	0	0	0	0	4.8	46	20	33	0	0	0	0
5	0	0	0	0	73	44	15	24	0	0	0	0
6	0	0	0	0	376	43	13	30	0	0	0	10
7	0	0	0	0	30	42	12	23	0	0	0	1.0
8	0	0	0	0	15	37	12	20	0	0	0	.50
9	0	0	0	0	8.6	37	11	18	0	0	0	0
10	0	0	0	0	4.8	53	11	12	0	0	0	0
11	0	0	0	0	3.1	38	11	7.5	0	0	0	0
12	0	0	0	0	2.0	37	11	3.0	0	0	0	0
13	0	0	0	31	1.5	36	13	1.4	0	0	0	0
14	0	0	0	81	2.6	36	13	.78	0	0	0	0
15	0	2.2	0	2.6	71	34	12	.42	0	0	0	0
16	0	0	1.8	2.0	14	22	12	.53	0	0	0	0
17	0	0	0	.80	14	21	12	.25	0	0	0	0
18	0	0	0	12	185	17	11	.10	0	0	0	0
19	0	0	0	21	101	12	11	0	0	0	0	0
20	0	0	.32	250	19	10	11	0	0	0	0	0
21	0	.16	0	252	12	19	11	0	0	0	0	0
22	0	0	0	265	80	15	11	0	0	0	0	0
23	0	0	0	30	364	15	10	0	0	0	0	0
24	0	0	0	357	987	12	10	0	0	0	0	0
25	0	0	12	1,670	5,060	12	8.6	0	0	0	0	0
26	.02	0	40	693	1,030	9.7	9.2	0	0	0	0	0
27	0	.18	2.4	108	360	8.0	9.2	0	0	0	0	0
28	.07	0	2.2	98	351	12	8.6	0	0	0	0	0
29	0	.30	.61	23	-----	12	7.5	0	0	0	0	0
30	.08	0	0	14	-----	14	6.5	0	0	0	0	0
31	.20	-----	0	12	-----	9.1	-----	0	-----	0	0	-----
TOTAL	0.46	2.84	59.33	3,922.40	9,185.2	1,090.8	372.6	210.98	0	0	0	11.50
MEAN	.015	.095	1.91	127	328	35.2	12.4	6.81	0	0	0	.38
MAX	.20	2.2	40	1,670	5,060	196	50	33	0	0	0	10
MIN	0	0	0	0	1.5	8.0	6.5	0	0	0	0	0
AC-FT	.9	5.6	118	7,780	18,220	2,160	739	418	0	0	0	23
CAL YR 1968	TOTAL	308.63	MEAN	.84	MAX	113	MIN	0	AC-FT	612		
WTR YR 1969	TOTAL	14,856.11	MEAN	40.7	MAX	5,060	MIN	0	AC-FT	29,470		

SANTA ANA RIVER BASIN

11-0593. SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CALIF.

LOCATION.--Lat 34°04'05", long 117°17'36", in San Bernardino Grant, San Bernardino County, on downstream side of E Street bridge, 0.8 mile downstream from San Timoteo Creek, 1 mile upstream from Warm Creek, and 3 miles south of San Bernardino.

DRAINAGE AREA.--528 sq mi.

PERIOD OF RECORD.--March 1939 to September 1954, October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 970 ft (from topographic map). Prior to Nov. 10, 1950, water-stage recorder at right bank at datum 10.00 ft higher. Nov. 11, 1950, to Sept. 30, 1954, water-stage recorders on both banks at datum 10.00 ft higher.

AVERAGE DISCHARGE.--15 years (1939-54), 12.5 cfs (9,050 acre-ft per year); median of yearly mean discharges, 6.9 cfs (5,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 28,000 cfs Feb. 25; maximum gage height, 13.5 ft Jan. 25; minimum daily, 13 cfs Nov. 10, 24, 25.

Period of record: Maximum discharge, 28,000 cfs Feb. 25, 1969; maximum gage height, 16.50 ft (present datum) Jan. 23, 1943, discharge uncertain but was probably less than 8,000 cfs; no flow for many days prior to 1967.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (see sta 11-0490). Natural flow of stream affected by ground-water withdrawals and diversions for domestic use and irrigation above station. Effluent from sewage reclamation plant causes sustained flow since station was last operated. Records of chemical analyses for the water year 1969 are published in Part 2 of this report. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	16	14	50	1,600	500	470	325	194	102	40
2	16	16	16	15	45	1,300	700	560	350	185	98	39
3	16	16	16	15	36	1,100	720	630	370	178	96	38
4	16	16	16	16	34	700	660	720	374	178	96	37
5	16	16	16	16	100	450	600	800	365	180	95	36
6	16	16	16	16	900	330	560	780	345	180	94	130
7	16	16	16	16	200	300	550	750	325	182	91	190
8	16	16	15	16	80	290	510	714	315	184	86	170
9	16	16	16	14	60	280	480	670	305	186	80	140
10	15	13	16	15	50	800	448	620	290	188	74	128
11	15	16	15	15	40	700	430	600	280	186	69	88
12	15	15	15	14	38	620	420	570	280	182	64	72
13	15	16	16	34	37	580	410	540	275	178	59	62
14	15	16	16	303	37	540	400	520	270	170	58	52
15	15	21	15	20	120	520	750	488	270	165	56	47
16	15	17	15	18	36	480	740	475	275	158	55	43
17	16	17	15	16	36	450	733	470	275	150	54	40
18	15	16	15	22	400	450	720	465	280	142	53	39
19	15	16	15	34	230	450	670	460	276	140	52	41
20	15	16	16	397	190	440	600	455	272	140	52	43
21	15	16	15	1,760	154	550	540	440	270	144	50	45
22	15	16	15	1,000	140	470	500	435	260	148	48	46
23	14	16	15	100	525	450	450	430	258	152	47	46
24	14	13	14	550	3,670	440	420	420	248	160	46	46
25	14	13	32	10,000	14,800	430	382	375	242	180	46	45
26	14	15	101	3,500	6,650	420	375	345	234	170	46	44
27	14	14	30	1,700	5,140	410	370	320	227	150	45	43
28	14	14	27	700	2,150	390	365	310	220	130	44	41
29	14	15	21	220	-----	380	360	305	212	120	43	40
30	15	15	16	100	-----	370	365	310	204	110	42	37
31	16	-----	15	60	-----	360	-----	315	-----	105	41	-----
TOTAL	469	470	613	20,716	35,948	17,050	15,728	15,762	8,492	5,015	1,982	1,908
MEAN	15.1	15.7	19.8	668	1,284	550	524	508	283	162	63.9	63.6
MAX	16	21	101	10,000	14,800	1,600	750	800	374	194	102	190
MIN	14	13	14	14	34	280	360	305	204	105	41	36
AC-FT	930	932	1,220	41,090	71,300	33,820	31,200	31,260	16,840	9,950	3,930	3,780
CAL YR 1968	TOTAL	6,002.7	MEAN	16.4	MAX	293	MIN	9.7	AC-FT	11,910		
WTR YR 1969	TOTAL	124,153	MEAN	340	MAX	14,800	MIN	13	AC-FT	246,300		

PEAK DISCHARGE (BASE, 400 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-26	1030	5.52	790	2-6	-	-	b6,000
1-14	0930	5.96	1,990	2-25	1130	11.9	28,000
1-21	1400	6.50	10,300	5-6	1200	9.70	1,350
1-25	1100	a13.5	23,000				

NOTE.--No gage-height record Jan. 22 to Feb. 17. Stage-discharge relation indefinite Feb. 18-23, Mar. 1 to Sept. 30.

a From floodmarks.

b Estimated.

SANTA ANA RIVER BASIN

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11-0604. WARM CREEK NEAR SAN BERNARDINO, CALIF.

LOCATION.--Lat 34°04'51", long 117°17'53", in San Bernardino Grant, San Bernardino County, on right bank 265 ft downstream from State Highway 395 bridge, 0.1 mile downstream from Lytle Creek (east channel), and 1.9 miles southeast of San Bernardino.

DRAINAGE AREA.--15.0 sq mi.

PERIOD OF RECORD.--February 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 975 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 2,200 cfs Jan. 25 (gage height, 5.55 ft); no flow for most of year.

Period of record: Maximum discharge, 2,200 cfs Jan. 25, 1969 (gage height, 5.55 ft); no flow for most of each year.

REMARKS.--Records good. At times discharge diverted above station to Warm Creek floodway. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	C	2.8	C	C	0	C	C	0
2	0	0	0	0	C	0	11	0	0	C	C	0
3	0	0	0	0	C	0	0	0	0	C	C	0
4	0	0	0	0	C	C	C	1.9	0	0	C	0
5	0	0	0	0	17	C	1.6	C	0	0	C	0
6	0	0	0	0	126	C	0	5.6	0	0	C	0
7	0	0	0	0	C	C	0	0	0	0	C	0
8	0	0	0	0	0	C	0	C	0	0	C	0
9	0	0	0	0	0	0	0	0	0	0	C	0
10	0	0	0	0	C	6.2	0	C	0	0	C	0
11	0	0	0	0	0	0	0	0	0	0	C	0
12	0	0	0	0	0	C	0	0	0	0	C	C
13	0	0	0	20	C	C	0	C	0	0	C	0
14	0	0	0	44	0	0	0	C	0	0	0	0
15	0	0	0	0	10	0	0	0	0	0	C	0
16	0	0	.20	0	C	C	0	0	0	0	C	0
17	0	0	0	0	C	C	0	0	0	0	0	0
18	0	0	0	11	34	C	0	0	0	0	C	0
19	0	0	0	17	6.7	C	0	C	0	0	C	0
20	0	0	.10	117	0	0	0	C	0	0	C	0
21	0	0	0	74	C	0	0	0	0	0	C	0
22	0	0	0	95	15	0	0	0	0	0	0	0
23	0	0	0	0	94	C	0	C	0	0	C	0
24	0	0	0	125	151	0	0	0	0	0	0	0
25	0	0	3.6	488	365	C	0	0	0	0	0	0
26	0	0	8.7	19	C	0	0	C	C	0	C	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	2.2	11	0	0	0	0	C	C	0
29	0	0	0	0	-----	0	0	C	0	0	C	0
30	0	0	0	0	-----	0	0	C	0	0	C	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	12.60	1,012.2	829.7	9.0	12.6	7.5	0	0	0	0
MEAN	0	0	.41	32.7	29.6	.29	.42	.24	0	0	C	0
MAX	0	0	8.7	488	365	6.2	11	5.6	0	0	C	0
MIN	0	0	C	0	0	0	C	C	0	0	C	0
AC-FT	0	0	25	2,010	1,650	18	25	15	0	0	0	0
CAL YR 1968	TOTAL	73.50	MEAN	.20	MAX	50	MIN	0	AC-FT	146		
WTR YR 1969	TOTAL	1,883.60	MEAN	5.16	MAX	488	MIN	0	AC-FT	3,740		

SANTA ANA RIVER BASIN

11-0605. WEEKS AND DALEY CANAL NEAR COLTON, CALIF.

LOCATION.--Lat 34°04'47", long 117°18'00", in San Bernardino Grant, San Bernardino County, at point of diversion from Warm Creek, and 1.5 miles northeast of Colton.

PERIOD OF RECORD.--September 1920 to current year. Published with station Warm Creek near Colton, October 1950 to September 1961.

GAGE.--Water-stage recorder. Altitude of gage is 965 ft (from topographic map).

EXTREMES.--Period of record: Maximum daily discharge, 25 cfs Mar. 2, 1938; no flow at times in most years.

REMARKS.--Records good. Canal diverts water from right bank of Warm Creek 1.6 miles northeast of Colton for irrigation in vicinity of Colton, Riverside and Corona. All flow passing station this year was pumped from ground-water basin. Pumping began in 1931. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.9	11	0	0	0	0	6.2	3.2	7.4	9.9	9.9
2	11	9.9	10	0	0	0	0	6.2	3.2	9.2	9.9	9.9
3	11	9.9	10	1.0	0	0	0	6.2	3.2	12	9.9	9.9
4	11	9.9	10	2.7	0	0	.30	4.1	3.2	11	9.9	9.9
5	11	9.9	10	3.0	0	0	.50	3.0	6.0	9.1	9.9	9.9
6	10	8.8	9.9	3.0	0	0	.40	3.2	10	9.1	9.9	9.1
7	10	4.8	9.9	3.0	0	0	.60	3.0	10	9.5	10	9.9
8	10	2.2	9.9	3.0	0	0	.60	3.0	11	9.1	10	9.9
9	7.5	2.2	9.9	3.2	0	0	.60	3.0	11	10	10	9.9
10	2.2	2.2	9.9	3.2	0	0	.60	3.0	11	11	10	9.5
11	2.4	2.4	9.9	3.2	0	0	.60	3.2	11	10	10	9.5
12	2.4	2.4	9.9	3.2	0	0	1.1	3.2	11	10	10	9.5
13	2.4	2.4	9.9	2.8	0	0	1.6	3.2	11	11	10	9.5
14	2.4	8.5	9.9	.60	0	0	.80	3.2	11	11	10	9.5
15	2.4	5.3	9.9	0	0	0	.80	3.0	11	11	10	10
16	2.4	2.4	10	0	0	0	.80	3.0	11	11	11	9.9
17	2.4	2.4	11	0	0	0	.80	3.0	11	11	11	10
18	2.2	2.4	11	0	0	0	1.1	3.5	11	11	10	10
19	2.2	2.4	11	0	0	0	.80	3.5	11	11	10	9.9
20	2.2	2.4	10	0	0	0	1.0	3.8	11	12	10	10
21	2.2	2.4	10	0	0	0	.80	3.8	11	12	10	10
22	4.9	2.2	7.2	0	0	0	.80	3.8	11	12	9.9	10
23	10	2.2	1.8	0	0	0	2.3	3.8	11	11	9.9	10
24	10	2.2	1.8	0	0	0	3.0	3.8	8.5	9.1	9.5	10
25	9.9	2.4	1.8	0	0	0	5.6	3.8	4.0	9.1	9.5	10
26	9.9	2.4	.60	0	0	0	9.1	7.0	4.0	9.1	9.5	11
27	10	2.4	0	.30	0	0	7.2	11	4.0	7.8	9.5	10
28	10	5.3	0	0	0	0	6.2	8.3	3.8	5.6	9.5	9.5
29	10	11	0	0	-----	0	6.2	3.5	3.2	5.6	8.7	10
30	10	11	0	0	-----	0	6.2	3.8	5.2	5.6	8.4	10
31	10	-----	0	0	-----	0	-----	3.8	-----	8.1	9.9	-----
TOTAL	215.0	146.2	226.20	32.20	0	0	60.40	129.9	247.5	301.4	305.7	296.1
MEAN	6.94	4.87	7.30	1.04	0	0	2.01	4.19	8.25	9.72	9.86	9.87
MAX	11	11	11	3.2	0	0	9.1	11	11	12	11	11
MIN	2.2	2.2	0	0	0	0	0	3.0	3.2	5.6	8.4	9.1
AC-FT	426	290	449	64	0	0	120	258	491	598	606	587
CAL YR 1968	TOTAL 2,885.20		MEAN 7.88		MAX 15		MIN 0		AC-FT 5,720			
WTR YR 1969	TOTAL 1,960.60		MEAN 5.37		MAX 12		MIN 0		AC-FT 3,890			

11-0620. LYTLE CREEK NEAR FONTANA, CALIF.

LOCATION.--Lat 34°12'44", long 117°27'26", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.2 N., R.6 W., San Bernardino County, on right bank 75 ft upstream from highway bridge, 0.7 mile upstream from right tributary, and 8 miles north of Fontana.

DRAINAGE AREA.--46.3 sq mi.

PERIOD OF RECORD.--October 1918 to current year. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to current year (published as "at mouth of canyon near Rialto" 1898-99, as "near San Bernardino" 1904-18, and as Lytle Creek and Fontana pipe line near Fontana 1919-31). Monthly discharge only for some periods published in WSP 1315-B.

GAGE.--Water-stage recorder on creek. Dual arch-culvert control since 1964; water-stage recorders and sharp-crested weirs on conduit and infiltration line. Altitude of gage is 2,380 ft (from topographic map). October 1918 to Mar. 21, 1938, at site 1 mile downstream at different datum. Mar. 22, 1938, to Nov. 20, 1963, at site 75 ft downstream at datum 4.58 ft.

AVERAGE DISCHARGE (Creek only).--51 years, 14.5 cfs (10,510 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,400 acre-ft per year).

(Combined).--66 years, 43.4 cfs (31,440 acre-ft per year); median of yearly mean discharges, 33 cfs (23,900 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 35,900 cfs Jan. 25 (gage height, 15.0 ft, from floodmark), from rating curve extended as explained below; no flow for many days.

Period of record: Maximum discharge, 35,900 cfs Jan. 25, 1969 (gage height, 15.0 ft, from floodmark), from rating curve extended above 570 cfs on basis of slope-area measurements at gage heights 10.78 and 15.0 ft; no flow at times in each year.

(Combined).--Current year: Maximum discharge, 35,900 cfs Jan. 25; minimum daily, 12 cfs Dec. 26.

REMARKS.--Records poor. No regulation above station. Southern California Edison Co.'s Lytle Creek conduit diverts 2.3 miles upstream for power development, and Fontana Union Water Co. collects water from an infiltration line upstream for irrigation. See schematic diagram of Santa Ana River basin. For records of combined discharge of Lytle Creek and diversions, see following page.

COOPERATION.--Records of discharge through infiltration line furnished by Fontana Union Water Co.; water-stage recorder graph for Lytle Creek conduit furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	355	624	320	175	122	150	80	83
2	0	0	0	0	300	1,030	316	175	122	150	80	80
3	0	0	0	0	275	792	314	172	122	150	80	77
4	0	0	0	0	250	525	350	175	122	147	77	71
5	0	0	0	0	225	435	340	172	122	137	77	65
6	0	0	0	0	500	405	320	168	122	131	74	62
7	0	0	0	0	300	400	300	168	122	119	71	56
8	0	0	0	0	275	380	280	164	122	119	71	53
9	0	0	0	0	270	350	270	168	122	107	68	50
10	0	0	0	0	265	370	250	168	134	107	65	50
11	0	0	0	0	263	341	274	164	128	101	65	48
12	0	0	0	0	261	274	340	161	128	101	65	46
13	0	0	0	0	259	385	262	161	131	98	62	44
14	0	0	0	19	300	375	218	158	134	98	62	42
15	0	0	0	4.6	290	355	214	154	131	95	62	42
16	0	0	0	0	285	353	206	150	134	95	71	42
17	0	0	0	0	280	352	214	144	137	95	80	40
18	0	0	0	0	270	350	206	137	140	95	83	38
19	0	0	0	46	260	346	200	131	147	92	86	38
20	0	0	0	162	250	340	196	134	154	92	89	38
21	0	0	0	596	240	380	199	128	154	92	101	36
22	0	0	0	447	238	360	198	128	150	89	110	34
23	0	0	0	175	374	350	203	113	158	89	107	30
24	0	0	0	577	781	345	196	116	164	89	101	29
25	0	0	3.8	8,320	3,000	340	189	113	172	89	101	30
26	0	0	0	2,120	495	340	186	113	178	89	92	30
27	0	0	0	1,460	470	338	182	113	178	98	86	32
28	0	0	0	1,160	425	335	178	113	164	92	86	32
29	0	0	0	900	-----	330	186	134	161	86	80	32
30	0	0	0	680	-----	328	182	122	150	83	80	32
31	0	-----	0	440	-----	325	-----	122	-----	83	83	-----
TOTAL	0	0	3.8	17,106.6	11,756	12,553	7,289	4,514	4,225	3,258	2,495	1,382
MEAN	0	0	.12	552	420	405	243	146	141	105	80.5	46.1
MAX	0	0	3.8	8,320	3,000	1,030	350	175	178	150	110	83
MIN	0	0	0	0	225	274	178	113	122	83	62	29
AC-FT	0	0	7.5	33,930	23,320	24,900	14,460	8,950	8,380	6,460	4,950	2,740

CAL YR 1968 TOTAL 502.90 MEAN 1.37 MAX 100 MIN 0 AC-FT 997
WTR YR 1969 TOTAL 64,582.40 MEAN 177 MAX 8,320 MIN 0 AC-FT 128,100

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0900	8.85	3,600	2-25	0200	8.80	6,000
1-25	0930	15.0	35,900	3- 2	0630	6.45	1,410
2- 6	unknown	6.40	900				

NOTE.--No gage-height record or stage-discharge relation indefinite much of time after Jan. 24.

a From floodmark.

SANTA ANA RIVER BASIN

11-0620, LYTLE CREEK NEAR FONTANA, CALIF.--Continued

Combined discharge, in cubic feet per second, of Lytle Creek,
Southern California Edison Co.'s Lytle Creek conduit, and Fontana Union
Water Co.'s infiltration line, near Fontana, Calif., water year October 1968 to September 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	21	21	18	355	625	325	190	127	162	109	109
2	20	20	21	17	300	1,030	321	193	127	162	109	106
3	20	21	21	19	275	792	319	190	127	162	109	103
4	20	21	21	21	250	525	355	192	126	160	106	96
5	20	21	21	20	225	435	345	191	126	150	106	91
6	20	21	22	18	500	411	325	192	127	144	103	89
7	19	21	22	14	300	406	305	190	127	131	100	83
8	19	21	22	16	275	386	285	186	127	143	99	80
9	19	20	22	20	270	356	275	193	126	138	96	77
10	20	20	21	20	265	376	255	190	138	138	93	77
11	20	20	21	20	263	346	280	188	132	132	93	75
12	19	21	21	20	261	280	348	187	132	132	93	73
13	19	21	21	21	259	390	269	188	141	129	90	71
14	20	21	21	22	302	380	224	185	146	129	90	69
15	20	23	21	17	294	360	219	188	142	126	90	69
16	19	22	22	19	290	358	211	185	146	124	99	69
17	19	22	21	19	284	358	219	179	150	124	108	67
18	19	22	22	19	279	356	212	175	154	123	111	65
19	19	21	22	52	269	352	207	169	160	121	114	65
20	20	21	22	166	259	346	203	163	167	121	115	65
21	20	22	22	600	249	386	206	157	167	121	123	63
22	19	21	22	452	247	366	205	159	163	118	132	61
23	19	20	21	180	382	356	209	152	171	118	129	57
24	19	20	21	582	790	350	205	152	177	117	125	56
25	19	21	20	8,330	3,010	346	204	138	184	118	127	57
26	19	21	12	2,120	516	345	199	139	191	118	118	57
27	19	21	22	1,460	474	343	194	140	191	128	112	59
28	20	21	21	1,160	426	340	190	125	177	121	112	59
29	20	21	20	900	-----	335	198	138	174	116	106	59
30	20	21	19	680	-----	333	194	127	163	112	106	59
31	20	-----	19	440	-----	330	-----	127	-----	112	109	-----
TOTAL	604	630	647	17,462	11,869	12,698	7,506	5,268	4,506	4,050	3,332	2,186
MEAN	19.5	21.0	20.9	563	424	410	250	170	150	131	107	72.9
MAX	20	23	22	8,330	3,010	1,030	355	193	191	162	132	109
MIN	19	20	12	14	225	280	190	125	126	112	90	56
AC-FT	1,200	1,250	1,280	34,640	23,540	25,190	14,890	10,450	8,940	8,030	6,610	4,340
CAL YR 1968	TOTAL	8,866	MEAN	24.2	MAX	111	MIN	12	AC-FT	17,590		
WTR YR 1969	TOTAL	70,758	MEAN	194	MAX	8,330	MIN	12	AC-FT	140,300		

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0800		3,600	2-6	unknown		900
1-25	0830		35,900	2-25	0200		6,010

SANTA ANA RIVER BASIN

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11-0630. CAJON CREEK NEAR KEENBROOK, CALIF.

LOCATION.--Lat 34°16'01", long 117°27'33", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.2 N., R.6 W., San Bernardino County, on left bank 1,300 ft upstream from Lone Pine Creek, and 1.2 miles north of Keenbrook.

DRAINAGE AREA.--40.6 sq mi.

PERIOD OF RECORD.--December 1919 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,630 ft (from topographic map). Prior to Oct. 24, 1935, at site 1,000 ft downstream at different datum. Oct. 24, 1935, to Jan. 26, 1966, at site 300 ft upstream at datum 6.68 ft higher.

AVERAGE DISCHARGE.--49 years (1920-69), 9.15 cfs (6,620 acre-ft per year); median of yearly mean discharges, 5.6 cfs (4,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,980 cfs Feb. 25 (gage height, 9.70 ft), from rating curve extended above slope-area measurement at gage height 9.2 ft; minimum daily, 0.81 cfs Oct. 18.

Period of record: Maximum discharge, 14,500 cfs Mar. 2, 1938 (gage height, 26.0 ft, present datum, at site then in use), result of slope-area measurement of maximum flow; minimum, 0.05 cfs June 25, 1920.

REMARKS.--Records good except those for Jan. 20 to Mar. 31, which are poor. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	1.5	3.8	3.8	37	100	23	13	9.2	6.7	5.5	4.6
2	2.6	1.5	3.8	3.8	31	90	24	13	9.7	6.4	5.2	4.4
3	2.6	1.6	3.8	3.8	31	80	26	14	9.7	6.4	5.2	4.4
4	2.6	1.6	3.8	3.8	30	70	24	14	9.2	6.4	5.5	4.4
5	2.6	1.8	3.6	3.6	30	60	45	13	9.2	6.4	6.0	4.4
6	2.6	1.8	3.6	3.8	165	54	44	15	9.2	6.4	5.5	4.4
7	2.6	1.8	4.4	3.8	52	48	24	15	9.2	7.1	5.2	4.4
8	2.8	1.5	4.6	3.8	46	46	20	14	8.7	6.4	5.2	4.4
9	3.0	1.2	4.4	3.8	41	44	20	14	8.7	6.1	5.2	4.4
10	3.0	1.3	4.4	3.8	37	42	20	14	8.7	6.1	5.2	4.4
11	2.4	1.5	4.9	3.6	36	41	18	13	8.7	6.1	4.9	4.4
12	2.4	1.6	4.4	3.6	35	40	18	13	8.7	6.1	4.9	4.1
13	3.0	2.2	4.6	4.4	34	42	17	12	8.3	6.1	4.9	4.1
14	3.4	1.8	4.4	4.4	34	50	17	13	8.3	6.1	4.9	4.1
15	4.4	1.9	4.6	4.1	34	45	16	13	8.3	6.1	4.9	4.1
16	4.6	2.2	4.6	4.1	33	41	16	12	8.3	6.1	4.9	4.4
17	1.2	2.2	4.4	4.1	33	38	15	12	8.3	6.1	4.9	4.1
18	.81	1.9	4.4	4.1	33	35	15	11	7.9	6.1	4.9	3.8
19	1.6	1.9	4.6	15	32	33	14	12	7.5	6.1	4.6	4.1
20	1.3	3.4	4.6	104	32	32	14	12	7.5	6.7	4.6	4.1
21	1.2	3.2	4.6	640	32	35	14	12	7.5	6.1	4.6	4.6
22	1.1	3.2	4.6	108	32	35	13	13	7.1	6.1	4.4	4.6
23	1.0	3.4	4.4	28	221	32	13	12	7.5	6.4	4.1	4.6
24	.90	3.4	4.4	200	977	30	14	12	7.5	6.4	4.4	4.6
25	.90	3.2	5.2	1,700	2,180	28	13	11	7.5	6.4	4.6	4.6
26	.90	3.2	5.2	600	400	27	13	11	7.5	6.1	4.6	4.9
27	.90	3.2	4.6	220	200	26	12	10	7.5	6.1	4.6	4.9
28	.90	3.2	3.8	95	135	25	12	9.7	7.5	6.1	4.4	4.8
29	.90	3.4	3.8	60	-----	24	13	9.2	7.5	5.8	4.4	4.8
30	.90	3.4	3.8	40	-----	24	13	9.2	6.7	5.8	4.9	4.8
31	1.3	-----	3.8	32	-----	23	-----	9.2	-----	5.5	4.6	-----
TOTAL	63.01	69.0	133.9	3,912.2	5,008	1,340	560	380.3	247.1	192.8	151.7	132.7
MEAN	2.03	2.30	4.32	126	179	43.2	18.7	12.3	8.24	6.22	4.89	4.42
MAX	4.6	3.4	5.2	1,700	2,180	100	45	15	9.7	7.1	6.0	4.9
MIN	.81	1.2	3.6	3.6	30	23	12	9.2	6.7	5.5	4.1	3.8
AC-FT	125	137	266	7,760	9,930	2,660	1,110	754	490	382	301	263

CAL YR 1968 TOTAL 1,480.31 MEAN 4.04 MAX 20 MIN .81 AC-FT 2,940
WTR YR 1969 TOTAL 12,190.71 MEAN 33.4 MAX 2,180 MIN .81 AC-FT 24,180

PEAK DISCHARGE (BASE, 140 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0500	7.98	2,950	2-25	0400	9.70	8,980
1-25	0600	a9.2	7,480	4- 5	1900	3.75	242
2- 6	0500	6.30	1,140				

NOTE.--No gage-height record Jan. 24 to Feb. 5, Feb. 8-22, Feb. 26 to Apr. 1.

a From floodmark.

SANTA ANA RIVER BASIN

11-0635. LONE PINE CREEK NEAR KEENBROOK, CALIF.

LOCATION.--Lat 34°15'59", long 117°27'47", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.2 N., R.6 W., San Bernardino County, on right bank 50 ft upstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 150 ft upstream from mouth, and 1.1 miles north of Keenbrook.

DRAINAGE AREA.--15.1 sq mi.

PERIOD OF RECORD.--December 1919 to September 1938, June 1949 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,605.92 ft above mean sea level. Prior to Mar. 2, 1938, water-stage recorder (destroyed by flood) and Mar. 2 to Sept. 30, 1938, nonrecording gage at same site at datum 0.98 ft higher.

AVERAGE DISCHARGE.--38 years (1920-38, 1949-69), 1.36 cfs (985 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,650 cfs Jan. 25 (gage height, 10.70 ft), from rating curve extended above slope-conveyance measurement at gage height 9.07 ft; minimum daily, 0.36 cfs for many days. Period of record: Maximum discharge, 6,180 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow Aug. 6-8, Sept. 29-30, 1965.

REMARKS.--Records good except those above 50 cfs, which are poor. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.46	.56	.36	1.8	19	12	8.4	5.5	5.5	4.6	4.9
2	.46	.46	.56	.36	1.8	19	12	8.0	5.5	5.2	4.6	4.6
3	.46	.46	.56	.36	1.8	18	12	8.0	5.5	5.5	4.6	4.6
4	.46	.46	.56	.36	1.8	18	12	7.6	5.5	5.5	4.6	4.6
5	.46	.46	.56	.36	2.6	17	12	6.9	5.5	5.9	4.6	4.6
6	.46	.46	.56	.36	51	16	10	7.6	5.5	6.2	4.9	4.6
7	.46	.46	.56	.36	3.0	16	9.6	7.6	5.5	6.2	4.9	4.3
8	.46	.46	.56	.36	2.4	12	9.2	7.3	5.5	5.9	4.9	4.3
9	.46	.46	.56	.36	2.4	12	9.6	6.9	5.5	5.9	5.1	4.3
10	.46	.46	.56	.36	2.6	16	11	6.6	5.9	5.5	5.9	4.3
11	.46	.46	.56	.36	2.6	14	11	6.6	5.9	5.5	5.9	4.3
12	.46	.46	.56	.36	2.8	14	11	6.6	5.5	5.9	5.9	4.3
13	.46	.46	.46	.36	2.4	16	11	6.9	5.5	5.4	5.9	4.3
14	.46	.46	.46	.36	2.6	18	11	6.9	5.5	5.2	5.5	4.0
15	.46	.56	.46	.36	2.6	16	11	6.6	5.5	5.2	5.5	4.0
16	.36	.56	.46	.36	2.2	15	11	6.6	5.5	5.2	5.5	4.0
17	.36	.46	.46	.36	2.2	13	11	6.6	5.5	5.2	5.5	4.0
18	.36	.46	.36	.36	2.0	12	11	6.6	5.5	5.2	5.5	4.0
19	.36	.46	.36	1.1	1.2	13	11	6.2	5.5	5.2	5.5	4.0
20	.36	.46	.36	13	1.2	12	11	6.2	5.4	5.2	5.5	4.0
21	.36	.46	.36	167	1.4	14	11	5.9	5.9	4.9	5.2	4.0
22	.36	.46	.36	4.6	1.6	14	11	5.9	5.9	4.6	5.2	4.0
23	.36	.46	.36	.56	66	12	11	5.9	5.9	4.3	5.2	4.0
24	.36	.46	.36	11	190	11	10	5.9	6.2	4.6	5.2	4.0
25	.36	.56	.46	528	701	12	9.2	5.9	6.2	4.6	4.9	4.0
26	.36	.56	.66	4.8	39	12	8.8	5.9	5.9	4.6	4.9	4.0
27	.36	.56	.66	2.4	25	11	8.8	5.9	5.9	4.6	4.9	4.0
28	.36	.56	.66	2.0	20	12	8.8	5.5	5.9	4.9	4.9	4.0
29	.46	.56	.56	1.8	-----	12	8.4	5.5	5.9	4.6	4.9	3.8
30	.46	.56	.46	1.8	-----	14	8.4	5.2	5.9	4.6	4.9	3.8
31	.46	-----	.46	1.8	-----	14	-----	5.2	-----	4.6	4.9	-----
TOTAL	12.96	14.60	15.46	746.34	1,137.0	444	314.8	203.4	170.3	161.4	160.0	125.6
MEAN	.42	.49	.50	24.1	40.6	14.3	10.5	6.56	5.68	5.21	5.16	4.19
MAX	.46	.56	.66	528	701	19	12	8.4	6.2	6.2	5.9	4.9
MIN	.36	.46	.36	.36	1.2	11	8.4	5.2	5.4	4.3	4.6	3.8
AC-FT	26	29	31	1,480	2,260	881	624	403	338	320	317	249
CAL YR 1968	TOTAL	258.92	MEAN	.71	MAX	5.8	MIN	.36	AC-FT	514		
WTR YR 1969	TOTAL	3,505.86	MEAN	9.61	MAX	701	MIN	.36	AC-FT	6,950		

PEAK DISCHARGE (BASE, 80 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0630	8.12	1,560	2-6	0600	4.87	442
1-25	0930	10.70	2,650	2-25	0500	9.23	1,930

11-0636.8. DEVIL CANYON CREEK NEAR SAN BERNARDINO, CALIF.

LOCATION.--Lat 34°12'12", long 117°20'02", in Muscupiabe Grant, San Bernardino County, on right bank 1.0 mile downstream from confluence of East Fork and West Fork, and 7.0 miles northwest of San Bernardino.

DRAINAGE AREA.--5.61 sq mi.

PERIOD OF RECORD.--November 1911 to September 1912, October 1913 to September 1914, December 1919 to current year. Monthly figures only for January 1914, published in WSP 1315-B.

GAGE.--Water-stage recorder and broad-crested weir since July 1925 (affected by debris in most years) on creek; flow meter on diversion. Altitude of gage is 1,900 ft (from topographic map). Prior to December 1919, non-recording gage at site 500 ft downstream at different datum.

AVERAGE DISCHARGE (Creek only).--50 years (1913-14, 1920-69), 1.87 cfs (1,350 acre-ft per year); median of yearly mean discharges, 0.7 cfs (510 acre-ft per year).
(Combined).--36 years (1913-14, 1934-69), 3.62 cfs (2,620 acre-ft per year); median of yearly mean discharges, 2.5 cfs (1,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,720 cfs Jan. 25 (gage height, 5.40 ft), on basis of slope-area measurement of maximum flow; minimum daily, 0.53 cfs Oct. 4.
1913-14, 1919 to current year: Maximum discharge, 3,720 cfs Jan. 25, 1969 (gage height, 5.40 ft), on basis of slope-area measurement of maximum flow; no flow at times in most years.

REMARKS.--Records poor. No regulation above station. City of San Bernardino diverts above station for municipal supply. See schematic diagram of Santa Ana River basin.

COOPERATION.--Records of diversion furnished by city of San Bernardino.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.4	2.2	1.2	43	140	22	10	6.5	3.1	2.1	1.1
2	.89	1.4	2.4	1.0	41	120	21	9.8	6.4	3.1	2.1	1.1
3	.65	1.4	2.6	1.1	40	100	21	9.8	6.3	3.2	2.1	1.1
4	.53	1.4	2.5	1.1	44	90	21	20	6.3	3.1	2.1	1.1
5	.83	1.3	2.5	1.0	49	75	20	16	6.2	3.3	2.1	1.1
6	1.3	1.1	2.4	1.0	89	65	20	20	6.2	3.2	1.9	1.5
7	.89	1.3	2.4	1.2	32	60	20	15	6.1	3.1	1.8	1.4
8	.89	1.3	2.3	1.3	24	55	20	12	6.0	3.1	1.8	1.3
9	.89	1.5	2.3	1.2	22	50	20	11	6.0	3.1	1.8	1.2
10	.89	1.5	2.2	1.1	20	45	30	11	5.9	2.9	1.7	1.2
11	.89	1.9	2.2	1.1	19	42	26	10	5.8	2.9	1.7	1.2
12	.96	2.0	2.1	.96	20	40	23	9.8	5.8	2.9	1.7	1.1
13	.96	2.0	2.2	2.0	18	37	21	9.3	5.6	3.0	1.6	1.1
14	.96	2.0	2.2	6.2	17	35	19	9.0	5.6	2.9	1.7	1.1
15	1.0	2.3	2.1	1.9	29	34	18	8.8	5.4	2.8	1.6	1.1
16	1.0	2.1	2.1	1.0	26	33	17	8.6	5.2	2.9	1.5	1.1
17	1.0	2.0	2.0	.77	22	32	16	8.4	5.0	2.8	1.5	1.1
18	.96	1.8	2.1	1.2	26	31	15	8.2	4.8	2.6	1.4	1.2
19	.96	1.7	2.1	9.0	24	30	14	8.0	4.6	2.6	1.3	1.3
20	.96	2.0	2.0	20	23	29	13	7.8	4.4	2.5	1.3	1.2
21	.96	1.8	1.9	46	22	28	13	7.6	4.2	2.5	1.2	1.2
22	1.1	1.7	1.8	31	24	27	12	7.5	4.0	2.4	1.2	1.2
23	1.1	1.4	1.7	18	46	26	12	7.4	3.8	2.4	1.2	1.2
24	1.0	1.5	1.6	23	42	26	11	7.3	3.6	2.3	1.2	1.2
25	1.1	1.6	4.5	556	262	25	11	7.2	3.4	2.3	1.2	1.1
26	1.1	2.3	5.7	170	220	25	11	7.1	3.2	2.2	1.2	1.1
27	1.2	2.2	2.2	65	190	24	10	7.0	3.2	2.2	1.2	1.1
28	1.3	2.1	1.7	76	160	24	10	6.9	3.2	2.1	1.1	1.0
29	1.5	1.9	1.8	57	-----	23	10	6.8	3.1	2.1	1.1	1.0
30	1.4	2.1	1.4	50	-----	23	10	6.7	3.1	2.1	1.1	1.0
31	1.4	-----	1.1	45	-----	22	-----	6.6	-----	2.1	1.1	-----
TOTAL	32.07	52.0	70.3	1,192.33	1,594	1,416	507	300.6	148.9	83.8	47.6	34.7
MEAN	1.03	1.73	2.27	38.5	56.9	45.7	16.9	9.70	4.96	2.70	1.54	1.16
MAX	1.5	2.3	5.7	556	262	140	30	20	6.5	3.3	2.1	1.5
MIN	.53	1.1	1.1	.77	17	22	10	6.6	3.1	2.1	1.1	1.0
AC-FT	64	103	139	2,360	3,160	2,810	1,010	596	295	166	94	69
(a)	122	187	189	2,410	3,210	2,860	1,110	730	481	352	242	170

CAL YR 1968 TOTAL 431.17 MEAN 1.18 MAX 14 MIN .10 AC-FT 855 AC-FT a 190
WTR YR 1969 TOTAL 5,479.30 MEAN 15.0 MAX 556 MIN .53 AC-FT 10,870 AC-FT a 12,030

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0800	2.85	84	2-15	1800	3.13	63
1-25	0700	5.40	3,710	2-25	0400	4.89	1,780
2-6	0600	3.68	310				

a Combined discharge, in acre-ft, of Devil Canyon Creek and city of San Bernardino diversion.

NOTE.--No gage-height record and/or stage-discharge relation indefinite for most of time after Feb. 26.

SANTA ANA RIVER BASIN

11-0650. LYTLE CREEK AT COLTON, CALIF.

LOCATION.--Lat 34°04'44", long 117°18'17", in San Bernardino Grant, San Bernardino County, on right bank 400 ft downstream from Colton Avenue, 1,930 ft upstream from outlet end of channel, and 1.3 miles north-east of Colton.

DRAINAGE AREA.--172 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 974.67 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--12 years, 8.60 cfs (6,230 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 16,800 cfs Jan. 25 (gage height, 13.6 ft, from floodmarks), from rating curve extended as explained below; no flow for many days.
Period of record: Maximum discharge, 16,800 cfs Jan. 25, 1969 (gage height, 13.6 ft, from floodmarks), from rating curve extended above 4,200 cfs on basis of discharge for design flood at gage height 21.4 ft; no flow for most of each year.

REMARKS.--Records good except those for Jan. 25, Feb. 7 to Apr. 25, which are poor. Flow partly regulated by Lytle Creek spreading grounds 3.2 miles upstream. Diversions above station for irrigation, power development, domestic use, and ground-water replenishment. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	5.1	98	32	77	42	.90	16	8.6
2	0	0	0	0	4.2	217	56	84	46	.90	16	8.6
3	0	0	0	0	3.5	105	91	71	51	.90	18	8.6
4	0	0	0	0	2.8	46	42	119	37	.90	20	10
5	0	0	0	0	32	70	37	91	42	.90	28	8.6
6	0	0	0	0	580	65	42	112	42	.90	32	7.2
7	0	0	0	0	37	37	42	119	42	.90	37	7.2
8	0	0	0	0	10	51	42	112	32	.90	32	7.2
9	0	0	0	0	8.0	37	46	98	37	.90	28	7.2
10	0	0	0	0	7.0	168	46	91	42	.90	23	6.1
11	0	0	0	0	6.0	98	51	91	32	.90	20	6.1
12	0	0	0	0	5.0	32	51	91	28	.90	20	3.5
13	0	0	0	.05	4.0	32	51	91	20	.90	20	3.5
14	0	0	0	.18	3.0	28	51	84	16	.90	18	4.2
15	0	.05	0	0	24	28	56	84	12	.90	14	5.1
16	0	0	.03	0	5.0	25	56	91	9.0	.90	14	6.1
17	0	0	0	0	3.0	25	56	91	5.1	.90	14	5.1
18	0	0	0	0	41	20	61	105	5.1	1.0	14	5.1
19	0	0	0	0	7.3	20	61	119	1.8	1.0	16	5.1
20	0	0	0	5.1	4.0	20	62	119	1.0	1.0	14	4.2
21	0	0	0	1,170	3.0	20	63	98	1.0	1.4	12	5.1
22	0	0	0	716	40	112	64	91	1.0	2.2	11	5.1
23	0	0	0	3.5	664	46	65	91	.90	2.2	10	5.1
24	0	0	0	230	970	42	66	70	.90	4.2	10	5.1
25	0	0	.23	5,040	2,550	37	67	70	.90	7.2	13	5.1
26	0	0	0	1,840	890	37	70	70	.90	10	10	7.2
27	0	0	0	706	340	37	61	70	.90	14	10	6.1
28	0	0	0	84	270	37	70	77	.90	16	10	5.1
29	0	0	0	23	-----	37	77	56	.90	16	10	4.2
30	0	0	0	20	-----	37	84	42	.90	16	10	2.2
31	0	-----	0	18	-----	32	-----	42	-----	14	8.6	-----
TOTAL	0	0.05	0.26	9,855.83	6,518.9	1,696	1,719	2,717	552.20	121.50	528.6	177.6
MEAN	0	.002	.008	318	233	54.7	57.3	87.6	18.4	3.92	17.1	5.92
MAX	0	.05	.23	5,040	2,550	217	91	119	51	16	37	10
MIN	0	0	0	0	2.8	20	32	42	.90	.90	8.6	2.2
AC-FT	0	.10	.5	19,550	12,930	3,360	3,410	5,390	1,100	241	1,050	352
CAL YR 1968	TOTAL	240.31	MEAN	.66	MAX	230	MIN	0	AC-FT	477		
WTR YR 1969	TOTAL	23,886.94	MEAN	65.4	MAX	5,040	MIN	0	AC-FT	47,380		

11-0665. SANTA ANA RIVER AT RIVERSIDE NARROWS, NEAR ARLINGTON, CALIF.

LOCATION.--Lat 33°57'53", long 117°27'55", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.2 S., R.6 W., Riverside County, on right bank at downstream side of bridge on Pedley Road, 1.8 miles downstream from Union Pacific Railroad bridge, 3.3 miles northwest of Arlington, and 12 miles upstream from Temescal Creek.

DRAINAGE AREA.--850 sq mi.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for October 1927 to January 1929, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 666.87 ft above mean sea level (levels by Riverside County Engineer). See WSP 1735 for history of changes prior to Jan. 17, 1955.

EXTREMES.--Current year: Maximum discharge, 41,000 cfs Jan. 25 (gage height, 15.23 ft); minimum daily, 29 cfs Oct. 31.

Period of record: Maximum discharge, 100,000 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 11 cfs Oct. 17, 26, 1966.

Flood of Jan. 22, 1862, 320,000 cfs result of slope-conveyance measurement at site 9.3 miles upstream. Stage at that site was 5 ft higher than Mar. 2, 1938.

REMARKS.--Records fair. Flow partly regulated by Big Bear Lake (see sta 11-0490). Natural streamflow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Riverside Quality of Water Control plant released to river 0.6 mile upstream. See schematic diagram for Santa Ana River basin. Records of chemical analyses for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	39	43	48	130	2,500	264	354	288	63	52	50
2	42	46	48	49	120	1,500	496	448	300	63	52	50
3	42	46	48	49	112	1,200	601	392	312	60	53	51
4	42	45	46	49	108	850	512	424	306	60	53	50
5	38	45	46	49	105	650	565	496	300	58	53	54
6	31	45	50	49	500	540	583	683	294	58	52	50
7	46	45	50	49	233	470	529	574	294	55	52	48
8	42	45	48	50	150	420	512	592	288	53	52	51
9	48	45	52	50	110	380	460	590	282	51	52	54
10	48	45	53	50	90	360	390	500	282	50	52	51
11	40	45	53	50	84	296	360	436	282	50	52	49
12	43	45	52	49	70	296	350	428	276	50	53	49
13	46	46	50	65	68	295	340	428	212	49	53	47
14	48	45	49	339	66	290	340	402	208	49	53	47
15	48	58	48	73	66	288	360	408	196	50	53	49
16	43	50	50	66	65	282	512	378	192	52	52	48
17	42	55	50	66	65	275	565	408	180	56	52	48
18	41	58	50	74	65	270	496	384	180	56	52	47
19	48	52	50	92	80	296	496	390	157	55	53	50
20	48	52	55	365	95	336	384	366	145	55	52	47
21	46	50	50	2,890	115	330	424	348	136	54	52	45
22	46	50	53	1,730	100	330	456	348	127	54	51	49
23	45	50	56	109	200	200	472	348	118	55	50	49
24	50	50	56	949	5,000	230	408	318	109	56	50	48
25	50	49	68	18,200	18,600	210	315	294	103	56	49	48
26	50	48	103	4,940	10,000	190	300	192	93	56	49	47
27	48	46	52	2,000	4,500	215	280	214	86	55	50	47
28	48	42	49	550	3,500	240	275	224	76	54	50	46
29	40	42	46	200	-----	252	270	232	71	53	54	47
30	35	42	50	160	-----	258	270	246	65	52	53	47
31	29	-----	50	140	-----	258	-----	258	-----	52	53	-----
TOTAL	1,355	1,421	1,624	33,599	44,397	14,507	12,585	12,103	5,958	1,690	1,609	1,463
MEAN	43.7	47.4	52.4	1,084	1,586	468	420	390	199	54.5	51.9	48.8
MAX	50	58	103	18,200	18,600	2,500	601	683	312	63	54	54
MIN	29	39	43	48	65	190	264	192	65	49	49	45
AC-FT	2,690	2,820	3,220	66,640	88,060	28,770	24,960	24,010	11,820	3,350	3,190	2,900

CAL YR 1968 TOTAL 18,234 MEAN 49.8 MAX 945 MIN 29 AC-FT 36,170
WTR YR 1969 TOTAL 132,311 MEAN 362 MAX 18,600 MIN 29 AC-FT 262,400

PEAK DISCHARGE (BASED, 500 CFS).

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	0900	5.25	990	2-6	0600	9.25	8,000
1-21	1030	8.35	9,180	2-25	1400	11.65	36,000
1-25	1330	15.23	41,000	5-6	1300	6.35	1,110

NOTE.--No gage-height record for several periods after Jan. 25.

SANTA ANA RIVER BASIN

11-0670. DAY CREEK NEAR ETIWANDA, CALIF.

LOCATION.--Lat 34°11'06", long 117°32'20", in NW¼NW¼SW¼ sec.8, T.1 N., R.6 W., San Bernardino County, on left bank 0.5 mile downstream from confluence of two main forks, and 4 miles north of Etiwanda.

DRAINAGE AREA.--4.59 sq mi.

PERIOD OF RECORD.--October 1927 to current year. Combined records of creek and diversion, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Broad-crested weir since September 1938 on creek; water-stage recorder and Parshall flume on diversion. Altitude of gage is 2,870 ft (from topographic map). Prior to Jan. 7, 1929, at site 125 ft downstream at different datum. Jan. 7, 1929, to Mar. 2, 1938, at site 200 ft upstream at different datum (destroyed by flood). May 2 to Sept. 2, 1938, at site 200 ft downstream at different datum.

AVERAGE DISCHARGE (Creek only).--42 years, 4.17 cfs (3,020 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).

(Combined).--19 years, 5.43 cfs (3,930 acre-ft per year); median of yearly mean discharges, 2.8 cfs (2,000 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 9,450 cfs Jan. 25 (gage height, 9.90 ft), from rating curve extended as explained below; minimum daily, 0.17 cfs Dec. 18, 19.

Period of record: Maximum discharge, 9,450 cfs Jan. 25, 1969 (gage height, 9.90 ft), from rating curve extended above 340 cfs on basis of slope-area measurements at gage heights 3.78, 4.90, and 9.90 ft; no flow Oct. 5 to Nov. 1, 1950.

(Combined).--Current year: Maximum discharge, 9,450 cfs Jan. 25; minimum daily, 1.9 cfs Dec. 12.

Period of record: Maximum discharge, 9,450 cfs Jan. 25, 1969; minimum daily, 0.30 cfs for several days in 1961 and 1963.

REMARKS.--Records poor. No regulation above station. Etiwanda Water Co. has diverted water above station during entire period of record. Diversion destroyed by flood of Jan. 25, 1969. In addition, an infiltration gallery, unwatering the gravel in the bed of the stream at gaging station, produced 806 acre-ft during year. See schematic diagram of Santa Ana River basin. For records of combined discharge of creek and Etiwanda Water Co.'s diversion, see following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.36	.41	.32	32	75	32	22	13	10	8.3	6.1
2	.35	.36	.40	.30	24	66	32	15	13	10	8.1	6.1
3	.38	.36	.32	.27	22	58	32	15	13	10	8.0	5.9
4	.41	.36	.31	.27	20	52	32	15	13	10	8.0	5.9
5	.41	.36	.31	.30	18	47	32	14	13	10	7.9	5.9
6	.41	.36	.31	.44	110	45	32	15	13	10	7.9	5.8
7	.43	.31	.31	.76	60	42	33	14	13	10	7.7	5.8
8	.46	.30	.31	.99	50	40	34	14	13	10	7.7	5.7
9	.46	.30	.31	.60	40	38	34	14	13	9.9	7.7	5.6
10	.46	.27	.31	.36	30	36	34	14	13	9.6	7.7	5.6
11	.46	.27	.58	.36	25	35	30	14	12	9.6	7.7	5.6
12	.46	.27	.62	.36	20	34	29	14	12	9.7	7.7	5.4
13	.46	.45	.61	.81	18	33	30	14	12	9.7	7.4	5.5
14	.47	.37	.25	8.9	17	32	29	13	12	9.7	7.4	5.5
15	.49	.81	.20	4.2	16	31	26	13	12	9.4	7.4	5.4
16	.44	.55	.20	3.3	15	30	26	13	12	9.3	7.4	5.4
17	.42	.43	.19	3.2	32	29	25	13	12	9.3	7.3	5.4
18	.41	.41	.17	3.8	25	28	25	13	12	9.3	7.3	5.2
19	.40	.41	.17	13	20	29	24	13	12	9.3	7.1	5.2
20	.39	.42	.20	45	18	33	23	13	12	9.3	7.0	5.2
21	.38	.36	.20	158	16	33	23	14	12	9.1	7.0	5.2
22	.34	.36	.20	207	20	32	23	14	12	8.9	6.9	5.1
23	.29	.66	.20	29	180	33	22	14	12	8.9	6.7	4.9
24	.29	.99	.23	73	410	33	20	14	12	8.9	6.7	4.9
25	.29	.70	2.8	4,070	820	33	19	14	11	8.8	6.7	4.8
26	.31	.74	5.6	2,200	400	33	19	14	11	8.8	6.5	4.7
27	.31	.53	2.5	450	200	33	20	14	11	8.7	6.5	4.7
28	.31	.41	.55	90	115	33	19	14	11	8.6	6.5	4.6
29	.32	.41	.43	65	-----	33	19	14	11	8.5	6.4	4.5
30	.36	.41	.36	50	-----	32	20	14	10	8.5	6.3	4.5
31	.36	-----	.32	40	-----	32	-----	13	-----	8.4	6.3	-----
TOTAL	12.10	13.30	19.88	7,519.54	2,773.	1,173	798	438	363	290.2	225.2	160.1
MEAN	.39	.44	.64	243	99.0	37.8	26.6	14.1	12.1	9.36	7.26	5.34
MAX	.49	.99	5.6	4,070	820	75	34	22	13	10	8.3	6.1
MIN	.29	.27	.17	.27	15	28	19	13	10	8.4	6.3	4.5
AC-FT	24	26	39	14,910	5,500	2,330	1,580	869	720	576	447	318
CAL YR 1968	TOTAL	409.88	MEAN	1.12	MAX	7.9	MIN	.17	AC-FT	813		
WTR YR 1969	TOTAL	13,785.32	MEAN	37.8	MAX	4,070	MIN	.17	AC-FT	27,340		

PEAK DISCHARGE (BASE, 25 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-22	0615	3.34	728	2-6	unknown	unknown	a360
1-25	1400	9.90	9,450	2-25	unknown	unknown	a2,500

NOTE.--No gage-height record Jan. 26 to Mar. 18, Mar. 24 to Apr. 7, May 21 to June 25.

a Estimated.

11-0670. DAY CREEK NEAR ETIWANDA, CALIF.--Continued

Combined discharge, in cubic feet per second, of Day Creek and Etiwanda Water Co.'s diversion
near Etiwanda, Calif., water year October 1968 to September 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.4	2.3	2.2	32	75	32	22	13	10	8.3	6.1
2	2.4	2.4	2.3	2.1	24	66	32	15	13	10	8.1	6.1
3	2.5	2.4	2.2	2.0	22	58	32	15	13	10	8.0	5.9
4	2.5	2.4	2.1	2.0	20	52	32	15	13	10	8.0	5.9
5	2.4	2.4	2.1	2.0	18	47	32	14	13	10	7.9	5.9
6	2.3	2.4	2.1	2.0	110	45	32	15	13	10	7.9	5.8
7	2.4	2.2	2.1	2.3	60	42	33	14	13	10	7.7	5.8
8	2.5	2.1	2.1	2.4	50	40	34	14	13	10	7.7	5.7
9	2.5	2.2	2.0	2.2	40	38	34	14	13	9.9	7.7	5.6
10	2.5	2.1	2.0	2.1	30	36	34	14	13	6.6	7.7	5.6
11	2.5	2.1	2.3	2.1	25	35	30	14	12	6.6	7.7	5.6
12	2.4	2.2	1.9	2.1	20	34	29	14	12	9.7	7.7	5.4
13	2.4	2.2	2.1	2.7	18	33	30	14	12	9.7	7.4	5.5
14	2.7	2.2	2.0	8.9	17	32	29	13	12	9.7	7.4	5.5
15	2.6	3.3	2.0	4.2	16	31	26	13	12	9.4	7.4	5.4
16	2.4	2.8	2.1	3.3	15	30	26	13	12	9.3	7.4	5.4
17	2.4	2.5	2.1	3.2	32	29	25	13	12	9.3	7.3	5.4
18	2.4	2.4	2.0	3.8	25	28	25	13	12	9.3	7.3	5.2
19	2.3	2.4	2.1	13	20	29	24	13	12	9.3	7.1	5.2
20	2.3	2.3	2.1	14	18	33	23	13	12	9.3	7.0	5.2
21	2.3	2.3	2.1	158	16	33	23	14	12	9.1	7.6	5.2
22	2.2	2.3	2.1	207	20	32	23	14	12	8.9	6.9	5.1
23	2.1	2.4	2.0	29	180	33	22	14	12	8.9	6.7	4.9
24	2.1	2.5	2.0	73	410	33	20	14	12	8.9	6.7	4.9
25	2.1	2.4	4.0	4,070	820	33	19	14	11	8.8	6.7	4.8
26	2.1	2.2	5.6	2,200	400	33	19	14	11	8.8	6.5	4.7
27	2.1	2.4	3.7	450	200	33	20	14	11	8.7	6.5	4.7
28	2.1	2.3	2.6	90	115	33	19	14	11	8.6	6.5	4.6
29	2.2	2.3	2.4	65	-----	33	19	14	11	8.5	6.4	4.5
30	2.5	2.3	2.4	50	-----	32	20	14	10	8.5	6.3	4.5
31	2.5	-----	2.2	40	-----	32	-----	13	-----	8.4	6.3	-----
TOTAL	73.1	70.8	73.1	7,510.6	2,773	1,173	798	438	363	284.2	225.8	160.1
MEAN	2.36	2.36	2.36	242	99.0	37.8	26.6	14.1	12.1	9.17	7.28	5.34
MAX	2.7	3.3	5.6	4,070	820	75	34	22	13	10	8.3	6.1
MIN	2.1	2.1	1.9	2.0	15	28	19	13	10	6.6	6.3	4.5
AC-FT	145	140	145	14,900	5,500	2,330	1,580	869	720	564	448	318

CAL YR 1968 TOTAL 1,126.9 MEAN 3.08 MAX 8.7 MIN 1.9 AC-FT 2,240
WTR YR 1969 TOTAL 13,942.7 MEAN 38.2 MAX 4,070 MIN 1.9 AC-FT 27,650

Peak discharge (base, 25 cfs).--Same as those listed on previous page.

SANTA ANA RIVER BASIN

11-0690. LAKE HEMET NEAR IDYLLWILD, CALIF.

LOCATION.--Lat 33°39'56", long 116°42'19", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.7, T.6 S., R.3 E., Riverside County, on upstream face near right end of dam on South Fork San Jacinto River, 5 miles southeast of Idyllwild, and 6.5 miles upstream from mouth.

DRAINAGE AREA.--65.6 sq mi.

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

GAGE.--Nonrecording gage read once daily, Datum of gage is 4,201.5 ft above mean sea level (levels by Lake Hemet Municipal Water District).

EXTREMES.--Current year: Maximum contents observed, 13,879 acre-ft Feb. 25 (elevation, 4,337.58 ft); minimum, 6,340 acre-ft Nov. 8-15 (elevation, 4,315.92 ft).

Period of record: Maximum contents, 13,879 acre-ft Feb. 25, 1969 (elevation, 4,337.88 ft); minimum, 264 acre-ft Nov. 19, 1962, Nov. 19, 1963 (elevation, 4,266.9 ft).

REMARKS.--Lake is formed by single-arch dam. Dam was completed to a height of 110 ft in 1893; raised to 122.5 ft in 1895, and to 135 ft in 1923. Capacity table is dated February 1932 (furnished by Lake Hemet Municipal Water District). Lowest sluice gate silted (elevation, 4,222.6 ft). Capacity below spillway level (elevation, 4,333.0 ft), 11,882 acre-ft. Water is released from lake to South Fork San Jacinto River for domestic use and irrigation in the Hemet-San Jacinto Valley. See schematic diagram of Santa Ana River basin.

COOPERATION.--Elevations furnished by Lake Hemet Municipal Water District.

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	4,317.00	6,615	-
Oct. 31.....	4,316.08	6,380	-235
Nov. 30.....	4,316.08	6,380	0
Dec. 31.....	4,316.75	6,550	+170
CAL YR 1968.....	-	-	-378
Jan. 31.....	4,327.33	9,690	+3,140
Feb. 28.....	4,336.00	13,180	+3,490
Mar. 31.....	4,334.83	12,670	-510
Apr. 30.....	4,336.58	13,430	+760
May 31.....	4,336.50	13,400	-30
June 30.....	4,336.50	13,400	0
July 31.....	4,335.67	13,030	-370
Aug. 31.....	4,333.27	12,000	-1,030
Sept. 30.....	4,330.46	10,840	-1,160
WTR YR 1968-69.....	-	-	+4,225

^a Elevation at 0800 hours.

11-0695, SAN JACINTO RIVER NEAR SAN JACINTO, CALIF.

LOCATION.--Lat 33°44'13", long 116°49'33", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.13, T.5 S., R.1 E., Riverside County, on downstream side of right pier of bridge on State Highway 74, 1 mile downstream from North Fork, and 8.2 miles southeast of San Jacinto.

DRAINAGE AREA.--141 sq mi.

PERIOD OF RECORD.--October 1920 to February 1927, March 1927 to current year; combined records of river and diversions, October 1948 to current year. Monthly discharge only for October 1920 and July to September 1926, published in WSP 1315-B.

GAGE.--Water-stage recorder on river; water-stage recorder on lower canal; water-stage recorder on upper canal; nonrecording gage on pipeline. Datum of gage is 1,982.75 ft above mean sea level (Corps of Engineers bench mark). See WSP 1735 for history of gage changes prior to Jan. 23, 1948.

AVERAGE DISCHARGE (River only).--48 years (1920-26, 1927-69), 18.0 cfs (13,040 acre-ft per year); median of yearly mean discharges, 6.0 cfs (4,300 acre-ft per year).

(Combined).--21 years (1948-69), 20.4 cfs (14,780 acre-ft per year); median of yearly mean discharges, 9.5 cfs (6,900 acre-ft per year).

EXTREMES (River only).--Current year: Maximum discharge, 7,410 cfs Jan. 25 (gage height, 10.15 ft), on basis of slope-area measurement of peak flow; no flow for many days.

Period of record: Maximum discharge, 45,000 cfs Feb. 16, 1927, on basis of slope-area measurement of maximum flow; no flow for several months in each year.

(Combined).--Current year: Maximum discharge, 7,420 cfs Jan. 25; minimum daily, 0.5 cfs Dec. 25.

Period of record: Maximum discharge, 7,420 cfs Jan. 25, 1969; no flow at times in 1951, 1952, and 1957.

REMARKS.--Records fair. Flow partly regulated by Lake Hemet (see sta 11-0690). Lake Hemet Municipal Water District's upper and lower canals divert water above station for irrigation. Fairview Land and Water Co.'s pipeline diverts water above station for domestic use. Diversion above station began prior to 1920. See schematic diagram of Santa Ana River basin. For records of combined daily discharge of San Jacinto River and diversions, see following page.

COOPERATION.--Records of Fairview Land and Water Co.'s pipeline furnished by Lake Hemet Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NCV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.03	0	0	82	513	198	106	55	.62	.04	.02
2	0	.04	0	0	75	389	160	104	52	.44	.03	.01
3	0	.04	0	0	67	318	192	104	48	.32	.03	.01
4	0	.04	0	0	65	262	180	108	47	.54	.03	.01
5	0	.04	0	0	78	223	178	108	45	.49	.03	.01
6	0	.04	0	0	193	172	228	124	44	.32	.03	.02
7	.01	.04	0	0	130	160	180	122	42	.22	.03	.02
8	.01	.03	0	0	87	152	175	116	41	.19	.03	.01
9	.01	.03	0	0	73	150	170	100	45	.17	.03	.01
10	.02	.04	0	0	72	172	152	102	47	.17	.02	.01
11	.02	.04	0	0	72	216	150	98	47	.17	.02	.01
12	.02	.04	0	0	70	204	152	96	43	.19	.02	.01
13	.02	.04	0	0	69	198	155	88	38	.17	.02	.01
14	.02	.03	0	116	66	186	158	82	36	.17	.02	.01
15	.02	.05	0	60	66	178	148	82	35	.15	.02	.04
16	.02	.04	0	15	66	175	142	80	17	.15	.02	.03
17	.02	.04	0	4.0	63	178	138	76	8.5	.19	.02	.03
18	.02	.04	0	1.4	67	186	132	76	7.8	.22	.02	.02
19	.02	.04	0	27	69	201	124	76	7.2	.17	.02	.02
20	.02	.04	0	88	68	204	124	76	6.9	.17	.02	.03
21	.01	.04	0	405	70	219	122	76	6.6	.13	.02	.03
22	.01	.04	0	183	72	207	122	76	5.7	.13	.02	.02
23	.02	.04	0	62	73	195	118	76	4.8	.13	.02	.02
24	.02	.04	0	813	590	195	114	76	3.8	.13	.02	.01
25	.03	.04	0	3,060	2,380	183	112	73	3.1	.11	.02	.01
26	.02	.01	0	1,130	1,880	175	110	72	2.5	.11	.02	.01
27	.02	0	0	553	937	183	110	69	2.0	.11	.02	.01
28	.02	0	0	259	670	195	108	69	1.5	.11	.02	.01
29	.01	0	0	152	-----	201	108	66	1.1	.06	.02	.01
30	.01	0	0	114	-----	213	106	60	.90	.05	.02	.01
31	.03	-----	0	94	-----	222	-----	55	-----	.05	.02	-----
TOTAL	0.45	0.98	0	7,136.4	8,270	6,625	4,366	2,692	744.40	6.35	0.72	0.48
MEAN	.015	.033	0	230	295	214	146	86.8	24.8	.20	.023	.016
MAX	.03	.05	0	3,060	2,380	513	228	124	55	.62	.04	.04
MIN	0	0	0	0	63	150	106	55	.90	.05	.02	.01
AC-FT	.9	1.9	0	14,150	16,400	13,140	8,660	5,340	1,480	13	1.4	1.0
CAL YR 1968	TOTAL	445.03	MEAN	1.22	MAX	39	MIN	0	AC-FT	883		
WTR YR 1969	TOTAL	29,842.78	MEAN	81.8	MAX	3,060	MIN	0	AC-FT	59,190		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	1400	4.88	296	2-6	1800	4.92	388
1-21	1900	6.02	872	2-26	2200	8.50	4,080
1-25	1300	10.15	7,410				

SANTA ANA RIVER BASIN

11-0695. SAN JACINTO RIVER NEAR SAN JACINTO, CALIF.--Continued

Combined discharge, in cubic feet per second, of San Jacinto River,
 Lake Hemet Water Co.'s upper and lower canals, and Fairview Land and
 Water Co.'s pipeline, near San Jacinto, Calif., water year October 1968 to September 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.6	.91	.89	98	516	218	151	76	26	18	20
2	4.0	3.5	1.1	.92	91	391	180	149	74	24	17	21
3	4.0	3.4	1.4	1.2	81	320	211	149	68	22	17	20
4	3.8	3.6	1.3	2.0	76	265	206	153	67	21	18	21
5	3.7	3.6	1.2	3.2	93	225	206	153	74	20	19	21
6	3.3	3.5	1.1	2.5	212	174	256	166	80	20	22	21
7	3.5	3.4	1.1	2.8	152	163	210	160	77	20	21	18
8	3.7	2.8	1.0	2.8	109	155	208	154	76	19	22	18
9	3.6	2.9	1.0	2.6	94	153	203	138	71	17	22	19
10	3.6	2.8	1.0	2.3	92	175	184	139	69	20	22	19
11	3.9	3.3	1.1	2.8	92	219	187	139	69	20	22	19
12	3.9	3.6	1.2	2.0	89	207	192	137	75	21	22	19
13	3.8	3.8	1.1	1.5	87	201	195	124	69	21	22	19
14	4.2	3.8	1.2	128	81	189	198	118	66	19	22	20
15	3.7	6.0	1.3	72	81	181	187	120	62	18	22	22
16	3.2	4.8	1.6	23	82	178	180	124	46	18	21	23
17	3.1	2.1	2.0	13	76	181	176	119	39	18	22	22
18	3.5	1.5	1.6	9.2	83	189	170	119	39	19	22	21
19	3.7	1.1	1.5	34	86	204	161	116	38	20	24	21
20	3.1	.98	2.3	97	84	207	161	116	38	24	24	20
21	3.0	.87	1.6	413	92	222	162	117	38	24	24	17
22	3.0	.80	1.7	199	94	210	165	117	36	23	24	17
23	3.0	.77	1.3	88	90	198	162	116	35	22	24	16
24	3.0	.74	.73	830	601	198	159	114	34	21	21	16
25	3.2	.84	.50	3,070	2,380	194	156	109	38	20	18	16
26	3.1	.80	3.6	1,150	1,880	197	154	106	39	20	18	16
27	3.1	.81	3.2	568	938	205	153	99	37	14	18	16
28	3.3	.87	1.4	275	672	217	152	92	34	24	19	16
29	3.4	.87	.99	170	-----	223	154	89	28	21	18	15
30	4.0	.83	.94	131	-----	234	152	82	27	23	18	15
31	3.6	-----	.89	110	-----	242	-----	77	-----	20	18	-----
TOTAL	108.9	72.28	42.86	7,407.71	8,686	6,833	5,458	3,862	1,619	639	641	564
MEAN	3.51	2.41	1.38	239	310	220	182	125	54.0	20.6	20.7	18.8
MAX	4.2	6.0	3.6	3,070	2,380	516	256	166	80	26	24	23
MIN	3.0	.74	.50	.89	76	153	152	77	27	14	17	15
AC-FT	216	143	85	14,690	17,230	13,550	10,830	7,660	3,210	1,270	1,270	1,120
CAL YR 1968	TOTAL	3,279.54	MEAN	8.96	MAX	63	MIN	.50	AC-FT	6,500		
WTR YR 1969	TOTAL	35,933.75	MEAN	98.4	MAX	3,070	MIN	.50	AC-FT	71,270		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	1400	-	313	2-6	1800	-	409
1-21	1900	-	881	2-26	2200	-	4,080
1-25	1300	-	7,420				

SANTA ANA RIVER BASIN

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11-0700. BAUTISTA CREEK NEAR HEMET, CALIF.

LOCATION.--Lat 33°41'40", long 116°51'00", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.35, T.5 S., R.1 E., Riverside County, on left bank 0.2 mile upstream from unnamed tributary, 6 miles upstream from mouth, and 8 miles southeast of Hemet.

DRAINAGE AREA.--39.4 sq mi.

PERIOD OF RECORD.--October 1947 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,250 ft (from topographic map).

AVERAGE DISCHARGE.--22 years, 0.570 cfs (413 acre-ft per year); median of yearly mean discharges, 0.02 cfs (14 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 650 cfs Feb. 25 (gage height, 5.38 ft), from rating curve extended above slope-area measurement at gage height 4.98 ft; no flow for most of year.
Period of record: Maximum discharge, 1,440 cfs Apr. 3, 1958 (gage height, 4.65 ft); no flow for most of each year.

REMARKS.--Records fair. No regulation above station. One diversion above station for irrigation of about 15 acres. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	7.6	0	0	0	0	0	0
2	0	0	0	0	0	6.6	0	0	0	0	0	0
3	0	0	0	0	0	6.0	0	0	0	0	0	0
4	0	0	0	0	0	5.4	0	0	0	0	0	0
5	0	0	0	0	.40	4.5	0	0	0	0	0	0
6	0	0	0	0	53	3.5	0	0	0	0	0	0
7	0	0	0	0	8.8	2.5	0	0	0	0	0	0
8	0	0	0	0	.20	1.5	0	0	0	0	0	0
9	0	0	0	0	.10	1.0	0	0	0	0	0	0
10	0	0	0	0	0	.70	0	0	0	0	0	0
11	0	0	0	0	0	.40	0	0	0	0	0	0
12	0	0	0	0	0	.20	0	0	0	0	0	0
13	0	0	0	0	0	.10	0	0	0	0	0	0
14	0	0	0	0	0	.05	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	.10	0	0	0	0	0	0	0
19	0	0	0	0	1.0	0	0	0	0	0	0	0
20	0	0	0	0	1.4	0	0	0	0	0	0	0
21	0	0	0	.80	1.6	0	0	0	0	0	0	0
22	0	0	0	.10	4.4	0	0	0	0	0	0	0
23	0	0	0	0	14	0	0	0	0	0	0	0
24	0	0	0	1.4	115	0	0	0	0	0	0	0
25	0	0	0	102	249	0	0	0	0	0	0	0
26	0	0	0	7.0	163	0	0	0	0	0	0	0
27	0	0	0	.60	22	0	0	0	0	0	0	0
28	0	0	0	.40	11	0	0	0	0	0	0	0
29	0	0	0	.20	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	112.50	645.00	40.05	0	0	0	0	0	0
MEAN	0	0	0	3.63	23.0	1.29	0	0	0	0	0	0
MAX	0	0	0	102	249	7.6	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	223	1,280	79	0	0	0	0	0	0
CAL YR 1968	TOTAL	1.50		MEAN	.004	MAX	1.1	MIN	0	AC-FT	3.0	
WTR YR 1969	TOTAL	797.55		MEAN	2.19	MAX	249	MIN	0	AC-FT	1,580	

PEAK DISCHARGE (BASE, 20 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-25	1400	4.98	473	2-25	2300	5.38	650
2-6	1800	4.16	181				

SANTA ANA RIVER BASIN

11-0705, SAN JACINTO RIVER NEAR ELSINORE, CALIF.

LOCATION.--Lat 33°39'51", long 117°17'35", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.9, T.6 S., R.4 W., Riverside County, on right bank 2 miles east of Elsinore, and 2.1 miles downstream from Railroad Canyon Dam.

DRAINAGE AREA.--728 sq mi.

PERIOD OF RECORD.--January 1916 to current year. Monthly figures 1927-50, adjusted for diversion, published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 1,270 ft (from topographic map). Prior to Feb. 13, 1916, nonrecording gage at site 0.7 mile downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, nonrecording gage at present site at different datum.

EXTREMES.--Current year: Maximum discharge, 6,260 cfs Feb. 25 (gage height, 9.48 ft), from rating curve extended above 2,820 cfs; no flow for most of year.

Period of record: Maximum discharge, 16,000 cfs Feb. 17, 1927 (gage height, 11.8 ft), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow for several months in most years.

REMARKS.--Records good. Flow partly regulated by Lake Hemet (see sta 11-0690) and regulated since 1928 by Railroad Canyon Reservoir (capacity, 12,000 acre-ft) 2.1 miles above station. Diversion for irrigation and domestic use above Railroad Canyon Reservoir. Temescal Water Co. diverted 264 acre-ft during year from Railroad Canyon Reservoir for irrigation below station in vicinity of Corona. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	8.9	1,730	103	.13	0	0	0	0
2	0	0	0	1.4	8.6	896	81	.10	0	0	0	0
3	0	0	0	1.5	8.3	550	74	.09	0	0	0	0
4	0	0	0	1.6	8.3	510	96	.10	0	0	0	0
5	0	0	0	1.6	10	386	108	.10	0	0	0	0
6	0	0	0	1.6	95	310	81	.13	0	0	0	0
7	0	0	0	1.6	288	187	71	.13	0	0	0	0
8	0	0	0	1.7	278	205	72	.13	0	0	0	0
9	0	0	0	1.7	273	190	72	.10	0	0	0	0
10	0	0	0	1.8	203	175	72	.10	0	0	0	0
11	0	0	0	1.8	79	170	72	.09	0	0	0	0
12	0	0	0	2.0	13	168	49	.08	0	0	0	0
13	0	0	0	2.0	12	168	41	.08	0	0	0	0
14	0	0	0	1.8	12	170	40	.08	0	0	0	0
15	0	0	0	1.7	12	170	40	.08	0	0	0	0
16	0	0	0	1.6	12	170	40	.08	0	0	0	0
17	0	0	0	1.6	11	170	40	.08	0	0	0	0
18	0	0	0	1.7	13	170	39	.04	0	0	0	0
19	0	0	0	1.8	13	187	38	0	0	0	0	0
20	0	0	0	1.8	12	202	31	0	0	0	0	0
21	0	0	0	3.1	10	202	1.3	0	0	0	0	0
22	0	0	0	1.7	12	193	.41	0	0	0	0	0
23	0	0	0	1.6	290	165	.60	0	0	0	0	0
24	0	0	0	2.1	2,190	133	.29	0	0	0	0	0
25	0	0	0	29	4,900	76	.20	0	0	0	0	0
26	0	0	0	238	4,230	109	.17	0	0	0	0	0
27	0	0	0	466	2,720	93	.15	0	0	0	0	0
28	0	0	0	424	2,560	73	.15	0	0	0	0	0
29	0	0	0	248	-----	110	.15	0	0	0	0	0
30	0	0	0	50	-----	110	.13	0	0	0	0	0
31	0	-----	0	10	-----	110	-----	0	-----	0	0	-----
TOTAL	0	0	0	1,505.8	18,282.1	8,258	1,263.55	1.72	0	0	0	0
MEAN	0	0	0	48.6	653	266	42.1	.056	0	0	0	0
MAX	0	0	0	466	4,900	1,730	108	.13	0	0	0	0
MIN	0	0	0	0	8.3	73	.13	0	0	0	0	0
AC-FT	0	0	0	2,990	36,260	16,380	2,510	3.4	0	0	0	0
CAL YR 1968	TOTAL	33.20	MEAN	.091	MAX	5.4	MIN	0	AC-FT	66		
WTR YR 1969	TOTAL	29,311.17	MEAN	80.3	MAX	4,900	MIN	0	AC-FT	58,140		

11-0720. TEMESCAL CREEK NEAR CORONA, CALIF.

LOCATION.--Lat 33°50'29", long 117°30'37", in El Sobrante de San Jacinto Grant, Riverside County, on right bank 0.2 mile downstream from unnamed tributary, and 3.8 miles southeast of Corona.

DRAINAGE AREA.--164 sq mi, not including 768 sq mi above Elsinore Lake.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for the period October 1928 to January 1929, published in WSP 1315-B.

GAGE.--Water-stage recorder and incomplete masonry-dam control (ineffective due to sand fill). Altitude of gage is 730 ft (from topographic map). Prior to Feb. 11, 1943, at datum 6.00 ft higher.

AVERAGE DISCHARGE.--42 years, 3.62 cfs (2,620 acre-ft per year); median of yearly mean discharges, 0.08 cfs (58 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,800 cfs Feb. 25 (gage height, 15.0 ft, from floodmarks), from rating curve extended above 1,000 cfs; no flow for much of year.

Period of record: Maximum discharge, 14,900 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow at times in most years.

REMARKS.--Records poor. Flow regulated by several storage reservoirs. Many diversions above station for irrigation. See schematic diagram for Santa Ana River basin. Records of chemical analyses for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	3.0	400	44	49	32	17	4.4	3.1
2	0	0	0	0	2.2	280	90	49	32	17	4.3	3.1
3	0	0	0	0	2.0	200	60	49	31	18	4.2	3.1
4	0	0	0	0	1.9	140	46	48	31	18	4.1	3.1
5	0	0	0	0	1.8	120	45	48	31	17	4.2	3.1
6	0	0	0	0	90	115	100	70	31	16	5.0	3.1
7	0	0	0	0	25	110	60	43	32	14	6.1	3.1
8	0	0	0	0	8.0	107	56	39	33	12	5.9	3.1
9	0	0	0	0	5.5	106	53	35	34	10	5.7	3.1
10	0	0	0	0	4.1	105	52	33	35	9.5	5.5	3.1
11	0	0	0	0	3.6	103	51	31	36	9.4	5.3	3.1
12	0	0	0	0	3.3	100	51	30	36	9.1	5.1	3.0
13	0	0	0	0	3.1	95	51	29	35	9.2	5.0	3.0
14	0	0	0	3.6	2.9	90	51	28	32	10	4.8	3.0
15	0	0	0	0	2.7	81	51	28	28	13	4.6	2.9
16	0	0	0	0	2.6	73	51	28	24	10	4.4	2.9
17	0	0	0	0	2.5	66	50	29	21	9.0	4.2	2.9
18	0	0	0	.70	2.5	61	50	29	20	8.4	4.0	2.9
19	0	0	0	1.2	3.2	58	50	29	19	7.9	3.8	3.0
20	0	0	0	2.3	2.7	55	50	30	18	7.3	3.6	3.0
21	0	0	0	38	2.5	54	50	31	17	7.0	3.4	3.1
22	0	0	0	3.0	10	52	50	32	16	6.7	3.4	3.1
23	0	0	0	0	90	51	50	32	15	6.4	3.4	3.1
24	0	0	0	257	400	49	50	33	14	6.3	3.4	3.4
25	0	0	1.7	810	2,500	47	50	34	14	6.2	3.4	3.8
26	0	0	1.2	150	1,500	46	49	35	14	5.8	3.3	3.0
27	0	0	0	50	900	45	49	36	15	5.4	3.3	2.7
28	0	0	0	20	600	45	49	35	15	5.1	3.3	2.5
29	0	0	0	10	-----	45	49	35	16	4.9	3.3	2.3
30	0	0	0	6.0	-----	44	49	34	16	4.7	3.2	2.2
31	0	-----	0	4.0	-----	44	-----	33	-----	4.5	3.2	-----
TOTAL	0	0	2.9	1,355.80	6,175.1	2,987	1,607	1,124	743	304.8	130.8	89.9
MEAN	0	0	.094	43.7	221	96.4	53.6	36.3	24.8	9.83	4.22	3.00
MAX	0	0	1.7	810	2,500	400	100	70	36	18	6.1	3.8
MIN	0	0	0	0	1.8	44	44	28	14	4.5	3.2	2.2
AC-FT	0	0	5.8	2,690	12,250	5,920	3,190	2,230	1,470	605	259	178

CAL YR 1968 TOTAL 382.60 MEAN 1.05 MAX 147 MIN 0 AC-FT 759
WTR YR 1969 TOTAL 14,520.30 MEAN 39.8 MAX 2,500 MIN 0 AC-FT 28,800

NOTE.--No gage-height record Jan. 26 to Sept. 30.

SANTA ANA RIVER BASIN

11-0722. TEMESCAL CREEK AT CORONA, CALIF.

LOCATION.--Lat 33°53'46", long 117°34'50", in La Sierra Grant, Riverside County, on right bank 0.25 mile downstream from Lincoln Avenue, and 1.0 mile northwest of Corona.

DRAINAGE AREA.--249 sq mi (not including 768 sq mi above Lake Elsinore).

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

GAGE.--Water-stage recorder. Altitude of gage is 550 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 8,850 cfs Feb. 25 (gage height, 8.17 ft, from floodmark), on basis of slope-area measurement of maximum flow; no flow for much of year.

Period of record: Maximum discharge, 8,850 cfs Feb. 25, 1969 (gage height, 8.17 ft, from floodmark), on basis of slope-area measurement of maximum flow; no flow at times in each year.

Flood of Mar. 2, 1938, 14,900 cfs, result of slope-area measurement at site 3 miles upstream.

REMARKS.--Records good prior to Feb. 24 and poor thereafter. Flow regulated by Lake Elsinore and several storage reservoirs. Many diversions for irrigation. Prior to July 22, 1968, effluent from city of Corona disposal plant was released to creek at site 0.5 mile upstream. Records of chemical analyses for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	2.0	250	7.4	3.7	.10	0	0	0
2	0	0	0	0	1.5	165	25	3.6	.10	0	0	0
3	0	0	0	0	1.2	120	15	3.5	.05	0	0	0
4	0	0	0	0	1.0	90	11	3.4	.05	0	0	0
5	.05	.02	0	0	6.3	72	10	3.3	.10	0	0	0
6	0	0	0	0	174	55	80	3.2	.20	0	0	0
7	.06	0	0	0	29	45	35	3.1	.20	0	0	0
8	0	0	0	0	4.0	40	20	2.0	.20	0	0	0
9	0	0	0	0	2.0	36	16	1.0	.10	0	0	0
10	0	0	0	0	.75	32	14	.50	.13	0	0	0
11	0	0	0	0	0	28	12	.30	.12	0	0	0
12	.01	0	0	0	.46	26	10	.22	.14	0	0	0
13	.07	0	0	5.0	.20	23	9.0	.20	.11	0	0	0
14	.02	0	0	35	.96	20	8.1	.20	.09	0	0	0
15	0	3.0	0	0	3.1	15	7.3	.20	.42	0	0	0
16	0	.51	0	0	.58	11	6.6	.20	.20	0	0	0
17	0	0	0	0	.12	8.8	6.0	.20	.18	0	0	0
18	0	0	0	11	3.9	8.4	5.7	.20	.29	0	0	0
19	0	0	0	20	3.8	8.2	5.4	.20	.17	0	0	0
20	0	0	1.8	36	1.8	8.0	5.2	.20	.19	0	0	0
21	0	0	0	100	.97	8.0	5.0	.20	.19	0	0	0
22	0	0	.15	.04	21	8.0	4.8	.19	.24	0	0	0
23	0	0	.08	1.2	205	8.0	4.7	.19	.78	0	0	0
24	0	0	.02	207	600	8.0	4.6	.19	.35	0	0	0
25	0	0	6.8	1,010	3,000	7.8	4.5	.11	0	0	0	0
26	.03	0	12	95	1,500	7.7	4.3	.05	0	0	0	0
27	.02	0	0	22	600	7.6	4.2	0	0	0	0	0
28	0	0	0	18	400	7.6	4.0	0	0	0	0	0
29	0	0	0	10	-----	7.5	3.9	0	0	0	0	0
30	0	0	0	5.0	-----	7.4	3.8	0	0	0	0	0
31	0	-----	0	3.0	-----	7.4	-----	.10	-----	0	0	-----
TOTAL	0.26	3.53	20.85	1,578.24	6,563.64	1,146.4	352.5	30.45	4.70	0	0	0
MEAN	.008	.12	.67	50.9	234	37.0	11.8	.98	.16	0	0	0
MAX	.07	3.0	12	1,010	3,000	250	80	3.7	.78	0	0	0
MIN	0	0	0	0	0	7.4	3.8	0	0	0	0	0
AC-FT	.5	7.0	41	3,130	13,020	2,270	699	60	9.3	0	0	0

CAL YR 1968 TOTAL 927.04 MEAN 2.53 MAX 221 MIN 0 AC-FT 1,840
WTR YR 1969 TOTAL 9,700.57 MEAN 26.6 MAX 3,000 MIN 0 AC-FT 19,240

NOTE.--No gage-height record Feb. 24 to June 5.

11-0730. SAN ANTONIO CREEK NEAR CLAREMONT, CALIF.

LOCATION.--Lat 34°12'58", long 117°40'04", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.36, T.2 N., R.8 W., Los Angeles County, on right bank 0.5 mile upstream from Southern California Edison Co.'s Sierra powerplant, and 8.8 miles northeast of Claremont.

DRAINAGE AREA.--16.5 sq mi.

PERIOD OF RECORD.--January 1917 to current year; combined records of creek and conduit, March 1901 to December 1916 (fragmentary, published as "near Upland"), January 1917 to current year.

GAGE.--Water-stage recorder; broad-crested weir since January 1939 on creek; water-stage recorder and sharp-crested weir on conduit; water-stage recorder and combination rectangular V-notch weir on river pickup. Datum of gage is 3,397 ft above mean sea level. For history of gage changes prior to Jan. 9, 1939, see WSP 1315-B.

AVERAGE DISCHARGE (Creek only).--52 years (1917-69), 12.3 cfs (8,910 acre-ft per year); median of yearly mean discharges, 2.4 cfs (1,700 acre-ft per year).
(Combined).--64 years (1901-2, 1903-4, 1905-9, 1910-15, 1916-69), 25.3 cfs (18,330 acre-ft per year); median of yearly mean discharges, 16 cfs (11,600 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 16,400 cfs Jan. 25 (gage height, 11.13 ft), from rating curve extended above 150 cfs on basis of slope-area measurements at 5.68 and 11.13 ft; minimum daily, 0.34 cfs Dec. 24.

Period of record: Maximum discharge, 21,400 cfs Mar. 2, 1938, on basis of slope-area measurement and rainfall-runoff studies; no flow Aug. 24-27, 31, Sept. 1, Oct. 17-21, 1951.

(Combined).--Current year: Maximum discharge, 16,400 cfs Jan. 25; minimum daily, 0.73 cfs Nov. 21.

Period of record: Maximum discharge, 21,400 cfs Mar. 2, 1938; minimum daily, 0.30 cfs Dec. 8-19, 1954, Dec. 12-17, 1963.

REMARKS.--Records fair. No regulation above station. See schematic diagram of Santa Ana River basin. For records of combined discharge of San Antonio Creek and Southern California Edison Co.'s Sierra conduit, which diverts from site 0.5 mile above station, see following page.

COOPERATION.--Water-stage recorder graph for conduit and records of river pickup furnished by Southern California Edison Co.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.68	.69	.7	373	375	152	110	92	37	29	24
2	.74	.64	.74	.8	335	343	159	109	91	37	30	24
3	.75	.61	.75	.7	304	331	169	109	90	37	30	24
4	.76	.61	.72	.6	271	316	158	108	88	36	30	24
5	.75	.61	.69	.6	241	282	161	108	85	36	29	23
6	.67	.62	.71	.6	364	248	159	108	83	35	29	22
7	.69	.60	.68	.6	343	228	150	107	81	35	29	21
8	.66	.56	.66	.6	261	204	147	107	78	35	27	21
9	.65	.56	.61	.6	201	190	144	106	75	34	29	21
10	.65	.46	.64	.6	164	179	141	106	73	34	29	21
11	.62	.49	.66	.7	138	164	139	105	71	34	28	21
12	.62	.55	.68	.8	133	152	137	104	68	33	29	20
13	.57	.60	.65	.9	131	138	135	103	64	33	29	20
14	.62	.63	.61	1.3	128	126	133	103	62	32	29	20
15	.66	.82	.58	1.0	128	118	131	102	59	31	29	19
16	.62	.76	.63	.8	128	118	129	102	57	31	29	19
17	.57	.82	.63	.6	126	116	127	102	55	31	29	19
18	.53	.78	.59	.6	126	116	124	102	52	30	29	19
19	.51	.70	.54	1.8	124	116	121	101	50	30	28	18
20	.52	.78	.56	15	124	116	119	101	48	30	28	18
21	.51	.73	.48	663	124	116	118	100	46	30	27	18
22	.49	.74	.39	440	122	116	117	100	45	30	27	17
23	.51	.67	.36	300	174	116	116	99	43	29	26	17
24	.56	.63	.34	500	450	116	115	99	42	29	26	17
25	.56	.68	.95	4,430	2,070	113	115	98	41	29	26	17
26	.54	.62	1.5	2,400	814	116	114	98	41	32	26	17
27	.48	.59	1.1	1,480	713	118	113	97	40	32	25	17
28	.51	.62	.97	530	425	115	112	97	39	30	25	16
29	.50	.67	.86	440	-----	114	111	96	39	30	25	16
30	.59	.68	.80	412	-----	118	110	95	38	30	25	15
31	.63	-----	.75	404	-----	136	-----	94	-----	30	25	-----
TOTAL	18.66	19.51	21.52	12,028.9	9,035	5,270	3,976	3,176	1,836	1,002	861	585
MEAN	.60	.65	.69	388	323	170	133	102	61.2	32.3	27.8	19.5
MAX	.76	.82	1.5	4,430	2,070	375	169	110	92	37	30	24
MIN	.48	.46	.34	.60	122	113	110	94	38	29	25	15
AC-FT	37	39	43	23,860	17,920	10,450	7,890	6,300	3,640	1,990	1,710	1,160
CAL YR 1968	TOTAL	4,297.69	MEAN	11.7	MAX	43	MIN	.34	AC-FT	8,520		
WTR YR 1969	TOTAL	37,829.59	MEAN	104	MAX	4,430	MIN	.34	AC-FT	75,030		

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0900	4.43	2,270	2-25	1000	6.04	4,560
1-25	1115	11.13	16,400	4- 3	0045	1.52	193
2- 6	1700	2.47	412				

NOTE.--No gage-height record Apr. 8 to July 25.

SANTA ANA RIVER BASIN

11-0730. SAN ANTONIO CREEK NEAR CLAREMONT, CALIF.--Continued

Combined discharge, in cubic feet per second, of San Antonio Creek and Southern California Edison Co.'s
Sierra conduit near Claremont, Calif., water year October 1968 to September 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	9.7	9.1	9.1	373	375	152	110	92	37	29	24
2	9.9	9.3	9.1	9.2	335	343	159	109	91	37	30	24
3	10	9.3	9.2	9.1	304	331	169	109	90	37	30	24
4	10	9.3	9.1	9.0	271	316	158	108	88	36	30	24
5	10	9.3	9.1	9.0	241	282	161	108	85	36	29	23
6	9.9	9.3	9.1	9.0	364	248	159	108	83	35	29	22
7	9.9	9.3	9.1	9.0	343	228	150	107	81	35	29	21
8	9.9	9.3	9.1	9.0	261	204	147	107	78	35	27	21
9	9.6	9.3	9.0	9.0	201	190	144	106	75	34	29	21
10	9.6	9.2	9.0	9.0	164	179	141	106	73	34	29	21
11	9.5	9.2	8.7	9.1	138	164	139	105	71	34	28	21
12	9.8	9.2	8.7	9.2	133	152	137	104	68	33	29	20
13	9.8	9.2	8.6	9.3	131	138	135	103	64	33	29	20
14	9.8	9.3	8.6	11	128	126	133	103	62	32	29	20
15	9.9	10	8.6	11	128	118	131	102	59	31	29	19
16	9.6	9.5	8.6	11	128	118	129	102	57	31	29	19
17	9.6	9.5	8.6	11	126	116	127	102	55	31	29	19
18	9.5	9.5	8.6	11	126	116	124	102	52	30	29	19
19	9.5	8.9	8.5	17	124	116	121	101	50	30	28	18
20	9.5	1.9	8.6	37	124	116	119	101	48	30	28	18
21	9.5	.73	8.5	685	124	116	118	100	46	30	27	18
22	9.5	2.3	8.4	462	122	116	117	100	45	30	27	17
23	9.5	9.1	8.4	322	174	116	116	99	43	29	26	17
24	9.6	9.0	8.3	522	450	116	115	99	42	29	26	17
25	9.6	9.1	10	4,430	2,070	113	115	98	41	29	26	17
26	9.5	9.0	11	2,400	814	116	114	98	41	32	26	17
27	9.5	9.0	10	1,480	713	118	113	97	40	32	25	17
28	9.5	9.0	9.7	530	425	115	112	97	39	30	25	16
29	9.5	9.1	9.3	440	-----	114	111	96	39	30	25	16
30	9.6	9.1	9.2	412	-----	118	110	95	38	30	25	15
31	9.6	-----	9.2	404	-----	136	-----	94	-----	30	25	-----
TOTAL	300.0	254.93	279.0	12,314.0	9,035	5,270	3,976	3,176	1,836	1,002	861	585
MEAN	9.68	8.50	9.00	397	323	170	133	102	61.2	32.3	27.8	19.5
MAX	10	10	11	4,430	2,070	375	169	110	92	37	30	24
MIN	9.5	.73	8.3	9.0	122	113	110	94	38	29	25	15
AC-FT	595	506	553	24,420	17,920	10,450	7,890	6,300	3,640	1,990	1,710	1,160

CAL YR 1968 TOTAL 5,071.93 MEAN 13.9 MAX 43 MIN .73 AC-FT 10,060
WTR YR 1969 TOTAL 38,888.93 MEAN 107 MAX 4,430 MIN .73 AC-FT 77,130

Peak discharge (base, 50 cfs).--Same as those listed on previous page.

11-0732. SAN ANTONIO CREEK BELOW SAN ANTONIO DAM, CALIF.

LOCATION.--Lat 34°09'26", long 117°40'50", in NE¼NE¼SE¼ sec.23, T.1 N., R.8 W., Los Angeles-San Bernardino County line, on left wall of outlet channel at toe of San Antonio Dam, and 4.7 miles northeast of Claremont.

DRAINAGE AREA.--26.9 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 2,093.94 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--7 years, 15.8 cfs (11,440 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,420 cfs Jan. 25 (gage height, 11.22 ft), from rating curve extended as explained below; no flow Oct. 1 to Jan. 18, July 10 to Sept. 30.

Period of record: Maximum discharge, 8,420 cfs Jan. 25, 1969 (gage height, 11.22 ft), from rating curve extended above 400 cfs on basis of gate openings at dam; no flow for most of each year.

REMARKS.--Records good. Flow regulated by San Antonio flood-control reservoir (capacity, 9,110 acre-ft). Water diverted out of basin for power, domestic use, and irrigation. See schematic diagram for Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	138	452	112	54	63	7.5	0	0
2	0	0	0	0	198	350	109	67	50	1.8	0	0
3	0	0	0	0	157	185	89	73	43	1.2	0	0
4	0	0	0	0	160	68	86	76	45	.20	0	0
5	0	0	0	0	476	192	84	78	61	.20	0	0
6	0	0	0	0	284	238	81	78	54	.20	0	0
7	0	0	0	0	56	180	94	78	33	.20	0	0
8	0	0	0	0	54	180	104	76	33	26	0	0
9	0	0	0	0	47	180	97	63	34	.40	0	0
10	0	0	0	0	69	172	94	59	33	0	0	0
11	0	0	0	0	171	120	91	54	31	0	0	0
12	0	0	0	0	196	86	86	54	33	0	0	0
13	0	0	0	0	119	86	86	52	34	0	0	0
14	0	0	0	0	97	86	84	52	28	0	0	0
15	0	0	0	0	94	86	84	52	23	0	0	0
16	0	0	0	0	94	86	84	52	24	0	0	0
17	0	0	0	0	97	86	84	52	24	0	0	0
18	0	0	0	0	101	91	84	47	23	0	0	0
19	0	0	0	.10	97	91	84	42	23	0	0	0
20	0	0	0	.40	94	91	84	40	23	0	0	0
21	0	0	0	11	94	57	84	40	24	0	0	0
22	0	0	0	31	104	45	86	40	24	0	0	0
23	0	0	0	33	107	47	84	43	24	0	0	0
24	0	0	0	353	161	52	86	45	21	0	0	0
25	0	0	0	3,250	3,760	52	91	50	18	0	0	0
26	0	0	0	2,260	1,570	52	94	56	14	0	0	0
27	0	0	0	785	1.5	50	91	59	12	0	0	0
28	0	0	0	689	1,450	63	81	56	11	0	0	0
29	0	0	0	472	-----	73	63	56	9.0	0	0	0
30	0	0	0	375	-----	76	52	59	8.2	0	0	0
31	0	-----	0	223	-----	73	-----	63	-----	0	0	-----
TOTAL	0	0	0	8,432.50	10,046.5	3,746	2,613	1,766	880.2	37.70	0	0
MEAN	0	0	0	272	359	121	87.1	57.0	29.3	1.22	0	0
MAX	0	0	0	3,250	3,760	452	112	78	63	26	0	0
MIN	0	0	0	0	1.5	45	52	40	8.2	0	0	0
AC-FT	0	0	0	16,730	19,930	7,430	5,180	3,500	1,750	75	0	0
CAL YR 1968	TOTAL	59.60	MEAN	.16	MAX	14	MIN	0	AC-FT	118		
WTR YR 1969	TOTAL	27,521.90	MEAN	75.4	MAX	3,760	MIN	0	AC-FT	54,590		

SANTA ANA RIVER BASIN

11-0734.4. CHINO CREEK NEAR CHINO, CALIF.

LOCATION.--Lat 33°56'22", long 117°38'58", in El Rincon Grant, San Bernardino County, on first pier from right bank on downstream side of Euclid Avenue bridge, 5.6 miles southeast of Chino.

DRAINAGE AREA.--107 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 500 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 9,200 cfs Jan. 25 (gage height, 9.3 ft, from floodmark), from rating curve extended as explained below; no flow Oct. 14, Aug. 5.

Period of record: Maximum discharge, 9,200 cfs Jan. 25, 1969 (gage height, 9.3 ft, from floodmark), from rating curve extended above contracted-opening measurement at gage height 8.2 ft; no flow for some days in each year.

REMARKS.--Records good prior to Jan. 24 and poor thereafter. Flow partly regulated by San Antonio flood-control reservoir (capacity, 9,110 acre-ft). Natural streamflow affected by extensive ground-water withdrawals, diversions for power, domestic use, and irrigation, and return flow from irrigated areas. See schematic diagram of Santa Ana River basin. Records of chemical analyses for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	1.1	1.1	1.5	189	651	6.0	5.4	3.2	1.4	.23	.48
2	.43	.61	1.1	1.3	343	543	5.8	5.1	3.3	1.8	.01	.46
3	1.3	.09	.94	1.2	212	238	5.7	4.8	3.3	1.8	.34	.45
4	1.0	.01	1.5	1.2	201	23	5.6	4.6	3.6	1.6	.17	.45
5	1.2	.10	1.5	1.1	708	11	5.6	4.4	3.4	1.4	0	.44
6	1.2	.39	1.1	1.1	601	7.0	5.5	4.2	3.2	1.4	.03	.38
7	.14	1.1	.61	1.4	32	5.0	5.4	3.9	3.2	1.2	.15	.30
8	1.3	.07	.89	1.4	20	8.0	5.6	3.8	3.0	.91	.20	.21
9	1.7	.02	.37	1.4	23	8.6	5.8	3.7	2.8	.70	.21	.15
10	1.8	.77	.09	1.4	83	8.8	6.0	3.6	2.8	1.2	.23	.05
11	1.7	1.2	.52	1.4	246	8.7	6.2	3.8	2.8	1.1	.30	.20
12	1.2	.16	.13	1.4	351	8.6	6.4	4.2	2.7	1.1	.35	.23
13	.07	1.1	.87	7.6	175	8.6	6.7	4.7	2.7	.53	.50	.24
14	0	2.8	1.5	78	35	8.6	6.8	5.2	2.7	.48	.55	.28
15	.74	8.9	.01	3.2	138	8.5	7.0	4.4	2.0	.43	.62	.30
16	1.0	2.6	3.8	1.2	16	8.5	7.4	3.6	1.8	.38	.75	.32
17	1.0	2.0	1.4	1.1	11	8.4	7.7	3.4	1.8	.38	.82	.33
18	1.2	2.1	.13	4.6	75	8.3	8.2	3.2	1.8	.52	.84	.34
19	1.1	2.6	.06	49	58	8.1	8.4	3.0	1.6	.64	.85	.34
20	1.3	2.6	1.1	466	18	7.9	8.7	2.7	1.6	1.0	.80	.35
21	1.3	2.4	.30	315	20	7.6	8.8	3.2	2.0	.64	.72	.36
22	2.3	2.2	.26	47	161	7.4	8.6	3.8	1.8	.20	.66	.37
23	2.4	2.3	.02	16	764	7.2	8.2	3.8	1.6	.34	.61	.50
24	1.8	2.3	.20	1,130	807	7.1	8.0	3.6	1.4	.48	.59	.90
25	2.0	1.9	26	3,680	1,200	7.0	7.6	3.4	1.6	.43	.61	1.3
26	2.0	1.8	20	1,950	938	6.8	7.1	3.4	1.2	.34	.59	1.2
27	1.4	2.0	3.8	983	123	6.6	6.7	3.3	1.8	.30	.56	1.1
28	1.2	1.7	3.2	880	1,170	6.4	6.3	3.0	1.8	.26	.53	1.0
29	1.5	.84	2.8	794	-----	6.3	6.0	3.4	1.6	.15	.52	1.0
30	5.4	.84	1.8	651	-----	6.2	5.7	3.4	1.6	.17	.51	1.0
31	1.1	-----	1.3	472	-----	6.1	-----	3.3	-----	.26	.50	-----
TOTAL	41.83	48.60	78.40	11,544.5	8,718	1,662.3	203.5	119.3	69.7	23.54	14.35	15.03
MEAN	1.35	1.62	2.53	372	311	53.6	6.78	3.85	2.32	.76	.46	.50
MAX	5.4	8.9	26	3,680	1,200	651	8.8	5.4	3.6	1.8	.85	1.3
MIN	0	.01	.01	1.1	11	5.0	5.4	2.7	1.2	.15	0	.05
AC-FT	83	96	156	22,900	17,290	3,300	404	237	138	47	28	30
CAL YR 1968	TOTAL	949.83	MEAN	2.60	MAX	220	MIN	0	AC-FT	1,880		
WTR YR 1969	TOTAL	22,539.05	MEAN	61.8	MAX	3,680	MIN	0	AC-FT	44,710		

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-25	1830	3.94	280	2-6	0400	unknown	2,040
1-14	0200	3.90	270	2-15	2000	unknown	1,130
1-21	1030	5.55	1,660	2-25	unknown	unknown	a2,700
1-25	1300	9.3	9,200				

NOTE.--No gage-height record Jan. 26 to May 13, Aug. 7 to Sept. 30.

a Estimated.

SANTA ANA RIVER BASIN

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11-0734.7. CUCAMONGA CREEK NEAR UPLAND, CALIF.

LOCATION.--Lat 34°10'26", long 117°37'51", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.1 N., R.7 W., San Bernardino County, on right bank 0.5 mile downstream from unnamed tributary, and 5.3 miles north of Upland.

DRAINAGE AREA.--10.1 sq mi.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for October to December 1928, published in WSP 1315-B.

GAGE.--Water-stage recorder. Broad-crested weir since December 1938. Datum of gage is 2,367 ft above mean sea level. See WSP 1735 for history of changes prior to Dec. 13, 1938. Dec. 14, 1938, to Aug. 5, 1969, at same site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--42 years, 8.06 cfs (5,840 acre-ft per year); median of yearly mean discharges, 5.0 cfs (3,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 14,100 cfs Jan. 25 (gage height, 14.44 ft, present datum), from rating curve extended as explained below; minimum daily, 0.45 cfs Nov. 29.

Period of record: Maximum discharge, 14,100 cfs Jan. 25 (gage height, 14.44 ft, present datum), from rating curve extended above 450 cfs on basis of slope-area measurements at gage heights 6.22 and 12.44 ft; minimum daily, 0.30 cfs Oct. 5, 6, 1962.

REMARKS.--Records fair except those for May 6 to Aug. 4, which are poor. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	3.0	5.3	3.3	71	115	55	29	22	15	10	9.9
2	3.0	2.8	5.5	2.8	61	103	54	28	22	15	10	10
3	3.1	3.0	3.3	2.3	55	96	56	28	21	14	10	10
4	3.1	3.7	3.3	2.2	49	92	51	28	21	14	10	10
5	2.8	4.4	3.4	2.3	54	87	53	27	21	14	10	9.8
6	2.5	4.3	3.3	3.0	126	65	52	27	20	14	10	10
7	2.9	4.1	3.1	4.0	74	74	50	27	20	14	10	10
8	3.2	3.7	3.2	3.9	64	69	48	27	20	13	10	9.9
9	3.2	3.1	3.3	3.5	57	65	47	26	20	13	10	9.4
10	3.0	2.5	2.9	3.6	51	64	46	26	20	13	10	9.2
11	3.1	2.7	2.9	3.1	49	59	45	26	19	13	10	9.2
12	2.9	3.1	2.7	2.3	47	55	46	26	19	13	11	9.2
13	2.1	3.4	2.6	2.5	45	51	46	26	19	13	11	9.4
14	2.7	3.0	2.5	15	42	53	44	25	18	13	11	9.8
15	2.9	5.1	2.4	5.6	49	40	44	25	18	12	11	10
16	2.2	3.4	2.3	3.0	46	50	42	25	18	12	10	10
17	1.9	2.3	2.3	2.6	42	49	41	25	18	12	9.7	10
18	2.0	2.0	2.3	4.0	43	49	40	25	17	12	9.4	9.9
19	2.4	1.8	2.4	19	43	54	38	24	17	11	9.2	9.6
20	2.7	1.4	2.6	64	42	55	36	24	17	11	8.8	10
21	2.7	1.3	2.6	304	40	59	36	24	17	11	8.6	10
22	2.6	1.1	2.7	295	42	55	35	24	17	11	8.7	10
23	2.3	1.1	2.7	78	134	52	35	24	17	11	8.7	10
24	2.1	1.0	2.5	116	669	49	35	24	16	11	8.6	10
25	2.1	.99	6.3	4,050	1,410	50	33	24	16	11	8.7	10
26	1.9	1.1	7.6	2,040	501	49	31	24	16	11	8.6	10
27	1.6	1.1	4.9	327	262	48	30	24	15	10	8.6	9.9
28	2.0	.54	1.1	154	138	49	30	23	15	10	8.6	9.9
29	2.2	.45	1.4	110	-----	50	29	23	15	10	8.4	9.8
30	2.9	1.8	3.5	96	-----	51	29	22	15	10	9.1	9.8
31	2.8	-----	3.5	82	-----	54	-----	22	-----	10	9.8	-----
TOTAL	79.7	73.28	100.4	7,804.0	4,306	1,911	1,257	782	546	377	297.5	294.7
MEAN	2.57	2.44	3.24	252	154	61.6	41.9	25.2	18.2	12.2	9.60	9.82
MAX	3.2	5.1	7.6	4,050	1,410	115	56	29	22	15	11	10
MIN	1.6	.45	1.1	2.2	40	40	29	22	15	10	8.4	9.2
AC-FT	158	145	199	15,480	8,540	3,790	2,490	1,550	1,080	748	590	585
CAL YR 1968	TOTAL	1,538.88	MEAN	4.20	MAX	16	MIN	.45	AC-FT	3,050		
WTR YR 1969	TOTAL	17,828.58	MEAN	48.8	MAX	4,050	MIN	.45	AC-FT	35,360		

PEAK DISCHARGE (BASE, 80 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0800	a6.98	946	2-6	0545	a6.27	545
1-25	1030	a14.44	14,100	2-25	0700	a9.51	4,090

NOTE.--No gage-height record Feb. 28 to Mar. 4, May 6 to Aug. 5.

a Present datum.

SANTA ANA RIVER BASIN

11-0734.95. CUCAMONGA CREEK NEAR MIRA LOMA, CALIF.

LOCATION.--Lat 33°58'58", long 117°35'55", in SW¼SW¼NE¼ sec.22, T.2 S., R.7 W., San Bernardino County, on left levee (revised) 200 ft upstream from Merrill Avenue, and 4.6 miles west of Mira Loma.

DRAINAGE AREA.--75.8 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 655.3 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 9,100 cfs Jan. 25 (gage height, 7.08 ft, from floodmark), on basis of slope-area measurement of maximum flow; no flow for most of year.

Period of record: Maximum discharge, 9,100 cfs Jan. 25, 1969 (gage height, 7.08 ft, from floodmark), on basis of slope-area measurement of maximum flow; no flow for most of each year.

REMARKS.--Records poor. Flood flows not materially affected by percolation basins in headwater areas. Extensive ground-water withdrawals for municipal supply and irrigation. See schematic diagram for Santa Ana River basin. Records of chemical analyses for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	5.0	10	1.8	0	0	0	0	0
2	0	0	0	0	4.0	7.0	1.2	0	0	0	0	0
3	0	0	0	0	3.0	6.2	1.0	.10	0	0	0	0
4	0	0	0	0	2.0	5.8	7.0	.20	.04	0	0	0
5	0	0	0	0	1.0	5.4	8.0	.20	.17	0	0	0
6	0	0	0	0	10	5.1	11	.20	.01	0	0	0
7	0	0	0	0	5.0	4.9	12	.29	0	0	0	0
8	0	0	0	0	2.0	4.6	12	.20	0	0	0	0
9	0	0	0	0	1.0	4.3	13	.10	0	0	0	0
10	0	0	0	0	.50	4.1	13	0	0	0	0	0
11	0	0	0	0	.30	3.9	14	0	0	0	0	0
12	0	0	0	0	.20	3.8	15	0	0	0	0	0
13	0	0	0	0	.20	3.7	17	0	0	0	0	0
14	0	0	0	.10	.20	3.6	18	0	0	0	0	0
15	0	0	0	2.5	.20	3.8	20	0	0	0	0	0
16	0	0	0	1.0	.20	4.4	20	0	0	0	0	0
17	0	0	0	.10	.20	5.2	19	0	0	0	0	0
18	0	0	0	.05	.20	6.6	18	0	0	0	0	0
19	0	0	0	.01	.20	9.0	18	0	0	0	0	0
20	0	0	0	10	.20	15	18	0	0	0	0	0
21	0	0	0	50	.20	20	17	.01	0	0	0	0
22	0	0	0	400	10	20	16	.01	0	0	0	0
23	0	0	0	5.0	30	19	16	.08	0	0	0	0
24	0	0	0	45	150	18	16	.04	0	0	0	0
25	0	0	0	2,600	460	16	15	.05	0	0	0	0
26	0	0	0	1,300	100	12	15	.08	0	0	0	0
27	0	0	0	100	50	8.5	14	.15	0	0	0	0
28	0	0	0	50	25	6.0	13	.04	0	0	0	0
29	0	0	2.0	25	-----	4.5	12	.12	0	0	0	0
30	0	0	0	15	-----	3.1	1.0	.05	0	0	0	0
31	0	-----	0	8.0	-----	2.5	-----	0	-----	0	0	-----
TOTAL	0	0	2.0	4,611.76	860.80	246.0	392.0	1.92	0.22	0	0	0
MEAN	0	0	.065	149	30.7	7.94	13.1	.062	.007	0	0	0
MAX	0	0	2.0	2,600	460	20	20	.29	.17	0	0	0
MIN	0	0	0	0	.20	2.5	1.0	0	0	0	0	0
AC-FT	0	0	4.0	9,150	1,710	488	778	3.8	.4	0	0	0

CAL YR 1968	TOTAL	---	MEAN	---	MAX	---	MIN	---	AC-FT	---
WTR YR 1969	TOTAL	6,114.70	MEAN	16.8	MAX	2,600	MIN	0	AC-FT	12,130

PEAK DISCHARGE (BASE, 80 CFS)						
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.
1-22	1430	3.48	1,080	2-6	unknown	unknown
1-25	unknown	7.08	9,100	2-25	unknown	2.72
						1,280

NOTE.--No gage-height record
Dec. 19 to May 21.

11-0740. SANTA ANA RIVER BELOW PRADO DAM, CALIF.

LOCATION.--Lat 33°53'00", long 117°38'40", in La Sierra Grant, Riverside County, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 miles west of Corona.

DRAINAGE AREA.--1,485 sq mi, not including 768 sq mi above Lake Elsinore.

PERIOD OF RECORD.--May 1930 to November 1939 (irrigation seasons only), March 1940 to current year. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.--Water-stage recorder and concrete control since August 1944. Datum of gage is approximately 449 ft above mean sea level (Corps of Engineers Survey). Prior to Mar. 18, 1940, at about same site at various datums.

EXTREMES.--Current year: Maximum discharge, 5,800 cfs Jan. 26 (gage height, 5.75 ft); minimum daily, 20 cfs Oct. 17.

Period of record: Maximum discharge, 5,800 cfs Jan. 26, 1969 (gage height, 5.75 ft); minimum daily, 12 cfs for some days in 1960.

Flood of Mar. 2, 1938, 100,000 cfs, result of slope-area measurement at site 2.5 miles downstream.

REMARKS.--Records good. Flow regulated since 1941 by Prado Reservoir (capacity, 222,800 acre-ft) and Big Bear Lake (see sta 11-0490). Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, and return flow from irrigated areas. Santa Ana River Development Co. pumps water from wells in Prado Reservoir into conduit which passes through dam and is released to river immediately downstream from gage. No water pumped in 1969. See schematic diagram for Santa Ana River basin. Records of chemical analyses for the water year 1969 are published in Part 2 of this report.

COOPERATION.--Twenty-eight discharge measurements and records of bypass flow furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	40	46	60	2,520	5,670	1,130	260	74	125	148	31
2	29	35	46	64	2,400	5,700	1,120	315	70	106	148	41
3	29	42	44	58	2,600	5,290	1,100	297	72	58	148	31
4	29	42	46	46	2,780	4,680	1,090	415	70	55	97	26
5	27	42	50	50	2,830	4,650	1,090	450	72	52	66	33
6	27	44	54	54	2,860	4,650	1,080	645	74	52	56	42
7	33	44	52	54	2,860	3,260	1,060	651	72	54	48	39
8	31	42	54	54	2,860	1,290	1,040	418	72	49	44	31
9	27	44	54	54	2,780	1,270	1,020	333	72	63	39	31
10	33	48	58	56	2,860	1,270	1,020	315	68	61	33	27
11	37	46	60	56	2,120	1,260	999	255	66	61	33	30
12	33	46	58	52	1,040	1,240	973	250	66	61	39	35
13	35	46	62	60	1,030	1,240	960	297	66	60	39	36
14	37	46	58	471	1,010	1,240	950	303	66	84	38	39
15	35	62	62	214	992	1,230	930	345	64	128	38	52
16	29	90	64	108	981	1,230	920	339	66	143	35	52
17	20	66	68	98	959	1,220	920	404	76	156	31	46
18	21	62	62	101	926	1,220	890	410	100	159	35	44
19	22	60	60	294	926	1,200	870	384	98	159	39	48
20	25	56	74	546	904	1,200	820	280	100	159	39	48
21	31	56	80	738	871	1,200	554	275	102	159	35	46
22	35	50	72	850	871	1,190	466	270	102	156	33	46
23	35	48	70	882	860	1,190	466	327	104	156	29	48
24	33	48	72	893	1,050	1,160	426	315	104	159	29	42
25	35	52	80	2,590	1,330	1,170	300	260	102	156	31	33
26	33	48	156	5,580	2,700	1,200	285	245	119	156	36	36
27	33	46	111	3,380	4,990	1,190	240	156	108	156	36	41
28	35	44	78	1,020	5,640	1,170	210	188	112	159	44	39
29	35	40	72	1,020	-----	1,160	220	64	102	156	42	42
30	38	44	68	1,980	-----	1,160	240	66	102	154	42	39
31	44	-----	66	1,960	-----	1,150	-----	70	-----	151	36	-----
TOTAL	971	1,479	2,057	23,443	56,550	62,950	23,389	9,602	2,541	3,563	1,586	1,174
MEAN	31.3	49.3	66.4	756	2,020	2,031	780	310	84.7	115	51.2	39.1
MAX	44	90	156	5,580	5,640	5,700	1,130	651	119	159	148	52
MIN	20	35	44	46	860	1,150	210	64	64	49	29	26
AC-FT	1,930	2,930	4,080	46,500	112,200	124,900	46,390	19,050	5,040	7,070	3,150	2,330
CAL YR 1968	TOTAL	21,551	MEAN	58.9	MAX	942	MIN	16	AC-FT	42,750		
WTR YR 1969	TOTAL	189,305	MEAN	519	MAX	5,700	MIN	20	AC-FT	375,500		

SANTA ANA RIVER BASIN

11-0757.2. CARBON CREEK BELOW CARBON CANYON DAM, CALIF.

LOCATION (revised).--Lat 33°54'40", long 117°50'29", in SW¼NE¼ sec.17, T.3 S., R.9 W., Orange County, on right wall of outlet channel, 250 ft downstream from toe of Carbon Canyon Dam, and 2.4 miles northwest of Yorba Linda.

DRAINAGE AREA.--19.5 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 398.29 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--8 years, 0.814 cfs (589 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 446 cfs Feb. 25 (gage height, 2.64 ft), from rating curve extended as explained below; no flow for most of year.

Period of record: Maximum discharge, 446 cfs Feb. 25, 1969 (gage height, 2.64 ft), from rating curve extended above 110 cfs on basis of computation of flow in concrete-lined channel at gage height 4.18 ft; no flow for most of each year.

REMARKS.--Records good. Flow regulated by Carbon Canyon flood-control reservoir (capacity, 7,030 acre-ft). No diversion above station. See schematic diagram for Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	.10	133	0	0	0	0	0	0
2	0	0	0	0	.10	133	0	0	0	0	0	0
3	0	0	0	0	.10	44	0	0	0	0	0	0
4	0	0	0	0	.10	0	3.1	0	0	0	0	0
5	0	0	0	0	0	0	4.6	0	0	0	0	0
6	0	0	0	0	0	5.0	0	0	0	0	0	0
7	0	0	0	0	0	5.0	0	0	0	0	0	0
8	0	0	0	0	0	5.0	0	0	0	0	0	0
9	0	0	0	0	0	5.0	0	0	0	0	0	0
10	0	0	0	0	8.3	5.0	0	0	0	0	0	0
11	0	0	0	0	14	5.0	0	0	0	0	0	0
12	0	0	0	0	13	5.0	0	0	0	0	0	0
13	0	0	0	0	13	5.0	0	0	0	0	0	0
14	0	0	0	1.1	10	5.0	.45	0	0	0	0	0
15	0	0	0	.90	8.6	5.0	0	0	0	0	0	0
16	0	0	0	1.0	8.6	5.0	0	0	0	0	0	0
17	0	0	0	0	9.3	5.0	0	0	0	0	0	0
18	0	0	0	.10	6.8	5.0	0	0	0	0	0	0
19	0	0	0	1.3	6.8	5.0	0	0	0	0	0	0
20	0	0	0	1.1	3.6	5.0	0	0	0	0	0	0
21	0	0	0	.30	.10	0	0	0	0	0	0	0
22	0	0	0	.10	.10	0	0	0	0	0	0	0
23	0	0	0	.10	13	0	0	0	0	0	0	0
24	0	0	0	.20	219	0	0	0	0	0	0	0
25	0	0	.10	158	166	0	0	0	0	0	0	0
26	0	0	.10	179	62	0	0	0	0	0	0	0
27	0	0	0	74	143	0	0	0	0	0	0	0
28	0	0	0	.20	151	0	0	0	0	0	0	0
29	0	0	0	.20	-----	0	0	0	0	0	0	0
30	0	0	0	.20	-----	0	0	0	0	0	0	0
31	0	-----	0	.10	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0.20	417.90	856.60	385.0	8.15	0	0	0	0	0
MEAN	0	0	.007	13.5	30.6	12.4	.27	0	0	0	0	0
MAX	0	0	.10	179	219	133	4.6	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	.4	829	1,700	764	16	0	0	0	0	0

CAL YR 1968 TOTAL 71.90 MEAN .20 MAX 24 MIN 0 AC-FT 143
WTR YR 1969 TOTAL 1,667.85 MEAN 4.57 MAX 219 MIN 0 AC-FT 3,310

NOTE.--Discharge Mar. 4 to Apr. 3 determined from flow through dam.

SANTA ANA RIVER BASIN

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11-0758. SANTIAGO CREEK AT MODJESKA, CALIF.

LOCATION.--Lat 33°42'32", long 117°38'05", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.29, T.5 S., R.7 W., Orange County, on right bank at Santiago Canyon road bridge, 0.3 mile west of Modjeska, and 0.4 mile downstream from Harding Creek.

DRAINAGE AREA.--12.5 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,258.77 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 10.3 cfs (7,460 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,520 cfs Feb. 25 (gage height, 6.18 ft), from rating curve extended above 840 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1 to Jan. 12.

Period of record: Maximum discharge, 6,520 cfs Feb. 25, 1969 (gage height, 6.18 ft), from rating curve extended above 840 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--Records fair. Slight regulation by Modjeska Reservoir on Harding Creek. No diversion above station. See schematic diagram of Santa Ana River basin.

COOPERATION.--Eleven discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	24	150	25	11	6.3	3.9	1.3	.48
2	0	0	0	0	30	100	25	11	6.2	3.8	1.2	.47
3	0	0	0	0	27	93	25	11	6.1	3.6	1.2	.46
4	0	0	0	0	30	87	25	11	6.0	3.5	1.1	.45
5	0	0	0	0	29	80	25	10	5.9	3.4	1.1	.43
6	0	0	0	0	218	75	24	10	5.8	3.3	1.1	.41
7	0	0	0	0	151	71	24	10	5.7	3.1	1.0	.40
8	0	0	0	0	93	67	23	9.8	5.6	3.0	1.0	.40
9	0	0	0	0	64	63	21	9.7	5.5	2.9	.97	.40
10	0	0	0	0	69	59	20	9.5	5.4	2.8	.94	.39
11	0	0	0	0	60	56	18	9.4	5.3	2.7	.90	.38
12	0	0	0	0	48	53	17	9.2	5.2	2.6	.88	.38
13	0	0	0	.10	45	51	15	9.1	5.2	2.5	.85	.38
14	0	0	0	4.0	34	49	14	9.0	5.1	2.4	.83	.38
15	0	0	0	3.7	33	48	13	8.7	5.0	2.3	.80	.38
16	0	0	0	2.1	30	46	13	8.6	4.9	2.2	.78	.37
17	0	0	0	1.5	22	45	13	8.4	4.9	2.1	.76	.37
18	0	0	0	1.3	32	43	13	8.2	4.8	2.0	.73	.37
19	0	0	0	3.1	37	42	13	8.0	4.7	1.9	.71	.37
20	0	0	0	25	40	40	13	7.9	4.6	1.8	.69	.37
21	0	0	0	573	36	39	13	7.8	4.5	1.8	.67	.37
22	0	0	0	133	47	37	12	7.7	4.5	1.7	.65	.37
23	0	0	0	70	821	35	12	7.6	4.4	1.7	.63	.38
24	0	0	0	442	3,590	34	12	7.4	4.3	1.6	.61	.39
25	0	0	0	3,410	3,230	33	12	7.2	4.2	1.6	.59	.39
26	0	0	0	743	837	31	12	7.1	4.2	1.5	.58	.40
27	0	0	0	330	569	29	12	7.0	4.1	1.5	.56	.41
28	0	0	0	166	271	28	11	6.8	4.0	1.5	.54	.42
29	0	0	0	129	-----	27	11	6.7	4.0	1.4	.53	.43
30	0	0	0	57	-----	26	11	6.6	4.0	1.4	.52	.45
31	0	-----	0	17	-----	26	-----	6.4	-----	1.3	.50	-----
TOTAL	0	0	0	6,110.80	10,517	1,663	497	267.8	150.4	72.8	25.22	12.05
MEAN	0	0	0	197	376	53.6	16.6	8.64	5.01	2.35	.81	.40
MAX	0	0	0	3,410	3,590	150	25	11	6.3	3.9	1.3	.48
MIN	0	0	0	0	22	26	11	6.4	4.0	1.3	.50	.37
AC-FT	0	0	0	12,120	20,860	3,300	986	531	298	144	50	24
CAL YR 1968	TOTAL	388.94	MEAN	1.06	MAX	59	MIN	0	AC-FT	771		
WTR YR 1969	TOTAL	19,316.07	MEAN	52.9	MAX	3,590	MIN	0	AC-FT	38,310		

PEAK DISCHARGE (BASE, 100 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0930	3.27	1,810	2-6	0830	2.46	752
1-25	1200	6.93	2,750	2-25	1545	6.18	6,520

NOTE.--No gage-height record Mar. 1 to Sept. 30.

SANTA ANA RIVER BASIN

11-0760. SANTIAGO CREEK AT SANTIAGO DAM, NEAR VILLA PARK, CALIF.

LOCATION.--Lat 33°47'10", long 117°43'33", near west corner of lot 70 of Lomas de Santiago Grant, Orange County, on upstream face near left end of Santiago Dam, 0.3 mile upstream from Fremont Canyon, and 5.7 miles southeast of Villa Park.

DRAINAGE AREA.--63.1 sq mi.

PERIOD OF RECORD.--October 1931 to September 1960, October 1961 to current year.

GAGE.--Nonrecording gage read on last day of each month. Datum of gage is at mean sea level.

AVERAGE DISCHARGE.--37 years, 18.5 cfs (13,400 acre-ft per year); median of yearly mean discharges, 10 cfs (7,200 acre-ft per year).

REMARKS.--Records of total inflow represent all water reaching Santiago Reservoir, including precipitation on the reservoir and supplemental Colorado River water delivered through aqueduct of Metropolitan Water District of Southern California. Total inflow computed on basis of records of storage, release (draft), spill, leakage and evaporation. Monthly evaporation from lake surface computed on basis of evaporation from class A pan using coefficient of 0.80. Records of net inflow exclude supplemental water from Colorado River. Dam was completed in December 1931. Area and capacity tables for the reservoir are dated December 1930. Capacity of reservoir at spillway level (gage height, 790.0 ft), 25,000 acre-ft. Flashboards installed on spillway in April. Dead storage below lowest outlet included in these records. Minor diversions in basin above this reservoir. See schematic diagram of Santa Ana River basin.

COOPERATION.--Reservoir operation records and related data furnished by Serrano and Carpenter Irrigation Districts and Irvine Co. Spill, in acre-ft, furnished by Orange County Flood Control District.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Month	Elevation (feet) ^a	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Evapo- ration (acre- feet)	Spill waste, and leakage (acre- feet)	Total inflow (acre- feet)	Colorado River water imported (acre- feet)	Net inflow (acre- feet)
Santiago Reservoir									
Sept. 30.....	761.1	10,900	-	-	-	-	-	-	-
Oct. 31.....	760.1	10,500	-400	2,086	144	0	1,830	1,720	110
Nov. 30.....	758.9	10,100	-400	1,263	119	0	982	898	84
Dec. 31.....	758.5	9,950	-150	1,171	91	0	1,112	932	180
CAL YR 1968.....	-	-	-8,250	20,194	2,164	0	14,134	9,675	4,449
Jan. 31.....	790.0	25,000	+15,050	847	158	780	16,835	792	16,043
Feb. 28.....	790.0	25,000	0	1	94	44,600	44,695	0	44,695
Mar. 31.....	790.0	25,000	0	6	208	12,000	12,214	0	12,214
Apr. 30.....	794.0	27,400	+2,400	3	232	0	2,635	0	2,635
May 31.....	793.6	27,200	-200	350	239	0	389	0	389
June 30.....	791.8	26,100	-1,100	1,921	187	0	1,008	0	1,008
July 31.....	788.8	24,300	-1,800	2,042	336	0	578	90	488
Aug. 31.....	786.0	22,700	-1,600	1,839	386	0	625	54	571
Sept. 30.....	783.1	21,000	-1,700	1,840	252	0	392	53	339
WTR YR 1968-69.....	-	-	+10,100	13,369	2,446	57,380	83,295	4,539	78,756

^a Elevation at 1700 hours.

NOTE.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of net inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

SANTA ANA RIVER BASIN

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11-0775. SANTIAGO CREEK AT SANTA ANA, CALIF.

LOCATION.--Lat 33°46'09", long 117°52'54", in NE¼SW¼NW¼ sec.1, T.5 S., R.10 W., Orange County, on left bank at end of Baker Street, Santa Ana, 2,400 ft upstream from mouth.

DRAINAGE AREA.--95.0 sq mi.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only October to December 1928, published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 110 ft (from topographic map). Prior to June 22, 1948, at datum 0.98 ft higher.

AVERAGE DISCHARGE.--41 years, 5.60 cfs (4,050 acre-ft per year); median of yearly mean discharges, 0.7 cfs (510 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,600 cfs Feb. 25 (gage height, 9.10 ft); no flow for most of year.

Period of record: Maximum discharge, 6,600 cfs Feb. 25, 1969 (gage height, 9.10 ft); maximum gage height, 9.85 ft Jan. 16, 1952; no flow for most of each year.

REMARKS.--Records fair. Flow regulated by Santiago Reservoir (see sta 11-0760), since January 1963 by Villa Park flood-control reservoir (capacity, 15,500 acre-ft), and affected by intervening gravel pits. Diversions above station by Irvine Co. and Serrano and Carpenter Irrigation Districts. In each winter season, some water originally diverted from Santa Ana River by Santa Ana Valley Irrigation Co.'s canal is occasionally wasted into Santiago Creek 3 miles above station. See schematic diagram for Santa Ana River basin.

COOPERATION.--Thirteen discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	38	1,760	0	0	0	0	0	0
2	0	0	0	0	37	1,200	0	0	0	0	0	0
3	0	0	0	0	26	1,050	0	0	0	0	0	0
4	0	0	0	0	0	990	0	0	0	0	0	0
5	0	0	0	0	4.6	950	0	0	0	0	0	0
6	0	0	0	0	363	660	0	0	0	0	0	0
7	0	0	0	0	749	320	0	0	0	0	0	0
8	0	0	0	0	486	530	0	0	0	0	0	0
9	0	0	0	0	268	350	0	0	0	0	0	0
10	0	0	0	0	198	0	0	0	0	0	0	0
11	0	0	0	0	165	0	0	0	0	0	0	0
12	0	0	0	0	175	0	0	0	0	0	0	0
13	0	0	0	0	128	0	0	0	0	0	0	0
14	0	0	0	24	2.5	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	7.4	6.3	0	0	0	0	0	0	0
19	0	0	0	20	132	0	0	0	0	0	0	0
20	0	0	0	45	118	0	0	0	0	0	0	0
21	0	0	0	38	120	0	0	0	0	0	0	0
22	0	0	0	3.5	176	0	0	0	0	0	0	0
23	0	0	0	0	619	0	0	0	0	0	0	0
24	0	0	0	89	738	0	0	0	0	0	0	0
25	0	0	15	328	4,270	0	0	0	0	0	0	0
26	0	0	7.1	380	3,600	0	0	0	0	0	0	0
27	0	0	0	137	2,360	0	0	0	0	0	0	0
28	0	0	0	1.0	2,460	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	27	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	22.1	1,100.38	17,239.4	7,810	0	0	0	0	0	0
MEAN	0	0	.71	35.5	616	252	0	0	0	0	0	0
MAX	0	0	15	380	4,270	1,760	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	44	2,180	34,190	15,490	0	0	0	0	0	0
CAL YR 1968	TOTAL	178.70	MEAN	.49	MAX	114	MIN	0	AC-FT	354		
WTR YR 1969	TOTAL	26,171.88	MEAN	71.7	MAX	4,270	MIN	0	AC-FT	51,910		

SANTA ANA RIVER BASIN

11-0780. SANTA ANA RIVER AT SANTA ANA, CALIF.

LOCATION.--Lat 33°44'56", long 117°54'30", in NW¼SW¼SE¼ sec.10, T.5 S., R.10 W., Orange County, on pier of Fifth Street Bridge in Santa Ana, 1.8 miles downstream from Santiago Creek.

DRAINAGE AREA.--1,685 sq mi, not including 768 sq mi above Lake Elsinore.

PERIOD OF RECORD.--January 1923 to current year.

GAGE.--Water-stage recorder. Datum of gage is 71.20 ft above mean sea level (Orange County bench mark).

Jan. 3, 1923, to Jan. 24, 1929, at same site at different datum. Jan. 25, 1929, to June 20, 1948, at site 450 ft upstream at different datum. June 21, 1948, to May 2, 1960, at same site at different datum. Feb. 28, 1961, to Oct. 1, 1961, at same site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--17 years (1923-40), 23.4 cfs (16,940 acre-ft per year); median of yearly mean discharges, 3.1 cfs (2,200 acre-ft per year); 29 years (1940-69), 32.3 cfs (23,380 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 19,100 cfs Feb. 25 (gage height, 6.90 ft); no flow for most of year.

Period of record: Maximum discharge, (excluding flow which bypassed gage from break in levee below Imperial Highway), 46,300 cfs Mar. 3, 1938 (gage height, 10.20 ft, site and datum then in use), on basis of slope-area measurement of maximum flow; no flow for several months each year.

REMARKS.--Records fair. Natural flow affected by ground-water withdrawals, diversions, importation from Metropolitan Water District, municipal use, return flow from irrigation, Prado flood-control reservoir (capacity, 222,800 acre-ft) since 1940, three small flood-control reservoirs (combined capacity, 31,900 acre-ft), Big Bear Lake (see sta 11-0490), and Santiago Reservoir (see sta 11-0760). Discharge up to 100 cfs can be diverted from Carbon Creek to Coyote Creek, 1.5 miles upstream from mouth of Carbon Creek. See schematic diagram for Santa Ana River basin.

COOPERATION.--Ten discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1,930	8,430	733	25	0	0	0	0
2	0	0	0	0	1,980	7,600	706	25	0	0	0	0
3	0	0	0	0	2,140	7,110	751	25	0	0	0	0
4	0	0	0	0	2,390	6,470	796	35	0	0	0	0
5	0	0	0	0	2,630	6,520	802	50	0	0	0	0
6	0	0	0	0	3,480	6,320	795	160	0	0	0	0
7	0	0	0	0	3,350	6,000	751	210	0	0	0	0
8	0	0	0	0	2,960	3,960	733	210	0	0	0	0
9	0	0	0	0	2,580	1,980	687	220	0	0	0	0
10	0	0	0	0	2,520	1,200	642	180	0	0	0	0
11	0	0	1.3	0	2,250	985	596	145	0	0	0	0
12	0	0	0	0	800	950	551	125	0	0	0	0
13	0	0	0	6.5	1,000	900	527	125	0	0	0	0
14	0	0	0	62	890	850	471	155	0	0	0	0
15	0	6.6	0	0	830	830	420	135	0	0	0	0
16	0	.10	.20	0	920	815	366	135	0	0	0	0
17	0	0	0	0	954	800	248	145	0	0	0	0
18	0	0	0	24	905	790	185	160	0	0	0	0
19	0	0	0	68	815	780	180	185	0	0	0	0
20	0	0	.50	397	800	800	175	185	0	0	0	0
21	0	0	0	645	686	850	195	165	0	0	0	0
22	0	0	0	450	1,230	840	210	130	0	0	0	0
23	0	0	0	877	3,400	825	210	116	0	0	0	0
24	0	0	0	1,870	6,040	815	172	110	0	0	0	0
25	0	0	21	3,470	11,400	800	94	75	0	0	0	0
26	0	0	24	5,550	7,640	780	73	50	0	0	0	0
27	0	0	0	5,030	8,130	760	58	50	0	0	0	0
28	0	0	0	1,220	8,420	740	43	50	0	0	0	0
29	0	0	0	1,210	-----	720	33	36	0	0	0	0
30	.40	0	0	1,450	-----	700	25	1.0	0	0	0	0
31	0	-----	0	2,340	-----	680	-----	1.0	-----	0	0	-----
TOTAL	0.40	6.70	47.00	24,669.5	83,070	72,600	12,228	3,419.0	0	0	0	0
MEAN	.013	.22	1.52	796	2,967	2,342	408	110	0	0	0	0
MAX	.40	6.6	24	5,550	11,400	8,430	802	220	0	0	0	0
MIN	0	0	0	0	686	680	25	1.0	0	0	0	0
AC-FT	.8	13	93	48,930	164,800	144,000	24,250	6,780	0	0	0	0
CAL YR 1968	TOTAL	2,662.80	MEAN	7.28	MAX	805	MIN	0	AC-FT	5,280		
WTR YR 1969	TOTAL	196,040.60	MEAN	537	MAX	11,400	MIN	0	AC-FT	388,800		

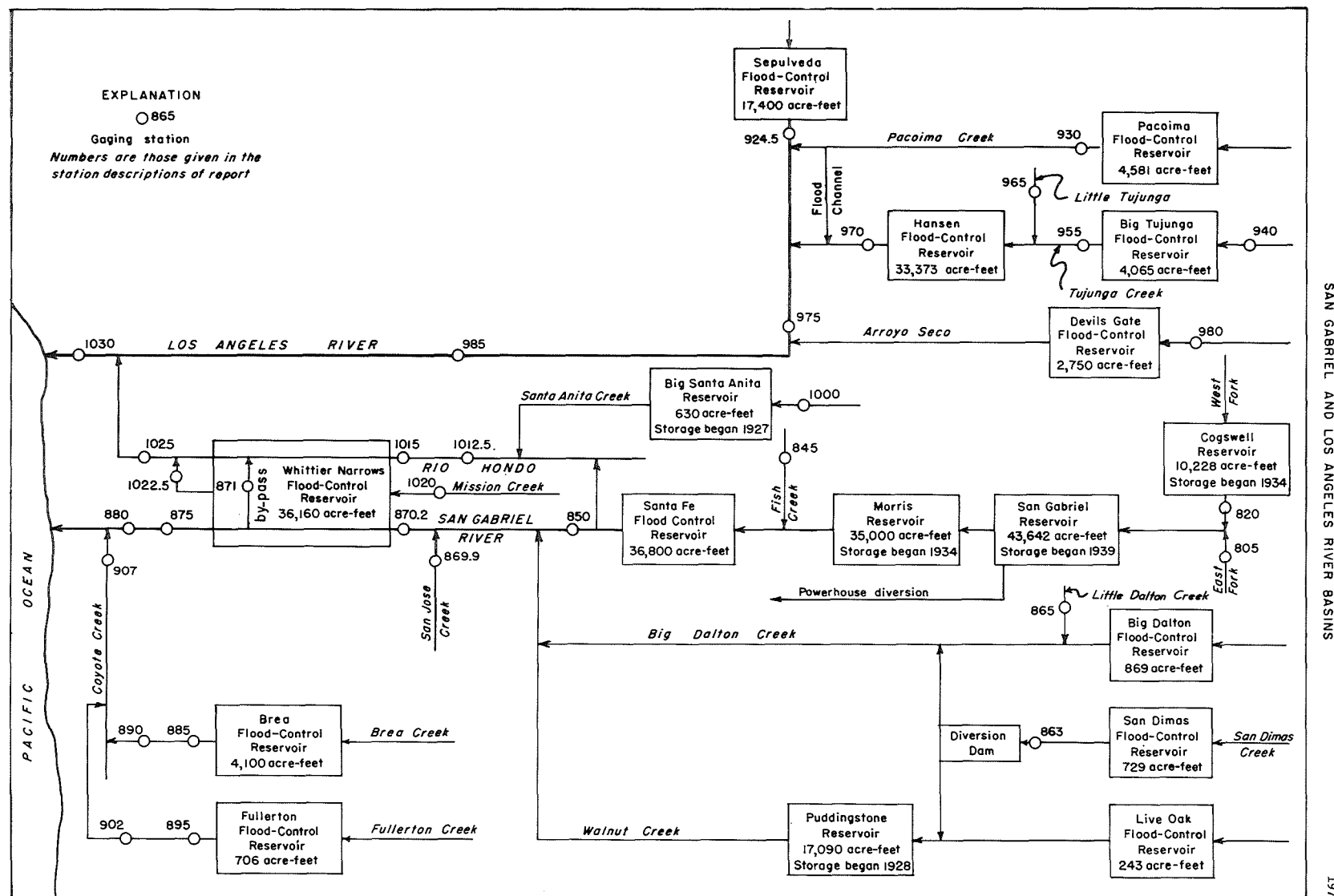


Figure 4.--Schematic diagram showing diversions and storage in San Gabriel and Los Angeles River basins.

SAN GABRIEL RIVER BASIN

11-0805. EAST FORK SAN GABRIEL RIVER NEAR CAMP BONITA, CALIF.

LOCATION.--Lat 34°14'09", long 117°48'18", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.2 N., R.9 W., Los Angeles County, on right bank 1,600 ft upstream from mouth of Graveyard Canyon, 2.5 miles upstream from confluence with West Fork, and 2.5 miles west of Camp Bonita.

DRAINAGE AREA.--84.6 sq mi.

PERIOD OF RECORD.--December 1932 to current year. Prior to 1940, published as San Gabriel River near Camp Bonita

GAGE.--Water-stage recorder. Datum of gage is 1,567.04 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Dec. 10, 1938, at site 0.6 mile downstream at different datum.

AVERAGE DISCHARGE.--36 years (1933-69), 73.2 cfs (53,030 acre-ft per year); median of yearly mean discharges, 43 cfs (31,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,900 cfs Jan. 25 (gage height, 15.74 ft); minimum daily, 13 cfs Oct. 24.

Period of record: Maximum discharge, 46,000 cfs Mar. 2, 1938, from rating curve extended above 21,300 cfs (computed by Geological Survey); minimum, 1.5 cfs Oct. 1, 1934.

REMARKS.--No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	15	17	720	1,590	488	282	229	137	76	46
2	16	15	16	16	612	1,360	460	279	226	138	75	47
3	16	15	16	16	536	1,060	495	269	217	125	73	45
4	16	16	15	16	524	942	461	266	212	123	72	45
5	16	17	15	16	531	772	505	256	212	121	72	45
6	16	16	15	16	959	732	593	266	206	119	69	45
7	16	16	15	16	693	710	477	259	201	117	66	44
8	16	15	15	16	654	674	459	263	201	115	65	46
9	16	15	15	17	587	660	451	279	195	111	63	44
10	16	14	15	17	519	687	456	285	193	105	61	42
11	17	14	16	17	490	580	463	292	187	104	61	42
12	16	15	16	16	473	560	451	296	181	105	64	42
13	15	15	16	18	491	517	416	279	170	105	61	42
14	16	15	15	47	508	450	426	266	164	105	60	42
15	16	20	15	32	516	345	416	259	161	102	59	45
16	16	19	16	26	468	331	380	256	156	98	58	46
17	15	17	16	22	472	355	375	253	154	94	57	46
18	16	16	16	21	468	380	349	250	151	93	57	45
19	15	15	16	50	440	360	341	247	156	93	57	42
20	15	15	16	307	413	500	328	241	151	91	53	42
21	15	15	16	2,110	402	541	328	235	150	88	51	42
22	14	15	16	1,080	394	512	341	241	146	87	50	42
23	14	15	15	503	834	500	345	250	144	83	49	40
24	13	14	15	725	2,280	478	337	250	144	83	48	39
25	14	15	22	6,890	8,070	462	320	247	142	82	49	39
26	14	14	26	4,500	3,460	419	306	247	141	80	50	40
27	14	15	21	2,150	2,280	460	296	244	141	82	50	40
28	14	15	20	1,620	1,770	514	282	244	140	85	49	40
29	15	15	19	1,310	-----	533	279	241	138	80	48	38
30	15	15	18	965	-----	530	282	238	138	79	47	38
31	16	-----	17	854	-----	578	-----	235	-----	76	46	-----
TOTAL	475	464	515	23,426	30,564	19,092	11,906	8,015	5,147	3,106	1,816	1,281
MEAN	15.3	15.5	16.6	756	1,092	616	397	259	172	100	58.6	42.7
MAX	17	20	26	6,890	8,070	1,590	593	296	229	138	76	47
MIN	13	14	15	16	394	331	279	235	138	76	46	38
AC-FT	942	920	1,020	46,460	60,620	37,870	23,620	15,900	10,210	6,160	3,600	2,540
CAL YR 1968	TOTAL	13,085	MEAN	35.8	MAX	174	MIN	13	AC-FT	25,950		
WTR YR 1969	TOTAL	105,807	MEAN	290	MAX	8,070	MIN	13	AC-FT	209,960		

11-0820. WEST FORK SAN GABRIEL RIVER AT CAMP RINCON, CALIF.

LOCATION.--Lat 34°14'28", long 117°51'45", Los Angeles County, in Angeles National Forest, on right bank 0.2 mile upstream from Camp Rincon, 0.5 mile downstream from North Fork, and 6 miles downstream from Cogswell Dam.

DRAINAGE AREA.--104 sq mi.

PERIOD OF RECORD.--October 1927 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,474.94 ft above mean sea level (levels by Los Angeles County Flood Control District). See WSP 1735 for history of changes prior to July 3, 1941.

AVERAGE DISCHARGE.--42 years, 70.1 cfs (50,790 acre-ft per year); median of yearly mean discharges, 33 cfs (23,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 26,000 cfs Feb. 25 (gage height, 20.40 ft); minimum daily, 10 cfs Oct. 25.

Period of record: Maximum discharge, 34,000 cfs (estimated) Mar. 2, 1938; no flow at times in 1928-29.

REMARKS.--Flow partly regulated by Cogswell flood-control reservoir since 1934 (capacity, 9,999 acre-ft). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	14	11	14	707	1,500	340	156	112	74	66	45
2	15	14	11	14	329	1,010	345	154	109	76	66	42
3	16	14	11	13	474	1,160	353	149	109	74	66	46
4	16	14	11	13	466	1,000	276	154	109	62	66	46
5	15	14	11	13	582	762	300	146	103	61	66	46
6	15	14	11	13	1,850	710	363	156	101	60	58	45
7	15	13	11	13	1,910	919	334	171	97	61	55	40
8	16	13	11	12	1,050	851	314	210	95	61	55	43
9	15	13	11	12	978	802	304	183	93	67	55	43
10	16	13	11	12	743	765	309	172	93	67	55	43
11	16	13	12	12	659	717	294	156	93	60	55	43
12	16	13	12	13	608	693	285	156	105	62	51	43
13	15	13	11	14	442	682	272	154	91	60	54	43
14	16	13	11	42	323	532	268	154	95	60	54	43
15	18	18	11	23	337	285	256	151	93	55	52	45
16	26	14	12	20	329	314	248	146	95	51	52	40
17	30	13	12	19	305	314	240	141	93	49	52	40
18	40	13	13	19	316	318	240	137	89	63	54	39
19	48	13	13	68	336	318	233	134	87	76	48	40
20	48	12	13	550	371	323	230	137	83	74	52	42
21	46	12	13	3,060	375	374	275	139	83	74	51	45
22	53	12	13	2,150	501	351	241	139	83	71	49	46
23	52	11	13	1,300	2,260	340	224	129	81	72	51	40
24	11	11	13	2,630	4,490	328	213	132	80	71	51	42
25	10	11	20	13,000	14,400	318	252	129	78	71	52	40
26	11	11	22	12,800	6,570	323	204	125	78	71	45	42
27	11	11	17	4,500	3,700	351	183	125	81	71	45	43
28	12	11	14	1,380	3,200	334	183	120	80	71	45	42
29	12	11	14	1,140	-----	334	164	116	76	62	46	42
30	13	11	14	969	-----	331	159	112	76	66	46	38
31	14	-----	14	831	-----	345	-----	109	-----	66	46	-----
TOTAL	673	383	397	44,669	48,611	17,704	7,902	4,492	2,741	2,039	1,659	1,277
MEAN	21.7	12.8	12.8	1,441	1,736	571	263	145	91.4	65.8	53.5	42.6
MAX	53	18	22	13,000	14,400	1,500	363	210	112	76	66	46
MIN	10	11	11	12	305	285	159	109	76	49	45	38
AC-FT	1,330	760	787	88,600	96,420	35,120	15,670	8,910	5,440	4,040	3,290	2,530

CAL YR 1968 TOTAL 10,263 MEAN 28.0 MAX 203 MIN 10 AC-FT 20,360
WTR YR 1969 TOTAL 132,547 MEAN 363 MAX 14,400 MIN 10 AC-FT 262,900

NOTE.--No gage-height record or stage-discharge relation indefinite Jan. 28-31, Feb. 26 to Mar. 2.

SAN GABRIEL RIVER BASIN

11-0845. FISH CREEK NEAR DUARTE, CALIF.

LOCATION.--Lat 34°09'57", long 117°55'24", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.1 N., R.10 W., Los Angeles County, on left bank 0.8 mile upstream from mouth of canyon, and 3.2 (revised) miles northeast of Duarte.

DRAINAGE AREA.--6.36 sq mi.

PERIOD OF RECORD.--July to September 1916, July 1917 to current year.

GAGE.--Water-stage recorder. Broad-crested weir since July 1917, restored in December 1938. Datum of gage is 905.9 ft above mean sea level. See WSP 1315-B for history of gage changes prior to Dec. 7, 1938. Dec. 7, 1938, to Oct. 3, 1951, at datum 1 ft higher.

AVERAGE DISCHARGE.--52 years (1917-69), 4.65 cfs (3,370¹ acre-ft per year); median of yearly mean discharges, 2.2 cfs (1,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,000 cfs Jan. 25 (gage height, 11.98 ft, from inside gage), from rating curve extended above 1,100 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.69 cfs Nov. 26, 27, Dec. 4.

Period of record: Maximum discharge, 13,000 cfs Jan. 25, 1969 (gage height, 11.98 ft, from inside gage), from rating curve extended above 1,100 cfs on basis of slope-area measurement of maximum flow; maximum gage height, about 14.5 ft Feb. 11, 16, 1959 (from debris wave); no flow at times in some years.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	.77	1.1	60	95	18	10	7.7	5.2	3.6	2.0
2	1.2	1.2	.77	1.2	45	75	19	10	7.6	5.2	3.6	2.0
3	1.2	1.2	.77	1.2	37	68	24	10	7.5	5.2	3.4	2.0
4	1.2	1.2	.69	1.3	31	61	17	11	7.3	5.1	3.1	2.0
5	1.2	1.2	.71	1.4	25	56	25	9.9	7.2	5.1	3.1	2.0
6	1.2	1.1	.74	1.5	166	52	20	10	7.2	5.1	3.1	2.0
7	1.2	1.1	.74	1.5	137	50	18	9.3	7.2	5.1	3.0	2.0
8	1.2	1.0	.76	1.6	76	46	16	8.7	7.1	5.1	3.0	2.0
9	1.2	.97	.77	1.9	82	42	15	8.2	7.0	5.1	3.0	2.0
10	1.2	.97	.77	1.9	92	40	16	8.1	7.0	5.2	3.0	2.0
11	1.2	.93	.85	2.0	102	38	15	8.1	7.0	5.4	3.0	2.0
12	1.2	.92	.85	2.0	72	35	14	7.9	7.1	5.7	3.0	2.0
13	1.2	.98	.85	2.8	50	33	14	7.9	6.7	5.8	2.6	2.0
14	1.2	.94	.85	11	40	31	13	9.0	6.4	5.9	2.0	2.0
15	1.2	1.4	.96	2.8	35	29	13	8.7	6.3	5.4	1.9	2.0
16	1.2	1.0	1.1	2.2	29	28	13	8.7	6.4	5.4	1.8	2.5
17	1.2	.85	1.0	1.9	53	27	12	7.9	6.5	5.2	1.8	2.8
18	1.1	.85	1.0	2.0	32	26	13	11	6.1	4.9	1.7	2.8
19	1.1	.85	1.0	14	24	25	12	10	5.8	4.6	1.5	2.7
20	1.2	.77	1.1	75	23	24	12	9.7	5.8	4.6	1.3	2.7
21	1.2	.77	1.0	790	21	30	13	9.7	5.8	4.3	1.2	2.7
22	1.2	.77	1.0	350	32	27	13	9.0	5.8	4.0	1.1	2.7
23	1.1	.77	1.0	130	282	25	13	7.1	5.8	3.6	1.1	2.6
24	1.1	.73	1.0	450	566	23	12	6.9	5.6	3.5	2.8	2.6
25	1.1	.74	1.3	3,370	930	22	11	7.3	5.6	3.4	4.1	2.6
26	1.1	.69	1.9	1,600	450	21	11	6.8	5.6	3.2	4.2	2.6
27	1.1	.69	1.3	1,170	250	20	11	7.1	5.4	3.0	2.9	2.6
28	1.1	.72	1.1	400	150	19	11	7.2	5.4	3.0	2.4	2.5
29	1.2	.72	1.2	125	-----	18	10	7.6	5.3	2.9	2.2	2.5
30	1.3	.75	1.2	85	-----	19	11	7.6	5.2	3.1	2.0	2.5
31	1.3	-----	1.1	70	-----	18	-----	7.6	-----	3.7	2.0	-----
TOTAL	36.6	27.98	30.15	8,670.3	3,892	1,123	435	268.0	192.4	142.0	78.5	69.4
MEAN	1.18	.93	.97	280	139	36.2	14.5	8.65	6.41	4.58	2.53	2.31
MAX	1.3	1.4	1.9	3,370	930	95	25	11	7.7	5.9	4.2	2.8
MIN	1.1	.69	.69	1.1	21	18	10	6.8	5.2	2.9	1.1	2.0
AC-FT	73	56	60	17,200	7,720	2,230	863	532	382	282	156	138
CAL YR 1968	TOTAL	613.80	MEAN	1.68	MAX	44	MIN	.35	AC-FT	1,220		
WTR YR 1969	TOTAL	14,965.33	MEAN	41.0	MAX	3,370	MIN	.69	AC-FT	29,680		

PEAK DISCHARGE (BASE, 60 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0815	6.68	2,130	2-6	0530	5.71	594
1-25	0530	11.98	13,000	2-25	0700	8.6	5,030

NOTE.--No gage-height record Jan. 21-24, Jan. 28 to Feb. 5, Feb. 13-15, Feb. 26 to Mar. 1, Mar. 10-27, Aug. 27 to Sept. 30.

a From inside gage.

SAN GABRIEL RIVER BASIN

201

11-0850. SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CALIF.

LOCATION.--Lat 34°06'44", long 117°58'07", in SE¼NE¼SW¼ sec.6, T.1 S., R.10 W., Los Angeles County, on left bank at stilling basin of outlet of Santa Fe flood-control dam, 500 ft downstream from axis of dam, and 1.7 miles north of Baldwin Park.

DRAINAGE AREA.--236 sq mi.

PERIOD OF RECORD.--October 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum discharge, 30,900 cfs Jan. 26 (gage height, 22.20 ft); no flow for most of year.

Period of record: Maximum discharge, 30,900 cfs Jan. 26, 1969 (gage height, 22.20 ft); no flow for several months of each year.

REMARKS.--Records good. Flow regulated by Cogswell and San Gabriel flood-control reservoirs (combined capacity, 53,870 acre-ft), Morris Reservoir (capacity, 35,000 acre-ft), and Santa Fe flood-control reservoir (capacity, 36,800 acre-ft). Diversions above station for irrigation, power development, and ground-water replenishment. At times, water diverted from right side of stilling basin to headwaters of Rio Hondo; 24,360 acre-ft diverted during year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Los Angeles County Flood Control District reports 24,360 acre-ft of water diverted to Rio Hondo during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	112	5,530	26	375	155	0	0	0
2	0	0	0	0	351	561	0	354	163	0	0	0
3	0	0	0	0	474	355	102	334	155	0	0	0
4	0	0	0	0	292	151	448	328	131	0	0	0
5	0	0	0	0	2,080	146	606	334	108	0	0	0
6	0	0	0	0	5,390	146	606	328	85	0	0	0
7	0	0	0	0	4,070	663	538	322	64	0	0	0
8	0	0	0	0	3,780	1,540	482	316	0	0	0	0
9	0	0	0	0	3,720	1,550	554	304	0	0	0	0
10	0	0	0	0	1,310	1,570	498	292	0	0	0	0
11	0	0	0	0	146	1,300	458	286	0	0	0	0
12	0	0	0	0	151	1,280	482	280	0	0	0	0
13	0	0	0	0	146	1,480	474	269	0	0	0	0
14	0	0	0	0	265	1,190	466	269	0	0	0	0
15	0	0	0	0	146	660	306	269	0	0	0	0
16	0	0	0	0	142	669	0	263	0	0	0	0
17	0	0	0	0	221	466	0	269	0	0	0	0
18	0	0	0	0	314	134	15	269	0	0	0	0
19	0	0	0	0	340	75	85	274	5.1	0	0	0
20	0	0	0	0	340	75	146	280	0	0	0	0
21	0	0	0	164	340	75	237	280	0	0	0	0
22	0	0	0	242	340	72	292	280	0	0	0	0
23	0	0	0	609	1,610	72	354	253	0	0	0	0
24	0	0	0	2,600	4,480	15	368	253	0	0	0	0
25	0	0	0	12,400	17,600	10	389	253	0	0	0	0
26	0	0	0	26,000	19,500	36	382	243	0	0	0	0
27	0	0	0	11,800	13,200	63	375	222	0	0	0	0
28	0	0	0	12,300	10,400	66	375	185	0	0	0	0
29	0	0	0	48	-----	69	368	159	0	0	0	0
30	0	0	0	197	-----	69	368	159	0	0	0	0
31	0	-----	0	328	-----	69	-----	155	-----	0	0	-----
TOTAL	0	0	0	66,688	91,260	20,157	9,800	8,457	866.1	0	0	0
MEAN	0	0	0	2,151	3,259	650	327	273	28.9	0	0	0
MAX	0	0	0	26,000	19,500	5,530	606	375	163	0	0	0
MIN	0	0	0	0	112	10	0	155	0	0	0	0
AC-FT	0	0	0	132,300	181,000	39,980	19,440	16,770	1,720	0	0	0
(a)	0	0	0	132,300	182,600	39,980	26,300	23,410	5,910	3,140	1,980	0

CAL YR 1968 TOTAL .70 MEAN .002 MAX . MIN 0 AC-FT 1.4 AC-FT a 0
WTR YR 1969 TOTAL 197,228.10 MEAN 540 MAX 26,000 MIN 0 AC-FT 391,200 AC-FT a 413,600

a Combined discharge, in acre-feet, of river and diversion to Rio Hondo.

SAN GABRIEL RIVER BASIN

11-0863. SAN DIMAS CREEK BELOW SAN DIMAS DAM, CALIF.

LOCATION.--Lat 34°09'10", long 117°46'18", in SW¼SE¼ sec.24, T.1 N., R.9 W., Los Angeles County, on left bank 1,000 ft downstream from San Dimas Dam, and 3.7 miles northeast of San Dimas.

DRAINAGE AREA.--16.3 sq mi.

PERIOD OF RECORD.--October 1951 to current year. Prior to October 1956 monthly discharge only, published in WSP 1735.

GAGE.--Water-stage recorder and low-flow concrete control. Datum of gage is 1,325.0 ft above mean sea level (levels by Los Angeles County Flood Control District).

EXTREMES.--Current year: Maximum discharge, 4,280 cfs Jan. 25 (gage height, 6.98 ft), from rating curve extended above 600 cfs on basis of computation of maximum flow over dam; no flow Jan. 1, 2, July 4-29.
Period of record: Maximum discharge, 4,280 cfs Jan. 25, 1969 (gage height, 6.98 ft), from rating curve extended above 600 cfs on basis of computation of maximum flow over dam; no flow at times in most years.

REMARKS.--Flow regulated by San Dimas flood-control reservoir (capacity, 1,129 acre-ft) and at times by old water tunnel 150 ft upstream. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	18	.04	0	67	149	40	24	30	15	.30	5.1
2	.10	17	.04	0	61	162	39	23	30	14	.30	5.1
3	.10	17	.04	.02	61	200	40	25	30	10	.30	8.9
4	.10	11	.04	.02	61	144	43	28	29	0	.30	11
5	.10	.10	.04	.02	72	133	43	29	30	0	.30	11
6	.10	.10	.04	7.3	145	134	43	27	30	0	6.4	10
7	.10	.10	.04	11	194	109	37	25	30	0	7.8	10
8	.10	.10	.04	11	184	109	30	25	30	0	7.1	10
9	.10	.10	.04	14	128	109	33	25	30	0	8.3	9.9
10	.10	.10	.04	13	70	109	43	25	30	0	6.2	9.9
11	.10	.10	.04	15	54	104	43	25	27	0	6.6	9.9
12	.10	.10	.04	17	54	100	43	25	27	0	5.8	9.9
13	.10	.10	.04	18	54	100	43	25	28	0	7.8	9.9
14	.10	.10	.04	17	54	81	39	25	28	0	6.5	9.9
15	.10	.10	.04	15	54	53	28	25	28	0	11	9.9
16	.10	.10	.04	8.2	54	53	28	25	28	0	9.4	9.9
17	8.2	.10	.04	.50	54	53	26	25	28	0	9.4	12
18	14	.10	.04	.60	54	53	24	25	30	0	9.4	16
19	15	.10	.04	.70	54	59	29	25	33	0	9.4	15
20	15	.10	.04	4.6	54	68	35	25	31	0	9.4	14
21	18	.10	.06	27	54	86	35	26	28	0	9.4	14
22	21	.10	.06	200	64	73	32	27	28	0	9.0	14
23	21	.10	.06	289	130	57	33	30	25	0	9.0	13
24	21	.10	.06	153	473	57	30	32	17	0	9.0	12
25	20	.10	.40	1,720	1,250	51	28	29	15	0	9.0	14
26	20	.10	.06	498	294	47	28	26	15	0	6.6	14
27	20	.10	.06	445	286	47	28	26	15	0	.60	14
28	19	.10	.06	100	309	47	29	25	15	0	.60	14
29	19	.10	.04	100	-----	47	28	28	15	0	3.4	14
30	19	.10	.02	94	-----	53	28	30	15	.30	5.5	8.5
31	18	-----	.02	81	-----	49	-----	30	-----	.30	5.1	-----
TOTAL	269.80	65.60	1.70	3,859.96	4,443	2,696	1,028	815	775	39.60	189.20	338.8
MEAN	8.70	2.19	.055	125	159	87.0	34.3	26.3	25.8	1.28	6.10	11.3
MAX	21	18	.40	1,720	1,250	200	43	32	33	15	11	16
MIN	.10	.10	.02	0	54	47	24	23	15	0	.30	5.1
AC-FT	535	130	3.4	7,660	8,810	5,350	2,040	1,620	1,540	79	375	672
CAL YR 1968	TOTAL	1,010.90	MEAN	2.76	MAX	21	MIN	0	AC-FT	2,010		
WTR YR 1969	TOTAL	14,521.66	MEAN	39.8	MAX	1,720	MIN	0	AC-FT	28,800		

11-0869.9. SAN JOSE CREEK NEAR EL MONTE, CALIF.

LOCATION.--Lat 34°01'55", long 118°00'40", in El Monte Grant, Los Angeles County, on right bank of San Jose flood channel, 1,650 ft upstream from Workman Mill Road, and 2.7 miles southeast of El Monte.

DRAINAGE AREA.--87.8 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 248.52 ft above mean sea level (levels by Los Angeles County Flood Control District).

EXTREMES.--Current year: Maximum discharge, 9,710 cfs Feb. 25 (gage height, 6.79 ft); minimum daily, 9.3 cfs Jan. 5.

Period of record: Maximum discharge, 10,200 cfs Jan. 24, 1967 (gage height, 6.80 ft, from outside gage); no flow for some days in some years.

REMARKS.--No regulation above station. One small diversion for ground-water recharge. At times effluent from city of Pomona's sewage reclamation plant is released to creek above Spadra and at Lemon Street. Bypass to the original San Jose Creek channel has been closed since Oct. 1, 1964. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	12	12	21	113	18	15	14	14	10	17
2	12	12	12	13	18	41	27	15	15	13	10	17
3	18	12	12	13	19	41	66	15	15	14	10	17
4	11	12	13	12	18	41	18	15	14	13	11	17
5	11	11	13	9.3	294	41	59	15	15	13	11	17
6	11	10	13	10	1,010	41	22	20	15	13	13	19
7	12	10	13	12	59	41	18	15	14	14	13	18
8	11	12	12	12	39	37	18	14	14	14	14	18
9	11	10	13	12	30	36	18	14	14	13	14	17
10	11	11	12	12	25	142	23	14	13	14	14	17
11	12	11	16	11	19	36	19	14	14	17	13	17
12	11	12	12	11	21	33	19	14	14	18	13	18
13	12	12	12	152	21	33	19	14	11	13	13	18
14	12	12	12	328	19	30	19	14	11	11	13	19
15	12	71	12	16	375	23	19	14	13	13	13	18
16	12	16	31	11	85	19	19	15	13	13	13	17
17	12	12	12	11	19	18	19	15	17	14	13	17
18	12	12	12	116	171	17	19	15	21	11	14	19
19	13	13	13	313	99	19	19	15	14	11	14	21
20	13	13	22	1,400	44	22	19	17	15	13	15	19
21	13	12	11	927	33	123	19	17	15	13	15	18
22	13	14	11	137	385	23	19	17	15	11	15	18
23	13	12	12	29	2,270	22	18	17	15	13	15	18
24	13	12	12	1,540	1,930	21	17	18	18	13	15	18
25	14	12	196	4,370	2,840	20	17	15	17	11	15	17
26	14	12	86	829	213	19	17	14	17	11	15	17
27	13	12	14	170	116	19	17	14	17	11	15	17
28	13	11	13	179	175	19	16	15	17	11	15	17
29	16	11	13	41	-----	19	16	15	15	11	15	18
30	40	12	13	37	-----	18	16	15	14	11	15	17
31	13	-----	12	33	-----	18	-----	14	-----	11	17	-----
TOTAL	416	416	672	10,778.3	10,368	1,145	649	470	446	396	421	532
MEAN	13.4	13.9	21.7	348	370	36.9	21.6	15.2	14.9	12.8	13.6	17.7
MAX	40	71	196	4,370	2,840	142	66	20	21	18	17	21
MIN	11	10	11	9.3	18	17	16	14	11	11	10	17
AC-FT	825	825	1,330	21,380	20,560	2,270	1,290	932	885	785	835	1,060
CAL YR 1968	TOTAL 6,937.7		MEAN 19.0		MAX 2,180	MIN 6.8		AC-FT 13,760				
WTR YR 1969	TOTAL 26,709.3		MEAN 73.2		MAX 4,370	MIN 9.3		AC-FT 52,980				

SAN GABRIEL RIVER BASIN

11-0870.2, SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CALIF.

LOCATION.--Lat 34°02'00", long 118°02'14", in La Puente Grant, Los Angeles County, on downstream side of bridge near center, on San Gabriel River Parkway, 0.8 mile downstream from San Jose flood channel, 1.2 miles upstream from axis of Whittier Narrows Dam, and 1.8 miles south of El Monte.

DRAINAGE AREA.--353 sq mi.

PERIOD OF RECORD.--October 1955 to September 1957, October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 220 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 46,600 cfs Jan. 25 (gage height, 10.90 ft); minimum daily, 6.0 cfs Jan. 5, 6.

Period of record: Maximum discharge, 46,600 cfs Jan. 25, 1969 (gage height, 10.90 ft); no flow for part of most years.

REMARKS.--Records good. Flow regulated by San Gabriel, Cogswell, and Santa Fe flood-control reservoirs (combined capacity, 90,670 acre-ft), several small flood-control reservoirs (combined capacity, 19,100 acre-ft), and Morris Reservoir (capacity, 35,000 acre-ft). Many diversions above station for irrigation, power development, and ground-water replenishment. Colorado River water released to the San Gabriel River at a site 4.2 miles upstream from gage and 460 ft downstream from San Bernardino Road for ground-water replenishment. Los Angeles County Flood Control District diverted 24,360 acre-ft of water from San Gabriel River below Santa Fe Dam to Rio Hondo during year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of Colorado River water released to river and releases from Pudingstone reservoir furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	15	9.0	9.0	329	6,130	65	74	31	16	18	20
2	87	36	9.0	8.5	321	1,170	43	65	31	18	20	22
3	117	11	10	8.0	497	903	204	57	33	20	22	22
4	90	9.0	10	7.0	390	421	179	51	27	20	20	24
5	87	22	10	6.0	2,130	409	503	48	35	18	22	24
6	87	48	10	6.0	8,160	314	431	71	31	18	24	24
7	81	71	10	7.0	5,080	565	411	65	27	20	26	24
8	65	93	10	8.0	4,750	1,600	348	62	22	22	24	22
9	59	90	10	8.0	4,500	1,620	366	65	20	22	24	22
10	59	93	10	9.0	1,870	1,960	431	57	31	22	27	24
11	62	93	13	8.0	202	1,460	266	43	26	26	24	26
12	62	87	10	8.0	184	1,270	282	35	22	27	26	27
13	59	40	10	164	184	1,520	282	62	22	24	26	29
14	59	11	10	592	265	1,290	282	62	20	22	27	27
15	62	93	10	15	714	702	256	65	22	22	26	29
16	59	22	33	10	226	702	40	74	22	24	26	29
17	59	11	10	10	244	569	27	81	29	33	24	27
18	59	10	10	134	607	184	27	74	35	31	27	35
19	62	34	10	490	584	110	26	71	27	24	26	46
20	62	87	22	2,990	442	110	24	59	22	22	26	40
21	59	101	10	2,090	454	480	22	65	20	20	27	38
22	54	106	10	626	1,030	168	24	74	20	24	27	35
23	14	106	10	339	5,490	131	22	54	31	26	27	33
24	10	19	10	5,900	9,060	131	20	51	35	26	20	27
25	9.0	10	275	24,400	22,900	90	46	51	29	22	20	27
26	9.0	10	125	24,800	20,600	57	90	51	26	22	22	26
27	9.0	9.0	12	13,300	14,900	57	84	40	26	22	22	27
28	8.0	9.0	11	10,700	14,500	71	81	31	22	24	22	27
29	28	9.0	10	319	-----	71	78	29	22	22	22	27
30	127	9.0	9.0	290	-----	68	74	33	20	18	22	27
31	64	-----	9.0	384	-----	68	-----	31	-----	22	20	-----
TOTAL	1,815.0	1,364.0	727.0	87,645.5	120,613	24,401	5,034	1,751	786	699	736	837
MEAN	58.5	45.5	23.5	2,827	4,308	787	168	56.5	26.2	22.5	23.7	27.9
MAX	127	106	275	24,800	22,900	6,130	503	81	35	33	27	46
MIN	8.0	9.0	9.0	6.0	184	57	20	29	20	16	18	20
AC-FT	3,600	2,710	1,440	173,800	239,200	48,400	9,980	3,470	1,560	1,390	1,460	1,660
(a)	3,300	7,100	6,910	2,680	0	0	0	0	0	0	0	0
CAL YR 1968	TOTAL	16,765.5	MEAN	45.8	MAX	3,550	MIN	5.5	AC-FT	33,250		
WTR YR 1969	TOTAL	246,408.5	MEAN	675	MAX	24,800	MIN	6.0	AC-FT	488,700		

a Colorado River water, in acre-feet, released to San Gabriel River at site 4.2 miles upstream of which 1,490 acre-ft passed Valley Boulevard in November.

SAN GABRIEL RIVER BASIN

205

11-0871, RIO HONDO FLOOD-FLOW CHANNEL AT WHITTIER NARROWS DAM, CALIF.

LOCATION.--Lat 34°01'27", long 118°04'10", in La Merced Grant, Los Angeles County, on upstream side of left abutment of Rosemead Boulevard bridge, 1,100 ft north of axis of Whittier Narrows Dam, 2.2 miles northeast of Montebello.

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

GAGE.--Water-stage recorder. Datum of gage is 196.90 ft above mean sea level (Corps of Engineers bench mark).

EXTREMES.--Current year: Maximum daily discharge, 14,600 cfs (estimated) (elevation, submerged); no flow for most of year.

Period of record: Maximum discharge, unknown, probably occurred Jan. 25, 1969, while gage was submerged from 0800 hours Jan. 25 to 0900 hours Jan. 26; no flow most of each year.

REMARKS.--Records poor. Flow regulated by operation of gates on San Gabriel River side of dam. Flow reported herein is San Gabriel River water passed to the Rio Hondo. See schematic diagram of San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	12	1,410	0	0	0	0	0	0
2	0	0	0	0	14	118	0	0	0	0	0	0
3	0	0	0	0	12	0	0	0	0	0	0	0
4	0	0	0	0	13	0	0	0	0	0	0	0
5	0	0	0	0	35	0	0	0	0	0	0	0
6	0	0	0	0	2,930	0	0	0	0	0	0	0
7	0	0	0	0	1,500	0	0	0	0	0	0	0
8	0	0	0	0	3,860	0	0	0	0	0	0	0
9	0	0	0	0	4,230	0	0	0	0	0	0	0
10	0	0	0	0	1,890	0	0	0	0	0	0	0
11	0	0	0	0	120	0	0	0	0	0	0	0
12	0	0	0	0	89	0	0	0	0	0	0	0
13	0	0	0	0	89	0	0	0	0	0	0	0
14	0	0	0	0	155	0	0	0	0	0	0	0
15	0	0	0	0	398	0	0	0	0	0	0	0
16	0	0	0	0	186	0	0	0	0	0	0	0
17	0	0	0	0	146	0	0	0	0	0	0	0
18	0	0	0	0	487	0	0	0	0	0	0	0
19	0	0	0	0	517	0	0	0	0	0	0	0
20	0	0	0	273	482	0	0	0	0	0	0	0
21	0	0	0	90	323	0	0	0	0	0	0	0
22	0	0	0	0	912	0	0	0	0	0	0	0
23	0	0	0	0	2,620	0	0	0	0	0	0	0
24	0	0	0	380	6,010	0	0	0	0	0	0	0
25	0	0	0	11,700	13,400	0	0	0	0	0	0	0
26	0	0	0	14,600	10,500	0	0	0	0	0	0	0
27	0	0	0	6,500	7,730	0	0	0	0	0	0	0
28	0	0	0	7,560	7,250	0	0	0	0	0	0	0
29	0	0	0	14	-----	0	0	0	0	0	0	0
30	0	0	0	9.6	-----	0	0	0	0	0	0	0
31	0	-----	0	8.2	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	41,134.8	65,910	1,528	0	0	0	0	0	0
MEAN	0	0	0	1,327	2,354	49.3	0	0	0	0	0	0
MAX	0	0	0	14,600	13,400	1,410	0	0	0	0	0	0
MIN	0	0	0	0	12	0	0	0	0	0	0	0
AC-FT	0	0	0	81,590	130,700	3,030	0	0	0	0	0	0
CAL YR 1968	TOTAL	4,416.20	MEAN	12.1	MAX	3,370	MIN	0	AC-FT	8,760		
WTR YR 1969	TOTAL	108,572.80	MEAN	297	MAX	14,600	MIN	0	AC-FT	215,400		

SAN GABRIEL RIVER BASIN

207

11-0880. SAN GABRIEL RIVER AT SPRING STREET, NEAR LOS ALAMITOS, CALIF.

LOCATION.--Lat 33°48'43", long 118°05'24", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.24, T.4 S., R.12 W., Los Angeles County, on right levee, 455 ft upstream from Spring Street bridge, 1.3 miles upstream from Coyote Creek, and 1.3 miles north-west of Los Alamitos.

DRAINAGE AREA.--472 sq mi.

PERIOD OF RECORD.--October 1927 to September 1951, October 1952 to current year. Monthly discharge only for October 1927 to September 1936, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 11.87 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to October 1952, at datum 4.82 ft higher, and October 1952 to Nov. 17, 1964, at site 455 ft downstream at datum 0.38 ft higher.

AVERAGE DISCHARGE.--41 years, 28.3 cfs (20,500 acre-ft per year); median of yearly mean discharges, 3.6 cfs (2,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,600 cfs Jan. 25 (gage height, 9.37 ft); no flow for some days. Period of record: Maximum discharge, 27,000 cfs (estimated) Mar. 2, 1938; no flow for several months in each year.

REMARKS.--Regulation and diversions same as sta 11-0875. Additional diversion to percolation basin near Washington Boulevard and percolation basins in streambed. Average Discharge represents flow to ocean during period, regardless of upstream development. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	0	.20	.1	261	3,820	0	.10	.20	.20	.10	.40
2	.10	0	.20	.1	147	1,450	.70	.20	.30	.40	.10	.50
3	.80	0	.20	.1	345	968	114	.20	.20	.40	.10	.40
4	0	1.8	.20	.1	354	380	21	.20	.40	.80	.10	.40
5	0	.10	.20	.1	1,320	315	389	.40	.40	.30	.10	.20
6	.10	0	.20	.1	4,770	249	531	.40	.10	.30	.10	.10
7	.10	.10	.30	.1	3,450	247	400	.30	.10	.40	.20	.10
8	.10	0	.30	.1	45	1,480	301	.20	.20	.20	.30	.50
9	.10	.10	.30	.1	33	1,520	315	.30	.10	.40	.40	.30
10	.10	.10	.30	.1	23	1,760	417	.30	.10	.10	.80	.20
11	.20	.10	14	.1	2.3	1,460	232	.10	.10	.80	1.0	.10
12	.30	.10	.40	.1	.2	1,170	238	.10	.10	1.3	1.0	.80
13	.20	.10	.20	41	.1	1,450	239	.10	.10	.10	1.0	1.0
14	2.1	.10	.10	631	.1	1,390	239	0	.10	.20	.20	1.3
15	2.3	18	.10	7.4	45	629	232	0	.10	.40	.40	1.0
16	.80	1.2	9.2	.1	67	688	50	.10	.10	1.3	.50	.50
17	0	0	.80	.1	25	695	.10	.10	.10	1.3	.80	.40
18	0	0	.10	38	88	171	.10	.10	.10	1.5	.80	.50
19	.10	0	0	486	55	66	.10	.10	.10	1.3	.80	.80
20	.10	0	4.1	2,550	35	29	.20	.10	.10	.50	.80	.50
21	0	0	.50	1,780	36	306	.20	.10	.10	1.0	1.0	.50
22	0	0	.20	616	174	284	.10	.10	.10	1.8	.80	.50
23	0	.10	.10	255	563	48	.10	.20	.10	1.5	.80	1.0
24	0	.10	.10	3,840	2,170	48	.30	.20	.10	.40	.80	.10
25	0	.10	51	7,530	7,770	35	.20	.30	.10	.10	.80	.10
26	.10	.10	240	9,350	8,390	1.0	.10	1.0	.10	.10	1.0	.10
27	.10	.10	31	6,810	5,760	0	.20	.30	.30	.10	1.0	.10
28	.10	.10	1.8	4,660	4,390	0	.20	.20	.10	.10	.50	.10
29	.10	.10	2.1	357	-----	0	.20	.30	.20	.10	1.0	.10
30	5.2	.20	.50	173	-----	0	.10	.30	.10	.10	.50	.10
31	.10	-----	.10	232	-----	0	-----	.30	-----	.10	.50	-----
TOTAL	13.30	22.70	358.80	39,357.8	40,318.7	20,659.0	3,720.90	6.70	4.40	17.60	18.30	12.70
MEAN	.43	.76	11.6	1,270	1,440	666	124	.22	.15	.57	.59	.42
MAX	5.2	18	240	9,350	8,390	3,820	531	1.0	.40	1.8	1.0	1.3
MIN	0	0	0	.10	.10	0	0	0	.10	.10	.10	.10
AC-FT	26	45	712	78,070	79,970	40,980	7,380	13	8.7	35	36	25
CAL YR 1968	TOTAL	1,535.80	MEAN	4.20	MAX	476	MIN	0	AC-FT	3,050		
WTR YR 1969	TOTAL	104,510.90	MEAN	286	MAX	9,350	MIN	0	AC-FT	207,300		

SAN GABRIEL RIVER BASIN

11-0885. BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CALIF.

LOCATION.--Lat 33°53'16", long 117°55'32", in NE¼NE¼NE¼ sec.28, T.3 S., R.10 W., Orange County, on right bank 0.2 mile downstream from Brea Dam, and 1 mile north of Fullerton.

DRAINAGE AREA.--21.6 sq mi.

PERIOD OF RECORD.--January 1942 to current year.

GAGE.--Water-stage recorder. V-notch sharp-crested weir since October 1946. Datum of gage is 196.67 ft above mean sea level (levels by Corps of Engineers). Prior to Dec. 4, 1964, at datum 1.03 ft higher.

AVERAGE DISCHARGE.--27 years, 1.08 cfs (782 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 970 cfs Feb. 25 (gage height, 6.30 ft), from rating curve extended above 340 cfs; minimum daily, 0.03 cfs June 9.
Period of record: Maximum discharge, 970 cfs Feb. 25, 1969 (gage height, 6.30 ft), from rating curve extended above 340 cfs; no flow for parts of most years.

REMARKS.--Records fair. Flow regulated by Brea flood-control reservoir (capacity, 4,100 acre-ft). No diversion above station. Since August 1966, low flow mostly the result of irrigation waste water from golf course 0.8 mile upstream. See schematic diagram for San Gabriel and Los Angeles River basins.

DISCHARGE. IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	.20	.13	8.6	8.0	2.0	.30	.30	.40	.10	.13
2	.10	.10	.20	.13	9.5	5.0	3.0	.30	.30	.30	.10	.13
3	.10	.10	.10	.14	9.7	5.0	3.5	.30	.20	.40	.10	.17
4	.10	.10	.20	.14	11	4.0	3.8	.30	.30	.30	.10	.21
5	.05	.20	.10	.15	25	3.0	4.2	.20	.20	.30	.04	.21
6	.10	.20	.10	.13	162	8.0	1.9	.30	.20	.30	.10	.21
7	.10	.10	.10	.13	10	5.0	2.2	.30	.10	.30	.10	.21
8	.10	.10	.10	.13	9.7	5.0	1.9	.20	.04	.20	.10	.17
9	.10	.10	.10	.13	7.3	4.0	2.0	.20	.03	.20	.20	.13
10	.10	.20	.20	.13	7.1	3.0	2.3	.20	.04	.30	.30	.17
11	.10	.30	.30	.13	7.1	7.0	2.3	.20	.10	.20	.30	.32
12	.10	.20	.10	.14	7.1	7.0	2.2	.20	.20	.20	.30	.21
13	.10	.20	.10	4.9	7.1	4.0	2.2	.20	.30	.30	.20	.13
14	.10	.10	.10	19	7.1	4.0	2.2	.20	.30	.30	.20	.26
15	.10	.70	.10	.46	34	4.0	2.2	.20	.20	.50	.30	.26
16	.10	.10	.30	.19	11	4.0	2.1	.16	.20	.50	.20	.32
17	.10	.10	.10	.16	7.5	4.0	1.8	.16	.20	.30	.20	.32
18	.10	.10	.10	7.6	8.9	4.0	1.8	.14	.30	.10	.20	.32
19	.10	.10	.10	11	9.8	4.0	1.6	.14	.20	.40	.20	.26
20	.10	.20	.40	161	8.1	2.0	1.4	.20	.30	.30	.20	.32
21	.10	.10	.20	95	7.5	10	1.4	.15	.20	.40	.20	.26
22	.10	.10	.10	7.9	38	3.0	1.1	.07	.20	.30	.20	.26
23	.10	.10	.10	3.5	145	3.0	.90	.04	.30	.30	.20	.21
24	.10	.10	.10	70	316	2.5	.70	.07	.40	.20	.30	.17
25	.10	.10	13	302	594	2.5	.60	.13	.40	.04	.30	.21
26	.10	.10	4.0	316	310	2.0	.50	.11	.40	.10	.20	.21
27	.10	.10	.20	95	15	2.0	.30	.10	.30	.10	.20	.21
28	.10	.20	.10	12	10	2.0	.40	.30	.30	.30	.26	.17
29	.10	.10	.10	9.8	-----	2.0	.40	.20	.30	.20	.26	.17
30	.40	.10	.10	8.0	-----	2.0	.40	.20	.30	.10	.21	.10
31	.10	-----	.10	7.7	-----	2.0	-----	.20	-----	.10	.17	-----
TOTAL	3.35	4.50	21.20	1,132.82	1,803.1	127.0	53.30	5.97	7.11	8.24	6.04	6.43
MEAN	.11	.15	.68	36.5	64.4	4.10	1.78	.19	.24	.27	.19	.21
MAX	.40	.70	13	316	594	10	4.2	.30	.40	.50	.30	.32
MIN	.05	.10	.10	.13	7.1	2.0	.30	.04	.03	.04	.04	.10
AC-FT	6.6	8.9	42	2,250	3,580	252	106	12	14	16	12	13

CAL YR 1968 TOTAL 328.75 MEAN .90 MAX 226 MIN .05 AC-FT 652
WTR YR 1969 TOTAL 3,179.06 MEAN 8.71 MAX 594 MIN .03 AC-FT 6,310

NOTE.--No gage-height record Feb. 27 to Apr. 3.

SAN GABRIEL RIVER BASIN

209

11-0890. BREA CREEK AT FULLERTON, CALIF.

LOCATION.--Lat 33°52'25", long 117°55'30", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.3 S., R.10 W., Orange County, between Malden Avenue and Spadra Road at Fullerton.

DRAINAGE AREA.--23.6 sq mi.

PERIOD OF RECORD.--October 1930 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 160 ft (from topographic map). For history of gage changes prior to Jan. 19, 1940, see WSP 1735.

AVERAGE DISCHARGE.--39 years, 1.42 cfs (1,030 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 980 cfs Feb. 25 (gage height, 2.40 ft), from rating curve based on computations of flow in concrete-lined channel; no flow Aug. 31 to Sept. 2.

Period of record: Maximum discharge, 3,700 cfs Mar. 14, 1941 (gage height, 5.45 ft); no flow for some days in each year.

REMARKS.--Flow regulated by Brea flood-control reservoir since January 1942 (capacity, 4,100 acre-ft). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.90	.60	.90	3.0	19	3.0	2.0	1.5	.10	.60	0
2	1.9	.90	.90	.90	3.0	12	5.0	2.5	2.0	2.5	.60	0
3	1.9	.90	.60	.90	3.0	3.0	9.0	2.5	1.5	2.2	.60	.40
4	1.6	.90	.60	.90	3.0	3.0	2.5	2.8	1.5	1.5	.60	.50
5	1.9	1.2	.60	.90	11	3.0	5.0	3.0	1.5	1.5	.40	.60
6	1.9	1.2	.30	.90	107	3.2	5.0	3.1	2.5	1.5	.40	.60
7	1.6	1.5	.30	.60	15	2.2	4.0	4.0	2.5	1.5	.60	.90
8	1.6	1.9	.30	.90	5.0	1.9	3.0	4.0	2.5	1.5	.60	1.2
9	1.6	2.2	.30	.90	3.1	1.9	2.5	4.0	2.5	1.5	.60	1.2
10	1.6	1.9	.60	.90	3.1	6.4	3.0	4.0	2.5	1.7	.50	1.2
11	1.6	1.9	1.9	.90	2.8	7.9	3.0	3.5	2.5	1.8	.80	1.2
12	1.6	6.0	.60	1.2	2.8	6.0	2.8	3.5	3.0	1.5	.90	1.5
13	1.6	2.5	.60	12	2.8	9.4	2.5	2.5	3.0	.90	.80	.60
14	1.6	2.2	.90	44	2.5	6.0	2.5	2.0	2.5	.30	.60	.60
15	1.6	3.1	.90	1.9	36	5.0	2.5	3.0	2.5	.10	.70	.60
16	1.6	1.6	.90	1.6	25	4.1	2.5	4.0	2.5	.90	.60	.60
17	1.6	.90	1.6	1.2	5.0	4.1	2.5	3.0	2.0	1.2	.50	.60
18	1.2	.30	.60	12	26	3.1	2.5	2.0	1.0	1.2	.30	.60
19	1.2	.60	.60	43	29	3.1	2.8	1.0	1.0	1.5	.10	.60
20	1.2	.90	1.9	189	9.4	3.1	3.0	1.0	1.0	1.5	.10	.60
21	1.2	.60	.60	102	3.0	36	3.5	1.5	1.5	1.9	.10	.70
22	1.2	.90	.60	34	63	13	4.0	1.5	1.5	1.8	.10	.80
23	1.2	.90	.60	8.0	205	5.0	3.0	1.5	1.5	.90	.10	.90
24	1.2	.90	.60	137	357	3.0	3.0	1.0	1.5	.60	.10	1.2
25	1.2	.60	19	306	625	3.0	3.0	.50	1.5	.30	.10	1.3
26	1.2	.60	16	213	274	3.0	3.0	.30	1.5	.40	.10	.90
27	1.2	.60	1.6	65	23	3.0	2.5	.20	1.5	.80	.10	.90
28	1.2	.90	.90	3.1	22	3.0	2.8	1.5	1.5	.80	.30	.90
29	.90	.60	.60	7.9	-----	3.0	2.8	1.5	1.5	.60	.10	.90
30	1.5	.60	.60	3.1	-----	3.0	2.0	1.5	1.0	.60	.10	1.2
31	.90	-----	.90	3.1	-----	3.0	-----	1.5	-----	.60	0	-----
TOTAL	43.90	40.70	57.60	1,197.70	1,869.5	185.4	98.2	69.90	56.0	35.70	12.10	23.80
MEAN	1.42	1.36	1.86	38.6	66.8	5.98	3.27	2.25	1.87	1.15	.39	.79
MAX	1.9	6.0	19	306	625	36	9.0	4.0	3.0	2.5	.90	1.5
MIN	.60	.30	.30	.60	2.5	1.9	2.0	.20	1.0	.10	0	0
AC-FT	87	81	114	2,380	3,710	368	195	139	111	71	24	47
CAL YR 1968	TOTAL	646.70	MEAN	1.77	MAX	244	MIN	0	AC-FT	1,280		
WTR YR 1969	TOTAL	3,690.50	MEAN	10.1	MAX	625	MIN	0	AC-FT	7,320		

SAN GABRIEL RIVER BASIN

11-0895. FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA, CALIF.

LOCATION.--Lat 33°53'45", long 117°53'07", in NE¼NW¼SW¼ sec.24, T.3 S., R.10 W., Orange County, on left bank of outlet channel of Fullerton Dam, 1.6 miles southeast of Brea.

DRAINAGE AREA.--4.94 sq mi.

PERIOD OF RECORD.--October 1941 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 250 ft (from topographic map). V-notch sharp-crested weir used Oct. 25, 1946, to Feb. 2, 1956.

AVERAGE DISCHARGE.--13 years (1941-54), 0.190 cfs (135 acre-ft per year); median of yearly discharges, 0.02 cfs (14 acre-ft per year); 15 years (1954-69), 0.551 cfs (399 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 313 cfs Jan. 25 (gage height, 4.32 ft); no flow for most of year. Period of record: Maximum discharge, 313 cfs Jan. 25, 1969 (gage height, 4.32 ft); no flow at times each year.

REMARKS.--Records good. Flow regulated by Fullerton flood-control reservoir (capacity 706 acre-ft). Small tributary formerly entering below station diverted into reservoir since December 1954. See schematic diagram for San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	1.8	0	0	0	0	0	0
2	0	0	0	0	0	.22	0	0	0	0	0	0
3	0	0	0	0	0	0	.70	0	0	0	0	0
4	0	0	0	0	0	0	.10	0	0	0	0	0
5	0	0	0	0	1.0	0	1.1	0	0	0	0	0
6	0	0	0	0	9.0	0	.20	0	0	0	0	0
7	0	0	0	0	39	0	.10	0	0	0	0	0
8	0	0	0	0	32	0	.10	0	0	0	0	0
9	0	0	0	0	.12	0	.10	0	0	0	0	0
10	0	0	.20	0	.10	.11	.10	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	.12	0	0	0	0	0	0	0
13	0	0	0	0	.12	.18	0	0	0	0	0	0
14	0	0	0	6.1	.12	0	0	0	0	0	0	0
15	0	0	0	0	2.8	0	0	0	0	0	0	0
16	0	0	0	0	9.1	0	0	0	0	0	0	0
17	0	0	0	0	.38	0	0	0	0	0	0	0
18	0	0	0	2.2	3.4	0	0	0	0	0	0	0
19	0	0	0	8.1	1.7	0	0	0	0	0	0	0
20	0	0	0	74	1.0	0	0	0	0	0	0	0
21	0	0	0	20	.63	4.7	0	0	0	0	0	0
22	0	0	0	19	14	2.1	0	0	0	0	0	0
23	0	0	0	.20	26	0	0	0	0	0	0	0
24	0	0	0	9.7	152	0	0	0	0	0	0	0
25	0	0	1.4	198	153	0	0	0	0	0	0	0
26	0	0	1.5	55	34	0	0	0	0	0	0	0
27	0	0	0	15	0	0	0	0	0	0	0	0
28	0	0	0	1.2	.73	0	0	0	0	0	0	0
29	0	0	0	.10	-----	0	0	0	0	.10	0	0
30	0	0	0	.10	-----	0	0	0	0	.10	0	0
31	0	-----	0	.10	-----	0	-----	0	-----	0	-----	-----
TOTAL	0	0	3.10	408.80	480.32	9.11	2.50	0	0	0.20	0	0
MEAN	0	0	.10	13.2	17.2	.29	.083	0	0	.007	0	0
MAX	0	0	1.5	198	153	4.7	1.1	0	0	.10	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	6.2	811	953	18	5.0	0	0	.4	0	0
CAL YR 1968	TOTAL	57.90	MEAN	.16	MAX	23	MIN	0	AC-FT	115		
WTR YR 1969	TOTAL	904.03	MEAN	2.48	MAX	198	MIN	0	AC-FT	1,790		

SAN GABRIEL RIVER BASIN

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11-0902. FULLERTON CREEK AT RICHMAN AVENUE, AT FULLERTON, CALIF.

LOCATION.--Lat 33°51'45", long 117°55'55", in NW¼SW¼SE¼ sec.33, T.3 S., R.10 W., Orange County, on right bank 125 ft east of Richman Avenue, in Fullerton.

DRAINAGE AREA.--12.1 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 126.4 ft above mean sea level (levels by Orange County Flood Control District).

AVERAGE DISCHARGE.--10 years, 1.98 cfs (1,430 acre-ft per year); median of mean annual discharges, 1.1 cfs (800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,100 cfs Jan. 25 (gage height, 4.78 ft); no flow for some days.
Period of record: Maximum discharge, 1,100 cfs Jan. 25, 1969 (gage height, 4.78 ft); no flow for many days in each year.

REMARKS.--Flow regulated by Fullerton flood-control reservoir (capacity, 706 acre-ft). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.10	.20	0	.10	1.1	.10	.20	.10	.20	.10	.10
2	.20	.10	1.2	.10	0	.60	9.1	.20	.20	.10	.10	.30
3	.50	.40	2.1	.10	0	.60	6.9	.10	.70	.10	.10	.10
4	.30	.20	2.3	.10	0	.20	.10	.10	.10	.10	.20	.10
5	.50	.90	2.3	.10	26	.10	9.5	.10	.10	.10	.20	.10
6	.20	2.0	2.1	.10	132	.20	1.2	1.0	.10	0	.10	.10
7	.70	1.9	2.3	.10	21	.30	.10	.10	.10	0	.10	.10
8	.60	1.8	1.8	0	18	.10	0	.10	.10	.10	.10	.10
9	.60	2.0	2.4	0	.50	.10	0	.10	0	0	.10	.10
10	.60	1.2	2.3	.10	.50	5.7	.80	.10	.10	0	.10	.10
11	.60	.10	6.4	.10	.10	.10	.10	.10	.10	.10	.10	.10
12	.70	.10	2.8	0	.10	0	.10	.10	.10	.20	.20	.10
13	.10	.10	2.6	32	.20	6.5	.20	.10	.20	.30	.20	.10
14	.50	.10	3.5	58	.10	.10	.10	.10	.10	.20	.30	.10
15	.30	9.4	3.8	.20	31	.10	.10	.10	.10	.20	.20	.10
16	.60	.20	3.3	.10	10	0	.10	.10	.10	.10	.20	.10
17	.50	.10	.30	0	.40	.10	.10	.10	.20	.10	.20	.10
18	.60	0	.30	30	14	.10	.10	.10	.20	.10	.10	.10
19	.70	.10	.30	49	16	.10	.10	.10	.10	.10	.10	.10
20	.30	.10	1.8	347	3.8	.10	.10	.10	.20	.10	.10	.10
21	1.4	.10	0	102	.50	39	.10	.10	.10	.10	.10	.10
22	.50	.20	0	39	80	4.8	0	1.7	.10	.10	.10	0
23	.40	.30	.10	4.0	177	.30	.10	3.2	.10	.10	.10	.10
24	.30	.60	.10	193	482	.10	.10	.10	.20	.10	.10	.10
25	.50	.10	34	521	488	0	.30	.10	.20	.10	.10	.10
26	.60	1.8	12	85	65	.10	.30	2.0	.10	.10	.20	.10
27	.20	3.3	.20	34	4.8	.10	.30	2.7	.20	.10	.30	.10
28	.60	2.1	.10	11	8.2	.10	.40	1.3	.10	.10	.10	.10
29	.60	1.0	0	.60	-----	.10	.30	1.3	.20	.10	.10	.10
30	2.6	.20	0	.10	-----	.10	.30	.20	.10	.10	.10	.10
31	.10	-----	0	.10	-----	.10	-----	.20	-----	.10	.10	-----
TOTAL	17.20	30.60	90.60	1,506.90	1,579.30	61.00	31.10	16.00	4.40	3.30	4.30	3.10
MEAN	.55	1.02	2.92	48.6	56.4	1.97	1.04	.52	.15	.11	.14	.10
MAX	2.6	9.4	34	521	488	39	9.5	3.2	.70	.30	.30	.30
MIN	.10	0	0	0	0	0	0	.10	0	0	.10	0
AC-FT	34	61	180	2,990	3,130	121	62	32	8.7	6.6	8.5	6.2
CAL YR 1968	TOTAL	455.90	MEAN	1.25	MAX	153	MIN	0	AC-FT	904		
WTR YR 1969	TOTAL	3,347.80	MEAN	9.17	MAX	521	MIN	0	AC-FT	6,640		

SAN GABRIEL RIVER BASIN

11-0907. COYOTE CREEK AT LOS ALAMITOS, CALIF.

LOCATION.--Lat 33°48'38", long 118°04'28", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.4 S., R.11 W., Orange County, on right bank about 250 ft downstream from Spring Street, 0.5 mile northwest of Los Alamitos.

DRAINAGE AREA.--136 sq mi.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7.37 ft above mean sea level (levels by Los Angeles County Flood Control District).

AVERAGE DISCHARGE.--6 years, 35.6 cfs (25,790 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,300 cfs Jan. 20 (gage height, 6.38 ft); minimum daily, 3.1 cfs Apr. 9.

Period of record: Maximum discharge, 11,300 cfs Jan. 20, 1969 (gage height, 6.38 ft); no flow Jan. 25, Feb. 15-17, 1964.

REMARKS.--Flows up to 100 cfs can be diverted from present Carbon Creek channel to Coyote Creek through the original Carbon Creek channel. No regulation or diversion above station. Average Discharge represents flow to ocean during period of record, regardless of upstream development. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	11	4.6	4.3	13	50	24	10	7.4	8.8	8.8	5.2
2	5.5	9.4	4.6	5.2	10	45	24	11	8.1	8.8	8.8	4.3
3	8.1	8.1	6.2	6.2	10	39	153	8.8	7.4	9.4	8.8	4.9
4	8.8	35	6.8	7.4	15	24	8.1	8.1	8.8	8.8	8.8	5.5
5	7.4	8.1	8.8	4.9	1,760	21	104	8.8	8.8	9.4	9.4	5.5
6	4.6	7.4	6.2	4.9	956	21	38	12	8.1	10	8.8	5.2
7	4.6	7.4	9.4	5.2	74	19	3.7	15	8.1	11	8.8	5.2
8	6.8	8.1	11	4.9	47	17	3.4	11	6.1	8.1	8.8	6.8
9	4.3	7.4	8.8	4.3	17	13	3.1	11	6.1	6.8	8.8	6.2
10	5.2	8.8	11	4.0	12	87	7.4	12	6.1	7.4	8.8	6.2
11	5.2	8.8	65	3.7	12	31	9.4	11	7.4	10	8.8	6.8
12	4.9	5.2	9.4	3.7	15	19	9.4	10	8.1	12	9.4	6.2
13	6.2	5.2	5.5	155	15	88	12	8.8	9.4	5.5	9.4	6.2
14	7.4	4.9	8.1	746	11	19	13	7.4	8.1	6.1	10	6.8
15	6.2	91	8.8	19	298	17	9.4	7.4	6.8	7.4	10	6.2
16	4.6	19	41	8.8	138	12	11	8.1	10	6.8	10	6.8
17	4.6	3.4	6.2	8.8	11	11	15	8.8	8.1	7.4	9.4	6.8
18	6.2	3.4	5.2	180	276	12	12	8.8	8.1	8.1	10	6.8
19	7.4	3.7	4.9	626	165	11	16	8.1	8.8	8.1	11	6.8
20	6.8	4.0	30	3,860	39	13	16	8.1	9.4	6.8	12	8.1
21	6.2	4.0	7.4	1,410	11	382	13	8.8	8.8	7.4	10	8.8
22	11	4.3	5.5	231	580	58	10	8.8	9.4	9.4	6.8	6.8
23	16	4.0	6.8	53	2,370	15	10	16	8.8	9.4	6.8	6.8
24	6.8	5.5	6.8	1,760	2,070	13	13	8.1	9.4	8.1	6.2	8.1
25	7.4	5.2	438	4,420	3,290	11	15	8.1	10	8.1	6.2	8.8
26	8.1	5.2	224	792	508	8.8	15	8.8	8.8	8.8	5.5	10
27	9.4	9.4	8.8	230	206	10	12	13	9.4	8.1	6.8	6.8
28	8.1	6.8	4.3	164	92	12	12	9.4	9.4	11	4.9	6.8
29	9.4	4.6	5.5	58	-----	12	16	10	9.4	9.4	4.6	6.2
30	53	4.3	4.6	22	-----	15	13	8.1	8.8	9.4	4.9	8.1
31	16	-----	4.9	13	-----	20	-----	9.4	-----	9.4	4.3	-----
TOTAL	273.6	312.6	978.1	14,815.3	13,021	1,125.8	620.9	302.7	251.4	265.2	255.6	199.7
MEAN	8.83	10.4	31.6	478	465	36.3	20.7	9.76	8.38	8.55	8.25	6.66
MAX	53	91	438	4,420	3,290	382	153	16	10	12	12	10
MIN	4.3	3.4	4.3	3.7	10	8.8	3.1	7.4	6.1	5.5	4.3	4.3
AC-FT	543	620	1,940	29,390	25,830	2,230	1,230	600	499	526	507	396
CAL YR 1968	TOTAL	7,138.4	MEAN	19.5	MAX	2,350	MIN	2.5	AC-FT	14,160		
WTR YR 1969	TOTAL	32,421.9	MEAN	88.8	MAX	4,420	MIN	3.1	AC-FT	64,310		

11-0924.5. LOS ANGELES RIVER AT SEPULVEDA DAM, CALIF.

LOCATION.--Lat 34°09'42", long 118°27'57", in Ex Mission de San Fernando Grant, Los Angeles County, on right bank of outlet channel of Sepulveda Dam, 200 ft upstream from Sepulveda Boulevard in city of Los Angeles, and 1.8 miles southwest of Van Nuys.

DRAINAGE AREA.--158 sq mi.

PERIOD OF RECORD.--January 1929 to February 1938, May 1938 to current year. See WSP 1315-B, 1735 for history of records prior to September 1950.

GAGE.--Water-stage recorder. Datum of gage is 652.7 ft above mean sea level. Prior to Aug. 23, 1941, at site 1 mile downstream at different datum; Aug. 23, 1941, to Sept. 30, 1950, at site 900 ft downstream at different datum; Oct. 1, 1950, to Aug. 29, 1953, at site 800 ft upstream at datum 5.99 ft higher.

AVERAGE DISCHARGE.--39 years (1929-37, 1938-69), 28.2 cfs (20,420 acre-ft per year); median of yearly mean discharges, 19 cfs (13,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,800 cfs Jan. 25 (gage height, 11.42 ft); minimum daily, 2.7 cfs Oct. 31.

Period of record: Maximum discharge, 13,800 cfs Jan. 25, 1969 (gage height, 11.42 ft); no flow Sept. 19, 20, 1930.

Flood of Mar. 2, 1938, amounted to 12,000 cfs (estimated).

REMARKS.--Records good. Flow regulated since December 1941 by Sepulveda flood-control reservoir (capacity, 17,400 acre-ft). Some diversion above station. City of Los Angeles at times discharges imported Owens River water into Los Angeles River from upstream distributing reservoirs. See schematic diagram for San Gabriel and Los Angeles River basins.

COOPERATION.--Three discharge measurements furnished by Los Angeles County Flood Control District. Records of released water from reservoirs furnished by city of Los Angeles.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	3.1	6.0	7.4	33	81	19	15	16	12	17	6.9
2	6.9	5.0	6.0	8.5	27	73	38	15	17	15	25	7.9
3	9.1	4.8	6.0	7.9	23	66	20	15	17	18	19	7.9
4	7.4	9.7	6.9	7.9	23	62	19	24	16	32	10	8.5
5	6.4	4.6	7.4	9.1	308	60	185	10	16	26	10	9.1
6	10	4.6	7.9	9.1	1,780	54	23	10	16	29	11	9.1
7	9.7	5.0	7.4	9.1	78	50	16	10	17	27	9.7	9.1
8	6.4	5.0	9.5	8.5	52	46	16	10	16	27	15	9.1
9	6.9	5.0	9.1	9.1	42	46	16	10	16	27	11	8.5
10	7.4	9.6	7.9	9.7	40	185	16	11	16	33	11	7.9
11	7.4	6.4	51	9.7	33	46	17	13	16	133	10	8.5
12	7.4	4.6	5.4	9.7	54	40	20	12	18	34	9.7	8.5
13	7.9	4.2	5.4	191	27	33	23	10	17	32	9.1	7.4
14	81	4.2	5.0	615	23	28	14	11	18	32	9.1	7.4
15	4.9	169	12	12	102	28	12	12	16	32	9.1	7.4
16	3.1	11	37	7.9	27	27	18	12	22	34	8.5	7.4
17	3.8	6.0	5.0	7.9	28	28	15	12	12	36	7.9	6.9
18	6.4	6.0	6.4	265	128	30	15	12	12	36	7.9	7.4
19	5.9	6.0	5.4	2,090	24	26	15	12	11	40	7.9	7.4
20	7.7	5.0	5.4	2,050	19	24	16	12	10	40	7.9	7.9
21	6.4	5.0	4.6	3,830	109	255	15	12	10	38	9.1	8.5
22	5.9	4.0	5.0	312	453	38	16	12	10	40	9.7	9.1
23	5.9	5.0	4.6	58	3,670	34	15	12	10	26	9.7	7.4
24	6.4	5.0	5.0	2,540	2,250	30	14	12	10	16	9.1	7.9
25	6.4	6.0	321	8,250	4,270	21	14	12	10	13	7.9	7.4
26	6.9	6.0	103	2,670	374	20	14	12	11	17	7.9	6.4
27	7.4	6.0	9.7	352	301	19	15	12	11	16	7.9	5.4
28	7.4	6.0	7.9	231	415	19	15	16	11	17	7.4	5.9
29	13	6.0	10	80	-----	19	15	16	12	16	7.4	5.9
30	28	6.0	13	57	-----	18	15	17	12	16	7.4	5.9
31	2.7	-----	13	43	-----	18	-----	17	-----	16	7.4	-----
TOTAL	308.5	333.8	708.9	23,767.5	14,713	1,524	681	398	422	926	316.7	230.0
MEAN	9.95	11.1	22.9	767	525	49.2	22.7	12.8	14.1	29.9	10.2	7.67
MAX	81	169	321	8,250	4,270	255	185	24	22	133	25	9.1
MIN	2.7	3.1	4.6	7.4	19	18	12	10	10	12	7.4	5.4
AC-FT	612	662	1,410	47,140	29,180	3,020	1,350	789	837	1,840	628	456
(a)	0	0	0	0	0	86	0	0	30	1,396	69	0

CAL YR 1968 TOTAL 8,567.0 MEAN 23.4 MAX 2,720 MIN 2.7 AC-FT 16,990

WTR YR 1969 TOTAL 44,329.4 MEAN 121 MAX 8,250 MIN 2.7 AC-FT 87,930

a Release, in acre-feet, from city of Los Angeles distributing reservoirs, included in discharge that passes station.

LOS ANGELES RIVER BASIN

11-0930. PACOIMA CREEK NEAR SAN FERNANDO, CALIF.

LOCATION.--Lat 34°20'07", long 118°23'50", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.3 N., R.15 W., Los Angeles County, on right bank 500 ft downstream from Pacoima Dam, 0.3 mile upstream from mouth of canyon, and 4 miles northeast of San Fernando.

DRAINAGE AREA.--28.5 sq mi.

PERIOD OF RECORD.--March to July 1916 (fragmentary), December 1916 to current year.

GAGE.--Water-stage recorder. Flume or weir control since June 1937. Altitude of gage is 1,650 ft (from topographic map). See WSP 1735 for history of changes prior to Feb. 1, 1935.

AVERAGE DISCHARGE.--52 years (1917-69), 9.84 cfs (7,130 acre-ft per year); median of yearly mean discharges, 4.2 cfs (3,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,300 cfs Feb. 25 (gage height, unknown); no flow Oct. 10 to Jan. 21. Period of record: Maximum discharge, 2,440 cfs Mar. 3, 1938; no flow for several months in most years.

REMARKS.--Flow regulated since February 1929 by Pacoima flood-control reservoir (capacity, 4,453 acre-ft). Flow passing over Pacoima Dam spillway enters creek below station. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	0	0	0	72	524	51	26	16	7.4	3.9	1.2
2	13	0	0	0	120	494	54	26	16	7.1	3.7	1.1
3	12	0	0	0	154	452	62	26	15	7.2	3.5	1.1
4	12	0	0	0	153	373	68	25	15	7.3	3.3	1.1
5	12	0	0	0	297	241	71	25	15	7.4	3.1	1.3
6	4.4	0	0	0	332	184	96	25	15	7.5	2.9	1.5
7	.20	0	0	0	283	192	94	25	15	7.7	2.9	1.9
8	.10	0	0	0	283	157	114	24	14	7.3	2.8	2.4
9	.10	0	0	0	276	150	139	24	14	6.9	2.7	3.1
10	0	0	0	0	193	148	128	24	14	6.5	2.6	3.0
11	0	0	0	0	273	151	125	23	14	6.1	2.5	3.0
12	0	0	0	0	276	122	105	23	14	5.9	2.4	3.0
13	0	0	0	0	159	176	157	22	14	5.8	2.4	2.8
14	0	0	0	0	105	132	44	22	13	5.6	2.4	3.0
15	0	0	0	0	105	91	89	21	13	5.5	2.3	3.1
16	0	0	0	0	104	90	132	21	12	5.3	2.2	3.2
17	0	0	0	0	101	84	120	20	12	5.2	2.1	3.0
18	0	0	0	0	101	82	7.0	20	12	5.1	2.0	3.0
19	0	0	0	0	100	85	38	14	12	5.0	1.9	2.9
20	0	0	0	0	100	86	35	44	12	4.9	1.9	3.0
21	0	0	0	0	97	90	30	99	11	4.8	1.9	3.1
22	0	0	0	36	90	90	35	57	11	4.7	1.8	3.0
23	0	0	0	108	106	90	35	18	10	4.5	1.7	3.0
24	0	0	0	112	279	90	32	18	10	4.5	1.6	3.0
25	0	0	0	729	1,470	54	30	18	9.8	4.4	1.5	2.8
26	0	0	0	1,140	1,490	52	30	18	9.4	4.4	1.4	2.8
27	0	0	0	1,190	885	52	29	18	9.0	4.3	1.3	2.8
28	0	0	0	933	635	52	29	18	8.6	4.3	1.3	2.7
29	0	0	0	314	-----	25	28	18	8.2	4.2	1.3	2.6
30	0	0	0	95	-----	47	27	17	7.8	4.1	1.2	2.6
31	0	-----	0	64	-----	78	-----	17	-----	4.0	1.2	-----
TOTAL	66.80	0	0	4,721	8,639	4,734	2,034.0	796	371.8	174.9	69.7	76.1
MEAN	2.15	0	0	152	309	153	67.8	25.7	12.4	5.64	2.25	2.54
MAX	13	0	0	1,190	1,490	524	157	99	16	7.7	3.9	3.2
MIN	0	0	0	0	72	25	7.0	14	7.8	4.0	1.2	1.1
AC-FT	133	0	0	9,360	17,140	9,390	4,030	1,580	737	347	138	151

CAL YR 1968 TOTAL 1,585.10 MEAN 4.33 MAX 21 MIN 0 AC-FT 3,140
 WTR YR 1969 TOTAL 21,683.30 MEAN 59.4 MAX 1,490 MIN 0 AC-FT 43,000

NOTE.--Stage-discharge relation indefinite Apr. 3 to Sept. 18.

11-0934.9. NORTH FORK MILL CREEK NEAR LA CANADA, CALIF.

LOCATION.--Lat 34°19'03", long 118°08'00", Los Angeles County, in Angeles National Forest on right upstream end of culvert on Angeles Forest Highway, 0.2 mile west of Hidden Springs, and 8.8 miles northeast of La Canada.

DRAINAGE AREA.--5.79 sq mi.

PERIOD OF RECORD.--Water years 1960-66 (annual maximum), June 1966 to current year.

GAGE.--Water-stage recorder with rain-gage attachment. Altitude of gage is 3,060 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 1,280 cfs Jan. 25 (gage height, 17.3 ft, from floodmarks), from rating curve extended as explained below; minimum daily, 0.01 cfs Oct. 23, 24.

Period of record: Maximum discharge, 1,280 cfs Jan. 25, 1969 (gage height, 17.3 ft, from floodmarks), from rating curve extended above 10 cfs on basis of computations of flow through culvert at gage-heights 4.00, 9.4, and 17.3 ft; no flow at times in each year.

REMARKS.--Records fair except those for periods of no gage-height record, which are poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.07	.09	.12	18	23	12	8.0	2.4	.98	1.4	.86
2	.02	.06	.09	.12	17	23	12	8.0	2.4	.86	1.4	.86
3	.03	.06	.09	.12	16	22	15	8.0	2.2	.75	1.2	.86
4	.04	.07	.09	.12	15	21	14	8.0	2.2	.86	1.1	.86
5	.02	.07	.09	.12	14	21	13	8.0	2.0	.98	1.1	.86
6	.02	.06	.09	.12	25	21	12	7.0	1.8	1.2	1.1	.86
7	.04	.06	.09	.12	16	21	12	7.0	1.8	1.4	.86	.86
8	.04	.05	.09	.12	15	20	11	7.0	1.6	1.2	.98	.86
9	.02	.05	.09	.12	15	20	11	7.0	1.8	1.2	.98	.86
10	.03	.05	.09	.12	14	20	11	6.5	2.0	1.2	.98	.86
11	.06	.05	.12	.12	14	20	11	6.5	2.2	1.4	.98	.86
12	.06	.06	.09	.12	13	20	11	6.5	2.0	1.8	.98	.86
13	.05	.07	.09	.18	13	20	11	6.0	2.0	1.6	.98	.86
14	.05	.07	.12	.36	12	20	11	6.0	2.0	1.6	.98	.86
15	.04	.12	.15	.21	12	19	11	6.0	1.8	1.6	.98	1.1
16	.04	.07	.18	.15	11	19	10	5.5	2.0	1.6	.98	1.1
17	.04	.07	.15	.15	11	19	10	5.5	2.0	1.4	.98	1.1
18	.04	.06	.15	.25	10	19	10	5.5	1.8	1.4	.98	1.1
19	.03	.06	.18	.57	10	19	10	5.4	1.6	1.4	.86	1.1
20	.03	.06	.18	7.6	9.0	19	10	5.4	1.6	1.4	.86	1.2
21	.02	.06	.57	56	8.0	19	9.5	5.4	1.8	1.4	.86	1.2
22	.02	.06	.30	22	8.0	18	9.5	5.3	1.8	1.2	.86	1.1
23	.01	.06	.12	21	7.0	17	9.5	5.3	1.8	1.2	.75	.98
24	.01	.06	.12	48	10	15	9.5	5.3	1.6	1.2	.75	.98
25	.02	.07	.25	180	75	15	9.0	4.9	1.6	1.3	.75	.98
26	.03	.09	.30	50	40	14	9.0	4.2	1.6	1.4	.75	.98
27	.03	.09	.15	40	30	14	9.0	4.2	1.4	1.4	.75	.98
28	.03	.09	.15	30	25	13	9.0	3.5	1.4	1.4	.75	.98
29	.05	.09	.15	25	-----	13	8.5	3.2	1.2	1.4	.75	.98
30	.06	.09	.15	22	-----	13	8.5	2.8	1.1	1.4	.75	.98
31	.06	-----	.15	20	-----	12	-----	2.4	-----	1.4	.75	-----
TOTAL	1.07	2.05	4.72	524.91	483.0	569	319.0	179.3	54.5	40.53	29.13	28.88
MEAN	.035	.068	.15	16.9	17.3	18.4	10.6	5.78	1.82	1.31	.94	.96
MAX	.06	.12	.57	180	75	23	15	8.0	2.4	1.8	1.4	1.2
MIN	.01	.05	.09	.12	7.0	12	8.5	2.4	1.1	.75	.75	.86
AC-FT	2.1	4.1	9.4	1,040	958	1,130	633	356	108	80	58	57

CAL YR 1968 TOTAL 224.74 MEAN .61 MAX 11 MIN 0 AC-FT 446
WTR YR 1969 TOTAL 2,236.09 MEAN 6.13 MAX 180 MIN .01 AC-FT 4,440

a Precipitation, incomplete.

NOTE.--No gage-height record Jan. 22-24, Jan. 26 to Mar. 20, Apr. 1 to May 22.

LOS ANGELES RIVER BASIN

11-0940. TUJUNGA CREEK BELOW MILL CREEK, NEAR COLBY RANCH, CALIF.

LOCATION.--Lat 34°18'33", long 118°08'40", Los Angeles County, in Angeles National Forest, on left bank 500 ft downstream from Mill Creek, and 2 miles west of Colby Ranch.

DRAINAGE AREA.--64.9 sq mi.

PERIOD OF RECORD.--January 1948 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,650 ft (from topographic map).

AVERAGE DISCHARGE.--21 years, 12.4 cfs (8,980 acre-ft per year); median of yearly mean discharges, 2.9 cfs (2,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 20,700 cfs Feb. 25 (gage height, 15.25 ft), from rating curve extended above 7,000 cfs; minimum daily, 0.90 cfs for some days.

Period of record: Maximum discharge, 20,700 cfs Feb. 25, 1969 (gage height, 15.25 ft), from rating curve extended above 7,000 cfs; no flow at times in most years.

REMARKS.--No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	.90	1.2	1.6	131	666	101	52	31	19	11	6.3
2	.90	.90	1.3	1.6	61	484	103	52	31	18	11	6.3
3	.90	1.0	1.3	1.7	53	494	120	54	30	18	10	6.3
4	.90	1.0	1.4	1.7	52	415	103	56	30	18	9.4	6.3
5	.90	1.1	1.4	1.8	51	348	120	56	30	18	9.1	6.3
6	.90	1.2	1.4	1.9	519	275	126	56	30	18	8.8	6.3
7	1.0	1.2	1.4	1.9	248	221	109	55	30	18	9.1	6.1
8	1.0	1.2	1.4	2.0	240	199	109	53	30	18	9.1	6.1
9	1.0	1.2	1.4	2.1	178	197	96	50	32	18	8.8	6.1
10	.90	1.2	1.4	2.1	172	202	96	50	32	17	8.6	6.1
11	.90	1.3	1.6	2.1	163	202	88	48	33	18	8.6	6.1
12	.90	1.3	1.6	2.1	153	197	83	45	32	19	8.6	6.1
13	.90	1.3	1.6	2.2	147	187	80	44	31	18	8.6	6.3
14	.90	1.3	1.6	5.4	126	172	76	44	30	17	8.3	6.8
15	.90	1.3	1.6	3.2	124	159	74	43	29	16	8.3	7.0
16	.90	1.3	1.6	3.0	118	153	70	42	30	15	8.0	7.3
17	.90	1.3	1.6	2.8	112	147	69	40	30	15	8.0	7.0
18	1.0	1.2	1.6	3.2	122	143	69	40	29	15	8.0	6.8
19	1.0	1.2	1.6	12	116	139	66	40	28	15	7.8	6.8
20	1.0	1.2	1.6	116	114	137	64	39	28	15	7.8	7.0
21	.90	1.2	1.6	1,060	105	161	61	38	28	14	7.8	7.6
22	.90	1.2	1.6	185	101	161	61	37	27	14	7.6	7.3
23	.90	1.2	1.6	89	305	155	63	37	26	14	7.3	7.0
24	.90	1.2	1.6	300	1,550	145	60	36	25	13	7.0	6.6
25	.90	1.2	4.2	4,210	5,320	137	58	36	24	13	7.0	6.6
26	.90	1.2	4.0	1,830	1,460	131	57	35	22	12	6.8	6.3
27	.90	1.2	1.9	739	1,110	128	54	35	22	12	6.8	6.3
28	.90	1.2	1.8	504	895	124	53	35	22	12	6.8	6.1
29	.90	1.2	1.8	411	-----	120	53	32	21	12	6.8	6.1
30	.90	1.2	1.8	307	-----	114	52	31	20	12	6.8	6.1
31	.90	-----	1.7	197	-----	109	-----	31	-----	11	6.6	-----
TOTAL	28.50	35.60	53.2	10,002.4	13,846	6,622	2,394	1,342	843	482	254.2	195.4
MEAN	.92	1.19	1.72	323	495	214	79.8	43.3	28.1	15.5	8.20	6.51
MAX	1.0	1.3	4.2	4,210	5,320	666	126	56	33	19	11	7.6
MIN	.90	.90	1.2	1.6	51	109	52	31	20	11	6.6	6.1
AC-FT	57	71	106	19,840	27,460	13,130	4,750	2,660	1,670	956	504	388
CAL YR 1968	TOTAL	2,075.00	MEAN	5.67	MAX	76	MIN	.60	AC-FT	4,120		
WTR YR 1969	TOTAL	36,098.30	MEAN	98.9	MAX	5,320	MIN	.90	AC-FT	71,600		

11-0955. TUJUNGA CREEK NEAR SUNLAND, CALIF.

LOCATION.--Lat 34°18'02", long 118°16'04", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.3 N., R.13 W., Los Angeles County, on left bank 1,000 ft upstream from Gold Canyon, 2 miles upstream from mouth of canyon, and 4 miles northeast of Sunland.

DRAINAGE AREA.--106 sq mi.

PERIOD OF RECORD.--October 1916 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,571.80 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Oct. 1, 1932, at site 1,000 ft upstream at different datum.

AVERAGE DISCHARGE.--52 years, 29.8 cfs (21,590 acre-ft per year); median of yearly mean discharges, 14 cfs (10,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,300 cfs Feb. 25 (gage height, 16.23 ft, from high-water mark in well); minimum daily, 0.80 cfs for some days.

Period of record: Maximum discharge, 50,000 cfs (estimated) Mar. 2, 1938; minimum, 0.10 cfs at times in some years.

REMARKS.--Flow regulated since July 1931 by Big Tujunga flood-control reservoir (capacity, 3,819 acre-ft).

Several small diversions above station for irrigation. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.0	1.2	2.0	383	1,000	225	110	54	38	21	12
2	2.0	1.0	1.3	2.0	503	776	244	110	57	39	20	11
3	2.6	1.0	1.3	2.0	226	816	271	108	60	39	20	11
4	2.6	.90	1.4	2.0	199	533	268	115	58	40	19	11
5	2.4	.90	1.4	1.9	917	786	329	120	55	40	18	11
6	2.4	.80	1.4	1.9	1,370	756	283	120	54	41	17	11
7	2.2	.80	1.4	1.9	1,030	547	215	120	54	43	16	11
8	2.2	.80	1.5	1.9	560	404	132	120	58	42	16	11
9	2.0	.80	1.5	5.2	469	399	131	110	63	41	16	11
10	1.5	.80	1.6	6.0	346	404	169	105	63	37	16	11
11	1.6	.80	1.7	6.2	347	390	208	105	64	35	16	11
12	1.8	.80	1.7	6.5	337	327	202	103	63	35	16	11
13	2.6	.90	1.7	7.2	281	370	193	96	65	35	16	11
14	2.6	.90	1.7	12	293	376	68	84	64	35	16	11
15	3.4	1.0	1.8	11	398	422	152	82	45	34	16	11
16	1.8	1.0	2.4	14	319	422	152	82	42	34	16	11
17	1.5	1.0	2.2	12	222	311	158	77	9.3	34	15	11
18	1.4	1.0	2.2	9.6	273	330	182	74	48	35	15	11
19	1.2	1.0	2.2	17	199	325	185	74	49	46	14	11
20	1.2	1.0	2.2	152	282	312	132	74	51	44	14	11
21	1.0	1.0	2.2	1,140	220	369	130	74	53	39	13	11
22	.90	1.0	2.2	806	312	375	135	74	55	87	13	11
23	.80	.90	2.0	698	591	319	146	70	56	38	13	11
24	.80	.90	2.2	668	1,710	263	107	69	54	24	13	11
25	.80	.80	4.0	8,550	9,250	299	106	69	52	24	13	11
26	.80	1.0	3.4	5,120	2,500	296	130	62	49	23	13	11
27	.80	1.0	3.0	1,960	1,800	295	120	56	50	23	13	11
28	.80	1.0	2.8	575	3,390	299	127	57	48	23	13	11
29	.80	1.1	2.8	299	-----	426	116	59	43	22	12	11
30	1.0	1.2	2.6	414	-----	408	113	56	40	22	12	11
31	1.0	-----	2.2	323	-----	251	-----	53	-----	22	12	-----
TOTAL	50.50	28.10	63.2	20,827.3	28,727	13,606	5,129	2,688	1,576.3	1,114	473	331
MEAN	1.63	.94	2.04	672	1,026	439	171	86.7	52.5	35.9	15.3	11.0
MAX	3.4	1.2	4.0	8,550	9,250	1,000	329	120	65	87	21	12
MIN	.80	.80	1.2	1.9	199	251	68	53	9.3	22	12	11
AC-FT	100	56	125	41,310	56,980	26,990	10,170	5,330	3,130	2,210	938	657

CAL YR 1968 TOTAL 4,427.50 MEAN 12.1 MAX 89 MIN .80 AC-FT 8,780
WTR YR 1969 TOTAL 74,613.40 MEAN 204 MAX 9,250 MIN .80 AC-FT 148,000

NOTE.--No gage-height record Jan. 27 to Feb. 5, Feb. 7-22.

LOS ANGELES RIVER BASIN

11-0965. LITTLE TUJUNGA CREEK NEAR SAN FERNANDO, CALIF.

LOCATION.--Lat 34°16'28", long 118°22'18", in Tujunga Grant, Los Angeles County, on downstream side of Foothill Boulevard Bridge, 4 miles east of San Fernando.

DRAINAGE AREA.--21.1 sq mi.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge for April 1931, published in WSP 1315-B.

GAGE.--Water-stage recorder. Concrete control since May 1940. Datum of gage is 1,068.39 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Nov. 30, 1964, at datum 0.5 ft lower.

AVERAGE DISCHARGE.--41 years, 2.66 cfs (1,930 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,420 cfs Feb. 25 (gage height, 6.20 ft); no flow for most of year. Period of record: Maximum discharge, 8,500 cfs (estimated) Mar. 2, 1938; no flow for several months each year.

REMARKS.--No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	28	94	8.0	8.6	2.8	.50	0	0
2	0	0	0	0	21	77	8.0	8.4	2.8	.40	0	0
3	0	0	0	0	13	58	10	8.2	2.7	.40	0	0
4	0	0	0	0	9.0	47	11	8.0	2.7	.40	0	0
5	0	0	0	0	8.0	34	13	7.9	2.7	.40	0	0
6	0	0	0	0	95	39	14	7.8	2.8	.30	0	0
7	0	0	0	0	84	39	14	7.7	2.9	.30	0	0
8	0	0	0	0	61	36	14	7.7	3.0	.30	0	0
9	0	0	0	0	43	32	14	7.6	3.1	.30	0	0
10	0	0	0	0	28	26	14	7.5	3.2	.20	0	0
11	0	0	0	0	20	24	13	7.4	3.3	.10	0	0
12	0	0	0	0	18	22	12	7.3	3.2	.10	0	0
13	0	0	0	.10	7.3	20	11	7.2	3.1	0	0	0
14	0	0	0	.10	2.1	19	10	7.0	3.0	0	0	0
15	0	0	0	0	16	18	9.0	6.7	2.9	0	0	0
16	0	0	0	0	12	16	8.0	6.4	2.8	0	0	0
17	0	0	0	0	12	15	7.0	6.1	2.7	0	0	0
18	0	0	0	.10	14	13	6.0	6.0	2.6	0	0	0
19	0	0	0	.50	16	12	5.0	5.7	2.4	0	0	0
20	0	0	0	25	14	12	4.0	5.4	2.2	0	0	0
21	0	0	0	191	15	11	4.0	5.1	2.0	0	0	0
22	0	0	0	56	20	11	6.9	4.8	1.8	0	0	0
23	0	0	0	15	278	10	9.8	4.4	1.6	0	0	0
24	0	0	0	54	920	10	9.7	4.1	1.5	0	0	0
25	0	0	0	166	1,180	8.6	9.6	3.8	1.4	0	0	0
26	0	0	0	248	611	7.3	9.5	3.5	1.2	0	0	0
27	0	0	0	114	165	7.3	9.3	3.2	1.0	0	0	0
28	0	0	0	79	107	7.5	9.1	2.9	.80	0	0	0
29	0	0	0	51	-----	7.7	8.9	2.9	.70	0	0	0
30	0	0	0	33	-----	7.9	8.8	2.9	.60	0	0	0
31	0	-----	0	28	-----	8.0	-----	2.9	-----	0	0	-----
TOTAL	0	0	0	1,060.80	3,817.4	749.3	290.6	185.1	69.50	3.70	0	0
MEAN	0	0	0	34.2	136	24.2	9.69	5.97	2.32	.12	0	0
MAX	0	0	0	248	1,180	94	14	8.6	3.3	.50	0	0
MIN	0	0	0	0	2.1	7.3	4.0	2.9	.60	0	0	0
AC-FT	0	0	0	2,100	7,570	1,490	576	367	138	7.3	0	0

CAL YR 1968 TOTAL 63.00 MEAN .17 MAX 25 MIN 0 AC-FT 125
WTR YR 1969 TOTAL 6,176.40 MEAN 16.9 MAX 1,180 MIN 0 AC-FT 12,250

NOTE.--No gage-height record Mar. 11 to July 12.

11-0970. TUJUNGA CREEK BELOW HANSEN DAM, CALIF.

LOCATION (revised).--Lat 34°15'13", long 118°23'17", in Ex Mission San Fernando Grant, Los Angeles County, in city of Los Angeles, on left bank of outlet channel of Hansen Dam, 0.1 mile upstream from Glen Oaks Boulevard, and 3 miles southeast of San Fernando.

DRAINAGE AREA.--150 sq mi.

PERIOD OF RECORD.--May 1932 to February 1938, August 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 943.32 ft above mean sea level (Corps of Engineers bench mark). Prior to Aug. 25, 1944, at site 0.1 mile downstream at different datum. Aug. 25, 1944, to Sept. 30, 1951, at site 0.3 mile upstream at different datum. Oct. 1, 1951, to Sept. 30, 1953, at present site at datum 1.00 ft higher.

EXTREMES.--Current year: Maximum discharge, 11,700 cfs Feb. 25 (gage height, 7.36 ft), from rating curve extended above 5,000 cfs on basis of gate openings at dam; no flow for most of year.

Period of record: Maximum discharge, 11,700 cfs Feb. 25, 1969 (gage height, 7.36 ft), from rating curve extended above 5,000 cfs on basis of gate openings at dam; no flow for parts of each year.

Maximum discharge known since May 1932, 54,000 cfs (estimated) Mar. 2, 1938.

REMARKS.--Records good. Flow regulated since July 1931 by Big Tujunga flood-control reservoir (capacity, 4,240 acre-ft) and since September 1940 by Hansen flood-control reservoir (capacity, 33,373 acre-ft). Several small diversions for domestic use and irrigation. Water reported herein is that which passed Hansen Dam. Los Angeles County Flood Control District diverts 0.3 mile upstream from gage to spreading grounds. See schematic diagram for San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1.1	1,470	121	53	91	0	.50	0
2	0	0	0	0	6.2	1,420	121	53	91	0	0	0
3	0	0	0	0	12	387	127	53	97	0	0	0
4	0	0	0	0	1.1	145	133	53	103	0	0	0
5	0	0	0	0	362	91	127	53	103	0	0	0
6	0	0	0	0	1,280	649	133	62	60	0	0	0
7	0	0	0	0	1,030	590	139	62	0	0	0	0
8	0	0	0	0	750	372	139	23	0	0	0	0
9	0	0	0	0	448	345	139	0	0	0	0	0
10	0	0	0	0	37	111	145	0	0	0	0	0
11	0	0	0	0	172	121	151	0	0	0	0	0
12	0	0	0	0	286	257	151	0	0	0	0	0
13	0	0	0	0	22	78	165	0	0	0	0	0
14	0	0	0	0	345	89	172	0	0	0	0	0
15	0	0	0	0	12	214	172	0	0	0	0	.45
16	0	0	0	0	8.6	221	165	0	11	0	0	.50
17	0	0	0	0	71	200	145	0	0	0	0	.50
18	0	0	0	0	9.3	62	133	0	5.8	0	0	.50
19	0	0	0	0	22	0	133	0	6.4	0	0	.50
20	0	0	0	0	31	106	127	0	7.5	0	.30	.50
21	0	0	0	2.3	31	214	133	60	7.5	0	0	.50
22	0	0	0	49	71	214	139	103	0	0	0	.50
23	0	0	0	31	470	193	139	103	2.1	0	0	.50
24	0	0	0	352	2,000	193	97	103	0	0	0	.50
25	0	0	0	7,100	9,450	91	66	103	0	0	0	.14
26	0	0	0	5,070	5,040	66	53	97	0	0	0	0
27	0	0	0	2,430	2,480	71	58	97	0	0	0	0
28	0	0	0	1,160	2,260	81	58	103	0	0	0	0
29	0	0	0	379	-----	97	58	103	0	0	0	0
30	0	0	0	53	-----	139	58	97	0	1.1	0	0
31	0	-----	0	55	-----	145	-----	91	-----	0	0	-----
TOTAL	0	0	0	16,681.3	26,708.3	8,432	3,697	1,472	585.3	1.1	0.80	5.09
MEAN	0	0	0	538	954	272	123	47.5	19.5	.036	.026	.17
MAX	0	0	0	7,100	9,450	1,470	172	103	103	1.1	.50	.50
MIN	0	0	0	0	1.1	0	53	0	0	0	0	0
AC-FT	0	0	0	33,090	52,980	16,720	7,330	2,920	1,160	2.2	1.6	10
(a)	0	0	0	33,280	60,430	24,820	11,830	6,320	4,320	2,720	2,300	1,670
CAL YR 1968	TOTAL	16.10	MEAN	.044	MAX	16	MIN	0	AC-FT	32	AC-FT a	4,910
WTR YR 1969	TOTAL	57,582.89	MEAN	158	MAX	9,450	MIN	0	AC-FT	114,200	AC-FT a	147,700

a Combined discharge, in acre-feet, of creek and diversion.

LOS ANGELES RIVER BASIN

11-0975. LOS ANGELES RIVER AT LOS ANGELES, CALIF.

LOCATION.--Lat 34°04'52", long 118°13'36", (landline location not available), Los Angeles County, on right bank near Figueroa Street, Los Angeles, and 800 ft upstream from Arroyo Seco.

DRAINAGE AREA.--514 sq mi.

PERIOD OF RECORD.--October 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 292.58 ft above mean sea level (levels by Los Angeles County Flood Control District). See WSP 1315-B for history of changes prior to Dec. 8, 1939.

AVERAGE DISCHARGE.--40 years, 69.6 cfs (50,430 acre-ft per year); median of yearly mean discharges, 39 cfs (28,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 41,800 cfs Jan. 25 (gage height, 12.30 ft); minimum daily, 5.1 cfs Nov. 18.

Period of record: Maximum discharge, 67,000 cfs Mar. 2, 1938; no flow at times in some years.

REMARKS.--Flow regulated since September 1940 by Hansen flood-control reservoir and since December 1941 by Sepulveda flood-control reservoir (combined capacity, 49,400 acre-ft) and several small flood-control reservoirs. City of Los Angeles at times discharges imported Owens River water into Los Angeles River from upstream distributing reservoirs. Excess treated sewage effluent from Los Angeles Bureau of Sanitation is released to channel about 8 miles upstream. Many diversions above station for domestic use and irrigation. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.4	6.9	6.9	60	2,490	63	31	22	47	22	12
2	9.8	9.2	7.8	8.7	60	1,350	65	25	27	50	23	15
3	14	6.0	7.4	9.2	180	1,430	371	22	31	49	24	20
4	7.4	10	8.3	9.2	110	470	67	46	47	60	25	18
5	6.0	8.7	9.8	8.7	1,380	515	672	39	53	56	26	19
6	5.5	7.4	6.0	9.8	5,650	867	200	30	54	50	27	17
7	8.7	7.4	4.6	12	1,580	916	108	27	52	46	28	13
8	6.0	7.8	4.0	10	1,150	560	115	27	50	48	28	14
9	5.5	8.3	9.2	10	883	505	138	27	53	52	24	17
10	6.9	7.8	9.8	14	256	810	144	30	54	60	22	16
11	8.3	16	115	13	362	550	123	21	56	68	21	17
12	9.2	8.7	22	11	527	326	104	28	60	68	23	18
13	6.9	7.8	6.0	337	500	120	119	26	58	67	23	16
14	112	7.8	8.3	1,410	293	248	115	25	53	67	22	13
15	59	221	34	32	351	286	96	27	53	67	22	18
16	10	40	178	17	293	281	228	26	74	67	19	20
17	8.7	9.2	33	8.7	169	201	274	27	75	67	14	20
18	9.2	5.1	18	418	442	120	88	23	62	67	21	19
19	11	7.4	12	3,500	150	82	95	22	53	66	22	18
20	9.8	6.9	9.2	4,310	127	160	108	25	56	65	16	16
21	12	9.8	9.2	7,370	161	250	100	30	56	63	23	15
22	12	9.8	6.4	1,320	1,290	326	104	50	59	60	16	18
23	9.2	9.8	8.3	162	6,480	286	100	40	54	58	16	20
24	9.2	9.8	9.8	4,280	5,380	257	64	64	58	54	14	20
25	11	8.3	524	23,400	18,200	236	65	59	58	48	14	20
26	15	12	233	11,300	7,680	181	50	67	54	46	17	18
27	14	7.8	27	4,340	4,000	74	54	64	54	38	16	17
28	15	7.4	14	2,720	3,620	65	53	58	49	33	16	14
29	8.7	6.9	7.4	1,140	-----	61	39	40	46	28	16	16
30	134	6.9	7.4	80	-----	52	34	27	47	24	15	17
31	19	-----	10	75	-----	55	-----	27	-----	22	15	-----
TOTAL	584.0	498.4	1,365.8	66,342.2	61,334	14,130	3,956	1,080	1,578	1,661	630	511
MEAN	18.8	16.6	44.1	2,140	2,191	456	132	34.8	52.6	53.6	20.3	17.0
MAX	134	221	524	23,400	18,200	2,490	672	67	75	68	28	20
MIN	5.5	5.1	4.0	6.9	60	52	34	21	22	22	14	12
AC-FT	1,160	989	2,710	131,600	121,700	28,030	7,850	2,140	3,130	3,290	1,250	1,010
CAL YR 1968	TOTAL	14,028.4	MEAN	38.3	MAX	4,780	MIN	3.8	AC-FT	27,820		
WTR YR 1969	TOTAL	153,670.4	MEAN	421	MAX	23,400	MIN	4.0	AC-FT	304,800		

LOS ANGELES RIVER BASIN

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11-0980. ARROYO SECO NEAR PASADENA, CALIF.

LOCATION.--Lat 34°13'20", long 118°10'36", in NW¼NW¼NE¼ sec.31, T.2 N., R.12 W., Los Angeles County, on right bank 1.5 miles upstream from Millard Canyon, and 5.5 miles northwest of Pasadena.

DRAINAGE AREA.--16.0 sq mi.

PERIOD OF RECORD.--December 1910 to current year.

GAGE.--Water-stage recorder and broad-crested weir since November 1938. Datum of gage is 1,397.88 ft above mean sea level. Prior to Oct. 1, 1916, nonrecording gage at different datum. Oct. 1, 1916, to Oct. 19, 1945, water-stage recorder at datum 4.00 ft lower.

AVERAGE DISCHARGE.--55 years (1913-15, 1916-69), 9.69 cfs (7,020 acre-ft per year); median of yearly mean discharges, 4.8 cfs (3,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,540 cfs Jan. 25 (gage height, 9.37 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurements at gage heights 7.86 and 9.42 ft; minimum daily, 0.62 cfs Jan. 3-6.

Period of record: Maximum discharge, 8,620 cfs Mar. 2, 1938 (gage height, 9.42 ft, present datum), on basis of slope-area measurement of maximum flow; no flow at times in some years.

REMARKS.--Records good. Minor regulation by debris dam 1.5 miles upstream. No diversion above station. See schematic diagram for San Gabriel and Los Angeles River basins.

COOPERATION.--Two discharge measurements furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.7	1.7	.85	165	299	42	20	14	12	8.2	5.0
2	1.7	2.5	1.7	.73	147	272	44	20	14	11	7.9	4.7
3	1.7	2.1	1.7	.62	135	253	60	19	13	11	7.6	4.7
4	1.7	2.3	1.7	.62	124	227	42	19	13	11	7.4	4.7
5	1.7	2.3	1.7	.62	212	202	57	20	13	11	7.1	4.4
6	1.7	2.1	1.7	.62	296	172	57	19	13	15	7.1	4.4
7	1.7	1.9	1.7	.73	173	155	45	18	13	16	7.1	4.4
8	1.7	1.9	1.7	.73	137	141	41	18	13	15	7.1	4.4
9	1.7	1.7	1.7	.73	124	131	40	17	13	13	6.8	4.4
10	1.7	1.7	1.7	.85	114	129	38	16	13	12	6.8	4.4
11	1.7	1.7	2.1	.85	118	114	39	16	14	11	6.6	4.4
12	1.7	1.7	1.9	1.3	137	110	36	15	14	12	6.6	4.2
13	1.7	1.9	1.9	1.9	131	106	35	15	14	11	6.3	4.4
14	1.9	1.9	1.7	14	126	99	32	15	13	11	6.3	4.7
15	1.7	4.0	1.7	3.7	133	94	29	15	13	10	6.3	4.7
16	1.5	3.0	2.7	2.5	120	90	28	14	14	10	6.0	5.0
17	1.3	2.5	2.5	1.9	111	86	28	15	14	10	6.0	5.4
18	1.5	2.3	2.1	3.6	129	82	28	15	13	9.9	6.0	5.4
19	1.5	2.1	1.9	22	116	78	27	15	13	9.9	5.7	5.4
20	1.5	1.9	1.7	128	109	73	26	15	13	9.3	5.4	5.2
21	1.5	2.1	1.7	569	108	92	24	15	13	9.6	5.2	5.0
22	1.5	2.1	1.7	223	116	86	24	15	13	9.6	5.0	5.0
23	1.5	2.1	1.5	75	290	74	24	15	13	9.0	5.0	5.2
24	1.5	2.1	1.5	169	631	63	23	15	14	9.0	5.0	5.0
25	1.3	1.9	4.3	3,210	1,800	58	23	15	13	9.0	5.2	5.0
26	1.3	1.7	4.4	2,120	498	56	22	15	12	9.3	5.2	5.0
27	1.1	1.7	1.9	356	347	53	21	15	14	9.3	5.2	4.7
28	1.3	1.7	1.5	254	336	51	21	16	15	9.0	5.2	4.7
29	1.5	1.7	1.3	231	-----	48	20	16	14	8.7	5.4	4.2
30	2.7	1.7	1.1	207	-----	46	20	14	13	8.5	5.4	4.2
31	2.7	-----	1.0	183	-----	44	-----	14	-----	8.2	5.4	-----
TOTAL	51.1	63.0	59.1	7,783.85	6,983	3,584	996	501	401	330.3	191.5	142.3
MEAN	1.65	2.10	1.91	251	249	116	33.2	16.2	13.4	10.7	6.18	4.74
MAX	2.7	4.0	4.4	3,210	1,800	299	60	20	15	16	8.2	5.4
MIN	1.1	1.7	1.0	.62	108	44	20	14	12	8.2	5.0	4.2
AC-FT	101	125	117	15,440	13,850	7,110	1,980	994	795	655	380	282

CAL YR 1968 TOTAL 1,640.0 MEAN 4.48 MAX 74 MIN 1.0 AC-FT 3,250
WTR YR 1969 TOTAL 21,086.15 MEAN 57.8 MAX 3,210 MIN .62 AC-FT 41,820

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0600	5.25	1,980	2-6	0530	4.17	946
1-25	1100	9.37	8,540	2-25	0400	7.30	4,560

LOS ANGELES RIVER BASIN

11-0985. LOS ANGELES RIVER NEAR DOWNEY, CALIF.

LOCATION.--Lat 33°56'58", long 118°10'23", in San Antonio Grant, Los Angeles County, on right bank 400 ft downstream from Firestone Boulevard Bridge, 1 mile upstream from Rio Hondo, and 2.5 miles west of Downey.

DRAINAGE AREA.--599 sq mi.

PERIOD OF RECORD.--March 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 96.12 ft above mean sea level (levels by Los Angeles County Flood Control District). See WSP 1735 for history of changes prior to Dec. 11, 1956.

AVERAGE DISCHARGE.--41 years, 108 cfs (78,250 acre-ft per year); median of yearly mean discharges, 63 cfs (45,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 58,000 cfs Jan. 25 (gage height, 9.18 ft); minimum daily, 12 cfs for some days.

Period of record: Maximum discharge, 79,700 cfs Mar. 2, 1938, on basis of slope-area measurements; no flow at times in some years.

REMARKS.--Flow regulated since July 1941 by Hansen flood-control reservoir and since December 1941 by Sepulveda flood-control reservoir (combined capacity, 49,400 acre-ft), and several small flood-control reservoirs. City of Los Angeles stores imported Owens River water in San Fernando and Chatsworth Reservoirs and at times, discharges imported water into Los Angeles River. Many diversions for domestic use and irrigation above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	16	14	12	260	2,600	75	55	40	60	45	26
2	19	18	14	12	248	1,720	91	48	50	68	45	32
3	64	18	16	14	260	1,250	320	42	50	68	34	36
4	21	19	16	12	228	630	79	74	71	70	34	35
5	16	19	17	13	1,460	645	577	80	75	67	37	32
6	14	16	17	14	6,830	894	317	51	75	69	50	31
7	15	17	15	17	1,640	1,020	86	48	74	72	36	27
8	17	17	14	17	1,180	685	88	48	53	70	40	31
9	14	15	19	17	888	630	101	50	61	90	36	37
10	15	14	34	18	810	936	88	48	70	105	37	36
11	16	16	160	17	350	372	132	42	70	120	39	36
12	15	18	32	17	400	451	131	50	74	250	36	37
13	13	14	17	306	425	365	134	50	74	90	34	34
14	95	17	16	1,990	275	260	137	50	66	94	37	30
15	83	274	24	58	1,320	298	114	53	61	102	42	34
16	18	83	196	28	1,000	293	157	53	62	102	40	35
17	18	24	42	22	600	293	204	55	120	105	34	36
18	16	19	20	400	676	233	114	50	68	105	43	34
19	17	20	17	2,970	700	94	101	50	63	90	40	31
20	15	20	23	6,880	277	132	119	50	63	85	42	28
21	16	19	14	9,790	152	1,270	116	48	70	88	42	24
22	19	18	12	2,010	1,670	338	112	73	60	110	31	29
23	18	18	12	279	8,700	298	112	64	65	95	31	32
24	18	17	13	5,220	6,600	269	64	84	61	69	28	30
25	17	14	437	31,800	23,700	248	60	64	60	60	31	29
26	24	17	340	15,500	9,500	193	53	82	62	39	35	28
27	23	14	54	5,170	3,870	86	58	69	59	37	30	28
28	27	14	26	2,620	4,150	77	51	73	56	36	31	25
29	27	12	19	1,180	-----	73	45	62	53	43	30	27
30	189	14	15	279	-----	64	45	45	55	42	31	31
31	35	-----	17	293	-----	67	-----	64	-----	42	25	-----
TOTAL	932	831	1,682	86,975	78,169	16,784	3,881	1,775	1,941	2,543	1,126	941
MEAN	30.1	27.7	54.3	2,806	2,792	541	129	57.3	64.7	82.0	36.3	31.4
MAX	189	274	437	31,800	23,700	2,600	577	84	120	250	50	37
MIN	13	12	12	12	152	64	45	42	40	36	25	24
AC-FT	1,850	1,650	3,340	172,500	155,000	33,290	7,700	3,520	3,850	5,040	2,230	1,870
CAL YR 1968	TOTAL	21,552	MEAN	58.9	MAX	6,720	MIN	12	AC-FT	42,750		
WTR YR 1969	TOTAL	197,580	MEAN	541	MAX	31,800	MIN	12	AC-FT	391,900		

LOS ANGELES RIVER BASIN

223

11-1000. SANTA ANITA CREEK NEAR SIERRA MADRE, CALIF.

LOCATION.--Lat 34°11'30", long 118°00'59", in SW¹/₄NE¹/₄ sec.10, T.1 N., R.11 W., Los Angeles County, on right bank at head of Hermits Falls, 0.9 mile upstream from Big Santa Anita Dam, and 3 miles northeast of Sierra Madre.

DRAINAGE AREA.--9.71 sq mi.

PERIOD OF RECORD.--July 1916 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,475.3 ft above mean sea level (levels by U.S. Forest Service). Prior to Mar. 2, 1938, at datum 0.4 ft lower (destroyed by flood). Mar. 18 to Sept. 27, 1938, at datum 0.7 ft higher.

AVERAGE DISCHARGE.--53 years, 6.75 cfs (4,890 acre-ft per year); median of yearly mean discharges, 3.6 cfs (2,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,500 cfs Jan. 25 (gage height, 18.44 ft, from floodmark), from rating curve extended above 450 cfs on basis of slope-area measurement of maximum flow; minimum daily, 1.1 cfs Oct. 23-28.

Period of record: Maximum discharge, 8,500 cfs Jan. 25, 1969 (gage height, 18.44 ft), from rating curve extended above 450 cfs on basis of slope-area measurement of maximum flow; practically no flow Aug. 18 to Sept. 14, 1929.

REMARKS.--Records good except those for Jan. 25 to Apr. 10, which are poor. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.6	1.5	1.9	90	210	33	20	12	7.7	6.4	4.3
2	1.5	1.6	1.5	1.8	83	190	32	19	12	7.5	6.7	4.3
3	1.8	1.5	1.5	1.8	75	170	31	19	12	7.5	6.5	4.3
4	1.8	1.6	1.5	1.8	70	150	30	20	12	7.6	6.4	4.2
5	1.5	1.6	1.4	1.8	65	140	29	19	12	7.9	6.3	4.2
6	1.4	1.6	1.4	1.6	160	130	28	19	11	8.2	6.0	4.2
7	1.5	1.5	1.4	1.6	130	115	27	18	11	8.2	5.6	4.1
8	1.4	1.4	1.3	1.7	110	108	27	18	12	7.9	5.6	4.1
9	1.4	1.3	1.4	1.8	100	100	26	17	11	7.6	5.6	3.9
10	1.4	1.5	1.4	1.8	92	92	26	17	11	7.4	5.6	3.8
11	1.4	1.5	1.8	1.7	86	87	25	17	12	7.6	5.6	3.7
12	1.4	1.8	1.6	1.8	82	81	25	16	11	7.8	5.6	3.7
13	1.4	3.3	1.6	2.0	80	77	24	16	11	7.4	5.3	3.7
14	1.7	2.2	1.5	13	77	73	24	16	11	7.6	5.1	3.8
15	1.5	1.9	1.6	4.4	74	67	24	16	11	7.4	5.1	4.0
16	1.4	1.8	2.2	2.9	72	63	22	15	11	7.3	5.1	4.1
17	1.3	1.7	1.9	2.4	70	60	22	15	11	7.3	5.1	4.1
18	1.2	1.6	1.8	2.9	70	57	22	15	10	7.1	5.1	4.0
19	1.2	1.5	1.8	19	70	53	22	15	9.9	7.0	5.1	3.9
20	1.2	1.5	1.8	133	70	50	21	15	9.8	7.0	5.1	3.9
21	1.2	1.5	1.8	500	70	60	21	15	9.8	7.1	4.9	4.0
22	1.2	1.5	1.8	449	70	53	21	14	9.5	7.0	4.8	4.0
23	1.1	1.5	1.7	100	90	50	21	14	9.2	6.9	4.4	3.9
24	1.1	1.5	1.6	188	600	47	20	14	9.4	7.1	4.4	3.7
25	1.1	1.5	3.0	2,500	1,200	45	20	14	9.3	7.1	4.4	3.6
26	1.1	1.4	4.4	1,800	700	43	20	13	9.1	7.1	4.4	3.5
27	1.1	1.4	2.7	600	350	41	19	13	8.8	7.2	4.4	3.5
28	1.1	1.5	2.2	200	250	38	19	13	8.6	7.1	4.5	3.4
29	1.2	1.5	2.1	150	-----	37	19	13	8.3	7.0	4.5	3.2
30	1.7	1.5	2.0	120	-----	35	19	12	7.9	6.9	4.5	3.2
31	1.6	-----	1.9	100	-----	34	-----	12	-----	6.6	4.4	-----
TOTAL	42.4	48.8	57.1	6,907.7	5,056	2,556	719	489	313.6	228.1	162.5	116.3
MEAN	1.37	1.63	1.84	223	181	82.5	24.0	15.8	10.5	7.36	5.24	3.88
MAX	1.8	3.3	4.4	2,500	1,200	210	33	20	12	8.2	6.7	4.3
MIN	1.1	1.3	1.3	1.6	65	34	19	12	7.9	6.6	4.4	3.2
AC-FT	84	97	113	13,700	10,030	5,070	1,430	970	622	452	322	231
CAL YR 1968 TOTAL	1,038.46		MEAN 2.84		MAX 55	MIN .96		AC-FT 2,060				
WTR YR 1969 TOTAL	16,696.5		MEAN 45.7		MAX 2,500	MIN 1.1		AC-FT 33,120				

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0530	7.26	1,240	2-6	unknown	unknown	
1-25	0945	18.44	8,500	2-25	unknown	15.1	5,000

NOTE.--No gage-height record Jan. 25 to Feb. 12, Feb. 18 to Apr. 10.

a From floodmarks.

LOS ANGELES RIVER BASIN

11-1012.5. RIO HONDO ABOVE WHITTIER NARROWS DAM, CALIF.

LOCATION.--Lat 34°03'32", long 118°04'13", in Portrero Grande Grant, Los Angeles County, on right bank 0.3 mile downstream from Garvey Avenue, 0.4 mile downstream from Rubio Wash, and 2.2 miles west of El Monte.

DRAINAGE AREA.--91.2 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 217.8 ft above mean sea level.

AVERAGE DISCHARGE.--13 years, 35.8 cfs (25,920 acre-ft per year); median of yearly mean discharges, 13 cfs (9,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,700 cfs Jan. 25 (gage height, 7.23 ft); minimum daily, 1.1 cfs Nov. 2.

Period of record: Maximum discharge, 17,700 cfs Jan. 25, 1969 (gage height, 7.23 ft); no flow for some days in most years.

REMARKS.--Records good. Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs (combined capacity, 1,700 acre-ft) and Sierra Madre, Las Flores, and Rubio debris basins. Many diversions above station for domestic use and irrigation. Los Angeles County Flood Control District diverted 24,360 acre-ft of water from San Gabriel River below Santa Fe Dam to Rio Hondo during year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Six discharge measurements and records of diversion furnished by the Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.4	1.4	1.4	59	758	106	100	130	5.1	130	5.8
2	2.0	1.1	1.6	1.7	100	475	221	130	142	5.8	130	5.8
3	11	1.9	1.6	2.3	124	425	135	106	154	6.4	118	5.1
4	3.0	1.9	2.3	1.9	34	250	27	106	142	5.4	118	4.6
5	3.0	1.4	2.1	2.1	457	154	327	118	142	4.6	77	4.8
6	2.5	1.9	2.1	2.3	1,890	100	43	88	190	4.1	3.8	4.8
7	2.5	2.3	2.1	2.3	94	94	45	94	202	5.1	4.1	4.1
8	2.5	2.9	1.9	1.7	55	112	100	94	65	4.6	4.4	3.6
9	2.5	2.1	2.1	2.1	51	118	118	112	90	4.6	4.1	3.
10	2.5	1.4	2.3	1.9	51	400	190	112	4.1	4.8	3.6	3.
11	2.5	2.9	8.7	1.9	55	76	202	118	3.6	9.0	3.8	3
12	1.7	2.7	2.1	1.7	55	76	190	118	3.8	4.1	4.4	3
13	1.6	2.9	1.7	474	43	82	214	118	3.4	3.4	3.8	4.6
14	2.9	3.5	1.9	679	100	82	226	124	2.3	3.6	3.8	4.4
15	1.9	41	2.9	2.5	912	70	325	124	2.5	3.6	3.6	4.1
16	2.1	6.0	32	3.6	66	66	226	124	4.8	3.8	3.6	6.1
17	2.1	1.2	2.5	1.9	66	62	214	100	81	4.4	3.6	5.4
18	2.3	3.1	1.9	291	621	59	350	106	325	4.4	3.8	5.6
19	3.6	3.1	2.1	494	943	66	350	112	275	4.4	43	5.8
20	2.5	2.1	3.1	1,910	238	66	238	112	226	3.8	117	4.6
21	2.5	2.1	1.6	1,490	337	593	118	118	214	4.8	166	4.8
22	2.1	2.1	1.4	976	534	66	70	112	214	104	100	5.8
23	2.1	2.5	1.7	81	2,640	59	47	94	166	178	51	6.4
24	2.7	2.1	2.1	1,540	3,020	55	47	94	142	202	32	5.8
25	3.1	1.7	134	7,700	5,620	55	51	94	118	190	26	5.8
26	1.9	1.7	65	4,170	3,000	43	70	94	112	178	20	5.8
27	1.6	1.6	1.7	1,920	1,450	40	62	100	130	166	16	4.6
28	2.3	1.2	1.4	950	1,470	36	82	112	124	166	13	3.8
29	5.4	1.6	1.6	250	-----	36	82	112	124	166	11	6.1
30	42	1.6	1.7	130	-----	32	76	130	92	154	7.4	8.2
31	2.1	-----	2.1	82	-----	29	-----	142	-----	142	6.4	-----
TOTAL	124.5	105.0	292.7	23,168.3	24,085	4,635	4,552	3,418	3,624.5	1,745.8	1,232.2	150.9
MEAN	4.02	3.50	9.44	747	860	150	152	110	121	56.3	39.7	5.03
MAX	42	41	134	7,700	5,620	758	350	142	325	202	166	8.2
MIN	1.6	1.1	1.4	1.4	34	29	27	88	2.3	3.4	3.6	3.4
AC-FT	247	208	581	45,950	47,770	9,190	9,030	6,780	7,190	3,460	2,440	299
CAL YR 1968	TOTAL	3,813.6	MEAN	10.4	MAX	1,320	MIN	1.1	AC-FT	7,560		
WTR YR 1969	TOTAL	67,133.9	MEAN	184	MAX	7,700	MIN	1.1	AC-FT	133,200		

LOS ANGELES RIVER BASIN

225

11-1015. RIO HONDO NEAR MONTEBELLO, CALIF.

LOCATION.--Lat 34°02'00", long 118°04'22", in Potrero Grande Grant, Los Angeles County, on right bank 900 ft upstream from Mission Bridge, and 2 miles northeast of Montebello.

DRAINAGE AREA.--116 sq mi (excluding area above Santa Fe Dam).

PERIOD OF RECORD.--October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 190.77 ft above mean sea level (levels by Los Angeles County Flood Control District). See WSP 1735 for history of changes prior to Sept. 1962.

AVERAGE DISCHARGE.--29 years (1928-57), 51.5 cfs (37,280 acre-ft per year); median of yearly mean discharges, 36 cfs (26,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 20,000 cfs Jan. 25 (estimated); minimum daily, 6.6 cfs Dec. 22, 23. Period of record: Maximum discharge, 28,000 cfs Mar. 2, 1938 (gage height, 16.69 ft, present datum), from rating curve extended above 9,000 cfs on basis of slope-area measurement and runoff from contributing stream; no flow for some days in 1964, 1965.

REMARKS.--Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs (combined capacity, 1,700 acre-ft) and Sierra Madre, Las Flores, and Rubio debris basins. Many diversions above station for domestic use and irrigation. At times flow is diverted from San Gabriel River below Santa Fe Dam to Rio Hondo above station. Since 1957, imported Colorado River water has been released to Rio Hondo 1.6 miles above station for ground-water recharge. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	158	7.3	7.0	130	497	89	137	128	18	213	15
2	11	162	7.7	7.3	220	460	181	177	131	12	210	16
3	128	144	7.0	8.1	300	431	211	151	141	12	200	15
4	210	139	7.3	7.5	167	348	32	144	131	12	197	14
5	220	142	7.3	7.2	506	280	253	147	131	11	124	13
6	203	140	7.3	7.8	1,810	220	92	105	157	12	10	13
7	208	126	7.7	7.8	190	190	72	108	170	12	9.4	12
8	228	135	7.3	7.8	125	213	174	118	89	13	9.4	12
9	228	122	7.7	8.1	110	170	197	147	84	13	9.1	11
10	196	116	7.7	7.8	105	436	305	141	12	13	9.1	10
11	200	123	23	7.8	110	151	263	131	11	16	9.4	9.7
12	222	83	7.3	7.2	100	151	266	124	9.7	11	9.1	10
13	212	56	7.0	335	80	144	289	128	9.7	11	8.8	11
14	220	92	7.0	419	178	121	296	124	9.4	11	8.4	12
15	215	90	7.7	11	862	100	322	114	9.4	12	8.1	12
16	171	16	56	9.2	122	81	295	124	10	12	7.2	13
17	166	10	8.0	85	81	81	251	111	60	12	7.2	13
18	171	57	7.0	339	582	97	388	108	157	11	7.5	13
19	179	72	7.0	464	453	100	368	114	151	10	47	13
20	105	61	8.5	1,650	370	97	286	118	157	9.7	152	12
21	9.9	8.0	7.7	1,490	285	539	194	121	157	9.4	154	12
22	8.5	8.5	6.6	717	662	118	124	124	157	72	92	12
23	62	8.5	6.6	106	2,960	81	81	105	141	174	50	13
24	156	8.0	7.0	982	2,520	77	86	97	118	180	34	12
25	140	7.7	93	8,600	6,010	72	86	92	121	190	25	12
26	137	7.7	100	3,500	1,430	65	134	92	128	190	21	12
27	150	7.3	9.4	1,310	871	63	121	105	131	190	21	11
28	156	7.3	8.0	610	922	70	128	141	128	190	19	11
29	101	7.3	8.5	358	-----	65	128	137	134	210	20	12
30	77	7.3	8.0	289	-----	56	114	134	116	226	18	14
31	70	-----	8.0	210	-----	58	-----	134	-----	220	16	-----
TOTAL	4,569.8	2,121.6	475.6	21,575.6	22,261	5,632	5,826	3,853	3,089.2	2,095.1	1,725.7	370.7
MEAN	147	70.7	15.3	696	795	182	194	124	103	67.6	55.7	12.4
MAX	228	162	100	8,600	6,010	539	388	177	170	226	213	16
MIN	8.5	7.3	6.6	7.0	80	56	32	92	9.4	9.4	7.2	9.7
AC-FT	9,060	4,210	943	42,790	44,150	11,170	11,560	7,640	6,130	4,160	3,420	735
(a)	8,350	3,630	0	492	0	0	0	0	0	0	0	0
CAL YR 1968	TOTAL 36,535.3		MEAN 99.8		MAX 1,490	MIN 5.3		AC-FT 72,470		AC-FT a 60,250		
WTR YR 1969	TOTAL 73,595.3		MEAN 202		MAX 8,600	MIN 6.6		AC-FT 146,000		AC-FT a 12,470		

a Colorado River water, in acre-feet, released to Rio Hondo via Alhambra Wash, at site 1.6 miles upstream.

NOTE.--Gage submerged Jan. 25 and 26, by water stored behind Whittier Narrows Dam.

LOS ANGELES RIVER BASIN

11-1020. MISSION CREEK NEAR MONTEBELLO, CALIF.

LOCATION.--Lat 34°01'45", long 118°04'07", in La Merced Grant, Los Angeles County, on upstream side of right abutment of San Gabriel Boulevard Bridge, 2 miles northeast of Montebello.

DRAINAGE AREA.--4.16 sq mi.

PERIOD OF RECORD.--October 1929 to current year. Yearly estimate for 1938, published in WSP 1315-B. Prior to October 1944, published as Rio Hondo Slough near Montebello.

GAGE.--Water-stage recorder. Datum of gage is 187.7 ft above mean sea level. Prior to Nov. 3, 1938, at datum 6.30 ft higher.

AVERAGE DISCHARGE.--40 years, 11.8 cfs (8,550 acre-ft per year); median of yearly mean discharges, 12 cfs (8,700 acre-ft per year).

EXTREMES.--Current year: Maximum daily discharge, 39 cfs (estimated) Jan. 25; minimum daily, 2.3 cfs Dec. 21-23. Period of record: Maximum discharge not determined, occurred Mar. 2, 1938; no flow at times in some years.

REMARKS.--Flow is almost entirely from ground-water seepage. Flow partially regulated above station by Legg Lake. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.0	2.5	3.0	13	15	10	8.1	8.3	7.7	5.9	5.1
2	2.4	3.0	2.4	3.0	13	14	10	8.3	8.3	8.4	5.8	5.0
3	2.4	3.1	2.4	3.0	13	13	11	8.4	8.5	8.3	5.9	4.9
4	2.8	3.1	2.4	3.0	12	13	11	8.3	8.3	8.2	6.0	4.7
5	3.2	3.2	2.4	3.0	13	13	10	9.0	8.2	8.1	6.0	4.8
6	3.2	3.1	2.4	3.0	21	13	11	9.4	8.2	7.8	5.8	4.9
7	3.2	2.9	2.4	3.0	15	13	11	10	8.4	7.8	5.4	4.9
8	3.2	2.8	2.4	3.0	11	13	11	9.8	8.4	7.5	5.4	5.1
9	3.2	2.8	2.4	3.1	11	13	13	9.4	8.5	6.3	5.3	5.1
10	3.2	2.6	2.4	3.0	11	13	12	9.3	8.5	6.2	5.5	5.2
11	3.2	2.5	2.5	3.0	11	13	12	8.4	8.4	7.0	5.6	5.2
12	3.2	2.6	2.6	3.0	10	13	12	8.3	8.6	6.5	5.5	5.2
13	3.2	2.6	2.4	3.3	10	12	12	8.2	8.4	6.5	5.4	5.2
14	3.2	2.6	2.4	8.4	10	12	12	8.2	8.6	6.5	5.4	5.2
15	3.2	2.7	2.4	7.8	12	12	12	8.3	8.5	6.5	5.4	5.2
16	3.2	2.7	2.5	6.3	15	11	11	8.3	8.3	6.3	5.4	5.2
17	3.2	2.7	2.5	5.0	13	11	11	8.3	8.2	6.1	5.5	5.3
18	3.2	2.8	2.4	5.0	13	11	11	8.3	8.4	6.1	5.4	5.3
19	3.2	2.9	2.4	9.4	14	10	11	8.3	8.4	6.0	5.5	5.5
20	3.0	2.9	2.4	29	15	10	11	8.3	8.4	6.0	5.5	5.7
21	2.7	2.6	2.3	30	13	11	11	8.4	8.3	6.1	5.7	5.8
22	2.6	2.5	2.3	20	15	12	10	8.4	8.5	6.1	5.7	5.9
23	2.7	2.5	2.4	12	23	11	10	8.5	8.5	6.0	5.6	6.0
24	2.9	2.6	2.3	27	27	10	10	8.5	8.9	6.1	5.5	6.2
25	2.7	2.6	2.4	39	30	11	9.8	8.6	9.0	6.6	5.4	6.3
26	2.6	2.6	2.9	38	20	11	9.6	8.6	9.0	6.2	5.4	6.3
27	2.5	2.6	4.0	26	17	11	9.2	8.6	8.3	6.2	5.4	6.2
28	2.5	2.5	3.5	20	16	11	8.8	8.7	8.4	6.1	5.4	6.2
29	2.4	2.4	3.1	18	-----	11	8.4	8.7	8.4	6.1	5.6	6.0
30	2.6	2.5	3.1	17	-----	11	8.3	8.3	7.8	6.0	5.1	5.9
31	2.4	-----	3.1	15	-----	10	-----	8.3	-----	5.9	5.0	-----
TOTAL	89.8	82.0	80.0	372.3	417	368	320.1	266.5	252.9	207.2	171.4	163.5
MEAN	2.90	2.73	2.58	12.0	14.9	11.9	10.7	8.60	8.43	6.68	5.53	5.45
MAX	3.2	3.2	4.0	39	30	15	13	10	9.0	8.4	6.0	6.3
MIN	2.4	2.4	2.3	3.0	10	10	8.3	8.1	7.8	5.9	5.0	4.7
AC-FT	178	163	159	738	827	730	635	529	502	411	340	324
CAL YR 1968	TOTAL 1,530.6		MEAN 4.18		MAX 25		MIN 1.2		AC-FT 3,040			
WTR YR 1969	TOTAL 2,790.7		MEAN 7.65		MAX 39		MIN 2.3		AC-FT 5,540			

LOS ANGELES RIVER BASIN

227

11-1022.5. MISSION CREEK BELOW WHITTIER NARROWS DAM, CALIF.

LOCATION.--Lat 34°01'15", long 118°04'15", near north boundary of Paso de Bartolo Grant, Los Angeles County, on left bank about 500 ft downstream from axis of Whittier Narrows Dam, and 1.4 miles north of Pico.

PERIOD OF RECORD.--December 1955 to current year.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 187.1 ft above mean sea level (Corps of Engineers Survey).

EXTREMES.--Current year: Maximum daily discharge, 2.9 cfs Jan. 12, 15; no flow Mar. 12 to Sept. 30.

Period of record: Maximum daily discharge, 18 cfs Jan. 6, 1959; no flow for many days in most years.

REMARKS.--Records good. Flow is almost entirely from ground-water seepage. Flow regulated or diverted at Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.0	1.8	2.2	.08	.34	0	0	0	0	0	0
2	1.7	2.0	1.9	2.2	.06	.27	0	0	0	0	0	0
3	1.8	2.0	1.8	2.2	.04	.22	0	0	0	0	0	0
4	2.0	2.0	1.9	2.3	.01	.14	0	0	0	0	0	0
5	2.1	2.0	1.7	2.3	.03	.10	0	0	0	0	0	0
6	2.2	2.0	1.5	2.2	.13	.07	0	0	0	0	0	0
7	2.1	2.0	1.5	2.4	.11	.04	0	0	0	0	0	0
8	2.0	2.0	1.5	2.5	.12	.04	0	0	0	0	0	0
9	1.9	2.0	1.5	2.6	.15	.04	0	0	0	0	0	0
10	2.0	2.0	1.5	2.6	.19	.04	0	0	0	0	0	0
11	1.9	2.0	1.7	2.7	.16	.02	0	0	0	0	0	0
12	2.1	2.0	1.9	2.9	.14	0	0	0	0	0	0	0
13	2.0	1.9	1.9	2.6	.10	0	0	0	0	0	0	0
14	2.2	1.9	1.9	2.6	.08	0	0	0	0	0	0	0
15	2.2	1.9	2.0	2.9	.15	0	0	0	0	0	0	0
16	2.2	1.9	2.0	2.8	.08	0	0	0	0	0	0	0
17	2.1	1.9	2.0	2.7	.04	0	0	0	0	0	0	0
18	2.2	1.9	2.0	2.7	.04	0	0	0	0	0	0	0
19	2.1	1.9	2.0	.73	.04	0	0	0	0	0	0	0
20	2.2	2.0	2.0	.91	.06	0	0	0	0	0	0	0
21	1.9	1.8	2.0	.26	.04	0	0	0	0	0	0	0
22	1.9	1.8	2.0	1.1	.08	0	0	0	0	0	0	0
23	1.8	1.8	2.0	2.0	1.0	0	0	0	0	0	0	0
24	2.0	1.8	2.0	.46	.33	0	0	0	0	0	0	0
25	2.0	1.8	2.0	.71	.39	0	0	0	0	0	0	0
26	2.1	1.8	2.2	.17	.45	0	0	0	0	0	0	0
27	2.0	1.7	2.6	.18	.50	0	0	0	0	0	0	0
28	2.1	1.7	2.8	.16	.49	0	0	0	0	0	0	0
29	2.2	1.8	2.4	.14	-----	0	0	0	0	0	0	0
30	2.2	1.8	2.3	.12	-----	0	0	0	0	0	0	0
31	2.0	-----	2.0	.10	-----	0	-----	0	-----	0	0	-----
TOTAL	63.0	57.1	60.3	52.44	5.09	1.32	0	0	0	0	0	0
MEAN	2.03	1.90	1.95	1.69	.18	.043	0	0	0	0	0	0
MAX	2.2	2.0	2.8	2.9	1.0	.34	0	0	0	0	0	0
MIN	1.7	1.7	1.5	.10	.01	0	0	0	0	0	0	0
AC-FT	125	113	120	104	10	2.6	0	0	0	0	0	0

CAL YR 1968 TOTAL 361.09
WTR YR 1969 TOTAL 239.25

MEAN .99
MEAN .66

MAX 2.9
MAX 2.9

MIN 0
MIN 0

AC-FT 716
AC-FT 475

LOS ANGELES RIVER BASIN

11-1023. RIO HONDO BELOW WHITTIER NARROWS DAM, CALIF.

LOCATION.--Lat 34°01'00", long 118°05'15", in Paso de Bartolo Grant, Los Angeles County, on right levee 0.25 mile upstream from Beverly Boulevard, 0.4 mile downstream from axis of Whittier Narrows Dam, and 1.0 mile northeast of Montebello.

DRAINAGE AREA.--124 sq mi.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 175 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 38,800 cfs Jan. 25 (gage height, 13.82 ft), from rating curve extended as explained below; no flow for some days.

Period of record: Maximum discharge, 38,800 cfs Jan. 25, 1969 (gage height, 13.82 ft), from rating curve extended above 15,000 cfs on basis of gate openings at dam at gage heights 12.32 and 13.82 ft; no flow at times in each year.

REMARKS.--Records good except those below 200 cfs, which are fair. Flow regulated by Whittier Narrows flood-control reservoir (capacity, 36,160 acre-ft). There are several small flood-control reservoirs (combined capacities, 1,700 acre-ft) and several small debris basins above Whittier Narrows Dam. Many diversions for domestic use and irrigation. At times flow is diverted from San Gabriel River to Rio Hondo from sites below Santa Fe Dam and above Whittier Narrows Dam. See schematic diagram for San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	160	2.3	0	212	2,550	81	142	111	41	184	8.4
2	1.3	166	1.3	15	191	543	166	160	111	37	184	6.8
3	80	148	1.3	30	178	456	210	148	121	12	184	6.8
4	154	142	0	30	172	414	71	142	101	10	178	6.8
5	184	154	0	30	432	320	247	148	101	7.5	59	6.8
6	166	154	0	34	5,120	267	106	126	116	7.5	12	6.8
7	166	148	0	36	2,410	261	86	121	126	7.5	6.8	6.8
8	184	154	0	16	4,930	267	148	121	74	7.5	8.4	6.8
9	198	147	0	8.4	4,810	240	160	121	96	7.5	8.4	3.4
10	213	142	8.8	8.4	2,140	541	240	121	34	7.5	6.8	0
11	212	148	44	6.8	247	198	226	121	34	7.5	6.8	0
12	212	122	34	6.8	328	184	219	126	44	7.5	10	0
13	205	82	30	108	320	178	233	126	47	7.5	14	0
14	233	126	30	412	290	154	240	126	36	7.5	8.4	0
15	247	106	30	36	1,390	136	261	58	36	7.5	6.8	0
16	205	44	74	16	665	131	261	151	28	8.0	6.8	0
17	191	34	34	35	282	126	233	111	74	8.0	5.2	3.5
18	154	81	14	222	665	131	305	106	192	8.0	6.8	24
19	136	81	1.3	406	933	136	282	111	178	8.0	73	21
20	95	82	1.3	1,560	1,330	126	247	116	166	8.0	184	21
21	2.3	34	0	1,780	668	576	178	121	166	8.0	191	21
22	2.3	34	0	966	1,840	148	136	116	154	74	148	21
23	29	34	0	285	6,780	106	106	116	148	206	111	19
24	126	34	0	1,200	8,860	96	101	116	136	200	86	13
25	145	30	48	19,900	19,400	91	96	116	126	184	76	10
26	131	34	85	18,800	14,100	86	126	111	126	182	67	9.1
27	136	14	11	7,840	9,090	81	126	116	140	180	40	6.7
28	148	2.3	0	8,900	9,080	76	126	116	133	180	30	16
29	126	2.3	0	254	-----	76	126	111	132	191	19	22
30	94	2.3	0	226	-----	71	126	111	138	205	10	11
31	84	-----	0	219	-----	71	-----	116	-----	198	10	-----
TOTAL	4,264.8	2,641.9	450.3	63,386.4	96,863	8,837	5,269	3,768	3,225	2,030.5	1,941.2	277.7
MEAN	138	88.1	14.5	2,045	3,459	285	176	122	108	65.5	62.6	9.26
MAX	247	166	85	19,900	19,400	2,550	305	160	192	206	191	24
MIN	1.3	2.3	0	0	172	71	71	58	28	7.5	5.2	0
AC-FT	8,460	5,240	893	125,700	192,100	17,530	10,450	7,470	6,400	4,030	3,850	551

CAL YR 1968 TOTAL 42,673.50 MEAN 117 MAX 4,760 MIN 0 AC-FT 84,640
WTR YR 1969 TOTAL 192,954.80 MEAN 529 MAX 19,900 MIN 0 AC-FT 382,700

NOTE.--No gage-height record June 27 to July 28.

11-1025. RIO HONDO NEAR DOWNEY, CALIF.

LOCATION.--Lat 33°56'48", long 118°09'43", in San Antonio Grant, Los Angeles County, on left bank 700 ft upstream from Stewart and Gray Road Bridge, 1.0 mile upstream from mouth, and 1.5 miles west of Downey.

DRAINAGE AREA.--143 sq mi (excluding area above Santa Fe Dam).

PERIOD OF RECORD.--March 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 91.4 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Oct. 31, 1951, at site 700 ft downstream at datum 1.5 ft lower.

EXTREMES.--Current year: Maximum discharge, 46,900 cfs Jan. 25 (gage height, 15.15 ft); no flow for many days.
Period of record: Maximum discharge, 46,900 cfs Jan. 25, 1969 (gage height, 15.15 ft); no flow for part of each year.

REMARKS.--Flow regulated since January 1956 by Whittier Narrows flood-control reservoir (capacity, 36,160 acre-ft). There are several small flood-control reservoirs (combined capacity, 1,700 acre-ft) and several debris basins above Whittier Narrows Dam. Many diversions above station for domestic use and irrigation. At times, flow is diverted from San Gabriel River below Santa Fe Dam and above Whittier Narrows Dam to Rio Hondo above station. Since 1937 much of the flow in Rio Hondo has been diverted to percolation basin from a site 5.5 miles upstream. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.3	1.0	2,270	.80	1.4	.40	.40	.80	.80
2	.20	.10	0	.3	1.2	317	20	1.4	.80	0	1.0	1.0
3	7.1	.20	0	.8	1.2	8.0	117	1.2	.40	.10	.80	1.0
4	.30	.30	0	.6	1.4	.10	.80	1.0	.30	.40	.80	.30
5	.20	0	0	.6	267	.10	145	1.4	.40	.30	.80	.10
6	.30	0	0	.6	4,770	.10	7.6	1.2	.60	.40	0	.30
7	.30	0	0	.8	1,980	.10	1.4	1.0	.60	.80	.30	.10
8	.30	0	0	.8	4,260	.10	1.4	.80	.40	.80	.40	.10
9	.20	0	0	.6	4,170	.10	9.5	.80	.30	.80	.80	0
10	.30	.10	0	.8	1,930	263	88	.80	.10	.60	.80	0
11	.20	.20	8.6	.6	40	2.0	132	.80	0	.80	.80	0
12	.30	.20	0	.3	117	.10	104	.80	0	1.2	1.0	.10
13	.30	0	0	114	104	.10	142	.80	0	.80	.80	0
14	1.4	0	0	114	92	.10	142	.60	0	.60	.80	.30
15	.30	24	.30	1.0	1,240	.10	157	.60	0	.60	1.0	0
16	.20	1.0	14	.4	669	.10	157	.80	.10	.60	1.0	0
17	.20	.20	.30	1.2	38	.10	122	.80	1.0	.10	.80	0
18	.30	.20	0	97	198	.10	209	.60	.60	0	.60	.80
19	.20	.30	.10	191	385	25	193	.60	.80	0	.80	.40
20	.20	.20	3.8	1,980	959	.10	152	.60	2.6	0	.80	0
21	.20	.10	0	1,420	309	273	60	.40	7.6	0	.80	0
22	.30	0	0	275	1,500	.40	3.2	.40	1.2	0	.80	0
23	.20	.10	0	5.8	6,570	.30	2.6	1.2	.80	0	.80	0
24	.20	.10	0	1,110	8,700	.10	1.8	.80	.80	0	.80	0
25	.30	0	38	23,100	19,100	.10	1.6	.80	.40	0	.60	0
26	.20	0	37	18,000	12,800	.10	1.4	.60	.60	0	.80	0
27	.30	0	.10	7,620	8,110	.20	1.2	.60	.60	0	.10	0
28	.10	0	.40	8,280	8,280	.30	1.0	.40	.60	.10	.10	0
29	.10	0	1.2	271	-----	.50	1.0	.60	.80	.30	.10	0
30	15	0	.40	145	-----	.70	1.4	.60	0	.40	.30	0
31	.10	-----	.30	18	-----	.80	-----	.40	-----	.60	.60	-----
TOTAL	29.80	27.30	104.50	62,750.5	86,592.8	3,213.50	1,976.70	24.80	22.80	10.70	20.70	5.30
MEAN	.96	.91	3.37	2,024	3,093	104	65.9	.80	.76	.35	.67	.18
MAX	15	24	38	23,100	19,100	2,270	209	1.4	7.6	1.2	1.0	1.0
MIN	0	0	0	.30	1.0	.10	.80	.40	0	0	0	0
AC-FT	59	54	207	124,500	171,800	6,370	3,920	49	45	21	41	11
CAL YR 1968	TOTAL	4,994.90	MEAN	13.6	MAX	4,300	MIN	0	AC-FT	9,910		
WTR YR 1969	TOTAL	154,779.40	MEAN	424	MAX	23,100	MIN	0	AC-FT	307,000		

LOS ANGELES RIVER BASIN

11-1030. LOS ANGELES RIVER AT LONG BEACH, CALIF.

LOCATION.--Lat 33°49'02", long 118°12'20", in Los Cerritos Grant, Los Angeles County, on right bank 5,000 ft upstream from Willow Street, 3.4 miles north of Long Beach, and 3.7 miles upstream from mouth.

DRAINAGE AREA.--832 sq mi.

PERIOD OF RECORD.--December 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 11.91 ft above mean sea level (levels by Los Angeles County Flood Control District). See WSP 1735 for history of changes prior to Jan. 19, 1956.

AVERAGE DISCHARGE.--40 years (1929-69), 167 cfs (121,000 acre-ft per year); median of yearly mean discharges, 97 cfs (70,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 102,000 cfs Jan. 25 (gage height, 16.00 ft); minimum daily, 16 cfs Dec. 23.

Period of record: Maximum discharge, 102,000 cfs Jan. 25, 1969 (gage height, 16.00 ft); no flow at times in 1929-30, 1934.

REMARKS.--Flow regulated since September 1940 by Hansen flood-control reservoir and since December 1941 by Sepulveda flood-control reservoir (combined capacity, 49,400 acre-ft), and several small flood-control reservoirs. City of Los Angeles stores imported Owens River water in San Fernando and Chatsworth reservoirs and at times discharges imported water into Los Angeles River above station. Many diversions above station for domestic use and irrigation. Average Discharge represents flow to the ocean, regardless of upstream development. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	29	17	24	411	5,920	81	62	50	76	53	36
2	27	25	18	22	346	2,460	85	63	63	81	48	39
3	231	26	22	27	372	1,670	781	56	74	79	42	48
4	32	39	22	25	311	904	118	56	70	81	49	47
5	26	34	24	25	1,970	831	838	105	88	77	45	48
6	22	27	24	26	12,600	1,040	514	60	88	81	57	50
7	24	25	22	29	4,530	1,380	96	56	94	85	47	40
8	30	24	19	26	10,900	980	105	56	81	83	49	43
9	25	21	20	25	6,130	885	315	54	83	120	49	47
10	25	19	27	27	3,530	1,670	237	52	90	118	45	46
11	26	20	250	25	557	640	252	47	85	134	47	46
12	24	24	54	24	754	825	215	50	94	320	53	47
13	20	19	24	511	790	761	220	58	94	103	49	44
14	87	22	18	2,890	553	424	284	52	85	108	54	40
15	136	492	24	91	3,130	504	333	54	72	129	50	44
16	28	155	317	40	2,160	530	462	57	74	123	47	45
17	25	32	83	37	925	514	388	57	154	123	40	46
18	24	26	29	524	1,620	481	284	57	88	123	47	44
19	26	30	25	4,420	1,450	126	239	50	86	108	50	42
20	23	29	51	12,600	2,210	120	220	56	83	97	45	38
21	20	26	20	12,100	754	2,280	210	53	103	99	54	30
22	28	26	18	2,860	4,520	663	138	77	86	126	44	34
23	26	24	16	406	15,300	482	120	63	92	112	43	38
24	26	20	18	7,580	15,600	411	89	90	90	81	35	39
25	28	18	850	55,000	40,800	359	64	88	85	68	37	40
26	32	21	835	32,000	21,700	239	63	90	81	52	45	38
27	29	20	87	13,500	12,600	124	56	94	79	47	41	38
28	30	20	38	12,400	13,200	92	57	86	76	47	43	34
29	29	18	42	2,220	-----	86	58	79	68	58	45	33
30	292	18	29	600	-----	74	57	74	70	56	49	43
31	164	-----	27	513	-----	70	-----	56	-----	53	38	-----
TOTAL	1,591	1,329	3,070	160,597	179,723	27,545	6,979	2,008	2,526	3,048	1,440	1,247
MEAN	51.3	44.3	99.0	5,181	6,419	889	233	64.8	84.2	98.3	46.5	41.6
MAX	292	492	850	55,000	40,800	5,920	838	105	154	320	57	50
MIN	20	18	16	22	311	70	56	47	50	47	35	30
AC-FT	3,160	2,640	6,090	318,500	356,500	54,630	13,840	3,980	5,010	6,050	2,860	2,470
CAL YR 1968	TOTAL 35,807		MEAN 97.8		MAX 13,200		MIN 16		AC-FT 71,020			
WTR YR 1969	TOTAL 391,103		MEAN 1,072		MAX 55,000		MIN 16		AC-FT 775,700			

11-1035. BALLONA CREEK NEAR CULVER CITY, CALIF.

LOCATION.--Lat 33°59'54", long 118°24'05", in La Ballona Grant, Los Angeles County, 500 ft upstream from Sawtelle Boulevard Bridge, 1.7 miles south of Culver City, and 4.1 miles upstream from mouth.

DRAINAGE AREA.--89.5 sq mi, excludes that of Sepulveda Creek. Prior to January 1951, 111 sq mi, change due to tributary channel realignment.

PERIOD OF RECORD.--February 1928 to current year (after December 1950, flow of Sepulveda Creek excluded).

GAGE.--Water-stage recorder. Datum of gage is 11.98 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to May 14, 1936, at site 1 mile downstream at different datum. May 14, 1936, to Oct. 3, 1961, at datum 0.72 ft lower and Oct. 24, 1961, to Aug. 10, 1967, at datum 0.92 ft lower at site 500 ft downstream.

AVERAGE DISCHARGE.--22 years (1928-50), 35.2 cfs (25,480 acre-ft per year); 19 years (1950-69), 44.1 cfs (31,950 acre-ft per year); median of yearly mean discharges, 37 cfs (26,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,000 cfs Jan. 25 (gage height, 10.34 ft); minimum daily, 8.2 cfs Sept. 5.

Period of record: Maximum discharge, 32,500 cfs Nov. 21, 1967 (gage height, 14.89 ft); no flow at times in some years.

REMARKS.--No regulation above station. City of Los Angeles, at times, discharges imported Owens River water from several distribution reservoirs into the creek above station. Some small pumping diversions above station for irrigation.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	16	14	78	66	20	18	13	45	45	38
2	42	13	13	16	62	41	112	19	19	48	45	50
3	93	32	14	15	62	38	70	19	17	48	45	45
4	19	28	12	14	52	36	22	19	18	43	50	38
5	17	16	12	12	356	32	270	18	18	45	45	8.2
6	14	16	12	15	1,160	32	18	18	19	48	48	8.8
7	18	18	9.4	12	36	32	17	18	15	45	48	10
8	19	19	8.8	14	23	25	17	18	12	45	48	16
9	12	17	12	12	21	23	18	17	18	48	38	14
10	12	17	12	12	23	208	19	13	16	45	43	13
11	16	18	88	9.4	22	30	19	12	17	93	48	12
12	13	18	11	9.4	32	25	16	18	18	50	48	12
13	12	19	12	698	22	27	15	16	17	45	48	10
14	70	19	10	392	23	27	19	17	12	50	53	11
15	13	170	14	13	762	22	17	17	12	52	50	16
16	12	21	120	10	36	23	18	18	17	58	43	17
17	11	18	13	11	25	30	20	15	16	52	43	18
18	11	20	12	464	1,810	27	21	13	16	55	52	20
19	12	19	12	2,830	52	27	18	19	16	50	52	21
20	12	20	29	3,240	75	25	16	20	18	50	50	18
21	15	23	11	1,730	344	283	20	16	13	58	48	17
22	14	32	10	216	326	19	19	20	12	58	43	25
23	14	34	12	110	1,660	15	18	20	17	55	38	20
24	15	27	11	1,860	327	18	18	15	16	50	41	20
25	13	19	301	4,840	1,300	20	16	12	16	45	48	19
26	12	17	192	1,150	76	20	14	18	14	60	48	19
27	12	20	15	139	58	20	13	19	13	36	48	20
28	15	17	13	245	384	21	20	18	11	48	45	21
29	39	20	16	84	-----	20	18	20	12	43	45	32
30	127	18	14	76	-----	17	19	16	34	45	38	34
31	18	-----	14	78	-----	19	-----	14	-----	48	38	-----
TOTAL	739	762	1,051.2	18,340.8	9,207	1,268	937	530	482	1,561	1,422	623.0
MEAN	23.8	25.4	33.9	592	329	40.9	31.2	17.1	16.1	50.4	45.9	20.8
MAX	127	170	301	4,840	1,810	283	270	20	34	93	53	50
MIN	11	13	8.8	9.4	21	15	13	12	11	36	38	8.2
AC-FT	1,470	1,510	2,090	36,380	18,260	2,520	1,860	1,050	956	3,100	2,820	1,240
CAL YR 1968	TOTAL 11,592.2		MEAN 31.7		MAX 2,060		MIN 8.8		AC-FT 22,990			
WTR YR 1969	TOTAL 36,923.0		MEAN 101		MAX 4,840		MIN 8.2		AC-FT 73,240			

TOPANGA CREEK BASIN

11-1040. TOPANGA CREEK NEAR TOPANGA BEACH, CALIF.

LOCATION.--Lat 34°03'52", long 118°35'10", in Boca de Santa Monica Grant, Los Angeles County, on downstream side of right abutment of highway bridge, 1.7 miles north of Topanga Beach.

DRAINAGE AREA.--18.0 sq mi.

PERIOD OF RECORD.--January 1930 to September 1938, October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 265.60 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to June 5, 1940, at different datum. June 5, 1940, to Dec. 9, 1941, at site 400 ft upstream at different datum.

AVERAGE DISCHARGE.--38 years, 5.83 cfs (4,220 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 12,200 cfs Jan. 25 (gage height, 13.36 ft), from rating curve extended above 610 cfs on basis of slope-area measurement of maximum flow; no flow Aug. 22-24.

Period of record: Maximum discharge, 12,200 cfs Jan. 25, 1969 (gage height, 13.36 ft), from rating curve extended above 610 cfs on basis of slope-area measurement of maximum flow; no flow at times in some years.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	.20	.40	29	86	8.4	3.2	2.0	1.0	.80	.80
2	.20	.20	.20	.40	26	64	8.4	3.2	2.4	1.0	.80	.60
3	.20	.20	.20	.40	23	51	8.4	3.2	2.0	1.0	.80	.60
4	.20	.20	.20	.50	21	40	6.0	3.6	2.0	1.0	1.0	.40
5	.20	.20	.20	.40	238	32	21	3.2	2.0	1.0	1.2	.40
6	.20	.20	.20	.30	869	30	11	3.6	2.0	1.4	1.0	.40
7	.20	.20	.20	.30	82	27	7.2	3.6	2.0	1.6	.60	.40
8	.20	.10	.20	.30	45	24	6.6	3.2	2.0	1.4	.60	.40
9	.20	.10	.20	.30	34	24	6.6	2.0	1.8	1.2	.60	.40
10	.20	.20	.20	.30	27	28	6.6	2.0	1.6	1.2	.60	.40
11	.20	.10	.30	.30	24	26	6.0	1.8	1.8	1.6	.60	.40
12	.20	.10	.20	.30	28	23	6.0	1.6	1.6	1.6	.60	.40
13	.20	.10	.20	1.4	19	20	6.0	1.4	1.4	1.2	.60	.40
14	.30	.10	.20	12	16	17	6.0	1.2	1.6	1.0	.20	.60
15	.20	.20	.20	.50	59	16	5.6	1.2	1.6	.80	.60	.60
16	.20	.20	.20	.60	29	16	5.6	1.2	1.8	.80	.60	.60
17	.20	.20	.20	.50	16	16	5.6	1.2	2.0	1.0	.40	.60
18	.20	.20	.20	1.4	19	15	6.0	1.4	2.0	.60	.60	.60
19	.20	.20	.20	271	17	14	5.2	1.6	1.8	.40	.60	.60
20	.20	.20	.20	365	10	14	4.8	1.8	1.6	.80	.40	.60
21	.20	.10	.20	721	27	16	4.4	2.0	1.8	.80	.20	.60
22	.10	.10	.20	132	52	11	4.8	2.4	1.8	1.0	0	.60
23	.10	.20	.20	38	1,450	10	4.4	2.4	1.6	1.0	0	.60
24	.10	.20	.20	273	491	11	4.0	2.4	1.6	.80	0	.60
25	.20	.20	1.8	4,920	1,180	11	4.0	2.4	2.8	.80	.40	.60
26	.20	.20	.90	1,370	185	11	3.2	2.4	1.4	.80	.40	.60
27	.20	.20	.50	167	111	9.6	2.8	2.0	1.2	.80	.40	.60
28	.20	.20	.40	76	125	7.8	2.8	2.0	1.4	1.0	.40	.60
29	.20	.20	.40	52	-----	8.4	3.2	1.8	1.4	1.0	.40	.40
30	.30	.20	.40	42	-----	8.4	3.2	1.8	1.2	1.0	.60	.40
31	.30	-----	.40	36	-----	8.4	-----	1.8	-----	.80	.60	-----
TOTAL	6.20	5.20	9.70	8,483.60	5,252	695.6	183.8	68.6	53.2	31.40	16.60	15.80
MEAN	.20	.17	.31	274	188	22.4	6.13	2.21	1.77	1.01	.54	.53
MAX	.30	.20	1.8	4,920	1,450	86	21	3.6	2.8	1.6	1.2	.80
MIN	.10	.10	.20	.30	10	7.8	2.8	1.2	1.2	.40	0	.40
AC-FT	12	10	19	16,830	10,420	1,380	365	136	106	62	33	31
CAL YR 1968	TOTAL	471.70	MEAN	1.29	MAX	186	MIN	.10	AC-FT	936		
WTR YR 1969	TOTAL	14,821.70	MEAN	40.6	MAX	4,920	MIN	0	AC-FT	29,400		

11-1055. MALIBU CREEK AT CRATER CAMP, NEAR CALABASAS, CALIF.

LOCATION.--Lat 34°04'40", long 118°42'03", in SW $\frac{1}{4}$ sec.18, T.1 S., R.17 W., Los Angeles County, on right bank 700 ft downstream from Cold Creek, 0.2 mile downstream from Crater Camp, and 6 miles southwest of Calabasas

DRAINAGE AREA.--105 sq mi.

PERIOD OF RECORD.--January 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 432.82 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Nov. 16, 1954, at datum 2.31 ft lower.

AVERAGE DISCHARGE.--38 years, 22.2 cfs (16,080 acre-ft per year); median of yearly mean discharges, 6.6 cfs (4,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 33,800 cfs Jan. 25 (gage height, 21.43 ft), from rating curve extended as explained below; minimum daily, 1.4 cfs Oct. 1, 2.

Period of record: Maximum discharge, 33,800 cfs Jan. 25, 1969 (gage height, 21.43 ft), from rating curve extended above 6,000 cfs on basis of slope-area measurements at gage heights 17.27 and 21.43 ft; no flow at times in some years.

REMARKS.--Flow partly regulated by many small recreational reservoirs. Small diversions above station for domestic use.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.1	2.4	4.6	121	369	44	23	12	7.4	4.0	3.6
2	1.4	2.0	1.7	3.8	102	284	46	21	12	8.0	4.4	4.2
3	1.6	2.0	1.8	3.3	86	236	56	20	11	7.1	5.1	15
4	1.6	1.8	2.0	4.0	77	194	49	21	11	6.4	4.2	22
5	1.7	1.8	1.7	3.1	136	166	60	21	10	6.6	4.2	8.0
6	1.8	1.7	1.7	2.9	1,100	149	74	18	9.6	6.8	4.6	4.6
7	1.8	1.8	1.7	2.9	373	133	50	18	11	6.8	4.4	3.6
8	1.8	1.7	1.8	2.9	247	117	40	16	10	6.5	4.0	3.8
9	1.8	1.7	1.8	3.1	192	104	37	15	9.3	6.1	4.2	4.2
10	2.0	2.0	2.1	3.3	158	117	35	15	9.3	5.8	4.2	3.6
11	2.1	2.1	2.9	3.3	139	109	29	15	9.9	6.1	4.2	5.8
12	2.0	2.1	2.1	3.3	125	100	39	14	9.0	6.1	4.0	4.6
13	1.8	2.1	2.1	3.3	109	96	34	15	9.6	6.1	4.2	4.4
14	2.8	1.8	2.9	13	100	86	30	14	9.6	6.4	4.0	4.2
15	2.8	2.4	3.4	8.6	124	80	30	14	9.9	6.4	4.0	4.2
16	2.0	2.3	3.2	5.1	121	74	29	14	11	6.1	4.0	3.6
17	1.7	2.3	3.1	4.4	91	72	27	14	11	5.6	4.0	4.7
18	1.7	2.0	2.9	5.1	91	66	26	14	9.6	5.4	4.2	4.2
19	1.7	2.0	3.1	466	78	66	28	14	10	5.6	3.8	4.4
20	1.7	2.1	3.1	1,970	69	63	27	14	9.9	6.1	3.3	4.0
21	1.6	2.0	2.9	3,110	75	66	25	15	9.6	6.1	3.3	4.4
22	1.6	2.0	2.9	516	193	63	26	15	9.3	5.4	3.6	4.2
23	1.6	2.0	2.8	173	2,110	60	26	14	9.9	5.6	3.3	4.2
24	1.8	2.0	2.8	934	1,250	36	25	14	9.0	4.6	3.6	4.2
25	1.7	2.4	4.1	24,200	3,590	41	24	14	9.3	5.4	3.1	4.2
26	1.8	2.0	4.5	9,010	770	46	24	13	9.3	5.1	3.3	4.6
27	1.8	2.0	3.4	834	491	46	23	13	8.0	5.4	3.6	4.6
28	2.1	1.7	3.2	355	426	46	22	13	8.0	5.4	3.6	4.2
29	2.3	1.6	3.6	250	-----	44	21	12	8.6	5.1	4.2	4.4
30	2.9	1.6	3.6	189	-----	43	22	12	7.1	4.8	4.4	2.9
31	2.1	-----	3.8	137	-----	43	-----	11	-----	4.8	3.8	-----
TOTAL	58.5	59.1	85.1	42,224.0	12,544	3,215	1,028	476	292.8	185.1	122.8	158.6
MEAN	1.89	1.97	2.75	1,362	448	104	34.3	15.4	9.76	5.97	3.96	5.29
MAX	2.9	2.4	4.5	24,200	3,590	369	74	23	12	8.0	5.1	22
MIN	1.4	1.6	1.7	2.9	69	36	21	11	7.1	4.6	3.1	2.9
AC-FT	116	117	169	83,750	24,880	6,380	2,040	944	581	367	244	315
CAL YR 1968	TOTAL 3,840.5		MEAN 10.5		MAX 1,350		MIN 1.0		AC-FT 7,620			
WTR YR 1969	TOTAL 60,449.0		MEAN 166		MAX 24,200		MIN 1.4		AC-FT 119,900			

CALLEGUAS CREEK BASIN

11-1058.5. ARROYO SIMI NEAR SIMI, CALIF.

LOCATION.--Lat 34°16'41", long 118°47'43", on line between secs.7 and 8, T.2 N., R.18 W., Ventura County, on downstream side of bridge on Kujaski Road, 0.5 mile upstream from Brea Canyon, and 1.1 miles northwest of Simi.

DRAINAGE AREA.--66.5 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 705 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 6,330 cfs Feb. 25 (gage height, 5.7 ft, from floodmark); no flow for most of year.

REMARKS.--No regulation above station. Pumping from wells for irrigation. Records of suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

COOPERATION.--Records furnished by Ventura County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	.70	20	.10	0	0	0	0	0
2	0	0	0	0	.40	15	4.7	0	0	0	0	0
3	0	0	0	0	0	11	1.0	0	0	0	0	0
4	0	0	0	0	0	8.0	.30	0	0	0	0	0
5	0	0	0	0	11	6.0	12	0	0	0	0	0
6	0	0	0	0	314	4.0	1.0	0	0	0	0	0
7	0	0	0	0	2.6	3.0	.20	0	0	0	0	0
8	0	0	0	0	.40	2.0	.10	0	0	0	0	0
9	0	0	0	0	0	1.0	0	0	0	0	0	0
10	0	0	0	0	0	8.0	0	0	0	0	0	0
11	0	0	0	0	0	1.8	0	0	0	0	0	0
12	0	0	0	0	1.0	1.5	0	0	0	0	0	0
13	0	0	0	10	0	.90	0	0	0	0	0	0
14	0	0	0	15	0	.60	0	0	0	0	0	0
15	0	6.0	0	0	1.0	.50	0	0	0	0	0	0
16	0	0	.90	0	0	.40	0	0	0	0	0	0
17	0	0	0	0	0	.30	0	0	0	0	0	0
18	0	0	0	63	0	.20	0	0	0	0	0	0
19	0	0	0	229	0	.10	0	0	0	0	0	0
20	0	0	0	199	0	.10	0	0	0	0	0	0
21	0	0	0	498	15	3.5	0	0	0	0	0	0
22	0	0	0	53	96	.50	0	0	0	0	0	0
23	0	0	0	5.0	1,110	.40	0	0	0	0	0	0
24	0	0	0	383	640	.30	0	0	0	0	0	0
25	0	0	6.4	1,680	1,290	.20	0	0	0	0	0	0
26	0	0	9.4	574	76	.10	0	0	0	0	0	0
27	0	0	0	98	22	.10	0	0	0	0	0	0
28	0	0	0	21	35	.10	0	0	0	0	0	0
29	0	0	0	1.8	-----	.10	0	0	0	0	0	0
30	0	0	0	1.2	-----	.10	0	0	0	0	0	0
31	0	-----	0	.90	-----	.10	-----	0	-----	0	0	-----
TOTAL	0	6.0	16.70	3,831.90	3,615.10	89.90	20.40	0	0	0	0	0
MEAN	0	.20	.54	124	129	2.90	.68	0	0	0	0	0
MAX	0	6.0	9.4	1,680	1,290	20	13	0	0	0	0	0
MIN	0	0	0	0	0	.10	0	0	0	0	0	0
AC-FT	0	12	33	7,600	7,170	178	40	0	0	0	0	0
CAL YR 1968	TOTAL	---	MEAN	---	MAX	---	MIN	---	AC-FT	---		
WTR YR 1969	TOTAL	7,580.00	MEAN	20.8	MAX	1,680	MIN	0	AC-FT	15,030		

11-1065.5. CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CALIF.

LOCATION.--Lat 34°10'46", long 119°02'20", in Guadalupe Grant, Ventura County, on downstream side of county road bridge, 1.0 mile northeast of Camarillo State Hospital, and 1.4 miles downstream from Conejo Creek.

DRAINAGE AREA.--243 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 65 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 16,300 cfs Feb. 25 (gage height, 8.50 ft); minimum daily, 0.50 cfs Jan. 6.

REMARKS.--No regulation above station. Pumping for irrigation in valley above station. Sustained flow after Apr. 11 was out of Conejo Creek from city of Thousand Oaks reclamation plant. Records of suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

COOPERATION.--Records furnished by Ventura County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	3.8	2.5	2.1	22	70	6.5	2.5	2.5	2.5	2.5	2.5
2	1.7	3.8	2.1	2.5	20	58	6.0	2.5	2.5	2.5	2.5	2.5
3	1.7	4.6	1.7	.9	17	42	5.5	2.5	2.5	2.5	2.5	2.5
4	1.7	4.6	2.5	.8	16	38	5.0	2.5	2.5	2.5	2.5	2.5
5	1.7	4.2	2.1	.6	36	34	13	2.5	2.5	2.5	2.5	2.5
6	1.7	3.4	2.9	.5	695	30	6.0	2.5	2.5	2.5	2.5	2.5
7	1.7	2.9	3.4	.8	23	25	4.5	2.5	2.5	2.5	2.5	2.5
8	1.7	2.1	3.4	1.3	13	22	4.0	2.5	2.5	2.5	2.5	2.5
9	1.7	2.1	2.5	1.7	12	23	3.5	2.5	2.5	2.5	2.5	2.5
10	1.7	1.7	3.4	1.7	11	32	3.0	2.5	2.5	2.5	2.5	2.5
11	4.6	.80	3.8	1.3	11	16	2.5	2.5	2.5	2.5	2.5	2.5
12	4.2	.90	2.1	.7	11	16	2.5	2.5	2.5	2.5	2.5	2.5
13	4.6	1.7	1.3	.8	10	17	2.5	2.5	2.5	2.5	2.5	2.5
14	4.6	1.7	1.3	56	10	17	2.5	2.5	2.5	2.5	2.5	2.5
15	4.2	3.8	.90	14	10	14	2.5	2.5	2.5	2.5	2.5	2.5
16	4.2	7.4	2.5	3.0	9.0	14	2.5	2.5	2.5	2.5	2.5	2.5
17	3.8	2.9	2.5	2.5	10	14	2.5	2.5	2.5	2.5	2.5	2.5
18	3.8	3.3	1.7	6.4	14	13	2.5	2.5	2.5	2.5	2.5	2.5
19	4.2	2.5	2.5	779	16	13	2.5	2.5	2.5	2.5	2.5	2.5
20	4.6	1.7	2.9	1,150	17	12	2.5	2.5	2.5	2.5	2.5	2.5
21	4.6	.80	3.4	1,450	26	12	2.5	2.5	2.5	2.5	2.5	2.5
22	4.6	.70	2.5	65	81	11	2.5	2.5	2.5	2.5	2.5	2.5
23	4.2	.70	2.5	17	2,620	11	2.5	2.5	2.5	2.5	2.5	2.5
24	4.2	.80	1.7	879	1,230	10	2.5	2.5	2.5	2.5	2.5	2.5
25	4.2	2.5	2.1	7,960	6,030	10	2.5	2.5	2.5	2.5	2.5	2.5
26	3.8	2.5	7.4	1,600	578	9.5	2.5	2.5	2.5	2.5	2.5	2.5
27	3.8	2.9	11	153	200	9.0	2.5	2.5	2.5	2.5	2.5	2.5
28	3.8	2.5	3.8	58	270	8.5	2.5	2.5	2.5	2.5	2.5	2.5
29	4.6	2.5	1.7	46	-----	8.0	2.5	2.5	2.5	2.5	2.5	2.5
30	5.0	2.5	1.7	36	-----	7.5	2.5	2.5	2.5	2.5	2.5	2.5
31	5.0	-----	2.1	23	-----	7.0	-----	2.5	-----	2.5	2.5	-----
TOTAL	107.6	78.30	87.90	14,313.6	12,018.0	623.5	107.0	77.5	75.0	77.5	77.5	75.0
MEAN	3.47	2.61	2.84	462	429	20.1	3.57	2.50	2.50	2.50	2.50	2.50
MAX	5.0	7.4	11	7,960	6,030	70	13	2.5	2.5	2.5	2.5	2.5
MIN	1.7	.70	.90	.50	9.0	7.0	2.5	2.5	2.5	2.5	2.5	2.5
AC-FT	213	155	174	28,390	23,840	1,240	212	154	149	154	154	149

CAL YR 1968 TOTAL
WTR YR 1969 TOTAL 27,718.40 MEAN 75.9 MAX 7,960 MIN .50 AC-FT 54,980

SANTA CLARA RIVER BASIN

11-1085. SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CALIF.

LOCATION.--Lat 34°23'59", long 118°42'14", in San Francisco Grant, Ventura County, on downstream end of old diversion weir on right bank, 0.8 mile west of Los Angeles-Ventura County Line.

DRAINAGE AREA.--644 sq mi.

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 794.93 ft above mean sea level.

AVERAGE DISCHARGE.--17 years, 36.6 cfs (26,520 acre-ft per year); median of yearly mean discharges, 7.9 cfs (5,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 68,800 cfs Jan. 25 (gage height, 19.01 ft), from rating curve extended above 9,200 cfs on basis of field estimate of maximum flow; minimum daily, 0.47 cfs Oct. 16-18.
Period of record: Maximum discharge, 82,000 cfs Jan. 25, 1969 (gage height, 19.01 ft), from rating curve extended above 9,200 cfs on basis of field estimate of maximum flow; no flow at times in some years.

REMARKS.--Records poor. No regulation above station. Base flow affected by pumping from wells along stream for irrigation.

COOPERATION.--Water-stage recorder graph Oct. 1 to Jan. 3 and 26 discharge measurements furnished by Ventura County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	2.3	4.4	2.6	209	1,600	165	88	51	35	22	14
2	.80	1.8	4.4	3.7	173	1,300	166	89	51	38	22	14
3	.80	2.3	5.1	3.7	149	1,100	168	90	52	37	22	14
4	.80	2.3	5.8	3.7	125	1,000	170	93	53	37	22	14
5	.80	2.3	5.8	2.7	185	900	165	96	55	36	22	14
6	1.0	5.1	5.8	3.0	1,450	800	160	98	56	35	21	14
7	1.0	5.8	4.4	.9	629	750	158	98	57	34	21	14
8	1.0	5.1	4.4	1.5	374	700	157	97	59	32	21	15
9	1.2	3.7	5.8	3.0	337	640	150	96	60	31	20	15
10	1.5	2.3	5.1	3.7	283	580	135	94	62	30	20	15
11	1.8	2.3	4.4	3.0	233	540	127	93	63	29	20	15
12	1.8	1.8	4.4	3.0	233	500	123	90	62	28	19	15
13	2.3	3.0	5.1	13	210	420	120	84	60	27	19	15
14	2.6	4.4	5.1	14	149	350	118	80	56	26	18	16
15	.62	5.1	5.1	1.2	221	330	116	76	52	25	18	16
16	.47	2.6	4.4	1.5	336	310	115	72	48	24	18	16
17	.47	2.3	5.1	.9	209	290	114	68	44	23	17	17
18	.47	2.6	5.1	2.7	453	270	113	65	40	22	17	17
19	.62	3.7	5.1	56	431	260	112	60	36	21	17	17
20	.80	3.7	5.1	365	364	250	111	55	33	21	16	18
21	.80	3.7	4.4	3,670	301	230	111	52	31	20	16	18
22	1.0	3.7	3.0	487	783	210	109	51	30	20	16	18
23	1.5	3.0	3.7	215	4,000	190	104	50	28	20	15	19
24	1.5	2.6	5.1	558	15,000	170	102	50	27	20	15	19
25	1.5	3.0	9.3	27,400	28,800	165	98	50	26	20	15	20
26	1.5	3.7	4.4	3,170	5,500	165	94	49	26	20	14	20
27	1.5	4.4	3.0	500	2,700	165	91	49	27	20	14	20
28	1.8	5.1	3.0	300	2,000	165	85	48	28	21	14	21
29	1.8	5.8	2.3	275	-----	165	86	48	31	21	14	21
30	2.3	5.8	2.6	250	-----	165	85	50	33	22	14	22
31	2.6	-----	3.7	225	-----	165	-----	51	-----	22	14	-----
TOTAL	39.45	105.3	144.4	37,538.8	65,837	14,845	3,728	2,230	1,337	817	553	503
MEAN	1.27	3.51	4.66	1,211	2,351	479	124	71.9	44.6	26.4	17.8	16.8
MAX	2.6	5.8	9.3	27,400	28,800	1,600	170	98	63	38	22	22
MIN	.47	1.8	2.3	.90	125	165	85	48	26	20	14	14
AC-FT	78	209	286	74,460	130,600	29,440	7,390	4,420	2,650	1,620	1,100	998

CAL YR 1968 TOTAL 3,637.95 MEAN 9.94 MAX 262 MIN .47 AC-FT 7,220
WTR YR 1969 TOTAL 127,677.95 MEAN 350 MAX 28,800 MIN .47 AC-FT 253,200

PEAK DISCHARGE (BASE, 750 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-21 0800 11.50 15,000 2-6 0400 8.97 5,880
1-25 0930 19.01 68,800 2-25 0300 17.9 62,500

NOTE.--No gage-height record 10 hours
Jan. 25 to 13 hours Jan. 30, Feb. 23 to
Apr. 30.

SANTA CLARA RIVER BASIN

237

11-1096, PIRU CREEK ABOVE LAKE PIRU, CALIF.

LOCATION.--Lat 34°31'40", long 118°45'21", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.5 N., R.18 W., Ventura County, on right bank at Blue Point, 1.0 mile downstream from Agua Blanca Creek, 4.6 miles upstream from Santa Felicia Dam, and 8.0 miles northeast of Piru.

DRAINAGE AREA.--372 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,063.62 ft above mean sea level (levels by Ventura County Flood Control District).

AVERAGE DISCHARGE.--14 years, 60.9 cfs (44,120 acre-ft per year); median of yearly mean discharges, 17 cfs (12,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 31,200 cfs Feb. 25 (gage height, 18.6 ft, from floodmark), from rating curve extended as explained below; minimum daily, 0.02 cfs Oct. 1, 2.

Period of record: Maximum discharge, 31,200 cfs Feb. 25, 1969 (gage height, 18.6 ft, from floodmark), from rating curve extended above 4,000 cfs on basis of slope-area measurement at gage-height 12.2 ft and inflow-outflow records for Lake Piru; no flow for several months in most years.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	2.4	5.9	8.0	330	1,330	320	120	60	30	15	9.5
2	.02	2.9	5.8	7.8	310	1,060	320	120	58	28	15	8.6
3	.04	3.0	5.8	7.8	290	942	350	120	56	26	14	7.4
4	.32	3.1	5.7	7.7	280	837	325	120	55	25	12	6.9
5	.48	3.2	5.9	7.7	350	716	310	130	54	26	11	7.4
6	.55	3.3	5.9	7.8	3,000	680	260	125	54	27	9.7	9.3
7	.60	3.3	5.9	7.9	1,800	640	260	120	54	27	9.8	9.5
8	.72	3.3	5.9	8.1	1,000	620	250	115	54	26	9.5	10
9	.79	3.2	5.9	8.1	640	590	250	115	54	25	9.6	8.7
10	.87	3.2	5.9	8.1	400	570	260	110	54	24	9.7	8.1
11	.97	3.4	6.1	8.1	370	550	270	105	54	24	11	8.1
12	.92	3.5	6.0	8.2	350	550	270	100	54	24	10	8.1
13	1.1	3.4	6.3	9.0	340	550	240	98	54	24	9.5	8.4
14	2.6	3.7	6.3	19	330	540	200	94	75	24	9.1	9.4
15	2.2	5.0	7.7	12	320	540	190	91	100	24	8.6	11
16	1.7	5.4	8.3	10	315	540	180	90	85	22	11	11
17	1.6	5.2	7.9	9.5	310	530	175	88	72	22	15	11
18	1.5	4.9	7.4	12	305	525	170	85	66	21	15	11
19	1.3	4.7	7.4	515	303	500	165	82	56	20	14	10
20	1.3	4.5	7.5	1,180	300	480	160	80	48	20	14	11
21	1.4	4.6	7.5	4,460	298	490	160	78	47	20	13	12
22	1.4	4.5	6.9	608	321	470	155	76	45	20	12	13
23	1.4	4.4	6.8	408	3,300	470	150	74	41	19	11	11
24	1.3	4.6	7.1	791	7,880	480	145	72	38	19	11	10
25	1.3	4.8	10	9,810	15,600	440	140	70	38	18	10	9.8
26	1.2	5.0	11	7,710	3,600	370	135	70	38	18	10	9.5
27	1.2	5.2	9.1	3,160	2,080	340	130	68	37	18	10	10
28	1.2	5.3	8.4	739	1,670	330	125	68	35	18	10	9.8
29	1.5	5.6	8.3	496	-----	330	120	66	33	17	10	10
30	2.2	5.6	8.2	410	-----	320	120	64	32	20	10	9.4
31	2.3	-----	8.2	298	-----	320	-----	62	-----	17	9.9	-----
TOTAL	36.00	124.2	221.0	30,751.8	46,392	17,650	6,305	2,876	1,601	693	349.4	288.9
MEAN	1.16	4.14	7.13	992	1,657	569	210	92.8	53.4	22.4	11.3	9.63
MAX	2.6	5.6	11	9,810	15,600	1,330	350	130	100	30	15	13
MIN	.02	2.4	5.7	7.7	280	320	120	62	32	17	8.6	6.9
AC-FT	71	246	438	61,000	92,020	35,010	12,510	5,700	3,180	1,370	693	573

CAL YR 1968 TOTAL 4,331.32 MEAN 11.8 MAX 183 MIN .01 AC-FT 8,590
WTR YR 1969 TOTAL 107,288.30 MEAN 294 MAX 15,600 MIN .02 AC-FT 212,800

PEAK DISCHARGE (BASE, 800 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-21 0500 10.62 9,040 2-6 unknown - (b)
1-25 0900 13.9 20,800 2-25 0200 18.6 31,200

NOTE.--No gage-height record Jan. 24 to June 20.

a From floodmarks.
b Probably less than 6,000 cfs.

SANTA CLARA RIVER BASIN

11-1097. LAKE PIRU NEAR PIRU, CALIF.

LOCATION.--Lat 34°27'52", long 118°44'57", in Temescal Grant, Ventura County, at Santa Felicia Dam on Piru Creek, on left bank 1,000 ft upstream from left end of dam, 0.5 mile downstream from Santa Felicia Canyon, and 4.2 miles northeast of Piru.

DRAINAGE AREA.--425 sq mi.

PERIOD OF RECORD.--May 1955 to current year.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by United Water Conservation District). Prior to Jan. 27, 1956, reference point at intake tower at same datum.

EXTREMES.--Current year: Maximum contents, 109,400 acre-ft Feb. 25 (elevation, 1,061.45 ft); minimum contents, 24,900 acre-ft Dec. 15 (elevation, 973.10 ft).
Period of record: Maximum contents observed, 109,400 acre-ft Feb. 25, 1969 (elevation, 1,061.45 ft); lake dry Oct. 25 to Nov. 20, 1961.

REMARKS.--Lake is formed by earthfill dam. Storage began May 20, 1955. Capacity table is based on surveys made in 1949 and 1956. Dead storage below two 24-inch sluice gates (elevation, 880.0 ft), 74 acre-ft, included in contents. Capacity below spillway level (elevation, 1,055.0 ft), 101,225 acre-ft. Water is released from outlet to Piru Creek for ground-water recharge, domestic use and irrigation on the Oxnard plain.

COOPERATION.--Elevations furnished by United Water Conservation District.

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	974.60	25,900	-
Oct. 31.....	973.85	25,400	-500
Nov. 30.....	973.25	25,000	-400
Dec. 31.....	973.25	25,000	0
CAL YR 1968.....	-	-	-6,200
Jan. 31.....	1,043.15	87,200	+62,200
Feb. 28.....	1,056.05	102,500	+15,300
Mar. 31.....	1,055.40	101,700	-800
Apr. 30.....	1,055.20	101,500	-200
May 31.....	1,055.15	101,400	-100
June 30.....	1,054.45	100,500	-900
July 31.....	1,048.15	92,900	-7,600
Aug. 31.....	1,033.25	76,300	-16,600
Sept. 30.....	1,018.50	61,400	-14,900
WTR YR 1968-69.....	-	-	+35,500

^a Elevation at 0800 hours.

11-1100. PIRU CREEK NEAR PIRU, CALIF.

LOCATION.--Lat 34°25'30", long 118°45'40", in southern part of Temescal Grant, Ventura County, on right bank 1.8 miles northeast of Piru, and 2 miles upstream from mouth.

DRAINAGE AREA.--437 sq mi (revised).

PERIOD OF RECORD.--October 1911 to September 1913, October 1917 to current year. Published as "at Piru" 1927-34. Records not equivalent prior to May 20, 1955, due to regulation by Lake Piru. Published as "below Santa Felicia dam" May 20, 1955, to September 30, 1968.

GAGE.--Water-stage recorder. Broad-crested weir since Oct. 20, 1940. Altitude of gage is 750 ft (from topographic map). See WSP 1315-B for history of changes prior to Feb. 20, 1939.

AVERAGE DISCHARGE.--29 years (1927-56), 54.8 cfs (39,700 acre-ft per year); median of yearly mean discharges, 25 cfs (18,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 28,800 cfs Feb. 25 (gage height, 15.9 ft), from rating curve extended above 5,200 cfs on basis of computation of peak flow over dam; no flow Dec. 18, Jan. 1-18, 20, 22.

Period of record: Maximum discharge, 35,600 cfs Mar. 2, 1938, from rating curve extended above 750 cfs on basis of slope-area measurement of maximum flow; no flow at times in some years.

REMARKS.--Records good. Flow regulated by Lake Piru 2.8 miles upstream (see sta 11-1097). No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	5.9	5.9	0	8.8	1,530	410	173	57	87	327	300
2	6.2	5.9	6.1	0	29	1,200	385	171	56	85	328	292
3	6.1	5.9	6.1	0	25	1,070	406	171	55	83	326	294
4	6.2	6.1	6.1	0	28	896	353	163	54	81	324	288
5	6.4	5.9	6.2	0	30	825	343	156	53	79	322	283
6	6.5	5.9	6.2	0	3.6	788	433	150	52	77	324	284
7	6.4	5.9	6.2	0	.2	709	349	141	51	75	324	284
8	6.4	5.9	6.2	0	.1	658	295	135	50	75	323	284
9	6.2	5.9	6.2	0	.1	606	272	148	49	75	321	284
10	6.2	5.9	6.2	0	.1	600	266	145	48	75	325	284
11	6.2	5.9	6.2	0	0	564	266	141	47	163	328	284
12	6.2	5.9	6.2	0	0	504	263	136	46	136	328	285
13	5.9	5.9	6.2	0	29	483	263	140	48	107	328	283
14	5.6	5.9	6.2	0	32	472	252	106	50	101	326	280
15	5.5	5.9	6.2	0	31	457	240	91	52	102	326	280
16	5.3	5.9	6.2	0	30	448	210	91	54	116	323	281
17	5.1	5.9	2.8	0	29	438	210	90	56	139	324	284
18	5.1	5.9	0	0	28	429	221	89	58	142	324	287
19	5.0	5.9	3.2	7.1	27	424	195	87	60	185	324	286
20	4.8	5.9	5.6	0	26	410	192	85	62	204	324	284
21	4.6	5.9	5.6	9.3	25	424	190	82	64	211	324	284
22	4.6	5.9	5.6	0	24	415	190	81	66	240	324	284
23	4.6	5.9	5.6	24	2,860	385	188	79	68	240	324	224
24	4.6	5.9	5.6	141	7,220	394	217	75	70	233	324	185
25	4.6	6.0	5.7	167	7,800	349	212	71	74	252	324	185
26	4.6	5.9	5.8	24	4,420	329	173	68	80	274	310	185
27	4.6	5.9	5.9	.17	2,480	320	165	64	86	276	309	185
28	4.6	5.9	5.9	.53	1,870	337	169	63	86	267	310	185
29	4.6	5.9	5.9	.52	-----	349	171	61	86	276	306	185
30	4.6	5.9	3.0	.33	-----	368	171	59	86	291	304	185
31	4.6	-----	6.4	.15	-----	398	-----	57	-----	290	311	-----
TOTAL	168.2	177.3	171.2	374.10	27,055.9	17,579	7,670	3,369	1,824	5,082	9,969	7,798
MEAN	5.43	5.91	5.52	12.1	966	567	256	109	60.8	164	322	260
MAX	6.5	6.1	6.4	167	7,800	1,530	433	173	86	291	328	300
MIN	4.6	5.9	0	0	0	320	165	57	46	75	304	185
AC-FT	334	352	340	742	53,660	34,870	15,210	6,680	3,620	10,080	19,770	15,470

CAL YR 1968 TOTAL 6,926.12 MEAN 18.9 MAX 67 MIN 0 AC-FT 13,740
WTR YR 1969 TOTAL 81,237.70 MEAN 223 MAX 7,800 MIN 0 AC-FT 161,100

SANTA CLARA RIVER BASIN

11-1105. HOPPER CREEK NEAR PIRU, CALIF.

LOCATION.--Lat 34°24'03", long 118°49'32", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.4 N., R.19 W., Ventura County, on downstream end of center pier of bridge on State Highway 126, 1 mile upstream from mouth, and 2.1 miles southwest of Piru.

DRAINAGE AREA.--23.6 sq mi.

PERIOD OF RECORD.--October 1930 to September 1932, October 1933 to September 1936, October 1937 to current year.

GAGE.--Water-stage recorder. Concrete control since October 1967 (ineffective due to fill). Altitude of gage is 590 ft (from topographic map).

AVERAGE DISCHARGE.--37 years, 5.71 cfs (4,140 acre-ft per year); median of yearly mean discharges, 2.2 cfs (1,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,400 cfs Jan. 25 (gage height, 12.72 ft, from floodmark), from rating curve extended above 850 cfs on basis of slope-area measurement of maximum flow; no flow for many days.

Period of record: Maximum discharge, 8,400 cfs Jan. 25, 1969 (gage height, 12.72 ft, from floodmark), from rating curve extended above 850 cfs on basis of slope-area measurement of maximum flow; no flow for several months in most years.

REMARKS.--No regulation above station. Some pumping along stream for irrigation.

COOPERATION.--Records furnished by Ventura County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.21	40	80	16	7.6	4.8	2.9	1.8	.99
2	0	0	0	.21	35	76	15	7.6	4.8	2.9	1.7	.98
3	0	0	0	.18	30	68	15	7.7	4.8	2.9	1.7	.96
4	0	0	0	.15	20	67	14	7.7	4.7	3.0	1.7	.94
5	0	0	0	.18	50	62	14	7.7	4.7	3.0	1.6	.92
6	0	0	0	.18	452	56	13	7.7	4.7	3.0	1.6	.90
7	0	0	0	.21	80	50	12	7.5	4.6	3.0	1.6	.87
8	0	0	0	.21	53	47	12	7.3	4.6	2.9	1.5	.85
9	0	0	0	.21	46	44	11	7.0	4.6	2.7	1.5	.88
10	0	0	0	.21	41	41	11	6.8	4.6	2.6	1.5	.91
11	0	0	.20	.21	35	39	10	6.6	4.6	2.4	1.4	.94
12	0	0	0	.21	34	36	10	6.3	4.5	2.3	1.4	.97
13	0	0	0	.67	29	34	10	6.2	4.5	2.1	1.4	.98
14	.45	0	.10	28	25	32	9.1	6.1	4.4	2.0	1.4	.99
15	0	.35	.52	2.2	34	30	9.0	5.9	4.4	2.0	1.4	1.0
16	0	0	.40	1.2	31	27	8.9	5.8	4.3	2.0	1.4	1.1
17	0	0	.18	.90	26	25	8.8	5.7	4.3	2.0	1.4	1.1
18	0	0	.15	2.2	26	24	8.7	5.6	4.2	1.9	1.4	1.1
19	0	0	.15	230	27	24	8.6	5.4	4.1	1.9	1.4	1.1
20	0	0	.21	119	27	23	8.5	5.4	4.0	1.9	1.3	1.0
21	0	0	.18	734	26	22	8.4	5.3	4.0	1.9	1.3	1.0
22	0	0	.18	180	31	21	8.3	5.3	3.9	1.8	1.3	1.0
23	0	0	.12	108	494	20	8.2	5.2	3.8	1.8	1.2	.93
24	0	0	.12	369	900	20	8.1	5.2	3.7	1.8	1.2	.86
25	0	0	.54	2,400	1,500	19	8.0	5.1	3.6	1.8	1.1	.79
26	0	0	2.4	1,660	420	18	7.9	5.0	3.4	1.9	1.1	.72
27	0	0	.82	140	160	18	7.8	5.0	3.3	1.9	1.1	.65
28	0	0	.59	60	90	17	7.7	5.0	3.2	1.9	1.1	.58
29	0	0	.40	55	-----	17	7.6	4.9	3.0	1.9	1.1	.51
30	0	0	.40	50	-----	17	7.6	4.9	2.9	1.9	1.0	.50
31	0	-----	.28	47	-----	16	-----	4.9	-----	1.8	1.0	-----
TOTAL	0.45	0.35	7.94	6,189.54	4,762	1,090	304.2	189.4	125.0	69.8	42.6	27.02
MEAN	.015	.012	.26	200	170	35.2	10.1	6.11	4.17	2.25	1.37	.90
MAX	.45	.35	2.4	2,400	1,500	80	16	7.7	4.8	3.0	1.8	1.1
MIN	0	0	0	.15	20	16	7.6	4.9	2.9	1.8	1.0	.50
AC-FT	.9	.7	16	12,280	9,450	2,160	603	376	248	138	85	54
CAL YR 1968	TOTAL	356.64	MEAN	.97	MAX	75	MIN	0	AC-FT	707		
WTR YR 1969	TOTAL	12,808.30	MEAN	35.1	MAX	2,400	MIN	0	AC-FT	25,400		

PEAK DISCHARGE (BASE, 90 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-14	0600	2.70	116	2- 6	0400	7.68	1,960
1-21	0600	5.83	1,770	2-15	1800	4.98	105
1-25	0700	12.72	8,400	2-25	0100	12.3	4,600

NOTE.--No gage-height record Jan. 26 to Feb. 5, Feb. 24 to Sept. 30.

a From floodmarks.
b Estimated.

11-1115. SESPE CREEK NEAR WHEELER SPRINGS, CALIF.

LOCATION.--Lat 34°34'40", long 119°15'25", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.6 N., R.22 W., Ventura County, on right bank at Sespe Gorge, 1.6 miles upstream from Tule Creek, 5 miles upstream from Cold Springs damsite, and 5 miles northeast of Wheeler Springs.

DRAINAGE AREA.--49.5 sq mi.

PERIOD OF RECORD.--January 1948 to current year. Monthly discharge only for January to July 1948 and yearly estimate for water year 1948 (incomplete), published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 3,500.65 ft above mean sea level (levels by Ventura County Flood Control District).

AVERAGE DISCHARGE.--22 years (1947-69), 10.9 cfs (7,890 acre-ft per year); median of yearly mean discharges, 2.7 cfs (2,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,700 cfs Jan. 25 (gage height, 13.16 ft), from rating curve extended above 3,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.05 cfs Oct. 1, 2, 9, 22, 23.

Period of record: Maximum discharge, 9,700 cfs Jan. 25, 1969 (gage height, 13.16 ft), from rating curve extended above 3,000 cfs on basis of slope-area measurement of maximum flow; no flow for many days in most years.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.09	.68	1.0	66	150	39	22	8.0	2.3	2.8	1.8
2	.05	.10	.68	.86	64	130	39	22	7.6	2.3	2.8	1.8
3	.06	.10	.68	.86	57	120	53	21	7.2	2.3	2.7	1.8
4	.06	.11	.68	.68	54	110	37	21	6.9	2.3	2.7	1.6
5	.06	.13	.68	.68	65	105	67	20	6.6	2.1	2.7	1.6
6	.06	.15	.68	.62	347	100	73	19	6.6	2.8	2.6	1.8
7	.06	.15	.68	.62	152	96	54	19	6.6	2.8	2.6	1.8
8	.07	.17	.68	.62	116	94	48	18	6.9	2.8	2.6	1.8
9	.05	.19	.68	.62	100	92	41	17	7.2	2.8	2.5	1.8
10	.06	.21	.68	.62	89	90	40	16	7.6	2.8	2.5	1.8
11	.06	.23	.74	.57	83	89	34	16	7.6	3.7	2.5	1.8
12	.06	.23	.74	.57	78	86	31	15	7.2	5.2	2.4	1.8
13	.06	.26	.74	.74	70	84	30	15	6.6	5.2	2.4	1.8
14	.13	.29	.80	1.0	62	80	30	14	6.0	4.7	2.3	1.8
15	.08	.42	1.5	.74	92	76	30	14	6.3	4.4	2.3	1.8
16	.09	.35	1.1	.74	81	73	30	14	6.6	4.2	2.3	1.8
17	.09	.32	1.1	.74	67	71	29	14	6.6	4.2	2.2	1.8
18	.09	.32	1.1	.92	73	77	29	13	6.3	4.2	2.2	1.8
19	.09	.32	1.0	286	65	77	29	13	6.0	3.9	2.2	1.8
20	.09	.32	.95	416	58	73	28	12	5.7	3.7	2.1	1.8
21	.07	.35	.86	2,430	55	77	27	11	4.9	3.7	2.1	1.8
22	.05	.35	.95	195	60	70	27	12	3.9	3.7	2.1	1.8
23	.05	.35	.95	81	87	64	27	11	3.5	3.5	2.1	1.9
24	.06	.35	.95	412	2,920	60	27	11	3.0	3.5	2.1	1.9
25	.08	.38	1.3	3,840	2,600	56	26	11	2.8	3.2	2.1	1.8
26	.07	.47	1.3	278	900	53	25	11	2.8	3.2	2.1	1.8
27	.08	.52	1.0	97	400	49	25	10	2.6	3.0	2.1	1.8
28	.07	.57	1.1	90	200	47	24	10	2.4	3.0	1.9	1.8
29	.08	.62	1.1	83	-----	44	24	9.8	2.3	3.0	1.9	1.8
30	.09	.62	1.1	78	-----	43	23	9.0	2.3	2.8	1.9	1.6
31	.09	-----	1.0	71	-----	41	-----	8.6	-----	2.8	1.9	-----
TOTAL	2.21	9.04	28.18	8,370.20	9,061	2,477	1,046	449.4	166.6	104.1	71.7	53.6
MEAN	.071	.30	.91	270	324	79.9	34.9	14.5	5.55	3.36	2.31	1.79
MAX	.13	.62	1.5	3,840	2,920	150	73	22	8.0	5.2	2.8	1.9
MIN	.05	.09	.68	.57	54	41	23	8.6	2.3	2.1	1.9	1.6
AC-FT	4.4	18	56	16,600	17,970	4,910	2,070	891	330	206	142	106
CAL YR 1968 TOTAL	425.43	MEAN	1.16	MAX	28	MIN	0	AC-FT	844			
WTR YR 1969 TOTAL	21,839.03	MEAN	59.8	MAX	3,840	MIN	.05	AC-FT	43,320			

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0430	11.82	6,650	2-15	1500	4.52	130
1-25	0800	13.16	9,700	2-24	2400	13.10	8,800
2- 6	0300	6.34	770	4- 5	1900	3.18	164

NOTE.--No gage-height record Feb. 26 to Mar. 9.

SANTA CLARA RIVER BASIN

11-1130. SESPE CREEK NEAR FILLMORE, CALIF.

LOCATION.--Lat 34°27'03", long 118°55'30", in NE¼NW¼NE¼ sec.12, T.4 N., R.20 W., Ventura County, on right bank 0.1 mile downstream from Little Sespe Creek, and 3.5 miles north of Fillmore.

DRAINAGE AREA.--251 sq mi.

PERIOD OF RECORD.--September 1911 to September 1913, October 1927 to current year; combined records of creek and canal, October 1927 to current year. Published as "at Sespe", prior to 1935.

GAGE.--Water-stage recorder on creek; water-stage recorder and Parshall flume on canal. Altitude of gage is 580 ft (from topographic map). See WSP 1315-B for history of gage changes prior to Jan. 17, 1946.

AVERAGE DISCHARGE (Creek only).--44 years, 106 cfs (76,740 acre-ft per year); median of yearly mean discharges, 52 cfs (37,600 acre-ft per year).
(Combined).--42 years, 112 cfs (81,080 acre-ft per year); median of yearly mean discharges, 51 cfs (36,900 acre-ft per year).

EXTREMES (Creek only).--Current year: Maximum discharge, 60,000 cfs Jan. 25 (gage height, 20.80 ft), from rating curve extended as explained below; maximum gage height, 24.95 ft Feb. 25 (from debris wave); minimum daily, 0.10 cfs for some days.

Period of record: Maximum discharge, 60,000 cfs Jan. 25, 1969 (gage height, 20.80 ft), from rating curve extended above 22,000 cfs on basis of slope-area measurement at gage height 19.0 ft; maximum gage height, 24.95 ft Feb. 25, 1969 (from debris wave); no flow at times in some years.

(Combined).--Current year: Maximum discharge, 60,000 cfs Jan. 25; minimum daily, 1.2 cfs Nov. 15.

Period of record: Maximum discharge, 60,000 cfs Jan. 25, 1969; minimum daily, 1.1 cfs July 31, Aug. 2, 1951.

REMARKS.--Records good. No regulation above station. Fillmore Irrigation Co. has diverted water one mile upstream since September 1911. Records of suspended-sediment loads for the water year 1969 are published in Part 2 of this report. For records of combined discharge of Sespe Creek and Fillmore Irrigation Co.'s canal, see following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	.30	8	2,430	2,240	365	150	69	46	25	12
2	.10	.10	.30	7	1,530	1,760	346	148	69	46	25	11
3	.10	.10	.20	6	948	1,510	390	145	68	43	24	9.8
4	.10	.10	.20	6	748	1,350	309	158	68	41	24	9.8
5	.10	.10	.20	6	873	1,190	364	142	68	41	21	9.6
6	.10	.10	.20	5	6,630	1,110	395	136	68	41	20	10
7	.10	.10	.20	5	1,760	1,030	318	133	69	41	24	10
8	.10	.10	.20	6	1,190	948	304	129	71	41	24	9.8
9	.10	.10	.20	6	988	884	304	127	73	40	24	8.6
10	.10	.10	.20	6	956	852	314	125	74	39	25	8.6
11	.10	.10	.20	6	980	780	318	122	74	38	26	8.6
12	.10	.10	.20	6	948	716	322	120	74	44	27	8.6
13	.10	.10	.20	12	716	665	296	118	73	44	21	8.6
14	.80	.10	.60	149	630	600	259	116	71	40	16	8.6
15	1.2	.80	9.2	22	832	558	216	114	68	37	15	8.6
16	.70	1.0	8.2	17	996	528	210	112	66	35	16	8.6
17	.80	1.0	6.1	10	844	516	204	108	65	34	18	9.4
18	.50	1.0	4.3	14	836	522	204	106	63	34	21	9.4
19	.10	1.0	2.7	3,890	820	486	198	104	62	31	21	9.4
20	.30	1.0	3.5	4,080	812	468	195	102	59	31	21	9.4
21	.70	1.0	4.2	17,200	863	528	192	100	59	30	21	9.4
22	.40	1.0	4.2	3,010	1,150	516	192	98	58	28	21	9.4
23	.10	1.0	4.8	1,390	5,400	486	189	96	56	28	21	9.4
24	.10	.80	5.0	3,410	19,700	468	180	92	55	28	20	9.4
25	.10	.40	28	29,100	22,600	434	174	88	54	28	19	9.4
26	.10	.40	19	20,500	8,460	406	171	85	53	27	19	9.4
27	.10	.30	12	5,920	3,110	406	165	79	53	27	19	9.0
28	.10	.30	14	5,210	2,720	406	160	77	51	27	19	9.0
29	.10	.30	12	4,550	-----	400	158	74	50	26	19	8.6
30	.10	.30	9.8	3,410	-----	400	152	73	48	26	19	8.2
31	.10	-----	8.6	2,740	-----	400	-----	71	-----	26	19	-----
TOTAL	7.70	13.00	159.00	104,707	90,470	23,563	7,564	3,448	1,909	1,088	654	279.6
MEAN	.25	.43	5.13	3,378	3,231	760	252	111	63.6	35.1	21.1	9.32
MAX	1.2	1.0	28	29,100	22,600	2,240	395	158	74	46	27	12
MIN	.10	.10	.20	5.0	630	400	152	71	48	26	15	8.2
AC-FT	15	26	315	207,700	179,400	46,740	15,000	6,840	3,790	2,160	1,300	555
CAL YR 1968	TOTAL 6,317.60			MEAN 17.3	MAX 530	MIN .10	AC-FT 12,530					
WTR YR 1969	TOTAL 233,862.30			MEAN 641	MAX 29,100	MIN .10	AC-FT 463,900					

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0600	17.00	38,000	2-6	0400	16.50	14,400
1-25	0900	20.80	60,000	2-25	0400	24.95	45,000

NOTE.--No gage-height record Feb. 24, 25.

11-1130. SESPE CREEK NEAR FILLMORE, CALIF.--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SESPE CREEK AND FILLMORE IRRIGATION CO.'S
CANAL NEAR FILLMORE, CALIF., WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	5.2	5.4	9	2,430	2,240	365	150	69	46	29	15
2	4.7	5.2	5.3	8	1,530	1,760	346	148	69	46	29	15
3	4.8	5.2	5.1	8	948	1,510	390	145	68	43	28	17
4	5.0	5.3	5.0	7	748	1,350	309	158	68	41	28	17
5	4.9	5.4	5.1	7	873	1,190	364	142	68	41	25	17
6	4.9	5.1	5.1	7	6,630	1,110	395	136	68	41	24	18
7	4.9	5.1	5.0	7	1,760	1,030	318	133	69	41	28	17
8	4.8	4.9	5.0	8	1,190	948	304	129	71	41	28	17
9	4.8	4.9	5.1	8	988	884	304	127	73	40	27	16
10	4.9	4.8	5.1	8	956	852	314	125	74	39	28	16
11	4.9	4.8	5.6	7	980	780	318	122	74	38	30	16
12	5.0	4.9	5.3	8	948	716	322	120	74	44	31	16
13	5.2	5.0	5.3	13	716	665	296	118	73	44	27	16
14	3.0	4.9	4.4	149	630	600	259	116	71	41	23	17
15	2.7	1.2	9.7	22	832	558	216	114	68	40	22	17
16	3.7	1.8	8.6	17	996	528	210	112	66	38	23	17
17	2.0	1.7	6.5	10	844	516	204	108	65	38	22	18
18	3.6	1.6	6.5	14	836	522	204	106	63	38	21	18
19	4.8	1.7	6.1	3,890	820	486	198	104	62	35	21	18
20	3.2	1.6	6.8	4,080	812	468	195	102	59	35	21	18
21	2.5	1.6	7.2	17,200	863	528	192	100	59	33	21	18
22	4.0	1.6	7.1	3,010	1,150	516	192	98	58	32	21	18
23	4.6	1.6	7.7	1,390	5,400	486	189	96	56	32	21	18
24	4.5	3.6	8.0	3,410	19,700	468	180	92	55	32	20	18
25	4.5	4.9	29	29,100	22,600	434	174	88	54	32	19	17
26	4.5	5.2	19	20,500	8,460	406	171	85	53	31	19	17
27	4.5	5.2	12	5,920	3,110	406	165	79	53	31	19	17
28	4.6	5.2	15	5,210	2,720	406	160	77	51	32	19	17
29	4.7	5.2	13	4,550	-----	400	158	74	50	30	19	17
30	5.0	5.3	10	3,410	-----	400	152	73	48	30	19	17
31	5.0	-----	9.3	2,740	-----	400	-----	71	-----	30	19	-----
TOTAL	134.9	119.7	253.3	104,727	90,470	23,563	7,564	3,448	1,909	1,150	731	510
MEAN	4.35	3.99	8.17	3,378	3,231	760	252	111	63.6	37.3	23.6	17.0
MAX	5.2	5.4	29	29,100	22,600	2,240	395	158	74	46	31	18
MIN	2.0	1.2	4.4	7.0	630	400	152	71	48	30	19	15
AC-FT	268	237	502	207,700	179,400	46,740	15,000	6,840	3,790	2,290	1,450	1,010
CAL YR 1968	TOTAL	7,977.8	MEAN	21.8	MAX	530	MIN	1.2	AC-FT	15,820		
WTR YR 1969	TOTAL	234,584.9	MEAN	643	MAX	29,100	MIN	1.2	AC-FT	465,300		

PEAK DISCHARGE (BASE, 1,300 CFS).--(Same as those listed on previous page).

SANTA CLARA RIVER BASIN

11-1135. SANTA PAULA CREEK NEAR SANTA PAULA, CALIF.

LOCATION.--Lat 34°23'44", long 119°04'32", in NW¼SW¼SW¼ sec.27, T.4 N., R.21 W., Ventura County, on right bank 15 ft upstream from Santa Paula Water Works diversion dam, 200 ft upstream from Mud Creek, and 3 miles north of Santa Paula.

DRAINAGE AREA.--40.0 sq mi.

PERIOD OF RECORD.--October 1927 to current year. March 1912 to September 1913, at site 2.5 miles upstream; records not equivalent.

GAGE.--Water-stage recorder and concrete diversion dam control. Altitude of gage is 650 ft (from topographic map). Oct. 1, 1927, to Feb. 19, 1931, at site 500 ft downstream at different datum. Feb. 20, 1931, to Dec. 5, 1963, at present site and datum. Dec. 6, 1963, to July 29, 1965, at site 50 ft upstream at present datum.

AVERAGE DISCHARGE.--42 years, 21.9 cfs (15,870 acre-ft per year); median of yearly mean discharges, 9.5 cfs (6,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,000 cfs Feb. 25 (gage height, 15.18 ft, from floodmark), from rating curve extended as explained below; minimum daily, 1.1 cfs Nov. 2, 6, 7, 12.

Period of record: Maximum discharge, 21,000 cfs Feb. 25, 1969 (gage height, 15.18 ft, from floodmark), from rating curve extended above 2,300 cfs on basis of critical-depth measurement at gage height 12.2 ft; no flow at times in 1949, 1951-52, 1965.

REMARKS.--Records poor. No regulation above station. Diversion above station for irrigation of 60 acres by Santa Paula Water Works began prior to October 1927; 359 acre-ft was diverted during year.

COOPERATION.--Record of diversion furnished by Santa Paula Water Works.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.3	3.0	2.4	260	600	85	37	27	21	10	5.4
2	1.9	1.1	2.7	2.3	215	520	110	37	27	21	9.7	5.3
3	1.8	1.4	2.7	2.3	185	460	102	36	27	20	9.4	5.2
4	1.8	1.4	2.5	2.2	170	405	100	36	27	20	9.1	5.1
5	1.7	1.2	2.5	2.2	190	355	115	36	27	20	8.8	5.0
6	1.7	1.1	2.5	2.2	900	310	75	35	27	20	8.5	4.9
7	1.9	1.1	2.5	2.1	440	290	70	35	26	20	8.2	4.8
8	1.9	1.3	2.5	2.1	360	270	66	34	26	19	7.9	4.7
9	1.9	1.3	2.6	2.1	330	250	62	33	27	18	7.7	4.6
10	1.9	1.3	2.3	2.1	290	235	58	32	28	18	7.5	4.5
11	2.1	1.2	2.9	2.1	260	220	55	31	29	18	7.3	4.4
12	1.9	1.1	3.1	2.1	220	205	52	31	30	17	7.1	4.3
13	1.9	1.3	3.5	5.0	190	190	50	30	30	17	6.9	4.2
14	3.1	1.5	3.3	25	170	175	49	30	30	16	6.7	4.3
15	2.3	2.7	4.2	13	245	165	48	29	30	16	6.6	4.4
16	2.0	2.5	3.8	5.0	190	152	47	29	29	16	6.5	4.5
17	2.2	2.7	3.7	3.9	170	142	46	29	28	15	6.4	4.6
18	2.4	2.8	3.7	3.7	160	132	46	29	27	15	6.2	4.7
19	2.2	2.6	3.5	1,200	150	128	45	29	26	15	6.1	4.7
20	1.9	2.5	3.3	375	142	120	45	29	25	14	6.0	4.7
21	1.9	2.0	3.4	3,500	142	135	44	28	24	14	5.9	4.7
22	1.8	2.0	3.3	920	200	122	44	28	23	14	5.8	4.7
23	1.7	2.6	3.3	390	750	112	44	28	23	14	5.7	4.7
24	1.5	2.9	4.5	780	4,000	108	44	28	22	13	5.6	4.7
25	1.5	3.0	7.2	7,200	8,900	102	43	28	22	13	5.6	4.7
26	1.6	3.3	5.2	3,500	2,500	100	42	28	22	13	5.5	4.8
27	1.4	3.3	4.3	1,890	1,150	96	41	28	21	12	5.5	4.8
28	1.4	3.3	3.5	940	680	94	40	28	21	12	5.4	4.8
29	1.6	3.2	3.1	630	-----	91	39	28	21	11	5.4	4.8
30	1.5	3.3	2.8	500	-----	89	38	27	21	11	5.4	4.9
31	1.6	-----	2.5	360	-----	87	-----	27	-----	10	5.4	-----
TOTAL	57.8	62.3	103.9	22,266.8	23,559	6,460	1,745	953	773	493	213.8	141.9
MEAN	1.86	2.08	3.35	718	841	208	58.2	30.7	25.8	15.9	6.90	4.73
MAX	3.1	3.3	7.2	7,200	8,900	600	115	37	30	21	10	5.4
MIN	1.4	1.1	2.3	2.1	142	87	38	27	21	10	5.4	4.2
AC-FT	115	124	206	44,170	46,730	12,810	3,460	1,890	1,530	978	424	281
CAL YR 1968	TOTAL	2,836.02	MEAN	7.75	MAX	140	MIN	.78	AC-FT	5,630		
WTR YR 1969	TOTAL	56,829.5	MEAN	156	MAX	8,900	MIN	1.1	AC-FT	112,700		

DATE	TIME	G.H.	PEAK DISCHARGE (BASE, 200 CFS)	DATE	TIME	G.H.	DISCHARGE
1-19	unknown	5.16	2,400	2- 6	unknown	a4.75	1,900
1-21	0600	7.30	5,300	2-15	unknown	a2.00	375
1-25	unknown	a12.2	16,000	2-25	unknown	a15.18	21,000

NOTE.--No gage-height record Dec. 24 to May 6.

a From floodmarks.

11-1139.2. SANTA CLARA RIVER AT SATICOY, CALIF.

LOCATION.--Lat 34°16'29", long 119°08'11", in Santa Clara Del Norte Grant, Ventura County, on third pier from left levee of bridge on State Highway 118, 0.9 mile southeast of Saticoy.

DRAINAGE AREA.--1,595 sq mi.

PERIOD OF RECORD.--October 1927 to September 1932, October 1949 to current year. Published as "at Montalvo", prior to 1968. Monthly discharge only for 1950-67 published in 1968 report.

GAGE.--Water-stage recorder. Datum of gage is 102.40 ft above mean sea level (Ventura County Flood Control District bench mark). Prior to October 1967, at site 3.9 miles downstream at different datums.

AVERAGE DISCHARGE.--25 years, 119 cfs (86,150 acre-ft per year); median of yearly mean discharges, 18 cfs (13,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 165,000 cfs Jan. 25 (gage height, 23.07 ft); no flow Oct. 1 to Jan. 18.

Period of record: Maximum discharge, 165,000 cfs Jan. 25, 1969 (gage height, 23.07 ft); no flow for most of each year.

Flood of Mar. 2, 1938, 120,000 cfs, estimated by Ventura County Flood Control District at site 3.9 miles downstream.

REMARKS.--Records fair. Flow partly regulated since May 1955 by Lake Piru (see sta 11-1097). Natural flow affected by ground-water withdrawals, diversions, municipal use, and ground-water replenishment. Diversion to spreading grounds and for irrigation in Pleasant Valley, at site 2.0 miles upstream. Period of Record represents flow to the ocean regardless of upstream development. Records of chemical analyses and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

COOPERATION.--Fourteen discharge measurements furnished by Ventura County Flood Control District. Records of diversion furnished by United Water Conservation District.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	770	9,080	842	57	15	8.9	6.6	8.5
2	0	0	0	0	740	6,380	842	55	15	8.9	7.6	8.9
3	0	0	0	0	710	4,920	890	52	13	8.9	8.5	9.4
4	0	0	0	0	704	4,000	844	50	13	8.9	7.6	8.9
5	0	0	0	0	698	3,290	680	65	13	9.8	8.1	9.4
6	0	0	0	0	10,200	2,800	608	35	13	9.8	8.5	9.4
7	0	0	0	0	2,930	2,340	528	34	12	8.9	8.9	9.4
8	0	0	0	0	1,800	2,170	466	34	12	8.9	9.4	9.4
9	0	0	0	0	1,710	1,940	406	34	11	8.5	10	9.4
10	0	0	0	0	1,660	1,780	370	33	9.4	7.2	11	9.4
11	0	0	0	0	1,550	1,670	345	31	8.9	7.6	11	9.4
12	0	0	0	0	1,440	1,620	284	29	8.9	8.9	12	9.4
13	0	0	0	0	1,410	1,590	252	25	8.5	8.9	11	9.4
14	0	0	0	0	1,160	1,440	220	24	8.1	8.5	11	9.4
15	0	0	0	0	1,330	1,240	200	22	11	8.1	10	9.4
16	0	0	0	0	1,090	1,110	175	21	11	7.6	8.1	9.8
17	0	0	0	0	946	1,050	160	20	9.8	7.2	7.2	10
18	0	0	0	0	946	1,040	147	20	9.4	7.2	7.2	12
19	0	0	0	1,700	946	1,120	135	20	8.9	7.2	7.2	11
20	0	0	0	5,630	864	1,180	127	19	8.5	7.6	7.6	10
21	0	0	0	32,100	853	1,180	111	18	8.1	7.2	8.1	10
22	0	0	0	5,680	1,740	1,100	107	17	8.1	6.9	8.1	10
23	0	0	0	2,480	10,400	1,010	96	17	7.2	7.2	8.1	10
24	0	0	0	5,630	23,500	967	91	17	7.6	7.6	8.1	11
25	0	0	0	74,300	92,300	981	85	17	7.6	7.6	8.5	12
26	0	0	0	25,800	19,900	953	80	16	8.1	8.9	8.9	12
27	0	0	0	7,350	11,800	932	77	16	8.1	9.4	9.4	12
28	0	0	0	3,770	10,700	1,010	74	14	8.5	8.9	9.4	12
29	0	0	0	2,530	-----	876	72	14	8.9	9.4	9.4	13
30	0	0	0	1,710	-----	869	66	15	8.9	8.9	9.4	13
31	0	-----	0	1,110	-----	848	-----	15	-----	7.6	8.5	-----
TOTAL	0	0	0	169,790	204,797	62,486	9,380	856	300.5	257.1	274.4	306.9
MEAN	0	0	0	5,477	7,314	2,016	313	27.6	10.0	8.29	8.85	10.2
MAX	0	0	0	74,300	92,300	9,080	890	65	15	9.8	12	13
MIN	0	0	0	0	698	848	66	14	7.2	6.9	6.6	8.5
AC-FT	0	0	0	336,800	406,200	123,900	18,600	1,700	596	510	544	609
(a)	1,100	984	1,380	1,790	10,990	73	20,660	15,990	10,380	10,060	16,100	13,940
CAL YR 1968	TOTAL	2,055.90	MEAN	5.6	MAX	1,390	MIN	0	AC-FT	4,080		
WTR YR 1969	TOTAL	448,447.90	MEAN	1,229	MAX	92,300	MIN	0	AC-FT	889,500		

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0800	17.6	70,000	2-6	0430	9.02	23,100
1-25	1000	23.07	165,000	2-25	0500	21.45	152,000

NOTE.--Much of year computed on basis of reconstructed graph.
a Discharge in acre-ft, diverted to spreading grounds, 2.0 miles upstream.

VENTURA RIVER BASIN

11-1145, MATILIJA CREEK ABOVE RESERVOIR, NEAR MATILIJA HOT SPRINGS, CALIF.

LOCATION (revised).--Lat 34°29'41", long 119°19'48", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.5 N., R.23 W., Ventura County, on left bank 1.6 miles upstream from Matilija Dam, and 1.7 miles northwest of Matilija Hot Springs. Prior to Jan. 24, 1969, at site 300 ft downstream.

DRAINAGE AREA.--50.7 sq mi.

PERIOD OF RECORD.--May 1948 to September 1969 (discontinued). Published as "near Matilija" prior to October 1953.

GAGE.--Water-stage recorder. Datum of gage is 1,160.20 ft above mean sea level (levels by Ventura County Flood Control District). Oct. 1, 1967, to Jan. 23, 1969, at site 300 ft downstream at datum 2.22 ft lower.

AVERAGE DISCHARGE.--21 years, 28.0 cfs (20,290 acre-ft per year); median of yearly mean discharges, 9.0 cfs (6,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 19,600 cfs Jan. 25 (gage height, 14.25 ft), from rating curve extended above 470 cfs on basis of computation of maximum flow over dam; minimum daily, 1.4 cfs Oct. 24-28.

Period of record: Maximum discharge, 19,600 cfs Jan. 25, 1969 (gage height, 14.25 ft), from rating curve extended above 470 cfs on basis of computation of maximum flow over dam; minimum daily, 0.30 cfs Oct. 17-20, 25, 27, 1951.

REMARKS.--Records poor. No regulation or diversion above station.

COOPERATION.--Twenty-one discharge measurements furnished by Ventura County Flood Control District; four discharge measurements furnished by Ventura River Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.0	2.7	4.1	306	752	90	50	28	21	12	7.3
2	1.8	2.0	2.6	4.1	274	692	88	49	28	21	12	7.2
3	2.0	2.1	2.7	4.4	238	590	87	48	28	20	12	7.1
4	2.0	2.1	2.8	4.4	215	515	86	47	28	20	12	7.0
5	1.9	2.0	3.0	4.7	269	450	85	46	28	20	11	6.9
6	1.8	2.0	3.1	4.7	1,120	402	84	45	28	19	11	6.9
7	1.8	2.0	3.1	4.7	530	362	84	44	27	19	11	6.9
8	1.8	2.0	3.1	5.0	382	322	102	43	27	19	11	6.9
9	1.8	1.8	3.3	5.3	338	294	92	42	27	18	10	6.8
10	1.9	1.8	3.4	5.0	306	270	84	42	27	18	10	6.8
11	2.0	1.8	3.6	5.3	274	238	78	41	27	18	10	6.8
12	2.0	1.8	3.3	5.0	250	212	73	40	27	17	10	6.8
13	2.0	1.8	3.3	5.6	230	209	70	39	26	17	9.8	6.7
14	2.9	2.0	3.4	6.8	218	198	68	39	26	16	9.8	6.7
15	3.1	2.6	4.6	5.9	266	178	67	38	26	16	9.6	6.7
16	2.5	2.0	3.8	5.6	238	168	66	37	26	16	9.6	6.7
17	1.8	2.0	3.8	5.9	224	160	64	36	26	16	9.4	6.6
18	1.8	2.2	3.8	7.7	238	158	64	35	26	15	9.4	6.6
19	1.8	2.5	3.8	447	218	155	63	34	25	15	9.2	6.6
20	1.8	2.5	4.1	537	212	150	62	34	25	15	9.0	6.5
21	1.7	2.5	4.1	4,040	180	145	61	33	24	15	8.8	6.5
22	1.5	2.5	4.1	612	150	138	60	32	24	15	8.6	6.4
23	1.4	2.5	4.1	356	539	131	58	31	23	14	8.4	6.4
24	1.4	2.5	4.1	881	6,210	124	57	30	23	14	8.2	6.4
25	1.4	2.7	4.4	8,610	4,650	120	56	30	23	14	8.0	6.3
26	1.4	2.7	4.7	4,210	1,480	115	55	29	22	14	7.9	6.3
27	1.4	2.6	4.1	1,700	945	110	54	29	22	14	7.8	6.3
28	1.4	2.5	4.1	903	854	105	53	29	22	13	7.7	6.2
29	1.6	2.6	4.1	638	-----	102	52	29	22	13	7.6	6.2
30	2.0	2.7	4.1	445	-----	98	51	29	21	13	7.5	6.2
31	2.0	-----	4.1	374	-----	92	-----	29	-----	13	7.4	-----
TOTAL	57.5	66.8	113.3	23,847.2	21,354	7,755	2,114	1,159	762	508	295.7	199.7
MEAN	1.85	2.23	3.65	769	763	250	70.5	37.4	25.4	16.4	9.54	6.66
MAX	3.1	2.7	4.7	8,610	6,210	752	102	50	28	21	12	7.3
MIN	1.4	1.8	2.6	4.1	150	92	51	29	21	13	7.4	6.2
AC-FT	114	133	225	47,300	42,360	15,380	4,190	2,300	1,510	1,010	587	396

CAL YR 1968 TOTAL 2,347.16 MEAN 6.41 MAX 117 MIN .70 AC-FT 4,660
WTR YR 1969 TOTAL 58,232.2 MEAN 160 MAX 8,610 MIN 1.4 AC-FT 115,500

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0330	unknown	11,300	2-6	0200	8.90	2,950
1-25	0730	14.25	19,600	2-24	2230	13.75	15,000

NOTE.--No gage-height record Mar. 25 to Sept. 30.

11-1155. MATILIJA CREEK AT MATILIJA HOT SPRINGS, CALIF.

LOCATION.--Lat 34°28'58", long 119°18'03", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.5 N., R.23 W., Ventura County, on right bank 0.2 mile east of Matilija Hot Springs, 0.2 mile upstream from North Fork, and 0.4 mile downstream from Matilija Dam.

DRAINAGE AREA.--54.6 sq mi.

PERIOD OF RECORD.--October 1927 to current year. Combined monthly records for creek and diversion, May 1951 to current year. Prior to October 1953, published as "at Matilija."

GAGE.--Water-stage recorder. Altitude of gage is 900 ft (from topographic map). Prior to Feb. 11, 1939, at site 0.6 mile upstream at different datum.

EXTREMES.--Current year: Maximum discharge, 20,000 cfs Jan. 25 (gage height, 16.5 ft), from rating curve extended above 4,200 cfs on basis of computation of maximum flow over dam; minimum daily, 1.0 cfs Sept. 23, 24.
Period of record: Maximum discharge, 20,000 cfs Jan. 25, 1969 (gage height, 16.5 ft), from rating curve extended above 4,200 cfs on basis of computation of maximum flow over dam; minimum daily, 0.10 cfs for several days in some years of regulated flow.

REMARKS.--Records good prior to Apr. 2 and poor thereafter. Flow regulated by Matilija Reservoir March 1948 to March 1964 (capacity, 7,020 acre-ft) and partly regulated since March 1964 (capacity, 3,800 acre-ft); water diverted at dam by Matilija conduit to Ventura River basin and Ojai Valley for irrigation since May 1951. Ventura River Municipal Water District reports no diversion during year.

COOPERATION.--Eight discharge measurements furnished by Ventura River Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	3.1	3.1	3.4	311	699	203	66	10	27	41	6.7
2	2.7	3.1	3.1	3.4	302	610	195	64	13	27	35	6.7
3	2.7	3.1	3.1	3.4	299	558	185	61	14	27	30	6.7
4	2.7	3.0	3.0	3.4	296	500	176	59	14	27	14	6.7
5	2.8	163	3.0	3.5	305	448	175	57	14	27	13	6.7
6	2.8	159	3.0	3.5	1,160	380	174	54	14	27	12	6.7
7	2.7	6.8	3.0	3.5	484	336	173	51	14	27	11	6.7
8	2.6	6.7	3.0	3.5	360	294	171	45	14	27	10	6.7
9	2.6	3.0	3.0	3.5	299	293	168	37	14	27	9.0	6.7
10	2.6	2.1	3.0	3.5	269	284	164	28	14	27	8.0	6.7
11	2.6	2.1	3.0	3.4	248	263	159	22	14	27	7.0	6.7
12	2.6	2.3	3.0	3.4	232	245	159	18	14	28	6.7	6.7
13	2.6	2.7	3.0	3.7	135	243	160	15	14	28	6.7	6.7
14	3.1	2.7	3.0	3.8	128	235	160	14	12	29	6.7	6.7
15	2.7	3.0	3.5	3.7	147	220	150	13	10	29	6.7	6.7
16	2.7	2.9	3.3	3.5	188	215	138	12	10	29	6.7	6.7
17	2.6	2.9	3.3	3.5	133	200	133	11	10	53	6.7	6.7
18	2.6	2.9	3.3	4.0	155	190	126	11	10	69	6.7	6.7
19	2.6	2.6	3.3	13	253	180	117	10	10	69	6.7	6.7
20	2.6	2.6	3.3	145	288	170	110	10	10	68	6.7	6.7
21	2.6	2.6	3.3	3,620	279	160	105	9.8	11	68	6.7	6.7
22	2.6	2.7	3.3	662	266	150	100	9.7	11	67	6.7	2.4
23	2.6	2.9	3.3	270	362	140	94	9.6	11	66	6.7	1.0
24	2.6	3.0	3.4	651	4,760	135	91	9.5	11	65	6.7	1.0
25	2.6	3.1	3.7	8,340	6,250	130	86	9.4	11	65	6.7	4.8
26	2.6	3.1	3.4	4,000	1,650	128	83	9.4	20	64	6.7	6.6
27	2.6	3.1	3.4	1,830	938	126	80	9.4	27	63	6.7	6.6
28	2.6	3.1	3.4	899	837	120	76	9.3	27	63	6.7	6.6
29	2.7	3.1	3.4	543	-----	118	73	9.3	27	62	6.7	6.6
30	3.1	3.1	3.4	412	-----	116	69	9.2	27	56	6.7	6.6
31	3.1	-----	3.4	352	-----	114	-----	9.2	-----	48	6.7	-----
TOTAL	83.3	409.4	99.7	21,800.6	21,334	8,000	4,053	761.8	432	1,386	324.0	182.9
MEAN	2.69	13.6	3.22	703	762	258	135	24.6	14.4	44.7	10.5	6.10
MAX	3.1	163	3.7	8,340	6,250	699	203	66	27	69	41	6.7
MIN	2.6	2.1	3.0	3.4	128	114	69	9.2	10	27	6.7	1.0
AC-FT	165	812	198	43,240	42,320	15,870	8,040	1,510	857	2,750	643	363

CAL YR 1968 TOTAL 2,437.7 MEAN 6.66 MAX 163 MIN 1.3 AC-FT 4,840
WTR YR 1969 TOTAL 58,866.7 MEAN 161 MAX 8,340 MIN 1.0 AC-FT 116,800

NOTE.--No gage-height record Mar. 16 to July 21, Aug. 4 to Sept. 25.

VENTURA RIVER BASIN

11-1160. NORTH FORK MATILIJA CREEK AT MATILIJA HOT SPRINGS, CALIF.

LOCATION.--Lat 34°29'33", long 119°18'20", in NE¼NW¼NE¼ sec.29, T.5 N., R.23 W., Ventura County, on right bank at bridge on U.S. Highway 399, 0.7 mile north of Matilija Hot Springs, and 0.8 mile upstream from mouth.

DRAINAGE AREA.--15.6 sq mi.

PERIOD OF RECORD.--October 1928 to September 1932, October 1933 to current year. Prior to October 1953, published as "at Matilija".

GAGE.--Water-stage recorder. Concrete control since September 1966. Datum of gage is 1,142.02 ft above mean sea level (levels by Ventura County Flood Control District). Prior to Nov. 12, 1948, at site 0.3 mile downstream at different datum.

AVERAGE DISCHARGE.--40 years, 10.5 cfs (7,610 acre-ft per year); median of yearly mean discharges, 4.0 cfs (2,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,440 cfs Feb. 24 (gage height, 11.0 ft, from floodmark), from rating curve extended as explained below; minimum daily, 1.0 cfs Oct. 1-12.

Period of record: Maximum discharge, 9,440 cfs Feb. 24, 1969 (gage height, 11.0 ft, from floodmark), from rating curve extended above 1,700 cfs on basis of slope-area measurement at gage height 10.0 ft; minimum daily, 0.10 cfs for several days in some years.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by Ventura County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.2	1.2	1.7	108	268	34	19	12	7.0	4.8	3.4
2	1.0	1.2	1.2	1.7	84	208	33	19	12	7.0	4.4	3.4
3	1.0	1.2	1.2	1.7	80	184	31	19	12	7.0	4.4	3.4
4	1.0	1.2	1.2	1.7	80	166	29	18	12	7.0	4.4	3.4
5	1.0	1.2	1.2	1.7	114	156	47	17	12	6.6	4.0	3.4
6	1.0	1.2	1.2	1.7	1,050	130	38	17	12	6.6	4.4	3.4
7	1.0	1.2	1.3	1.7	322	108	30	17	11	6.6	4.8	3.4
8	1.0	1.2	1.3	1.7	173	102	28	16	11	6.2	4.8	3.4
9	1.0	1.2	1.3	1.7	145	95	27	15	11	6.2	4.4	3.4
10	1.0	1.2	1.3	1.9	118	90	27	15	11	6.2	4.4	3.4
11	1.0	1.3	1.5	1.9	95	82	25	15	11	6.2	4.4	3.4
12	1.0	1.5	1.5	1.9	82	76	25	15	11	6.2	4.4	3.4
13	1.2	1.7	1.5	2.6	76	70	24	14	10	6.2	4.8	3.4
14	2.1	1.7	1.5	4.0	70	64	23	14	10	6.2	4.8	3.4
15	1.5	2.6	3.1	2.4	90	60	23	14	10	6.2	4.4	3.4
16	1.3	1.9	2.4	2.4	76	58	22	14	10	5.8	4.4	3.4
17	1.2	1.7	2.1	2.1	70	54	22	14	10	5.8	4.4	3.4
18	1.2	1.7	2.1	2.8	60	50	22	14	10	5.8	4.0	3.4
19	1.2	1.7	1.9	476	52	48	22	14	9.4	5.8	4.0	3.4
20	1.2	1.5	1.9	324	48	47	21	14	9.4	5.8	4.0	3.4
21	1.2	1.5	1.7	1,510	48	47	21	14	8.9	5.4	4.0	3.4
22	1.2	1.3	1.7	142	47	46	21	13	8.9	5.4	4.0	3.4
23	1.2	1.3	1.7	88	342	44	21	14	8.4	5.4	4.0	3.1
24	1.2	1.2	1.7	247	2,810	41	21	12	8.4	5.1	4.0	3.1
25	1.2	1.2	2.6	4,980	4,420	40	20	12	8.4	5.1	4.0	3.1
26	1.2	1.2	2.4	1,250	1,280	38	20	12	8.4	5.1	4.0	3.1
27	1.2	1.2	2.1	350	516	36	19	12	7.9	4.8	4.0	3.1
28	1.2	1.2	1.9	256	329	35	19	12	7.4	4.8	4.0	3.1
29	1.2	1.2	1.7	200	-----	34	19	12	7.4	4.8	3.7	3.1
30	1.2	1.2	1.7	159	-----	34	19	12	7.0	4.8	4.0	3.1
31	1.2	-----	1.7	130	-----	34	-----	12	-----	4.8	3.4	-----
TOTAL	36.1	41.8	52.8	10,149.3	12,785	2,545	753	451	297.9	181.9	131.5	99.6
MEAN	1.16	1.39	1.70	327	457	82.1	25.1	14.5	9.93	5.87	4.24	3.32
MAX	2.1	2.6	3.1	4,980	4,420	268	47	19	12	7.0	4.8	3.4
MIN	1.0	1.2	1.2	1.7	47	34	19	12	7.0	4.8	3.4	3.1
AC-FT	72	83	105	20,130	25,360	5,050	1,490	895	591	361	261	198

CAL YR 1968 TOTAL 814.30 MEAN 2.22 MAX 30 MIN .60 AC-FT 1,620
WTR YR 1969 TOTAL 27,524.9 MEAN 75.4 MAX 4,980 MIN 1.0 AC-FT 54,590

PEAK DISCHARGE (BASE, 40 CFS).
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-21 0330 6.80 4,820 2-24 2330 a11.0 9,440
1-25 0600 a10.0 8,440 4- 5 1730 2.27 145
2- 6 0200 4.75 2,310

a From floodmarks.

VENTURA RIVER BASIN

249

11-1165.5. VENTURA RIVER NEAR MEINERS OAKS, CALIF.

LOCATION.--Lat 34°27'45", long 119°17'20", in Santa Ana Grant, Ventura County, on right bank 500 ft downstream from Robles diversion dam, 1,500 ft downstream from Los Padres National Forest boundary, and 1.1 miles northwest of Meiners Oaks.

DRAINAGE AREA.--76.4 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 744.60 ft above mean sea level (Bureau of Reclamation bench mark).

EXTREMES.--Current year: Maximum discharge, 28,000 cfs (estimated) Jan. 25 (gage height, unknown); no flow for most of year.
Period of record: Maximum discharge, 28,000 cfs (estimated) Jan. 25, 1969 (gage height, unknown); no flow for several months in most years.

REMARKS.--Records good prior to Jan. 19 and poor thereafter. Flow regulated by Matilija Reservoir (capacity, 3,800 acre-ft). Flows up to 500 cfs diverted since May 1959 at Robles diversion dam to Casitas Reservoir on Coyote Creek. Flow reported herein is that released through gates in Robles diversion dam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.9	419	884	0	0	0	3.9	4.8	4.9
2	0	0	.10	.9	386	350	0	0	0	3.9	4.8	4.8
3	0	.10	.10	.7	379	333	0	0	0	3.9	4.8	4.7
4	0	.10	.10	.7	376	208	0	0	0	3.9	4.8	4.6
5	0	.10	.10	.9	419	180	0	0	0	3.9	4.8	4.5
6	0	0	0	1.0	2,210	31	0	0	0	3.9	4.8	4.4
7	0	0	0	1.0	806	0	0	0	0	3.9	4.8	4.3
8	0	3.4	.10	1.0	363	26	0	0	0	3.9	4.8	4.2
9	0	2.3	.30	1.0	0	0	0	0	0	4.7	4.8	4.1
10	0	1.2	.30	1.0	.5	8.9	0	0	0	4.8	4.8	4.0
11	0	1.0	.20	.9	0	18	0	0	0	4.8	4.8	3.9
12	0	.90	.30	.9	0	28	0	0	0	4.8	4.8	4.1
13	0	.60	.40	1.4	6.0	0	0	0	0	4.8	4.8	4.3
14	.10	.40	.70	4.2	5.0	0	0	0	0	4.8	4.9	4.5
15	.10	1.6	3.0	3.0	1.0	0	0	0	0	4.8	4.9	4.7
16	.20	1.2	2.0	1.8	0	0	0	0	0	4.8	4.9	4.9
17	.20	.40	1.6	1.4	34	0	0	0	0	4.9	4.9	5.1
18	.10	.40	1.0	2.0	22	0	0	0	0	4.9	4.9	5.3
19	0	.60	1.2	344	49	0	0	0	0	5.0	4.9	5.5
20	0	.30	1.2	469	0	8.0	0	0	0	5.2	4.9	5.7
21	0	.20	1.6	5,130	0	92	0	0	0	5.4	5.0	5.9
22	0	.20	1.4	804	0	0	0	0	0	5.6	5.0	1.0
23	0	0	.30	358	277	0	0	0	0	5.8	5.0	1.0
24	0	0	.30	898	7,250	0	0	0	0	5.6	5.0	1.0
25	0	0	1.6	13,300	10,600	0	0	0	0	5.4	5.0	6.1
26	0	0	2.6	5,250	2,910	0	0	0	2.0	5.2	5.0	6.3
27	0	0	2.6	2,180	1,450	0	0	0	3.9	5.0	5.0	6.5
28	0	.40	1.8	1,160	1,130	0	0	0	3.9	4.8	5.0	6.7
29	0	.90	.90	743	-----	0	0	0	3.9	4.8	5.0	6.8
30	0	.30	.70	571	-----	0	0	0	3.9	4.8	5.0	6.8
31	0	-----	.90	482	-----	0	-----	0	-----	4.8	5.0	-----
TOTAL	0.70	16.60	27.40	31,713.7	29,092.5	2,166.9	0	0	17.6	146.7	151.7	140.6
MEAN	.023	.55	.88	1,023	1,039	69.9	0	0	.59	4.73	4.89	4.69
MAX	.20	3.4	3.0	13,300	10,600	884	0	0	3.9	5.8	5.0	6.8
MIN	0	0	0	.70	0	0	0	0	0	3.9	4.8	1.0
AC-FT	1.4	33	54	62,900	57,700	4,300	0	0	35	291	301	279

CAL YR 1968 TOTAL 1,171.80 MEAN 3.20 MAX 16 MIN 0 AC-FT 2,320
WTR YR 1969 TOTAL 63,474.40 MEAN 174 MAX 13,300 MIN 0 AC-FT 125,900

NOTE.--No gage-height record Jan. 20 to Sept. 30.

VENTURA RIVER BASIN

11-1175. SAN ANTONIO CREEK AT CASITAS SPRINGS, CALIF.

LOCATION.--Lat 34°22'49", long 119°18'13", in Santa Ana Grant, Ventura County, on downstream side of bridge on U.S. Highway 399, 0.2 mile upstream from mouth, and 0.9 mile north of Casitas Springs.

DRAINAGE AREA.--51.2 sq mi.

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 307.25 ft above mean sea level (levels by Ventura County Flood Control District). Prior to Jan. 30, 1962, at datum 0.30 ft higher.

AVERAGE DISCHARGE.--20 years, 11.8 cfs (8,550 acre-ft per year); median of yearly mean discharges, 1.7 cfs (1,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 16,200 cfs Jan. 25 (gage height, 14.30 ft, from inside gage), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1-13, Oct. 26 to Nov. 14.

Period of record: Maximum discharge, 16,200 cfs Jan. 25, 1969 (gage height, 14.30 ft, from inside gage), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--No regulation above station; pumping from wells along creek for irrigation.

COOPERATION.--Records furnished by Ventura County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.09	.9	81	239	70	31	20	13	6.9	7.8
2	0	0	.09	.9	56	230	76	31	20	13	6.9	7.3
3	0	0	.12	.9	44	221	84	31	19	13	8.3	7.8
4	0	0	.12	.8	40	215	60	31	19	14	9.3	6.9
5	0	0	.12	.8	153	206	103	31	19	13	12	6.5
6	0	0	.17	.8	977	200	74	32	19	13	14	6.9
7	0	0	.17	.6	243	194	62	30	20	13	12	6.1
8	0	0	.17	.6	185	185	59	29	20	13	4.6	6.1
9	0	0	.17	.6	167	176	56	28	20	13	4.2	6.1
10	0	0	.17	.6	90	170	53	27	20	13	3.3	6.1
11	0	0	.23	.6	72	158	50	27	19	15	7.8	6.1
12	0	0	.23	.6	60	123	48	26	18	13	7.3	6.1
13	0	0	.23	.6	51	119	45	26	18	12	7.3	6.1
14	.12	0	.29	11	45	115	42	26	17	13	7.3	6.1
15	.04	.23	.53	1.7	112	112	41	27	17	10	7.3	6.1
16	.04	.29	.64	1.3	77	110	40	26	16	11	7.3	6.5
17	.04	.23	.64	1.0	64	106	40	26	17	10	6.9	6.5
18	.04	.23	.53	5.6	64	98	39	25	16	11	6.9	6.1
19	.04	.23	.53	715	62	94	37	24	16	10	6.5	6.1
20	.04	.12	.53	650	57	90	37	24	15	11	6.1	6.1
21	.06	.12	.53	1,680	78	84	33	22	16	10	6.1	6.1
22	.04	.09	.53	359	108	81	33	21	15	11	6.1	6.1
23	.04	.09	.53	131	1,380	77	33	20	15	10	6.5	5.7
24	.03	.09	.53	815	3,410	74	33	20	14	11	5.7	5.7
25	.02	.09	2.6	10,400	3,660	74	33	21	12	11	5.7	5.7
26	.01	.09	2.1	2,780	746	74	33	21	13	11	5.7	5.0
27	0	.12	1.2	945	262	74	32	20	13	10	6.1	5.0
28	0	.12	1.2	336	388	72	30	20	13	10	6.5	4.6
29	0	.12	1.0	203	-----	72	30	20	14	9.3	6.9	4.2
30	0	.12	1.0	140	-----	72	30	20	14	10	7.3	4.2
31	0	-----	1.0	121	-----	72	-----	20	-----	9.3	7.3	-----
TOTAL	0.56	2.38	17.99	19,304.9	12,732	3,987	1,436	783	504	359.6	222.1	181.7
MEAN	.018	.079	.58	623	455	129	47.9	25.3	16.8	11.6	7.16	6.06
MAX	.12	.29	2.6	10,400	3,660	239	103	32	20	15	14	7.8
MIN	0	0	.09	.60	40	72	30	20	12	9.3	3.3	4.2
AC-FT	1.1	4.7	36	38,290	25,250	7,910	2,850	1,550	1,000	713	441	360
CAL YR 1968	TOTAL	946.40	MEAN	2.59	MAX	126	MIN	0	AC-FT	1,880		
WTR YR 1969	TOTAL	39,531.23	MEAN	108	MAX	10,400	MIN	0	AC-FT	78,410		

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0200	10.90	7,020	2-25	0100	10.70	11,500
1-25	0800	14.30	16,200	4- 2	2400	5.08	227
2- 6	0200	8.15	3,030				

a From inside gage.

11-1176. COYOTE CREEK NEAR OAK VIEW, CALIF.

LOCATION.--Lat 34°25'02", long 119°22'01", in Santa Ana Grant, Ventura County, on right bank 1,000 ft downstream from Los Padres National Forest boundary, 0.6 mile upstream from Poplin Creek, and 4.2 miles northwest of Oak View.

DRAINAGE AREA.--13.2 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 560 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 7.14 cfs (5,170 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,000 cfs Jan. 25 (gage height, 12.00 ft, from floodmarks), from rating curve extended as explained below; minimum daily, 0.15 cfs Oct. 1-3.
Period of record: Maximum discharge, 8,000 cfs Jan. 25, 1969 (gage height, 12.00 ft, from floodmarks), from rating curve extended above 2,100 cfs on basis of slope-area measurements at gage heights 9.10 and 12.00 ft; no flow at times in most years.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.27	.38	.48	36	85	14	6.2	3.9	2.4	1.9	1.4
2	.15	.27	.36	.48	33	75	14	6.1	3.9	2.4	1.9	1.4
3	.15	.29	.36	.48	31	66	14	6.0	3.9	2.4	1.9	1.4
4	.17	.28	.36	.48	28	57	14	6.0	3.9	2.4	1.9	1.4
5	.16	.28	.36	.48	26	51	25	6.0	3.9	2.4	1.9	1.4
6	.16	.27	.36	.48	450	45	20	5.8	3.7	2.4	1.8	1.4
7	.17	.26	.36	.45	150	40	14	5.8	3.7	2.4	1.8	1.4
8	.16	.26	.36	.45	60	36	13	5.8	3.7	2.4	1.8	1.4
9	.18	.26	.36	.45	45	33	12	5.8	3.7	2.4	1.8	1.4
10	.19	.26	.37	.45	38	30	11	5.8	3.6	2.4	1.8	1.4
11	.19	.26	.38	.45	33	27	11	5.8	3.6	2.4	1.7	1.3
12	.19	.27	.35	.45	28	25	11	5.8	3.6	2.4	1.7	1.3
13	.19	.28	.36	.67	24	24	10	5.8	3.5	2.3	1.7	1.3
14	.33	.28	.36	.85	22	23	10	5.7	3.4	2.2	1.7	1.3
15	.20	.44	.51	.56	100	22	10	5.5	3.4	2.2	1.7	1.3
16	.18	.33	.43	.56	50	21	9.7	5.3	3.2	2.2	1.6	1.3
17	.17	.33	.39	.56	26	21	9.4	5.2	3.2	2.2	1.6	1.3
18	.17	.32	.36	1.0	23	20	9.3	5.1	3.2	2.0	1.6	1.3
19	.18	.32	.38	524	21	20	9.0	4.9	3.2	2.0	1.6	1.3
20	.19	.32	.37	1,320	20	19	8.7	4.7	3.2	2.0	1.6	1.3
21	.19	.32	.39	788	20	18	8.4	4.6	3.1	2.0	1.5	1.2
22	.20	.32	.41	197	30	18	8.1	4.5	3.1	2.0	1.5	1.2
23	.22	.33	.42	81	200	17	7.8	4.4	3.1	2.0	1.5	1.2
24	.22	.33	.42	350	1,800	17	7.6	4.4	3.0	2.0	1.5	1.2
25	.22	.33	.64	2,500	2,200	16	7.4	4.3	3.0	2.0	1.5	1.2
26	.23	.36	.48	270	193	16	7.2	4.3	2.8	2.0	1.4	1.2
27	.24	.36	.45	360	125	16	7.0	4.2	2.8	2.0	1.4	1.2
28	.24	.36	.48	150	100	15	6.8	4.2	2.7	2.0	1.4	1.2
29	.25	.36	.45	90	-----	15	6.6	4.1	2.7	2.0	1.4	1.2
30	.26	.37	.48	55	-----	15	6.4	4.1	2.5	2.0	1.4	1.2
31	.27	-----	.48	41	-----	14	-----	4.0	-----	2.0	1.4	-----
TOTAL	6.17	9.29	12.62	6,735.78	5,912	917	322.4	160.2	100.2	67.9	50.9	39.0
MEAN	.20	.31	.41	217	211	29.6	10.7	5.17	3.34	2.19	1.64	1.30
MAX	.33	.44	.64	2,500	2,200	85	25	6.2	3.9	2.4	1.9	1.4
MIN	.15	.26	.35	.45	20	14	6.4	4.0	2.5	2.0	1.4	1.2
AC-FT	12	18	25	13,360	11,730	1,820	639	318	199	135	101	77

CAL YR 1968 TOTAL 482.14 MEAN 1.32 MAX 153 MIN .13 AC-FT 956
WTR YR 1969 TOTAL 14,333.46 MEAN 39.3 MAX 2,500 MIN .15 AC-FT 28,430

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1900	8.93	3,740	2-15			b180
1-25	0645	a12.00	8,000	2-24	2400	a10.2	6,010
2-6			b600				

NOTE.--No gage-height record Jan. 25 to May 29.

a From floodmarks.
b Estimated.

VENTURA RIVER BASIN

11-1178. SANTA ANA CREEK NEAR OAK VIEW, CALIF.

LOCATION.--Lat 34°25'25", long 119°20'25", in Santa Ana Grant, Ventura County, on downstream end of right abutment of bridge, 400 ft upstream from unnamed tributary, and 3.0 miles northwest of Oak View.

DRAINAGE AREA.--9.11 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 610 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 6.02 cfs (4,360 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,730 cfs Jan. 25 (gage height, 10.70 ft); no flow Oct. 1 to Dec. 26.

Period of record: Maximum discharge, 4,730 cfs Jan. 25, 1969 (gage height, 10.70 ft); no flow at times in each year.

Flood of Mar. 2, 1938, 3,780 cfs, result of slope-area measurement at site 2.0 miles downstream.

REMARKS.--Records fair. No regulation or diversion above station.

COOPERATION.--Six discharge measurements furnished by Ventura River Municipal Water District; one discharge measurement furnished by Ventura County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.20	33	71	10	3.8	2.1	1.4	.80	.30
2	0	0	0	.20	28	61	10	3.8	2.0	1.4	.80	.30
3	0	0	0	.20	24	53	12	3.8	1.8	1.4	.80	.30
4	0	0	0	.20	21	48	10	3.8	1.6	1.2	.70	.30
5	0	0	0	.20	101	43	23	3.8	1.6	1.2	.60	.30
6	0	0	0	.30	313	39	14	3.8	1.5	1.2	.60	.30
7	0	0	0	.30	103	33	10	3.8	1.4	1.2	.50	.20
8	0	0	0	.30	73	30	9.1	4.0	1.4	1.2	.50	.20
9	0	0	0	.40	52	27	8.3	4.3	1.2	1.2	.40	.20
10	0	0	0	.40	37	25	7.9	4.3	1.2	1.2	.40	.20
11	0	0	0	.40	31	23	7.5	4.3	1.4	1.2	.30	.20
12	0	0	0	.40	27	21	7.5	4.3	1.4	1.2	.30	.20
13	0	0	0	1.1	25	20	7.5	4.3	1.4	1.1	.30	.20
14	0	0	0	1.8	24	19	7.1	4.3	1.4	1.0	.30	.20
15	0	0	0	.40	71	18	6.7	4.0	1.4	1.0	.30	.20
16	0	0	0	.20	33	16	6.7	3.8	1.4	.90	.30	.20
17	0	0	0	.10	27	16	6.4	3.8	1.4	.90	.30	.20
18	0	0	0	1.1	27	16	6.4	3.8	1.5	.90	.30	.20
19	0	0	0	533	25	15	6.4	3.8	1.5	.90	.30	.20
20	0	0	0	430	24	14	6.4	3.8	1.5	.90	.30	.20
21	0	0	0	838	23	14	6.1	3.8	1.5	.90	.30	.20
22	0	0	0	227	18	12	6.1	3.3	1.5	.90	.30	.10
23	0	0	0	73	287	12	6.1	2.7	1.5	.90	.30	.10
24	0	0	0	333	1,290	12	5.2	2.7	1.5	.90	.30	.10
25	0	0	0	1,900	1,570	11	4.9	2.7	1.5	.90	.30	.10
26	0	0	0	218	180	10	4.6	2.7	1.5	.90	.30	.10
27	0	0	.30	258	87	10	4.3	2.5	1.4	.90	.30	.10
28	0	0	.40	107	90	10	4.3	2.5	1.4	.90	.30	.10
29	0	0	.10	67	-----	10	4.0	2.5	1.4	.90	.40	.10
30	0	0	.10	40	-----	10	4.0	2.3	1.4	.90	.40	.10
31	0	-----	.20	39	-----	10	-----	2.3	-----	.90	.40	-----
TOTAL	0	0	1.10	5,071.20	4,644	729	232.5	109.4	44.7	32.50	12.70	5.70
MEAN	0	0	.036	164	166	23.5	7.75	3.53	1.49	1.05	.41	.19
MAX	0	0	.40	1,900	1,570	71	23	4.3	2.1	1.4	.80	.30
MIN	0	0	0	.10	18	10	4.0	2.3	1.2	.90	.30	.10
AC-FT	0	0	2.2	10,060	9,210	1,450	461	217	89	64	25	11

CAL YR 1968 TOTAL 214.20 MEAN .59 MAX 63 MIN 0 AC-FT 425
WTR YR 1969 TOTAL 10,882.80 MEAN 29.8 MAX 1,900 MIN 0 AC-FT 21,590

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1900	8.40	2,890	2-15	1400	7.35	295
1-25	0800	10.70	4,730	2-24	2400	9.55	3,410
2- 6	0300	9.10	1,100				

NOTE.--No gage-height record July 30 to Sept. 21.

VENTURA RIVER BASIN

253

11-1185. VENTURA RIVER NEAR VENTURA, CALIF.

LOCATION (revised).--Lat 34°21'08", long 119°18'27", in southeast corner of Santa Ana Grant, Ventura County, on right bank 50 ft downstream from county road bridge at Foster Memorial Park, 0.2 mile downstream from Coyote Creek, and 5 miles north of Ventura. Prior to June 13, 1969, at site 450 ft downstream.

DRAINAGE AREA.--188 sq mi.

PERIOD OF RECORD.--September 1911 to January 1914, October 1929 to current year; combined records of river and diversion, October 1932 to current year.

GAGE.--Water-stage recorder on river; water-stage recorder and Parshall flume on diversion. Datum of gage is 205.23 ft above mean sea level (Ventura County Flood Control bench mark). See WSP 1315-B for history of changes prior to Nov. 2, 1949. Nov. 2, 1949, to June 12, 1969, at site 450 ft downstream at datum 4.00 ft lower.

AVERAGE DISCHARGE (River only).--42 years (1911-13, 1929-69), 59.6 cfs (43,180 acre-ft per year); median of yearly mean discharges, 24 cfs (17,400 acre-ft per year).

(Combined).--37 years, 69.6 cfs (50,430 acre-ft per year); median of yearly mean discharges, 27 cfs (19,600 acre-ft per year).

EXTREMES (River only).--Current year: Maximum discharge, 58,000 cfs Jan. 25 (gage height, 24.3 ft, from floodmarks), from rating curve as explained below; no flow Oct. 1 to Jan. 18.

Period of record: Maximum discharge, 58,000 cfs Jan. 25, 1969 (gage height, 24.3 ft, from floodmarks), from rating curve extended above 19,600 cfs on basis of contracted-opening measurement of maximum flow; no flow at times in many years.

(Combined).--Current year: Maximum discharge, 58,000 cfs Jan. 25; minimum daily, 3.4 cfs Oct. 5.

Period of record: Maximum discharge, 58,000 cfs Jan. 25, 1969; minimum daily, 0.10 cfs Sept. 3, 4, 13, 1961.

REMARKS.--Records poor prior to May 1 and good thereafter. Flow partly regulated since March 1948 by Matilija Reservoir (capacity, 3,800 acre-ft) and since October 1959 by Casitas Reservoir (capacity, 267,000 acre-ft). Water diverted since May 1951 through pipeline at dam (Matilija Reservoir) to Ojai Valley for irrigation. Water diverted to Casitas Reservoir on Coyote Creek since January 1959. Diversion by city of Ventura for municipal supply began prior to 1911. Average Discharge (river only) represents flow to ocean, regardless of upstream development. For records of combined discharge of river and Ventura City diversion, see following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	600	1,300	105	49	28	11	11	3.0
2	0	0	0	0	500	1,100	105	49	28	14	12	1.5
3	0	0	0	0	450	900	102	49	28	10	12	1.2
4	0	0	0	0	400	650	100	49	28	14	9.8	1.2
5	0	0	0	0	600	530	98	48	27	20	6.7	1.2
6	0	0	0	0	3,500	440	96	47	27	20	5.0	1.5
7	0	0	0	0	1,700	410	94	46	27	18	14	1.9
8	0	0	0	0	1,100	390	91	44	27	11	16	1.5
9	0	0	0	0	600	380	90	42	27	7.4	13	1.8
10	0	0	0	0	350	370	88	41	27	16	17	2.0
11	0	0	0	0	200	360	86	39	27	27	16	2.2
12	0	0	0	0	150	330	85	38	27	28	8.2	2.2
13	0	0	0	0	130	270	84	37	26	27	7.5	2.4
14	0	0	0	0	128	220	82	36	26	27	9.0	2.6
15	0	0	0	0	127	195	80	35	25	27	5.4	2.8
16	0	0	0	0	126	170	77	35	25	24	7.9	3.1
17	0	0	0	0	125	150	74	35	21	24	7.5	3.1
18	0	0	0	0	122	140	72	34	21	23	6.0	3.1
19	0	0	0	1,590	119	130	70	33	19	23	6.3	3.2
20	0	0	0	893	117	120	68	33	17	24	4.4	3.5
21	0	0	0	6,800	115	110	66	32	17	17	3.4	3.0
22	0	0	0	1,500	113	105	65	32	13	13	4.4	2.5
23	0	0	0	500	2,000	100	63	31	15	13	5.0	2.6
24	0	0	0	2,000	14,000	98	61	31	18	14	4.4	2.5
25	0	0	0	20,000	17,000	96	58	30	18	13	6.3	2.6
26	0	0	0	13,000	5,000	94	55	30	19	14	6.0	2.6
27	0	0	0	5,000	2,300	93	53	29	17	14	4.8	2.8
28	0	0	0	2,800	1,500	92	51	29	15	14	4.8	3.0
29	0	0	0	2,000	-----	95	50	29	13	13	4.8	3.0
30	0	0	0	1,300	-----	98	50	29	11	12	4.3	3.1
31	0	-----	0	900	-----	100	-----	29	-----	11	4.0	-----
TOTAL	0	0	0	58,283	53,172	9,636	2,319	1,150	664	543.4	246.9	72.7
MEAN	0	0	0	1,880	1,899	311	77.3	37.1	22.1	17.5	7.96	2.42
MAX	0	0	0	20,000	17,000	1,300	105	49	28	28	17	3.5
MIN	0	0	0	0	113	92	50	29	11	7.4	3.4	1.2
AC-FT	0	0	0	115,600	105,500	19,110	4,600	2,280	1,320	1,080	490	144

CAL YR 1968 TOTAL 2,044.80 MEAN 5.59 MAX 287 MIN 0 AC-FT 4,060
WTR YR 1969 TOTAL 126,087.00 MEAN 345 MAX 20,000 MIN 0 AC-FT 250,100

PEAK DISCHARGE (BASE, 500 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-21 0600 a21.18 16,600 2-6 0500 a10.54 7,280
1-25 0900 a24.3 58,000 2-25 0100 a21.2 40,000

NOTE.--No gage-height record Jan. 21 to Sept. 30.

a From floodmarks.

VENTURA RIVER BASIN

11-1185. VENTURA RIVER NEAR VENTURA, CALIF.--Continued

Combined discharge, in cubic feet per second, of Ventura River and Ventura City diversion near Ventura, Calif., water year October 1968 to September 1969

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	4.8	4.1	4.4	600	1,310	110	57	32	18	21	16
2	4.9	4.7	4.1	4.4	500	1,110	113	55	32	24	21	14
3	4.9	4.7	4.1	4.4	450	904	109	52	32	23	21	13
4	4.2	4.7	4.1	4.4	402	653	104	51	32	22	21	13
5	3.4	4.6	4.0	4.4	602	535	102	52	31	24	22	13
6	5.4	4.6	4.0	4.4	3,500	448	100	54	33	25	20	14
7	6.3	4.6	4.0	4.4	1,700	417	98	51	33	28	27	14
8	5.9	4.5	4.0	4.4	1,100	395	94	48	33	25	25	14
9	5.9	4.5	4.0	4.4	603	385	91	46	30	22	26	14
10	5.8	4.5	4.0	4.4	352	377	92	45	32	28	26	14
11	5.7	4.4	4.0	4.4	202	369	91	43	33	37	26	14
12	5.6	4.4	4.0	4.4	152	338	88	42	35	37	24	14
13	5.5	4.4	4.0	4.1	132	275	87	41	32	36	22	14
14	5.5	4.3	4.0	4.4	130	224	85	40	33	34	22	14
15	5.4	4.3	3.9	4.7	129	198	82	39	31	35	19	15
16	5.4	4.3	4.0	4.7	127	174	79	39	30	32	20	15
17	5.3	4.3	4.0	4.7	126	156	77	38	26	32	20	15
18	5.3	4.3	4.0	4.7	125	146	75	37	26	31	18	15
19	5.3	4.3	4.0	1,590	123	133	76	36	26	31	18	15
20	5.2	4.3	4.0	898	121	126	77	37	25	32	16	16
21	5.2	4.2	4.0	6,810	118	115	74	38	25	29	15	15
22	5.1	4.2	4.0	1,500	115	108	70	36	22	27	16	14
23	5.1	4.2	4.0	501	2,000	103	68	33	23	25	17	15
24	5.1	4.2	4.0	2,000	14,000	104	68	34	25	25	15	14
25	5.0	4.2	4.1	20,000	17,000	105	64	35	24	24	17	15
26	5.0	4.2	4.2	13,000	5,000	102	61	35	23	26	17	15
27	4.9	4.1	4.3	5,000	2,310	102	58	33	24	26	16	15
28	4.9	4.1	4.3	2,800	1,510	99	56	33	27	24	17	15
29	4.9	4.1	4.4	2,000	-----	99	56	33	25	22	18	15
30	4.9	4.1	4.4	1,300	-----	102	57	33	20	22	17	14
31	4.8	-----	4.4	900	-----	103	-----	33	-----	20	17	-----
TOTAL	160.7	131.1	126.4	58,379.1	53,229	9,815	2,462	1,279	855	846	617	433
MEAN	5.18	4.37	4.08	1,883	1,901	317	82.1	41.3	28.5	27.3	19.9	14.4
MAX	6.3	4.8	4.4	20,000	17,000	1,310	113	57	35	37	27	16
MIN	3.4	4.1	3.9	4.1	115	99	56	33	20	18	15	13
AC-FT	319	260	251	115,800	105,600	19,470	4,880	2,540	1,700	1,680	1,220	859
CAL YR 1968	TOTAL	4,933.0	MEAN	13.5	MAX	293	MIN	1.7	AC-FT	9,780		
WTR YR 1969	TOTAL	128,333.3	MEAN	352	MAX	20,000	MIN	3.4	AC-FT	254,500		

PEAK DISCHARGE (BASE, 500 CFS).--(Same as those listed on previous page).

CARPINTERIA CREEK BASIN

255

11-1195. CARPINTERIA CREEK NEAR CARPINTERIA, CALIF.

LOCATION.--Lat 34°24'04", long 119°29'08", in El Rincon Grant, Santa Barbara County, on left bank at upstream side of bridge on State Highway 150, 200 ft downstream from Gobernador Creek, and 1.8 miles northeast of Carpinteria.

DRAINAGE AREA.--13.1 sq mi.

PERIOD OF RECORD.--January 1941 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 130 ft (from topographic map). Prior to July 1, 1958, at datum 2.00 ft higher.

AVERAGE DISCHARGE.--28 years, 3.00 cfs (2,170 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,560 cfs Jan. 25 (gage height, 14.9 ft, from floodmark), from rating curve extended above 2,100 cfs on basis of slope-area measurement of maximum flow; no flow for most of year.

Period of record: Maximum discharge, 4,560 cfs Jan. 25, 1969 (gage height, 14.9 ft, from floodmark), from rating curve extended above 2,100 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

REMARKS.--Records poor. No regulation above station. Gobernador Land and Water Co. diverts from Gobernador Creek 1.8 miles above station. Small lake 0.8 mile southeast of station and outside the drainage area stores storm runoff and surplus water diverted by Gobernador Land and Water Co. from Gobernador Creek. At times, this lake is drained by pumping water back into Gobernador Creek 1,000 ft above station; 120 acre-ft returned to creek in 1969.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	40	100	14	5.7	3.6	1.8	.90	.60
2	0	0	0	0	25	50	20	5.6	3.6	1.6	.90	.60
3	0	0	0	0	20	52	15	5.5	3.5	1.4	.80	.60
4	0	0	0	0	19	50	13	5.4	3.5	1.4	.80	.60
5	0	0	0	0	70	46	30	5.3	3.4	1.4	.80	.60
6	0	0	0	0	270	42	15	5.2	3.4	1.4	.80	.60
7	0	0	0	0	180	38	12	5.1	3.3	1.4	.80	.60
8	0	0	0	0	100	35	11	5.0	3.3	1.4	.80	.60
9	0	0	0	0	50	32	10	5.0	3.2	1.4	.80	.60
10	0	0	0	0	35	30	9.0	4.7	3.2	1.4	.80	.50
11	0	0	0	0	25	28	8.5	4.4	3.2	1.4	.80	.50
12	0	0	0	0	22	26	8.2	4.1	3.1	1.3	.80	.50
13	0	0	0	0	21	25	8.0	3.8	3.1	1.3	.80	.50
14	0	0	0	0	20	24	7.6	3.7	3.1	1.2	.80	.50
15	0	0	0	0	19	22	7.4	3.7	3.0	1.2	.80	.60
16	0	0	0	0	18	21	7.2	3.8	3.0	1.2	.80	.60
17	0	0	0	0	18	20	6.9	3.8	3.0	1.1	.80	.60
18	0	0	0	.20	18	19	6.6	3.9	3.0	1.1	.80	.60
19	0	0	0	263	18	18	6.8	3.9	2.9	1.1	.70	.60
20	0	0	0	128	17	17	7.0	4.0	2.9	1.1	.70	.60
21	0	0	0	468	17	17	7.2	4.1	2.8	1.1	.70	.60
22	0	0	0	87	17	15	7.4	4.1	2.7	1.1	.70	.60
23	0	0	0	23	300	15	7.6	4.0	2.6	1.1	.70	.60
24	0	0	0	158	1,400	14	7.8	4.0	2.6	1.0	.70	.60
25	0	0	0	2,270	1,900	13	7.2	3.9	2.5	1.0	.70	.60
26	0	0	0	1,040	700	13	7.0	3.9	2.4	1.0	.70	.60
27	0	0	0	242	300	13	6.8	3.8	2.3	1.0	.70	.60
28	0	0	0	101	200	13	6.5	3.8	2.2	1.0	.70	.60
29	0	0	0	64	-----	13	6.2	3.8	2.1	.90	.60	.60
30	0	0	0	53	-----	13	6.0	3.7	2.0	.90	.60	.60
31	0	-----	0	61	-----	13	-----	3.7	-----	.90	.60	-----
TOTAL	0	0	0	4,958.20	5,839	847	292.9	134.4	88.5	37.60	23.40	17.50
MEAN	0	0	0	160	209	27.3	9.76	4.34	2.95	1.21	.75	.58
MAX	0	0	0	2,270	1,900	100	30	5.7	3.6	1.8	.90	.60
MIN	0	0	0	0	17	13	6.0	3.7	2.0	.90	.60	.50
AC-FT	0	0	0	9,830	11,580	1,680	581	267	176	75	46	35

CAL YR 1968 TOTAL 68.10 MEAN .19 MAX 38 MIN 0 AC-FT 135
WTR YR 1969 TOTAL 12,238.50 MEAN 33.5 MAX 2,270 MIN 0 AC-FT 24,270

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1800	8.00	1,700	2-6	unknown	unknown	b500
1-25	0900	a14.9	4,560	2-24	-	a5.39	3,600

NOTE.--No gage-height record Feb. 4 to Sept. 30.

a From floodmark.
b Estimated.

ATASCADERO CREEK BASIN

11-1200. ATASCADERO CREEK NEAR GOLETA, CALIF.

LOCATION.--Lat 34°25'28", long 119°48'40", in La Goleta Grant, Santa Barbara County, downstream side of center pier of county road bridge 400 ft downstream from Maria Ygnacio Creek, 1.3 miles upstream from mouth, and 1.3 miles southeast of Goleta.

DRAINAGE AREA.--18.8 sq mi.

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1947, published as Alascadero Creek near Goleta.

GAGE.--Water-stage recorder. Altitude of gage is 20 ft (from topographic map). Prior to Dec. 14, 1967, at site 275 ft downstream at same datum.

AVERAGE DISCHARGE.--28 years, 3.98 cfs (2,880 acre-ft per year); median of yearly mean discharges, 1.0 cfs (720 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,230 cfs Jan. 25 (gage height, 13.00 ft), from rating curve extended above 2,300 cfs; no flow for many days.

Period of record: Maximum discharge, 5,230 cfs Jan. 25, 1969 (gage height, 13.00 ft), from rating curve extended above 2,300 cfs; no flow for many days in each year.

REMARKS.--Records poor. No regulation above station. Small diversions for irrigation above station. At times, low flow results from return irrigation waste water. At other times, Lake Cachuma water is wasted to channel.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	0	0	0	15	46	4.5	1.9	.10	.07	.02	0
2	.16	0	0	0	13	31	15	1.9	.05	.07	.02	0
3	.01	0	0	0	10	28	14	1.9	.03	.08	.01	0
4	0	0	0	0	9.4	26	7.0	1.8	.03	.08	.02	0
5	0	0	0	0	33	24	149	1.7	.05	.03	.02	0
6	0	0	0	0	348	22	25	1.5	.08	.03	.02	0
7	.01	.04	0	0	37	20	12	1.4	.03	.05	.02	0
8	.02	.04	0	0	27	18	8.6	1.3	.03	.07	.02	0
9	.07	0	0	0	23	16	6.8	1.1	.03	.05	.02	.16
10	0	0	.18	0	22	15	6.0	1.0	.03	.02	.02	.14
11	0	0	1.3	0	22	14	5.2	1.0	.03	.02	.01	.12
12	0	0	.02	0	24	12	4.8	1.1	.05	.08	.02	.10
13	.06	0	0	15	20	11	4.5	.80	.03	.12	.01	0
14	13	0	0	11	18	11	4.1	.50	.03	.03	0	0
15	.70	5.4	9.0	0	70	9.7	3.9	.20	.03	.01	.01	0
16	.06	.16	6.8	0	20	8.9	3.7	.10	.03	.01	.05	.01
17	.01	0	.04	0	12	8.4	3.4	.10	.03	0	.01	.01
18	0	0	0	51	13	7.8	3.2	.10	.03	0	.01	.01
19	0	0	0	1,280	11	7.3	3.0	.10	.03	0	0	0
20	0	0	0	494	10	7.3	2.8	.10	.05	0	0	0
21	0	0	0	1,120	43	10	2.8	.10	.16	0	.01	0
22	0	0	0	100	15	7.0	2.8	.14	.08	0	0	0
23	0	0	0	28	707	6.6	2.5	.14	.07	0	0	.02
24	0	0	0	635	799	6.6	2.3	.16	.05	0	.01	.01
25	0	0	1.3	2,410	182	6.2	2.3	.14	.05	0	0	0
26	0	.01	2.3	612	49	6.0	2.2	.14	.03	0	0	0
27	0	.01	.01	150	27	5.4	2.1	.08	.05	0	0	0
28	.01	0	.02	90	113	5.0	2.1	.07	.07	0	0	0
29	.02	0	.02	60	-----	4.8	2.1	.05	.07	.04	0	0
30	.16	0	0	40	-----	4.8	1.9	.03	.05	.05	0	0
31	.04	-----	0	24	-----	4.5	-----	.05	-----	.03	0	-----
TOTAL	14.66	5.66	20.99	7,120	2,692.4	410.3	309.6	20.70	1.48	0.94	0.33	0.58
MEAN	.47	.19	.68	230	96.2	13.2	10.3	.67	.049	.030	.011	.019
MAX	13	5.4	9.0	2,410	799	46	149	1.9	.16	.12	.05	.16
MIN	0	0	0	0	9.4	4.5	1.9	.03	.03	0	0	0
AC-FT	29	11	42	14,120	5,340	814	614	41	2.9	1.9	.7	1.2

CAL YR 1968 TOTAL 394.41 MEAN 1.08 MAX 94 MIN 0 AC-FT 782
WTR YR 1969 TOTAL 10,597.64 MEAN 29.0 MAX 2,410 MIN 0 AC-FT 21,020

PEAK DISCHARGE (BASE, 70 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1900	12.80	4,730	2-23	1130	12.48	4,040
1-25	0230	13.00	5,230	2-28	1230	7.77	342
2- 6	0130	11.85	2,860	4- 5	1530	9.68	930
2-15	1200	8.28	335				

11-1205. SAN JOSE CREEK NEAR GOLETA, CALIF.

LOCATION.--Lat 34°27'33", long 119°48'29", in La Goleta Grant, Santa Barbara County, on left pier of Patterson Avenue Bridge, 1.1 miles downstream from unnamed tributary, and 1.7 miles northeast of Goleta.

DRAINAGE AREA.--5.51 sq mi.

PERIOD OF RECORD.--January 1941 to current year.

GAGE.--Water-stage recorder. Concrete low-water control since October 1962. Datum of gage is 95.61 ft above mean sea level (Santa Barbara County Road Department bench mark). Prior to Dec. 24, 1955, at datum 5.50 ft higher. Dec. 24, 1955, to Jan. 10, 1960, at datum 1.5 ft higher.

AVERAGE DISCHARGE.--28 years, 1.88 cfs (1,360 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,000 cfs Jan. 25 (gage height, 10.10 ft), from rating curve extended as explained below; minimum daily, 0.02 cfs Oct. 2.

Period of record: Maximum discharge, 2,000 cfs Jan. 25, 1969 (gage height, 10.10 ft), from rating curve extended above 400 cfs on basis of slope-area measurement at gage height 9.32 ft; maximum gage height, 12.74 ft, present datum, Jan. 21, 1943; no flow at times in each year.

REMARKS.--Records good. No regulation above station. Many small diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.16	.28	.37	7.0	32	2.1	1.7	1.5	.41	.22	.17
2	.02	.18	.28	.37	5.5	22	3.0	1.7	1.8	.40	.23	.26
3	.08	.23	.28	.37	5.0	18	6.1	1.7	1.8	.37	.30	.28
4	.08	.28	.35	.37	5.5	15	2.5	1.7	1.7	.37	.32	.29
5	.08	.25	.37	.37	6.0	13	50	1.7	1.7	.37	.24	.30
6	.08	.24	.37	.37	25	11	16	1.5	1.4	.39	.30	.34
7	.08	.27	.37	.37	12	10	7.9	1.5	1.3	.50	.36	.40
8	.08	.24	.37	.37	9.0	8.4	5.7	1.5	1.3	.52	.40	.42
9	.08	.26	.36	.37	8.0	8.0	5.0	1.4	1.3	.48	.40	.42
10	.08	.26	.33	.37	7.0	7.6	4.3	1.4	1.5	.46	.39	.36
11	.12	.27	.48	.37	6.4	7.3	3.8	1.3	1.7	.42	.39	.36
12	.19	.29	.41	.37	6.9	8.2	3.9	1.3	1.2	.48	.39	.39
13	.16	.30	.31	.84	5.5	7.8	3.7	1.4	1.2	.46	.38	.38
14	.75	.21	.28	1.6	4.8	6.9	3.3	1.4	1.4	.42	.39	.41
15	.28	.59	.80	.86	21	6.0	3.0	1.3	1.4	.43	.39	.50
16	.21	.35	.66	.91	12	5.8	2.7	1.4	1.4	.43	.41	.60
17	.21	.28	.42	.73	8.1	5.5	2.6	1.5	1.5	.42	.45	.50
18	.21	.28	.42	4.0	8.7	5.4	2.8	1.5	1.3	.41	.43	.32
19	.19	.28	.37	60	7.1	5.1	2.6	1.5	.90	.39	.41	.28
20	.19	.25	.37	40	6.1	4.9	2.6	1.5	.93	.36	.47	.28
21	.21	.16	.37	58	7.6	5.1	2.5	1.5	.90	.38	.40	.27
22	.21	.16	.37	25	12	4.5	2.4	1.6	.90	.36	.33	.27
23	.16	.16	.37	12	144	3.3	2.3	1.6	.90	.35	.27	.30
24	.13	.22	.37	88	179	3.3	2.3	1.5	.90	.34	.31	.26
25	.07	.31	.42	400	111	3.2	2.1	1.4	.90	.43	.29	.26
26	.05	.33	.37	200	41	2.8	2.0	1.2	.86	.47	.24	.31
27	.04	.32	.37	50	27	2.7	1.9	1.1	.69	.49	.26	.29
28	.04	.32	.37	30	54	2.6	1.9	1.2	.46	.48	.27	.30
29	.08	.31	.37	15	-----	2.2	1.9	1.0	.43	.34	.30	.40
30	.15	.28	.37	10	-----	2.1	1.9	1.0	.41	.25	.27	.33
31	.14	-----	.37	8.0	-----	2.1	-----	1.2	-----	.22	.25	-----
TOTAL	4.51	8.04	12.00	1,009.38	752.2	241.8	154.8	44.2	35.58	12.60	10.46	10.25
MEAN	.15	.27	.39	32.6	26.9	7.80	5.16	1.43	1.19	.41	.34	.34
MAX	.75	.59	.80	400	179	32	50	1.7	1.8	.52	.47	.60
MIN	.02	.16	.28	.37	4.8	2.1	1.9	1.0	.41	.22	.22	.17
AC-FT	9.0	16	24	2,000	1,490	480	307	88	71	25	21	20

CAL YR 1968 TOTAL 173.22 MEAN .47 MAX 25 MIN 0 AC-FT 344
WTR YR 1969 TOTAL 2,295.82 MEAN 6.29 MAX 400 MIN .02 AC-FT 4,550

PEAK DISCHARGE (BASE, 100 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-19 1100 3.82 269 2-24 2000 5.41 662
1-25 0200 10.10 2,000 4- 5 1545 4.03 318
2- 6 unknown unknown

NOTE.--No gage-height record Jan. 19-22, Jan. 25 to Feb. 10.

GAVIOTA CREEK BASIN

11-1205.5. GAVIOTA CREEK NEAR GAVIOTA, CALIF.

LOCATION.--Lat 34°29'16", long 120°13'34", in Nuestra Senora Del Refugio Grant, Santa Barbara County, on left bank 1.6 miles upstream from mouth, and 1.3 miles northwest of Gaviota.

DRAINAGE AREA.--18.8 sq mi.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 100 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 2,340 cfs Feb. 24 (gage height, 7.16 ft); minimum daily, 0.03 cfs Nov. 9.

Period of record: Maximum discharge, 4,000 cfs Jan. 24, 1967 (gage height, 8.40 ft), from rating curve extended above 1,300 cfs on basis of slope-area measurement of maximum flow; no flow July 10-12, Sept. 10, 24, 25, 1968.

REMARKS.--Records good. No regulation. Small pumping for domestic and resort use.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.07	.16	.20	17	83	7.8	5.2	3.2	1.4	.80	.81
2	.07	.07	.16	.25	13	60	13	5.2	3.1	1.4	.80	.73
3	.10	.57	.16	.20	10	50	12	5.2	3.2	1.3	.91	.74
4	.10	.16	.16	.25	8.6	43	8.4	5.8	3.4	1.3	.90	.75
5	.11	.10	.16	.25	26	38	72	5.1	3.3	1.4	.78	.79
6	.10	.07	.16	.35	77	35	27	4.9	3.2	1.6	.85	.75
7	.11	.05	.16	.42	24	32	17	4.9	3.3	1.5	.89	.79
8	.13	.04	.20	.42	17	29	13	4.7	3.4	1.5	.83	.78
9	.14	.03	.20	.42	14	27	12	4.6	3.5	1.5	.83	.76
10	.16	.04	.25	.49	12	25	11	4.5	3.7	1.4	.83	.73
11	.21	.05	.35	.49	11	22	11	4.5	3.4	1.4	.72	.74
12	.25	.05	.20	.49	14	21	10	4.6	3.5	1.3	.64	.77
13	1.5	.04	.16	3.1	9.8	22	9.5	4.1	3.4	1.3	.72	.83
14	3.4	.07	.42	2.4	8.4	18	8.8	3.9	3.5	1.3	.73	1.0
15	.25	2.0	1.2	.96	124	17	9.0	3.9	3.5	1.2	.71	1.1
16	.07	.42	1.1	.75	41	16	8.6	3.8	3.2	1.2	.73	1.1
17	.04	.25	.20	.75	25	15	8.3	3.8	3.3	1.2	.80	.96
18	.04	.25	.16	9.2	28	15	8.1	3.7	3.2	1.2	.83	.94
19	.05	.20	.16	143	36	13	7.7	3.6	3.0	1.1	.81	.90
20	.05	.20	.16	84	23	13	7.5	3.7	3.0	1.1	.75	.83
21	.05	.16	.16	140	37	16	7.4	3.7	2.9	1.0	.71	.82
22	.05	.16	.13	43	45	13	6.9	3.8	2.7	.98	.68	.85
23	.07	.16	.13	11	334	12	6.9	3.7	2.6	.93	.73	.85
24	.05	.16	.35	137	423	11	6.4	3.6	2.4	.89	.73	.86
25	.05	.16	.85	889	267	10	6.0	3.5	2.3	.93	.78	.85
26	.05	.16	1.4	250	139	9.8	5.9	3.2	2.3	1.0	.78	.85
27	.05	.20	.35	77	91	9.4	5.6	3.2	2.2	1.0	.79	.89
28	.07	.20	.30	60	160	9.1	5.4	3.1	1.9	.99	.82	.85
29	.20	.20	.25	45	-----	8.6	5.4	3.1	1.8	.95	.84	.81
30	.16	.20	.20	30	-----	8.4	5.4	3.0	1.7	.87	.87	.71
31	.07	-----	.20	22	-----	8.1	-----	3.2	-----	.82	.87	-----
TOTAL	7.80	6.49	10.20	1,952.39	2,034.8	709.4	343.0	126.8	89.1	36.96	24.46	25.14
MEAN	.25	.22	.33	63.0	72.7	22.9	11.4	4.09	2.97	1.19	.79	.84
MAX	3.4	2.0	1.4	889	423	83	72	5.8	3.7	1.6	.91	1.1
MIN	.04	.03	.13	.20	8.4	8.1	5.4	3.0	1.7	.82	.64	.71
AC-FT	15	13	20	3,870	4,040	1,410	680	252	177	73	49	50
CAL YR 1968	TOTAL	211.03	MEAN	.58	MAX	15	MIN	0	AC-FT	419		
WTR YR 1969	TOTAL	5,366.54	MEAN	14.7	MAX	889	MIN	.03	AC-FT	10,640		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0230	4.74	386	2-24	1830	7.16	2,340
1-25	0530	6.96	2,120	4- 5	1515	4.36	356
2- 6	0030	4.35	352				

NOTE.--No gage-height record Jan. 26 to Feb. 3.

JALAMA CREEK BASIN

259

11-1206. JALAMA CREEK NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°30'50", long 120°29'02", in San Julian Grant, Santa Barbara County, on downstream side of right bridge pier on Jalama Road, 0.6 mile downstream from Gasper Creek, 1.4 miles upstream from mouth, and 8.9 miles southwest of Lompoc.

DRAINAGE AREA.--20.5 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 80 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 1,210 cfs Jan. 25 (gage height, 7.40 ft); no flow for many days.

Period of record: Maximum discharge, 1,710 cfs Jan. 24, 1967 (revised) (gage height, 8.05 ft); no flow for many days in most years.

REMARKS.--Records good. No regulation or diversion above station. Pumping from wells for irrigation of about 400 acres.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.07	.24	6.8	58	2.9	2.3	1.5	.57	.24	.19
2	0	0	.06	.23	5.7	39	4.2	2.2	1.5	.62	.23	.14
3	0	.15	.06	.25	4.9	35	8.7	2.2	1.3	.64	.21	.09
4	0	.03	.08	.21	4.3	32	3.8	2.7	1.4	.62	.25	.08
5	0	0	.06	.21	9.1	30	69	2.3	1.4	.73	.22	.11
6	0	0	.07	.21	24	27	24	2.2	1.2	.92	.17	.09
7	0	0	.12	.21	9.3	24	11	2.2	1.1	.93	.24	.06
8	0	0	.15	.23	8.0	20	8.5	2.1	1.2	.97	.29	.06
9	0	0	.17	.26	7.5	17	7.1	2.0	1.2	.97	.22	.05
10	0	0	.18	.26	5.4	14	6.3	1.9	1.2	.84	.20	.04
11	0	0	.30	.26	4.8	11	5.7	1.7	1.1	.78	.20	.04
12	0	0	.26	.26	9.9	10	5.5	1.8	.97	.73	.19	.04
13	.02	0	.19	.52	5.9	10	5.1	1.7	.82	.66	.21	.04
14	.17	0	.32	1.4	4.7	8.8	4.6	1.6	.82	.58	.24	.05
15	0	.13	.56	.60	198	7.7	4.4	1.6	.82	.53	.20	.08
16	0	.06	.45	.40	54	7.3	4.1	1.6	.81	.52	.19	.10
17	0	.07	.26	.36	35	6.9	3.9	1.5	.76	.50	.19	.06
18	0	.08	.19	1.6	25	6.6	3.7	1.5	.88	.48	.25	.06
19	0	.07	.17	173	28	6.3	3.5	1.5	.81	.44	.25	.07
20	0	.07	.21	66	18	6.0	3.3	1.4	.74	.42	.23	.05
21	0	.06	.21	99	26	7.6	3.4	1.5	.72	.37	.18	.06
22	0	.01	.19	25	45	6.0	3.3	1.6	.66	.40	.14	.05
23	0	0	.17	10	162	5.3	3.7	1.6	.61	.37	.11	.05
24	0	0	.22	107	108	4.9	3.3	1.6	.51	.37	.10	.05
25	0	0	.43	395	104	4.6	3.0	1.5	.48	.35	.08	.05
26	0	.02	.68	90	55	4.3	2.8	1.2	.59	.37	.08	.04
27	0	.03	.48	50	40	4.0	2.6	1.2	.48	.37	.08	.04
28	0	.05	.31	27	152	3.9	2.5	1.1	.49	.36	.10	.04
29	0	.06	.30	17	-----	3.7	2.4	1.0	.45	.34	.12	.03
30	0	.06	.26	11	-----	3.6	2.4	1.1	.52	.29	.16	.02
31	0	-----	.26	8.6	-----	3.3	-----	1.2	-----	.25	.19	-----
TOTAL	0.19	0.95	7.44	1,086.31	1,160.3	427.8	218.7	52.6	27.04	17.29	5.76	1.93
MEAN	.006	.032	.24	35.0	41.4	13.8	7.29	1.70	.90	.56	.19	.064
MAX	.17	.15	.68	395	198	58	69	2.7	1.5	.97	.29	.19
MIN	0	0	.06	.21	4.3	3.3	2.4	1.0	.45	.25	.08	.02
AC-FT	.4	1.9	15	2,150	2,300	849	434	104	54	34	11	3.8

CAL YR 1968 TOTAL 96.48 MEAN .26 MAX 11 MIN 0 AC-FT 191
WTR YR 1969 TOTAL 3,006.31 MEAN 8.24 MAX 395 MIN 0 AC-FT 5,960

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1130	5.76	469	2-23	1000	6.70	850
1-25	0200	7.40	1,210	4- 5	1500	5.64	437
1-15	1045	6.69	845				

SANTA YNEZ RIVER BASIN

11-1210. SANTA YNEZ RIVER AT JAMESON LAKE, NEAR MONTECITO, CALIF.

LOCATION.--Lat 34°29'32", long 119°30'25", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.5 N., R.25 W., Santa Barbara County, on upstream face of Juncal Dam, 6.5 miles north of Carpinteria, and 8 miles northeast of Montecito.

DRAINAGE AREA.--13.8 sq mi (not including Alder Creek).

PERIOD OF RECORD.--December 1930 to current year. Prior to October 1938, published as "at Juncal Reservoir, near Montecito."

GAGE.--Water-stage recorder on lake; water-stage recorder and sharp-crested weir on outlet conduit. Datum of gage is 2,021.6 ft above mean sea level (U.S. Bureau of Reclamation bench mark), or 2,000 ft above arbitrary datum (called sea level) generally used for works in this vicinity.

AVERAGE DISCHARGE.--38 years (1931-69), 6.57 cfs (4,760 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

REMARKS.--Records of total inflow represent all water reaching Jameson Lake, including precipitation on the lake. Net discharge computed on basis of records of storage, diversion (draft) to the city of Montecito, spill and release to river, and evaporation. Records of net discharge exclude precipitation on lake surface. Monthly evaporation from lake surface computed on basis of evaporation from Colorado land pan using coefficient of 0.80. Area and capacity tables are based on surveys made in 1961. Lake capacity at spillway level (gage height, 223.82 ft) 6,596 acre-ft. Dead storage, 220 acre-ft, below lowest outlet at gage height 139.0 ft included in these records. There is no regulation or diversion above station. At times, flow of Alder Creek, which enters Santa Ynez River 2 miles downstream from Juncal Dam, is diverted at elevation 2,250 ft through a tunnel to Jameson Lake and is included in these records.

COOPERATION.--Reservoir-operation records and related data furnished by Montecito County Water District.

MONTHLY NET DISCHARGE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Month	Gage height (feet) ^a	Contents (acre-feet)	Change in Contents (acre-feet)	Draft (acre-feet)	Spill and Release (acre-feet)	Evapo-ration (acre-feet)	Total inflow (acre-feet)	Rain on reser-voir (acre-feet)	Net discharge (acre-feet)
Jameson Lake									
Sept. 30.....	2,208.86	4,658	-	-	-	-	-	-	-
Oct. 31.....	2,206.77	4,417	-241	277	0	16	52	12	40
Nov. 30.....	2,205.17	4,236	-181	205	0	10	34	9	25
Dec. 31.....	2,204.00	4,107	-129	164	0	7	42	21	21
CAL YR 1968.....	-	-	-1,734	2,466	0	351	1,083	138	945
Jan. 31.....	2,224.12	6,639	+2,532	101	10,740	5	13,378	528	12,850
Feb. 28.....	2,224.31	6,667	+28	0	12,960	6	12,994	315	12,679
Mar. 31.....	2,224.05	6,629	-38	24	4,650	b20	4,656	24	4,632
Apr. 30.....	2,223.97	6,617	-12	183	1,480	b34	1,685	37	1,648
May 31.....	2,223.93	6,611	-6	250	583	45	872	0	872
June 30.....	2,223.54	6,555	-56	315	11	43	313	0	313
July 31.....	2,222.12	6,353	-202	338	0	62	198	0	198
Aug. 31.....	2,220.10	6,074	-279	356	0	68	145	0	145
Sept. 30.....	2,218.10	5,806	-268	359	0	40	131	0	131
WTR YR 1968-69.....	-	-	+1,148	2,572	30,424	356	34,500	956	33,554

a Gage height at 1800 hours.

b Estimated.

NOTE.--For months when inflow to the lake was small and other quantities were large, discordant figures of net discharge may appear. This arises primarily from the difficulty of computing net discharge as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

11-1220. SANTA YNEZ RIVER ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA, CALIF.

LOCATION.--Lat 34°31'34", long 119°41'08", Santa Barbara County, in Los Padres National Forest, on upstream face of Gibraltar Dam, 7 miles north of Santa Barbara.

DRAINAGE AREA.--216 sq mi.

PERIOD OF RECORD.--April 1920 to current year. November 1903 to November 1918 (fragmentary) at river station at damsite; records not equivalent because records since April 1920 are based on operation of Gibraltar Reservoir, and since December 1930, Jameson Lake. Prior to October 1945, published as "near Santa Barbara."

GAGE.--Water-stage recorder on reservoir; water-stage recorder and sharp-crested weir on diversion. Spill and release measured at river gaging station below dam (see sta 11-1230). Datum of gage is at mean sea level. See WSP 1735 for history of changes prior to Oct. 1, 1955.

REMARKS.--Records of total inflow represent all water reaching Gibraltar Reservoir, including precipitation on reservoir. Total inflow computed on basis of records of storage, diversion (draft) to city of Santa Barbara, spill and release to river, and evaporation. Records of net inflow exclude precipitation on reservoir surface. Monthly evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using coefficient of 0.80. Area and capacity tables (revised) are based on surveys made in August 1969. Sediment deposition of 5,123 acre-ft has occurred since 1956, date of previous survey. Most sediment accumulated during January and February 1969. Reservoir capacity at spillway level (elevation, 1,399.82 ft), 9,654 acre-ft (unnotched 12-inch flashboards placed on spillway June 12). Silt level of reservoir at elevation 1,344.4 ft. Lowest outlet at elevation 1,333.86 ft. Flow regulated by Jameson Lake since December 1930 (see sta 11-1210).

COOPERATION.--Reservoir-operation records and related data furnished by city of Santa Barbara.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Month	Elevation (feet) ^a	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Spill and release (acre- feet)	Evapo- ration (acre- feet)	Total inflow (acre- feet)	Rain on reservoir (acre- feet)	Net inflow (acre- feet)
Gibraltar Reservoir									
Sept. 30.....	1,388.83	b10,578	-	-	-	-	-	-	-
Oct. 31.....	1,386.37	b 9,788	-790	726	0	89	25	32	-7
Nov. 30.....	1,384.01	b 9,081	-707	704	0	51	48	27	21
Dec. 31.....	1,382.04	b 8,530	-551	654	0	23	126	55	71
CAL YR 1968.....	-	-	-4,681	7,707	1,385	1,502	5,913	409	5,504
Jan. 31.....	1,399.97	11,009	+2,479	274	127,900	13	130,666	1,059	129,607
Feb. 28.....	1,400.28	9,793	-1,216	129	121,600	8	120,521	659	119,862
Mar. 31.....	1,400.30	9,799	+6	324	45,770	77	46,177	36	46,141
Apr. 30.....	1,400.16	9,756	-43	494	14,510	118	15,079	78	15,001
May 31.....	1,399.98	9,702	-54	582	4,830	168	5,526	0	5,526
June 30.....	1,400.35	9,814	+112	575	1,620	170	2,477	0	2,477
July 31.....	1,400.06	9,726	-88	674	367	193	1,146	0	1,146
Aug. 31.....	1,398.93	9,387	-339	527	4	164	356	0	356
Sept. 30.....	1,397.56	8,981	-406	479	5	98	176	0	176
WTR YR 1968-69.....	-	-	-1,597	6,142	316,606	1,172	322,323	1,946	320,377

a Elevation at 1800 hours.

b Contents from capacity table used October 1962 to December 1968.

NOTE.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of net inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

SANTA YNEZ RIVER BASIN

11-1230. SANTA YNEZ RIVER BELOW GIBALTAR DAM, NEAR SANTA BARBARA, CALIF.

LOCATION.--Lat 34°31'28", long 119°41'11", Santa Barbara County, Los Padres National Forest, on left bank 700 ft downstream from Gibraltar Dam, and 7 miles north of Santa Barbara.

DRAINAGE AREA.--216 sq mi.

PERIOD OF RECORD.--April 1920 to current year (monthly discharge only prior to October 1941).

GAGE.--Water-stage recorder; water-stage recorder and combination sharp-crested weir on "release to river" gage. Datum of gage is 1,227 ft above mean sea level. Water-stage recorder on Gibraltar Reservoir used as supplementary gage. Prior to Apr. 17, 1952, water-stage recorder on Gibraltar Reservoir used as principal gage. Apr. 17 to Oct. 15, 1952, nonrecording gage, and Oct. 16, 1952, to May 20, 1958, water-stage recorder at datum 5.00 ft higher.

EXTREMES.--Current year: Maximum discharge, 54,200 cfs Jan. 25 (gage height, 25.8 ft), from rating curve extended as explained below; no flow Oct. 1 to Jan. 18.

Period of record: Maximum discharge, 54,200 cfs Jan. 25, 1969 (gage height, 25.8 ft), from rating curve extended above 2,100 cfs on basis of computations of flow from gate openings and flow over dam at gage heights 17.5 and 25.8 ft; no flow at times in most years.

REMARKS.--Records poor. Flow regulated by Jameson Lake (see sta 11-1210) and Gibraltar Reservoir (see sta 11-1220). City of Santa Barbara diverted 6,142 acre-ft during year from Gibraltar Reservoir; Montecito County Water District diverted 2,572 acre-ft during year from Jameson Lake.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	878	2,200	260	122	50	15	.26	.01
2	0	0	0	0	730	1,900	250	125	55	15	.24	.01
3	0	0	0	0	600	1,700	300	128	50	12	.18	.01
4	0	0	0	0	500	1,500	260	128	45	9.6	.17	.01
5	0	0	0	0	660	1,400	650	126	40	8.8	.11	.01
6	0	0	0	0	3,500	1,300	780	120	45	9.8	.08	.01
7	0	0	0	0	2,500	1,200	510	116	45	9.3	.07	.01
8	0	0	0	0	1,500	1,100	400	108	45	11	.06	.02
9	0	0	0	0	1,200	1,050	280	105	44	12	.06	.06
10	0	0	0	0	1,100	1,000	260	100	44	10	.06	.03
11	0	0	0	0	1,000	300	240	95	44	8.6	.06	.29
12	0	0	0	0	900	100	230	90	15	5.8	.06	.33
13	0	0	0	0	750	350	220	85	5.0	6.4	.06	.16
14	0	0	0	0	660	750	205	82	5.0	7.0	.06	.12
15	0	0	0	0	900	680	198	77	5.0	6.5	.06	.12
16	0	0	0	0	950	620	190	71	10	6.0	.06	.12
17	0	0	0	0	780	580	185	66	25	5.5	.06	.12
18	0	0	0	0	750	530	180	62	24	5.0	.06	.12
19	0	0	0	3.9	720	495	173	58	22	5.0	.06	.12
20	0	0	0	4.5	680	460	167	56	21	4.5	.05	.12
21	0	0	0	7,750	640	440	160	54	20	4.5	.05	.14
22	0	0	0	2,030	700	420	154	52	19	3.6	.04	.14
23	0	0	0	865	2,500	400	150	50	18	.88	.04	.12
24	0	0	0	2,050	13,000	380	145	48	18	.54	.04	.10
25	0	0	0	26,600	12,000	360	140	47	18	.50	.03	.08
26	0	0	0	8,800	5,000	340	135	46	18	.47	.03	.06
27	0	0	0	6,680	3,500	330	130	45	18	.44	.03	.05
28	0	0	0	3,640	2,700	315	125	43	17	.41	.03	.04
29	0	0	0	2,700	-----	305	118	42	16	.39	.03	.02
30	0	0	0	1,970	-----	290	120	40	18	.33	.02	.01
31	0	-----	0	1,280	-----	280	-----	47	-----	.28	.01	-----
TOTAL	0	0	0	64,373.4	61,298	23,075	7,315	2,434	819.0	185.14	2.23	2.56
MEAN	0	0	0	2,077	2,189	744	244	78.5	27.3	5.97	.072	.085
MAX	0	0	0	26,600	13,000	2,200	780	128	55	15	.26	.33
MIN	0	0	0	0	500	100	118	40	5.0	.28	.01	.01
AC-FT	0	0	0	127,700	121,600	45,770	14,510	4,830	1,620	367	4.4	5.1
CAL YR 1968	TOTAL	697.94	MEAN	1.91	MAX	55	MIN	0	AC-FT	1,380		
WTR YR 1969	TOTAL	159,504.33	MEAN	437	MAX	26,600	MIN	0	AC-FT	316,400		

NOTE.--No gage-height record Jan. 26 to June 25.

11-1235. SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CALIF.

LOCATION.--Lat 34°32'37", long 119°51'50", in San Marcos Grant, Santa Barbara County, on left bank 0.3 mile downstream from Los Laureles Canyon Creek, and 13.3 miles east of Santa Ynez.

DRAINAGE AREA.--277 sq mi.

PERIOD OF RECORD.--April 1947 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 787.8 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 67,500 cfs Jan. 25 (gage height, 18.88 ft), from rating curve extended as explained below; no flow Oct. 1 to Jan. 18.

Period of record: Maximum discharge, 67,500 cfs Jan. 25, 1969 (gage height, 18.88 ft), from rating curve extended above 11,600 cfs on basis of maximum flow for station below Gibraltar Dam plus tributary inflow; no flow for several months in each year.

REMARKS.--Records good except those above 10,000 cfs, which are poor. Flow regulated by Jameson Lake and Gibraltar Reservoir (see sta 11-1210, 11-1220). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Low flow affected by intermittent pumping for irrigation from infiltration gallery in riverbed at station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	910	2,730	310	141	59	24	7.6	1.6
2	0	0	0	0	810	2,220	269	145	60	24	7.0	.70
3	0	0	0	0	746	1,970	339	145	69	24	6.6	1.1
4	0	0	0	0	600	1,720	330	148	64	22	6.3	1.4
5	0	0	0	0	728	1,510	600	142	60	22	5.8	2.2
6	0	0	0	0	5,840	1,440	861	138	51	20	5.8	2.2
7	0	0	0	0	2,890	1,350	562	136	57	20	5.6	2.2
8	0	0	0	0	1,810	1,260	450	130	57	19	5.6	2.3
9	0	0	0	0	1,470	1,220	400	123	55	18	5.4	2.3
10	0	0	0	0	1,270	1,190	350	115	55	18	5.2	2.3
11	0	0	0	0	1,220	1,100	306	119	55	18	5.0	2.2
12	0	0	0	0	1,110	819	302	115	48	18	4.6	2.2
13	0	0	0	0	920	284	283	111	40	16	4.2	2.2
14	0	0	0	0	791	803	258	107	31	15	3.4	2.2
15	0	0	0	0	1,060	761	252	103	29	14	3.0	2.1
16	0	0	0	0	1,080	705	237	101	28	14	3.0	2.3
17	0	0	0	0	850	684	204	97	31	14	3.8	2.4
18	0	0	0	0	840	677	222	95	34	12	4.4	2.3
19	0	0	0	1,050	800	577	201	90	44	12	4.6	1.8
20	0	0	0	877	755	532	192	86	44	11	3.6	1.7
21	0	0	0	11,800	742	582	179	82	42	11	2.4	1.7
22	0	0	0	3,210	764	546	177	79	39	10	.90	1.8
23	0	0	0	1,300	3,730	486	178	74	37	9.8	1.0	1.5
24	0	0	0	2,580	13,800	445	175	75	35	9.8	1.5	1.2
25	0	0	0	33,700	16,500	400	158	74	33	9.4	1.3	1.3
26	0	0	0	15,000	5,780	385	162	72	31	8.7	3.8	1.1
27	0	0	0	7,000	3,830	365	157	74	30	8.7	3.8	1.1
28	0	0	0	3,600	3,460	350	150	72	28	8.7	4.0	2.0
29	0	0	0	2,500	-----	330	123	66	27	8.7	4.2	2.0
30	0	0	0	1,600	-----	318	136	54	25	8.4	2.6	2.0
31	0	-----	0	1,200	-----	322	-----	59	-----	7.8	2.4	-----
TOTAL	0	0	0	85,417	75,106	28,081	8,523	3,168	1,298	456.0	128.40	55.40
MEAN	0	0	0	2,755	2,682	906	284	102	43.3	14.7	4.14	1.85
MAX	0	0	0	33,700	16,500	2,730	861	148	69	24	7.6	2.4
MIN	0	0	0	0	600	284	123	54	25	7.8	.90	.70
AC-FT	0	0	0	169,400	149,000	55,700	16,910	6,280	2,570	904	255	110

CAL YR 1968 TOTAL 1,229.50 MEAN 3.36 MAX 70 MIN 0 AC-FT 2,440
WTR YR 1969 TOTAL 202,232.80 MEAN 554 MAX 33,700 MIN 0 AC-FT 401,100

NOTE.--No gage-height record Jan. 26-31.

SANTA YNEZ RIVER BASIN

11-1245. SANTA CRUZ CREEK NEAR SANTA YNEZ, CALIF.

LOCATION.--Lat 34°35'48", long 119°54'28", in San Marcos Grant, Santa Barbara County, on right bank 0.6 mile downstream from Pine Canyon, and 9.9 miles east of Santa Ynez.

DRAINAGE AREA.--73.9 sq mi.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 783.38 ft (revised) above mean sea level. See WSP 1735 for history of changes prior to Sept. 27, 1952. Sept. 27, 1952, to June 24, 1969, at datum 3.25 ft higher.

AVERAGE DISCHARGE.--28 years, 17.7 cfs (12,820 acre-ft per year); median of yearly mean discharges, 6.4 cfs (4,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,050 cfs Feb. 24 (gage height, 14.45 ft, from floodmark, present datum), from rating curve extended as explained below; no flow Oct. 1 to Jan. 18.

Period of record: Maximum discharge, 7,050 cfs Feb. 24, 1969 (gage height, 14.45 ft, from floodmark, present datum), from rating curve extended above 2,500 cfs on basis of slope-area measurement at gage height 14.16 ft; no flow at times since 1953.

REMARKS.--Records good except those for Feb. 15 to June 24, which are poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	235	1,000	100	46	24	16	5.8	3.0
2	0	0	0	0	185	700	97	45	24	16	5.3	2.9
3	0	0	0	0	142	570	120	45	23	16	4.9	2.9
4	0	0	0	0	118	450	102	44	23	15	5.1	2.8
5	0	0	0	0	267	360	500	43	22	15	4.5	2.8
6	0	0	0	0	1,410	310	250	42	22	14	4.5	2.7
7	0	0	0	0	573	275	108	41	22	14	4.4	2.6
8	0	0	0	0	429	240	93	40	22	13	4.1	2.7
9	0	0	0	0	332	210	87	40	21	13	4.3	2.6
10	0	0	0	0	284	230	83	39	21	12	4.3	2.4
11	0	0	0	0	250	213	80	38	21	12	4.4	2.4
12	0	0	0	0	240	202	77	38	20	12	4.2	2.4
13	0	0	0	.1	185	192	74	37	20	11	4.0	2.5
14	0	0	0	2.6	162	182	72	36	20	10	3.9	2.6
15	0	0	0	3.3	800	175	70	35	20	9.5	4.1	2.9
16	0	0	0	2.1	400	168	68	34	20	9.0	4.0	3.4
17	0	0	0	1.7	310	159	66	34	19	8.9	4.0	3.6
18	0	0	0	2.1	270	150	65	33	19	8.2	3.8	3.6
19	0	0	0	694	240	145	63	32	19	7.9	3.7	3.5
20	0	0	0	454	210	140	60	32	19	8.1	3.9	3.5
21	0	0	0	2,280	250	162	58	31	19	7.7	3.6	3.9
22	0	0	0	335	300	154	56	31	18	7.3	3.2	4.0
23	0	0	0	84	900	147	55	30	18	6.9	3.2	3.6
24	0	0	0	742	5,000	139	54	30	18	7.5	3.3	3.1
25	0	0	0	4,510	3,900	134	53	29	18	7.5	3.2	2.8
26	0	0	.10	3,360	1,500	128	52	28	17	7.3	3.1	2.5
27	0	0	.47	1,230	600	121	51	27	17	7.5	3.2	2.5
28	0	0	.06	791	1,300	118	50	27	17	7.2	3.2	2.4
29	0	0	.16	578	-----	114	48	26	17	6.9	3.1	2.4
30	0	0	0	431	-----	109	47	26	16	6.5	3.1	2.4
31	0	-----	0	322	-----	104	-----	25	-----	6.4	3.1	-----
TOTAL	0	0	0.79	15,822.9	20,792	7,501	2,759	1,084	596	319.3	122.5	87.4
MEAN	0	0	.026	510	743	242	92.0	35.0	19.9	10.3	3.95	2.91
MAX	0	0	.47	4,510	5,000	1,000	500	46	24	16	5.8	4.0
MIN	0	0	0	0	118	104	47	25	16	6.4	3.1	2.4
AC-FT	0	0	1.6	31,380	41,240	14,880	5,470	2,150	1,180	633	243	173

CAL YR 1968 TOTAL 1,467.79 MEAN 4.01 MAX 275 MIN 0 AC-FT 2,910
WTR YR 1969 TOTAL 49,084.89 MEAN 134 MAX 5,000 MIN 0 AC-FT 97,360

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0400	12.60	4,620	2-6	0300	11.15	2,850
1-25	0930	14.16	6,620	2-24	2400	14.45	7,050

NOTE.--No gage-height record Feb. 15 to June 24.

a From floodmark.

NOTE.--All gage heights at present datum.

SANTA YNEZ RIVER BASIN

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11-1255. LAKE CACHUMA NEAR SANTA YNEZ, CALIF.

LOCATION.--Lat 34°34'57", long 119°58'47", in Lomas de la Purification Grant, Santa Barbara County, at Cachuma Dam on Santa Ynez River, on upstream face near left end of dam, 6.1 miles east of Santa Ynez.

DRAINAGE AREA.--417 sq mi.

PERIOD OF RECORD.--November 1952 to current year. Prior to October 1960, published as Cachuma Reservoir near Santa Ynez.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level, (Bureau of Reclamation bench mark). Prior to Oct. 1, 1965, nonrecording gage.

EXTREMES.--Current year: Maximum contents, 221,100 acre-ft Feb. 24 (elevation, 755.11 ft); minimum, 155,700 acre-ft Jan. 17 (elevation, 732.59 ft).

Period of record: Maximum contents, 221,100 acre-ft Feb. 24, 1969 (elevation, 755.11 ft); minimum since initial filling in April 1958, 117,900 acre-ft Nov. 13, 1965 (elevation, 716.63 ft).

REMARKS.--Reservoir is formed by earthfill dam. Storage began November 1952. Capacity table is based on surveys made in January 1953. Dead storage below outlet gate to river (elevation, 600 ft), 3,114 acre-ft, included in contents. Capacity below sill of inlet to Tecolote Tunnel (elevation, 660 ft), 32,514 acre-ft; below spillway level (elevation, 720 ft), 125,292 acre-ft; below top of 4 radial gates (elevation, 750 ft), 204,874 acre-ft. Water is released from outlet to Santa Ynez River to satisfy downstream water rights. Water diverted to Tecolote Tunnel for use by city of Santa Barbara and nearby communities, to Santa Ynez River Water Conservation District, and to Cachuma Recreation Area.

COOPERATION.--Reservoir elevations and diversion figures furnished by Bureau of Reclamation.

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)	Total Diversions (acre-feet)
Sept. 30.....	734.57	160,900	-	-
Oct. 31.....	733.76	158,700	-2,200	1,340
Nov. 30.....	733.19	157,300	-1,400	635
Dec. 31.....	732.75	156,100	-1,200	603
CAL YR 1968.....	-	-	-30,991	21,430
Jan. 31.....	750.18	205,400	+49,300	476
Feb. 28.....	748.31	199,700	-5,700	562
Mar. 31.....	747.39	196,900	-2,800	570
Apr. 30.....	749.94	204,700	+7,800	703
May 31.....	750.20	205,500	+800	1,550
June 30.....	749.98	204,800	-700	2,260
July 31.....	748.22	199,400	-5,400	3,310
Aug. 31.....	746.37	193,900	-5,500	3,430
Sept. 30.....	745.12	190,200	-3,700	2,420
WTR YR 1968-69.....	-	-	+29,300	17,860

^a Elevation at 2400 hours.

SANTA YNEZ RIVER BASIN

11-1260. SANTA YNEZ RIVER NEAR SANTA YNEZ, CALIF.

LOCATION.--Lat 34°35'30", long 119°59'45", on boundary between Canada de los Pinos and Lomas de la Purification Grants, Santa Barbara County, on right bank 1.1 miles downstream from Cachuma Dam, and 5 miles southeast of Santa Ynez.

DRAINAGE AREA.--422 sq mi.

PERIOD OF RECORD.--December 1928 to September 1931, October 1932 to current year.

GAGE.--Water-stage recorder. Datum of gage is 552.9 ft above mean sea level. Prior to Oct. 1, 1955, at site 2.1 miles downstream at different datum.

EXTREMES.--Current year: Maximum discharge, 79,000 cfs Jan. 25 (gage height, 20.60 ft, from floodmark), on basis of computation of maximum flow over dam; no flow for many days.

Period of record: Maximum discharge, 79,000 cfs Jan. 25, 1969 (gage height, 20.60 ft, from floodmark), on basis of computation of maximum flow over dam; no flow at times in some years.

REMARKS.--Records good. Flow regulated by Jameson Lake since December 1930, Gibraltar Reservoir, and Lake Cachuma since November 1952 (see sta 11-1210, 11-1220, 11-1255). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and to the Santa Ynez valley for municipal supply. Some water pumped from wells along river banks for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	1.6	0	1,200	5,540	31	8.0	28	31	16	3.1
2	1.7	0	1.6	0	1,420	5,520	61	21	27	34	16	2.0
3	2.4	1.6	.74	0	1,140	4,460	37	25	26	52	16	3.0
4	2.7	2.2	.50	0	1,080	2,510	10	24	26	63	20	3.0
5	2.9	.41	.44	0	1,080	334	153	185	26	63	26	3.0
6	3.1	.30	.41	0	8,330	21	942	180	26	50	27	3.0
7	2.8	.30	.37	0	3,460	468	818	174	26	47	27	3.0
8	.40	.25	.33	0	2,190	1,600	896	174	26	45	27	5.0
9	0	.22	.22	0	2,000	1,700	895	174	26	44	27	7.4
10	0	.19	.13	0	1,820	1,510	894	174	26	43	27	7.4
11	0	.16	.15	0	1,590	21	975	174	26	41	24	7.4
12	0	.13	.14	0	1,420	21	1,050	123	26	40	22	7.4
13	0	.09	.12	0	1,080	21	875	123	26	39	22	7.4
14	0	.06	.08	0	1,020	167	25	123	26	38	22	7.4
15	0	.05	.05	0	1,550	947	20	123	26	37	22	3.2
16	0	0	.03	0	1,600	947	19	123	26	36	22	1.3
17	0	0	0	0	1,370	910	18	106	10	36	22	.62
18	0	0	0	0	1,170	1,010	17	79	8.0	36	22	.42
19	0	0	0	0	1,180	1,700	16	75	6.0	36	20	.34
20	0	0	0	0	953	1,700	15	75	5.0	36	6.0	.27
21	0	0	0	0	1,120	1,700	14	75	4.5	36	1.0	.21
22	0	0	0	0	1,330	1,700	14	75	4.3	36	1.0	.19
23	0	0	0	0	4,040	1,700	13	75	4.2	36	1.0	.17
24	0	0	0	0	15,800	1,700	12	61	4.2	35	1.0	.13
25	0	0	0	38,900	31,100	1,700	11	43	4.1	35	2.5	.09
26	0	.27	0	20,900	8,000	1,700	10	43	4.0	20	3.1	.02
27	0	.86	0	7,630	7,600	299	10	43	4.0	10	3.1	0
28	0	1.1	0	3,620	5,540	21	9.9	43	29	9.0	3.1	0
29	0	1.3	0	2,880	-----	21	9.5	40	30	15	3.1	0
30	0	1.5	0	1,840	-----	21	8.5	35	30	16	3.1	0
31	0	-----	0	1,670	-----	21	-----	30	-----	16	3.1	-----
TOTAL	16.00	10.99	6.91	77,440	111,183	41,690	7,878.9	2,826.0	566.3	1,111.0	458.1	76.46
MEAN	.52	.37	.22	2,498	3,971	1,345	263	91.2	18.9	35.8	14.8	2.55
MAX	3.1	2.2	1.6	38,900	31,100	5,540	1,050	185	30	63	27	7.4
MIN	0	0	0	0	953	21	8.5	8.0	4.0	9.0	1.0	0
AC-FT	32	22	14	153,600	220,500	82,690	15,630	5,610	1,120	2,200	909	152

CAL YR 1968 TOTAL 3,071.81 MEAN 8.39 MAX 92 MIN 0 AC-FT 6,090
WTR YR 1969 TOTAL 243,263.66 MEAN 666 MAX 38,900 MIN 0 AC-FT 482,500

NOTE.--No gage-height record Jan. 3 to Sept. 15.

SANTA YNEZ RIVER BASIN

267

11-1265. SANTA AGUEDA CREEK NEAR SANTA YNEZ, CALIF.

LOCATION.--Lat 34°35'42", long 120°01'43", in Canada de los Pinos Grant, Santa Barbara County, on left downstream wingwall of highway bridge, 0.5 mile (revised) upstream from mouth, and 3.5 miles southeast of Santa Ynez.

DRAINAGE AREA.--55.8 sq mi.

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for January 1941 and yearly estimate for water year 1941 (incomplete) published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 520 ft (from topographic map). Prior to Oct. 1, 1955, at datum 1.00 ft higher.

AVERAGE DISCHARGE.--29 years, 3.93 cfs (2,850 acre-ft per year); median of yearly mean discharges, 0.7 cfs (510 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,300 cfs Feb. 24 (gage height, 6.65 ft), from rating curve extended above 2,300 cfs; no flow Oct. 1 to Jan. 18, July 25 to Sept. 30.

Period of record: Maximum discharge, 7,300 cfs Feb. 24, 1969 (gage height, 6.65 ft), from rating curve extended above 2,300 cfs; no flow at times in most years.

REMARKS.--Records fair. Flow partly regulated by several detention dams. Diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	13	90	11	2.8	1.8	.42	0	0
2	0	0	0	0	13	68	15	2.7	1.8	.42	0	0
3	0	0	0	0	12	60	17	2.5	1.8	.42	0	0
4	0	0	0	0	12	58	12	2.3	1.9	.42	0	0
5	0	0	0	0	26	55	26	2.0	1.9	.46	0	0
6	0	0	0	0	292	51	17	1.9	1.8	.46	0	0
7	0	0	0	0	58	43	9.7	1.9	1.8	.42	0	0
8	0	0	0	0	25	35	8.2	1.8	1.7	.42	0	0
9	0	0	0	0	14	32	7.2	1.9	1.6	.42	0	0
10	0	0	0	0	12	36	6.5	2.0	1.5	.42	0	0
11	0	0	0	0	10	20	5.6	2.0	1.2	.38	0	0
12	0	0	0	0	13	16	4.9	2.0	1.3	.38	0	0
13	0	0	0	0	11	16	4.2	2.1	1.2	.38	0	0
14	0	0	0	0	10	15	4.0	1.6	1.1	.34	0	0
15	0	0	0	0	21	12	3.8	2.1	1.0	.34	0	0
16	0	0	0	0	9.7	11	3.4	2.5	1.0	.28	0	0
17	0	0	0	0	7.5	10	2.8	2.5	.89	.22	0	0
18	0	0	0	0	22	9.7	3.0	2.5	.82	.16	0	0
19	0	0	0	148	37	9.3	3.0	2.5	.82	.12	0	0
20	0	0	0	84	18	9.3	2.7	2.5	.82	.10	0	0
21	0	0	0	726	36	14	2.1	2.7	.82	.08	0	0
22	0	0	0	155	52	12	2.7	2.7	.76	.04	0	0
23	0	0	0	8.6	321	10	3.6	2.5	.70	.02	0	0
24	0	0	0	255	1,760	10	3.6	2.5	.65	.01	0	0
25	0	0	0	1,760	505	9.7	3.4	2.3	.65	0	0	0
26	0	0	0	1,100	193	9.7	3.2	2.2	.55	0	0	0
27	0	0	0	88	134	10	3.0	2.1	.46	0	0	0
28	0	0	0	72	198	10	2.8	2.1	.46	0	0	0
29	0	0	0	35	-----	10	2.8	2.0	.46	0	0	0
30	0	0	0	20	-----	10	2.8	1.9	.42	0	0	0
31	0	-----	0	13	-----	10	-----	1.9	-----	0	0	-----
TOTAL	0	0	0	4,464.6	3,835.2	771.7	197.0	69.0	33.68	7.13	0	0
MEAN	0	0	0	144	137	24.9	6.57	2.23	1.12	.23	0	0
MAX	0	0	0	1,760	1,760	90	26	2.8	1.9	.46	0	0
MIN	0	0	0	0	7.5	9.3	2.1	1.6	.42	0	0	0
AC-FT	0	0	0	8,860	7,610	1,530	391	137	67	14	0	0

CAL YR 1968 TOTAL 17.10 MEAN .047 MAX 14 MIN 0 AC-FT 34
WTR YR 1969 TOTAL 9,378.31 MEAN 25.7 MAX 1,760 MIN 0 AC-FT 18,600

PEAK DISCHARGE (BASE, 50 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0600	6.56	3,900	2-24	1930	6.65	7,300
1-26	1000	5.74	5,630	2-28	1530	3.16	454
2- 6	0200	3.28	508	4- 5	1730	2.78	71
2-15	1900	2.67	109				

SANTA YNEZ RIVER BASIN

11-1284. ALISAL CREEK NEAR SOLVANG, CALIF.

LOCATION (revised).--Lat 34°34'52", long 120°08'41", in Nojoqui Grant, Santa Barbara County, on right bank at foot-bridge, 0.3 mile upstream from mouth, and 1.0 mile southwest of Solvang.

DRAINAGE AREA.--12.2 sq mi.

PERIOD OF RECORD.--October 1954 to September 1955, October 1955 to September 1956 (monthly discharge only), October 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 378.73 ft above mean sea level. Prior to Dec. 25, 1955, at site 50 ft upstream at different datum (destroyed by flood). Oct. 1, 1956, to Jan. 23, 1961, at datum 1.0 ft higher.

AVERAGE DISCHARGE.--15 years, 6.95 cfs (5,040 acre-ft per year); median of yearly mean discharges, 2.2 cfs (1,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,960 cfs Jan. 25 (gage height, 8.50 ft), from rating curve extended above 1,840 cfs on basis of slope-conveyance measurement of maximum flow; no flow Oct. 1 to Jan. 18, July 15 to Sept. 30.

Period of record: Maximum discharge, 4,960 cfs Jan. 25, 1969 (gage height, 8.50 ft), from rating curve extended above 1,840 cfs on basis of slope-conveyance measurement of maximum flow; no flow for several months in each year.

REMARKS.--Records fair. No regulation or diversion above station. At times, waste irrigation water pumped from Santa Ynez River causes minor flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	39	120	8.4	4.8	2.0	.55	0	0
2	0	0	0	0	34	83	9.7	4.6	1.9	.55	0	0
3	0	0	0	0	31	64	11	4.5	1.9	.55	0	0
4	0	0	0	0	30	52	8.8	4.4	1.9	.55	0	0
5	0	0	0	0	190	43	201	4.2	1.9	.55	0	0
6	0	0	0	0	277	38	47	4.0	1.9	.55	0	0
7	0	0	0	0	71	32	28	3.8	1.9	.45	0	0
8	0	0	0	0	51	29	22	3.6	1.9	.35	0	0
9	0	0	0	0	40	26	20	3.6	1.8	.35	0	0
10	0	0	0	0	31	25	17	3.5	1.8	.26	0	0
11	0	0	0	0	28	21	15	3.4	1.8	.18	0	0
12	0	0	0	0	27	20	14	3.3	1.8	.11	0	0
13	0	0	0	0	26	19	13	3.2	1.8	.11	0	0
14	0	0	0	0	20	17	12	3.1	1.8	.05	0	0
15	0	0	0	0	202	16	11	3.0	1.6	0	0	0
16	0	0	0	0	67	15	10	2.9	1.5	0	0	0
17	0	0	0	0	46	14	9.3	2.8	1.5	0	0	0
18	0	0	0	0	47	14	8.4	2.7	1.4	0	0	0
19	0	0	0	458	44	13	8.0	2.6	1.4	0	0	0
20	0	0	0	236	35	13	7.6	2.5	1.2	0	0	0
21	0	0	0	515	56	16	7.3	2.5	1.2	0	0	0
22	0	0	0	58	51	14	6.9	2.4	1.2	0	0	0
23	0	0	0	19	748	13	6.6	2.3	1.2	0	0	0
24	0	0	0	175	978	12	6.6	2.3	1.0	0	0	0
25	0	0	0	2,040	467	11	6.2	2.2	.88	0	0	0
26	0	0	0	785	176	11	5.9	2.2	.77	0	0	0
27	0	0	0	291	96	10	5.6	2.1	.66	0	0	0
28	0	0	0	99	251	9.7	5.3	2.1	.66	0	0	0
29	0	0	0	64	-----	9.3	5.3	2.1	.66	0	0	0
30	0	0	0	51	-----	8.8	5.0	2.0	.55	0	0	0
31	0	-----	0	43	-----	8.8	-----	2.0	-----	0	0	-----
TOTAL	0	0	0	4,834	4,159	797.6	541.9	94.7	43.48	5.16	0	0
MEAN	0	0	0	156	149	25.7	18.1	3.05	1.45	.17	0	0
MAX	0	0	0	2,040	978	120	201	4.8	2.0	.55	0	0
MIN	0	0	0	0	20	8.8	5.0	2.0	.55	0	0	0
AC-FT	0	0	0	9,590	8,250	1,580	1,070	188	86	10	0	0
CAL YR 1968	TOTAL	66.40	MEAN	.18	MAX	11	MIN	0	AC-FT	132		
WTR YR 1969	TOTAL	10,475.84	MEAN	28.7	MAX	2,040	MIN	0	AC-FT	20,780		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0300	5.75	1,920	2-24	1800	7.13	4,700
1-25	0500	8.50	4,960	2-28	1130	3.82	926
2- 5	2400	5.07	2,300	4- 5	1430	4.15	1,230
2-15	1100	3.85	1,080				

NOTE.--No gage-height record May 1 to June 2.

SANTA YNEZ RIVER BASIN

269

11-1285. SANTA YNEZ RIVER AT SOLVANG, CALIF.

LOCATION.--Lat 34°35'06", long 120°08'37", in San Carlos de Jonata Grant, Santa Barbara County, on downstream side of right abutment of Mission Bridge, 25 ft downstream from Alisal Creek, and 0.8 mile (revised) southwest of Solvang.

DRAINAGE AREA.--579 sq mi.

PERIOD OF RECORD.--October 1928 to November 1936, June 1937 to November 1940 (irrigation seasons only), October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 362.43 ft above mean sea level. Various datums used during period of record. July 29 to Sept. 30, 1953, auxiliary water-stage recorder 750 ft upstream at different datum. Oct. 1, 1953, to Sept. 30, 1968, water-stage recorder at datum 2.00 ft higher.

EXTREMES.--Current year: Maximum discharge, 82,000 cfs (estimated) Jan. 25 (gage height, 17.1 ft, from floodmark); no flow Oct. 1 to Jan. 18.
1928-36, 1946 to current year: Maximum discharge, 82,000 cfs (estimated) Jan. 25, 1969 (gage height, 17.1 ft, from floodmark); no flow for several months in many years.

REMARKS.--Records poor. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (see sta 11-1210, 11-1220, 11-1255). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Some water for irrigation pumped from wells along banks of river in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1,350	6,000	150	27	55	37	11	2.3
2	0	0	0	0	1,600	5,800	200	27	52	40	10	2.1
3	0	0	0	0	1,300	5,100	210	27	47	50	10	2.0
4	0	0	0	0	1,300	3,000	200	29	35	70	9.5	1.7
5	0	0	0	0	1,400	1,000	300	35	25	70	9.5	1.5
6	0	0	0	0	9,000	300	950	130	25	64	9.2	1.5
7	0	0	0	0	4,500	500	900	130	25	60	9.2	1.5
8	0	0	0	0	2,500	1,700	950	130	25	58	9.2	1.5
9	0	0	0	0	2,200	1,800	950	130	25	58	9.6	1.5
10	0	0	0	0	1,900	1,700	950	130	25	58	9.8	1.5
11	0	0	0	0	1,700	500	950	125	25	55	9.8	1.6
12	0	0	0	0	1,500	165	980	125	25	53	9.8	1.2
13	0	0	0	0	1,200	165	900	120	25	50	9.8	1.2
14	0	0	0	0	1,100	165	500	115	25	48	9.8	1.4
15	0	0	0	0	2,100	1,000	100	110	25	45	10	1.4
16	0	0	0	0	1,800	1,000	69	110	22	43	10	1.4
17	0	0	0	0	1,500	960	65	110	20	40	10	1.4
18	0	0	0	0	1,300	1,050	62	105	15	38	10	1.4
19	0	0	0	750	1,300	1,750	57	105	10	37	10	1.4
20	0	0	0	360	1,100	1,750	54	100	10	36	6.0	1.4
21	0	0	0	2,000	1,300	1,750	50	97	10	35	4.0	1.4
22	0	0	0	300	1,500	1,750	48	97	10	33	4.0	1.1
23	0	0	0	150	6,000	1,750	45	97	10	32	3.5	1.0
24	0	0	0	585	19,000	1,730	42	95	10	31	3.5	1.0
25	0	0	0	40,000	31,500	1,730	39	75	10	30	3.5	.91
26	0	0	0	25,900	9,000	1,730	37	68	15	29	3.2	.84
27	0	0	0	8,440	8,000	1,000	34	65	20	22	3.1	.64
28	0	0	0	4,000	6,500	200	32	62	30	13	3.1	.70
29	0	0	0	3,300	-----	200	30	60	32	12	3.1	.58
30	0	0	0	2,100	-----	200	27	60	35	12	2.8	.70
31	0	-----	0	1,800	-----	200	-----	57	-----	12	2.5	-----
TOTAL	0	0	0	89,685	124,450	47,645	9,881	2,753	723	1,271	228.5	39.77
MEAN	0	0	0	2,893	4,445	1,537	329	88.8	24.1	41.0	7.37	1.33
MAX	0	0	0	40,000	31,500	6,000	980	130	55	70	11	2.3
MIN	0	0	0	0	1,100	165	27	27	10	12	2.5	.58
AC-FT	0	0	0	177,900	246,800	94,500	19,600	5,460	1,430	2,520	453	79

CAL YR 1968 TOTAL 2,300.07 MEAN 6.28 MAX 67 MIN 0 AC-FT 4,560
WTR YR 1969 TOTAL 276,676.27 MEAN 758 MAX 40,000 MIN 0 AC-FT 548,800

NOTE.--No gage-height record Jan. 2 to Sept. 9.

SANTA YNEZ RIVER BASIN

11-1298. ZACA CREEK NEAR BUELLTON, CALIF.

LOCATION.--Lat 34°38'55", long 120°11'00", in San Carlos de Jonata Grant, Santa Barbara County, on upstream end of left pier of bridge on frontage road, 0.9 mile upstream from Dry Creek, 2.4 miles north of Buellton, and 4.0 miles upstream from mouth.

DRAINAGE AREA.--32.8 sq mi.

PERIOD OF RECORD.--September 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 471.54 ft above mean sea level.

AVERAGE DISCHARGE.--6 years, 1.72 cfs (1,250 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,390 cfs Feb. 24 (gage height, 9.20 ft); no flow for most of year.
Period of record: Maximum discharge, 1,390 cfs Feb. 24, 1969 (gage height, 9.20 ft); no flow for most of each year.

REMARKS.--Records good. Slight regulation by Zaca Lake. Some pumping from wells along stream for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	10	52	9.3	3.0	.20	0	0	0
2	0	0	0	0	8.3	38	11	3.0	.10	0	0	0
3	0	0	0	0	7.4	33	10	3.0	.10	0	0	0
4	0	0	0	0	6.2	28	9.3	2.6	.10	0	0	0
5	0	0	0	0	11	23	20	2.6	.10	0	0	0
6	0	0	0	0	57	22	12	2.2	.10	0	0	0
7	0	0	0	0	28	21	8.3	1.9	0	0	0	0
8	0	0	0	0	15	21	8.0	1.8	.10	0	0	0
9	0	0	0	0	12	21	7.7	1.8	.10	0	0	0
10	0	0	0	0	10	21	7.1	1.2	.10	0	0	0
11	0	0	0	0	9.6	17	6.5	1.2	.10	0	0	0
12	0	0	0	0	10	16	6.2	1.0	0	0	0	0
13	0	0	0	0	8.0	16	6.0	1.6	0	0	0	0
14	0	0	0	0	6.5	15	5.4	1.0	0	0	0	0
15	0	0	0	0	11	14	5.2	1.0	0	0	0	0
16	0	0	0	0	6.5	13	5.0	.50	0	0	0	0
17	0	0	0	0	5.7	13	4.7	.40	0	0	0	0
18	0	0	0	0	9.5	13	4.5	.90	.10	0	0	0
19	0	0	0	17	22	13	4.3	.90	0	0	0	0
20	0	0	0	10	16	13	4.1	.20	0	0	0	0
21	0	0	0	62	24	15	3.9	.10	0	0	0	0
22	0	0	0	21	32	14	3.9	.50	0	0	0	0
23	0	0	0	6.2	145	13	4.1	.50	0	0	0	0
24	0	0	0	32	450	13	3.9	.40	0	0	0	0
25	0	0	0	404	393	13	3.7	.40	0	0	0	0
26	0	0	0	292	132	12	3.3	.40	0	0	0	0
27	0	0	0	66	69	11	3.1	.40	0	0	0	0
28	0	0	0	35	77	11	2.8	.30	0	0	0	0
29	0	0	0	22	-----	11	3.1	.30	0	0	0	0
30	0	0	0	16	-----	10	3.1	.20	0	0	0	0
31	0	-----	0	12	-----	10	-----	.20	-----	0	0	-----
TOTAL	0	0	0	995.2	1,591.7	556	189.5	35.50	1.20	0	0	0
MEAN	0	0	0	32.1	56.8	17.9	6.32	1.15	.040	0	0	0
MAX	0	0	0	404	450	52	20	3.0	.20	0	0	0
MIN	0	0	0	0	5.7	10	2.8	.10	0	0	0	0
AC-FT	0	0	0	1,970	3,160	1,100	376	70	2.4	0	0	0
CAL YR 1968	TOTAL	.30	MEAN	.0008	MAX	.20	MIN	0	AC-FT	.6		
WTR YR 1969	TOTAL	3,369.10	MEAN	9.23	MAX	450	MIN	0	AC-FT	6,680		

PEAK DISCHARGE (BASE, 10 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1800	4.42	191	2-24	2130	9.20	1,390
1-25	0930	7.15	752	4- 5	1630	3.23	59
2- 6	0530	4.35	181				

11-1305, SANTA YNEZ RIVER NEAR BUELLTON, CALIF.

LOCATION.--Lat 34°36'50", long 120°14'30", in Santa Rosa Grant, Santa Barbara County, on left bank 0.5 mile downstream from Canada de los Palos Blancos, and 3 miles west of Buellton.

DRAINAGE AREA.--668 sq mi.

PERIOD OF RECORD.--June 1948 to September 1952 (irrigation seasons only); October 1952 to September 1965; October 1965 to current year (wading stages only).

GAGE.--Water-stage recorder. Altitude of gage is 250 ft (from topographic map). Prior to Apr. 25, 1950, at same site at different datum. Apr. 25, 1950, to Sept. 22, 1957, at site 200 ft upstream at datum 3 ft higher. Sept. 23, 1957, to Mar. 28, 1962, at site 200 ft upstream at datum 1 ft higher.

REMARKS.--Records poor. This is a project station. Discharge above wading stages not generally reported herein. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (see sta 11-1210, 11-1220, 11-1255). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	3.8	1,360	6,700	170	34	54	21	9.0	5.4
2	0	0	0	3.9	1,600	6,000	210	32	48	24	8.0	5.6
3	0	0	0	4.1	1,330	5,250	220	32	40	34	7.0	5.6
4	0	0	0	4.1	1,300	3,500	210	32	33	45	6.0	5.8
5	0	0	0	4.0	1,550	1,100	310	40	30	60	5.0	6.0
6	0	0	0	4.0	9,250	330	960	140	28	58	4.4	6.0
7	0	0	0	4.0	4,600	550	960	144	28	56	4.4	6.2
8	0	0	0	4.0	2,400	1,750	960	144	28	54	4.2	6.4
9	0	0	0	4.0	2,200	1,850	960	144	28	52	4.0	6.6
10	0	0	0	4.0	1,950	1,950	960	144	28	50	3.8	6.6
11	0	0	0	4.0	1,700	600	960	140	28	48	3.6	6.6
12	0	0	0	4.0	1,530	165	990	130	28	45	3.4	6.6
13	0	0	0	4.0	1,180	165	920	120	28	42	3.2	6.6
14	0	0	0	4.0	1,110	165	550	115	28	39	3.1	6.6
15	0	0	0	4.0	2,280	1,000	110	110	28	36	3.1	6.6
16	0	0	0	4.0	1,850	1,050	80	105	28	33	3.3	6.6
17	0	0	.37	4.0	1,540	980	67	100	22	33	3.5	6.6
18	0	0	.76	4.0	1,360	1,100	65	98	20	33	3.8	6.6
19	0	0	1.2	800	1,390	1,770	60	96	15	32	3.8	6.6
20	0	0	1.5	400	1,110	1,770	60	96	12	32	3.8	6.6
21	0	0	1.8	2,100	1,350	1,770	55	96	11	32	4.0	6.6
22	0	0	2.1	320	1,590	1,770	50	95	11	31	4.2	6.6
23	0	0	2.3	133	6,800	1,770	47	95	11	31	4.4	6.8
24	0	0	2.7	620	21,400	1,750	45	85	11	30	4.5	6.8
25	0	0	3.5	42,000	32,500	1,750	42	80	11	30	4.7	6.8
26	0	0	4.2	26,900	9,500	1,750	40	75	12	29	4.9	6.8
27	0	0	3.7	8,600	8,500	1,050	40	70	14	22	5.0	6.8
28	0	0	3.5	4,300	7,000	220	38	65	14	12	5.0	7.0
29	0	0	3.6	3,500	-----	220	36	60	16	12	5.2	7.0
30	0	0	3.6	2,200	-----	220	34	60	18	11	5.2	7.0
31	0	-----	3.9	1,950	-----	220	-----	60	-----	10	5.2	-----
TOTAL	0	0	38.73	93,894.9	131,230	50,235	10,209	2,837	711	1,077	142.7	194.4
MEAN	0	0	1.25	3,029	4,687	1,620	340	91.5	23.7	34.7	4.60	6.48
MAX	0	0	4.2	42,000	32,500	6,700	990	144	54	60	9.0	7.0
MIN	0	0	0	3.8	1,110	165	34	32	11	10	3.1	5.4
AC-FT	0	0	77	186,200	260,300	99,640	20,250	5,630	1,410	2,140	283	386

CAL YR 1968 TOTAL 2,444.77 MEAN 6.68 MAX 62 MIN 0 AC-FT 4,850
WTR YR 1969 TOTAL 290,569.73 MEAN 796 MAX 42,000 MIN 0 AC-FT 576,300

NOTE.--No gage-height record Jan. 4 to Sept. 30.

SANTA YNEZ RIVER BASIN

11-1315. SANTA YNEZ RIVER AT COOPER'S REEF, NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°36'48", long 120°21'20", near boundary of Canada de Salsipuedes Grant, Santa Barbara County, on right bank 0.6 mile upstream from Canada de la Vina, and 6 miles east of Lompoc.

DRAINAGE AREA.--708 sq mi.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 200 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 81,000 cfs (estimated) Jan. 25 (gage height, 22.5 ft, from floodmark); minimum daily, 0.04 cfs Oct. 1-15.

Period of record: Maximum discharge, 81,000 cfs (estimated) Jan. 25, 1969 (gage height, 22.5 ft, from floodmark); no flow for several months in some years.

REMARKS.--Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see sta 11-1210, 11-1220, 11-1255). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.05	.12	.1	1,400	6,750	320	70	55	9.6	7.0	1.0
2	.04	.05	.12	.1	1,650	6,100	310	70	50	12	6.6	1.0
3	.04	.05	.12	.1	1,350	5,200	310	70	45	20	5.6	1.2
4	.04	.05	.12	.1	1,300	3,500	310	70	43	40	5.2	1.2
5	.04	.05	.12	.1	1,780	1,120	310	70	38	60	4.7	1.4
6	.04	.05	.12	.1	9,510	400	900	120	34	60	4.1	1.6
7	.04	.05	.11	.1	4,200	560	1,000	171	34	54	3.6	1.8
8	.04	.05	.11	.1	2,400	1,700	1,000	170	32	50	3.2	2.0
9	.04	.05	.11	.1	2,300	1,800	1,000	170	32	48	2.9	2.2
10	.04	.05	.11	.1	2,000	1,900	1,000	170	32	47	2.6	2.2
11	.04	.05	.10	.1	1,750	800	1,000	170	30	45	2.3	2.4
12	.04	.05	.10	.1	1,500	350	1,050	160	30	43	2.2	2.4
13	.04	.05	.10	.1	1,200	170	950	155	30	41	2.0	2.6
14	.04	.05	.10	.1	1,120	170	600	152	28	39	1.8	2.8
15	.04	.15	.10	.1	2,250	700	250	145	28	38	1.6	3.0
16	.05	.15	.10	.1	1,900	1,000	160	135	27	36	1.4	3.0
17	.05	.14	.10	.1	1,550	1,050	138	130	25	36	1.2	3.2
18	.05	.14	.10	.1	1,380	1,000	130	125	25	35	1.0	3.4
19	.05	.14	.10	200	1,400	1,150	125	120	24	34	.80	3.6
20	.05	.14	.10	450	1,120	1,800	115	116	22	33	.70	3.8
21	.05	.14	.10	2,200	1,380	1,800	105	112	20	32	.70	4.1
22	.05	.14	.10	500	1,620	1,800	100	110	19	31	.70	4.4
23	.05	.14	.10	175	7,270	1,800	90	105	18	30	.70	4.8
24	.05	.13	.10	900	21,800	1,780	85	100	17	30	.70	5.2
25	.05	.13	.10	38,000	33,000	1,770	80	95	16	29	.70	6.0
26	.05	.13	.10	30,000	9,070	1,770	80	90	15	28	.70	6.4
27	.05	.13	.09	8,870	8,210	1,400	80	85	14	21	.70	6.8
28	.05	.13	.09	4,100	6,540	800	75	80	13	10	.70	7.2
29	.05	.13	.09	3,800	-----	330	75	75	12	8.0	.80	7.6
30	.05	.13	.09	2,070	-----	330	70	70	11	7.3	.80	8.0
31	.05	-----	.09	1,850	-----	320	-----	65	-----	7.2	.90	-----
TOTAL	1.40	2.89	3.21	93,116.8	131,950	51,120	11,818	3,546	819	1,014.1	68.60	106.3
MEAN	.045	.096	.10	3,004	4,713	1,649	394	114	27.3	32.7	2.21	3.54
MAX	.05	.15	.12	38,000	33,000	6,750	1,050	171	55	60	7.0	8.0
MIN	.04	.05	.09	.10	1,120	170	70	65	11	7.2	.70	1.0
AC-FT	2.8	5.7	6.4	184,700	261,700	101,400	23,440	7,030	1,620	2,010	136	211

CAL YR 1968 TOTAL 3,297.10 MEAN 9.01 MAX 106 MIN .04 AC-FT 6,540
WTR YR 1969 TOTAL 293,566.30 MEAN 804 MAX 38,000 MIN .04 AC-FT 582,300

NOTE.--No gage-height record Jan. 4 to Sept. 17.

11-1325. SALSIPUEDES CREEK NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°35'19", long 120°24'27", in W $\frac{1}{2}$ sec. 24, T.6 N., R.34 W., Santa Barbara County, on right bank at bridge on Jalama Road, 0.4 mile downstream from El Jaro Creek, and 4.4 miles southeast of Lompoc.

DRAINAGE AREA.--47.1 sq mi.

PERIOD OF RECORD.--January 1941 to current year.

GAGE.--Water-stage recorder and concrete low-water control. Altitude of gage is 240 ft (from topographic map).

AVERAGE DISCHARGE.--28 years, 8.77 cfs (6,350 acre-ft per year); median of yearly mean discharges, 3.5 cfs (2,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,880 cfs Jan. 25 (gage height, 11.30 ft); no flow Oct. 2, 24.
Period of record: Maximum discharge, 11,400 cfs Mar. 15, 1952 (gage height, 20.8 ft); no flow at times in some years.

REMARKS.--Records good. No regulation above station. Small diversions for irrigation above station. Records of sediment data for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.02	.09	.21	25	125	13	12	6.7	4.2	2.1	1.4
2	0	.02	.08	.18	22	85	20	12	6.6	4.2	1.8	1.4
3	.01	.05	.06	.13	21	76	27	12	6.6	4.1	1.6	1.4
4	.01	.03	.09	.09	21	74	16	13	6.7	3.7	1.6	1.4
5	.01	.02	.08	.09	49	69	232	12	6.5	3.7	1.6	1.4
6	.01	.02	.08	.10	155	64	79	11	6.7	3.7	1.6	1.4
7	.01	.01	.09	.09	58	61	75	11	6.7	3.7	1.6	1.4
8	.02	.01	.08	.11	31	54	69	11	6.7	3.7	1.6	1.4
9	.01	.01	.07	.12	28	50	42	11	6.7	3.7	1.6	1.4
10	.01	.01	.07	.12	27	46	24	11	6.7	3.7	1.6	1.4
11	.02	.01	.14	.12	24	35	22	11	6.6	3.4	1.6	1.4
12	.01	.01	.13	.12	36	34	21	11	6.7	3.2	1.6	1.4
13	.02	.01	.12	.28	23	36	20	10	6.7	3.0	1.6	1.4
14	.07	.02	.42	1.4	20	31	18	9.0	6.7	3.0	1.6	1.4
15	.02	.22	.67	.50	516	28	17	8.9	6.7	3.0	1.6	1.4
16	.01	.09	1.5	.24	91	25	16	8.7	6.7	3.0	1.4	1.4
17	.02	.09	.48	.17	59	24	16	8.2	6.7	2.7	1.4	1.4
18	.02	.09	.28	3.8	78	23	16	7.8	6.7	2.7	1.4	1.4
19	.02	.09	.21	484	119	22	15	7.9	6.2	2.7	1.4	1.4
20	.01	.09	.30	184	63	21	15	7.8	6.2	2.7	1.4	1.4
21	.01	.06	.26	341	96	27	13	7.9	5.9	2.7	1.4	1.4
22	.01	.06	.25	89	148	22	13	8.1	5.4	2.7	1.4	1.4
23	.01	.07	.22	42	650	20	14	8.4	5.4	2.7	1.4	1.4
24	0	.06	.28	292	580	18	13	8.1	5.4	2.4	1.4	1.4
25	.01	.06	.64	1,650	312	17	13	7.6	5.4	2.4	1.4	1.4
26	.01	.08	1.5	362	129	16	12	6.7	5.3	2.4	1.4	1.4
27	.01	.07	.89	105	88	16	12	7.0	5.4	2.4	1.4	1.4
28	.01	.08	.57	75	381	15	12	7.5	5.2	2.4	1.4	1.4
29	.02	.08	.42	52	-----	15	12	7.2	4.9	2.4	1.4	1.4
30	.03	.09	.33	37	-----	14	12	6.8	4.5	2.2	1.4	1.4
31	.02	-----	.28	29	-----	14	-----	6.5	-----	2.1	1.4	-----
TOTAL	0.46	1.63	10.68	3,749.87	3,850	1,177	899	288.1	185.3	94.6	47.1	42.0
MEAN	.015	.054	.34	121	138	38.0	30.0	9.29	6.18	3.05	1.52	1.40
MAX	.07	.22	1.5	1,650	650	125	232	13	6.7	4.2	2.1	1.4
MIN	0	.01	.06	.09	20	14	12	6.5	4.5	2.1	1.4	1.4
AC-FT	.9	3.2	21	7,440	7,640	2,330	1,780	571	368	188	93	83

CAL YR 1968 TOTAL 185.70 MEAN .51 MAX 7.4 MIN 0 AC-FT 368
WTR YR 1969 TOTAL 10,345.74 MEAN 28.3 MAX 1,650 MIN 0 AC-FT 20,520

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1930	5.59	1,330	2-15	1200	7.18	2,350
1-25	0230	11.30	4,880	2-23	1830	8.58	3,140
2- 6	0115	3.78	483	2-28	1115	5.51	1,350

SANTA YNEZ RIVER BASIN

11-1330. SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°38'21", long 120°25'39", in Canada de Salsipuedes Grant, Santa Barbara County, on left bank 0.4 mile upstream from State Highway 150, 1.9 miles east of Lompoc, and 2.1 miles downstream from Salsipuedes Creek.

DRAINAGE AREA.--789 sq mi.

PERIOD OF RECORD.--November and December 1906, October 1907 to September 1918, April 1925 to current year. Published as "near Lompoc" prior to October 1960. Monthly discharge only for some periods published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 90 ft (from topographic map). Prior to Mar. 23, 1953, at site 700 ft upstream at different datum. Mar. 23, 1953, to Feb. 10, 1962, at site 500 ft upstream at datum 5.00 ft higher, and Feb. 11, 1962, to Sept. 30, 1965, at datum 3.00 ft higher. Sept. 30, 1965, to Aug. 17, 1967, at same site at datum 3.00 ft higher. Since October 1960, supplementary gage at site 0.4 mile downstream at datum 79.28 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 80,000 cfs Jan. 25 (gage height, 24.20 ft, from supplementary gage); no flow Oct. 1 to Jan. 17.

Period of record: Maximum discharge, 80,000 cfs Jan. 25, 1969 (gage height, 24.20 ft, from supplementary gage); no flow at times in each year.

Flood of Jan. 9, 1907, 120,000 cfs (gage height, 22.0 ft, site and datum then in use), from discharge-mean depth study.

REMARKS.--Records poor. Flow regulated by Jameson Lake, Gibraltar Reservoir and since November 1952 by Lake Cachuma (see sta 11-1210, 11-1220, 11-1255). Water diverted out of Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1,400	6,600	400	100	55	21	7.0	.50
2	0	0	0	0	1,350	6,000	350	140	52	21	6.4	.50
3	0	0	0	0	1,300	5,500	310	160	50	21	4.6	.50
4	0	0	0	0	1,010	4,200	305	175	48	21	3.9	.50
5	0	0	0	0	1,320	3,000	310	180	46	21	3.5	.50
6	0	0	0	0	9,120	2,000	450	180	44	20	3.0	.60
7	0	0	0	0	5,400	608	600	185	42	20	2.8	.60
8	0	0	0	0	3,370	1,400	720	185	41	20	2.4	.60
9	0	0	0	0	2,600	1,500	780	175	40	20	2.2	.70
10	0	0	0	0	2,190	2,500	840	170	39	20	2.0	.70
11	0	0	0	0	1,860	2,150	800	165	38	20	1.9	.80
12	0	0	0	0	1,650	784	760	160	37	20	1.7	.90
13	0	0	0	0	1,410	580	620	150	36	20	1.6	1.0
14	0	0	0	0	719	340	450	140	35	20	1.5	1.2
15	0	0	0	0	2,220	634	300	140	33	20	1.4	1.3
16	0	0	0	0	1,640	837	160	135	33	20	1.2	1.5
17	0	0	0	0	1,880	1,080	138	130	31	20	1.1	1.6
18	0	0	0	2	1,800	1,090	130	125	30	20	1.1	1.7
19	0	0	0	391	2,100	1,090	125	125	28	20	1.0	1.7
20	0	0	0	494	1,970	1,230	120	125	27	20	.90	1.8
21	0	0	0	2,250	1,160	1,250	120	120	26	20	.80	2.0
22	0	0	0	844	1,480	1,210	115	120	25	20	.80	2.2
23	0	0	0	265	4,060	1,270	115	115	24	19	.70	2.3
24	0	0	0	413	22,200	1,340	115	105	23	19	.70	2.5
25	0	0	0	38,000	33,000	1,610	115	100	22	19	.60	2.6
26	0	0	0	37,500	12,500	1,600	115	95	22	17	.60	2.9
27	0	0	0	12,900	10,200	1,060	110	90	22	15	.60	3.1
28	0	0	0	3,810	8,220	564	105	80	22	13	.50	3.3
29	0	0	0	2,240	-----	466	100	70	21	12	.50	3.5
30	0	0	0	1,760	-----	454	92	64	21	10	.50	3.7
31	0	-----	0	1,510	-----	448	-----	58	-----	8.0	.50	-----
TOTAL	0	0	0	102,379	139,129	54,395	9,770	4,062	1,013	577.0	58.00	47.30
MEAN	0	0	0	3,303	4,969	1,755	326	131	33.8	18.6	1.87	1.58
MAX	0	0	0	38,000	33,000	6,600	840	185	55	21	7.0	3.7
MIN	0	0	0	0	719	340	92	58	21	8.0	.50	.50
AC-FT	0	0	0	203,100	276,000	107,900	19,380	8,060	2,010	1,140	115	94
CAL YR 1968	TOTAL	2,723.10	MEAN	7.44	MAX	58	MIN	0	AC-FT	5,400		
WTR YR 1969	TOTAL	311,430.30	MEAN	853	MAX	38,000	MIN	0	AC-FT	617,700		

NOTE.--No gage-height record Jan. 28 to Feb. 28, Apr. 1 to Sept. 17.

SANTA YNEZ RIVER BASIN

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11-1345. SANTA YNEZ RIVER AT 13TH STREET, NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°40'06", long 120°28'29", in Lompoc Grant, Santa Barbara County, on right bank at 13th Street crossing, 2.3 miles northwest of Lompoc.

DRAINAGE AREA.--820 sq mi.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 60 ft (from topographic map). Prior to Nov. 27, 1956, at various sites within 300 ft at same datum. Nov. 27, 1956, to Oct. 1, 1962, at datum 6.00 ft higher. Oct. 1, 1962, to Oct. 1, 1966, at datum 5.00 ft higher.

EXTREMES.--Current year: Maximum discharge, 79,000 cfs (estimated) Jan. 25 (gage height, not determined); no flow Oct. 1 to Jan. 18, July 28 to Sept. 30.

Period of record: Maximum discharge, 79,000 cfs (estimated) Jan. 25, 1969 (gage height, not determined); no flow for several months in each year.

REMARKS.--Records poor. This is a project station. Discharge above wading stages generally not reported herein. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see sta 11-1210, 11-1220, 11-1255). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along bank of river for irrigation in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	1,450	6,600	395	72	50	40	0	0
2	0	0	0	0	1,400	6,000	345	135	47	42	0	0
3	0	0	0	0	1,300	5,500	305	155	45	45	0	0
4	0	0	0	0	1,090	4,200	300	170	43	43	0	0
5	0	0	0	0	1,320	3,000	305	175	41	41	0	0
6	0	0	0	0	9,140	2,000	440	180	41	39	0	0
7	0	0	0	0	5,400	600	590	181	39	37	0	0
8	0	0	0	0	3,370	1,380	715	182	38	36	0	0
9	0	0	0	0	2,600	1,480	775	175	35	34	0	0
10	0	0	0	0	2,190	2,320	835	170	29	33	0	0
11	0	0	0	0	1,860	2,200	805	165	27	32	0	0
12	0	0	0	0	1,650	770	765	160	25	30	0	0
13	0	0	0	0	1,410	580	620	155	23	28	0	0
14	0	0	0	0	719	330	440	143	22	27	0	0
15	0	0	0	0	2,220	630	290	139	21	25	0	0
16	0	0	0	0	1,640	830	150	130	19	24	0	0
17	0	0	0	0	1,880	1,070	128	125	17	23	0	0
18	0	0	0	0	1,800	1,080	120	120	15	21	0	0
19	0	0	0	300	2,040	1,080	115	120	13	18	0	0
20	0	0	0	450	1,950	1,230	110	118	11	15	0	0
21	0	0	0	2,000	1,110	1,250	105	116	9.0	12	0	0
22	0	0	0	800	1,400	1,210	100	115	8.0	9.0	0	0
23	0	0	0	170	4,000	1,260	98	115	7.5	6.0	0	0
24	0	0	0	400	22,600	1,330	98	110	7.0	2.8	0	0
25	0	0	0	37,500	33,400	1,600	94	105	6.0	1.5	0	0
26	0	0	0	38,000	12,600	1,600	85	90	5.0	1.0	0	0
27	0	0	0	13,100	10,200	1,100	85	85	4.0	.50	0	0
28	0	0	0	3,910	8,220	560	80	75	3.0	0	0	0
29	0	0	0	2,290	-----	460	75	65	2.0	0	0	0
30	0	0	0	1,780	-----	450	70	59	1.0	0	0	0
31	0	-----	0	1,520	-----	445	-----	53	-----	0	0	-----
TOTAL	0	0	0	102,220	139,959	54,145	9,438	3,958	653.5	665.80	0	0
MEAN	0	0	0	3,297	4,999	1,747	315	128	21.8	21.5	0	0
MAX	0	0	0	38,000	33,400	6,600	835	182	50	45	0	0
MIN	0	0	0	0	719	330	70	53	1.0	0	0	0
AC-FT	0	0	0	202,800	277,600	107,400	18,720	7,850	1,300	1,320	0	0

CAL YR 1968 TOTAL 545.10 MEAN 1.49 MAX 28 MIN 0 AC-FT 1,080
WTR YR 1969 TOTAL 311,039.30 MEAN 852 MAX 38,000 MIN 0 AC-FT 616,900

NOTE.--No gage-height record Jan. 3 to Feb. 4, Feb. 17 to July 29.

SANTA YNEZ RIVER BASIN

11-1350. SANTA YNEZ RIVER AT PINE CANYON, NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°40'20", long 120°29'30", in Lompoc Grant, Santa Barbara County, on right bank at Floradale Avenue bridge, 2.1 miles upstream from Santa Lucia Creek, and 3 miles northwest of Lompoc.

DRAINAGE AREA.--832 sq mi.

PERIOD OF RECORD.--May 1941 to October 1946, August 1964 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 39.87 ft above mean sea level. Prior to Aug. 24, 1964, at different datum.

EXTREMES.--Current year: Maximum discharge, 78,000 cfs (estimated) Jan. 25 (gage height, 24.0 ft, from floodmark); minimum daily, 0.07 cfs Sept. 27, 29.

Period of record: Maximum discharge, 78,000 cfs (estimated) Jan. 25, 1969 (gage height, 24.0 ft, from floodmark); no flow at times in some years.

REMARKS.--Records poor. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see sta 11-1210, 11-1220, 11-1255). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along bank for irrigation in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	.67	.42	1	1,460	6,600	390	70	45	20	1.5	1.4
2	.52	.69	.44	1	1,400	6,000	340	130	42	21	1.2	1.6
3	.32	3.1	.64	1	1,300	5,500	300	140	40	23	.81	1.5
4	.35	2.1	.76	1	1,100	4,200	295	150	38	25	.81	1.4
5	.32	.97	.61	1	1,320	3,000	300	150	38	37	.60	1.4
6	.36	.65	.55	1	9,180	2,000	435	150	38	40	.47	1.2
7	.44	.52	.49	1	5,420	590	580	150	37	41	.40	1.1
8	.57	.43	.51	1	3,380	1,370	710	150	35	37	.54	.84
9	.29	.45	.45	1	2,600	1,470	770	150	33	31	.46	.51
10	.32	.42	.60	1	2,190	2,300	830	150	27	28	.46	.71
11	.38	.25	3.2	1	1,860	2,180	810	150	26	27	.59	.78
12	.25	.67	.97	1	1,650	760	760	160	24	25	.66	.81
13	1.5	.57	.82	1	1,410	580	615	140	22	24	.63	.79
14	30	.53	3.4	1	719	320	435	136	21	22	.74	.77
15	4.5	9.1	2.4	1	2,220	625	285	135	20	21	.84	2.3
16	2.0	1.6	3.3	1	1,640	825	145	128	18	18	.95	3.6
17	1.4	.99	1.2	1	1,880	1,060	125	122	16	15	1.1	2.3
18	1.4	.76	.85	2	1,800	1,070	118	118	14	12	1.3	2.0
19	.98	.86	.85	310	2,050	1,070	112	118	12	9.5	1.4	1.7
20	.90	.66	2.9	455	1,960	1,230	107	116	10	8.1	1.6	1.4
21	.80	.56	1.3	2,100	1,120	1,250	103	105	9.9	6.6	1.8	.99
22	.87	.52	.82	810	1,420	1,210	101	105	9.7	5.1	1.6	.55
23	.88	.54	.63	175	4,040	1,250	100	105	9.6	3.8	1.5	.32
24	.59	.59	1.3	410	23,000	1,320	100	105	8.0	2.3	1.8	.20
25	.45	.50	4.6	37,900	33,800	1,590	96	100	6.5	2.4	1.8	.17
26	.44	.66	9.9	38,400	12,700	1,600	87	85	5.0	1.8	1.7	.18
27	.62	.60	4.3	13,300	10,200	1,110	85	80	3.5	1.6	1.7	.07
28	.57	.59	.78	4,010	8,220	560	82	70	3.0	2.1	1.8	.08
29	.84	.38	1.2	2,340	-----	460	77	60	2.0	2.1	1.8	.07
30	5.5	.45	.96	1,800	-----	450	75	54	1.2	1.9	1.5	.13
31	1.1	-----	1.2	1,530	-----	440	-----	48	-----	1.6	1.4	-----
TOTAL	59.84	31.38	52.35	103,559	141,039	53,990	9,368	3,630	614.4	515.9	35.46	30.87
MEAN	1.93	1.05	1.69	3,341	5,037	1,742	312	117	20.5	16.6	1.14	1.03
MAX	30	9.1	9.9	38,400	33,800	6,600	830	160	45	41	1.8	3.6
MIN	.25	.25	.42	1.0	719	320	75	48	1.2	1.6	.40	.07
AC-FT	119	62	104	205,400	279,700	107,100	18,580	7,200	1,220	1,020	70	61

CAL YR 1968 TOTAL 901.26 MEAN 2.46 MAX 51 MIN .02 AC-FT 1,790
WTR YR 1969 TOTAL 312,926.20 MEAN 857 MAX 38,400 MIN .07 AC-FT 620,700

NOTE.--No gage-height record Jan. 6 to July 3.

11-1361. SAN ANTONIO CREEK NEAR CASMALIA, CALIF.

LOCATION.--Lat 34°46'56", long 120°31'47", in Jesus Maria Grant, Santa Barbara County, on Camp Cook Military Reservation on downstream side of left center pile bent of San Antonio Road bridge, 0.7 mile east of junction of San Antonio Road with Lompoc-Casmalia Road, and 3.8 miles south of Casmalia.

DRAINAGE AREA.--135 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 160 ft (from topographic map). Prior to June 27, 1958, at datum 2.00 ft higher.

AVERAGE DISCHARGE.--14 years, 6.22 cfs (4,510 acre-ft per year); median of yearly mean discharges, 3.0 cfs (2,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,300 cfs Feb. 25 (gage height, 11.79 ft); minimum daily, 0.36 cfs Oct. 2.

Period of record: Maximum discharge, 2,300 cfs Feb. 25, 1969 (gage height, 11.79 ft); minimum daily, 0.10 cfs June 19, 20, 1957.

REMARKS.--Records good. No regulation above station. Flow affected by pumping from wells along stream for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.62	.75	1.6	15	167	5.3	2.7	1.4	1.2	.86	.75
2	.36	.80	.76	1.6	12	109	5.6	2.7	1.4	1.2	.82	.80
3	.40	1.2	.78	1.6	10	71	11	2.6	1.3	1.1	.80	.92
4	.39	.80	.79	1.7	8.0	53	6.7	2.5	1.3	1.1	.84	.90
5	.42	.70	.78	1.7	33	42	31	2.5	1.3	1.2	.87	.93
6	.40	.70	.87	1.8	216	33	33	2.4	1.2	1.1	.92	.72
7	.41	.70	.72	1.8	96	29	8.8	2.4	1.2	1.2	.91	.78
8	.45	.70	.81	1.9	44	24	8.0	2.3	1.1	1.1	.88	.79
9	.45	.70	.84	1.9	29	20	7.0	2.3	1.1	1.1	.76	.91
10	.43	.70	.97	2.0	22	24	5.4	2.2	1.1	1.1	.77	.98
11	.44	.70	1.5	2.0	19	19	4.7	2.1	1.2	1.1	.83	.95
12	.45	.70	1.3	2.0	33	14	3.9	2.1	1.2	.90	.85	.92
13	.58	.70	1.1	2.4	25	13	3.5	2.0	1.2	.91	.93	.90
14	1.3	.70	1.5	5.7	17	11	3.1	2.0	1.1	.93	.84	.96
15	.85	2.0	2.3	4.0	28	9.3	2.9	1.9	1.0	1.0	.80	1.0
16	.66	1.3	2.4	3.1	30	8.1	2.6	1.9	1.1	1.0	.83	1.1
17	.48	.90	1.7	2.7	16	7.6	2.7	1.8	1.3	1.0	.86	1.1
18	.44	.80	1.4	7.1	33	7.3	2.8	1.8	1.1	1.0	.91	1.0
19	.44	.75	1.3	42	147	7.2	2.8	1.9	1.1	.93	.78	.90
20	.43	.70	1.5	58	97	7.1	2.9	2.0	1.1	.89	.87	.88
21	.44	.68	1.3	56	33	8.2	3.0	2.1	1.1	.90	.84	.88
22	.45	.66	1.2	24	204	8.8	3.1	2.1	1.1	.92	.90	.88
23	.44	.66	1.2	11	417	7.2	3.1	2.2	1.0	.95	.79	.88
24	.42	.64	1.3	26	616	6.6	3.2	2.0	1.1	.93	.75	.88
25	.39	.62	2.2	627	1,220	6.5	3.0	1.8	1.1	.93	.74	.88
26	.41	.62	3.8	503	371	6.4	3.0	1.6	1.1	.89	.79	.90
27	.42	.67	2.7	180	230	6.1	2.9	1.5	1.1	.88	.90	.90
28	.39	.69	1.9	92	190	6.0	2.9	1.5	1.1	.91	.91	.88
29	.50	.68	2.0	72	-----	5.8	2.8	1.5	1.0	.96	.90	.84
30	.55	.71	1.8	40	-----	5.4	2.8	1.5	1.1	.95	.77	.80
31	.62	-----	1.6	25	-----	5.4	-----	1.5	-----	.92	.76	-----
TOTAL	15.21	23.50	45.07	1,802.6	4,211.0	748.0	183.5	63.4	34.6	31.20	25.98	26.91
MEAN	.49	.78	1.45	58.1	150	24.1	6.12	2.05	1.15	1.01	.84	.90
MAX	1.3	2.0	3.8	627	1,220	167	33	2.7	1.4	1.2	.93	1.1
MIN	.36	.62	.72	1.6	8.0	5.4	2.6	1.5	1.0	.88	.74	.72
AC-FT	30	47	89	3,580	8,350	1,480	364	126	69	62	52	53

CAL YR 1968 TOTAL 462.01 MEAN 1.26 MAX 16 MIN .24 AC-FT 916
WTR YR 1969 TOTAL 7,210.97 MEAN 19.8 MAX 1,220 MIN .36 AC-FT 14,300

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-20	0015	4.96	154	2-25	0100	11.79	2,300
1-25	1300	8.29	967	4- 5	2015	4.29	109
2- 6	1800	5.54	308				

SAN ANTONIO CREEK BASIN

11-1361.5. SAN ANTONIO CREEK TRIBUTARY NEAR CASMALIA, CALIF.

LOCATION.--Lat 34°48'45", long 120°31'30", in Todos Santos Y San Antonio Grant, Santa Barbara County, on right bank at culvert under Lompoc-Casmalia Road, 1.8 miles south of Casmalia.

DRAINAGE AREA.--0.28 sq mi.

PERIOD OF RECORD.--Water years 1960-64 (annual maximum), August 1964 to current year.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 480 ft (from topographic map). Sept. 18, 1959, to Aug. 20, 1964, crest-stage gage only at same site and datum.

EXTREMES.--Current year: Maximum discharge, 5.0 cfs Feb. 24 (gage height, 5.32 ft); no flow most of year. Period of record: Maximum discharge, 8.4 cfs Feb. 10, 1962 (gage height, 5.51 ft, from crest-stage gage), by computation of maximum flow through culvert; no flow for most of each year.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	.02	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	.20	0	0	0	0	0	0	0
25	0	0	0	.06	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	0.08	0.20	0	0	0	0	0	0	0
MEAN	0	0	0	.003	.007	0	0	0	0	0	0	0
MAX	0	0	0	.06	.20	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	.2	.4	0	0	0	0	0	0	0
CAL YR 1968	TOTAL 0		MEAN 0		MAX 0		MIN 0		AC-FT 0			
WTR YR 1969	TOTAL .28		MEAN .0008		MAX .20		MIN 0		AC-FT .6			

11-1366.5. ALISO CANYON CREEK NEAR NEW CUYAMA, CALIF.

LOCATION.--Lat 34°59'00", long 119°46'30", in Cuyama Grant, Santa Barbara County, at culvert on State Highway 166, 5.8 miles northwest of New Cuyama.

DRAINAGE AREA.--16.1 sq mi.

PERIOD OF RECORD.--Water years 1960-63 (annual maximum), October 1963 to current year.

GAGE.--Water-stage recorder with rain-gage attachment. Arch-culvert control since July 25, 1963. Altitude of gage is 1,880 ft (from topographic map). Sept. 30, 1959, to July 24, 1963, crest-stage gage at same site at different datum.

AVERAGE DISCHARGE.--6 years, 0.374 cfs (271 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 552 cfs Feb. 24 (gage height, 10.66 ft), on basis of computation of flow through culvert; no flow for most of year.

Period of record: Maximum discharge, 552 cfs Feb. 24, 1969 (gage height, 10.66 ft), on basis of computation of flow through culvert; no flow for most of each year.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	13	2.8	1.6	0	0	0	0
2	0	0	0	0	0	12	3.5	1.6	0	0	0	0
3	0	0	0	0	0	11	5.0	1.6	0	0	0	0
4	0	0	0	0	0	11	2.8	2.0	0	0	0	0
5	0	0	0	0	.50	10	6.7	1.6	0	0	0	0
6	0	0	0	0	49	9.0	4.2	1.2	0	0	0	0
7	0	0	0	0	16	8.5	2.4	1.2	0	0	0	0
8	0	0	0	0	10	8.0	1.8	1.2	0	0	0	0
9	0	0	0	0	8.0	7.5	4.0	1.0	0	0	0	0
10	0	0	0	0	5.0	7.0	5.5	.60	0	0	0	0
11	0	0	0	0	2.6	6.5	4.5	2.0	0	0	0	0
12	0	0	0	0	2.0	6.0	3.8	1.0	0	0	0	0
13	0	0	0	0	1.4	5.5	3.5	.80	0	0	0	0
14	0	0	0	0	.80	5.0	3.5	.50	0	0	0	0
15	0	0	0	0	1.8	4.5	3.2	.20	0	0	0	0
16	0	0	0	0	.80	4.0	3.0	.50	0	0	0	0
17	0	0	0	0	.50	3.5	3.0	.40	0	0	0	0
18	0	0	0	0	3.2	3.5	3.0	0	0	0	0	0
19	0	0	0	0	2.4	3.5	3.0	0	0	0	0	0
20	0	0	0	0	1.8	3.8	2.6	0	0	0	0	0
21	0	0	0	0	2.3	4.8	1.6	0	0	0	0	0
22	0	0	0	0	5.8	3.8	2.0	0	0	0	0	0
23	0	0	0	0	29	3.8	2.0	0	0	0	0	0
24	0	0	0	0	151	3.8	2.0	0	0	0	0	0
25	0	0	0	44	74	3.5	2.0	0	0	0	0	0
26	0	0	0	2.8	30	3.2	2.0	0	0	0	0	0
27	0	0	0	0	20	3.0	2.0	0	0	0	0	0
28	0	0	0	0	17	2.8	1.8	0	0	0	0	0
29	0	0	0	0	-----	2.6	1.6	0	0	0	0	0
30	0	0	0	0	-----	2.6	1.6	0	0	0	0	0
31	0	-----	0	0	-----	2.8	-----	0	-----	0	0	-----
TOTAL	0	0	0	46.8	434.90	179.5	90.4	19.00	0	0	0	0
MEAN	0	0	0	1.51	15.5	5.79	3.01	.61	0	0	0	0
MAX	0	0	0	44	151	13	6.7	2.0	0	0	0	0
MIN	0	0	0	0	0	2.6	1.6	0	0	0	0	0
AC-FT	0	0	0	93	863	356	179	38	0	0	0	0
(a)	1.4	.4	.4	4.3	3.3	0	.9	0	0	0	0	0

CAL YR 1968 TOTAL 0 MEAN 0 MAX 0 MIN 0 AC-FT 0
WTR YR 1969 TOTAL 770.60 MEAN 2.11 MAX 151 MIN 0 AC-FT 1,530

a Precipitation, in inches.

NOTE.--No gage-height record Feb. 25 to Mar. 16.

SANTA MARIA RIVER BASIN

11-1368. CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CALIF.

LOCATION.--Lat 35°01'19", long 120°13'39", in SW $\frac{1}{4}$ sec.14, T.11 N., R.32 W., San Luis Obispo-Santa Barbara County line, on downstream side of second pier from right abutment of bridge on State Highway 166, 0.7 mile downstream from Buckhorn Canyon, and 13 miles northeast of Santa Maria.

DRAINAGE AREA.--884 sq mi.

PERIOD OF RECORD.--October 1903 to December 1905 (published as Santa Maria River near Santa Maria), October 1959 to September 1968.

GAGE.--Water-stage recorder. Altitude of gage is 760 ft (from topographic map). Prior to October 1959, non-recording gage at different site and datum.

AVERAGE DISCHARGE.--12 years, 28.9 cfs (20,940 acre-ft per year); median of yearly mean discharges, 3.0 cfs (2,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,800 cfs Feb. 25 (gage height, 13.70 ft), from rating curve extended as explained below; no flow Oct. 1 to Jan. 18.

Period of record: Maximum discharge, 17,800 cfs Feb. 25, 1969 (gage height, 13.70 ft), from rating curve extended above 4,900 cfs on basis of slope-area measurement at gage height 10.85 ft; no flow at times in most years.

REMARKS.--Records fair. No regulation above station. Pumping from wells along stream for irrigation in upper Cuyama Valley.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	192	917	92	44	15	12	5.5	3.6
2	0	0	0	0	172	648	92	42	14	11	5.5	3.3
3	0	0	0	0	154	523	140	42	14	11	5.5	3.3
4	0	0	0	0	140	481	100	40	14	10	5.2	3.3
5	0	0	0	0	238	430	160	40	14	10	4.9	3.3
6	0	0	0	0	1,510	358	180	38	14	10	4.9	3.3
7	0	0	0	0	878	278	100	37	14	10	4.9	3.6
8	0	0	0	0	422	310	90	35	14	10	4.9	3.8
9	0	0	0	0	320	278	83	34	15	9.5	4.9	3.6
10	0	0	0	0	270	262	83	33	15	9.5	4.9	3.3
11	0	0	0	0	234	214	78	31	15	9.5	4.9	3.3
12	0	0	0	0	254	189	76	30	14	9.3	4.9	3.3
13	0	0	0	0	238	172	73	29	14	9.3	4.9	3.3
14	0	0	0	0	196	165	70	29	14	9.3	4.6	3.3
15	0	0	0	0	196	160	68	29	14	9.3	4.6	3.6
16	0	0	0	0	189	155	65	29	14	8.9	4.6	3.6
17	0	0	0	0	172	150	62	29	14	8.9	4.6	3.6
18	0	0	0	0	210	145	60	29	14	8.9	4.6	3.3
19	0	0	0	10	274	140	58	29	14	8.9	4.6	3.3
20	0	0	0	53	250	135	56	29	14	8.5	4.6	3.3
21	0	0	0	684	210	129	54	28	13	8.1	4.3	3.3
22	0	0	0	1,230	282	120	52	27	13	8.1	4.1	3.3
23	0	0	0	104	654	110	52	26	13	7.7	4.1	3.3
24	0	0	0	232	3,820	106	50	24	13	7.7	4.1	3.1
25	0	0	0	5,460	9,390	104	50	23	13	7.7	3.8	3.1
26	0	0	0	4,650	2,420	102	50	21	12	7.7	3.8	3.1
27	0	0	0	900	1,350	100	48	20	12	7.3	3.8	3.1
28	0	0	0	400	1,120	100	48	19	12	7.3	3.8	3.1
29	0	0	0	274	-----	98	46	17	12	6.9	3.8	3.1
30	0	0	0	250	-----	96	46	16	12	6.5	3.8	2.9
31	0	-----	0	222	-----	94	-----	15	-----	6.1	3.6	-----
TOTAL	0	0	0	14,469	25,755	7,269	2,282	914	409	274.9	141.0	99.7
MEAN	0	0	0	467	920	234	76.1	29.5	13.6	8.87	4.55	3.32
MAX	0	0	0	5,460	9,390	917	180	44	15	12	5.5	3.8
MIN	0	0	0	0	140	94	46	15	12	6.1	3.6	2.9
AC-FT	0	0	0	28,700	51,080	14,420	4,530	1,810	811	545	280	198

CAL YR 1968	TOTAL	360.70	MEAN	.99	MAX	42	MIN	0	AC-FT	715
WTR YR 1969	TOTAL	51,613.60	MEAN	141	MAX	9,390	MIN	0	AC-FT	102,400

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-22	0230	8.82	4,550	2-25	0830	13.70	17,800
1-25	2330	13.00	15,700	4- 5	unknown	unknown	unknown
2- 6	1600	7.33	1,590				

NOTE.--No gage-height record Mar. 14 to July 11.

SANTA MARIA RIVER BASIN

281

11-1374. ALAMO CREEK NEAR NIPOMO, CALIF.

LOCATION.--Lat 35°02'55", long 120°18'05", in Huasna Grant, San Luis Obispo County, on right bank 3.2 miles upstream from mouth, and 10 miles east of Nipomo.

DRAINAGE AREA.--83.3 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 650 ft (from topographic map). Prior to Oct. 1, 1966, at datum 2.00 ft higher.

AVERAGE DISCHARGE.--10 years, 11.2 cfs (8,110 acre-ft per year); median of yearly mean discharges, zero.

EXTREMES.--Current year: Maximum discharge, 9,020 cfs Jan. 25 (gage height, 10.51 ft), from rating curve extended as explained below; no flow for several months.

Period of record: Maximum discharge, 9,020 cfs Jan. 25, 1969 (gage height, 10.51 ft), from rating curve extended above 3,100 cfs on basis of slope-area measurement at gage height 10.30 ft; no flow for all or part of each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	146	670	29	11	1.7	0	.06	0
2	0	0	0	0	135	575	30	10	1.5	0	.06	0
3	0	0	0	0	133	482	46	11	1.5	0	.03	0
4	0	0	0	0	128	362	32	11	1.5	0	.03	0
5	0	0	0	0	184	289	44	9.7	1.2	0	.03	0
6	0	0	0	0	967	232	63	8.8	1.2	0	.01	0
7	0	0	0	0	429	192	42	8.4	1.2	0	.01	0
8	0	0	0	0	203	161	38	8.0	1.2	0	0	0
9	0	0	0	0	198	141	30	8.0	1.0	0	0	0
10	0	0	0	0	144	126	29	7.6	1.0	0	0	0
11	0	0	0	0	116	118	26	6.8	.77	0	0	0
12	0	0	0	0	120	106	24	6.4	.66	0	0	0
13	0	0	0	0	106	103	23	6.0	.66	0	0	0
14	0	0	0	0	96	86	22	5.6	.66	0	0	0
15	0	0	0	0	108	78	21	5.2	.66	0	0	0
16	0	0	0	0	110	72	20	4.3	.66	0	0	0
17	0	0	0	0	94	67	19	3.7	.66	0	0	0
18	0	0	0	0	118	62	18	3.2	.66	0	0	0
19	0	0	0	205	170	60	17	2.9	.55	0	0	0
20	0	0	0	71	157	60	16	2.6	.55	0	0	0
21	0	0	0	824	135	62	16	2.4	.55	0	0	0
22	0	0	0	225	168	50	16	2.4	.46	0	0	0
23	0	0	0	49	429	46	17	2.2	.46	.06	0	0
24	0	0	0	298	2,220	43	17	2.0	.46	.06	0	0
25	0	0	0	2,980	1,400	40	16	2.0	.38	.06	0	0
26	0	0	0	1,420	700	37	14	1.9	.30	.06	0	0
27	0	0	0	742	575	35	13	1.7	.24	.06	0	0
28	0	0	0	422	652	33	12	1.7	.18	.06	0	0
29	0	0	0	323	-----	32	11	1.7	.06	.06	0	0
30	0	0	0	203	-----	30	11	1.7	0	.06	0	0
31	0	-----	0	150	-----	29	-----	1.7	-----	.06	0	-----
TOTAL	0	0	0	7,912	10,141	4,479	732	161.6	22.58	0.54	0.23	0
MEAN	0	0	0	255	362	144	24.4	5.21	.75	.017	.007	0
MAX	0	0	0	2,980	2,220	670	63	11	1.7	.06	.06	0
MIN	0	0	0	0	94	29	11	1.7	0	0	0	0
AC-FT	0	0	0	15,690	20,110	8,880	1,450	321	45	1.1	.5	0
CAL YR 1968	TOTAL	.10	MEAN	.0003	MAX	.1	MIN	0	AC-FT	.2		
WTR YR 1969	TOTAL	23,448.95	MEAN	64.2	MAX	2,980	MIN	0	AC-FT	46,510		

REMARKS.--Records fair. No regulation or diversion above station.

PEAK DISCHARGE (BASE, 50 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1300	6.15	2,000	2-24	1800	9.58	6,800
1-25	0900	10.51	9,020	4-6	0030	4.59	96
2-6	0100	6.10	1,110				

SANTA MARIA RIVER BASIN

11-1379. HUASNA RIVER NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°04'40", long 120°22'15", in Huasna Grant, San Luis Obispo County, on right bank 300 ft downstream from Huasna Creek, and 12 miles southeast of Arroyo Grande.

DRAINAGE AREA.--104 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 640 ft (from topographic map).

AVERAGE DISCHARGE.--10 years, 24.6 cfs (17,820 acre-ft per year); median of yearly mean discharges, 3.0 cfs (2,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,000 cfs Jan. 25 (gage height, 15.90 ft), from rating curve extended above 1,300 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.20 cfs Oct. 1 to Nov. 14.

Period of record: Maximum discharge, 21,000 cfs Jan. 25, 1969 (gage height, 15.90 ft), from rating curve extended above 1,300 cfs on basis of slope-area measurement of maximum flow; no flow for many days in most years.

REMARKS.--Records fair. No regulation above station. Some diversions by pumping for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	.30	.3	179	1,610	46	18	3.7	2.5	1.8	1.3
2	.20	.20	.30	.3	156	1,260	56	17	3.6	2.5	1.8	1.2
3	.20	.20	.30	.3	153	944	68	17	3.6	2.5	1.6	1.1
4	.20	.20	.30	.3	147	709	49	17	3.6	2.5	1.5	1.2
5	.20	.20	.30	.3	288	512	72	16	3.5	2.4	1.5	1.2
6	.20	.20	.30	.3	1,750	415	85	16	3.5	2.4	1.5	1.2
7	.20	.20	.30	.3	561	345	63	15	3.5	2.4	1.5	1.2
8	.20	.20	.30	.3	450	280	52	15	3.4	2.4	1.5	1.2
9	.20	.20	.30	.3	295	224	46	15	3.4	2.4	1.5	.96
10	.20	.20	.30	.3	270	199	46	14	3.4	2.4	1.5	.96
11	.20	.20	.30	.3	215	153	43	13	3.4	2.4	1.5	.96
12	.20	.20	.30	.3	191	144	41	12	3.1	2.2	1.5	.96
13	.20	.20	.30	.3	130	136	38	11	3.0	2.1	1.5	.96
14	.20	.20	.30	.3	161	120	36	10	3.0	2.1	1.5	1.0
15	.20	.30	.30	.3	199	105	33	9.4	3.0	2.0	1.5	1.1
16	.20	.30	.30	.3	169	100	31	8.0	3.0	2.0	1.5	1.1
17	.20	.30	.30	.3	130	95	31	7.0	3.0	2.0	1.5	1.1
18	.20	.30	.30	12	157	89	30	6.0	2.8	2.0	1.5	1.1
19	.20	.30	.30	1,950	194	82	29	5.4	2.8	2.0	1.5	1.1
20	.20	.30	.30	581	179	80	29	5.0	2.8	2.0	1.4	1.1
21	.20	.30	.30	2,640	155	82	28	4.8	2.8	2.0	1.4	1.0
22	.20	.30	.30	519	816	72	27	4.6	2.6	2.0	1.4	1.0
23	.20	.30	.30	215	733	68	27	4.5	2.6	2.0	1.4	1.0
24	.20	.30	.30	857	4,580	63	26	4.4	2.8	1.9	1.3	1.0
25	.20	.30	.30	7,790	2,400	60	25	4.3	2.8	1.9	1.3	1.0
26	.20	.30	.30	3,300	1,360	55	24	4.2	2.8	1.9	1.3	.90
27	.20	.30	.30	912	1,040	53	22	4.1	2.6	1.9	1.3	.90
28	.20	.30	.30	665	1,880	52	21	4.0	2.5	1.9	1.3	.90
29	.20	.30	.30	447	-----	50	20	3.9	2.5	1.9	1.3	.90
30	.20	.30	.30	279	-----	49	19	3.8	2.5	1.9	1.3	.90
31	.20	-----	.30	206	-----	46	-----	3.7	-----	1.8	1.3	-----
TOTAL	6.20	7.60	9.30	20,378.1	18,938	8,252	1,163	293.1	91.6	66.3	45.2	31.50
MEAN	.20	.25	.30	657	676	266	38.8	9.45	3.05	2.14	1.46	1.05
MAX	.20	.30	.30	7,790	4,580	1,610	85	18	3.7	2.5	1.8	1.3
MIN	.20	.20	.30	.30	130	46	19	3.7	2.5	1.8	1.3	.90
AC-FT	12	15	18	40,420	37,560	16,370	2,310	581	182	132	90	62

CAL YR 1968 TOTAL 339.80 MEAN .93 MAX 17 MIN .10 AC-FT 674
WTR YR 1969 TOTAL 49,281.90 MEAN 135 MAX 7,790 MIN .20 AC-FT 97,750

PEAK DISCHARGE (BASE, 40 CFS)
DATE TIME G.H. DISCHARGE
1-19 1100 10.48 7,780
1-25 0600 15.90 21,000
2- 6 0230 6.50 3,160

NOTE.--No gage-height record May 5 to June 8.
DATE TIME G.H. DISCHARGE
2-24 1700 13.25 15,000
2-28 1500 6.23 2,920
4- 5 1500 4.98 167

SANTA MARIA RIVER BASIN

283

11-1381. CUYAMA RIVER BELOW TWITCHELL DAM, CALIF.

LOCATION.--Lat 34°56'40", long 120°17'30", in Suey Grant, Santa Barbara County, on left bank 3.5 miles upstream from mouth, 4 miles northeast of Garey, and 4.4 miles downstream from Twitchell Dam.

DRAINAGE AREA.--1,133 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 6,920 cfs Feb. 25 (gage height, 10.58 ft); no flow Oct. 1 to Jan. 19.

Period of record: Maximum discharge, 6,920 cfs Feb. 25, 1969 (gage height, 10.58 ft); no flow at times in each year.

REMARKS.--Records good. Flow regulated since February 1959 by Twitchell Reservoir (capacity, 240,000 acre-ft). Some pumping from wells along stream for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	4.9	2,570	6.4	126	235	248	252	235
2	0	0	0	0	4.4	4,130	6.7	124	232	250	252	266
3	0	0	0	0	4.1	4,000	7.3	124	233	252	252	265
4	0	0	0	0	3.7	4,020	6.2	163	236	256	256	265
5	0	0	0	0	7.9	4,000	8.8	166	236	256	254	263
6	0	0	0	0	10	3,420	7.9	166	236	252	255	261
7	0	0	0	0	6.7	1,920	6.5	166	232	256	256	262
8	0	0	0	0	5.0	1,990	6.2	166	232	256	256	261
9	0	0	0	0	4.5	2,000	6.2	182	232	260	257	261
10	0	0	0	0	4.6	2,000	6.0	227	228	256	252	262
11	0	0	0	0	7.3	1,410	5.8	232	220	256	253	278
12	0	0	0	0	13	762	5.8	229	220	256	255	276
13	0	0	0	0	9.2	500	5.6	214	220	260	255	275
14	0	0	0	0	8.8	347	5.4	211	220	256	256	272
15	0	0	0	0	12	23	5.0	214	217	256	258	268
16	0	0	0	0	12	16	5.0	214	220	256	259	268
17	0	0	0	0	12	14	5.1	214	228	260	258	271
18	0	0	0	0	16	12	5.0	216	256	256	253	283
19	0	0	0	.12	20	11	5.0	216	252	260	251	281
20	0	0	0	4.7	19	10	4.9	219	248	256	251	279
21	0	0	0	6.4	18	11	4.9	219	244	252	251	277
22	0	0	0	5.3	23	9.4	5.1	222	244	252	249	272
23	0	0	0	2.0	28	8.8	5.3	226	244	252	249	271
24	0	0	0	3.7	47	8.3	5.1	224	236	252	249	267
25	0	0	0	38	1,630	7.9	5.1	228	236	256	249	267
26	0	0	0	34	291	7.6	5.4	225	236	252	247	266
27	0	0	0	16	345	7.4	5.8	228	240	252	250	260
28	0	0	0	11	1,920	7.2	6.3	226	244	248	253	264
29	0	0	0	7.7	-----	7.0	7.0	230	240	252	254	269
30	0	0	0	6.2	-----	6.9	41	233	244	252	257	283
31	0	-----	0	5.4	-----	6.6	-----	233	-----	252	261	-----
TOTAL	0	0	0	140.52	4,487.1	33,243.1	211.8	6,283	7,041	7,886	7,860	8,048
MEAN	0	0	0	4.53	160	1,072	7.06	203	235	254	254	268
MAX	0	0	0	38	1,920	4,130	41	233	256	260	261	283
MIN	0	0	0	0	3.7	6.6	4.9	124	217	248	247	235
AC-FT	0	0	0	279	8,900	65,940	420	12,460	13,970	15,640	15,590	15,960
CAL YR 1968	TOTAL	9,667.60	MEAN	26.4	MAX	129	MIN	0	AC-FT	19,180		
WTR YR 1969	TOTAL	75,200.52	MEAN	206	MAX	4,130	MIN	0	AC-FT	149,200		

SANTA MARIA RIVER BASIN

11-1385, SISQUOC RIVER NEAR SISQUOC, CALIF.

LOCATION (revised).--Lat 34°50'23", long 120°10'02", in Sisquoc Grant, Santa Barbara County, on left bank 2.6 miles upstream from La Brea Creek, and 7 miles east of Sisquoc.

DRAINAGE AREA.--281 sq mi.

PERIOD OF RECORD.--October 1943 to current year. October 1929 to September 1933, at site 0.2 mile downstream; low-flow records not equivalent owing to diversion immediately upstream. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 624.30 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). See WSP 1735 for history of changes prior to Aug. 24, 1951.

AVERAGE DISCHARGE.--26 years, 43.9 cfs (31,810 acre-ft per year); median of yearly mean discharges, 15 cfs (10,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,400 cfs Jan. 25 (gage height, 15.39 ft), from rating curve extended as explained below; minimum daily, 0.36 cfs Oct. 26.

Period of record: Maximum discharge, 23,200 cfs Dec. 6, 1966 (gage height, 15.75 ft), from rating curve extended above 1,700 cfs on basis of slope-area measurements at gage heights 10.08 and 15.75 ft; no flow Nov. 11-18, 1967.

Flood of Mar. 2, 1938, 11,000 cfs (gage height, 8.1 ft, from high-water mark in gage well, at site in use 1929-33), from rating curve extended above 2,800 cfs.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.55	.92	2.9	515	2,500	399	150	75	38	17	7.9
2	.60	.52	.98	4.4	485	2,110	375	145	74	35	16	6.5
3	.60	.75	1.0	7.0	450	1,810	458	145	73	33	17	8.0
4	.55	.66	1.0	9.8	406	1,600	368	140	71	32	16	6.8
5	.54	.63	.99	13	465	1,400	444	136	70	34	15	7.3
6	.61	.56	1.0	17	1,780	1,200	483	134	67	33	14	7.7
7	.65	.59	1.0	23	1,120	1,000	409	131	65	33	14	7.6
8	.62	.54	1.1	30	980	900	382	131	64	32	14	7.0
9	.58	.50	1.1	37	920	800	361	128	62	31	14	6.5
10	.58	.53	1.3	43	848	730	350	131	59	30	14	6.3
11	.58	.53	1.7	50	776	650	342	147	57	30	13	6.3
12	.58	.52	1.5	63	728	570	340	121	54	31	14	6.4
13	1.1	.55	3.4	53	665	510	332	121	56	30	14	6.8
14	5.2	.79	9.5	35	613	460	310	120	55	30	14	6.9
15	.92	1.9	6.1	20	639	409	295	117	53	28	14	7.1
16	.77	.94	9.8	10	646	379	268	113	51	25	15	7.8
17	.64	.86	10	5.0	560	369	250	108	49	23	15	7.6
18	.65	.84	19	3.0	592	381	240	103	45	20	14	7.4
19	.66	.84	28	834	605	388	235	98	50	21	14	7.1
20	.64	.82	28	1,140	587	380	230	97	50	22	14	7.2
21	.68	.76	25	3,500	562	391	225	96	47	21	14	7.3
22	.74	.81	20	1,250	612	374	220	95	47	22	13	7.2
23	.64	.79	15	800	687	361	215	92	47	22	13	7.1
24	.58	.80	11	1,140	4,960	361	210	90	39	21	13	7.5
25	.40	.82	9.4	14,800	12,000	347	200	86	42	21	13	7.2
26	.36	.85	7.0	10,200	7,380	344	185	83	40	20	11	7.0
27	.38	.87	4.9	5,200	4,800	348	175	82	38	20	11	6.8
28	.43	.86	2.9	2,600	3,100	355	165	81	43	19	11	6.9
29	.71	.82	2.4	1,600	-----	356	160	77	48	19	10	6.7
30	.73	.85	2.2	1,000	-----	367	155	75	39	19	9.1	6.6
31	.54	-----	1.6	687	-----	385	-----	75	-----	18	8.4	-----
TOTAL	23.86	22.65	228.79	45,177.1	48,481	22,535	8,781	3,448	1,630	813	418.5	212.5
MEAN	.77	.76	7.38	1,457	1,731	727	293	111	54.3	26.2	13.5	7.08
MAX	5.2	1.9	28	14,800	12,000	2,500	483	150	75	38	17	8.0
MIN	.36	.50	.92	2.9	406	344	155	75	38	18	8.4	6.3
AC-FT	47	45	454	89,610	96,160	44,700	17,420	6,840	3,230	1,610	830	421

CAL YR 1968 TOTAL 3,682.20 MEAN 10.1 MAX 500 MIN .30 AC-FT 7,300
WTR YR 1969 TOTAL 131,771.40 MEAN 361 MAX 14,800 MIN .36 AC-FT 261,400

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0615	10.49	7,650	2-24	2030	14.36	17,800
1-25	1000	15.39	21,400	4- 5	2200	3.76	758
2- 6	0500	6.00	2,650				

NOTE.--Discharge Jan. 14-31, Feb. 23 to Mar. 14 computed from partly reconstructed graph.

SANTA MARIA RIVER BASIN

285

11-1390. LA BREA CREEK NEAR SISQUOC, CALIF.

LOCATION.--Lat 34°51'10", long 120°11'55", in SE¼ sec.13, T.9 N., R.32 W., Santa Barbara County, on right bank 2,100 ft upstream from mouth, and 5.5 miles east of Sisquoc.

DRAINAGE AREA.--93.5 sq mi.

PERIOD OF RECORD.--October 1943 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 550 ft (from topographic map).

AVERAGE DISCHARGE.--26 years, 7.51 cfs (5,440 acre-ft per year); median of yearly mean discharges, 0.7 cfs (510 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,820 cfs Jan. 25 (gage height, 6.43 ft), on basis of slope-area measurement of peak flow; no flow Oct. 1 to Jan. 18, July 14 to Sept. 30.

Period of record: Maximum discharge, 11,200 cfs Dec. 6, 1966 (gage height, 8.23 ft), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow for most of each year.

REMARKS.--Records poor. Perennial low flow from basin above sinks beneath streambed before reaching station. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	86	480	35	21	6.6	.80	0	0
2	0	0	0	0	66	400	35	20	6.5	.67	0	0
3	0	0	0	0	58	340	56	19	6.4	.44	0	0
4	0	0	0	0	52	290	44	18	6.3	.38	0	0
5	0	0	0	0	102	240	80	18	6.2	.28	0	0
6	0	0	0	0	411	200	60	17	6.0	.24	0	0
7	0	0	0	0	240	180	45	17	5.9	.14	0	0
8	0	0	0	0	200	160	41	16	5.8	.14	0	0
9	0	0	0	0	160	140	37	16	5.7	.09	0	0
10	0	0	0	0	120	125	36	15	5.6	.06	0	0
11	0	0	0	0	110	115	35	20	5.6	.02	0	0
12	0	0	0	0	120	105	34	15	5.5	.02	0	0
13	0	0	0	0	100	95	33	14	5.3	.01	0	0
14	0	0	0	0	82	87	33	14	5.0	0	0	0
15	0	0	0	0	80	80	32	13	4.7	0	0	0
16	0	0	0	0	95	75	31	13	4.4	0	0	0
17	0	0	0	0	95	71	30	12	4.1	0	0	0
18	0	0	0	0	90	67	29	11	3.8	0	0	0
19	0	0	0	.70	87	63	28	11	3.6	0	0	0
20	0	0	0	61	118	60	28	10	3.3	0	0	0
21	0	0	0	702	107	57	27	9.6	3.0	0	0	0
22	0	0	0	712	111	65	26	9.2	2.7	0	0	0
23	0	0	0	283	238	62	25	8.6	2.4	0	0	0
24	0	0	0	438	2,000	58	24	8.0	2.1	0	0	0
25	0	0	0	2,950	2,200	54	24	7.4	1.8	0	0	0
26	0	0	0	2,000	1,200	50	23	7.2	1.6	0	0	0
27	0	0	0	1,000	1,000	46	23	7.2	1.4	0	0	0
28	0	0	0	500	600	42	22	7.0	1.2	0	0	0
29	0	0	0	250	-----	38	22	7.0	1.0	0	0	0
30	0	0	0	130	-----	34	21	7.0	.90	0	0	0
31	0	-----	0	100	-----	35	-----	6.8	-----	0	0	-----
TOTAL	0	0	0	9,126.70	9,928	3,914	1,019	395.0	124.40	3.29	0	0
MEAN	0	0	0	294	355	126	34.0	12.7	4.15	.11	0	0
MAX	0	0	0	2,950	2,200	480	80	21	6.6	.80	0	0
MIN	0	0	0	0	52	34	21	6.8	.90	0	0	0
AC-FT	0	0	0	18,100	19,690	7,760	2,020	783	247	6.5	0	0
CAL YR 1968	TOTAL	239.70	MEAN	.65	MAX	104	MIN	0	AC-FT	475		
WTR YR 1969	TOTAL	24,510.39	MEAN	67.2	MAX	2,950	MIN	0	AC-FT	48,620		

PEAK DISCHARGE (BASE, 30 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-22	0600	4.63	1,290	2-6	0830	3.72	585
1-25	1100	6.43	5,820	2-24	1930	4.67	5,100

NOTE.--No gage-height record Jan. 26-31, Feb. 8-13, 15-18, Feb. 24 to July 1.

SANTA MARIA RIVER BASIN

11-1393.5, FOXEN CREEK NEAR SISQUOC, CALIF.

LOCATION.--Lat 34°48'58", long 120°13'26", in La Laguna Grant, Santa Barbara County, on left upstream wingwall to culvert on Foxen Canyon road, 3.0 miles upstream from mouth, and 3.7 miles southeast of Sisquoc.

DRAINAGE AREA.--16.8 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 650 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 271 cfs Feb. 26 (gage height, 4.91 ft), from rating curve extended above 24 cfs on basis of slope-conveyance of maximum flow; minimum daily, 0.03 cfs Jan. 2, 3.

Period of record: Maximum discharge, 271 cfs Feb. 26, 1969 (gage height, 4.91 ft), from rating curve extended above 24 cfs on basis of slope-conveyance measurement of maximum flow; no flow for many days in most years.

REMARKS.--Records fair. Small diversion dam for irrigation of about 160 acres above gage. Some pumping from wells along stream above gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.06	.06	.04	3.0	19	1.7	1.0	.76	.65	.48	.48
2	.09	.06	.06	.03	2.4	15	2.0	1.0	.76	.65	.48	.48
3	.06	.06	.06	.03	1.8	12	2.4	1.0	.76	.65	.48	.48
4	.05	.06	.06	.04	1.5	10	1.8	.94	.76	.65	.48	.44
5	.05	.06	.05	.05	1.2	9.1	6.4	.89	.76	.65	.48	.53
6	.05	.06	.08	.05	13	7.8	3.1	.90	.76	.65	.48	.51
7	.06	.06	.08	.06	8.5	7.1	2.2	.97	.76	.65	.48	.51
8	.06	.06	.07	.08	3.9	6.2	1.8	.94	.76	.65	.48	.52
9	.04	.06	.07	.08	2.6	5.5	1.7	.93	.76	.65	.48	.48
10	.04	.06	.09	.08	1.7	5.3	1.6	.77	.76	.65	.48	.48
11	.04	.06	.11	.08	1.3	4.6	1.5	.76	.76	.65	.48	.48
12	.05	.06	.06	.08	1.6	3.9	1.5	.76	.65	.65	.48	.48
13	.06	.06	.06	.09	.91	3.8	1.4	.76	.76	.65	.48	.48
14	.06	.06	.06	.10	.68	3.2	1.4	.76	.65	.65	.48	.48
15	.06	.06	.06	.10	1.2	2.8	1.4	.76	.76	.65	.48	.47
16	.06	.05	.06	.10	.79	2.7	1.4	.76	.76	.65	.48	.48
17	.06	.05	.06	.12	.64	2.5	1.3	.76	.76	.56	.48	.45
18	.06	.05	.06	.14	1.9	2.3	1.3	.76	.76	.56	.48	.43
19	.07	.05	.06	.50	4.0	2.2	1.3	.76	.76	.56	.48	.51
20	.08	.05	.06	.14	3.3	2.2	1.3	.76	.65	.56	.48	.51
21	.08	.06	.06	.43	3.7	2.5	1.3	.76	.65	.56	.48	.51
22	.08	.06	.05	.12	9.2	2.0	1.2	.76	.65	.56	.48	.48
23	.07	.04	.05	.06	34	2.0	1.3	.76	.65	.56	.48	.43
24	.06	.04	.06	.37	97	1.9	1.2	.76	.65	.56	.48	.43
25	.06	.04	.06	32	90	1.8	1.2	.76	.65	.56	.48	.43
26	.06	.04	.06	45	46	1.7	1.2	.76	.65	.56	.48	.43
27	.06	.06	.06	17	28	1.7	1.0	.76	.65	.56	.48	.50
28	.06	.07	.08	9.6	27	1.6	1.0	.76	.65	.56	.48	.50
29	.06	.06	.07	7.2	-----	1.5	1.0	.76	.65	.48	.48	.50
30	.06	.06	.06	4.3	-----	1.5	1.0	.76	.65	.48	.48	.50
31	.12	-----	.05	3.4	-----	1.5	-----	.76	-----	.48	.48	-----
TOTAL	1.97	1.68	1.99	121.47	390.82	146.9	49.9	25.30	21.37	18.56	14.88	14.39
MEAN	.064	.056	.064	3.92	14.0	4.74	1.66	.82	.71	.60	.48	.48
MAX	.12	.07	.11	45	97	19	6.4	1.0	.76	.65	.48	.53
MIN	.04	.04	.05	.03	.64	1.5	1.0	.76	.65	.48	.48	.43
AC-FT	3.9	3.3	4.0	241	775	291	99	50	42	37	30	29

CAL YR 1968 TOTAL 33.68 MEAN .092 MAX .60 MIN 0 AC-FT 67
WTR YR 1969 TOTAL 809.23 MEAN 2.22 MAX 97 MIN .03 AC-FT 1,610

PEAK DISCHARGE (BASE, 15 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-26	0900	3.42	99	2-24	1830	4.91	271
2- 6	1445	1.70	19	4- 5	1730	1.65	18

11-1395. TEPUSQUET CREEK NEAR SISQUOC, CALIF.

LOCATION.--Lat 34°52'21", long 120°14'37", in NE¼ sec.9, T.9 N., R.32 W., Santa Barbara County, on downstream wingwall of right bridge abutment, 1.1 miles upstream from mouth, and 3 miles east of Sisquoc.

DRAINAGE AREA.--28.7 sq mi.

PERIOD OF RECORD.--October 1943 to current year.

GAGE.--Water-stage recorder. Concrete control since July 1957. Altitude of gage is 500 ft (from topographic map). Prior to Dec. 9, 1948, at datum 0.9 ft higher.

AVERAGE DISCHARGE.--26 years, 1.58 cfs (1,140 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 785 cfs Feb. 24 (gage height, 5.47 ft), from rating curve extended as explained below; minimum daily, 0.03 cfs Oct. 24, 25.

Period of record: Maximum discharge, 788 cfs Dec. 6, 1966 (gage height, 5.48 ft), from rating curve extended above 220 cfs on basis of computation of maximum flow at contracted opening; no flow at times in some years.

REMARKS.--Records fair. No regulation above station. Some diversion by pumping from wells along stream to irrigate about 100 acres above gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.12	.16	.15	3.2	77	6.2	3.5	3.4	1.8	1.3	1.1
2	.09	.11	.18	.14	2.4	54	7.5	3.6	3.2	1.9	1.3	1.0
3	.09	.14	.19	.14	2.2	45	10	3.6	2.9	1.7	1.3	1.0
4	.09	.14	.17	.13	2.1	26	7.7	3.6	2.6	1.7	1.3	1.0
5	.09	.11	.17	.13	16	22	22	3.6	2.4	1.8	1.4	.90
6	.09	.10	.18	.12	126	19	19	3.6	2.5	1.7	1.4	.90
7	.09	.10	.18	.12	90	17	14	3.6	2.5	1.6	1.3	.90
8	.09	.08	.20	.13	45	18	11	3.6	2.6	1.5	1.5	.80
9	.09	.06	.18	.13	30	18	9.6	3.6	2.6	1.4	1.5	.80
10	.09	.05	.20	.13	22	21	7.8	3.6	2.6	1.3	1.6	.80
11	.09	.05	.21	.13	18	21	7.2	3.6	2.7	1.3	1.6	.70
12	.09	.06	.20	.13	18	24	6.8	3.6	2.3	1.3	1.6	.70
13	.10	.06	.21	.16	15	21	5.0	3.6	2.3	1.3	1.7	.70
14	.16	.07	.22	.19	14	13	5.4	3.6	2.5	1.3	1.8	.70
15	.07	.21	.22	.14	15	12	7.3	3.6	2.3	1.3	1.7	.68
16	.06	.12	.23	.10	12	9.7	7.6	3.6	1.9	1.2	1.6	.68
17	.05	.10	.19	.14	11	8.3	7.1	3.6	1.8	1.2	1.7	.67
18	.06	.10	.20	.23	17	7.9	6.9	3.6	1.7	1.2	1.7	.69
19	.05	.09	.20	.83	27	6.1	6.7	3.6	1.8	1.2	1.6	.68
20	.05	.07	.21	1.5	35	5.8	5.7	3.6	1.7	1.1	1.7	.66
21	.05	.07	.21	45	29	7.0	5.1	3.6	1.6	1.1	1.7	.72
22	.06	.08	.21	57	39	6.3	5.2	3.6	1.5	1.2	1.7	.69
23	.04	.08	.18	2.8	101	4.9	5.5	3.6	1.5	1.2	1.7	.73
24	.03	.09	.18	90	329	4.5	5.0	3.6	1.5	1.3	1.6	.66
25	.03	.11	.22	501	388	4.8	4.8	3.6	1.5	1.3	1.5	.54
26	.06	.11	.22	330	172	4.6	3.7	3.6	1.4	1.3	1.5	.79
27	.05	.11	.19	121	77	4.8	3.5	3.4	1.6	1.3	1.5	.81
28	.06	.13	.19	80	79	5.2	3.4	3.4	1.6	1.3	1.5	.73
29	.10	.15	.18	56	-----	4.7	3.5	4.0	1.7	1.3	1.3	.70
30	.13	.16	.17	12	-----	4.6	3.5	4.0	1.8	1.3	1.1	.81
31	.12	-----	.16	5.5	-----	4.9	-----	4.0	-----	1.3	1.0	-----
TOTAL	2.40	3.03	6.01	1,305.17	1,734.9	502.1	223.7	112.3	64.0	42.7	46.7	23.24
MEAN	.077	.10	.19	42.1	62.0	16.2	7.46	3.62	2.13	1.38	1.51	.77
MAX	.16	.21	.23	501	388	77	22	4.0	3.4	1.9	1.8	1.1
MIN	.03	.05	.16	.10	2.1	4.5	3.4	3.4	1.4	1.1	1.0	.54
AC-FT	4.8	6.0	12	2,590	3,440	996	444	223	127	85	93	46

CAL YR 1968 TOTAL 104.80 MEAN .29 MAX .82 MIN 0 AC-FT 208
WTR YR 1969 TOTAL 4,066.25 MEAN 11.1 MAX 501 MIN .03 AC-FT 8,070

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-22	0300	3.76	169	2-6	1600	3.23	171
1-25	0845	5.46	782	2-24	1845	5.47	785

SANTA MARIA RIVER BASIN

11-1400. SISQUOC RIVER NEAR GAREY, CALIF.

LOCATION.--Lat 34°53'38", long 120°18'20", in SW $\frac{1}{4}$ sec.36, T.10 N., R.33 W., Santa Barbara County, near right bank on downstream side of county road bridge, 0.6 mile northeast of Garey, and 3.7 miles downstream from Tepusquet Creek.

DRAINAGE AREA.--471 sq mi.

PERIOD OF RECORD.--October 1940 to current year. Records for water year 1941 incomplete, yearly estimate and monthly discharge only for October 1940 and January 1941 published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 354.8 ft above mean sea level (Santa Barbara County bench mark). See WSP 1735 for history of changes prior to Oct. 1, 1959. Oct. 1, 1959, to Dec. 30, 1965, at datum 6.00 ft higher. Since Oct. 1, 1959, supplementary gage near left bank at same datum.

AVERAGE DISCHARGE.--29 years, 44.8 cfs (32,460 acre-ft per year); median of yearly mean discharges, 7.3 cfs (5,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 24,500 cfs Jan. 25 (gage height, 13.00 ft); no flow Oct. 1 to Jan. 18, July 8 to Sept. 30.

Period of record: Maximum discharge, 24,500 cfs Jan. 25, 1969 (gage height, 13.00 ft); no flow for several months in each year.

REMARKS.--Records fair. No regulation above station. Pumping from wells along stream for irrigation of about 7,000 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	290	3,040	327	128	28	1.8	0	0
2	0	0	0	0	270	2,700	316	128	18	1.3	0	0
3	0	0	0	0	250	2,200	486	128	9.9	1.1	0	0
4	0	0	0	0	240	1,780	338	128	28	.70	0	0
5	0	0	0	0	450	1,560	555	121	28	.50	0	0
6	0	0	0	0	2,740	1,300	741	114	28	.30	0	0
7	0	0	0	0	2,610	1,160	327	108	25	.20	0	0
8	0	0	0	0	1,830	1,000	272	108	25	0	0	0
9	0	0	0	0	1,340	874	261	102	25	0	0	0
10	0	0	0	0	820	803	272	95	25	0	0	0
11	0	0	0	0	744	720	241	161	25	0	0	0
12	0	0	0	0	1,040	630	241	134	18	0	0	0
13	0	0	0	0	620	545	250	114	17	0	0	0
14	0	0	0	0	530	545	272	114	16	0	0	0
15	0	0	0	0	516	500	283	108	16	0	0	0
16	0	0	0	0	659	458	283	95	16	0	0	0
17	0	0	0	0	416	416	272	90	14	0	0	0
18	0	0	0	0	818	416	272	72	12	0	0	0
19	0	0	0	391	910	402	272	77	11	0	0	0
20	0	0	0	6,660	917	388	272	68	10	0	0	0
21	0	0	0	5,900	723	430	272	59	10	0	0	0
22	0	0	0	1,260	1,200	430	261	59	9.4	0	0	0
23	0	0	0	379	4,880	388	239	54	9.4	0	0	0
24	0	0	0	1,150	9,040	338	178	54	8.6	0	0	0
25	0	0	0	13,100	13,200	327	160	50	11	0	0	0
26	0	0	0	10,100	7,040	349	154	47	9.4	0	0	0
27	0	0	0	4,000	3,180	360	147	47	7.9	0	0	0
28	0	0	0	2,400	3,350	360	134	44	6.1	0	0	0
29	0	0	0	1,080	-----	349	134	39	7.1	0	0	0
30	0	0	0	700	-----	338	128	33	2.8	0	0	0
31	0	-----	0	350	-----	327	-----	30	-----	0	0	-----
TOTAL	0	0	0	47,470	60,623	25,433	8,360	2,709	476.6	5.90	0	0
MEAN	0	0	0	1,531	2,165	820	279	87.4	15.9	.19	0	0
MAX	0	0	0	13,100	13,200	3,040	741	161	28	1.8	0	0
MIN	0	0	0	0	240	327	128	30	2.8	0	0	0
AC-FT	0	0	0	94,160	120,200	50,450	16,580	5,370	945	12	0	0

CAL YR 1968	TOTAL	1,145.90	MEAN	3.13	MAX	601	MIN	0	AC-FT	2,270
WTR YR 1969	TOTAL	145,077.50	MEAN	397	MAX	13,200	MIN	0	AC-FT	287,800

PEAK DISCHARGE (BASE, 100 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0800	10.15	12,600	2-28	2100	9.80	4,800
1-25	1030	13.00	24,500	4-6	0100	8.85	1,420
2-6	0700	8.90	4,560	5-11	0200	9.27	205
2-24	2200	12.14	20,600				

NOTE.--No gage-height record Jan. 27, 28, Jan. 30 to Feb. 5.

11-1410. SANTA MARIA RIVER AT GUADALUPE, CALIF.

LOCATION.--Lat 34°58'35", long 120°34'15", in Guadalupe Grant, Santa Barbara County, on downstream side of seventh bridge pier from left bank on State Highway 1, 0.5 mile north of Guadalupe, and 4.5 miles upstream from mouth.

DRAINAGE AREA.--1,741 sq mi.

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only, October 1940 to January 1941, published in WSP 1315-B.

GAGE.--Water-stage recorder and supplementary gage near right bank. Datum of gage is 64.92 ft above mean sea level. Prior to Aug. 11, 1955, at site 100 ft upstream at same datum.

AVERAGE DISCHARGE.--29 years, 36.8 cfs (26,660 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 27,200 cfs Feb. 25 (gage height, 10.0 ft); no flow for several months. Period of record: Maximum discharge, 32,800 cfs Jan. 16, 1952 (gage height, 8.18 ft); no flow for several months in each year.

REMARKS.--Records fair. Flow of Cuyama River regulated since February 1959 by Twitchell Reservoir (capacity, 240,000 acre-ft). Several small surface diversions and extensive pumping from wells for irrigation along stream above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	60	4,920	0	0	0	0	0	0
2	0	0	0	0	40	5,280	3.1	0	0	0	0	0
3	0	0	0	0	20	4,140	217	0	0	0	0	0
4	0	0	0	0	5.0	4,260	113	0	0	0	0	0
5	0	0	0	0	0	3,750	118	0	0	0	0	0
6	0	0	0	0	432	2,240	427	0	0	0	0	0
7	0	0	0	0	1,730	1,300	285	0	0	0	0	0
8	0	0	0	0	898	1,690	162	0	0	0	0	0
9	0	0	0	0	300	1,410	118	0	0	0	0	0
10	0	0	0	0	167	1,190	118	0	0	0	0	0
11	0	0	0	0	114	1,040	11	0	0	0	0	0
12	0	0	0	0	82	548	5.2	0	0	0	0	0
13	0	0	0	0	27	446	2.8	0	0	0	0	0
14	0	0	0	0	5.2	614	1.4	0	0	0	0	0
15	0	0	0	0	3.0	350	0	0	0	0	0	0
16	0	0	0	0	48	200	0	0	0	0	0	0
17	0	0	0	0	.6	120	0	0	0	0	0	0
18	0	0	0	0	1.9	60	0	0	0	0	0	0
19	0	0	0	16	5.2	30	0	0	0	0	0	0
20	0	0	0	389	24	20	0	0	0	0	0	0
21	0	0	0	2,220	34	14	0	0	0	0	0	0
22	0	0	0	725	49	1.8	0	0	0	0	0	0
23	0	0	0	57	165	0	0	0	0	0	0	0
24	0	0	0	25	3,670	0	0	0	0	0	0	0
25	0	0	0	8,540	11,700	.3	0	0	0	0	0	0
26	0	0	0	7,940	4,600	.4	0	0	0	0	0	0
27	0	0	0	2,330	3,490	0	0	0	0	0	0	0
28	0	0	0	674	4,230	0	0	0	0	0	0	0
29	0	0	0	299	-----	0	0	0	0	0	0	0
30	0	0	0	179	-----	0	0	0	0	0	0	0
31	0	-----	0	80	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0	0	23,474	31,900.9	33,624.5	1,581.5	0	0	0	0	0
MEAN	0	0	0	757	1,139	1,085	52.7	0	0	0	0	0
MAX	0	0	0	8,540	11,700	5,280	427	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	46,560	63,270	66,690	3,140	0	0	0	0	0
CAL YR 1968	TOTAL	49.00	MEAN	.13	MAX	49	MIN	0	AC-FT	97		
WTR YR 1969	TOTAL	90,580.90	MEAN	248	MAX	11,700	MIN	0	AC-FT	179,700		

ARROYO GRANDE BASIN

11-1411.5. ARROYO GRANDE ABOVE PHOENIX CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°11'03", long 120°26'11", in Arroyo Grande Grant, San Luis Obispo County, on right bank at county road bridge 100 ft upstream from Phoenix Creek, 8.8 miles northeast of Arroyo Grande.

DRAINAGE AREA.--13.4 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 550 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 1,270 cfs Jan. 25 (gage height, 6.83 ft in gage well, 6.57 ft, from floodmarks), from rating curve extended above 350 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.80 cfs Sept. 5.

Period of record: Maximum discharge, 1,270 cfs Jan. 25, 1969 (gage height, 6.83 ft in gage well, 6.57 ft, from floodmarks), from rating curve extended above 350 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.43 cfs July 7, 1968.

REMARKS.--Records poor. No regulation or diversion above station. Records of water temperatures and total sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.82	1.0	1.1	1.5	16	80	11	2.4	1.7	3.4	2.0	.93
2	.89	1.0	1.1	1.5	13	60	14	2.4	1.7	3.3	2.0	.90
3	.84	1.6	1.1	1.5	11	45	19	2.3	1.7	3.2	2.0	.87
4	.86	1.1	1.1	1.5	14	35	16	2.2	1.7	3.1	2.0	.81
5	.82	1.0	1.1	1.5	35	28	22	2.2	1.7	3.1	1.9	.80
6	.84	1.0	1.1	1.5	70	23	14	2.1	1.7	3.0	1.9	.86
7	.86	1.0	1.1	1.5	50	21	9.6	2.1	1.8	3.0	1.9	.92
8	.85	1.0	1.1	1.5	35	19	8.2	2.0	1.9	2.9	2.4	1.0
9	.81	1.0	1.1	1.5	26	18	7.4	2.0	2.0	2.9	2.3	1.1
10	.83	1.0	2.0	1.5	23	23	6.8	1.9	2.5	2.9	2.1	1.2
11	.85	1.1	2.4	1.6	19	21	6.0	1.9	5.0	2.8	2.1	1.2
12	.91	1.1	1.4	1.7	17	18	5.4	1.9	4.8	2.8	1.8	1.3
13	3.0	1.1	1.3	2.7	14	20	4.8	1.8	4.7	2.8	1.9	1.3
14	2.7	1.3	1.7	3.3	15	16	4.5	1.8	4.6	3.5	2.1	1.3
15	.91	1.9	2.0	1.9	20	14	4.2	1.8	4.5	3.1	2.1	1.4
16	.87	1.5	1.8	1.8	16	14	4.2	1.8	4.5	2.9	1.8	1.4
17	.82	1.1	1.5	1.7	12	13	4.3	1.7	4.4	2.7	1.8	1.4
18	.82	1.1	1.4	7.3	13	13	4.2	1.7	4.3	2.6	1.7	1.4
19	.81	1.1	1.4	116	16	12	3.7	1.7	4.2	2.5	1.4	1.4
20	.84	1.1	1.4	45	15	12	3.3	1.7	4.1	2.4	1.4	1.4
21	.84	1.0	1.4	139	14	16	3.1	1.7	4.0	2.3	1.3	1.4
22	.89	1.0	1.4	21	20	14	3.1	1.7	4.0	2.3	1.3	1.5
23	.88	1.1	1.4	14	31	12	3.4	1.7	3.9	2.2	1.3	1.5
24	.89	1.1	1.5	86	165	12	3.3	1.7	3.8	2.2	1.2	1.5
25	.89	1.1	1.8	391	184	12	3.2	1.7	3.7	2.2	1.1	1.5
26	.88	1.1	2.3	283	140	11	3.0	1.7	3.7	2.1	1.1	1.5
27	.90	1.1	1.5	150	80	11	2.9	1.7	3.6	2.1	1.1	1.5
28	.94	1.1	1.8	90	100	11	2.8	1.7	3.6	2.1	1.1	1.6
29	1.2	1.1	1.7	60	-----	10	2.6	1.7	3.5	2.0	1.1	1.6
30	1.2	1.1	1.7	30	-----	10	2.5	1.7	3.5	2.0	1.1	1.6
31	1.0	-----	1.7	20	-----	10	-----	1.7	-----	2.0	.99	-----
TOTAL	31.46	33.9	46.4	1,482.0	1,184	634	202.5	58.1	100.8	82.4	51.29	38.09
MEAN	1.01	1.13	1.50	47.8	42.3	20.5	6.75	1.87	3.36	2.66	1.65	1.27
MAX	3.0	1.9	2.4	391	184	80	22	2.4	5.0	3.5	2.4	1.6
MIN	.81	1.0	1.1	1.5	11	10	2.5	1.7	1.7	2.0	.99	.80
AC-FT	62	67	92	2,940	2,350	1,260	402	115	200	163	102	76

CAL YR 1968 TOTAL 457.99 MEAN 1.25 MAX 5.6 MIN .43 AC-FT 908
 HTR YR 1969 TOTAL 3,944.94 MEAN 10.8 MAX 391 MIN .80 AC-FT 7,820

PEAK DISCHARGE (BASE, 20 CFS)						NOTE.--No gage-height record	
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1445	4.40	425	2-24	1645	6.15	552
1-25	0530	6.83	1,270	2-28	unknown	-	unknown
2- 6	unknown	-	unknown	4- 5	1515	4.33	42
2-15	unknown	-	unknown				

Feb. 27 to Mar. 31, Apr. 10 to Aug. 17.

11-1411.6. WITTENBERG CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°12'54", long 120°27'21", on north boundary of Arroyo Grande Grant, San Luis Obispo County, on right bank 0.2 mile upstream from Huffs Hole Creek, and 9.1 miles northeast of Arroyo Grande.

DRAINAGE AREA.--3.43 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 550 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 840 cfs Jan. 19 (gage height, 7.9 ft, from outside gage); no flow for many days.

Period of record: Maximum discharge, 840 cfs Jan. 19, 1969 (gage height, 7.9 ft, from outside gage); no flow many days in each year.

REMARKS.--Records poor. No regulation; small diversions above station for domestic use. Backwater from Lopez Reservoir affects record at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	13	32	1.5	1.1	.54	.29	.18	.13
2	0	0	0	0	9.8	26	1.9	1.0	.53	.29	.18	.13
3	0	0	0	0	5.2	21	1.9	1.0	.52	.28	.18	.13
4	0	0	0	0	7.1	16	1.3	.98	.51	.28	.18	.13
5	0	0	0	0	32	14	2.1	.95	.50	.27	.17	.13
6	0	0	0	0	31	12	4.7	.93	.48	.27	.17	.13
7	0	0	0	0	14	9.7	4.3	.92	.47	.26	.17	.13
8	0	0	0	0	8.2	8.3	3.2	.90	.46	.26	.17	.13
9	0	0	0	0	6.4	7.4	2.6	.88	.46	.25	.17	.13
10	0	0	0	0	5.2	6.6	2.1	.86	.45	.25	.16	.13
11	0	0	0	0	4.5	5.3	1.8	.84	.44	.25	.16	.12
12	0	0	0	0	3.7	4.7	1.6	.82	.43	.24	.16	.12
13	0	0	0	.16	3.3	4.5	1.5	.80	.42	.24	.16	.12
14	0	0	.58	.41	2.7	4.2	1.5	.79	.41	.24	.16	.12
15	0	0	.19	0	3.3	3.8	1.4	.77	.40	.23	.16	.12
16	0	0	0	0	5.0	3.6	1.4	.76	.39	.23	.15	.12
17	0	0	0	0	3.8	3.5	1.3	.75	.38	.23	.15	.12
18	0	0	0	1.0	3.2	3.4	1.3	.74	.37	.22	.15	.12
19	0	0	0	182	4.1	3.3	1.3	.73	.36	.22	.15	.12
20	0	0	0	49	3.7	3.2	1.3	.72	.36	.21	.15	.12
21	0	0	0	78	4.0	3.2	1.3	.70	.35	.21	.15	.12
22	0	0	0	19	6.2	2.6	1.3	.68	.35	.21	.15	.12
23	0	0	0	16	12	2.6	1.4	.66	.34	.20	.14	.12
24	0	0	0	61	112	2.3	1.4	.65	.33	.20	.14	.12
25	0	0	0	144	51	2.3	1.3	.64	.32	.20	.14	.12
26	0	0	.08	55	42	2.1	1.2	.62	.32	.20	.14	.12
27	0	0	0	35	32	2.3	1.2	.61	.31	.19	.14	.12
28	0	0	.06	48	44	1.9	1.2	.60	.31	.19	.14	.12
29	0	0	0	40	-----	1.9	1.1	.58	.30	.19	.13	.12
30	0	0	0	32	-----	1.7	1.1	.57	.30	.18	.13	.12
31	0	-----	0	23	-----	1.7	-----	.56	-----	.18	.13	-----
TOTAL	0	0	0.91	783.57	472.4	217.1	52.5	24.11	12.11	7.16	4.81	3.70
MEAN	0	0	.029	25.3	16.9	7.00	1.75	.78	.40	.23	.16	.12
MAX	0	0	.58	182	112	32	4.7	1.1	.54	.29	.18	.13
MIN	0	0	0	0	2.7	1.7	1.1	.56	.30	.18	.13	.12
AC-FT	0	0	1.8	1,550	937	431	104	48	24	14	9.5	7.3

CAL YR 1968 TOTAL 14.25 MEAN .039 MAX 6.2 MIN 0 AC-FT 28
WTR YR 1969 TOTAL 1,578.37 MEAN 4.32 MAX 182 MIN 0 AC-FT 3,130

PEAK DISCHARGE (BASE, 50 CFS) NOTE.--Backwater from Lopez Reservoir
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE Apr. 5 to Sept. 30.
1-19 1430 7.9 840 2- 5 2330 3.43 121
1-25 0645 5.58 424 2-24 1600 4.62 398

ARROYO GRANDE BASIN

11-1412.8. LOPEZ CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°13'48", long 120°28'22", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.16, T.31 S., R.14 E., San Luis Obispo County, on right bank 0.7 mile upstream from unnamed tributary, 3.2 miles upstream from mouth, and 9.2 miles northeast of Arroyo Grande.

DRAINAGE AREA.--21.4 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 540 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 2,830 cfs Jan. 25 (gage height, 9.26 ft in gage well, 10.8 ft, from floodmarks); from rating curve extended above 300 cfs on basis of slope-area measurement of maximum flow; minimum daily, 1.5 cfs Oct. 7-11.

Period of record: Maximum discharge, 2,830 cfs Jan. 25, 1969 (gage height, 9.26 ft in gage well, 10.8 ft, from floodmarks); from rating curve extended above 300 cfs on basis of slope-area measurement of maximum flow; minimum daily, 1.2 cfs Sept. 24-27, 1968.

REMARKS.--Records fair. Small diversions above station for domestic use. Records of water temperatures and total sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.1	2.7	4.7	50	193	27	16	14	11	8.0	8.0
2	1.6	2.1	2.7	4.6	40	145	30	16	13	11	8.0	8.0
3	1.6	3.1	2.7	4.5	35	113	32	16	13	11	8.0	6.9
4	1.6	2.9	2.7	4.3	31	89	28	16	14	12	6.5	6.8
5	1.6	2.7	2.7	4.5	119	75	58	16	15	12	6.5	6.9
6	1.6	2.5	2.7	4.5	383	70	68	16	14	12	6.5	7.1
7	1.5	2.3	2.7	4.5	166	71	45	16	14	12	6.5	7.1
8	1.5	2.3	2.7	4.3	110	64	37	15	15	12	6.8	7.0
9	1.5	2.3	2.7	4.2	78	50	34	16	15	12	6.5	6.7
10	1.5	2.3	3.1	4.2	62	52	30	16	14	11	5.8	6.5
11	1.5	2.3	3.5	4.5	58	54	24	15	14	11	8.0	6.7
12	1.6	2.3	3.2	4.4	45	50	24	16	13	11	8.0	7.2
13	2.7	2.3	3.1	5.3	38	48	22	16	13	11	7.2	6.5
14	3.4	2.5	3.6	9.4	42	43	21	16	13	12	7.2	6.6
15	2.6	4.4	4.6	7.6	59	45	21	16	12	11	7.2	6.8
16	2.2	3.5	5.3	6.5	45	42	23	15	12	11	7.2	7.0
17	2.1	3.1	4.5	5.9	35	41	22	15	12	10	8.0	6.5
18	2.1	2.9	4.1	19	38	42	21	15	12	10	8.0	5.8
19	2.0	2.8	3.9	343	48	41	20	15	12	9.4	7.2	6.4
20	2.0	2.7	3.9	218	42	38	20	15	13	9.4	8.0	5.8
21	2.0	2.7	3.7	404	41	38	19	16	13	9.4	7.2	6.5
22	2.0	2.6	3.8	220	62	36	19	15	12	9.4	8.0	6.5
23	1.9	2.5	3.8	140	164	34	21	15	12	9.4	7.2	5.7
24	1.8	2.6	3.9	252	789	33	19	16	12	9.4	7.2	5.5
25	1.8	2.5	4.4	1,360	483	31	18	15	12	9.4	7.2	5.5
26	1.8	2.5	6.7	743	261	32	17	15	12	9.4	7.2	5.6
27	1.8	2.5	6.0	259	181	32	18	15	12	9.4	8.0	5.7
28	2.0	2.7	5.5	167	233	30	18	14	12	9.4	7.2	5.6
29	2.1	2.7	5.5	122	-----	29	17	14	12	8.7	8.0	5.5
30	2.3	2.7	5.2	95	-----	29	16	13	11	8.7	7.2	5.1
31	2.1	-----	5.0	64	-----	28	-----	13	-----	8.0	8.0	-----
TOTAL	59.4	79.4	120.6	4,493.9	3,738	1,718	789	474	387	322.4	227.5	193.5
MEAN	1.92	2.65	3.89	145	134	55.4	26.3	15.3	12.9	10.4	7.34	6.45
MAX	3.4	4.4	6.7	1,360	789	193	68	16	15	12	8.0	8.0
MIN	1.5	2.1	2.7	4.2	31	28	16	13	11	8.0	5.8	5.1
AC-FT	118	157	239	8,910	7,410	3,410	1,560	940	768	639	451	384
CAL YR 1968	TOTAL	1,384.6	MEAN	3.78	MAX	25	MIN	1.2	AC-FT	2,750		
WTR YR 1969	TOTAL	12,602.7	MEAN	34.5	MAX	1,360	MIN	1.5	AC-FT	25,000		

PEAK DISCHARGE (BASE, 20 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1430	7.92	1,580	2-15	1345	4.98	75
1-22	0030	6.08	516	2-24	1615	8.14	1,690
1-25	0700	9.26	2,830	2-28	1045	5.75	302
2- 5	2330	7.82	1,420	4- 5	1815	4.33	128

11-1414. TAR SPRING CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°07'56", long 120°32'30", in Santa Manuela Grant, San Luis Obispo County, on right bank 0.5 mile upstream from mouth, and 2.1 miles northeast of Arroyo Grande. Prior to May 20, 1969, at site 0.3 mile upstream.

DRAINAGE AREA.--18.2 sq mi. Area at site used prior to May 20, 1969, 17.8 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 180 ft (from topographic map). Prior to May 20, 1969, at site 0.3 mile upstream at datum 24.00 ft higher.

EXTREMES.--Current year: Maximum discharge, 1,340 cfs Jan. 25 (gage height, 10.1 ft, from floodmarks), from rating curve extended above 68 cfs on basis of slope-area measurement of maximum flow; no flow many days. Period of record: Maximum discharge, 1,340 cfs Jan. 25, 1969 (gage height, 10.1 ft, from floodmarks), from rating curve extended above 68 cfs on basis of slope-area measurement of maximum flow; no flow at times each year.

REMARKS.--Records fair. No regulation; some diversion above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.20	22	95	7.6	4.5	2.5	.93	.24	1.9
2	0	0	0	.20	16	70	7.0	3.4	2.5	1.0	.21	1.6
3	0	0	0	.20	14	55	12	3.4	2.4	1.9	.31	1.5
4	0	0	0	.16	12	45	8.6	3.7	2.2	1.8	.26	1.2
5	0	0	0	.20	25	40	8.3	2.7	2.1	1.3	.35	1.3
6	0	0	0	.20	100	36	18	2.2	1.9	.85	.48	.84
7	0	0	0	.24	27	34	12	3.2	1.8	1.3	.45	.79
8	0	0	0	.24	23	30	11	2.7	1.7	2.0	.30	.52
9	0	0	0	.28	17	26	9.7	2.7	1.6	1.5	.31	1.5
10	0	0	0	.24	15	26	9.3	2.5	1.5	1.1	.34	.68
11	0	0	0	.24	14	24	8.6	2.7	1.4	1.1	.29	.42
12	0	0	0	.24	16	25	7.6	2.7	1.3	1.2	.23	1.1
13	0	0	0	.40	12	22	7.0	1.8	1.2	2.5	.47	1.0
14	0	0	0	.70	10	18	6.7	1.6	1.1	4.4	.68	.37
15	0	0	.20	.28	31	17	6.7	1.5	1.0	3.7	.65	.31
16	0	0	.20	.24	17	17	6.3	.93	1.0	2.1	.43	.42
17	0	0	.16	.24	15	17	6.3	.93	.95	2.2	.24	.56
18	0	0	.16	2.4	24	17	6.3	1.3	.90	2.1	.50	.71
19	0	0	.20	225	53	16	6.0	2.2	.85	2.5	.56	.93
20	0	0	.16	125	24	15	6.0	2.0	.82	2.4	.54	.98
21	0	0	.12	171	19	16	6.0	2.0	.71	2.0	.49	.71
22	0	0	.12	27	65	14	6.0	1.9	1.2	1.7	.36	.67
23	0	0	.12	13	150	12	6.3	2.2	.53	1.2	.17	1.4
24	0	0	.20	118	400	12	5.7	2.3	.67	.58	.14	1.5
25	0	0	.20	700	240	12	5.7	2.0	.68	.48	.35	.85
26	0	0	.24	400	140	9.7	5.7	1.9	.77	.77	.90	1.2
27	0	0	.12	200	100	9.7	4.8	1.8	.55	1.4	.34	1.3
28	0	0	.16	100	130	9.0	4.2	1.9	.65	1.0	.45	.84
29	0	0	.16	55	-----	8.3	4.5	1.6	.63	.82	.23	1.1
30	0	0	.16	40	-----	8.0	4.5	1.6	1.9	.64	.10	.38
31	0	-----	.16	30	-----	7.3	-----	2.5	-----	.20	.47	-----
TOTAL	0	0	2.84	2,210.90	1,731	763.0	224.4	70.36	39.01	48.67	11.84	28.58
MEAN	0	0	.092	71.3	61.8	24.6	7.48	2.27	1.30	1.57	.38	.95
MAX	0	0	.24	700	400	95	18	4.5	2.5	4.4	.90	1.9
MIN	0	0	0	.16	10	7.3	4.2	.93	.53	.20	.10	.31
AC-FT	0	0	5.6	4,390	3,430	1,510	445	140	77	97	23	57

CAL YR 1968 TOTAL 59.54 MEAN .16 MAX 1.2 MIN 0 AC-FT 118
WTR YR 1969 TOTAL 5,130.60 MEAN 14.1 MAX 700 MIN 0 AC-FT 10,180

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1800	8.10	750	2-19	unknown	-	unknown
1-25	unknown	10.1	1,340	2-24	do	-	do
2-6	do	-	unknown	2-28	do	-	do
2-15	do	-	do	4-6	do	-	do

NOTE.--No gage-height record Jan. 25 to Feb. 6.

ARROYO GRANDE BASIN

11-1415. ARROYO GRANDE AT ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°07'28", long 120°34'05", in Pismo Grant, San Luis Obispo County, on left bank at Arroyo Grande, 0.7 mile upstream from U.S. Highway 101.

DRAINAGE AREA.--102 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Records for water year 1940 incomplete, yearly estimate published in WSP 1315-B.

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 97.77 ft above mean sea level. Prior to July 10, 1947, at datum 0.50 ft higher.

AVERAGE DISCHARGE.--30 years, 19.9 cfs (14,420 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,990 cfs Feb. 24 (gage height, 9.48 ft); minimum daily, 0.33 cfs Oct. 4.

Period of record: Maximum discharge, 5,400 cfs Dec. 6, 1966 (gage height, 12.88 ft); no flow for several days in some years. Maximum discharge since construction of Lopez Dam in 1968, 2,990 cfs Feb. 24, 1969 (gage height, 9.48 ft).

REMARKS.--Records fair. Flow regulated by Lopez Dam 7.8 miles upstream since 1968 (usable capacity, 47,800 acre-ft). Many small and intermittent diversions by pumping from stream for irrigation of about 4,000 acres above station.

REVISIONS (WATER YEARS).--WSP 931: 1940. WSP 1011: 1941, 1942(M). WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	3.1	2.7	3.3	55	211	18	30	19	11	6.3	15
2	.97	3.0	2.8	3.4	45	137	18	27	20	9.9	7.3	15
3	.41	4.5	2.8	3.4	32	110	27	27	20	9.4	7.5	14
4	.33	3.5	2.1	3.3	40	93	22	27	21	9.4	5.6	15
5	1.4	4.0	2.6	3.2	80	79	54	26	21	8.5	4.8	14
6	1.7	2.9	2.0	3.5	192	74	38	28	20	9.4	6.3	15
7	1.4	2.9	2.0	3.6	140	68	28	34	20	9.6	6.9	15
8	1.3	2.9	2.0	3.9	100	64	25	49	16	8.5	3.7	16
9	1.7	2.8	1.8	3.2	70	58	24	46	14	8.8	1.9	14
10	1.1	2.8	2.3	3.2	55	57	23	43	13	8.2	1.3	5.5
11	1.8	3.5	3.7	3.1	43	53	22	29	12	9.6	1.4	3.8
12	1.3	3.1	2.7	2.9	38	49	20	29	12	9.6	1.9	3.5
13	4.2	2.9	2.8	3.8	34	48	20	28	11	10	2.2	4.2
14	6.5	3.4	3.8	5.6	40	44	18	29	9.1	9.9	2.1	5.0
15	4.0	4.0	5.0	4.2	47	42	17	28	9.1	9.9	6.7	4.2
16	3.5	3.8	4.1	3.8	40	39	16	22	11	9.1	7.8	4.9
17	3.1	3.3	3.4	3.9	30	37	16	26	9.1	9.4	9.9	4.5
18	3.1	3.2	3.0	7.0	35	35	16	20	9.1	9.4	10	4.9
19	3.3	3.2	3.4	474	45	33	15	24	7.4	9.1	10	4.9
20	3.2	2.9	2.9	230	54	32	14	22	6.3	8.8	9.2	5.1
21	3.1	3.1	2.9	322	79	33	14	24	6.3	7.4	9.5	5.6
22	3.0	3.0	2.9	73	119	30	14	25	6.1	7.9	9.6	5.1
23	2.6	3.1	2.9	40	305	29	18	24	6.3	7.4	9.9	5.9
24	2.3	3.0	3.2	231	856	28	20	24	4.6	6.5	10	5.3
25	1.7	2.9	3.7	1,110	508	26	23	24	2.9	7.9	11	5.0
26	1.5	2.8	3.6	586	293	24	22	22	3.4	8.7	10	6.2
27	1.6	2.7	3.7	202	168	23	15	22	4.6	8.5	12	6.3
28	3.2	2.7	3.3	165	261	22	26	25	3.3	7.8	14	6.2
29	2.3	2.9	3.4	130	-----	22	40	17	3.4	6.0	16	6.5
30	2.8	2.6	3.3	100	-----	22	33	16	3.9	6.9	15	10
31	3.2	-----	3.2	75	-----	19	-----	18	-----	6.1	15	-----
TOTAL	73.51	94.5	94.0	3,806.3	3,804	1,641	676	835	324.9	268.6	244.8	245.6
MEAN	2.37	3.15	3.03	123	136	52.9	22.5	26.9	10.8	8.66	7.90	8.19
MAX	6.5	4.5	5.0	1,110	856	211	54	49	21	11	16	16
MIN	.33	2.6	1.8	2.9	30	19	14	16	2.9	6.0	1.3	3.5
AC-FT	146	187	186	7,550	7,550	3,250	1,340	1,660	644	533	486	487
CAL YR 1968	TOTAL	1,435.67	MEAN	3.92	MAX	16	MIN	.04	AC-FT	2,850		
WTR YR 1969	TOTAL	12,108.21	MEAN	33.2	MAX	1,110	MIN	.33	AC-FT	24,020		

11-1416, LOS BERROS CREEK NEAR NIPOMO, CALIF.

LOCATION.--Lat 35°05'17", long 120°30'32", in Nipomo Grant (on boundary), San Luis Obispo County, on left bank at upstream side of bridge, 0.8 mile downstream from Adobe Creek, and 3.7 miles northwest of Nipomo.

DRAINAGE AREA.--15.0 sq mi.

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

GAGE.--Water-stage recorder and broad-crested weir. Altitude of gage is 312 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 599 cfs Jan. 25 (gage height, 5.43 ft), from rating curve extended as explained below; minimum daily, 0.06 cfs Nov. 9, 10, 23.

Period of record: Maximum discharge, 599 cfs Jan. 25, 1969 (gage height, 5.43 ft), from rating curve extended above 230 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.02 cfs Aug. 6, 1968.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.13	.07	.08	6.8	67	6.8	2.9	1.1	.47	.38	.24
2	.12	.13	.08	.08	6.5	49	6.0	2.8	1.1	.48	.34	.20
3	.12	.18	.08	.08	5.0	38	4.8	2.8	1.1	.42	.37	.17
4	.12	.14	.09	.08	4.3	28	4.5	2.8	1.1	.31	.28	.16
5	.11	.10	.07	.10	6.2	25	6.9	2.7	1.1	.31	.28	.13
6	.12	.12	.07	.12	12	22	7.7	2.5	1.2	.34	.25	.13
7	.13	.13	.07	.12	14	21	6.0	2.5	1.1	.34	.29	.15
8	.13	.12	.07	.10	11	18	5.3	2.5	1.1	.38	.28	.15
9	.12	.06	.08	.17	8.3	17	4.9	2.5	1.3	.37	.31	.15
10	.11	.06	.10	.17	6.5	19	4.6	2.4	1.3	.35	.31	.14
11	.12	.07	.11	.14	5.3	16	4.4	2.2	1.3	.33	.30	.16
12	.10	.08	.12	.17	5.0	17	4.3	2.2	1.3	.35	.30	.18
13	.19	.10	.11	.17	4.3	17	4.2	2.5	1.2	.36	.30	.12
14	.17	.11	.13	.20	3.8	15	4.1	2.4	1.2	.38	.30	.12
15	.11	.16	.12	.17	7.2	11	4.1	2.3	1.1	.31	.30	.14
16	.11	.10	.12	.17	5.3	11	4.0	2.3	1.1	.29	.30	.16
17	.13	.09	.10	.20	4.8	10	3.8	2.2	1.2	.27	.29	.20
18	.11	.08	.10	.65	5.3	10	3.8	2.1	1.2	.28	.29	.19
19	.11	.08	.10	52	9.7	14	3.8	2.0	.98	.28	.31	.16
20	.12	.08	.12	58	18	12	3.6	2.0	1.0	.24	.28	.20
21	.10	.07	.12	115	17	12	3.4	2.0	1.0	.23	.28	.17
22	.09	.07	.10	29	20	13	3.4	2.0	.85	.22	.28	.14
23	.10	.06	.10	11	58	10	3.9	1.8	.86	.23	.28	.14
24	.08	.08	.12	33	156	8.8	3.8	1.6	.81	.22	.26	.14
25	.08	.08	.14	311	184	9.2	3.4	1.5	.64	.20	.23	.13
26	.10	.07	.10	162	94	8.8	3.4	1.4	.61	.23	.20	.12
27	.09	.07	.10	69	55	8.3	3.3	1.3	.69	.25	.22	.12
28	.10	.07	.12	31	70	8.8	3.0	1.1	.56	.25	.23	.12
29	.13	.07	.12	17	-----	9.7	3.0	.98	.48	.26	.25	.13
30	.11	.07	.10	12	-----	8.3	3.0	.98	.46	.29	.25	.12
31	.11	-----	.08	9.2	-----	9.2	-----	.95	-----	.31	.23	-----
TOTAL	3.56	2.83	3.11	912.17	803.3	543.1	131.2	64.21	30.04	9.55	8.77	4.58
MEAN	.11	.094	.10	29.4	28.7	17.5	4.37	2.07	1.00	.31	.28	.15
MAX	.19	.18	.14	311	184	67	7.7	2.9	1.3	.48	.38	.24
MIN	.08	.06	.07	.08	3.8	8.3	3.0	.95	.46	.20	.20	.12
AC-FT	7.1	5.6	6.2	1,810	1,590	1,080	260	127	60	19	17	9.1

CAL YR 1968 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1969 TOTAL 2,516.42 MEAN 6.89 MAX 311 MIN .06 AC-FT 4,990

PEAK DISCHARGE (BASE, 7.0 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0345	3.31	182	2-20	1515	2.00	26
1-25	0745	5.43	599	2-24	2000	4.37	377
2-6	1715	1.92	19	2-28	1145	2.86	126
2-15	0715	1.95	21	4-5	1515	1.76	11

11-1425. ARROYO DE LA CRUZ NEAR SAN SIMEON, CALIF.

LOCATION.--Lat 35°43'02", long 121°17'02", in Piedra Blanca Grant, San Luis Obispo County, on right bank 1.7 miles upstream from mouth, and 7 miles northwest of San Simeon.

DRAINAGE AREA.--41.2 sq mi.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 22 ft (from topographic map).

AVERAGE DISCHARGE.--19 years, 57.3 cfs (41,510 acre-ft per year); median of yearly mean discharges, 46 cfs (33,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 23,700 cfs Jan. 19 (gage height, 13.45 ft), from rating curve extended as explained below; no flow for long periods.

Period of record: Maximum discharge, 35,200 cfs Dec. 6, 1966 (gage height, 15.27 ft), from rating curve extended above 7,600 cfs on basis of slope-area measurements at gage heights 12.40 and 15.27 ft; no flow for long periods in each year.

REMARKS.--Records good. No regulation or diversion above station.

REVISIONS (WATER YEARS).--WSP 1245: 1951. WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	17	167	511	13	16	5.5	1.6	0	0
2	0	0	0	14	134	348	14	16	5.9	1.2	0	0
3	0	0	0	12	107	272	27	16	6.2	1.3	0	0
4	0	0	0	10	91	226	14	15	5.9	1.2	0	0
5	0	0	0	8.8	258	187	343	15	6.2	1.1	0	0
6	0	0	0	7.9	478	160	188	14	6.2	1.0	0	0
7	0	0	0	7.1	221	139	108	13	6.2	.92	0	0
8	0	0	0	6.3	167	122	68	13	6.2	.84	0	0
9	0	0	0	5.4	143	108	62	13	5.9	.56	0	0
10	0	0	0	4.9	126	102	55	12	5.9	.52	0	0
11	0	0	0	4.6	146	87	49	12	5.5	.44	0	0
12	0	0	0	4.2	627	81	44	11	5.2	.28	0	0
13	0	0	0	484	237	74	41	11	5.0	.16	0	0
14	0	0	39	552	182	66	39	11	4.7	.02	0	0
15	0	0	82	129	1,600	59	37	11	4.7	0	0	0
16	0	0	77	75	546	53	34	9.9	4.3	0	0	0
17	0	0	23	52	332	48	33	9.0	4.0	0	0	0
18	0	0	13	1,730	307	44	30	9.0	3.8	0	0	0
19	0	0	10	10,500	280	38	29	8.6	3.8	0	0	0
20	0	0	8.2	3,810	214	37	27	8.3	3.8	0	0	0
21	0	0	6.7	3,340	235	37	26	7.9	3.6	0	0	0
22	0	0	5.9	949	368	32	32	7.6	3.4	0	0	0
23	0	0	4.8	532	856	30	30	7.6	3.1	0	0	0
24	0	0	59	2,630	4,620	27	25	7.2	2.9	0	0	0
25	0	0	371	6,250	1,530	25	23	7.2	2.6	0	0	0
26	0	0	145	2,380	760	23	21	6.9	2.6	0	0	0
27	0	0	52	768	468	20	20	6.6	2.3	0	0	0
28	0	0	58	510	717	19	19	6.6	2.2	0	0	0
29	0	0	54	340	-----	17	18	6.2	1.8	0	0	0
30	0	0	31	294	-----	16	17	5.9	1.7	0	0	0
31	0	-----	22	216	-----	15	-----	5.9	-----	0	0	-----
TOTAL	0	0	1,061.6	35,643.2	15,917	3,023	1,486	319.4	131.1	11.14	0	0
MEAN	0	0	34.2	1,150	568	97.5	49.5	10.3	4.37	.36	0	0
MAX	0	0	371	10,500	4,620	511	343	16	6.2	1.6	0	0
MIN	0	0	0	4.2	91	15	13	5.9	1.7	0	0	0
AC-FT	0	0	2,110	70,700	31,570	6,000	2,950	634	260	22	0	0

CAL YR 1968 TOTAL 3,453.90 MEAN 9.44 MAX 414 MIN 0 AC-FT 6,850
WTR YR 1969 TOTAL 57,592.44 MEAN 158 MAX 10,500 MIN 0 AC-FT 114,200

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1145	13.45	23,700	2-15	0715	6.59	3,690
1-25	0615	11.17	14,600	2-24	1215	10.78	13,300

BIG SUR RIVER BASIN

11-1430, BIG SUR RIVER NEAR BIG SUR, CALIF.

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

DRAINAGE AREA.--46.5 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 400 ft (from topographic map). Prior to Oct. 1, 1951, nonrecording gage at site 0.9 mile downstream at different datum.

AVERAGE DISCHARGE.--19 years, 94.6 cfs (68,540 acre-ft per year); median of yearly mean discharges, 71 cfs (51,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,820 cfs Jan. 26 (gage height, 9.53 ft); minimum daily, 8.9 cfs Oct. 8, 10, 11.

Period of record: Maximum discharge, 5,680 cfs Apr. 2, 1958 (gage height, 11.56 ft); minimum, 3.7 cfs Oct. 7, 1961.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1445: 1952(P), 1953(M). WSP 1715: 1951.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	13	13	44	454	1,170	138	96	58	39	20	14
2	9.9	15	14	39	393	1,030	150	95	58	38	20	13
3	9.9	35	13	35	337	917	152	94	58	37	19	13
4	9.9	17	13	32	301	811	137	94	58	36	19	13
5	9.7	13	13	30	441	719	258	91	58	36	19	12
6	9.5	12	13	29	655	643	264	88	59	36	19	14
7	9.2	12	13	27	608	577	223	87	56	35	18	16
8	8.9	11	13	26	520	517	202	86	55	35	17	16
9	9.0	11	13	25	454	466	190	83	57	34	18	15
10	8.9	11	25	24	399	432	178	81	58	35	18	14
11	8.9	12	39	23	568	384	168	78	58	34	17	14
12	13	13	23	24	810	364	162	77	58	33	17	14
13	16	13	21	480	664	331	156	78	55	32	17	14
14	14	13	62	496	596	302	150	77	53	32	17	14
15	12	28	111	207	1,040	280	145	75	52	31	17	14
16	11	20	88	139	892	261	139	73	51	29	17	15
17	11	16	43	106	784	245	133	72	51	28	17	15
18	10	15	32	574	729	230	129	71	52	28	17	15
19	10	15	29	2,650	710	217	124	70	51	28	16	14
20	11	14	26	1,890	643	222	122	69	50	27	16	14
21	11	14	25	2,660	590	211	118	68	50	26	16	14
22	11	13	23	1,540	552	196	117	67	48	25	18	15
23	11	13	22	941	761	185	139	66	46	24	17	15
24	11	13	53	1,000	1,900	179	120	65	45	24	16	15
25	11	13	140	2,950	1,690	172	112	65	44	24	16	15
26	11	13	144	2,890	1,320	165	108	64	43	24	15	15
27	11	13	87	1,670	1,120	160	105	63	43	23	15	15
28	11	13	82	1,110	1,200	156	102	62	41	21	15	15
29	13	13	75	822	-----	151	100	59	41	21	14	15
30	15	13	62	660	-----	146	98	57	40	21	14	14
31	14	-----	51	535	-----	143	-----	58	-----	20	14	-----
TOTAL	341.4	440	1,381	23,678	21,131	11,982	4,439	2,329	1,547	916	525	431
MEAN	11.0	14.7	44.5	764	755	387	148	75.1	51.6	29.5	16.9	14.4
MAX	16	35	144	2,950	1,900	1,170	264	96	59	39	20	16
MIN	8.9	11	13	23	301	143	98	57	40	20	14	12
AC-FT	677	873	2,740	46,960	41,910	23,770	8,800	4,620	3,070	1,820	1,040	855
CAL YR 1968	TOTAL 12,351.1		MEAN 33.7		MAX 510		MIN 7.7		AC-FT 24,500			
WTR YR 1969	TOTAL 69,140.4		MEAN 189		MAX 2,950		MIN 8.9		AC-FT 137,100			

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	2045	5.91	1,030	2-11	2130	5.95	990
1-19	1600	8.74	3,110	2-15	1145	6.26	1,190
1-26	0500	9.53	3,820	2-24	1300	7.83	2,360
2- 5	2145	5.63	805				

11-1432. CARMEL RIVER AT ROBLES DEL RIO, CALIF.

LOCATION.--Lat 36°28'28", long 121°43'40", in Los Laureles Grant; Monterey County, on downstream side of county road bridge at Robles del Rio, 0.2 mile downstream from Hitchcock Canyon, and 11 miles southeast of town of Carmel.

DRAINAGE AREA.--193 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (from topographic map).

AVERAGE DISCHARGE.--12 years, 77.9 cfs (56,440 acre-ft per year); median of yearly mean discharges, 42 cfs (30,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,900 cfs Jan. 26 (gage height, 10.52 ft); no flow for long periods.

Period of record: Maximum discharge, 7,100 cfs Apr. 2, 1958 (gage height, 10.50 ft); no flow at times in each year.

Flood of Dec. 23, 1955, reached a stage of 11.7 ft, from floodmarks (discharge, 6,930 cfs by slope-area measurement of peak flow).

REMARKS.--Records good. Flow regulated by Los Padres Reservoir 11 miles upstream (capacity, 3,000 acre-ft) and San Clemente Reservoir 4 miles upstream (capacity, 2,150 acre-ft, revised). Small diversion above station.

REVISIONS.--WSP 1715: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	654	1,970	240	110	39	20	.73	.16
2	0	0	0	0	542	1,650	260	114	40	21	.64	.10
3	0	0	0	0	476	1,470	290	111	48	15	.57	.07
4	0	0	0	0	422	1,280	350	116	41	15	.55	.01
5	0	0	0	0	507	1,110	405	107	7.1	24	.51	0
6	0	0	0	0	1,320	965	414	101	7.6	28	.49	0
7	0	0	0	0	1,070	855	383	101	6.1	31	.46	0
8	0	0	0	0	840	746	371	100	7.7	26	.46	0
9	0	0	0	0	714	670	345	96	8.1	25	.42	0
10	0	0	0	0	602	638	315	91	10	22	.42	0
11	0	0	0	0	758	579	295	86	11	22	.42	0
12	0	0	0	0	1,340	519	275	86	36	19	.38	0
13	0	0	0	0	1,010	466	255	82	40	17	.38	0
14	0	0	0	21	830	420	240	81	40	16	.38	0
15	0	0	0	156	1,570	382	225	78	35	13	.38	0
16	0	0	0	118	1,370	360	205	75	25	12	.38	0
17	0	0	0	82	1,160	340	185	71	23	10	.34	0
18	0	0	0	213	1,070	330	175	69	21	9.5	.38	0
19	0	0	0	2,400	1,420	315	162	69	17	6.9	.34	0
20	0	0	0	1,560	1,220	300	148	66	20	6.3	.38	0
21	0	0	0	2,660	1,070	285	138	64	29	6.1	.38	0
22	0	0	0	1,290	955	270	140	54	31	5.3	.38	0
23	0	0	0	785	1,250	260	152	49	31	3.2	.34	0
24	0	0	0	698	3,220	250	147	49	30	2.3	.34	0
25	0	0	0	3,460	2,550	235	135	48	25	1.9	.34	0
26	0	0	0	3,960	2,160	228	128	50	19	1.8	.34	0
27	0	0	0	2,000	1,660	220	114	51	36	1.8	.34	0
28	0	0	0	1,530	2,000	212	116	54	39	1.6	.31	0
29	0	0	0	1,170	-----	205	106	51	34	1.4	.31	0
30	0	0	0	960	-----	202	105	48	32	1.2	.28	0
31	0	-----	0	762	-----	205	-----	41	-----	.89	.25	-----
TOTAL	0	0	0	23,825	33,760	17,937	6,819	2,369	788.6	386.19	12.62	0.34
MEAN	0	0	0	769	1,206	579	227	76.4	26.3	12.5	.41	.011
MAX	0	0	0	3,960	3,220	1,970	414	116	48	31	.73	.16
MIN	0	0	0	0	422	202	105	41	6.1	.89	.25	0
AC-FT	0	0	0	47,260	66,960	35,580	13,530	4,700	1,560	766	25	.7
CAL YR 1968	TOTAL	3,173.32	MEAN	8.67	MAX	138	MIN	0	AC-FT	6,290		
WTR YR 1969	TOTAL	85,897.75	MEAN	235	MAX	3,960	MIN	0	AC-FT	170,400		

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0930	8.64	3,410	2-15	1145	7.35	1,850
1-21	1000	8.98	3,920	2-19	0815	7.09	1,610
1-26	0600	10.52	6,900	2-24	1430	9.05	4,250
2- 6	1200	6.90	1,460	2-28	1400	7.83	2,330
2-12	0330	7.15	1,660				

CARMEL RIVER BASIN

11-1432.5. CARMEL RIVER NEAR CARMEL, CALIF.

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

DRAINAGE AREA.--246 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 45 ft (from topographic map).

AVERAGE DISCHARGE.--7 years, 108 cfs (78,250 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,620 cfs Jan. 26 (gage height, 17.30 ft in gage well, 17.4 ft, from floodmarks); no flow for many days.

Period of record: Maximum discharge, 8,620 cfs Jan. 26, 1969 (gage height, 17.30 ft in gage well, 17.4 ft, from floodmarks); no flow at times in each year.

REVISIONS.--The maximum discharge for the water year 1967 has been revised to 6,160 cfs Dec. 6, 1966 (gage height, 12.26 ft), superseding figure published in WRD Calif. 1967.

REMARKS.--Records fair. Flow regulated by Los Padres Reservoir (capacity, 3,000 acre-ft) and San Clemente Reservoir (capacity, 2,150 acre-ft, revised). Small diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	845	2,120	252	146	54	21	1.4	.35
2	0	0	0	0	775	1,760	252	146	55	16	1.4	.34
3	0	0	0	0	710	1,560	304	139	54	16	1.2	.33
4	0	0	0	0	660	1,320	264	148	63	14	1.1	.32
5	0	0	0	0	725	1,140	367	140	41	14	.95	.32
6	0	0	0	0	1,630	1,020	496	130	26	15	.84	.31
7	0	0	0	0	1,100	932	428	123	23	14	.67	.30
8	0	0	0	0	958	830	384	121	23	12	.67	.30
9	0	0	0	0	1,070	770	357	116	25	10	.80	.29
10	0	0	0	0	1,020	755	337	112	23	9.9	.96	.29
11	0	0	0	0	1,200	660	320	110	23	8.6	.81	.28
12	0	0	0	0	2,100	648	304	106	26	7.6	.75	.31
13	0	0	0	0	1,250	605	290	103	43	7.6	.70	.34
14	0	0	0	0	1,390	547	274	96	48	7.3	.67	.36
15	0	0	0	0	2,530	504	263	96	49	6.6	.63	.27
16	0	0	0	0	1,770	474	251	97	41	5.8	.60	.23
17	0	0	0	0	1,660	451	238	94	37	4.8	.58	.24
18	0	0	0	0	1,680	437	223	87	34	3.4	.55	.24
19	0	0	0	2,840	2,320	417	220	85	31	2.9	.52	.23
20	0	0	0	1,380	1,940	409	209	81	29	2.8	.50	.27
21	0	0	0	4,830	1,660	418	199	83	28	2.4	.48	.22
22	0	0	0	1,980	1,560	383	188	74	29	2.3	.46	.20
23	0	0	0	775	2,100	365	196	67	31	2.0	.45	.19
24	0	0	0	664	5,360	345	201	63	30	1.8	.43	.19
25	0	0	0	5,870	4,160	332	183	63	27	1.7	.42	.19
26	0	0	0	6,750	2,700	317	179	62	25	1.7	.41	.18
27	0	0	0	2,700	1,910	303	159	63	23	1.8	.40	.18
28	0	0	0	1,370	2,340	291	154	63	24	1.7	.39	.20
29	0	0	0	1,050	-----	277	149	63	25	2.7	.38	.19
30	0	0	0	905	-----	264	140	56	21	2.4	.37	.18
31	0	-----	0	935	-----	258	-----	54	-----	1.4	.36	-----
TOTAL	0	0	0	32,049	49,123	20,912	7,781	2,987	1,011	221.2	20.85	7.84
MEAN	0	0	0	1,034	1,754	675	259	96.4	33.7	7.14	.67	.26
MAX	0	0	0	6,750	5,360	2,120	496	148	63	21	1.4	.36
MIN	0	0	0	0	660	258	140	54	21	1.4	.36	.18
AC-FT	0	0	0	63,570	97,430	41,480	15,430	5,920	2,010	439	41	16
CAL YR 1968	TOTAL	3,678.49	MEAN	10.1	MAX	130	MIN	0	AC-FT	7,300		
WTR YR 1969	TOTAL	114,112.89	MEAN	313	MAX	6,750	MIN	0	AC-FT	226,300		

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1230	10.09	4,570	2-15	1400	8.42	3,060
1-21	1230	12.63	6,380	2-19	1030	8.48	2,800
1-26	0830	17.30	8,620	2-24	1900	12.92	6,550
2- 6	1730	7.61	2,120	2-28	1730	9.86	3,060
2-12	0645	8.20	2,820				

NOTE.--No gage-height record Aug. 13 to Sept. 12.

11-1433. ARROYO DEL REY AT DEL REY OAKS, CALIF.

LOCATION.--Lat 36°35'47", long 121°50'50", in Noche Buena Grant, Monterey County, on right bank at culvert on Rosita Avenue, at Del Rey Oaks, and 1,000 ft upstream from State Highway 1.

DRAINAGE AREA.--14.3 sq mi.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 60 cfs Feb. 24 (gage height, 4.14 ft), from rating curve extended above 26 cfs; minimum daily, 0.02 cfs for many days.

Period of record: Maximum discharge, 60 cfs Feb. 24, 1969 (gage height, 4.14 ft), from rating curve extended above 26 cfs; no flow at times.

REMARKS.--Records fair. No regulation or diversion above station.

REVISIONS (WATER YEARS).--WRD Calif. 1968: 1967.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.03	.04	.10	5.8	32	.29	.24	.13	.08	.05	.06
2	.02	.06	.04	.09	4.7	20	1.9	.23	.13	.08	.05	.06
3	.02	.08	.04	.09	3.3	16	2.8	.22	.13	.08	.04	.06
4	.02	.03	.04	.09	2.7	14	.85	.23	.13	.08	.04	.07
5	.02	.03	.04	.09	3.0	12	12	.22	.13	.07	.04	.07
6	.02	.03	.04	.09	5.5	10	10	.21	.12	.07	.04	.08
7	.02	.03	.04	.09	9.3	9.1	5.5	.24	.12	.07	.04	.07
8	.02	.03	.04	.09	5.3	7.8	4.1	.24	.12	.07	.04	.07
9	.02	.03	.04	.09	3.8	7.2	4.1	.19	.14	.07	.04	.07
10	.02	.03	.14	.09	3.2	14	3.0	.19	.14	.07	.04	.08
11	.02	.03	.20	.09	13	8.4	1.7	.19	.14	.07	.05	.08
12	.02	.04	.11	.09	31	10	1.3	.18	.14	.06	.05	.08
13	.03	.03	.11	.24	19	8.5	1.0	.18	.13	.06	.05	.08
14	.02	.04	.11	.17	9.3	6.4	.89	.17	.12	.06	.05	.08
15	.02	.04	.20	.08	11	4.2	.77	.17	.12	.06	.05	.08
16	.02	.03	.17	.07	5.6	2.8	.51	.18	.13	.06	.05	.08
17	.02	.03	.11	.07	5.7	2.6	.50	.17	.12	.06	.05	.09
18	.02	.03	.10	.64	8.4	2.3	.45	.16	.11	.06	.05	.09
19	.02	.03	.17	5.7	19	1.8	.37	.16	.10	.06	.05	.09
20	.02	.03	.20	1.3	15	1.4	.35	.15	.10	.06	.05	.10
21	.02	.03	.14	6.4	11	1.5	.32	.16	.10	.06	.05	.10
22	.03	.03	.12	.43	15	1.2	.35	.17	.10	.06	.05	.10
23	.03	.03	.12	.44	20	1.2	.42	.17	.10	.06	.05	.09
24	.03	.04	.20	1.0	41	1.0	.63	.16	.10	.06	.05	.10
25	.03	.04	.61	6.3	44	.91	.39	.15	.09	.06	.06	.10
26	.03	.03	1.3	39	40	.72	.35	.14	.09	.05	.06	.10
27	.03	.03	.26	20	27	.52	.33	.14	.08	.05	.06	.10
28	.03	.03	.19	19	33	.46	.28	.13	.08	.05	.06	.10
29	.03	.03	.13	16	-----	.37	.27	.13	.08	.05	.06	.10
30	.03	.04	.12	15	-----	.34	.24	.13	.08	.05	.06	.10
31	.03	-----	.11	9.4	-----	.33	-----	.13	-----	.06	.06	-----
TOTAL	0.73	1.04	5.28	142.33	414.6	199.05	55.96	5.53	3.40	1.96	1.54	2.53
MEAN	.024	.035	.17	4.59	14.8	6.42	1.87	.18	.11	.063	.050	.084
MAX	.03	.08	1.3	39	44	32	12	.24	.14	.08	.06	.10
MIN	.02	.03	.04	.07	2.7	.33	.24	.13	.08	.05	.04	.06
AC-FT	1.5	2.1	10	282	822	395	111	11	6.7	3.9	3.1	5.0
CAL YR 1968	TOTAL	32.19		MEAN	.088	MAX	1.3	MIN	.01	AC-FT	64	
WTR YR 1969	TOTAL	833.95		MEAN	2.28	MAX	44	MIN	.02	AC-FT	1,650	

PEAK DISCHARGE (BASE, 5 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0230	2.13	19	2-19	1245	3.16	28
1-21	0430	1.82	13	2-24	1330	4.14	60
1-26	0645	4.07	57	2-28	1330	3.53	46
2- 7	2215	2.54	13	3-10	0845	2.63	19
2-11	2145	4.08	57	4- 5	1430	2.83	21

SALINAS RIVER BASIN

11-1435. SALINAS RIVER NEAR POZO, CALIF.

LOCATION.--Lat 35°17'55", long 120°24'10", in NE¼ sec.19, T.30 S., R.15 E., San Luis Obispo County, on right bank at downstream side of county road bridge, 1.0 mile downstream from Pozo Creek, 1.6 miles west of Pozo, and 7.4 miles upstream from Salinas Dam. Prior to May 13, 1969, at site 0.4 mile downstream.

DRAINAGE AREA.--70.3 sq mi. Area at site used prior to May 13, 1969, 73.8 sq mi (revised).

PERIOD OF RECORD.--July 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,347.78 ft above mean sea level. Prior to May 13, 1969, water-stage recorder at site 0.4 mile downstream at same datum. May 13 to July 28, 1969, nonrecording gage at bridge at datum 4.56 ft higher.

AVERAGE DISCHARGE.--27 years, 18.4 cfs (13,330 acre-ft per year); median of yearly mean discharges, 7.4 cfs (5,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 18,600 cfs Jan. 25 (gage height, 13.90 ft in gage well, 15.5 ft, from floodmarks), from rating curve extended above 7,100 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.02 cfs Oct. 1, 2.

Period of record: Maximum discharge, 18,600 cfs Jan. 25, 1969 (gage height, 13.90 ft in gage well, 15.5 ft, from floodmarks), from rating curve extended above 7,100 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records fair. No regulation or diversion above station. Water is stored in Santa Margarita Lake below station.

REVISIONS (WATER YEARS).--WSP 1565: 1943(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.37	.39	1.2	123	689	19	11	7.9	1.3	.81	.96
2	.02	.37	.36	1.2	88	452	25	11	7.5	1.3	.89	.96
3	.07	.37	.52	1.2	68	345	49	10	7.2	1.3	.92	.83
4	.16	.30	.49	1.2	62	264	29	10	7.5	1.2	1.0	.83
5	.19	.30	.42	1.2	504	182	67	10	6.8	1.2	1.1	.96
6	.20	.30	.48	1.2	1,980	162	116	9.5	6.5	1.2	1.2	.96
7	.21	.27	.47	1.2	689	121	70	9.1	6.2	1.2	1.2	.96
8	.21	.27	.46	1.2	470	102	47	8.7	6.5	1.3	1.2	.96
9	.22	.27	.54	1.2	360	98	41	9.1	5.9	1.1	1.2	.96
10	.22	.27	.69	1.2	288	102	40	9.1	5.3	1.0	1.2	.96
11	.22	.30	.82	1.2	185	85	33	9.1	5.0	1.1	1.2	.96
12	.23	.47	.87	1.2	161	80	31	9.1	4.5	1.1	1.1	.96
13	.25	.60	.91	1.7	119	80	27	9.1	3.6	1.1	1.1	1.1
14	.52	.77	.98	1.8	86	72	23	9.1	3.4	1.1	1.1	.96
15	.88	1.8	1.2	1.4	233	62	23	8.7	3.0	.95	1.1	1.1
16	.82	1.3	1.2	1.4	214	57	22	7.5	2.4	1.0	1.1	1.1
17	.76	1.2	1.1	1.2	119	51	21	8.3	2.4	1.0	1.1	.96
18	.76	.98	1.1	29	135	47	20	7.9	2.4	.95	1.1	.96
19	.70	.94	1.1	2,520	301	44	20	10	2.4	.75	1.1	1.1
20	.62	.84	.98	751	288	36	18	10	2.4	.88	1.1	1.1
21	.59	.71	.98	3,010	206	49	17	9.5	2.2	.75	1.1	1.1
22	.51	.71	.98	862	306	39	15	10	2.2	.95	1.1	.96
23	.43	.63	.98	325	1,010	34	17	10	2.0	.88	.96	1.1
24	.40	.55	1.1	1,130	4,990	32	17	9.1	2.0	.88	.96	1.1
25	.34	.54	1.7	7,150	2,390	31	14	9.1	1.7	.75	.96	1.1
26	.28	.48	1.9	3,980	864	29	13	8.7	1.5	.95	.96	1.1
27	.27	.45	1.4	1,140	520	26	12	8.3	1.4	.95	.96	1.1
28	.24	.40	1.4	448	934	24	12	7.9	1.5	.95	.96	1.1
29	.34	.36	1.4	274	-----	18	12	7.9	1.6	.83	.96	1.1
30	.53	.36	1.4	217	-----	21	11	7.5	1.4	.83	.96	1.1
31	.55	-----	1.2	161	-----	20	-----	7.5	-----	.85	.96	-----
TOTAL	11.76	17.48	29.52	22,018.9	17,693	3,454	881	281.8	116.3	31.60	32.66	30.50
MEAN	.38	.58	.95	710	632	111	29.4	9.09	3.88	1.02	1.05	1.02
MAX	.88	1.8	1.9	7,150	4,990	689	116	11	7.9	1.3	1.2	1.1
MIN	.02	.27	.36	1.2	62	18	11	7.5	1.4	.75	.81	.83
AC-FT	23	35	59	43,670	35,090	6,850	1,750	559	231	63	65	60

CAL YR 1968 TOTAL 612.51 MEAN 1.67 MAX 14 MIN .02 AC-FT 1,210
WTR YR 1969 TOTAL 44,598.52 MEAN 122 MAX 7,150 MIN .02 AC-FT 88,460

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1730	10.93	9,170	2-19	1800	3.69	418
1-25	0700	13.90	18,600	2-24	1700	11.98	13,400
2- 6	0015	8.04	5,270	2-28	1530	5.12	1,540

SALINAS RIVER BASIN

303

11-1440. TORO CREEK NEAR POZO, CALIF.

LOCATION.--Lat 35°19'20", long 120°25'20", in SE $\frac{1}{4}$ sec.12, T.30 S., R.14 E., San Luis Obispo County, on left bank 300 ft upstream from mouth, and 3 miles northwest of Pozo.

DRAINAGE AREA.--9.56 sq mi (revised).

PERIOD OF RECORD.--June 1942 to September 1969 (discontinued). Prior to October 1961 low-water records only. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,312.99 ft above mean sea level. Prior to Dec. 8, 1961, at site 250 ft downstream at datum 11.83 ft lower.

AVERAGE DISCHARGE.--8 years (1961-69), 0.91 cfs (659 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,400 cfs Feb. 24 (gage height, 8.3 ft, from floodmarks), from rating curve extended above 30 cfs on basis of slope-area measurements at gage heights 5.11 and 7.3 ft; minimum daily, 0.13 cfs Oct. 6.
Period of record: Maximum discharge, 2,400 cfs Feb. 24, 1969 (gage height, 8.3 ft, from floodmarks), from rating curve extended above 30 cfs on basis of slope-area measurements at gage heights 5.11 and 7.3 ft; no flow at times.

REMARKS.--Records good prior to Jan. 25, poor thereafter. Small diversions above station for irrigation and stock reservoir.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.19	.34	.35	2.4	30	3.4	2.0	1.3	.60	.62	.90
2	.17	.17	.34	.33	2.3	20	3.4	1.9	1.3	.60	.64	.90
3	.21	.28	.34	.34	2.3	15	4.5	1.9	1.2	.60	.68	.90
4	.20	.22	.31	.34	2.1	12	3.3	1.9	1.2	.60	.75	.90
5	.17	.23	.28	.36	22	11	3.4	1.8	1.2	.60	.85	.90
6	.13	.22	.36	.30	52	10	8.0	1.8	1.2	.60	1.0	.90
7	.20	.20	.36	.31	11	9.3	6.5	1.8	1.1	.60	1.2	.90
8	.21	.20	.39	.36	7.2	8.5	5.0	1.8	1.0	.60	1.2	.90
9	.18	.22	.39	.34	5.8	8.0	4.5	1.7	.96	.60	1.2	.90
10	.22	.24	.45	.34	5.1	7.5	4.0	1.7	.87	.60	1.1	.90
11	.22	.24	.39	.34	4.5	7.0	3.6	1.7	.81	.60	1.1	.90
12	.20	.23	.33	.34	4.7	6.6	3.4	1.7	.76	.60	1.1	.90
13	.47	.25	.34	.50	3.8	6.3	3.2	1.7	.70	.60	1.1	.90
14	.38	.27	.56	.48	4.1	6.0	3.0	1.7	.65	.60	1.1	.90
15	.24	.45	.53	.29	8.5	5.7	2.8	1.7	.60	.60	1.1	.90
16	.23	.29	.44	.29	5.2	5.5	2.7	1.7	.60	.60	1.1	.90
17	.23	.24	.39	.29	5.0	5.2	2.6	1.8	.60	.60	1.0	.90
18	.23	.23	.40	.86	6.2	5.0	2.5	1.9	.60	.60	1.0	.90
19	.19	.29	.38	45	7.2	4.8	2.4	1.9	.60	.60	1.0	.90
20	.18	.29	.37	18	6.0	4.6	2.3	1.9	.60	.60	1.0	.92
21	.23	.29	.32	43	6.7	4.4	2.3	1.8	.60	.60	.98	.93
22	.23	.31	.31	5.1	7.0	4.3	2.2	1.8	.60	.60	.95	.95
23	.20	.29	.34	1.9	24	4.2	2.2	1.7	.60	.60	.95	.95
24	.19	.34	.37	6.0	321	4.1	2.2	1.6	.60	.60	.93	.96
25	.21	.34	.55	220	90	4.0	2.1	1.5	.60	.60	.92	.97
26	.21	.35	.48	84	70	3.8	2.1	1.5	.60	.60	.90	.98
27	.17	.29	.34	8.2	50	3.7	2.1	1.4	.60	.60	.90	1.0
28	.16	.27	.34	9.4	40	3.6	2.0	1.4	.60	.60	.90	1.0
29	.26	.32	.34	6.7	-----	3.6	2.0	1.4	.60	.60	.90	1.1
30	.23	.34	.34	3.6	-----	3.5	2.0	1.4	.60	.60	.90	1.1
31	.22	-----	.34	2.7	-----	3.4	-----	1.4	-----	.60	.90	-----
TOTAL	6.71	8.09	11.76	460.36	776.1	230.6	95.7	52.9	23.85	18.60	29.97	27.96
MEAN	.22	.27	.38	14.9	27.7	7.44	3.19	1.71	.80	.60	.97	.93
MAX	.47	.45	.56	220	321	30	8.0	2.0	1.3	.60	1.2	1.1
MIN	.13	.17	.28	.29	2.1	3.4	2.0	1.4	.60	.60	.62	.90
AC-FT	13	16	23	913	1,540	457	190	105	47	37	59	55
CAL YR 1968	TOTAL	68.72	MEAN	.19	MAX	.87	MIN	.02	AC-FT	136		
WTR YR 1969	TOTAL	1,742.60	MEAN	4.77	MAX	321	MIN	.13	AC-FT	3,460		

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1500	5.47	372	2-21	2015	4.04	15
1-25	0715	a7.3	1,370	2-24	1515	a8.3	2,400
2- 5	2345	5.20	219	2-28	unknown	-	unknown
2-15	0730	4.10	18	4- 6	unknown	-	unknown

a From floodmarks.
NOTE.--No gage-height record Apr. 5 to May 13, June 17 to Aug. 7.

SALINAS RIVER BASIN

11-1445. SANTA MARGARITA LAKE NEAR POZO, CALIF.

LOCATION.--Lat 35°20'14", long 120°30'08", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.30 S., R.14 E., San Luis Obispo County, at left end of dam on Salinas River, 2 miles upstream from Pilitas Creek, and 7.5 miles northwest of Pozo.

DRAINAGE AREA.--112 sq mi.

PERIOD OF RECORD.--December 1941 to current year. Prior to October 1967, published as Salinas Reservoir near Pozo.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to Mar. 9, 1942, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 37,000 acre-ft Jan. 25 (elevation, 1,313.30 ft); minimum, 16,100 acre-ft Jan. 11, 12.
Period of record: Maximum contents, 37,000 acre-ft Jan. 25, 1969 (elevation, 1,313.30 ft); minimum, 1,730 acre-ft Nov. 6-10, 1943.

REMARKS.--Reservoir is formed by concrete-arch dam, outlet closed Dec. 6, 1941. Usable capacity, 26,000 acre-ft between elevations 1,220.3 (bottom of outlet pipe) and 1,301.0 ft (spillway crest) above mean sea level. Water diverted at dam into pipeline to small reservoir 10 miles below, from which it is pumped to Camp San Luis Obispo and city of San Luis Obispo for water supply; water is also released down natural channel of river. Figures given herein represent usable contents.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FEET)

1,220.3	0	1,245	2,100	1,270	8,650	1,295	21,700
1,225	210	1,250	3,000	1,275	10,600	1,300	25,200
1,230	510	1,255	4,100	1,280	12,800	1,310	33,700
1,235	880	1,260	5,400	1,285	15,300	1,320	44,400
1,240	1,400	1,265	6,900	1,290	18,300	1,325	50,400

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17,100	16,600	16,300	16,200	25,300	27,200	26,200	26,000	25,800	25,300	24,400	23,300
2	17,100	16,600	16,300	16,200	24,800	26,700	26,300	26,000	25,800	25,300	24,300	23,200
3	17,100	16,600	16,300	16,200	24,700	26,400	26,300	26,000	25,800	25,200	24,300	23,200
4	17,100	16,600	16,200	16,200	24,800	26,200	26,200	26,000	25,800	25,200	24,200	23,200
5	17,000	16,600	16,200	16,200	27,500	26,100	26,400	26,100	25,800	25,200	24,200	23,100
6	17,000	16,600	16,200	16,200	28,800	26,100	26,300	26,100	25,700	25,100	24,200	23,100
7	17,000	16,500	16,200	16,200	27,300	26,100	26,000	26,100	25,700	25,100	24,100	23,100
8	17,000	16,500	16,200	16,200	26,700	26,000	25,800	26,100	25,700	25,100	24,100	23,100
9	16,900	16,500	16,200	16,200	26,300	25,900	25,800	26,100	25,700	25,000	24,100	23,100
10	16,900	16,500	16,200	16,200	25,900	26,000	25,800	26,100	25,700	25,000	24,000	23,000
11	16,900	16,500	16,200	16,100	25,400	26,200	25,800	26,100	25,700	25,000	24,000	23,000
12	16,900	16,500	16,200	16,100	25,000	26,200	25,800	26,100	25,700	24,900	23,900	23,000
13	16,900	16,500	16,200	16,200	24,500	26,200	25,900	26,100	25,700	24,900	23,900	22,900
14	16,900	16,500	16,200	16,200	24,000	26,100	26,000	26,100	25,600	24,900	23,900	22,900
15	16,900	16,500	16,200	16,200	24,000	25,900	26,000	26,100	25,600	24,900	23,800	22,900
16	16,900	16,500	16,200	16,200	23,800	25,800	26,000	26,100	25,600	24,900	23,800	22,800
17	16,900	16,500	16,200	16,200	24,000	25,900	26,000	26,000	25,600	24,800	23,800	22,800
18	16,900	16,500	16,200	16,400	24,300	26,000	26,000	26,000	25,600	24,800	23,800	22,800
19	16,800	16,400	16,200	25,300	25,100	26,100	26,000	26,000	25,600	24,800	23,700	22,800
20	16,800	16,400	16,200	28,100	25,500	26,300	26,000	26,000	25,600	24,700	23,700	22,700
21	16,800	16,400	16,200	29,200	25,600	26,300	26,000	26,000	25,500	24,700	23,600	22,700
22	16,800	16,400	16,200	27,600	25,900	26,300	26,000	26,000	25,500	24,700	23,600	22,700
23	16,800	16,400	16,200	26,700	27,700	26,300	26,000	26,000	25,500	24,600	23,600	22,700
24	16,700	16,400	16,200	28,300	34,400	26,400	26,000	25,900	25,500	24,600	23,500	22,700
25	16,700	16,400	16,200	31,800	29,200	26,300	25,900	25,900	25,400	24,600	23,500	22,600
26	16,700	16,300	16,200	29,700	27,800	26,300	25,900	25,900	25,400	24,500	23,500	22,600
27	16,700	16,300	16,200	27,600	27,100	26,300	25,900	25,900	25,400	24,500	23,400	22,600
28	16,700	16,300	16,200	26,900	27,700	26,300	26,000	25,900	25,400	24,500	23,400	22,500
29	16,700	16,300	16,200	26,400	-----	26,300	26,000	25,900	25,300	24,500	23,400	22,500
30	16,600	16,300	16,200	26,100	-----	26,300	26,000	25,800	25,300	24,400	23,300	22,500
31	16,600	-----	16,200	25,600	-----	26,200	-----	25,800	-----	24,400	23,300	-----
MAX	17,100	16,600	16,300	31,800	34,400	27,200	26,400	26,100	25,800	25,300	24,400	23,300
MIN	16,600	16,300	16,200	16,100	23,800	25,800	25,800	25,800	25,300	24,400	23,300	22,500
(a)	1,287.19	1,286.66	1,286.54	1,300.55	1,303.10	1,301.30	1,300.98	1,300.78	1,300.15	1,298.84	1,297.29	1,296.11
(b)	-500	-300	-100	+9,400	+2,100	-1,800	-200	-200	-500	-900	-1,100	-800
(c)	404	287	264	228	0	0	0	272	410	516	542	441
CAL YR 1968	b	-5,600	c	4,700								
WTR YR 1969	b	+5,400	c	3,360								

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Diversion, in acre-feet, for municipal supply; furnished by county of San Luis Obispo.

11-1450. SALINAS RIVER ABOVE PILITAS CREEK, NEAR SANTA MARGARITA, CALIF.

LOCATION.--Lat 35°20'56", long 120°30'42", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.6, T.30 S., R.14 E., San Luis Obispo County, on downstream side of right bank bridge pier, 200 ft upstream from Pilitas Creek, 2 miles downstream from Salinas Dam, and 6 miles southeast of Santa Margarita.

DRAINAGE AREA.--114 sq mi.

PERIOD OF RECORD.--July 1942 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,148.66 ft above mean sea level.

AVERAGE DISCHARGE.--27 years, 19.9 cfs (14,420 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 16,600 cfs Jan. 25 (gage height, 14.90 ft); no flow for many days.
Period of record: Maximum discharge, 16,600 cfs Jan. 25, 1969 (gage height, 14.90 ft); no flow at times.

REMARKS.--Records good. Flow regulated by Santa Margarita Lake 2 miles upstream beginning in 1941 and water diverted to Camp San Luis Obispo and city of San Luis Obispo (see sta 11-1445).

REVISIONS.--WSP 1715: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	0	0	.1	323	1,000	31	.43	.02	0	1.3	1.5
2	.07	0	0	.1	415	710	31	.32	.02	.06	1.3	1.5
3	0	0	0	.1	196	560	45	.29	.01	1.3	1.2	1.1
4	0	0	0	0	2.3	470	79	.27	.02	1.4	1.1	.93
5	0	0	0	.1	47	355	124	.22	.02	1.6	1.1	.95
6	0	0	0	.1	2,430	247	204	.24	.02	1.6	1.0	1.5
7	0	0	0	0	1,360	263	260	2.2	.01	1.6	.98	1.5
8	0	0	0	0	713	233	149	2.5	.01	1.6	1.1	1.5
9	0	0	0	0	501	263	77	2.4	.02	1.5	1.2	1.5
10	0	0	.01	0	422	101	63	1.8	.02	1.5	1.2	1.4
11	0	0	.01	0	415	28	46	.68	.02	1.5	1.2	1.5
12	0	0	.01	0	415	118	13	1.3	.02	1.6	1.2	1.6
13	0	0	.01	.3	411	104	2.2	3.8	.01	1.5	1.2	1.6
14	.14	0	.19	.9	410	190	1.8	2.2	.01	1.5	1.1	1.6
15	.02	.09	.50	.4	416	176	2.7	1.7	.01	1.5	1.1	1.7
16	0	.09	.45	.3	330	132	17	.70	.01	1.5	1.1	1.8
17	0	0	.22	.2	44	55	31	.43	.01	1.5	1.1	1.7
18	0	0	.10	1.1	78	4.8	18	.32	.01	1.5	1.2	1.6
19	0	0	.08	120	5.2	2.7	18	.23	0	1.5	1.3	1.6
20	0	0	.07	480	55	3.4	18	.19	0	1.5	1.3	1.6
21	0	0	.05	3,950	259	30	18	.29	0	1.5	1.3	1.6
22	0	0	.04	2,300	234	42	14	.29	0	1.5	1.3	1.5
23	0	0	.07	1,010	566	48	9.8	.20	0	1.3	1.3	1.6
24	0	0	.12	.964	6,040	37	54	.16	0	1.4	1.3	1.5
25	0	0	.55	10,200	6,050	45	43	.14	0	1.4	1.3	1.5
26	0	0	.64	6,450	2,110	39	12	.11	0	1.4	1.3	1.5
27	0	0	.28	2,010	1,070	40	2.4	.09	0	1.4	1.3	1.5
28	0	0	.17	826	985	41	5.5	.06	0	1.4	1.3	1.6
29	0	0	.19	597	-----	37	.78	.04	0	1.3	1.4	1.6
30	0	0	.12	463	-----	33	.54	.04	0	1.3	1.4	1.8
31	0	-----	.12	420	-----	35	-----	.03	-----	1.3	1.6	-----
TOTAL	0.35	0.18	4.00	29,793.7	26,302.5	5,442.9	1,390.72	23.67	0.27	42.46	38.08	45.38
MEAN	.011	.006	.13	961	939	176	46.4	.76	.009	1.37	1.23	1.51
MAX	.14	.09	.64	10,200	6,050	1,000	260	3.8	.07	1.6	1.6	1.3
MIN	0	0	0	0	2.3	2.7	.54	.03	0	0	.98	.93
AC-FT	.7	.4	7.9	59,090	52,170	10,800	2,760	47	.5	84	76	90

CAL YR 1968 TOTAL 62.10 MEAN .17 MAX 4.4 MIN 0 AC-FT 123
WTR YR 1969 TOTAL 63,084.21 MEAN 173 MAX 10,200 MIN 0 AC-FT 125,100

SALINAS RIVER BASIN

11-1470. JACK CREEK NEAR TEMPLETON, CALIF.

LOCATION.--Lat 35°34'00", long 120°48'10", in Paso de Robles Grant, San Luis Obispo County, on left bank 1.4 miles upstream from mouth, 1.8 miles northwest of Oakdale School, and 5.6 miles west of Templeton.

DRAINAGE AREA.--25.3 sq mi.

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 980 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 15.0 cfs (10,870 acre-ft per year); median of yearly mean discharges, 9.7 cfs (7,030 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,160 cfs Feb. 24 (gage height, 11.28 ft), from rating curve extended as explained below; no flow for several months.
Period of record: Maximum discharge, 8,160 cfs Feb. 24, 1969 (gage height, 11.28 ft), from rating curve extended above 1,500 cfs on basis of slope-area measurement at gage height 9.56 ft; no flow for several months in each year.

REMARKS.--Records fair. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.73	55	254	14	10	2.2	.83	.24	.01
2	0	0	0	.48	46	175	14	9.3	2.3	.74	.22	.01
3	0	0	0	.34	38	135	18	9.3	2.0	.67	.19	.01
4	0	0	0	.29	35	106	14	8.8	2.1	.60	.17	0
5	0	0	0	.22	97	82	124	8.6	2.3	.58	.15	0
6	0	0	0	.18	271	68	80	7.9	2.2	.76	.14	0
7	0	0	0	.17	121	56	56	7.9	2.0	.88	.13	0
8	0	0	0	.14	80	47	44	7.7	2.1	.88	.13	0
9	0	0	0	.13	63	40	36	7.1	2.2	.85	.12	0
10	0	0	0	.13	53	37	32	6.9	2.2	.76	.12	0
11	0	0	0	.12	48	31	29	6.6	2.3	.68	.12	0
12	0	0	0	.12	58	29	30	6.4	2.2	.66	.11	0
13	0	0	0	54	43	28	29	6.2	2.0	.73	.11	0
14	0	0	0	86	35	24	27	6.0	1.9	.63	.10	0
15	0	0	0	20	530	23	25	5.6	1.8	.61	.10	0
16	0	0	.01	8.8	189	21	22	5.4	1.8	.52	.10	0
17	0	0	0	5.1	110	20	19	4.9	1.9	.40	.10	0
18	0	0	0	249	85	19	18	4.7	1.8	.38	.09	0
19	0	0	0	2,050	69	18	17	4.5	1.7	.39	.10	0
20	0	0	0	1,040	58	20	16	4.0	1.7	.36	.08	0
21	0	0	0	842	64	22	16	4.0	1.7	.34	.07	0
22	0	0	0	220	85	22	15	3.6	1.5	.32	.06	0
23	0	0	0	118	353	20	16	3.6	1.4	.33	.05	0
24	0	0	0	545	2,610	19	15	3.3	1.2	.34	.05	0
25	0	0	8.8	2,560	689	18	14	3.1	1.1	.34	.04	0
26	0	0	17	914	335	17	13	2.8	1.1	.33	.03	0
27	0	0	4.3	238	208	16	12	2.6	1.1	.32	.03	0
28	0	0	2.9	176	378	16	11	2.4	1.0	.31	.02	0
29	0	0	4.5	115	-----	15	11	2.3	.97	.28	.02	0
30	0	0	2.2	88	-----	14	10	1.5	.89	.27	.01	0
31	0	-----	1.1	66	-----	14	-----	1.9	-----	.26	.01	-----
TOTAL	0	0	40.81	9,397.95	6,806	1,426	797	168.9	52.66	16.35	3.01	0.03
MEAN	0	0	1.32	303	243	46.0	26.6	5.45	1.76	.53	.097	.001
MAX	0	0	17	2,560	2,610	254	124	10	2.3	.88	.24	.01
MIN	0	0	0	.12	35	14	10	1.5	.89	.26	.01	0
AC-FT	0	0	81	18,640	13,500	2,830	1,580	335	104	32	6.0	.06
CAL YR 1968	TOTAL	545.71	MEAN	1.49	MAX	80	MIN	0	AC-FT	1,080		
WTR YR 1969	TOTAL	18,708.71	MEAN	51.3	MAX	2,610	MIN	0	AC-FT	37,110		

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1215	10.08	5,820	2-24	1300	11.28	8,160
1-25	0615	10.57	6,740	2-28	1130	5.07	650
2-15	1345	6.84	1,770				

11-1470.4. SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON, CALIF.

LOCATION.--Lat 35°32'03", long 120°50'47", in Asuncion Grant, San Luis Obispo County, near left bank on downstream pier of highway bridge, 0.2 mile downstream from unnamed tributary, and 8.6 miles west of Templeton.

DRAINAGE AREA.--2.95 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,178.36 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,290 cfs Jan. 19 (gage height, 10.60 ft), from rating curve extended above 320 cfs on basis of slope-area measurement of maximum flow; no flow for long periods.

Period of record: Maximum discharge, 1,290 cfs Jan. 19, 1969 (gage height, 10.60 ft), from rating curve extended above 320 cfs on basis of slope-area measurement of maximum flow; no flow for long periods in each year.

REMARKS.--Records good. No regulation; small diversions above station for irrigation. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.56	15	43	.33	.72	.13	0	0	0
2	0	0	0	.39	13	24	1.3	.60	.13	0	0	0
3	0	0	0	.28	10	16	.66	.60	.13	0	0	0
4	0	0	0	.23	14	10	.41	.60	.13	0	0	0
5	0	0	0	.20	25	7.2	57	.60	.12	0	0	0
6	0	0	0	.18	52	4.8	19	.67	.12	0	0	0
7	0	0	0	.17	27	3.5	7.2	.70	.12	0	0	0
8	0	0	0	.16	20	2.7	4.9	.67	.12	0	0	0
9	0	0	0	.18	18	2.1	4.1	.65	.13	0	0	0
10	0	0	0	.15	16	2.1	3.5	.62	.13	0	0	0
11	0	0	0	.15	14	1.4	2.7	.55	.12	0	0	0
12	0	0	0	.13	22	1.4	2.5	.52	.13	0	0	0
13	0	0	0	30	14	1.4	2.1	.52	.12	0	0	0
14	0	0	2.0	22	11	1.1	1.9	.49	.11	0	0	0
15	0	0	11	3.9	93	.90	1.7	.50	.10	0	0	0
16	0	0	4.4	1.6	34	.72	1.6	.44	.09	0	0	0
17	0	0	.72	.84	22	.72	1.4	.38	.10	0	0	0
18	0	0	.34	123	18	.66	1.3	.30	.09	0	0	0
19	0	0	.28	496	17	.66	1.2	.29	.06	0	0	0
20	0	0	.26	255	13	.72	1.1	.27	.06	0	0	0
21	0	0	.22	127	18	.72	1.1	.26	.04	0	0	0
22	0	0	.02	38	25	.55	1.1	.25	.01	0	0	0
23	0	0	0	13	84	.55	1.9	.25	.01	0	0	0
24	0	0	1.9	159	405	.45	1.3	.25	0	0	0	0
25	0	0	16	455	105	.45	1.2	.24	0	0	0	0
26	0	0	9.1	133	49	.45	1.1	.22	0	0	0	0
27	0	0	2.2	62	27	.41	1.0	.20	0	0	0	0
28	0	0	5.0	51	75	.41	.90	.17	0	0	0	0
29	0	0	3.2	40	-----	.37	.72	.15	0	0	0	0
30	0	0	1.4	26	-----	.37	.72	.13	0	0	0	0
31	0	-----	.82	18	-----	.37	-----	.12	-----	0	0	-----
TOTAL	0	0	58.86	2,057.12	1,256	130.18	126.94	12.93	2.30	0	0	0
MEAN	0	0	1.90	66.4	44.9	4.20	4.23	.42	.077	0	0	0
MAX	0	0	16	496	405	43	57	.72	.13	0	0	0
MIN	0	0	0	.13	10	.37	.33	.12	0	0	0	0
AC-FT	0	0	117	4,080	2,490	258	252	26	4.6	0	0	0
CAL YR 1968	TOTAL	216.90	MEAN	.59	MAX	31	MIN	0	AC-FT	430		
WTR YR 1969	TOTAL	3,644.33	MEAN	9.98	MAX	496	MIN	0	AC-FT	7,230		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1900	4.27	124	2-15	0630	5.39	284
1-19	1200	10.60	1,290	2-24	1215	8.95	930
1-25	0545	9.81	1,110	2-28	0530	4.68	179
2- 5	2100	4.24	122	4- 5	1115	4.58	166

SALINAS RIVER BASIN

11-1470.7. SANTA RITA CREEK NEAR TEMPLETON, CALIF.

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

DRAINAGE AREA.--18.2 sq mi.

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

GAGE.--Water-stage recorder with rain-gage attachment. Altitude of gage is 860 ft (from topographic map).
Auxiliary rain gage 5.3 miles west of gage. Altitude of gage is 1,270 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 16.3 cfs (11,810 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,060 cfs Jan. 19 (gage height, 11.12 ft in gage well, 11.75 ft, from floodmarks), from rating curve extended above 1,300 cfs on basis of slope-area measurement of maximum flow; no flow for several months.

Period of record: Maximum discharge, 6,060 cfs Jan. 19, 1969 (gage height, 11.12 ft in gage well, 11.75 ft, from floodmarks), from rating curve extended above 1,300 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REVISIONS.--The maximum discharge for the water year 1967 has been revised to 4,660 cfs Dec. 6, 1966 (gage height, 10.53 ft), superseding figure published in WRD Calif. 1967.

REMARKS.--Records good. Some regulation and pumping above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	2.3	55	178	6.5	7.1	2.4	.26	0	0
2	0	0	0	1.9	44	122	9.4	7.1	2.5	.31	0	0
3	0	0	0	1.7	39	94	14	7.1	2.3	.22	0	0
4	0	0	0	1.5	34	75	7.7	6.8	2.4	.17	0	0
5	0	0	0	1.5	70	52	121	6.2	2.4	.16	0	0
6	0	0	0	1.3	200	51	89	5.9	2.3	.18	0	0
7	0	0	0	1.3	105	46	49	6.0	2.2	.23	0	0
8	0	0	0	1.3	74	41	38	5.5	2.3	.25	0	0
9	0	0	0	1.3	59	38	32	5.1	2.4	.24	0	0
10	0	0	0	1.2	50	37	28	5.0	2.5	.21	0	0
11	0	0	0	1.2	44	26	26	4.7	2.6	.18	0	0
12	0	0	0	1.3	54	19	24	4.3	2.5	.17	0	0
13	0	0	0	41	41	18	21	4.4	2.2	.16	0	0
14	0	0	0	64	29	19	19	4.2	2.1	.15	0	0
15	0	0	6.1	22	254	19	18	4.1	2.0	.15	0	0
16	0	0	13	11	137	18	18	3.9	1.9	.14	0	0
17	0	0	1.9	8.1	89	18	17	3.3	1.8	.12	0	0
18	0	0	.90	185	77	16	15	3.2	1.7	.10	0	0
19	0	0	.70	1,710	68	15	14	3.0	1.5	.09	0	0
20	0	0	.60	742	55	15	14	2.9	1.4	.08	0	0
21	0	0	.41	582	63	16	12	2.8	1.2	.06	0	0
22	0	0	.35	173	94	13	12	2.7	1.0	.05	0	0
23	0	0	.35	79	338	12	16	2.7	.89	.03	0	0
24	0	0	.47	366	1,210	12	14	2.7	.74	.02	0	0
25	0	0	20	1,740	452	11	11	2.6	.62	0	0	0
26	0	0	16	602	206	9.4	9.4	2.5	.52	0	0	0
27	0	0	4.7	226	129	8.8	8.8	2.4	.46	0	0	0
28	0	0	6.6	184	238	7.7	8.2	2.3	.41	0	0	0
29	0	0	9.8	122	-----	7.1	7.7	2.3	.35	0	0	0
30	0	0	4.2	97	-----	6.5	7.7	2.1	.28	0	0	0
31	0	-----	2.9	71	-----	6.5	-----	2.1	-----	0	0	-----
TOTAL	0	0	88.98	7,042.9	4,308	1,027.0	687.4	127.0	49.87	3.73	0	0
MEAN	0	0	2.87	227	154	33.1	22.9	4.10	1.66	.12	0	0
MAX	0	0	20	1,740	1,210	178	121	7.1	2.6	.31	0	0
MIN	0	0	0	1.2	29	6.5	6.5	2.1	.28	0	0	0
AC-FT	0	0	176	13,970	8,540	2,040	1,360	252	99	7.4	0	0
(a)	2.2	1.9	-	-	14.4	.7	.4	0	0	0	0	0
(b)	2.0	3.2	1.6	26.4	15.9	1.1	4.6	0	0	0	0	0

CAL YR 1968 TOTAL 535.58 MEAN 1.46 MAX 55 MIN 0 AC-FT 1,060
WTR YR 1969 TOTAL 13,334.88 MEAN 36.5 MAX 1,740 MIN 0 AC-FT 26,450

PEAK DISCHARGE (BASE, 600 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-19 1315 11.12 6,060 2-24 1345 9.92 3,530
1-25 0700 10.15 3,900
a Precipitation, in inches.
b Precipitation, in inches, at auxiliary gage.

SALINAS RIVER BASIN

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11-1476. HUERHUERO CREEK NEAR CRESTON, CALIF.

LOCATION.--Lat 35°35'00", long 120°33'15", in NE¼ sec.15, T.27 S., R.13 E., San Luis Obispo County, on left bank 1 mile northwest of Geneseo School, and 4.6 miles northwest of Creston.

DRAINAGE AREA.--101 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 930 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 7.45 cfs (5,400 acre-ft per year); median of yearly mean discharges, 0.09 cfs (65 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,800 cfs Feb. 24 (gage height, 13.2 ft, from floodmarks), from rating curve extended above 1,500 cfs on basis of slope-area measurement of maximum flow; no flow for long periods.

Period of record: Maximum discharge, 13,800 cfs Feb. 24, 1969 (gage height, 13.2 ft, from floodmarks), from rating curve extended above 1,500 cfs on basis of slope-area measurement of maximum flow; no flow for long periods in each year.

REMARKS.--Records fair. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	96	640	13	.90	.30	0	0	0
2	0	0	0	0	76	460	12	.80	.40	0	0	0
3	0	0	0	0	65	330	24	.70	.50	0	0	0
4	0	0	0	0	55	260	16	.70	.60	0	0	0
5	0	0	0	0	93	210	32	.40	.70	0	0	0
6	0	0	0	0	468	160	37	.40	.70	0	0	0
7	0	0	0	0	268	130	21	.40	.50	0	0	0
8	0	0	0	0	220	105	16	.40	.50	0	0	0
9	0	0	0	0	190	100	16	.40	.70	0	0	0
10	0	0	0	0	172	115	13	.40	.70	0	0	0
11	0	0	0	0	168	85	12	.40	.70	0	0	0
12	0	0	0	0	166	85	8.6	.40	.60	0	0	0
13	0	0	0	0	137	90	8.6	.30	.40	0	0	0
14	0	0	0	0	122	67	7.4	.30	.30	0	0	0
15	0	0	0	0	170	58	6.9	.30	.20	0	0	0
16	0	0	0	0	150	51	5.9	.30	.10	0	0	0
17	0	0	0	0	124	45	5.0	.30	.10	0	0	0
18	0	0	0	.04	162	40	4.6	.30	.30	0	0	0
19	0	0	0	3.6	195	36	4.6	.30	.20	0	0	0
20	0	0	0	3.0	150	31	3.9	.30	.10	0	0	0
21	0	0	0	257	130	39	3.6	.30	.20	0	0	0
22	0	0	0	68	125	31	3.0	.30	.10	0	0	0
23	0	0	0	8.3	800	28	3.0	.30	0	0	0	0
24	0	0	0	34	5,000	24	2.8	.30	0	0	0	0
25	0	0	0	1,560	4,600	22	3.3	.30	0	0	0	0
26	0	0	0	1,440	900	20	2.8	.30	0	0	0	0
27	0	0	0	519	600	18	2.2	.30	0	0	0	0
28	0	0	0	352	860	16	1.8	.40	0	0	0	0
29	0	0	0	238	-----	15	1.6	.40	0	0	0	0
30	0	0	0	166	-----	14	1.4	.30	0	0	0	0
31	0	-----	0	122	-----	13	-----	.30	-----	0	0	-----
TOTAL	0	0	0	4,770.94	16,262	3,338	293.0	12.20	8.90	0	0	0
MEAN	0	0	0	154	581	108	9.77	.39	.30	0	0	0
MAX	0	0	0	1,560	5,000	640	37	.90	.70	0	0	0
MIN	0	0	0	0	55	13	1.4	.30	0	0	0	0
AC-FT	0	0	0	9,460	32,260	6,620	581	24	18	0	0	0
CAL YR 1968	TOTAL	18.20	MEAN	.050	MAX	.4	MIN	0	AC-FT	36		
WTR YR 1969	TOTAL	24,685.04	MEAN	67.6	MAX	5,000	MIN	0	AC-FT	48,960		

PEAK DISCHARGE (BASE, 40 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0915	3.94	504	2-15	1445	3.76	225
1-25	1000	9.27	3,030	2-24	unknown	13.2	13,800
1-28	1800	5.16	438	4-5	2230	3.29	77
2-6	0700	5.83	669				

NOTE.--No gage-height record Feb. 18 to Apr. 4.

SALINAS RIVER BASIN

11-1478. CHOLAME CREEK NEAR SHANDON, CALIF.

LOCATION.--Lat 35°41'20", long 120°20'03", in SE $\frac{1}{4}$ sec.3, T.26 S., R.15 E., San Luis Obispo County, on left bank 500 ft upstream from bridge on State Highway 46, 2.6 miles downstream from White Canyon, and 3.5 miles north-east of Shandon.

DRAINAGE AREA.--227 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,069.0 ft above mean sea level (planetable survey).

AVERAGE DISCHARGE.--11 years, 7.30 cfs (5,290 acre-ft per year); median of yearly mean discharges, 0.58 cfs (420 acre-ft per year). Median of yearly mean discharges: 10 years, 0.38 cfs (280 acre-ft per year); figure published in Water Resources Data for Calif., 1968, in error.

EXTREMES.--Current year: Maximum discharge, 6,900 cfs Feb. 24 (gage heights, 14.06 ft in gage well, 14.5 ft, from floodmarks); no flow for several months.

Period of record: Maximum discharge, 6,900 cfs Feb. 24, 1969 (gage height, 14.06 ft in gage well, 14.5 ft, from floodmarks); no flow for many months in each year.

REVISIONS.--The maximum discharge for the water year 1967 has been revised to 4,660 cfs Dec. 6, 1966 (gage height, 10.45 ft), superseding figure published in WRD Calif. 1967.

REMARKS.--Records good. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	20	740	12	5.0	.36	0	0	0
2	0	0	0	0	17	230	12	4.7	.28	0	0	0
3	0	0	0	0	12	150	31	4.4	.23	0	0	0
4	0	0	0	0	11	130	25	4.2	.23	0	0	0
5	0	0	0	0	11	110	20	4.0	.28	0	0	0
6	0	0	0	0	737	95	70	3.8	.28	0	0	0
7	0	0	0	0	96	85	50	3.6	.28	0	0	0
8	0	0	0	0	24	77	35	3.5	.36	0	0	0
9	0	0	0	0	18	70	25	3.3	.36	0	0	0
10	0	0	0	0	14	74	20	3.2	.36	0	0	0
11	0	0	0	0	9.2	60	18	3.1	.68	0	0	0
12	0	0	0	0	17	54	16	3.1	.82	0	0	0
13	0	0	0	0	12	56	14	3.0	.56	0	0	0
14	0	0	0	0	6.6	48	13	2.9	.36	0	0	0
15	0	0	0	0	392	45	12	2.9	1.2	0	0	0
16	0	0	0	0	144	40	11	2.8	.46	0	0	0
17	0	0	0	0	53	37	10	2.2	.56	0	0	0
18	0	0	0	0	145	35	9.5	2.0	.68	0	0	0
19	0	0	0	607	70	33	9.0	1.8	.56	0	0	0
20	0	0	0	465	53	31	8.5	1.8	.46	0	0	0
21	0	0	0	1,010	45	38	8.0	1.5	.36	0	0	0
22	0	0	0	68	65	32	7.5	1.3	.16	0	0	0
23	0	0	0	22	784	28	7.2	1.2	0	0	0	0
24	0	0	0	150	3,290	23	6.7	.98	0	0	0	0
25	0	0	0	3,320	3,220	21	6.4	.82	0	0	0	0
26	0	0	0	2,010	494	19	6.2	.82	0	0	0	0
27	0	0	0	224	265	18	5.8	.82	0	0	0	0
28	0	0	0	106	580	16	5.6	.68	0	0	0	0
29	0	0	0	70	-----	15	6.3	.68	0	0	0	0
30	0	0	0	34	-----	14	5.8	.56	0	0	0	0
31	0	-----	0	28	-----	13	-----	.46	-----	0	0	-----
TOTAL	0	0	0	8,114	10,604.8	2,437	486.5	75.12	9.88	0	0	0
MEAN	0	0	0	262	379	78.6	16.2	2.42	.33	0	0	0
MAX	0	0	0	3,320	3,290	740	70	5.0	1.2	0	0	0
MIN	0	0	0	0	6.6	13	5.6	.46	0	0	0	0
AC-FT	0	0	0	16,090	21,030	4,830	965	149	20	0	0	0

CAL YR 1968	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0
WTR YR 1969	TOTAL	21,727.30	MEAN	59.5	MAX	3,320	MIN	0	AC-FT	43,100

PEAK DISCHARGE (BASE, 100 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	2300	8.72	2,240	2-18	1500	3.33	2,440
1-25	1200	12.25	5,030	2-24	1700	14.06	6,900
2- 6	0500	5.06	1,060	2-28	1800	4.77	1,260
2-15	1900	5.37	1,280	4- 6	unknown	1.80	120

NOTE.--No gage-height record Mar. 1 to May 15.

11-1485. ESTRELLA RIVER NEAR ESTRELLA, CALIF.

LOCATION.--Lat 35°42'35", long 120°38'20", in NW $\frac{1}{4}$ sec.36, T.25 S., R.12 E., San Luis Obispo County, on right bank 0.2 mile downstream from mouth of Ranchito Canyon, and 1.9 miles northwest of Estrella.

DRAINAGE AREA.--922 sq mi (revised), not including Carrizo Plains.

PERIOD OF RECORD.--October 1954 to current year. Prior to October 1962, published as Estrella Creek near Estrella.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 671.59 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--15 years, 29.6 cfs (21,450 acre-ft per year); median of yearly mean discharges, 3.7 cfs (2,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 32,500 cfs Feb. 24 (gage height, 10.4 ft, from floodmarks), by slope-area measurement of maximum flow; maximum gage height, 10.9 ft Jan. 25, from floodmarks; no flow for several months.

Period of record: Maximum discharge, 32,500 cfs Feb. 24, 1969 (gage height, 10.4 ft, from floodmarks), by slope-area measurement of maximum flow; maximum gage height, 10.9 ft Jan. 25, 1969, from floodmarks; no flow for several months in each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	200	1,390	9.0	7.5	0	0	0	0
2	0	0	0	0	170	1,030	5.4	9.0	0	0	0	0
3	0	0	0	0	140	780	118	11	0	0	0	0
4	0	0	0	0	120	700	50	17	0	0	0	0
5	0	0	0	0	120	610	284	26	0	0	0	0
6	0	0	0	0	3,170	628	2,220	11	0	0	0	0
7	0	0	0	0	1,660	594	1,560	2.8	2.2	0	0	0
8	0	0	0	0	530	562	380	.60	2.8	0	0	0
9	0	0	0	0	320	530	110	.60	6.1	0	0	0
10	0	0	0	0	200	530	107	.50	9.0	0	0	0
11	0	0	0	0	150	450	45	.80	11	0	0	0
12	0	0	0	0	150	450	29	1.4	11	0	0	0
13	0	0	0	0	200	436	22	2.8	8.2	0	0	0
14	0	0	0	0	130	380	14	12	6.8	0	0	0
15	0	0	0	1.0	588	332	13	6.8	6.1	0	0	0
16	0	0	0	3.0	554	308	11	8.2	4.7	0	0	0
17	0	0	0	2.8	150	280	6.8	9.8	2.8	0	0	0
18	0	0	0	4.0	200	270	6.1	8.2	1.7	0	0	0
19	0	0	0	394	610	275	4.7	8.2	1.4	0	0	0
20	0	0	0	1,710	450	290	2.8	11	1.4	0	0	0
21	0	0	0	2,660	260	332	4.0	11	.80	0	0	0
22	0	0	0	1,090	260	362	2.8	9.8	.60	0	0	0
23	0	0	0	294	2,500	356	4.7	8.2	.60	0	0	0
24	0	0	0	267	14,300	338	5.4	6.8	.10	0	0	0
25	0	0	0	14,000	12,900	260	6.1	4.7	0	0	0	0
26	0	0	0	4,470	3,300	210	5.4	6.8	0	0	0	0
27	0	0	0	1,420	1,850	160	4.0	7.5	0	0	0	0
28	0	0	0	800	1,620	110	4.7	7.5	0	0	0	0
29	0	0	0	450	-----	39	4.7	12	0	0	0	0
30	0	0	0	380	-----	16	5.4	2.8	0	0	0	0
31	0	-----	0	260	-----	21	-----	0	-----	0	0	-----
TOTAL	0	0	0	28,205.8	46,802	13,029	5,045.0	232.30	77.30	0	0	0
MEAN	0	0	0	910	1,672	420	168	7.49	2.58	0	0	0
MAX	0	0	0	14,000	14,300	1,390	2,220	26	11	0	0	0
MIN	0	0	0	0	120	16	2.8	0	0	0	0	0
AC-FT	0	0	0	55,950	92,830	25,840	10,010	461	153	0	0	0
CAL YR 1968	TOTAL	419.50	MEAN	1.15	MAX	6.	MIN	0	AC-FT	832		
WTR YR 1969	TOTAL	93,391.40	MEAN	256	MAX	14,300	MIN	0	AC-FT	185,200		

PEAK DISCHARGE (BASE, 200 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	1345	5.91	5,380	2-19	1100	2.05	655
1-25	1800	a10.9	30,300	2-24	2330	a10.4	32,500
2-6	1100	4.70	5,580	3-21	1600	1.72	394
2-15	1600	2.79	1,550	4-6	1700	7.40	9,600

a From floodmarks.
NOTE.--No gage-height record Jan. 25-29, Feb. 23 to Mar. 20.

SALINAS RIVER BASIN

11-1488. NACIMIENTO RIVER NEAR BRYSON, CALIF.

LOCATION.--Lat 35°48'06", long 121°06'50", in NW $\frac{1}{4}$ sec.33, T.24 S., R.8 E., Monterey County, on right bank 0.6 mile upstream from Turtle Creek, 1.6 miles west of Bryson, and 10 miles southwest of Lockwood.

DRAINAGE AREA.--140 sq mi.

PERIOD OF RECORD.--October 1955 to current year. Records for February to April 1901, published in WSP 66 and 75, have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Altitude of gage is 860 ft (from topographic map).

AVERAGE DISCHARGE.--14 years, 174 cfs (126,100 acre-ft per year); median of yearly mean discharges, 125 cfs (90,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 39,100 cfs Jan. 25 (gage height, 24.60 ft), from rating curve extended above 12,000 cfs on basis of slope-area measurement of maximum flow; no flow for long periods. Period of record: Maximum discharge, 39,100 cfs Jan. 25, 1969 (gage height, 24.60 ft), from rating curve extended above 12,000 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 24.63 ft Dec. 23, 1955; no flow at times in each year.

REVISIONS.--The maximum discharge for the water year 1967 has been revised to 36,600 cfs Dec. 6, 1966 (gage height, 23.78 ft), superseding figure published in WRD Calif. 1967.

REMARKS.--Records good. No storage or diversion above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

REVISIONS.--See PERIOD OF RECORD. Revised figures of discharge, in cubic feet per second, for the water year 1967, superseding figures published in WRD Calif. 1967 are given below:

Dec. 6, 1966..... 24,600

Jan. 21, 1967..... 701

MONTH	TOTAL	MEAN	MAX	MIN	AC-FT
December 1966	42,184	1,360	24,600	40	83,670
CAL YR 1966	61,706.50	169	24,600	0	122,400
January 1967	27,876	899	9,950	30	55,290
WTR YR 1967	127,335.55	349	24,600	0	252,600
CAL YR 1967	85,195.77	233	9,950	0	169,000

REVISED PEAK DISCHARGE.--1967: Dec. 6 (1130) 36,600 cfs (23.78 ft); Jan. 22 (0215) 12,400 cfs (14.29 ft); Jan. 24 (0900) 35,400 cfs (23.38 ft); Mar. 16 (1045) 11,500 cfs (13.87 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	89	984	2,320	77	76	18	7.8	.05	0
2	0	0	0	73	850	1,700	93	73	18	7.1	0	0
3	0	0	0	66	742	1,340	219	70	18	6.5	0	0
4	0	0	0	56	665	1,050	130	70	20	5.4	0	0
5	0	0	0	52	1,310	812	538	68	20	4.9	0	0
6	0	0	0	46	2,840	628	850	60	22	4.4	0	0
7	0	0	0	42	1,750	550	530	58	22	4.0	0	0
8	0	0	0	38	1,250	477	389	58	21	4.0	0	0
9	0	0	0	35	1,010	426	329	58	24	4.0	0	0
10	0	0	0	33	849	392	291	56	27	4.0	0	0
11	0	0	51	31	916	346	260	54	28	3.6	0	0
12	0	0	15	29	1,830	320	225	48	30	3.2	0	0
13	0	0	8.2	1,630	1,140	301	206	44	27	2.8	0	0
14	0	0	154	1,720	925	271	191	44	24	2.5	0	0
15	0	0	243	412	4,560	243	179	45	21	2.5	0	0
16	0	0	245	246	2,010	225	155	43	19	2.3	0	0
17	0	0	72	180	1,290	207	146	40	19	2.3	0	0
18	0	0	38	2,110	1,160	193	137	36	18	2.0	0	0
19	0	0	25	13,900	1,050	183	131	35	18	2.0	0	0
20	0	0	20	5,960	938	175	128	33	16	2.0	0	0
21	0	0	16	11,000	844	188	119	32	16	1.7	0	0
22	0	0	12	3,680	957	161	113	30	16	1.3	0	0
23	0	0	11	1,770	2,560	149	134	28	15	.96	0	0
24	0	0	46	2,860	16,000	137	140	28	14	.73	0	0
25	0	0	741	19,800	5,120	127	113	27	12	.73	0	0
26	0	0	579	12,900	2,840	119	107	24	11	.62	0	0
27	0	0	254	3,300	1,980	110	95	25	11	.62	0	0
28	0	0	216	2,280	2,790	104	86	24	9.8	.54	0	0
29	0	0	209	1,680	-----	94	83	21	9.1	.46	0	0
30	0	0	146	1,400	-----	86	83	20	8.4	.32	0	0
31	0	-----	110	1,170	-----	83	-----	18	-----	.20	0	-----
TOTAL	0	0	3,211.2	88,588	61,160	13,517	6,277	1,346	552.3	85.48	0.05	0
MEAN	0	0	104	2,858	2,184	436	209	43.4	18.4	2.76	.002	0
MAX	0	0	741	19,800	16,000	2,320	850	76	30	7.8	.05	0
MIN	0	0	0	29	665	83	77	18	8.4	.20	0	0
AC-FT	0	0	6,370	175,700	121,300	26,810	12,450	2,670	1,100	170	.10	0
CAL YR 1968	TOTAL	12,081.57	MEAN	33.0	MAX	812	MIN	0	AC-FT	23,960		
WTR YR 1969	TOTAL	174,737.03	MEAN	479	MAX	19,800	MIN	0	AC-FT	346,600		

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	2045	9.64	4,660	2- 5	2315	9.57	4,570
1-19	1245	18.62	22,000	2-15	1045	12.16	8,370
1-25	0600	24.60	39,100	2-24	1000	22.03	31,400

11-1494. NACIMIENTO RIVER BELOW NACIMIENTO DAM, NEAR BRADLEY, CALIF.

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

DRAINAGE AREA.--322 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 597 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE (unadjusted).--12 years, 295 cfs (213,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,340 cfs Feb. 25 (gage height, 10.92 ft); minimum daily, 0.66 cfs Dec. 1.

Period of record: Maximum discharge, 7,340 cfs Feb. 25, 1969 (gage height, 10.92 ft); no flow for many days in each year except 1964, 1966-69.

REMARKS.--Records good. Flow regulated by Nacimiento Dam 2.2 miles upstream (usable capacity, 340,000 acre-ft). No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	270	176	.66	12	2,950	4,840	1,880	40	602	549	590	489
2	289	176	32	12	2,960	4,270	1,760	319	600	552	588	487
3	336	176	108	12	2,940	3,720	1,700	615	598	550	591	486
4	336	176	104	12	2,960	3,400	1,660	615	589	552	588	485
5	336	176	109	12	2,870	3,320	1,650	615	589	560	585	483
6	333	152	109	12	2,420	3,290	1,640	615	583	562	580	483
7	330	118	108	12	2,010	3,270	1,810	615	579	562	576	486
8	330	68	106	12	1,740	3,240	2,110	615	579	563	572	485
9	330	6.0	104	12	1,640	3,230	2,240	610	575	569	568	484
10	330	4.4	106	12	1,520	3,180	2,560	610	570	567	568	484
11	330	4.1	104	12	1,550	3,150	2,560	610	571	568	563	482
12	330	3.9	104	12	1,500	3,120	2,000	610	566	572	558	487
13	336	3.6	104	13	1,360	3,080	1,630	612	561	571	553	485
14	316	3.9	107	13	1,290	3,060	1,560	610	561	570	548	483
15	267	4.1	107	12	1,220	3,010	1,470	609	557	570	543	482
16	267	3.2	107	12	1,190	2,980	1,380	609	555	575	538	479
17	267	3.2	107	12	1,180	2,940	1,320	608	557	575	534	479
18	264	3.2	106	13	1,760	2,920	1,140	610	553	575	528	482
19	261	3.2	106	30	2,290	2,900	890	610	549	575	522	481
20	261	3.4	108	25	2,110	2,850	776	610	552	580	523	480
21	234	3.2	109	27	2,440	2,820	570	610	550	581	518	479
22	178	3.2	109	17	2,210	2,760	164	610	548	583	513	477
23	176	3.2	109	17	2,070	2,710	34	605	552	589	507	479
24	176	3.1	81	19	2,610	2,640	25	605	551	588	502	477
25	176	3.2	15	37	6,150	2,590	24	605	550	588	499	476
26	176	3.2	13	30	6,770	2,540	38	605	553	587	496	475
27	176	2.2	12	1,900	5,730	2,500	38	604	552	590	494	472
28	176	1.5	12	4,020	5,120	2,450	40	604	550	590	491	476
29	176	1.3	12	3,380	-----	2,390	45	603	554	589	490	474
30	176	.85	12	3,100	-----	2,270	42	602	551	593	492	473
31	176	-----	12	2,920	-----	2,070	-----	601	-----	592	490	-----
TOTAL	8,115	1,289.15	2,442.66	15,741	72,560	93,510	34,756	18,021	16,957	17,787	16,708	14,430
MEAN	262	43.0	78.8	508	2,591	3,016	1,159	581	565	574	539	481
MAX	336	176	109	4,020	6,770	4,840	2,560	615	602	593	591	489
MIN	176	.85	.66	12	1,180	2,070	24	40	548	549	490	472
AC-FT	16,100	2,560	4,840	31,220	143,900	185,500	68,940	35,740	33,630	35,280	33,140	28,620
CAL YR 1968	TOTAL	94,438.81	MEAN	258	MAX	540	MIN	.66	AC-FT	187,300		
WTR YR 1969	TOTAL	312,316.81	MEAN	856	MAX	6,770	MIN	.66	AC-FT	619,500		

SALINAS RIVER BASIN

11-1496.5. SULPHUR SPRINGS CANYON NEAR JOLON, CALIF.

LOCATION.--Lat 36°01'10", long 121°14'15", Monterey County, in Hunter Liggett Military Reservation, on right bank at culvert on Sulphur Springs road, 4.8 miles northwest of Jolon.

DRAINAGE AREA.--5.16 sq mi.

PERIOD OF RECORD.--Water years 1961-67 (annual maximum), October 1967 to current year.

GAGE.--Water-stage recorder with rain-gage attachment and crest-stage gage. Altitude of gage is 1,070 ft (from topographic map). Sept. 3, 1960, to Nov. 7, 1967, crest-stage gage at same site and datum.

EXTREMES.--Current year: Maximum discharge, 319 cfs Jan. 26 (gage height, 8.15 ft), from rating curve extended above 9 cfs on basis of theoretical rating for flow through culvert; no flow most of year.

Period of record: Maximum discharge, 372 cfs Dec. 6, 1966 (gage height, 9.22 ft), from theoretical rating for flow through culvert; no flow at times.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	2.1	8.8	.12	0	0	0	0	0
2	0	0	0	0	1.7	4.6	.14	0	0	0	0	0
3	0	0	0	0	1.4	3.4	.16	0	0	0	0	0
4	0	0	0	0	1.2	2.5	.12	0	0	0	0	0
5	0	0	0	0	5.5	2.0	.28	0	0	0	0	0
6	0	0	0	0	27	1.6	.40	0	0	0	0	0
7	0	0	0	0	9.2	1.4	.20	0	0	0	0	0
8	0	0	0	0	6.6	1.1	.14	0	0	0	0	0
9	0	0	0	0	5.4	1.0	.14	0	0	0	0	0
10	0	0	0	0	4.6	.84	.10	0	0	0	0	0
11	0	0	0	0	4.5	.70	.09	0	0	0	0	0
12	0	0	0	0	5.0	.62	.09	0	0	0	0	0
13	0	0	0	.32	4.5	.54	.09	0	0	0	0	0
14	0	0	.01	0	3.8	.50	.08	0	0	0	0	0
15	0	0	.02	0	18	.46	.07	0	0	0	0	0
16	0	0	0	0	7.8	.41	.06	0	0	0	0	0
17	0	0	0	0	6.2	.38	.06	0	0	0	0	0
18	0	0	0	3.4	5.7	.36	.07	0	0	0	0	0
19	0	0	0	50	5.0	.34	.07	0	0	0	0	0
20	0	0	0	14	4.4	.32	.06	0	0	0	0	0
21	0	0	0	48	4.9	.30	.06	0	0	0	0	0
22	0	0	0	14	5.0	.28	.04	0	0	0	0	0
23	0	0	0	6.2	16	.27	.03	0	0	0	0	0
24	0	0	0	11	107	.26	.01	0	0	0	0	0
25	0	0	0	110	32	.25	0	0	0	0	0	0
26	0	0	0	104	14	.24	0	0	0	0	0	0
27	0	0	0	14	8.0	.23	0	0	0	0	0	0
28	0	0	0	6.9	18	.22	0	0	0	0	0	0
29	0	0	0	4.4	-----	.22	0	0	0	0	0	0
30	0	0	0	3.4	-----	.18	0	0	0	0	0	0
31	0	-----	0	2.6	-----	.12	-----	0	-----	0	0	-----
TOTAL	0	0	0.03	392.22	334.5	34.44	2.68	0	0	0	0	0
MEAN	0	0	.001	12.7	11.9	1.11	.089	0	0	0	0	0
MAX	0	0	.02	110	107	8.8	.40	0	0	0	0	0
MIN	0	0	0	0	1.2	.12	0	0	0	0	0	0
AC-FT	0	0	.06	778	663	68	5.3	0	0	0	0	0
(a)	.6	1.8	3.6	13.7	9.4	.1	1.9	0	0	0	0	.5
CAL YR 1968	TOTAL	.03	MEAN	.00008	MAX	.02	MIN	0	AC-FT	.06		
WTR YR 1969	TOTAL	763.87	MEAN	2.09	MAX	110	MIN	0	AC-FT	1,520		

PEAK DISCHARGE (BASE, 10 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1200	4.47	134	2-15	1100	2.26	39
1-21	0615	4.04	112	2-23	0800	2.91	62
1-25	0530	7.55	288	2-24	0700	5.95	208
1-26	0500	8.15	319	2-28	1300	1.87	27
2- 6	0100	2.92	63				

a Precipitation, in inches.

11-1499. SAN ANTONIO RIVER NEAR LOCKWOOD, CALIF.

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

DRAINAGE AREA.--223 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 800.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 14,000 cfs Jan. 26 (gage height, 8.25 ft); no flow for several months.

Period of record: Maximum discharge, 14,000 cfs Jan. 26, 1969 (gage height, 8.25 ft); maximum gage height, 9.2 ft, from floodmarks, Dec. 6, 1966; no flow for several months in each year.

REMARKS.--Records poor. No regulation; some pumping above station. Records of water temperatures and total-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	63	666	1,680	183	81	34	14	0	0
2	0	0	0	56	526	1,290	176	83	35	13	0	0
3	0	0	0	50	400	1,020	179	83	34	13	0	0
4	0	0	0	44	336	914	153	80	32	13	0	0
5	0	0	0	42	397	792	208	73	31	12	0	0
6	0	0	0	40	1,570	722	298	65	30	11	0	0
7	0	0	0	38	1,090	610	251	59	31	12	0	0
8	0	0	0	35	884	562	240	58	28	12	0	0
9	0	0	0	33	785	508	200	60	28	11	0	0
10	0	0	0	31	694	465	170	63	29	11	0	0
11	0	0	0	31	631	430	150	63	27	11	0	0
12	0	0	0	29	1,040	420	130	66	27	10	0	0
13	0	0	0	465	680	400	120	75	29	9.9	0	0
14	0	0	0	1,020	562	376	115	78	26	9.4	0	0
15	0	0	0	405	1,560	350	110	75	25	8.9	0	0
16	0	0	0	259	1,220	328	105	71	24	8.2	0	0
17	0	0	13	182	1,010	319	100	65	22	7.8	0	0
18	0	0	14	499	956	302	96	61	21	7.1	0	0
19	0	0	14	5,500	836	278	92	60	22	6.7	0	0
20	0	0	12	3,250	694	274	88	57	20	6.0	0	0
21	0	0	13	5,250	580	266	85	56	19	5.2	0	0
22	0	0	12	2,580	586	255	84	53	19	3.5	0	0
23	0	0	12	1,360	924	247	90	50	18	5.7	0	0
24	0	0	14	1,750	4,330	236	95	49	17	0	0	0
25	0	0	120	8,050	3,040	225	92	49	15	0	0	0
26	0	0	236	7,830	2,240	218	85	45	14	0	0	0
27	0	0	132	2,820	1,600	218	80	44	14	0	0	0
28	0	0	97	2,110	1,930	218	76	44	14	0	0	0
29	0	0	97	1,310	-----	208	76	43	14	0	0	0
30	0	0	80	1,010	-----	201	78	42	14	0	0	0
31	0	-----	71	836	-----	194	-----	39	-----	0	0	-----
TOTAL	0	0	937	46,978	31,767	14,526	4,005	1,890	713	216.27	0	0
MEAN	0	0	30.2	1,515	1,135	469	134	61.0	23.8	6.98	0	0
MAX	0	0	236	8,050	4,330	1,680	298	83	35	14	0	0
MIN	0	0	0	29	336	194	76	39	14	0	0	0
AC-FT	0	0	1,860	93,180	63,010	28,810	7,940	3,750	1,410	429	0	0

CAL YR 1968 TOTAL 6,144.28 MEAN 16.8 MAX 278 MIN 0 AC-FT 12,190
 WTR YR 1969 TOTAL 101,032.27 MEAN 277 MAX 8,050 MIN 0 AC-FT 200,400

PEAK DISCHARGE (BASE, 350 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	2200	4.26	2,260	2-15	1030	4.24	2,310
1-21	1300	7.03	8,820	2-24	1030	6.59	7,870
1-26	1000	8.25	14,000	2-28	1815	4.28	2,280
2- 6	1430	4.12	1,860				

SALINAS RIVER BASIN

11-1505. SALINAS RIVER NEAR BRADLEY, CALIF.

LOCATION.--Lat 35°55'40", long 120°52'00", in NE $\frac{1}{4}$ sec.15, T.23 S., R.10 E., Monterey County, on left bank 6 miles northwest of Bradley, and 7 miles downstream from San Antonio River.

DRAINAGE AREA.--2,535 sq mi (revised).

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

GAGE.--Water-stage recorder. Datum of gage is 442.69 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--21 years, 448 cfs (324,600 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 117,000 cfs Feb. 24 (gage height, 20.34 ft, from floodmarks); minimum daily, 21 cfs Jan. 9.

Period of record: Maximum discharge, 117,000 cfs Feb. 24, 1969 (gage height, 20.34 ft, from floodmarks); no flow at times in 1951, 1954-55, 1957.

REMARKS.--Records fair. Flow partly regulated by Santa Margarita Lake (see sta 11-1445), Nacimiento Reservoir beginning in November 1956 (usable capacity, 340,000 acre-ft), and San Antonio Reservoir beginning in October 1965 (usable capacity, 350,000 acre-ft). Several small diversions above station.

REVISIONS (WATER YEARS).--WSP 1285: 1950.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	318	178	121	34	4,270	11,600	2,320	134	623	602	553	555
2	312	184	117	30	3,870	9,430	2,160	117	623	602	553	566
3	333	201	78	29	3,620	8,180	2,080	484	609	602	546	567
4	365	180	85	29	3,310	7,160	2,050	658	609	602	553	556
5	371	178	88	26	2,950	6,580	2,060	686	609	595	532	546
6	364	198	99	26	8,560	6,130	2,730	708	602	581	532	546
7	363	163	106	25	9,930	5,550	2,590	732	602	595	511	553
8	363	127	110	23	5,110	4,970	2,540	732	597	588	496	553
9	377	96	110	21	3,520	5,040	2,510	748	589	588	493	553
10	381	117	113	23	2,820	4,640	2,840	756	588	588	505	574
11	382	122	113	25	2,440	4,310	2,930	724	587	581	521	560
12	391	128	103	24	2,510	4,050	2,670	700	582	567	517	804
13	402	125	99	32	2,330	3,990	2,110	700	601	567	503	924
14	424	128	126	47	2,100	3,870	1,880	700	605	546	486	908
15	386	142	122	49	2,870	3,830	1,730	686	610	539	492	860
16	331	138	120	36	4,550	3,730	1,670	679	598	532	501	844
17	319	130	110	31	2,780	3,770	1,620	693	582	539	521	836
18	317	126	108	33	2,320	4,050	1,590	686	586	546	539	836
19	306	126	111	667	3,330	3,910	1,340	686	591	553	540	852
20	297	121	110	8,770	2,930	3,650	1,150	672	588	546	532	844
21	316	117	107	10,700	3,050	3,670	1,040	665	581	546	523	844
22	248	113	101	9,460	3,460	3,470	672	651	567	553	516	852
23	184	121	105	3,990	6,080	3,350	442	644	588	560	504	836
24	176	121	108	2,520	34,800	3,270	334	637	602	553	508	836
25	175	117	98	30,000	60,400	3,090	272	637	595	539	515	852
26	175	113	98	32,000	25,600	2,930	244	609	595	539	537	884
27	171	117	69	15,500	14,900	2,860	228	602	595	546	552	812
28	172	117	58	10,700	11,500	2,930	196	602	588	546	560	844
29	172	121	49	8,340	-----	2,680	168	602	609	553	563	860
30	182	121	42	5,870	-----	2,630	142	602	616	553	556	820
31	176	-----	37	4,810	-----	2,510	-----	616	-----	553	548	-----
TOTAL	9,249	4,086	3,021	143,870	235,910	141,830	46,358	19,548	17,917	17,500	16,308	22,277
MEAN	298	136	97.5	4,641	8,425	4,575	1,545	631	597	565	526	743
MAX	424	201	126	32,000	60,400	11,600	2,930	756	623	602	563	924
MIN	171	96	37	21	2,100	2,510	117	117	567	532	486	546
AC-FT	18,350	8,100	5,990	285,400	467,900	281,300	91,950	38,770	35,540	34,710	32,350	44,190

CAL YR 1968 TOTAL 103,870 MEAN 284 MAX 666 MIN 15 AC-FT 206,000
WTR YR 1969 TOTAL 677,874 MEAN 1,857 MAX 60,400 MIN 21 AC-FT 1,345,000

677 874
298094 = 974
306

11-1513. SAN LORENZO CREEK BELOW BITTERWATER CREEK, NEAR KING CITY, CALIF.

LOCATION.--Lat 36°16'05", long 121°03'55", in NE $\frac{1}{4}$ sec.23, T.19 S., R.8 E., Monterey County, on right bank 1.3 miles downstream from Bitterwater Creek, 5 miles northeast of King City, and 10 miles upstream from mouth.

DRAINAGE AREA.--233 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 431.64 ft above mean sea level. Prior to Apr. 24, 1967, at site 500 ft upstream at datum 5.00 ft higher.

AVERAGE DISCHARGE.--11 years, 13.1 cfs (9,490 acre-ft per year); median of yearly mean discharges, 4.3 cfs (3,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 10,800 cfs Jan. 25 (gage height, 15.33 ft in gage well, 16.2 ft, from floodmarks); minimum daily, 0.14 cfs Oct. 1-5, 9, Nov. 18.
Period of record: Maximum discharge, 10,800 cfs Jan. 25, 1969 (gage height, 15.33 ft in gage well, 16.2 ft, from floodmarks); no flow for many days in 1961.

REMARKS.--Records good. No regulation; small diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.20	.74	2.8	63	550	14	16	5.4	3.9	.90	1.3
2	.14	.28	.75	2.4	59	420	17	14	5.1	4.3	.87	1.2
3	.14	.29	.76	2.3	56	340	54	14	5.3	2.6	.69	1.2
4	.14	.22	.77	2.1	53	280	50	17	5.5	1.9	.60	1.2
5	.14	.20	.83	2.1	51	240	244	16	6.0	1.5	.58	1.2
6	.15	.19	.83	2.1	358	200	285	14	6.2	.45	.67	1.1
7	.15	.20	.90	2.0	181	175	113	12	5.8	.30	.72	2.6
8	.15	.19	.91	1.8	126	150	68	12	5.7	.29	.75	2.3
9	.14	.19	.84	1.7	100	130	59	12	6.5	.31	.74	1.4
10	.17	.18	.97	1.6	79	110	54	12	7.6	.59	.79	1.1
11	.16	.18	1.2	1.7	72	100	45	12	8.3	.99	.85	.94
12	.16	.18	1.3	1.6	63	91	37	12	7.7	1.1	1.0	.90
13	.28	.19	1.1	2.8	54	93	33	11	6.3	1.1	1.0	.86
14	.22	.20	2.0	85	50	68	29	11	6.5	1.2	.98	.83
15	.19	.20	2.8	18	192	57	27	10	6.6	1.1	1.0	.76
16	.19	.16	2.7	4.2	124	54	27	9.8	6.9	1.0	.99	.86
17	.18	.16	2.5	1.9	57	50	23	8.6	7.1	.84	.97	.94
18	.18	.14	2.1	2.6	148	44	23	7.7	7.3	.78	.95	1.1
19	.19	.15	1.9	1,150	254	40	21	7.6	7.0	.91	1.1	1.2
20	.19	.18	1.6	471	148	38	21	8.4	5.9	.82	1.2	1.2
21	.19	.22	1.4	2,930	86	44	21	8.1	5.6	.74	1.1	1.1
22	.18	.27	1.2	462	154	36	20	7.6	4.6	.72	1.1	.86
23	.18	.29	1.3	101	764	29	21	7.2	3.8	.70	.99	.91
24	.19	.38	1.6	184	4,490	25	22	6.9	3.1	.74	.97	.96
25	.19	.52	2.7	4,010	1,520	23	19	6.8	2.9	.92	1.0	1.1
26	.19	.57	3.9	2,040	884	21	18	6.5	3.3	1.0	1.2	1.1
27	.19	.58	7.0	471	550	20	17	6.0	3.2	1.2	1.3	1.3
28	.19	.62	7.3	212	730	18	16	6.0	3.4	1.2	1.3	1.4
29	.22	.62	4.5	116	-----	17	16	5.7	3.2	.86	1.3	1.4
30	.21	.72	3.9	88	-----	16	16	5.2	3.4	.88	1.5	1.3
31	.20	-----	3.6	70	-----	16	-----	5.1	-----	.97	1.4	-----
TOTAL	5.53	8.67	65.90	12,443.7	11,466	3,495	1,430	308.2	165.2	35.91	30.51	35.62
MEAN	.18	.29	2.13	401	410	113	47.7	9.94	5.51	1.16	.98	1.19
MAX	.28	.72	7.3	4,010	4,490	550	285	17	8.3	4.3	1.5	2.6
MIN	.14	.14	.74	1.6	50	16	14	5.1	2.9	.29	.58	.76
AC-FT	11	17	131	24,680	22,740	6,930	2,840	611	328	71	61	71
CAL YR 1968	TOTAL	251.35	MEAN	.69	MAX	9.0	MIN	.12	AC-FT	499		
WTR YR 1969	TOTAL	29,490.24	MEAN	80.8	MAX	4,490	MIN	.14	AC-FT	58,490		

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0400	13.39	7,680	2-19	1245	5.74	372
1-25	0930	15.33	10,800	2-24	1315	14.38	9,210
2-6	1945	6.34	700	2-28	1700	7.01	1,080
2-15	1915	6.26	635	4-5	2115	6.61	836

SALINAS RIVER BASIN

11-1517. SALINAS RIVER AT SOLEDAD, CALIF.

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

DRAINAGE AREA.--3,563 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 170 ft (from topographic map).

EXTREMES.--Maximum discharge during period, 106,000 cfs Feb. 25 (gage height, 23.31 ft); maximum gage height, 23.39 ft Jan. 26; minimum daily discharge, 17 cfs Jan. 12.

REMARKS.--Records good. Flow partly regulated by Santa Margarita Lake (see sta 11-1445), Nacimiento Reservoir (usable capacity, 340,000 acre-ft), and San Antonio Reservoir (usable capacity, 350,000 acre-ft). Several small diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	122	88	58	5,950	14,000	2,360	426	520	420	360	297
2	130	122	86	50	5,500	12,200	2,180	380	510	420	360	312
3	130	144	83	48	4,790	10,200	2,130	352	510	420	355	307
4	130	150	79	46	4,510	8,440	2,060	416	500	415	355	296
5	130	146	70	45	3,840	7,150	2,080	694	490	410	355	281
6	135	136	68	40	4,620	7,390	2,490	777	485	410	350	294
7	145	133	68	36	13,000	6,850	3,420	801	480	405	366	339
8	165	126	70	32	9,000	6,550	2,920	802	470	405	358	347
9	175	117	70	22	5,920	7,000	3,090	806	470	405	359	328
10	180	109	70	20	4,170	6,790	2,980	806	463	400	357	359
11	175	99	72	19	3,500	6,520	3,130	816	456	400	370	339
12	175	93	67	17	3,600	5,920	3,130	815	456	395	343	361
13	175	102	64	19	3,700	5,560	2,630	802	455	395	292	414
14	180	93	80	23	3,200	5,230	2,110	790	455	390	338	471
15	195	91	120	43	2,800	4,840	1,940	780	450	390	332	519
16	217	94	115	56	3,600	4,570	1,840	760	450	385	325	544
17	232	94	113	38	6,000	4,250	1,760	750	450	385	335	584
18	199	93	111	42	3,800	3,960	1,710	740	445	385	330	595
19	197	88	110	279	3,150	3,820	1,620	720	445	380	321	597
20	190	88	108	1,050	5,200	3,660	1,460	700	445	380	328	635
21	192	88	100	5,070	3,600	3,530	1,310	680	440	380	313	642
22	195	91	98	9,190	3,800	3,460	1,210	660	440	380	300	671
23	188	91	96	9,940	4,700	3,350	1,020	650	435	380	294	644
24	158	91	95	6,030	6,500	3,260	855	630	430	375	277	607
25	133	94	100	8,940	68,300	3,130	755	610	430	375	311	678
26	124	94	115	46,600	39,200	2,980	656	590	425	375	315	605
27	119	91	93	32,200	20,300	2,860	612	570	425	370	278	563
28	119	86	88	13,400	14,000	2,810	556	560	425	370	285	558
29	122	85	78	10,600	-----	2,730	519	550	420	370	304	552
30	122	88	67	7,510	-----	2,690	479	540	420	365	294	592
31	122	-----	60	6,610	-----	2,570	-----	530	-----	365	285	-----
TOTAL	4,979	3,139	2,702	158,073	260,250	168,270	55,012	20,503	13,695	12,100	10,145	14,331
MEAN	161	105	87.2	5,099	9,295	5,428	1,834	661	457	390	327	478
MAX	232	150	120	46,600	68,300	14,000	3,420	816	520	420	370	678
MIN	119	85	60	17	2,800	2,570	479	352	420	365	277	281
AC-FT	9,880	6,230	5,360	313,500	516,200	333,800	109,100	40,670	27,160	24,000	20,120	28,430

CAL YR 1968 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1969 TOTAL 723,199 MEAN 1,981 MAX 68,300 MIN 17 AC-FT 1,434,000

SALINAS RIVER BASIN

319

11-1518.7. ARROYO SECO NEAR GREENFIELD, CALIF.

LOCATION.--Lat 36°14'15", long 121°28'50", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.19 S., R.4 E., Monterey County, on right bank 0.6 mile downstream from Rocky Creek, and 14.5 miles southwest of Greenfield.

DRAINAGE AREA.--113 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 780 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 151 cfs (109,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 18,900 cfs Jan. 26 (gage height, 11.97 ft), from rating curve extended above 3,100 cfs on basis of slope-area measurement of peak flow; minimum daily, 0.60 cfs Oct. 1. Period of record: Maximum discharge, 21,800 cfs (revised) Dec. 6, 1966 (gage height, 12.50 ft), from rating curve extended above 3,100 cfs on basis of slope-area measurement at gage-height 11.97 ft; no flow at times.

REVISIONS.--The maximum discharge for the water year 1967 has been revised to 21,800 cfs Dec. 6, 1966 (gage height, 12.50 ft), superseding figure published in WRD Calif. 1967.

REMARKS.--Records good. No regulation; small diversion for fishponds above station by pumping. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WRD Calif. 1967: 1966.

REVISED PEAK DISCHARGE.--1967: Dec. 6 (1000) 21,800 cfs (12.50 ft); Jan. 22 (0015) 6,680 cfs (8.47 ft); Jan. 24 (0745) 10,900 cfs (9.96 ft); Mar. 16 (0915) 9,410 cfs (9.47 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	4.2	8.4	40	736	2,120	229	127	63	35	13	4.6
2	.75	4.5	8.5	35	663	1,720	247	126	64	33	13	4.5
3	.90	14	8.0	31	602	1,470	281	124	63	32	12	3.9
4	1.0	13	7.8	28	621	1,260	225	124	62	31	10	3.6
5	.90	7.5	7.7	26	897	1,090	576	119	63	30	9.8	3.5
6	.80	6.3	7.8	24	1,580	967	558	116	63	29	9.3	3.8
7	1.2	5.9	8.0	22	1,180	869	437	114	61	30	9.2	5.5
8	1.3	5.7	8.5	22	941	785	371	112	61	29	10	6.7
9	1.5	5.6	8.2	20	811	724	336	111	64	28	13	5.6
10	1.6	5.5	9.5	20	729	681	297	108	66	27	11	4.8
11	1.6	5.6	28	19	1,100	613	271	105	66	26	8.4	4.2
12	1.9	5.7	17	19	1,490	582	253	102	65	25	8.7	4.1
13	2.5	5.7	13	1,560	1,070	537	236	102	60	25	10	3.9
14	3.6	6.3	70	775	917	494	225	102	56	24	9.7	3.7
15	3.3	20	142	304	2,740	459	215	98	53	23	9.3	3.9
16	3.0	16	114	179	1,680	430	201	96	50	22	8.9	4.1
17	2.8	12	38	128	1,340	409	190	92	49	22	8.7	4.7
18	2.7	10	26	1,620	1,220	395	183	90	52	21	8.8	5.0
19	2.6	10	22	5,890	1,140	377	176	89	54	21	8.7	5.4
20	2.5	9.6	20	3,290	999	375	169	85	51	20	8.8	5.5
21	2.5	9.3	18	6,170	904	370	162	84	49	19	8.8	5.9
22	2.5	9.2	16	2,700	841	342	159	82	46	18	8.3	6.2
23	2.5	9.0	16	1,370	1,240	323	184	80	43	17	8.8	5.8
24	2.5	8.8	25	1,920	6,240	309	169	78	42	17	9.2	5.5
25	2.5	8.8	296	9,520	3,430	295	156	76	41	17	7.5	5.1
26	2.4	8.9	248	8,590	2,410	281	148	75	41	17	7.3	4.9
27	2.4	9.0	101	2,870	1,900	270	142	76	39	16	7.3	4.9
28	2.5	8.6	95	1,810	2,420	260	137	73	39	17	7.4	5.2
29	2.7	8.5	88	1,280	-----	251	134	69	38	18	6.8	5.1
30	3.3	8.4	60	1,030	-----	243	130	67	36	16	6.0	4.8
31	3.8	-----	48	846	-----	236	-----	64	-----	15	5.7	-----
TOTAL	66.65	261.6	1,583.4	52,158	41,841	19,537	7,197	2,966	1,600	720	283.4	144.4
MEAN	2.15	8.72	51.1	1,683	1,494	630	240	95.7	53.3	23.2	9.14	4.81
MAX	3.8	20	296	9,520	6,240	2,120	576	127	66	35	13	6.7
MIN	.60	4.2	7.7	19	602	236	130	64	36	15	5.7	3.5
AC-FT	132	519	3,140	103,500	82,990	38,750	14,280	5,880	3,170	1,430	562	286
CAL YR 1968	TOTAL	12,129.74	MEAN	33.1	MAX	558	MIN	0	AC-FT	24,060		
WTR YR 1969	TOTAL	128,358.45	MEAN	352	MAX	9,520	MIN	.60	AC-FT	254,600		

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1700	6.96	3,690	2-11	2130	6.14	2,570
1-21	0900	10.05	11,200	2-15	1230	6.90	3,600
1-26	0430	11.97	18,900	2-24	0645	9.60	9,800
2- 5	2115	6.45	2,960	2-28	1345	6.42	2,920

SALINAS RIVER BASIN

11-1520. ARROYO SECO NEAR SOLEDAD, CALIF.

LOCATION.--Lat 36°16'50", long 121°19'20", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.16, T.19 S., R.6 E., Monterey County, on right bank just downstream from bridge, 1.5 miles downstream from Vaquero Creek, and 10 miles south of Soledad.

DRAINAGE AREA.--244 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 342.20 ft above mean sea level (Corps of Engineers bench mark). Prior to June 16, 1929, nonrecording gage, and June 16, 1929, to Dec. 2, 1941, water-stage recorder at site 1 mile upstream at different datum. Dec. 3, 1941, to Sept. 30, 1959, water-stage recorder at datum 2.00 ft higher. Jan. 30 to Mar. 26, 1969, nonrecording gage at bridge at same datum.

AVERAGE DISCHARGE.--68 years, 163 cfs (118,100 acre-ft per year); median of yearly mean discharges, 120 cfs (86,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 23,800 cfs Jan. 26 (gage height, 15.43 ft, from floodmark), from rating curve extended as explained below; no flow many days.

Period of record: Maximum discharge, 28,300 cfs Apr. 3, 1958 (gage height, 16.40 ft, present datum), from rating curve extended above 12,000 cfs on basis of slope-area measurement at gage height 16.30 ft; no flow at times during several years.

REMARKS.--Records good. No regulation or large diversion above station.

REVISIONS (WATER YEARS).--WSP 881: 1902-9 (yearly summary only). WSP 1565: 1916-19, 1920-21(M), 1922, 1926-27, 1928-30(M), 1932, 1934, 1936(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	7.3	55	870	3,030	313	170	84	39	14	.83
2	0	0	7.4	47	770	2,380	313	167	84	39	14	.66
3	0	0	7.5	42	690	2,140	385	164	82	39	14	.52
4	0	0	7.4	37	700	1,710	255	164	82	37	11	.52
5	0	0	6.3	34	900	1,510	295	161	82	37	9.7	.52
6	0	0	6.6	31	2,260	1,330	665	155	79	37	9.7	.54
7	0	0	6.6	29	1,170	1,170	490	149	77	37	4.8	1.0
8	0	0	6.6	27	940	1,020	385	146	77	37	7.4	1.8
9	0	0	7.1	26	800	940	340	143	77	37	5.4	.86
10	0	.29	8.5	25	665	870	340	143	79	34	6.7	1.1
11	0	2.5	19	24	1,060	730	340	138	82	31	6.0	1.5
12	0	3.3	28	80	1,810	665	313	132	77	30	6.0	1.4
13	0	3.8	18	1,750	1,090	605	300	129	73	30	4.8	1.2
14	0	5.0	42	700	870	605	283	129	71	30	4.3	1.2
15	0	11	73	350	3,130	545	275	126	67	28	4.8	1.0
16	0	30	204	180	1,920	490	259	123	63	27	4.3	1.0
17	0	16	68	150	1,420	435	251	118	61	24	2.9	1.0
18	0	11	41	2,600	1,330	435	239	115	59	22	2.9	1.0
19	0	9.4	32	6,600	1,170	435	231	113	59	22	2.9	1.0
20	0	8.8	27	3,800	1,090	435	223	110	57	21	2.9	1.1
21	0	8.4	23	7,000	940	435	212	107	55	21	2.9	2.2
22	0	7.9	21	3,000	870	385	208	107	53	20	2.5	2.0
23	0	7.8	19	1,300	1,420	385	223	102	51	19	2.5	1.8
24	0	7.0	18	2,000	7,580	385	219	102	48	18	2.1	1.7
25	0	6.6	196	10,700	5,100	340	202	100	44	18	1.5	1.4
26	0	6.6	329	10,000	3,310	340	195	97	44	18	1.2	1.5
27	0	6.7	160	3,200	3,030	340	189	95	42	19	1.2	1.5
28	0	7.0	99	1,900	3,310	349	179	95	42	19	1.2	1.5
29	0	7.2	131	1,400	-----	340	176	93	42	18	1.0	1.5
30	0	7.3	85	1,100	-----	331	173	86	41	16	1.0	1.3
31	0	-----	66	960	-----	318	-----	86	-----	15	1.0	-----
TOTAL	0	173.59	1,770.3	59,147	50,215	25,428	8,471	3,865	1,934	839	156.6	36.15
MEAN	0	5.79	57.1	1,908	1,793	820	282	125	64.5	27.1	5.05	1.21
MAX	0	30	329	10,700	7,580	3,030	665	170	84	39	14	2.2
MIN	0	0	6.3	24	665	318	173	86	41	15	1.0	.52
AC-FT	0	344	3,510	117,300	99,600	50,440	16,800	7,670	3,840	1,660	311	72

CAL YR 1968 TOTAL 12,336.80 MEAN 33.7 MAX 748 MIN 0 AC-FT 24,470
WTR YR 1969 TOTAL 152,035.64 MEAN 417 MAX 10,700 MIN 0 AC-FT 301,600

PEAK DISCHARGE (BASE, 2,500 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
1-13 unknown - 5,000 2-12 unknown - 4,000
1-21 unknown - 18,000 2-15 unknown - 5,000
1-28 unknown a15.43 23,800 2-24 unknown - 16,000
2- 6 unknown - 4,000 2-28 unknown - 4,000

a From floodmarks.
NOTE.--No gage-height record Jan. 8-29.

11-1525. SALINAS RIVER NEAR SPRECKELS, CALIF.

LOCATION.--Lat 36°37'52", long 121°40'17", in Nacional Grant, Monterey County, near right bank on downstream side of bridge on Salinas-Monterey highway, 0.8 mile upstream from El Toro Creek, 1.6 miles northwest of Spreckels, and 2 miles south of Salinas. Prior to May 23, 1969, at site 0.3 mile downstream.

DRAINAGE AREA.--4,156 sq mi.

PERIOD OF RECORD.--January 1900 to August 1901, October 1929 to current year. Records for water year 1930 incomplete, yearly estimate published in WSP 1315-B. Published as "near Salinas" 1900-1901.

GAGE.--Nonrecording gage read once daily. Datum of gage is 20.56 ft above mean sea level. 1900-1901, May 10 to July 29, 1940, nonrecording gages at site 0.3 mile downstream at different datum. July 29, 1940, to May 22, 1969, water-stage recorder at site 0.3 mile downstream at datum 0.69 ft lower. Mar. 17, 1941, to June 30, 1961, supplementary nonrecording gages, July 1, 1961, to May 22, 1969, auxiliary water-stage recorder at site 0.3 mile downstream at datum 0.69 ft lower.

AVERAGE DISCHARGE.--40 years (1929-69), 427 cfs (309,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 83,100 cfs Feb. 26 (gage height, 26.51 ft, site and datum then in use); minimum daily, 0.60 cfs Nov. 4.

Period of record: Maximum discharge, 83,100 cfs Feb. 26, 1969 (gage height, 26.51 ft, site and datum then in use); maximum gage height, 26.85 ft Jan. 16, 1952, site and datum then in use from floodmarks; no flow at times in 1929-40.

REMARKS.--Records good. Large withdrawals from ground water and small surface-water diversions for municipal use and irrigation of about 95,000 acres above station. Low flow represents waste water from Spreckels sugar refinery and Alisal sewage disposal plant. Flow partly regulated by Nacimiento Reservoir beginning in November 1956 (usable capacity, 340,000 acre-ft) and San Antonio Reservoir beginning in October 1965 (usable capacity, 350,000 acre-ft). Records of chemical analyses for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1565: 1930, 1935, 1945. WSP 1715: 1959.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.94	.95	5.0	1	7,140	16,600	2,160	500	440	386	199	213
2	1.4	1.7	4.4	1	6,090	15,300	2,000	470	435	368	196	230
3	2.5	1.7	4.3	1	5,790	12,000	2,060	450	430	347	190	244
4	2.1	.60	3.9	1	5,200	10,500	2,460	440	430	338	186	244
5	2.0	.72	4.3	1	4,800	8,950	2,880	600	430	334	186	220
6	2.0	1.0	3.9	1	5,200	8,190	3,340	730	435	330	183	196
7	2.0	1.4	3.3	2	6,890	7,420	3,260	760	440	326	183	213
8	2.0	1.7	3.3	3	11,500	7,000	3,000	760	440	338	180	196
9	2.0	2.2	2.8	3	6,510	6,500	3,160	750	430	338	180	183
10	2.0	3.2	3.6	3	4,850	6,100	2,800	730	420	321	180	196
11	2.0	2.5	3.3	2	4,680	5,700	2,700	720	415	313	180	209
12	2.0	3.4	3.0	3	4,990	5,400	3,180	690	425	305	180	230
13	2.4	3.6	2.8	4	4,340	5,000	2,800	680	435	298	180	247
14	2.7	4.4	3.6	3	3,680	4,700	2,400	660	430	290	176	294
15	2.9	6.3	3.6	234	3,620	4,400	2,100	650	425	283	176	368
16	3.1	5.4	2.6	108	5,000	4,100	1,900	630	420	272	180	391
17	5.7	7.2	2.4	26	5,540	3,900	1,700	620	425	264	183	420
18	14	5.0	2.8	8	4,270	3,720	1,500	610	425	261	183	420
19	14	4.3	2.6	39	4,380	3,620	1,350	600	425	261	180	425
20	15	5.6	2.8	3,370	4,680	3,520	1,250	580	420	254	183	435
21	15	5.9	2.6	4,200	4,230	3,380	1,100	570	405	250	180	435
22	15	6.2	2.8	11,000	4,110	3,300	1,000	560	405	247	176	440
23	16	6.6	3.0	16,400	4,660	3,100	920	540	400	240	176	445
24	16	6.2	2.8	10,500	8,390	2,900	840	530	400	230	176	450
25	15	5.9	3.6	4,920	36,100	2,700	770	520	391	220	180	450
26	9.3	6.2	4.3	18,800	64,800	2,620	720	500	396	216	180	456
27	4.9	5.9	2.4	53,400	26,400	2,700	670	490	405	216	180	450
28	3.6	5.3	2.8	26,900	18,300	2,580	620	480	405	216	180	445
29	.94	5.3	2.2	14,500	-----	2,240	580	470	400	216	180	456
30	.65	5.0	2.4	11,400	-----	2,100	520	460	396	209	183	461
31	.62	-----	2.4	8,900	-----	2,140	-----	450	-----	203	196	-----
TOTAL	179.75	121.37	99.6	184,734	276,140	172,380	55,740	18,200	12,578	8,690	5,651	10,062
MEAN	5.80	4.05	3.21	5,959	9,862	5,561	1,858	587	419	280	182	335
MAX	16	7.2	5.0	53,400	64,800	16,600	3,340	760	440	386	199	461
MIN	.62	.60	2.2	1.0	3,620	2,100	520	440	391	203	176	183
AC-FT	357	241	198	366,400	547,700	341,900	110,600	36,100	24,950	17,240	11,210	19,960

CAL YR 1968 TOTAL 1,678.34 MEAN 4.5 MAX 81 MIN .50 AC-FT 3,330
WTR YR 1969 TOTAL 744,575.72 MEAN 2,040 MAX 64,800 MIN .60 AC-FT 1,477,000

NOTE.--No gage-height record Apr. 13 to June 5.

287,701

365
-31
-28
306

SALINAS RIVER BASIN

11-1525.4, EL TORO CREEK NEAR SPRECKELS, CALIF.

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

DRAINAGE AREA.--31.9 sq mi.

PERIOD OF RECORD.--October 1961 to current year. Prior to October 1962, published as Toro Creek near Spreckels.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 210 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 1.58 cfs (1,140 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 626 cfs Jan. 26 (gage height, 5.99 ft), from rating curve extended above 82 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.02 cfs for several days in October.

Period of record: Maximum discharge, 626 cfs Jan. 26, 1969 (gage height, 5.99 ft), from rating curve extended above 82 cfs on basis of slope-area measurement of maximum flow; no flow for many days in most years.

REMARKS.--Records good above 10 cfs and poor below. No regulation or diversion above station except for minor stock ponds.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.04	.08	.16	28	75	1.2	.71	.14	.45	.31	.25
2	.02	.15	.07	.16	23	65	1.1	.80	.09	.46	.29	.24
3	.02	.28	.06	.11	19	56	1.0	.75	.08	.26	.20	.29
4	.02	.07	.06	.11	17	50	1.4	.90	.10	.24	.17	.25
5	.02	.06	.06	.08	18	38	2.6	1.1	.08	.27	.17	.24
6	.02	.06	.06	.08	30	29	3.0	.93	.08	.39	.18	.29
7	.02	.06	.06	.08	49	25	2.3	.93	.08	.39	.11	.24
8	.02	.06	.07	.06	39	20	1.6	.96	.16	.48	.13	.21
9	.02	.06	.09	.05	24	17	.90	1.3	.21	.59	.16	.19
10	.02	.05	.10	.06	22	15	.60	1.2	.23	.70	.18	.19
11	.02	.06	.17	.06	61	15	.50	1.2	.26	.60	.19	.20
12	.03	.07	.11	.06	108	15	.40	1.3	.21	.64	.19	.20
13	.03	.06	.11	.27	74	13	.33	1.3	.32	.67	.21	.20
14	.03	.08	.18	.22	63	10	.28	1.3	.41	.71	.19	.19
15	.03	.11	.28	.08	66	8.5	.24	1.1	.44	.57	.28	.20
16	.03	.08	.22	.08	58	7.0	.21	1.2	.45	.63	.25	.19
17	.02	.07	.16	.08	54	6.0	.15	1.1	.59	.67	.26	.19
18	.02	.06	.16	.92	61	5.0	.22	1.3	.55	.57	.26	.19
19	.03	.07	.25	7.9	165	4.5	.21	.90	.50	.56	.27	.22
20	.03	.07	.44	6.8	125	4.0	.29	.77	.54	.57	.28	.19
21	.02	.06	.19	23	108	3.5	.42	.92	.75	.56	.28	.18
22	.03	.06	.21	5.0	102	3.0	.46	.90	.87	.44	.29	.17
23	.02	.06	.27	11	156	2.7	.59	1.0	.43	.47	.30	.16
24	.02	.09	.36	30	284	2.4	.64	1.3	.41	.45	.31	.15
25	.03	.18	1.1	191	170	2.2	.41	1.1	.46	.40	.30	.14
26	.03	.10	2.0	226	95	2.0	.40	.75	.55	.29	.24	.15
27	.03	.08	.38	125	72	1.8	.62	.55	.69	.27	.24	.16
28	.04	.06	.43	96	88	1.7	.67	.49	.63	.49	.24	.14
29	.06	.06	.27	51	-----	1.5	.64	.28	.50	.58	.24	.14
30	.05	.08	.22	42	-----	1.4	.58	.21	.34	.40	.25	.14
31	.04	-----	.16	33	-----	1.3	-----	.21	-----	.31	.25	-----
TOTAL	0.85	2.45	8.38	850.42	2,179	501.5	23.96	28.76	11.15	15.08	7.22	5.89
MEAN	.027	.082	.27	27.4	77.8	16.2	.80	.93	.37	.49	.23	.20
MAX	.06	.28	2.0	226	284	75	3.0	1.3	.87	.71	.31	.29
MIN	.02	.04	.06	.05	17	1.3	.15	.21	.08	.24	.11	.14
AC-FT	1.7	4.9	17	1,690	4,320	995	48	57	22	30	14	12

CAL YR 1968 TOTAL 33.69 MEAN .092 MAX 2.0 MIN 0 AC-FT 67
WTR YR 1969 TOTAL 3,634.66 MEAN 9.96 MAX 284 MIN .02 AC-FT 7,210

PEAK DISCHARGE (BASE, 5 CFS)					
DATE	TIME	G.H.	DISCHARGE	DATE	TIME
1-19	0315	4.11	66	2-15	1330
1-21	1015	4.06	58	2-19	0915
1-23	2230	3.99	49	2-24	1415
1-26	0530	5.99	626	2-28	1345
2- 6	1130	4.06	74		
2-11	2215	4.78	213		

NOTE.--No gage-height record Mar. 5 to May 15.

11-1529. CEDAR CREEK NEAR BELL STATION, CALIF.

LOCATION.--Lat 37°03'00", long 121°19'35", in San Luis Gonzaga Grant, Santa Clara County, on left bank 0.5 mile upstream from Hagerman Canyon, and 1.3 miles northwest of Bell Station.

DRAINAGE AREA.--12.8 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 4.92 cfs (3,560 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,590 cfs Jan. 25 (gage height, 5.27 ft), from rating curve extended above 560 cfs on basis of slope-area measurement at gage height 4.66 ft; no flow for many days.

Period of record: Maximum discharge, 3,490 cfs Jan. 31, 1963 (gage height, 6.85 ft), from rating curve extended above 560 cfs on basis of slope-area measurement at gage height 4.66 ft; no flow for several months in each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.01	.32	19	123	2.4	.79	.20	.05	.02	.01
2	0	.01	.01	.28	14	57	2.6	.79	.20	.04	.01	0
3	0	.07	.01	.25	11	44	2.8	.79	.20	.04	.01	0
4	0	.02	.01	.25	8.0	36	2.4	.79	.16	.04	.01	0
5	0	.01	.01	.23	10	26	4.4	.69	.16	.03	.01	0
6	0	.01	.01	.21	93	20	7.2	.61	.16	.03	.01	0
7	0	.02	.01	.19	40	16	4.4	.53	.16	.03	.01	.01
8	0	.02	.01	.19	23	13	3.2	.53	.16	.03	.01	.01
9	0	.02	.01	.20	16	12	3.0	.53	.16	.03	.01	.01
10	0	.02	.05	.19	12	11	2.8	.53	.16	.03	.01	.01
11	0	.02	.03	.19	39	9.2	2.6	.53	.16	.03	.01	0
12	0	.04	.02	.19	58	9.7	2.2	.53	.16	.02	.01	.01
13	0	.03	.02	.42	29	8.8	2.2	.53	.16	.02	.01	.01
14	0	.05	.07	4.8	21	7.6	2.0	.46	.13	.02	.01	.01
15	0	.11	.10	1.6	89	6.2	1.9	.46	.13	.02	.01	.01
16	0	.03	.05	.89	53	5.3	1.9	.46	.13	.02	.01	.01
17	0	.02	.04	.66	36	5.0	1.7	.40	.13	.02	.01	.01
18	0	.02	.03	98	31	4.7	1.6	.40	.13	.01	.01	.02
19	0	.02	.03	670	25	4.4	1.4	.34	.11	.01	.02	.02
20	0	.02	.03	158	19	4.7	1.4	.34	.11	.02	.02	.01
21	0	.02	.02	310	16	4.7	1.4	.34	.11	.01	.01	0
22	0	.01	.02	90	22	3.9	1.3	.34	.11	.01	.01	0
23	0	.01	.03	39	82	3.9	1.3	.34	.08	.01	.01	0
24	0	.01	.08	99	432	3.7	1.1	.28	.08	.01	.01	0
25	0	.01	.15	718	168	3.5	1.1	.28	.07	.02	.01	0
26	0	.01	6.2	250	136	3.2	1.1	.24	.07	.01	.01	0
27	0	.01	.69	64	60	3.0	1.1	.24	.07	.02	.01	.01
28	0	.01	.43	74	103	3.0	1.0	.24	.07	.02	.01	.01
29	0	.01	.48	51	-----	2.8	1.0	.24	.07	.01	.01	.01
30	0	.01	.40	42	-----	2.8	.79	.24	.05	.01	.01	.01
31	0	-----	.38	28	-----	2.6	-----	.20	-----	.02	.01	-----
TOTAL	0	0.67	9.44	2,702.06	1,665.0	460.7	65.29	14.01	3.85	0.69	0.34	0.20
MEAN	0	.022	.30	87.2	59.5	14.9	2.18	.45	.13	.022	.011	.007
MAX	0	.11	6.2	718	432	123	7.2	.79	.20	.05	.02	.02
MIN	0	0	.01	.19	8.0	2.6	.79	.20	.05	.01	.01	0
AC-FT	0	1.3	19	5,360	3,300	914	130	28	7.6	1.4	.7	.4
CAL YR 1968	TOTAL	51.14	MEAN	.14	MAX	6.2	MIN	0	AC-FT	101		
WTR YR 1969	TOTAL	4,922.25	MEAN	13.5	MAX	718	MIN	0	AC-FT	9,760		

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0315	5.11	1,440	2-11	2045	2.71	161
1-21	0745	4.02	691	2-15	1100	2.86	202
1-25	0115	5.27	1,590	2-24	1230	4.49	964
2-6	0930	2.76	174	3-1	0145	2.94	227

PAJARO RIVER BASIN

11-1530. PACHECO CREEK NEAR DUNNEVILLE, CALIF.

LOCATION.--Lat 36°58'50", long 121°22'45", in Ausaymas y San Felipe Grant, Santa Clara County, on right bank 450 ft downstream from private road bridge, and 3.3 miles northeast of Dunneville.

DRAINAGE AREA.--146 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only prior to January 1940, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 230.70 ft above mean sea level. Prior to Nov. 17, 1950, nonrecording gage at site 350 ft upstream at datum 6.00 ft higher. Nov. 17, 1950, to Aug. 18, 1960, nonrecording gage at site 350 ft upstream at datum 4.00 ft higher.

AVERAGE DISCHARGE.--30 years, 34.8 cfs (25,210 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,300 cfs Jan. 25 (gage height, 19.77 ft), from rating curve extended as explained below; no flow Oct. 1 to Jan. 17.

Period of record: Maximum discharge, 12,600 cfs Dec. 23, 1955 (gage height, 21.0 ft, present site and datum, from floodmarks), from rating curve extended above 5,400 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records good. Flow regulated by Pacheco Lake 9 miles upstream (capacity, 6,150 acre-ft). Small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	190	1,430	23	5.1	1.3	0	8.6	7.8
2	0	0	0	0	155	602	23	4.8	1.3	0	9.7	7.4
3	0	0	0	0	118	408	24	4.5	1.2	0	9.7	7.8
4	0	0	0	0	97	305	24	4.4	1.2	0	9.6	6.5
5	0	0	0	0	86	239	32	4.1	1.2	0	9.6	4.7
6	0	0	0	0	623	198	68	3.8	1.1	0	9.9	5.6
7	0	0	0	0	402	170	56	3.5	1.1	6.7	9.9	7.1
8	0	0	0	0	236	146	37	3.4	1.1	16	9.9	7.1
9	0	0	0	0	166	127	28	3.3	1.0	21	9.6	6.8
10	0	0	0	0	131	116	26	3.4	1.0	22	9.6	6.5
11	0	0	0	0	269	99	23	3.2	.90	16	9.6	6.2
12	0	0	0	0	683	98	19	3.0	.80	14	9.9	6.5
13	0	0	0	0	303	94	17	2.9	.60	13	9.9	6.5
14	0	0	0	0	215	80	15	2.8	.40	12	9.6	6.5
15	0	0	0	0	602	71	14	2.6	.20	12	9.9	6.5
16	0	0	0	0	459	64	13	2.5	.03	12	10	6.2
17	0	0	0	0	274	59	12	2.4	0	11	11	6.2
18	0	0	0	1.6	276	56	11	2.3	0	11	11	5.9
19	0	0	0	2,470	256	52	10	2.2	0	11	12	5.9
20	0	0	0	944	212	51	9.8	2.1	0	12	10	5.9
21	0	0	0	3,070	173	55	9.4	2.0	0	18	9.6	5.6
22	0	0	0	1,160	277	45	8.8	1.9	0	16	9.6	5.3
23	0	0	0	382	849	41	8.3	1.8	0	12	9.6	4.7
24	0	0	0	285	3,600	38	7.8	1.8	0	12	9.2	4.7
25	0	0	0	6,310	1,800	35	8.1	1.7	0	12	9.2	4.7
26	0	0	0	2,900	1,570	33	7.9	1.7	0	12	8.8	4.7
27	0	0	0	856	630	30	7.3	1.6	0	12	8.1	5.0
28	0	0	0	751	967	27	6.7	1.6	0	11	7.8	5.3
29	0	0	0	510	-----	26	6.1	1.5	0	10	8.1	4.7
30	0	0	0	341	-----	24	5.6	1.4	0	9.2	7.8	4.7
31	0	-----	0	254	-----	24	-----	1.4	-----	8.7	7.8	-----
TOTAL	0	0	0	20,234.6	15,619	4,843	560.8	84.7	14.43	322.6	294.6	179.0
MEAN	0	0	0	653	558	156	18.7	2.73	.48	10.4	9.50	5.97
MAX	0	0	0	6,310	3,600	1,430	68	5.1	1.3	22	12	7.8
MIN	0	0	0	0	86	24	5.6	1.4	0	0	7.8	4.7
AC-FT	0	0	0	40,130	30,980	9,610	1,110	168	29	640	584	355
CAL YR 1968	TOTAL	0	MEAN	0	MAX	0	MIN	0	AC-FT	0		
WTR YR 1969	TOTAL	42,152.73	MEAN	115	MAX	6,310	MIN	0	AC-FT	83,610		

11-1535. LLAGAS CREEK NEAR MORGAN HILL, CALIF.

LOCATION.--Lat 37°06'50", long 121°41'25", in Las Uvas Grant, Santa Clara County, on right bank 500 ft upstream from Llagas Avenue Bridge, 0.3 mile downstream from Chesbro Dam, 0.3 mile upstream from small tributary, and 2.3 miles west of Morgan Hill.

DRAINAGE AREA.--19.6 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 445 ft (from topographic map).

AVERAGE DISCHARGE.--18 years, 16.0 cfs (11,590 acre-ft per year); median of yearly mean discharges, 13 cfs (9,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,300 cfs Jan. 26 (gage height, 5.86 ft); minimum daily, 0.27 cfs Oct. 15.

Period of record: Maximum discharge, 3,190 cfs Apr. 2, 1958 (gage height, 8.45 ft), from rating curve extended above 1,600 cfs on basis of computation of maximum flow over dam; no flow at times in most years.

REMARKS.--Records good. Flow regulated by Chesbro Reservoir 0.3 mile upstream since 1955 (see sta 11-1534.8). No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	1.3	3.0	17	82	352	16	7.7	1.2	12	15	16
2	12	1.1	3.0	13	66	232	16	8.6	2.7	12	15	16
3	12	1.1	3.0	4.5	59	178	17	10	4.9	12	15	16
4	12	1.1	4.5	2.5	52	136	15	6.3	6.6	12	15	15
5	12	.95	9.0	2.0	83	108	32	7.0	10	12	15	15
6	12	.90	9.2	2.0	344	92	47	5.8	10	12	15	14
7	11	.97	9.1	2.0	156	78	30	6.3	10	12	15	14
8	9.5	.97	11	2.0	107	68	24	7.2	10	12	15	14
9	1.7	.85	11	1.9	87	61	22	7.0	10	12	15	14
10	.32	.85	11	1.9	75	55	21	6.6	10	12	15	14
11	.29	.97	9.7	1.9	200	49	18	5.7	10	12	15	14
12	.43	.85	9.6	1.9	276	47	17	4.8	10	12	16	14
13	.82	.75	9.6	2.8	140	44	17	4.7	10	12	16	14
14	.42	.75	9.7	1.9	108	39	16	5.7	10	12	16	14
15	.27	.65	10	1.7	544	35	15	5.3	9.4	12	16	14
16	.29	.65	10	1.5	285	33	14	4.1	9.4	12	16	14
17	.40	.65	10	1.5	183	32	14	3.3	13	12	16	14
18	.48	.55	12	4.5	145	31	14	5.2	13	12	16	14
19	.42	.55	13	9.9	130	29	12	4.1	10	12	16	14
20	.45	.63	13	4.1	106	29	12	2.2	10	12	15	14
21	.49	1.1	15	3.9	86	33	12	2.4	10	12	15	14
22	.57	2.5	18	2.4	94	26	11	2.1	10	13	20	14
23	1.1	2.6	19	1.6	188	25	14	2.6	10	15	16	14
24	1.6	2.6	19	3.0	477	22	15	4.2	10	15	16	14
25	1.4	2.9	18	337	344	22	13	1.9	10	15	16	14
26	1.2	2.8	19	756	248	22	10	2.0	9.8	15	16	14
27	1.3	2.8	18	315	179	21	9.6	3.9	10	15	16	14
28	1.7	2.8	18	208	430	19	11	2.6	10	15	16	14
29	1.8	2.7	18	135	-----	19	9.6	2.5	12	15	16	14
30	1.5	2.7	18	149	-----	18	9.1	2.0	12	15	16	14
31	1.4	-----	17	104	-----	17	-----	1.1	-----	15	16	-----
TOTAL	112.85	42.59	377.4	2,095.4	5,274	1,974	503.3	144.9	284.0	400	487	428
MEAN	3.64	1.42	12.2	67.6	188	63.7	16.8	4.67	9.47	12.9	15.7	14.3
MAX	12	2.9	19	756	544	352	47	10	13	15	20	16
MIN	.27	.55	3.0	1.5	52	17	9.1	1.1	1.2	12	15	14
AC-FT	224	34	749	4,160	10,460	3,920	998	287	563	793	966	849
CAL YR 1968	TOTAL	4,253.88	MEAN	11.6	MAX	30	MIN	.12	AC-FT	8,440		
WTR YR 1969	TOTAL	12,123.44	MEAN	33.2	MAX	756	MIN	.27	AC-FT	24,050		

PAJARO RIVER BASIN

11-1537. PAJARO RIVER NEAR GILROY, CALIF.

LOCATION.--Lat 36°56'54", long 121°30'39", on boundary between Las Animas and Llano del Tequisquita Grants, Santa Clara County, on center pier on downstream side of highway bridge on Bolsa Road, 0.9 mile downstream from Llagas Creek, and 4.7 miles southeast of Gilroy.

DRAINAGE AREA.--399 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 123.88 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--10 years, 57.9 cfs (41,950 acre-ft per year); median of yearly mean discharges, 23 cfs (16,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 12,900 cfs Jan. 25 (gage height, 14.63 ft), from rating curve extended above 4,800 cfs; minimum daily, 0.32 cfs Nov. 28, 29.

Period of record: Maximum discharge, 12,900 cfs Jan. 25, 1969 (gage height, 14.63 ft), from rating curve extended above 4,800 cfs; no flow for many days in 1961-62.

REMARKS.--Records good. Flow regulated by Pacheco Lake (capacity, 6,150 acre-ft), Chesbro Reservoir 21 miles upstream (see sta 11-1534.8) and San Felipe Lake. Many diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.1	.50	5.7	938	2,990	58	27	13	9.1	3.5	2.8
2	.91	1.8	.39	5.4	673	2,270	57	26	12	8.0	5.2	5.5
3	.86	2.8	.33	4.6	479	1,680	61	25	9.8	8.1	7.3	3.9
4	1.3	1.4	.36	4.6	351	1,360	61	24	8.7	7.8	5.9	4.2
5	1.2	1.1	.40	4.6	287	1,100	82	23	8.2	9.1	5.5	2.4
6	1.1	1.2	.50	4.2	1,200	848	131	22	8.4	7.7	6.0	2.8
7	1.0	1.4	.55	4.6	902	648	135	21	8.4	7.5	6.3	2.8
8	.94	1.4	.48	3.8	700	490	122	21	9.3	7.8	4.7	3.1
9	.90	1.6	.51	4.2	543	375	104	21	8.7	11	4.9	2.7
10	.90	1.1	.82	3.2	417	298	92	23	9.7	8.9	4.6	2.6
11	.90	1.4	1.6	3.2	498	242	79	23	8.8	9.1	5.3	4.1
12	.87	2.1	.72	3.2	1,440	213	70	21	9.5	8.1	4.6	5.4
13	.94	1.9	.74	21	908	194	64	21	9.1	9.7	3.1	5.9
14	1.1	2.2	2.4	39	705	168	58	20	8.4	7.3	3.0	7.7
15	1.0	3.8	4.5	7.1	1,670	147	55	20	9.6	7.0	2.6	8.4
16	.82	2.8	13	4.9	1,350	131	51	17	9.0	5.7	2.2	7.8
17	.82	2.7	2.2	4.3	959	121	48	17	8.3	6.1	2.1	7.1
18	.84	2.7	1.4	45	865	112	49	17	7.9	6.5	2.8	7.2
19	1.0	2.7	1.3	2,730	767	104	46	18	8.2	7.5	4.3	8.2
20	1.0	2.4	1.4	1,730	655	101	45	19	7.7	7.6	2.6	7.4
21	1.0	2.1	1.2	2,070	532	106	43	19	8.0	8.5	1.9	7.0
22	1.1	1.9	1.2	1,860	662	98	42	18	10	9.3	2.6	4.5
23	1.2	1.7	1.2	1,410	1,320	90	38	17	11	10	4.2	4.4
24	1.7	1.0	1.6	1,130	3,230	84	36	18	12	8.3	5.2	3.7
25	2.8	.61	3.0	7,450	6,710	77	33	17	9.9	7.8	4.8	3.4
26	2.8	.44	19	11,700	4,600	74	32	15	14	6.9	3.1	3.4
27	2.8	.42	11	4,780	2,630	71	31	14	9.4	5.6	2.9	3.5
28	2.9	.32	7.1	2,550	2,340	68	30	12	11	5.3	4.0	3.5
29	3.2	.32	11	1,910	-----	63	29	12	11	6.7	4.4	1.7
30	3.1	.48	6.6	1,650	-----	60	28	13	9.2	7.1	2.4	.85
31	2.4	-----	5.9	1,260	-----	59	-----	14	-----	5.5	3.2	-----
TOTAL	44.80	49.89	102.90	42,402.6	38,331	14,442	1,810	595	288.2	240.6	125.2	137.95
MEAN	1.45	1.66	3.32	1,368	1,369	466	60.3	19.2	9.61	7.76	4.04	4.60
MAX	3.2	3.8	19	11,700	6,710	2,990	135	27	14	11	7.3	8.4
MIN	.82	.32	.33	3.2	287	59	28	12	7.7	5.3	1.9	.85
AC-FT	89	99	204	84,100	76,030	28,650	3,590	1,180	572	477	248	274
CAL YR 1968	TOTAL	2,715.73	MEAN	7.42	MAX	43	MIN	.32	AC-FT	5,390		
WTR YR 1969	TOTAL	98,570.14	MEAN	270	MAX	11,700	MIN	.32	AC-FT	195,500		

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1245	11.40	3,970	2-12	0415	7.67	1,840
1-25	2145	14.63	12,900	2-15	1600	8.68	2,710
2- 6	1245	7.07	1,440	2-25	1015	12.25	7,500

11-1539. UVAS CREEK ABOVE UVAS RESERVOIR, NEAR MORGAN HILL, CALIF.

LOCATION.--Lat 37°05'34", long 121°43'02", in Las Uvas Grant, Santa Clara County, on left bank 0.6 mile downstream from Little Uvas Creek, 0.9 mile upstream from Hay Canyon, and 4.4 miles southwest of Morgan Hill.

DRAINAGE AREA.--21.0 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 486.47 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 29.8 cfs (21,590 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,100 cfs Jan. 19; minimum daily, 0.14 cfs Oct. 1.

Period of record: Maximum discharge, 6,580 cfs Oct. 13, 1962 (gage height, 13.18 ft); no flow July 12 to Oct. 22, 1961, Oct. 1, 1964.

REMARKS.--Records fair. Minor regulation and diversion above station affects low flows. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	1.0	1.0	7.3	121	362	22	13	6.8	2.7	1.2	.17
2	.28	1.0	1.2	6.9	102	255	23	13	6.7	2.7	1.1	.35
3	.28	4.5	1.0	6.3	89	197	22	13	6.5	2.1	1.1	.43
4	.23	2.0	.92	5.4	80	160	20	12	6.4	2.2	.98	.37
5	.23	1.2	.80	4.8	165	134	80	11	6.1	2.1	.71	.42
6	.34	1.0	.92	4.3	378	115	87	11	6.6	2.3	.52	.41
7	.34	1.5	.92	3.8	193	100	52	11	6.6	2.1	.80	.57
8	.23	1.2	1.0	3.8	153	88	41	11	6.8	2.1	.91	.52
9	.28	1.0	1.3	3.6	134	79	37	10	7.0	1.8	.84	.37
10	.18	1.0	13	3.4	116	71	33	10	7.6	1.6	.75	.25
11	.18	1.0	8.8	3.6	370	64	30	9.5	7.2	1.8	.29	.36
12	.80	1.6	3.2	3.3	278	61	28	9.4	7.3	1.4	.68	.36
13	2.0	1.3	2.2	357	180	56	27	9.6	6.9	1.9	.36	.27
14	1.2	1.3	9.2	83	158	51	25	9.0	6.4	1.2	.59	.20
15	.92	5.9	48	27	898	46	24	8.9	6.2	.66	.65	.46
16	.80	3.0	17	18	305	42	22	8.6	6.0	.92	.73	.42
17	.68	2.0	9.9	14	217	39	21	8.4	5.5	.77	.70	.48
18	.68	1.3	6.9	515	183	36	21	8.3	5.3	.99	.45	.38
19	.80	1.3	5.9	1,700	158	33	19	8.0	5.1	1.5	.95	.41
20	.80	1.3	5.1	877	132	36	19	7.7	4.6	1.4	.98	.32
21	.40	.92	4.5	701	117	37	18	7.8	4.0	.99	.70	.27
22	.58	.48	4.2	293	117	37	17	7.6	4.4	.79	.83	.49
23	.68	.48	4.0	185	273	34	22	7.3	4.8	.41	.47	.31
24	.68	.30	5.6	304	689	31	19	7.3	4.5	.70	.65	.38
25	.40	1.3	30	1,060	411	30	17	7.6	3.6	.93	.44	.24
26	.58	1.3	48	916	253	28	16	7.3	3.6	.75	.54	.33
27	.58	.30	14	299	222	27	15	7.5	3.4	1.2	.48	.34
28	.48	.30	23	238	584	26	15	7.1	3.4	1.0	.54	.30
29	.68	.30	16	177	-----	25	14	6.3	4.0	1.1	.61	.40
30	.80	.92	9.9	201	-----	23	14	6.4	3.6	1.4	.54	.23
31	1.0	-----	8.8	145	-----	22	-----	6.3	-----	1.1	.46	-----
TOTAL	18.25	44.10	306.26	8,166.5	7,076	2,345	820	280.9	166.9	44.61	21.55	10.81
MEAN	.59	1.47	9.88	263	253	75.6	27.3	9.06	5.56	1.44	.70	.36
MAX	2.0	5.9	48	1,700	898	362	87	13	7.6	2.7	1.2	.57
MIN	.14	.48	.80	3.3	80	22	14	6.3	3.4	.41	.29	.17
AC-FT	36	87	607	16,200	14,040	4,650	1,630	557	331	88	43	21
CAL YR 1968	TOTAL	3,452.52	MEAN	9.43	MAX	960	MIN	.12	AC-FT	6,850		
WTR YR 1969	TOTAL	19,300.78	MEAN	52.9	MAX	1,700	MIN	.14	AC-FT	38,280		

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1415	6.59	1,030	2-15	0700	7.33	1,510
1-19	0630	9.58	3,100	2-24	0430	8.27	2,140
1-26	0230	9.35	2,920	2-28	1130	6.44	937
2-11	1745	6.62	1,020				

PAJARO RIVER BASIN

11-1541, BODFISH CREEK NEAR GILROY, CALIF.

LOCATION.--Lat 37°00'15", long 121°59'58", in Las Animas Grant, Santa Clara County, on left bank just upstream from Whitehurst Creek, 2.7 miles upstream from mouth, and 5.1 miles west of west city limits of Gilroy.

DRAINAGE AREA.--7.40 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 360 ft (from topographic map).

AVERAGE DISCHARGE.--10 years, 3.73 cfs (2,700 acre-ft per year); median of yearly mean discharges, 2.3 cfs (1,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 638 cfs Jan. 19 (gage height, 7.11 ft); no flow Oct. 1, 2, 4-11. Period of record: Maximum discharge, 1,240 cfs Jan. 31, 1963 (gage height, 8.25 ft), from rating curve extended above 580 cfs; no flow at times.

REVISIONS.--The maximum discharge for the water year 1967 has been revised to 862 cfs Jan. 21 (gage height, 7.94 ft), superseding figure published in WRD Calif. 1967.

REMARKS.--Records good. No regulation or diversion above station.

REVISED PEAK DISCHARGE.--1967; Dec. 6 (0715) 303 cfs (5.53 ft); Jan. 21 (2115) 862 cfs (7.94 ft); Jan. 24 (0600) 550 cfs (6.75 ft); Jan. 30 (1015) 372 cfs (5.91 ft); Mar. 16 (0745) 695 cfs (7.34 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.34	.11	.66	14	63	5.3	2.1	1.0	.66	.37	.04
2	0	.40	.12	.56	11	43	5.0	2.0	1.1	.75	.37	.04
3	.01	1.2	.10	.49	8.7	34	4.8	1.9	1.0	.74	.36	.02
4	0	.31	.06	.44	7.8	27	4.6	1.9	.97	.68	.35	.04
5	0	.28	.07	.46	15	22	12	1.8	.93	.70	.33	.05
6	0	.26	.07	.44	32	18	11	1.8	.88	.68	.32	.07
7	0	.28	.05	.44	18	16	12	1.7	.87	.66	.31	.24
8	0	.23	.07	.43	14	15	8.4	1.7	.93	.65	.14	.22
9	0	.23	.07	.36	11	13	7.0	1.7	.93	.63	.07	.20
10	0	.23	1.5	.36	9.0	12	6.2	1.7	.90	.61	.06	.11
11	0	.22	.53	.36	51	11	5.5	1.7	.93	.60	.07	.13
12	.01	.64	.15	.36	54	11	5.2	1.7	.90	.58	.06	.14
13	.04	.41	.10	12	23	9.9	4.8	1.7	.90	.57	.05	.17
14	.05	.46	.89	10	18	9.2	4.5	1.6	.99	.56	.06	.11
15	.05	1.4	5.9	3.7	131	8.6	4.2	1.5	.93	.55	.10	.09
16	.03	.51	2.2	2.4	50	8.2	3.9	1.5	.93	.54	.05	.12
17	.02	.39	.69	1.9	31	7.8	3.7	1.5	.88	.53	.07	.13
18	.03	.46	.46	78	27	7.6	3.5	1.5	.87	.52	.07	.10
19	.04	1.9	.40	282	23	7.2	3.3	1.4	.86	.51	.05	.09
20	.04	.38	.36	51	18	8.1	3.1	1.4	.89	.50	.05	.10
21	.04	.30	.30	99	18	7.6	3.0	1.4	.88	.48	.05	.07
22	.04	.27	.30	34	19	7.0	2.9	1.4	.87	.47	.05	.07
23	.05	.24	.34	19	40	6.7	2.8	1.4	.85	.46	.06	.04
24	.05	.18	.53	44	110	6.5	2.6	1.4	.81	.45	.10	.05
25	.07	.16	2.1	190	87	6.2	2.5	1.3	.76	.44	.07	.03
26	.07	.15	5.4	67	61	6.0	2.4	1.3	.75	.43	.05	.04
27	.01	.14	1.6	33	44	5.8	2.3	1.3	.73	.42	.05	.10
28	.06	.10	2.1	42	64	5.9	2.3	1.2	.70	.41	.05	.10
29	.17	.10	1.6	27	-----	5.7	2.2	1.2	.68	.40	.08	.07
30	.30	.14	1.1	26	-----	5.6	2.1	1.2	.66	.39	.08	.07
31	.32	-----	.80	18	-----	5.4	-----	1.2	-----	.38	.06	-----
TOTAL	1.50	12.31	30.07	1,045.36	1,009.5	420.0	143.1	48.1	26.28	16.95	4.01	2.85
MEAN	.048	.41	.97	33.7	36.1	13.5	4.77	1.55	.88	.55	.13	.095
MAX	.32	1.9	5.9	282	131	63	12	2.1	1.1	.75	.37	.24
MIN	0	.10	.05	.36	7.8	5.4	2.1	1.2	.66	.38	.05	.02
AC-FT	3.0	24	60	2,070	2,000	833	284	95	52	34	8.0	5.7

CAL YR 1968 TOTAL 416.23

MEAN 1.14

MAX 31

MIN 0

AC-FT 826

WTR YR 1969 TOTAL 2,760.03

MEAN 7.56

MAX 282

MIN 0

AC-FT 5,470

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0615	7.11	638	2-11	2045	4.53	153
1-21	0730	4.60	161	2-15	0915	6.15	420
1-24	2315	6.49	490	2-24	1045	4.57	157

NOTE.--No gage-height record Apr. 8 to May 8, July 6 to Aug. 6.

11-1542, UVAS CREEK NEAR GILROY, CALIF.

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

DRAINAGE AREA.--71.2 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 190 ft (from topographic map).

AVERAGE DISCHARGE.--10 years, 38.2 cfs (27,680 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,540 cfs Jan. 25 (gage height, 12.67 ft); no flow for many days.
Period of record: Maximum discharge, 9,490 cfs Feb. 1, 1963 (gage height, 17.66 ft), from rating curve extended above 3,300 cfs; no flow for many days in each year.

REMARKS.--Records good. Flow regulated by Uvas Reservoir 10 miles upstream (see sta 11-1540.2). Diversion above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	313	1,320	59	22	0	.82	2.6	1.8
2	0	0	0	0	265	866	59	21	.01	.48	1.6	1.7
3	0	0	0	0	228	610	61	21	0	.14	1.9	2.1
4	0	0	0	0	200	460	57	21	.20	.01	2.6	3.4
5	0	0	0	0	236	358	87	18	1.8	0	.81	3.8
6	0	0	0	0	771	294	164	17	2.2	0	.20	3.8
7	0	0	0	0	472	251	120	16	2.2	0	.30	4.2
8	0	0	0	0	355	220	93	15	2.5	.01	.31	3.5
9	0	0	0	0	292	196	84	15	3.5	0	.28	3.6
10	0	0	0	0	254	177	77	15	4.0	.34	.70	3.1
11	0	0	0	0	478	154	71	14	3.9	.99	1.5	3.2
12	0	0	0	0	870	150	66	12	3.6	.97	2.0	3.7
13	0	0	0	16	445	138	62	11	3.4	1.4	1.6	3.9
14	0	0	0	80	340	122	59	10	3.4	1.5	1.1	4.1
15	0	0	0	25	1,550	110	55	8.5	3.0	1.2	1.2	4.4
16	0	0	0	14	1,030	104	52	7.5	3.8	2.2	.72	4.2
17	0	0	0	9.0	637	99	48	6.7	3.2	.99	.86	3.8
18	0	0	0	220	490	94	46	6.1	2.7	.02	.46	3.9
19	0	0	0	1,900	400	88	44	5.7	2.3	.74	.27	4.0
20	0	0	0	592	310	89	41	5.1	2.4	.11	.53	4.6
21	0	0	0	1,340	250	98	39	3.8	2.1	.01	.36	3.6
22	0	0	0	960	265	85	37	3.5	2.1	0	.22	4.1
23	0	0	0	532	499	82	40	3.9	2.3	.02	.24	3.9
24	0	0	0	448	1,490	76	43	3.4	2.0	2.1	.35	3.5
25	0	0	0	2,740	1,580	74	39	3.5	1.7	4.7	.58	3.3
26	0	0	0	1,900	1,180	72	34	3.0	2.0	5.3	.41	2.8
27	0	0	0	915	807	70	30	2.0	1.6	5.9	.84	3.3
28	0	0	0	735	1,370	67	26	1.0	1.5	5.8	.77	3.5
29	0	0	0	490	-----	64	25	.27	2.2	4.5	.69	3.4
30	0	0	0	502	-----	63	23	.06	1.9	3.4	.91	3.0
31	0	-----	0	400	-----	63	-----	.02	-----	2.6	1.5	-----
TOTAL	0	0	0	13,818.0	17,377	6,714	1,741	292.05	67.51	46.25	28.41	105.2
MEAN	0	0	0	446	621	217	58.0	9.42	2.25	1.49	.92	3.51
MAX	0	0	0	2,740	1,580	1,320	164	22	4.0	5.9	2.6	4.6
MIN	0	0	0	0	200	63	23	.02	0	0	.20	1.7
AC-FT	0	0	0	27,410	34,470	13,320	3,450	579	134	92	56	209
CAL YR 1968	TOTAL	1,960.67	MEAN	5.36	MAX	99	MIN	0	AC-FT	3,890		
WTR YR 1969	TOTAL	40,189.42	MEAN	110	MAX	2,740	MIN	0	AC-FT	79,710		

11-1564.5. WILLOW CREEK TRIBUTARY NEAR SAN BENITO, CALIF.

LOCATION.--Lat 36°35'25", long 121°11'45", in NW $\frac{1}{4}$ sec.34, T.15 S., R.7 E., San Benito County, on left bank at culvert on State Highway 25, 300 ft upstream from mouth, and 9.1 miles northwest of San Benito.

DRAINAGE AREA.--1.24 sq mi.

PERIOD OF RECORD.--Water years 1961-64 (annual maximum), July 1964 to September 1969 (discontinued as a continuous-record station; converted to a crest-stage partial-record station).

GAGE.--Water-stage recorder with rain-gage attachment and crest-stage gage. Datum of gage is 1,027.7 ft above mean sea level (levels by Topographic Division). Aug. 31, 1960, to July 9, 1964, crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--5 years (1964-69), 0.014 cfs (10 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 40 cfs Feb. 24 (gage height, 1.43 ft), by slope-area measurement of maximum flow; no flow for most of year.

Period of record: Maximum discharge, 40 cfs Feb. 24, 1969 (gage height, 1.43 ft), by slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	.80	0	0	0	0	0	0
2	0	0	0	0	0	.60	.10	0	0	0	0	0
3	0	0	0	0	0	.50	.10	0	0	0	0	0
4	0	0	0	0	0	.40	.04	0	0	0	0	0
5	0	0	0	0	.03	.30	.33	0	0	0	0	0
6	0	0	0	0	0	.32	.16	0	0	0	0	0
7	0	0	0	0	.02	.34	.10	0	0	0	0	0
8	0	0	0	0	.03	.36	.06	0	0	0	0	0
9	0	0	0	0	0	.36	.08	0	0	0	0	0
10	0	0	0	0	0	.36	.02	0	0	0	0	0
11	0	0	0	0	0	.32	0	0	0	0	0	0
12	0	0	0	0	0	.32	0	0	0	0	0	0
13	0	0	0	0	0	.30	0	0	0	0	0	0
14	0	.01	0	0	0	.28	0	0	0	0	0	0
15	0	0	.01	0	0	.24	0	0	0	0	0	0
16	0	0	0	0	0	.24	0	0	0	0	0	0
17	0	0	0	0	0	.22	0	0	0	0	0	0
18	0	0	0	.03	0	.20	0	0	0	0	0	0
19	0	0	0	.03	.10	.14	0	0	0	0	0	0
20	0	0	0	.05	0	.14	0	0	0	0	0	0
21	0	0	0	.02	0	.13	0	0	0	0	0	0
22	0	0	0	.01	0	.11	0	0	0	0	0	0
23	0	0	0	.05	1.0	.11	0	0	0	0	0	0
24	0	0	0	.20	12	.10	0	0	0	0	0	0
25	0	0	.01	2.0	1.2	.08	0	0	0	0	0	0
26	0	0	.01	.50	.45	.06	0	0	0	0	0	0
27	0	0	0	.20	.20	.05	0	0	0	0	0	0
28	0	0	.01	.10	.10	.03	0	0	0	0	0	0
29	0	0	0	.05	-----	0	0	0	0	0	0	0
30	0	0	0	.03	-----	0	0	0	0	0	0	0
31	0	-----	0	.01	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0.01	0.04	3.28	15.13	7.41	0.99	0	0	0	0	0
MEAN	0	.0003	.001	.11	.54	.24	.033	0	0	0	0	0
MAX	0	.01	.01	2.0	12	.80	.33	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	.02	.08	6.5	30	15	2.0	0	0	0	0	0
(a)	.5	1.7	1.8	7.2	4.3	.2	.9	0	0	0	0	0

CAL YR 1968	TOTAL	.08	MEAN	.0002	MAX	.02	MIN	0	AC-FT	.2
WTR YR 1969	TOTAL	26.86	MEAN	.074	MAX	12	MIN	0	AC-FT	53

a Precipitation, in inches.

PAJARO RIVER BASIN

331

11-1565. SAN BENITO RIVER NEAR WILLOW CREEK SCHOOL, CALIF.

LOCATION.--Lat 36°36'34", long 121°12'07", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.15 S., R.7 E., San Benito County, on left bank 1.3 miles downstream from Willow Creek, 0.9 mile northwest of Willow Creek School, and 10 miles northwest of San Benito.

DRAINAGE AREA.--249 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 927.89 ft above mean sea level, unadjusted. Prior to Jan. 28, 1948, and Nov. 11, 1955, to Sept. 30, 1965, at site 0.9 mile downstream at different datum. Jan. 28, 1948, to Nov. 10, 1955, at present site and datum.

AVERAGE DISCHARGE.--30 years, 24.6 cfs (17,820 acre-ft per year); median of yearly mean discharges, 13 cfs (9,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,950 cfs Feb. 24 (gage height, 10.57 ft in gage well, 10.65 ft, from floodmarks), from rating curve extended above 1,100 cfs on basis of slope-area measurements at gage heights 9.52 and 10.57 ft; minimum daily, 0.05 cfs on many days in October.

Period of record: Maximum discharge, 8,210 cfs Apr. 3, 1958 (gage height, 8.35 ft, site and datum then in use), from rating curve extended above 600 cfs on basis of slope-area measurement of maximum flow; no flow at times.

Flood of February 1938, reached a stage of about 9.0 ft (former datum) from floodmarks.

REMARKS.--Records good. Flow regulated by Hernandez Reservoir 40 miles upstream beginning in December 1961 (capacity, 18,700 acre-ft). Small diversion above station for irrigation.

REVISIONS (WATER YEARS).--WSP 1565: 1948(M), 1949.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.12	.12	.20	60	1,100	40	32	18	66	43	37
2	.05	.31	.12	.20	60	900	70	32	18	66	43	31
3	.05	1.8	.12	.20	62	700	90	32	18	66	42	29
4	.05	.17	.12	.20	65	600	84	34	19	67	40	29
5	.05	.12	.17	.20	92	500	115	33	18	67	40	28
6	.05	.12	.17	.20	326	400	297	32	18	68	40	29
7	.05	.12	.17	.20	390	340	206	31	18	68	40	35
8	.05	.12	.12	.20	222	290	140	31	38	68	39	34
9	.05	.12	.12	.20	162	240	111	30	48	67	39	31
10	.05	.12	.23	.20	125	215	98	31	48	67	39	30
11	.05	.12	.23	.20	104	197	86	31	53	66	39	30
12	.05	.12	.17	.20	153	185	76	30	64	66	39	30
13	.08	.12	.17	1.0	145	181	68	30	63	66	40	30
14	.05	.52	.31	.20	106	107	63	30	61	65	40	30
15	.05	.78	1.8	.20	160	78	59	28	63	62	41	30
16	.05	.17	1.2	.20	260	69	53	28	64	53	41	31
17	.05	.12	.31	.20	195	62	51	27	64	50	40	31
18	.05	.12	.17	.20	179	55	48	26	68	48	39	30
19	.08	.12	.17	18	268	49	46	26	67	47	40	30
20	.05	.12	.17	92	232	47	44	26	68	46	40	30
21	.08	.17	.17	356	175	50	41	25	69	46	40	31
22	.08	.17	.17	300	179	40	39	24	69	46	40	31
23	.08	.16	.12	106	316	38	40	23	69	44	39	31
24	.08	.17	.17	104	3,170	36	40	23	69	44	40	30
25	.08	.16	1.0	783	2,000	35	37	22	68	46	41	30
26	.08	.12	.80	658	1,400	34	35	19	68	49	41	30
27	.08	.12	.50	212	1,000	33	32	16	68	49	41	30
28	.08	.12	2.0	100	1,400	32	30	23	69	48	41	30
29	.17	.12	.80	150	-----	31	31	24	68	47	41	29
30	.12	.12	.50	90	-----	30	31	21	66	46	40	29
31	.12	-----	.20	70	-----	30	-----	19	-----	44	40	-----
TOTAL	2.11	6.86	12.59	3,043.40	13,006	6,704	2,201	839	1,579	1,748	1,248	916
MEAN	.068	.23	.41	98.2	465	216	73.4	27.1	52.6	56.4	40.3	30.5
MAX	.17	1.8	2.0	783	3,170	1,100	297	34	69	68	43	37
MIN	.05	.12	.12	.20	60	30	30	16	18	44	39	28
AC-FT	4.2	14	25	6,040	25,800	13,300	4,370	1,660	3,130	3,470	2,480	1,820
CAL YR 1968	TOTAL	1,028.40	MEAN	2.81	MAX	42	MIN	.03	AC-FT	2,040		
WTR YR 1969	TOTAL	31,305.96	MEAN	85.8	MAX	3,170	MIN	.05	AC-FT	62,090		

PAJARO RIVER BASIN

11-1567. PESCADERO CREEK NEAR PAICINES, CALIF.

LOCATION.--Lat 36°41'40", long 121°18'35", in SE $\frac{1}{4}$ sec.21, T.14 S., R.6 E., San Benito County, on left bank just downstream from Cienega Valley Road bridge, 1.5 miles upstream from mouth, and 3 miles southwest of Paicines.

DRAINAGE AREA.--38.3 sq mi.

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

GAGE.--Water-stage recorder. Concrete control since Sept. 10, 1963. Datum of gage is 730.4 ft above mean sea level (levels by Topographic Division).

AVERAGE DISCHARGE.--10 years, 1.59 cfs (1,150 acre-ft per year); median of yearly mean discharges, 0.74 cfs (540 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 341 cfs Feb. 24 (gage height, 7.00 ft in gage well, 7.3 ft, from floodmarks), from rating curve extended above 14 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.46 cfs Oct. 9.

Period of record: Maximum discharge, 341 cfs Feb. 24, 1969 (gage height, 7.00 ft in gage well, 7.3 ft, from floodmarks), from rating curve extended above 14 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records good. No regulation; large ground-water withdrawals above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	.86	1.0	1.0	11	100	7.6	5.2	2.2	1.5	.96	1.9
2	.48	.96	.95	1.0	9.9	74	8.4	5.4	2.2	1.8	1.1	1.8
3	.55	1.7	.99	1.0	8.7	61	8.4	5.7	2.2	1.6	1.2	2.0
4	.58	1.0	.94	1.0	8.1	49	7.3	5.4	2.2	1.4	.95	1.8
5	.58	1.0	.87	1.1	9.3	40	12	4.7	2.2	1.8	.93	2.0
6	.59	1.2	.87	1.1	38	33	16	4.5	2.2	2.0	1.2	1.9
7	.56	1.2	.87	1.2	36	28	14	4.3	2.0	2.2	1.6	2.2
8	.50	1.0	.87	1.2	18	24	13	4.1	2.7	1.5	1.8	2.1
9	.46	1.0	.87	1.2	14	21	12	3.9	2.7	2.2	1.8	1.9
10	.48	1.0	1.2	1.2	11	18	11	4.7	2.2	1.9	1.8	1.8
11	.58	1.0	1.5	1.2	11	17	11	4.4	2.2	1.5	1.8	1.7
12	.65	1.0	1.3	1.2	24	15	10	4.3	2.2	1.5	1.8	1.7
13	.81	1.0	1.4	1.5	11	14	9.6	4.1	2.2	2.0	1.7	2.1
14	.79	1.2	1.7	1.7	9.6	14	9.6	3.9	2.2	1.8	1.6	2.1
15	.70	1.6	2.1	1.2	13	14	9.6	3.5	2.5	1.4	1.0	2.2
16	.70	1.0	1.4	1.2	10	14	9.2	3.0	2.4	1.3	1.3	2.2
17	.67	1.0	1.2	1.2	9.6	14	6.3	3.1	1.9	1.3	2.0	2.1
18	.69	1.0	1.1	2.3	12	14	6.0	3.0	2.2	1.1	2.1	2.2
19	.67	1.0	1.2	3.9	19	14	6.9	2.9	2.4	1.2	1.7	2.0
20	.66	1.0	1.0	2.9	25	14	8.5	2.9	2.4	1.6	1.2	2.2
21	.67	1.0	1.0	6.3	25	13	9.2	2.7	2.2	1.2	1.2	2.1
22	.68	1.0	1.0	2.4	30	12	8.9	2.7	2.0	1.3	1.5	1.9
23	.64	1.0	1.0	2.8	46	11	8.5	2.7	1.9	1.4	1.3	1.7
24	.65	1.0	1.5	3.2	152	10	8.5	2.7	2.0	1.6	1.7	1.6
25	.61	1.0	2.1	96	160	10	6.0	2.7	1.9	1.6	1.7	1.5
26	.62	1.0	2.8	104	104	9.9	4.9	2.7	1.9	1.6	1.6	1.5
27	.62	.87	1.2	56	75	8.7	4.7	2.5	2.4	1.6	1.8	1.7
28	.70	.87	1.4	46	73	7.6	4.5	2.5	2.0	1.5	1.9	1.5
29	.82	.88	1.2	36	-----	7.3	4.9	2.5	2.0	1.4	1.7	1.4
30	.85	1.0	1.2	28	-----	7.1	5.4	2.5	1.9	1.4	1.7	1.4
31	.86	-----	1.0	13	-----	7.8	-----	2.4	-----	1.3	1.8	-----
TOTAL	19.96	31.34	38.73	423.0	973.2	696.4	261.9	111.6	65.6	48.5	47.44	56.2
MEAN	.64	1.04	1.25	13.6	34.8	22.5	8.73	3.60	2.19	1.56	1.53	1.87
MAX	.86	1.7	2.8	104	160	100	16	5.7	2.7	2.2	2.1	2.2
MIN	.46	.86	.87	1.0	8.1	7.1	4.5	2.4	1.9	1.1	.93	1.4
AC-FT	40	62	77	839	1,930	1,380	519	221	130	96	94	111
CAL YR 1968	TOTAL	452.77		MEAN 1.24		MAX 4.2		MIN .06		AC-FT 898		
WTR YR 1969	TOTAL	2,773.87		MEAN 7.60		MAX 160		MIN .46		AC-FT 5,500		

PEAK DISCHARGE (BASE, 10 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	0915	5.35	14	2-20	1030	4.96	28
1-25	1300	6.24	176	2-24	1700	7.00	341
2-7	0045	5.31	53	3-1	0930	5.92	124
2-12	0145	4.93	26	4-5	1415	5.09	26
2-15	1245	4.78	18				

11-1575. TRES PINOS CREEK NEAR TRES PINOS, CALIF.

LOCATION.--Lat 36°45'13", long 121°17'03", in Santa Ana y Quien Sabe Grant, San Benito County, on right bank 3.5 miles southeast of Tres Pinos, and 6.2 miles upstream from mouth.

DRAINAGE AREA.--206 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Yearly estimate only for 1940 and monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Concrete control since June 3, 1954 (control ineffective since 1955 due to gravel fill). Altitude of gage is 570 ft (from topographic map).

AVERAGE DISCHARGE (unadjusted).--30 years, 13.9 cfs (10,070 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,520 cfs Feb. 24 (gage height, 9.49 ft), from rating curve extended above 640 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.35 cfs Oct. 26-28.
Period of record: Maximum discharge, 8,060 cfs Apr. 4, 1941 (gage height, 7.75 ft), from rating curve extended above 3,500 cfs; no flow at times in 1952, 1957-61, 1965.
Flood in February 1938 reached a stage of about 9.0 ft, from floodmarks.

REMARKS.--Records poor. No regulation; diversions above station for irrigation can divert total flow in summer months, and since 1962, diversions into basin above station from San Benito River for percolation and irrigation.

REVISIONS.--WSP 1715: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.40	.60	.71	16	634	16	16	7.3	12	3.2	7.3
2	.53	.45	.60	.71	8.7	276	16	18	8.3	12	2.9	7.6
3	.54	.45	.60	.71	3.0	196	17	19	8.7	12	2.9	7.6
4	.51	.40	.55	.71	1.4	152	16	20	8.7	13	2.8	7.6
5	.48	.40	.55	.71	1.4	118	22	22	10	14	2.8	7.0
6	.48	.40	.55	.71	700	86	43	12	16	14	4.0	7.0
7	.53	.40	.55	.71	676	65	29	2.9	18	15	5.6	7.0
8	.52	.40	.60	.71	165	50	21	3.2	18	11	5.9	6.6
9	.52	.40	.55	.71	39	42	18	3.2	18	6.6	5.9	6.3
10	.54	.40	.60	.71	6.9	37	17	3.9	18	5.9	5.6	8.0
11	.54	.40	.60	.71	.59	27	15	4.2	18	13	4.9	8.4
12	.54	.45	.60	.82	296	23	15	4.2	16	13	3.9	8.6
13	.62	.45	.60	.93	60	22	14	5.1	17	7.6	3.9	8.3
14	.56	.45	.71	.93	12	19	14	9.4	19	6.3	3.9	7.9
15	.53	.45	.82	.82	71	17	14	11	19	6.3	3.9	7.7
16	.49	.45	.60	.82	57	13	16	14	20	6.6	3.7	6.6
17	.48	.45	.60	.82	9.2	9.0	16	17	19	7.0	3.4	5.7
18	.48	.50	.60	1.0	39	5.4	16	19	20	6.3	3.4	6.0
19	.52	.50	.60	1.2	361	3.4	15	29	19	5.9	3.2	7.9
20	.53	.50	.60	.93	203	7.3	15	42	18	5.4	3.1	7.8
21	.53	.50	.60	160	50	23	15	42	18	5.1	3.1	7.9
22	.53	.50	.71	102	150	18	15	40	15	4.9	2.9	8.0
23	.49	.50	.71	27	739	15	15	35	14	4.6	2.9	7.5
24	.48	.50	.82	77	3,150	13	15	27	14	4.6	2.9	7.5
25	.45	.55	.93	711	970	12	15	19	14	4.4	4.6	7.7
26	.35	.55	.93	961	724	12	16	17	13	4.2	6.3	7.9
27	.35	.55	.71	236	265	12	15	14	14	3.9	7.3	7.9
28	.35	.55	.82	176	246	14	15	18	11	3.7	7.6	7.5
29	.40	.55	.71	139	-----	14	15	11	11	3.7	7.6	7.5
30	.45	.55	.71	69	-----	13	16	7.6	12	3.4	7.3	7.3
31	.40	-----	.71	55	-----	13	-----	7.3	-----	3.4	7.3	-----
TOTAL	15.22	14.00	20.44	2,729.08	9,020.19	1,961.1	517	513.0	452.0	238.8	138.7	223.6
MEAN	.49	.47	.66	88.0	322	63.3	17.2	16.5	15.1	7.70	4.47	7.45
MAX	.62	.55	.93	961	3,150	634	43	42	20	15	7.6	8.6
MIN	.35	.40	.55	.71	.59	3.4	14	2.9	7.3	3.4	2.8	5.7
AC-FT	30	28	41	5,410	17,890	3,890	1,030	1,020	897	474	275	444

CAL YR 1968 TOTAL 382.88 MEAN 1.05 MAX 3.2 MIN .20 AC-FT 759
WTR YR 1969 TOTAL 15,843.13 MEAN 43.4 MAX 3,150 MIN .35 AC-FT 31,420

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-26	0900	7.35	2,500	2-19	1400	5.71	708
2-6	1945	6.57	1,540	2-24	1545	9.49	5,520
2-12	0915	5.51	548	3-1	0930	5.99	941

PAJARO RIVER BASIN

11-1585, SAN BENITO RIVER NEAR HOLLISTER, CALIF.

LOCATION.--Lat 36°47'17", long 121°22'11", in SW $\frac{1}{4}$ sec.24, T.13 S., R.5 E., San Benito County, on left bank 1,500 ft downstream from Bird Creek, 0.9 mile downstream from Tres Pinos Creek, 2.7 miles west of Tres Pinos and 4.8 miles southeast of Hollister.

DRAINAGE AREA.--586 sq mi.

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 370 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 29.2 cfs (21,160 acre-ft per year); median of yearly mean discharges, 8.2 cfs (5,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,900 cfs Feb. 24 (gage height, 16.10 ft); no flow Nov. 26, 27. Period of record: Maximum discharge, 11,600 cfs Apr. 3, 1958 (gage height, 16.30 ft), from rating curve extended above 1,200 cfs on basis of flood-routing study; no flow at times.

REMARKS.--Records good. Flow regulated by Hernandez Reservoir 65 miles upstream beginning in December 1961 (capacity, 18,700 acre-ft). Several small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.01	.02	52	2,020	61	45	8.5	45	30	12
2	.01	.01	.01	.02	44	1,250	65	28	7.4	29	28	14
3	.01	.03	.01	.02	36	965	82	24	7.4	19	28	21
4	.01	.02	.01	.02	34	805	87	24	8.2	15	26	20
5	.01	.01	.01	.02	38	660	93	23	8.2	9.8	25	20
6	.01	.01	.01	.02	814	553	337	20	8.2	9.4	25	21
7	.01	.01	.01	.02	1,320	454	326	18	8.9	9.8	24	24
8	.01	.01	.01	.02	404	390	218	22	8.9	8.9	25	28
9	.01	.01	.01	.02	182	340	149	27	22	18	24	29
10	.01	.01	.01	.02	108	290	128	26	33	41	25	24
11	.01	.01	.02	.02	104	250	110	26	34	43	26	24
12	.01	.01	.02	.02	294	220	94	25	39	42	26	22
13	.02	.01	.01	.03	183	190	73	24	45	43	26	24
14	.02	.02	.02	.03	101	170	67	17	45	29	26	24
15	.02	.04	.04	.02	128	155	61	14	46	8.5	26	25
16	.02	.02	.02	.02	410	139	55	13	29	6.0	26	25
17	.01	.02	.02	.02	253	123	75	11	18	5.1	26	18
18	.01	.02	.02	.04	193	117	56	10	16	5.1	28	13
19	.01	.02	.02	.08	561	122	44	11	16	9.8	30	11
20	.01	.02	.02	.06	587	120	41	9.8	18	23	30	11
21	.01	.01	.02	421	307	125	38	10	14	26	21	14
22	.01	.01	.02	917	379	115	52	10	15	25	10	17
23	.01	.01	.02	77	959	98	64	11	16	26	9.3	24
24	.01	.01	.02	87	5,130	90	43	8.5	16	28	8.6	17
25	.01	.01	.04	1,720	5,380	86	35	8.5	15	31	8.1	14
26	.01	0	.05	2,010	2,420	85	32	8.5	36	32	10	13
27	.01	0	.03	509	1,340	99	29	8.9	42	32	23	13
28	.01	.01	.03	299	1,130	63	26	7.0	43	31	30	14
29	.01	.01	.02	359	-----	58	24	7.0	46	31	32	14
30	.01	.01	.02	148	-----	54	42	9.4	45	31	30	13
31	.01	-----	.02	79	-----	59	-----	9.4	-----	31	22	-----
TOTAL	0.35	0.40	0.60	6,626.54	22,891	10,265	2,607	516.0	714.7	743.4	734.0	563
MEAN	.011	.013	.019	214	818	331	86.9	16.6	23.8	24.0	23.7	18.8
MAX	.02	.04	.05	2,010	5,380	2,020	337	45	46	45	32	29
MIN	.01	0	.01	.02	34	54	24	7.0	7.4	5.1	8.1	11
AC-FT	.7	.8	1.2	13,140	45,400	20,360	5,170	1,020	1,420	1,470	1,460	1,120
CAL YR 1968	TOTAL 984.52		MEAN 2.69	MAX 28	MIN 0	AC-FT 1,950						
WTR YR 1969	TOTAL 45,661.99		MEAN 125	MAX 5,380	MIN 0	AC-FT 90,570						

11-1590, PAJARO RIVER AT CHITTENDEN, CALIF.

LOCATION.--Lat 36°54'01", long 121°35'48", in Salsipuedes Grant, Santa Cruz County, on downstream side of right bank pier of bridge on State Highway 129, 0.6 mile downstream from Pescadero Creek, 0.6 mile southeast of Chittenden, and 2.3 miles downstream from San Benito River.

DRAINAGE AREA.--1,186 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "near Chittenden."

GAGE.--Water-stage recorder. Datum of gage is 82.28 ft above mean sea level. Prior to May 13, 1949, nonrecording gage on former bridge 100 ft downstream at same datum except that water-stage recorder, also 100 ft downstream and at same datum, was used Dec. 20, 1946, to June 11, 1947, June 21 to Sept. 23, 1947, and Dec. 19, 1947, to May 6, 1948.

AVERAGE DISCHARGE.--30 years, 150 cfs (108,700 acre-ft per year); median of yearly mean discharges, 78 cfs (56,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,800 cfs Feb. 25 (gage height, 23.90 ft); minimum daily, 0.64 cfs Oct. 26.

Period of record: Maximum discharge, 24,000 cfs Dec. 24, 1955 (gage height, 32.46 ft), from rating curve extended above 8,300 cfs on basis of slope-conveyance study; maximum gage height, 33.11 ft Apr. 3, 1958; no flow at times in July, August 1948.

Flood in February 1938, reached a stage of 31.3 ft, from floodmarks.

REMARKS.--Records fair. Flow regulated by Hernandez Reservoir (capacity, 18,700 acre-ft), Pacheco Lake (capacity, 6,150 acre-ft), Chesbro Reservoir (see sta 11-1534.8), Uvas Reservoir (see sta 11-1540.2), and San Felipe Lake. Many diversions above station for irrigation. Records of chemical analyses for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.6	2.0	18	1,390	5,610	160	68	30	12	8.2	4.5
2	1.2	1.6	2.5	16	1,070	3,790	160	68	28	14	7.8	4.5
3	1.1	2.7	2.9	16	866	2,870	170	61	26	12	7.9	4.5
4	1.1	2.9	3.6	14	708	2,340	170	60	26	9.7	8.8	4.5
5	1.1	2.5	3.8	12	598	1,950	240	55	25	11	9.0	4.5
6	1.0	2.0	3.8	11	1,920	1,640	472	52	24	10	8.5	4.0
7	1.0	1.4	3.8	9.7	2,540	1,400	548	50	24	10	9.1	4.0
8	1.0	1.1	3.8	8.3	1,560	1,180	426	50	24	11	9.9	4.0
9	.90	.96	3.8	6.6	1,100	1,000	372	50	26	12	9.7	4.1
10	.90	.80	4.4	6.0	869	890	300	49	25	13	9.2	4.1
11	.90	.80	5.8	5.5	854	770	250	47	24	12	7.6	4.1
12	.80	1.3	6.9	5.5	2,630	699	210	43	23	11	7.5	3.9
13	.80	1.3	7.2	12	1,670	664	160	42	22	11	7.0	4.7
14	4.0	1.6	7.6	44	1,200	581	156	39	21	12	6.3	5.2
15	5.5	2.5	8.7	65	2,800	512	147	38	21	11	6.3	5.9
16	5.2	3.4	9.7	40	2,870	470	136	37	20	10	6.1	6.1
17	4.6	4.9	11	29	1,820	420	126	35	19	9.4	6.4	6.5
18	3.6	5.5	7.6	68	1,510	390	134	34	19	9.3	6.1	7.8
19	2.9	5.5	5.2	5,110	1,470	360	116	34	18	9.6	5.5	8.8
20	2.9	5.2	3.4	3,470	1,540	330	107	33	17	9.8	6.1	8.6
21	2.7	4.4	2.7	3,780	1,150	350	101	31	16	9.2	6.0	8.1
22	2.3	3.6	2.5	3,740	1,250	310	98	32	17	9.3	6.0	7.2
23	1.8	3.1	2.7	2,300	2,340	280	108	31	16	9.7	6.0	5.9
24	1.3	2.7	3.8	1,590	7,100	260	111	29	16	10	6.0	5.0
25	.96	2.7	6.3	8,010	14,800	240	97	30	14	10	6.0	4.8
26	.64	2.3	19	11,000	8,080	230	90	30	13	10	5.0	5.3
27	1.3	1.8	20	6,750	4,320	210	80	30	14	9.4	5.0	5.9
28	1.8	1.6	17	3,420	3,910	200	73	28	13	8.8	5.0	5.8
29	2.3	1.4	16	2,700	-----	190	71	27	14	7.7	5.0	5.2
30	2.5	1.6	14	2,240	-----	180	67	28	13	8.2	5.0	4.2
31	1.8	-----	14	1,860	-----	170	-----	29	-----	8.5	5.0	-----
TOTAL	61.10	74.76	225.5	56,356.6	73,935	30,486	5,456	1,270	608	320.6	213.0	161.7
MEAN	1.97	2.49	7.27	1,818	2,641	983	182	41.0	20.3	10.3	6.87	5.39
MAX	5.5	5.5	20	11,000	14,800	5,610	548	68	30	14	9.9	8.8
MIN	.64	.80	2.0	5.5	598	170	67	27	13	7.7	5.0	3.9
AC-FT	121	148	447	111,800	146,600	60,470	10,820	2,520	1,210	636	422	321
CAL YR 1968	TOTAL	6,581.20	MEAN	18.0	MAX	149	MIN	.64	AC-FT	13,050		
WTR YR 1969	TOTAL	169,168.26	MEAN	463	MAX	14,800	MIN	.64	AC-FT	335,500		

PÁJARO RIVER BASIN

11-1591.5. CORRALITOS CREEK NEAR CORRALITOS, CALIF.

LOCATION.--Lat 37°00'20", long 121°48'25", in Los Corralitos Grant, Santa Cruz County, on left bank 0.5 mile downstream from Mormon Gulch, 1.2 miles upstream from Corralitos, and 7 miles northwest of Watsonville.

DRAINAGE AREA.--10.6 sq mi.

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

GAGE.--Water-stage recorder. Concrete control since July 24, 1969. Altitude of gage is 310 ft (from topographic map).

AVERAGE DISCHARGE.--12 years, 9.09 cfs (6,590 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 646 cfs Jan. 18 (gage height, 5.13 ft); minimum daily, 0.03 cfs Oct. 28.

Period of record: Maximum discharge, 1,970 cfs Apr. 2, 1958 (gage height, 7.55 ft), from rating curve extended above 450 cfs on basis of estimate of maximum flow over dam; maximum gage height, 7.62 ft Jan. 31, 1963; no flow at times.

REMARKS.--Records good. No regulation; Watsonville Water Works can divert up to 8.0 cfs daily above station for municipal supply, domestic use, and irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.08	.43	2.2	42	140	7.8	5.3	1.6	.57	.23	.16
2	.09	1.0	.25	1.5	37	90	9.5	5.3	1.7	.56	.24	.17
3	.10	7.0	.18	1.1	33	75	9.6	4.8	1.5	.52	.24	.18
4	.08	2.2	.18	.93	29	60	7.8	4.9	1.5	.41	.25	.18
5	.08	.16	.17	.86	45	50	29	4.7	1.6	.47	.22	.18
6	.09	.20	.20	.78	77	46	32	4.5	1.6	.57	.21	.22
7	.09	.25	.37	.72	53	41	21	4.6	1.5	1.1	.21	.34
8	.08	.22	.48	.65	40	36	15	4.1	1.6	.75	.22	.17
9	.07	.23	.66	.64	38	33	14	4.1	3.2	.37	.24	.16
10	.08	.22	19	.61	34	30	12	4.0	2.8	.35	.23	.18
11	.11	.25	9.0	.57	113	27	11	3.8	2.7	.33	.25	.16
12	.28	1.4	3.0	.57	113	26	10	3.9	3.0	.32	.23	.15
13	.07	.78	1.2	107	64	24	9.6	3.9	3.1	.32	.21	.16
14	.10	1.4	11	47	52	21	9.1	3.9	2.5	.33	.22	.16
15	.10	6.6	20	18	246	19	8.6	3.7	2.0	.35	.26	.19
16	.08	2.0	9.6	10	113	18	8.1	3.6	1.5	.38	.29	.16
17	.12	.34	3.3	7.3	80	17	7.8	3.4	1.5	.37	.32	.17
18	.08	.39	1.5	120	69	16	7.5	3.2	1.5	.45	.26	.17
19	.06	.33	1.1	387	58	14	7.2	3.2	1.4	.34	.22	.17
20	.06	.46	.99	197	49	19	6.9	3.2	1.4	.34	.26	.17
21	.09	.30	.75	211	45	18	6.6	3.0	1.4	.33	.21	.21
22	.06	.54	.72	87	46	14	6.2	3.0	1.4	1.4	.20	.20
23	.07	.37	.66	55	65	13	11	3.0	1.3	.85	.18	.17
24	.07	.52	1.3	78	158	12	8.7	2.9	1.2	.59	.18	.17
25	.10	.62	11	278	142	11	6.3	2.8	1.2	.26	.17	.18
26	.05	.71	18	225	100	10	6.1	2.8	1.2	.25	.18	.17
27	.04	.16	7.2	99	70	9.6	5.8	2.7	1.0	.25	.16	.19
28	.03	.12	11	78	150	9.0	5.6	2.6	.61	.24	.17	.19
29	.09	.11	8.0	56	-----	8.7	5.5	2.4	.51	.23	.17	.19
30	.08	.40	4.7	66	-----	8.4	5.5	1.7	.60	.23	.16	.19
31	.10	-----	3.5	50	-----	8.2	-----	1.6	-----	.23	.17	-----
TOTAL	2.68	28.86	149.44	2,187.43	2,161	923.9	310.8	110.6	49.62	14.06	6.76	5.46
MEAN	.087	.96	4.82	70.6	77.2	29.8	10.4	3.57	1.65	.45	.22	.18
MAX	.28	7.0	20	387	246	140	32	5.3	3.2	1.4	.32	.34
MIN	.03	.08	.17	.57	29	8.2	5.5	1.6	.51	.23	.16	.15
AC-FT	5.3	57	296	4,340	4,290	1,830	616	219	98	28	13	11
CAL YR 1968	TOTAL	1,103.65	MEAN	3.02	MAX	100	MIN	0	AC-FT	2,190		
WTR YR 1969	TOTAL	5,950.61	MEAN	16.3	MAX	387	MIN	.03	AC-FT	11,800		

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-18	1915	5.13	646	2-11	1800	3.91	332
1-25	0030	4.70	510	2-15	0630	4.44	445

11-1592. CORRALITOS CREEK AT FREEDOM, CALIF.

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

DRAINAGE AREA.--27.8 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 80 ft (from topographic map).

AVERAGE DISCHARGE.--13 years, 14.0 cfs (10,140 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,270 cfs Jan. 19 (gage height, 8.11 ft); no flow for several days in October.

Period of record: Maximum discharge, 2,680 cfs Apr. 2, 1958 (gage height, 12.59 ft), from rating curve extended above 830 cfs on basis of contracted-opening measurement at gage height 15.6 ft; no flow at times.

Flood of Dec. 22, 1955, reached a stage of 15.6 ft, from floodmarks (discharge, 3,620 cfs on basis of contracted-opening measurement of maximum flow).

REMARKS.--Records fair. No regulation; Watsonville Water Works can divert up to 8.0 cfs daily above station for municipal supply, domestic use, and irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.03	.40	.39	81	278	9.2	7.2	.81	.60	.60	.28
2	0	.10	.33	.19	70	171	8.7	6.3	.75	.56	.52	.29
3	0	1.9	.34	.20	62	129	11	5.2	.75	.55	.49	.35
4	0	1.5	.36	.22	56	104	9.9	6.2	.77	.53	.60	.24
5	.01	.54	.37	.26	79	87	38	5.7	.77	.56	.45	.22
6	.02	.33	.39	.26	152	76	48	5.5	.80	.59	.44	.25
7	0	.25	.39	.22	104	67	36	5.5	.78	.64	.44	.31
8	0	.21	.31	.19	82	59	27	5.0	.74	.62	.39	.39
9	0	.20	.17	.16	73	50	24	5.0	1.4	.59	.39	.23
10	0	.20	13	.11	65	44	21	4.4	1.6	1.0	.34	.22
11	0	.22	8.1	.11	284	39	18	3.9	1.2	.89	.39	.23
12	.01	1.4	1.4	.11	235	40	17	4.1	1.1	.53	.39	.24
13	.01	.90	.21	169	120	34	15	4.3	1.0	.50	.39	.26
14	.01	.60	8.2	82	93	29	15	3.8	.86	.53	.41	.24
15	.02	4.2	25	28	523	26	14	3.4	.79	.51	.49	.63
16	.02	.95	12	15	217	23	12	3.0	.88	.49	.65	.20
17	.02	.38	1.7	8.7	138	22	13	2.7	.76	.46	.59	.18
18	.02	.30	.53	273	121	21	13	2.3	.72	.44	.59	.19
19	.02	.34	.25	859	97	18	11	2.2	.73	.43	.53	.20
20	.02	.37	.14	360	81	23	10	2.0	.73	.43	.53	.20
21	.02	.33	.16	426	76	25	8.8	1.9	.73	.46	.51	.20
22	.02	.38	.16	202	77	18	7.6	1.9	.71	.75	.52	.17
23	.02	.31	.16	111	116	16	16	1.9	.68	1.6	.61	.18
24	.02	.29	.42	134	322	15	15	2.1	.65	1.4	.29	.17
25	.02	.28	6.9	667	303	13	11	1.6	.64	1.3	.31	.18
26	.02	.31	18	463	179	13	8.8	1.4	.62	.76	.32	.20
27	.02	.33	5.5	203	127	12	7.5	1.2	.64	.79	.32	.24
28	.02	.33	7.3	156	330	12	6.8	1.0	.75	.88	.27	.22
29	.02	.32	6.0	109	-----	12	6.7	.91	.87	.83	.27	.18
30	.02	.38	2.2	137	-----	11	6.8	1.0	.59	.78	.37	.17
31	.03	-----	.90	92	-----	11	-----	.87	-----	.69	.23	-----
TOTAL	0.41	18.18	121.29	4,497.12	4,263	1,498	465.8	103.48	24.82	21.69	13.64	7.26
MEAN	.013	.61	3.91	145	152	48.3	15.5	3.34	.83	.70	.44	.24
MAX	.03	4.2	25	859	523	278	48	7.2	1.6	1.6	.65	.63
MIN	0	.03	.14	.11	56	11	6.7	.87	.59	.43	.23	.17
AC-FT	.8	36	241	8,920	8,460	2,970	924	205	49	43	27	14
CAL YR 1968	TOTAL	1,212.38	MEAN	3.31	MAX	114	MIN	0	AC-FT	2,400		
WTR YR 1969	TOTAL	11,034.69	MEAN	30.2	MAX	859	MIN	0	AC-FT	21,890		

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0430	8.11	1,270	2-11	1830	6.51	814
1-25	0130	7.54	1,100	2-15	0645	7.26	1,030

NOTE.--No gage-height record Oct. 15 to Nov. 15.

PAJARO RIVER BASIN

RESERVOIRS IN PAJARO RIVER BASIN, CALIF.

11-1534.8. CHESBRO RESERVOIR.--Lat 37°07'00", long 121°41'34", near southwest boundary of Ojo de Agua de la Coche Grant, Santa Clara County, at left end of dam on Llagas Creek, and 2.5 miles west of Morgan Hill. Drainage area, 19.4 sq mi. Period of record, December 1955 to current year. Monthly contents prior to October 1959 published in WSP 1735. Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara County Flood Control and Water District). Extremes for current year: Maximum contents observed, 8,100 acre-ft Feb. 24 (elevation, 527.4 ft); minimum observed, 330 acre-ft Jan. 2 (elevation, 476.5 ft). Extremes for period of record: Maximum contents observed, 8,100 acre-ft Feb. 24, 1969 (elevation, 527.4 ft); no contents at times in 1957, 1960-62.

Reservoir is formed by earth- and rockfill dam completed in 1955. Capacity, 7,500 acre-ft between elevations 465 (elevation of outlet gates) and 525 ft (crest of spillway). Reservoir is used for flood control and water released down Llagas Creek for irrigation. Record of contents furnished by Santa Clara County Flood Control and Water District.

11-1540.2. UVAS RESERVOIR.--Lat 37°04'02", long 121°41'25", in Las Uvas Grant, Santa Clara County, at center of dam on Uvas Creek, and 4.8 miles southwest of Morgan Hill. Drainage area, 30.4 sq mi. Period of record, December 1957 to current year. Monthly contents prior to October 1959 published in WSP 1735. Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara County Flood Control and Water District). Extremes for current year: Maximum contents observed, 10,860 acre-ft Feb. 15 (elevation, 489.90 ft); minimum observed, 640 acre-ft Dec. 9 (elevation, 429.0 ft). Extremes for period of record: Maximum contents observed, 11,030 acre-ft Mar. 16, 1967 (elevation, 490.5 ft); no contents May 18 to Nov. 30, 1961.

Reservoir is formed by earth- and rockfill dam completed in 1957. Capacity, 10,000 acre-ft between elevations 410 (hydraulic gate valves) and 487.5 ft (crest of spillway). Water released down Uvas Creek for irrigation; at times, diverted into Llagas Creek 3.6 miles below Chesbro Reservoir for ground-water recharge by percolation. Record of contents furnished by Santa Clara County Flood Control and Water District.

Month-end contents, in acre-feet (including momentary storage above spillway crest), water year October 1968 to September 1969

Date	Chesbro Reservoir	Uvas Reservoir
Sept. 30, 1968.....	1,000	1,330
Oct. 31.....	794	4,120
Nov. 30.....	740	706
Dec. 31.....	354	2,190
Jan. 31, 1969.....	7,650	10,020
Feb. 28.....	7,780	10,200
Mar. 31.....	7,600	10,000
Apr. 30.....	7,580	10,000
May 31.....	7,480	9,320
June 30.....	7,040	8,290
July 31.....	6,380	7,710
Aug. 31.....	5,060	5,340
Sept. 30.....	4,150	3,800

NOTE.--Contents at 0800 on first day of following month.

11-1597, APTOS CREEK AT APTOS, CALIF.

LOCATION.--Lat 36°58'33", long 121°54'05", in Aptos Grant, Santa Cruz County, on left bank at Aptos, 0.6 mile upstream from mouth.

DRAINAGE AREA.--12.2 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 10 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 7.92 cfs (5,740 acre-ft per year); median of yearly mean discharges, 5.3 cfs (3,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 966 cfs Jan. 18 (gage height, 7.55 ft); minimum daily, 0.52 cfs Oct. 5.

Period of record: Maximum discharge, 2,110 cfs Jan. 31, 1963 (gage height, 10.82 ft), from rating curve extended above 980 cfs; no flow July 1-3, 1966.

REMARKS.--Records fair. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	.77	1.2	3.2	39	114	10	6.8	4.5	3.2	2.1	1.1
2	.77	1.2	1.4	2.7	30	76	10	7.4	4.5	3.1	2.1	1.1
3	.77	4.2	1.1	2.8	24	60	10	6.7	4.0	3.1	2.1	1.1
4	.68	.98	.96	2.9	20	50	9.8	7.2	4.3	3.0	2.0	1.2
5	.52	.68	.96	2.9	22	42	25	6.8	5.1	3.0	1.8	1.1
6	.68	.63	1.0	2.9	57	37	32	6.9	4.8	2.9	1.8	1.2
7	.74	.72	.99	2.7	46	33	21	6.9	4.4	2.9	1.8	1.5
8	.68	.63	1.1	2.7	31	30	17	6.7	4.4	2.9	1.8	1.4
9	.69	.62	1.8	2.6	27	26	15	6.5	4.6	2.9	1.7	1.5
10	.70	.58	12	2.6	24	25	14	6.5	4.7	2.9	1.7	1.4
11	.89	.62	5.2	2.6	191	22	12	6.3	4.6	2.9	1.7	1.4
12	2.3	1.1	2.3	2.7	80	22	12	6.2	4.6	2.7	1.7	1.4
13	1.7	.84	2.3	216	40	20	11	6.3	4.5	2.7	1.7	1.4
14	1.4	1.7	9.3	66	45	18	11	6.1	4.4	2.7	1.7	1.4
15	1.1	4.2	7.7	19	369	18	10	6.1	4.2	2.7	1.7	1.4
16	.91	1.2	6.8	11	90	17	9.8	5.8	4.2	2.7	1.5	1.4
17	.86	.86	2.9	8.2	60	16	9.5	5.8	4.4	2.5	1.5	1.4
18	.86	.77	2.2	180	55	16	9.2	5.7	4.2	2.5	1.5	1.4
19	.83	.77	2.0	410	50	15	8.8	5.5	4.1	2.5	1.5	1.4
20	.74	.77	1.8	220	50	18	8.5	5.5	3.9	2.4	1.5	1.4
21	.76	.77	1.7	130	50	21	8.3	5.5	3.8	2.4	1.5	1.4
22	.79	.67	1.7	82	55	17	8.0	5.4	3.7	2.3	1.5	1.3
23	.69	.67	1.8	44	100	15	10	5.3	3.6	2.3	1.4	1.3
24	.66	.68	3.5	55	180	14	8.9	5.2	3.5	2.3	1.3	1.3
25	.65	.68	8.7	291	90	13	7.9	5.2	3.5	2.4	1.3	1.3
26	.64	.68	13	210	75	13	7.6	4.9	3.5	2.5	1.3	1.3
27	.59	.68	6.0	90	65	12	7.4	4.8	3.4	2.5	1.3	1.3
28	.59	.68	10	70	200	12	7.1	4.6	3.4	2.5	1.2	1.4
29	.87	.75	7.3	49	-----	11	6.9	4.6	3.4	2.3	1.1	1.3
30	1.1	1.0	4.9	113	-----	11	6.8	4.6	3.3	2.3	1.1	1.3
31	.78	-----	3.7	61	-----	10	-----	4.4	-----	2.3	1.1	-----
TOTAL	26.71	31.10	127.31	2,358.5	2,165	824	344.5	182.2	123.5	82.3	49.0	39.8
MEAN	.86	1.04	4.11	76.1	77.3	26.6	11.5	5.88	4.12	2.65	1.58	1.33
MAX	2.3	4.2	13	410	369	114	32	7.4	5.1	3.2	2.1	1.5
MIN	.52	.58	.96	2.6	20	10	6.8	4.4	3.3	2.3	1.1	1.1
AC-FT	53	62	253	4,680	4,290	1,630	683	361	245	163	97	79

CAL YR 1968 TOTAL 1,267.91 MEAN 3.46 MAX 200 MIN .52 AC-FT 2,510
WTR YR 1969 TOTAL 6,353.92 MEAN 17.4 MAX 410 MIN .52 AC-FT 12,600

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1445	6.87	664	2-11	1800	6.26	612
1-18	1915	7.55	966	2-15	0630	7.06	852
1-25	0145	5.95	524	2-24	1200	5.04	285
1-30	0630	4.45	161	2-28	1200	4.59	188

SOQUEL CREEK BASIN

11-1598. WEST BRANCH SOQUEL CREEK NEAR SOQUEL, CALIF.

LOCATION.--Lat 37°03'03", long 121°56'17", in NW¼ sec.23, T.10 S., R.1 W., Santa Cruz County, on left bank 0.5 mile upstream from Soquel Creek, and 4.5 miles north of Soquel.

DRAINAGE AREA.--12.2 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 220 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 13.1 cfs (9,490 acre-ft per year); median of yearly mean discharges, 9.8 cfs (7,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,000 cfs Feb. 15 (gage height, 7.79 ft), from rating curve extended above 740 cfs as explained below; minimum, 0.85 cfs Oct. 11.

Period of record: Maximum discharge, 4,530 cfs Jan. 24, 1967 (gage height, 11.47 ft, from high-water mark in well), from rating curve extended above 740 cfs on basis of slope-area measurement at gage height 7.96 ft; minimum, 0.40 cfs July 16, 1961.

REMARKS.--Records good. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.2	2.0	5.5	52	174	12	9.4	5.4	3.8	3.0	1.9
2	1.0	1.9	1.8	5.0	43	113	12	9.2	5.5	3.7	2.8	2.0
3	1.1	7.1	1.7	4.8	38	85	14	8.8	5.4	3.6	2.7	1.9
4	1.1	2.9	1.6	4.6	34	69	12	9.0	5.2	3.7	2.6	1.9
5	1.1	2.1	1.5	4.4	66	57	25	8.5	5.3	3.6	2.5	1.8
6	1.1	2.0	1.6	4.3	138	49	35	8.3	5.4	3.8	2.5	1.8
7	1.1	2.0	1.5	4.2	61	44	32	8.2	5.0	3.9	2.6	2.0
8	.98	1.7	1.2	4.1	42	40	23	8.2	5.1	3.9	2.6	1.8
9	.95	1.6	2.6	4.0	38	37	22	8.0	5.3	3.8	2.5	1.7
10	.91	1.6	25	3.9	33	34	19	7.9	5.5	3.8	2.5	1.7
11	.99	1.5	10	3.8	290	29	18	7.7	5.2	3.8	2.5	1.5
12	3.9	2.1	5.2	3.7	128	32	17	7.7	5.2	3.6	2.5	1.6
13	2.7	1.9	5.2	301	61	28	16	7.6	5.1	3.5	2.5	1.7
14	2.2	3.0	18	73	69	25	15	7.5	4.7	3.4	2.3	1.7
15	1.7	10	46	16	683	23	15	7.4	4.6	3.7	2.3	1.7
16	1.5	3.7	13	7.9	130	21	14	7.1	4.9	3.6	2.3	1.5
17	1.5	2.7	5.6	5.2	94	21	13	6.9	5.0	3.5	2.3	1.5
18	1.3	2.5	4.6	322	77	20	13	6.7	5.0	3.3	2.3	1.5
19	1.3	2.5	4.2	917	65	19	12	6.6	4.8	3.2	2.4	1.5
20	1.3	2.1	3.9	474	53	18	12	6.5	4.8	3.2	2.4	1.4
21	1.2	2.1	3.5	358	49	28	12	6.4	4.7	3.2	2.4	1.4
22	1.1	2.1	3.3	114	51	26	11	6.4	4.5	2.9	2.3	1.2
23	1.1	1.9	3.2	67	179	22	18	6.4	4.4	3.0	2.3	1.2
24	1.0	2.0	6.3	117	321	20	14	6.3	4.3	3.0	2.3	1.2
25	1.0	2.1	42	461	162	19	12	6.1	4.4	3.1	2.2	1.2
26	.97	1.9	34	337	113	18	11	6.0	4.3	3.3	2.2	1.2
27	1.1	1.7	12	119	110	16	11	5.9	4.1	3.3	2.2	1.2
28	1.0	1.8	24	94	351	15	10	5.7	4.2	3.3	2.2	1.2
29	1.7	1.6	14	67	-----	14	9.8	5.6	3.9	3.2	2.1	1.2
30	1.8	1.8	8.8	99	-----	13	9.6	5.5	3.8	3.0	2.2	1.2
31	1.4	-----	6.4	65	-----	13	-----	5.3	-----	3.0	2.3	-----
TOTAL	42.10	75.1	313.7	4,066.4	3,531	1,142	469.4	222.8	145.0	106.7	74.8	46.3
MEAN	1.36	2.50	10.1	131	126	36.8	15.6	7.19	4.83	3.44	2.41	1.54
MAX	3.9	10	46	917	683	174	35	9.4	5.5	3.9	3.0	2.0
MIN	.91	1.2	1.2	3.7	33	13	9.6	5.3	3.8	2.9	2.1	1.2
AC-FT	84	149	622	8,070	7,000	2,270	931	442	288	212	148	92
CAL YR 1968	TOTAL	2,769.22	MEAN	7.57	MAX	487	MIN	.85	AC-FT	5,490		
WTR YR 1969	TOTAL	10,235.30	MEAN	28.0	MAX	917	MIN	.91	AC-FT	20,300		

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1315	5.94	867	2-15	0445	7.79	2,000
1-19	0645	7.26	1,660	2-24	0500	5.88	910
1-25	0100	6.69	1,310	2-28	1100	5.24	590
2-11	1615	5.81	796				

SOQUEL CREEK BASIN

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11-1599.4. SOQUEL CREEK NEAR SOQUEL, CALIF.

LOCATION.--Lat 37°02'02", long 121°56'35", in NW $\frac{1}{4}$ sec.26, T.10 S., R.1 W., Santa Cruz County, on right bank 30 ft downstream from private road bridge, 1.1 miles downstream from West Branch, and 3.4 miles north of town of Soquel.

DRAINAGE AREA.--32.0 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 140 ft (from topographic map).

EXTREMES.--Maximum discharge during period, 2,700 cfs Feb. 15 (gage height, 8.03 ft); minimum daily, 1.2 cfs Oct. 10.

REMARKS.--Records fair. No regulation; small diversion above station for irrigation and mill pond.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.0	3.6	15	258	550	40	24	12	7.5	4.4	2.8
2	1.5	3.2	3.4	13	203	350	40	24	13	7.5	4.2	2.8
3	1.5	14	3.4	12	164	277	40	23	13	7.5	3.8	2.8
4	1.5	5.6	3.1	11	137	219	40	23	13	7.5	3.8	2.8
5	1.5	3.4	3.1	10	212	183	140	23	13	7.0	4.2	2.6
6	1.5	3.1	3.1	9.4	474	155	150	22	13	7.5	4.4	2.6
7	1.6	3.1	2.8	9.4	271	135	110	22	12	7.0	4.2	2.6
8	1.6	3.1	2.5	8.9	221	125	62	20	12	7.0	4.4	2.6
9	1.3	2.8	5.2	8.4	180	115	56	18	12	7.0	4.2	2.4
10	1.2	2.8	67	8.0	162	105	52	17	12	7.0	4.2	2.6
11	1.3	2.6	28	8.0	659	100	46	17	12	7.0	4.2	2.5
12	5.6	3.6	9.9	8.0	585	110	43	17	12	7.0	4.2	2.4
13	3.6	3.1	8.3	652	318	100	42	17	12	6.5	4.2	2.5
14	3.1	4.5	41	239	306	92	40	18	12	6.0	4.2	2.5
15	2.6	20	75	68	1,240	86	38	18	11	6.0	4.2	2.5
16	2.0	7.5	32	43	477	82	35	18	11	5.6	4.2	2.5
17	1.9	5.4	17	30	304	78	34	17	11	5.6	4.2	2.4
18	1.8	4.4	12	491	246	76	33	17	11	5.6	4.2	2.3
19	1.6	4.2	9.9	1,470	206	72	32	17	11	5.4	3.8	2.3
20	1.6	3.8	8.4	955	168	80	31	17	10	5.0	3.8	2.2
21	1.6	3.6	7.5	823	157	100	30	16	10	5.0	3.8	2.1
22	1.6	3.6	6.0	790	162	85	30	16	9.9	5.0	3.8	2.0
23	1.6	3.6	6.0	111	483	75	41	16	9.4	5.0	3.8	1.9
24	1.6	3.4	12	178	780	70	33	15	9.4	5.0	3.6	1.8
25	1.4	3.4	64	1,160	477	65	30	15	8.9	5.0	3.6	1.8
26	1.3	3.1	57	970	331	60	28	15	8.9	5.0	3.4	1.8
27	1.3	2.8	27	516	318	56	26	15	8.9	5.0	2.8	1.8
28	1.3	2.8	40	438	867	52	25	14	8.4	5.0	2.8	1.8
29	2.0	2.8	32	319	-----	48	24	14	8.0	5.0	2.8	1.8
30	2.8	3.1	21	399	-----	45	23	14	8.0	5.0	2.8	1.8
31	2.4	-----	18	310	-----	42	-----	13	-----	4.8	2.8	-----
TOTAL	58.7	134.4	629.2	9,583.1	10,368	3,788	1,394	552	327.8	187.0	119.0	69.3
MEAN	1.89	4.48	20.3	309	370	122	46.5	17.8	10.9	6.03	3.84	2.31
MAX	5.6	20	75	1,470	1,240	550	150	24	13	7.5	4.4	2.8
MIN	1.2	2.0	2.5	8.0	137	42	23	13	8.0	4.8	2.8	1.8
AC-FT	116	267	1,250	19,010	20,560	7,510	2,760	1,090	650	371	236	137

CAL YR 1968	TOTAL -	MEAN -	MAX -	MIN -	AC-FT -
WTR YR 1969	TOTAL 27,210.5	MEAN 74.5	MAX 1,470	MIN 1.2	AC-FT 53,970

PEAK DISCHARGE (BASE, 750 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1330	5.73	1,370	2-15	0430	8.03	2,700
1-18	1930	6.96	2,190	2-24	0430	5.13	1,320
1-25	0030	7.35	2,380	2-28	1000	5.00	1,260
2-11	1730	5.46	1,480				

SOQUEL CREEK BASIN

11-1600. SOQUEL CREEK AT SOQUEL, CALIF.

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

DRAINAGE AREA.--40.2 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 21.38 ft above mean sea level.

AVERAGE DISCHARGE.--18 years, 44.0 cfs (31,880 acre-ft per year); median of yearly mean discharges, 29 cfs (21,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,230 cfs Feb. 15 (gage height, 10.76 ft); minimum daily, 1.3 cfs Oct. 1, 2.

Period of record: Maximum discharge, 15,800 cfs Dec. 23, 1955 (gage height, 22.33 ft), from rating curve extended above 2,900 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.10 cfs Aug. 12, 19, 1964.

REMARKS.--Records fair. No regulation; small diversion above station for irrigation. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.8	4.0	19	141	421	44	27	15	10	5.7	3.8
2	1.3	4.5	3.9	16	136	268	44	27	16	10	5.1	3.8
3	1.5	33	3.8	14	126	229	47	27	16	9.6	5.0	3.9
4	1.5	6.2	3.8	13	118	207	41	27	15	9.2	4.7	3.9
5	1.4	4.0	3.7	12	189	189	163	26	16	8.8	4.5	3.9
6	1.4	3.8	3.8	10	357	166	174	26	15	9.2	4.5	4.1
7	1.5	3.9	3.8	9.6	217	151	91	25	14	9.2	4.4	4.6
8	1.6	3.8	3.8	9.6	175	138	72	25	14	9.6	4.3	4.3
9	1.6	3.6	4.5	8.1	169	128	67	24	15	9.6	4.4	4.1
10	1.4	3.5	117	8.1	161	123	61	23	15	8.8	4.4	4.2
11	1.6	3.8	49	7.8	697	114	56	23	15	8.8	4.3	4.1
12	4.8	4.5	15	8.1	294	119	51	23	15	8.4	4.5	4.3
13	3.4	4.1	12	946	171	112	45	23	14	8.4	4.5	4.3
14	2.8	8.1	68	318	185	103	41	22	14	8.4	4.4	4.3
15	2.4	31	126	102	1,350	96	38	21	13	8.4	4.4	4.0
16	2.1	7.1	56	62	375	92	36	20	14	8.1	4.3	4.0
17	2.0	4.4	25	50	318	90	34	19	14	7.8	4.4	4.0
18	2.0	4.0	18	650	315	86	33	20	14	7.8	4.4	4.0
19	2.3	3.8	15	1,500	309	82	31	19	13	7.1	4.7	4.4
20	2.3	3.7	13	900	291	104	30	19	13	7.0	5.2	3.3
21	2.2	3.5	11	850	294	113	29	18	12	7.0	5.2	3.8
22	2.2	3.5	9.6	330	315	93	28	18	12	6.7	4.9	4.9
23	2.2	3.5	8.8	236	538	84	43	18	12	6.4	5.1	4.6
24	2.2	3.6	20	450	737	79	36	18	11	6.4	4.8	4.3
25	2.4	3.8	108	1,200	354	74	32	17	11	6.3	4.5	4.3
26	2.4	3.6	99	773	265	68	30	17	11	6.6	4.5	4.3
27	2.4	3.5	40	177	260	64	29	16	11	6.5	4.6	4.3
28	2.6	3.5	66	129	745	61	29	15	11	6.5	4.5	3.8
29	2.9	3.8	49	144	-----	56	27	15	10	6.4	4.2	3.2
30	3.1	4.0	30	231	-----	50	27	15	10	6.1	4.0	3.0
31	2.9	-----	23	154	-----	48	-----	15	-----	5.8	3.9	-----
TOTAL	67.7	179.9	1,013.5	9,337.3	9,602	3,808	1,509	648	401	244.9	142.3	121.8
MEAN	2.18	6.00	32.7	301	343	123	50.3	20.9	13.4	7.90	4.59	4.06
MAX	4.8	33	126	1,500	1,350	421	174	27	16	10	5.7	4.9
MIN	1.3	2.8	3.7	7.8	118	48	27	15	10	5.8	3.9	3.0
AC-FT	134	357	2,010	18,520	19,050	7,550	2,990	1,290	795	486	282	242

CAL YR 1968 TOTAL 6,688.4 MEAN 18.3 MAX 882 MIN 1.0 AC-FT 13,270
WTR YR 1969 TOTAL 27,075.4 MEAN 74.2 MAX 1,500 MIN 1.3 AC-FT 53,700

PEAK DISCHARGE (BASE, 750 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1345	9.16	2,250	2-15	0600	10.76	3,230
1-19	0800	9.98	2,740	2-24	0545	7.44	1,380
1-25	0200	9.42	2,400	2-28	1045	7.21	1,280
2-11	1630	8.23	1,760				

11-1600.2. SAN LORENZO RIVER NEAR BOULDER CREEK, CALIF.

LOCATION.--Lat 37°12'24", long 122°08'38", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.8 S., R.3 W., Santa Cruz County, on right bank 22 ft upstream from culvert on State Highway 9, 100 ft upstream from unnamed tributary, and 5.8 miles north of town of Boulder Creek.

DRAINAGE AREA.--6.13 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 710 ft (from topographic map).

EXTREMES.--Maximum discharge during period, 655 cfs Jan. 26, 1969 (gage height, 8.48 ft), from rating curve extended above 190 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.37 cfs Sept. 17, 1968.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										-	.53	.39
2										-	.54	.40
3										-	.53	.44
4										-	.53	.47
5										-	.46	.46
6										-	.44	.43
7										-	.41	.43
8										-	.41	.44
9										-	.41	.43
10										-	.39	.42
11										-	.41	.43
12										-	.42	.42
13										-	.51	.42
14										-	.62	.44
15										-	.53	.44
16										-	.48	.39
17										.79	.50	.37
18										.78	.46	.39
19										.73	.65	.41
20										.66	.59	.44
21										.67	.53	.48
22										.67	.51	.48
23										.69	.46	.47
24										.70	.44	.45
25										.65	.44	.43
26										.63	.43	.43
27										.60	.42	.42
28										.61	.43	.40
29										.61	.41	.45
30										.56	.38	.55
31										.52	.39	-----
TOTAL										-	14.66	13.02
MEAN										-	.47	.43
MAX										-	.65	.55
MIN										-	.38	.37
AC-FT										-	.29	.26

SAN LORENZO RIVER BASIN

11-1600.2, SAN LORENZO RIVER NEAR BOULDER CREEK, CALIF.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.70	.77	2.0	28	102	9.8	6.8	3.3	2.4	1.2	.69
2	.52	.94	.70	1.7	26	69	12	6.8	3.3	2.3	1.1	.64
3	.52	1.6	.58	1.6	24	56	11	6.8	3.2	2.3	1.1	.65
4	.52	.96	.58	1.6	23	48	11	6.8	3.2	2.3	1.0	.73
5	.52	.84	.59	1.4	30	40	21	6.4	3.2	2.2	1.1	.74
6	.52	.78	.60	1.3	57	36	19	6.1	3.2	2.2	.97	.79
7	.52	.83	.64	1.2	48	34	16	6.1	3.2	2.2	.79	.82
8	.51	.76	.64	1.2	41	30	14	5.8	3.2	2.1	.77	.83
9	.48	.76	.70	1.2	36	28	13	5.2	3.1	2.1	.76	.39
10	.48	.76	3.2	1.1	33	26	12	5.2	3.1	2.0	.74	.87
11	.54	.74	1.7	1.1	84	25	12	5.2	3.0	2.0	.82	.86
12	1.1	.85	1.0	1.4	75	27	11	5.2	3.0	2.0	.84	.91
13	.85	.76	1.1	58	60	26	11	5.2	3.0	1.9	.78	.90
14	.82	.94	3.2	7.0	78	21	11	5.2	2.9	1.9	.74	.84
15	.77	1.8	9.3	1.6	125	19	10	5.2	2.9	1.9	.73	.80
16	.67	.97	4.6	1.3	61	16	9.6	5.2	2.8	1.8	.73	.83
17	.63	.81	2.8	1.2	50	15	9.3	5.2	2.8	1.8	.74	.84
18	.59	.84	2.1	15	48	14	9.2	4.9	2.8	1.7	.75	.83
19	.58	.84	2.1	280	51	15	8.9	4.6	2.7	1.7	.76	.83
20	.58	.78	1.9	200	46	17	9.9	4.4	2.7	1.6	.73	.81
21	.58	.70	1.7	160	42	16	11	4.4	2.7	1.6	.69	.78
22	.58	.70	1.6	74	39	14	11	4.1	2.6	1.6	.67	.72
23	.61	.64	1.5	42	50	13	12	4.1	2.6	1.5	.74	.67
24	.59	.70	2.1	47	84	12	10	4.1	2.5	1.5	.77	.67
25	.58	.67	4.4	165	59	11	9.6	4.1	2.5	1.4	.82	.63
26	.58	.63	6.1	243	54	11	9.0	3.8	2.5	1.4	.79	.64
27	.58	.58	3.4	92	52	10	8.9	3.8	2.5	1.3	.79	.68
28	.58	.58	4.1	70	141	10	8.0	3.6	2.4	1.3	.78	.65
29	.70	.53	3.2	47	-----	9.7	6.5	3.4	2.4	1.3	.79	.58
30	.76	.58	2.6	43	-----	9.7	6.3	3.4	2.4	1.2	.75	.57
31	.70	-----	2.1	31	-----	9.5	-----	3.3	-----	1.2	.72	-----
TOTAL	19.14	24.57	71.60	1,594.9	1,545	789.9	333.0	154.4	85.7	55.7	25.46	22.69
MEAN	.62	.82	2.31	51.4	55.2	25.5	11.1	4.98	2.86	1.80	.82	.76
MAX	1.1	1.8	9.3	280	141	102	21	6.8	3.3	2.4	1.2	.91
MIN	.48	.53	.58	1.1	23	9.5	6.3	3.3	2.4	1.2	.67	.57
AC-FT	38	49	142	3,160	3,060	1,570	661	306	170	110	50	45

CAL YR 1968 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1969 TOTAL 4,722.06 MEAN 12.9 MAX 280 MIN .48 AC-FT 9,370

PEAK DISCHARGE (BASE, 70 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1200	4.45	138	2-11	1415	4.48	158
1-19	unknown	6.46	327	2-15	0115	5.40	238
1-21	1100	5.69	243	2-24	0430	4.84	167
1-26	0215	8.48	655	2-28	1030	5.30	206

11-1603. ZAYANTE CREEK AT ZAYANTE, CALIF.

LOCATION.--Lat 37°05'10", long 122°02'45", in SE $\frac{1}{4}$ sec.2, T.10 S., R.2 W., Santa Clara County, on left bank at downstream side of bridge on Zayante Road in town of Zayante, 0.4 mile upstream from Lompico Creek, 2.0 miles east of Ben Lomond, and 3.2 miles upstream from mouth.

DRAINAGE AREA.--11.1 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map).

AVERAGE DISCHARGE.--12 years, 11.7 cfs (8,480 acre-ft per year); median of yearly mean discharges, 7.6 cfs (5,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,540 cfs Feb. 15 (gage height, 6.60 ft); minimum daily, 0.41 cfs Sept. 9, 10.

Period of record: Maximum discharge, 3,700 cfs Apr. 2, 1958 (gage height, 7.70 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurement of maximum flow; no flow at times, caused by filling of pools upstream.

REMARKS.--Records good. No known regulation; only small diversion above station for individual use.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	.68	1.1	2.8	47	244	12	8.1	4.1	2.7	1.8	1.3
2	.68	.92	1.0	2.2	39	140	14	8.1	4.2	2.7	1.7	1.3
3	.78	2.4	.96	2.1	34	102	13	7.8	3.9	2.6	1.7	1.3
4	.60	1.3	.92	1.8	30	76	12	7.8	3.8	2.6	1.5	1.3
5	.46	1.1	.92	1.8	82	60	38	7.8	3.8	2.5	1.4	1.3
6	.43	1.0	.92	1.6	194	50	38	7.6	3.8	2.5	1.4	1.2
7	.46	1.1	.92	1.6	93	43	23	7.6	3.7	2.5	1.4	1.2
8	.43	1.0	1.1	1.5	62	39	21	7.3	3.8	2.6	1.4	1.2
9	.41	1.0	1.9	1.5	53	35	20	6.8	3.8	2.6	1.4	1.2
10	.41	1.0	13	1.5	46	32	18	6.8	3.8	2.6	1.4	1.2
11	.43	1.1	5.1	1.4	274	29	17	6.8	3.8	2.5	1.4	1.2
12	1.4	1.2	2.9	1.6	174	30	16	6.3	3.8	2.4	1.4	1.2
13	.96	1.0	3.2	275	88	26	15	6.0	3.7	2.3	1.4	1.2
14	.87	1.4	12	62	140	25	14	6.0	3.7	2.3	1.4	1.2
15	.75	4.4	29	21	1,010	23	14	6.0	3.4	2.3	1.4	1.3
16	.71	1.4	6.5	14	218	21	13	5.6	3.6	2.2	1.4	1.4
17	.68	1.2	2.9	11	127	21	12	5.5	3.6	2.1	1.4	1.4
18	.64	1.1	2.0	226	95	20	12	5.3	3.6	2.0	1.4	1.4
19	.60	1.1	1.8	853	76	19	12	5.3	3.3	2.0	1.4	1.2
20	.60	.96	1.6	630	61	23	11	5.3	3.2	2.0	1.4	1.2
21	.60	.96	1.4	492	55	21	11	5.1	3.2	1.9	1.4	1.2
22	.60	.92	1.4	147	54	19	11	5.1	3.0	1.9	1.4	1.1
23	.57	.92	1.4	76	159	18	14	5.1	3.0	1.9	1.4	1.1
24	.57	.92	2.4	132	354	17	11	4.9	3.2	1.9	1.4	1.1
25	.57	.92	9.7	434	188	16	11	4.6	3.0	1.9	1.4	1.1
26	.57	.92	12	402	129	16	9.8	4.6	3.0	1.9	1.4	1.1
27	.57	.92	5.3	127	133	14	9.4	4.7	2.9	2.0	1.4	1.1
28	.57	.92	10	88	468	14	9.0	4.4	2.9	1.9	1.3	1.1
29	.82	.92	7.0	60	-----	14	8.6	4.4	2.7	1.9	1.4	1.1
30	.87	.96	4.2	87	-----	13	8.3	4.2	2.7	1.9	1.3	1.1
31	.71	-----	3.2	57	-----	12	-----	4.1	-----	1.8	1.3	-----
TOTAL	19.85	35.64	147.74	4,215.4	4,483	1,232	448.1	185.0	104.0	68.9	44.2	36.3
MEAN	.64	1.19	4.77	136	160	39.7	14.9	5.97	3.47	2.22	1.43	1.21
MAX	1.4	4.4	29	853	1,010	244	38	8.1	4.2	2.7	1.8	1.4
MIN	.41	.68	.92	1.4	30	12	8.3	4.1	2.7	1.8	1.3	1.1
AC-FT	39	71	293	8,360	8,890	2,440	889	367	206	137	88	72

CAL YR 1968 TOTAL 1,959.69 MEAN 5.35 MAX 474 MIN .30 AC-FT 3,890
WTR YR 1969 TOTAL 11,020.13 MEAN 30.2 MAX 1,010 MIN .41 AC-FT 21,860

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1230	4.28	650	2-15	0400	6.60	2,540
1-19	0630	5.35	1,360	2-24	0400	4.45	750
1-26	0300	5.00	1,100	2-28	0200	4.18	600
2-11	1430	4.29	655				

SAN LORENZO RIVER BASIN

11-1605. SAN LORENZO RIVER AT BIG TREES, CALIF.

LOCATION.--Lat 37°01'49", long 122°03'24", in Canada del Rincon Grant, Santa Cruz County, on right bank 0.5 mile south of Big Trees station on Southern Pacific Railroad, 1.6 miles downstream from Zayante Creek, and 4 miles north of Santa Cruz.

DRAINAGE AREA.--111 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 217.0 ft above mean sea level (levels by Topographic Division).

AVERAGE DISCHARGE.--33 years, 137 cfs (99,260 acre-ft per year); median of yearly mean discharges, 90 cfs (65,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,500 cfs Feb. 15 (gage height, 14.97 ft); minimum daily, 14 cfs Oct. 6, 8.

Period of record: Maximum discharge, 30,400 cfs Dec. 23, 1955 (gage height, 22.55 ft), from rating curve extended above 11,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.8 cfs (regulated) June 25, 1939; minimum daily, 7.5 cfs July 1, 1939.

REMARKS.--Records good. Flow regulated by Loch Lomond Reservoir since 1961 (capacity, 8,400 acre-ft). Many small diversions above station for domestic supply. Records of chemical analyses and water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1315-B: 1938(M). WSP 1715: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	22	86	624	1,910	177	120	66	46	32	24
2	15	26	23	82	542	1,250	191	117	67	44	30	24
3	15	60	21	75	479	985	209	115	66	42	30	24
4	15	31	20	70	424	826	177	114	64	40	30	24
5	15	23	19	66	741	716	544	110	64	42	27	23
6	14	21	19	63	1,540	641	455	106	64	44	28	24
7	16	21	19	60	1,000	583	325	105	62	44	28	25
8	14	19	25	58	716	529	279	104	63	43	28	24
9	18	19	40	56	645	490	262	100	65	44	28	23
10	15	19	177	55	556	464	238	98	65	43	27	23
11	15	18	106	55	1,940	416	220	92	63	42	28	23
12	43	21	46	66	1,540	443	211	95	62	42	26	26
13	31	20	44	2,920	915	398	204	93	63	42	26	24
14	23	30	234	879	975	356	193	92	60	41	27	25
15	20	122	352	353	5,580	331	186	90	59	40	26	32
16	18	37	164	242	1,580	313	176	82	58	40	27	24
17	17	26	71	183	1,110	309	171	86	60	41	27	24
18	17	24	53	1,250	976	291	166	81	59	42	27	23
19	16	22	48	4,640	893	274	160	82	57	42	27	23
20	16	22	44	4,030	770	319	155	81	56	39	26	23
21	16	20	39	3,880	709	309	149	80	55	40	26	24
22	16	20	37	1,510	683	269	145	79	54	40	28	23
23	15	20	35	881	1,280	252	207	77	54	41	29	23
24	17	20	78	916	2,370	234	168	74	52	38	29	22
25	15	20	223	3,300	1,500	227	151	73	52	36	27	22
26	15	20	295	3,310	1,150	216	144	72	51	34	27	22
27	15	19	126	1,320	1,040	207	138	71	50	34	27	23
28	16	19	275	1,080	2,980	199	132	71	49	35	25	24
29	22	20	169	816	-----	192	125	68	49	34	25	24
30	22	21	109	940	-----	187	122	63	47	34	26	22
31	19	-----	94	725	-----	182	-----	64	-----	33	25	-----
TOTAL	559	798	3,027	33,967	35,258	14,318	6,180	2,755	1,756	1,242	849	714
MEAN	18.0	26.6	97.6	1,096	1,259	462	206	88.9	58.5	40.1	27.4	23.8
MAX	43	122	352	4,640	5,580	1,910	544	120	67	46	32	32
MIN	14	18	19	55	424	182	122	63	47	33	25	22
AC-FT	1,110	1,580	6,000	67,370	69,930	28,400	12,260	5,460	3,480	2,460	1,680	1,420

CAL YR 1968 TOTAL 27,737 MEAN 75.8 MAX 3,610 MIN 12
WTR YR 1969 TOTAL 101,423 MEAN 278 MAX 5,580 MIN 14

AC-FT 55,020
AC-FT 201,200

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1345	10.60	5,670	2-11	1630	8.94	4,040
1-19	0745	11.44	6,800	2-15	0515	14.97	11,500
1-21	0800	10.50	5,560	2-24	0615	8.48	3,620
1-26	0445	11.29	6,430	2-28	1230	8.82	3,930
2- 6	0845	6.16	1,860				

11-1619. SCOTT CREEK ABOVE LITTLE CREEK, NEAR DAVENPORT, CALIF.

LOCATION.--Lat 37°03'51", long 122°13'42", in Agua Puerco y las Trancas Grant, Santa Cruz County, on left bank 600 ft upstream from Little Creek, 2.0 miles upstream from mouth, and 4.2 miles north of Davenport.

DRAINAGE AREA.--25.0 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 29.7 cfs (21,520 acre-ft per year); median of yearly mean discharges, 18 cfs (13,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,180 cfs Feb. 15 (gage height, 5.31 ft); minimum daily, 0.94 cfs Oct. 10.

Period of record: Maximum discharge, 1,970 cfs Feb. 13, 1962 (gage height, 9.36 ft), from rating curve extended above 650 cfs on basis of slope-area measurement at gage height 7.35 ft; minimum daily, 0.3 cfs for several days in 1961.

REMARKS.--Records good except those above 600 cfs, which are fair. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.6	2.9	36	196	510	53	31	13	9.9	4.0	2.3
2	1.2	2.2	2.6	31	161	388	66	28	13	9.6	3.9	2.2
3	1.3	7.5	2.5	27	134	312	66	27	13	11	3.7	2.2
4	1.2	3.9	2.4	24	114	272	54	26	12	11	3.5	2.2
5	1.1	3.0	2.4	21	157	239	142	24	12	9.5	3.4	2.1
6	1.1	2.7	2.3	20	278	216	119	23	12	8.7	3.4	2.1
7	1.1	2.6	2.3	18	231	196	97	23	12	8.4	3.4	2.5
8	1.1	2.4	2.9	16	168	172	82	23	11	8.4	3.4	2.2
9	1.0	2.3	4.8	16	152	161	75	23	12	8.3	3.3	2.1
10	.94	2.2	36	14	123	150	68	23	13	8.1	3.3	1.9
11	1.2	2.2	32	14	457	138	61	22	13	7.4	3.2	1.9
12	4.5	2.7	15	17	442	144	57	22	13	7.2	3.1	2.1
13	3.4	2.4	11	535	297	124	56	22	12	7.1	3.1	2.1
14	2.7	2.9	59	345	312	123	51	22	11	6.9	3.1	2.1
15	2.4	20	61	177	845	114	48	22	11	6.7	3.0	2.1
16	2.0	7.5	48	128	468	108	45	23	10	6.2	3.0	2.1
17	1.7	4.9	28	103	381	106	43	23	9.7	6.0	3.1	2.0
18	1.6	4.2	20	255	342	101	43	23	9.6	6.0	3.2	1.9
19	1.5	3.7	18	812	348	92	38	22	9.6	5.9	3.3	1.9
20	1.5	3.4	15	832	303	106	37	21	11	5.7	3.1	1.9
21	1.4	3.0	13	848	272	110	36	21	12	5.6	2.9	2.0
22	1.4	2.8	11	598	258	103	35	20	13	5.6	2.8	1.9
23	1.4	2.6	10	451	370	92	46	20	13	5.5	2.7	1.7
24	1.4	2.7	16	468	493	86	42	18	13	5.2	2.6	1.6
25	1.3	2.7	38	815	395	79	40	18	12	5.2	2.6	1.6
26	1.3	2.5	80	732	333	75	41	17	12	5.2	2.5	1.6
27	1.4	2.4	47	469	297	70	38	16	11	5.0	2.4	1.8
28	1.4	2.4	114	378	541	65	37	16	11	4.9	2.3	2.0
29	1.8	2.3	76	290	-----	62	37	14	11	4.7	2.3	1.8
30	2.1	3.2	52	416	-----	61	35	14	10	4.5	2.3	1.6
31	1.9	-----	43	234	-----	56	-----	13	-----	4.3	2.3	-----
TOTAL	50.44	110.9	868.1	9,140	8,868	4,631	1,688	660	350.9	213.7	94.2	59.5
MEAN	1.63	3.70	28.0	295	317	149	56.3	21.3	11.7	6.89	3.04	1.98
MAX	4.5	20	114	848	845	510	142	31	13	11	4.0	2.5
MIN	.94	1.6	2.3	14	114	56	35	13	9.6	4.3	2.3	1.6
AC-FT	100	220	1,720	18,130	17,590	9,190	3,350	1,310	696	424	187	118
CAL YR 1968	TOTAL	7,174.51	MEAN	19.6	MAX	440	MIN	.82	AC-FT	14,230		
WTR YR 1969	TOTAL	26,734.74	MEAN	73.2	MAX	948	MIN	.94	AC-FT	53,030		

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1445	5.09	972	2-11	1600	4.31	932
1-20	1845	5.09	1,020	2-15	0515	5.31	1,180
1-25	0100	5.20	1,100	2-24	0515	3.44	607
2- 6	1630	2.27	333	2-28	1215	3.67	685

11-1625. PESCADERO CREEK NEAR PESCADERO, CALIF.

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

DRAINAGE AREA.--45.9 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 62.3 ft above mean sea level.

AVERAGE DISCHARGE.--18 years, 42.9 cfs (31,080 acre-ft per year); median of yearly mean discharges, 23 cfs (16,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,900 cfs Jan. 19 (gage height, 11.97 ft); minimum daily, 1.3 cfs Oct. 8-10, 22, 25-28.

Period of record: Maximum discharge, 9,420 cfs Dec. 23, 1955 (gage height, 21.27 ft), from rating curve extended above 2,700 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records good. Minor regulation from swimming pools in San Mateo County Memorial Park and Portola State Park during summer months. Small diversions above station by pumping. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1445: 1952-53(M). WSP 1715: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.4	5.1	20	224	742	42	27	14	11	7.6	17
2	1.4	2.7	7.7	16	190	456	44	26	15	10	7.0	16
3	1.4	16	4.6	11	163	342	52	26	13	9.1	6.5	16
4	1.4	8.8	3.5	10	145	293	42	26	12	10	6.0	4.0
5	1.4	3.1	3.1	9.0	215	237	112	25	9.9	10	5.5	2.7
6	1.4	2.3	3.0	8.2	449	198	160	24	11	11	4.5	2.7
7	1.4	2.2	2.9	7.1	346	172	115	23	12	11	8.6	4.2
8	1.3	2.2	3.6	6.3	255	153	91	23	16	11	5.4	6.9
9	1.3	2.1	5.4	5.6	217	138	82	22	18	10	5.0	4.9
10	1.3	2.0	26	5.0	187	128	73	22	16	10	8.3	2.9
11	2.0	2.0	45	5.0	513	114	66	22	14	9.7	8.2	2.5
12	3.7	2.9	17	6.3	520	122	62	21	12	9.7	7.5	2.0
13	5.4	3.8	12	580	310	116	58	21	9.9	9.8	7.0	3.0
14	3.6	3.1	47	253	285	101	54	20	8.6	9.8	6.2	3.5
15	3.4	17	65	102	1,300	92	52	20	9.0	8.7	5.6	4.0
16	2.6	11	61	66	551	87	48	20	8.4	9.1	5.2	4.0
17	1.9	4.6	29	51	418	84	45	20	7.1	8.5	8.3	4.2
18	1.7	3.5	19	177	513	81	44	20	6.6	5.2	12	4.4
19	1.5	3.2	16	1,660	424	81	41	20	6.1	9.7	15	4.7
20	1.5	2.8	13	1,380	354	86	39	19	6.2	9.3	14	4.7
21	1.4	2.7	10	1,570	296	92	38	20	6.5	9.7	15	4.7
22	1.3	2.7	8.4	669	266	81	35	20	6.6	9.8	14	4.4
23	1.4	2.6	7.4	325	380	81	47	20	5.7	9.9	12	4.2
24	1.4	2.7	9.1	253	539	74	42	19	5.5	9.1	13	4.0
25	1.3	3.2	40	1,120	437	59	36	19	5.6	9.7	15	4.0
26	1.3	3.2	56	1,380	388	56	34	17	6.2	10	17	3.2
27	1.3	2.9	51	525	321	53	32	17	5.8	11	17	4.2
28	1.3	2.6	46	405	711	50	31	16	6.4	11	15	4.2
29	1.5	2.7	44	332	-----	48	29	11	6.2	9.7	15	4.0
30	2.0	3.3	32	319	-----	46	29	15	8.3	9.4	15	3.7
31	2.4	-----	25	255	-----	44	-----	14	-----	8.0	16	-----
TOTAL	58.6	126.3	757.8	11,531.5	10,917	4,507	1,675	635	287.6	303.9	326.0	154.9
MEAN	1.89	4.21	24.4	372	390	145	55.8	20.5	9.59	9.80	10.5	5.16
MAX	5.4	17	96	1,660	1,300	742	160	27	18	11	17	17
MIN	1.3	2.0	2.9	5.0	145	44	29	11	5.5	8.0	4.5	2.0
AC-FT	116	251	1,500	22,870	21,650	8,940	3,320	1,260	570	603	647	307

CAL YR 1968 TOTAL 8,324.03 MEAN 22.7 MAX 1,250 MIN .95 AC-FT 16,510
WTR YR 1969 TOTAL 31,280.6 MEAN 85.7 MAX 1,660 MIN 1.3 AC-FT 62,040

PEAK DISCHARGE (BASE, 700 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1530	7.19	1,090	2-11	1815	6.79	975
1-19	0915	11.97	2,900	2-15	0515	9.65	1,900
1-21	1015	9.98	2,030	2-24	0815	5.94	744
1-26	0545	11.77	2,800	2-28	1415	6.88	1,000

11-1625.4. BUTANO CREEK NEAR PESCADERO, CALIF.

LOCATION.--Lat 37°14'01", long 122°21'56", in Butano Grant, San Mateo County, on right bank 0.2 mile below unnamed tributary, and 1.7 miles southeast of Pescadero.

DRAINAGE AREA.--18.3 sq mi.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1957, 1959-62, and annual maximum, water years 1959-62, June 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 70 ft (from topographic map). February 1957 to June 22, 1962, crest-stage gage at site 250 ft downstream at same datum.

AVERAGE DISCHARGE.--7 years, 22.2 cfs (16,080 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 993 cfs Jan. 19 (gage height, 12.59 ft); minimum daily, 0.73 cfs Oct. 4.

Period of record: Maximum discharge, 1,600 cfs Feb. 13, 1962 (gage height, 10.04 ft, crest-stage gage, from floodmarks), by slope-area measurement of maximum flow; no flow July 29 to Aug. 1, 1964.

REMARKS.--Records good. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.0	2.9	17	104	230	22	15	7.1	5.8	3.0	1.5
2	1.1	2.4	3.4	14	89	180	23	15	7.1	5.6	2.9	1.4
3	.94	8.4	2.7	13	77	149	30	14	6.9	5.6	2.9	1.4
4	.73	4.5	2.4	11	69	121	23	14	6.8	5.4	2.8	1.3
5	.79	3.2	2.4	10	109	101	74	13	7.0	5.5	2.6	1.2
6	1.1	3.0	2.3	9.1	177	86	91	13	7.0	5.5	2.4	1.2
7	.87	3.0	2.3	8.3	151	76	67	12	6.9	5.1	2.4	1.4
8	.83	2.7	2.7	8.1	114	68	55	12	7.4	4.9	2.4	1.3
9	.96	2.6	3.6	7.8	97	62	49	12	10	4.9	2.3	1.2
10	.83	2.4	23	7.4	84	57	43	11	9.1	4.9	2.5	1.1
11	1.1	2.4	23	7.3	212	52	39	11	8.3	4.5	2.6	1.1
12	3.2	3.6	9.6	8.0	229	55	36	11	7.7	4.6	2.4	1.1
13	3.4	2.7	7.9	370	150	52	33	11	7.2	4.7	2.1	1.1
14	2.4	2.3	45	192	141	45	31	10	7.1	4.6	2.1	1.1
15	2.3	11	49	84	544	41	29	10	7.3	4.3	2.0	1.1
16	1.9	5.7	39	55	253	38	27	10	7.3	4.1	2.0	1.1
17	1.8	4.2	18	42	213	38	25	9.7	6.7	3.9	2.0	1.2
18	1.7	3.4	13	108	263	35	24	9.4	6.5	3.9	2.2	1.1
19	1.6	3.1	11	661	222	32	23	9.3	6.4	3.7	1.9	1.3
20	1.6	2.8	9.3	528	178	40	22	9.1	6.4	3.9	1.7	1.3
21	1.5	2.4	7.8	689	154	51	21	9.1	6.7	4.1	1.5	1.3
22	1.5	2.4	7.0	302	137	42	20	9.0	7.0	3.9	1.3	1.3
23	1.4	2.3	6.4	188	176	38	26	9.1	6.9	3.8	1.5	1.2
24	1.4	2.4	7.8	160	201	35	22	8.5	6.4	3.4	1.5	1.2
25	1.4	2.7	19	490	175	33	20	8.1	6.1	3.4	1.7	1.2
26	1.4	2.6	44	449	160	30	19	7.9	6.0	3.6	1.5	1.1
27	1.4	2.3	26	221	141	28	18	7.7	5.9	3.7	1.4	1.3
28	1.4	2.1	46	178	206	26	17	7.4	5.7	3.6	1.1	1.3
29	1.6	2.1	40	145	-----	25	16	7.3	6.0	3.3	1.0	1.3
30	2.4	2.6	28	140	-----	23	16	7.2	6.1	3.3	1.1	1.3
31	2.3	-----	21	114	-----	23	-----	7.1	-----	3.3	1.4	-----
TOTAL	47.95	99.3	525.5	5,237.0	4,826	1,912	961	319.9	209.0	134.8	62.2	37.0
MEAN	1.55	3.31	17.0	169	172	61.7	32.0	10.3	6.97	4.35	2.01	1.23
MAX	3.4	11	49	689	544	230	91	15	10	5.8	3.0	1.5
MIN	.73	2.0	2.3	7.3	69	23	16	7.1	5.7	3.3	1.0	1.1
AC-FT	95	197	1,040	10,390	9,570	3,790	1,910	635	415	267	123	73
CAL YR 1968	TOTAL	4,757.34	MEAN	13.0	MAX	449	MIN	.71	AC-FT	9,440		
WTR YR 1969	TOTAL	14,371.65	MEAN	39.4	MAX	689	MIN	.73	AC-FT	28,510		

PEAK DISCHARGE (BASE, 200 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1445	11.17	644	2-15	0530	11.09	783
1-19	0830	12.59	993	2-18	0100	7.68	298
1-21	0915	12.15	931	2-24	0700	7.29	244
1-26	0500	10.85	749	2-28	1915	7.34	251
2-11	1745	8.41	407				

PURISIMA CREEK BASIN

11-1626. PURISIMA CREEK NEAR HALF MOON BAY, CALIF.

LOCATION.--Lat 37°26'06", long 122°22'23", in Canada de Verde y Arroyo de la Purisima Grant, San Mateo County, on left bank 15 ft downstream from county road bridge, 3.6 miles southeast of Half Moon Bay, and 4.0 miles upstream from mouth.

DRAINAGE AREA.--4.83 sq mi.

PERIOD OF RECORD.--October 1958 to September 1969 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 380 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 3.34 cfs (2,420 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 166 cfs Jan. 26 (gage height, 4.84 ft); minimum daily, 0.41 cfs Oct. 1.

Period of record: Maximum discharge, 343 cfs Jan. 21, 1967 (gage height, 5.42 ft), from rating curve extended above 140 cfs on basis of slope-area measurement at gage height 5.28 ft; minimum daily, 0.20 cfs Dec. 28, 29, 1959, Sept. 3-5, 1961.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.81	1.3	3.5	19	40	7.4	5.5	3.2	2.3	1.7	1.0
2	.49	.95	1.1	2.8	17	32	8.4	5.2	2.9	2.5	1.7	1.0
3	.49	2.2	.99	2.2	15	28	8.4	5.2	2.7	2.5	1.6	1.0
4	.49	.95	1.0	2.0	13	25	7.6	5.8	2.7	2.4	1.6	1.1
5	.52	.83	1.0	1.8	25	23	18	5.5	2.7	2.4	1.5	1.1
6	.54	.87	.95	1.7	51	22	19	5.5	2.6	2.5	1.6	.98
7	.53	.77	.93	1.6	33	20	16	5.2	2.5	2.5	1.6	1.0
8	.49	.76	1.2	1.5	29	18	14	5.2	3.0	2.5	1.6	1.0
9	.49	.71	2.9	1.3	23	17	13	5.2	3.8	2.3	1.6	1.0
10	.49	.68	8.3	1.3	20	16	11	4.9	4.1	2.3	1.4	1.0
11	.54	.65	5.9	1.3	26	15	11	4.9	4.1	2.3	1.4	.98
12	.79	.95	2.9	1.5	30	16	10	4.9	3.9	2.2	1.4	1.0
13	.76	.76	2.1	21	26	14	9.9	4.9	3.7	2.1	1.3	1.1
14	.78	.97	2.5	15	28	12	9.4	4.9	3.6	2.1	1.3	1.1
15	.76	2.7	6.2	8.5	70	12	9.0	4.5	3.8	2.1	1.3	1.0
16	.74	1.0	5.5	6.1	40	11	8.5	4.5	3.9	2.1	1.4	1.0
17	.61	.89	3.3	4.9	30	10	8.0	3.9	3.8	2.1	1.2	1.0
18	.61	.93	2.5	6.8	40	10	7.6	3.5	3.4	1.9	1.3	1.1
19	.67	.92	2.1	52	35	10	7.6	3.4	3.4	1.9	1.2	1.1
20	.67	.89	1.6	71	30	12	7.1	3.2	3.2	1.8	1.3	1.0
21	.67	.76	1.4	66	26	14	6.8	3.2	3.2	1.7	1.2	1.1
22	.64	.76	1.3	40	24	13	6.8	3.2	3.5	1.7	1.2	1.0
23	.65	.82	1.2	23	30	12	7.6	3.2	3.7	1.8	1.3	.97
24	.63	.90	1.4	19	36	11	6.8	3.2	3.5	1.8	1.2	.99
25	.61	.92	8.4	81	34	10	6.5	3.3	3.2	1.9	1.3	.97
26	.58	.84	16	83	32	9.4	6.1	3.3	3.1	1.9	1.2	.97
27	.54	.77	8.1	42	28	9.0	6.1	3.2	2.9	1.9	1.2	1.0
28	.58	.76	7.3	31	35	8.5	5.8	3.4	2.7	1.9	1.2	1.0
29	.70	.80	7.0	24	-----	8.3	5.5	3.3	2.5	1.8	1.2	.98
30	.84	.95	5.7	23	-----	7.9	5.5	3.2	2.5	1.8	1.1	.95
31	.84	-----	4.4	19	-----	7.6	-----	3.2	-----	1.8	1.1	-----
TOTAL	19.15	28.47	116.47	658.8	845	473.7	274.4	131.5	97.8	64.8	42.2	30.49
MEAN	.62	.95	3.76	21.3	30.2	15.3	9.15	4.24	3.26	2.09	1.36	1.02
MAX	.84	2.7	16	83	70	40	19	5.8	4.1	2.5	1.7	1.1
MIN	.41	.65	.93	1.3	13	7.6	5.5	3.2	2.5	1.7	1.1	.95
AC-FT	38	56	231	1,310	1,680	940	544	261	194	129	84	60

CAL YR 1968 TOTAL 790.16 MEAN 2.16 MAX 29 MIN .36 AC-FT 1,570
WTR YR 1969 TOTAL 2,782.78 MEAN 7.62 MAX 83 MIN .41 AC-FT 5,520

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1315	4.02	38	2- 5	2130	4.27	67
1-20	0130	4.54	107	2-15	unknown	-	unknown
1-26	0215	4.84	166	3- 1	unknown	-	unknown

NOTE.--No gage-height record Feb. 12 to Mar. 25.

11-1626.3. PILARCITOS CREEK AT HALF MOON BAY, CALIF.

LOCATION.--Lat 37°28'07", long 122°28'08", on north boundary of Miramontes Grant, San Mateo County, on left bank 0.2 mile downstream from State Highway 1, 0.5 mile northwest of town of Half Moon Bay, and 1.0 mile upstream from mouth.

DRAINAGE AREA.--27.2 sq mi.

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 23.59 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 594 cfs Feb. 5 (gage height, 7.00 ft); no flow for many days.
Period of record: Maximum discharge, 1,290 cfs Jan. 30, 1968 (gage height, 11.20 ft); no flow for many days in each year.

REMARKS.--Records good. Flow slightly regulated by storage in Pilarcitos Lake (capacity, 3,100 acre-ft, majority of water imported for domestic use). Small diversions for irrigation above station by pumping.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.90	1.8	7.5	78	156	16	9.6	4.1	2.6	1.1	.03
2	0	1.6	2.1	6.7	67	121	20	9.1	4.2	2.5	.75	.08
3	0	3.3	2.0	6.0	57	108	20	8.3	3.9	2.3	.99	.01
4	0	2.0	1.7	5.5	50	87	17	8.2	3.9	1.6	1.0	.09
5	0	1.5	1.6	5.2	185	75	53	7.1	3.7	1.8	.55	0
6	0	1.3	1.6	4.9	299	65	56	5.6	3.5	1.9	.47	0
7	0	1.2	1.5	4.5	126	54	37	5.5	3.4	2.1	.30	0
8	0	1.1	2.2	4.2	89	48	32	5.3	4.1	2.2	.06	.16
9	0	1.0	2.7	4.4	74	42	32	5.2	6.1	2.2	.26	.06
10	0	.90	8.1	4.2	63	39	28	5.1	5.8	2.2	.41	0
11	0	.90	6.9	4.5	149	35	25	4.9	4.9	1.9	.55	0
12	0	1.3	4.0	4.9	116	47	24	4.7	4.7	1.5	.33	.17
13	0	1.0	3.3	53	84	39	23	4.4	4.3	1.4	.10	.28
14	.36	1.5	5.3	34	127	33	20	4.0	4.1	1.6	.29	.43
15	.71	3.8	25	18	203	30	19	3.5	4.2	1.2	.03	.25
16	.18	2.7	16	13	113	28	18	3.7	4.4	1.2	.74	.07
17	0	1.6	9.2	11	133	26	17	3.4	4.0	1.1	.52	0
18	0	1.3	7.1	34	179	23	16	3.3	3.6	.82	1.1	.01
19	0	1.1	6.8	290	113	21	15	3.7	3.8	.83	.65	.12
20	0	1.0	5.9	282	90	21	14	4.4	3.5	1.5	.41	.34
21	0	.90	5.3	306	82	22	14	4.2	3.4	1.8	.17	.41
22	0	.85	4.8	130	83	19	14	3.8	3.4	1.4	.25	.50
23	0	.85	4.4	66	193	17	18	4.0	3.7	1.4	.02	.41
24	0	.95	4.5	88	189	15	16	4.3	3.3	1.2	.19	.04
25	0	1.1	14	339	128	13	14	4.6	3.4	1.5	.24	.04
26	0	1.1	39	310	113	17	13	4.5	3.6	1.7	.04	0
27	0	1.0	16	146	113	20	11	4.2	3.4	2.0	0	.05
28	0	.90	22	108	166	19	11	4.0	3.2	2.1	0	.35
29	0	.85	17	75	-----	18	11	4.1	2.6	1.5	0	.53
30	.43	1.2	12	93	-----	17	10	4.1	2.5	1.1	.01	.26
31	.86	-----	9.1	67	-----	17	-----	3.9	-----	1.2	0	-----
TOTAL	2.54	40.70	262.9	2,525.5	3,462	1,292	634	154.7	116.7	51.35	11.53	4.69
MEAN	.082	1.36	8.48	81.5	124	41.7	21.1	4.99	3.89	1.66	.37	.16
MAX	.86	3.8	39	339	299	156	56	9.6	6.1	2.6	1.1	.53
MIN	0	.85	1.5	4.2	50	13	10	3.3	2.5	.82	0	0
AC-FT	5.0	81	521	5,010	6,870	2,560	1,260	307	231	102	23	9.3

CAL YR 1968 TOTAL 3,281.94

MEAN 8.97

MAX 415

MIN 0

AC-FT 6,510

WTR YR 1969 TOTAL 8,558.61

MEAN 23.4

MAX 339

MIN 0

AC-FT 16,980

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0200	6.26	483	2-14	2030	5.17	320
1-21	0815	5.95	436	2-17	2315	5.68	396
1-26	0300	6.70	549	2-23	0315	6.62	537
2- 5	2245	7.00	594	2-28	1145	4.63	238
2-11	1415	5.01	296				

NOTE.--No gage-height record Nov. 4 to Dec. 3.

COLMA CREEK BASIN

11-1627.2. COLMA CREEK AT SOUTH SAN FRANCISCO, CALIF.

LOCATION.--Lat 37°39'14", long 122°25'31", in Buri Buri Grant, San Mateo County, on left bank in Orange Memorial Park, 1.0 mile southwest of South San Francisco Post Office.

DRAINAGE AREA.--10.9 sq mi.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 12.53 ft above mean sea level. Tipping-bucket rain gage at site 3.3 miles south.

AVERAGE DISCHARGE.--6 years, 6.42 (4,650 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,180 cfs Feb. 23 (gage height, 8.12 ft); minimum daily, 0.21 cfs May 29.

Period of record: Maximum discharge, 1,260 cfs Jan. 30, 1968 (gage height, 8.32 ft); no flow Oct. 5, 26, 1963.

REMARKS.--Records good except those below 5.0 cfs, which are poor. Low flow affected by return flow from urban irrigation. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	1.2	8.3	1.6	19	19	2.1	2.1	.80	1.6	3.8	2.0
2	1.2	21	1.6	1.2	5.9	29	31	1.2	.21	1.6	3.8	1.8
3	1.6	20	1.2	1.2	3.8	8.2	1.6	1.2	.60	1.2	3.2	2.2
4	1.6	.80	2.1	1.2	4.4	6.6	5.4	.80	.80	1.2	3.2	2.1
5	1.6	1.2	1.2	1.2	138	5.2	100	1.2	1.6	1.2	2.6	1.2
6	2.1	4.0	1.2	1.2	83	4.4	26	1.2	2.6	1.2	2.1	1.6
7	2.1	1.2	3.6	1.6	12	4.4	3.2	1.2	2.1	.43	2.1	1.2
8	2.1	.60	8.9	1.6	7.4	3.8	2.6	1.2	2.6	1.2	2.1	1.2
9	2.6	.60	29	1.6	6.6	3.2	19	1.2	2.6	2.1	2.6	.80
10	2.1	.60	69	2.1	5.2	2.1	2.6	1.6	2.1	2.1	2.6	1.2
11	2.1	11	3.8	14	136	1.2	2.6	1.6	1.6	1.6	2.1	.80
12	14	3.7	1.6	37	13	36	2.1	1.6	1.6	2.1	3.2	.80
13	13	.60	35	127	8.2	2.6	1.6	1.6	1.2	2.6	2.1	1.2
14	4.4	44	12	5.2	96	2.1	1.6	1.2	1.2	1.2	2.1	1.2
15	1.6	16	75	2.6	82	2.1	2.6	.31	1.2	3.2	3.2	.80
16	1.6	3.8	2.1	2.1	17	5.4	2.6	.31	1.2	2.6	3.8	.80
17	2.1	1.6	1.2	1.6	29	11	3.2	.31	1.2	2.6	2.6	1.6
18	2.1	7.4	5.1	123	15	2.6	2.6	.31	1.6	3.8	3.2	2.1
19	2.1	1.2	1.6	162	5.9	2.1	3.2	.31	1.6	3.8	2.1	1.6
20	2.1	1.2	1.2	143	5.2	20	3.8	.31	2.6	3.8	2.0	1.5
21	2.6	1.2	1.2	98	34	2.1	3.2	.43	2.1	2.6	1.9	1.4
22	3.2	1.2	2.1	18	27	1.6	3.8	.80	2.1	2.6	1.8	1.5
23	2.6	1.2	1.2	22	112	1.6	15	1.2	1.6	3.8	1.6	1.9
24	1.6	3.3	21	68	131	2.1	3.8	1.6	2.1	2.6	1.4	2.1
25	1.6	1.9	96	109	57	2.1	2.1	1.6	2.1	3.8	1.8	2.1
26	2.1	1.2	29	105	25	2.6	2.6	1.2	2.1	2.6	1.6	2.1
27	2.1	1.2	5.9	44	36	2.1	3.2	.80	1.6	2.6	1.6	2.1
28	1.6	1.6	30	35	94	1.6	2.6	.31	1.6	3.8	1.6	1.6
29	7.7	16	2.1	43	-----	2.1	2.6	.21	1.6	2.6	2.2	1.6
30	3.3	4.1	1.6	46	-----	2.1	2.6	.31	1.2	3.8	2.0	2.1
31	1.6	-----	1.6	8.2	-----	2.1	-----	.60	-----	3.8	1.8	-----
TOTAL	92.90	174.60	456.4	1,228.2	1,208.6	193.1	260.9	29.82	49.11	75.73	73.8	46.20
MEAN	3.00	5.82	14.7	39.6	43.2	6.23	8.70	.96	1.64	2.44	2.38	1.54
MAX	14	44	96	162	138	36	100	2.1	2.6	3.8	3.8	2.2
MIN	.80	.60	1.2	1.2	3.8	1.2	1.6	.21	.21	.43	1.4	.80
AC-FT	184	346	905	2,440	2,400	383	517	59	97	150	146	92
(a)	.8	2.4	4.2	8.7	9.6	2.6	.7	0	0	0	0	0
CAL YR 1968	TOTAL 2,298.47		MEAN 6.28		MAX 198		MIN .57		AC-FT 4,560			
WTR YR 1969	TOTAL 3,889.36		MEAN 10.7		MAX 162		MIN .21		AC-FT 7,710			

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1030	6.42	602	1-29	2330	7.26	863
12-25	2100	6.74	698	2- 6	0330	6.53	635
1-19	1730	6.68	680	2-23	0045	8.12	1,180
1-26	0045	7.86	1,080				

a Precipitation, in inches.

COLMA CREEK BASIN

353

11-1627.22 SPRUCE BRANCH AT SOUTH SAN FRANCISCO, CALIF.

LOCATION.--Lat 37°38'46", long 122°25'15", in Buri Buri Grant, San Mateo County, on right bank 0.5 mile upstream from mouth, and 1.0 mile southwest of South San Francisco Post Office.

DRAINAGE AREA.--0.70 sq mi (revised). Reduced by diversion from 1.68 to 0.70 sq mi, Oct. 1, 1968.

PERIOD OF RECORD.--February 1965 to September 1969 (discontinued).

GAGE.--Water-stage recorder and concrete culvert control. Datum of gage is 5.50 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 137 cfs Jan. 26 (gage height, 8.85 ft); no flow at times.
Period of record: Maximum discharge, 389 cfs Jan. 30, 1968 (gage height, 16.42 ft), from rating curve extended above 72 cfs on basis of indirect measurements of theoretical flow through culvert; no flow at times in each year.

REMARKS.--Records poor. Completion of bypass channel, in November 1968, diverts water 150 ft upstream. Records of suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.10	.58	.10	1.5	1.5	.02	.01	.01	.02	.05	.03
2	.15	2.5	.03	.10	.50	2.0	2.0	.01	.01	.07	.05	.03
3	.15	1.5	.03	.05	.30	1.0	.01	.01	.01	.07	.05	.07
4	.15	.10	.05	.05	1.0	.40	8.0	.03	.02	.05	.07	.05
5	.15	.15	.05	.05	11	.20	2.0	.02	.02	.03	.07	.07
6	.10	.20	.05	.10	5.0	.02	.80	.02	.02	.05	.02	.05
7	.10	.10	.19	.10	1.0	.03	.40	.03	0	.07	.05	.05
8	.10	.05	1.6	.05	.70	.03	.10	.01	.03	.05	.03	.07
9	.10	.05	6.4	.05	.60	.03	1.5	.02	.02	.02	.01	.03
10	.10	.05	1.5	.05	.50	.03	.10	.01	0	.02	.03	.07
11	.10	.90	.07	.80	12	.03	.05	0	.02	.02	.03	.05
12	.50	.20	.05	3.0	2.0	3.0	.05	.01	.01	.02	.05	.05
13	1.4	.05	2.0	11	.80	1.0	.02	.02	.02	.03	.05	.05
14	.50	3.5	.80	.30	5.7	.50	.02	.02	0	.02	.07	.05
15	.10	1.0	5.2	.20	12	.10	.02	.02	0	.02	.05	.07
16	.10	.30	.50	.10	2.0	.40	.01	.02	.02	.07	.03	.03
17	.10	.10	.10	.02	3.0	.70	.01	.02	.02	.05	.05	.07
18	.10	.60	.50	5.9	.70	.30	.01	.01	.03	.05	.05	.05
19	.10	.10	.10	13	.60	.10	.01	.01	.05	.03	.03	.10
20	.10	.05	.05	12	.40	1.5	.01	.01	.01	.02	.10	.01
21	.05	.05	.05	11	3.0	.20	.01	.01	0	.03	.07	.03
22	.05	.05	.10	3.0	2.5	.10	.01	.01	0	.03	.10	.05
23	.05	.14	.10	1.8	11	.10	.01	.03	.01	.05	.03	.03
24	.05	.58	1.0	5.0	11	.05	.01	.01	.01	.03	.03	.05
25	.05	.10	7.0	9.5	4.0	.05	.03	.01	.01	.03	.07	.07
26	.05	.03	2.0	9.1	2.0	.03	.03	.02	.03	.03	.05	.05
27	.05	.03	.50	8.7	4.0	.02	.05	.01	.02	.01	.03	.02
28	.05	.05	2.5	3.0	7.0	.02	.05	.02	.05	.02	.03	.03
29	.70	2.8	.20	6.5	-----	.02	.05	.01	.05	.02	.05	.05
30	.25	.14	.10	4.0	-----	.02	.03	.01	.03	.03	.03	.05
31	.10	-----	.10	1.0	-----	.02	-----	.02	-----	.03	.01	-----
TOTAL	5.80	15.57	33.50	109.62	105.80	13.50	15.42	0.47	0.53	1.09	1.44	1.48
MEAN	.19	.52	1.08	3.54	3.78	.44	.51	.015	.018	.035	.047	.049
MAX	1.4	3.5	7.0	13	12	3.0	8.0	.03	.05	.07	.10	.10
MIN	.05	.03	.03	.02	.30	.02	.01	0	0	.01	.01	.01
AC-FT	12	31	66	217	210	27	31	.9	1.1	2.2	2.9	2.9

CAL YR 1968 TOTAL
WTR YR 1969 TOTAL 304.22

MEAN
MEAN .83
MAX 13

MIN
MIN 0
AC-FT 603

REDWOOD CREEK BASIN

11-1628. REDWOOD CREEK AT REDWOOD CITY, CALIF.

LOCATION.--Lat 37°26'58", long 122°13'57", in Pulgas Grant, San Mateo County, at Menlo Country Club, on right bank 200 ft upstream from Alameda de las Pulgas bridge, and 2.5 miles south of Redwood City Post Office.

DRAINAGE AREA.--1.82 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 83.92 ft above mean sea level.

AVERAGE DISCHARGE.--10 years, 1.00 cfs (724 acre-ft per year); median of yearly mean discharges, 0.48 cfs (348 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 313 cfs Feb. 5 (gage height, 6.28 ft); minimum daily, 0.01 cfs for many days.

Period of record: Maximum discharge, 644 cfs Jan. 31, 1963 (gage height, 9.36 ft), from rating curve extended above 180 cfs on basis of slope-area measurement of maximum flow and computation of maximum flow through culvert; no flow at times.

REMARKS.--Records good. Low flow at times affected by return flow from urban irrigation.

REVISIONS.--WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.01	.82	.32	2.7	19	.58	.35	.27	.08	.02	.13
2	.01	.03	.06	.34	2.1	7.7	1.5	.36	.31	.09	.02	.05
3	.01	.36	.02	.25	1.9	5.1	1.5	.37	.30	.10	.02	.03
4	.01	.04	.03	.29	1.8	3.3	.63	.36	.25	.09	.02	.02
5	.01	.05	.02	.29	38	2.7	7.5	.44	.28	.08	.02	.02
6	.01	.08	.03	.23	28	2.4	4.3	.63	.20	.07	.02	.02
7	.01	.04	.04	.17	6.3	2.1	.99	.47	.16	.08	.04	.02
8	.01	.05	.18	.17	3.0	1.9	.68	.43	.19	.07	.02	.02
9	.01	.06	.18	.15	2.2	1.7	.93	.37	.23	.07	.02	.02
10	.01	.04	3.2	.13	1.9	1.6	.62	.36	.20	.07	.02	.02
11	.01	.06	.59	.20	36	1.4	.57	.37	.16	.07	.02	.02
12	.01	.13	.14	.26	17	3.1	.52	.34	.15	.06	.02	.02
13	.01	.06	.56	19	6.9	2.4	.50	.25	.13	.06	.02	.02
14	.03	.50	1.5	1.9	21	1.4	.48	.25	.13	.06	.02	.02
15	.02	.78	14	.73	28	1.2	.47	.27	.13	.06	.02	.02
16	.01	.03	.85	.54	6.4	1.1	.47	.29	.11	.06	.02	.01
17	.01	.02	.47	.45	20	1.1	.44	.35	.10	.05	.02	.01
18	.01	.02	.28	20	16	.96	.48	.32	.09	.05	.02	.01
19	.01	.03	.26	54	7.2	.88	.48	.29	.10	.05	.02	.01
20	.01	.04	.16	30	4.0	1.4	.46	.28	.11	.05	.02	.01
21	.01	.04	.09	29	3.8	1.6	.47	.28	.12	.05	.02	.01
22	.01	.04	.11	8.8	7.6	1.0	.44	.31	.10	.04	.02	.01
23	.01	.03	.11	5.1	19	.87	1.5	.31	.09	.04	.02	.01
24	.01	.04	.60	18	21	.76	.58	.31	.07	.04	.02	.01
25	.01	.04	13	46	11	.70	.44	.29	.07	.04	.02	.01
26	.01	.05	6.0	45	5.8	.68	.47	.32	.07	.04	.02	.01
27	.01	.06	.75	5.6	4.6	.68	.45	.26	.06	.03	.02	.01
28	.01	.06	3.0	13	38	.68	.40	.22	.07	.03	.02	.01
29	.01	.07	.67	3.7	-----	.68	.40	.23	.09	.03	.02	.01
30	.01	.04	.43	13	-----	.63	.37	.24	.08	.03	.02	.01
31	.01	-----	.43	3.0	-----	.62	-----	.27	-----	.03	.02	-----
TOTAL	0.35	2.90	48.58	319.62	361.2	71.34	29.62	10.19	4.42	1.77	0.64	0.60
MEAN	.011	.097	1.57	10.3	12.9	2.30	.99	.33	.15	.057	.021	.020
MAX	.03	.78	14	54	38	19	7.5	.63	.31	.10	.04	.13
MIN	.01	.01	.02	.13	1.8	.62	.37	.22	.06	.03	.02	.01
AC-FT	.7	5.8	96	634	716	142	59	20	8.8	3.5	1.3	1.2
CAL YR 1968	TOTAL 285.75		MEAN .78		MAX 70		MIN 0		AC-FT 567			
WTR YR 1969	TOTAL 851.23		MEAN 2.33		MAX 54		MIN .01		AC-FT 1,690			

PEAK DISCHARGE (BASE, 70 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1115	4.28	130	2-11	1330	4.99	187
1-19	0030	4.27	129	2-17	1715	3.97	108
1-21	0730	3.35	70	2-24	0345	3.67	88
1-26	0100	6.23	308	2-28	0930	4.11	118
2- 5	1830	6.28	313				

ATHERTON DRAINAGE CHANNEL BASIN

355

11-1629. SHARON CREEK NEAR MENLO PARK, CALIF.

LOCATION.--Lat 37°25'45", long 122°13'02", in Pulgas Grant, San Mateo County, at Atherton City boundary, 900 ft upstream from Atherton drainage channel, and 2.6 miles southwest of Menlo Park.

DRAINAGE AREA.--0.38 sq mi.

PERIOD OF RECORD.--October 1958 to September 1969 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 146.18 ft above mean sea level.

AVERAGE DISCHARGE.--11 years, 0.17 cfs (123 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 75 cfs Jan. 26 (gage height, 3.18 ft); no flow Aug. 20.
Period of record: Maximum discharge, 87 cfs Jan. 24, 1967 (gage height, 3.38 ft); no flow at times.
Flood of Apr. 2, 1958, reached a stage of about 4.2 ft, from floodmarks.

REMARKS.--Records fair. Low flow affected by runoff from golf course irrigation and flushing of regulating ponds. Except for storm periods, all low flow affected by imported water.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.03	.58	.04	.25	1.0	.14	.09	.02	.04	.04	.06
2	.07	.27	.05	.04	.17	.60	.54	.05	.04	.10	.03	.05
3	.05	.66	.02	.04	.15	.40	.08	.05	.04	.04	.02	.05
4	.39	.03	.02	.03	.13	.25	.17	.03	.09	.04	.03	.06
5	.05	.02	.02	.04	4.9	.17	1.2	.07	.05	.03	.03	.05
6	.04	.14	.02	.04	2.4	.17	.56	.04	.06	.04	.04	.05
7	.03	.02	.13	.03	.35	.16	.09	.05	.02	.06	.02	.04
8	.02	.02	.05	.03	.21	.15	.08	.03	.04	.05	.03	.03
9	.05	.02	.04	.03	.17	.14	.20	.04	.14	.07	.03	.06
10	.02	.03	1.0	.03	.14	.14	.06	.06	.03	.06	.05	.05
11	.02	.07	.11	.07	6.3	.15	.06	.06	.01	.05	.04	.03
12	.12	.11	.03	.34	.57	1.4	.05	.09	.01	.04	.02	.02
13	.14	.02	.66	2.6	.25	.22	.06	.08	.01	.05	.03	.26
14	.05	.84	.58	.13	3.4	.12	.06	.10	.01	.08	.04	.29
15	.02	.47	4.6	.06	3.6	.12	.06	.09	.01	.07	.06	.33
16	.04	.04	.09	.05	.43	.15	.06	.09	.01	.09	.03	.27
17	.02	.02	.04	.04	3.9	.15	.05	.10	.01	.08	.03	.27
18	.04	.10	.03	1.0	1.6	.12	.06	.09	.02	.08	.02	.26
19	.02	.03	.04	10	.65	.12	.06	.11	.01	.09	.01	.24
20	.03	.02	.09	6.5	.31	.47	.06	.11	.01	.08	0	.24
21	.04	.02	.06	6.0	.60	.14	.07	.09	.01	.09	.03	.27
22	.02	.02	.05	3.0	2.0	.11	.06	.06	.01	.09	.03	.27
23	.05	.02	.02	1.2	3.0	.11	.48	.03	.02	.09	.01	.26
24	.02	.04	.48	5.5	1.0	.12	.09	.01	.01	.09	.04	.23
25	.02	.06	4.7	10	.50	.13	.03	.01	.02	.09	.09	.21
26	.02	.02	1.1	8.9	.40	.15	.04	.02	.01	.07	.05	.21
27	.02	.02	.09	.81	.30	.15	.03	.02	.01	.07	.09	.21
28	.03	.02	.90	2.6	8.0	.17	.05	.03	.01	.07	.09	.20
29	.07	.04	.11	.64	-----	.16	.05	.02	.05	.03	.06	.20
30	.03	.02	.07	3.0	-----	.15	.04	.04	.05	.05	.06	.20
31	.02	-----	.05	.34	-----	.16	-----	.03	-----	.03	.06	-----
TOTAL	1.63	3.24	15.83	63.13	45.68	7.75	4.64	1.79	0.84	2.01	1.21	4.97
MEAN	.053	.11	.51	2.04	1.63	.25	.15	.058	.028	.065	.039	.17
MAX	.39	.84	4.7	10	8.0	1.4	1.2	.11	.14	.10	.09	.33
MIN	.02	.02	.02	.03	.13	.11	.03	.01	.01	.03	0	.02
AC-FT	3.2	6.4	31	125	91	15	9.2	3.6	1.7	4.0	2.4	9.9
CAL YR 1968	TOTAL	66.84	MEAN	.18	MAX	12	MIN	.02	AC-FT	133		
WTR YR 1969	TOTAL	152.72	MEAN	.42	MAX	10	MIN	0	AC-FT	303		

PEAK DISCHARGE (BASE, 25 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1045	2.43	33	1-26	0115	3.18	75
12-25	0730	2.44	33	1-30	0100	2.50	36
1-18	2115	3.09	69	2- 5	1730	2.63	44
1-20	1300	2.51	37	2-11	1315	2.71	48

SAN FRANCISQUITO CREEK BASIN

11-1629.4. SAN FRANCISQUITO CREEK BELOW LADERA DAMSITE, NEAR STANFORD UNIVERSITY, CALIF.

LOCATION.--Lat 37°24'24", long 122°12'11", on north boundary of El Corte de Madera Grant, Santa Clara County, 1.2 miles upstream from Los Trancos Creek, 0.5 mile northwest of Ladera School, and 2.3 miles southwest of Stanford University Post Office.

DRAINAGE AREA.--28.5 sq mi.

PERIOD OF RECORD.--October 1961 to current year. Prior to October 1962, published as "below Ladera damsite."

GAGE.--Water-stage recorder and concrete control. Datum of gage is 177.47 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 17.0 cfs (12,320 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,850 cfs Jan. 26 (gage height, 11.47 ft); minimum daily, 0.02 cfs for many days.

Period of record: Maximum discharge, 2,890 cfs Jan. 21, 1967 (gage height, 14.81 ft); maximum gage height, 16.04 ft Jan. 31, 1963; no flow at times.

REMARKS.--Records good. Flow regulated by Searsville Lake 3 miles upstream (capacity, 952 acre-ft). Small diversions from Searsville Lake for irrigation on Stanford University campus.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.08	.04	.71	66	349	11	4.5	1.2	.20	.08	.11
2	.04	.10	.02	1.7	54	148	16	4.6	.97	.09	.08	.09
3	.03	.09	.02	.48	44	118	20	4.7	.56	.09	.10	.07
4	.03	.06	.02	.36	36	91	15	4.8	.56	.21	.08	.12
5	.03	.04	.02	.35	232	56	115	4.8	.56	.21	.06	.12
6	.03	.04	.02	.33	413	38	106	4.2	.56	.16	.07	.09
7	.03	.04	.02	.71	130	29	38	3.9	.56	.12	.10	.10
8	.03	.04	.04	1.9	77	44	31	3.2	.56	.10	.11	.09
9	.03	.03	.04	1.4	62	45	31	1.2	.56	.11	.12	.08
10	.03	.03	4.1	1.3	55	32	25	1.3	.56	.10	.08	.08
11	.03	.04	7.0	2.8	288	28	17	1.7	.56	.10	.06	.08
12	.03	.05	.56	2.8	171	98	17	3.9	.71	.12	.05	.09
13	.04	.04	.18	148	84	59	18	3.1	.92	.09	.06	.09
14	.04	.06	2.6	61	136	39	15	2.2	1.1	.06	.06	.09
15	.04	.06	32	17	462	33	13	2.2	1.2	.02	.07	.06
16	.04	.04	5.6	8.2	136	34	13	2.1	.63	.05	.12	.08
17	.04	.03	.71	6.5	210	34	12	2.1	.78	.04	.07	.05
18	.04	.02	.28	84	252	22	9.9	2.1	.90	.06	.10	.06
19	.04	.02	.28	844	151	17	9.4	1.8	.98	.09	.08	.06
20	.04	.02	.21	527	101	32	9.2	1.8	.87	.14	.06	.06
21	.04	.02	.10	596	86	44	8.8	1.7	.32	.08	.07	.07
22	.04	.03	.16	190	96	28	8.5	1.7	.22	.09	.09	.07
23	.03	.03	.17	80	178	22	13	1.6	.18	.18	.09	.08
24	.03	.06	.19	122	237	19	12	1.6	.20	.23	.10	.09
25	.03	.06	47	911	159	13	9.8	1.6	.28	.21	.08	.08
26	.03	.02	62	832	120	11	8.8	1.6	.29	.18	.05	.07
27	.03	.02	6.5	173	96	16	8.2	1.4	.19	.17	.05	.08
28	.04	.02	8.6	182	500	14	5.8	1.2	.13	.17	.05	.08
29	.05	.02	3.0	107	-----	13	4.1	1.2	.08	.17	.06	.05
30	.07	.03	1.2	189	-----	12	4.2	1.2	.39	.10	.09	.06
31	.09	-----	.71	82	-----	11	-----	1.2	-----	.09	.05	-----
TOTAL	1.19	1.24	183.39	5,174.54	4,632	1,549	624.7	76.2	17.58	3.83	2.39	2.40
MEAN	.038	.041	5.92	167	165	50.0	20.8	2.46	.59	.12	.077	.080
MAX	.09	.10	62	911	500	349	115	4.8	1.2	.23	.12	.12
MIN	.03	.02	.02	.33	36	11	4.1	1.2	.08	.02	.05	.05
AC-FT	2.4	2.5	364	10,260	9,190	3,070	1,240	151	35	7.6	4.7	4.8

CAL YR 1968 TOTAL 2,187.85 MEAN 5.98 MAX 573 MIN .02 AC-FT 4,340
WTR YR 1969 TOTAL 12,268.46 MEAN 33.6 MAX 911 MIN .02 AC-FT 24,330

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0745	9.44	1,270	2-11	1445	7.22	706
1-21	1130	8.46	1,010	2-15	0915	7.23	709
1-26	0345	11.47	1,850	2-28	1030	7.54	779
2- 5	2315	7.74	826				

SAN FRANCISQUITO CREEK BASIN

357

11-1645. SAN FRANCISQUITO CREEK AT STANFORD UNIVERSITY, CALIF.

LOCATION.--Lat 37°25'24", long 122°11'18", in San Francisquito Grant, Santa Clara County, at golf course, on right bank 1.1 miles downstream from Los Trancos Creek, and 1.1 miles west of Stanford University Post Office.

DRAINAGE AREA.--37.5 sq mi.

PERIOD OF RECORD.--October 1930 to September 1941, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 115.75 ft above mean sea level.

AVERAGE DISCHARGE.--30 years, 18.1 cfs (13,110 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,300 cfs Jan. 26 (gage height, 6.28 ft); minimum daily, 0.02 cfs Oct. 28, Nov. 5.

Period of record: Maximum discharge, 5,560 cfs Dec. 22, 1955 (gage height, 13.60 ft); no flow at times.

REMARKS.--Records good. Flow regulated by Searsville Lake 5 miles upstream (capacity, 952 acre-ft). Diversions of about 800 acre-ft each year above station to Los Trancos and Lagunita Canals for irrigation on Stanford University campus below station. Low flow affected by waste water from Stanford Linear Accelerator.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.09	.89	.03	84	478	15	2.9	1.8	1.4	.79	.30
2	.04	.11	.08	.03	70	222	22	3.5	2.7	1.3	.89	.36
3	.06	.39	.05	.03	58	172	28	4.0	2.3	.89	.79	.30
4	.06	.03	.04	.03	50	126	21	4.1	2.1	1.3	.51	.36
5	.08	.02	.05	.03	263	84	143	4.3	2.4	1.1	1.6	.43
6	.10	.03	.06	.03	549	61	146	3.7	2.3	1.4	1.0	.43
7	.11	.08	.06	.05	189	49	52	3.5	2.3	1.3	.30	.43
8	.12	.06	.11	.09	104	61	40	2.9	2.4	1.4	.30	.43
9	.14	.06	.14	.13	83	62	40	1.1	2.4	1.3	.36	.30
10	.12	.08	.30	.07	72	42	30	1.0	2.4	1.1	.24	.36
11	.14	.09	1.9	.09	356	37	23	1.4	2.3	1.0	.36	.36
12	.17	.13	.05	.11	247	132	23	3.4	2.3	1.4	.36	.36
13	.23	.12	.07	130	115	89	24	2.7	2.5	.89	.36	.30
14	.25	.21	.42	56	178	56	20	2.0	2.9	.89	.36	.30
15	.25	1.2	25	11	590	46	17	1.8	3.0	.79	.24	.51
16	.30	.05	2.1	3.6	205	46	17	1.6	2.2	.79	.18	.30
17	.30	.04	.06	2.1	274	46	15	1.8	2.1	.79	.18	.36
18	.30	.07	.03	76	347	30	12	1.8	2.4	.69	.36	.30
19	.30	.10	.07	944	213	22	11	1.3	2.5	.89	.43	.30
20	.30	.10	.06	682	137	45	11	1.3	2.7	.89	.24	.24
21	.29	.10	.06	711	112	62	10	1.3	2.1	.89	.24	.24
22	.30	.10	.07	230	130	41	9.8	1.1	1.8	.79	.24	.36
23	.30	.10	.09	92	258	32	18	1.4	1.6	.79	.30	.43
24	.32	.13	.13	157	365	26	17	1.3	1.6	.89	.36	.36
25	.36	.14	33	1,080	248	18	13	.89	1.5	1.3	.43	.36
26	.36	.16	48	1,080	181	15	12	.79	1.6	1.0	.36	.24
27	.19	.18	1.6	243	139	23	10	.89	1.7	1.0	.24	.24
28	.02	.18	2.1	258	638	22	6.8	.79	1.5	.89	.30	.24
29	.03	.24	.23	140	-----	19	3.1	.69	1.3	.89	.30	.30
30	.05	.37	.05	253	-----	18	2.9	.79	1.8	.69	.36	.24
31	.07	-----	.03	108	-----	17	-----	.79	-----	.69	.51	-----
TOTAL	5.99	4.76	116.90	6,247.41	6,255	2,199	812.6	60.83	64.5	31.33	13.43	10.04
MEAN	.18	.16	3.77	202	223	70.9	27.1	1.96	2.15	1.01	.43	.33
MAX	.36	1.2	48	1,080	638	478	146	4.3	3.0	1.4	1.6	.51
MIN	.02	.02	.03	.03	50	15	2.9	.69	1.3	.69	.18	.24
AC-FT	11	9.4	232	17,390	12,410	4,360	1,610	121	128	62	27	20
CAL YR 1969	TOTAL	2,166.37	MEAN	5.92	MAX	674	MIN	C	AC-FT	4,300		
WTR YR 1969	TOTAL	15,821.49	MEAN	43.3	MAX	1,080	MIN	.02	AC-FT	31,390		

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0730	5.21	1,550	2-11	1445	4.17	885
1-21	1115	4.62	1,140	2-15	0945	4.08	840
1-26	0400	6.28	2,300	2-17	2100	3.83	718
2- 5	2345	4.22	910	2-28	1115	4.28	940

MATADERO CREEK BASIN

11-1660. MATADERO CREEK AT PALO ALTO, CALIF.

LOCATION.--Lat 37°25'18", long 122°08'04", in Rincon de San Francisco Grant, Santa Clara County, on right bank on Ash Street, 150 ft upstream from Lambert Avenue Bridge, and 2.1 miles southeast of Palo Alto Post Office.

DRAINAGE AREA.--7.24 sq mi.

PERIOD OF RECORD.--July 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 22.07 ft above mean sea level. Prior to Sept. 25, 1958, at site 150 ft downstream at different datum.

AVERAGE DISCHARGE.--17 years, 1.60 cfs (1,160 acre-ft per year); median of yearly mean discharges, 1.0 cfs (720 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 792 cfs Jan. 26 (gage height, 4.74 ft), from rating curve extended above 150 cfs on basis of step backwater computations at gage heights 3.68 and 5.33 ft; minimum daily, 0.02 cfs May 7, 8.

Period of record: Maximum discharge, 854 cfs Dec. 22, 1955 (gage height, 9.60 ft), from rating curve extended above 390 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 9.88 ft Dec. 23, 1955, site and datum then in use (backwater from culvert); no flow at times.

REMARKS.--Records good except those above 200 cfs, which are fair. No regulation or diversion above station.

REVISIONS.--WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.06	3.1	.13	4.5	36	1.0	.14	.06	.10	.13	.17
2	.12	1.9	.16	.13	2.8	13	5.7	.13	.10	.08	.10	.29
3	.12	9.5	.27	.13	2.5	9.7	1.5	.11	.14	.15	.09	.21
4	.10	.08	.06	.11	1.7	7.1	1.2	.12	.07	.14	.12	.15
5	.10	.06	.07	.10	59	5.8	14	.06	.06	.13	.17	.19
6	.10	.48	.06	.09	110	4.9	8.4	.11	.09	.13	.21	.38
7	.12	.08	.17	.11	10	4.3	1.7	.02	.06	.13	.17	.29
8	.14	.06	.49	.11	5.3	3.8	1.3	.02	.10	.13	.19	.13
9	.16	.08	.10	.09	3.7	3.7	2.4	.06	.10	.16	.13	.13
10	.17	.06	3.4	.10	2.8	3.1	.94	.11	.10	.16	.15	.11
11	.10	.09	.42	.11	74	2.6	1.4	.11	.10	.18	.16	.11
12	.12	.62	.14	.10	17	22	.74	.10	.10	.12	.16	.14
13	1.5	.09	3.0	16	5.7	5.5	.79	.07	.10	.14	.14	.12
14	.17	5.9	1.5	.48	27	3.3	.71	.07	.10	.15	.16	.16
15	.08	3.0	18	.12	83	2.8	.68	.07	.10	.18	.17	.11
16	.06	.11	.28	.13	12	2.7	.60	.10	.10	.16	.15	.13
17	.07	.08	.14	.13	50	3.6	.56	.08	.10	.14	.14	.12
18	.21	.15	.13	27	36	2.2	.50	.06	.10	.19	.14	.13
19	.09	.11	.12	98	15	2.5	.43	.05	.10	.16	.18	.18
20	.09	.09	.12	80	7.5	7.4	.41	.06	.10	.19	.15	.14
21	.07	.06	.12	77	8.4	2.9	.41	.10	.10	.18	.12	.14
22	.06	.05	.15	11	15	2.0	.40	.10	.10	.20	.18	.15
23	.07	.05	.15	12	55	1.9	5.1	.12	.10	.18	.11	.17
24	.06	.06	1.9	54	96	1.5	.90	.06	.10	.19	.12	.18
25	.06	.06	28	159	37	2.0	.42	.05	.10	.15	.13	.12
26	.05	.06	11	140	16	1.3	.28	.06	.10	.16	.16	.16
27	.06	.06	.26	15	16	1.3	.23	.08	.10	.17	.15	.11
28	.09	.05	2.5	38	123	1.2	.19	.06	.10	.16	.12	.11
29	.08	.05	.17	9.5	-----	1.2	.16	.08	.10	.14	.18	.20
30	.06	.07	.14	26	-----	1.1	.16	.08	.10	.14	.15	.12
31	.08	-----	.13	6.4	-----	1.1	-----	.08	-----	.11	.17	-----
TOTAL	4.48	23.17	76.25	771.07	895.9	163.5	53.21	2.52	2.88	4.70	4.60	4.85
MEAN	.14	.77	2.46	24.9	32.0	5.27	1.77	.081	.096	.15	.15	.16
MAX	1.5	9.5	28	159	123	36	14	.14	.14	.20	.21	.38
MIN	.05	.05	.06	.09	1.7	1.1	.16	.02	.06	.08	.09	.11
AC-FT	8.9	46	151	1,530	1,780	324	106	5.0	5.7	9.3	9.1	9.6

CAL YR 1968 TOTAL 537.57 MEAN 1.47 MAX 203 MIN .02 AC-FT 1,070
WTR YR 1969 TOTAL 2,007.13 MEAN 5.50 MAX 159 MIN .02 AC-FT 3,980

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1130	2.26	209	2-11	1400	2.35	225
1-20	1800	2.66	282	2-17	2030	2.45	243
1-25	0130	3.84	536	2-23	0130	2.65	280
1-26	0100	4.74	792	2-24	0300	2.98	344
2-6	0430	3.00	348				

11-1664.8. STEVENS CREEK RESERVOIR NEAR MONTE VISTA, CALIF.

LOCATION.--Lat 37°17'55", long 122°04'34", in NW¼ sec.27, T.7 S., R.2 W., Santa Clara County, at center of dam on Stevens Creek, 2.0 miles southwest of Monte Vista.

DRAINAGE AREA.--17.3 sq mi.

PERIOD OF RECORD.--December 1935 to current year. Monthly contents prior to October 1959 published in WSP 1735.

GAGE.--Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara County Flood and Water District).

EXTREMES (at 0800).--Current year: Maximum contents observed, 3,930 acre-ft Jan. 25 (elevation, 537.96 ft); minimum observed, 51 acre-ft Dec. 2 (elevation, 463.00 ft).

Period of record: Maximum contents observed, 4,100 acre-ft Dec. 26, 1955 (elevation, 538.61 ft); maximum elevation, 539.70 ft Mar. 16, 1967; no contents at times in most years.

REMARKS.--Reservoir is formed by earthfill dam completed in 1936. Capacity, 3,860 acre-ft between elevations 444.9 (invert of outlet tunnel) and 537.14 ft (crest of spillway). Water released down Stevens Creek for irrigation and ground-water recharge by percolation.

COOPERATION.--Record of contents furnished by Santa Clara County Flood Control and Water District.

Month-end contents, in acre-feet (including momentary storage above spillway crest), water year October 1968 to September 1969

Date	Contents
Sept. 30, 1968.....	660
Oct. 31.....	410
Nov. 30.....	345
Dec. 31.....	400
Jan. 31, 1969.....	3,720
Feb. 28.....	3,860
Mar. 31.....	3,690
Apr. 30.....	3,770
May 31.....	3,740
June 30.....	3,210
July 31.....	2,110
Aug. 31.....	1,080
Sept. 30.....	6,780

NOTE.--Contents at 0800 on first day of following month.

GUADALUPE RIVER BASIN

11-1669. ALAMITOS CREEK NEAR NEW ALMADEN, CALIF.

LOCATION.--Lat 37°13'21", long 121°51'00", in Pueblo Lands of San Jose Grant, Santa Clara County, on left bank at Greystone bridge, 1.1 miles downstream from Arroyo Calero, 3.4 miles southwest of Edenvale, and 3.5 miles northwest of New Almaden.

DRAINAGE AREA.--31.8 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 247 ft (from topographic map). Prior to July 15, 1958, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--11 years, 18.8 cfs (13,620 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,200 cfs Jan. 26 (gage height, 5.63 ft); minimum daily, 0.27 cfs Nov. 29.

Period of record: Maximum discharge, 4,300 cfs Apr. 2, 1958 (gage height, 9.67 ft), from rating curve extended above 720 cfs on basis of slope-area measurement at gage height 7.98 ft; no flow at times in most years.

REMARKS.--Records good. Flow regulated by Calero 5.2 miles upstream (see sta 11-1667.4) and Almaden 5.3 miles upstream (see sta 11-1666.7) Reservoirs; water released during summer. Small diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	1.7	.74	2.2	31	454	6.9	13	13	21	9.4	5.4
2	9.0	1.6	.54	2.2	27	313	6.6	14	13	20	9.8	5.4
3	11	1.6	.54	7.4	23	275	8.2	15	12	18	8.6	5.4
4	15	1.2	.49	8.5	21	271	8.6	15	11	19	8.2	5.4
5	16	1.1	.49	8.5	65	265	14	13	10	20	8.2	5.4
6	16	1.1	.54	13	156	258	23	9.4	11	20	8.2	5.7
7	16	.81	.54	17	48	213	28	9.4	11	21	7.8	6.3
8	15	.74	.49	18	65	138	26	9.4	11	23	8.6	5.7
9	20	.74	.49	8.7	112	136	28	9.4	11	22	11	5.1
10	12	.67	.97	1.6	112	133	26	9.4	11	24	11	4.8
11	13	.67	.81	1.6	213	83	20	9.4	11	24	12	4.8
12	15	1.1	.67	2.1	165	20	11	9.8	11	23	13	4.4
13	17	.81	.74	30	125	16	11	9.8	12	23	13	4.2
14	16	.88	1.2	13	136	14	10	9.8	12	22	13	4.2
15	20	.88	5.0	4.8	402	16	11	9.8	12	19	13	4.0
16	23	.67	.88	3.8	302	16	15	9.8	12	18	13	3.5
17	27	.67	.74	3.1	292	16	19	10	11	18	13	3.1
18	27	.54	.67	66	275	19	20	10	11	17	13	2.9
19	18	.54	.74	399	258	34	20	10	11	16	13	3.3
20	17	.54	.67	661	219	51	20	10	10	15	13	3.5
21	16	.54	.81	494	177	52	20	10	10	15	13	4.0
22	17	.54	1.4	199	177	51	20	11	10	15	13	3.8
23	18	.54	1.8	56	262	49	20	14	11	14	13	3.5
24	18	.54	1.7	56	451	49	20	18	11	14	13	3.8
25	18	.54	7.2	601	238	33	19	19	11	14	13	3.5
26	18	.54	7.2	797	242	8.6	13	19	12	15	12	3.5
27	18	.39	3.5	182	306	7.2	13	18	15	14	6.3	3.8
28	14	.35	3.8	88	687	6.6	13	15	18	14	6.0	4.0
29	3.5	.27	3.1	46	-----	6.3	13	14	18	14	5.7	4.0
30	2.4	.60	2.7	62	-----	6.0	13	13	19	13	5.7	4.0
31	2.0	-----	2.6	38	-----	6.6	-----	12	-----	9.8	5.7	-----
TOTAL	473.3	23.41	53.76	3,890.5	5,587	3,016.3	496.3	378.4	362	554.8	326.2	130.4
MEAN	15.3	.78	1.73	126	200	97.3	16.5	12.2	12.1	17.9	10.5	4.35
MAX	27	1.7	7.2	797	687	454	28	19	19	24	13	6.3
MIN	2.0	.27	.49	1.6	21	6.0	6.6	9.4	10	9.8	5.7	2.9
AC-FT	939	46	107	7,720	11,080	5,980	984	751	718	1,100	647	259
CAL YR 1968	TOTAL	4,734.53	MEAN	12.9	MAX	279	MIN	0	AC-FT	9,390		
WTR YR 1969	TOTAL	15,292.37	MEAN	41.9	MAX	797	MIN	.27	AC-FT	30,330		

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LOCATION.--Lat 37°14'56", long 121°54'45", in SE¼ sec.12, T.8 S., R.1 W., Santa Clara County, on right bank at south city limits of San Jose, 200 ft upstream from Harwood Avenue, and 600 ft downstream from Lone Hill Creek.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 204.4 ft above mean sea level (levels by Santa Clara County Flood Control and Water Conservation District). Prior to Apr. 13, 1965, at site 500 ft upstream at different datum.

EXTREMES.--Current year: Maximum discharge, 550 cfs Jan. 26 (gage height, 5.91 ft), from rating curve extended as explained below; no flow Nov. 16-23, Jan. 12.
Period of record: Maximum discharge, 763 cfs Jan. 30, 1968 (gage height, 6.62 ft), from rating curve extended above 150 cfs on basis of slope-area measurement at 6.22 ft; no flow for many days in each year.

REMARKS.--Records good. Water imported from South Bay Aqueduct and released into creek 1.5 miles above station totaled 1,670 acre-ft for the water year 1969. During periods of high flows, no water imported.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	2.1	5.2	5.9	5.2	30	2.7	3.4	2.8	3.4	.15	.04
2	3.7	4.5	3.4	3.8	4.0	17	6.3	3.4	2.7	3.1	1.8	.03
3	3.5	8.8	3.3	2.2	3.3	12	3.8	3.5	2.5	3.0	2.5	.28
4	3.5	2.1	3.3	2.1	3.0	8.0	3.6	3.5	2.5	3.1	1.9	2.4
5	3.4	2.1	3.3	2.0	62	6.0	21	3.3	2.5	3.2	1.4	2.6
6	3.5	3.3	3.4	1.9	57	5.1	9.6	3.3	3.0	3.1	1.6	1.5
7	3.4	2.1	3.3	1.9	35	4.7	4.7	3.3	3.1	2.8	2.2	.02
8	3.4	2.1	3.3	2.0	30	4.2	4.4	3.3	3.0	2.8	3.2	.02
9	3.4	2.1	2.9	2.1	30	4.2	4.4	3.2	3.1	2.0	3.2	.31
10	3.3	2.1	10	2.2	40	3.3	2.8	3.3	3.0	.15	3.1	.91
11	3.4	2.7	1.9	1.3	55	2.9	.69	3.2	2.7	.12	3.2	.01
12	3.8	5.9	3.5	0	45	8.0	.65	3.1	2.7	.84	3.3	.08
13	5.2	2.3	5.1	31	40	2.9	.57	3.0	2.8	.13	3.4	1.4
14	3.5	4.7	3.5	3.9	40	2.3	.48	3.1	3.0	.12	3.5	1.4
15	3.0	1.6	22	.67	100	1.9	.42	3.1	2.8	.08	3.4	1.5
16	2.1	0	1.4	1.6	70	1.8	1.3	3.1	3.0	.12	3.2	1.5
17	2.1	0	3.8	2.5	55	2.3	3.7	2.9	3.0	.08	3.0	1.6
18	2.1	0	4.2	39	52	1.5	3.8	2.7	3.0	.10	3.0	1.7
19	2.1	0	.48	87	45	1.4	3.8	2.7	3.0	.11	2.9	2.4
20	2.1	0	1.5	70	40	4.8	3.8	2.6	3.0	.12	2.9	2.3
21	2.1	0	1.3	65	40	1.9	3.8	2.6	3.0	.10	3.0	2.2
22	2.1	0	2.6	18	45	1.2	3.6	2.6	3.0	.06	3.0	2.2
23	2.1	0	.28	11	70	.99	6.7	2.6	3.0	.10	2.9	2.4
24	2.1	.02	2.0	49	80	.88	3.7	2.7	3.0	.09	3.0	2.4
25	2.2	.77	18	79	60	.80	3.6	2.8	3.0	.18	3.0	2.6
26	2.2	3.3	9.7	87	55	.74	3.7	2.7	3.4	.10	2.7	2.6
27	2.2	3.3	.57	19	60	.73	3.6	2.7	3.4	.12	1.3	2.8
28	2.2	3.3	4.1	24	93	1.4	3.7	2.8	3.4	.12	.03	2.8
29	2.2	3.4	.80	8.6	-----	2.8	3.5	2.8	3.4	.10	.03	2.9
30	2.2	3.6	2.9	23	-----	2.5	3.4	2.6	3.4	.11	.05	3.0
31	2.1	-----	5.5	6.9	-----	2.6	-----	2.6	-----	.13	.04	-----
TOTAL	87.8	66.21	136.53	653.57	1,314.5	140.84	121.81	92.5	89.2	29.68	71.90	47.90
MEAN	2.83	2.21	4.40	21.1	46.9	4.54	4.06	2.98	2.97	.96	2.32	1.60
MAX	5.2	8.8	22	87	100	30	21	3.5	3.4	3.4	3.5	3.0
MIN	2.1	0	.28	0	3.0	.73	.42	2.6	2.5	.06	.03	.01
AC-FT	174	131	271	1,300	2,610	279	242	183	177	59	143	99

CAL YR 1968	TOTAL 1,722.37	MEAN 4.71	MAX 216	MIN 0	AC-FT 3,420
WTR YR 1969	TOTAL 2,852.44	MEAN 7.81	MAX 100	MIN 0	AC-FT 5,660

		PEAK DISCHARGE (BASE, 150 CFS)					
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1230	4.38	204	1-30	0130	4.15	168
12-25	1000	4.11	162	2- 5	1900	5.13	354
1-19	0430	5.18	365	2-15	unknown	5.86	536
1-26	0115	5.91	550	2-28	0945	5.08	343

GUADALUPE RIVER BASIN

11-1680. LOS GATOS CREEK AT LOS GATOS, CALIF.

LOCATION.--Lat 37°12'30", long 121°59'15", in NE $\frac{1}{4}$ sec.29, T.8 S., R.1 W., Santa Clara County, on left bank 0.3 mile downstream from Trout Creek, 0.5 mile downstream from Lexington Reservoir, and 1.0 mile south of Los Gatos.

DRAINAGE AREA.--38.6 sq mi.

PERIOD OF RECORD.--October 1929 to September 1944, October 1953 to current year. Yearly estimate for water year 1930 (incomplete) and monthly discharge only for June to September 1944, published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 420 ft (from topographic map). Prior to Oct. 1, 1943, with concrete control after October 1934, at site 1 mile downstream and October 1943 to May 1944 at site 0.5 mile downstream at different datums.

AVERAGE DISCHARGE (adjusted for diversion).--31 years, 48.6 cfs (35,210 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,450 cfs Feb. 15 (gage height, 7.51 ft); minimum daily, 2.7 cfs Nov. 10.

Period of record: Maximum discharge, 7,110 cfs Feb. 27, 1940 (gage height, 14.71 ft, site and datum then in use), from rating curve extended above 2,300 cfs; no flow for part of some years.

REMARKS.--Records good. Flow regulated by Lexington Reservoir 0.5 mile upstream (see sta 11-1679.8) and Lake Elsmar (see sta 11-1679.5). Several diversions for irrigation above station and diversion by San Jose Water Works.

REVISIONS.--WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	4.4	14	15	12	864	27	12	34	49	38	39
2	4.9	4.3	24	15	10	646	28	12	28	48	37	39
3	4.8	4.5	34	17	65	550	28	12	18	47	37	39
4	4.6	4.3	33	15	199	526	27	12	22	48	36	38
5	4.3	3.8	20	12	237	526	32	12	28	48	36	38
6	3.9	3.7	11	12	300	522	29	11	31	48	37	38
7	3.8	3.5	22	11	346	522	28	11	42	48	37	38
8	3.7	3.1	32	11	324	468	47	11	49	48	35	38
9	3.6	3.0	16	7.2	314	406	64	11	49	48	35	38
10	3.6	2.7	7.5	5.1	314	273	78	11	49	48	35	37
11	4.1	2.8	5.8	5.1	321	150	80	12	39	48	35	37
12	4.1	3.2	5.1	5.1	454	150	55	11	26	48	34	40
13	3.6	3.2	5.2	14	426	72	55	11	21	48	35	43
14	3.4	3.7	5.6	8.6	454	60	45	11	16	50	37	42
15	3.5	3.9	8.0	5.5	1,080	132	24	11	13	53	40	43
16	3.6	3.7	4.2	5.1	722	132	27	11	16	64	41	54
17	3.8	3.7	3.7	5.1	540	132	34	11	19	79	41	82
18	3.5	3.9	3.6	14	508	170	33	11	21	79	42	116
19	3.5	14	5.6	45	504	197	33	11	28	79	41	134
20	3.5	36	9.0	49	504	197	26	11	36	78	41	134
21	3.7	59	8.7	46	504	132	16	11	41	78	41	93
22	3.7	72	7.0	24	504	77	13	11	43	78	40	72
23	3.9	71	3.9	15	513	104	15	11	45	77	40	76
24	4.3	51	4.2	17	526	139	13	11	49	77	40	76
25	4.5	35	7.1	39	518	82	12	11	49	77	40	81
26	4.5	29	6.2	53	513	49	12	11	49	77	39	81
27	4.5	12	4.0	24	513	41	12	17	49	77	39	81
28	4.5	14	4.7	19	804	28	12	28	49	77	39	80
29	4.7	14	4.0	15	-----	28	12	34	49	76	39	80
30	4.7	14	3.9	15	-----	27	12	34	49	76	39	80
31	4.5	-----	8.8	13	-----	27	-----	34	-----	52	39	-----
TOTAL	129.9	486.4	331.8	556.8	12,029	7,429	929	439	1,057	1,928	1,185	1,907
MEAN	4.19	16.2	10.7	18.0	430	240	31.0	14.2	35.2	62.2	38.2	63.6
MAX	8.6	72	34	53	1,080	864	80	34	49	79	42	134
MIN	3.4	2.7	3.6	5.1	10	27	12	11	13	47	34	37
AC-FT	258	965	658	1,100	23,860	14,740	1,840	871	2,100	3,820	2,350	3,780
(a)	132	32	103	203	24	421	1,550	2,120	2,150	1,970	1,820	974

CAL YR 1968 TOTAL 5,354.57 MEAN 14.6 MAX 75 MIN .38 AC-FT 10,620 a 8,970
 WIR YR 1969 TOTAL 28,407.9 MEAN 77.8 MAX 1,080 MIN 2.7 AC-FT 56,350 a 11,300

a Diversion, in acre-feet, furnished by San Jose Water Works.

11-1690. GUADALUPE RIVER AT SAN JOSE, CALIF.

LOCATION.--Lat 37°20'04", long 121°53'54", Santa Clara County, on right bank at San Jose, 100 ft downstream from Los Gatos Creek.

DRAINAGE AREA.--144 sq mi.

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to 1945, published as Guadalupe Creek at San Jose.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 72.00 ft above mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum discharge, 3,840 cfs Jan. 26 (gage height, 7.39 ft); minimum daily, 0.22 cfs June 29.

Period of record: Maximum discharge, 9,150 cfs Apr. 2, 1958 (gage height, 16.55 ft); no flow for many days in most years.

REMARKS.--Records good. Flow regulated by Lexington Reservoir 12 miles upstream and Calero, Almaden, Guadalupe Reservoirs, and Lake Elman given elsewhere in this report, with water released during summer for percolation in spreading basins on tributaries. Diversions by San Jose Water Works for urban use (see sta 11-1680). Diversion of 902 acre-ft into Alamitos Percolation Ponds from Coyote Creek basin during year.

REVISIONS (WATER YEARS).--WSP 1315-B: 1943(M), 1945(M), 1949(M). WRD Calif. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	3.2	4.6	7.4	93	1,640	11	3.1	.28	.27	1.2	.49
2	.40	26	1.9	6.1	89	1,140	48	3.6	.39	.24	.84	.55
3	.36	78	.54	5.1	120	998	17	4.0	6.6	.29	.96	.93
4	.31	4.4	.42	4.0	265	952	6.2	6.8	2.0	.27	.58	1.2
5	.51	1.2	.36	3.4	577	888	188	7.6	5.3	.30	.75	1.2
6	.68	3.8	.56	2.9	1,000	859	130	5.3	.70	.76	.60	1.2
7	.26	4.6	.42	2.4	622	811	67	6.6	.37	4.2	.57	1.1
8	.37	.78	.47	2.0	521	602	49	11	.33	1.8	.62	1.5
9	.42	.40	.47	1.6	560	497	68	9.3	.38	.97	.59	1.5
10	.64	.30	27	1.3	549	505	64	8.1	.35	.94	.35	.94
11	.51	.52	8.7	1.1	841	310	73	7.9	.31	2.9	.41	.95
12	.49	33	1.1	.92	768	167	38	7.6	.35	2.7	.78	.96
13	2.6	1.9	.66	177	669	104	31	6.7	.40	4.2	.73	.69
14	3.7	22	15	53	727	7.6	30	4.7	.35	1.8	.57	.49
15	1.0	23	108	8.8	2,070	41	15	2.9	.98	1.2	.58	.55
16	2.7	1.8	19	2.8	1,460	86	11	2.3	1.1	3.2	.70	.53
17	2.2	2.0	5.0	7.6	971	89	16	1.8	.59	3.6	.40	.61
18	1.1	.64	6.4	251	943	89	17	2.1	.47	3.3	.50	.54
19	2.2	.52	7.5	1,250	930	135	17	1.2	.33	2.8	.63	.46
20	2.7	.52	2.7	1,260	835	180	18	.95	.28	1.2	.71	.42
21	2.2	.52	1.1	1,190	743	146	17	.66	.25	.43	.69	.36
22	2.9	.52	.34	504	792	80	17	.70	4.5	.32	.71	.45
23	2.6	.40	.43	173	1,250	80	30	.84	.44	.28	.67	.48
24	2.7	.95	3.8	252	1,650	112	21	.56	.26	.51	.47	.51
25	2.2	1.0	95	1,400	1,050	93	4.5	.39	.29	.96	.48	.54
26	2.2	.76	112	1,850	963	22	4.0	.37	.34	1.0	.71	.50
27	1.6	2.0	11	497	1,030	14	3.8	.40	.31	1.2	.96	.76
28	.90	2.7	14	384	1,860	10	3.6	2.1	.27	1.5	1.1	1.1
29	.82	.84	12	173	-----	15	2.9	4.6	.22	2.0	.97	.83
30	1.5	1.4	9.4	256	-----	22	2.9	2.8	.27	2.6	.70	1.9
31	2.0	-----	8.0	112	-----	23	-----	.61	-----	2.1	.70	-----
TOTAL	45.07	219.67	477.87	9,839.42	23,948	10,717.6	1,020.9	117.58	29.01	49.84	21.23	24.24
MEAN	1.45	7.32	15.4	317	855	346	34.0	3.79	.97	1.61	.68	.81
MAX	3.7	78	112	1,850	2,070	1,640	188	11	6.6	4.2	1.2	1.9
MIN	.26	.30	.34	.92	89	7.6	2.9	.37	.22	.24	.35	.36
AC-FT	89	436	948	19,520	47,500	21,260	2,020	233	58	99	42	48
CAL YR 1968	TOTAL	5,490.77	MEAN	15.0	MAX	2,650	MIN	.17	AC-FT	10,890		
WTR YR 1969	TOTAL	46,510.43	MEAN	127	MAX	2,070	MIN	.22	AC-FT	92,250		

GUADALUPE RIVER BASIN

11-1695. SARATOGA CREEK AT SARATOGA, CALIF.

LOCATION.--Lat 37°15'16", long 122°02'18", in Quito Grant, Santa Clara County, on right bank on upstream side of private road bridge, 0.5 mile southwest of Saratoga, and 0.7 mile downstream from diversion dam. Prior to Dec. 6, 1968, at site 40 ft downstream.

DRAINAGE AREA.--9.22 sq mi.

PERIOD OF RECORD.--October 1933 to current year. Prior to October 1951, published as Campbell Creek at Saratoga.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 500 ft (from topographic map). Prior to Dec. 6, 1968, at site 40 ft downstream at different datum.

AVERAGE DISCHARGE (adjusted for diversion).--36 years, 9.92 cfs (7,190 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,120 cfs Jan. 26 (gage height, 4.0 ft, from floodmark); maximum gage height, 4.15 ft Feb. 15; minimum daily discharge, 0.08 cfs Aug. 6.

Period of record: Maximum discharge, 2,730 cfs Dec. 22, 1955 (gage height, 6.40 ft, site and datum then in use), from rating curve extended above 510 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Water is diverted for municipal use by San Jose Water Works at diversion dam above station.

REVISIONS (WATER YEARS).--WSP 1445: 1940, 1952(M). WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	.70	.20	.90	55	182	9.5	4.0	.69	.27	.48	.70
2	.41	.78	.10	.70	40	136	17	3.7	.94	.30	.40	.70
3	.41	2.5	.10	.50	26	107	17	4.2	.87	.25	.23	.70
4	.40	.90	.10	.30	20	88	17	3.8	.69	.80	.33	.70
5	.46	.70	.14	.40	200	74	44	3.3	.87	2.1	.21	.90
6	.50	.90	.20	.35	180	62	41	3.0	1.2	1.4	.08	.90
7	.47	.70	.20	.20	140	55	32	2.8	.69	2.0	.10	.90
8	.42	.70	.40	.30	93	48	27	2.5	.74	1.6	.20	.90
9	.37	.70	3.0	.25	79	44	24	2.2	1.0	2.0	.30	.90
10	.39	.70	5.0	.10	65	40	20	1.8	.90	2.2	.30	1.0
11	.50	.70	8.0	.10	120	36	19	1.6	.80	1.6	.30	1.1
12	1.1	.70	1.5	.10	107	36	18	2.3	1.0	1.6	.30	1.2
13	1.0	.70	2.0	90	82	30	18	3.3	1.4	1.2	.30	1.2
14	.90	1.2	5.0	22	90	27	16	1.7	1.7	1.4	.30	1.1
15	.81	3.5	35	9.0	218	26	15	1.5	1.8	2.0	.40	1.1
16	.62	1.8	5.8	7.0	144	26	13	2.1	1.0	1.4	.40	1.1
17	.65	1.2	.20	6.0	134	23	13	1.7	1.2	1.4	.40	1.2
18	.62	1.0	.20	36	122	22	12	1.3	1.3	.74	.40	1.2
19	.61	.80	.20	239	110	19	12	.64	1.5	1.2	.40	1.2
20	.60	.60	.20	343	88	21	11	.44	1.0	.74	.50	1.3
21	.62	.60	.20	308	80	22	11	.36	.50	.69	.50	1.2
22	.61	.60	.10	120	100	16	9.9	.33	.35	.87	.50	1.1
23	.60	.50	.30	80	140	14	19	.25	.28	.69	.50	1.1
24	.50	.50	1.0	74	190	16	12	2.3	.32	.56	.50	1.1
25	.45	.50	20	279	140	15	9.1	.52	.36	.52	.50	1.0
26	.40	.50	70	363	112	15	8.3	.60	.45	.52	.60	1.1
27	.40	.40	8.0	127	112	14	7.1	.56	.23	.36	.60	1.3
28	.40	.40	9.5	89	220	13	5.3	.64	.33	.40	.60	1.4
29	.40	.40	4.5	42	-----	12	4.2	.48	.44	.27	.60	1.2
30	.45	.30	2.0	160	-----	11	4.2	.44	.30	.27	.60	1.2
31	.65	-----	.70	75	-----	11	-----	.40	-----	.33	.60	-----
TOTAL	17.15	26.18	183.84	2,473.20	3,207	1,261	485.6	54.76	24.85	31.68	12.43	31.70
MEAN	.55	.87	5.93	79.8	115	40.7	16.2	1.77	.83	1.02	.40	1.06
MAX	1.1	3.5	70	363	220	182	44	4.2	1.8	2.2	.60	1.4
MIN	.37	.30	.10	.10	20	11	4.2	.25	.23	.25	.08	.70
AC-FT	34	52	365	4,910	6,360	2,500	963	109	49	63	25	63
(a)	0	0	80	62	0	114	298	360	300	240	60	0
CAL YR 1968	TOTAL	1,085.65	MEAN	2.97	MAX	328	MIN	.02	AC-FT	2,150		
WTR YR 1969	TOTAL	7,809.39	MEAN	21.4	MAX	363	MIN	.08	AC-FT	15,490		

PEAK DISCHARGE (BASE, 110 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-20	1715	2.48	488	2-15	0500	4.15	328
1-26	0215	4.0	1,120	2-28	1000	4.00	280
2-11	1400	3.67	188				

a Diversion, in acre-feet, furnished by San Jose Water Works.

NOTE.--No gage-height record Oct. 23 to Jan. 17, Aug. 7 to Sept. 11.

RESERVOIRS IN GUADALUPE RIVER BASIN, CALIF.

11-1666.7. ALMADEN RESERVOIR.--Lat 37°09'54", long 121°49'39", in San Vicente Grant, Santa Clara County, at center of dam on Alamitos Creek, 0.7 mile southwest of New Almaden, and 7 miles south of Edenvale. Drainage area, 11.9 sq mi. Period of record, January 1936 to current year. Monthly contents prior to October 1959, published in WSP 1735. Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara County Flood Control and Water District). Extremes for current year: Maximum contents observed, 1,850 acre-ft Jan. 26 (elevation, 608.10 ft); minimum observed, 298 acre-ft Nov. 1 (elevation, 566.81 ft). Extremes for period of record: Maximum contents observed, 2,150 acre-ft Jan. 31, 1963 (elevation, 610.24 ft, from floodmarks); no contents at times in each year except 1942, 1943, 1962-63, 1966, 1968.

Reservoir is formed by earthfill dam completed in 1936. Capacity, 1,790 acre-ft (revised) between elevations 533.1 (invert of outlet tunnel) and 607 ft (crest of spillway). Water released down Alamitos Creek for ground-water recharge by percolation and minor irrigation. Up to 100 cfs diverted to Calero Reservoir at times. Record of contents furnished by Santa Clara County Flood Control and Water District.

11-1667.4. CALERO RESERVOIR.--Lat 37°11'00", long 121°47'28", in San Vicente Grant, Santa Clara County, at center of dam on Arroyo Calero, 1.7 miles northeast of New Almaden, and 6 miles southeast of Edenvale. Drainage area, 6.96 sq mi. Period of record, January 1936 to current year. Monthly contents prior to October 1959, published in WSP 1735. Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara County Flood Control and Water District). Extremes for current year: Maximum contents observed, 10,270 acre-ft Mar. 1 (elevation, 483.49 ft); minimum observed, 983 acre-ft Oct. 28 (elevation, 433.05 ft). Extremes for period of record: Maximum contents observed, 10,520 acre-ft Apr. 7, 1967 (elevation, 485.21 ft); no contents at times in each year except 1942-45, 1963-69.

Reservoir is formed by earthfill dam completed to crest elevation 482.55 ft in 1936 and raised to 483.50 ft (revised) in 1962. Capacity, 10,280 acre-ft (revised) between elevations 393.7 (center of outlet tunnel) and 483.50 ft, revised, (crest of spillway). Water released down Arroyo Calero for ground-water recharge by percolation and minor irrigation. Up to 100 cfs diverted from Almaden Reservoir to Calero Reservoir at times. Records of contents furnished by Santa Clara County Flood Control and Water District.

11-1673.7. GUADALUPE RESERVOIR.--Lat 37°11'57", long 121°52'42", in Los Capitancillos Grant, Santa Clara County, at center of dam on Guadalupe Creek, 3.6 miles northwest of New Almaden, and 5.0 miles southeast of Los Gatos. Drainage area, 5.97 sq mi. Period of record, January 1936 to current year. Monthly contents prior to October 1959, published in WSP 1735. Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara County Flood Control and Water District). Extremes for current year: Maximum contents observed, 3,550 acre-ft Jan. 26 (elevation, 618.46 ft); no contents Oct. 23 to Nov. 6, Sept. 26-30. Extremes for period of record: Maximum contents observed, 3,610 acre-ft Feb. 1, 1963 (elevation, 619.26 ft, from floodmarks); no contents at times in each year except 1941-43, 1962-63, 1966-67.

Reservoir is formed by earthfill dam completed in 1936. Capacity, 3,460 acre-ft between elevations 506.8 (invert of outlet tunnel) and 617.0 ft (crest of spillway). Water released down Guadalupe Creek for irrigation and ground-water recharge by percolation. Record of contents furnished by Santa Clara County Flood Control and Water District.

11-1679.5. LAKE ELSMAN.--Lat 37°07'51", long 121°55'47", in SE $\frac{1}{4}$ sec.23, T.9 S., R.1 W., Santa Clara County, at center of Austrian Dam on Los Gatos Creek, and 7.3 miles southeast of Los Gatos. Drainage area, 9.79 sq mi. Period of record, February 1951 to current year. Monthly contents prior to October 1959, published in WSP 1735. Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by San Jose Water Works). Extremes for current year: Maximum contents observed, 6,350 acre-ft Apr. 29 (elevation, 1,112.15 ft); no contents Nov. 30. Extremes for period of record: Maximum contents observed, 6,640 acre-ft Jan. 31, 1963 (elevation, 1,115.1 ft); no contents Nov. 30, 1968.

Reservoir is formed by earthfill dam completed in 1951; topped by a 2-foot inflatable surcharge dam since 1956. Usable capacity, 6,280 acre-ft between elevations 944 (elevation of outlet gates) and 1,112 ft (top of 2-foot inflatable surcharge dam). Dead storage, 60 acre-ft. Water released down Los Gatos Creek for domestic and industrial use. Record of contents furnished by San Jose Water Works.

11-1679.8. LEXINGTON RESERVOIR.--Lat 37°12'06", long 121°59'17", in SE $\frac{1}{4}$ sec.29, T.8 S., R.1 W., Santa Clara County, at center of dam on Los Gatos Creek, and 1.7 miles south of Los Gatos. Drainage area, 37.0 sq mi. Period of record, December 1952 to current year. Monthly contents prior to October 1959, published in WSP 1735. Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara County Flood Control and Water District). Extremes for current year: Maximum contents observed, 21,940 acre-ft Feb. 15 (elevation, 651.25 ft); minimum observed, 7,800 acre-ft Sept. 29 (elevation, 607.65 ft). Extremes for period of record: Maximum contents observed, 23,190 acre-ft Mar. 16, 1967 (elevation, 654.00 ft); no contents at times in each year except 1963, 1966-69.

Reservoir is formed by earthfill dam completed in 1952. Capacity, 21,430 acre-ft between elevations 519 (invert at outlet tunnel) and 650 ft (crest of spillway). Dead storage, 31 acre-ft. Water released down Los Gatos Creek for irrigation and ground-water recharge by percolation. Record of contents furnished by Santa Clara County Flood Control and Water District.

Month-end contents, in acre-feet (including momentary storage above spillway crest), water year October 1968 to September 1969

Date	Almaden Reservoir a	Calero Reservoir a	Guadalupe Reservoir a	Lake Elsman b	Lexington Reservoir a
Sept. 30, 1968.....	615	1,650	295	1,080	1,150
Oct. 31.....	298	1,010	0	144	2,000
Nov. 30.....	308	991	31	0	1,490
Dec. 31.....	460	1,100	260	496	1,800
Jan. 31, 1969.....	1,620	6,930	3,420	6,140	20,060
Feb. 28.....	1,790	10,270	3,420	6,210	21,390
Mar. 31.....	1,630	9,690	3,040	6,120	19,830
Apr. 30.....	1,750	10,090	3,180	6,270	20,690
May 31.....	1,670	9,660	2,840	5,350	20,370
June 30.....	1,420	8,950	2,200	4,080	18,300
July 31.....	1,210	7,740	1,310	2,620	14,240
Aug. 31.....	1,020	6,870	498	1,440	11,560
Sept. 30.....	801	6,490	0	728	7,450

a Contents at 0800 on first day of following month.

b Contents at 0800 on last day of month.

COYOTE CREEK BASIN

11-1698. COYOTE CREEK NEAR GILROY, CALIF.

LOCATION.--Lat 37°04'40", long 121°29'36", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.10 S., R.4 E., Santa Clara County, on left bank 0.7 mile downstream from Bear Creek, 5.0 miles upstream from Coyote Creek Dam, and 6.4 miles northeast of Gilroy.

DRAINAGE AREA.--109 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 790 ft (from topographic map). Prior to Nov. 14, 1963, at site 0.4 mile downstream at different datum.

AVERAGE DISCHARGE.--9 years, 48.6 cfs (35,210 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,190 cfs Jan. 25 (gage height, 13.70 ft), from rating curve extended as explained below; no flow many days.

Period of record: Maximum discharge, 10,100 cfs Jan. 31, 1963 (gage height, 12.60 ft, site and datum then in use), from rating curve extended above 3,200 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	11	239	1,520	35	18	5.4	1.7	.36	.13
2	0	0	0	8.0	230	809	35	17	5.3	1.5	.34	.15
3	0	0	0	6.2	176	543	38	17	5.1	1.4	.33	.05
4	0	0	0	4.9	139	396	34	17	5.1	1.3	.35	.03
5	0	0	0	4.0	162	298	56	16	5.1	1.3	.39	.03
6	0	0	0	3.3	1,250	237	133	15	4.9	1.4	.36	.03
7	0	0	0	2.8	707	197	80	15	4.7	1.3	.34	.06
8	0	0	0	2.4	391	165	58	14	4.9	1.2	.27	.07
9	0	0	0	2.1	266	146	51	14	5.5	1.2	.27	.05
10	0	0	0	1.8	199	128	47	13	6.1	1.2	.26	.05
11	0	0	0	1.7	365	108	42	13	6.2	1.1	.21	.03
12	0	0	0	2.1	701	110	38	12	6.2	1.1	.19	.03
13	0	0	0	.61	368	99	36	13	5.8	1.0	.18	.03
14	0	0	0	170	273	84	35	12	5.6	.98	.18	.03
15	0	0	0	50	1,400	77	34	12	5.6	.86	.18	.03
16	0	0	6.1	27	890	71	31	11	5.7	.84	.18	.03
17	0	0	2.2	18	509	67	30	11	5.5	.72	.15	.03
18	0	0	.74	442	392	63	29	9.9	5.3	.70	.17	.03
19	0	0	.61	4,340	375	58	28	9.4	4.8	.60	.12	.03
20	0	0	.51	2,020	313	62	27	8.9	4.5	.58	.11	.03
21	0	0	.38	2,590	262	73	26	8.6	4.1	.67	.11	.03
22	0	0	.31	1,540	308	59	25	8.2	3.7	.59	.09	.02
23	0	0	.28	437	723	52	27	8.0	3.6	.59	.08	.02
24	0	0	.51	469	2,580	48	29	7.7	3.3	.57	.09	.01
25	0	0	60	3,890	1,820	45	25	7.3	3.1	.51	.13	.01
26	0	0	167	2,610	1,490	44	23	7.1	2.5	.50	.18	0
27	0	0	54	800	831	41	21	7.2	2.3	.49	.19	0
28	0	0	37	650	1,330	39	20	6.9	2.1	.47	.20	0
29	0	0	42	425	-----	37	19	6.6	1.9	.45	.36	0
30	0	0	24	343	-----	36	19	6.1	1.8	.39	.32	0
31	0	-----	15	274	-----	35	-----	5.7	-----	.37	.18	-----
TOTAL	0	0	410.64	21,206.3	18,689	5,747	1,131	347.6	135.7	27.58	6.87	1.04
MEAN	0	0	13.2	684	667	185	37.7	11.2	4.52	.89	.22	.035
MAX	0	0	167	4,340	2,580	1,520	133	18	6.2	1.7	.39	.15
MIN	0	0	0	1.7	139	35	19	5.7	1.8	.37	.08	0
AC-FT	0	0	815	42,060	37,070	11,400	2,240	689	269	55	14	2.1
CAL YR 1968	TOTAL	2,058.71	MEAN	5.62	MAX	206	MIN	0	AC-FT	4,080		
WTR YR 1969	TOTAL	47,702.73	MEAN	131	MAX	4,340	MIN	0	AC-FT	94,620		

PEAK DISCHARGE (BASE, 1,000 CFS).

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0915	13.25	7,650	2-11	2315	6.26	1,080
1-21	2345	9.24	3,420	2-15	1100	8.39	2,640
1-25	0230	13.70	8,190	2-24	1230	10.67	4,810
2-6	0915	6.99	1,570	2-28	2000	7.71	2,100

11-1700. COYOTE CREEK NEAR MADRONE, CALIF.

LOCATION.--Lat 37°10'06", long 121°38'55", near southeast corner of La Laguna Seca Grant, Santa Clara County, on right bank 1.2 miles downstream from Anderson Dam, and 1.8 miles northeast of Madrone.

DRAINAGE AREA.--196 sq mi.

PERIOD OF RECORD.--October 1902 to September 1912, December 1916 to current year. Records for water years 1917-19 incomplete, yearly estimates published in WSP 1315-B. Published as Coyote River near Madrone 1902-12, 1916-26.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 375 ft (from topographic map). Prior to Mar. 1, 1950, nonrecording gage and water-stage recorders at various sites within 1.4 miles upstream at different datums.

AVERAGE DISCHARGE.--63 years, 66.1 cfs (47,890 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,570 cfs Feb. 25 (gage height, 8.16 ft); minimum daily, 3.6 cfs Feb. 10.

Period of record: Maximum discharge, 25,000 cfs probably Mar. 7, 1911 (record furnished by Duryea, Haehl and Gilman); no flow at times.

REMARKS.--Records good. Flow regulated by Coyote (see sta 11-1698.8) and Anderson (see sta 11-1699.2) Lakes; water released during summer. Water is diverted to Main Avenue percolation ponds by Santa Clara Valley Water Conservation District.

REVISIONS (WATER YEARS).--WSP 1345: 1932, 1935(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	46	18	8.0	4.6	1,810	27	35	45	44	40	70
2	38	48	18	8.0	4.6	1,530	18	34	45	44	40	70
3	38	48	18	8.0	4.6	1,140	15	34	44	44	40	70
4	35	47	18	8.0	4.2	848	12	34	44	45	35	69
5	32	47	19	7.8	4.9	664	8.3	34	45	45	39	71
6	22	47	21	7.8	5.2	558	7.6	34	45	45	35	71
7	33	47	21	7.8	4.2	513	9.1	32	44	45	39	71
8	22	47	21	7.8	4.2	492	11	33	45	45	38	71
9	22	47	21	7.8	3.8	483	11	35	44	44	38	79
10	31	47	22	6.7	3.6	473	9.8	34	43	44	37	84
11	29	47	22	5.6	5.2	449	8.0	34	41	44	38	84
12	28	47	22	6.0	4.6	320	11	34	41	43	38	84
13	29	42	22	6.5	4.0	419	11	36	41	44	38	81
14	28	37	22	5.6	3.8	451	11	38	39	42	38	83
15	28	37	22	5.6	7.2	415	11	39	39	41	38	84
16	28	37	20	5.6	243	319	11	39	40	41	39	83
17	39	37	19	5.6	203	331	10	41	40	41	39	83
18	57	35	19	6.0	208	95	11	43	41	41	35	83
19	57	31	20	8.0	66	125	11	42	45	42	39	82
20	57	27	20	7.0	94	213	11	42	48	41	35	82
21	56	24	20	6.0	229	254	10	44	48	41	39	81
22	56	25	20	6.0	230	278	10	45	48	41	39	81
23	55	23	19	5.2	299	278	11	52	48	41	40	80
24	55	24	20	6.0	1,550	277	10	52	47	42	40	77
25	55	24	20	7.0	3,200	207	9.9	52	47	42	40	76
26	54	21	20	8.7	2,420	144	9.9	52	46	42	40	79
27	55	18	19	5.2	1,500	75	9.7	51	44	40	43	73
28	55	18	17	5.2	1,350	33	9.7	52	44	40	45	74
29	55	18	17	4.9	-----	33	24	50	44	39	60	75
30	51	18	17	5.2	-----	33	35	46	44	35	70	76
31	47	-----	12	4.9	-----	33	-----	45	-----	39	71	-----
TOTAL	1,316	1,061	606	203.5	11,725.5	13,293	374.0	1,268	1,319	1,311	1,301	2,327
MEAN	42.5	35.4	19.5	6.56	419	429	12.5	40.9	44.0	42.3	42.0	77.6
MAX	57	48	22	8.7	3,200	1,810	35	52	48	45	71	84
MIN	28	18	12	4.9	3.6	33	7.6	32	39	39	27	69
AC-FT	2,610	2,100	1,200	404	23,260	26,370	742	2,520	2,620	2,600	2,580	4,620
(a)	425	357	311	30	0	0	0	402	469	473	419	300

CAL YR 1968 TOTAL 14,003.8 MEAN 38.3 MAX 112 MIN 3.0 AC-FT 27,780 a 3,740
WTR YR 1969 TOTAL 36,105.0 MEAN 98.9 MAX 3,200 MIN 3.6 AC-FT 71,610 a 3,190

a Diversion, in acre-feet, to Main Avenue percolation ponds, furnished by Santa Clara Valley Water Conservation District.

COYOTE CREEK BASIN

11-1721. UPPER PENITENCIA CREEK AT SAN JOSE, CALIF.

LOCATION.--Lat 37°23'43", long 121°49'38", on north boundary of San Jose Pala Grant, Santa Clara County, on left bank at downstream side of county road bridge, 0.1 mile upstream from Dutard Creek, near northeast limits of San Jose.

DRAINAGE AREA.--21.5 sq mi.

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

GAGE.--Water-stage recorder. Concrete control since Sept. 12, 1963. Datum of gage is 265.30 ft above mean sea level. Prior to Aug. 3, 1962, at site 0.4 mile downstream at different datum.

AVERAGE DISCHARGE.--8 years, 4.98 cfs (3,610 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 386 cfs Jan. 25, Feb. 24 (gage height, 4.71 ft); minimum daily, 0.14 cfs Oct. 26.

Period of record: Maximum discharge, 1,500 cfs Jan. 21, 1967 (gage height, 6.24 ft in gage well; 7.8 ft, from outside gage), from rating curve extended above 270 cfs on basis of slope-area measurement of maximum flow; no flow at times in most years.

Maximum discharge known since at least 1935, 2,100 cfs Apr. 2, 1958, from information furnished by Santa Clara Valley Water Conservation District.

REMARKS.--Records fair. Flow partly regulated by Cherry Flat Reservoir 5 miles upstream (capacity, 500 acre-ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.27	.52	1.3	37	192	5.3	3.2	1.4	.89	.27	.23
2	.34	.68	.51	1.0	35	99	6.5	3.1	1.4	.84	.27	.41
3	.50	1.1	.48	.89	26	69	8.8	3.1	1.5	.69	.27	.17
4	.50	.18	.50	.77	20	48	6.6	3.4	1.7	.77	.23	.20
5	.37	.37	.51	.72	33	37	14	2.9	2.4	.80	.23	.23
6	.24	.48	.48	.69	117	26	19	2.7	2.4	.80	.27	.23
7	.25	.28	.50	.66	76	21	12	2.5	2.4	.73	.23	.23
8	.21	.22	.49	.58	45	18	9.0	2.4	2.6	.73	.17	.22
9	.20	.43	.50	.62	31	16	8.4	2.4	2.6	.69	.23	.19
10	.22	.49	.58	.57	23	14	7.6	2.4	2.6	.66	.27	.19
11	.24	.54	.42	.68	45	12	7.0	2.2	2.5	.64	.27	.19
12	.27	.85	.53	.71	74	19	6.5	2.2	2.4	.63	.23	.28
13	.31	.48	.58	1.5	42	21	6.2	2.2	2.3	.61	.23	.28
14	.36	.63	.45	2.8	33	13	5.8	1.9	2.2	.49	.23	.28
15	.31	.68	1.2	1.6	81	10	5.8	1.9	2.1	.52	.20	.28
16	.27	.51	.98	1.3	59	8.8	5.4	1.8	1.8	.46	.23	.26
17	.27	.51	.85	1.1	42	8.5	5.2	1.8	1.8	.36	.27	.26
18	.23	.50	.75	2.2	41	8.1	4.9	1.5	1.6	.27	.27	.31
19	.23	.50	.63	76	84	7.5	4.7	1.5	1.5	.27	.27	.29
20	.23	.49	.54	59	68	9.3	4.6	1.5	1.5	.31	.23	.29
21	.23	.51	.52	86	52	11	4.5	1.5	1.6	.27	.20	.29
22	.23	.49	.50	74	54	8.4	4.4	1.5	2.0	.27	.23	.26
23	.23	.49	.48	32	81	7.4	4.4	1.5	1.7	.27	.27	.24
24	.23	.48	.58	22	219	6.8	4.4	1.5	1.8	.27	.27	.26
25	.23	.59	2.2	198	127	6.5	4.0	1.7	1.7	.23	.27	.24
26	.14	.44	6.8	128	103	6.0	3.9	1.7	1.7	.36	.20	.25
27	.20	.54	3.5	65	68	5.8	3.8	1.8	1.5	.36	.20	.27
28	.17	.43	3.1	68	131	5.6	3.5	1.9	1.5	.31	.17	.28
29	.27	.46	2.6	49	-----	5.5	3.4	1.8	1.4	.27	.23	.27
30	.41	.53	1.9	40	-----	5.6	3.2	1.5	1.1	.31	.23	.22
31	.27	-----	1.6	32	-----	5.5	-----	1.5	-----	.27	.23	-----
TOTAL	8.31	15.15	35.78	948.69	1,847	731.3	192.8	64.5	56.7	15.35	7.37	7.60
MEAN	.27	.51	1.15	30.6	66.0	23.6	6.43	2.08	1.89	.50	.24	.25
MAX	.50	1.1	6.8	198	219	192	19	3.4	2.6	.89	.27	.41
MIN	.14	.18	.42	.57	20	5.5	3.2	1.5	1.1	.23	.17	.17
AC-FT	16	30	71	1,880	3,660	1,450	382	128	112	30	15	15

CAL YR 1968 TOTAL 541.34 MEAN 1.48 MAX 96 MIN .06 AC-FT 1,070
WTR YR 1969 TOTAL 3,930.55 MEAN 10.8 MAX 219 MIN .14 AC-FT 7,800

PEAK DISCHARGE (BASE, 90 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0700	4.25	188	2-11	2215	4.25	188
1-21	1500	4.04	123	2-15	0915	4.12	145
1-25	0130	4.71	386	2-24	1230	4.71	386
2- 6	1530	4.23	180	3- 1	1230	4.29	202

RESERVOIRS IN COYOTE CREEK BASIN, CALIF.

11-1698.5. COYOTE LAKE.--Lat 37°07'06", long 121°32'55", in SE¼ sec.29, T.9 S., R.4 E., Santa Clara County, at center of dam on Coyote Creek, 3.8 miles northeast of San Martin. Drainage area, 120 sq mi. Period of record, February 1936 to current year. Monthly contents prior to October 1959, published in WSP 1735. Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara County Flood Control and Water District). Extremes for current year: Maximum contents observed, 26,150 acre-ft Mar. 1 (elevation 781.06 ft); minimum observed, 226 acre-ft Nov. 20 (elevation, 704.03 ft). Extremes for period of record: Maximum contents observed, 28,120 acre-ft Dec. 8, 1950 (elevation, 782.5 ft); no contents at times. Reservoir is formed by rock- and earthfill dam completed in 1936. Capacity, 24,510 acre-ft between elevations 693.3 (invert of outlet tunnel) and 777 ft (crest of spillway). Water released down Coyote Creek for storage in Anderson Lake. Record of contents furnished by Santa Clara County Flood Control and Water District.

11-1699.2. ANDERSON LAKE.--Lat 37°09'56", long 121°37'42", in southeast corner of La Laguna Seca Grant, Santa Clara County, at center of dam on Coyote Creek, 2.5 miles northeast of Madrone. Drainage area, 195 sq mi. Period of record, December 1950 to current year. Monthly contents prior to October 1959, published in WSP 1735. Nonrecording gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara County Flood Control and Water District). Extremes for current year: Maximum contents observed, 95,200 acre-ft Feb. 25 (elevation, 628.05 ft); minimum observed, 28,970 acre-ft Jan. 10 (elevation, 554.11 ft). Extremes for period of record: Maximum contents, 95,990 acre-ft Apr. 3, 1958 (elevation, 628.67 ft, from floodmarks); no contents at times in 1960-62.

Reservoir is formed by earth- and rockfill dam completed in 1950. Capacity, 91,310 acre-ft between elevations 439 (invert of outlet tunnel) and 625 ft (crest of spillway). Water released down Coyote Creek for irrigation and ground-water recharge by percolation. Record of contents furnished by Santa Clara County Flood Control and Water District.

Month-end contents, in acre-feet (including momentary storage above spillway crest), water year October 1968 to September 1969

Date	Coyote Lake	Anderson Lake
Sept. 30, 1968.....	2,880	33,410
Oct. 31.....	1,350	31,650
Nov. 30.....	238	30,400
Dec. 31.....	918	29,100
Jan. 31, 1969.....	24,560	62,110
Feb. 28.....	26,150	91,300
Mar. 31.....	22,880	88,470
Apr. 30.....	23,480	91,120
May 31.....	22,600	90,000
June 30.....	21,100	87,820
July 31.....	19,430	85,500
Aug. 31.....	17,600	83,290
Sept. 30.....	15,030	79,180

NOTE.--Contents at 0800 on first day of following month.

ALAMEDA CREEK BASIN

11-1732. ARROYO HONDO NEAR SAN JOSE, CALIF.

LOCATION.--Lat 37°27'42", long 121°46'06", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.32, T.5 S., R.2 E., Santa Clara County, on right bank 150 ft upstream from road bridge, 3.5 miles southeast of Calaveras Dam, and 3.5 miles northeast of city limits of San Jose.

DRAINAGE AREA.--77.1 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 783.86 ft above mean sea level.

EXTREMES.--Maximum discharge during period, 4,620 cfs Jan. 26 (gage height, 10.94 ft); minimum daily, 0.40 cfs Oct. 1-9.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	1.1	2.8	24	199	1,240	36	24	9.0	4.8	1.6	1.3
2	.40	1.3	2.9	19	227	618	36	24	8.9	4.4	1.5	1.2
3	.40	1.9	3.4	15	177	414	43	23	8.8	4.1	1.5	1.3
4	.40	7.1	3.3	12	143	298	36	24	8.7	4.0	1.3	1.3
5	.40	3.9	3.1	11	155	223	62	20	8.3	3.8	1.3	1.2
6	.40	3.3	3.0	9.4	1,190	182	166	21	9.0	3.8	1.4	1.3
7	.40	2.8	2.9	8.4	643	152	127	20	8.8	3.6	1.3	1.3
8	.40	2.5	2.8	7.5	361	130	93	20	9.6	3.5	1.3	1.2
9	.40	2.4	2.7	6.8	270	115	78	19	10	3.4	1.2	1.3
10	.45	2.3	2.9	6.3	207	104	70	19	11	3.3	1.2	1.2
11	.50	2.2	3.1	6.5	298	90	62	18	10	3.1	1.2	1.2
12	.55	2.4	5.3	7.5	633	89	57	18	10	3.0	1.2	1.2
13	.59	2.2	4.8	24	324	86	53	17	9.4	2.9	1.2	1.2
14	.64	2.4	4.3	123	239	74	49	17	8.9	2.8	1.2	1.2
15	.59	5.4	6.4	51	900	67	46	17	8.4	2.6	1.2	1.2
16	.57	10	66	33	535	62	43	16	7.8	2.4	1.2	1.2
17	.59	5.4	25	24	329	60	40	15	7.2	2.3	1.2	1.3
18	.60	4.2	13	47	260	58	39	14	7.0	2.2	1.3	1.2
19	.60	3.8	10	1,900	368	55	37	14	7.2	2.2	1.3	1.2
20	.65	3.4	8.6	1,220	319	58	35	14	6.9	2.1	1.3	1.2
21	.69	3.1	6.9	1,380	254	78	33	13	6.7	2.0	1.3	1.2
22	.77	3.0	5.8	967	258	65	32	13	6.6	2.0	1.3	1.2
23	.87	2.7	5.3	330	425	56	34	13	6.1	2.0	1.3	1.3
24	.88	2.6	5.2	231	1,650	51	35	12	6.0	1.9	1.3	1.3
25	.88	2.5	228	2,080	982	48	32	12	5.8	1.9	1.3	1.4
26	.88	2.7	194	1,980	668	46	30	11	5.9	1.8	1.3	1.4
27	.88	2.9	91	513	440	43	28	11	5.9	1.7	1.3	1.4
28	.88	2.9	143	352	1,030	42	27	11	5.7	1.7	1.3	1.4
29	.94	2.7	99	248	-----	40	26	10	5.4	1.7	1.3	1.4
30	1.0	2.7	52	207	-----	38	25	9.7	5.0	1.6	1.3	1.4
31	1.1	-----	34	184	-----	37	-----	9.2	-----	1.6	1.3	-----
TOTAL	19.70	77.8	1,040.5	11,927.5	13,484	4,723	1,510	498.9	234.5	84.2	40.2	38.1
MEAN	.64	3.26	33.6	385	482	152	50.3	16.1	7.82	2.72	1.30	1.27
MAX	1.1	10	228	2,080	1,650	1,240	166	24	11	4.8	1.6	1.4
MIN	.40	1.1	2.7	6.3	143	37	25	9.2	5.0	1.6	1.2	1.2
AC-FT	39	194	2,060	23,660	26,750	9,370	3,000	990	465	167	80	76

CAL YR 1968	TOTAL -	MEAN -	MAX -	MIN -	AC-FT -
WTR YR 1969	TOTAL 33,698.40	MEAN 92.3	MAX 2,080	MIN .40	AC-FT 66,840

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-25	1530	7.14	940	2-11	2315	7.59	1,210
1-19	0900	9.98	3,380	2-15	0900	8.03	1,520
1-22	0045	8.53	1,930	2-24	1400	9.67	3,040
1-26	0515	10.94	4,620	3- 1	0415	8.37	1,800
2- 6	1015	8.18	1,640				

11-1760. ARROYO MOCHO NEAR LIVERMORE, CALIF.

LOCATION.--Lat 37°37'35", long 121°42'13", NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.3 S., R.2 E., Alameda County, on right bank 100 ft downstream from Mines Road bridge, 2.4 miles upstream from unnamed tributary, and 5.2 miles southeast of Livermore.

DRAINAGE AREA.--38.2 sq mi.

PERIOD OF RECORD.--January 1912 to September 1930, October 1963 to current year. Records for water year 1914 incomplete, yearly estimate and monthly discharge only for some months, published in WSP 1315-B.

GAGE.--Water-stage recorder, and since Aug. 5, 1964, concrete control. Datum of gage is 746.49 ft above mean sea level. 1912 to October 1914 at present site at different datum. November 1914 to Sept. 30, 1930, at site 1 mile upstream at different datum.

AVERAGE DISCHARGE.--24 years, 4.26 cfs (3,090 acre-ft per year); median of yearly mean discharges, 3.9 cfs (2,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 900 cfs Jan. 26 (gage height, 6.36 ft), by slope-area measurement of peak flow; no flow Oct. 1 to Nov. 27.

Period of record: Maximum discharge recorded, 1,250 cfs Jan. 22, 1967 (gage height, 5.90 ft), from rating curve extended above 460 cfs; maximum daily discharge, 1,000 cfs Jan. 25, 1914 (estimated); no flow for parts of most years.

Flood of Dec. 23, 1955, discharge 1,880 cfs (by slope-area measurement of maximum flow).

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.07	1.5	16	174	5.7	3.0	1.1	.70	.14	.04
2	0	0	.08	1.3	14	65	5.7	2.8	1.1	.64	.14	.04
3	0	0	.10	1.2	12	55	6.0	2.8	1.2	.64	.11	.04
4	0	0	.10	.90	9.1	42	5.5	2.8	1.3	.56	.11	.04
5	0	0	.11	.82	11	32	6.8	2.6	1.3	.56	.11	.04
6	0	0	.11	.72	126	25	8.7	2.6	1.2	.56	.12	.04
7	0	0	.11	.72	71	21	6.9	2.2	1.1	.56	.10	.06
8	0	0	.17	.68	47	19	6.0	2.0	1.0	.56	.10	.06
9	0	0	.17	.66	41	16	5.7	1.9	.98	.40	.10	.04
10	0	0	.21	.66	36	14	5.9	2.2	.96	.40	.09	.04
11	0	0	.23	.66	56	13	5.0	2.1	1.0	.40	.09	.03
12	0	0	.23	.66	108	13	4.7	2.0	.95	.40	.08	.03
13	0	0	.24	.86	58	12	4.5	1.9	.90	.40	.08	.03
14	0	0	.29	2.8	47	11	4.4	1.9	.90	.40	.07	.03
15	0	0	.50	2.4	186	11	4.3	1.8	.90	.22	.07	.04
16	0	0	1.2	1.7	100	10	4.1	1.9	.85	.22	.07	.04
17	0	0	1.9	1.4	64	9.9	4.0	1.6	.85	.22	.07	.04
18	0	0	1.6	1.7	61	9.5	3.9	1.5	.85	.22	.07	.06
19	0	0	1.3	63	56	9.2	3.8	1.3	.85	.22	.07	.07
20	0	0	1.1	52	47	8.8	3.7	1.4	.85	.18	.07	.07
21	0	0	.90	77	42	9.4	3.5	1.4	.80	.18	.07	.08
22	0	0	.83	42	45	8.5	3.5	1.6	.80	.18	.07	.09
23	0	0	.91	18	56	8.2	3.8	1.6	.80	.18	.07	.08
24	0	0	.74	11	317	7.4	4.7	1.5	.80	.18	.07	.06
25	0	0	1.4	180	164	7.4	3.8	1.5	.80	.18	.07	.05
26	0	0	7.8	260	112	7.4	3.5	1.3	.75	.14	.05	.05
27	0	0	3.5	49	57	6.8	3.2	1.3	.75	.18	.05	.06
28	0	.02	2.9	29	169	6.7	3.2	1.3	.75	.14	.05	.06
29	0	.04	5.3	27	-----	6.6	3.0	1.3	.73	.14	.05	.06
30	0	.05	3.1	24	-----	5.9	3.0	1.2	.73	.14	.05	.06
31	0	-----	1.8	20	-----	5.9	-----	.94	-----	.14	.05	-----
TOTAL	0	0.11	39.00	873.34	2,128.1	650.6	140.5	57.24	27.85	10.24	2.51	1.53
MEAN	0	.004	1.26	28.2	76.0	21.0	4.68	1.85	.93	.33	.081	.051
MAX	0	.05	7.8	260	317	174	8.7	3.0	1.3	.70	.14	.09
MIN	0	0	.07	.66	9.1	5.9	3.0	.94	.73	.14	.05	.03
AC-FT	0	.2	77	1,730	4,220	1,290	279	114	55	20	5.0	3.0

CAL YR 1968 TOTAL 363.55 MEAN .99 MAX 47 MIN 0 AC-FT 721
WTR YR 1969 TOTAL 3,931.02 MEAN 10.8 MAX 317 MIN 0 AC-FT 7,800

PEAK DISCHARGE (BASE, 90 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1030	4.33	128	2-11	2245	4.90	240
1-21	1700	4.27	112	2-15	1100	5.14	320
1-26	0500	6.36	900	2-24	1345	5.88	639
2- 6	0845	4.74	196	2-28	1500	5.05	289

ALAMEDA CREEK BASIN

11-1762. ARROYO MOCHO NEAR PLEASANTON, CALIF.

LOCATION.--Lat 37°41'26", long 121°52'20", in Santa Rita Grant, Alameda County, on right bank 0.3 mile upstream from Santa Rita Road, 0.8 mile downstream from Arroyo Las Positas, and 2 miles north of Pleasanton.

DRAINAGE AREA.--141 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 319.51 ft above mean sea level. Prior to Oct. 30, 1967, at site 0.4 mile downstream at different datum. Dec. 8, 1967, to July 7, 1968, nonrecording gage at bridge 0.3 mile downstream at different datum.

AVERAGE DISCHARGE.--7 years, 15.6 cfs (11,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,070 cfs Jan. 26 (gage height, 14.63 ft); no flow Oct. 18-24. Period of record: Maximum discharge, 1,760 cfs Feb. 1, 1963 (gage height, 8.60 ft, site and datum then in use), from rating curve extended above 58 cfs on basis of slope-area measurement of maximum flow; no flow for many days in each year.

REMARKS.--Records good. No regulation; low flow represents waste water from Livermore sewage disposal plant.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.0	4.4	3.4	15	188	3.2	2.1	2.2	3.8	1.2	.74
2	2.9	3.3	4.9	3.7	8.9	88	2.6	1.8	2.1	3.2	.99	.88
3	2.7	37	3.5	3.0	5.3	62	5.3	1.8	2.7	2.8	.93	2.3
4	3.1	4.8	3.4	3.0	5.1	45	1.8	1.4	2.2	2.8	1.1	2.3
5	2.8	4.0	3.8	2.1	15	34	11	2.7	2.2	1.6	1.5	2.4
6	2.7	4.7	4.1	3.2	314	26	24	2.8	2.8	2.0	1.2	1.7
7	2.7	3.0	3.7	2.1	94	21	9.1	2.1	1.7	1.7	2.4	1.8
8	3.2	4.1	4.7	2.0	47	18	4.9	1.9	.81	2.4	1.6	2.3
9	2.9	2.4	4.2	.93	26	15	3.5	2.2	.61	2.0	1.5	2.3
10	2.6	5.2	4.5	1.4	13	12	2.9	2.4	1.7	2.3	1.3	2.0
11	.14	3.4	7.9	1.4	79	8.9	3.1	2.3	1.9	1.5	1.1	1.4
12	1.1	5.0	4.1	1.4	201	23	3.4	2.7	.89	1.2	1.2	.93
13	2.8	6.4	4.2	5.3	58	34	4.2	2.6	1.7	1.8	1.4	.72
14	3.7	6.3	14	5.6	38	10	4.4	2.5	2.6	1.3	.46	.72
15	3.9	14	16	1.7	183	5.8	3.5	2.5	2.3	2.3	.30	.93
16	3.1	3.9	11	1.3	115	5.1	5.3	5.6	2.2	1.8	.33	.98
17	.30	2.8	2.9	1.3	60	5.5	3.2	7.3	2.2	1.9	.89	.95
18	0	3.1	3.0	14	57	5.1	3.1	6.7	2.2	2.2	.77	1.3
19	0	3.1	2.9	116	63	4.7	3.1	6.1	2.9	2.3	.67	1.8
20	0	2.9	3.5	60	42	10	3.2	6.0	2.0	2.8	.96	1.9
21	0	2.9	3.9	94	24	16	3.2	5.3	2.0	2.1	1.3	1.5
22	0	2.9	4.4	57	61	7.9	2.9	5.4	2.2	1.9	.48	1.2
23	0	2.8	3.9	15	98	6.0	3.1	5.6	2.1	2.6	.43	.77
24	0	.89	5.1	8.9	215	4.9	4.2	6.3	2.2	2.4	.72	.91
25	.86	3.0	31	600	170	4.1	3.9	3.4	2.6	2.4	.44	1.3
26	1.2	4.7	54	638	129	3.9	2.0	3.1	2.5	2.8	.38	.56
27	2.2	2.8	6.6	133	73	3.5	2.5	3.9	1.7	1.5	1.1	.45
28	2.3	.75	7.3	182	126	4.2	2.8	3.4	1.7	2.1	1.5	.41
29	2.6	4.4	5.1	68	-----	3.9	2.5	.79	1.9	1.7	1.2	.32
30	1.7	3.5	3.5	67	-----	3.7	2.4	1.8	2.8	1.8	.92	.31
31	2.9	-----	3.1	31	-----	3.5	-----	2.6	-----	1.7	.79	-----
TOTAL	57.40	151.04	238.6	2,126.73	2,335.3	682.7	134.3	107.09	61.61	66.7	31.06	38.08
MEAN	1.85	5.03	7.70	68.6	83.4	22.0	4.48	3.45	2.05	2.15	1.00	1.27
MAX	3.9	37	54	638	314	188	24	7.3	2.9	3.8	2.4	2.4
MIN	0	.75	2.9	.93	5.1	3.5	1.8	.79	.61	1.2	.30	.31
AC-FT	114	300	473	4,220	4,630	1,350	266	212	122	132	62	76
CAL YR 1968	TOTAL 1,637.65		MEAN 4.47		MAX 175		MIN 0		AC-FT 3,250			
WTR YR 1969	TOTAL 6,030.61		MEAN 16.5		MAX 638		MIN 0		AC-FT 11,960			

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11- 3	1115	9.59	160	2-12	0215	11.37	431
1-19	1515	9.79	190	2-15	1545	11.05	380
1-26	0900	14.63	1,070	2-24	2000	11.11	390
2- 6	1130	12.08	546	3- 1	0615	10.11	238

11-1764. ARROYO VALLE ABOVE LANG CANYON, NEAR LIVERMORE, CALIF.

LOCATION.--Lat 37°33'00", long 121°39'57", in SE $\frac{1}{4}$ sec.29, T.4 N., R.3 E., Alameda County, on left bank 700 ft upstream from unnamed tributary, 1,200 ft upstream from Lang Canyon, and 10.5 miles southeast of Livermore.

DRAINAGE AREA.--126 sq mi.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 800 ft (from topographic map).

AVERAGE DISCHARGE.--6 years, 31.4 cfs (22,750 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,340 cfs Jan. 25 (gage height, 8.90 ft); no flow many days.

Period of record: Maximum discharge, 5,340 cfs Jan. 25, 1969 (gage height, 8.90 ft); no flow at times each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.29	6.8	146	995	27	13	3.5	.92	.C2	0
2	0	0	.30	5.8	135	514	27	12	3.4	.76	.C1	0
3	0	0	.26	4.7	95	358	29	12	3.3	.71	.C1	0
4	0	0	.25	4.0	80	272	26	12	3.2	.62	C	0
5	0	0	.26	3.7	82	214	34	11	3.0	.60	C	0
6	0	0	.30	3.4	1,030	176	63	10	3.0	.53	C	C
7	0	0	.30	3.1	542	148	52	11	3.0	.52	C	0
8	0	0	.34	3.0	288	130	39	10	3.0	.45	C	0
9	0	0	.33	2.8	193	114	33	9.9	3.0	.43	C	0
10	0	0	.42	2.6	143	104	31	9.6	3.3	.38	0	0
11	0	0	.72	3.0	208	90	28	8.9	3.4	.35	C	C
12	0	0	.67	3.4	761	88	28	8.4	3.3	.28	0	0
13	0	0	.63	8.7	345	84	28	7.9	2.8	.26	C	C
14	0	0	.76	3.0	259	71	25	7.5	2.6	.23	C	0
15	0	1.4	5.7	15	1,110	63	24	7.9	2.5	.19	C	0
16	0	.73	5.8	11	681	58	22	7.7	2.3	.18	C	0
17	0	.45	3.6	9.2	375	58	21	7.0	2.0	.15	0	0
18	0	.34	2.3	39	302	52	20	6.2	1.9	.12	C	0
19	0	.28	1.9	1,100	281	48	19	5.9	1.9	.12	C	0
20	0	.23	1.7	749	231	50	18	5.6	1.7	.10	C	0
21	0	.21	1.6	1,060	194	56	17	5.2	1.6	.10	C	0
22	0	.18	1.4	618	219	47	16	5.1	1.5	.08	0	0
23	0	.18	1.3	229	345	42	16	5.3	1.5	.08	C	0
24	0	.23	1.6	146	1,640	40	18	5.0	1.4	.07	C	0
25	0	.30	1.6	2,180	1,010	36	16	4.7	1.3	.07	C	0
26	0	.27	2.7	2,190	635	34	15	4.7	1.2	.07	C	0
27	0	.22	1.7	540	402	32	14	4.6	1.2	.06	C	0
28	0	.21	4.1	327	762	31	14	4.4	1.2	.05	C	C
29	0	.21	2.8	250	-----	30	14	4.1	1.2	.04	C	0
30	0	.23	1.2	190	-----	29	14	3.7	.95	.04	C	0
31	0	-----	8.8	168	-----	28	-----	3.7	-----	.03	C	-----
TOTAL	0	5.67	182.53	9,906.2	12,494	4,092	748	234.0	69.15	8.59	C.C4	C
MEAN	0	.19	5.89	320	446	132	24.9	7.55	2.31	.28	.C01	0
MAX	0	1.4	4.1	2,150	1,640	955	63	13	3.5	.92	.C2	0
MIN	0	0	.25	2.6	80	28	14	3.7	.95	.03	C	0
AC-FT	0	11	362	19,650	24,780	8,120	1,480	464	137	17	.C8	0

CAL YR 1968 TOTAL 1,541.60 MEAN 4.21 MAX 239 MIN 0 AC-FT 3,060
WTR YR 1969 TOTAL 27,740.18 MEAN 76.0 MAX 2,190 MIN 0 AC-FT 55,020

PEAK DISCHARGE (BASE, 350 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	1000	6.53	2,010	2-12	0230	5.66	1,230
1-21	1600	5.85	1,380	2-15	1345	6.36	1,840
1-25	0645	8.90	5,340	2-24	1215	7.26	2,830
2- 6	1230	5.99	1,490	3- 1	0100	5.80	1,340

ALAMEDA CREEK BASIN

11-1765. ARROYO VALLE NEAR LIVERMORE, CALIF.

LOCATION.--Lat 37°37'24", long 121°45'28", in Valle de San Jose Grant, Alameda County, on right bank 900 ft downstream from highway bridge, 1.1 miles upstream from Dry Creek, 1.3 miles downstream from Del Valle Dam, 4.1 miles south of Livermore, and 6.9 miles southeast of Pleasanton.

DRAINAGE AREA.--147 sq mi.

PERIOD OF RECORD.--January 1912 to September 1930, October 1957 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as Arroyo del Valle near Livermore, 1912-29.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 510.44 ft above mean sea level. Prior to November 1914, at site 900 ft upstream at different datum. Nov. 1, 1914 to Sept. 30, 1930, at site 300 ft upstream at different datum.

AVERAGE DISCHARGE (adjusted for diversions).--30 years, 30.6 cfs (22,170 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 885 cfs Mar. 2 (gage height, 4.88 ft); no flow for several months. Period of record: Maximum discharge, 12,200 cfs Apr. 2, 1958 (gage height, 10.91 ft); no flow at times. Maximum discharge since construction of Del Valle Dam in 1968, 885 cfs Mar. 2, 1969 (gage height, 4.88 ft). Flood of Dec. 23, 1955, reached a stage of 13.93 ft, from floodmarks (discharge, 18,200 cfs on basis of contracted-opening and slope-area measurement of maximum flow).

REMARKS.--Records good. Flow regulated by Del Valle Reservoir 1.3 miles upstream beginning in September 1968 (capacity, 77,100 acre-ft). Natural flow of stream affected by imported water from Sacramento-San Joaquin Delta through South Bay Aqueduct and released for downstream percolation. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS.--WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	.89	694	9.9	9.9	29	16	35	60
2	0	0	0	0	.79	720	10	13	29	19	35	60
3	0	0	0	0	.66	864	10	19	29	20	36	60
4	0	0	0	0	.71	849	10	19	29	20	35	55
5	0	0	0	0	2.9	658	10	19	29	22	35	46
6	0	0	0	0	15	192	10	38	27	25	35	45
7	0	0	0	0	12	141	10	61	17	25	35	45
8	0	0	0	0	12	75	10	67	17	25	35	44
9	0	0	0	0	12	75	16	72	17	28	35	44
10	0	0	0	0	12	75	49	71	17	31	35	44
11	0	0	0	0	12	94	40	71	18	31	35	44
12	0	0	0	0	12	105	35	60	19	31	35	44
13	0	0	0	0	12	104	35	30	19	31	35	44
14	0	0	0	0	12	104	35	5.3	17	30	39	44
15	0	0	0	0	13	104	32	18	11	31	44	44
16	0	0	0	0	12	104	29	39	9.8	30	45	44
17	0	0	0	0	12	61	30	40	9.6	31	44	44
18	0	0	0	.07	13	37	30	40	16	30	44	45
19	0	0	0	.44	12	24	29	40	29	30	44	45
20	0	0	0	.44	12	12	29	40	33	30	49	45
21	0	0	0	.66	11	10	21	40	34	30	61	45
22	0	0	0	.60	12	10	7.9	38	36	30	55	43
23	0	0	0	.58	12	10	8.9	38	35	33	46	44
24	0	0	0	.66	27	10	9.6	38	32	35	48	47
25	0	0	.06	3.3	127	10	9.9	38	31	35	48	50
26	0	0	.24	4.9	444	10	9.9	37	31	35	49	46
27	0	0	.14	1.7	693	10	9.9	35	30	35	50	46
28	0	0	.17	2.5	690	10	9.9	35	30	36	51	46
29	0	0	.11	1.3	-----	10	9.9	29	30	36	58	46
30	0	0	.05	1.5	-----	10	10	29	27	36	61	46
31	0	-----	.01	.92	-----	9.9	-----	29	-----	36	61	-----
TOTAL	0	0	0.78	19.57	2,206.95	5,201.9	575.8	1,158.2	737.4	913	1,353	1,405
MEAN	0	0	.025	.63	78.8	168	19.2	37.4	24.6	29.5	43.6	46.8
MAX	0	0	.24	4.9	693	864	49	72	36	36	61	60
MIN	0	0	0	0	.66	9.9	7.9	5.3	9.6	16	35	43
AC-FT	0	0	1.6	39	4,380	10,320	1,140	2,300	1,460	1,810	2,680	2,790
(a)	0	0	0	0	409	0	1,010	5,300	6,590	2,940	0	0

CAL YR 1968 TOTAL 1,474.24 MEAN 4.03 MAX 234 MIN 0 AC-FT 2,920
WTR YR 1969 TOTAL 13,571.60 MEAN 37.2 MAX 864 MIN 0 AC-FT 26,920

CAL YR 1968 a -
WTR YR 1969 a 16,250

a Imported water, in acre-feet, furnished by Calif. Department of Water Resources.

ALAMEDA CREEK BASIN

375

11-1766, ARROYO VALLE AT PLEASANTON, CALIF.

LOCATION.--Lat 37°40'02", long 121°53'02", in Valle de San Jose Grant, Alameda County, on right bank 0.4 mile northwest of Pleasanton, and 5.8 miles west of Livermore.

DRAINAGE AREA.--171 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 311.80 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 28.3 cfs (20,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 897 cfs Mar. 3 (gage height, 11.43 ft); no flow many days.
Period of record: Maximum discharge, 11,300 cfs Apr. 3, 1958 (gage height, 25.36 ft); no flow for several months in each year. Maximum discharge since construction of Del Valle Dam in 1968, 897 cfs Mar. 3, 1969 (gage height, 11.43 ft).

REMARKS.--Records good. Flow regulated by Del Valle Reservoir 10 miles upstream beginning in September 1968 (capacity, 77,100 acre-ft). Water imported from Sacramento-San Joaquin Delta (see sta 11-1765). Flow regulated by pumping and gravel operations above station.

COOPERATION.--Six discharge measurements furnished by Alameda County Water District.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	4.6	716	7.7	2.0	32	14	23	54
2	0	0	0	0	5.7	674	7.7	2.0	23	5.9	23	51
3	0	0	0	0	3.9	872	7.6	3.8	22	5.8	22	50
4	0	0	0	0	1.4	862	7.3	9.8	25	12	22	50
5	0	0	0	0	2.4	774	8.8	10	22	14	22	38
6	0	0	0	0	17	216	8.8	10	22	8.3	22	37
7	0	0	0	0	20	175	6.2	49	24	10	22	44
8	0	0	0	0	13	96	7.4	61	21	11	23	38
9	0	0	0	0	12	89	7.1	72	14	11	23	39
10	0	0	0	0	5.7	86	41	61	8.1	15	22	37
11	0	0	0	0	18	90	35	55	7.5	19	22	33
12	0	0	0	0	30	110	31	59	7.8	27	23	33
13	0	0	0	0	12	106	31	44	8.9	27	22	33
14	0	0	0	0	13	106	31	20	9.4	25	22	37
15	0	0	0	0	35	104	27	4.2	6.8	18	28	33
16	0	0	0	0	28	104	23	16	2.7	19	30	35
17	0	0	2.1	0	13	94	24	36	.67	18	30	36
18	0	0	0	1.5	25	46	24	37	0	18	31	35
19	0	0	0	8.3	31	39	23	37	0	18	31	35
20	0	0	0	2.6	13	24	24	39	8.8	18	31	42
21	0	0	3.9	3.9	14	18	18	39	18	18	41	46
22	0	0	1.6	4.6	20	12	4.6	37	21	17	48	39
23	0	0	0	3.6	38	9.1	2.9	35	23	18	38	40
24	0	0	.50	1.5	52	7.5	2.6	38	21	21	35	40
25	0	0	8.0	34	99	9.4	2.0	44	19	23	37	40
26	0	0	2.0	17	426	9.0	1.8	37	13	24	37	40
27	0	0	1.0	5.3	687	8.8	2.0	30	9.1	23	37	40
28	0	0	.50	14	726	6.3	2.3	30	20	24	38	40
29	0	0	.30	13	-----	5.9	2.3	27	28	23	39	40
30	0	0	.60	11	-----	5.8	2.3	32	23	23	49	40
31	0	-----	.20	4.9	-----	5.7	-----	35	-----	23	49	-----
TOTAL	0	0	20.70	125.2	2,365.7	5,480.5	423.4	1,011.8	460.77	551.0	942	1,195
MEAN	0	0	.67	4.04	84.5	177	14.1	32.6	15.4	17.8	30.4	39.8
MAX	0	0	8.0	34	726	872	41	72	32	27	49	54
MIN	0	0	0	0	1.4	5.7	1.8	2.0	0	5.8	22	33
AC-FT	0	0	41	248	4,690	10,870	840	2,010	914	1,090	1,870	2,370
CAL YR 1968	TOTAL	1,229.53	MEAN	3.36	MAX	288	MIN	0	AC-FT	2,440		
WTR YR 1969	TOTAL	12,576.07	MEAN	34.5	MAX	872	MIN	0	AC-FT	24,940		

ALAMEDA CREEK BASIN

11-1790. ALAMEDA CREEK NEAR NILES, CALIF.

LOCATION.--Lat 37°35'14", long 121°57'35", in NW¼ sec.15, T.4 S., R.1 W., Alameda County, on right bank 0.3 mile downstream from railroad bridge, and 1.2 miles northeast of Niles.

DRAINAGE AREA.--633 sq mi.

PERIOD OF RECORD.--January 1891 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as "at Niles Dam" 1891-1900, and as "at Sunol Glen" 1901-21.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 85.66 ft above mean sea level. Prior to 1901, nonrecording gage at site 1 mile upstream at different datum. 1901 to Sept. 30, 1914, nonrecording gage and Oct. 1, 1914, to Sept. 30, 1916, water-stage recorder at site 4.5 miles upstream at different datum. Oct. 1, 1916, to Dec. 17, 1923, water-stage recorder at site 800 ft upstream at different datum.

AVERAGE DISCHARGE.--78 years, 120 cfs (86,940 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,300 cfs Jan. 26 (gage height, 8.44 ft); minimum daily, 7.3 cfs Nov. 22.

Period of record: Maximum discharge, 29,000 cfs Dec. 23, 1955 (gage height, 14.9 ft); minimum (1891-62), no flow at times; minimum daily (1963 to current year), 1.4 cfs Dec. 7, 8, 1962.

REMARKS.--Records good. Flow regulated by Calaveras Reservoir (usable capacity, 96,800 acre-ft, most of which is diverted for San Francisco water supply) beginning in 1916 although dam not completed until 1925, by San Antonio Reservoir beginning in February 1965 (capacity, 51,000 acre-ft), and by Del Valle Reservoir 23 miles upstream beginning in September 1968 (capacity, 77,100 acre-ft). Natural flow of stream affected by imported water from Delta-Mendota Canal beginning in 1962. Other diversions from ground water basin for irrigation of 9,000 acres above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	47	47	52	132	3,670	90	29	39	23	27	50
2	17	49	42	45	103	2,420	96	27	31	19	26	56
3	25	50	31	35	83	2,050	121	23	29	12	25	51
4	24	45	30	41	67	1,800	93	27	31	11	25	53
5	26	14	30	41	106	1,530	131	28	30	18	26	49
6	25	20	30	40	1,270	794	229	28	30	18	25	42
7	27	40	31	41	430	615	195	47	31	14	26	42
8	63	38	31	39	195	445	172	67	31	14	27	45
9	58	35	31	39	133	370	154	78	28	15	27	39
10	50	33	12	38	97	332	146	79	19	15	26	43
11	56	25	31	37	299	299	158	79	16	20	25	37
12	54	24	22	12	783	326	142	79	16	26	25	36
13	54	26	12	16	227	369	129	64	17	27	25	36
14	56	24	13	44	161	304	119	43	17	30	25	38
15	56	22	41	19	514	271	111	24	18	23	26	36
16	47	24	84	42	455	248	100	18	14	21	32	38
17	46	13	25	41	238	240	94	42	11	21	35	38
18	43	11	14	43	472	178	88	48	8.6	21	34	37
19	42	11	36	696	321	164	84	46	8.6	22	34	37
20	42	7.6	93	568	194	166	79	46	7.9	23	33	41
21	41	9.1	74	655	155	193	74	45	21	22	37	48
22	40	7.3	48	400	259	139	71	44	25	23	48	46
23	40	35	48	148	590	121	65	43	27	21	45	38
24	39	48	38	107	878	107	65	45	27	23	37	37
25	40	47	53	2,010	1,720	104	54	50	24	27	39	38
26	40	45	176	2,220	2,130	102	51	49	23	27	39	41
27	41	42	48	608	1,770	99	45	40	18	28	38	38
28	41	47	27	684	2,440	96	41	39	16	25	39	39
29	41	45	27	378	-----	111	40	36	28	27	40	44
30	43	47	56	419	-----	111	36	32	29	26	46	38
31	44	-----	54	268	-----	91	-----	39	-----	27	49	-----
TOTAL	1,278	931.0	1,335	9,826	16,222	17,865	3,073	1,384	671.1	669	1,011	1,251
MEAN	41.2	31.0	43.1	317	579	576	102	44.6	22.4	21.6	32.6	41.7
MAX	63	50	176	2,220	2,440	3,670	229	79	39	30	49	56
MIN	17	7.3	12	12	67	91	36	18	7.9	11	25	36
AC-FT	2,530	1,850	2,650	19,490	32,180	35,430	6,100	2,750	1,330	1,330	2,010	2,480
CAL YR 1968	TOTAL 19,887.8		MEAN 54.3		MAX 748		MIN 7.3		AC-FT 39,450			
WTR YR 1969	TOTAL 55,516.1		MEAN 152		MAX 3,670		MIN 7.3		AC-FT 110,100			

11-1805. DRY CREEK AT UNION CITY, CALIF.

LOCATION.--Lat 37°36'22", long 122°01'22", in Arroyo de la Alameda Grant, Alameda County, on right bank 900 ft downstream from bridge on State Highway 9 in Decoto District in Union City, and 1.7 miles upstream from mouth.

DRAINAGE AREA.--9.41 sq mi.

PERIOD OF RECORD.--October 1916 to September 1919 (published as "near Decoto"), April 1959 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 85.12 ft above mean sea level. Prior to Apr. 1, 1959, at site 1.4 miles downstream at different datum.

AVERAGE DISCHARGE.--13 years, 1.63 cfs (1,180 acre-ft per year); median of yearly mean discharges, 1.3 cfs (940 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 536 cfs Jan. 25 (gage height, 3.78 ft); no flow for several months. Period of record: Maximum discharge, 930 cfs Oct. 13, 1962 (gage height, 5.27 ft, from outside gage), from rating curve extended above 140 cfs on basis of slope-area measurement of maximum flow; no flow most of each year.

REVISIONS.--The figures of maximum discharge for some water years have been revised as shown in following table. They supersede figures published in the water-supply papers indicated.

WRD Calif.	WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
1962	1929	1962	Feb. 14, 1962	345	3.50
1965	1929	1965	Jan. 5, 1965	545	-
1967	-	1967	Jan. 30, 1967	522	3.75

REMARKS.--Records good. No regulation or diversion above station.

REVISIONS.--WSP 1929: Drainage area. The figures of peak discharge for water years 1963, 1965, 1967 have been revised as shown in the following table. They supersede figures published in WSP 1830-A, 1929, and WRD Calif. 1963, 1965, 1967.

REVISED PEAK DISCHARGE.--1963: Jan. 31 (2000) 225 cfs (3.20 ft).

1965: Dec. 23 (time unknown) 238 cfs (3.05 ft); Jan. 5 (2100) 545 cfs.

1967: Jan. 21 (1500) 455 cfs (3.6 ft); Jan. 24 (2230) 170 cfs (2.85 ft); Jan. 30 (1000) 522 cfs (3.75 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.04	0	16	53	2.9	1.3	.17	0	0	0
2	0	0	0	0	11	31	3.5	1.3	.17	0	0	0
3	0	.03	0	0	8.5	25	3.8	1.2	.19	0	0	0
4	0	0	0	0	7.8	20	2.9	1.1	.19	0	0	0
5	0	0	0	0	26	16	7.5	1.0	.19	0	0	0
6	0	0	0	0	55	13	7.8	.89	.19	0	0	0
7	0	0	0	0	28	11	4.7	.84	.19	0	0	0
8	0	0	0	0	19	9.6	4.0	.79	.27	0	0	0
9	0	0	0	0	11	8.9	3.7	.74	.40	0	0	0
10	0	0	.33	0	8.5	8.1	3.5	.74	.40	0	0	0
11	0	0	0	0	46	7.4	3.2	.74	.34	0	0	0
12	0	0	0	0	36	8.5	3.0	.74	.31	0	0	0
13	0	0	0	.34	21	7.4	2.9	.65	.29	0	0	0
14	0	.03	0	.15	18	6.3	2.8	.65	.31	0	0	0
15	0	.02	.44	0	28	5.7	2.6	.61	.27	0	0	0
16	0	0	0	0	21	5.7	2.4	.57	.21	0	0	0
17	0	0	0	0	33	5.7	2.3	.49	.13	0	0	0
18	0	0	0	3.2	38	5.4	2.3	.46	.09	0	0	0
19	0	0	0	65	24	4.9	2.2	.43	.10	0	0	0
20	0	0	0	64	20	9.3	2.0	.43	.09	0	0	0
21	0	0	0	55	17	7.4	1.9	.40	.09	0	0	0
22	0	0	0	24	25	5.2	1.8	.40	.08	0	0	0
23	0	0	0	14	46	4.7	1.9	.37	.07	0	0	0
24	0	0	0	12	44	4.2	1.8	.34	.05	0	0	0
25	0	0	.48	166	35	3.7	1.7	.29	.04	0	0	0
26	0	0	3.0	75	32	3.5	1.6	.27	.02	0	0	0
27	0	0	.16	34	24	3.5	1.4	.25	0	0	0	0
28	0	0	.34	43	62	3.4	1.4	.25	0	0	0	0
29	0	0	.02	25	-----	3.2	1.3	.21	0	0	0	0
30	0	0	0	26	-----	3.0	1.3	.21	0	0	0	0
31	0	-----	0	16	-----	3.0	-----	.21	-----	0	0	-----
TOTAL	0	0.08	4.81	622.69	760.8	306.7	86.1	18.87	4.85	0	0	0
MEAN	0	.003	.16	20.1	27.2	9.89	2.87	.61	.16	0	0	0
MAX	0	.03	3.0	166	62	53	7.8	1.3	.40	0	0	0
MIN	0	0	0	0	7.8	3.0	1.3	.21	0	0	0	0
AC-FT	0	.2	9.5	1,240	1,510	608	171	37	9.6	0	0	0
CAL YR 1968	TOTAL	313.18	MEAN	.86	MAX	40	MIN	0	AC-FT	621		
WTR YR 1969	TOTAL	1,804.90	MEAN	4.94	MAX	166	MIN	0	AC-FT	3,580		

PEAK DISCHARGE (BASE, 40 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-20	1830	2.81	158	2-17	2130	2.62	107
1-25	0830	3.78	536	2-23	0445	2.53	87
2- 6	0630	2.51	82	2-28	1145	2.86	174
2-11	2000	2.71	130				

ALAMEDA CREEK BASIN

11-1807. PATTERSON CREEK AT UNION CITY, CALIF.

LOCATION.--Lat 37°55'09", long 122°02'50", in Portero de Los Cerritos Grant, Alameda County, on right bank 0.1 mile downstream from effluence, 0.2 mile upstream from bridge on State Highway 17 (Nimitz Freeway), and 2.0 miles southwest of Decoto District in Union City.

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

GAGE.--Water-stage recorder. Datum of gage is 4.13 ft above mean sea level. Prior to Oct. 26, 1966, at site 0.2 mile downstream at same datum.

AVERAGE DISCHARGE.--11 years, 47.5 cfs (34,410 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,760 cfs Jan. 19 (gage height, 12.51 ft); no flow at times.

Period of record: Maximum discharge, 10,500 cfs Feb. 1, 1963 (gage height, 20.4 ft, from floodmarks); no flow for most of each year.

REMARKS.--Records good except those for periods of backwater from temporary dams, which are poor. This stream is a distributary of Alameda Creek. See Remarks for Alameda Creek at Union City.

COOPERATION.--Three discharge measurements furnished by Alameda County Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.1	160	3,140	107	21	.02	0	0	0
2	0	0	0	.1	103	2,230	114	23	.01	0	0	0
3	0	0	0	.1	79	1,940	141	12	.02	0	0	0
4	0	0	0	.1	67	1,720	114	6.9	.02	0	0	0
5	0	0	0	.1	131	1,500	146	.23	.02	0	0	0
6	0	0	0	.1	1,310	842	241	.38	.05	0	0	0
7	0	0	0	.1	646	656	222	.08	.04	0	0	0
8	0	0	0	.1	278	504	187	.05	.03	0	0	.18
9	0	0	0	.1	169	405	160	.03	.02	0	0	1.3
10	0	0	0	2.0	114	350	149	.07	.01	0	0	.17
11	0	0	0	3.8	295	319	163	.02	0	0	0	2.6
12	0	0	0	2.2	1,000	324	157	.01	0	0	0	9.4
13	0	0	0	2.6	332	395	144	.01	0	0	0	11
14	0	0	0	2.3	200	324	133	0	0	0	0	11
15	0	30	26	1.4	551	283	119	0	0	0	0	11
16	0	0	90	.9	633	253	103	0	0	0	0	11
17	0	0	90	.9	146	237	98	8.9	0	0	0	9.4
18	0	0	20	26	576	190	90	14	0	0	0	8.4
19	0	0	0	803	477	175	92	5.4	0	0	0	8.4
20	0	0	0	637	257	175	75	2.6	0	0	0	8.4
21	0	0	0	722	175	218	60	2.2	0	0	0	7.4
22	0	0	0	485	306	163	65	1.9	0	0	0	3.8
23	0	0	0	202	700	136	60	1.7	0	0	0	2.3
24	0	0	0	138	924	116	60	1.5	0	0	0	2.3
25	0	0	59	2,310	1,720	116	43	.38	0	0	0	2.2
26	0	0	121	2,440	2,030	111	60	.08	0	0	0	4.8
27	0	0	119	869	1,750	105	67	.08	0	0	0	7.4
28	0	0	94	827	2,300	107	47	.07	0	0	0	7.9
29	0	0	42	516	-----	121	28	.05	0	0	0	8.4
30	0	0	13	456	-----	136	30	.02	0	0	0	9.4
31	0	-----	.11	314	-----	111	-----	.02	-----	0	0	-----
TOTAL	0	30	674.11	10,762.0	17,429	17,402	3,275	102.68	0.24	0	0	148.15
MEAN	0	1.00	21.7	347	622	561	109	3.31	.008	0	0	4.94
MAX	0	30	121	2,440	2,300	3,140	241	23	.05	0	0	11
MIN	0	0	0	.10	67	105	28	0	0	0	0	0
AC-FT	0	60	1,340	21,350	34,570	34,520	6,500	204	.5	0	0	294
CAL YR 1968	TOTAL	3,734.08	MEAN	10.2	MAX	752	MIN	0	AC-FT	7,410		
WTR YR 1969	TOTAL	49,823.18	MEAN	137	MAX	3,140	MIN	0	AC-FT	98,820		

ALAMEDA CREEK BASIN

379

11-1807.5. ALAMEDA CREEK AT UNION CITY, CALIF.

LOCATION.--Lat 37°35'46", long 122°03'15", in Arroyo de la Alameda Grant, Alameda County, on left bank 5 ft downstream from bridge on Baker Road, 1 mile downstream from Dry Creek, and 1.4 miles east of Alvarado District in Union City.

DRAINAGE AREA.--653 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 0.40 ft above mean sea level.

AVERAGE DISCHARGE.--11 years, 1.56 cfs (1,130 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1.8 cfs Jan. 25 (gage height, 9.41 ft); no flow for most of year.
Period of record: Maximum discharge, 1,770 cfs Feb. 1, 1963 (gage height, 19.25 ft, from floodmarks); no flow for most of each year.

REMARKS.--Records fair. Flow completely regulated by gates at Patterson Creek since October 1966. For total flow in Alameda Creek, add flow of Patterson Creek at Union City (see REMARKS for Alameda Creek near Niles). Diversion by Alameda County Water District to percolation ponds between stations near Niles and at Union City; additional percolation to ground water by placing check dams in channel during summer months.

REVISIONS.--WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	.01	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	.01	0	0	0	0	0	0	0	0	0
11	0	0	0	0	.01	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	.01	0	0	0	0	0	0	0	0	0	0
15	0	.01	.02	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	.01	0	0	0	0	0	0	0	0
19	0	0	0	.06	0	0	0	0	0	0	0	0
20	0	0	0	.01	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	.01	0	0	0	0	0	0	0	0
25	0	0	.04	.09	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	.01	0	0	0	0	0	0	0
29	0	0	0	0	-----	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	0.02	0.07	0.18	0.03	0	0	0	0	0	0	0
MEAN	0	.0007	.002	.006	.001	0	0	0	0	0	0	0
MAX	0	.01	.04	.09	.01	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	.04	.1	.4	.06	0	0	0	0	0	0	0
CAL YR 1968	TOTAL 15.99		MEAN .044		MAX 12	MIN 0		AC-FT 32				
WTR YR 1969	TOTAL .30		MEAN .0008		MAX .09	MIN 0		AC-FT .6				

SAN LORENZO CREEK BASIN

11-1810. SAN LORENZO CREEK AT HAYWARD, CALIF.

LOCATION.--Lat 37°41'11", long 122°03'44", in San Lorenzo Grant, Alameda County, on right bank at bridge on B Street, just outside city limits of Hayward, 0.5 mile downstream from Crow Creek, and 0.9 mile downstream from Don Castro Dam.

DRAINAGE AREA.--37.5 sq mi.

PERIOD OF RECORD.--October 1939 to September 1940, October 1946 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder and concrete control (control ineffective since 1952 due to gravel fill). Datum of gage is 133.16 ft above mean sea level. January to September 1940, nonrecording gage on bridge at present site and datum.

AVERAGE DISCHARGE.--24 years, 14.4 cfs (10,430 acre-ft per year); median of yearly mean discharges, 7.1 cfs (5,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,410 cfs Jan. 26 (gage height, 10.33 ft); minimum daily, 0.01 cfs Oct. 4, 7, 8, 10, 11.

Period of record: Maximum discharge, 7,460 cfs Oct. 13, 1962 (gage height, 19.73 ft, from floodmarks), from rating curve extended above 2,700 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 20.82 ft, from floodmarks, Dec. 22, 1955; no flow at times.

REMARKS.--Records good. Flow partly regulated by Don Castro Reservoir (formerly San Lorenzo Creek Reservoir) 0.9 mile upstream beginning in January 1965 (capacity, 380 acre-ft) and Cull Creek Reservoir beginning in October 1962 (capacity, 310 acre-ft). A few very small diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.10	2.6	.87	90	200	16	1.5	2.7	1.7	.49	.09
2	.67	1.3	1.4	.77	73	120	20	1.4	2.8	1.7	.42	2.1
3	.53	9.8	1.4	.69	64	80	19	2.3	2.9	1.5	.25	1.5
4	.01	.49	3.3	.66	59	61	15	5.6	3.2	1.2	.21	1.7
5	.02	.25	3.4	.66	213	54	53	5.8	3.2	1.2	.21	1.3
6	.02	.30	3.6	.61	277	52	45	5.2	3.1	1.3	.21	1.3
7	.01	.25	3.8	.57	103	50	23	5.1	2.9	1.0	.21	1.8
8	.01	.23	5.2	.57	55	49	20	4.7	4.5	1.0	.21	1.8
9	.02	.20	4.2	.54	40	48	23	4.5	5.5	1.0	.22	1.9
10	.01	.17	20	.49	36	47	22	4.9	5.9	.99	.11	1.6
11	.01	.22	8.3	1.4	237	49	20	5.7	4.9	1.0	.10	1.8
12	.10	1.7	9.1	.94	177	56	19	6.1	5.3	1.0	1.1	1.8
13	.13	.49	16	27	108	47	21	6.0	2.3	.87	4.8	1.9
14	.10	2.6	21	8.3	101	41	18	5.8	3.3	.87	4.1	2.0
15	.09	5.9	40	4.0	145	39	16	5.7	4.0	.76	3.6	2.3
16	.05	1.4	10	3.1	103	37	18	5.4	3.6	.76	4.6	2.4
17	.04	.68	8.1	2.8	130	38	18	4.8	3.2	.66	5.1	2.0
18	.04	.83	7.9	28	141	34	19	4.4	2.7	.49	4.2	2.1
19	.04	.72	7.8	191	106	31	19	4.8	2.5	.57	3.7	2.0
20	.04	.66	5.2	243	88	48	19	4.7	2.5	.57	3.6	1.7
21	.04	.66	3.2	224	86	37	18	4.6	2.9	.49	3.3	1.8
22	.05	.66	3.2	122	105	28	18	5.0	2.7	.49	3.3	1.8
23	.05	.57	2.2	75	193	25	24	5.1	2.6	.57	2.9	1.9
24	.04	2.2	1.7	77	190	23	23	4.9	2.9	.49	2.9	1.9
25	.04	1.5	16	378	188	22	15	4.1	2.5	.57	3.5	1.9
26	.04	.87	11	369	167	20	11	4.1	2.3	.66	.17	2.0
27	.04	.66	1.6	154	133	19	10	3.9	2.0	.57	.20	2.1
28	.04	.61	8.0	212	308	18	5.7	4.0	1.9	.66	.90	2.2
29	.04	.86	2.5	123	-----	17	1.8	3.0	1.7	.57	.14	2.1
30	.08	2.2	1.4	160	-----	20	1.7	3.0	1.5	.49	.13	2.6
31	.12	-----	.95	97	-----	19	-----	2.9	-----	.49	.12	-----
TOTAL	3.72	39.08	234.05	2,506.97	3,716	1,429	571.2	139.0	94.0	26.19	55.00	55.39
MEAN	.12	1.30	7.55	80.9	133	46.1	19.0	4.48	3.13	.84	1.77	1.85
MAX	1.2	9.8	40	378	308	200	53	6.1	5.9	1.7	5.1	2.6
MIN	.01	.10	.95	.49	36	17	1.7	1.4	1.5	.49	.10	.09
AC-FT	7.4	78	464	4,970	7,370	2,830	1,130	276	186	52	109	110
CAL YR 1968	TOTAL 1,955.79		MEAN 5.34		MAX 138		MIN .01		AC-FT 3,880			
WTR YR 1969	TOTAL 8,869.60		MEAN 24.3		MAX 378		MIN .01		AC-FT 17,590			

PEAK DISCHARGE (BASE, 350 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-20	1915	7.69	428	2-11	1700	-	490
1-26	0300	10.33	1,410	2-23	0300	-	450
2- 5	2330	9.19	926	2-28	0900	-	580

NOTE.--No gage-height record Feb. 6 to Mar. 5.

SAN LORENZO CREEK BASIN

381

11-1810.4. SAN LORENZO CREEK AT SAN LORENZO, CALIF.

LOCATION.--Lat 37°41'03", long 122°08'20", in San Lorenzo (Soto) Grant, Alameda County, on left bank 400 ft downstream from Washington Avenue bridge in San Lorenzo, and 1.6 miles upstream from mouth.

DRAINAGE AREA.--44.6 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 6.13 ft above mean sea level (levels by Alameda County Flood Control and Water Conservation District).

EXTREMES.--Current year: Maximum discharge, 1,900 cfs Jan. 26 (gage height, 6.36 ft), from rating curve extended above 900 cfs; minimum daily, 0.05 cfs Oct. 23.

Period of record: Maximum discharge, 1,900 cfs Jan. 26, 1969 (gage height, 6.36 ft), from rating curve extended above 900 cfs; minimum daily, 0.05 cfs Oct. 23, 1968.

REMARKS.--Records fair. Flow partly regulated by Cull Creek Reservoir beginning in October 1962 (capacity, 310 acre-ft), and Don Castro Reservoir (formerly San Lorenzo Creek Reservoir) 7 miles upstream beginning in January 1965 (capacity, 380 acre-ft). A few very small diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	.50	17	2.3	81	285	29	4.8	5.5	3.6	4.2	1.0
2	2.1	11	1.7	2.1	57	176	44	5.3	5.5	2.9	3.2	2.0
3	2.5	46	1.4	1.9	49	144	33	5.0	5.5	3.2	6.3	2.2
4	1.6	2.0	2.4	2.0	44	115	28	8.8	5.5	2.6	3.9	2.2
5	1.0	1.5	2.7	2.2	348	96	116	9.5	5.3	2.0	1.4	2.3
6	1.8	5.8	2.9	2.0	501	81	60	9.5	4.8	1.8	1.4	2.7
7	1.4	1.5	5.6	1.8	157	72	28	6.6	4.0	1.5	1.3	2.4
8	.74	.87	11	1.7	103	66	26	6.4	6.4	1.4	1.3	2.4
9	.84	.93	3.6	1.7	77	61	26	6.4	6.8	1.2	3.1	2.9
10	.83	.93	77	1.6	63	55	23	6.9	6.6	1.1	6.2	2.7
11	.94	1.9	9.0	11	453	49	23	7.4	4.6	1.1	1.0	2.7
12	2.7	12	3.3	6.9	176	64	23	7.2	5.8	1.0	.69	2.8
13	1.5	1.1	13	93	115	48	24	6.9	2.2	.93	3.3	2.9
14	1.3	29	17	15	124	44	22	6.9	2.9	.93	3.6	3.2
15	1.4	18	50	5.0	193	43	20	6.6	3.2	.93	3.8	4.2
16	1.0	2.1	14	3.4	122	40	22	6.9	3.0	.93	3.8	4.3
17	.75	1.4	9.6	2.9	250	45	21	7.2	3.0	.87	3.6	4.1
18	.64	3.0	12	76	228	39	23	7.2	2.9	.81	3.8	4.5
19	.42	1.3	11	321	117	38	23	7.7	3.0	.75	4.2	4.9
20	.54	1.2	5.5	328	94	74	23	8.1	3.0	.75	4.2	4.7
21	.64	1.0	3.2	292	95	46	23	8.1	3.0	.81	4.8	4.8
22	.50	1.1	3.3	130	134	38	23	8.5	3.4	.87	5.5	4.7
23	.05	1.1	2.7	71	231	36	34	8.5	3.4	1.0	5.5	4.7
24	.35	13	6.1	114	261	33	26	8.5	4.4	1.1	5.3	5.1
25	.81	2.7	70	456	220	33	20	8.5	4.2	1.1	5.5	5.2
26	.54	1.7	39	484	202	33	18	8.5	4.0	1.3	1.8	5.3
27	.59	1.2	5.9	201	144	32	17	8.5	3.8	1.3	1.9	4.8
28	.59	1.0	36	286	478	31	13	8.5	3.8	1.5	2.3	4.4
29	1.3	7.0	6.9	132	-----	30	4.4	8.1	3.3	1.5	1.5	4.4
30	1.1	8.3	3.4	175	-----	32	4.6	7.4	3.3	1.5	1.2	4.4
31	.59	-----	2.6	82	-----	32	-----	6.6	-----	2.0	1.1	-----
TOTAL	34.46	180.13	448.8	3,304.5	5,117	2,011	820.0	231.0	126.1	44.28	100.69	108.9
MEAN	1.11	6.00	14.5	107	183	64.9	27.3	7.45	4.20	1.43	3.25	3.63
MAX	3.4	46	77	484	501	285	116	9.5	6.8	3.6	6.3	5.3
MIN	.05	.50	1.4	1.6	44	30	4.4	4.8	2.2	.75	.69	1.0
AC-FT	68	357	890	6,550	10,150	3,990	1,630	458	250	88	200	216
CAL YR 1968	TOTAL	3,898.01	MEAN	10.7	MAX	526	MIN	.05	AC-FT	7,730		
WTR YR 1969	TOTAL	12,526.86	MEAN	34.3	MAX	501	MIN	.05	AC-FT	24,850		

PEAK DISCHARGE (BASE, 850 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0100	5.51	1,090	2-11	1730	5.70	1,280
1-26	0330	6.36	1,900	2-28	0930	6.03	1,590
2- 6	0030	5.74	1,310				

CASTRO CREEK BASIN

11-1814. WILDCAT CREEK AT RICHMOND, CALIF.

LOCATION.--Lat 37°57'41", long 122°21'33", in San Pablo Grant, Contra Costa County, on left bank 200 ft down-stream from Southern Pacific Railway bridge at east city limits of Richmond, and 2 miles upstream from mouth.

DRAINAGE AREA.--8.69 sq mi.

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 20.62 ft above mean sea level.

AVERAGE DISCHARGE.--5 years, 4.90 cfs (3,550 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 375 cfs Jan. 19 (gage height, 7.03 ft); no flow for many days.

Period of record: Maximum discharge, 622 cfs Jan. 21, 1967 (gage height, 9.65 ft); no flow for many days in each year.

REMARKS.--Records good. Minor storage in Lake Anza and Jewel Lake. No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.28	.56	13	58	3.4	1.3	.09	0	0	0
2	0	0	0	.39	10	36	7.6	1.2	.15	0	0	0
3	0	0	0	.27	8.9	27	5.6	1.2	.12	0	0	0
4	0	0	.64	.20	8.9	20	4.5	1.1	.15	.05	0	0
5	0	0	.92	.18	50	17	53	1.0	.21	.07	0	0
6	0	0	1.3	.13	55	14	22	.97	.25	.05	0	0
7	0	0	14	.10	23	12	9.4	.94	.18	0	0	0
8	0	0	2.0	.09	17	11	7.6	.88	.21	.09	0	0
9	0	0	9.3	.07	22	9.4	8.5	.88	.30	.88	0	0
10	0	0	19	.03	16	8.1	5.6	.88	.43	.21	0	0
11	0	.84	7.0	7.8	7.9	6.7	4.5	.88	.25	.01	0	0
12	0	.47	3.0	9.0	47	32	4.5	.88	.25	0	0	0
13	0	0	7.6	43	24	17	4.2	.88	.18	0	0	0
14	0	12	6.8	12	65	10	3.9	.78	.25	0	0	0
15	0	4.3	23	7.4	124	8.5	3.4	.67	.36	0	0	0
16	0	.13	7.1	6.6	45	8.9	3.1	.58	1.2	0	0	0
17	0	0	1.9	6.0	32	9.8	3.1	.67	.43	0	0	0
18	0	.68	9.2	45	37	8.5	3.1	.78	.78	0	0	0
19	0	0	8.2	98	26	7.6	3.1	.78	.99	0	0	0
20	0	0	.56	157	20	11	2.9	.67	.67	0	0	0
21	0	0	1.8	114	20	9.4	2.9	.50	.88	.34	0	0
22	0	0	2.1	47	22	6.3	2.6	.50	.88	.26	0	0
23	0	0	2.2	15	53	5.6	10	.50	.99	0	0	0
24	0	.63	11	23	70	4.9	3.0	.50	.21	0	0	0
25	0	0	8.7	93	56	4.2	2.2	.67	0	0	0	0
26	0	0	7.0	102	37	3.9	2.0	.50	0	0	0	0
27	0	0	2.1	39	33	3.9	1.8	.25	0	0	0	0
28	0	0	22	47	79	3.9	1.6	.18	0	0	0	0
29	0	.02	3.7	25	-----	3.4	1.5	.15	0	0	0	0
30	0	.04	1.6	34	-----	3.4	1.4	.12	0	0	0	0
31	0	-----	.83	15	-----	3.4	-----	.09	-----	0	0	-----
TOTAL	0	19.11	184.83	947.82	1,092.8	384.8	192.0	21.88	10.41	1.96	0	0
MEAN	0	.64	5.96	30.6	39.0	12.4	6.40	.71	.35	.063	0	0
MAX	0	12	23	157	124	58	53	1.3	1.2	.88	0	0
MIN	0	0	0	.03	8.9	3.4	1.4	.09	0	0	0	0
AC-FT	0	38	367	1,880	2,170	763	381	43	21	3.9	0	0
CAL YR 1968	TOTAL	923.77		MEAN 2.52		MAX 91		MIN 0		AC-FT 1,830		
WTR YR 1969	TOTAL	2,855.61		MEAN 7.82		MAX 157		MIN 0		AC-FT 5,660		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	2315	7.03	375	2-24	0500	4.78	123
1-26	0300	6.02	248	2-28	1115	5.20	162
2-11	1345	5.07	149	4- 5	0830	4.68	114
2-15	0445	6.14	262				

RHEEM CREEK BASIN

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11-1820.3. RHEEM CREEK AT SAN PABLO, CALIF.

LOCATION.--Lat 37°58'38", long 122°21'10", in San Pablo Grant, Contra Costa County, on left bank 50 ft downstream from Santa Fe Railway bridge at San Pablo, and 0.7 mile upstream from mouth.

DRAINAGE AREA.--1.09 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 13.63 ft above mean sea level (Corps of Engineers bench mark). Prior to Aug. 13, 1965, at site 0.2 mile upstream at datum 7.74 ft higher.

AVERAGE DISCHARGE.--8 years (1961-69), 1.38 cfs (1,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 223 cfs Jan. 18 (gage height, 5.16 ft); minimum daily, 0.04 cfs Oct. 8, 17, 21, 22.

Period of record: Maximum discharge, 417 cfs Jan. 29, 1968 (gage height, 6.58 ft), from rating curve extended above 150 cfs; no flow at times.

REMARKS.--Records good. Low flow affected by return flow from industrial waste, leakage and infrequent releases from off stream North Reservoir.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.05	2.1	.28	1.2	3.1	.29	.19	.13	.17	.34	.10
2	.08	9.7	.12	.28	.81	2.8	2.8	.20	.14	.27	.32	.13
3	.06	5.7	.11	.21	.69	1.3	.40	.20	.17	.41	.45	.23
4	.05	.18	.08	.19	1.0	.92	1.2	.21	.23	.20	.74	.19
5	.06	.12	.09	.18	21	.80	18	.24	.28	.14	.46	.19
6	.05	.80	.09	.18	5.7	.72	1.1	.19	.24	.15	.37	.13
7	.05	.15	1.3	.17	1.4	.61	.44	.18	.18	.23	.28	.10
8	.04	.11	1.6	.16	.99	.61	.34	.19	.18	.35	.29	.16
9	.07	.11	15	.16	4.9	.55	1.7	.28	.23	.24	.27	.10
10	.05	.10	21	.16	1.2	.56	.35	.20	.21	.24	.22	.08
11	.06	1.4	1.0	2.8	29	.48	.32	.18	.23	.29	.23	.10
12	6.8	.76	.33	4.2	2.8	7.1	.28	.20	.19	.22	.50	.10
13	.72	.08	9.6	24	1.2	.77	.29	.20	.21	.20	.28	.07
14	.10	15	5.3	.98	27	.54	.27	.30	.19	.22	.19	.06
15	.06	2.3	15	.54	13	.50	.24	.20	.15	.21	.19	.06
16	.05	1.3	.64	.45	2.3	.81	.26	.30	.28	.32	.19	.11
17	.04	.15	.29	.36	3.8	.98	.26	.31	.16	.35	.19	.08
18	.05	1.6	.21	37	10	.43	.24	.20	.16	.33	.23	.10
19	.05	.18	.19	33	2.0	.42	.25	.32	.22	.25	.23	.16
20	.05	.13	.16	36	1.1	2.8	.30	.20	.27	.22	.28	.09
21	.04	.11	.14	21	3.4	.98	.23	.17	.20	.22	.28	.09
22	.04	.10	.13	3.4	2.1	.39	.24	.17	.12	.27	.23	.10
23	.06	.11	.14	2.5	16	.36	3.4	.26	.15	.25	.19	.18
24	.06	1.2	11	13	11	.32	.35	.26	.23	.36	.16	.12
25	.07	.10	4.9	28	7.1	.30	.20	.19	.20	.31	.19	.09
26	.06	.09	3.1	15	1.7	.32	.22	.15	.34	.31	.16	.17
27	.07	.09	1.4	4.5	4.2	.32	.21	.17	.31	.23	.13	.08
28	.07	.07	18	5.3	19	.30	.19	.23	.22	.41	.13	.09
29	1.7	.62	.82	8.6	-----	.30	.21	.28	.22	.31	.16	.09
30	.36	.24	.42	8.9	-----	.31	.19	.20	.21	.32	.16	.07
31	.06	-----	.31	1.4	-----	.29	-----	.18	-----	.36	.10	-----
TOTAL	11.13	42.65	114.57	252.90	195.59	30.99	34.77	6.75	6.25	8.36	8.14	3.42
MEAN	.36	1.42	3.70	8.16	6.99	1.00	1.16	.22	.21	.27	.26	.11
MAX	6.8	15	21	37	29	7.1	18	.32	.34	.41	.74	.23
MIN	.04	.05	.08	.16	.69	.29	.19	.15	.12	.14	.10	.06
AC-FT	22	85	227	502	388	61	69	13	12	17	16	6.8

CAL YR 1968 TOTAL 464.42 MEAN 1.27 MAX 44 MIN .03 AC-FT 921
WTR YR 1969 TOTAL 715.52 MEAN 1.96 MAX 37 MIN .04 AC-FT 1,420

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	0930	4.74	176	1-19	2100	4.71	173
1-18	1745	5.16	223	2-14	1645	4.70	172

PINOLE CREEK BASIN

11-1821. PINOLE CREEK AT PINOLE, CALIF.

LOCATION.--Lat 37°58'21", long 122°14'43", in Pinole Grant, Contra Costa County, on left bank 0.2 mile downstream from county bridge on Pinole Valley Road, 0.8 mile upstream from Pinole city boundary.

DRAINAGE AREA.--10.0 sq mi.

PERIOD OF RECORD.--December 1938 to current year. Monthly discharge only for water years 1939-59, published in WSP 1735.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 170 ft (from topographic map).

AVERAGE DISCHARGE.--30 years (1939-69), 3.73 cfs (2,700 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 682 cfs Jan. 26 (gage height, 6.54 ft); minimum daily, 0.05 cfs Oct. 10.

Period of record: Maximum discharge, 1,660 cfs Apr. 2, 1958 (gage height, 11.63 ft); no flow at times.

REMARKS.--No storage or diversion above station except for minor stock ponds.

COOPERATION.--Records furnished by East Bay Municipal Utility District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.25	.37	.51	12	56	8.5	3.9	1.2	.69	.24	.15
2	.08	.37	.34	.52	9.3	45	9.2	3.8	1.2	.60	.25	.14
3	.08	.84	.33	.55	8.2	32	9.2	3.5	1.2	.55	.23	.13
4	.08	.37	.35	.53	7.2	25	8.4	3.4	1.2	.55	.16	.14
5	.08	.29	.35	.53	54	21	21	3.2	1.3	.53	.12	.09
6	.12	.30	.35	.51	79	19	13	3.2	1.2	.53	.12	.07
7	.09	.31	.35	.48	16	17	9.3	2.9	1.2	.53	.16	.08
8	.07	.29	.37	.44	12	16	8.6	2.9	1.5	.48	.17	.07
9	.06	.27	.40	.42	12	15	8.9	2.8	1.7	.53	.21	.06
10	.05	.27	2.2	.42	9.3	14	8.4	2.8	1.7	.51	.19	.07
11	.10	.28	1.1	.46	95	13	7.9	3.2	1.5	.44	.19	.08
12	.21	.42	.48	.52	28	47	7.6	2.8	1.4	.42	.21	.15
13	.19	.31	.54	14	16	18	7.4	2.5	1.4	.42	.17	.16
14	.21	.36	2.3	2.3	88	15	7.4	2.3	1.2	.42	.15	.17
15	.19	1.0	6.5	.98	150	13	7.2	2.3	1.2	.44	.16	.21
16	.16	.39	1.3	.75	37	13	7.0	2.0	1.1	.35	.15	.25
17	.14	.37	.63	.60	29	14	7.0	1.9	1.0	.39	.17	.23
18	.13	.37	.53	35	30	12	6.4	1.8	1.0	.35	.27	.27
19	.13	.39	.51	136	20	12	6.0	1.7	1.0	.29	.27	.27
20	.13	.33	.48	199	15	13	5.6	1.5	1.1	.31	.25	.29
21	.13	.35	.46	185	13	12	5.4	1.8	1.0	.31	.27	.27
22	.13	.35	.44	52	17	10	5.2	1.7	1.0	.17	.13	.21
23	.13	.35	.44	15	88	10	6.5	1.6	.84	.29	.14	.17
24	.12	.42	.61	21	101	9.4	5.4	1.7	.81	.39	.27	.19
25	.12	.39	1.4	103	63	9.4	5.2	1.5	.81	.42	.29	.16
26	.10	.33	1.3	161	38	8.9	5.2	1.5	.81	.42	.21	.13
27	.10	.33	.69	47	38	8.9	4.8	1.4	.75	.42	.15	.15
28	.13	.33	2.7	52	124	8.6	4.6	1.2	.78	.35	.16	.19
29	.17	.35	.93	18	-----	8.6	4.4	1.2	.78	.33	.16	.16
30	.27	.35	.63	50	-----	8.4	4.2	.97	.75	.31	.15	.13
31	.25	-----	.53	14	-----	8.4	-----	1.2	-----	.31	.15	-----
TOTAL	4.02	11.33	29.91	1,112.52	1,209.0	532.6	224.9	70.17	33.63	13.05	5.92	4.84
MEAN	.13	.38	.96	35.9	43.2	17.2	7.50	2.26	1.12	.42	.19	.16
MAX	.27	1.0	6.5	199	150	56	21	3.9	1.7	.69	.29	.29
MIN	.05	.25	.33	.42	7.2	8.4	4.2	.97	.75	.17	.12	.06
AC-FT	8.0	22	59	2,210	2,400	1,060	446	139	67	26	12	9.6

CAL YR 1968	TOTAL	791.90	MEAN	2.16	MAX	107	MIN	0	AC-FT	1,570
WTR YR 1969	TOTAL	3,251.89	MEAN	8.91	MAX	199	MIN	.05	AC-FT	6,450

PEAK DISCHARGE (BASE, 200 CFS, REVISED)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-21	2000	5.45	492	2-14	1900	4.45	326
1-26	0130	6.54	682	2-23	0400	4.63	311
2- 6	0600	3.84	228	2-28	1100	4.45	281
2-11	1300	3.83	227				

11-1824. ARROYO DEL HAMBRE AT MARTINEZ, CALIF.

LOCATION.--Lat 38°00'12", long 122°07'44", in Las Juntas Grant, Contra Costa County, on right bank 40 ft upstream from D Street Bridge in Martinez.

DRAINAGE AREA.--15.1 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 48.33 ft above mean sea level (levels by Contra Costa County Flood Control District).

AVERAGE DISCHARGE.--5 years, 4.61 cfs (3,340 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,640 cfs Jan. 26 (gage height, 9.62 ft), from rating curve extended above 540 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.03 cfs Oct. 31, Nov. 1, 10.

Period of record: Maximum discharge, 1,640 cfs Jan. 26, 1969 (gage height, 9.62 ft), from rating curve extended above 540 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REVISIONS.--The maximum discharge for the water year 1967 has been revised to 1,480 cfs Jan. 21, 1967 (gage height, 9.00 ft), superseding figure published in WRD Calif. 1967.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.03	.30	.74	16	59	7.0	3.6	1.6	.51	.34	.10
2	.07	1.4	.17	.68	14	43	7.4	3.4	1.6	.42	.60	.17
3	.08	3.2	.15	.68	14	35	7.0	3.4	1.6	.51	.51	.21
4	.09	.06	.17	.61	13	29	6.6	3.4	1.6	.51	.51	.21
5	.08	.04	.17	.60	63	26	21	3.6	1.6	.60	.27	.21
6	.08	.20	.17	.60	81	24	11	4.2	1.6	.34	.13	.21
7	.07	.10	.25	.60	22	22	7.4	4.5	1.4	.34	.13	.21
8	.08	.04	.59	.60	18	20	7.0	3.9	1.6	.27	.13	.27
9	.08	.07	.61	.60	16	19	7.4	2.9	1.6	.27	.13	.34
10	.09	.03	8.4	.55	15	18	6.2	2.9	1.3	.21	.17	.42
11	.15	.28	.99	1.2	63	16	6.2	2.7	1.2	.21	.17	.42
12	.35	.58	.46	1.3	29	18	5.8	2.7	1.1	.21	.10	.10
13	.08	.05	3.4	11	18	16	5.8	2.7	.94	.21	.10	.10
14	.07	3.6	4.2	2.0	57	14	5.8	2.7	.94	.21	.10	.10
15	.07	3.5	12	1.0	104	14	5.4	2.7	.82	.27	.10	.13
16	.07	.25	1.4	.86	34	13	5.1	2.7	.71	.21	.17	.13
17	.06	.22	.76	.77	31	14	5.1	2.7	.71	.17	.17	.13
18	.07	.64	.63	31	32	12	4.8	3.1	.71	.21	.21	.13
19	.05	.21	.64	91	24	12	4.5	2.5	.82	.21	.17	.17
20	.05	.17	.54	107	20	13	4.5	2.3	.71	.27	.17	.13
21	.06	.18	.48	97	21	12	4.5	1.9	.82	.21	.21	.10
22	.05	.16	.46	30	22	11	4.2	1.6	.94	.17	.27	.13
23	.05	.13	.45	14	77	10	5.8	1.3	.82	.17	.27	.13
24	.07	.66	1.6	22	91	9.5	5.4	1.1	.82	.17	.27	.13
25	.07	.15	3.2	92	52	9.0	4.2	.82	.71	.27	.21	.13
26	.05	.13	1.5	216	36	8.6	4.2	1.2	.71	.21	.17	.13
27	.05	.14	.81	40	36	8.2	3.9	1.9	.71	.17	.17	.13
28	.07	.14	5.8	38	122	7.8	3.9	1.6	.60	.21	.17	.13
29	.10	.18	1.2	21	-----	7.8	3.9	1.4	.42	.21	.21	.17
30	.09	.26	.86	36	-----	7.4	3.9	1.4	.51	.27	.17	.17
31	.03	-----	.78	17	-----	7.4	-----	1.6	-----	.21	.07	-----
TOTAL	2.58	16.80	53.14	876.39	1,141	535.7	184.9	78.42	31.22	8.43	6.57	5.24
MEAN	.083	.56	1.71	28.3	40.8	17.3	6.16	2.53	1.04	.27	.21	.17
MAX	.35	3.6	12	216	122	59	71	4.5	1.6	.60	.60	.42
MIN	.03	.03	.15	.55	13	7.4	3.9	.82	.42	.17	.07	.10
AC-FT	5.1	33	105	1,740	2,260	1,060	367	156	62	17	13	10
CAL YR 1968	TOTAL	593.10	MEAN	1.62	MAX	68	MIN	.02	AC-FT	1,180		
WTR YR 1969	TOTAL	2,940.39	MEAN	8.06	MAX	216	MIN	.03	AC-FT	5,830		

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	2330	4.13	314	2-15	0545	3.80	241
1-28	0215	9.62	1,640	2-23	0315	4.45	384
2- 6	0600	3.68	215	2-28	1100	4.30	351

PACHECO CREEK BASIN

11-1825. SAN RAMON CREEK AT SAN RAMON, CALIF.

LOCATION.--Lat 37°46'23", long 121°59'37", in sec.8, T.2 S., R.1 W., Contra Costa County, on right bank 0.2 mile downstream from Bollinger Creek, and 1.0 mile southwest of San Ramon.

DRAINAGE AREA.--5.89 sq mi.

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 530 ft (from topographic map).

AVERAGE DISCHARGE.--17 years, 2.86 cfs (2,070 acre-ft per year); median of yearly mean discharges, 1.1 cfs (800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 407 cfs Jan. 26 (gage height, 5.05 ft); no flow for many days. Period of record: Maximum discharge, 1,600 cfs Oct. 13, 1962 (gage height, 16.98 ft), from rating curve extended above 90 cfs on basis of indirect measurements of maximum flow through culvert at gage heights 12.09 and 16.98 ft; no flow for parts of each year.

REMARKS.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station.

REVISIONS (WATER YEARS).--WSP 1445: 1953-54(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.01	.17	.28	11	36	3.6	2.1	.75	.22	.02	0
2	0	.01	.10	.26	8.9	26	4.4	2.0	.78	.21	.01	0
3	0	.34	.07	.24	7.8	21	3.8	1.9	.78	.20	.01	0
4	0	.06	.08	.24	6.9	18	3.5	2.0	.82	.18	.01	0
5	0	.01	.09	.23	53	16	10	1.8	.84	.20	.01	0
6	0	.02	.09	.23	54	14	8.4	1.7	.80	.23	.01	0
7	0	.05	.09	.22	16	13	4.9	1.6	.82	.18	.01	0
8	0	.03	.09	.21	12	12	4.3	1.7	.96	.16	.01	0
9	0	.02	.09	.20	10	11	4.2	1.7	1.0	.17	.01	0
10	0	.02	.40	.18	9.1	9.9	3.8	1.6	.93	.16	0	0
11	0	.02	.45	.27	45	9.2	3.5	1.6	.87	.11	0	0
12	0	.10	.30	.25	19	11	3.4	1.6	.89	.10	0	0
13	0	.10	.25	5.3	13	8.7	3.2	1.6	.89	.09	0	0
14	0	.14	1.0	1.2	17	7.8	3.4	1.6	.86	.09	0	0
15	0	.77	4.0	.50	34	7.2	3.2	1.5	.82	.10	0	0
16	0	.13	1.0	.40	16	6.9	3.0	1.4	.73	.09	0	0
17	0	.07	.50	.36	22	7.3	3.0	1.4	.67	.06	0	0
18	0	.09	.30	7.6	20	6.5	2.9	1.3	.66	.04	0	0
19	0	.09	.25	68	15	6.2	2.7	1.3	.59	.04	0	0
20	0	.07	.22	64	13	8.9	2.6	1.2	.63	.03	0	0
21	0	.08	.20	54	13	6.8	2.7	1.2	.64	.03	0	0
22	0	.08	.19	17	14	5.9	2.6	1.1	.58	.03	0	0
23	0	.09	.18	8.2	33	5.5	3.4	1.1	.47	.03	0	0
24	0	.14	.30	15	29	5.0	2.8	1.1	.42	.04	0	0
25	0	.13	2.2	83	35	4.9	2.5	.99	.37	.06	0	0
26	0	.08	2.6	82	25	4.7	2.4	.97	.34	.06	0	0
27	0	.07	1.0	22	20	4.4	2.6	.94	.33	.06	0	0
28	0	.07	1.7	35	63	4.2	2.2	.90	.31	.04	0	0
29	.01	.06	.80	15	-----	4.0	2.2	.84	.29	.03	0	0
30	.01	.11	.45	24	-----	3.9	2.3	.77	.22	.03	0	0
31	.01	-----	.30	12	-----	3.8	-----	.72	-----	.03	0	-----
TOTAL	0.03	3.06	19.46	517.37	634.7	309.7	107.5	43.23	20.06	3.10	0.10	0
MEAN	.001	.10	.63	16.7	22.7	9.99	3.58	1.39	.67	.10	.003	0
MAX	.01	.77	4.0	83	63	36	10	2.1	1.0	.23	.02	0
MIN	0	.01	.07	.18	6.9	3.8	2.2	.72	.22	.03	0	0
AC-FT	.06	6.1	39	1,030	1,260	614	213	86	40	6.2	.2	0

CAL YR 1968 TOTAL 380.49 MEAN 1.04 MAX 56 MIN 0 AC-FT 755
WTR YR 1969 TOTAL 1,658.31 MEAN 4.54 MAX 83 MIN 0 AC-FT 3,290

PEAK DISCHARGE (BASE, 100 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0700	3.70	197	2-11	1500	3.14	116
1-21	0800	3.13	114	2-15	1030	3.12	113
1-26	0145	5.05	407	2-23	0330	3.28	135
1-28	0030	3.10	110	2-25	0730	3.05	104
2- 5	2215	4.51	326	2-28	1100	3.39	151

NOTE.--No gage-height record Dec. 8 to Jan. 10.

11-1830. SAN RAMON CREEK AT WALNUT CREEK, CALIF.

LOCATION.--Lat 37°53'04", long 122°03'00", on boundary between Arroyo de las Nueces y Bolbones and San Ramon Grants, Contra Costa County, on left bank at town of Walnut Creek, 0.3 mile downstream from small tributary, and 1.2 miles upstream from confluence with Las Trampas Creek.

DRAINAGE AREA.--50.8 sq mi.

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder. Concrete control since Dec. 4, 1962. Altitude of gage is 170 ft (from topographic map).

AVERAGE DISCHARGE.--17 years, 15.0 cfs (10,870 acre-ft per year); median of yearly mean discharges, 6.3 cfs (4,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,350 cfs Jan. 26 (gage height, 9.57 ft); minimum daily, 0.86 cfs Oct. 5.

Period of record: Maximum discharge, 7,980 cfs Jan 31, 1963 (gage height, 14.40 ft), from rating curve extended above 2,200 cfs on basis of computed discharge at gage height 13.16 ft; maximum gage height, 14.55 ft Dec. 23, 1955; no flow at times in most years.

REMARKS.--Records good. No regulation; pumping for irrigation above station during periods of low flow.

REVISIONS (WATER YEARS).--WSP 1395: 1953(M). WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECCNC, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.99	1.3	1.5	2.6	35	257	15	8.9	4.4	3.2	2.1	1.7
2	.96	1.9	1.4	2.4	28	100	18	8.9	4.4	3.1	2.0	1.6
3	.96	11	1.3	2.3	24	77	18	8.9	4.5	3.0	1.8	1.6
4	.90	5.8	1.4	2.3	21	60	14	8.6	4.8	2.8	1.6	1.6
5	.86	2.3	1.3	2.2	345	51	47	8.4	4.7	2.5	1.7	1.7
6	.90	1.7	1.4	2.3	571	46	46	7.9	4.6	2.4	2.0	1.7
7	.90	1.7	1.4	2.3	74	41	19	7.6	4.5	2.3	1.9	1.8
8	.89	1.7	1.6	2.2	46	38	17	7.4	5.0	2.2	2.0	1.8
9	.98	1.4	1.8	2.2	36	35	17	7.4	5.4	2.2	1.6	1.7
10	1.0	1.3	7.6	2.1	31	33	16	7.3	6.0	2.3	1.9	1.7
11	1.0	1.4	9.5	3.0	407	30	14	6.3	6.1	2.3	2.0	1.8
12	1.2	1.9	4.3	3.9	139	60	14	5.6	5.9	2.3	2.0	1.8
13	1.1	2.2	3.6	37	52	35	14	5.6	5.7	2.2	1.9	1.7
14	1.1	2.6	12	13	104	27	13	5.5	5.9	2.2	1.9	1.7
15	1.2	11	50	5.5	294	25	13	5.6	5.7	2.2	1.9	1.7
16	1.2	4.8	11	3.6	76	25	12	5.6	5.0	2.3	2.0	1.7
17	1.2	2.0	4.4	3.0	94	27	11	5.4	4.3	2.2	2.2	1.7
18	1.2	1.7	2.7	64	141	24	12	5.4	5.2	2.1	2.3	1.7
19	1.1	1.7	2.3	442	62	22	11	5.5	4.4	2.1	2.4	1.8
20	1.1	1.5	2.3	440	46	36	11	5.5	4.2	2.0	2.1	1.7
21	1.1	1.4	2.0	313	43	32	11	5.3	4.5	2.1	1.6	1.7
22	1.1	1.6	1.9	79	62	22	10	5.2	4.2	2.1	1.9	1.8
23	1.1	2.5	1.8	27	244	20	18	5.2	4.5	2.2	1.6	1.6
24	1.1	3.0	2.5	59	241	18	13	5.3	4.4	2.2	2.1	1.7
25	1.1	2.3	25	584	244	18	10	5.1	4.1	2.2	2.1	1.6
26	1.0	1.7	27	782	135	18	10	5.2	4.2	2.1	1.6	1.6
27	.93	1.5	6.5	100	75	17	9.8	5.1	3.8	2.2	1.9	1.8
28	.97	1.3	18	255	457	17	9.8	5.2	3.4	2.2	1.8	1.8
29	1.0	1.3	7.1	59	-----	16	9.5	4.8	3.3	2.2	1.8	1.7
30	1.2	1.3	4.7	159	-----	16	9.2	4.6	3.3	2.2	2.1	1.6
31	1.2	-----	3.2	43	-----	15	-----	4.7	-----	2.2	2.0	-----
TOTAL	32.54	78.8	222.5	3,497.8	4,127	1,258	462.3	193.0	140.4	71.8	61.2	51.1
MEAN	1.05	2.63	7.18	113	147	40.6	15.4	6.23	4.68	2.32	1.97	1.70
MAX	1.2	11	50	782	571	257	47	8.9	6.1	3.2	2.4	1.8
MIN	.86	1.3	1.3	2.1	21	15	9.2	4.6	3.3	2.0	1.7	1.6
AC-FT	65	156	441	6,940	8,190	2,500	917	383	278	142	121	101

CAL YR 1968	TOTAL	2,244.31	MEAN	6.13	MAX	432	MIN	.86	AC-FT	4,450
WTR YR 1969	TOTAL	10,196.44	MEAN	27.9	MAX	782	MIN	.86	AC-FT	20,220

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0730	5.03	762	2-15	1115	4.31	508
1-21	1215	4.42	547	2-23	0500	5.02	758
1-26	0345	9.57	3,350	2-25	0745	4.42	547
2- 5	2245	7.88	2,170	2-28	1230	6.37	1,340
2-11	1515	5.83	1,100				

PACHECO CREEK BASIN

11-1836, WALNUT CREEK AT CONCORD, CALIF.

LOCATION.--Lat 37°56'43", long 122°02'55", in Arroyo de las Nueces y Bolbones Grant, Contra Costa County, on right bank at southwest city limits of Concord, 0.2 mile upstream from Southern Pacific Railroad bridge, and 3.8 miles downstream from confluence of San Ramon and Las Trampas Creeks.

DRAINAGE AREA.--85.1 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 35.44 ft above mean sea level (Corps of Engineers bench mark).

EXTREMES.--Maximum discharge during period, 5,490 cfs Jan. 26 (gage height, 10.75 ft); minimum daily, 3.4 cfs Oct. 21.

REMARKS.--Records good. Flow slightly regulated by Lafayette Reservoir 10 miles upstream (capacity, 4,240 acre-ft). Some small diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	4.6	6.2	12	91	475	34	21	12	9.2	8.0	6.1
2	3.7	10	5.0	12	74	270	43	20	12	8.9	8.1	6.6
3	4.0	48	4.3	12	65	248	46	20	12	9.1	8.0	7.1
4	3.7	14	4.7	11	60	222	37	23	12	9.0	8.1	6.6
5	3.6	7.0	5.1	10	682	108	149	21	12	8.9	7.6	5.7
6	5.4	7.3	5.0	11	986	98	117	19	12	8.9	7.8	5.7
7	4.5	8.3	4.8	11	178	96	46	18	12	9.6	7.4	6.6
8	5.9	5.0	7.1	11	116	79	41	19	12	9.5	7.7	6.6
9	5.2	4.4	6.3	7.8	106	78	42	17	13	9.5	7.6	7.1
10	3.6	4.8	63	7.7	94	67	32	18	14	9.1	7.1	6.6
11	3.7	4.4	24	12	758	60	30	26	13	9.0	7.1	6.6
12	6.5	13	10	13	298	134	29	34	13	9.6	8.0	6.6
13	7.3	6.1	13	239	137	79	29	32	13	8.8	7.5	6.6
14	5.7	11	62	43	287	60	27	33	12	8.8	7.5	6.6
15	4.7	34	132	17	720	57	39	37	13	9.5	7.1	6.6
16	4.7	14	28	13	225	53	40	36	12	8.5	7.5	6.6
17	4.1	6.5	11	9.7	254	60	24	35	12	7.8	7.1	6.6
18	4.1	7.9	8.2	209	305	53	25	27	11	7.8	7.1	6.6
19	4.7	6.6	7.8	1,060	193	50	24	19	11	8.0	7.1	6.6
20	3.5	4.9	7.2	870	192	70	24	21	11	6.9	7.1	6.6
21	3.4	5.3	6.7	632	160	64	23	22	11	7.0	7.1	6.1
22	3.6	4.4	6.4	205	169	49	22	18	10	7.1	7.5	6.1
23	4.8	6.2	6.7	71	506	45	54	18	10	7.2	6.6	6.1
24	3.5	12	23	135	502	42	36	17	9.9	7.2	6.6	6.1
25	3.8	6.4	97	828	482	41	23	14	9.1	7.2	6.6	6.1
26	4.2	5.2	57	1,340	299	41	23	13	8.8	7.7	6.6	6.1
27	3.9	4.6	18	239	245	39	23	12	9.6	7.6	6.6	6.1
28	4.3	4.3	69	412	830	39	22	13	8.5	8.4	6.1	6.6
29	5.3	4.5	23	127	-----	37	21	13	8.4	7.8	6.1	6.1
30	7.2	5.7	16	295	-----	36	22	12	9.2	7.5	6.6	6.1
31	5.3	-----	13	104	-----	36	-----	12	-----	8.0	6.6	-----
TOTAL	141.5	280.4	750.5	6,979.2	9,014	2,886	1,147	660	338.5	259.1	223.5	192.2
MEAN	4.56	9.35	24.2	225	322	93.1	38.2	21.3	11.3	8.36	7.21	6.41
MAX	7.3	48	132	1,340	986	475	149	37	14	9.6	8.1	7.1
MIN	3.4	4.3	4.3	7.7	60	36	21	12	8.4	6.9	6.1	5.7
AC-FT	281	556	1,490	13,840	17,880	5,720	2,280	1,310	671	514	443	381

CAL YR 1968 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1969 TOTAL 22,871.9 MEAN 62.7 MAX 1,340 MIN 3.4 AC-FT 45,370

PEAK DISCHARGE (BASE, 850 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-19	0200	6.69	2,240	2-15	1115	5.89	1,590
1-26	0300	10.75	5,490	2-23	0415	5.89	1,590
2-5	2300	7.94	3,240	2-25	0830	5.11	918
2-11	1530	6.26	1,900	2-28	1215	6.71	2,260

LOCATION (revised).--Lat 38°29'52", long 122°25'37", in Carne Humana Grant, Napa County, on right bank 0.2 mile upstream from highway bridge, 1.3 miles northeast of Zinfandel, and 2.5 miles east of St. Helena.

PERIOD OF RECORD.--October 1929 to September 1932, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

EXTREMES.--Current year: Maximum discharge, 6,600 cfs Jan. 13 (gage height, 11.45 ft); minimum daily, 0.53 cfs Oct. 1.
Period of record: Maximum discharge, 12,600 cfs Dec. 22, 1955 (gage height, 16.17 ft, present datum); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAL YR 1968	TOTAL 29,991.16	MEAN 81.9	MAX 2,010	MIN 0	AC-FT 59,490
WTR YR 1969	TOTAL 63,736.71	MEAN 175	MAX 4,640	MIN .53	AC-FT 126,400

PEAK DISCHARGE (BASE, 2,300 CFS)								NOTE.--No gage-height record June 3 to
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE	July 2.
12-15	1315	8.68	3,910	1-26	0215	9.17	4,350	
1-13	0200	11.45	6,600	2- 9	0930	7.38	2,850	
1-21	0545	10.11	5,210	2-11	1115	6.64	2,300	

NAPA RIVER BASIN

11-4580, NAPA RIVER NEAR NAPA, CALIF.

LOCATION.--Lat 38°22'06", long 122°18'08", in Yajome Grant, Napa County, on left bank at downstream side of Oak Knoll Avenue bridge, 0.4 mile downstream from Dry Creek, and 5 miles north of Napa.

DRAINAGE AREA.--218 sq mi.

PERIOD OF RECORD.--October 1929 to September 1932, October 1959 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 24.74 ft above mean sea level.

AVERAGE DISCHARGE.--13 years, 166 cfs (120,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,760 cfs Jan. 13 (gage height, 19.78 ft); no flow for several days.

Period of record: Maximum discharge, 16,900 cfs Jan. 31, 1963 (gage height, 27.59 ft); no flow at times.

REMARKS.--Records good. Flow slightly regulated by Lake Hennessey beginning in December 1945 (capacity, 31,000 acre-ft). Diversions for irrigation of about 10,000 acres above station.

REVISIONS (WATER YEARS).--WSP 1315-B: 1930(M). WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	5.2	9.3	220	1,090	2,680	136	67	23	9.4	4.7	0
2	.10	7.7	8.2	194	922	1,880	136	64	23	8.8	6.6	0
3	.22	16	7.2	170	766	1,600	159	62	23	8.8	6.1	0
4	.22	17	7.2	152	666	1,150	138	60	22	8.2	4.7	0
5	.22	9.3	6.7	138	1,000	902	200	58	22	8.2	4.3	0
6	1.2	6.2	7.2	125	2,350	733	224	55	21	8.2	4.7	0
7	1.8	5.2	7.7	116	1,320	624	183	53	20	9.4	3.9	0
8	2.0	4.8	9.3	106	998	537	166	53	20	8.2	3.9	0
9	1.8	4.5	16	96	3,230	486	161	52	21	7.6	4.3	1.0
10	2.1	4.5	606	88	2,360	465	156	52	22	6.6	6.6	.65
11	2.1	4.1	336	268	2,830	390	142	51	22	7.6	6.1	.65
12	10	4.5	132	1,540	2,420	390	131	47	21	5.6	3.5	.65
13	11	4.8	88	6,720	1,560	369	124	44	20	6.6	.48	1.0
14	13	5.7	455	2,140	1,510	328	122	44	18	7.6	2.1	0
15	7.7	24	1,390	971	4,050	301	112	42	19	8.2	3.5	0
16	5.2	28	588	657	2,540	279	99	40	14	7.1	3.1	0
17	4.1	16	314	528	1,750	298	91	39	10	6.1	3.1	0
18	3.8	13	234	787	1,440	284	90	38	13	6.1	3.5	0
19	3.2	14	192	3,840	1,080	246	85	37	13	6.1	2.4	1.4
20	2.8	14	158	6,660	854	252	80	34	11	4.7	3.5	1.4
21	3.5	11	133	7,420	705	279	79	33	11	4.3	2.4	1.4
22	3.2	10	120	4,400	631	241	76	30	14	4.7	2.4	1.7
23	4.8	9.3	128	2,530	998	220	110	31	15	5.6	3.1	2.1
24	2.5	9.3	822	1,950	1,550	204	139	31	11	5.1	4.7	1.4
25	1.8	10	1,360	2,120	1,760	189	109	30	12	4.7	4.7	1.4
26	2.3	9.3	824	4,680	1,610	179	93	29	15	4.3	4.3	1.0
27	2.5	8.2	458	2,600	1,300	170	84	30	11	4.3	3.9	1.4
28	2.8	7.7	537	1,980	2,540	163	79	28	10	4.3	2.4	1.7
29	5.2	7.2	405	1,440	-----	156	72	26	10	5.1	1.2	1.4
30	5.7	7.7	307	1,790	-----	149	72	25	10	4.7	0	.65
31	6.2	-----	256	1,240	-----	142	-----	24	-----	3.5	0	-----
TOTAL	113.11	298.2	9,921.8	57,666	45,830	16,286	3,648	1,309	497	199.7	110.18	20.90
MEAN	3.65	9.94	320	1,860	1,637	525	122	42.2	16.6	6.44	3.55	.70
MAX	13	28	1,390	7,420	4,050	2,680	224	67	23	9.4	6.6	2.1
MIN	.05	4.1	6.7	88	631	142	72	24	10	3.5	0	0
AC-FT	224	591	19,680	114,400	90,900	32,300	7,240	2,600	986	396	219	41

CAL YR 1968 TOTAL 59,361.29 MEAN 162 MAX 4,250 MIN .05 AC-FT 117,700
WTR YR 1969 TOTAL 135,899.89 MEAN 372 MAX 7,420 MIN 0 AC-FT 269,600

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1715	12.86	3,680	2- 9	1300	13.19	4,640
1-13	1115	19.78	8,760	2-11	1500	12.05	3,850
1-21	1000	18.78	8,730	2-15	0500	13.62	4,940
1-26	0645	16.04	6,640	3- 1	0145	11.48	3,500
2- 6	0545	10.75	3,060				

11-4582. REDWOOD CREEK NEAR NAPA, CALIF.

LOCATION.--Lat 38°19'04", long 122°20'35", in Napa Grant, Napa County, on right bank 2.9 miles upstream from confluence with Browns Valley Creek, and 3.4 miles northwest of Napa.

DRAINAGE AREA.--9.81 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 166.16 ft above mean sea level.

AVERAGE DISCHARGE.--11 years, 10.0 cfs (7,250 acre-ft per year); median of yearly mean discharges, 7.3 cfs (5,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,160 cfs Jan. 13 (gage height, 8.18 ft); no flow for many days.
Period of record: Maximum discharge, 1,450 cfs Jan. 5, 1965 (gage height, 10.44 ft); no flow for many days in each year.

REMARKS.--Records fair. Small storage and release affects summer flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.38	.71	13	49	119	6.6	4.8	.83	.29	.04	0
2	0	4.6	.57	11	41	95	7.3	4.6	.97	.32	.03	0
3	0	15	.45	9.3	33	72	7.8	4.1	.97	.29	.02	0
4	0	5.8	.42	7.7	28	53	7.0	4.6	.90	.29	.01	0
5	0	2.5	1.7	6.7	74	44	10	4.1	.97	.26	.01	0
6	0	1.3	.38	6.1	138	37	15	4.1	1.1	.24	0	0
7	0	.97	.42	5.6	76	31	11	3.8	.97	.22	0	0
8	0	.57	1.1	5.1	54	26	12	4.1	1.1	.20	0	0
9	0	.42	23	4.6	225	22	10	3.8	1.5	.20	0	0
10	0	.35	121	4.1	140	21	9.5	3.8	2.1	.20	0	0
11	0	.32	14	81	180	19	9.0	3.4	1.8	.20	0	0
12	0	.45	3.8	204	113	19	8.4	3.2	1.5	.22	0	0
13	0	.42	3.0	445	86	19	7.8	3.2	1.2	.22	0	0
14	0	.88	44	115	119	18	7.3	3.2	1.1	.22	0	0
15	.06	24	106	52	240	16	7.0	3.0	1.2	.26	0	0
16	.12	11	26	33	124	12	6.7	2.7	.97	.24	0	0
17	.12	3.6	13	24	90	14	7.0	2.4	.77	.22	0	0
18	.13	3.8	9.3	57	69	12	6.7	2.1	.77	.22	0	0
19	.12	3.4	7.0	205	48	12	6.4	1.9	.71	.22	0	0
20	.10	2.9	5.6	553	38	14	6.1	1.9	.66	.18	0	0
21	.09	1.9	4.3	336	31	16	5.8	1.8	.61	.16	0	0
22	.07	1.5	3.4	220	29	14	5.6	1.9	.57	.15	0	0
23	.07	.97	3.8	107	36	13	12	1.8	.54	.12	0	0
24	.07	.83	109	85	60	12	11	1.5	.50	.11	0	0
25	.06	.71	104	110	78	11	8.1	1.4	.46	.10	0	0
26	.05	.53	58	268	53	9.9	6.7	1.5	.43	.08	0	0
27	.04	.38	24	130	51	9.2	6.1	1.6	.40	.07	0	0
28	.04	.32	59	82	166	8.6	5.6	1.1	.38	.08	0	0
29	.04	.29	27	66	-----	7.9	5.1	.97	.35	.07	0	0
30	2.7	.66	19	90	-----	7.6	4.8	.77	.30	.06	0	0
31	.77	-----	15	60	-----	7.0	-----	.77	-----	.06	0	-----
TOTAL	4.65	90.75	807.95	3,396.2	2,469	791.2	239.4	83.91	26.63	5.77	0.11	0
MEAN	.15	3.03	26.1	110	88.2	25.5	7.98	2.71	.89	.19	.004	0
MAX	2.7	24	121	553	240	119	15	4.8	2.1	.32	.04	0
MIN	0	.29	.38	4.1	28	7.0	4.8	.77	.30	.06	0	0
AC-FT	9.2	180	1,600	6,740	4,900	1,570	475	166	53	11	.2	0

CAL YR 1968 TOTAL 2,950.10 MEAN 8.06 MAX 254 MIN 0 AC-FT 5,850
WTR YR 1969 TOTAL 7,915.57 MEAN 21.7 MAX 553 MIN 0 AC-FT 15,700

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1100	6.06	505	1-26	unknown	6.51	623
1-13	0900	8.18	1,160	2- 9	unknown	5.76	430
1-20	0515	7.53	936	2-15	0300	6.48	614

SONOMA CREEK BASIN

11-4585. SONOMA CREEK AT AGUA CALIENTE, CALIF.

LOCATION.--Lat 38°19'24", long 122°29'36", in Agua Caliente Grant, Sonoma County, on left bank 20 ft upstream from bridge, and 0.4 mile west of Agua Caliente. Prior to Oct. 10, 1968, at site 130 ft upstream.

DRAINAGE AREA.--58.3 sq mi.

PERIOD OF RECORD.--February 1955 to current year. Prior to October 1966, published as "at Boyes Hot Springs."

GAGE.--Water-stage recorder. Altitude of gage is 120 ft (from topographic map). Prior to July 24, 1967, at site 0.8 mile downstream at different datum. July 24, 1967, to Oct. 9, 1968, at site 130 ft upstream at different datum.

AVERAGE DISCHARGE.--14 years, 72.7 cfs (52,670 acre-ft per year); median of yearly mean discharges, 62 cfs (44,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,270 cfs Jan. 13 (gage height, 15.15 ft, from outside high-water marks), from rating curve extended above 3,800 cfs; minimum daily, 0.11 cfs Oct. 27, 28.
Period of record: Maximum discharge, 8,880 cfs Dec. 22, 1955 (gage height, 17.10 ft, site and datum then in use), from rating curve extended above 4,100 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records fair except those for periods of no gage-height record, which are poor. No regulation; some diversion above station for irrigation of about 1,500 acres.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	3.1	3.7	73	287	613	36	21	6.5	1.4	1.7	3.3
2	.32	18	3.4	62	243	459	40	20	8.2	1.6	1.6	2.3
3	.35	52	3.4	53	208	371	46	19	8.6	1.4	1.2	1.6
4	.34	29	3.4	47	193	305	36	19	7.8	1.1	1.1	3.1
5	.33	12	3.4	41	572	250	103	18	8.2	1.3	.85	1.3
6	.32	3.3	2.7	38	668	210	94	16	8.2	1.3	.60	.68
7	.32	2.8	3.5	34	356	174	68	16	6.5	1.6	.99	.60
8	.28	2.4	5.4	32	311	150	53	16	7.1	2.5	.85	.51
9	.28	2.3	17	29	1,160	136	57	16	7.4	4.2	.76	.44
10	.31	2.2	427	28	506	120	50	15	9.0	4.7	1.1	.37
11	2.5	2.4	116	235	1,030	102	41	15	8.2	3.5	1.2	.31
12	12	3.9	62	1,200	543	118	40	16	7.8	3.7	1.4	.38
13	3.5	3.0	104	2,650	431	99	39	16	6.8	3.3	.76	.34
14	1.0	7.2	158	880	649	85	37	15	6.5	3.5	.60	.36
15	.50	20	762	409	1,230	77	34	14	5.9	3.3	.95	.37
16	.26	11	105	284	466	71	32	13	5.0	2.9	1.7	.38
17	.26	4.9	51	195	377	90	31	12	4.7	2.7	1.3	.42
18	.19	5.3	36	342	380	73	30	13	4.5	2.0	1.1	.45
19	.18	5.6	31	1,600	314	64	28	11	4.7	1.2	1.3	.49
20	.18	4.8	24	2,450	269	73	27	11	5.0	1.6	1.6	.58
21	.14	4.3	21	2,410	228	82	26	11	5.0	1.6	1.6	.53
22	.14	4.0	19	1,010	203	64	26	11	4.5	1.6	.95	.46
23	.20	3.6	24	540	346	57	47	11	3.5	2.0	.60	.38
24	.20	4.6	630	442	552	52	39	11	2.7	2.9	.76	.34
25	.18	4.2	670	625	484	47	30	10	2.3	2.7	1.9	.28
26	.14	3.7	305	1,290	368	45	26	10	2.5	2.5	5.9	.30
27	.11	3.4	157	570	365	43	25	12	2.0	2.3	5.3	.31
28	.11	3.3	253	501	907	41	23	9.8	2.3	2.5	5.3	.31
29	.50	3.2	143	392	-----	39	22	7.8	2.2	2.0	4.7	.31
30	10	4.1	114	444	-----	39	22	7.1	1.7	2.3	4.2	.29
31	5.0	-----	89	308	-----	37	-----	6.2	-----	1.9	3.7	-----
TOTAL	40.44	233.6	4,346.9	19,214	13,646	4,186	1,208	418.9	165.3	73.1	57.57	21.79
MEAN	1.30	7.79	140	620	487	135	40.3	13.5	5.51	2.36	1.86	.73
MAX	12	52	762	2,650	1,230	613	103	21	9.0	4.7	5.9	3.3
MIN	.11	2.2	2.7	28	193	37	22	6.2	1.7	1.1	.60	.28
AC-FT	80	463	8,620	38,110	27,070	8,300	2,400	831	328	145	114	43

CAL YR 1968 TOTAL 20,595.26 MEAN 56.3 MAX 1,500 MIN .11
WTR YR 1969 TOTAL 43,611.60 MEAN 119 MAX 2,650 MIN .11

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1115	10.15	3,320	2- 5	1930	7.34	1,580
12-25	0900	7.53	1,520	2- 9	0830	8.24	2,100
1-13	unknown	15.15	8,270	2-11	0915	8.22	2,080
1-21	0430	10.88	4,000	2-15	0145	9.33	2,830
1-26	0145	10.54	3,730				

NOTE.--No gage-height record Oct. 1 to Dec. 6, Jan. 7-14.

11-4595. NOVATO CREEK AT NOVATO, CALIF.

LOCATION.--Lat 38°06'28", long 122°34'44", in Novato Grant, Marin County, on left bank in Novato, 100 ft upstream from 7th Street Bridge.

DRAINAGE AREA.--17.6 sq mi.

PERIOD OF RECORD.--October 1946 to current year. Records of diversions for water years 1952-53, estimated. Prior to October 1966 published as "near Novato."

GAGE.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map). Prior to Aug. 23, 1967, at site 0.6 mile upstream at different datum.

AVERAGE DISCHARGE (adjusted for diversion).--23 years, 11.8 cfs (8,550 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 633 cfs Jan. 20 (gage height, 6.57 ft); no flow for many days. Period of record: Maximum discharge, 1,330 cfs Jan. 20, 1964 (gage height, 8.74 ft, site and datum then in use); no flow for many days in each year.

REMARKS.--Records fair. Flow regulated by Stafford Lake beginning Dec. 1, 1951 (capacity, 4,500 acre-ft since Oct. 18, 1954); contents, 2,460 acre-ft Sept. 30, 1968, and 2,450 acre-ft Sept. 30, 1969. Diversion from Stafford Lake for municipal water supply began Apr. 25, 1952, and amounted to 2,000 acre-ft for the water year 1969.

COOPERATION.--Record of diversions furnished by North Marin County Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.13	.20	13	62	177	6.3	1.4	.46	.30	.30	0
2	0	9.7	.07	11	54	143	5.4	1.3	.42	.25	.30	0
3	0	1.6	.13	8.5	46	110	4.5	1.2	.40	.25	.30	0
4	0	.43	.20	7.2	50	81	6.4	1.5	.58	.25	.25	0
5	0	.32	.27	6.1	90	64	9.4	1.3	.40	.20	.05	0
6	0	.85	.20	5.2	127	51	6.4	1.2	.40	.20	0	0
7	0	.32	1.0	4.7	100	40	4.4	1.1	.46	.20	0	0
8	0	.20	.85	4.2	72	34	4.0	1.1	.52	.20	0	0
9	0	.20	8.3	3.8	170	30	4.4	1.2	.40	.15	.01	0
10	0	.32	38	3.5	123	26	3.6	1.1	.35	.15	0	0
11	0	1.0	4.3	18	202	23	3.3	1.0	.30	.15	0	0
12	4.0	.92	1.2	110	145	21	3.2	1.2	.30	.30	0	0
13	.20	.27	9.0	217	101	19	3.2	1.1	.35	.30	0	0
14	.13	25	10	69	176	16	3.2	1.0	.30	.25	0	0
15	.09	4.8	88	47	283	14	3.0	.98	.30	.20	0	0
16	.05	.43	13	53	146	12	2.7	.92	.25	.20	.02	0
17	0	.17	5.5	48	114	10	2.7	.86	.25	.20	.05	0
18	.06	2.2	3.4	158	131	9.4	2.6	.84	.40	.15	0	0
19	.04	.20	2.6	248	89	7.6	2.6	.82	.40	.05	.20	0
20	0	.13	2.0	459	75	12	2.6	.80	.35	.20	.30	0
21	0	.13	2.4	360	71	12	2.5	.77	.35	.25	.30	0
22	0	.13	1.5	170	77	7.6	2.5	.76	.30	.30	.01	0
23	0	.11	1.6	110	119	6.4	4.4	.74	.25	.25	0	0
24	0	.85	55	120	222	5.5	3.0	.72	.20	.25	0	0
25	0	.07	73	180	173	4.9	2.3	.67	.40	.25	0	0
26	0	.06	27	208	126	4.7	2.0	.62	.30	.35	0	0
27	0	.07	23	120	140	4.2	1.8	.66	.30	.35	0	0
28	0	.06	127	98	234	9.8	1.7	.62	.25	.46	0	0
29	3.6	.11	41	89	-----	6.2	1.6	.58	.30	.35	0	0
30	2.0	.11	24	106	-----	5.1	1.5	.52	.25	.35	0	0
31	.20	-----	17	80	-----	4.6	-----	.48	-----	.30	0	-----
TOTAL	10.37	50.89	580.72	3,135.2	3,518	971.0	107.2	29.06	10.49	7.61	2.09	0
MEAN	.33	1.70	18.7	101	126	31.3	3.57	.94	.35	.25	.067	0
MAX	4.0	25	127	459	283	177	9.4	1.5	.58	.46	.30	0
MIN	0	.06	.07	3.5	46	4.2	1.5	.48	.20	.05	0	0
AC-FT	21	101	1,150	6,220	6,960	1,930	213	58	21	15	4.2	0

CAL YR 1968 TOTAL 2,463.92 MEAN 6.73 MAX 178 MIN 0 AC-FT 4,890
WTR YR 1969 TOTAL 8,422.63 MEAN 23.1 MAX 459 MIN 0 AC-FT 16,710

CORTE MADERA CREEK BASIN

11-4600. CORTE MADERA CREEK AT ROSS, CALIF.

LOCATION.--Lat 37°57'45", long 122°33'20", in Punta de Quentin Grant, Marin County, on left bank behind fire station at Ross, 1.7 miles southwest of San Rafael, and 4 miles upstream from mouth.

DRAINAGE AREA.--18.1 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 7.97 ft (revised) above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--18 years, 27.5 cfs (19,920 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,870 cfs Feb. 15 (gage height, 13.43 ft); no flow for several days.

Period of record: Maximum discharge, 3,620 cfs Dec. 22, 1955 (gage height, 17.45 ft), from rating curve extended above 1,600 cfs; no flow at times.

REMARKS.--Records fair. Flow regulated by Phoenix Lake 1.7 miles upstream (capacity, 612 acre-ft). Diversion on tributary above station by Marin Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	1.2	7.1	48	105	190	10	5.0	2.4	1.7	1.1	0
2	.38	4.6	4.4	38	92	152	16	5.0	2.8	1.4	.75	.22
3	.31	9.0	3.4	31	68	116	12	5.0	2.0	1.1	.75	0
4	.27	3.7	2.4	26	69	87	12	6.0	2.0	1.1	.75	.22
5	.33	2.1	2.4	22	263	67	48	5.5	2.0	1.1	.45	.45
6	.33	3.1	2.4	19	244	49	32	5.5	2.0	1.4	.75	.45
7	.28	2.2	6.2	17	134	40	16	5.0	2.0	1.4	1.7	.75
8	.28	2.0	10	15	105	36	12	5.0	2.4	1.4	.75	.22
9	.38	2.1	107	12	353	31	19	5.5	2.0	1.1	.22	.45
10	.38	2.6	276	8.4	200	27	18	5.0	2.8	.75	.22	.45
11	2.7	5.1	120	64	416	24	27	4.5	1.7	1.1	0	.45
12	34	4.4	49	247	212	31	9.7	5.0	1.7	.75	.22	.75
13	1.9	2.1	103	828	130	23	9.0	5.0	1.7	.75	0	.75
14	1.2	45	185	236	468	20	8.4	4.5	1.7	.75	0	.45
15	.80	56	307	116	744	19	7.7	4.5	1.7	.75	.22	.75
16	.60	12	125	85	220	18	7.1	4.1	1.7	.75	.22	.75
17	.52	8.0	66	69	145	26	7.1	4.1	1.7	.75	.22	.22
18	.60	13	44	335	140	19	7.1	3.6	1.7	.75	.45	.75
19	.60	8.0	35	818	105	16	6.6	3.2	1.7	.75	.22	.75
20	.60	6.2	29	929	88	26	6.6	3.2	1.7	.75	.22	.75
21	.80	6.2	23	764	84	20	6.6	3.2	1.7	.75	0	1.1
22	.80	5.5	20	287	98	17	6.0	3.2	2.0	.75	0	.75
23	1.7	5.4	21	176	176	15	27	3.2	1.4	.75	0	.75
24	.75	10	347	194	303	15	7.7	3.2	1.7	1.1	0	.45
25	.75	5.1	224	389	185	14	7.1	3.2	1.7	1.1	.22	.45
26	.96	4.4	140	572	139	13	6.6	2.8	1.7	1.1	.22	.45
27	2.1	4.4	98	211	169	12	6.0	3.2	1.7	1.1	0	.45
28	4.4	4.3	577	158	257	12	5.5	2.8	1.7	1.1	.22	.45
29	18	6.2	163	146	-----	11	5.0	2.8	2.0	.75	.22	.45
30	5.1	5.8	89	193	-----	11	5.0	2.4	1.7	.75	.22	.45
31	1.3	-----	63	129	-----	11	-----	2.8	-----	1.1	0	-----
TOTAL	83.57	291.1	3,249.3	7,182.4	5,708	1,168	373.8	127.0	56.7	30.65	10.31	15.33
MEAN	2.70	9.70	105	232	204	37.7	12.5	4.10	1.89	.99	.33	.51
MAX	34	56	577	929	744	190	48	6.0	2.8	1.7	1.7	1.1
MIN	.27	1.2	2.4	8.4	68	11	5.0	2.4	1.4	.75	0	0
AC-FT	166	577	6,440	14,250	11,320	2,320	741	252	112	61	20	30

CAL YR 1968 TOTAL 10,890.97 MEAN 29.8 MAX 780 MIN .27 AC-FT 21,600
WTR YR 1969 TOTAL 18,296.16 MEAN 50.1 MAX 929 MIN 0 AC-FT 36,290

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-28	0415	11.95	1,500	1-26	0145	12.05	1,470
1-13	1015	12.84	1,700	2-15	0200	13.43	1,870
1-19	0515	12.25	1,530				

11-4601. ARROYO CORTE MADERA DEL PRESIDIO AT MILL VALLEY, CALIF.

LOCATION.--Lat 37°53'50", long 122°32'06", in Sausalito Grant, Marin County, on right bank near south boundary of town of Mill Valley, 1 mile upstream from mouth.

DRAINAGE AREA.--4.69 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1.85 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 443 cfs Dec. 28 (gage height, 5.51 ft); minimum daily, 0.14 cfs Oct. 1, 5, 8, 9.

Period of record: Maximum discharge, 682 cfs Jan. 20, 1967 (gage height, 6.96 ft); minimum daily, no flow for several days in 1968.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.48	2.1	15	27	38	1.5	1.9	1.2	.61	.37	.16
2	.20	18	1.8	12	21	31	1.8	1.9	1.2	.61	.37	.16
3	.20	4.3	1.4	9.4	18	23	1.6	1.8	1.2	.61	.28	.21
4	.23	1.7	1.7	8.2	18	18	1.8	1.8	1.2	.54	.32	.24
5	.14	1.2	1.3	7.0	40	15	9.0	1.8	1.0	.54	.32	.21
6	.17	1.3	1.2	6.4	49	12	6.1	1.7	1.0	.48	.48	.24
7	.20	.84	5.4	5.5	36	9.8	5.2	1.8	.94	.48	.37	.16
8	.14	.76	9.8	5.2	27	8.6	4.9	1.8	.94	.54	.32	.16
9	.14	.68	23	4.9	33	7.0	6.1	1.8	.94	.54	.32	.16
10	.17	.68	48	4.6	31	5.5	4.6	1.8	1.0	.61	.42	.18
11	1.8	3.5	29	18	96	4.4	4.0	1.7	.94	.48	.48	.18
12	7.8	1.8	14	23	67	6.0	3.7	1.5	.94	.48	.54	.18
13	1.7	.94	19	79	37	4.8	3.7	1.5	.94	.42	.48	.21
14	1.5	19	38	48	76	3.9	3.4	1.5	.84	.42	.28	.24
15	.68	17	83	30	131	3.2	3.2	1.7	.76	.48	.28	.24
16	.54	4.3	35	21	49	2.9	2.9	1.7	.84	.48	.28	.37
17	.48	2.3	18	16	34	4.4	2.9	1.5	.76	.36	.28	.61
18	.42	4.3	12	49	30	3.3	2.7	1.5	.76	.36	.32	.61
19	.42	2.5	9.0	155	23	2.9	2.5	1.4	.76	.36	.42	.61
20	.36	1.9	6.7	221	20	4.2	2.5	1.4	.68	.31	.37	.48
21	.42	1.7	5.5	158	19	3.5	2.3	1.5	.68	.36	.32	.42
22	.36	1.4	4.6	90	18	3.1	2.3	1.5	.68	.31	.28	.42
23	.36	1.3	4.3	45	23	2.7	5.5	1.5	.68	.36	.24	.32
24	.31	4.3	45	38	51	2.5	2.9	1.5	.61	.36	.24	.28
25	.27	1.4	45	84	38	2.2	2.5	1.4	.61	.36	.24	.28
26	.23	1.3	37	132	27	2.0	2.3	1.5	.61	.36	.21	.24
27	.17	1.2	40	57	25	1.9	2.3	1.5	.54	.31	.21	.32
28	.23	1.0	201	41	35	1.8	3.4	1.4	.54	.31	.21	.54
29	2.2	2.9	46	37	-----	1.6	2.1	1.3	.54	.27	.21	.54
30	.68	2.5	28	38	-----	1.5	1.9	1.2	.54	.27	.16	.54
31	.48	-----	20	33	-----	1.4	-----	1.0	-----	.37	.16	-----
TOTAL	23.14	106.48	835.8	1,491.2	1,099	232.1	101.6	48.8	24.87	13.35	9.78	9.51
MEAN	.75	3.55	27.0	48.1	39.3	7.49	3.39	1.57	.83	.43	.32	.32
MAX	7.8	19	201	221	131	38	9.0	1.9	1.2	.61	.54	.61
MIN	.14	.48	1.2	4.6	18	1.4	1.5	1.0	.54	.27	.16	.16
AC-FT	46	211	1,660	2,960	2,180	460	202	97	49	26	19	19
LAL YR 1968	TOTAL 2,117.89	MEAN 5.79	MAX 201	MIN 0	AC-FT 4,200							
WTR YR 1969	TOTAL 3,995.63	MEAN 10.9	MAX 221	MIN .14	AC-FT 7,930							

PEAK DISCHARGE (BASE, 220 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1030	5.03	326	1-26	0045	4.53	233
12-28	0300	5.51	443	2-15	0230	4.60	246
1-19	2200	4.86	293	2-24	0315	4.68	260

BOLINAS LAGOON BASIN

11-4601.6, MORSES CREEK AT BOLINAS, CALIF.

LOCATION.--Lat 37°55'09", long 122°40'09", in Las Baulines Grant, Marin County, on right bank at mouth, 7 ft upstream from culvert on State Highway 1, 1.0 mile northeast of Bolinas.

DRAINAGE AREA.--0.70 sq mi.

PERIOD OF RECORD.--May 1967 to September 1969 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 3.85 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 25 cfs Jan. 20 (gage height, 2.20 ft); no flow for many days.
Period of record: Maximum discharge, 25 cfs Jan. 20, 1969 (gage height, 2.20 ft); maximum gage height, 2.51 ft Feb. 21, 1968; no flow for many days in each year.

REMARKS.--Records poor. No regulation; small diversion of about 30 acres above station for irrigation and domestic use. Records of suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.03	1.2	4.9	2.5	.16	.05	.02	.03	.06	0
2	0	.02	.02	.91	4.0	2.3	.19	.05	.02	.03	.05	0
3	0	.05	.01	.67	3.5	1.8	.16	.05	.02	.03	.03	0
4	0	.05	.01	.50	3.2	1.2	.14	.04	.02	.02	.02	0
5	0	.03	.01	.40	4.0	1.0	.22	.04	.02	.02	0	0
6	0	.03	.01	.32	5.8	.86	.19	.03	.02	.02	0	0
7	0	.02	.01	.29	6.0	.64	.16	.03	.02	.04	0	0
8	0	.01	.03	.22	5.2	.57	.16	.02	.02	.04	0	0
9	0	.01	.83	.19	4.9	.37	.22	.02	.02	.04	0	0
10	0	0	5.7	.16	4.9	.33	.25	.02	.03	.04	0	0
11	0	0	4.4	.50	8.8	.25	.25	.02	.04	.03	0	0
12	.11	0	2.3	.97	10	.26	.19	.02	.03	.03	0	0
13	.03	0	1.6	12	6.9	.22	.16	.03	.02	.03	0	0
14	.03	.03	3.3	12	7.1	.19	.14	.02	.02	.03	0	0
15	.02	.22	5.0	8.1	12	.16	.12	.03	.02	.03	0	0
16	.01	.09	4.8	6.0	5.1	.16	.10	.03	.02	.04	0	0
17	.01	.06	3.0	4.9	3.1	.28	.08	.03	.03	.04	0	0
18	0	.06	1.9	5.1	2.0	.25	.08	.03	.03	.04	0	0
19	0	.06	1.3	14	1.4	.22	.07	.02	.03	.04	0	0
20	0	.06	.85	21	1.0	.37	.06	.02	.03	.04	.01	0
21	0	.06	.55	20	.86	.43	.06	.02	.03	.04	0	0
22	0	.05	.36	14	.71	.43	.06	.02	.03	.05	0	0
23	0	.04	.25	9.6	.78	.37	.12	.02	.03	.06	0	0
24	0	.04	1.9	7.8	1.8	.32	.06	.02	.03	.06	0	0
25	0	.03	3.8	8.8	2.5	.28	.05	.02	.03	.07	0	0
26	0	.02	3.8	14	2.0	.25	.04	.02	.03	.07	0	0
27	0	.01	3.5	11	1.5	.22	.03	.02	.03	.08	0	0
28	0	.01	9.7	9.1	1.7	.19	.03	.02	.03	.08	0	0
29	0	.02	4.3	6.7	-----	.19	.03	.02	.03	.08	0	0
30	0	.03	2.6	5.6	-----	.16	.04	.02	.03	.08	0	0
31	0	-----	1.7	5.4	-----	.16	-----	.03	-----	.07	0	-----
TOTAL	0.21	1.11	67.57	201.43	115.65	16.93	3.62	0.83	0.78	1.40	0.17	0
MEAN	.007	.037	2.18	6.50	4.13	.55	.12	.027	.026	.045	.006	0
MAX	.11	.22	9.7	21	12	2.5	.25	.05	.04	.08	.06	0
MIN	0	0	.01	.16	.71	.16	.03	.02	.02	.02	0	0
AC-FT	.4	2.2	134	400	229	34	7.2	1.7	1.6	2.8	.3	0
CAL YR 1968	TOTAL 144.63		MEAN .40		MAX 9.7		MIN 0		AC-FT 287			
WTR YR 1969	TOTAL 409.70		MEAN 1.12		MAX 21		MIN 0		AC-FT 813			

PEAK DISCHARGE (BASE, 5 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1300	2.82	7.9	1-26	0315	1.92	14
12-15	1015	1.97	6.5	2- 7	0245	1.64	6.5
12-28	0445	2.54	18	2-11	2330	1.85	12
1-13	1600	2.01	18	2-15	0200	2.05	19
1-20	1400	2.20	25				

11-4601.7. PINE CREEK AT BOLINAS, CALIF.

LOCATION.--Lat 37°55'07", long 122°41'31", in Las Baulines Grant, Marin County, on right bank 100 ft upstream from highway bridge, 0.4 mile upstream from mouth, and 0.9 mile north of Bolinas.

DRAINAGE AREA.--7.83 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 5.48 ft (revised) above mean sea level. Prior to Feb. 20, 1968, at datum 0.70 ft higher. Feb. 20 to Dec. 28, 1968, at datum 0.17 ft higher. Float-operated rain gage 2.1 miles north of gage.

EXTREMES.--Current year: Maximum discharge, 715 cfs Dec. 28 (gage height, 6.74 ft, present datum); minimum daily, 0.12 cfs Oct. 10.

Period of record: Maximum discharge, 715 cfs Dec. 28, 1968 (gage height, 6.74 ft, present datum); no flow Sept. 22, 1968.

REMARKS.--Records poor. No regulation; some small diversions above station for domestic use. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	2.2	2.4	29	50	53	11	5.8	3.9	1.9	.85	.60
2	.21	4.8	2.1	25	41	49	12	5.8	3.9	1.9	.80	.70
3	.23	3.3	2.0	22	38	46	11	5.5	3.7	1.7	.60	.70
4	.21	2.7	2.1	20	36	42	10	5.5	3.2	1.7	.75	.75
5	.21	2.3	2.2	18	50	38	15	5.5	2.9	1.7	.60	.70
6	.21	2.1	2.2	15	55	31	14	5.5	2.7	1.4	.65	.65
7	.18	2.0	2.4	13	49	27	12	5.5	2.7	1.9	.70	.65
8	.14	2.0	5.1	13	46	25	12	5.2	2.9	1.9	.70	.60
9	.14	1.9	7.6	13	63	24	12	5.2	3.2	1.6	.70	.65
10	.12	1.9	51	12	78	22	11	5.2	3.2	1.7	.70	.60
11	.37	2.0	31	19	178	21	11	5.2	2.9	1.9	.70	.70
12	8.2	2.7	15	20	110	21	10	5.2	2.7	1.4	.65	.70
13	3.1	2.0	14	114	81	19	10	5.0	2.7	1.6	.60	.75
14	2.7	3.2	20	76	124	18	9.6	5.0	2.5	1.7	.60	.70
15	2.4	9.5	36	51	165	18	8.9	4.7	2.7	1.6	.60	.65
16	2.2	3.7	26	41	111	17	8.6	4.7	2.5	1.3	.65	.65
17	2.1	2.8	18	36	78	23	8.3	4.5	2.7	1.3	.70	.60
18	2.0	2.8	14	50	62	18	8.3	4.5	1.7	1.3	.70	.70
19	2.0	2.6	12	122	54	16	8.0	4.5	2.2	1.4	.65	.75
20	2.0	2.5	10	204	46	20	7.7	4.2	2.5	1.3	.70	.70
21	1.9	2.4	9.2	173	44	20	7.7	4.2	2.5	1.3	.70	.75
22	2.0	2.2	8.6	111	41	18	7.4	4.2	2.3	1.4	.65	.70
23	1.9	2.1	8.2	80	40	17	9.3	4.2	2.3	1.3	.65	.65
24	1.9	2.5	27	67	43	16	7.7	4.2	2.2	1.3	.65	.65
25	1.8	2.2	27	78	42	15	7.1	3.9	2.0	1.6	.60	.65
26	1.8	2.1	28	133	40	14	6.7	4.2	2.0	1.6	.60	.65
27	1.8	2.0	26	94	41	13	6.4	3.9	2.0	1.3	.60	.65
28	1.9	1.9	320	84	51	12	6.4	3.7	1.9	1.3	.60	.75
29	2.4	2.0	78	70	-----	12	6.1	3.7	1.9	1.3	.55	.85
30	2.7	2.4	46	65	-----	11	6.1	3.4	1.9	1.3	.55	.80
31	2.3	-----	36	56	-----	11	-----	3.7	-----	1.2	.55	-----
TOTAL	51.30	80.8	889.1	1,924	1,857	707	281.3	145.5	78.4	47.1	20.30	20.60
MEAN	1.65	2.69	28.7	62.1	66.3	22.8	9.38	4.69	2.61	1.52	.65	.69
MAX	8.2	9.5	320	204	178	53	15	5.8	3.9	1.9	.85	.85
MIN	.12	1.9	2.0	12	36	11	6.1	3.4	1.7	1.2	.55	.60
AC-FT	102	160	1,760	3,820	3,680	1,400	558	289	156	93	40	41
(a)	4.2	2.3	11.2	10.7	-	-	2.6	.2	.2	0	0	0

CAL YR 1968 TOTAL 2,703.72 MEAN 7.39 MAX 320 MIN 0 AC-FT 5,360
WTR YR 1969 TOTAL 6,102.40 MEAN 16.7 MAX 320 MIN .12 AC-FT 12,100

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE	a Precipitation, in inches.
12-28	0345	6.74	715	1-26	0200	4.94	204	
1-13	1045	4.71	272	2-11	unknown	5.31	256	
1-20	0945	5.37	265	2-14	1730	5.48	283	

WALKER CREEK BASIN

11-4608, WALKER CREEK NEAR TOMALES, CALIF.

LOCATION.--Lat 38°12'35", long 122°51'35", in Nicasio Grant, Marin County, on left bank 1,300 ft upstream from Chileno Creek, and 3.5 miles southeast of Tomales.

DRAINAGE AREA.--37.1 sq mi.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 56.74 ft above mean sea level.

AVERAGE DISCHARGE.--10 years, 41.7 cfs (30,210 acre-ft per year); median of yearly mean discharges, 35 cfs (25,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,030 cfs Jan. 13 (gage height, 20.47 ft), from rating curve extended above 790 cfs; no flow for many days.

Period of record: Maximum discharge, 5,420 cfs Jan. 5, 1966 (gage height, 22.23 ft); no flow for many days in each year.

REVISIONS.--Figures of maximum discharge for the water years 1967 and 1968 have been revised to 4,350 cfs Jan. 21, 1967 (gage height, 21.18 ft) and 3,620 cfs Jan. 29, 1968 (gage height, 19.47 ft), superseding figures published in WRD Calif. 1967 and 1968.

REMARKS.--Records good. No regulation; small diversions above station for irrigation of about 100 acres and stock watering.

REVISIONS.--Revised figures of discharge, in cubic feet per second, for water years 1967-68, superseding those published in WRD Calif. 1967-68, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1966		1967-Con.		1968-Con.	
Dec. 6	489	Mar. 14	106	Jan. 15	319
7	233	16	396	16	130
8	140	17	194	29	571
9	125	18	145	30	1,070
10	375	19	110	31	318
11	166	20	106	Feb. 1	159
12	118	23	111	2	150
		30	263	3	129
		31	241	17	289
1967				18	148
Jan. 20	1,170	Apr. 1	152	19	486
21	3,580	2	126	20	763
22	1,050	3	111	21	906
23	355	6	161	22	443
24	1,220	7	125	23	261
25	467	11	120	24	172
26	552	18	139	25	130
27	530	19	123	Mar. 12	304
28	465	21	180	13	338
29	1,370	22	170	14	168
30	1,570	23	208	15	129
31	729	24	159	16	547
Feb. 1	387	25	124	17	284
2	231			18	167
3	154	1968		19	125
4	106	Jan. 10	272		
Mar. 13	142	14	119		

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
December 1966.....	5,365	960	11	173	10,640
CAL YR 1966.....	18,397.40	3,400	0	50.4	36,490
January 1967.....	13,189.7	3,580	3.6	425	26,160
February.....	1,534	387	11	54.8	3,040
March.....	2,689.2	396	6.8	86.7	5,330
April.....	3,340	208	50	111	6,620
WTR YR 1967.....	27,778.15	3,580	0	76.1	55,100
CAL YR 1967.....	21,459.84	3,580	0	58.8	42,570
January 1968.....	3,338.8	1,070	1.0	108	6,620
February.....	4,875	906	13	168	9,670
March.....	2,894	547	17	93.4	5,740
WTR YR 1968.....	11,597.45	1,070	0	31.7	23,000

REVISED PEAK DISCHARGE.--1967: Dec. 2 (time unknown) 3,290 cfs (18.65 ft); Dec. 4 (time unknown) 1,360 cfs (12.73 ft); Jan. 21 (0100) 4,350 cfs (21.18 ft); Jan. 24 (0400) 2,720 cfs (17.06 ft); Jan. 30 (0815) 2,630 cfs (16.82 ft).

1968: Jan. 29 (2345) 3,620 cfs (19.47 ft); Feb. 21 (0500) 1,920 cfs (14.70 ft); Mar. 16 (0700) 1,430 cfs (13.03 ft).

11-4608, WALKER CREEK NEAR TOMALES, CALIF.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	1.2	81	196	450	11	6.7	.60	.10	.03	0
2	0	3.2	.69	62	154	312	14	6.4	.69	.10	.02	0
3	0	4.6	.43	48	133	230	17	6.0	.51	.10	.02	0
4	0	.69	.30	38	120	159	13	5.3	.43	.10	.01	0
5	0	.25	.30	32	255	132	48	5.0	.30	.09	.01	0
6	0	.18	.30	27	539	111	38	4.3	.30	.09	.01	0
7	0	.18	.51	24	316	93	24	4.6	.30	.08	.01	0
8	0	.12	2.1	22	219	78	20	3.1	.30	.08	0	0
9	0	.10	7.4	19	515	66	24	3.1	.36	.08	0	0
10	0	.10	184	18	363	56	21	3.4	.36	.08	0	0
11	0	.12	104	112	723	44	18	3.1	.36	.08	0	0
12	0	.51	66	845	440	48	17	3.4	.36	.07	0	0
13	0	.69	90	2,580	285	40	16	3.1	.30	.06	0	0
14	0	1.8	231	608	324	32	16	2.5	.36	.06	0	0
15	0	17	673	260	657	27	15	2.5	.36	.06	0	0
16	0	1.2	248	161	314	24	14	2.5	.30	.06	0	0
17	0	.25	120	120	239	32	13	2.1	.30	.06	0	0
18	0	.21	82	376	220	26	13	2.1	.43	.05	0	0
19	0	.21	65	1,040	160	22	12	1.6	.25	.05	0	0
20	0	.15	52	1,450	134	27	11	1.5	.25	.05	0	0
21	0	.10	46	1,270	115	43	11	1.3	.25	.05	0	0
22	0	.08	41	532	112	25	10	1.5	.21	.05	0	0
23	0	.07	41	312	175	22	21	1.5	.21	.05	0	0
24	0	.21	552	341	372	20	16	1.5	.15	.04	0	0
25	0	.21	562	573	394	18	12	1.5	.12	.04	0	0
26	0	.15	386	1,110	328	17	11	1.3	.12	.04	0	0
27	0	.12	188	496	260	16	9.3	1.3	.10	.04	0	0
28	0	.10	1,060	460	525	15	8.5	.91	.10	.04	0	0
29	.03	.12	333	319	-----	14	8.1	.80	.10	.04	0	0
30	0	.69	161	329	-----	13	7.4	.69	.08	.04	0	0
31	0	-----	109	214	-----	12	-----	.60	-----	.03	0	-----
TOTAL	0.03	33.41	5,407.23	13,879	8,587	2,224	489.3	85.20	8.86	1.96	0.11	0
MEAN	.001	1.11	174	448	307	71.7	16.3	2.75	.30	.063	.004	0
MAX	.03	17	1,060	2,580	723	450	48	6.7	.69	.10	.03	0
MIN	0	0	.30	18	112	12	7.4	.60	.08	.03	0	0
AC-FT	.06	66	10,730	27,530	17,030	4,410	971	169	18	3.9	.2	0
CAL YR 1968	TOTAL	16,892.13	MEAN	46.2	MAX	1,070	MIN	0	AC-FT	33,500		
WTR YR 1969	TOTAL	30,716.10	MEAN	84.2	MAX	2,580	MIN	0	AC-FT	60,920		

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1215	13.60	1,590	1-26	0115	15.19	2,070
12-28	0530	15.49	2,170	2-11	1000	12.00	1,180
1-13	0945	20.47	4,030	2-15	0215	12.38	1,270
1-20	0830	14.70	1,920				

SALMON CREEK BASIN

11-4609.2. SALMON CREEK AT BODEGA, CALIF.

LOCATION.--Lat 38°20'54", long 122°58'45", in Estero Americano Grant, Sonoma County, on left bank 100 ft upstream from private road bridge, 0.3 mile upstream from unnamed tributary, and 0.4 mile northwest of Bodega.

DRAINAGE AREA.--15.7 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 81.03 ft above mean sea level.

AVERAGE DISCHARGE.--7 years, 21.2 cfs (15,360 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,650 cfs Dec. 24 (gage height, 16.94 ft); no flow for many days.
Period of record: Maximum discharge, 1,960 cfs Jan. 5, 1966 (gage height, 18.89 ft), from rating curve extended above 800 cfs; no flow for many days in each year.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.37	2.4	27	73	135	5.8	3.3	1.2	.29	0	0
2	0	26	2.0	22	64	125	16	3.0	1.6	.41	0	0
3	0	6.6	1.6	18	56	82	12	2.7	1.6	.51	0	0
4	0	2.3	1.5	16	52	52	8.4	2.6	1.6	.46	0	0
5	0	1.5	1.4	14	74	39	55	2.3	1.5	.29	0	0
6	0	1.2	1.4	13	175	32	29	2.2	1.3	.20	0	0
7	0	1.1	1.7	12	61	26	16	2.2	.90	.23	0	0
8	0	.92	27	11	47	21	12	2.2	.84	.32	0	0
9	0	.86	33	9.4	306	18	16	2.2	.97	.46	0	0
10	0	.74	183	8.6	144	16	12	2.1	1.3	.46	0	0
11	0	.80	63	111	324	13	9.4	2.1	.97	.29	0	0
12	3.6	1.3	25	649	116	30	9.4	2.1	.84	.26	0	0
13	1.9	1.2	59	694	63	19	8.4	2.1	.84	.11	0	0
14	.80	2.0	184	285	317	14	7.4	2.0	.66	.08	0	0
15	.59	14	289	83	250	12	6.6	1.8	.51	.08	0	0
16	.37	3.5	70	50	97	11	6.0	1.7	.51	.11	0	0
17	.19	2.2	34	36	110	95	5.6	1.7	.78	.02	0	0
18	.07	2.7	22	29	94	39	5.2	1.6	.78	.02	0	0
19	.02	3.0	18	416	58	25	4.8	1.4	.90	0	0	0
20	0	2.1	13	457	43	37	4.4	1.4	1.2	.02	0	0
21	0	1.8	10	340	36	31	4.0	1.4	1.2	.08	0	0
22	0	1.6	8.6	185	37	20	3.7	1.4	.84	.14	0	0
23	0	1.5	37	110	89	16	12	1.6	.84	.11	0	0
24	0	1.8	662	130	167	13	14	1.6	.56	.11	0	0
25	0	1.7	268	180	89	11	6.6	1.3	.36	.14	0	0
26	0	1.4	155	355	69	9.7	5.4	1.5	.14	.20	0	0
27	0	1.3	98	195	105	8.6	4.4	1.7	.41	.23	0	0
28	0	1.2	418	160	231	8.1	4.0	1.4	.36	.23	0	0
29	.30	1.2	90	118	-----	7.4	3.7	1.1	.36	.08	0	0
30	1.3	2.5	50	145	-----	6.6	3.4	.97	.29	.02	0	0
31	.64	-----	35	96	-----	6.4	-----	1.1	-----	.08	0	-----
TOTAL	9.78	90.39	2,863.6	4,975.0	3,347	978.8	310.6	57.77	26.16	6.04	0	0
MEAN	.32	3.01	92.4	160	120	31.6	10.4	1.86	.87	.19	0	0
MAX	3.6	26	662	694	324	135	55	3.3	1.6	.51	0	0
MIN	0	.37	1.4	8.6	36	6.4	3.4	.97	.14	0	0	0
AC-FT	19	179	5,680	9,870	6,640	1,940	616	115	52	12	0	0

CAL YR 1968 TOTAL 8,466.25 MEAN 23.1 MAX 662 MIN 0 AC-FT 16,790
WTR YR 1969 TOTAL 12,665.14 MEAN 34.7 MAX 694 MIN 0 AC-FT 25,120

PEAK DISCHARGE (BASE, 750 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1130	12.38	943	1-12	0615	12.99	1,030
12-24	1030	16.94	1,650	1-19	1245	12.68	985
12-28	0230	12.94	1,020	2-14	1845	13.04	1,040

11-4610. RUSSIAN RIVER NEAR UKIAH, CALIF.

LOCATION.--Lat 39°12'07", long 123°11'55", in Yokayo Rancho Grant, Mendocino County, on left bank 200 ft downstream from York Creek, 0.7 mile upstream from East Fork, and 3.6 miles north of Ukiah.

DRAINAGE AREA.--99.7 sq mi.

PERIOD OF RECORD.--August 1911 to September 1913, October 1952 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 611.98 ft above mean sea level. Prior to October 1952, nonrecording gage at bridge 0.6 mile downstream at different datum. Oct. 1, 1952, to Feb. 16, 1959, water-stage recorder at datum 2.00 ft higher, and Feb. 17, 1959, to Sept. 30, 1961, at datum 1.00 ft higher.

AVERAGE DISCHARGE.--19 years, 176 cfs (127,500 acre-ft per year); median of yearly mean discharges, 150 cfs (109,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,720 cfs Dec. 23 (gage height, 12.29 ft); minimum daily, 0.01 cfs Oct. 1.

Period of record: Maximum discharge, 18,900 cfs Dec. 21, 1955 (gage height, 21.0 ft, present datum); no flow at times in 1911, 1952-53, 1960-61, 1964-65.

REMARKS.--Records good. No regulation; small diversions above station for irrigation of about 300 acres.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	1.6	74	290	670	1,220	92	43	9.6	3.5	.23	.10
2	.03	15	58	235	500	880	85	42	9.1	2.9	.15	.10
3	.03	9.4	33	190	435	660	81	40	8.2	2.9	.15	.10
4	.03	5.3	24	165	395	542	74	41	8.6	3.2	.15	.10
5	.03	4.2	20	135	1,010	480	154	39	8.6	3.5	.15	.10
6	.03	3.6	18	114	1,770	411	110	36	8.6	3.2	.23	.10
7	.03	3.3	18	103	980	370	93	31	8.6	2.6	.23	.15
8	.03	3.0	141	90	780	343	82	29	9.1	2.3	.23	.10
9	.03	3.0	83	81	2,450	309	97	28	10	1.8	.23	.10
10	.03	2.7	2,410	76	1,600	285	85	28	8.6	1.5	.15	.10
11	.05	3.6	1,070	1,000	2,080	268	76	27	9.1	1.3	.15	.15
12	.07	4.9	453	3,900	1,420	254	69	28	9.1	.87	.15	.15
13	.07	5.3	307	4,950	990	239	66	26	8.2	1.5	.15	.15
14	.07	9.4	711	1,450	1,080	223	63	24	7.3	.87	.15	.15
15	.07	25	2,010	800	1,690	198	63	23	7.7	.87	.15	.23
16	.07	15	938	540	1,250	181	62	22	6.4	.66	.15	.23
17	.10	10	464	335	950	305	62	21	5.3	.15	.15	.23
18	.18	16	307	450	760	201	60	20	6.0	.23	.23	.23
19	.22	20	235	4,000	620	183	59	18	6.4	1.1	.15	.23
20	.32	13	178	3,000	560	172	59	15	6.0	.66	.15	.33
21	.60	10	141	3,900	500	161	58	16	6.8	.33	.15	.15
22	.50	8.3	144	1,800	450	151	57	13	6.4	.15	.15	.15
23	.60	7.4	6,670	1,080	470	141	63	13	5.6	.23	.15	.15
24	.60	9.4	5,200	830	1,090	121	84	12	4.3	.23	.10	.15
25	.60	34	2,450	1,300	800	112	58	12	4.0	.33	.10	.15
26	.60	24	1,500	2,000	680	105	50	12	4.3	.47	.10	.15
27	.70	16	990	1,400	700	103	47	13	4.0	.23	.10	.15
28	.82	14	700	1,000	1,800	103	46	12	4.0	.23	.10	.15
29	3.0	15	580	810	-----	101	44	11	3.5	.15	.10	.15
30	2.2	30	450	680	-----	101	43	11	4.3	.23	.10	.15
31	1.8	-----	355	560	-----	97	-----	10	-----	.23	.10	-----
TOTAL	13.52	341.4	28,732	37,264	28,480	9,020	2,142	716	207.7	38.42	4.73	4.63
MEAN	.44	11.4	927	1,202	1,017	291	71.4	23.1	6.92	1.24	.15	.15
MAX	3.0	34	6,670	4,950	2,450	1,220	154	43	10	3.5	.23	.33
MIN	.01	1.6	18	76	395	97	43	10	3.5	.15	.10	.10
AC-FT	27	677	56,990	73,910	56,490	17,890	4,250	1,420	412	76	9.4	9.2

CAL YR 1968 TOTAL 91,944.88 MEAN 251 MAX 6,670 MIN .01 AC-FT 182,400
WTR YR 1969 TOTAL 106,964.40 MEAN 293 MAX 6,670 MIN .01 AC-FT 212,200

PEAK DISCHARGE (BASE, 4,000 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
12-10 1030 8.70 6,000 1-19 0930 8.64 5,940
12-23 1830 12.29 9,720 1-21 0945 8.54 5,840
1-12 0100 9.62 6,920

RUSSIAN RIVER BASIN

11-4615. EAST FORK RUSSIAN RIVER NEAR CALPELLA, CALIF.

LOCATION.--Lat 39°14'48", long 123°07'45", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.16 N., R.11 W., Mendocino County, on left bank 0.1 mile downstream from Cold Creek, and 3.9 miles east of Calpella.

DRAINAGE AREA.--92.2 sq mi.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 787.87 ft above mean sea level. Prior to May 28, 1957, at site 1.3 miles downstream at different datum. May 28, 1957, to Apr. 5, 1966, at site 0.4 mile downstream at same datum.

AVERAGE DISCHARGE.--28 years, 338 cfs (244,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,650 cfs Jan. 13 (gage height, 15.95 ft); minimum daily, 101 cfs Oct. 2.

Period of record: Maximum discharge, 18,700 cfs Dec. 22, 1964 (gage height, 20.21 ft); minimum daily, 3.8 cfs Oct. 30, 31, 1959.

REMARKS.--Records good. Flow greatly affected by diversion from Eel River through Potter Valley powerhouse (see sta 11-4710). Diversion for irrigation of about 1,000 acres above station. Records of water temperatures and turbidity data for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	307	328	428	825	975	378	351	295	185	209	233
2	101	323	317	413	724	1,020	378	351	295	175	189	197
3	219	319	313	395	660	880	375	345	287	177	189	163
4	253	305	305	386	624	732	369	342	279	175	183	130
5	269	305	301	377	1,590	660	434	342	293	175	187	153
6	267	309	299	371	1,840	620	408	305	293	175	195	271
7	275	307	301	365	900	580	390	299	295	185	191	271
8	255	305	321	365	1,020	543	378	310	295	201	195	275
9	259	309	309	362	2,080	518	384	313	281	209	189	269
10	271	305	1,480	359	1,040	501	375	318	287	215	197	269
11	309	307	689	3,440	2,200	476	360	310	289	223	193	269
12	307	307	404	3,750	1,180	466	366	295	293	221	191	271
13	307	309	443	4,040	865	448	363	291	287	225	181	275
14	305	323	638	1,010	935	445	360	291	235	225	185	289
15	307	323	1,600	710	1,960	431	357	291	235	229	185	279
16	305	309	553	596	1,190	424	351	287	221	235	187	267
17	305	309	398	539	885	490	351	293	193	235	191	287
18	305	315	362	1,100	768	441	351	305	195	231	193	299
19	303	311	345	3,770	680	424	348	299	219	231	183	303
20	303	309	325	2,910	616	420	348	287	205	227	193	303
21	303	309	317	3,510	568	417	348	291	201	223	193	303
22	303	311	337	1,330	553	405	348	287	203	219	193	287
23	301	311	4,620	875	760	399	381	285	207	215	213	285
24	301	313	3,450	732	1,540	393	375	287	197	213	195	279
25	301	311	2,310	1,170	1,080	390	354	289	191	229	201	275
26	299	307	1,410	1,670	825	387	348	295	181	233	199	291
27	297	307	830	1,090	804	384	345	293	193	231	201	301
28	299	307	900	1,020	1,470	384	345	308	185	229	205	299
29	311	311	648	768	-----	381	348	310	183	229	209	297
30	311	319	528	825	-----	376	351	295	187	227	219	273
31	307	-----	472	708	-----	375	-----	295	-----	237	227	-----
TOTAL	8,703	9,322	25,853	39,384	30,182	15,785	10,967	9,460	7,200	6,639	6,061	7,963
MEAN	281	311	834	1,270	1,078	509	366	305	240	214	196	265
MAX	311	323	4,620	4,040	2,200	1,020	434	351	295	237	227	303
MIN	101	305	299	359	553	375	345	285	181	175	181	130
AC-FT	17,260	18,490	51,280	78,120	59,870	31,310	21,750	18,760	14,280	13,170	12,020	15,790
CAL YR 1968	TOTAL	126,097		MEAN	345	MAX	4,620	MIN	33	AC-FT	250,100	
WTR YR 1969	TOTAL	177,519		MEAN	486	MAX	4,620	MIN	101	AC-FT	352,100	

PEAK DISCHARGE (BASE, 3,300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1100	12.19	3,790	1-21	0900	14.86	6,460
12-15	1000	11.85	3,470	2- 5	2300	12.10	3,700
12-24	0800	15.20	6,820	2-11	0800	12.28	3,880
1-13	0700	15.95	7,650	2-15	0700	12.15	3,750

11-4618. LAKE MENDOCINO NEAR UKIAH, CALIF.

LOCATION.--Lat 39°11'53", long 123°10'50", in Yokayo Rancho Grant, Mendocino County, in intake tower 30 ft upstream from Coyote Dam on East Fork Russian River, and 3.6 miles northeast of Ukiah.

DRAINAGE AREA.--105 sq mi.

PERIOD OF RECORD.--October 1965 to current year. Records prior to October 1965 in files of Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum contents, 91,400 acre-ft Jan. 21 (elevation, 748.30 ft); minimum, 54,500 acre-ft Feb. 4 (elevation, 726.15 ft).

Period of record: Maximum contents, 91,400 acre-ft Jan. 21, 1969 (elevation, 748.30 ft); minimum, 52,600 acre-ft Nov. 22, 1965 (elevation, 725.20 ft).

REMARKS.--Reservoir is formed by earthfill dam; storage began in November 1958. Capacity, 122,900 acre-ft between elevations 637.0 (invert of outlet tunnel) and 764.8 ft (spillway crest) above mean sea level. Storage affected by diversions from Eel River through Potter Valley powerhouse (see sta 11-4710). Water is released down East Fork Russian River for irrigation and recreation use. Records given herein represent total contents.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FEET)

637	135	660	2,110	685	10,900	720	45,000
640	250	665	3,190	690	13,700	730	60,100
645	535	670	4,590	695	17,100	740	76,900
650	900	675	6,280	700	21,100	750	94,600
655	1,380	680	8,430	710	31,620	765	122,900

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59600	64300	71000	64400	60800	76300	72900	82700	83500	81800	74700	67500
2	59400	64700	71200	63000	58200	76200	73600	82600	83600	81600	74400	67300
3	59400	64900	71400	63800	55500	74300	74300	82600	83500	81400	74100	67000
4	59400	65100	71600	64500	54500	70400	75600	82500	83500	81200	73800	66600
5	59500	65400	71700	65200	57600	65600	76000	82300	83400	81000	73500	66300
6	59600	65600	71700	65900	61500	60800	76700	82100	83500	80800	73200	66300
7	59700	65800	71700	66600	63400	58300	77400	81700	83600	80600	73000	66300
8	59800	65900	71800	67300	65500	57300	78100	81300	83700	80400	72700	66300
9	59900	66200	72100	68000	69700	56300	78800	81200	83800	80200	72500	66300
10	60000	66400	73600	68600	71900	56500	79400	80700	83800	80000	72300	66400
11	60300	66600	69900	74800	76500	57300	80000	80300	83900	79900	72000	66400
12	60500	66800	68100	81900	76000	58200	80600	79900	84100	79700	71800	66500
13	60700	67000	69100	89800	72100	59100	81200	79600	84100	79500	71600	66500
14	60900	67300	70300	88900	72100	59900	81800	79200	84000	79300	71400	66600
15	61100	67600	73400	84200	76400	60700	82500	78900	83900	79100	71000	66700
16	61300	67800	71400	79500	78700	61500	83000	78900	83800	79000	70800	66800
17	61500	68000	66300	74500	77100	62300	83000	79400	83500	78800	70600	67000
18	61600	68300	61200	72400	72400	63200	83000	79800	83400	78600	70300	67200
19	61800	68500	59800	79100	67600	63900	83000	80200	83200	78400	70100	67400
20	62000	68600	60400	84600	66200	64700	83000	80600	83200	78100	69900	67500
21	62200	68800	61100	91400	67300	65400	83000	81000	83100	77900	69700	67800
22	62400	69000	62000	90300	68500	66100	82900	81400	83000	77600	69400	67900
23	62600	69200	71100	85200	70000	66800	83000	81800	82900	77300	69100	68100
24	62800	69500	77900	81500	73100	67500	83000	82000	82800	77000	68900	68200
25	63000	69700	80500	80100	75500	68200	83000	82100	82600	76600	68700	68300
26	63100	69800	79100	80100	74600	68900	82900	82300	82500	76400	68500	68400
27	63300	70100	77800	76600	72700	69600	83000	82500	82300	76200	68300	68500
28	63500	70200	78200	71900	74500	70300	82800	82700	82200	75800	68100	68700
29	63800	70500	78100	67900	-----	70900	82900	83000	82100	75500	67900	68800
30	64000	70700	74600	65600	-----	71600	82700	83200	82000	75200	67700	68800
31	64200	-----	69400	63000	-----	72200	-----	83400	-----	74900	67600	-----
MEAN	61384	67610	70887	74858	68925	65171	80437	81352	83283	78703	70890	67280
MAX	64200	70700	80500	91400	78700	76300	83000	83400	84100	81800	74700	68800
MIN	59400	64300	59800	63000	54500	56300	72900	78900	82000	74900	67600	66300
(a)	732.55	736.58	735.75	731.86	738.70	737.45	743.47	743.87	743.08	738.95	734.67	735.40
(b)	+4,500	+6,500	-1,300	-6,400	+11,500	-2,300	+10,500	+700	-1,400	-7,100	-7,300	+1,200

CAL YR 1968..... b -2,400

WTR YR 1969..... b +9,100

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

RUSSIAN RIVER BASIN

11-4620. EAST FORK RUSSIAN RIVER NEAR UKIAH, CALIF.

LOCATION.--Lat 39°11'45", long 123°11'30", in Yokayo Rancho Grant, Mendocino County, on right bank of outlet channel, 500 ft downstream from Coyote Dam, 1,300 ft upstream from mouth, and 3.2 miles northeast of Ukiah.

DRAINAGE AREA.--105 sq mi.

PERIOD OF RECORD.--August 1911 to September 1913, October 1951 to June 1956, October 1957 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 614.41 ft above mean sea level. Prior to October 1951, nonrecording gage at site 0.5 mile upstream at different datum. October 1951 to June 1956, water-stage recorder at site 1.0 mile upstream at different datum.

EXTREMES.--Current year: Maximum discharge, 4,060 cfs Jan. 22 (gage height, 7.74 ft); minimum daily, 0.10 cfs May 19-21.

Period of record (prior to regulation by Lake Mendocino): Maximum discharge, 13,300 cfs Dec. 21, 1955 (gage height, 16.86 ft, site and datum then in use), from rating curve extended above 1,700 cfs on basis of maximum flow at station upstream which was defined to 8,600 cfs; no flow Aug. 13-15, 1913.

1957 to current year: Maximum discharge, 6,780 cfs Dec. 30, 1964 (gage height, 10.82 ft); minimum daily, 0.10 cfs May 19-21, 1969.

REMARKS.--Records good. Flow affected by diversion from Eel River through Potter Valley powerhouse (see sta 11-4710) and since November 1958 by storage in Lake Mendocino 500 ft upstream (see sta 11-4618). Small diversions above station for irrigation of about 1,000 acres. Records of turbidity data for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	193	186	2,900	2,010	135	30	350	167	245	273	273
2	179	191	186	1,220	2,000	1,000	31	350	227	257	269	269
3	179	190	186	17	1,990	1,600	31	350	277	261	273	269
4	183	190	186	17	1,250	2,520	33	350	281	257	273	269
5	183	190	248	17	16	2,940	33	424	265	261	273	269
6	183	190	285	17	16	2,890	33	477	238	261	273	269
7	183	190	285	17	16	1,690	33	477	227	257	269	269
8	183	190	280	17	16	867	33	477	227	257	269	234
9	183	190	280	17	16	864	33	477	227	257	269	216
10	183	190	617	16	16	341	33	483	227	257	269	216
11	183	190	2,430	17	16	27	33	483	231	257	269	216
12	183	190	1,470	18	1,460	27	33	483	231	257	269	202
13	183	190	28	18	2,630	27	33	483	249	257	269	191
14	183	190	28	1,460	890	27	33	483	261	257	269	191
15	183	190	29	2,890	8.6	27	48	483	257	257	269	187
16	186	189	1,510	2,910	7.7	27	108	202	257	253	269	187
17	186	187	2,960	2,900	1,780	27	234	53	273	253	269	187
18	186	186	2,890	2,040	2,870	27	330	6.4	249	261	269	187
19	186	186	1,120	244	2,940	29	345	.10	234	277	269	187
20	186	186	21	6.3	1,300	29	345	.10	234	277	269	187
21	190	186	16	6.5	15	29	345	.10	234	277	269	187
22	190	186	16	1,760	15	29	345	6.6	231	277	269	187
23	190	186	19	2,510	15	29	345	34	231	277	269	187
24	193	186	19	1,880	16	29	345	158	231	277	269	187
25	193	186	840	1,860	16	29	345	161	231	273	269	213
26	193	186	2,050	1,830	1,180	29	345	164	227	273	273	209
27	193	186	1,690	2,970	1,600	30	345	164	231	273	273	209
28	193	186	700	3,250	648	30	345	164	227	273	273	209
29	193	186	650	2,880	-----	30	345	164	231	273	273	209
30	193	186	2,050	2,040	-----	30	350	164	227	273	273	209
31	193	-----	3,000	2,030	-----	30	-----	167	-----	273	273	-----
TOTAL	5,777	5,648	26,275	39,774.8	24,753.3	15,445	5,320	8,238.30	7,140	8,195	8,383	6,481
MEAN	186	188	848	1,283	884	498	177	266	238	264	270	216
MAX	193	193	3,000	3,250	2,940	2,940	350	483	281	277	273	273
MIN	179	186	16	6.3	7.7	27	30	.10	167	245	269	187
AC-FT	11,460	11,200	52,120	78,890	49,100	30,630	10,550	16,340	14,160	16,250	16,630	12,850
CAL YR 1968	TOTAL 120,756.5		MEAN 330		MAX 3,000		MIN 9.5		AC-FT 239,500			
WTR YR 1969	TOTAL 161,430.40		MEAN 442		MAX 3,250		MIN .10		AC-FT 320,200			

11-4625. RUSSIAN RIVER NEAR HOPLAND, CALIF.

LOCATION.--Lat 39°01'35", long 123°07'45", in Rancho de Sanel Grant, Mendocino County, on right bank at abandoned highway bridge, 0.2 mile downstream from McNab Creek, 4 miles north of Hopland.

DRAINAGE AREA.--362 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 497.61 ft above mean sea level. Prior to Sept. 9, 1943, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--30 years, 720 cfs (521,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,600 cfs Dec. 23 (gage height, 17.64 ft); minimum daily, 95 cfs May 23.

Period of record: Maximum discharge, 45,000 cfs Dec. 22, 1955 (gage height, 27.00 ft); minimum daily, 26 cfs Dec. 18, 1943, June 26, 1949.

Flood in December 1937 reached a stage of 30.0 ft, from floodmarks.

REMARKS.--Records good. Small diversions for irrigation of about 700 acres above station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino 15 miles upstream (see sta 11-4618). Records of water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS.--WSP 1041: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	220	274	3,520	3,960	2,920	216	435	207	235	256	274
2	179	240	289	2,340	3,670	3,260	224	435	235	253	256	270
3	182	235	265	620	3,320	3,490	240	430	306	256	260	270
4	184	227	254	470	2,740	3,930	212	430	310	253	260	270
5	188	225	271	400	2,250	4,270	345	460	302	256	260	267
6	193	222	327	340	4,220	4,130	350	524	278	260	260	267
7	193	222	330	300	2,310	3,050	284	530	256	298	260	267
8	193	222	396	268	2,050	1,920	256	530	260	253	263	253
9	193	222	403	236	4,880	1,790	260	524	260	249	260	214
10	193	222	3,800	212	2,730	1,220	244	518	256	246	260	211
11	200	225	3,730	3,210	4,820	644	224	518	253	246	260	211
12	205	227	2,780	9,950	4,020	566	216	512	249	246	260	200
13	205	230	660	11,800	4,850	512	204	512	256	249	260	183
14	205	240	1,090	4,640	3,100	460	200	506	270	249	260	179
15	205	270	3,830	4,850	3,400	425	200	500	274	246	260	183
16	207	240	2,430	4,340	2,610	400	228	360	274	246	263	179
17	210	233	3,670	4,020	3,120	524	312	147	278	246	263	179
18	207	231	3,490	3,910	4,310	445	420	120	278	242	263	179
19	207	240	2,280	7,030	4,150	395	450	114	249	260	263	179
20	207	230	571	8,400	2,880	405	450	105	246	263	267	176
21	210	230	441	9,070	952	390	445	104	246	267	263	179
22	210	230	378	5,250	805	350	450	103	242	263	267	179
23	210	238	9,970	6,110	1,150	320	560	95	242	260	270	176
24	210	251	11,100	4,440	2,630	296	560	172	239	263	270	179
25	210	275	6,250	4,680	2,200	280	494	221	239	263	270	186
26	210	254	6,250	6,540	2,580	268	476	225	239	260	267	207
27	210	243	3,970	6,220	3,440	256	465	221	235	263	270	214
28	212	240	2,810	5,960	4,750	248	450	218	235	260	270	214
29	222	240	2,250	5,090	-----	236	440	218	235	260	270	214
30	222	254	2,740	3,880	-----	228	440	207	235	260	270	214
31	217	-----	3,710	3,520	-----	220	-----	207	-----	256	274	-----
TOTAL	6,282	7,078	81,009	131,616	87,897	37,848	10,315	10,201	7,684	7,927	8,175	6,373
MEAN	203	236	2,613	4,246	3,139	1,221	344	329	256	256	264	212
MAX	222	275	11,100	11,800	4,880	4,270	560	530	310	298	274	274
MIN	179	220	254	212	805	220	200	95	207	235	256	176
AC-FT	12,460	14,040	160,700	261,100	174,300	75,070	20,460	20,230	15,240	15,720	16,210	12,640
CAL YR 1968	TOTAL 264,447		MEAN 723		MAX 11,100		MIN 80		AC-FT 524,500			
WTR YR 1969	TOTAL 402,405		MEAN 1,102		MAX 11,800		MIN 95		AC-FT 798,200			

PEAK DISCHARGE (BASE, 9,600 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-23	2330	17.64	17,600	1-21	1145	15.19	12,300
1-13	0930	17.19	16,500				

RUSSIAN RIVER BASIN

11-4630. RUSSIAN RIVER NEAR CLOVERDALE, CALIF.

LOCATION.--Lat 38°52'55", long 123°03'15", in SW $\frac{1}{4}$ sec.14, T.12 N., R.11 W., Mendocino County, on left bank at Lambert Ranch, 400 ft downstream from Cummsky Creek, and 5 miles northwest of Cloverdale.

DRAINAGE AREA.--502 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 373.62 ft above mean sea level.

AVERAGE DISCHARGE.--18 years, 992 cfs (718,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 24,800 cfs Jan. 13 (gage height, 21.32 ft); minimum daily, 105 cfs May 23.

Period of record: Maximum discharge, 55,200 cfs Dec. 22, 1964 (gage height, 31.60 ft); minimum daily, 81 cfs Nov. 24, 1958.

REMARKS.--Records good. Small diversions for irrigation of about 1,200 acres above station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino 28 miles upstream (see sta 11-4618). Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	210	265	4,020	4,720	4,960	333	517	187	200	232	269
2	159	235	290	3,170	4,460	4,560	350	510	192	224	241	269
3	168	230	275	940	4,000	4,630	370	504	278	230	245	269
4	174	227	260	730	3,560	4,640	330	498	302	239	249	265
5	178	224	255	622	3,800	4,880	608	504	301	242	241	265
6	180	222	315	559	6,790	4,630	580	566	271	246	241	265
7	180	213	313	504	3,920	3,930	462	566	237	243	241	265
8	180	204	343	425	3,380	2,460	414	566	235	229	245	261
9	175	204	370	340	8,120	2,240	414	566	243	222	237	218
10	172	204	4,670	285	4,820	1,870	396	559	237	224	241	211
11	175	200	4,040	3,480	8,640	970	366	559	231	224	245	204
12	180	213	3,300	14,800	6,090	837	355	559	228	222	245	197
13	185	204	1,080	19,200	6,190	730	340	552	226	231	245	176
14	188	222	1,930	6,680	4,620	643	335	552	248	231	253	166
15	188	260	6,460	5,860	5,290	587	325	545	256	222	253	166
16	188	236	3,160	5,040	4,150	552	330	498	264	222	253	162
17	190	227	3,990	4,610	3,820	636	385	260	254	218	257	162
18	190	236	3,720	5,040	5,080	594	462	195	274	213	257	166
19	188	236	2,870	9,900	4,790	545	492	175	225	227	261	166
20	190	236	722	13,200	3,860	538	492	154	214	240	257	169
21	195	227	510	15,400	1,570	580	492	135	213	245	257	169
22	200	227	420	7,580	1,260	517	492	123	211	240	261	173
23	205	227	7,770	7,500	1,970	480	643	105	212	236	261	169
24	200	231	15,900	5,400	4,220	450	690	137	201	236	261	169
25	200	240	8,510	6,010	3,790	426	601	218	199	240	261	173
26	205	255	7,900	9,740	3,410	408	566	227	203	236	257	183
27	205	236	5,130	7,680	4,660	390	552	223	198	240	261	187
28	205	240	3,790	6,970	6,900	377	538	211	194	240	261	190
29	207	245	2,930	6,150	-----	364	531	204	196	231	265	197
30	210	255	2,890	4,860	-----	354	524	198	206	236	265	201
31	205	-----	4,220	4,280	-----	344	-----	189	-----	231	269	-----
TOTAL	5,829	6,826	98,598	180,975	127,880	50,122	13,768	11,375	6,936	7,160	7,818	6,102
MEAN	188	228	3,181	5,838	4,567	1,617	459	367	231	231	252	203
MAX	210	260	15,900	19,200	8,640	4,960	690	566	302	246	269	269
MIN	159	200	255	285	1,260	344	325	105	187	200	232	162
AC-FT	11,560	13,540	195,600	359,000	253,600	99,420	27,310	22,560	13,760	14,200	15,510	12,100
CAL YR 1968	TOTAL 323,104			MEAN 883	MAX 15,900	MIN 97		AC-FT 640,900				
WTR YR 1969	TOTAL 523,389			MEAN 1,434	MAX 19,200	MIN 105		AC-FT 1,038,000				

PEAK DISCHARGE (BASE, 13,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-24	0600	18.87	18,900	1-21	0745	18.70	18,500
1-13	0815	21.32	24,800				

NOTE.--No gage-height record Oct. 4 to Nov. 5.

RUSSIAN RIVER BASIN

407

11-4632. BIG SULPHUR CREEK NEAR CLOVERDALE, CALIF.

LOCATION.--Lat 38°49'21", long 122°59'07", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.11 N., R.10 W., Sonoma County, on right bank 0.5 mile downstream from unnamed tributary, 1.9 miles upstream from mouth, and 2.0 miles northeast of Cloverdale.

DRAINAGE AREA.--82.3 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 392.78 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 194 cfs (140,600 acre-ft per year); median of yearly mean discharges, 160 cfs (116,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 12,200 cfs Jan. 13 (gage height, 12.33 ft), from rating curve extended above 5,700 cfs on basis of slope-area measurement at gage height 16.8 ft; minimum daily, 4.2 cfs Sept. 3.

Period of record: Maximum discharge, 15,700 cfs Dec. 22, 1964 (gage height, 15.08 ft), from rating curve extended above 4,100 cfs on basis of slope-area measurement at gage height 16.8 ft; minimum daily, 1.8 cfs Sept. 24, Oct. 20, 1964.

Flood of Dec. 22, 1955, reached a stage of 16.8 ft from floodmarks, present datum (discharge, 20,000 cfs by slope-area measurement of maximum flow).

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	14	20	193	600	1,360	111	111	36	18	8.9	4.6
2	5.0	32	18	167	560	1,080	161	105	37	17	8.6	4.4
3	5.0	50	17	144	500	868	169	97	36	17	8.0	4.2
4	5.6	25	16	131	460	688	133	92	35	17	7.7	4.4
5	6.2	19	16	119	1,280	590	615	85	35	16	7.7	4.4
6	6.2	17	16	109	1,690	520	368	79	36	15	7.7	4.4
7	6.2	16	16	101	970	460	276	78	34	14	7.7	4.6
8	5.6	16	20	95	952	404	230	77	34	15	8.0	4.6
9	5.0	15	38	89	3,750	368	233	75	36	15	8.0	4.6
10	4.7	14	2,080	85	1,850	336	206	71	38	14	8.0	4.4
11	6.2	14	364	925	3,300	300	180	69	36	13	7.7	4.8
12	39	22	135	3,390	1,900	304	169	66	34	12	7.5	4.6
13	27	18	186	5,940	1,180	260	159	66	33	11	7.5	4.8
14	12	22	508	1,800	1,080	239	149	65	31	11	7.2	4.8
15	11	54	1,650	982	1,780	221	139	62	29	10	7.0	5.2
16	10	35	525	676	1,160	209	129	58	28	10	7.0	5.7
17	10	25	257	500	916	242	121	55	26	9.4	7.0	6.0
18	9.2	24	163	655	754	221	117	53	28	9.3	7.2	6.0
19	8.6	27	123	2,140	610	200	109	51	29	9.0	7.5	6.4
20	8.6	22	98	4,580	510	206	103	49	27	9.0	7.2	6.7
21	8.6	20	80	6,290	435	230	97	48	27	10	6.7	6.4
22	8.6	18	70	2,470	404	195	95	46	25	9.5	6.7	6.4
23	8.0	17	240	1,360	694	175	372	45	23	9.5	6.5	6.0
24	7.4	20	1,120	958	976	163	276	44	22	9.5	6.7	5.4
25	8.0	21	1,170	1,710	868	157	195	44	21	9.5	7.0	5.4
26	8.0	18	691	3,140	665	149	167	44	21	8.9	6.5	5.2
27	7.4	16	421	1,350	916	141	151	48	20	8.9	6.2	5.0
28	7.4	16	472	1,020	2,180	135	141	43	20	8.9	6.2	5.2
29	17	16	333	814	-----	127	129	40	20	8.9	6.2	5.0
30	36	20	266	736	-----	121	121	37	19	8.6	5.7	4.8
31	19	-----	223	570	-----	117	-----	36	-----	8.9	4.8	-----
TOTAL	331.5	663	11,352	43,239	32,940	10,786	5,621	1,939	876	362.8	222.3	154.4
MEAN	10.7	22.1	366	1,395	1,176	348	187	62.5	29.2	11.7	7.17	5.15
MAX	39	54	2,080	6,290	3,750	1,360	615	111	38	18	8.9	6.7
MIN	4.7	14	16	85	404	117	95	36	19	8.6	4.8	4.2
AC-FT	658	1,320	22,520	85,760	65,340	21,390	11,150	3,850	1,740	720	441	306

CAL YR 1968 TOTAL 56,296.40 MEAN 154 MAX 5,350 MIN 4.4 AC-FT 111,700
WTR YR 1969 TOTAL 108,487.0 MEAN 297 MAX 6,290 MIN 4.2 AC-FT 215,200

PEAK DISCHARGE (BASE, 3,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1145	9.22	4,560	1-26	0100	10.75	8,150
12-15	1000	8.86	4,130	2- 9	0730	9.39	5,820
1-13	0645	12.33	12,200	2-11	0830	9.07	5,310
1-21	0445	11.68	9,960				

RUSSIAN RIVER BASIN

11-4639, MAACAMA CREEK NEAR KELLOGG, CALIF.

LOCATION.--Lat 38°38'25", long 122°45'45", in SW $\frac{1}{4}$ sec.9, T.9 N., R.8 W., Sonoma County, on right bank 0.5 mile downstream from Redwood Creek, and 4.4 miles west of Kellogg.

DRAINAGE AREA.--43.4 sq mi.

PERIOD OF RECORD.--Occasional low-flow measurements and annual maximum, water years 1958-60, December 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 188.91 ft above mean sea level. Prior to Dec. 20, 1960, crest-stage gage only at site 700 ft upstream at different datum.

AVERAGE DISCHARGE.--8 years (1961-69), 88.2 cfs (63,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,410 cfs Jan. 13 (gage height, 14.11 ft); minimum daily, 0.08 cfs Oct. 1.

Period of record: Maximum discharge, 8,920 cfs Dec. 22, 1964 (gage height, 17.56 ft); no flow for many days in 1964 and 1968.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	2.9	5.7	86	270	484	44	34	11	5.1	2.0	.67
2	.15	10	5.2	76	226	436	81	32	12	4.1	1.5	.33
3	.73	13	4.8	70	198	350	67	31	12	2.9	1.1	.67
4	.79	6.3	4.7	63	178	270	55	30	11	4.5	1.3	.97
5	.79	4.5	4.5	57	469	224	216	28	11	3.1	.91	.49
6	.61	3.9	4.4	52	650	193	137	26	11	3.5	.91	.29
7	.79	3.8	4.7	47	333	168	98	26	10	3.4	1.1	.21
8	.73	3.4	8.1	41	383	147	83	26	8.6	3.2	1.5	.25
9	.73	3.2	70	38	1,750	134	86	25	12	3.1	1.5	.21
10	.73	3.1	956	36	764	139	76	24	12	3.1	1.7	.18
11	1.6	3.7	184	504	1,210	109	68	23	12	3.0	1.2	.18
12	17	5.6	73	2,080	658	121	64	22	12	3.2	.61	.49
13	5.5	4.5	144	3,220	420	101	60	23	10	2.8	.55	.79
14	2.8	6.0	380	694	670	93	55	22	8.1	2.8	.49	.97
15	2.6	14	956	350	1,290	84	51	21	8.6	2.8	.55	1.0
16	2.2	8.0	232	236	613	79	48	19	8.1	2.8	.43	1.2
17	2.0	6.0	125	181	442	107	45	19	7.6	2.7	.97	1.5
18	1.9	5.8	86	300	353	88	43	17	8.1	2.4	.67	1.5
19	1.9	6.4	70	1,540	274	81	41	17	7.6	2.6	1.2	1.5
20	1.9	5.6	54	2,430	219	93	39	17	7.3	2.2	.85	1.5
21	2.0	5.1	46	2,830	189	112	37	16	7.3	2.2	1.2	1.6
22	1.9	4.5	41	1,140	171	87	36	16	6.7	2.2	1.3	1.4
23	1.9	4.2	72	546	250	77	85	16	6.1	2.2	1.5	.85
24	1.8	4.5	674	390	358	69	76	15	6.1	2.1	1.4	.55
25	1.7	4.9	754	742	378	66	55	14	6.1	2.4	1.3	.49
26	1.7	4.6	358	1,050	305	63	47	15	5.9	2.4	1.2	.49
27	1.7	4.0	201	481	315	59	42	15	5.5	2.2	1.5	.61
28	1.7	3.9	285	383	814	55	39	13	5.1	2.2	.85	.97
29	5.4	4.0	174	343	-----	52	37	12	5.5	2.2	.79	1.4
30	6.7	4.9	130	335	-----	49	35	12	3.9	2.2	.85	1.6
31	3.7	-----	103	248	-----	47	-----	12	-----	2.4	.33	-----
TOTAL	75.73	164.3	6,210.1	20,589	14,150	4,237	1,946	638	258.2	88.0	33.26	24.86
MEAN	2.44	5.48	200	664	505	137	64.9	20.6	8.61	2.84	1.07	.83
MAX	17	14	956	3,220	1,750	484	216	34	12	5.1	2.0	1.6
MIN	.08	2.9	4.4	36	171	47	35	12	3.9	2.1	.33	.18
AC-FT	150	326	12,320	40,840	28,070	8,400	3,860	1,270	512	175	66	49

CAL YR 1968 TOTAL 25,765.13 MEAN 70.4 MAX 1,810 MIN 0 AC-FT 51,100
WTR YR 1969 TOTAL 48,414.45 MEAN 133 MAX 3,220 MIN .08 AC-FT 96,030

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1130	10.42	2,670	1-26	0045	10.78	2,890
12-15	1015	11.74	3,640	2-9	0545	10.31	2,610
1-13	0645	14.11	5,410	2-11	0845	9.48	2,110
1-21	1800	12.87	4,420	2-15	0815	10.46	2,700

11-4640. RUSSIAN RIVER NEAR HEALDSBURG, CALIF.

LOCATION.--Lat 38°36'48", long 122°50'07", in Sotoyome Grant, Sonoma County, on left bank 2 miles east of Healdsburg, and 3.5 miles upstream from Dry Creek.

DRAINAGE AREA.--793 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 77.01 ft above mean sea level.

AVERAGE DISCHARGE.--30 years, 1,419 cfs (1,028,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 39,200 cfs Jan. 13 (gage height, 19.38 ft); minimum daily, 165 cfs Sept. 24, 25.

Period of record: Maximum discharge, 71,300 cfs Dec. 23, 1964 (gage height, 27.00 ft); maximum gage height, 30.0 ft Feb. 28, 1940; minimum daily discharge, 38 cfs July 2, 1950.

Flood in December 1937 reached a stage of 30.8 ft, from floodmarks.

REMARKS.--Records good. Several small diversions for irrigation above station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino 63 miles upstream (see sta 11-4618). Records for water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 981: 1942. WSP 1929: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	233	292	4,540	6,090	9,700	652	750	258	236	236	262
2	178	256	296	4,290	6,010	6,960	720	740	266	229	236	258
3	173	308	304	2,290	5,350	6,960	940	740	274	240	243	254
4	173	277	296	1,590	4,940	6,180	730	710	340	243	240	258
5	173	259	292	1,330	5,700	6,200	1,700	676	380	254	232	258
6	170	252	292	1,140	11,000	5,880	1,870	700	397	254	229	258
7	173	249	345	1,000	6,650	5,500	1,390	760	375	258	232	254
8	173	245	395	880	5,140	3,940	1,150	780	340	254	236	250
9	175	242	480	770	14,700	3,420	1,060	780	335	246	240	246
10	178	242	5,890	700	9,860	3,210	1,030	790	340	243	236	246
11	185	242	5,720	2,650	13,200	2,470	840	780	330	240	236	240
12	203	249	4,350	19,700	11,100	2,130	770	770	317	240	232	193
13	210	259	2,300	35,800	8,900	1,920	710	770	312	240	232	188
14	213	263	4,860	14,900	7,780	1,730	652	760	308	240	232	210
15	208	308	8,860	9,080	10,700	1,590	606	740	317	236	236	173
16	203	320	5,930	7,510	7,820	1,460	578	720	326	232	240	170
17	203	296	4,560	5,780	5,900	1,520	578	581	330	215	243	168
18	203	288	4,290	6,700	6,870	1,560	652	385	330	212	246	168
19	203	292	3,980	13,300	6,310	1,390	750	330	335	218	246	170
20	203	288	1,980	20,800	5,850	1,350	790	300	299	232	250	170
21	205	284	1,230	28,400	3,510	1,510	780	273	282	243	250	168
22	205	277	930	16,000	2,790	1,340	770	259	278	246	246	168
23	205	273	3,300	11,000	3,650	1,210	1,220	249	274	240	254	168
24	205	277	17,400	8,400	5,560	1,190	1,520	242	266	240	258	165
25	208	277	12,500	9,060	6,240	1,010	1,230	242	254	243	258	165
26	208	277	10,500	15,600	5,180	940	1,050	270	250	250	258	170
27	208	284	6,940	10,700	5,880	840	950	288	254	250	250	178
28	210	277	6,070	9,400	10,300	820	880	280	250	254	250	188
29	221	277	4,530	8,300	-----	770	820	275	246	250	250	193
30	239	280	3,680	7,600	-----	720	790	270	250	243	254	200
31	239	-----	4,710	6,200	-----	684	-----	264	-----	243	258	-----
TOTAL	6,136	8,151	127,502	285,410	202,980	86,104	28,178	16,474	9,113	7,464	7,539	6,157
MEAN	198	272	4,113	9,207	7,249	2,778	939	531	304	241	243	205
MAX	239	320	17,400	35,800	14,700	9,700	1,870	790	397	258	258	262
MIN	170	233	292	700	2,790	684	578	242	246	212	229	165
AC-FT	12,170	16,170	252,900	566,100	402,600	170,800	55,890	32,680	18,080	14,800	14,950	12,210
CAL YR 1968	TOTAL 478,578		MEAN 1,308		MAX 17,400		MIN 110		AC-FT 949,200			
WTR YR 1969	TOTAL 791,208		MEAN 2,168		MAX 35,800		MIN 165		AC-FT 1,569,000			

PEAK DISCHARGE (BASE, 19,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-24	1500	13.61	21,200	1-21	2000	17.17	31,700
1-13	1500	19.38	39,200	1-26	0900	12.91	19,400

RUSSIAN RIVER BASIN

11-4640.5, DRY CREEK TRIBUTARY NEAR HOPLAND, CALIF.

LOCATION.--Lat 38°53'10", long 123°09'15", in sec.13, T.12 N., R.12 W., Mendocino County, on right bank at culvert on State Highway 128, 6.5 miles southwest of Hopland.

DRAINAGE AREA.--1.27 sq mi.

PERIOD OF RECORD.--Water years 1959-67 (annual maximum), October 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 800 ft (from topographic map). Oct. 15, 1958, to Sept. 6, 1967, crest-stage gage only at datum 5.39 ft higher. Tipping-bucket rain gage at site 300 ft southeast.

EXTREMES.--Current year: Maximum discharge, 151 cfs Jan. 21 (gage height, 2.91 ft); no flow for several months. Period of record: Maximum discharge, 430 cfs Dec. 22, 1964 (gage height, 7.41 ft), by computation of maximum flow through culvert; no flow for several months in each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	1.2	6.2	12	.46	.18	.02	0	0	0
2	0	0	0	1.0	4.6	11	.70	.17	.02	0	0	0
3	0	0	0	.79	4.1	8.1	.53	.16	.02	0	0	0
4	0	0	0	.61	3.8	6.2	.70	.15	.02	0	0	0
5	0	0	0	.53	19	5.1	1.6	.14	.02	0	0	0
6	0	0	0	.39	18	4.3	1.0	.13	.02	0	0	0
7	0	0	0	.33	11	4.1	.70	.12	.02	0	0	0
8	0	0	0	.33	19	3.4	.61	.11	.02	0	0	0
9	0	0	0	.28	29	3.0	.61	.10	.02	0	0	0
10	0	0	15	.23	15	2.4	.53	.09	.02	0	0	0
11	0	0	0	27	40	2.1	.46	.08	.01	0	0	0
12	0	0	0	64	17	2.1	.46	.07	.01	0	0	0
13	0	0	0	69	9.2	1.8	.46	.07	.01	0	0	0
14	0	0	.03	12	7.8	1.5	.39	.06	.01	0	0	0
15	0	0	33	5.6	16	1.4	.39	.06	.01	0	0	0
16	0	0	7.4	3.4	11	1.4	.33	.06	0	0	0	0
17	0	0	3.2	2.6	8.8	1.8	.33	.05	0	0	0	0
18	0	0	1.6	9.8	6.8	1.4	.33	.05	0	0	0	0
19	0	0	1.2	30	5.6	1.2	.33	.05	0	0	0	0
20	0	0	.70	37	4.6	1.2	.28	.04	0	0	0	0
21	0	0	.53	56	4.1	1.2	.23	.04	0	0	0	0
22	0	0	.46	16	3.4	1.0	.28	.04	0	0	0	0
23	0	0	31	9.6	5.1	.89	.70	.04	0	0	0	0
24	0	0	50	7.4	14	.79	.53	.03	0	0	0	0
25	0	0	22	21	11	.70	.39	.03	0	0	0	0
26	0	0	10	22	7.8	.61	.33	.03	0	0	0	0
27	0	0	5.3	13	8.1	.61	.33	.03	0	0	0	0
28	0	0	4.6	9.6	18	.53	.28	.03	0	0	0	0
29	0	0	3.0	7.4	-----	.53	.23	.02	0	0	0	0
30	0	0	2.3	7.4	-----	.53	.18	.02	0	0	0	0
31	0	-----	1.6	5.6	-----	.53	-----	.02	-----	0	0	-----
TOTAL	0	0	192.92	441.09	328.0	83.42	14.68	2.27	0.25	0	0	0
MEAN	0	0	6.22	14.2	11.7	2.69	.49	.073	.008	0	0	0
MAX	0	0	50	69	40	12	1.6	.18	.02	0	0	0
MIN	0	0	0	.23	3.4	.53	.18	.02	0	0	0	0
AC-FT	0	0	383	875	651	165	29	4.5	.5	0	0	0
(a)	2.8	4.3	15.4	21.1	14.1	1.5	3.0	0	0	0	0	0
CAL YR 1968	TOTAL	680.90	MEAN	1.86	MAX	50	MIN	0	AC-FT	1,350		
WTR YR 1969	TOTAL	1,062.63	MEAN	2.91	MAX	69	MIN	0	AC-FT	2,110		

PEAK DISCHARGE (BASE, 75 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	0845	1.83	86	1-21	0530	2.91	151
12-15	0745	2.45	123	1-25	2330	2.62	133
12-24	0500	1.91	91	2-11	0600	1.98	95
1-13	0100	2.77	142				

a Precipitation, in inches.
NOTE.--No gage-height record May 1 to June 16.

11-4645, DRY CREEK NEAR CLOVERDALE, CALIF.

LOCATION.--Lat 38°44'59", long 123°05'28", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.5, T.10 N., R.11 W., Sonoma County, on left bank 500 ft downstream from Smith Creek, and 5 miles southwest of Cloverdale.

DRAINAGE AREA.--87.8 sq mi.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 304.04 ft above mean sea level.

AVERAGE DISCHARGE.--28 years, 158 cfs (114,500 acre-ft per year); median of yearly mean discharges, 150 cfs (109,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,700 cfs Jan. 13 (gage height, 12.07 ft); minimum daily, 0.36 cfs Oct. 8-10.

Period of record: Maximum discharge, 18,100 cfs Dec. 22, 1964 (gage height, 18.09 ft); minimum, 0.10 cfs several days in 1944, 1949, 1951-53, 1962, 1964.

Flood in December 1937 reached a stage of about 18 ft, from floodmarks.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--1395: 1942(M), 1943, 1946(M), 1951-54(M), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	5.5	27	184	480	1,230	68	45	18	5.8	2.3	1.0
2	.38	51	23	152	440	982	89	43	18	5.4	2.1	.88
3	.42	27	20	129	400	790	80	42	18	5.1	2.0	.88
4	.42	14	18	113	360	638	69	41	17	4.8	1.8	.88
5	.42	10	17	102	3,100	492	163	40	17	4.8	1.7	.78
6	.42	8.5	16	93	2,300	390	120	38	17	4.8	1.7	.78
7	.42	8.0	18	86	1,100	325	94	36	16	4.5	1.7	.69
8	.36	6.9	48	82	982	275	85	36	17	4.8	1.5	.78
9	.36	6.3	57	78	2,280	235	87	36	18	4.8	1.5	.78
10	.36	6.0	1,690	74	1,440	206	78	34	18	4.8	1.5	.78
11	1.5	7.0	559	900	2,730	181	73	33	17	4.5	1.5	.69
12	7.0	12	339	3,300	1,790	187	71	32	17	3.9	1.5	.69
13	10	9.5	424	5,400	1,070	160	66	32	16	3.6	1.5	.69
14	8.0	26	526	1,900	950	148	65	32	15	3.3	1.4	.69
15	6.0	61	1,930	834	1,200	135	62	30	14	3.0	1.4	.78
16	4.0	27	633	454	926	130	59	29	13	3.0	1.2	.88
17	2.8	19	283	327	798	169	58	27	7.5	2.7	1.2	.88
18	2.3	31	202	589	652	138	56	27	11	2.7	1.2	.78
19	2.0	29	166	2,060	527	125	54	26	12	2.5	1.2	.78
20	1.5	21	138	3,110	420	128	53	25	12	2.5	1.1	.88
21	1.5	18	117	4,440	354	130	52	24	12	2.7	1.1	1.0
22	1.3	15	109	2,220	315	113	51	24	11	2.5	1.1	1.0
23	1.0	14	1,310	1,310	562	105	101	23	9.5	2.5	1.1	1.0
24	1.0	20	3,100	902	1,260	99	80	22	9.0	2.5	1.1	1.0
25	1.0	22	1,670	1,250	950	92	62	22	8.5	2.5	1.0	1.0
26	1.0	19	929	2,340	774	87	55	23	8.5	2.3	1.0	1.0
27	1.0	17	588	1,270	886	83	52	24	8.0	2.3	1.0	1.0
28	1.0	15	618	974	1,570	80	49	22	7.5	2.3	1.1	.88
29	13	16	391	720	-----	76	48	20	7.0	2.3	1.2	1.0
30	14	28	290	550	-----	73	46	19	6.2	2.3	1.2	1.0
31	7.4	-----	227	460	-----	71	-----	18	-----	2.3	1.1	-----
TOTAL	92.24	569.7	16,483	36,403	30,616	8,073	2,146	925	395.7	107.8	43.0	25.85
MEAN	2.98	19.0	532	1,174	1,093	260	71.5	29.8	13.2	3.48	1.39	.86
MAX	14	61	3,100	5,400	3,100	1,230	163	45	18	5.8	2.3	1.0
MIN	.36	5.5	16	74	315	71	46	18	6.2	2.3	1.0	.69
AC-FT	183	1,130	32,690	72,200	60,730	16,010	4,260	1,830	785	214	85	51
CAL YR 1968	TOTAL	52,265.39	MEAN	143	MAX	3,100	MIN	.26	AC-FT	103,700		
WTR YR 1969	TOTAL	95,880.29	MEAN	263	MAX	5,400	MIN	.36	AC-FT	190,200		

PEAK DISCHARGE (BASE, 3,300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1045	8.91	4,700	1-21	0815	11.14	7,430
12-15	1000	8.99	4,790	1-26	0115	8.10	4,150
12-24	0700	9.17	5,000	2- 5	unknown	9.43	5,480
1-13	unknown	12.07	8,700	2-11	0745	8.10	4,150

NOTE.--No gage-height record Jan. 8-14.

RUSSIAN RIVER BASIN

11-4652. DRY CREEK NEAR GEYSERVILLE, CALIF.

LOCATION.--Lat 38°41'55", long 122°57'25", in Tzabaco Grant, Sonoma County, on left bank pier of bridge, 0.3 mile downstream from Pena Creek, and 3 miles west of Geyserville.

DRAINAGE AREA.--162 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 159.40 ft above mean sea level. Prior to Oct. 1, 1964, at datum 1.00 ft higher.

AVERAGE DISCHARGE.--10 years, 310 cfs (224,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 18,500 cfs Jan. 13 (gage height, 14.00 ft); minimum daily, 0.10 cfs Oct. 1-11.

Period of record: Maximum discharge, 32,400 cfs Jan. 31, 1963 (gage height, 17.50 ft, present datum); no flow at times.

REMARKS.--Records good. No regulation; small diversion above station for orchard irrigation of about 400 acres in summer. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	12	39	510	1,170	2,800	129	86	33	11	2.6	.66
2	.10	71	37	402	985	2,000	147	86	31	11	2.6	.66
3	.10	67	30	325	835	1,600	160	86	31	8.7	2.6	.66
4	.10	31	27	275	739	1,220	129	82	30	7.7	2.6	.66
5	.10	21	26	238	1,780	1,010	323	75	30	7.2	2.4	.66
6	.10	17	24	220	3,640	854	256	71	29	6.7	1.7	.57
7	.10	16	23	198	1,980	728	201	68	29	6.7	1.2	.57
8	.10	13	54	182	1,690	640	180	65	29	6.7	.85	.48
9	.10	12	74	169	4,740	560	180	63	29	6.7	.75	.48
10	.10	12	2,990	158	2,980	495	165	61	29	6.7	.39	.48
11	.10	12	968	2,400	5,910	418	151	60	29	6.7	.75	.48
12	.35	12	361	9,240	3,640	402	141	58	29	6.2	.85	.48
13	.35	16	378	13,500	2,180	356	133	58	29	5.8	1.1	.57
14	12	19	1,480	4,050	1,870	304	127	55	29	5.8	1.3	.48
15	9.0	123	4,110	2,190	2,670	269	123	54	29	5.4	1.4	.48
16	5.1	57	1,480	1,570	2,020	249	120	54	26	4.7	1.6	.57
17	3.3	37	711	1,270	1,600	311	116	53	25	3.8	1.3	.48
18	2.1	36	418	1,610	1,310	263	109	49	22	3.8	.85	.48
19	1.3	51	311	4,180	1,080	228	103	48	21	3.8	.75	.48
20	1.1	37	249	6,800	894	225	101	45	21	3.5	.57	.39
21	.64	30	203	10,100	767	238	98	40	21	3.3	.75	.48
22	.50	26	180	4,330	684	208	95	38	20	3.3	.66	.48
23	.35	23	1,710	2,520	1,010	191	183	37	19	3.0	.75	.48
24	.50	24	5,780	1,780	2,270	178	167	35	17	2.8	.66	.39
25	.35	31	3,270	2,250	1,880	169	125	35	16	2.8	.66	.39
26	.35	30	2,180	5,000	1,500	160	109	35	15	2.6	.66	.48
27	.35	26	1,320	2,660	1,530	156	101	37	14	2.6	.57	.48
28	.35	23	1,470	1,990	3,330	154	95	37	13	2.6	.48	.39
29	2.1	21	1,010	1,550	-----	145	93	37	13	2.6	.57	.39
30	16	33	797	1,640	-----	135	90	36	11	2.6	.57	.39
31	13	-----	651	1,270	-----	133	-----	36	-----	2.6	.66	-----
TOTAL	70.19	939	32,361	84,577	56,684	16,799	4,250	1,680	719	159.4	35.15	15.12
MEAN	2.26	31.3	1,044	2,728	2,024	542	142	54.2	24.0	5.14	1.13	.50
MAX	16	123	5,780	13,500	5,910	2,800	323	86	33	11	2.6	.66
MIN	.10	12	23	158	684	133	90	35	11	2.6	.39	.39
AC-FT	139	1,860	64,190	167,800	112,400	33,320	8,430	3,330	1,430	316	70	30
CAL YR 1968	TOTAL 107,069.48		MEAN 293		MAX 5,780		MIN .10		AC-FT 212,400			
WTR YR 1969	TOTAL 198,288.86		MEAN 543		MAX 13,500		MIN .10		AC-FT 393,300			

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1200	9.16	7,470	1-26	0400	9.35	7,800
12-15	1200	9.81	8,580	2- 6	0100	7.55	5,030
12-24	1000	9.97	8,850	2- 9	0700	8.17	5,960
1-13	0800	14.00	18,500	2-11	1000	9.65	8,310
1-21	0900	12.62	14,600				

RUSSIAN RIVER BASIN

413

11-4658. SANTA ROSA CREEK NEAR SANTA ROSA, CALIF.

LOCATION.--Lat 38°27'25", long 122°37'50", in Los Guillicos Grant, Sonoma County, on left bank 500 ft downstream from highway bridge, 1,500 ft upstream from unnamed tributary, and 4.6 miles east of Santa Rosa.

DRAINAGE AREA.--12.5 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 318.58 ft above mean sea level.

AVERAGE DISCHARGE.--10 years, 17.6 cfs (12,750 acre-ft per year); median of yearly mean discharges, 14 cfs (10,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,180 cfs Jan. 13 (gage height, 9.05 ft); minimum daily, 0.04 cfs Aug. 3.

Period of record: Maximum discharge, 3,200 cfs Feb. 8, 1960 (gage height, 13.35 ft, from floodmarks), from rating curve extended above 1,500 cfs on basis of slope-area measurements at gage heights 11.0 and 13.35 ft; no flow at times.

REMARKS.--Records good. No regulation; pumping for irrigation of about 200 acres above station during periods of low flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.63	2.1	21	66	140	11	7.4	2.4	.74	.46	.17
2	.13	5.6	1.8	17	50	114	14	7.1	2.9	.68	.28	.17
3	.15	3.3	1.7	14	41	94	13	6.6	2.9	.68	.04	.17
4	.14	2.4	1.7	12	36	72	11	6.4	2.8	.62	.08	.20
5	.14	1.8	1.6	11	103	58	25	5.9	2.9	.58	.29	.20
6	.13	1.3	1.6	10	151	49	19	5.7	2.8	.54	.26	.20
7	.13	1.1	1.6	9.6	70	42	15	5.7	2.3	.80	.29	.20
8	.10	.90	2.0	8.7	58	37	14	5.7	2.4	.86	.29	.20
9	.10	.84	9.0	7.9	320	34	15	5.4	2.8	.92	.29	.17
10	.10	.78	202	7.4	178	31	14	5.2	2.9	.86	.26	.17
11	.18	.84	39	69	280	27	12	5.2	2.8	.80	.26	.14
12	5.4	1.5	15	345	175	29	12	5.2	2.6	.74	.23	.17
13	1.3	1.3	14	721	100	25	11	5.2	2.6	.68	.23	.17
14	.54	2.2	78	247	106	23	11	5.0	2.3	.68	.23	.17
15	.48	6.7	229	108	226	21	10	4.8	2.1	.62	.23	.17
16	.28	3.4	66	64	135	20	9.6	4.6	2.0	.62	.23	.20
17	.28	2.4	29	46	98	23	9.3	4.3	2.0	.58	.23	.20
18	.26	2.8	19	116	78	20	9.0	4.1	2.1	.54	.26	.23
19	.24	3.0	15	493	63	18	8.7	4.1	2.1	.54	.26	.26
20	.24	2.4	11	679	50	21	8.1	3.9	2.1	.54	.23	.29
21	.22	2.1	9.3	628	42	23	7.9	3.7	2.3	.54	.20	.32
22	.22	1.9	7.9	315	38	19	7.6	3.7	1.7	.54	.23	.26
23	.24	1.8	8.7	178	52	17	14	3.5	1.4	.50	.23	.23
24	.24	2.4	117	100	96	16	18	3.7	1.2	.42	.23	.23
25	.24	2.2	178	163	84	15	11	3.3	1.1	.54	.20	.17
26	.24	1.9	94	358	75	14	9.9	3.5	.92	.58	.23	.17
27	.24	1.7	46	143	63	14	9.0	3.7	.92	.54	.23	.20
28	.42	1.7	60	118	208	13	8.4	3.1	.86	.54	.20	.20
29	4.0	1.7	41	94	-----	13	8.1	2.8	.86	.54	.20	.20
30	1.8	2.2	31	112	-----	12	7.6	2.6	.86	.50	.17	.17
31	.67	-----	25	72	-----	12	-----	2.4	-----	.50	.17	-----
TOTAL	18.97	64.79	1,358.0	5,287.6	3,042	1,066	353.2	143.5	61.92	19.36	7.22	6.00
MEAN	.61	2.16	43.8	171	109	34.4	11.8	4.63	2.06	.62	.23	.20
MAX	5.4	6.7	229	721	320	140	25	7.4	2.9	.92	.46	.32
MIN	.10	.63	1.6	7.4	36	12	7.6	2.4	.86	.42	.04	.14
AC-FT	38	129	2,690	10,490	6,030	2,110	701	285	123	38	14	12
CAL YR 1968	TOTAL	5,135.87	MEAN	14.0	MAX	294	MIN	.04	AC-FT	10,190		
WTR YR 1969	TOTAL	11,428.56	MEAN	31.3	MAX	721	MIN	.04	AC-FT	22,670		

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1230	7.36	568	1-21	0315	8.43	932
12-15	1300	8.69	1,040	1-26	0130	8.57	988
1-13	0145	9.05	1,180				

RUSSIAN RIVER BASIN

11-4665. LAGUNA DE SANTA ROSA NEAR GRATON, CALIF.

LOCATION.--Lat 38°27'10", long 122°50'05", in Molinos Grant, Sonoma County, on downstream side of left bank pier of highway bridge, 0.2 mile downstream from Santa Rosa Creek, and 2 miles northeast of Graton.

PERIOD OF RECORD.--February 1940 to September 1949 (contents only), October 1964 to current year in reports of Geological Survey. October 1949 to September 1964 available in files of district office.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to Dec. 31, 1958, at site 75 ft downstream at same datum.

EXTREMES.--Current year: Maximum elevation, 66.6 ft Jan. 13.
Period of record: Maximum elevation, 73.3 ft Dec. 23, 1964.

REMARKS.--The laguna is a natural water channel and overflow basin connecting Santa Rosa Creek, Mark West Creek, and other smaller creeks with Russian River. During floods directions of flow may be either to or from Russian River and the laguna acts as a natural regulator of floods on lower Russian River.

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			-	52.20	53.50	55.60	51.40	51.00				
2			-	52.00	53.10	54.90	51.50	51.00				
3			-	52.00	52.80	54.40	51.50	50.90				
4			-	51.90	52.50	53.60	51.50	50.90				
5			-	51.80	55.00	53.10	51.60	50.80				
6			-	51.70	56.10	52.70	51.70	50.80				
7			-	51.70	54.70	52.50	51.70	50.70				
8			-	51.60	54.10	52.30	51.70	50.70				
9			-	51.50	57.20	52.20	51.70	50.70				
10			53.60	51.50	55.80	52.00	51.60	50.70				
11			53.20	55.90	57.60	52.00	51.60	50.60				
12			52.60	60.60	55.90	52.00	51.50	50.60				
13			54.80	66.50	54.50	52.00	51.40	50.60				
14			54.90	60.90	55.30	51.90	51.40	50.50				
15			56.80	56.30	56.80	51.90	51.40	50.50				
16			55.20	54.20	55.20	51.90	51.30	50.50				
17			53.70	53.20	54.30	52.00	51.30	50.40				
18			52.80	55.40	54.40	52.00	51.20	50.40				
19			52.10	59.00	54.00	52.00	51.20	50.40				
20			51.80	60.50	53.30	52.00	51.20	50.30				
21			51.70	62.30	52.90	52.00	51.10	50.30				
22			51.70	59.00	52.80	52.00	51.10	50.30				
23			51.70	55.90	53.40	52.00	51.20	50.30				
24			56.70	54.90	55.00	51.90	51.20	50.20				
25			56.90	55.90	55.10	51.80	51.20	50.20				
26			55.80	57.00	54.60	51.70	51.20	50.20				
27			54.60	55.60	54.10	51.60	51.20	50.10				
28			55.50	55.40	56.40	51.60	51.10	50.10				
29			54.40	55.30	-----	51.50	51.10	50.00				
30			53.40	55.00	-----	51.40	51.00	-				
31	-----		52.80	54.10	-----	51.40	-----	-	-----			-----

RUSSIAN RIVER BASIN

415

11-4670. RUSSIAN RIVER NEAR GUERNEVILLE, CALIF.

LOCATION.--Lat 38°30'00", long 122°56'05", in NE¼ sec.35, T.8 N., R.10 W., Sonoma County, on left bank 0.6 mile downstream from Hobson Creek, and 3.4 miles east of Guerneville.

DRAINAGE AREA.--1,340 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "at Guerneville."

GAGE.--Water-stage recorder. Datum of gage is 17.25 ft above mean sea level. Prior to Oct. 1, 1954, nonrecording gage at bridge 5.3 miles downstream at datum 8.58 ft lower. Supplementary water-stage recorder 2.1 miles downstream used during periods of low flow 1948-54.

AVERAGE DISCHARGE.--30 years, 2,274 cfs (1,648,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 68,600 cfs Jan. 14 (gage height, 42.52 ft); minimum daily, 124 cfs Sept. 28.

Period of record: Maximum discharge, 93,400 cfs Dec. 23, 1964 (gage height, 49.6 ft, from floodmarks); maximum gage height, 49.7 ft Dec. 23, 1955, from floodmarks; minimum daily discharge, 52 cfs May 30, 1964.

REMARKS.--Records good. Many diversions above station for irrigation. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations), since November 1958 by storage in Lake Mendocino 77 miles upstream (see sta 11-4618), and by diversion at Wohler pumping plant beginning in May 1959. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	247	357	5,740	9,930	21,000	936	968	312	210	193	206
2	158	331	359	5,200	9,510	16,700	976	936	316	208	190	217
3	142	407	370	3,460	8,290	12,400	1,290	908	318	202	188	187
4	148	370	361	2,200	7,440	10,600	1,100	875	332	204	187	193
5	148	323	350	1,790	8,870	8,610	1,800	863	354	208	182	199
6	150	296	339	1,540	22,500	7,820	2,530	860	370	208	181	199
7	150	290	369	1,360	14,500	7,050	1,890	887	358	208	181	200
8	148	274	459	1,230	9,820	5,550	1,580	887	342	206	181	196
9	150	272	556	1,130	27,900	4,620	1,450	881	338	204	184	191
10	150	268	6,710	1,050	24,300	4,180	1,410	869	342	197	185	197
11	163	263	9,630	4,290	26,400	3,400	1,260	854	336	194	185	216
12	254	278	5,180	32,300	28,300	2,910	1,170	848	328	193	181	204
13	257	283	3,390	63,100	17,100	2,690	1,110	842	322	191	179	194
14	261	294	8,230	53,000	13,400	2,370	1,050	836	318	191	178	167
15	244	453	13,700	24,600	22,400	2,120	996	821	326	193	179	182
16	232	485	13,800	13,300	19,200	1,930	940	800	324	188	184	154
17	223	423	6,560	9,970	12,100	2,070	911	758	308	182	187	148
18	220	398	5,550	9,290	11,400	2,120	932	596	304	173	193	146
19	217	395	4,740	24,500	10,600	1,850	988	510	310	172	193	149
20	214	387	2,990	39,000	9,450	1,750	1,010	458	308	175	194	149
21	211	364	1,720	53,100	7,680	2,050	992	435	292	184	191	152
22	211	346	1,340	45,900	5,560	1,810	980	410	282	188	188	146
23	208	331	2,510	25,300	5,700	1,620	1,220	380	272	193	190	140
24	208	340	25,200	16,300	7,590	1,460	1,710	373	252	190	204	133
25	205	340	25,800	15,400	11,900	1,340	1,490	360	234	191	204	125
26	205	336	18,300	30,400	10,900	1,250	1,260	373	232	199	197	124
27	202	339	11,600	22,900	9,130	1,180	1,160	390	226	202	194	130
28	199	329	10,800	18,100	12,000	1,120	1,090	375	226	202	194	135
29	223	326	8,100	14,700	-----	1,070	1,040	248	222	202	194	140
30	261	340	5,940	15,000	-----	1,020	1,000	316	218	196	196	147
31	257	-----	5,910	11,300	-----	980	-----	320	-----	194	204	-----
TOTAL	6,176	10,128	201,220	566,400	383,870	136,640	37,271	20,237	9,022	6,048	5,861	5,066
MEAN	199	338	6,491	18,270	13,710	4,408	1,242	653	301	195	189	169
MAX	261	485	25,800	63,100	28,300	21,000	2,530	968	370	210	204	217
MIN	142	247	339	1,050	5,560	980	911	248	218	172	178	124
AC-FT	12,250	20,090	399,100	1,123M	761,400	271,000	73,930	40,140	17,890	12,000	11,630	10,050

CAL YR 1968 TOTAL 754,528 MEAN 2,062 MAX 35,500 MIN 77 AC-FT 1,497,000
WTR YR 1969 TOTAL 1,387,939 MEAN 3,803 MAX 63,100 MIN 124 AC-FT 2,753,000

PEAK DISCHARGE (BASE, 23,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	2115	25.19	24,400	1-26	1330	28.59	34,200
12-24	2030	30.01	35,000	2- 9	1845	28.65	34,300
1-14	0100	42.52	68,600	2-12	0030	29.16	35,300
1-21	2315	38.14	56,900				

GUALALA RIVER BASIN

11-4675. SOUTH FORK GUALALA RIVER NEAR ANNAPOLIS, CALIF.

LOCATION.--Lat 38°42'14", long 123°25'13", in German Grant, Sonoma County, on left bank 2,700 ft downstream from Wheatfield Fork Gualala River, and 3.1 miles southwest of Annapolis.

DRAINAGE AREA.--161 sq mi.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 43.63 ft above mean sea level. Prior to Aug. 30, 1962, at site 1,700 ft upstream at different datum.

AVERAGE DISCHARGE.--19 years, 422 cfs (305,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 29,100 cfs Jan. 13 (gage height, 18.54 ft, from high-water mark); minimum daily, 2.2 cfs Sept. 11.

Period of record: Maximum discharge, 55,000 cfs Dec. 22, 1955 (gage height, 24.57 ft, site and datum then in use), from rating curve extended above 13,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.4 cfs Sept. 13, 1951.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	29	85	516	1,010	2,100	156	114	38	19	8.0	3.1
2	4.8	175	82	415	790	1,550	184	107	38	25	7.7	3.1
3	5.4	160	67	365	638	930	216	101	38	16	7.4	2.7
4	5.4	79	58	320	554	780	170	95	38	15	6.9	2.6
5	5.4	54	52	290	1,970	690	846	92	38	16	6.3	2.5
6	5.4	40	47	252	3,210	620	631	83	38	14	5.9	2.7
7	5.4	35	45	220	1,780	560	426	80	36	14	5.6	2.7
8	5.4	34	115	200	1,460	500	360	80	36	14	5.2	2.6
9	5.4	28	150	180	6,210	450	325	77	36	14	5.2	2.4
10	5.4	26	3,610	170	2,700	420	285	74	38	14	5.0	2.3
11	8.0	27	1,220	1,100	4,500	398	252	72	38	14	5.0	2.2
12	125	44	463	17,000	2,800	409	229	69	34	13	4.7	2.4
13	95	43	1,080	15,000	1,800	360	212	69	34	13	4.7	2.5
14	57	40	2,910	4,000	1,200	320	192	69	32	12	4.5	2.6
15	38	124	3,510	1,800	2,300	290	180	66	31	12	4.4	2.9
16	29	89	1,490	1,450	1,900	280	166	60	31	11	4.3	3.1
17	24	64	641	1,280	1,500	610	156	60	28	11	4.3	3.2
18	20	68	343	1,400	1,280	444	149	55	28	9.9	4.3	3.7
19	18	83	255	1,700	1,100	365	138	55	29	9.5	4.5	4.5
20	17	67	236	8,200	950	382	131	52	29	9.7	4.7	5.2
21	16	56	221	7,200	790	387	124	50	29	9.3	4.7	5.7
22	15	46	177	2,700	730	335	121	50	28	9.3	4.5	5.6
23	15	41	1,860	1,800	1,080	295	330	50	28	9.3	4.7	5.5
24	15	54	8,670	1,350	1,900	265	300	48	26	9.0	4.5	5.5
25	15	64	3,770	1,780	1,750	247	208	48	24	9.0	4.3	5.5
26	15	55	2,620	4,240	1,100	225	173	50	23	9.2	4.1	5.5
27	15	48	1,530	2,270	820	212	156	52	23	9.5	3.9	5.3
28	15	43	1,820	1,810	2,520	196	138	48	20	9.2	3.7	5.3
29	23	41	1,190	1,320	-----	184	128	44	20	8.5	3.6	5.3
30	79	77	838	1,580	-----	173	121	40	19	8.5	3.5	5.3
31	40	-----	638	1,080	-----	166	-----	40	-----	8.1	3.3	-----
TOTAL	746.8	1,834	39,793	82,988	50,342	15,143	7,203	2,050	928	375.0	153.4	113.5
MEAN	24.1	61.1	1,284	2,677	1,798	488	240	66.1	30.9	12.1	4.95	3.78
MAX	125	175	8,670	17,000	6,210	2,100	846	114	38	25	8.0	5.7
MIN	4.8	26	45	170	554	166	121	40	19	8.1	3.3	2.2
AC-FT	1,480	3,640	78,930	164,600	99,850	30,040	14,290	4,070	1,840	744	304	225

CAL YR 1968 TOTAL 129,081.5 MEAN 353 MAX 8,670 MIN 4.3 AC-FT 256,000
WTR YR 1969 TOTAL 201,669.7 MEAN 553 MAX 17,000 MIN 2.2 AC-FT 400,000

DATE	TIME	PEAK DISCHARGE (BASE, 10,000 CFS)	DATE	TIME	DISCHARGE
12-24	1115	G.H. 13.80 DISCHARGE 16,000	1-20	unknown	-
1-13	unknown	G.H. 18.54 DISCHARGE 29,100			

NOTE.--No gage-height record Jan. 10-22, Feb. 10 to Mar. 10.

11-4676. GARCIA RIVER NEAR POINT ARENA, CALIF.

LOCATION.--Lat 38°55'35", long 123°37'45", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.12 N., R.16 W., Mendocino County, on left bank 0.9 mile downstream from North Fork Garcia River, and 3.5 miles northeast of town of Point Arena.

DRAINAGE AREA.--98.5 sq mi.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1951-56, and annual maximum, water years 1952-56, August 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 55.31 ft above mean sea level. July 17, 1951, to Jan. 31, 1956, crest-stage only, at site 15 ft upstream at different datum.

AVERAGE DISCHARGE.--7 years, 341 cfs (247,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 20,800 cfs Jan. 13 (gage height, 14.88 ft), from rating curve extended as explained below; minimum daily, 11 cfs Sept. 12-16, 26-30.
Period of record: Maximum discharge, 28,700 cfs Jan. 4, 1966 (gage height, 16.41 ft), from rating curve extended above 9,600 cfs on basis of slope-area measurement at gage height 15.11 ft. A discharge of 10.1 cfs was measured on Sept. 25, 1951.

REMARKS.--Records fair. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	21	82	421	1,230	1,880	129	107	53	29	19	13
2	14	102	75	371	1,090	1,450	146	101	52	28	19	13
3	14	92	63	335	996	1,180	148	97	52	27	19	12
4	14	54	55	308	926	912	138	97	50	27	18	12
5	14	40	51	286	1,320	744	420	92	50	26	17	12
6	14	34	46	272	2,370	630	366	89	49	25	17	12
7	14	31	46	258	1,530	545	286	86	47	25	17	12
8	14	29	132	247	1,690	480	247	85	48	25	17	12
9	14	28	134	236	4,100	424	226	82	47	24	17	12
10	13	26	4,250	225	2,310	380	205	80	46	24	17	12
11	15	28	1,270	3,910	3,680	340	189	79	46	24	17	12
12	29	52	620	14,000	2,550	312	180	77	45	23	17	11
13	24	45	633	12,300	1,650	286	168	75	43	23	16	11
14	21	42	1,230	3,040	1,400	256	159	74	42	23	16	11
15	21	102	2,130	1,660	2,000	234	152	73	42	22	16	11
16	19	75	1,290	1,110	1,580	229	144	73	41	22	15	11
17	18	57	737	835	1,400	312	138	70	38	22	15	12
18	17	60	519	859	1,220	253	134	67	37	21	15	12
19	17	67	407	2,610	1,050	229	127	66	38	21	15	12
20	16	55	344	5,900	898	242	122	65	37	20	15	12
21	16	48	290	5,400	774	237	117	64	35	20	15	13
22	16	42	250	2,700	660	216	115	62	35	20	14	12
23	16	38	3,240	1,610	912	207	207	61	35	19	14	12
24	16	49	8,070	1,260	1,630	196	180	60	33	20	14	12
25	15	72	3,010	1,590	1,490	187	150	60	32	20	14	12
26	15	64	1,660	3,220	1,160	175	136	61	32	20	14	11
27	15	52	1,040	1,880	1,060	166	127	62	31	20	14	11
28	15	45	963	1,500	2,010	157	120	49	31	20	13	11
29	22	45	737	1,380	-----	148	115	56	30	19	13	11
30	40	76	594	1,570	-----	140	110	55	29	19	13	11
31	25	-----	491	1,310	-----	134	-----	54	-----	18	14	-----
TOTAL	547	1,571	34,459	72,603	44,686	13,281	5,201	2,279	1,226	696	486	353
MEAN	17.6	52.4	1,112	2,342	1,596	428	173	73.5	40.9	22.5	15.7	11.8
MAX	40	102	8,070	14,000	4,100	1,880	420	107	53	29	19	13
MIN	13	21	46	225	660	134	110	49	29	18	13	11
AC-FT	1,080	3,120	68,350	144,000	88,630	26,340	10,320	4,520	2,430	1,380	964	700
CAL YR 1968	TOTAL 101,652		MEAN 278		MAX 8,070		MIN 13		AC-FT 201,600			
WTR YR 1969	TOTAL 177,388		MEAN 486		MAX 14,000		MIN 11		AC-FT 351,800			

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1100	11.31	9,910	1-20	1600	10.41	7,740
12-24	0930	12.16	12,200	2- 9	0145	9.87	6,540
1-13	0445	14.88	20,800	2-11	0815	9.16	5,120

NAVARRO RIVER BASIN

11-4680. NAVARRO RIVER NEAR NAVARRO, CALIF.

LOCATION.--Lat 39°10'15", long 123°39'55", in SE $\frac{1}{4}$ sec.7, T.15 N., R.16 W., Mendocino County, on left bank 2.7 miles downstream from North Fork, 5.4 miles upstream from mouth, and 6.6 miles west of Navarro.

DRAINAGE AREA.--303 sq mi.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6.65 ft above mean sea level.

AVERAGE DISCHARGE.--19 years, 524 cfs (379,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 20,400 cfs Jan. 13 (gage height, 27.70 ft); minimum daily, 5.5 cfs Sept. 30.

Period of record: Maximum discharge, 64,500 cfs Dec. 22, 1955 (gage height, 40.60 ft), from rating curve extended above 19,000 cfs on basis of slope-area measurement of maximum flow; minimum, 4.7 cfs Aug. 26, 27, 1959.

Flood in December 1937 reached a stage of 38.2 ft, from floodmarks.

REMARKS.--Records fair. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1445: 1954(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	23	91	644	2,900	4,850	198	145	56	27	13	6.7
2	9.8	110	82	516	2,600	3,100	208	141	55	26	13	6.7
3	10	98	75	468	2,350	2,510	258	135	55	25	13	6.7
4	9.8	51	68	437	2,250	1,920	210	130	53	25	11	6.7
5	9.8	38	60	395	2,900	1,590	401	126	49	23	11	6.7
6	9.8	32	58	359	5,100	1,340	507	120	53	23	11	6.7
7	9.2	30	57	323	4,000	1,120	394	114	53	23	11	6.7
8	9.2	28	91	287	4,200	956	347	109	51	23	11	6.7
9	8.8	26	125	260	9,950	828	319	105	51	23	11	6.7
10	8.9	25	4,450	239	5,750	728	295	103	53	21	11	6.7
11	18	28	1,600	2,950	7,400	620	260	100	53	21	11	6.7
12	38	40	864	14,600	4,480	566	245	96	53	19	10	6.7
13	31	54	540	16,600	2,800	513	230	93	50	18	10	6.7
14	25	46	1,400	5,530	2,040	449	215	91	48	18	9.7	6.7
15	22	81	4,430	2,830	2,900	409	203	89	47	18	9.2	6.7
16	20	113	2,320	1,930	2,410	386	193	86	44	18	9.2	6.7
17	18	72	1,050	1,490	2,000	470	185	83	43	18	9.2	6.7
18	16	58	622	1,400	1,790	439	181	79	39	17	8.7	6.7
19	16	64	448	5,890	1,510	387	172	77	38	17	8.2	6.5
20	16	64	347	11,900	1,270	368	164	74	38	17	8.2	6.4
21	16	52	275	12,600	1,060	385	158	71	37	16	8.2	6.3
22	16	43	230	5,900	924	352	156	70	35	15	8.2	6.3
23	16	36	4,870	3,340	1,360	322	233	65	33	15	8.2	6.7
24	15	60	11,700	2,410	3,190	300	266	63	32	15	8.2	7.2
25	14	81	5,980	2,940	3,190	275	223	61	32	15	8.2	6.7
26	14	68	4,480	6,730	2,360	260	188	63	32	14	8.2	6.3
27	14	59	2,450	4,600	2,030	248	172	61	31	13	8.2	6.3
28	14	48	1,950	3,750	5,050	235	164	63	30	13	7.7	6.3
29	14	49	1,400	3,350	-----	225	158	61	28	13	7.7	5.9
30	52	80	1,020	3,700	-----	215	151	58	27	13	7.2	5.5
31	35	-----	804	3,400	-----	208	-----	57	-----	13	6.7	-----
TOTAL	535.1	1,657	53,937	121,768	89,764	26,574	7,054	2,789	1,299	575	296.1	197.0
MEAN	17.3	55.2	1,740	3,928	3,206	857	235	90.0	43.3	18.5	9.55	6.57
MAX	52	113	11,700	16,600	9,950	4,850	507	145	56	27	13	7.2
MIN	8.8	23	57	239	924	208	151	57	27	13	6.7	5.5
AC-FT	1,060	3,290	107,000	241,500	178,000	52,710	13,990	5,530	2,580	1,140	587	391
CAL YR 1968	TOTAL	157,979.9	MEAN	432	MAX	11,700	MIN	7.2	AC-FT	313,300		
WTR YR 1969	TOTAL	306,445.2	MEAN	840	MAX	16,600	MIN	5.5	AC-FT	607,800		

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1445	19.39	10,700	1-21	1230	23.36	15,100
12-15	1515	16.80	8,000	1-26	0500	17.78	8,980
12-24	1215	22.92	14,600	2- 9	unknown	21.47	13,000
1-13	0930	27.70	20,400				

11-4680.1. ALBION RIVER NEAR COMPTCHE, CALIF.

LOCATION.--Lat 39°15'40", long 123°37'00", in SW $\frac{1}{4}$ sec.11, T.16 N., R.16 W., Mendocino County, on right bank 2,000 ft downstream from Morrison Gulch, and 1.7 miles west of Comptche.

DRAINAGE AREA.--14.4 sq mi.

PERIOD OF RECORD.--July 1961 to September 1969 (discontinued as a continuous-record station; converted to a crest-stage partial-record station).

GAGE.--Water-stage recorder. Datum of gage is 106.59 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 20.0 cfs (14,490 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,620 cfs Jan. 12 (gage height, 8.82 ft), from rating curve extended as explained below; minimum, 0.02 cfs many days during August and September.

Period of record: Maximum discharge, 2,390 cfs Jan. 4, 1966 (gage height, 9.98 ft), from rating curve extended above 480 cfs on basis of slope-area measurement at gage height 9.50 ft; no flow at times.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.47	6.5	26	104	187	4.0	3.6	.68	.24	.07	.02
2	.03	1.6	4.0	20	76	128	6.5	3.4	.69	.24	.06	.02
3	.03	.76	2.7	16	61	99	5.7	3.1	.70	.24	.06	.02
4	.03	.44	2.1	13	60	76	5.1	2.9	.67	.23	.06	.02
5	.04	.40	2.0	11	113	56	19	2.8	.71	.21	.06	.02
6	.04	.37	1.8	9.9	276	42	14	2.5	.76	.21	.06	.02
7	.03	.34	3.1	8.7	140	33	12	2.3	.67	.22	.05	.02
8	.03	.31	6.5	7.6	113	26	11	2.2	.66	.19	.05	.02
9	.03	.31	5.0	6.8	172	22	10	2.1	.71	.17	.04	.02
10	.04	.29	245	6.3	125	18	8.8	2.0	.82	.17	.04	.03
11	.14	.67	102	273	220	16	7.8	2.0	.79	.16	.04	.03
12	.31	1.5	47	1,050	161	14	7.4	1.9	.80	.14	.04	.03
13	.15	.67	35	527	95	12	6.7	1.9	.74	.13	.03	.03
14	.16	1.1	35	168	66	11	6.1	1.8	.68	.12	.03	.04
15	.22	2.7	176	84	68	9.5	5.8	1.7	.68	.12	.03	.04
16	.16	1.3	90	53	60	10	5.2	1.6	.57	.11	.03	.04
17	.14	.94	46	38	60	16	5.0	1.5	.48	.11	.03	.04
18	.14	1.5	31	68	54	12	4.9	1.3	.47	.10	.03	.06
19	.13	1.4	23	513	45	10	4.4	1.3	.60	.10	.03	.06
20	.12	1.1	17	634	37	12	3.7	1.2	.59	.10	.03	.04
21	.13	.89	13	689	30	11	3.5	1.1	.48	.09	.03	.02
22	.13	.72	14	220	27	9.5	3.6	1.1	.43	.09	.03	.02
23	.13	.64	491	110	54	8.3	11	1.1	.38	.09	.03	.02
24	.13	2.3	447	73	111	7.5	7.1	1.1	.34	.08	.02	.03
25	.13	4.9	304	171	138	6.8	5.9	1.1	.31	.08	.02	.03
26	.14	2.4	206	218	105	6.3	5.2	.96	.32	.09	.02	.03
27	.14	1.6	112	171	85	5.9	4.8	1.0	.28	.08	.02	.03
28	.13	1.3	79	158	199	5.5	4.3	.89	.27	.08	.02	.02
29	.82	3.0	56	147	-----	5.1	4.1	.79	.28	.07	.02	.02
30	.84	7.5	43	156	-----	4.7	3.8	.74	.28	.08	.02	.02
31	.62	-----	34	111	-----	4.3	-----	.74	-----	.07	.02	-----
TOTAL	5.34	43.42	2,679.7	5,707.3	2,855	884.4	206.4	53.72	16.84	4.21	1.12	0.86
MEAN	.17	1.45	86.4	184	102	28.5	6.88	1.73	.56	.14	.036	.029
MAX	.84	7.5	491	1,050	276	187	19	3.6	.82	.24	.07	.06
MIN	.03	.29	1.8	6.3	27	4.3	3.5	.74	.27	.07	.02	.02
AC-FT	11	86	5,320	11,320	5,660	1,750	409	107	33	8.4	2.2	1.7

CAL YR 1968	TOTAL	6,888.96	MEAN	18.8	MAX	491	MIN	.02	AC-FT	13,660
WTR YR 1969	TOTAL	12,458.31	MEAN	34.1	MAX	1,050	MIN	.02	AC-FT	24,710

PEAK DISCHARGE (BASE, 350 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	0830	6.31	498	1-21	0445	8.11	1,210
12-23	1945	7.08	752	2- 5	2400	5.78	365
1-12	0230	8.82	1,620				

BIG RIVER BASIN

11-4680.7. SOUTH FORK BIG RIVER NEAR COMPTCHE, CALIF.

LOCATION.--Lat 39°13'45", long 123°27'55", in sec.19, T.16 N., R.14 W., Mendocino County, on left bank 250 ft downstream from Daugherty Creek, and 7.2 miles east of Comptche.

DRAINAGE AREA.--36.2 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 500 ft (from topographic map).

AVERAGE DISCHARGE.--9 years, 51.3 cfs (37,170 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,090 cfs Jan. 13 (gage height, 9.02 ft); minimum daily, 0.74 cfs Sept. 11-13.

Period of record: Maximum discharge, 8,200 cfs Dec. 22, 1964 (gage height, 16.30 ft), from rating curve extended above 1,700 cfs on basis of slope-area measurement of maximum flow; minimum, 0.60 cfs for many days in September 1960.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	1.8	17	70	343	500	17	13	4.7	2.9	1.2	1.1
2	.89	6.9	12	58	273	379	20	12	4.7	2.9	1.2	.89
3	.89	3.7	8.9	49	206	312	18	12	4.4	2.7	1.1	.89
4	.89	2.4	6.9	42	165	234	17	12	4.4	2.6	1.2	.80
5	.89	2.2	6.9	38	255	177	31	12	4.7	2.7	1.2	.98
6	.89	2.1	6.2	34	532	134	27	11	4.9	2.9	1.2	.98
7	.89	2.0	11	32	352	104	26	11	4.7	2.7	1.5	.98
8	.89	2.0	17	29	315	85	24	9.7	4.7	2.6	1.4	.89
9	.89	1.9	13	27	570	70	27	9.7	4.9	2.5	1.5	.98
10	.89	1.8	407	24	376	60	26	9.3	5.2	2.4	1.6	.80
11	1.4	2.9	195	796	577	50	24	8.9	5.2	2.4	1.4	.74
12	2.4	5.0	84	1,490	455	45	23	8.5	4.9	2.3	1.2	.74
13	2.0	2.9	83	1,350	304	41	22	8.1	4.9	2.2	1.2	.74
14	2.1	4.1	112	469	223	37	21	7.7	4.4	2.1	1.3	.80
15	2.3	7.6	493	229	278	34	20	6.9	4.4	2.0	1.3	.80
16	1.6	4.5	206	142	244	33	19	6.6	4.2	2.0	1.2	.89
17	1.5	3.2	104	99	200	44	18	6.2	3.9	1.9	1.6	.80
18	1.4	5.1	73	114	156	35	18	6.2	3.9	1.8	1.3	1.1
19	1.3	4.2	57	850	119	32	17	6.2	4.4	1.7	1.4	1.2
20	1.3	3.8	47	1,320	94	31	17	5.9	4.2	1.9	1.5	1.2
21	1.3	3.4	39	1,390	77	30	16	5.5	3.9	1.8	1.4	1.3
22	1.3	3.2	49	661	67	28	15	5.5	3.7	1.7	1.3	1.2
23	1.3	3.0	1,190	367	91	26	21	5.2	3.1	1.7	1.4	1.2
24	1.3	7.1	1,010	244	358	24	21	5.2	3.1	1.6	1.4	1.2
25	1.3	14	693	329	361	23	17	5.2	3.1	1.6	1.5	1.2
26	1.3	9.0	553	633	268	22	16	5.5	3.3	1.5	1.5	1.1
27	1.2	5.8	296	490	225	21	14	5.9	3.1	1.4	1.5	1.1
28	1.2	4.9	220	455	542	20	14	5.5	2.6	1.4	1.5	1.1
29	3.1	12	158	373	-----	19	13	4.9	3.1	1.4	1.6	1.1
30	3.5	21	114	356	-----	19	13	4.9	3.1	1.3	1.2	1.0
31	2.3	-----	90	285	-----	18	-----	4.9	-----	1.3	1.3	-----
TOTAL	45.30	153.5	6,371.9	12,845	8,026	2,687	592	241.1	123.8	63.9	42.1	29.80
MEAN	1.46	5.12	206	414	287	86.7	19.7	7.78	4.13	2.06	1.36	.99
MAX	3.5	21	1,190	1,490	577	500	31	13	5.2	2.9	1.6	1.3
MIN	.89	1.8	6.2	24	67	18	13	4.9	2.6	1.3	1.1	.74
AC-FT	90	304	12,640	25,480	15,920	5,330	1,170	478	246	127	84	59

CAL YR 1968 TOTAL 16,651.59 MEAN 45.5 MAX 1,190 MIN .80 AC-FT 33,030
WTR YR 1969 TOTAL 31,221.40 MEAN 85.5 MAX 1,490 MIN .74 AC-FT 61,930

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-16	0630	7.00	1,080	1-21	0845	8.55	1,860
12-15	0930	6.55	855	1-26	0030	6.73	945
12-23	1615	8.41	1,790	2-11	0700	6.46	814
1-13	0715	9.02	2,090				

11-4681.5. WARNER CREEK NEAR FORT BRAGG, CALIF.

LOCATION.--Lat 39°23'13", long 123°48'42", in NE $\frac{1}{4}$ sec.36, T.18 N., R.18 W., Mendocino County, on left bank at culvert on State Highway 1, 1.6 miles north of Caspar, and 4 miles south of Fort Bragg.

DRAINAGE AREA.--0.61 sq mi.

PERIOD OF RECORD.--Annual maximums, water years 1962-68, October 1968 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Altitude of gage is 50 ft (from topographic map). Aug. 23, 1961, to Oct. 15, 1968, crest-stage gage at same site at datum 5.59 ft lower. Rain gage at site 500 ft north of gage.

EXTREMES.--Current year: Maximum discharge, 58 cfs Dec. 15 (gage height, 3.78 ft); minimum daily, 0.03 cfs several days in October and November.

Period of record: Maximum discharge, 99 cfs Dec. 22, 1964 (gage height, 10.20 ft), by computation of flow through culvert; minimum daily, 0.03 cfs on several days in October and November 1968.

REMARKS.--Records good. Small diversion for sawmill above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.03	.68	1.0	3.4	5.8	.68	.43	.33	.12	.09	.06
2	.03	.28	.38	.91	2.2	6.5	1.4	.38	.33	.12	.09	.06
3	.04	.20	.24	.91	1.7	6.7	1.5	.38	.33	.12	.09	.06
4	.03	.09	.20	.85	2.8	2.8	1.4	.38	.28	.12	.09	.04
5	.04	.06	.16	.79	9.2	2.0	5.4	.33	.24	.12	.06	.06
6	.03	.04	.16	.73	14	1.7	2.1	.33	.24	.09	.06	.04
7	.03	.04	.28	.73	4.0	1.5	1.3	.33	.20	.09	.06	.04
8	.03	.04	.53	.68	5.1	1.3	1.1	.28	.24	.06	.06	.04
9	.03	.04	.48	.63	9.5	1.2	1.0	.33	.24	.06	.06	.04
10	.06	.09	13	.63	5.8	1.1	.91	.38	.24	.06	.09	.06
11	.10	.47	3.2	24	27	.97	.73	.43	.20	.06	.09	.06
12	.06	.48	.97	34	6.2	1.0	.80	.43	.20	.06	.06	.06
13	.04	.28	1.6	16	3.1	.97	.85	.38	.20	.06	.06	.06
14	.04	.33	3.0	4.3	2.7	.91	.79	.38	.20	.06	.06	.09
15	.04	.58	22	2.5	4.3	.91	.79	.38	.20	.06	.06	.09
16	.04	.33	3.2	1.9	2.8	1.1	.73	.38	.20	.06	.06	.09
17	.04	.28	1.2	1.5	3.3	3.3	.73	.38	.16	.06	.09	.09
18	.04	.28	.79	2.9	3.3	1.8	.73	.38	.20	.06	.09	.12
19	.04	.24	.73	12	2.1	1.2	.68	.38	.20	.06	.09	.12
20	.04	.24	.58	16	1.5	1.8	.68	.38	.20	.06	.06	.12
21	.04	.20	.53	16	1.3	1.7	.63	.38	.20	.06	.06	.09
22	.04	.20	.78	6.8	1.6	1.2	.73	.38	.20	.06	.06	.09
23	.03	.20	27	3.3	6.0	.97	4.4	.38	.16	.09	.06	.06
24	.03	.61	17	2.2	12	.85	2.0	.38	.12	.09	.06	.06
25	.03	.73	18	4.9	5.2	.79	1.0	.38	.12	.09	.06	.06
26	.03	.43	5.8	5.4	4.4	.79	.79	.38	.12	.09	.06	.06
27	.04	.24	2.7	4.1	4.3	.73	.73	.38	.12	.09	.06	.06
28	.06	.20	3.3	5.2	20	.73	.63	.33	.12	.06	.06	.09
29	.16	.33	2.0	4.1	-----	.73	.53	.33	.12	.09	.06	.06
30	.09	.63	1.4	5.1	-----	.73	.43	.38	.12	.06	.06	.06
31	.04	-----	1.2	2.7	-----	.73	-----	.38	-----	.09	.06	-----
TOTAL	1.42	8.19	133.09	182.76	168.8	54.51	36.17	11.53	6.03	2.43	2.13	2.09
MEAN	.046	.27	4.29	5.90	6.03	1.76	1.21	.37	.20	.078	.069	.070
MAX	.16	.73	27	34	27	6.7	5.4	.43	.33	.12	.09	.12
MIN	.03	.03	.16	.63	1.3	.73	.43	.28	.12	.06	.06	.04
AC-FT	2.8	16	264	363	335	108	72	23	12	4.8	4.2	4.2
(a)	1.7	4.8	12.4	11.6	10.6	2.1	3.3	.2	.3	0	0	.4

CAL YR 1968 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1969 TOTAL 609.15 MEAN 1.67 MAX 34 MIN .03 AC-FT 1,210

PEAK DISCHARGE (BASE, 30 CFS) a Precipitation, in inches.

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	0945	3.78	58	2-5	2315	2.94	37
12-23	1530	3.09	41	2-11	0845	3.70	56
1-11	1600	3.70	56				

NOYO RIVER BASIN

11-4685. NOYO RIVER NEAR FORT BRAGG, CALIF.

LOCATION (revised).--Lat 39°25'42", long 123°44'12", in NE $\frac{1}{4}$ sec.15, T.18 N., R.17 W., Mendocino County, on right bank 0.7 mile downstream from South Fork, and 3.5 miles east of Fort Bragg.

DRAINAGE AREA.--106 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 11.73 ft above mean sea level.

AVERAGE DISCHARGE.--18 years, 217 cfs (157,200 acre-ft per year); median of yearly mean discharges, 190 cfs (138,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,300 cfs Jan. 12 (gage height, 20.13 ft); minimum daily, 2.7 cfs Oct. 1.

Period of record: Maximum discharge, 24,000 cfs Dec. 22, 1964 (gage height, 26.30 ft), from rating curve extended above 7,400 cfs on basis of slope-conveyance study; minimum daily, 0.80 cfs Sept. 12, 1968.

REMARKS.--Records fair. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	10	86	333	888	1,300	96	69	30	17	9.0	4.8
2	2.8	20	51	268	841	1,120	100	66	29	17	8.4	4.9
3	3.4	31	42	228	739	920	106	62	29	16	7.8	7.5
4	4.0	20	34	198	655	760	94	61	29	15	7.8	14
5	4.0	14	26	178	745	630	154	59	28	15	7.2	12
6	4.0	12	21	164	1,330	534	168	56	29	14	7.2	9.4
7	5.8	11	19	151	1,170	448	149	53	28	14	6.6	7.7
8	5.8	10	73	141	956	383	137	52	28	14	6.0	6.3
9	5.2	9.7	79	134	1,790	334	130	50	28	13	6.0	5.5
10	5.8	9.4	1,200	128	1,370	300	121	50	29	13	6.6	5.2
11	6.6	24	808	1,090	1,660	261	110	49	30	12	6.0	4.9
12	29	57	444	7,760	1,410	233	106	48	29	12	6.6	4.6
13	22	44	271	5,600	988	214	100	46	27	12	7.2	4.4
14	14	43	252	2,110	745	197	94	46	25	11	6.6	4.2
15	11	60	1,190	1,160	664	185	90	45	24	11	6.6	4.0
16	9.0	38	826	778	640	175	85	43	23	11	6.0	3.9
17	8.0	29	431	610	582	202	83	42	27	11	6.0	3.8
18	7.4	43	282	548	523	187	83	41	27	11	6.6	3.7
19	6.8	43	212	1,580	464	173	79	41	24	11	6.0	3.6
20	6.5	23	169	5,210	400	166	76	40	23	10	6.0	3.5
21	6.4	20	141	4,430	355	166	72	40	22	10	6.0	3.5
22	6.3	18	126	2,510	330	156	70	38	21	10	5.6	3.4
23	6.2	16	1,980	1,540	400	149	112	38	20	10	6.0	3.3
24	6.1	37	3,480	1,090	480	134	112	37	19	10	5.6	3.3
25	6.0	80	2,460	992	610	128	96	37	18	10	5.4	3.2
26	5.9	50	2,050	1,410	840	121	88	37	18	10	5.2	3.1
27	5.8	40	1,180	1,380	850	117	83	38	18	10	5.1	3.1
28	5.8	33	797	1,290	1,370	112	79	37	18	10	5.1	3.0
29	13	35	609	1,110	-----	110	76	35	17	10	5.0	3.0
30	18	55	498	1,050	-----	96	70	34	16	9.6	4.9	2.9
31	13	-----	399	874	-----	100	-----	31	-----	9.6	4.8	-----
TOTAL	256.3	935.1	20,236	46,045	23,795	10,111	3,019	1,421	733	369.2	194.9	149.7
MEAN	8.27	31.2	653	1,485	850	326	101	45.8	24.4	11.9	6.29	4.99
MAX	29	80	3,480	7,760	1,790	1,300	168	69	30	17	9.0	14
MIN	2.7	9.4	19	128	330	96	70	31	16	9.6	4.8	2.9
AC-FT	508	1,850	40,140	91,330	47,200	20,050	5,990	2,820	1,450	732	387	297
CAL YR 1968	TOTAL	61,054.50	MEAN	167	MAX	3,480	MIN	.80	AC-FT	121,100		
WTR YR 1969	TOTAL	107,265.2	MEAN	294	MAX	7,760	MIN	2.7	AC-FT	212,800		

PEAK DISCHARGE (BASE, 2,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-23	2215	14.32	4,390	1-20	0530	17.04	6,130
1-12	0800	20.13	9,300				

11-4685.4. PUDDING CREEK NEAR FORT BRAGG, CALIF.

LOCATION.--Lat 39°27'25", long 123°43'20", in NE1/4 sec.2, T.18 N., R.17 W., Mendocino County, on right bank at old town site of Glenblair, 0.7 mile downstream from Little Valley Creek, and 4.5 miles east of Fort Bragg.

DRAINAGE AREA.--12.5 sq mi.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 88.92 ft above mean sea level.

AVERAGE DISCHARGE.--6 years, 19.8 cfs (14,350 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 902 cfs Jan. 12 (gage height, 6.18 ft); minimum daily, 0.02 cfs Sept. 3-10.

Period of record: Maximum discharge, 2,000 cfs Dec. 21, 1964 (gage height, 8.55 ft); no flow at times.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.41	8.7	19	97	136	4.2	4.2	1.1	.66	.16	.03
2	.03	.81	6.7	16	77	99	7.7	3.7	1.2	.64	.16	.03
3	.03	1.0	3.8	13	60	102	8.0	3.2	1.3	.61	.12	.02
4	.03	.81	2.3	11	52	72	5.9	3.0	1.1	.48	.12	.02
5	.03	.72	2.3	9.8	71	51	23	3.0	1.1	.15	.12	.02
6	.05	.56	2.7	8.7	203	36	22	3.2	1.1	.48	.12	.02
7	.09	.56	2.6	7.7	117	27	16	3.2	1.0	.41	.09	.02
8	.09	.64	5.1	6.7	88	22	13	3.2	1.0	.40	.09	.02
9	.12	.56	4.9	6.1	176	18	14	3.2	1.0	.40	.09	.02
10	.12	.56	154	6.4	114	16	12	3.2	1.2	.34	.09	.02
11	.35	1.3	104	176	287	13	9.4	3.0	1.3	.33	.09	.03
12	1.0	3.8	52	762	156	12	8.4	3.0	1.3	.32	.09	.03
13	.64	1.8	30	454	83	11	7.3	3.0	1.2	.30	.09	.03
14	.50	1.7	33	147	58	9.1	6.7	2.4	1.2	.30	.09	.03
15	.40	2.9	277	73	52	8.4	5.9	1.8	1.4	.25	.09	.03
16	.35	2.3	106	48	38	8.7	5.4	1.8	1.5	.25	.09	.03
17	.30	1.6	45	33	34	16	4.9	1.7	1.2	.25	.09	.03
18	.25	1.7	27	35	31	12	5.1	1.6	1.7	.25	.09	.09
19	.25	1.8	20	102	25	9.4	4.4	1.6	2.3	.20	.09	.12
20	.20	1.4	14	338	20	10	4.2	1.4	2.0	.20	.07	.16
21	.25	1.2	11	338	18	11	3.8	1.4	1.8	.20	.07	.16
22	.25	1.0	11	187	17	8.7	3.8	1.4	1.5	.20	.07	.16
23	.25	.81	267	110	49	7.3	21	1.6	1.3	.16	.07	.16
24	.25	4.2	310	75	78	6.4	18	1.7	1.2	.16	.03	.30
25	.25	8.7	341	109	96	5.9	12	1.7	1.1	.16	.03	.35
26	.25	4.9	218	141	88	5.4	9.4	1.6	1.0	.20	.03	.40
27	.25	3.0	104	122	72	4.9	7.7	1.6	.92	.20	.03	.45
28	.25	2.1	65	123	178	4.6	6.2	1.4	.83	.20	.03	.50
29	.45	2.4	43	109	-----	4.4	5.4	1.2	.74	.16	.03	.50
30	.56	7.0	31	117	-----	4.2	4.8	1.1	.69	.16	.03	.50
31	.45	-----	24	89	-----	4.4	-----	1.1	-----	.16	.03	-----
TOTAL	8.32	62.24	2,326.1	3,792.4	2,435	755.8	279.6	70.2	37.28	9.18	2.49	4.28
MEAN	.27	2.07	75.0	122	87.0	24.4	9.32	2.26	1.24	.30	.080	.14
MAX	1.0	8.7	341	762	287	136	23	4.2	2.3	.66	.16	.50
MIN	.03	.41	2.3	6.1	17	4.2	3.8	1.1	.69	.15	.03	.02
AC-FT	17	123	4,610	7,520	4,830	1,500	555	139	74	18	4.9	8.5

CAL YR 1968 TOTAL 6,090.31 MEAN 16.6 MAX 341 MIN .03 AC-FT 12,080
WTR YR 1969 TOTAL 9,782.89 MEAN 26.8 MAX 762 MIN .02 AC-FT 19,400

PEAK DISCHARGE (BASE, 500 CFS).--Dec. 15 (1015) 591 cfs (5.33 ft); Jan. 12 (1230) 902 cfs (6.18 ft).

TENMILE RIVER BASIN

11-4686, MIDDLE FORK TENMILE RIVER NEAR FORT BRAGG, CALIF.

LOCATION.--Lat 39°34'22", long 123°41'57", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.25, T.20 N., R.17 W., Mendocino County, on right bank 0.8 mile upstream from confluence with North Fork Tenmile River, and 10 miles northeast of Fort Bragg.

DRAINAGE AREA.--32.9 sq mi.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1951-56, 1961. August 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 53.88 ft above mean sea level.

AVERAGE DISCHARGE.--5 years, 85.3 cfs (61,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,330 cfs Jan. 12 (gage height, 10.05 ft); minimum daily, 2.4 cfs Oct. 1, 9, 10.

Period of record: Maximum discharge, 5,670 cfs Dec. 21, 1964 (gage height, 15.34 ft); minimum daily, 2.3 cfs Sept. 12-19, 1964.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	4.6	43	126	396	432	31	29	13	8.3	4.8	3.0
2	2.5	8.6	33	103	348	363	37	28	13	8.3	4.4	3.0
3	2.5	12	23	84	285	320	36	26	13	8.3	4.4	2.7
4	2.5	8.2	17	74	249	263	32	25	12	7.8	4.4	2.7
5	2.7	7.0	17	66	278	221	73	24	12	7.8	4.0	2.7
6	2.7	6.2	15	59	464	181	72	23	13	7.8	4.0	2.7
7	2.5	5.8	14	53	438	157	59	22	12	7.3	4.0	2.7
8	2.5	5.0	33	47	390	138	51	22	12	7.3	4.0	2.7
9	2.4	4.8	27	43	658	121	51	21	12	6.8	4.0	2.7
10	2.4	4.6	710	42	489	108	47	21	13	6.4	4.0	2.7
11	7.8	8.6	351	354	686	93	42	20	13	6.4	4.0	2.7
12	14	24	197	2,100	576	83	40	19	13	6.4	3.6	2.7
13	10	15	135	1,800	393	75	38	19	12	6.0	3.6	2.7
14	7.0	14	126	822	293	69	36	19	12	6.0	3.6	2.7
15	5.0	25	686	417	255	63	34	18	12	6.0	3.6	2.7
16	4.2	17	384	273	219	61	32	18	11	5.6	3.3	2.7
17	4.2	12	197	201	187	73	30	17	10	5.6	3.3	2.7
18	4.1	15	133	179	169	67	31	17	12	5.6	3.6	3.6
19	4.1	15	99	489	153	60	29	17	12	5.6	3.3	4.0
20	3.7	12	75	1,390	135	58	28	16	12	5.2	3.3	3.6
21	3.7	9.0	60	1,410	120	57	27	16	11	5.2	3.3	3.6
22	3.5	7.0	53	886	112	52	26	15	10	5.2	3.3	3.6
23	3.5	5.8	802	513	139	48	59	15	9.8	5.2	3.3	3.3
24	3.3	22	1,110	360	175	46	61	15	9.3	5.2	3.3	3.3
25	3.3	41	1,050	345	243	43	50	16	9.3	5.2	3.3	3.3
26	3.0	24	958	506	265	40	45	15	9.3	5.2	3.3	3.3
27	3.0	17	496	475	247	38	41	16	9.3	5.2	3.3	3.0
28	3.0	12	333	475	438	37	37	14	8.8	5.2	2.7	3.0
29	5.4	13	241	420	-----	35	34	14	8.8	4.8	3.3	3.0
30	7.0	28	187	378	-----	33	32	14	8.3	4.8	3.3	3.0
31	5.0	-----	153	313	-----	32	-----	13	-----	4.8	3.0	-----
TOTAL	132.9	403.2	8,758	14,803	8,800	3,467	1,241	584	337.9	190.5	112.6	90.1
MEAN	4.29	13.4	283	478	314	112	41.4	18.8	11.3	6.15	3.63	3.00
MAX	14	41	1,110	2,100	686	432	73	29	13	8.3	4.8	4.0
MIN	2.4	4.6	14	42	112	32	26	13	8.3	4.8	2.7	2.7
AC-FT	264	800	17,370	29,360	17,450	6,880	2,460	1,160	670	378	223	179

CAL YR 1968	TOTAL	24,910.3	MEAN	68.1	MAX	1,110	MIN	2.4	AC-FT	49,410
WTR YR 1969	TOTAL	38,920.2	MEAN	107	MAX	2,100	MIN	2.4	AC-FT	77,200

PEAK DISCHARGE (BASE, 900 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1030	8.07	1,380	1-12	1415	10.05	2,330
12-15	1045	7.81	1,270	1-21	0945	8.55	1,600
12-23	2000	7.93	1,320				

11-4690, MATTOLE RIVER NEAR PETROLIA, CALIF.

LOCATION.--Lat 40°18'42", long 124°15'48", in NW¼ sec.11, T.2 S., R.2 W., Humboldt County, on right bank 0.2 mile upstream from Clear Creek, 1.5 miles southeast of Petrolia, and 1.7 miles upstream from North Fork.

DRAINAGE AREA.--240 sq mi.

PERIOD OF RECORD.--October 1911 to December 1913, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 40 ft (from topographic map). November 1911 to December 1913, nonrecording gages at several sites upstream within 0.3 mile of present site at various datums. Dec. 11, 1950, to July 14, 1955, at site 0.3 mile upstream at datum 7.48 ft higher. July 15, 1955, to Oct. 26, 1967, at site 0.4 mile downstream at different datum.

AVERAGE DISCHARGE.--21 years, 1,339 cfs (970,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 53,800 cfs Jan. 12 (gage height, 22.17 ft); minimum daily, 35 cfs Oct. 8-10.

Period of record: Maximum discharge, 90,400 cfs Dec. 22, 1955 (gage height, 29.60 ft, site and datum then in use), from rating curve extended above 24,000 cfs on basis of slope-area measurement of maximum flow; minimum observed, 20 cfs Sept. 1, 2, 15-30, Oct. 27-31, 1913.

REMARKS.--Records good. Diversions for irrigation of about 350 acres above station. Records of chemical analyses and water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1285: 1912-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	208	1,080	2,820	1,760	4,500	555	505	215	110	57	41
2	38	2,470	950	2,330	1,430	4,050	652	470	209	108	56	37
3	39	1,240	820	1,910	1,090	4,180	694	450	202	106	54	38
4	38	622	720	1,570	1,080	3,330	586	435	196	106	53	36
5	37	445	770	1,290	1,560	2,800	1,540	412	190	101	53	36
6	37	368	690	1,130	2,570	2,430	1,240	394	186	96	49	36
7	37	336	750	1,010	3,210	2,070	1,000	376	183	96	49	36
8	35	300	860	916	4,680	1,770	892	362	180	94	49	36
9	35	296	1,210	820	7,410	1,560	836	349	178	92	49	36
10	35	278	8,220	884	6,200	1,370	756	340	175	90	47	36
11	401	580	6,380	4,330	10,200	1,210	688	331	175	88	48	34
12	869	1,940	4,150	30,000	6,840	1,090	652	316	169	84	49	34
13	384	876	3,910	24,500	4,590	1,000	622	308	161	82	46	34
14	262	700	5,220	6,360	3,760	932	586	305	155	80	46	33
15	254	1,570	11,900	3,510	6,200	868	555	296	152	80	47	33
16	185	1,080	7,640	2,540	4,790	852	530	279	147	76	45	34
17	150	788	5,140	2,820	3,830	1,130	510	270	142	74	45	34
18	129	1,140	3,770	3,420	3,100	1,540	510	261	139	73	44	49
19	112	1,310	3,030	6,580	2,530	1,330	470	257	147	73	45	56
20	106	932	2,490	13,100	2,100	1,190	450	253	144	68	44	57
21	97	716	2,160	14,700	1,760	1,120	440	242	137	68	44	50
22	90	640	2,290	5,230	1,780	1,010	415	235	132	66	44	47
23	84	545	18,000	2,940	3,160	932	732	232	127	66	42	46
24	81	972	24,600	1,710	4,790	860	1,120	224	125	65	42	45
25	78	1,560	13,900	1,690	5,300	804	884	225	125	63	42	44
26	73	1,110	9,750	4,120	4,840	748	740	400	125	63	42	42
27	71	876	6,400	2,710	4,390	700	646	515	120	63	41	42
28	67	708	6,520	1,990	5,910	670	598	380	118	63	41	42
29	229	646	5,380	1,540	-----	640	555	286	113	60	42	42
30	355	820	4,270	1,490	-----	598	525	254	110	60	41	42
31	276	-----	3,450	1,080	-----	580	-----	235	-----	59	41	-----
TOTAL	4,721	26,072	166,420	151,040	110,860	47,864	20,979	10,197	4,677	2,473	1,437	1,208
MEAN	152	869	5,368	4,872	3,959	1,544	699	329	156	79.8	46.4	40.3
MAX	869	2,470	24,600	30,000	10,200	4,500	1,540	515	215	110	57	57
MIN	35	208	690	820	1,080	580	415	224	110	59	41	33
AC-FT	9,360	51,710	330,100	299,600	219,900	94,940	41,610	20,230	9,280	4,910	2,850	2,400
CAL YR 1968	TOTAL 479,450		MEAN 1,310		MAX 24,600		MIN 35		AC-FT 951,000			
WTR YR 1969	TOTAL 547,948		MEAN 1,501		MAX 30,000		MIN 33		AC-FT 1,087,000			

PEAK DISCHARGE (BASE, 15,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1145	13.32	17,800	1-12	2245	22.17	53,800
12-24	0430	17.38	32,300	1-20	2315	16.62	29,100

EEL RIVER BASIN

11-4700. LAKE PILLSBURY NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°24'30", long 122°57'30", on line between secs.14 and 23, T.18 N., R.10 W., Lake County, Mendocino National Forest, at Scott Dam near right bank of Eel River, 0.3 mile downstream from Rice Fork, and 10.2 miles northeast of town of Potter Valley.

DRAINAGE AREA.--289 sq mi.

PERIOD OF RECORD.--October 1922 to September 1928 (daily gage heights only), October 1928 to current year. Month-end contents only for some periods, published in WSP 1315-B. Prior to October 1953, published as "at Hullville."

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 81.7 ft below mean sea level (river-profile survey). Prior to Jan. 26, 1950, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 87,200 acre-ft May 24, 25; maximum gage height, 1,910.18 ft May 25; minimum contents, 12,200 acre-ft Dec. 9 (gage height, 1,855.59 ft).
Period of record: Maximum contents, 95,600 acre-ft May 13, 16, 1925 (gage height, 1,910.8 ft); maximum gage height, 1,911.84 ft Dec. 22, 1964, from floodmarks; minimum contents, 10 acre-ft Dec. 9, 10, 1931 (gage height, 1,822.5 ft).

REMARKS.--Reservoir is formed by concrete overflow type dam; storage began in December 1921. Usable capacity, 86,400 acre-ft between gage heights 1,822.4 (sill of outlet gate) and 1,910.0 ft (top of spillway gates); dead storage, 397 acre-ft; spillway at gage height 1,900.0 ft. Water is released down Eel River to Van Arsdale Reservoir, from which it is diverted through tunnel to Potter Valley powerhouse; part is then used for irrigation and remainder flows into East Fork Russian River. Records given herein represent total contents. Records of turbidity data for the water year 1969 are published in Part 2 of this report.

COOPERATION.--Record of contents furnished by Pacific Gas and Electric Co. in connection with a Federal Power Commission project.

CAPACITY TABLE (GAGE HEIGHT, IN FEET, AND CONTENTS, IN ACRE-FEET)

1,822.4	397	1,840	3,990	1,865	19,100	1,890	48,400
1,824	534	1,845	6,080	1,870	23,500	1,895	56,700
1,827	864	1,850	8,690	1,875	28,700	1,900	65,800
1,830	1,310	1,855	11,800	1,880	34,500	1,905	75,800
1,835	2,410	1,860	15,200	1,885	41,100	1,910	86,800

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42,681	26,355	14,951	67,267	68,283	68,342	68,420	84,884	86,444	80,763	69,071	55,956
2	42,384	26,188	14,592	67,223	68,126	68,283	68,302	85,154	86,376	80,349	68,656	55,476
3	41,933	25,918	14,228	67,305	68,008	68,243	68,008	85,312	86,285	80,067	68,283	55,033
4	41,318	25,475	13,745	67,676	68,106	67,969	67,930	85,290	86,149	79,763	67,832	54,694
5	40,738	24,947	13,267	67,891	68,420	67,949	68,165	85,447	85,990	79,438	67,403	54,255
6	40,230	24,416	12,853	67,891	68,460	67,891	67,969	85,877	85,809	79,136	66,975	53,718
7	39,728	23,883	12,515	67,773	68,126	67,812	67,812	86,308	85,628	78,813	66,569	53,069
8	39,215	23,353	12,284	67,598	69,131	67,715	67,734	86,717	85,425	78,469	66,165	52,474
9	38,694	22,834	13,381	67,422	70,642	67,676	67,715	86,967	85,290	78,169	65,762	51,867
10	38,152	22,295	21,827	67,305	70,340	67,598	67,989	86,876	85,087	77,805	65,513	51,281
11	37,627	21,763	27,245	72,615	72,615	67,500	68,617	86,649	84,907	77,464	64,999	50,684
12	37,082	21,303	28,462	75,477	70,642	67,442	69,170	86,421	84,727	77,102	64,581	50,075
13	36,670	20,850	29,773	74,411	69,607	67,403	70,179	86,330	84,570	76,699	64,147	49,472
14	36,210	20,411	32,496	70,682	69,547	67,364	71,594	86,421	84,413	76,340	63,715	48,841
15	35,653	20,013	40,449	69,349	70,440	67,403	72,717	86,580	84,279	75,939	63,229	48,232
16	35,090	19,816	42,980	68,656	69,527	67,559	73,644	86,694	84,122	75,519	62,820	47,643
17	34,530	19,833	44,233	68,224	69,012	68,460	74,453	86,740	83,943	75,142	62,412	47,044
18	33,957	19,875	44,891	69,111	68,656	68,381	74,870	86,649	83,943	74,766	61,988	46,480
19	33,402	19,739	45,576	74,891	68,401	68,185	74,912	86,467	83,765	74,391	61,584	45,876
20	32,852	19,467	46,329	76,869	68,165	68,165	75,037	86,421	83,631	74,017	61,163	45,274
21	32,284	19,131	47,059	74,620	67,989	68,047	75,750	86,535	83,453	73,644	60,744	44,700
22	31,710	18,725	47,782	71,208	67,969	67,989	77,357	86,831	83,208	73,252	60,328	44,146
23	31,164	18,251	51,039	70,099	67,891	68,047	77,443	87,059	82,964	72,861	59,895	43,568
24	30,613	17,793	61,657	69,269	68,086	68,067	80,851	87,150	82,742	72,492	59,446	43,009
25	30,044	17,351	67,500	71,675	67,989	68,106	81,332	87,127	82,477	72,103	58,982	42,440
26	29,358	16,900	68,047	71,310	67,812	68,126	81,530	87,036	82,190	71,675	58,468	41,863
27	28,706	16,389	67,871	70,461	68,028	68,401	81,749	86,399	81,903	71,289	57,973	41,305
28	28,308	15,925	67,930	69,309	68,755	68,519	82,587	86,694	81,595	70,864	57,517	40,738
29	27,860	15,507	67,754	68,893	-----	68,656	83,720	86,580	81,332	70,420	57,115	40,162
30	27,363	15,180	67,520	68,479	-----	68,735	84,391	86,603	81,047	69,978	56,716	39,579
31	26,755	-----	67,364	68,283	-----	68,417	-----	86,580	-----	69,527	56,059	-----
MAX	42,681	26,355	68,047	76,869	72,615	68,735	84,391	87,150	86,444	80,763	69,071	55,956
MIN	26,755	15,180	12,284	67,228	67,812	67,364	67,715	84,884	81,047	69,527	56,059	39,579
(a)	1,873.19	1,860.00	1,900.83	1,901.30	1,901.54	1,901.47	1,908.94	1,909.91	1,907.43	1,901.93	1,894.66	1,883.91
(b)	-16,100	-11,600	+52,200	+900	+500	-200	+15,800	+2,200	-5,600	-11,500	-13,400	-16,500

CAL YR 1968 b +44,100
WTR YR 1969 b -3,300

a Gage height, in feet, at end of month.

b Change in contents, in acre-feet, rounded to Geological Survey standards.

11-4705. EEL RIVER BELOW SCOTT DAM, NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°24'29", long 122°58'13", in SE $\frac{1}{4}$ sec.15, T.18 N., R.10 W., Lake County, Mendocino National Forest, on left bank 0.4 mile upstream from Soda Creek, 0.7 mile downstream from Scott Dam, and 9.7 miles northeast of town of Potter Valley.

DRAINAGE AREA.--290 sq mi.

PERIOD OF RECORD.--October 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as South Eel River at Hullville, and October 1929 to September 1953 as "at Hullville."

GAGE.--Water-stage recorder. Altitude of gage is 1,740 ft (from topographic map). Prior to Dec. 15, 1930, at datum 3.00 ft higher.

AVERAGE DISCHARGE.--47 years, 537 cfs (389,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 20,300 cfs Jan. 13 (gage height, 17.33 ft), from rating curve extended as explained below; minimum daily, 95 cfs Oct. 1.
Period of record: Maximum discharge, 56,300 cfs Dec. 22, 1964 (gage height, 24.24 ft, from floodmarks), from rating curve extended above 9,400 cfs on basis of computed flow over Scott Dam at gage heights 18.50 and 21.85 ft; minimum daily, 0.1 cfs Sept. 8, 1924.

REMARKS.--Records good. Flow regulated by Lake Pillsbury 0.7 mile upstream (see sta 11-4700). No diversion above station. Records of water temperatures and turbidity data for the water year 1969 are published in Part 2 of this report.

COOPERATION.--Gage-height record, 14 discharge measurements, and computations of daily discharge furnished by Pacific Gas and Electric Co.; records reviewed by Geological Survey in connection with a Federal Power Commission project.

REVISIONS (WATER YEARS).--WSP 1315-B: 1923(M), 1938(M). WSP 1395: Drainage area. WRD Calif. 1967: 1963-64.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	312	290	683	1,570	1,840	1,820	633	352	226	243	224
2	150	298	288	640	1,510	1,560	1,630	701	341	226	241	224
3	272	296	286	644	1,390	1,470	1,510	735	326	224	241	204
4	288	302	288	847	1,340	1,290	1,230	731	332	224	239	175
5	288	306	294	1,130	1,530	1,240	1,440	658	330	224	237	274
6	284	306	292	1,200	1,840	1,230	1,350	618	326	224	235	330
7	280	310	290	1,140	1,580	1,170	1,190	709	322	224	234	337
8	280	314	288	1,000	1,480	1,080	1,080	750	318	223	232	337
9	278	312	276	851	4,580	1,010	1,060	919	318	223	232	310
10	296	312	177	720	4,300	973	880	1,050	316	223	230	328
11	320	310	111	2,620	6,540	911	762	1,070	312	228	235	326
12	312	306	109	11,500	6,170	855	955	1,010	306	232	239	330
13	306	304	160	16,500	3,810	806	551	847	261	234	244	332
14	306	304	202	7,340	2,960	770	250	651	228	237	244	332
15	308	302	109	3,680	3,850	770	335	540	224	237	244	330
16	314	300	109	2,360	3,690	843	413	574	216	237	244	328
17	312	300	152	1,740	2,680	1,390	610	622	211	237	244	326
18	314	302	165	1,650	2,170	1,770	863	640	226	237	243	324
19	314	296	191	7,480	1,840	1,560	992	640	235	235	246	324
20	312	292	212	14,200	1,590	1,460	996	544	228	235	244	322
21	310	290	235	14,900	1,480	1,400	802	385	221	234	244	322
22	312	298	237	8,100	1,240	1,290	390	330	219	234	244	320
23	312	304	268	4,560	1,240	1,320	324	360	218	232	244	320
24	310	302	272	3,130	1,320	1,360	477	372	216	232	244	318
25	312	300	385	3,810	1,340	1,380	683	413	216	234	243	318
26	314	298	1,340	7,860	1,200	1,440	774	430	214	234	243	320
27	312	296	1,240	4,950	1,180	1,590	778	427	232	234	243	322
28	312	294	1,160	3,390	1,840	1,770	492	422	226	232	241	320
29	304	292	1,170	2,500	-----	1,900	372	383	226	239	237	320
30	302	290	955	2,040	-----	2,010	518	358	226	243	234	320
31	308	-----	786	1,680	-----	1,980	-----	358	-----	243	228	-----
TOTAL	9,037	9,048	12,337	134,845	67,160	41,438	25,527	18,880	7,942	7,181	7,436	9,237
MEAN	292	302	398	4,350	2,399	1,337	851	609	265	232	240	308
MAX	320	314	1,340	16,500	6,540	2,010	1,820	1,070	352	243	246	337
MIN	95	290	109	640	1,180	770	250	330	211	223	228	175
AC-FT	17,920	17,950	24,470	267,500	133,200	82,190	50,630	37,450	15,750	14,240	14,750	18,320
CAL YR 1968	TOTAL 164,747			MEAN 450	MAX 7,420	MIN 35	AC-FT 326,800					
WTR YR 1969	TOTAL 350,068			MEAN 959	MAX 16,500	MIN 95	AC-FT 694,300					

EEL RIVER BASIN

11-4710. POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°21'42", long 123°07'38", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.6, T.17 N., R.11 W., Mendocino County, on right bank 100 ft downstream from powerhouse of Pacific Gas and Electric Co., 1.8 miles southwest of Van Arsdale Dam, and 2.9 miles northwest of town of Potter Valley.

PERIOD OF RECORD.--December 1909 to current year. Prior to October 1922, monthly discharge only, published in WSP 1315-B. Prior to October 1931, published as Snow Mountain Water and Power Co.'s tailrace near Potter Valley.

GAGE.--Water-stage recorder and Parshall flume. Altitude of gage is 1,020 ft (from topographic map). No gage prior to Dec. 1, 1922. Dec. 1, 1922, to Sept. 30, 1923, nonrecording gage and Oct. 1, 1923, to Apr. 12, 1950, water-stage recorder, at site 50 ft upstream at different datum.

AVERAGE DISCHARGE.--59 years (1910-69), 200 cfs (144,900 acre-ft per year).

EXTREMES.--1922 to current year: Maximum daily discharge, 348 cfs Apr. 24, 1953; no flow at times in several years.

REMARKS.--Records excellent. Water is diverted from Eel River above Van Arsdale Dam. After passing through powerhouse, part of it is used for irrigation in Potter Valley and remainder flows into East Fork Russian River. Water for irrigation diverted from tailrace is included in figures of discharge. Records of water temperatures and turbidity data for the water year 1969 are published in Part 2 of this report.

COOPERATION.--Gage-height record, four discharge measurements, and computations of daily discharge furnished by Pacific Gas and Electric Co.; one discharge measurement made and records reviewed by Geological Survey in connection with a Federal Power Commission project.

REVISIONS (WATER YEARS).--WSP 1395: 1950.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	301	299	296	302	294	296	273	307	209	211	217
2	104	311	299	296	302	296	291	299	307	210	212	217
3	258	311	296	293	302	296	291	299	310	211	212	156
4	268	293	294	289	302	294	291	300	303	214	212	159
5	272	298	294	289	287	294	290	300	304	215	213	293
6	273	306	294	290	287	293	291	300	306	213	213	316
7	266	298	293	290	291	293	291	302	306	209	213	312
8	263	304	294	290	291	289	291	302	306	210	213	307
9	264	303	294	290	291	289	291	302	306	209	214	310
10	270	298	294	291	293	289	284	300	307	215	213	309
11	307	300	291	294	254	287	284	296	304	216	211	309
12	306	298	286	270	294	287	287	297	305	216	212	309
13	304	304	248	291	294	291	287	297	261	216	213	301
14	303	307	296	290	291	297	287	302	223	215	215	305
15	303	300	300	290	287	293	287	302	216	215	215	304
16	302	296	299	290	287	289	287	297	213	213	215	301
17	302	296	299	289	290	287	287	297	197	211	219	306
18	302	296	299	289	290	287	287	297	213	213	206	311
19	299	296	297	290	289	287	287	298	210	208	215	307
20	299	294	294	251	287	287	289	297	212	211	216	307
21	301	296	294	289	286	287	289	294	212	209	217	303
22	300	299	294	290	286	287	287	295	212	209	221	310
23	300	299	291	291	289	289	287	296	212	207	239	306
24	300	297	291	291	294	289	287	299	212	212	218	305
25	299	293	291	291	294	289	287	300	212	216	217	304
26	296	294	290	293	294	294	287	302	205	213	217	305
27	295	296	293	293	265	296	289	302	213	212	217	295
28	297	296	293	293	286	291	289	302	210	211	217	302
29	305	296	297	296	-----	291	293	304	210	211	215	304
30	305	299	296	302	-----	291	297	307	210	215	217	302
31	303	-----	296	302	-----	290	-----	307	-----	214	214	-----
TOTAL	8,698	8,975	9,086	8,989	8,105	9,013	8,668	9,265	7,524	6,578	6,672	8,692
MEAN	281	299	293	290	289	291	289	299	251	212	215	290
MAX	307	311	300	302	302	297	297	307	310	216	239	316
MIN	104	293	248	251	254	287	284	273	197	207	206	156
AC-FT	17,250	17,800	18,020	17,830	16,080	17,880	17,190	18,380	14,920	13,050	13,230	17,240
CAL YR 1968	TOTAL	85,246	MEAN	233	MAX	316	MIN	62	AC-FT	169,100		
WTR YR 1969	TOTAL	100,265	MEAN	275	MAX	316	MIN	104	AC-FT	198,900		

11-4715. EEL RIVER AT VAN ARSDALE DAM, NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°23'19", long 123°06'54", in NE $\frac{1}{4}$ sec.30, T.18 N., R.11 W., Mendocino County, on left bank 1,000 ft downstream from Van Arsdale Dam, and 4.6 miles north of town of Potter Valley.

DRAINAGE AREA.--349 sq mi.

PERIOD OF RECORD.--November 1909 to September 1922 (combined monthly discharge only, of Eel River at this station and Snow Mountain Water and Power Co.'s tailrace near Potter Valley), October 1922 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as South Eel River at Van Arsdale Dam, near Potter Valley.

GAGE.--Water-stage recorder. Altitude of gage is 1,400 ft (from topographic map). Nov. 18, 1909, to Mar. 3, 1927, recorder in reservoir 800 ft upstream from Van Arsdale Dam at different datum. Oct. 1, 1927, to Feb. 28, 1937, nonrecording gage at present site and datum.

AVERAGE DISCHARGE (combined flow of Eel River at Van Arsdale Dam and Potter Valley powerhouse tailrace),--60 years (1909-69), 629 cfs (455,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 22,300 cfs Jan. 13 (gage height, 21.74 ft); minimum daily, 0.55 cfs Nov. 7.

Period of record: Maximum discharge, 64,100 cfs Dec. 22, 1964 (gage height, 33.9 ft from floodmarks); no flow at times.

REMARKS.--Records good. Flow regulated by Lake Pillsbury 11 miles upstream (see sta 11-4700). Water is diverted from Van Arsdale Reservoir through tunnel to Potter Valley powerhouse (see sta 11-4710), after which part is used for irrigation and remainder flows into East Fork Russian River. Records given herein show only flow passing dam down Eel River.

COOPERATION.--Gage-height record, 14 discharge measurements, and computations of daily discharge furnished by Pacific Gas and Electric Co.; one discharge measurement made and records reviewed by Geological Survey in connection with a Federal Power Commission project.

REVISIONS (WATER YEARS),--WSP 1315-B: 1913, 1920-23, 1925-27. WSP 1395: 1923(M), 1938.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.79	38	650	1,560	1,900	1,610	347	24	5.1	6.1	4.3
2	1.2	38	16	580	1,520	1,640	1,440	393	18	5.3	6.5	3.8
3	1.1	1.7	2.9	592	1,390	1,530	1,250	448	2.5	5.5	6.5	3.4
4	1.0	.66	1.5	807	1,320	1,320	1,060	434	2.0	5.5	6.7	3.8
5	1.4	.93	1.6	1,150	1,570	1,250	1,260	372	7.2	5.5	7.0	3.7
6	2.2	.86	1.8	1,230	1,980	1,220	1,230	316	2.9	5.1	7.4	3.1
7	1.3	.55	1.6	1,140	1,690	1,130	1,040	376	2.4	5.1	7.9	3.1
8	1.4	2.2	34	973	1,570	1,040	917	438	2.2	5.1	7.9	3.5
9	1.4	2.2	16	779	5,100	942	876	580	2.0	5.1	7.7	3.8
10	1.6	2.6	899	609	4,690	887	741	757	1.9	5.1	7.2	3.8
11	11	5.1	242	3,060	7,270	807	552	801	2.0	4.5	7.0	3.8
12	13	20	22	12,900	6,860	736	710	747	2.2	4.3	6.5	3.7
13	2.9	4.2	33	18,700	3,990	674	535	586	2.0	4.3	6.3	3.7
14	1.5	2.4	199	8,230	3,040	615	31	359	2.0	4.3	5.7	4.0
15	1.2	21	684	3,870	4,020	609	124	236	2.0	4.3	5.7	4.3
16	1.2	31	227	2,430	3,940	689	176	239	2.6	4.3	5.9	4.3
17	1.5	28	90	1,770	2,820	1,340	313	284	1.9	4.3	6.1	4.3
18	1.8	100	16	1,650	2,250	1,720	574	302	2.4	4.3	5.5	4.3
19	2.8	38	19	8,160	1,880	1,510	752	302	3.2	4.5	4.3	4.3
20	2.4	8.4	1.6	15,500	1,600	1,390	752	242	3.7	4.7	4.3	4.3
21	1.9	1.9	7.2	16,700	1,380	1,320	622	120	4.0	4.7	4.3	4.2
22	1.7	1.0	15	8,970	1,190	1,200	212	41	4.0	4.7	4.3	4.0
23	1.7	1.3	1,280	4,780	1,200	1,210	164	54	4.0	4.7	4.2	3.8
24	1.6	4.0	1,440	3,160	1,300	1,250	261	72	3.8	4.7	4.0	3.7
25	1.5	35	1,080	3,760	1,350	1,250	411	93	3.7	4.7	4.0	3.4
26	6.5	13	1,640	8,100	1,190	1,310	530	122	3.5	4.5	4.0	3.1
27	8.7	4.2	1,410	5,130	1,160	1,440	530	120	3.5	4.3	4.0	2.9
28	4.0	1.6	1,300	3,410	1,880	1,600	343	113	3.7	4.3	4.2	2.9
29	14	1.2	1,310	2,500	-----	1,720	140	83	4.5	4.3	4.2	3.1
30	1.4	2.5	1,020	2,030	-----	1,810	218	39	4.7	4.5	4.3	3.1
31	.86	-----	795	1,640	-----	1,780	-----	36	-----	4.9	4.5	-----
TOTAL	96.86	374.29	13,843.2	144,960	70,710	38,839	19,374	9,452	128.5	146.5	174.2	111.5
MEAN	3.12	12.5	447	4,676	2,525	1,253	646	305	4.28	4.73	5.62	3.72
MAX	14	100	1,840	18,700	7,270	1,900	1,610	801	24	5.5	7.9	4.3
MIN	.86	.55	1.5	580	1,160	609	31	36	1.9	4.3	4.0	2.9
AC-FT	192	742	27,460	287,500	140,300	77,040	38,430	18,750	255	291	346	221
CAL YR 1968	TOTAL 115,579.87			MEAN 316	MAX 7,960			MIN .16	AC-FT 229,200			
WTR YR 1969	TOTAL 298,210.05			MEAN 817	MAX 18,700			MIN .55	AC-FT 591,500			

EEL RIVER BASIN

11-4718. TOMKI CREEK NEAR WILLITS, CALIF.

LOCATION.--Lat 39°25'10", long 123°13'40", in NE $\frac{1}{4}$ sec.18, T.18 N., R.12 W., Mendocino County, on left bank 500 ft upstream from Halfmile Creek, 5.8 miles upstream from mouth, and 6.8 miles east of Willits.

DRAINAGE AREA.--43.4 sq mi.

PERIOD OF RECORD.--July 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,591.91 ft above mean sea level.

AVERAGE DISCHARGE.--6 years, 101 cfs (73,170 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,150 cfs Jan. 19 (gage height, 9.61 ft); no flow for many days.
Period of record: Maximum discharge, 16,500 cfs Dec. 22, 1964 (gage height, 15.92 ft), from rating curve extended above 4,000 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.58	44	135	421	565	26	22	3.8	.64	0	0
2	0	4.3	33	117	412	510	35	20	3.3	.52	0	0
3	0	1.5	18	99	344	461	34	19	2.8	.52	0	0
4	0	.68	12	82	352	336	31	18	2.8	.42	0	0
5	0	.58	10	65	670	265	130	17	2.8	.24	0	0
6	0	.49	8.8	55	680	218	84	16	3.3	.21	0	0
7	0	.49	11	49	511	179	69	15	3.3	.19	0	0
8	0	.49	109	43	605	148	56	14	3.3	.19	0	0
9	0	.42	49	41	1,100	122	59	14	4.8	.24	0	0
10	0	.49	1,110	38	640	104	50	13	4.3	.37	0	0
11	0	.80	420	1,750	1,020	88	44	12	3.8	.42	0	0
12	0	6.9	199	3,120	635	77	43	12	3.3	.37	0	0
13	0	6.3	178	2,220	420	70	39	11	2.8	.28	0	0
14	0	8.1	300	650	412	61	36	11	1.9	.24	0	0
15	0	47	900	334	640	54	34	11	1.5	.24	0	0
16	0	23	365	209	542	54	32	10	1.1	.24	0	0
17	0	11	187	142	376	108	31	8.8	.90	.24	0	0
18	0	19	127	264	279	92	30	8.8	5.3	.21	0	0
19	0	20	99	2,150	215	77	28	8.2	5.8	.15	0	0
20	0	11	72	2,730	165	72	26	7.6	5.3	.13	0	0
21	0	7.5	55	2,320	135	70	24	7.6	4.3	.12	0	0
22	0	5.8	77	952	116	61	23	7.0	1.9	.10	0	0
23	0	4.3	2,620	575	142	53	47	6.4	1.1	.09	0	0
24	0	8.8	1,910	434	308	48	47	5.8	.90	.09	0	0
25	0	29	1,160	766	372	44	34	5.8	.90	.08	0	0
26	0	17	672	1,010	324	40	30	6.4	.76	.06	0	0
27	0	10	406	620	376	36	28	7.0	.76	.04	0	0
28	0	7.5	530	466	802	34	25	5.8	.76	.03	0	0
29	.29	6.9	260	348	-----	32	23	5.3	.64	.01	0	0
30	.93	16	181	290	-----	30	22	4.8	.64	0	0	0
31	.58	-----	166	251	-----	28	-----	4.3	-----	0	0	-----
TOTAL	1.80	275.92	12,288.8	22,325	13,014	4,137	1,220	334.6	78.86	6.68	0	0
MEAN	.058	9.20	396	720	465	133	40.7	10.8	2.63	.22	0	0
MAX	.93	47	2,620	3,120	1,100	565	130	22	5.8	.64	0	0
MIN	0	.42	8.8	38	116	28	22	4.3	.64	0	0	0
AC-FT	3.6	547	24,370	44,280	25,810	8,210	2,420	664	156	13	0	0

CAL YR 1968 TOTAL 33,471.89 MEAN 91.5 MAX 2,620 MIN 0 AC-FT 66,390
WTR YR 1969 TOTAL 53,682.66 MEAN 147 MAX 3,120 MIN 0 AC-FT 106,500

PEAK DISCHARGE (BASE, 4,000 CFS)
DATE TIME G.H. DISCHARGE DATE TIME G.H. DISCHARGE
12-23 1800 9.06 4,420 1-19 1930 9.61 5,150
1-12 0130 8.77 4,070

11-4721.5. EEL RIVER NEAR DOS RIOS, CALIF.

LOCATION.--Lat 39°37'30", long 123°20'25", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.21 N., R.13 W., Mendocino County, on left bank 1,100 ft upstream from Outlet Creek, and 6.3 miles south of Dos Rios.

DRAINAGE AREA.--528 sq mi.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,001.28 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 31,000 cfs Jan. 13 (gage height, 24.09 ft, backwater from Outlet Creek), from rating curve extended above 14,000 cfs; minimum daily, 3.7 cfs Oct. 1, 8-10.

Period of record: Maximum discharge, 31,000 cfs Jan. 13, 1969 (gage height, 24.09 ft, backwater from Outlet Creek), from rating curve extended above 14,000 cfs; minimum daily, 2.8 cfs on several days in 1967-69.

Flood of Dec. 22, 1964, reached a stage of 45.52 ft, from information by local resident (discharge, 120,000 cfs).

REMARKS.--Records fair. Flow partly regulated by Lake Pillsbury 40 miles upstream (see sta 11-4700) and by diversion through Potter Valley powerhouse (see sta 11-4710). Records of chemical analyses, water temperatures, and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	20	111	1,800	3,200	4,040	1,780	300	52	22	4.4	5.1
2	4.4	33	150	1,640	3,440	3,330	1,610	330	52	20	4.4	5.1
3	4.4	61	96	1,550	2,990	3,360	1,500	360	49	19	4.4	5.1
4	4.4	42	68	1,620	2,890	2,600	1,270	350	37	19	4.4	4.9
5	5.5	26	54	1,900	4,110	2,260	1,700	290	27	19	4.4	4.9
6	4.9	20	47	2,010	5,050	2,030	1,670	240	25	15	5.1	4.6
7	4.0	16	47	1,930	3,930	1,810	1,380	274	33	17	5.1	4.3
8	3.7	13	140	1,770	3,870	1,640	1,190	363	33	17	5.1	4.3
9	3.7	11	150	1,550	9,180	1,460	1,130	377	37	16	5.8	4.3
10	3.7	5.6	4,600	1,370	7,600	1,360	1,080	598	39	16	5.8	4.3
11	5.8	11	2,620	6,000	10,700	1,240	748	694	39	16	5.8	4.3
12	20	39	1,020	23,000	10,700	1,120	736	688	33	15	5.1	4.3
13	41	35	568	28,000	6,460	988	962	598	31	15	5.1	4.3
14	37	47	1,500	15,000	4,990	884	242	449	25	14	5.1	4.1
15	23	114	5,000	7,430	6,300	812	202	310	25	13	5.1	4.1
16	16	114	2,260	4,840	6,520	871	242	242	24	13	5.1	4.1
17	11	86	1,070	3,440	4,700	1,570	306	274	20	12	5.1	4.1
18	8.6	102	556	3,270	3,540	2,130	514	298	22	12	5.1	4.9
19	8.3	153	405	13,000	2,830	1,890	748	302	41	12	5.1	5.6
20	7.5	88	302	25,000	2,390	1,700	780	302	35	11	5.4	5.9
21	7.0	56	242	27,000	2,030	1,640	780	206	59	10	5.4	6.2
22	6.5	41	262	16,000	1,810	1,480	262	126	31	9.6	5.4	6.2
23	6.5	33	9,000	8,910	1,780	1,420	395	75	27	9.2	5.4	6.2
24	5.8	41	9,000	5,950	1,790	1,440	485	83	27	8.9	5.4	6.2
25	5.8	83	7,000	6,740	2,250	1,450	600	93	27	8.5	5.4	6.2
26	5.8	96	5,070	12,500	2,650	1,450	640	117	25	8.5	5.4	6.2
27	5.8	68	3,540	8,910	2,340	1,550	630	143	24	7.9	5.4	5.9
28	5.8	49	3,620	6,180	4,000	1,710	330	133	22	7.9	5.4	5.6
29	11	39	3,300	4,560	-----	1,830	230	126	22	7.9	5.4	5.6
30	27	52	2,590	3,690	-----	1,930	270	93	22	7.9	5.1	5.4
31	34	-----	2,100	3,080	-----	1,930	-----	59	-----	7.6	5.1	-----
TOTAL	341.6	1,598.6	66,488	249,640	124,040	54,925	24,412	8,893	965	406.9	159.7	152.3
MEAN	11.0	53.3	2,145	8,053	4,430	1,772	814	287	32.2	13.1	5.15	5.08
MAX	41	153	9,000	28,000	10,700	4,040	1,780	694	59	22	5.8	6.2
MIN	3.7	9.6	47	1,370	1,780	812	202	59	20	7.6	4.4	4.1
AC-FT	678	3,170	131,900	495,200	246,000	108,900	48,420	17,640	1,910	807	317	302

CAL YR 1968 TOTAL 249,703.9 MEAN 682 MAX 13,100 MIN 2.8 AC-FT 495,300
 WTR YR 1969 TOTAL 532,022.1 MEAN 1,458 MAX 28,000 MIN 3.7 AC-FT 1,055,000

PEAK DISCHARGE (BASE, 20,000 CFS).--Jan. 13 (1045) 31,000 cfs (24.09 ft, backwater from Outlet Creek); Jan. 21 (0930) 30,000 cfs (23.54 ft, backwater from Outlet Creek).

EEL RIVER BASIN

11-4722. OUTLET CREEK NEAR LONGVALE, CALIF.

LOCATION.--Lat 39°37'05", long 123°21'20", in NE¼ sec.1, T.20 N., R.14 W., Mendocino County, on right bank 0.2 mile downstream from Bloody Run Creek, 0.9 mile upstream from mouth, and 8.2 miles downstream from Longvale.

DRAINAGE AREA.--161 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,018.14 ft above mean sea level.

AVERAGE DISCHARGE.--13 years, 436 cfs (315,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,100 cfs Jan. 13 (gage height, 14.95 ft); minimum daily, 0.78 cfs Aug. 24.

Period of record: Maximum discharge, 77,900 cfs Dec. 22, 1964 (gage height, 30.6 ft, from floodmarks), from rating curve extended above 9,900 cfs on basis of slope-area measurement of maximum flow; no flow Aug. 15-17, 1959, Sept. 14, 15, 1967.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1929: 1958(M), 1960.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	9.8	334	387	1,830	2,280	108	83	20	7.5	1.7	.95
2	1.5	36	168	309	1,600	1,950	118	77	19	7.1	1.6	.95
3	1.5	40	93	249	1,140	1,730	160	72	18	6.4	1.2	.83
4	1.6	29	68	204	1,240	1,190	126	68	17	6.1	1.4	.83
5	1.7	21	61	168	2,060	886	552	65	17	5.6	1.4	.83
6	1.6	20	58	140	2,510	725	525	60	18	5.3	1.3	.83
7	1.7	17	92	120	1,960	605	327	56	19	5.0	1.3	.83
8	1.7	15	366	110	2,390	512	228	53	20	4.2	1.3	.95
9	1.7	13	205	95	3,960	423	228	50	20	4.2	1.3	.83
10	1.7	12	6,410	93	2,510	387	210	48	20	3.9	1.3	.83
11	3.4	12	2,900	5,470	3,470	331	175	45	20	3.5	1.3	.83
12	11	66	1,470	14,700	2,400	287	163	41	20	3.5	1.2	.83
13	16	41	959	10,700	1,550	254	158	39	19	3.4	1.2	.83
14	13	37	1,120	3,980	1,280	228	140	39	17	3.2	1.1	.83
15	10	222	4,910	2,220	1,950	207	128	38	16	3.1	1.1	.83
16	7.7	92	2,240	1,380	1,850	207	116	35	14	2.9	1.1	.83
17	6.9	51	1,090	810	1,290	566	112	33	13	2.8	1.1	.95
18	5.7	159	478	1,170	910	525	116	31	13	2.6	.95	1.2
19	5.0	97	341	6,980	725	359	104	29	18	2.6	.95	1.2
20	4.3	58	229	11,400	557	272	96	29	18	2.5	.95	1.3
21	4.0	42	165	9,260	480	268	88	28	17	2.3	.95	1.6
22	3.7	35	304	4,380	411	247	85	27	14	2.2	.95	1.6
23	3.4	30	10,100	2,390	543	201	240	25	12	2.0	.83	1.6
24	3.4	92	9,460	1,540	1,330	192	299	24	11	1.8	.78	1.6
25	3.4	215	6,680	2,260	1,720	170	180	24	9.6	1.9	.83	1.4
26	3.4	99	3,890	3,800	1,400	160	143	24	9.3	2.0	.95	1.3
27	3.4	62	2,170	2,500	1,200	145	120	27	8.9	2.0	.95	1.2
28	3.4	49	2,290	1,950	2,760	138	106	27	8.6	1.5	.95	1.3
29	5.7	44	1,540	1,380	-----	126	96	24	8.6	1.8	.95	1.3
30	11	145	840	1,070	-----	118	88	23	7.8	1.7	.95	1.3
31	12	-----	521	928	-----	114	-----	21	-----	1.7	.95	-----
TOTAL	156.0	1,860.8	61,552	92,143	47,026	15,803	5,335	1,265	462.8	106.3	34.79	32.49
MEAN	5.03	62.0	1,986	2,972	1,680	510	178	40.8	15.4	3.43	1.12	1.08
MAX	16	222	10,100	14,700	3,960	2,280	552	83	20	7.5	1.7	1.6
MIN	1.5	9.8	58	93	411	114	85	21	7.8	1.5	.78	.83
AC-FT	309	3,690	122,100	182,800	93,280	31,350	10,580	2,510	918	211	69	64
CAL YR 1968	TOTAL	150,452.12	MEAN	411	MAX	10,100	MIN	.45	AC-FT	298,400		
WTR YR 1969	TOTAL	225,777.18	MEAN	619	MAX	14,700	MIN	.78	AC-FT	447,800		

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	0900	13.64	14,000	1-13	0500	14.95	17,100
12-15	0930	11.71	10,000	1-19	2300	14.02	14,800
12-23	1715	13.58	13,900				

11-4728. MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'45", long 123°04'11", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.23 N., R.11 W., Mendocino County, on left bank 1.2 miles upstream from Black Butte River and 9.8 miles northeast of Covelo.

DRAINAGE AREA.--204 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,498.9 ft (revised) above mean sea level. Prior to Oct. 31, 1968, at datum 5.0 ft higher.

EXTREMES.--Current year: Maximum discharge, 39,300 cfs Dec. 10 (gage height, 15.09 ft); minimum daily, 8.0 cfs Oct. 1-9.

Period of record: Maximum discharge, 39,300 cfs Dec. 10, 1968 (gage height, 15.09 ft); minimum daily, 8.0 cfs Oct. 1-9, 1968.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	70	238	663	1,520	502	2,100	1,860	802	93	18	11
2	8.0	419	195	638	1,380	493	1,940	1,650	760	87	18	11
3	8.0	289	180	730	1,320	480	1,450	1,600	718	81	17	11
4	8.0	139	174	1,010	1,210	472	1,250	1,380	682	77	17	11
5	8.0	116	228	1,100	1,210	467	1,510	1,550	640	73	16	10
6	8.0	105	269	1,180	1,120	465	1,230	1,900	555	70	16	10
7	8.0	90	240	1,040	965	460	1,080	2,300	493	67	16	10
8	8.0	81	629	870	1,270	455	1,050	2,480	440	65	15	10
9	8.0	115	496	747	2,130	450	1,100	2,610	400	61	15	10
10	8.4	127	15,200	674	1,720	445	1,140	2,750	360	58	15	10
11	10	151	876	2,480	3,900	440	1,410	2,540	335	56	14	10
12	17	558	100	23,400	3,120	435	1,790	2,350	310	53	14	10
13	10	266	139	23,900	1,710	430	1,510	2,020	285	50	14	10
14	10	195	273	4,710	1,320	425	1,260	1,640	260	48	13	10
15	10	202	618	1,960	1,300	435	1,140	1,370	240	45	13	10
16	10	254	165	1,140	1,180	555	1,210	1,300	225	41	13	10
17	10	352	173	1,160	1,040	1,080	1,470	1,380	210	38	13	9.8
18	10	1,440	134	1,190	902	1,280	1,740	1,480	195	36	12	9.8
19	10	600	100	12,700	825	1,080	1,590	1,340	180	34	12	9.8
20	10	361	101	33,600	742	1,060	1,760	1,260	168	32	12	9.8
21	10	260	97	16,600	665	944	2,140	1,100	158	30	12	9.8
22	10	215	98	2,440	610	930	2,900	1,060	148	29	12	9.8
23	10	191	7,160	754	610	1,170	2,770	1,110	140	27	12	9.8
24	10	198	8,490	670	585	1,300	1,910	1,140	132	26	12	9.8
25	10	218	4,170	2,150	570	1,410	1,510	1,020	126	24	11	9.8
26	10	194	1,800	7,800	535	1,630	1,410	970	119	23	11	9.8
27	10	179	1,090	3,780	507	2,070	1,520	950	114	22	11	9.8
28	10	176	1,100	2,620	545	2,460	1,960	870	108	22	11	9.8
29	12	181	1,040	2,120	-----	2,920	2,290	810	102	21	11	9.8
30	17	259	813	1,820	-----	3,480	2,040	900	98	20	11	9.8
31	27	-----	807	1,590	-----	3,200	-----	860	-----	19	11	-----
TOTAL	323.4	8,001	47,193	157,236	34,511	33,423	49,180	47,550	9,503	1,428	418	301.2
MEAN	10.4	267	1,522	5,072	1,233	1,078	1,639	1,534	317	46.1	13.5	10.0
MAX	27	1,440	15,200	33,600	3,900	3,480	2,900	2,750	802	93	18	11
MIN	8.0	70	97	638	507	425	1,050	810	98	19	11	9.8
AC-FT	641	15,870	93,610	311,900	68,450	66,290	97,550	94,320	18,850	2,830	829	597
CAL YR 1968	TOTAL	243,799.4	MEAN	666	MAX	15,200	MIN	8.0	AC-FT	483,600		
WTR YR 1969	TOTAL	389,067.6	MEAN	1,066	MAX	33,600	MIN	8.0	AC-FT	771,700		

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1030	15.09	39,300	1-20	2015	14.89	37,800
12-23	1900	11.79	17,300	1-26	0345	11.59	16,100
1-13	0830	14.86	37,600				

NOTE.--No gage-height record Oct. 1-31, July 1 to Sept. 4.

EEL RIVER BASIN

11-4729. BLACK BUTTE RIVER NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'15", long 123°04'50", in SE $\frac{1}{4}$ sec.28, T.23 N., R.11 W., Mendocino County, on right bank 10 ft upstream from highway bridge, 0.5 mile upstream from mouth, and 9.5 miles east of Covelo.

DRAINAGE AREA.--162 sq mi.

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1951-56 and annual maximum, water years 1954-57, October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,456.71 ft above mean sea level. Sept. 10, 1953, to Sept. 30, 1957, crest-stage gage only at same site at different datum. Oct. 1, 1958, to Dec. 22, 1964, water-stage recorder at site 0.1 mile upstream at same datum.

AVERAGE DISCHARGE.--11 years, 305 cfs (221,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,800 cfs Jan. 19 (gage height, 22.10 ft), from rating curve extended as explained below; minimum daily, 3.0 cfs Oct. 1-7.

Period of record: Maximum discharge, 29,000 cfs Dec. 22, 1964 (gage height, 26.4 ft, from floodmarks, site then in use), from rating curve extended above 7,700 cfs on basis of slope-area measurement of maximum flow; minimum (1958-69), 1.2 cfs Sept. 11, 1959.

Flood of Dec. 11, 1937, reached a stage of 36.2 ft, from floodmarks at crest-stage site (discharge, 26,000 cfs).

REMARKS.--Records fair. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1715: 1959(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	5.3	79	246	730	750	1,290	760	195	49	12	6.4
2	3.0	23	55	227	720	720	1,110	702	182	45	12	6.2
3	3.0	36	44	275	675	574	805	702	173	43	12	5.8
4	3.0	21	39	720	693	468	693	639	163	41	12	5.7
5	3.0	16	50	1,150	740	404	850	684	150	39	11	5.6
6	3.0	15	62	1,190	770	284	624	875	140	37	11	5.6
7	3.0	14	61	942	639	234	553	942	132	35	10	5.6
8	3.3	15	145	919	790	184	540	1,010	122	33	9.8	5.5
9	3.3	19	111	453	1,840	162	567	1,030	122	32	9.5	5.5
10	3.3	20	3,490	340	1,550	135	537	1,080	127	31	9.4	5.4
11	5.0	24	702	3,270	3,950	123	593	1,010	124	29	9.2	5.4
12	8.6	71	156	6,180	2,320	111	763	954	118	28	9.0	5.3
13	14	35	170	6,500	1,520	91	573	864	101	26	8.7	5.3
14	12	33	831	2,650	1,530	86	450	720	91	25	8.6	5.3
15	9.4	45	2,830	1,580	1,800	95	370	630	82	24	8.5	5.3
16	8.6	54	1,010	1,060	1,520	123	417	622	80	22	8.5	5.3
17	8.1	70	250	842	1,350	462	569	630	73	21	8.4	5.3
18	7.1	412	154	1,180	1,220	606	712	598	74	20	8.4	5.3
19	6.5	140	125	7,200	1,130	432	648	543	94	18	8.4	5.3
20	6.2	59	75	9,550	1,040	450	719	468	78	18	8.1	5.3
21	5.9	39	54	8,480	1,040	376	987	438	76	17	7.6	5.2
22	5.9	32	55	3,250	1,010	320	1,460	420	66	16	7.2	5.0
23	5.6	29	4,950	1,620	1,040	415	1,260	409	62	16	6.9	5.0
24	5.3	49	3,570	1,130	1,000	398	757	370	61	16	6.7	5.0
25	5.3	94	2,040	3,050	990	426	462	340	59	15	6.6	5.4
26	5.3	50	930	5,370	886	720	469	313	58	15	6.6	5.5
27	5.0	41	398	1,670	886	1,030	508	306	56	14	6.6	5.2
28	5.0	38	494	1,340	908	1,170	752	249	53	14	6.6	5.0
29	5.2	42	574	1,050	-----	1,460	908	233	53	14	6.4	5.0
30	5.3	104	365	875	-----	1,830	800	228	51	13	6.4	5.0
31	5.6	-----	270	693	-----	1,720	-----	209	-----	13	6.4	-----
TOTAL	175.8	1,645.3	24,139	75,002	34,287	16,359	21,746	18,978	3,016	779	268.5	161.7
MEAN	5.67	54.8	779	2,419	1,225	528	725	612	101	25.1	8.66	5.39
MAX	14	412	4,950	9,550	3,950	1,830	1,460	1,080	195	49	12	6.4
MIN	3.0	5.3	39	227	639	86	370	209	51	13	6.4	5.0
AC-FT	349	3,260	47,880	148,800	68,010	32,450	43,130	37,640	5,980	1,550	533	321
CAL YR 1968	TOTAL	114,744.2	MEAN	314	MAX	4,950	MIN	3.0	AC-FT	227,600		
WTR YR 1969	TOTAL	196,557.3	MEAN	539	MAX	9,550	MIN	3.0	AC-FT	389,900		

PEAK DISCHARGE((BASE, 5,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1045	20.02	8,100	1-13	0745	20.29	8,780
12-15	1130	19.28	6,250	1-19	2400	22.10	13,800
12-23	1700	19.59	7,030	1-26	0315	20.51	9,330

NOTE.--No gage-height record Aug. 6 to Sept. 30.

11-4731. WILLIAMS CREEK NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'30", long 123°08'25", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.25, T.23 N., R.12 W., Mendocino County, on right bank 1.0 mile upstream from mouth, and 6.1 miles northeast of Covelo.

DRAINAGE AREA.--30.4 sq mi.

PERIOD OF RECORD.--October 1961 to September 1969 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,435.92 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 86.6 cfs (62,740 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,720 cfs Jan. 20 (gage height, 8.20 ft); minimum daily, 0.30 cfs Sept. 30.

Period of record: Maximum discharge, 11,300 cfs Dec. 22, 1964 (gage height, 14.25 ft), from rating curve extended above 1,900 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.06 cfs Sept. 14-16, 1967.

REMARKS.--Records excellent. No regulation or diversion above station. Records of suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	9.4	44	132	258	170	160	98	16	5.5	2.4	.42
2	.68	20	35	139	243	170	148	85	15	5.5	.42	.42
3	.65	27	30	152	235	152	126	75	14	5.5	.42	.42
4	.64	19	27	184	255	130	106	60	11	5.5	.42	.42
5	.64	13	35	189	303	120	136	61	11	5.5	.42	.42
6	.68	12	31	180	306	116	112	87	10	5.5	.42	.42
7	.71	9.8	40	160	235	112	100	108	8.3	5.5	.42	.42
8	.70	9.4	80	141	336	106	96	112	8.1	5.5	.42	.42
9	.69	14	55	119	682	102	98	122	7.8	2.4	.42	.42
10	.68	12	649	104	530	94	100	124	7.8	2.4	.42	.42
11	2.7	31	229	668	790	91	112	120	7.5	2.4	.42	.42
12	14	41	102	1,690	496	85	128	120	7.8	2.4	.42	.42
13	14	21	136	1,470	315	83	112	98	7.3	2.4	.42	.42
14	7.8	23	179	681	357	81	100	72	5.8	2.4	.42	.42
15	7.8	38	457	369	534	85	85	50	5.8	2.4	.42	.42
16	6.0	28	173	253	387	94	87	47	5.8	2.4	.42	.42
17	5.5	33	91	196	258	180	102	49	5.6	2.4	.42	.42
18	5.1	126	69	313	205	190	110	50	5.6	2.4	.42	.42
19	4.8	61	56	1,280	168	152	104	44	5.6	2.4	.42	.42
20	4.6	43	44	2,220	132	140	106	34	5.6	2.4	.42	.42
21	4.4	33	37	1,590	114	118	120	32	5.6	2.4	.42	.42
22	4.3	27	56	844	108	114	124	32	5.5	2.4	.42	.42
23	4.3	23	1,480	570	108	120	138	33	5.5	2.4	.42	.42
24	3.5	40	1,190	458	120	126	128	31	5.5	2.4	.42	.42
25	3.3	54	686	610	144	132	106	28	5.5	2.4	.42	.42
26	3.2	35	377	758	126	152	96	22	5.5	2.4	.42	.42
27	3.0	30	242	486	120	170	100	22	5.5	2.4	.42	.42
28	2.8	27	304	409	255	190	108	16	5.5	2.4	.42	.36
29	3.2	32	207	309	-----	203	120	16	5.5	2.4	.42	.36
30	5.0	44	159	267	-----	213	104	20	5.5	2.4	.42	.30
31	10	-----	136	235	-----	190	-----	20	-----	2.4	.42	-----
TOTAL	126.09	935.6	7,436	17,176	8,120	4,181	3,372	1,888	226.5	99.2	15.00	12.36
MEAN	4.07	31.2	240	554	290	135	112	60.9	7.55	3.20	.48	.41
MAX	14	126	1,480	2,220	790	213	160	124	16	5.5	2.4	.42
MIN	.64	9.4	27	104	108	81	85	16	5.5	2.4	.42	.30
AC-FT	250	1,860	14,750	34,070	16,110	8,290	6,690	3,740	449	197	30	25

CAL YR 1968

TOTAL 26,260.58

MEAN 71.8

MAX 1,480

MIN .18

AC-FT 52,090

WTR YR 1969

TOTAL 43,587.75

MEAN 119

MAX 2,220

MIN .30

AC-FT 86,460

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	0915	6.65	1,670	1-13	0415	7.43	2,180
12-23	1630	7.54	2,260	1-20	1530	8.20	2,720

11-4736. SHORT CREEK NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'50", long 123°10'56", in NE $\frac{1}{4}$ sec.27, T.23 N., R.12 W., Mendocino County, on left bank 0.4 mile downstream from unnamed tributary, 0.7 mile upstream from wooden bridge, and 4.5 miles northeast of Covelo.

DRAINAGE AREA.--15.2 sq mi.

PERIOD OF RECORD.--October 1958 to September 1969 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,438.2 ft above mean sea level (levels by Topographic Division). Prior to June 25, 1966, at site 100 ft upstream at datum 1.03 ft lower.

AVERAGE DISCHARGE.--11 years, 24.6 cfs (17,820 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,680 cfs Dec. 23 (gage height, 7.70 ft), from rating curve extended above 280 cfs on basis of slope-area measurement of Dec. 21, 1955; minimum daily, 0.07 cfs Nov. 7-10.

Period of record: Maximum discharge, 3,600 cfs Dec. 22, 1964 (gage height, 9.20 ft in gage well, 10.4 ft, from outside floodmarks, site and datum then in use), from rating curve extended above 690 cfs on basis of slope-area measurement of Dec. 21, 1955; no flow at times.

Flood of Dec. 21, 1955, reached a stage of 10.56 ft, from floodmarks (discharge, 3,780 cfs on basis of slope-area measurement of maximum flow).

REVISIONS.--Figures of maximum discharge for the water years 1967 and 1968 have been revised to 915 cfs Dec. 4, 1966 (gage height, 6.43 ft) and 1,050 cfs Jan. 14, 1968 (gage height, 6.69 ft), superseding figures published in WRD Calif. 1967 and 1968.

REMARKS.--Records good. No regulation or diversion above station.

REVISED PEAK DISCHARGE.--1967: Dec. 2 (1400) 755 cfs (6.11 ft); Dec. 4 (2200) 915 cfs (6.43 ft); Jan. 30 (2400) 685 cfs (5.97 ft).
1968: Dec. 4 (1815) 605 cfs (5.81 ft); Jan. 14 (1645) 1,050 cfs (6.69 ft); Feb. 2 (0100) 615 cfs (5.83 ft); Feb. 19 (2100) 765 cfs (6.13 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.43	8.0	72	97	119	14	7.8	1.5	.83	.36	.18
2	.08	.93	6.8	74	96	119	14	7.0	1.4	.83	.34	.18
3	.08	.22	4.7	80	88	108	15	6.8	1.4	.83	.34	.18
4	.08	.08	4.1	87	94	93	14	6.6	1.3	.83	.34	.18
5	.08	.08	3.9	73	121	87	12	6.1	1.3	.83	.29	.18
6	.08	.08	3.7	51	128	80	11	5.4	1.3	.83	.29	.18
7	.08	.07	4.3	38	99	72	9.8	5.0	1.3	.83	.27	.18
8	.08	.07	23	34	152	62	8.9	4.5	1.3	.79	.29	.18
9	.08	.07	11	27	259	57	9.4	4.3	1.3	.79	.29	.18
10	.09	.07	326	24	173	49	10	4.1	1.3	.75	.27	.18
11	.09	.08	126	462	298	42	11	4.3	1.3	.75	.24	.18
12	.11	.22	56	1,100	170	38	12	4.1	1.3	.67	.24	.18
13	.10	.08	74	600	115	35	11	3.7	1.3	.63	.24	.18
14	.09	.87	123	173	161	32	9.6	3.5	1.2	.63	.24	.18
15	.09	4.3	326	114	268	31	8.6	3.3	1.1	.63	.24	.18
16	.09	8.0	132	83	170	31	9.0	3.1	1.1	.63	.24	.18
17	.09	3.9	72	63	114	44	10	3.0	1.1	.63	.22	.18
18	.09	22	45	142	88	41	11	2.8	1.1	.63	.22	.18
19	.09	8.0	34	450	73	37	10	2.6	1.1	.63	.22	.18
20	.09	4.5	22	705	58	36	9.4	2.5	1.1	.59	.22	.18
21	.09	3.3	15	546	48	35	11	2.3	1.1	.55	.22	.16
22	.09	2.6	29	205	42	30	12	2.2	1.1	.55	.22	.15
23	.09	2.4	1,200	132	50	27	13	2.1	1.0	.55	.22	.16
24	.09	4.8	655	104	76	25	11	2.0	1.0	.51	.21	.16
25	.09	24	358	150	97	24	9.7	1.9	1.0	.51	.21	.16
26	.09	8.3	183	200	84	22	8.6	1.8	.93	.51	.18	.16
27	.09	4.8	124	134	84	21	9.2	1.7	.93	.47	.18	.15
28	.09	3.9	180	114	170	19	9.8	1.7	.93	.43	.18	.15
29	.21	3.3	136	90	-----	18	9.8	1.6	.87	.40	.18	.15
30	.43	4.8	100	84	-----	16	8.5	1.6	.87	.40	.18	.15
31	.43	-----	77	72	-----	15	-----	1.5	-----	.38	.18	-----
TOTAL	3.53	116.25	4,462.5	6,283	3,473	1,465	322.3	110.9	34.83	19.82	7.56	5.15
MEAN	.11	3.88	144	203	124	47.3	10.7	3.58	1.16	.64	.24	.17
MAX	.43	24	1,200	1,100	298	119	15	7.8	1.5	.83	.36	.18
MIN	.08	.07	3.7	24	42	15	8.5	1.5	.87	.38	.18	.15
AC-FT	7.0	231	8,850	12,460	6,890	2,910	639	220	69	39	15	10
CAL YR 1968	TOTAL	13,099.57	MEAN	35.8	MAX	1,200	MIN	.05	AC-FT	25,980		
WTR YR 1969	TOTAL	16,303.84	MEAN	44.7	MAX	1,200	MIN	.07	AC-FT	32,340		

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	0900	6.44	920	1-12	0330	7.11	1,310
12-15	0930	6.15	775	1-21	0700	6.77	1,100
12-23	1515	7.70	1,680				

11-4737, MILL CREEK NEAR COVELO, CALIF.

LOCATION.--Lat 39°44'45", long 123°10'15", in SW $\frac{1}{4}$ sec.23, T.22 N., R.12 W., Mendocino County, on right bank 50 ft upstream from unnamed tributary, 0.6 mile downstream from county road bridge, and 5.2 miles southeast of Covelo.

DRAINAGE AREA.--96.9 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,280.40 ft (revised) above mean sea level.

AVERAGE DISCHARGE.--13 years, 158 cfs (114,500 acre-ft per year); median of yearly mean discharges, 130 cfs (94,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,460 cfs Jan. 23 (gage height, 13.44 ft), from rating curve extended as explained below; no flow for several months.
Period of record: Maximum discharge, 24,100 cfs Dec. 22, 1964 (gage height, 20.97 ft), from rating curve extended above 2,300 cfs on basis of slope-area measurement at gage heights 14.50 and 20.97 ft; no flow for several months in each year.

REMARKS.--Records fair. No regulation or diversion above station. Records of suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	39	374	625	660	112	38	.07	0	0	0
2	0	0	32	385	600	640	113	35	.02	0	0	0
3	0	0	15	401	565	545	102	32	.01	0	0	0
4	0	0	9.8	430	622	475	89	31	0	0	0	0
5	0	0	6.3	401	758	428	82	27	0	0	0	0
6	0	0	5.3	343	840	372	76	25	0	0	0	0
7	0	0	4.1	303	675	337	68	21	0	0	0	0
8	0	0	74	254	1,050	303	72	17	0	0	0	0
9	0	0	38	209	1,500	274	79	15	0	0	0	0
10	0	0	1,250	198	1,150	248	95	13	0	0	0	0
11	0	0	577	2,750	1,980	221	86	12	0	0	0	0
12	0	0	201	5,100	1,260	209	82	10	0	0	0	0
13	0	0	237	2,940	730	201	77	8.5	0	0	0	0
14	0	0	404	956	1,110	194	73	8.0	0	0	0	0
15	0	1.0	1,920	547	1,800	192	68	6.9	0	0	0	0
16	0	26	537	390	1,150	194	64	6.3	0	0	0	0
17	0	12	242	301	706	286	62	5.0	0	0	0	0
18	0	50	148	862	560	277	62	4.3	0	0	0	0
19	0	26	116	2,940	471	229	56	3.7	0	0	0	0
20	0	6.6	67	3,600	395	233	52	3.0	0	0	0	0
21	0	2.6	40	3,240	343	233	48	2.6	0	0	0	0
22	0	1.5	115	1,230	260	203	47	2.1	0	0	0	0
23	0	.89	5,650	887	285	188	81	1.7	0	0	0	0
24	0	9.8	3,260	699	370	179	106	1.2	0	0	0	0
25	0	115	2,250	1,130	595	170	72	.83	0	0	0	0
26	0	33	1,070	1,810	530	158	58	.70	0	0	0	0
27	0	12	702	1,060	535	146	51	.70	0	0	0	0
28	0	5.3	1,110	895	848	137	47	.51	0	0	0	0
29	0	3.0	862	615	-----	130	44	.31	0	0	0	0
30	0	14	544	574	-----	120	41	.21	0	0	0	0
31	0	-----	410	450	-----	116	-----	.14	-----	0	0	-----
TOTAL	0	318.69	21,935.5	36,274	22,313	8,298	2,165	332.70	0.10	0	0	0
MEAN	0	10.6	708	1,170	797	268	72.2	10.7	.003	0	0	0
MAX	0	115	5,650	5,100	1,980	660	113	38	.07	0	0	0
MIN	0	0	4.1	198	260	116	41	.14	0	0	0	0
AC-FT	0	632	43,510	71,950	44,260	16,460	4,290	660	.2	0	0	0
CAL YR 1968	TOTAL	57,302.07	MEAN	157	MAX	5,650	MIN	0	AC-FT	113,700		
WTR YR 1969	TOTAL	91,636.99	MEAN	251	MAX	5,650	MIN	0	AC-FT	181,800		

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1030	10.90	4,470	1-12	0345	12.50	6,260
12-23	1715	13.44	7,460	1-21	0900	11.69	5,320

EEL RIVER BASIN

11-4738. ELK CREEK NEAR HEARST, CALIF.

LOCATION.--Lat 39°38'57", long 123°07'12", in NE $\frac{1}{4}$ sec.30, T.21 N., R.11 W., Mendocino County, on right bank 300 ft upstream from unnamed tributary, and 13.5 miles northeast of Hearst.

DRAINAGE AREA.--84.1 sq mi.

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,197.2 ft above mean sea level (levels by Topographic Division).

AVERAGE DISCHARGE.--5 years, 218 cfs (157,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,830 cfs Dec. 10 (gage height, 12.80 ft); minimum daily, 1.7 cfs Oct. 1-10, Sept. 10-30.

Period of record: Maximum discharge, 25,000 cfs Dec. 22, 1964 (gage height, 19.8 ft, from floodmarks), from rating curve extended above 9,900 cfs on basis of slope-area measurement at gage height 19.8 ft; minimum daily, 0.10 cfs Sept. 24 to Oct. 11, 1964.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	8.3	59	207	342	772	410	228	68	13	4.3	2.0
2	1.7	37	45	203	358	719	370	213	61	13	4.1	1.9
3	1.7	49	24	207	350	670	306	210	55	12	3.9	1.9
4	1.7	21	16	275	366	586	267	186	55	12	3.7	1.8
5	1.7	15	14	332	485	544	450	186	49	11	3.5	1.8
6	1.7	12	21	343	580	502	334	216	44	11	3.4	1.8
7	1.7	11	19	310	455	455	282	243	43	10	3.4	1.8
8	1.7	9.5	96	247	762	420	258	255	38	9.6	3.2	1.8
9	1.7	8.9	81	176	1,290	382	261	270	41	9.3	3.1	1.8
10	1.7	8.3	1,800	143	990	350	255	282	40	9.0	3.1	1.7
11	2.2	11	616	1,810	1,890	322	261	274	38	8.7	3.0	1.7
12	5.2	40	343	2,970	1,270	302	298	255	37	8.4	3.0	1.7
13	21	22	465	2,540	970	286	270	231	32	8.1	2.8	1.7
14	13	22	664	712	940	270	246	204	29	7.8	2.7	1.7
15	10	85	1,680	435	1,550	274	228	180	26	7.8	2.7	1.7
16	8.3	61	712	334	1,190	294	228	170	24	7.3	2.7	1.7
17	6.9	43	532	274	1,010	538	237	168	23	7.3	2.6	1.7
18	6.0	133	458	338	930	520	249	160	28	7.1	2.6	1.7
19	5.2	78	401	2,060	901	430	237	148	33	6.8	2.4	1.7
20	4.6	42	332	2,960	838	405	246	130	29	6.4	2.4	1.7
21	4.3	21	280	2,750	756	370	270	122	29	6.1	2.3	1.7
22	4.0	12	285	820	712	338	298	118	22	5.9	2.3	1.7
23	3.7	8.9	2,880	440	719	338	346	114	19	5.6	2.2	1.7
24	3.7	19	1,920	318	804	342	270	108	18	5.6	2.1	1.7
25	3.7	43	999	656	788	350	234	99	17	5.4	2.1	1.7
26	3.7	20	616	1,160	684	378	216	92	17	5.2	2.1	1.7
27	3.5	12	419	610	646	420	219	96	16	5.0	2.1	1.7
28	3.5	9.5	518	485	1,020	455	240	82	16	5.0	2.1	1.7
29	4.3	8.3	383	405	-----	475	255	79	15	4.8	2.1	1.7
30	8.3	35	275	374	-----	514	237	79	14	4.6	2.1	1.7
31	10	-----	224	338	-----	480	-----	75	-----	4.5	2.0	-----
TOTAL	152.1	905.7	17,177	25,232	23,596	13,501	8,278	5,273	976	243.3	86.1	52.3
MEAN	4.91	30.2	554	814	843	436	276	170	32.5	7.85	2.78	1.74
MAX	21	133	2,880	2,970	1,890	772	450	282	68	13	4.3	2.0
MIN	1.7	8.3	14	143	342	270	216	75	14	4.5	2.0	1.7
AC-FT	302	1,800	34,070	50,050	46,800	26,780	16,420	10,460	1,940	483	171	104
CAL YR 1968	TOTAL	56,167.2	MEAN	153	MAX	2,880	MIN	1.7	AC-FT	111,400		
WTR YR 1969	TOTAL	95,472.5	MEAN	262	MAX	2,970	MIN	1.7	AC-FT	189,400		

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1000	12.80	4,830	1-12	2030	12.78	4,790
12-24	0500	12.66	4,530	1-21	0800	12.73	4,680

11-4739. MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF.

LOCATION.--Lat 39°42'23", long 123°19'27", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5, T.21 N., R.13 W., Mendocino County, on right bank 0.6 mile upstream from Eastman Creek, 1.7 miles southeast of Dos Rios, and 1.9 miles upstream from mouth.

DRAINAGE AREA.--745 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 901.58 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 52,300 cfs Jan. 20 (gage height, 22.21 ft); minimum daily, 14 cfs Sept. 19.

Period of record: Maximum discharge, 70,200 cfs Jan. 4, 1966 (gage height, 32.86 ft, from high-water marks); minimum daily, 13 cfs Aug. 12-14, 17, 18, 1968.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WRD Calif. 1967: 1966.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	131	664	2,060	3,980	3,480	4,470	2,920	1,250	218	38	29
2	16	296	526	2,000	3,310	3,050	3,980	2,670	1,160	217	37	32
3	16	532	370	2,090	3,560	3,130	3,360	2,600	1,100	208	37	32
4	16	244	348	2,600	3,360	2,620	2,840	2,290	1,030	197	37	32
5	16	188	344	3,080	4,460	2,510	3,670	2,390	984	186	34	32
6	16	180	460	3,160	4,800	2,480	3,080	3,120	897	168	34	32
7	17	153	420	2,960	3,960	2,340	2,680	3,690	808	156	34	32
8	17	131	1,090	2,720	4,470	2,210	2,560	3,850	724	143	34	32
9	17	129	1,000	2,440	13,400	2,130	2,720	4,200	640	132	33	32
10	18	188	19,400	2,250	8,610	2,040	2,840	4,400	610	120	31	32
11	24	173	7,760	11,200	15,900	1,950	3,070	4,110	570	118	30	25
12	43	628	2,340	35,600	11,700	1,870	3,520	4,000	580	105	30	19
13	252	440	1,920	34,800	6,110	1,800	3,080	3,610	555	91	30	18
14	195	316	4,330	13,600	5,280	1,770	2,750	3,080	515	88	30	18
15	135	450	11,300	6,630	8,800	1,810	2,500	2,480	486	83	30	18
16	118	460	4,920	4,240	6,750	2,010	2,620	2,410	481	85	29	18
17	101	400	2,370	3,200	4,270	3,240	2,970	2,500	454	78	28	17
18	90	1,400	1,680	3,360	3,340	3,670	3,360	2,750	424	69	27	17
19	77	1,380	1,580	21,600	2,940	3,000	3,070	2,500	436	63	27	14
20	57	770	1,270	46,200	2,570	2,940	3,230	2,180	387	59	27	15
21	60	514	1,090	29,000	2,320	2,830	3,670	2,080	372	58	27	15
22	55	410	1,040	18,000	2,180	2,600	4,050	2,020	327	58	27	15
23	52	375	24,800	11,000	2,300	2,830	4,270	2,090	340	56	26	15
24	49	380	21,700	7,620	2,720	2,990	3,460	2,130	313	48	25	15
25	37	749	12,200	11,200	3,160	3,120	2,830	1,880	303	48	25	15
26	43	502	5,870	22,900	2,830	3,440	2,510	1,590	287	48	27	15
27	42	405	3,240	11,100	2,600	3,910	2,590	1,570	237	45	25	15
28	40	360	3,870	8,190	4,560	4,420	3,050	1,370	230	43	24	15
29	42	360	3,650	5,660	-----	4,850	3,440	1,300	225	43	24	15
30	86	574	2,750	4,660	-----	5,400	3,080	1,420	219	43	24	15
31	160	-----	2,250	4,070	-----	5,220	-----	1,390	-----	40	24	-----
TOTAL	1,923	13,218	146,552	339,190	144,240	91,660	95,320	80,590	16,944	3,114	915	646
MEAN	62.0	441	4,727	10,940	5,151	2,957	3,177	2,600	565	100	29.5	21.5
MAX	252	1,400	24,800	46,200	15,900	5,400	4,470	4,400	1,250	218	38	32
MIN	16	129	344	2,000	2,180	1,770	2,500	1,300	219	40	24	14
AC-FT	3,810	26,220	290,700	672,800	286,100	181,800	189,100	159,900	33,610	6,180	1,810	1,280
CAL YR 1968	TOTAL 590,476		MEAN 1,613		MAX 25,400		MIN 13		AC-FT 1,171,000			
WTR YR 1969	TOTAL 934,312		MEAN 2,560		MAX 46,200		MIN 14		AC-FT 1,853,000			

PEAK DISCHARGE (BASE, 35,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1330	20.42	39,400	1-20	0130	22.21	52,300
12-23	2030	20.70	41,300	1-26	unknown	-	36,100
1-13	0945	21.20	44,700				

EEL RIVER BASIN

11-4745. NORTH FORK EEL RIVER NEAR MINA, CALIF.

LOCATION.--Lat 39°56'18", long 123°20'36", in SW $\frac{1}{4}$ sec.8, T.24 N., R.13 W., Mendocino County, on right bank 0.2 mile upstream from county road bridge, 1.4 miles upstream from Asbill Creek, and 2 miles south of Mina.

DRAINAGE AREA.--248 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,016.8 ft above mean sea level (levels by Topographic Division). Aug. 27, 1953, to Jan. 15, 1954, water-stage recorder and Jan. 16 to June 22, 1954, nonrecording gage, at site 0.4 mile downstream at different datums. June 23, 1954, to Dec. 21, 1964, water-stage recorder and Feb. 7 to July 8, 1965, nonrecording gage at site 0.2 mile downstream at different datums. July 9, 1965, to Aug. 20, 1967, water-stage recorder at site 0.6 mile downstream at datum 15.1 ft lower.

AVERAGE DISCHARGE.--16 years, 642 cfs (465,100 acre-ft per year); median of yearly mean discharges, 570 cfs (413,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 25,800 cfs Jan. 20 (gage height, 19.00 ft, from floodmarks); minimum daily, 2.1 cfs Sept. 21-23, 26-30.

Period of record: Maximum discharge, 133,000 cfs Dec. 22, 1964 (gage height, 33.6 ft, from floodmarks, site and datum then in use), from rating curve extended above 12,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.1 cfs Aug. 30, 31, 1959.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	30	369	1,080	1,560	1,910	1,200	347	62	21	4.6	2.6
2	2.8	119	311	1,150	1,690	1,640	622	315	54	19	4.6	2.5
3	2.8	155	225	1,280	1,580	1,540	602	296	53	18	4.6	2.5
4	2.8	73	185	2,370	1,470	1,400	510	270	51	17	4.6	2.4
5	2.8	49	208	2,370	1,700	1,410	880	248	48	17	4.1	2.3
6	2.8	50	210	2,090	1,770	1,400	712	251	47	16	4.1	2.3
7	2.8	44	183	1,790	1,580	1,210	610	270	47	15	4.1	2.3
8	2.8	39	770	1,560	1,770	1,090	550	235	48	15	4.1	2.3
9	2.8	40	406	1,320	5,660	1,030	532	261	47	13	4.1	2.3
10	2.8	63	6,200	708	3,820	915	507	224	47	13	4.1	2.2
11	5.9	59	2,720	2,920	9,380	845	489	248	47	11	4.1	2.2
12	8.3	402	1,160	15,700	4,490	662	507	229	47	11	4.1	2.2
13	54	167	1,400	11,700	2,500	626	474	205	44	11	3.6	2.2
14	28	105	2,940	4,350	2,260	618	419	183	39	11	3.6	2.2
15	26	290	5,750	2,420	3,900	350	379	166	37	11	3.6	2.2
16	23	355	3,020	1,830	3,510	750	357	154	34	9.9	3.6	2.2
17	18	203	1,550	1,410	2,140	1,190	360	144	33	9.2	3.1	2.2
18	13	766	1,080	1,470	1,840	1,580	406	137	33	9.2	3.1	2.2
19	12	398	965	6,300	1,530	1,280	363	126	41	8.5	3.1	2.2
20	11	200	750	10,400	1,360	1,130	331	117	42	7.8	3.1	2.2
21	9.4	143	598	9,360	1,160	1,030	341	104	34	7.1	3.1	2.1
22	8.3	110	618	4,720	995	960	357	102	31	6.6	3.1	2.1
23	7.2	102	11,300	2,710	1,020	980	557	97	28	6.6	3.1	2.1
24	7.2	207	11,700	2,140	1,090	940	712	91	26	6.1	3.1	2.2
25	7.2	817	5,290	3,560	1,080	870	579	86	25	6.1	2.7	2.3
26	7.2	341	2,400	5,430	985	1,000	492	82	24	6.1	2.7	2.1
27	6.1	223	1,530	2,980	1,100	1,160	446	93	20	5.6	2.7	2.1
28	6.1	167	1,920	2,350	1,890	1,200	423	79	22	5.1	2.7	2.1
29	7.2	153	2,070	1,860	-----	1,420	412	72	23	5.1	2.7	2.1
30	23	290	1,460	1,650	-----	1,700	376	66	21	5.1	2.7	2.1
31	44	-----	1,190	1,380	-----	1,900	-----	68	-----	5.1	2.6	-----
TOTAL	360.1	6,160	70,478	112,358	64,830	36,036	15,505	5,366	1,155	328.2	109.2	67.0
MEAN	11.6	205	2,273	3,624	2,315	1,162	517	173	38.5	10.6	3.52	2.23
MAX	54	817	11,700	15,700	9,380	1,910	1,200	347	62	21	4.6	2.6
MIN	2.8	30	183	708	985	618	331	66	20	5.1	2.6	2.1
AC-FT	714	12,220	139,800	222,900	128,600	71,480	30,750	10,640	2,290	651	217	133
CAL YR 1968	TOTAL	240,040.6	MEAN	656	MAX	11,700	MIN	1.3	AC-FT	476,100		
WTR YR 1969	TOTAL	312,752.5	MEAN	857	MAX	15,700	MIN	2.1	AC-FT	620,300		

PEAK DISCHARGE (BASE, 8,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1115	16.00	15,800	1-20	unknown	19.00	25,800
12-23	1900	18.18	22,900	2-11	1200	14.42	11,900
1-12	1245	16.92	18,600				

NOTE.--No gage-height record Jan. 20, 21, Aug. 5 to Sept. 30.

11-4750, EEL RIVER AT FORT SEWARD, CALIF.

LOCATION.--Lat 40°13'05", long 123°37'54", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.8, T.3 S., R.5 E., Humboldt County, on right bank at downstream side of bridge, 1.0 mile southeast of Fort Seward, 1.9 miles upstream from Dobbys Creek, and 11.8 miles northeast of Garberville.

DRAINAGE AREA.--2,107 sq mi.

PERIOD OF RECORD.--September 1955 to current year. Prior to October 1965, published as "at Alderpoint."

GAGE.--Water-stage recorder. Datum of gage is 217.26 ft above mean sea level. Prior to Dec. 22, 1964, at site 7.5 miles upstream at datum 46.55 ft higher. Feb. 2 to Sept. 30, 1965, at site 7.7 miles upstream at datum 49.42 ft higher.

AVERAGE DISCHARGE.--14 years, 4,787 cfs (3,468,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 117,000 cfs Jan. 21 (gage height, 36.55 ft); minimum daily, 34 cfs Sept. 12-20.

Period of record: Maximum discharge, 561,000 cfs Dec. 22, 1964 (gage height, 87.2 ft, from floodmarks, site and datum then in use), from rating curve extended above 110,000 cfs on basis of slope-area measurement at gage height 72.5 ft; minimum daily, 10 cfs Aug. 30 to Sept. 5, 1964.

REMARKS.--Records good. Flow slightly regulated by Lake Pillsbury 99 miles upstream (see sta 11-4700) and by diversion through Potter Valley powerhouse (see sta 11-4710). Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	218	1,760	9,300	15,400	17,100	7,950	4,430	1,530	318	76	38
2	37	260	2,080	7,900	15,900	13,300	7,090	4,230	1,470	305	74	38
3	37	690	1,380	7,600	14,100	13,900	6,600	3,980	1,360	290	71	38
4	37	865	1,060	7,800	13,000	11,100	5,700	3,770	1,230	280	69	38
5	37	487	905	8,500	16,200	9,560	6,380	3,420	1,230	262	66	36
6	37	354	905	8,300	18,800	8,790	7,260	3,660	1,180	256	63	35
7	37	313	972	7,100	16,400	8,010	6,000	4,600	1,100	242	61	35
8	36	288	2,350	6,400	14,700	7,160	5,380	5,000	1,030	230	59	35
9	36	254	2,820	5,800	31,800	6,490	5,350	5,180	945	222	57	35
10	36	240	23,500	5,020	27,600	6,050	5,060	5,530	885	212	55	35
11	38	300	26,300	15,300	38,700	5,650	4,870	5,580	825	198	53	35
12	50	760	11,500	96,400	37,800	5,130	5,040	5,180	780	184	51	34
13	66	1,310	6,760	107,000	23,500	4,870	5,400	5,200	755	176	50	34
14	175	815	12,900	53,800	19,000	4,680	4,870	4,560	702	164	49	34
15	313	1,280	27,900	29,700	23,700	4,520	4,000	3,720	666	155	49	34
16	248	1,760	22,300	21,700	25,300	4,660	3,740	3,210	622	147	48	34
17	214	1,210	11,000	16,200	18,300	6,030	3,940	3,020	598	138	48	34
18	196	1,590	6,510	13,600	14,800	9,010	4,540	3,360	578	131	47	34
19	180	3,530	5,580	36,700	36,600	8,220	4,790	3,120	570	123	47	34
20	170	1,820	4,500	101,000	10,500	7,120	4,810	2,660	626	119	45	34
21	162	1,150	3,420	109,000	8,790	6,870	5,020	2,440	578	115	45	35
22	158	805	3,170	61,000	7,560	6,300	5,450	2,320	570	109	44	35
23	153	646	48,500	35,700	7,490	6,050	6,000	2,280	484	108	44	36
24	149	800	79,500	26,200	8,780	6,130	6,380	2,280	444	102	43	36
25	146	2,480	67,000	26,000	11,900	6,180	5,350	2,110	423	98	42	37
26	146	1,930	32,200	42,700	11,000	6,180	4,560	2,120	405	95	41	37
27	146	1,220	20,900	34,000	9,380	6,600	4,460	2,090	384	92	41	37
28	144	925	19,400	26,000	15,600	7,860	4,460	1,960	369	89	41	37
29	144	755	18,700	20,800	-----	8,450	4,810	1,850	354	85	39	37
30	144	1,000	14,900	17,600	-----	8,450	4,580	1,760	328	82	39	37
31	152	-----	11,800	15,100	-----	8,630	-----	1,620	-----	78	39	-----
TOTAL	3,662	30,055	492,472	979,220	512,600	239,050	159,840	106,240	23,021	5,205	1,596	1,068
MEAN	118	1,002	15,890	31,590	18,310	7,711	5,328	3,427	767	168	51.5	35.6
MAX	313	3,530	79,500	109,000	38,700	17,100	7,950	5,580	1,530	318	76	38
MIN	36	218	905	5,020	7,490	4,520	3,740	1,620	328	78	39	34
AC-FT	7,260	59,610	976,800	1,942M	1,017M	474,100	317,000	210,700	45,660	10,320	3,170	2,120
CAL YR 1968	TOTAL	1,508,964	MEAN	4,123	MAX	79,500	MIN	34	AC-FT	2,993,000		
WTR YR 1969	TOTAL	2,554,029	MEAN	6,997	MAX	109,000	MIN	34	AC-FT	5,066,000		

PEAK DISCHARGE (BASE, 41,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	2400	23.80	45,600	1-21	1445	36.55	117,000
12-15	1800	23.65	44,900	1-26	1330	24.57	49,000
12-24	unknown	34.50	105,000	2-11	1915	24.41	48,300
1-13	1145	36.12	114,000				

EEL RIVER BASIN

11-4755, SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF.

LOCATION.--Lat 39°43'09", long 123°39'06", in NW $\frac{1}{4}$ sec.32, T.22 N., R.16 W., Mendocino County, on right bank 0.4 mile upstream from Jack of Hearts Creek, and 4.7 miles north of Branscomb.

DRAINAGE AREA.--43.9 sq mi.

PERIOD OF RECORD.--October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,383.63 ft above mean sea level.

AVERAGE DISCHARGE.--23 years, 171 cfs (123,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,570 cfs Jan. 12 (gage height, 9.01 ft); minimum, 1.6 cfs Sept. 12-17, 30.

Period of record: Maximum discharge, 20,100 cfs Dec. 22, 1955 (gage height, 16.20 ft), from rating curve extended above 4,600 cfs on basis of slope-area measurement of maximum flow; minimum, 0.90 cfs Sept. 7, 1966.

REMARKS.--Records excellent. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1395: Drainage area. WSP 1445: 1951, 1952(M), 1953(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	13	120	323	519	674	70	68	21	12	5.2	2.0
2	3.6	31	90	268	512	568	77	61	20	12	5.2	2.0
3	3.4	31	68	228	460	498	79	57	20	12	4.2	2.0
4	3.1	22	58	198	477	422	68	54	20	11	4.0	1.9
5	3.1	21	53	175	622	361	140	48	20	11	4.0	1.9
6	3.4	18	46	153	726	310	122	45	20	11	4.0	1.9
7	3.4	16	49	136	638	268	105	42	20	10	4.0	1.9
8	3.4	15	129	122	785	233	97	40	19	10	3.9	1.9
9	3.1	14	99	109	1,440	206	97	37	19	9.6	3.9	1.9
10	3.1	13	1,770	105	975	183	93	36	19	9.2	3.9	1.9
11	21	21	975	1,030	1,420	160	83	34	20	9.0	3.9	1.9
12	37	55	519	4,730	1,020	145	84	33	19	8.5	3.5	1.6
13	22	33	390	3,270	674	134	79	32	18	8.4	3.5	1.6
14	18	31	400	1,290	519	124	74	31	18	8.0	3.5	1.6
15	16	97	1,300	744	750	118	70	31	17	7.8	3.5	1.6
16	13	61	875	498	509	118	65	30	16	8.5	3.0	1.6
17	11	44	498	387	435	163	63	28	15	8.2	3.0	1.6
18	10	90	364	384	374	170	64	28	14	8.2	3.0	2.2
19	9.1	75	280	1,320	313	153	57	27	15	7.2	3.0	3.0
20	8.7	53	219	3,160	262	145	54	26	17	7.2	3.0	5.8
21	7.7	42	180	2,660	222	140	50	25	18	6.8	3.0	11
22	7.3	35	170	1,390	200	131	49	24	17	6.4	3.0	9.6
23	7.0	31	1,950	855	211	122	133	24	16	6.0	2.9	6.1
24	6.6	65	2,030	561	268	116	154	24	15	6.0	2.4	3.0
25	6.6	118	1,920	642	364	107	124	24	14	6.0	2.4	2.5
26	6.3	74	1,360	1,040	374	99	112	25	14	6.0	2.4	2.0
27	5.9	56	870	810	380	93	98	26	13	6.0	2.1	1.8
28	5.9	45	795	593	825	88	89	23	13	6.0	2.0	1.8
29	14	42	674	464	-----	82	79	23	13	6.0	2.0	1.8
30	20	65	512	390	-----	77	73	22	13	6.0	2.0	1.6
31	16	-----	406	336	-----	75	-----	21	-----	5.2	2.0	-----
TOTAL	302.6	1,327	19,169	28,371	16,274	6,283	2,602	1,049	513	255.2	101.4	83.0
MEAN	9.76	44.2	618	915	581	203	86.7	33.8	17.1	8.23	3.27	2.77
MAX	37	118	2,030	4,730	1,440	674	154	68	21	12	5.2	11
MIN	3.1	13	46	105	200	75	49	21	13	5.2	2.0	1.6
AC-FT	600	2,630	38,020	56,270	32,280	12,460	5,160	2,080	1,020	506	201	165
CAL YR 1968	TOTAL	55,134.2	MEAN	151	MAX	2,030	MIN	1.6	AC-FT	109,400		
WTR YR 1969	TOTAL	76,330.2	MEAN	209	MAX	4,730	MIN	1.6	AC-FT	151,400		

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1030	7.17	3,320	1-12	0600	9.01	5,570
12-15	1115	6.14	2,400	1-20	1645	7.52	3,890
12-23	1845	6.88	3,030				

11-4755.6. ELDER CREEK NEAR BRANSCOMB, CALIF.
(Hydrologic bench-mark station)

LOCATION.--Lat 39°43'47", long 123°38'34", in NW¼NE¼ sec.29, T.22 N., R.16 W., Mendocino County, on right bank 0.2 mile upstream from mouth, and 5.3 miles north of Branscomb.
Rain gage No. 1: Lat 39°43'50", long 123°38'07", in NW¼NW¼ sec.28, T.22 N., R.16 W., altitude, 1,440 ft at site 0.5 mile east of gaging station.
Rain gage No. 2: Lat 39°42'36", long 123°37'03", in NW¼SW¼ sec.34, T.22 N., R.16 W., altitude, 2,680 ft at site 2 miles southeast of gaging station.

DRAINAGE AREA.--6.50 sq mi.

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

GAGE.--Water-stage recorder and two recording and storage-type precipitation gages. Datum of gage is 1,391.08 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 940 cfs Jan. 12 (gage height, unknown); minimum daily, 0.92 cfs Oct. 1-10, Sept. 11-17.

Period of record: Maximum discharge, 940 cfs Jan. 12, 1969 (gage height, unknown); minimum daily, 0.82 cfs Aug. 13, 1968.

Flood of Dec. 22, 1964, reached a stage of 11.41 ft, from floodmarks (discharge, 3,660 cfs, by slope-area measurement of maximum flow).

REMARKS.--Records good. No regulation; small diversion above station for domestic use. Records of chemical analyses, water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.92	2.2	9.4	65	62	118	23	16	5.7	3.5	1.7	1.0
2	.92	7.0	9.4	58	64	108	23	15	5.4	3.4	1.7	1.0
3	.92	6.2	8.1	52	62	94	20	14	5.3	3.3	1.5	1.0
4	.92	3.9	7.2	46	65	84	19	14	5.3	3.2	1.5	.98
5	.92	3.2	6.7	40	76	72	27	13	5.3	3.1	1.5	.98
6	.92	2.8	6.0	35	83	60	23	13	5.5	3.0	1.5	.98
7	.92	2.5	7.0	31	78	52	22	12	5.5	3.0	1.5	.98
8	.92	2.4	14	28	94	46	21	11	5.5	3.0	1.4	.98
9	.92	2.3	13	26	205	40	22	11	5.5	2.9	1.4	.98
10	.92	2.2	235	25	173	35	20	11	5.5	2.9	1.4	.98
11	2.9	3.4	136	24	268	31	19	10	5.4	2.9	1.4	.92
12	5.8	7.5	73	580	235	30	19	9.6	5.2	2.8	1.3	.92
13	4.0	5.0	57	330	152	28	18	9.4	5.0	2.7	1.3	.92
14	3.4	4.6	67	200	107	25	17	9.5	4.8	2.5	1.3	.92
15	3.0	11	183	140	109	25	16	9.3	4.7	2.6	1.3	.92
16	2.7	8.8	142	97	112	27	15	8.7	4.5	2.6	1.2	.92
17	2.4	6.7	88	74	101	44	15	8.4	4.5	2.4	1.2	.92
18	2.2	11	65	69	82	52	15	8.1	4.3	2.4	1.2	1.0
19	2.1	11	53	170	68	48	14	8.1	4.3	2.3	1.2	1.1
20	1.8	7.8	44	438	58	44	13	7.8	4.3	2.3	1.2	1.1
21	1.6	6.2	37	420	54	40	13	7.7	4.3	2.2	1.2	1.1
22	1.4	5.5	35	256	50	36	13	7.4	4.2	2.0	1.2	1.1
23	1.2	4.6	270	164	58	35	21	6.9	4.1	1.9	1.2	1.0
24	1.2	6.7	290	106	68	34	22	6.5	4.1	1.9	1.1	1.0
25	1.1	9.7	250	112	76	33	22	6.5	4.1	1.9	1.1	1.0
26	1.1	7.8	200	178	81	33	21	7.3	4.0	1.9	1.1	1.0
27	1.0	6.7	155	142	85	32	20	7.3	3.7	1.9	1.0	.98
28	1.0	5.5	125	104	125	30	19	6.6	3.7	1.9	1.0	.98
29	2.2	5.5	110	79	-----	29	18	6.4	3.7	1.9	1.0	.98
30	3.0	6.5	90	66	-----	27	17	6.2	3.5	1.7	1.0	.98
31	2.6	-----	80	57	-----	25	-----	6.1	-----	1.7	1.0	-----
TOTAL	56.90	176.2	2,865.8	4,212	2,851	1,417	567	293.8	140.9	77.7	39.6	29.62
MEAN	1.84	5.87	92.4	136	102	45.7	18.9	9.48	4.70	2.51	1.28	.99
MAX	5.8	11	290	580	268	118	27	16	5.7	3.5	1.7	1.1
MIN	.92	2.2	6.0	24	50	25	13	6.1	3.5	1.7	1.0	.92
AC-FT	113	349	5,680	8,350	5,650	2,810	1,120	583	279	154	79	59
(a)	4.7	8.0	26.3	28.1	16.9	2.6	4.9	.3	.2	0	0	.2
(b)	5.3	8.6	27.5	27.7	17.2	-	-	.5	.3	0	0	.6

CAL YR 1968 TOTAL 9,179.89 MEAN 25.1 MAX 315 MIN .82 AC-FT 18,210
WTR YR 1969 TOTAL 12,727.52 MEAN 34.9 MAX 580 MIN .92 AC-FT 25,240

DATE	TIME	PEAK DISCHARGE (BASE, 200 CFS)	DATE	TIME	G.H.	DISCHARGE	a Precipitation, in inches, at rain gage No. 1.
12-10	0915	5.97 375	1-12	unknown	-	940	b Precipitation, in inches, at rain gage No. 2.
12-15	1445	5.55 235	1-20	1715	6.55	590	NOTE.--No gage-height record Dec. 23 to Jan. 15.
12-24	unknown	- 500	2-11	1245	5.75	298	

EEL RIVER BASIN

11-4757. TENMILE CREEK NEAR LAYTONVILLE, CALIF.

LOCATION.--Lat 39°45'45", long 123°32'30", in NW $\frac{1}{4}$ sec.16, T.22 N., R.15 W., Mendocino County, on right bank 0.1 mile downstream from Step Gulch Creek, and 6.0 miles northwest of Laytonville.

DRAINAGE AREA.--50.3 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,427.42 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 154 cfs (111,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,190 cfs Dec. 23 (gage height, 13.29 ft); minimum daily, 12 cfs Sept. 5.

Period of record: Maximum discharge, 14,500 cfs Dec. 22, 1964 (gage height, 21.3 ft, from floodmarks), from rating curve extended above 4,300 cfs on basis of slope-area measurement at gage height 22.9 ft; no flow at times.

Flood of Dec. 22, 1955, reached a stage of 22.9 ft, from floodmarks (discharge, 16,300 cfs by slope-area measurement of maximum flow).

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	5.6	185	274	624	551	69	47	13	5.5	1.2	.44
2	2.4	78	76	234	509	566	80	44	15	5.2	1.2	.31
3	2.3	30	52	201	415	466	74	43	16	4.9	.94	.25
4	2.4	16	42	180	522	348	67	41	15	4.7	.88	.16
5	2.6	16	41	166	711	287	250	38	14	4.4	.88	.12
6	2.7	13	34	148	819	242	135	36	14	4.3	.82	.25
7	3.3	12	146	137	537	202	97	34	14	4.2	.88	1.4
8	2.7	9.7	283	124	1,000	173	84	33	14	3.9	.88	2.0
9	2.6	9.0	137	110	1,210	153	91	32	14	3.7	.82	1.6
10	2.7	8.0	2,990	113	803	135	79	31	14	3.5	.82	1.7
11	7.4	25	1,120	2,240	1,490	119	71	30	13	3.0	.76	1.2
12	17	47	597	4,770	776	110	73	29	13	2.9	.64	1.2
13	11	21	660	2,470	517	100	68	28	12	2.7	.70	1.4
14	8.9	85	768	811	683	91	64	28	12	2.3	.58	1.9
15	9.5	190	2,450	521	890	86	60	27	11	2.3	.64	2.0
16	5.2	56	949	392	660	95	56	26	11	1.9	.58	1.6
17	4.2	35	600	298	476	214	54	25	10	1.6	.64	1.5
18	3.6	125	457	617	386	208	53	24	10	1.5	.58	1.9
19	3.4	61	373	1,720	307	158	50	24	10	1.4	.58	2.5
20	3.4	39	280	2,430	244	145	47	23	11	1.3	.64	2.8
21	3.2	29	226	1,860	200	161	44	22	11	1.2	.76	2.9
22	3.1	25	548	884	178	125	56	21	10	1.2	.65	2.8
23	2.9	21	4,760	578	274	110	146	20	9.1	1.0	.54	2.3
24	2.3	100	2,330	454	469	102	127	20	8.6	.94	.62	3.4
25	2.2	121	1,930	861	527	95	79	20	7.8	1.4	.70	3.6
26	2.2	54	970	1,210	403	90	67	21	7.4	1.3	.70	2.3
27	2.1	39	661	705	411	87	60	22	6.9	1.1	.72	1.7
28	2.1	31	892	558	1,060	83	55	20	6.4	1.0	.79	1.4
29	7.9	37	601	427	-----	81	53	18	6.1	1.2	.73	1.4
30	15	76	428	379	-----	77	50	18	5.8	1.2	.67	1.5
31	8.1	-----	331	323	-----	73	-----	17	-----	1.2	.59	-----
TOTAL	150.7	1,414.3	25,917	26,195	17,101	5,533	2,359	862	335.1	77.94	23.13	49.53
MEAN	4.86	47.1	836	845	611	178	78.6	27.8	11.2	2.51	.75	1.65
MAX	17	190	4,760	4,770	1,490	566	250	47	16	5.5	1.2	3.6
MIN	2.1	5.6	34	110	178	73	44	17	5.8	.94	.54	.12
AC-FT	299	2,810	51,410	51,960	33,920	10,970	4,680	1,710	665	155	46	98
CAL YR 1968	TOTAL 56,885.58		MEAN 155		MAX 4,760		MIN 0		AC-FT 112,800			
WTR YR 1969	TOTAL 80,017.70		MEAN 219		MAX 4,770		MIN .12		AC-FT 158,700			

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	0815	13.24	6,140	1-12	0415	12.76	5,660
12-23	1300	13.29	6,190				

NOTE.--No gage-height record June 3 to July 10.

11-4758. SOUTH FORK EEL RIVER AT LEGGETT, CALIF.

LOCATION.--Lat 39°52'30", long 123°43'10", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.23 N., R.17 W., Mendocino County, on right bank near Standish-Hickey State Park, 0.2 mile upstream from Rock Creek, and 0.5 mile northwest of Leggett.

DRAINAGE AREA.--248 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 693.32 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 28,400 cfs Jan. 12 (gage height, 17.82 ft); minimum daily, 21 cfs Sept. 2.

Period of record: Maximum discharge, 72,700 cfs Jan. 4, 1966 (gage height, 25.4 ft, from floodmarks), from rating curve extended above 21,000 cfs on basis of slope-area measurement at gage height 26.13 ft; minimum daily, 15 cfs Oct. 15, 1966.

Flood of Dec. 22, 1964, reached a stage of 26.13 ft, from floodmarks (discharge, 78,700 cfs by slope-area measurement of maximum flow).

REMARKS.--Records excellent. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	68	513	2,130	2,970	3,730	443	372	126	69	27	23
2	24	170	434	1,800	3,070	3,150	465	358	119	67	27	21
3	25	215	309	1,560	2,570	2,970	479	323	121	65	26	22
4	24	139	250	1,360	2,460	2,370	424	306	119	63	25	26
5	24	116	224	1,200	3,620	1,960	819	283	116	61	23	26
6	24	106	204	1,040	4,120	1,730	665	268	116	58	24	26
7	24	97	207	920	3,590	1,510	570	253	116	57	26	26
8	24	88	729	830	3,790	1,350	521	240	116	54	29	25
9	24	82	468	745	7,260	1,190	522	231	116	53	37	24
10	24	77	9,490	718	5,110	1,080	503	220	112	52	37	24
11	46	97	4,970	5,500	7,450	1,000	459	213	114	49	34	24
12	150	285	2,650	22,900	5,430	915	460	203	109	48	32	23
13	112	193	2,020	18,200	3,860	851	451	201	103	48	32	23
14	85	160	2,660	7,680	3,480	792	422	194	100	46	30	24
15	86	531	7,060	4,320	3,940	749	400	188	96	45	29	23
16	68	334	4,460	3,100	3,680	751	381	179	88	44	28	23
17	56	218	2,610	2,460	2,940	1,030	364	171	83	42	29	23
18	50	394	1,810	2,560	2,440	1,060	374	166	82	41	28	26
19	45	402	1,430	8,170	2,060	929	344	166	90	39	26	29
20	43	260	1,120	15,700	1,850	857	326	158	102	39	26	32
21	41	198	920	14,700	1,600	886	309	156	111	38	27	34
22	38	167	890	7,800	1,320	783	294	153	100	35	28	32
23	36	148	15,100	4,620	1,360	717	651	145	94	33	24	31
24	36	260	14,300	3,440	1,730	675	838	145	88	32	24	31
25	34	605	10,900	3,770	2,210	638	641	146	83	32	24	30
26	33	366	7,930	5,960	2,160	600	549	149	83	34	23	30
27	33	257	4,810	4,710	2,060	565	501	163	81	33	23	30
28	32	204	4,700	4,040	4,390	531	460	148	79	30	24	29
29	50	185	4,280	3,150	-----	506	420	133	74	29	24	26
30	99	257	3,440	2,580	-----	482	406	131	71	29	23	26
31	88	-----	2,710	2,080	-----	465	-----	129	-----	27	24	-----
TOTAL	1,501	6,679	113,598	159,743	92,520	36,822	14,461	6,291	3,008	1,392	843	792
MEAN	48.4	223	3,664	5,153	3,304	1,188	482	203	100	44.9	27.2	26.4
MAX	150	605	15,100	22,900	7,450	3,730	838	372	126	69	37	34
MIN	23	68	204	718	1,320	465	294	129	71	27	23	21
AC-FT	2,980	13,250	225,300	316,800	183,500	73,040	28,680	12,480	5,970	2,760	1,670	1,570
CAL YR 1968	TOTAL	316,611		MEAN	865	MAX	15,100	MIN	21	AC-FT	628,000	
WTR YR 1969	TOTAL	437,650		MEAN	1,199	MAX	22,900	MIN	21	AC-FT	868,100	

PEAK DISCHARGE (BASE, 8,500 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1100	15.78	18,200	1-12	1500	17.82	28,400
12-15	1345	13.38	11,300	1-20	2015	15.40	19,300
12-23	1730	16.74	23,500	2- 9	0230	12.31	10,300

EEL RIVER BASIN

11-4759.4, EAST BRANCH SOUTH FORK EEL RIVER NEAR GARBERVILLE, CALIF.

LOCATION.--Lat 40°04'27", long 123°46'08", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.31, T.4 S., R.4 E., Humboldt County, on left bank just upstream from Panther Canyon, 1.9 miles upstream from mouth, and 2.3 miles southeast of Garberville.

DRAINAGE AREA.--74.3 sq mi.

PERIOD OF RECORD.--June 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 385.32 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 13,600 cfs Jan. 12 (gage height, 12.68 ft, from floodmarks), from rating curve extended above 3,100 cfs; minimum daily, 3.1 cfs Oct. 7, 9, 10.

Period of record: Maximum discharge, 14,200 cfs Dec. 4, 1966 (gage height, 10.09 ft), from rating curve extended above 3,100 cfs; minimum daily, 2.8 cfs Sept. 30, 1968.

REMARKS.--Records good. No regulation; small diversion above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	21	162	365	1,340	1,090	114	105	27	13	7.9	6.2
2	3.5	99	101	330	1,130	870	138	99	26	13	7.9	5.7
3	3.5	66	93	292	954	770	118	92	24	13	7.9	5.7
4	3.5	38	76	272	1,070	660	107	89	24	13	7.9	5.7
5	3.5	32	71	260	1,130	520	304	83	23	13	7.6	5.7
6	3.3	28	63	244	1,390	450	187	78	23	12	7.6	5.7
7	3.1	27	85	230	970	380	150	73	23	12	7.6	6.0
8	3.2	23	234	209	1,760	330	140	70	23	12	7.6	5.5
9	3.1	22	130	193	2,230	290	140	65	23	12	7.3	5.5
10	3.1	22	2,700	187	1,470	248	126	64	23	12	7.1	5.5
11	15	46	2,000	2,070	2,760	237	116	59	23	11	7.1	5.4
12	60	130	1,100	8,000	1,460	212	118	56	23	11	7.1	5.4
13	39	66	500	3,050	1,040	193	110	54	22	11	7.1	5.4
14	25	83	866	1,460	1,020	178	104	52	20	10	6.8	5.4
15	30	198	2,700	723	1,630	170	97	49	20	10	6.5	5.4
16	20	101	1,900	415	1,290	190	92	48	19	10	6.5	5.4
17	14	72	1,350	325	1,080	316	89	46	18	9.8	6.5	5.4
18	12	150	800	524	962	380	91	43	17	9.8	6.5	6.0
19	11	117	566	3,980	882	280	83	42	18	9.8	6.0	7.3
20	9.6	80	488	6,520	802	248	78	41	18	9.1	6.0	7.1
21	8.8	61	420	4,040	730	244	75	40	17	9.1	6.0	7.1
22	8.0	55	688	2,080	702	205	72	37	16	9.1	6.2	6.8
23	7.5	46	5,300	1,500	738	190	276	34	16	8.8	6.2	6.5
24	7.0	153	3,960	1,260	858	175	345	29	15	8.1	6.2	6.2
25	7.0	238	2,630	1,910	1,010	163	223	31	15	7.9	6.0	6.2
26	7.0	101	1,580	2,700	922	155	173	34	15	7.9	6.0	6.2
27	7.0	87	1,090	1,590	890	148	153	37	14	7.9	6.5	6.2
28	6.5	69	1,230	1,330	1,710	144	136	32	14	7.9	6.5	6.0
29	23	81	723	1,240	-----	136	124	30	14	7.9	6.2	5.7
30	44	121	506	1,100	-----	130	114	29	13	7.9	6.2	5.7
31	32	-----	415	970	-----	124	-----	28	-----	7.9	6.2	-----
TOTAL	426.8	2,433	34,527	49,369	33,930	9,826	4,193	1,669	586	316.9	210.7	178.0
MEAN	13.8	81.1	1,114	1,593	1,212	317	140	53.8	19.5	10.2	6.80	5.93
MAX	60	238	5,300	8,000	2,760	1,090	345	105	27	13	7.9	7.3
MIN	3.1	21	63	187	702	124	72	28	13	7.9	6.0	5.4
AC-FT	847	4,830	68,480	97,920	67,300	19,490	8,320	3,310	1,160	629	418	353

CAL YR 1968 TOTAL 104,089.1 MEAN 284 MAX 8,110 MIN 2.8 AC-FT 206,500

WTR YR 1969 TOTAL 137,665.4 MEAN 377 MAX 8,000 MIN 3.1 AC-FT 273,100

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	unknown	12.0	11,200	1-12	0300	12.68	13,600
12-15	unknown	-	8,000	1-19	1615	11.85	10,800
12-23	1545	11.30	9,100	2-11	0630	9.77	5,340

NOTE.--No gage-height record Jan. 12, 13.

11-4765, SOUTH FORK EEL RIVER NEAR MIRANDA, CALIF.

LOCATION.--Lat 40°10'55", long 123°46'30", in NW¼ sec.30, T.3 S., R.4 E., Humboldt County, on right bank at Sylvandale Campgrounds on U.S. Highway 101, 0.5 mile upstream from Rocky Glen Creek, 4.3 miles southeast of Miranda, and 20 miles upstream from mouth.

DRAINAGE AREA.--537 sq mi.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 217.57 ft above mean sea level. Prior to Nov. 2, 1940, nonrecording gage at site 200 ft upstream at datum 0.8 ft higher. Nov. 2, 1940, to Oct. 31, 1944, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--30 years, 1,857 cfs (1,345,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 70,000 cfs Jan. 13 (gage height, 24.79 ft); minimum daily, 34 cfs Sept. 17.
Period of record: Maximum discharge, 199,000 cfs Dec. 22, 1964 (gage height, 46.0 ft, from floodmarks), from rating curve extended above 52,000 cfs on basis of slope-area measurement at gage height 42.7 ft; minimum observed, 9 cfs Oct. 17, 1944.

REMARKS.--Records excellent. Occasional storage and release for recreation use during summer months at Benbow Dam. No diversion above station. Records of chemical analyses and water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	232	1,160	3,690	5,780	9,280	908	796	262	143	68	42
2	43	652	1,360	3,060	6,150	7,330	980	752	259	138	66	42
3	41	822	942	2,540	5,360	7,100	1,050	710	248	135	65	42
4	41	523	806	2,180	4,840	5,420	900	675	238	130	65	40
5	42	334	680	1,940	6,480	4,560	1,670	647	238	128	63	39
6	43	286	485	1,720	8,580	3,920	1,580	610	234	125	62	39
7	43	246	485	1,560	7,880	3,390	1,290	575	234	120	62	39
8	42	223	1,520	1,460	7,530	2,880	1,150	558	238	111	59	39
9	42	211	980	1,330	16,600	2,530	1,110	542	227	111	57	39
10	42	202	21,500	1,280	11,500	2,210	1,080	514	220	111	55	39
11	65	229	15,800	11,000	17,000	1,940	988	498	224	107	55	38
12	465	729	7,330	70,000	12,900	1,740	956	470	224	107	51	37
13	435	708	5,380	51,700	8,430	1,540	956	460	220	101	53	37
14	294	617	7,150	20,400	6,500	1,480	892	450	214	101	53	37
15	270	1,230	20,400	11,100	8,480	1,390	844	430	211	97	53	37
16	223	1,100	13,500	7,500	8,280	1,370	796	407	196	93	51	35
17	173	722	6,980	5,600	6,050	1,780	759	389	185	89	51	34
18	150	1,060	4,420	5,100	4,800	2,230	759	366	175	87	51	38
19	133	1,380	3,330	21,100	3,880	1,990	724	357	178	87	50	71
20	110	902	2,480	41,100	3,150	1,760	682	357	185	87	49	81
21	101	680	1,940	41,900	2,590	1,780	654	344	185	87	48	89
22	95	556	2,300	22,600	2,230	1,600	634	330	180	85	47	138
23	88	470	34,000	12,900	2,720	1,470	1,030	310	173	82	46	73
24	84	680	31,400	8,280	4,120	1,370	1,880	283	165	81	46	51
25	84	1,510	27,300	8,920	6,150	1,300	1,450	241	158	79	46	45
26	82	1,200	20,400	14,600	5,600	1,220	1,210	241	155	79	45	43
27	81	846	11,800	11,600	4,880	1,160	1,080	318	153	77	43	43
28	78	673	10,900	8,860	9,440	1,090	996	326	153	77	42	43
29	112	610	8,700	6,700	-----	1,040	916	294	143	77	42	43
30	242	830	6,180	5,720	-----	996	852	280	140	76	42	43
31	290	-----	4,680	4,680	-----	956	-----	273	-----	71	42	-----
TOTAL	4,075	20,463	276,288	412,120	197,900	79,822	30,776	13,803	6,015	3,079	1,628	1,456
MEAN	131	682	8,913	13,290	7,068	2,575	1,026	445	201	99.3	52.5	48.5
MAX	465	1,510	34,000	70,000	17,000	9,280	1,880	796	262	143	68	138
MIN	41	202	485	1,280	2,230	956	634	241	140	71	42	34
AC-FT	8,080	40,590	548,000	817,400	392,500	158,300	61,040	27,380	11,930	6,110	3,230	2,890

CAL YR 1968 TOTAL 699,819 MEAN 1,912 MAX 34,000 MIN 40 AC-FT 1,388,000
WTR YR 1969 TOTAL 1,047,425 MEAN 2,870 MAX 70,000 MIN 34 AC-FT 2,078,000

PEAK DISCHARGE (BASE, 15,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1630	17.48	37,400	1-20	2100	20.94	51,300
12-15	1715	14.66	26,100	1-26	1030	12.00	16,500
12-23	2100	21.06	51,800	2-11	1700	13.19	20,700
1-13	0230	24.79	70,000				

EEL RIVER BASIN

11-4766. BULL CREEK NEAR WEOTT, CALIF.

LOCATION.--Lat 40°21'05", long 124°00'10", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.1 S., R.2 E., Humboldt County, on left bank 0.2 mile downstream from Albee Creek, 4.5 miles northwest of Weott, and 4.6 miles upstream from mouth.

DRAINAGE AREA.--28.1 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 289.36 ft above mean sea level. Prior to Dec. 22, 1964, water-stage recorder, and Jan. 14 to Aug. 10, 1965, nonrecording gage at site 150 ft downstream at datum 8.90 ft lower.

AVERAGE DISCHARGE.--9 years, 124 cfs (89,840 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,550 cfs Dec. 24 (gage height, 11.84 ft); minimum daily, 1.0 cfs Oct. 6.

Period of record: Maximum discharge, 6,520 cfs Dec. 22, 1964 (gage height, 20.6 ft, from floodmarks, site and datum then in use), from rating curve extended above 2,100 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.90 cfs Oct. 20, 1964.

REMARKS.--Records good. Minor diversions above station for domestic use.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	14	67	391	532	538	48	57	18	9.7	4.7	1.8
2	1.2	63	59	337	418	501	67	55	17	9.4	4.4	1.8
3	1.3	32	52	271	349	554	54	53	17	9.3	4.4	1.8
4	1.2	23	48	225	366	421	53	51	17	8.8	4.1	1.8
5	1.2	19	50	147	454	352	92	48	17	8.5	3.8	1.8
6	1.0	17	45	123	622	307	71	46	17	8.3	3.5	1.6
7	1.3	17	49	110	499	256	65	44	17	8.1	3.2	1.5
8	1.4	16	56	99	734	218	63	43	18	7.7	3.2	1.4
9	1.2	16	50	97	890	190	63	41	17	7.6	3.5	1.4
10	1.3	15	606	102	905	169	58	40	17	6.9	3.5	1.4
11	23	27	248	469	1,410	153	55	38	16	6.9	3.5	1.4
12	31	43	172	1,900	1,100	142	57	37	15	7.2	3.2	1.4
13	18	33	220	2,020	930	142	53	35	14	6.6	2.9	1.4
14	19	38	310	1,280	820	142	51	34	14	6.6	2.9	1.4
15	15	51	1,020	895	1,130	142	50	33	14	6.6	2.6	1.4
16	12	38	860	634	845	117	47	32	13	6.3	2.6	1.4
17	9.9	35	541	511	710	102	47	29	13	6.0	2.6	1.4
18	9.2	51	349	442	447	112	45	28	13	6.3	2.6	1.8
19	7.2	43	319	815	406	102	42	27	14	6.3	2.3	1.9
20	6.6	38	277	1,500	301	100	41	26	13	6.0	2.3	1.9
21	5.6	35	225	1,780	215	94	39	25	12	5.6	2.0	1.9
22	5.3	35	280	1,420	213	87	40	23	12	5.3	1.9	1.9
23	4.4	32	1,590	975	271	81	79	23	12	5.6	1.9	1.9
24	4.4	61	2,530	686	481	76	94	22	11	5.6	1.9	1.8
25	2.9	77	1,940	850	535	72	78	22	11	5.6	1.9	1.9
26	2.9	55	1,610	1,200	502	69	72	32	11	5.3	1.8	1.9
27	2.9	51	1,370	960	526	64	68	30	11	5.0	1.8	1.8
28	3.2	45	970	835	702	61	64	24	10	4.7	1.8	1.6
29	23	46	730	750	-----	56	62	21	10	5.0	1.8	1.6
30	24	49	682	618	-----	53	60	20	9.8	5.0	1.8	1.4
31	18	-----	502	514	-----	51	-----	19	-----	4.7	1.8	-----
TOTAL	260.6	1,115	17,827	22,956	17,313	5,524	1,778	1,058	420.8	206.5	86.2	49.4
MEAN	8.41	37.2	575	741	618	178	59.3	34.1	14.0	6.66	2.78	1.65
MAX	31	77	2,530	2,020	1,410	554	94	57	18	9.7	4.7	1.9
MIN	1.0	14	45	97	213	51	39	19	9.8	4.7	1.8	1.4
AC-FT	517	2,210	35,360	45,530	34,340	10,960	3,530	2,100	835	410	171	98
CAL YR 1968	TOTAL	53,906.4	MEAN	147	MAX	2,530	MIN	1.0	AC-FT	106,900		
WTR YR 1969	TOTAL	68,594.5	MEAN	188	MAX	2,530	MIN	1.0	AC-FT	136,100		

PEAK DISCHARGE (BASE, 1,700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-24	0215	11.84	3,550	1-25	2215	10.06	1,770
1-12	2145	11.27	2,870	2-11	0415	10.43	2,070
1-20	2045	11.02	2,620				

11-4770. EEL RIVER AT SCOTIA, CALIF.
(International Hydrological Decade Station)

LOCATION.--Lat 40°29'30", long 124°05'55", in SW $\frac{1}{4}$ sec.5, T.1 N., R.1 E., Humboldt County, near center of span in left pier of bridge on U.S. Highway 101, 0.5 mile north of Scotia, and 6 miles upstream from Van Duzen River.

DRAINAGE AREA.--3,113 sq mi.

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods and yearly estimates for 1915-16, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 35.50 ft above mean sea level. Prior to Dec. 12, 1940, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--59 years, 7,150 cfs (5,180,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 223,000 cfs Jan. 13 (gage height, 39.00 ft); minimum daily, 84 cfs Oct. 10.

Period of record: Maximum discharge, 752,000 cfs Dec. 23, 1964 (gage height, 72.0 ft, from floodmarks), from rating curve extended above 220,000 cfs on basis of maximum flow at upstream stations; minimum observed, 10 cfs Aug. 12-14, 1924.

REMARKS.--Records good. Flow slightly regulated by Lake Pillsbury 138 miles upstream (see sta 11-4700) and by diversion through Potter Valley powerhouse (see sta 11-4710). Records of chemical analyses, water temperatures, and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 931: 1938. WSP 1315-B: 1914-15(M), 1917(M), 1927-28(M), 1936(M), 1939(M). WSP 1345: Drainage area. WSP 1715: 1959.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	498	2,750	15,900	21,800	37,800	10,600	6,030	2,240	570	217	120
2	130	914	3,800	13,800	24,100	26,900	9,610	5,830	2,100	540	208	119
3	146	1,550	3,420	12,600	20,700	29,000	9,310	5,480	1,990	518	197	115
4	194	1,650	2,950	12,000	18,900	27,000	7,820	5,220	1,900	505	191	120
5	128	1,350	2,570	12,200	24,200	23,200	9,080	4,850	1,810	496	185	117
6	123	1,020	2,350	12,000	30,600	19,800	11,600	4,740	1,740	462	180	116
7	153	896	2,290	11,300	28,300	15,900	9,190	5,310	1,670	450	179	112
8	168	788	3,500	10,300	24,000	12,200	7,830	6,010	1,610	438	173	110
9	109	738	5,550	8,900	55,000	11,100	7,250	6,330	1,500	425	169	110
10	84	746	36,800	7,710	47,800	9,650	7,180	6,740	1,420	410	166	111
11	121	738	54,800	14,900	66,900	8,600	6,800	6,990	1,350	398	162	121
12	315	1,780	22,600	136,000	72,100	7,800	6,730	6,630	1,300	384	159	115
13	706	2,120	14,300	187,000	44,500	7,180	7,410	6,450	1,270	376	158	110
14	589	2,120	22,100	109,000	32,700	6,730	7,120	5,850	1,180	371	155	115
15	589	2,350	45,100	53,700	40,200	6,500	5,860	5,020	1,100	358	152	110
16	610	3,250	36,000	36,500	46,700	6,580	5,220	4,250	1,060	346	149	119
17	470	2,590	21,000	21,000	32,500	7,700	5,180	4,080	1,020	332	148	117
18	356	2,930	14,000	16,500	24,700	12,500	5,790	4,130	963	320	148	121
19	296	5,690	12,000	52,500	20,200	12,200	6,240	4,200	973	308	144	123
20	255	3,970	10,000	154,000	17,000	10,200	6,210	3,920	968	292	139	141
21	227	2,640	8,200	190,000	14,800	9,820	6,290	3,520	599	284	137	178
22	201	2,070	7,250	122,000	14,600	9,290	6,710	3,310	927	284	132	175
23	184	1,750	58,200	66,000	14,600	8,550	7,900	3,140	898	276	130	204
24	171	1,960	151,000	42,400	16,800	8,540	10,400	3,050	818	269	130	211
25	156	2,910	103,000	38,300	22,900	8,440	8,790	3,000	765	260	130	146
26	148	4,820	80,400	67,200	20,000	8,440	7,150	2,770	760	250	128	147
27	140	3,170	63,200	60,800	17,000	8,760	6,620	2,610	756	240	125	149
28	135	2,350	37,600	43,100	33,500	9,460	6,480	2,670	691	231	122	149
29	184	1,930	33,100	31,800	-----	10,100	11,000	2,420	616	224	121	150
30	350	2,120	25,700	25,300	-----	10,600	6,630	2,280	598	224	120	151
31	484	-----	15,600	20,900	-----	11,100	-----	2,330	-----	223	120	-----
TOTAL	8,054	63,408	909,130	1,605,6M	847,100	401,640	230,000	139,200	36,992	11,064	4,774	4,002
MEAN	260	2,114	29,330	51,790	30,250	12,960	7,667	4,490	1,233	357	154	133
MAX	706	5,690	151,000	150,000	72,100	37,800	11,600	6,990	2,240	570	217	211
MIN	84	498	2,290	7,710	14,600	6,500	5,180	2,280	598	223	120	110
AC-FT	15,970	125,800	1,803M	3,185M	1,680M	796,600	456,200	276,100	73,370	21,950	9,470	7,940
CAL YR 1968	TOTAL	2,781,684	MEAN	7,600	MAX	151,000	MIN	84	AC-FT	5,517,000		
WTR YR 1969	TOTAL	4,260,974	MEAN	11,670	MAX	190,000	MIN	84	AC-FT	8,452,000		

PEAK DISCHARGE (BASE, 72,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-11	0115	27.53	102,000	1-21	0500	36.75	196,000
12-16	0115	26.01	88,100	1-26	1845	25.04	80,300
12-24	1130	37.99	211,000	2-11	2230	25.72	85,800
1-13	1315	39.00	223,000				

NOTE.--No gage-height record Feb. 2 to Mar. 3.

EEL RIVER BASIN

11-4775. VAN DUZEN RIVER NEAR DINSMORES, CALIF.

LOCATION.--Lat 40°29'05", long 123°39'25", in NW¼ sec.7, T.1 N., R.5 E., Humboldt County, on right bank 10 ft upstream from private road bridge, 0.3 mile upstream from South Fork, and 2.8 miles west of Dinsmores.

DRAINAGE AREA.--85.1 sq mi.

PERIOD OF RECORD.--August 1953 to September 1958, October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,996.88 ft above mean sea level. Aug. 19, 1953, to Sept. 30, 1958, at site 1.7 miles upstream at different datum.

AVERAGE DISCHARGE.--11 years, 379 cfs (274,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 14,900 cfs Jan. 13 (gage height, 13.96 ft); minimum daily, 2.5 cfs for several days.

Period of record: Maximum discharge, 27,000 cfs Dec. 22, 1964 (gage height, 22.5 ft, from floodmarks), from rating curve extended above 10,000 cfs on basis of slope-area measurement of maximum flow; minimum, 1.8 cfs Aug. 29, 1958.

REMARKS.--Records excellent. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	31	220	426	478	375	965	339	112	25	7.7	2.5
2	3.2	255	193	455	411	359	778	310	103	23	7.7	2.5
3	3.1	188	165	510	389	340	609	294	94	23	7.0	2.5
4	3.1	91	149	738	393	328	473	267	88	22	6.4	2.5
5	2.9	68	238	873	376	350	890	266	82	21	6.4	2.5
6	2.5	57	218	864	355	355	618	315	76	19	6.4	2.5
7	2.5	54	193	778	320	338	473	368	72	18	6.4	2.5
8	2.5	56	500	636	730	322	414	389	68	18	6.4	2.5
9	2.5	107	360	505	2,230	317	460	413	66	18	6.4	2.5
10	2.5	83	5,050	430	1,890	285	465	430	63	17	5.7	2.5
11	5.8	195	1,960	1,380	3,580	273	466	421	60	16	5.7	2.5
12	69	477	970	8,990	2,250	264	549	401	57	15	5.7	2.5
13	94	213	1,140	8,960	1,530	263	476	356	53	15	5.7	2.5
14	44	149	2,010	2,620	1,240	272	400	302	49	14	5.1	2.5
15	36	188	2,860	1,670	1,820	295	352	271	46	13	5.1	2.5
16	28	238	1,590	1,120	1,600	365	347	258	43	13	5.1	2.5
17	23	318	961	722	1,110	699	396	251	42	12	5.1	2.5
18	19	980	738	719	781	1,260	470	251	41	12	4.4	4.4
19	17	486	578	5,260	643	846	397	221	42	12	4.4	3.1
20	16	285	434	8,780	559	681	373	197	41	12	4.4	3.1
21	15	205	348	5,830	460	628	395	188	38	12	4.2	3.1
22	15	188	324	2,630	394	669	432	188	36	11	3.8	3.1
23	13	151	3,660	1,700	372	722	616	180	33	11	3.1	3.1
24	13	291	5,810	1,220	352	696	595	170	32	11	3.1	3.1
25	12	525	2,320	2,220	326	667	490	157	31	11	3.1	3.1
26	12	300	1,460	2,910	294	831	422	168	31	11	3.1	3.1
27	11	233	920	1,930	297	1,050	408	190	28	9.8	3.1	3.1
28	11	190	882	1,370	406	1,150	423	143	28	9.8	3.1	3.8
29	14	178	786	920	-----	1,250	419	132	27	9.1	3.1	3.8
30	55	230	562	683	-----	1,330	371	127	26	9.1	2.5	3.8
31	47	-----	477	530	-----	1,270	-----	122	-----	8.4	2.5	-----
TOTAL	597.1	7,010	38,076	68,379	25,586	18,850	14,942	8,085	1,608	451.2	151.9	86.2
MEAN	19.3	234	1,228	2,206	914	608	498	261	53.6	14.6	4.90	2.87
MAX	94	980	5,810	8,990	3,580	1,330	965	430	112	25	7.7	4.4
MIN	2.5	31	149	426	294	263	347	122	26	8.4	2.5	2.5
AC-FT	1,180	13,900	75,520	135,600	50,750	37,390	29,640	16,040	3,190	895	301	171
CAL YR 1968	TOTAL	130,448.0	MEAN	356	MAX	7,470	MIN	2.5	AC-FT	258,700		
WTR YR 1969	TOTAL	183,822.4	MEAN	504	MAX	8,990	MIN	2.5	AC-FT	364,600		

PEAK DISCHARGE (BASE, 3,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1030	12.07	11,200	1-20	1945	12.22	11,500
12-15	1145	9.12	4,700	1-26	0230	9.30	5,100
12-23	2100	10.60	7,960	2-11	0945	9.33	5,170
1-13	0415	13.96	14,900				

11-4784. VAN DUZEN RIVER TRIBUTARY NEAR BRIDGEVILLE, CALIF.

LOCATION.--Lat 40°28'28", long 123°52'56", in SW $\frac{1}{4}$ sec.7, T.1 N., R.3 E., Humboldt County, on right bank at culvert on State Highway 36, 4.5 miles west of Bridgeville.

DRAINAGE AREA.--0.71 sq mi.

PERIOD OF RECORD.--Annual maximums, water years 1963-68, October 1968 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Altitude of gage is 450 ft (from topographic map). Sept. 25, 1962, to Oct. 25, 1968, crest-stage gage at same site at datum 49.72 ft lower. Float-operated rain gage at site 0.2 mile east.

EXTREMES.--Current year: Maximum discharge, 68 cfs Jan. 20 (gage height, 4.40 ft); no flow for long periods. Period of record: Maximum discharge, 120 cfs Dec. 22, 1964 (gage height, 7.02 ft, present datum), by computation of maximum flow through culvert; no flow for long periods.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.24	1.4	7.3	3.6	.18	.14	0	0	0	0
2	0	0	.38	1.0	7.8	3.0	.22	.09	0	0	0	0
3	0	0	.32	.85	6.3	4.0	.24	.07	0	0	0	0
4	0	0	.22	.68	5.9	3.6	.22	.04	0	0	0	0
5	0	0	.22	.60	6.9	2.7	.44	.01	0	0	0	0
6	0	0	.20	.48	8.7	1.8	.52	.01	0	0	0	0
7	0	.01	.20	.44	7.3	1.2	.52	.01	0	0	0	0
8	0	.01	.18	.41	7.1	1.1	.52	.01	0	0	0	0
9	0	.01	.18	.38	9.7	.90	.48	.01	0	0	0	0
10	0	.01	4.3	.41	7.1	.80	.44	.01	0	0	0	0
11	0	.01	3.9	2.2	10	.72	.41	.01	0	0	0	0
12	0	.01	2.8	25	7.7	.64	.38	.01	0	0	0	0
13	0	.01	2.7	27	4.6	.60	.14	.01	0	0	0	0
14	0	.01	3.7	7.6	2.9	.52	.06	.01	0	0	0	0
15	0	.01	16	4.0	7.6	.48	.05	.01	0	0	0	0
16	0	.01	9.2	3.1	7.7	.41	.05	0	0	0	0	0
17	0	.02	5.3	2.6	4.9	.38	.05	0	0	0	0	0
18	0	.02	3.4	2.3	3.0	.38	.05	0	0	0	0	0
19	0	.02	2.8	3.2	1.5	.35	.05	0	0	0	0	0
20	0	.02	2.3	22	1.1	.32	.05	0	0	0	0	0
21	0	.02	1.9	23	.95	.32	.05	0	0	0	0	0
22	0	.02	2.2	9.0	.85	.29	.05	0	0	0	0	0
23	0	.02	18	6.0	.95	.26	.24	0	0	0	0	0
24	0	.32	26	4.9	3.0	.24	.85	0	0	0	0	0
25	0	1.3	17	5.6	6.9	.24	.80	0	0	0	0	0
26	0	.52	12	8.3	6.6	.22	.68	0	0	0	0	0
27	0	.26	6.6	7.0	4.6	.22	.44	0	0	0	0	0
28	0	.16	4.2	5.9	4.6	.20	.38	0	0	0	0	0
29	0	.12	3.0	4.8	-----	.20	.29	0	0	0	0	0
30	0	.12	2.2	3.6	-----	.18	.18	0	0	0	0	0
31	0	-----	1.8	3.5	-----	.18	-----	0	-----	0	0	-----
TOTAL	0	3.04	153.44	187.25	153.55	30.05	9.03	0.45	0	0	0	0
MEAN	0	.10	4.95	6.04	5.48	.97	.30	.015	0	0	0	0
MAX	0	1.3	26	27	10	4.0	.85	.14	0	0	0	0
MIN	0	0	.18	.38	.85	.18	.05	0	0	0	0	0
AC-FT	0	6.0	304	371	305	60	18	.9	0	0	0	0
(a)	3.3	7.9	17.5	19.1	12.0	2.3	4.3	.2	.3	0	0	.7
CAL YR 1968	TOTAL -		MEAN -		MAX -		MIN -		AC-FT -			
WTR YR 1969	TOTAL 536.81		MEAN 1.47		MAX 27		MIN 0		AC-FT 1,060			

PEAK DISCHARGE (BASE, 20 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	0645	2.58	29	1-13	0145	3.60	50
12-24	0445	3.27	43	1-20	2115	4.40	68

a Precipitation, in inches.

EEL RIVER BASIN

11-4785. VAN DUZEN RIVER NEAR BRIDGEVILLE, CALIF.

LOCATION.--Lat 40°28'50", long 123°53'23", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.1 N., R.2 E., Humboldt County, on left bank at downstream side of bridge on State Highway 36, 0.9 mile upstream from Grizzly Creek, and 5 miles west of Bridgeville.

DRAINAGE AREA.--222 sq mi.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 358.18 ft above mean sea level. Prior to Oct. 1, 1965, at site 2.4 miles upstream at different datum.

AVERAGE DISCHARGE.--19 years, 892 cfs (646,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 31,000 cfs Jan. 13 (gage height, 19.30 ft), from rating curve extended above 12,000 cfs as explained below; minimum daily, 7.0 cfs Sept. 4-17.

Period of record: Maximum discharge, 48,700 cfs Dec. 22, 1964 (gage height, 24.0 ft, present site and datum, from floodmarks), from rating curve extended above 20,000 cfs on basis of slope-area measurement at gage height 21.3 ft, former site and datum; minimum, 5.0 cfs Sept. 13, 1959.

REMARKS.--Records excellent. No storage or large diversion above station. Records of water temperatures for water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	78	860	1,210	1,760	1,660	1,490	691	212	57	20	9.8
2	9.7	600	736	1,250	1,560	1,620	1,270	613	200	53	20	9.8
3	9.7	440	570	1,240	1,380	1,690	1,100	552	186	48	20	8.6
4	9.7	220	509	1,470	1,490	1,360	880	516	173	48	19	7.0
5	9.7	168	691	1,610	1,610	1,250	1,840	474	162	47	17	7.0
6	9.7	143	736	1,560	1,640	1,240	1,430	516	159	45	15	7.0
7	9.7	143	546	1,400	1,330	1,180	1,120	604	153	44	15	7.0
8	9.7	146	1,030	1,240	3,030	960	940	638	146	44	17	7.0
9	9.7	290	910	1,050	6,960	900	950	657	140	42	17	7.0
10	9.7	245	12,600	990	5,040	781	960	705	141	41	17	7.0
11	17	305	6,520	3,320	10,500	709	900	707	132	39	17	7.0
12	176	1,510	3,290	20,100	6,070	646	1,040	661	128	35	17	7.0
13	290	586	3,480	18,700	3,780	637	940	593	118	35	17	7.0
14	146	424	5,700	5,300	2,990	646	820	516	112	34	18	7.0
15	132	781	11,400	2,340	5,400	682	727	454	105	35	18	7.0
16	95	664	6,040	1,360	4,760	840	676	424	98	34	18	7.0
17	69	610	3,400	930	3,040	1,450	691	406	89	33	18	7.0
18	52	2,240	2,390	772	2,090	2,480	880	406	89	32	17	9.0
19	43	1,280	2,020	9,000	1,670	1,770	745	382	92	30	16	13
20	41	772	1,520	17,400	1,440	1,430	700	340	98	28	13	17
21	41	570	1,070	12,800	1,190	1,280	709	320	86	27	12	17
22	35	602	1,030	5,280	1,050	1,300	763	310	82	26	12	17
23	33	454	9,810	2,600	1,160	1,370	1,180	305	74	25	12	17
24	33	1,320	15,700	1,800	1,330	1,300	1,600	295	69	24	12	17
25	31	1,990	8,020	4,020	1,570	1,310	1,250	280	66	25	11	17
26	30	950	4,580	7,980	1,250	1,390	1,050	265	68	25	9.8	15
27	28	700	3,400	4,180	1,270	1,600	950	352	66	25	9.8	15
28	28	570	2,720	2,780	2,290	1,670	880	275	65	24	9.8	13
29	32	502	2,340	1,990	-----	1,740	850	236	61	23	9.8	12
30	120	718	1,640	1,650	-----	1,830	745	232	58	22	9.8	12
31	100	-----	1,310	1,420	-----	1,800	-----	228	-----	21	9.8	-----
TOTAL	1,669.0	20,021	116,568	138,742	78,650	40,521	30,076	13,953	3,428	1,071	463.8	317.2
MEAN	53.8	667	3,760	4,476	2,809	1,307	1,003	450	114	34.5	15.0	10.6
MAX	290	2,240	15,700	20,100	10,500	2,480	1,840	707	212	57	20	17
MIN	9.7	78	509	772	1,050	637	676	228	58	21	9.8	7.0
AC-FT	3,310	39,710	231,200	275,200	156,000	80,370	59,650	27,680	6,800	2,120	920	629
CAL YR 1968	TOTAL	341,782.0	MEAN	934	MAX	15,700	MIN	9.7	AC-FT	677,900		
WTR YR 1969	TOTAL	445,480.0	MEAN	1,220	MAX	20,100	MIN	7.0	AC-FT	883,600		

PEAK DISCHARGE (BASE, 15,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1100	16.59	22,900	1-13	0445	19.30	31,000
12-15	1130	13.99	16,200	1-20	2045	17.90	26,600
12-24	0415	15.11	18,900				

EEL RIVER BASIN

453

11-4790. YAGER CREEK NEAR CARLOTTA, CALIF.

LOCATION.--Lat 40°34'15", long 124°02'55", in SW¹/₄NE¹/₄ sec.10, T.2 N., R.1 E., Humboldt County, on right bank 0.8 mile upstream from Cooper Mill Creek, and 2.4 miles north of Carlotta.

DRAINAGE AREA.--127 sq mi.

PERIOD OF RECORD.--August 1953 to October 1955, August 1956 to September 1960, August 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 200 ft (from topographic map). Aug. 18, 1953, to Dec. 22, 1955, at same site at different datum. Aug. 14, 1956, to Sept. 30, 1960, at site 0.2 mile downstream at different datum.

AVERAGE DISCHARGE.--10 years, 362 cfs (262,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,500 cfs Jan. 13 (gage height, 10.76 ft), from rating curve extended above 4,200 cfs on basis of field estimate at gage height 19.9 ft; minimum daily, 2.8 cfs Sept. 30. Period of record: Maximum discharge, 30,000 cfs Dec. 22, 1964 (gage height, 19.9 ft, from floodmarks), from rating curve extended above 250 cfs on basis of field estimate of maximum flow; minimum, 2.8 cfs Sept. 30, 1969.

REMARKS.--Records poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	20	130	759	2,260	1,210	173	206	29	16	7.8	4.1
2	6.6	150	110	686	1,700	1,180	200	183	28	16	7.8	4.1
3	6.1	70	100	572	1,290	1,670	218	168	28	16	7.6	4.1
4	5.8	50	90	584	1,300	1,160	168	160	27	15	7.2	3.7
5	5.3	40	160	518	1,390	1,000	608	144	27	15	7.2	3.7
6	5.0	35	140	430	1,710	1,100	608	132	26	15	7.2	3.7
7	4.9	30	120	334	1,330	892	445	118	25	15	7.2	3.6
8	4.8	40	300	302	2,420	717	350	102	25	14	7.2	3.6
9	4.8	70	250	251	7,000	614	320	94	24	14	7.2	3.6
10	4.8	50	2,000	251	4,000	530	295	90	24	14	6.8	3.3
11	11	120	1,300	1,860	6,000	445	260	83	24	14	6.8	3.3
12	30	300	1,110	7,230	2,510	385	248	75	23	13	6.8	3.3
13	70	160	1,480	5,960	1,500	350	233	72	21	13	6.8	3.3
14	30	100	2,070	2,380	1,310	334	209	70	21	12	6.4	3.2
15	24	120	5,910	1,530	2,780	327	206	67	21	12	6.4	3.1
16	19	160	3,350	1,170	1,970	420	193	62	21	12	6.4	3.0
17	15	250	2,300	899	1,280	590	183	56	20	11	6.4	2.9
18	13	600	1,870	801	952	773	251	54	19	11	6.3	5.0
19	12	300	1,790	3,350	794	560	221	53	18	11	5.9	4.0
20	10	200	1,390	5,630	686	450	195	52	18	11	5.5	4.5
21	9.0	150	1,070	3,250	620	385	183	50	18	11	5.5	4.0
22	8.5	120	1,000	2,100	512	354	170	46	18	9.8	5.3	3.5
23	8.0	100	4,520	1,350	680	346	440	40	17	9.8	5.3	3.5
24	7.5	150	5,980	928	1,090	313	800	37	17	9.8	5.1	3.3
25	7.0	400	4,000	1,750	1,310	285	700	36	17	9.8	5.0	3.2
26	6.5	200	2,780	3,130	1,110	271	536	36	17	9.8	4.8	3.1
27	6.0	150	1,860	1,700	1,100	257	395	35	17	9.2	4.8	3.0
28	6.0	130	1,920	1,230	1,830	245	313	35	16	9.2	4.4	3.0
29	10	110	1,450	920	-----	224	278	33	16	8.6	4.2	2.9
30	40	150	1,020	794	-----	203	242	31	16	8.6	4.1	2.8
31	25	-----	836	717	-----	190	-----	30	-----	8.2	4.1	-----
TOTAL	421.8	4,525	52,406	53,366	52,434	17,780	9,641	2,450	638	373.8	189.5	105.4
MEAN	13.6	151	1,691	1,721	1,873	574	321	79.0	21.3	12.1	6.11	3.51
MAX	70	600	5,980	7,230	7,000	1,670	800	206	29	16	7.8	5.0
MIN	4.8	20	90	251	512	190	168	30	16	8.2	4.1	2.8
AC-FT	837	8,980	103,900	105,900	104,000	35,270	19,120	4,860	1,270	741	376	209
CAL YR 1968	TOTAL 120,124.6	MEAN 328	MAX 5,980	MIN 4.0	AC-FT 238,300							
WTR YR 1969	TOTAL 194,330.5	MEAN 532	MAX 7,230	MIN 2.8	AC-FT 385,500							

PEAK DISCHARGE (BASE, 4,000 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	0815	9.54	9,080	1-26	0030	7.01	4,750
12-24	0500	8.84	7,760	2-9	unknown	-	9,000
1-13	0230	10.76	11,500	2-11	0915	8.57	7,300
1-20	2000	9.36	8,720				

NOTE.--No gage-height record Oct. 1 to Dec. 12, June 18 to Aug. 18.

MAD RIVER BASIN

11-4804. RUTH RESERVOIR NEAR FOREST GLEN, CALIF.

LOCATION.--Lat 40°21'29", long 123°25'20", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.1 S., R.7 E., Trinity County, Six Rivers National Forest, near center of Ruth Dam on Mad River 5.2 miles west of Forest Glen.

DRAINAGE AREA.--119 sq mi.

PERIOD OF RECORD.--October 1966 to current year. Records prior to October 1966 in files of Humboldt Bay Municipal Water District.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Humboldt Bay Municipal Water District).

EXTREMES.--Current year: Maximum contents, 61,100 acre-ft Jan. 13 (elevation, 2,661.95 ft); minimum, 18,000 acre-ft Dec. 7 (elevation, 2,617.17 ft).
Period of record: Maximum contents, 61,100 acre-ft Jan. 13, 1969 (elevation, 2,661.95 ft); minimum, 14,700 acre-ft Nov. 16 to Dec. 2, 1967 (elevation, 2,612.34 ft).

REMARKS.--Reservoir is formed by earthfill dam; storage began July 1961. Total capacity, 51,800 acre-ft at elevation 2,654.0 ft, crest of spillway. Water is released down Mad River for municipal use. Records given herein represent total contents.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FEET)

2,595	6,670	2,615	16,500	2,635	32,500	2,655	52,900
2,600	8,520	2,620	20,100	2,640	37,300	2,660	56,700
2,605	10,700	2,625	23,900	2,645	42,300	2,665	65,000
2,610	13,300	2,630	27,800	2,650	47,400	2,670	72,300

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31,400	26,100	20,200	52,200	52,600	52,200	52,900	52,200	51,400	49,000	44,000	38,100
2	31,100	26,100	19,900	52,100	52,300	52,200	52,900	52,200	51,400	48,900	43,800	37,900
3	30,900	26,100	19,700	52,200	52,300	52,200	52,900	52,100	51,300	48,700	43,600	37,700
4	30,700	25,900	19,000	52,500	52,300	52,200	52,800	52,100	51,300	48,600	43,400	37,600
5	30,400	25,700	18,600	52,800	52,300	52,200	52,900	52,100	51,200	48,500	43,200	37,400
6	30,100	25,400	18,300	53,000	52,200	52,200	52,900	52,000	51,100	48,400	43,000	37,200
7	29,900	25,100	18,100	52,800	52,200	52,200	52,800	51,800	51,000	48,200	42,800	37,000
8	29,800	24,800	18,300	52,700	52,800	52,200	52,700	51,600	50,900	48,100	42,600	36,800
9	29,600	25,000	18,300	52,500	54,000	52,100	52,600	51,800	50,800	48,000	42,400	36,600
10	29,500	24,500	24,600	52,300	54,400	52,100	52,600	51,900	50,800	47,900	42,200	36,400
11	29,400	24,300	26,500	54,700	56,500	52,000	52,500	52,000	50,700	47,700	41,900	36,100
12	29,200	24,100	27,100	60,600	55,400	52,000	52,500	52,100	50,600	47,600	41,700	35,900
13	28,900	24,000	28,200	59,800	54,300	52,100	52,500	52,100	50,500	47,500	41,600	35,800
14	28,700	23,900	31,100	57,100	54,000	52,300	52,400	52,000	50,500	47,300	41,400	35,600
15	28,600	23,700	36,900	55,100	54,400	52,400	52,300	52,000	50,500	47,200	41,200	35,400
16	28,500	23,500	39,200	53,800	54,100	52,500	52,300	52,000	50,400	47,000	41,000	35,100
17	28,300	23,500	40,000	53,400	53,600	52,800	52,200	52,000	50,400	46,900	40,800	35,000
18	28,200	23,500	40,300	53,400	53,200	53,500	52,200	51,900	50,300	46,700	40,600	34,800
19	28,000	23,900	40,500	57,000	53,100	53,700	52,200	51,900	50,300	46,500	40,400	34,500
20	27,900	23,800	40,700	60,200	52,800	53,500	52,200	51,800	50,200	46,300	40,200	34,300
21	27,600	23,400	40,800	59,900	52,300	53,400	52,200	51,800	50,100	46,100	40,300	33,900
22	27,600	23,000	41,000	57,800	52,400	53,300	52,200	51,800	50,000	45,900	40,100	33,600
23	27,300	22,700	41,500	57,700	52,300	53,300	52,300	51,700	49,900	45,700	39,700	33,600
24	27,300	22,400	56,400	57,700	52,200	53,300	52,500	51,700	49,800	45,500	39,500	33,400
25	27,100	22,100	55,500	57,200	52,100	53,100	52,500	51,600	49,700	45,400	39,300	33,000
26	27,000	21,900	54,200	55,500	51,900	53,000	52,500	51,600	49,500	45,200	39,100	32,800
27	26,800	21,600	53,500	54,700	51,800	53,100	52,400	51,600	49,400	45,000	38,900	32,700
28	26,700	21,200	53,200	53,900	52,000	53,100	52,400	51,600	49,300	44,800	38,700	32,500
29	26,600	20,800	53,000	53,400	-----	53,100	52,300	51,500	49,200	44,700	38,500	32,100
30	26,400	20,500	52,700	53,200	-----	53,100	52,300	51,500	49,100	44,500	38,400	31,900
31	26,300	-----	52,500	52,800	-----	53,000	-----	51,500	-----	44,100	38,200	-----
MAX	31,400	26,100	56,400	60,600	56,500	53,700	52,900	52,200	51,400	49,000	44,000	38,100
MIN	26,300	20,500	18,100	52,100	51,800	52,000	52,200	51,500	49,100	44,100	38,200	31,900
(a)	2,627.95	2,620.50	2,654.58	2,654.89	2,654.29	2,655.02	2,654.36	2,653.65	2,651.52	2,646.80	2,640.80	2,634.41
(b)	-5,200	-5,800	+32,000	+300	-800	+1,000	-700	-800	-2,400	-5,000	-5,900	-6,300

CAL YR 1968 b +27,400
WTR YR 1969 b +400

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

11-4805. MAD RIVER NEAR FOREST GLEN, CALIF.

LOCATION.--Lat 40°27'30", long 123°30'35", in SW $\frac{1}{4}$ sec.16, T.1 N., R.6 E., Trinity County, Six Rivers National Forest, on right bank 0.7 mile downstream from Lamb Creek, and 11.1 miles northwest of Forest Glen.

DRAINAGE AREA.--143 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 2,408.18 ft above mean sea level. Prior to Dec. 22, 1955, water-stage recorder at site 0.7 mile upstream at different datum. Jan. 13 to June 18, 1956, nonrecording gage at former site at datum 4.17 ft lower than former datum.

AVERAGE DISCHARGE.--16 years, 373 cfs (270,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 11,100 cfs Jan. 13 (gage height, 11.73 ft); minimum daily, 49 cfs June 17.

Period of record: Maximum discharge, 39,200 cfs Dec. 22, 1955 (gage height, 24.5 ft, from floodmarks, present datum), from rating curve extended above 8,100 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.60 cfs Sept. 15, 1961.

REMARKS.--Records excellent. Flow regulated by Ruth Reservoir 9 miles upstream beginning in July 1961 (see sta 11-4804). No diversion above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1395: 1954. WSP 1715: 1958(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	81	304	661	787	547	760	315	99	72	105	73
2	81	110	297	616	705	556	645	298	98	72	105	73
3	81	93	291	612	670	551	620	281	95	72	105	73
4	81	119	289	715	655	533	565	266	91	72	105	73
5	86	119	294	899	660	533	645	253	90	72	105	79
6	103	117	278	1,010	635	538	630	277	90	72	105	90
7	109	117	270	999	585	533	575	347	91	71	103	91
8	72	132	292	901	721	524	524	254	90	70	104	91
9	76	156	270	778	1,450	506	483	133	91	70	103	91
10	79	154	1,130	679	1,880	479	462	160	90	70	104	91
11	91	173	543	1,020	3,520	454	444	194	89	70	104	91
12	96	185	411	7,140	3,600	383	437	201	88	70	99	91
13	94	174	556	9,240	2,270	303	422	203	76	70	91	91
14	94	193	660	4,960	1,650	341	398	193	52	70	91	91
15	93	214	1,010	2,650	1,770	376	371	189	51	70	91	91
16	88	255	584	1,640	1,820	446	346	182	50	71	91	93
17	77	267	467	1,150	1,470	605	331	174	49	106	91	110
18	77	331	433	958	1,150	910	328	166	59	108	91	119
19	77	296	413	2,680	976	994	318	154	78	107	91	119
20	78	292	389	6,830	862	928	303	148	75	107	91	119
21	72	299	376	7,750	760	862	293	142	73	108	91	119
22	63	292	376	4,980	675	826	294	135	73	104	91	113
23	67	296	1,240	2,780	630	826	372	130	73	93	91	105
24	76	359	2,970	1,800	595	874	439	125	73	92	91	105
25	77	367	3,970	1,870	580	892	442	121	73	91	91	103
26	77	331	2,440	3,100	520	826	420	119	73	91	91	104
27	77	321	1,500	2,500	470	880	396	116	73	91	91	103
28	77	316	1,170	1,800	511	916	374	111	73	91	91	103
29	85	308	1,060	1,330	-----	928	355	107	72	91	85	103
30	84	296	908	1,070	-----	916	337	103	72	98	73	103
31	82	-----	764	874	-----	874	-----	100	-----	106	73	-----
TOTAL	2,551	6,763	25,955	75,992	32,577	20,660	13,329	5,697	2,320	2,618	2,934	2,901
MEAN	82.3	225	837	2,451	1,163	666	444	184	77.3	84.5	94.6	96.7
MAX	109	367	3,970	9,240	3,600	994	760	347	99	108	105	119
MIN	63	81	270	612	470	303	293	100	49	70	73	73
AC-FT	5,060	13,410	51,480	150,700	64,620	40,980	26,440	11,300	4,600	5,190	5,820	5,750
CAL YR 1968	TOTAL 126,985.4		MEAN 347		MAX 3,970		MIN 8.1		AC-FT 251,900			
WTR YR 1969	TOTAL 194,297		MEAN 532		MAX 9,240		MIN 49		AC-FT 385,400			

MAD RIVER BASIN

11-4807.5. MAD RIVER NEAR KNEELAND, CALIF.

LOCATION.--Lat 40°45'50", long 123°53'20", in NW¼NW¼ sec.6, T.4 N., R.3 E., Humboldt County, on left bank at mouth of Maple Creek, 30 ft upstream from bridge, and 5.4 miles east of Kneeland.

DRAINAGE AREA.--352 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 329.66 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 32,200 cfs Jan. 13 (gage height, 22.00 ft); minimum daily, 92 cfs Sept. 6.

Period of record: Maximum discharge, 32,200 cfs Jan. 13, 1969 (gage height, 22.00 ft); minimum daily, 55 cfs Oct. 3-8, Nov. 5, 1966.

Flood of Dec. 22, 1964, reached a stage of 37.99 ft, from floodmarks (discharge, 55,000 cfs).

REMARKS.--Records fair. Flow regulated by Ruth Reservoir 47 miles upstream (see sta 11-4804). No diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	152	1,150	1,520	3,460	1,520	2,600	1,120	253	138	102	93
2	103	225	907	1,490	2,110	1,470	2,240	1,030	236	138	113	93
3	103	279	701	1,560	1,880	2,500	1,870	943	229	134	113	93
4	103	198	610	1,940	2,000	1,700	1,560	859	229	134	113	93
5	103	210	1,590	2,410	2,080	1,760	2,390	811	219	134	113	93
6	105	206	1,130	2,540	2,230	1,820	2,240	859	219	131	113	92
7	121	222	766	2,450	1,840	1,670	1,910	1,050	213	118	113	98
8	127	237	1,190	2,230	2,840	1,510	1,670	1,040	213	117	113	99
9	110	584	970	1,870	8,130	1,380	1,610	799	210	115	113	100
10	93	353	9,230	1,640	7,030	1,160	1,450	835	210	112	113	102
11	114	609	4,780	3,980	14,200	1,000	1,290	823	210	110	113	102
12	182	1,520	1,790	22,500	8,800	811	1,370	811	195	110	113	102
13	184	590	2,230	24,400	5,700	535	1,210	775	188	108	110	102
14	165	448	4,480	8,480	3,300	559	955	695	174	108	108	102
15	177	982	10,200	2,690	4,500	591	739	655	152	105	102	102
16	151	843	4,200	1,850	4,900	835	655	615	150	105	102	102
17	134	1,100	2,230	1,280	3,300	1,480	775	591	143	104	102	102
18	119	2,520	1,650	1,000	2,500	2,810	943	591	141	123	102	121
19	115	1,380	1,650	7,630	2,100	2,510	655	751	164	124	102	126
20	135	734	1,100	22,600	1,700	2,230	511	487	172	124	102	123
21	128	523	787	20,700	1,430	2,090	543	455	158	124	102	121
22	114	672	919	9,450	1,210	2,050	503	425	154	123	102	120
23	102	533	8,330	4,700	1,290	2,140	907	395	154	120	102	115
24	101	1,760	15,400	3,560	1,380	2,150	1,510	370	139	112	102	111
25	107	2,690	9,830	6,080	1,540	2,480	1,470	370	143	112	102	111
26	107	1,290	5,020	10,200	1,310	2,500	1,320	380	150	102	102	111
27	107	844	3,080	6,750	1,140	2,740	1,280	413	150	102	102	110
28	107	611	3,020	4,920	1,600	2,870	1,220	336	145	102	102	110
29	111	661	2,720	3,360	-----	3,040	1,170	309	143	102	102	110
30	175	815	2,150	2,500	-----	3,140	1,160	276	141	102	99	110
31	188	-----	1,730	2,140	-----	3,060	-----	268	-----	102	94	-----
TOTAL	3,894	23,791	105,540	190,420	95,500	58,111	39,726	20,137	5,397	3,595	3,286	3,169
MEAN	126	793	3,405	6,143	3,411	1,875	1,324	650	180	116	106	106
MAX	188	2,690	15,400	24,400	14,200	3,140	2,600	1,120	253	138	113	126
MIN	93	152	610	1,000	1,140	535	503	268	139	102	94	92
AC-FT	7,720	47,190	209,300	377,700	189,400	115,300	78,800	39,940	10,700	7,130	6,520	6,290
CAL YR 1968	TOTAL 352,840		MEAN 964		MAX 15,400		MIN 82		AC-FT 699,800			
WTR YR 1969	TOTAL 552,566		MEAN 1,514		MAX 24,400		MIN 92		AC-FT 1,096,000			

PEAK DISCHARGE (BASE, 12,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1145	15.23	16,900	1-20	2245	21.09	30,400
12-15	1315	14.37	14,500	1-26	0445	14.31	14,300
12-24	0600	15.73	18,400	2-11	1130	15.66	18,200
1-13	0330	22.00	32,200				

NOTE.--No gage-height record July 26 to Aug. 29.

11-4810. MAD RIVER NEAR ARCATA, CALIF.

LOCATION.--Lat 40°54'35", long 124°03'35", in NW $\frac{1}{4}$ sec.15, T.6 N., R.1 E., Humboldt County, on right bank 100 ft upstream from bridge on U.S. Highway 299, 1.0 mile downstream from Warren Creek, and 2.8 miles northeast of Arcata.

DRAINAGE AREA.--485 sq mi.

PERIOD OF RECORD.--October 1910 to September 1913, August 1950 to current year. Monthly discharge only for some periods published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 12.79 ft above mean sea level. December 1910 to September 1913, nonrecording gage at site 0.1 mile upstream at different datum. Aug. 15, 1950, to July 23, 1956, water-stage recorder at site 0.6 mile upstream at datum 11.00 ft higher. July 24, 1956, to Apr. 9, 1965, water-stage recorder at datum 5.00 ft higher. Aug. 29 to Oct. 26, 1961, auxiliary water-stage recorder at site 0.5 mile downstream at different datum.

AVERAGE DISCHARGE.--22 years, 1,491 cfs (1,080,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 32,700 cfs Jan. 20 (gage height, 18.66 ft); minimum daily, 16 cfs Oct. 6.

Period of record: Maximum discharge, 77,800 cfs Dec. 22, 1955 (gage height, 29.75 ft, present site and datum); minimum, 2.1 cfs June 13, 1968.

REMARKS.--Records fair. Flow regulated by Ruth Reservoir 68 miles upstream beginning in July 1961 (see sta 11-4804). Since 1938, approximately 80 cfs diverted daily 0.5 mile above station for municipal supply of cities of Eureka and Arcata. Records of chemical analyses, water temperatures, and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	110	2,230	1,640	7,160	2,110	2,430	1,190	252	74	52	39
2	19	149	2,030	1,560	4,450	2,070	2,010	1,040	199	72	55	37
3	18	380	1,560	1,510	3,260	3,380	1,840	925	185	73	54	34
4	20	215	1,460	1,670	2,960	2,360	1,530	860	173	110	50	24
5	20	187	2,380	2,040	3,280	1,940	2,010	794	175	98	52	21
6	16	199	2,140	2,490	3,400	2,010	2,120	806	173	74	48	20
7	20	215	1,620	2,710	2,960	1,930	1,790	890	171	49	49	23
8	33	252	1,700	2,560	2,840	1,830	1,540	939	175	38	48	26
9	29	610	1,670	2,100	7,580	1,680	1,460	812	173	39	49	27
10	28	677	5,000	1,840	6,040	1,500	1,430	715	169	40	52	32
11	26	737	6,560	3,070	11,900	1,330	1,320	743	175	39	49	32
12	122	2,410	3,960	16,900	10,100	1,220	1,360	721	167	45	49	33
13	165	1,120	3,110	25,100	6,820	1,060	1,320	704	157	47	48	37
14	113	866	5,220	12,900	4,820	988	1,150	650	144	38	44	35
15	130	1,350	9,550	7,900	6,260	1,030	1,030	565	109	30	40	33
16	112	1,210	7,140	5,660	6,580	1,210	939	565	79	20	41	24
17	75	1,130	4,550	4,580	4,670	1,480	925	560	60	17	42	18
18	60	2,530	3,540	4,020	3,580	2,640	1,250	488	53	23	39	24
19	47	2,040	3,430	8,850	2,910	2,540	1,090	470	65	41	40	53
20	66	1,240	2,410	20,000	2,530	2,260	925	406	133	44	37	53
21	86	953	1,800	22,200	2,110	2,020	836	394	106	41	39	51
22	63	1,050	1,650	12,500	1,800	1,940	842	363	84	39	38	46
23	48	939	5,330	8,040	1,880	1,950	1,130	346	73	56	37	44
24	34	2,100	11,900	5,620	1,970	1,900	2,410	325	72	53	39	37
25	35	4,330	10,400	6,480	2,180	2,020	2,140	316	72	49	35	32
26	34	2,660	7,340	11,000	1,970	2,030	1,840	325	75	51	37	29
27	32	1,820	4,580	8,230	1,720	2,190	1,660	422	68	50	36	30
28	30	1,500	4,080	6,180	2,210	2,560	1,530	336	64	49	35	32
29	34	1,430	3,520	4,520	-----	2,830	1,470	310	60	48	38	28
30	71	1,850	2,610	4,100	-----	2,830	1,320	301	64	45	38	27
31	151	-----	1,980	3,460	-----	2,840	-----	295	-----	46	35	-----
TOTAL	1,759	36,259	126,450	221,430	119,940	61,678	44,647	18,576	3,725	1,538	1,345	981
MEAN	56.7	1,209	4,079	7,143	4,284	1,990	1,488	599	124	49.6	43.4	32.7
MAX	165	4,330	11,900	25,100	11,900	3,380	2,430	1,190	252	110	55	53
MIN	16	110	1,460	1,510	1,720	988	836	295	53	17	35	18
AC-FT	3,490	71,920	250,800	439,200	237,900	122,300	88,560	36,840	7,390	3,050	2,670	1,950

CAL YR 1968 TOTAL 425,293.1 MEAN 1,162 MAX 12,200 MIN 2.1 AC-FT 843,600
WTR YR 1969 TOTAL 638,328 MEAN 1,749 MAX 25,100 MIN 16 AC-FT 1,266,000

PEAK DISCHARGE (BASE, 15,000 CFS).--Jan. 13 (0600) 32,300 cfs (18.55 ft); Jan. 20 (2300) 32,700 cfs (18.66 ft).

LITTLE RIVER BASIN

11-4812. LITTLE RIVER AT CRANNELL, CALIF.

LOCATION.--Lat 41°00'40", long 124°04'50", in NE¼ sec.8, T.7 N., R.1 E., Humboldt County, on right bank at Crannell, 0.5 mile upstream from Coon Creek, and 9.1 miles north of Arcata.

DRAINAGE AREA.--44.4 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 17.62 ft above mean sea level.

AVERAGE DISCHARGE.--14 years, 134 cfs (97,080 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,380 cfs Jan. 13 (gage height, 6.88 ft); minimum daily, 2.9 cfs Oct. 10.

Period of record: Maximum discharge, 8,330 cfs Jan. 4, 1966 (gage height, 11.12 ft), from rating curve extended above 3,100 cfs on basis of slope-area measurement at gage height 11.06 ft; minimum daily, 2.8 cfs Oct. 20-22, 1964.

Flood of Jan. 17, 18, 1953, reached a stage of 15.7 ft, observed by an employee of Hammond Lumber Co.

REMARKS.--Records good. No storage or diversion above station.

REVISIONS (WATER YEARS).--WSP 1929: 1956-60.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	15	282	176	1,240	188	51	54	23	12	8.0	6.2
2	3.1	22	206	153	645	222	54	49	22	12	8.0	6.2
3	2.9	19	148	123	432	470	69	45	22	12	8.0	6.2
4	3.1	18	119	106	396	285	58	42	22	12	8.0	5.6
5	3.1	20	243	92	450	219	123	39	22	12	7.4	5.6
6	3.1	36	176	75	396	209	115	35	22	11	7.4	5.6
7	3.0	32	133	72	336	182	98	33	20	11	7.4	5.6
8	3.0	60	121	74	336	155	79	30	20	10	7.2	5.6
9	3.0	145	102	67	580	138	70	30	20	10	7.1	5.0
10	2.9	84	400	67	376	119	66	30	20	10	7.1	5.0
11	7.8	155	650	254	720	106	58	30	20	10	7.0	5.0
12	18	222	428	1,670	565	98	57	28	20	9.8	7.0	5.0
13	11	112	384	1,820	404	88	58	29	20	9.8	7.0	5.0
14	13	94	535	635	336	81	55	29	20	9.2	6.8	5.0
15	12	143	705	465	610	77	52	27	20	9.2	6.8	5.0
16	11	138	770	380	690	77	49	26	19	8.6	6.8	5.6
17	10	117	560	285	420	77	54	25	17	8.0	6.8	5.6
18	9.6	368	396	240	310	96	94	26	17	8.0	6.6	12
19	9.2	268	364	630	247	83	79	29	17	8.0	6.6	12
20	14	158	292	1,130	206	77	67	25	17	8.0	6.6	11
21	13	117	229	1,080	182	72	58	24	17	8.0	6.4	12
22	12	153	222	555	155	67	57	23	16	8.0	6.4	9.2
23	12	121	424	384	194	63	83	23	16	8.0	6.4	8.6
24	11	360	785	299	282	58	128	24	16	8.0	6.4	8.6
25	10	470	755	392	306	55	110	27	15	8.0	6.2	8.6
26	9.8	236	615	815	271	52	86	39	15	8.0	6.2	8.0
27	9.4	158	408	605	209	51	72	52	14	8.0	6.2	8.0
28	9.8	119	428	495	219	51	66	34	13	8.0	6.2	8.0
29	12	110	364	392	-----	54	64	27	12	8.0	6.2	7.4
30	18	161	278	490	-----	54	58	26	12	8.0	6.2	7.4
31	16	-----	215	535	-----	51	-----	24	-----	8.0	6.2	-----
TOTAL	279.1	4,231	11,737	14,556	11,513	3,675	2,188	984	546	288.6	212.6	213.6
MEAN	9.00	141	379	470	411	119	72.9	31.7	18.2	9.31	6.86	7.12
MAX	18	470	785	1,820	1,240	470	128	54	23	12	8.0	12
MIN	2.9	15	102	67	155	51	49	23	12	8.0	6.2	5.0
AC-FT	554	8,390	23,280	28,870	22,840	7,290	4,340	1,950	1,080	572	422	424

CAL YR 1968 TOTAL 38,172.4 MEAN 104 MAX 1,730 MIN 2.9 AC-FT 75,710
WTR YR 1969 TOTAL 50,423.9 MEAN 138 MAX 1,820 MIN 2.9 AC-FT 100,000

PEAK DISCHARGE (BASE, 3,000 CFS).--Jan. 13 (0145) 3,380 cfs (6.88 ft).

11-4825, REDWOOD CREEK AT ORICK, CALIF.

LOCATION.--Lat 41°17'20", long 124°03'30", in NE¼ sec.4, T.10 N., R.1 E., Humboldt County, on left bank at upstream side of bridge on U.S. Highway 101 at Orick, 0.9 mile downstream from Prairie Creek.

DRAINAGE AREA.--278 sq mi.

PERIOD OF RECORD.--September 1911 to September 1913, October 1953 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 5.16 ft above mean sea level. Sept. 10, 1911, to Aug. 9, 1913, nonrecording gage at different datum.

AVERAGE DISCHARGE.--18 years, 1,055 cfs (764,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 17,200 cfs Jan. 21 (gage height, 13.62 ft); minimum daily, 21 cfs Sept. 16, 17.

Period of record: Maximum discharge, 50,500 cfs Dec. 22, 1964 (gage height, 24.0 ft from outside high-water marks); minimum, 10 cfs Sept. 22-24, 1911.

Flood of Jan. 18, 1953, reached a stage of 23.95 ft, from floodmarks (discharge, 50,000 cfs).

REMARKS.--Records fair. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1315-B: 1912-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	144	1,710	1,170	4,950	1,390	1,000	705	255	110	52	28
2	22	1,070	1,660	1,040	3,840	1,370	950	656	239	107	51	26
3	21	890	1,300	910	3,170	2,380	980	624	231	102	49	25
4	32	465	1,120	815	2,860	2,010	788	608	215	100	48	25
5	31	423	1,760	763	2,990	1,790	1,190	565	212	98	47	25
6	30	411	1,630	680	3,020	1,870	1,240	572	208	95	47	25
7	29	429	1,340	672	2,720	1,710	1,030	600	200	91	46	24
8	27	459	1,290	689	2,770	1,480	920	624	193	89	45	24
9	26	1,170	1,220	572	5,260	1,340	890	616	191	87	44	24
10	31	880	3,010	572	4,100	1,200	833	624	189	85	44	24
11	65	1,140	5,170	1,170	5,890	1,120	752	616	187	83	43	24
12	300	3,040	3,520	6,030	4,780	1,020	824	593	182	81	42	24
13	296	1,350	3,100	13,100	3,600	940	743	579	179	79	41	24
14	180	1,000	4,880	6,030	3,230	870	695	551	176	76	39	24
15	208	1,220	6,980	4,320	4,660	824	650	524	171	73	36	22
16	144	1,080	7,210	3,800	4,830	797	595	485	165	72	36	21
17	104	910	4,810	2,920	3,440	950	700	447	159	71	36	21
18	99	3,270	3,420	2,500	2,670	1,510	1,260	453	153	69	36	42
19	85	2,050	3,230	5,140	2,080	1,360	1,170	453	149	68	35	47
20	104	1,400	2,510	8,800	1,770	1,180	890	411	145	67	32	42
21	129	1,050	1,990	10,600	1,500	1,070	745	394	143	65	32	42
22	104	1,120	1,830	5,410	1,270	1,000	685	378	140	64	32	36
23	90	970	6,490	3,880	1,580	990	1,050	361	139	63	32	33
24	81	1,700	7,370	3,020	2,440	960	1,740	350	136	62	32	35
25	70	3,580	6,300	3,660	3,050	920	1,430	325	132	60	32	31
26	70	1,950	4,200	6,590	2,350	930	1,180	340	130	59	31	29
27	63	1,450	3,440	5,070	1,800	940	970	411	125	58	29	28
28	58	1,170	3,120	3,770	1,480	990	890	330	121	57	29	25
29	65	1,060	2,900	3,020	-----	1,010	825	296	118	56	29	25
30	141	1,170	1,950	2,840	-----	1,020	765	278	113	55	29	25
31	205	-----	1,460	2,670	-----	1,080	-----	269	-----	53	29	-----
TOTAL	2,933	38,021	101,920	112,223	88,100	38,021	28,380	15,038	5,096	2,355	1,185	850
MEAN	94.6	1,267	3,288	3,620	3,146	1,226	946	485	170	76.0	38.2	28.3
MAX	300	3,580	7,370	13,100	5,890	2,380	1,740	705	255	110	52	47
MIN	21	144	1,120	572	1,270	797	595	269	113	53	29	21
AC-FT	5,820	75,410	202,200	222,600	174,700	75,410	56,290	29,830	10,110	4,670	2,350	1,690
CAL YR 1968	TOTAL 352,140		MEAN 962		MAX 12,100		MIN 19		AC-FT 698,500			
WTR YR 1969	TOTAL 434,122		MEAN 1,189		MAX 13,100		MIN 21		AC-FT 861,100			

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-15	1530	11.77	11,100	1-13	0230	13.58	17,000
12-24	unknown	-	10,200	1-21	0200	13.62	17,200

NOTE.--No gage-height record June 6 to Aug. 12.

BUTTE VALLEY BASIN

11-4895. ANTELOPE CREEK NEAR TENNANT, CALIF.

LOCATION.--Lat 41°32'48", long 121°55'02", in NW¼ sec.25, T.43 N., R.1 W., Siskiyou County, Shasta National Forest, on right bank 2.5 miles south of Tennant, 4 miles downstream from Frog Lake, and 17 miles southeast of town of Mount Hebron.

DRAINAGE AREA.--18.6 sq mi.

PERIOD OF RECORD.--May 1952 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,080 ft (from topographic map).

AVERAGE DISCHARGE.--17 years, 36.9 cfs (26,730 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 378 cfs May 26 (gage height, 3.37 ft); minimum daily, 9.5 cfs Oct. 7.

Period of record: Maximum discharge, 638 cfs Dec. 22, 1964 (gage height, 4.00 ft), from rating curve extended above 240 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 4.31 ft Oct. 12, 1962; minimum daily discharge, 3.6 cfs Jan. 5, 1960.

REMARKS.--Records excellent except those for period December to February, which are poor. No storage or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	13	15	19	31	27	33	68	169	38	20	14
2	10	14	15	18	30	25	30	68	164	38	19	14
3	10	14	14	18	29	24	29	66	166	37	19	14
4	9.7	13	14	18	28	23	28	62	175	35	19	14
5	9.6	13	14	18	27	23	30	71	177	34	19	14
6	9.6	13	14	18	26	19	27	84	165	34	19	14
7	9.5	13	13	18	26	19	27	96	147	33	18	14
8	9.6	13	13	20	25	19	27	111	136	31	18	14
9	9.6	13	19	19	27	19	27	137	121	31	18	14
10	9.6	13	109	19	29	21	28	165	113	30	18	14
11	36	29	46	20	50	19	31	190	116	30	18	14
12	68	30	34	21	35	18	34	215	108	29	17	14
13	25	19	30	20	27	18	34	234	104	28	17	14
14	20	16	29	20	28	18	32	213	103	28	17	14
15	17	17	23	18	31	18	32	193	98	27	16	14
16	16	16	28	18	31	18	35	188	92	26	16	14
17	15	17	26	19	31	17	39	199	85	25	16	14
18	14	21	26	20	31	17	44	209	83	25	16	17
19	14	18	23	24	31	17	45	198	81	24	16	15
20	15	17	22	75	30	17	50	181	74	24	16	15
21	13	16	20	84	28	17	57	177	68	23	15	15
22	13	17	19	43	26	17	72	183	65	22	15	14
23	13	16	22	38	26	18	76	196	62	23	15	14
24	13	16	25	35	26	18	63	212	57	22	15	14
25	12	15	23	33	26	18	59	215	53	22	15	14
26	12	15	22	59	23	19	57	249	50	21	15	14
27	12	15	21	44	24	20	59	251	46	21	15	14
28	11	15	22	41	26	22	67	191	43	21	15	14
29	17	14	20	40	-----	24	70	179	41	20	15	14
30	15	15	19	42	-----	28	67	188	39	20	15	14
31	14	-----	19	32	-----	35	-----	182	-----	20	15	-----
TOTAL	482.2	486	759	931	808	632	1,309	5,171	3,001	842	517	426
MEAN	15.6	16.2	24.5	30.0	28.9	20.4	43.6	167	100	27.2	16.7	14.2
MAX	68	30	109	84	50	35	76	251	177	38	20	17
MIN	9.5	13	13	18	23	17	27	62	39	20	15	14
AC-FT	956	964	1,510	1,850	1,600	1,250	2,600	10,260	5,950	1,670	1,030	845
CAL YR 1968	TOTAL	9,184.2	MEAN	25.1	MAX	109	MIN	9.5	AC-FT	18,220		
WTR YR 1969	TOTAL	15,364.2	MEAN	42.1	MAX	251	MIN	9.5	AC-FT	30,470		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-12	0015	2.37	127	5-6	2015	2.24	111
12-10	0945	2.53	169	5-12	2015	3.01	278
1-20	2100	2.37	136	5-26	2315	3.37	378

11-5107. KLAMATH RIVER BELOW JOHN C. BOYLE POWERPLANT, NEAR KENO, OREG.

LOCATION.--Lat 42°05'05", long 122°04'20", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.40 S., R.6 E., Klamath County, on right bank 0.7 mile downstream from John C. Boyle powerplant, 8 miles downstream from Spencer Creek, and 8.5 miles southwest of Keno.

DRAINAGE AREA.--4,080 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF RECORD.--January 1959 to current year. Prior to Oct. 1, 1961, published as "below Big Bend powerplant."

GAGE.--Water-stage recorder. Datum of gage is 3,274.82 ft above mean sea level (levels by Pacific Power and Light Co.).

AVERAGE DISCHARGE.--10 years, 1,725 cfs (1,250,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,180 cfs Apr. 3 (gage height, 8.35 ft); minimum, 290 cfs Jan. 5, 6; minimum daily, 342 cfs Dec. 8.

Period of record: Maximum discharge, 8,830 cfs Feb. 1, 1965 (gage height, 8.55 ft); minimum, 283 cfs Feb. 17, 1968; minimum daily, 317 cfs July 25, 1968.

REMARKS.--Records excellent. Flow regulated by Upper Klamath Lake. Large diurnal fluctuation caused by John C. Boyle powerplant and 2 powerplants below Upper Klamath Lake. Large diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,150	1,760	583	1,370	2,660	2,660	3,290	2,900	1,860	544	973	765
2	1,280	1,770	1,440	938	2,670	2,660	4,350	3,240	1,140	847	384	1,520
3	1,280	361	1,370	885	2,680	2,680	6,510	3,530	981	507	384	1,840
4	1,280	1,610	1,360	649	2,670	2,670	7,080	3,440	690	393	686	1,770
5	1,240	1,620	1,460	644	2,670	2,570	6,730	3,510	715	425	725	1,770
6	1,240	1,620	1,420	722	2,660	1,980	7,050	3,420	721	419	706	1,500
7	1,240	1,620	673	885	2,650	2,030	6,900	3,140	378	713	699	1,500
8	1,290	1,630	342	1,360	2,660	1,740	6,460	3,040	406	637	725	2,010
9	1,280	632	1,520	1,350	2,670	1,420	5,650	2,200	1,200	419	392	1,920
10	1,280	719	1,510	1,350	2,670	1,990	5,180	1,190	1,100	407	376	1,820
11	1,280	1,600	1,520	968	2,680	1,880	4,580	1,180	859	392	719	1,810
12	1,130	1,280	1,520	954	2,680	1,980	4,640	1,690	1,480	374	686	1,470
13	715	1,620	1,620	1,390	2,670	1,980	4,640	2,520	2,040	405	699	1,110
14	1,160	1,540	669	925	2,670	1,940	4,820	3,830	2,100	848	712	965
15	1,750	1,530	355	1,120	2,670	997	4,600	4,700	2,380	928	758	1,780
16	1,480	863	1,430	1,110	2,670	1,010	4,580	4,750	2,150	1,020	693	1,780
17	1,410	630	1,610	1,380	2,660	1,650	4,800	4,450	1,240	869	401	1,850
18	1,070	1,350	1,700	1,420	2,660	1,810	4,760	3,890	660	772	1,160	1,630
19	784	1,200	1,530	1,240	2,660	1,470	4,780	3,660	378	383	1,260	1,670
20	359	1,350	1,430	1,820	2,670	1,470	4,760	3,450	415	379	1,250	876
21	1,470	1,350	1,020	975	2,650	1,480	4,620	2,920	385	408	1,250	585
22	1,550	1,050	1,500	2,010	2,660	1,090	3,880	2,780	414	856	1,130	1,240
23	1,630	676	1,800	2,670	2,660	1,420	3,790	1,770	675	822	376	1,210
24	1,550	973	1,530	2,660	2,660	2,220	3,050	1,160	410	792	384	1,130
25	1,460	1,280	1,520	2,670	2,660	2,540	2,860	799	621	621	1,170	1,140
26	635	1,360	1,280	2,460	2,660	2,550	2,540	1,350	572	378	1,190	1,140
27	375	1,370	1,230	2,680	2,650	2,540	2,420	976	598	415	1,210	792
28	1,470	906	1,390	2,680	2,660	2,720	2,680	949	410	850	1,220	643
29	1,550	959	1,490	2,680	-----	3,100	2,510	1,350	542	1,040	1,210	980
30	1,630	813	1,890	2,660	-----	3,110	2,720	1,220	550	1,020	905	869
31	1,630	-----	1,600	2,650	-----	3,160	-----	457	-----	928	772	-----
TOTAL	38,648	37,042	41,312	49,275	74,610	64,517	137,230	79,461	28,070	19,811	25,205	41,085
MEAN	1,247	1,235	1,333	1,590	2,665	2,081	4,574	2,563	936	639	813	1,370
MAX	1,750	1,770	1,890	2,680	2,680	3,160	7,080	4,750	2,380	1,040	1,260	2,010
MIN	359	361	342	644	2,650	997	2,420	457	378	374	376	585
AC-FT	76,660	73,470	81,940	97,740	148,000	128,000	272,200	157,600	55,680	39,290	49,590	81,490
CAL YR 1968	TOTAL 412,920			MEAN 1,128	MAX 2,720	MIN 317	AC-FT 819,000					
WTR YR 1969	TOTAL 636,266			MEAN 1,743	MAX 7,080	MIN 342	AC-FT 1,262,000					

KLAMATH RIVER BASIN

11-5165.3. KLAMATH RIVER BELOW IRON GATE DAM, CALIF.

LOCATION.--Lat 41°55'41", long 122°26'35", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.47 N., R.5 W., Siskiyou County, on left bank 0.1 mile downstream from Bogus Creek, 0.6 mile downstream from Iron Gate Dam, and 5.9 miles northeast of Hornbrook.

DRAINAGE AREA.--4,630 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

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

GAGE.--Water-stage recorder. Datum of gage is 2,162.44 ft above mean sea level (levels by Pacific Power and Light Co.).

AVERAGE DISCHARGE.--9 years, 2,070 cfs (1,500,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,090 cfs Apr. 4 (gage height, 7.89 ft); minimum daily, 680 cfs July 1.

Period of record: Maximum discharge, 29,400 cfs Dec. 22, 1964 (gage height, 13.63 ft), from rating curve extended above 12,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 647 cfs Nov. 6, 1960, Sept. 24, Oct. 1, 1961.

REMARKS.--Records excellent. Complete regulation by Upper Klamath Lake (capacity, 584,000 acre-ft), other smaller reservoirs, and diversions above station. Iron Gate Dam, 0.6 mile upstream is a re-regulating reservoir (see sta 11-5165.1). Records of chemical analyses and water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,410	1,380	1,370	1,840	3,220	3,280	4,570	3,430	1,510	680	1,020	1,380
2	1,410	1,380	1,370	1,840	3,120	3,110	5,000	4,600	1,470	701	1,020	1,390
3	1,380	1,380	1,370	1,860	3,030	3,110	6,720	5,080	1,190	750	1,020	1,350
4	1,380	1,380	1,440	1,860	3,220	3,070	8,590	4,650	855	750	1,020	1,350
5	1,380	1,350	1,370	1,850	3,070	3,080	7,820	3,630	876	750	1,010	1,330
6	1,380	1,350	1,380	1,840	2,940	2,820	7,950	3,420	1,350	750	1,020	1,330
7	1,380	1,330	1,370	1,440	2,910	2,540	7,850	3,430	1,180	750	1,020	1,330
8	1,380	1,340	1,370	1,420	3,030	1,780	7,150	3,420	1,020	750	1,020	1,330
9	1,380	1,340	1,360	1,610	3,220	1,750	6,700	3,130	925	750	1,030	1,330
10	1,380	1,340	1,380	1,830	3,150	1,750	5,780	1,950	827	750	1,030	1,320
11	1,380	1,360	1,380	1,840	3,980	1,890	5,480	1,900	1,270	743	1,020	1,320
12	1,380	1,350	1,380	1,940	3,880	2,670	5,640	1,900	1,680	736	1,020	1,310
13	1,380	1,350	1,380	2,060	3,620	2,750	5,620	2,080	1,530	736	1,020	1,310
14	1,370	1,360	1,380	1,880	3,400	2,560	5,600	3,630	2,070	736	1,020	1,310
15	1,380	1,350	1,380	1,840	3,180	1,750	5,240	5,600	2,050	736	1,020	1,310
16	1,380	1,340	1,380	1,830	3,170	1,740	5,090	5,860	2,140	736	1,020	1,310
17	1,380	1,350	1,340	1,820	3,310	1,740	5,500	5,720	2,040	729	1,020	1,320
18	1,380	1,350	1,350	1,820	3,380	1,750	5,640	5,640	995	729	1,020	1,330
19	1,380	1,340	1,450	1,950	3,100	1,750	5,500	3,960	820	729	1,020	1,330
20	1,380	1,340	1,460	2,620	3,010	1,750	5,560	3,330	778	729	1,020	1,340
21	1,380	1,350	1,330	3,340	2,940	1,760	5,560	3,100	715	729	1,030	1,330
22	1,380	1,340	1,320	3,250	3,010	1,760	4,970	2,530	708	729	1,020	1,330
23	1,380	1,360	1,510	2,940	3,340	1,760	4,860	2,060	715	729	1,020	1,340
24	1,380	1,370	1,790	2,860	3,070	1,950	3,940	1,140	708	736	1,020	1,330
25	1,380	1,360	1,840	2,870	3,010	3,410	3,740	1,110	715	736	1,020	1,330
26	1,380	1,360	1,830	3,460	3,000	3,620	3,470	1,140	708	729	1,020	1,330
27	1,380	1,370	1,830	3,040	3,150	3,530	3,050	1,090	701	729	1,020	1,330
28	1,380	1,370	1,830	2,910	3,250	3,920	3,120	1,090	701	722	1,020	1,330
29	1,380	1,370	1,830	2,940	-----	4,470	3,380	1,130	694	722	1,030	1,320
30	1,380	1,370	1,830	3,120	-----	4,320	3,280	1,250	687	729	1,030	1,320
31	1,380	-----	1,830	3,170	-----	4,690	-----	1,290	-----	736	1,080	-----
TOTAL	42,830	40,680	46,430	70,890	89,710	81,830	162,370	93,290	33,628	22,746	31,720	39,960
MEAN	1,382	1,356	1,498	2,287	3,204	2,640	5,412	3,009	1,121	734	1,023	1,332
MAX	1,410	1,380	1,840	3,460	3,980	4,690	8,590	5,860	2,140	750	1,080	1,390
MIN	1,370	1,330	1,320	1,420	2,910	1,740	3,050	1,090	687	680	1,010	1,310
AC-FT	84,950	80,690	92,090	140,600	177,900	162,300	322,100	185,000	66,700	45,120	62,920	79,260
CAL YR 1968	TOTAL 489,389		MEAN 1,337		MAX 3,110		MIN 656		AC-FT 970,700			
WTR YR 1969	TOTAL 756,084		MEAN 2,071		MAX 8,590		MIN 680		AC-FT 1,500,000			

11-5166. COTTONWOOD CREEK AT HORN BROOK, CALIF.

LOCATION.--Lat 41°55'06", long 122°33'45", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.47 N., R.6 W., Siskiyou County, on right bank 0.5 mile upstream from Rancheria Gulch, and 0.6 mile northwest of Hornbrook.

DRAINAGE AREA.--89.8 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 2,160 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 51.6 cfs (37,380 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,340 cfs Jan. 13 (gage height, 5.92 ft); minimum daily, 0.29 cfs Oct. 2-4, 10.

Period of record: Maximum discharge, 5,480 cfs Dec. 22, 1964 (gage heights, 10.94 ft in gage well, 11.3 ft outside from floodmarks), from rating curve extended above 1,500 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.05 cfs Sept. 14-16, 1967.

REMARKS.--Records excellent. Some diversion above station for irrigation. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	3.3	11	20	66	97	281	77	28	12	1.6	.68
2	.29	4.9	12	38	61	83	227	75	23	11	1.5	.65
3	.29	7.3	10	80	60	76	175	70	20	11	1.6	.65
4	.29	6.5	9.0	105	60	70	156	65	20	10	1.6	.71
5	.37	7.0	9.1	85	66	80	185	62	28	9.9	1.7	.70
6	.35	7.0	9.3	70	64	87	157	63	26	9.2	1.6	.68
7	.37	6.9	9.8	67	60	80	139	67	23	7.8	1.5	.69
8	.37	7.1	13	57	83	79	131	68	24	6.2	1.5	.66
9	.35	7.9	12	44	119	78	124	73	29	6.1	1.4	.63
10	.29	7.6	102	41	167	70	119	74	37	5.1	1.3	.62
11	.50	8.8	53	50	451	69	121	74	30	4.9	1.3	.61
12	.88	13	29	189	302	72	133	85	27	4.7	1.3	.63
13	.67	8.5	25	676	163	79	126	88	24	4.3	1.3	.64
14	.61	8.1	30	170	129	91	116	79	24	4.3	1.3	.67
15	.68	12	99	95	124	117	110	68	21	4.1	1.2	.68
16	.78	11	50	68	127	167	108	63	20	4.0	1.2	.66
17	.83	11	31	52	127	185	116	59	16	3.8	1.1	.68
18	.94	20	26	49	127	174	117	56	16	3.5	1.0	.75
19	.92	14	24	112	133	154	112	55	18	3.3	1.0	.84
20	1.4	11	15	461	127	146	110	49	19	2.8	.99	1.1
21	1.7	9.6	14	397	100	154	113	48	17	2.6	.95	1.3
22	1.7	9.7	17	171	86	213	123	43	16	2.2	.88	1.2
23	1.8	9.1	22	105	80	216	131	41	17	2.2	.84	1.1
24	1.9	10	27	84	75	198	117	37	17	2.3	.83	1.2
25	1.9	12	26	83	71	196	104	36	17	2.3	.86	1.1
26	2.0	11	24	234	64	218	95	35	18	2.2	.85	1.1
27	2.1	8.9	22	127	63	279	89	37	18	2.0	.83	1.1
28	2.0	8.3	24	97	77	328	89	34	19	1.9	.77	1.1
29	2.5	8.6	22	80	-----	329	86	33	16	1.8	.72	1.1
30	3.2	11	20	73	-----	348	80	31	13	1.8	.69	1.1
31	3.4	-----	20	66	-----	338	-----	29	-----	1.7	.67	-----
TOTAL	35.74	281.1	817.2	4,046	3,232	4,871	3,890	1,774	641	151.0	35.88	25.33
MEAN	1.15	9.37	26.4	131	115	157	130	57.2	21.4	4.87	1.16	.84
MAX	3.4	20	102	676	451	348	281	88	37	12	1.7	1.3
MIN	.29	3.3	9.0	20	60	69	80	29	13	1.7	.67	.61
AC-FT	71	558	1,620	8,030	6,410	9,660	7,720	3,520	1,270	300	71	50
CAL YR 1968	TOTAL	8,970.81	MEAN	24.5	MAX	826	MIN	.08	AC-FT	17,790		
WTR YR 1969	TOTAL	19,800.25	MEAN	54.2	MAX	676	MIN	.29	AC-FT	39,270		

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	0600	5.92	1,340	2-11	1615	5.19	552
1-20	2245	5.58	910	3-30	2115	5.06	452

KLAMATH RIVER BASIN

11-5169, LITTLE SHASTA RIVER NEAR MONTAGUE, CALIF.

LOCATION.--Lat 41°45'11", long 122°17'42", in NW¼NW¼ sec.15, T.45 N., R.4 W., Siskiyou County, on right bank 0.5 mile downstream from Dry Creek, and 12 miles east of Montague.

DRAINAGE AREA.--48.2 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,360 ft (from topographic map). Prior to May 27, 1965, water-stage recorder at site 0.2 mile downstream at different datum.

AVERAGE DISCHARGE.--12 years, 17.1 cfs (12,390 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 180 cfs Jan. 20 (gage height, 3.00 ft); minimum daily, 1.0 cfs Jan. 1.

Period of record: Maximum discharge, 5,910 cfs Dec. 22, 1964 (gage height, 12.2 ft, present site and datum), from slope-area measurement of maximum flow; minimum daily, 0.60 cfs Jan. 4, 1966.

REMARKS.--No known diversion or regulation above station.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	3.2	4.5	1.0	16	11	106	73	45	13	6.6	5.0
2	2.8	5.1	4.8	6.5	12	11	90	71	41	13	6.6	5.0
3	2.8	4.2	4.8	23	12	12	70	65	39	13	6.6	5.0
4	2.8	3.6	5.9	29	13	10	60	62	38	12	6.3	5.0
5	2.8	3.6	6.8	32	12	11	71	68	37	12	6.3	5.0
6	2.8	3.4	7.1	29	12	12	66	76	32	12	6.3	4.7
7	2.8	3.4	6.2	23	12	11	61	83	29	11	6.3	4.7
8	2.8	3.6	5.9	16	12	11	59	89	29	11	6.0	4.7
9	2.8	5.4	7.9	15	12	12	58	92	29	11	6.0	4.7
10	2.8	4.2	39	14	14	11	60	94	29	11	5.6	4.7
11	3.4	5.1	22	13	25	11	72	95	29	10	5.6	4.7
12	6.2	9.1	13	12	25	11	83	95	26	9.9	5.6	4.7
13	4.8	5.1	9.5	15	18	11	69	94	25	9.5	5.6	4.7
14	3.8	4.0	7.9	13	16	12	66	90	23	9.5	5.6	4.7
15	3.8	4.2	8.7	11	16	18	62	84	23	9.5	5.6	4.4
16	3.4	3.8	7.5	9.5	15	30	71	80	21	9.0	5.6	4.7
17	2.8	5.6	8.3	8.7	15	41	90	78	20	8.5	5.3	4.4
18	2.8	15	7.5	9.1	15	38	98	80	20	8.5	5.3	5.0
19	2.6	9.5	6.8	22	16	29	95	76	23	8.1	5.3	5.3
20	4.5	6.5	6.5	118	14	29	100	73	21	8.1	5.3	5.6
21	3.6	5.4	6.8	95	13	32	104	70	18	7.6	5.3	5.3
22	3.0	6.5	6.8	44	12	49	102	68	18	7.3	5.3	5.0
23	2.8	5.9	6.8	29	12	54	92	67	18	8.1	5.3	4.7
24	2.8	5.1	6.8	29	12	51	78	66	18	8.5	5.0	4.7
25	2.8	4.5	6.5	29	11	56	71	64	16	8.1	5.0	4.4
26	2.8	4.8	6.2	37	11	71	68	65	16	7.6	5.0	4.4
27	2.8	5.1	5.9	31	11	83	71	64	16	7.3	5.0	3.8
28	2.8	5.1	4.5	22	9.9	94	80	57	16	6.9	5.3	3.8
29	3.0	4.5	3.0	21	-----	106	82	52	14	6.9	5.3	4.4
30	3.4	4.2	1.8	21	-----	121	75	49	14	6.9	5.3	4.7
31	3.2	-----	1.5	20	-----	118	-----	47	-----	6.6	5.0	-----
TOTAL	99.1	158.7	247.2	797.8	393.9	1,177	2,330	2,287	743	291.4	174.2	141.9
MEAN	3.20	5.29	7.97	25.7	14.1	38.0	77.7	73.8	24.8	9.40	5.62	4.73
MAX	6.2	15	39	118	25	121	106	95	45	13	6.6	5.6
MIN	2.6	3.2	1.5	1.0	9.9	10	58	47	14	6.6	5.0	3.8
AC-FT	197	315	490	1,580	781	2,330	4,620	4,540	1,470	578	346	281
CAL YR 1968	TOTAL 3,004.0			MEAN 8.21	MAX 141	MIN 1.5	AC-FT 5,960					
WTR YR 1969	TOTAL 8,841.2			MEAN 24.2	MAX 121	MIN 1.0	AC-FT 17,540					

11-5175. SHASTA RIVER NEAR YREKA, CALIF.

LOCATION.--Lat 41°49'23", long 122°35'40", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.46 N., R.7 W., Siskiyou County, on right bank 0.5 mile upstream from mouth, and 7 miles north of Yreka.

DRAINAGE AREA.--793 sq mi.

PERIOD OF RECORD.--October 1933 to December 1941, December 1944 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,000 ft (from topographic map). Prior to Nov. 2, 1933, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--32 years, 179 cfs (129,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,170 cfs Jan. 21 (gage height, 7.36 ft); minimum daily, 16 cfs Aug. 18.

Period of record: Maximum discharge, 21,500 cfs Dec. 22, 1964 (gage height, 12.92 ft in gage well, 13.85 ft, from floodmarks), from rating curve extended above 4,100 cfs on basis of slope-area measurement of maximum flow; minimum, 3.4 cfs Aug. 13, 1939, when about 2 cfs was being diverted around gage.

REMARKS.--Records excellent. Flow partly regulated by Lake Dwinnell beginning in 1928; storage limited to 50,000 acre-ft. Many diversions above station for irrigation. Records of chemical analyses and water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	178	196	206	331	397	348	171	63	139	58	66
2	84	178	191	231	325	392	299	164	61	95	53	80
3	74	178	186	262	303	334	285	148	50	79	40	73
4	75	178	182	270	287	295	266	130	50	79	36	68
5	73	182	182	270	301	268	300	125	98	77	36	74
6	80	178	178	262	315	255	366	122	84	61	33	71
7	99	178	182	259	308	247	340	106	70	65	31	72
8	87	178	182	276	381	241	303	105	76	60	32	76
9	91	175	178	242	514	235	247	97	88	49	19	66
10	97	172	200	228	438	231	199	97	153	61	29	56
11	132	175	242	248	453	228	177	117	150	47	27	44
12	155	189	234	360	530	223	172	127	182	39	25	45
13	146	192	214	580	477	218	160	195	149	39	21	49
14	158	186	214	530	422	216	153	159	121	41	36	58
15	168	182	248	416	369	216	188	157	120	38	37	55
16	172	178	305	320	331	217	177	134	107	38	24	49
17	172	178	332	276	308	221	169	122	90	40	20	54
18	189	189	248	259	292	234	177	117	96	49	16	74
19	192	189	224	474	286	229	178	122	197	52	25	72
20	203	186	217	1,710	279	225	153	129	204	44	34	81
21	196	182	200	2,090	278	225	172	133	174	40	36	105
22	189	182	192	1,060	266	217	179	112	143	40	41	111
23	189	182	200	678	260	220	183	104	131	33	37	117
24	182	186	273	498	264	230	248	106	139	80	38	127
25	186	206	290	438	276	223	271	118	151	214	27	129
26	182	192	273	816	276	227	214	130	150	189	35	111
27	178	186	245	686	263	234	200	133	156	121	39	93
28	178	186	231	533	276	269	205	104	187	97	44	104
29	175	186	224	436	-----	283	197	74	196	97	38	124
30	178	200	217	356	-----	299	196	68	166	84	41	116
31	175	-----	210	335	-----	333	-----	74	-----	62	45	-----
TOTAL	4,555	5,507	6,890	15,605	9,409	7,882	6,722	3,800	3,802	2,249	1,053	2,420
MEAN	147	184	222	503	336	254	224	123	127	72.5	34.0	80.7
MAX	203	206	332	2,090	530	397	366	195	204	214	58	129
MIN	73	172	178	206	260	216	153	68	50	33	16	44
AC-FT	9,030	10,920	13,670	30,950	18,660	15,630	13,330	7,540	7,540	4,460	2,090	4,800
CAL YR 1968	TOTAL 49,500.5			MEAN 135	MAX 645	MIN 4.9	AC-FT 98,180					
WTR YR 1969	TOTAL 69,894			MEAN 191	MAX 2,090	MIN 16	AC-FT 138,600					

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	1245	4.73	725	2- 9	0245	4.44	2,140
1-21	0015	7.36	3,170	3- 1	1045	4.10	425
1-26	1430	5.12	964				

KLAMATH RIVER BASIN

11-5180.5, EAST FORK SCOTT RIVER AT CALLAHAN, CALIF.

LOCATION.--Lat 41°18'15", long 122°46'32", in SE¼NW¼ sec.22, T.40 N., R.8 W., Siskiyou County, on right bank 1.0 mile downstream from Big Mill Creek, and 1.4 miles east of Callahan.

DRAINAGE AREA.--110 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,200 ft (from topographic map). Prior to July 26, 1961, at site 1.6 miles downstream at different datum.

AVERAGE DISCHARGE.--10 years, 99.9 cfs (72,380 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,810 cfs Dec. 10 (gage height, 6.91 ft); minimum daily, 2.3 cfs Oct. 9, 10, Sept. 11-13, 17.

Period of record: Maximum discharge, 7,480 cfs Dec. 22, 1964 (gage heights, 9.93 ft, in gage well, 9.73 ft, from floodmarks), from rating curve extended above 3,000 cfs on basis of slope-area measurements at gage heights 9.05 and 9.93 ft; minimum daily, 0.90 cfs Sept. 20, 21, 1962, Sept. 10-17, 1964.

REMARKS.--Records good. Small diversions 0.5 mile upstream from station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	6.9	14	32	122	101	472	290	330	63	8.9	2.6
2	2.6	8.9	13	40	108	98	370	266	315	58	7.9	3.0
3	2.6	9.9	12	52	101	96	300	254	330	52	7.4	3.0
4	2.6	9.4	12	63	96	94	262	223	345	37	7.4	3.0
5	2.6	9.9	13	67	94	98	382	242	340	40	7.4	2.6
6	2.6	9.4	13	70	89	106	266	350	315	37	6.4	2.6
7	2.6	9.4	15	74	80	108	234	500	280	37	6.0	2.6
8	2.6	10	20	78	80	108	223	666	242	33	6.0	2.6
9	2.3	14	20	70	92	111	226	820	223	32	6.0	2.6
10	2.3	11	690	65	182	106	230	856	242	32	6.0	2.6
11	4.2	14	167	63	1,150	103	242	910	226	30	6.0	2.3
12	6.4	30	92	191	507	106	300	928	206	28	5.6	2.3
13	6.4	18	63	477	305	103	285	937	195	26	5.1	2.3
14	6.0	15	60	178	250	103	250	793	181	25	5.1	2.6
15	6.0	14	563	127	223	114	226	586	170	24	5.6	3.0
16	6.0	14	133	98	195	148	230	563	160	22	5.1	2.6
17	6.0	15	87	82	181	184	262	658	148	20	4.2	2.3
18	6.0	31	70	76	174	188	285	674	157	20	3.8	2.6
19	6.0	26	61	143	160	170	280	514	184	19	3.8	2.6
20	6.4	20	49	562	145	164	315	400	157	17	4.2	3.4
21	5.6	18	45	838	133	164	388	412	136	16	3.8	3.8
22	6.0	17	41	370	127	181	570	479	122	15	3.4	3.4
23	6.0	17	42	238	122	195	549	563	111	14	3.4	3.8
24	6.0	17	43	192	119	192	330	610	98	14	3.4	4.2
25	6.0	17	42	207	111	195	254	586	89	13	3.8	5.6
26	6.4	17	40	627	106	212	226	542	85	12	3.8	6.0
27	5.6	15	36	266	103	250	234	418	80	12	3.4	6.0
28	5.1	14	36	209	106	305	295	335	72	11	3.4	5.6
29	6.0	13	33	164	-----	451	340	335	67	10	3.0	5.1
30	6.4	14	33	145	-----	570	295	394	63	9.9	3.0	5.1
31	6.9	-----	32	130	-----	602	-----	370	-----	9.4	3.0	-----
TOTAL	150.8	454.8	2,590	5,994	5,261	5,726	9,121	16,474	5,669	788.3	155.3	101.8
MEAN	4.86	15.2	83.5	193	188	185	304	531	189	25.4	5.01	3.39
MAX	6.9	31	690	838	1,150	602	570	937	345	63	8.9	6.0
MIN	2.3	6.9	12	32	80	94	223	223	63	9.4	3.0	2.3
AC-FT	299	902	5,140	11,890	10,440	11,360	18,090	32,680	11,240	1,560	308	202

CAL YR 1968 TOTAL 24,394.6 MEAN 66.7 MAX 847 MIN 2.1 AC-FT 48,390
WTR YR 1969 TOTAL 52,486.0 MEAN 144 MAX 1,150 MIN 2.3 AC-FT 104,100

PEAK DISCHARGE (BASE, 550 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	0900	6.91	1,810	1-26	0200	6.31	1,210
12-15	1000	6.44	1,340	2-11	1600	6.52	1,420
1-13	0200	6.00	865	3-30	2100	5.82	674
1-21	0100	6.31	1,210	5-13	2300	6.21	1,100

11-5183.1. CEDAR GULCH NEAR CALLAHAN, CALIF.

LOCATION.--Lat 41°20'40", long 122°49'47", near center of sec.1, T.40 N., R.9 W., Siskiyou County, on left bank at culvert on county road, 2.9 miles northwest of Callahan.

DRAINAGE AREA.--0.99 sq mi.

PERIOD OF RECORD.--Water years 1961-66 (annual maximum), February 1966 to current year.

GAGE.--Water-stage recorder, crest-stage gages, and float-operated rain gage. Altitude of gage is 3,040 ft (from topographic map). Prior to Feb. 11, 1966, crest-stage gages only at same site and datum.

EXTREMES.--Current year: Maximum discharge, 18 cfs Jan. 20 (gage height, 6.59 ft); no flow for several months. Period of record: Maximum discharge, 144 cfs Dec. 22, 1964 (gage height, 10.18 ft, from floodmarks), from rating curve extended above 7 cfs on basis of computations of flow through culvert at gage heights 6.15, 8.25, and 10.18 ft; no flow for several months each year.

REMARKS.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.14	.94	.74	.36	.14	.01	0	0	0
2	0	0	0	.18	.89	.79	.33	.14	.01	0	0	0
3	0	0	0	.29	.89	.79	.33	.14	.01	0	0	0
4	0	0	0	.33	.79	.79	.33	.14	.01	0	0	0
5	0	0	0	.36	.77	.86	.33	.14	.01	0	0	0
6	0	0	0	.39	.74	.89	.30	.12	.01	0	0	0
7	0	0	0	.42	.66	.84	.27	.12	.01	0	0	0
8	0	0	0	.50	.74	.79	.27	.12	.02	0	0	0
9	0	0	0	.36	1.6	.74	.24	.14	.03	0	0	0
10	0	0	.04	.33	2.8	.70	.21	.16	.03	0	0	0
11	0	0	.02	.42	5.4	.66	.18	.18	.01	0	0	0
12	0	0	0	1.9	3.2	.66	.18	.18	.01	0	0	0
13	0	0	0	5.2	2.1	.62	.18	.24	0	0	0	0
14	0	0	.01	2.2	1.6	.58	.18	.24	0	0	0	0
15	0	0	2.0	1.8	1.6	.58	.16	.21	0	0	0	0
16	0	0	.74	1.6	1.3	.74	.14	.18	0	0	0	0
17	0	0	.33	1.4	1.1	.99	.14	.18	0	0	0	0
18	0	0	.21	1.2	.94	.94	.14	.18	.07	0	0	0
19	0	0	.16	2.0	.84	.74	.12	.18	.04	0	0	0
20	.01	0	.14	12	.84	.74	.12	.16	.02	0	0	0
21	.02	0	.08	8.6	.74	.74	.12	.12	.01	0	0	0
22	.02	0	.08	3.3	.70	.70	.14	.09	0	0	0	0
23	.02	0	.09	1.8	.66	.66	.16	.09	0	0	0	0
24	.02	0	.09	1.4	.66	.58	.14	.08	0	0	0	0
25	.02	0	.12	1.3	.62	.54	.14	.06	0	0	0	0
26	.02	0	.12	2.3	.62	.50	.14	.06	0	0	0	0
27	.02	0	.12	1.7	.62	.46	.14	.06	0	0	0	0
28	.01	0	.12	1.4	.66	.46	.14	.04	0	0	0	0
29	.01	0	.16	1.2	-----	.42	.14	.02	0	0	0	0
30	.01	0	.16	1.1	-----	.42	.14	.02	0	0	0	0
31	0	-----	.14	.94	-----	.39	-----	.01	-----	0	0	-----
TOTAL	0.18	0	4.93	58.06	35.02	21.05	5.91	3.94	0.31	0	0	0
MEAN	.006	0	.16	1.87	1.25	.68	.20	.13	.010	0	0	0
MAX	.02	0	2.0	12	5.4	.99	.36	.24	.07	0	0	0
MIN	0	0	0	.14	.62	.39	.12	.01	0	0	0	0
AC-FT	.4	0	9.8	115	69	42	12	7.8	.6	0	0	0
(a)	1.51	2.22	5.05	6.19	1.85	.43	.58	.36	1.61	.10	.00	.19
CAL YR 1968	TOTAL	47.12	MEAN	.13	MAX	3.9	MIN	0	AC-FT	93		
WTR YR 1969	TOTAL	129.40	MEAN	.35	MAX	12	MIN	0	AC-FT	257		

a Precipitation, in inches.

KLAMATH RIVER BASIN

11-5195. SCOTT RIVER NEAR FORT JONES, CALIF.

LOCATION.--Lat 41°38'28", long 123°00'54", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.29, T.44 N., R.10 W., Siskiyou County, on right bank 1.7 miles upstream from Snow Creek, and 10.8 miles downstream from Fort Jones.

DRAINAGE AREA.--653 sq mi.

PERIOD OF RECORD.--December 1941 to current year. Monthly discharge only October to December 1941, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 2,623.80 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1966, water-stage recorder 400 ft downstream at datum 2.00 ft higher.

AVERAGE DISCHARGE.--28 years, 644 cfs (466,600 acre-ft per year); median of yearly mean discharges, 560 cfs (406,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,980 cfs Jan. 21 (gage height, 12.42 ft); minimum daily, 29 cfs Oct. 2-4.

Period of record: Maximum discharge, 54,600 cfs Dec. 22, 1964 (gage height, 25.34 ft, from floodmarks, site and datum then in use), from rating curve extended above 15,000 cfs on basis of slope-area measurement at 21.40 ft; minimum, 20 cfs Sept. 14, 15, 1955.

REMARKS.--Records excellent. Diversions for irrigation of about 30,000 acres above station. Records of chemical analyses for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	60	198	304	1,040	805	2,440	1,430	1,820	428	54	59
2	29	64	187	312	979	785	2,120	1,330	1,760	404	41	60
3	29	72	179	350	914	751	1,830	1,260	1,780	390	49	59
4	29	82	177	427	879	718	1,580	1,190	1,920	360	84	59
5	30	88	194	481	861	702	1,600	1,150	2,270	324	87	56
6	32	93	209	506	836	692	1,500	1,260	1,940	297	77	54
7	41	98	199	518	790	691	1,330	1,760	1,710	284	75	52
8	68	100	207	546	792	685	1,260	2,310	1,560	257	73	52
9	55	243	211	498	985	684	1,240	2,960	1,440	244	72	51
10	48	250	1,070	483	1,150	666	1,230	3,510	1,590	225	74	45
11	49	195	1,570	526	1,940	650	1,250	3,780	1,530	199	77	31
12	64	260	800	778	2,240	647	1,400	3,870	1,430	174	76	31
13	57	217	622	2,220	1,660	641	1,490	3,860	1,280	159	71	33
14	54	142	577	1,710	1,420	634	1,400	3,540	1,210	152	70	35
15	54	147	928	1,200	1,290	647	1,280	2,710	1,100	143	70	39
16	54	160	1,010	972	1,160	700	1,250	2,420	1,030	141	71	42
17	54	169	648	833	1,120	806	1,330	2,580	937	134	68	50
18	54	359	539	783	1,100	919	1,530	2,860	848	141	64	62
19	54	509	481	844	1,090	904	1,460	2,530	1,070	141	60	92
20	58	363	415	2,240	1,070	890	1,490	2,070	1,120	118	57	74
21	57	294	351	6,200	995	880	1,600	1,940	1,040	117	45	73
22	56	330	349	3,200	941	913	2,040	2,070	899	111	31	101
23	56	325	365	2,010	917	986	2,460	2,350	801	107	31	73
24	54	295	394	1,590	884	1,010	2,020	2,580	759	127	34	72
25	55	270	404	1,420	854	1,020	1,600	2,360	696	120	37	70
26	56	250	377	2,000	806	1,080	1,340	2,270	634	108	38	71
27	56	225	347	1,790	762	1,240	1,250	2,210	593	114	40	75
28	56	205	341	1,520	775	1,540	1,370	1,810	536	115	43	81
29	57	220	348	1,300	-----	1,850	1,610	1,700	493	96	71	83
30	58	210	331	1,140	-----	2,350	1,520	1,910	459	105	60	83
31	59	-----	315	1,070	-----	2,640	-----	1,970	-----	93	59	-----
TOTAL	1,574	6,295	14,343	39,771	30,250	30,126	46,820	71,550	36,255	5,928	1,859	1,818
MEAN	50.8	210	463	1,283	1,080	972	1,561	2,308	1,209	191	60.0	60.6
MAX	68	509	1,570	6,200	2,240	2,640	2,460	3,870	2,270	428	87	101
MIN	29	60	177	304	762	634	1,230	1,150	459	93	31	31
AC-FT	3,120	12,490	28,450	78,880	60,000	59,750	92,870	141,900	71,910	11,760	3,690	3,610
CAL YR 1968	TOTAL 174,740		MEAN 477		MAX 11,000		MIN 28		AC-FT 346,600			
WTR YR 1969	TOTAL 286,589		MEAN 785		MAX 6,200		MIN 29		AC-FT 568,400			

PEAK DISCHARGE (BASE, 2,300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	2100	9.36	2,760	4-23	1045	9.48	2,600
1-13	1600	9.60	2,760	5-13	0445	10.81	4,190
1-21	0700	12.42	6,980	5-24	0745	9.67	2,800
2-12	0045	9.47	2,630	6- 5	0630	9.39	2,510
3-31	0645	9.60	2,720				

11-5205. KLAMATH RIVER NEAR SEIAD VALLEY, CALIF.

LOCATION.--Lat 41°51'14", long 123°13'52", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.46 N., R.12 W., Siskiyou County, Klamath National Forest, on left bank 0.4 mile upstream from Bittenbender Creek, 1.4 miles downstream from Grider Creek, and 2.2 miles west of Selad Valley.

DRAINAGE AREA.--6,980 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF RECORD.--October 1912 to September 1925, July 1951 to current year. Monthly discharges only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 1,320 ft (from river-profile map). November 1912 to June 1925, nonrecording gage at site 3.5 miles upstream at different datum.

AVERAGE DISCHARGE.--31 years, 4,043 cfs (2,929,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 16,000 cfs Jan. 21 (gage height, 11.27 ft); minimum daily, 1,060 cfs July 31.

Period of record: Maximum discharge, 165,000 cfs Dec. 23, 1964 (gage height, 33.75 ft, from floodmarks), from rating curve extended above 25,000 cfs on basis of slope-area measurements at gage heights 20.1 and 29.2 ft; minimum daily, 320 cfs Nov. 25, 1917.

REMARKS.--Records excellent. Flow considerably regulated by reservoirs and powerplants above station. Large diversions above station for irrigation. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,350	1,730	2,040	2,910	5,800	5,620	10,800	6,780	4,950	1,890	1,120	1,390
2	1,590	1,850	2,000	3,000	5,620	5,380	10,300	7,440	5,020	1,780	1,330	1,630
3	1,560	1,900	1,990	3,210	5,300	5,250	11,000	8,260	4,850	1,720	1,320	1,660
4	1,530	1,830	2,010	3,550	5,300	4,950	12,600	7,960	4,660	1,710	1,300	1,640
5	1,530	1,840	2,150	3,720	5,300	4,800	12,000	7,050	5,230	1,650	1,340	1,580
6	1,540	1,800	2,080	3,750	5,220	4,710	12,500	6,870	4,950	1,580	1,330	1,570
7	1,560	1,800	2,050	3,540	5,180	4,520	11,900	7,560	4,660	1,520	1,310	1,580
8	1,570	1,790	2,120	3,300	5,250	3,870	11,200	8,460	4,210	1,490	1,310	1,560
9	1,580	1,960	2,080	3,140	5,700	3,510	10,500	9,490	3,830	1,470	1,310	1,560
10	1,580	2,030	3,620	3,380	5,850	3,450	9,180	9,420	3,750	1,440	1,300	1,540
11	1,640	2,000	5,190	3,560	8,100	3,400	8,980	9,330	3,640	1,390	1,300	1,510
12	1,800	2,230	3,560	4,740	9,800	3,900	9,200	9,440	4,290	1,320	1,300	1,500
13	1,760	2,100	3,040	9,130	7,200	4,310	9,310	9,380	4,150	1,280	1,300	1,510
14	1,700	2,000	2,980	6,860	6,600	4,360	9,180	9,790	4,280	1,250	1,290	1,500
15	1,690	1,990	3,490	5,270	6,100	3,750	8,850	10,700	4,400	1,230	1,290	1,510
16	1,700	1,940	4,110	4,480	6,000	3,580	8,220	11,300	4,160	1,210	1,300	1,520
17	1,690	1,920	3,210	4,030	6,050	3,840	8,760	11,400	4,150	1,190	1,280	1,540
18	1,700	2,330	2,850	3,800	6,100	4,180	9,620	11,600	3,560	1,190	1,250	1,580
19	1,690	2,580	2,670	3,970	5,850	4,170	9,400	10,300	2,900	1,200	1,240	1,650
20	1,750	2,320	2,720	6,950	5,600	4,110	9,240	8,040	3,110	1,160	1,260	1,690
21	1,740	2,160	2,370	14,900	5,480	4,100	9,640	7,660	2,810	1,120	1,270	1,720
22	1,720	2,230	2,330	10,300	5,400	4,310	10,100	7,220	2,560	1,120	1,250	1,720
23	1,710	2,200	2,460	7,760	5,800	4,550	10,300	7,140	2,430	1,100	1,230	1,750
24	1,710	2,220	3,130	6,710	5,450	4,640	9,160	6,640	2,350	1,140	1,210	1,720
25	1,700	2,260	3,350	6,340	5,350	5,540	7,880	5,880	2,260	1,250	1,210	1,700
26	1,700	2,140	3,160	7,690	5,250	6,460	7,220	5,740	2,250	1,350	1,220	1,680
27	1,700	2,070	3,100	7,610	5,380	7,020	6,710	5,570	2,160	1,230	1,220	1,650
28	1,690	2,020	3,100	6,620	5,460	7,840	6,670	4,770	2,140	1,160	1,220	1,630
29	1,720	2,000	3,070	5,990	-----	9,530	7,320	4,530	2,070	1,120	1,250	1,640
30	1,770	2,030	2,980	5,890	-----	10,200	7,090	4,900	2,000	1,120	1,270	1,660
31	1,750	-----	2,910	5,750	-----	11,200	-----	5,050	-----	1,060	1,260	-----
TOTAL	51,420	61,270	87,920	171,850	165,490	161,050	284,830	245,670	107,780	41,440	39,390	48,090
MEAN	1,659	2,042	2,836	5,544	5,910	5,195	9,494	7,925	3,593	1,337	1,271	1,603
MAX	1,800	2,580	5,190	14,900	9,800	11,200	12,600	11,600	5,230	1,890	1,340	1,750
MIN	1,350	1,730	1,990	2,910	5,180	3,400	6,670	4,530	2,000	1,060	1,120	1,390
AC-FT	102,000	121,500	174,400	340,900	328,200	319,400	565,000	487,300	213,800	82,200	78,130	95,390
CAL YR 1968	TOTAL	924,564	MEAN	2,526	MAX	22,000	MIN	906	AC-FT	1,834,000		
WTR YR 1969	TOTAL	1,466,200	MEAN	4,017	MAX	14,900	MIN	1,060	AC-FT	2,908,000		

KLAMATH RIVER BASIN

11-5215. INDIAN CREEK NEAR HAPPY CAMP, CALIF.

LOCATION (revised).--Lat 41°50'07", long 123°22'55", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T.17 N., R.7 E., Siskiyou County, Klamath National Forest, on left bank 0.2 mile upstream from Slater Creek, 3.0 miles north of Happy Camp, and 3.5 miles upstream from mouth.

DRAINAGE AREA.--118 sq mi.

PERIOD OF RECORD.--September 1911 to September 1921 (fragmentary), December 1956 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Altitude of gage is 1,200 ft (from topographic map). Prior to December 1956, nonrecording gages at sites 0.2 mile upstream at different datums. December 1956 to Sept. 20, 1969, water-stage recorder at site 0.8 mile upstream at different datum.

AVERAGE DISCHARGE.--15 years (1911-14, 1957-69), 429 cfs (310,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,180 cfs Dec. 10 (gage height, 11.52 ft); minimum daily, 38 cfs Oct. 9.

Period of record: Maximum discharge, 39,000 cfs Dec. 22, 1964 (gage height, 36.59 ft, from floodmarks, in gage well), from rating curve extended above 4,800 cfs on basis of slope-area measurement at gage height 29.0 ft; minimum observed, 20 cfs Aug. 19 to Sept. 6, 1914.

Flood of Dec. 21, 1955, reached a stage of 29.0 ft, from floodmarks (discharge, 23,000 cfs on basis of slope-area measurement of peak flow).

REMARKS.--Records good. Small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	91	235	325	387	351	1,750	992	834	200	89	60
2	40	409	210	403	359	351	1,450	911	852	195	87	59
3	40	250	194	441	342	345	1,170	870	848	189	86	59
4	47	149	198	517	331	340	1,000	794	854	182	85	59
5	48	156	448	546	318	348	1,150	870	828	177	85	58
6	41	146	378	565	308	348	1,050	1,280	712	172	83	58
7	40	176	343	571	292	348	947	1,700	634	166	82	58
8	39	226	468	564	368	342	920	1,980	579	160	81	58
9	38	453	439	517	595	337	952	2,150	546	158	79	57
10	39	266	1,880	490	539	326	960	2,350	523	157	78	57
11	66	342	1,140	579	1,060	318	1,050	2,350	494	149	76	57
12	103	523	688	782	1,010	316	1,250	2,260	473	144	75	57
13	85	326	620	1,680	746	321	1,170	2,070	459	139	75	57
14	78	256	612	1,030	644	331	1,030	1,710	439	136	74	56
15	88	219	858	742	626	348	947	1,440	408	133	72	56
16	75	199	674	570	609	393	960	1,380	385	130	71	56
17	70	216	541	490	560	525	1,120	1,510	365	127	69	70
18	66	576	492	438	525	774	1,270	1,650	342	123	68	64
19	62	370	438	427	514	696	1,160	1,350	336	119	67	60
20	105	285	387	486	500	626	1,060	1,120	311	116	65	58
21	84	247	349	542	469	616	1,220	1,170	286	114	65	57
22	69	230	346	504	444	686	1,570	1,300	270	112	65	56
23	64	220	374	444	427	732	1,790	1,320	265	116	64	57
24	62	210	395	411	405	746	1,330	1,170	257	121	64	58
25	60	207	374	430	390	782	1,060	1,030	250	112	64	57
26	58	203	340	830	368	906	965	1,140	245	108	63	56
27	57	201	326	668	359	1,170	1,050	996	233	105	63	55
28	56	198	368	556	362	1,410	1,300	866	225	102	62	54
29	69	193	361	497	-----	1,600	1,380	866	213	99	62	54
30	166	202	332	448	-----	1,890	1,120	934	205	96	61	54
31	123	-----	309	405	-----	2,050	-----	875	-----	92	60	-----
TOTAL	2,079	7,745	15,117	17,898	13,857	20,672	35,151	42,404	13,671	4,249	2,240	1,732
MEAN	67.1	258	488	577	495	667	1,172	1,368	456	137	72.3	57.7
MAX	166	576	1,880	1,680	1,060	2,050	1,790	2,350	854	200	89	70
MIN	38	91	194	325	292	316	920	794	205	92	60	54
AC-FT	4,120	15,360	29,980	35,500	27,480	41,000	69,720	84,110	27,120	8,430	4,440	3,440
CAL YR 1968	TOTAL	131,308	MEAN	359	MAX	5,890	MIN	38	AC-FT	260,400		
WTR YR 1969	TOTAL	176,815	MEAN	484	MAX	2,350	MIN	38	AC-FT	350,700		

PEAK DISCHARGE (BASE, 2,000 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1015	11.52	3,180	3-30	2230	9.73	2,180
1-13	0430	9.72	2,180	5-10	2145	10.61	2,650

KLAMATH RIVER BASIN

471

11-5225. SALMON RIVER AT SOMES BAR, CALIF.
(Formerly published as Salmon River at Somesbar)

LOCATION.--Lat 41°22'40", long 123°28'35", in NE $\frac{1}{4}$ sec.3, T.11 N., R.6 E., Siskiyou County, Klamath National Forest, on left bank at Somes Bar, 1.0 mile upstream from mouth.

DRAINAGE AREA.--751 sq mi.

PERIOD OF RECORD.--September 1911 to September 1915, October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 482.97 ft above mean sea level. Prior to October 1927, non-recording gage, at different datum, October 1927 to Dec. 22, 1964, water-stage recorder at site 0.5 mile upstream at datum 6.54 ft higher.

AVERAGE DISCHARGE.--46 years, 1,746 cfs (1,265,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,700 cfs Jan. 21 (gage height, 13.59 ft); minimum daily, 148 cfs Oct. 1-5, 10.

Period of record: Maximum discharge, 133,000 cfs Dec. 22, 1964 (gage height, 46.6 ft, present site and datum, from floodmarks), from rating curve extended above 33,000 cfs; minimum, 70 cfs Aug. 25, Sept. 4, 5, 1931.

REMARKS.--Records good. No storage or large diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1285: 1912, 1914, 1915(M), 1946(M), 1948(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	461	857	1,360	2,730	1,660	5,570	4,340	4,650	1,060	379	215
2	148	917	761	1,470	2,430	1,650	4,890	4,050	4,770	1,080	370	208
3	148	1,050	690	1,730	2,290	1,660	4,090	3,900	5,000	1,010	358	206
4	148	709	664	2,470	2,280	1,580	3,520	3,550	5,190	950	346	204
5	148	732	1,240	2,880	2,240	1,560	3,530	3,630	5,400	925	343	199
6	149	718	1,170	3,090	2,150	1,540	3,190	4,700	4,640	906	333	198
7	150	676	1,030	2,990	2,000	1,520	2,900	6,530	4,020	872	323	195
8	150	758	1,280	2,730	2,010	1,470	2,720	7,740	3,440	849	319	195
9	149	2,330	1,170	2,410	2,840	1,430	2,680	8,930	3,080	843	312	194
10	148	1,390	6,160	2,140	2,920	1,380	2,670	9,580	3,130	844	302	191
11	227	1,240	4,130	2,550	4,310	1,320	2,900	9,810	2,840	816	299	189
12	842	2,390	2,950	6,450	4,870	1,290	3,700	9,750	2,710	769	294	189
13	686	1,430	2,370	13,300	4,000	1,260	3,690	9,110	2,780	723	290	189
14	451	1,140	2,570	7,160	3,500	1,250	3,400	7,760	2,750	693	278	188
15	405	1,100	4,000	4,570	3,370	1,240	3,080	6,190	2,640	672	270	183
16	350	1,010	3,810	3,350	3,310	1,370	3,000	6,020	2,420	644	274	183
17	347	1,070	2,490	2,590	3,070	1,600	3,440	6,790	2,260	615	268	183
18	337	3,560	1,930	2,240	2,860	2,020	4,300	7,230	2,050	602	260	200
19	309	2,520	1,610	3,290	2,690	2,000	4,110	5,950	2,930	594	258	213
20	399	1,470	1,350	11,500	2,560	1,890	4,070	5,050	2,450	580	257	223
21	435	1,130	1,190	18,000	2,380	1,830	4,600	5,220	1,970	568	252	234
22	342	1,540	1,200	9,950	2,220	1,950	5,740	5,860	1,720	550	249	228
23	298	1,260	2,210	6,500	2,120	2,250	6,620	6,460	1,610	529	243	216
24	275	1,180	4,100	4,930	2,010	2,380	5,220	6,250	1,530	632	234	215
25	261	1,250	3,620	4,310	1,920	2,490	4,240	5,400	1,420	593	238	211
26	246	1,060	2,710	5,940	1,780	2,860	3,690	5,320	1,350	530	238	204
27	238	921	1,560	5,420	1,690	3,610	3,660	5,120	1,230	486	237	197
28	228	820	1,880	4,610	1,700	4,450	4,360	4,140	1,200	458	230	191
29	305	793	1,710	3,830	-----	5,180	4,950	4,290	1,100	432	230	188
30	688	859	1,570	3,220	-----	5,940	4,630	4,910	1,060	417	228	186
31	611	-----	1,440	2,850	-----	6,410	-----	4,930	-----	399	219	-----
TOTAL	9,766	37,484	65,422	149,830	74,250	70,040	119,160	188,510	83,340	21,641	8,731	6,015
MEAN	315	1,249	2,110	4,833	2,652	2,259	3,972	6,081	2,778	698	282	201
MAX	842	3,560	6,160	18,000	4,870	6,410	6,620	9,810	5,400	1,080	379	234
MIN	148	461	664	1,360	1,690	1,240	2,670	3,550	1,060	399	219	183
AC-FT	19,370	74,350	129,800	297,000	147,300	138,900	236,400	373,900	165,300	42,920	17,320	11,930

CAL YR 1968 TOTAL 547,050 MEAN 1,495 MAX 26,000 MIN 148 AC-FT 1,085,000
WTR YR 1969 TOTAL 834,189 MEAN 2,285 MAX 18,000 MIN 148 AC-FT 1,655,000

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1430	10.43	11,600	1-21	0100	13.59	21,700
1-13	0730	11.91	16,000	5-12	0100	9.74	10,900

KLAMATH RIVER BASIN

11-5230. KLAMATH RIVER AT ORLEANS, CALIF.

LOCATION.--Lat 41°18'13", long 123°32'00", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.31, T.11 N., R.6 E., Humboldt County, Six Rivers National Forest, on right bank at Orleans, 25 ft upstream from highway bridge, and 0.2 mile downstream from Cheenitch Creek.

DRAINAGE AREA.--8,500 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1965, published as "at Somesbar."

GAGE.--Water-stage recorder. Datum of gage is 355.98 ft above mean sea level. Prior to Oct. 1, 1965, at site 6.7 miles upstream at datum 90.68 ft higher.

AVERAGE DISCHARGE.--42 years, 7,818 cfs (5,664,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 77,800 cfs Jan. 21 (gage height, unknown); minimum daily, 1,430 cfs Oct. 9-11.

Period of record: Maximum discharge, 307,000 cfs Dec. 22, 1964 (gage height, 76.5 ft, from floodmarks, site and datum then in use), from rating curve extended above 80,000 cfs by slope-conveyance study; minimum daily, 320 cfs Aug. 25, Sept. 1, 1951.

REMARKS.--Records good. Flow considerably regulated by reservoirs and powerplants above station. Large diversions above station for irrigation. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1565: 1935(M), 1949.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,510	2,800	4,660	6,840	14,900	9,910	29,100	18,000	14,300	4,000	2,300	1,650
2	1,500	4,310	4,380	7,240	13,300	9,920	25,400	17,400	14,500	3,870	2,460	1,960
3	1,500	4,880	4,110	7,780	12,500	9,630	22,700	18,200	14,600	3,690	2,420	1,980
4	1,490	3,530	3,990	9,350	12,200	9,170	21,300	17,600	14,500	3,570	2,400	1,980
5	1,490	3,510	5,920	10,400	12,200	8,930	21,300	17,000	14,900	3,450	2,390	1,950
6	1,480	3,460	5,930	10,800	11,700	8,870	20,400	18,700	13,600	3,340	2,350	1,890
7	1,470	3,420	5,240	10,700	11,000	8,450	19,200	22,600	12,600	3,220	2,270	1,870
8	1,440	3,500	6,180	10,300	11,000	8,060	18,200	26,400	11,000	3,150	2,220	1,870
9	1,430	6,160	6,020	9,450	15,900	7,190	17,500	29,000	9,980	3,100	2,160	1,860
10	1,430	4,970	17,400	8,900	15,900	6,970	16,600	30,800	9,650	3,060	2,110	1,840
11	1,430	4,500	19,600	11,200	20,600	6,750	16,200	30,400	8,930	3,000	2,050	1,800
12	2,800	8,160	12,100	21,300	25,600	6,710	17,900	29,900	9,040	2,930	2,010	1,790
13	3,800	5,700	9,690	48,400	21,300	7,330	18,700	28,700	9,120	2,820	1,980	1,790
14	3,400	4,700	10,500	32,100	18,100	7,390	17,500	26,500	8,820	2,750	1,940	1,790
15	3,200	4,570	13,600	20,800	17,200	7,320	16,200	24,000	8,870	2,690	1,900	1,800
16	3,050	4,280	15,300	16,100	17,100	7,050	15,300	24,500	8,550	2,620	1,830	1,840
17	2,850	4,240	11,000	13,300	15,800	7,960	16,000	25,900	8,190	2,570	1,780	1,900
18	2,800	9,330	8,870	11,500	14,900	10,700	19,200	27,500	7,620	2,530	1,710	1,970
19	2,780	9,280	7,580	12,500	14,300	10,700	18,700	25,500	7,500	2,500	1,650	2,040
20	2,740	6,810	6,660	25,300	13,700	10,100	17,600	20,900	7,160	2,480	1,600	2,120
21	2,700	5,610	6,100	70,000	13,000	9,750	18,500	19,700	6,550	2,420	1,560	2,200
22	2,660	6,520	5,780	52,000	12,200	10,300	21,900	20,600	5,890	2,370	1,540	2,290
23	2,580	6,230	8,400	39,000	11,900	11,200	24,900	21,300	5,500	2,330	1,520	2,340
24	2,510	5,910	14,100	35,000	11,600	11,600	22,400	20,700	5,280	2,460	1,490	2,320
25	2,420	5,310	13,300	31,800	11,000	12,100	18,500	18,200	5,010	2,430	1,470	2,300
26	2,400	5,520	10,600	23,200	10,400	14,600	16,300	17,800	4,840	2,460	1,450	2,280
27	2,380	4,990	9,180	19,400	9,910	17,200	15,500	17,500	4,580	2,440	1,450	2,260
28	2,360	4,620	9,250	18,700	9,920	20,700	16,700	14,400	4,490	2,330	1,450	2,220
29	2,360	4,430	8,850	23,700	-----	24,500	19,100	13,700	4,300	2,270	1,460	2,200
30	2,700	4,660	7,980	22,000	-----	28,200	19,300	14,700	4,130	2,210	1,460	1,980
31	3,200	-----	7,240	20,900	-----	31,300	-----	15,300	-----	2,160	1,450	-----
TOTAL	71,860	155,910	279,510	659,960	399,130	360,560	578,100	673,400	264,000	87,220	57,830	60,080
MEAN	2,318	5,197	9,016	21,290	14,250	11,630	19,270	21,720	8,800	2,814	1,865	2,003
MAX	3,800	9,330	19,600	70,000	25,600	31,300	29,100	30,800	14,900	4,000	2,460	2,340
MIN	1,430	2,800	3,990	6,840	9,910	6,710	15,300	13,700	4,130	2,160	1,450	1,650
AC-FT	142,500	309,200	554,400	1,309M	791,700	715,200	1,147M	1,336M	523,600	173,000	114,700	119,200

CAL YR 1968 TOTAL 2,327,520 MEAN 6,359 MAX 92,800 MIN 1,280 AC-FT 4,617,000
 WTR YR 1969 TOTAL 3,647,560 MEAN 9,993 MAX 70,000 MIN 1,430 AC-FT 7,235,000

PEAK DISCHARGE (BASE, 40,000 CFS).--Jan. 13 (0930) 56,000 cfs (18.57 ft); Jan. 21 (time unknown) 77,800 cfs.

NOTE.--No gage-height record Jan. 21-24, Aug. 1 to Sept. 30.

11-5232. TRINITY RIVER ABOVE COFFEE CREEK, NEAR TRINITY CENTER, CALIF.

LOCATION.--Lat 41°06'29", long 122°42'23", on line between secs.31 and 32, T.38 N., R.7 W., Trinity County, Shasta National Forest, on right bank 250 ft downstream from Chinquapin Gulch, 1.8 miles upstream from Coffee Creek, and 8.5 miles north of Trinity Center.

DRAINAGE AREA.--149 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 2,533.36 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 416 cfs (301,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,640 cfs May 12 (gage height, 7.35 ft); minimum daily, 30 cfs Oct. 1-4. Period of record: Maximum discharge, 20,800 cfs Dec. 22, 1964 (gage height, 12.30 ft, in gage well, 13.4 ft, from floodmarks), from rating curve extended above 5,000 cfs on basis of slope-area measurement at gage height 9.91 ft; minimum daily, 27 cfs Nov. 3, 1966. Flood of Dec. 22, 1955, reached a stage of 10.5 ft, from floodmarks (discharge, 11,400 cfs).

REMARKS.--Records excellent. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	50	79	117	311	223	1,910	1,620	1,460	216	73	44
2	30	80	73	120	279	218	1,570	1,510	1,410	208	71	43
3	30	72	71	138	261	211	1,220	1,410	1,410	197	69	43
4	30	64	71	180	255	206	1,030	1,240	1,410	185	67	43
5	31	66	73	232	250	210	1,300	1,480	1,340	178	66	43
6	32	62	71	293	246	216	1,060	2,190	1,180	172	66	43
7	31	57	75	291	224	217	919	2,800	1,030	165	64	43
8	31	64	92	263	235	218	901	3,160	866	158	63	43
9	32	88	141	241	247	219	933	3,550	773	152	60	42
10	31	67	2,200	225	343	214	993	3,680	808	147	59	42
11	44	125	765	233	1,830	211	1,170	3,960	771	140	58	42
12	93	189	400	263	1,320	210	1,510	3,750	704	135	58	42
13	74	95	295	312	794	210	1,470	3,840	680	130	56	41
14	53	82	260	244	608	220	1,230	3,170	670	125	56	41
15	52	78	544	213	513	248	1,140	2,540	610	121	55	41
16	48	75	351	194	444	299	1,240	2,570	558	116	54	41
17	45	79	254	184	408	344	1,470	2,920	504	111	53	41
18	42	152	213	178	394	417	1,600	2,810	587	107	53	44
19	41	147	190	200	372	426	1,560	2,250	682	104	53	47
20	43	113	166	704	347	422	1,730	1,950	531	100	52	47
21	43	97	151	1,680	319	429	2,030	2,050	446	98	51	50
22	40	98	161	957	300	529	2,630	2,270	397	95	50	46
23	40	91	205	625	290	656	2,580	2,460	368	93	49	44
24	39	93	249	484	281	683	1,700	2,420	336	93	49	44
25	38	93	225	479	260	725	1,300	2,300	309	89	49	43
26	38	86	159	1,270	242	867	1,150	2,100	288	86	48	41
27	38	83	135	786	234	1,130	1,250	1,720	266	83	48	41
28	37	78	131	576	238	1,420	1,700	1,440	251	81	48	41
29	55	79	123	464	-----	1,630	1,940	1,530	236	79	47	41
30	67	79	120	392	-----	1,880	1,670	1,730	225	77	46	41
31	56	-----	118	339	-----	2,210	-----	1,600	-----	76	45	-----
TOTAL	1,334	2,682	8,161	12,877	11,845	17,318	43,906	74,020	21,106	3,917	1,736	1,288
MEAN	43.0	89.4	263	415	423	559	1,464	2,388	704	126	56.0	42.9
MAX	93	189	2,200	1,680	1,830	2,210	2,630	3,960	1,460	216	73	50
MIN	30	50	71	117	224	206	901	1,240	225	76	45	41
AC-FT	2,650	5,320	16,190	25,540	23,490	34,350	87,090	146,800	41,860	7,770	3,440	2,550

CAL YR 1968	TOTAL 113,575	MEAN 310	MAX 3,310	MIN 30	AC-FT 225,300
WTR YR 1969	TOTAL 200,190	MEAN 548	MAX 3,960	MIN 30	AC-FT 397,100

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1030	6.91	3,970	3-30	2300	5.60	2,320
1-21	0330	5.34	2,010	4-12	2100	5.00	1,660
1-28	0445	4.93	1,600	4-22	2130	6.29	3,150
2-11	1500	5.64	2,370	5-12	2245	7.35	4,640

11-5254. CLAIR ENGLE LAKE NEAR LEWISTON, CALIF.

LOCATION.--Lat 40°48'05", long 122°45'44", in sec.15, T.34 N., R.8 W., Trinity County, Trinity National Forest, on side of intake structure of Trinity Dam on Trinity River, 9 miles north of Lewiston.

DRAINAGE AREA.--692 sq mi.

PERIOD OF RECORD.--November 1960 to current year. Prior to October 1963 published as Trinity Lake near Lewiston.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Jan. 4, 1962, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 2,480,700 acre-ft June 6 (elevation, 2,371.99 ft); minimum, 1,305,600 acre-ft Dec. 9 (elevation, 2,286.22 ft).

Period of record: Maximum contents, 2,548,600 acre-ft Apr. 15, 1963 (elevation, 2,376.02 ft); minimum since lake first filled, 1,305,600 acre-ft Dec. 9, 1968 (elevation, 2,286.22 ft).

REMARKS.--The lake is formed by an earthfill dam completed in November 1960. Storage began Nov. 23, 1960. Usable capacity, 2,437,700 acre-ft between elevations 1,995.5 (elevation of invert of river outlets) and 2,370.0 ft (gross pool elevation) above mean sea level. Dead storage, 10,000 acre-ft. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records furnished by Bureau of Reclamation, rounded to Geological Survey standards.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FEET)

1,960	670	2,100	162,200
1,970	1,890	2,140	292,900
1,980	4,130	2,190	529,600
2,000	12,400	2,250	955,100
2,020	26,400	2,310	1,583,600
2,040	47,000	2,380	2,617,000
2,070	92,900		

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1,386	1,339	1,317	1,347	1,475	1,587	1,752	2,068	2,472	2,406	2,257	2,076
2	1,384	1,339	1,316	1,346	1,477	1,590	1,764	2,078	2,474	2,402	2,251	2,070
3	1,382	1,338	1,314	1,346	1,479	1,592	1,775	2,087	2,476	2,398	2,245	2,065
4	1,380	1,336	1,313	1,347	1,481	1,593	1,784	2,096	2,479	2,394	2,239	2,058
5	1,379	1,335	1,311	1,348	1,482	1,595	1,795	2,106	2,480	2,390	2,233	2,052
6	1,377	1,334	1,310	1,349	1,486	1,597	1,804	2,120	2,481	2,386	2,227	2,047
7	1,375	1,332	1,308	1,351	1,488	1,599	1,812	2,137	2,480	2,382	2,221	2,041
8	1,373	1,332	1,307	1,352	1,490	1,601	1,820	2,156	2,478	2,378	2,216	2,035
9	1,371	1,332	1,306	1,353	1,493	1,603	1,827	2,179	2,475	2,373	2,210	2,029
10	1,369	1,331	1,320	1,355	1,496	1,605	1,835	2,203	2,473	2,369	2,204	2,023
11	1,368	1,331	1,324	1,358	1,511	1,607	1,845	2,230	2,471	2,365	2,199	2,017
12	1,368	1,331	1,326	1,364	1,523	1,608	1,856	2,254	2,469	2,360	2,193	2,011
13	1,366	1,331	1,328	1,371	1,530	1,610	1,866	2,278	2,467	2,355	2,187	2,005
14	1,365	1,331	1,329	1,374	1,537	1,612	1,876	2,298	2,465	2,350	2,181	1,999
15	1,364	1,330	1,336	1,376	1,542	1,614	1,884	2,314	2,463	2,345	2,176	1,993
16	1,362	1,329	1,338	1,378	1,546	1,617	1,894	2,331	2,460	2,340	2,170	1,987
17	1,361	1,328	1,339	1,379	1,551	1,621	1,904	2,348	2,458	2,336	2,164	1,981
18	1,360	1,329	1,340	1,382	1,555	1,625	1,916	2,365	2,456	2,332	2,159	1,975
19	1,358	1,330	1,340	1,386	1,559	1,630	1,926	2,376	2,456	2,327	2,153	1,969
20	1,356	1,329	1,340	1,399	1,562	1,634	1,938	2,386	2,454	2,323	2,147	1,963
21	1,355	1,328	1,340	1,416	1,565	1,638	1,952	2,397	2,451	2,319	2,141	1,958
22	1,353	1,328	1,342	1,426	1,569	1,644	1,968	2,409	2,447	2,314	2,135	1,952
23	1,352	1,326	1,345	1,432	1,572	1,650	1,985	2,421	2,443	2,308	2,130	1,946
24	1,351	1,326	1,346	1,435	1,576	1,656	1,996	2,431	2,438	2,303	2,124	1,940
25	1,349	1,325	1,346	1,442	1,578	1,663	2,005	2,440	2,434	2,298	2,118	1,934
26	1,347	1,324	1,347	1,451	1,580	1,670	2,014	2,447	2,428	2,292	2,112	1,928
27	1,346	1,322	1,347	1,458	1,583	1,680	2,022	2,453	2,423	2,286	2,106	1,922
28	1,344	1,321	1,348	1,462	1,585	1,691	2,033	2,456	2,419	2,281	2,100	1,916
29	1,343	1,320	1,347	1,467	-----	1,705	2,046	2,460	2,414	2,275	2,094	1,910
30	1,342	1,318	1,347	1,470	-----	1,719	2,057	2,466	2,411	2,269	2,088	1,905
31	1,340	-----	1,348	1,473	-----	1,736	-----	2,470	-----	2,263	2,082	-----
TOTAL	42,226	39,885	41,265	43,193	42,871	50,592	56,951	71,260	73,695	72,519	67,262	59,707
MEAN	1,362	1,330	1,331	1,393	1,531	1,632	1,898	2,299	2,457	2,339	2,170	1,990
MAX	1,386	1,339	1,348	1,473	1,585	1,736	2,057	2,470	2,481	2,406	2,257	2,076
MIN	1,340	1,318	1,306	1,346	1,475	1,587	1,752	2,068	2,411	2,263	2,082	1,905
(a)	2,289.35	2,287.38	2,289.95	2,300.88	2,310.13	2,321.86	2,344.82	2,371.34	2,367.75	2,358.44	2,346.55	2,334.27
(b)	-47.9	-21.7	+28.4	+125.9	+112.6	+150.7	+320.9	+413.1	-59.2	-147.9	-180.5	-177.5
(c)	1,590	200	-	-	-	100	2,980	7,020	6,780	9,460	8,680	4,920
CAL YR 1968	b	-350.2		MAX 2,139	MIN 1,306							
WTR YR 1969	b	+516.9		MAX 2,481	MIN 1,306							

a Elevation, in feet, at end of month.

b Change in contents, in thousands of acre-feet.

c Evaporation, in acre-feet.

11-5254.3. JUDGE FRANCIS CARR POWERPLANT NEAR FRENCH GULCH, CALIF.

LOCATION.--Lat 40°38'49", long 122°37'34". Shasta County, at powerplant 1.6 miles downstream from Mill Creek, and 3.8 miles south of French Gulch.

PERIOD OF RECORD.--April 1963 to current year.

GAGE.--Recorded powerplant output.

EXTREMES.--Period of record: Maximum daily discharge, 3,866 cfs for many days in June 1969; no flow May 6-9, 1963 and Oct. 25, 1966.

REMARKS.--Water is diverted from Trinity River at NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake (see sta 11-3717). See schematic diagram of Pit and McCloud River basins.

COOPERATION.--Records furnished by Bureau of Reclamation, not rounded to Geological Survey standards.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	752	719	934	625	274	301	290	378	3,740	3,410	2,720	2,830
2	748	851	932	542	284	300	296	326	3,740	2,700	2,730	2,790
3	695	759	987	509	247	296	302	511	3,750	2,710	2,910	2,760
4	758	739	1,050	394	246	289	304	274	3,770	2,870	2,810	2,760
5	713	728	1,020	379	247	315	274	345	3,800	2,870	2,770	2,760
6	705	718	1,040	328	279	319	225	356	3,800	2,870	2,770	2,760
7	707	718	1,290	301	337	322	225	379	3,780	2,870	2,780	2,760
8	716	712	1,240	301	346	309	222	369	3,820	2,970	2,780	2,760
9	699	720	1,270	299	261	310	223	338	3,850	2,830	2,670	2,760
10	741	702	1,360	347	267	292	223	530	3,850	2,830	2,770	2,750
11	753	706	1,160	363	275	307	227	435	3,830	3,050	2,800	2,760
12	697	709	814	361	481	314	226	330	3,840	2,890	2,820	2,600
13	736	699	915	381	483	240	158	382	3,840	2,830	2,820	2,740
14	768	787	711	355	486	243	209	382	3,860	2,820	2,820	2,710
15	739	797	890	367	479	285	209	630	3,870	2,890	2,820	2,730
16	715	712	930	399	365	225	262	382	3,860	2,860	2,830	2,770
17	693	715	843	393	290	209	213	1,170	3,780	2,880	2,810	2,790
18	665	760	524	338	296	465	421	1,170	3,630	2,840	2,770	2,780
19	682	764	491	337	271	209	407	1,790	3,600	2,640	2,760	2,740
20	687	645	486	340	267	192	416	1,670	3,740	2,760	2,800	2,750
21	750	998	474	705	273	211	373	1,660	3,500	2,820	2,800	2,730
22	780	990	536	422	264	259	370	1,940	3,440	2,850	2,800	2,720
23	725	930	628	619	261	249	416	2,390	3,440	2,810	2,780	2,730
24	678	988	613	287	271	312	373	3,340	3,440	2,800	2,780	2,740
25	767	938	697	232	292	272	371	3,340	3,440	2,800	2,790	2,730
26	620	948	623	229	283	291	374	2,950	3,440	2,790	2,780	2,650
27	684	962	576	350	281	354	404	3,620	3,440	2,560	2,780	2,770
28	711	944	565	352	282	257	376	3,700	3,440	2,560	2,780	2,770
29	726	1,010	592	288	-----	239	391	3,670	3,440	2,700	2,770	2,770
30	719	1,010	602	309	-----	239	423	3,680	3,100	2,740	2,780	2,770
31	716	-----	582	271	-----	235	-----	3,720	-----	2,730	2,770	-----
TOTAL	22,245	24,378	25,375	11,723	8,688	8,660	9,203	46,157	109,870	87,550	86,370	82,440
MEAN	718	813	819	378	310	279	307	1,489	3,662	2,824	2,786	2,748
MAX	780	1,010	1,360	705	486	465	423	3,720	3,870	3,410	2,910	2,830
MIN	620	645	474	229	246	192	158	274	3,100	2,560	2,670	2,600
AC-FT	44,120	48,350	50,330	23,250	17,230	17,180	18,250	91,550	217,900	173,700	171,300	163,500
CAL YR 1968	TOTAL 635,288		MEAN 1,736		MAX 3,598		MIN 285		AC-FT 1,260,000			
WTR YR 1969	TOTAL 522,659		MEAN 1,432		MAX 3,870		MIN 158		AC-FT 1,037,000			

11-5255. TRINITY RIVER AT LEWISTON, CALIF.

LOCATION.--Lat 40°43'10", long 122°48'09", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.33 N., R.8 W., Trinity County, on right bank 400 ft upstream from Deadwood Creek, and 0.8 mile northeast of Lewiston.

DRAINAGE AREA.--728 sq mi.

PERIOD OF RECORD.--August 1911 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,810 ft (from topographic map). Prior to Oct. 16, 1930, nonrecording gage and Oct. 16, 1930, to Sept. 30, 1958, water-stage recorder, at site 1.1 miles downstream at different datum. Oct. 1, 1958, to July 6, 1964, water-stage recorder at site 0.8 mile downstream at different datum.

AVERAGE DISCHARGE (adjusted for storage, evaporation and diversion).--58 years, 1,675 cfs (1,214,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,450 cfs June 6 (gage height, 5.15 ft); minimum daily, 125 cfs July 8.

Period of record: Maximum discharge, 71,600 cfs Dec. 22, 1955 (gage height, 27.3 ft, from floodmarks, site and datum then in use); minimum, 23 cfs July 30, 1924. Maximum discharge since construction of Lewiston Dam in 1960, 12,700 cfs Apr. 20, 1963 (gage height, 12.38 ft).

Flood of December 1861 reached a stage of 21.6 ft, from floodmarks, at site 1.1 miles downstream at different datum (discharge, not determined).

REMARKS.--Records excellent. Flow regulated by Clair Engle Lake (see sta 11-5254) beginning in November 1960. Diversion to Judge Francis Carr Powerplant (see sta 11-5254.3), began in April 1963. Small diversions above head of Trinity Lake for irrigation, power and placer mining. Records of chemical analyses and water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	259	162	164	162	164	170	170	717	164	192	198
2	200	259	162	162	160	167	167	170	884	164	162	220
3	200	256	164	162	162	167	167	170	1,010	164	164	220
4	203	259	164	162	162	167	167	170	1,120	167	162	220
5	203	259	164	162	167	167	167	172	1,300	167	162	220
6	200	256	164	162	167	164	167	172	1,440	167	162	220
7	200	256	164	162	164	164	167	172	1,440	138	164	220
8	200	256	164	162	167	164	164	172	1,320	125	162	220
9	200	256	164	162	167	162	167	174	1,100	136	164	220
10	203	256	172	162	167	162	167	174	989	134	164	220
11	206	259	164	164	172	162	164	174	756	153	164	220
12	203	259	164	164	172	162	164	174	631	164	164	220
13	203	259	164	167	170	162	167	174	465	164	164	220
14	200	248	162	167	167	162	167	174	375	164	164	223
15	242	206	170	167	167	162	167	174	323	164	162	223
16	256	203	162	164	164	162	167	172	177	162	162	223
17	256	203	162	162	162	164	167	172	160	162	162	223
18	256	203	162	162	164	164	164	172	162	160	162	223
19	256	203	162	172	164	162	167	170	162	160	162	220
20	256	203	162	174	164	164	167	170	160	160	160	220
21	256	203	164	172	164	167	164	170	160	160	160	220
22	256	203	167	167	164	167	167	170	162	160	160	220
23	256	203	167	164	167	167	170	172	162	160	160	220
24	256	206	167	160	167	167	170	172	162	174	160	220
25	256	203	164	162	164	167	170	170	164	256	160	220
26	256	203	162	162	164	167	167	174	164	273	160	220
27	256	203	164	160	167	167	167	174	164	450	160	223
28	259	203	164	160	167	164	170	172	164	470	162	223
29	259	203	162	162	-----	167	170	172	164	400	162	223
30	259	195	164	160	-----	167	170	195	164	319	162	223
31	259	-----	164	160	-----	167	-----	238	-----	270	162	-----
TOTAL	7,171	6,843	5,087	5,074	4,635	5,108	5,016	5,421	16,321	6,231	5,052	6,605
MEAN	231	228	164	164	166	165	167	175	544	201	163	220
MAX	259	259	172	174	172	167	170	238	1,440	470	192	223
MIN	200	195	162	160	160	162	164	170	160	125	160	198
AC-FT	14,220	13,570	10,090	10,060	9,190	10,130	9,950	10,750	32,370	12,360	10,020	13,100
MEAN a	203	679	1,444	2,589	2,503	2,896	5,916	8,496	3,326	773	153	67.7
AC-FT a	12,090	40,430	88,810	159,200	139,000	178,100	352,000	522,400	197,900	47,510	9,430	4,030

CAL YR 1968 TOTAL 63,685 MEAN 174 MAX 259 MIN 144 AC-FT 126,300 MEAN a 1,479 AC-FT a 1,074,000
WTR YR 1969 TOTAL 78,564 MEAN 215 MAX 1,440 MIN 125 AC-FT 155,800 MEAN a 2,419 AC-FT a 1,751,000

a Adjusted for change in contents, diversion, and evaporation from Clair Engle Lake. Data furnished by U.S. Bureau of Reclamation.

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LOCATION.--Lat 40°40'06", long 122°56'31", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.33 N., R.10 W., Trinity County, on left bank 0.2 mile downstream from highway bridge, and 1.3 miles north of Douglas City.

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft (from topographic map). Oct. 4, 1967, to Sept. 30, 1968, at site 1,000 ft upstream at different datum.

Period of record: Maximum discharge, 3,980 cfs Dec. 22, 1964 (gage height, 12.72 ft), from rating curve extended above 260 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 12.85 ft Jan. 13, 1969: no flow Aug. 26, 1964.

REVISIONS (WATER YEARS).--WRD Calif. 1965: 1959(M), 1960(M), 1961-64.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	3.7	16	26	136	170	288	129	75	17	4.2	.90
2	.90	12	16	28	121	168	255	125	72	17	3.7	.70
3	.90	8.3	16	37	109	166	211	121	71	16	3.7	.60
4	1.0	6.3	17	56	103	149	187	112	70	15	3.4	.70
5	1.2	7.3	17	67	105	149	181	116	65	15	3.7	.70
6	1.3	6.0	17	75	107	151	153	140	61	14	3.7	.80
7	1.3	5.6	17	86	91	145	136	168	53	14	3.7	.60
8	1.5	6.0	17	91	169	138	130	181	49	14	3.4	.70
9	1.7	9.0	19	65	283	132	129	202	49	13	3.2	.50
10	1.7	7.7	389	50	270	119	129	215	46	12	3.0	.40
11	2.1	9.9	187	51	696	112	136	220	44	11	3.0	.50
12	3.4	16	78	731	509	114	153	206	42	11	2.8	.60
13	3.7	9.4	98	1,080	334	114	145	200	38	10	2.8	.40
14	3.7	9.9	170	448	299	118	130	175	37	9.9	2.6	.50
15	4.2	16	371	292	316	134	121	153	37	9.4	2.4	.50
16	3.9	14	183	183	288	162	121	149	35	8.7	2.2	.80
17	3.9	17	81	114	264	204	132	153	32	8.3	2.1	.80
18	3.7	33	55	138	266	257	140	149	32	8.3	2.2	1.0
19	3.7	25	42	572	266	237	132	134	49	7.7	2.2	2.1
20	3.9	16	31	873	253	235	138	121	38	7.3	2.2	2.2
21	3.9	13	26	874	213	255	151	119	33	7.0	2.2	2.4
22	3.9	12	25	473	183	270	173	119	30	6.7	1.9	2.2
23	3.9	12	49	299	168	281	181	121	27	6.7	1.7	1.9
24	3.9	18	121	217	170	268	147	112	26	6.3	1.5	2.1
25	3.9	33	109	271	154	261	127	103	25	6.0	1.7	1.9
26	3.9	15	80	452	138	272	116	98	25	5.6	1.9	1.5
27	3.9	15	52	294	134	303	118	87	24	5.2	1.9	1.5
28	3.9	16	43	226	198	334	130	80	21	4.9	1.9	1.3
29	5.4	20	36	177	-----	354	138	80	20	4.7	1.5	1.2
30	5.6	34	32	147	-----	352	136	84	18	4.2	1.2	1.3
31	5.2	-----	28	123	-----	332	-----	78	-----	3.9	1.1	-----
TOTAL	95.90	426.1	2,438	8,616	6,343	6,456	4,564	4,250	1,244	299.8	78.7	33.30
MEAN	3.09	14.2	78.6	278	227	208	152	137	41.5	9.67	2.54	1.11
MAX	5.6	34	389	1,080	696	354	288	220	75	17	4.2	2.4
MIN	.80	3.7	16	26	91	112	116	78	18	3.9	1.1	.40
AC-FT	190	845	4,840	17,090	12,580	12,810	9,050	8,430	2,470	595	156	66
CAL YR 1968	TOTAL 22,054.40		MEAN 60.3		MAX 1,470		MIN .40		AC-FT 43,740			
WTR YR 1969	TOTAL 34,844.80		MEAN 95.5		MAX 1,080		MIN .40		AC-FT 69,110			

KLAMATH RIVER BASIN

11-5265. NORTH FORK TRINITY RIVER AT HELENA, CALIF.

LOCATION.--Lat 40°46'55", long 123°07'38", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.21, T.34 N., R.11 W., Trinity County, on right bank 500 ft downstream from East Fork of North Fork Trinity River, 0.6 mile north of Helena, 1.0 mile upstream from mouth, and 6 miles northwest of Junction City.

DRAINAGE AREA.--151 sq mi.

PERIOD OF RECORD.--August 1911 to September 1913, January 1957 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,380 ft (from topographic map). August 1911 to September 1913, at site 0.8 mile downstream at different datum.

AVERAGE DISCHARGE.--14 years, 422 cfs (305,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,830 cfs Jan. 21 (gage height, 15.11 ft); minimum daily, 21 cfs Oct. 1-10.

Period of record: Maximum discharge, 35,800 cfs Dec. 22, 1964 (gage height, 27.93 ft, from floodmarks), from rating curve extended above 7,300 cfs on basis of slope-area measurement of maximum flow; minimum daily, 7.5 cfs Sept. 26, 1964.

REMARKS.--No known regulation or diversion above station. Records of suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	62	187	269	544	484	2,320	1,150	772	216	82	46
2	21	128	169	273	512	448	2,010	1,060	781	235	77	42
3	21	118	159	320	475	436	1,660	1,000	823	212	72	41
4	21	85	152	478	463	424	1,380	918	852	198	68	40
5	21	89	204	618	463	415	1,450	949	839	202	63	39
6	21	80	218	719	463	415	1,300	1,220	748	194	58	38
7	21	80	210	715	445	418	1,120	1,450	648	187	57	37
8	21	153	241	659	472	409	1,080	1,620	558	178	56	37
9	21	358	250	610	682	400	1,080	1,890	519	178	54	37
10	21	196	2,690	547	644	379	1,120	2,060	533	187	53	34
11	40	171	1,590	536	1,350	361	1,220	2,020	499	184	51	34
12	137	289	878	978	1,420	358	1,430	1,880	496	176	51	33
13	96	193	652	1,660	1,070	364	1,370	1,770	512	160	48	33
14	73	160	637	1,190	883	409	1,210	1,470	499	154	48	32
15	63	154	1,210	856	848	478	1,140	1,260	487	150	48	32
16	61	142	1,010	675	806	603	1,160	1,260	481	135	47	32
17	60	216	675	572	727	698	1,290	1,360	451	128	45	32
18	56	706	530	519	678	856	1,380	1,310	436	124	44	36
19	51	499	460	823	648	878	1,330	1,080	564	128	43	38
20	58	325	433	2,930	629	835	1,330	954	466	126	43	37
21	58	254	361	4,620	582	827	1,450	990	397	120	42	39
22	49	305	350	2,340	526	972	1,770	1,060	350	118	48	35
23	45	256	345	1,490	499	1,200	1,900	1,150	335	122	53	33
24	43	252	682	1,040	475	1,240	1,340	1,060	303	124	56	33
25	42	252	637	887	451	1,240	1,070	958	275	122	55	32
26	40	237	533	1,420	442	1,360	967	927	243	116	55	31
27	39	212	418	1,200	409	1,020	1,030	865	220	110	52	30
28	38	193	361	985	451	1,990	1,230	723	206	104	52	30
29	56	189	350	823	-----	2,380	1,290	776	196	97	50	30
30	97	191	315	652	-----	2,830	1,210	865	204	92	50	30
31	84	-----	287	578	-----	2,840	-----	818	-----	86	48	-----
TOTAL	1,496	6,545	17,194	31,982	18,057	27,967	40,637	37,873	14,693	4,663	1,669	1,053
MEAN	48.3	218	555	1,032	645	902	1,355	1,222	490	150	53.8	35.1
MAX	137	706	2,690	4,620	1,420	2,840	2,320	2,060	852	235	82	46
MIN	21	62	152	269	409	358	967	723	196	86	42	30
AC-FT	2,970	12,980	34,100	63,440	35,820	55,470	80,600	75,120	29,140	9,250	3,310	2,090
CAL YR 1968	TOTAL 137,844		MEAN 377		MAX 7,930		MIN 21		AC-FT 273,400			
WTR YR 1969	TOTAL 203,829		MEAN 558		MAX 4,620		MIN 21		AC-FT 404,300			

11-5270. TRINITY RIVER NEAR BURNT RANCH, CALIF.

LOCATION.--Lat 40°47'20", long 123°26'20", in S $\frac{1}{2}$ sec.19, T.5 N., R.7 E., Trinity County, Trinity National Forest, on left bank 500 ft upstream from Cedar Flat Creek, 700 ft upstream from highway bridge at Cedar Flat, and 2.3 miles southeast of town of Burnt Ranch.

DRAINAGE AREA.--1,439 sq mi.

PERIOD OF RECORD.--October 1931 to September 1940, October 1956 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 944.05 ft above mean sea level. Oct. 1, 1931, to Jan. 19, 1940, at site 2 miles upstream at different datum.

AVERAGE DISCHARGE.--22 years, 2,281 cfs (1,653,000 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 17,500 cfs Jan. 21 (gage height, unknown); minimum daily, 253 cfs Sept. 1.

Period of record: Maximum discharge, 81,500 cfs Feb. 25, 1958 (gage height, 30.50 ft), from rating curve extended above 40,000 cfs on basis of slope-area measurement at gage height 43.2 ft; minimum, 82 cfs Aug. 31, 1939.

Flood of Dec. 22, 1955, reached a stage of 43.2 ft, from floodmarks (discharge, 172,000 cfs, on basis of slope-area measurement of maximum flow).

REMARKS.--Records excellent. Flow regulated by Clair Engle Lake 64 miles upstream since November 1960 (see sta 11-5254). Small diversions above station for mining and irrigation. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294	502	703	949	2,690	2,600	6,340	3,310	2,250	892	530	253
2	297	566	630	946	2,470	2,400	5,660	3,090	2,740	936	450	261
3	298	695	587	1,000	2,300	2,520	5,120	2,980	2,930	888	394	290
4	295	582	571	1,260	2,230	2,390	4,470	2,750	3,120	846	377	292
5	297	570	610	1,620	2,250	2,330	4,470	2,690	3,290	843	368	292
6	301	558	686	1,910	2,270	2,340	4,190	3,100	3,320	830	362	292
7	301	542	662	1,990	2,180	2,310	3,730	3,910	3,150	809	353	291
8	301	554	757	1,950	2,990	2,250	3,490	4,350	2,900	772	346	289
9	301	1,260	771	1,790	3,160	2,180	3,430	4,800	2,580	746	340	289
10	301	948	4,120	1,640	5,140	2,100	3,480	5,050	2,420	776	332	289
11	322	730	4,190	1,690	7,960	1,990	3,690	5,180	2,220	763	326	289
12	482	1,090	2,170	3,620	6,070	1,930	4,280	5,000	1,990	742	322	289
13	558	858	1,640	10,800	4,780	1,900	4,280	4,760	1,960	725	319	286
14	494	735	1,720	6,870	4,430	1,890	3,840	4,250	1,770	695	314	286
15	470	760	3,120	4,130	4,110	1,930	3,460	3,510	1,710	680	306	287
16	458	660	3,440	3,060	3,570	2,160	3,340	3,320	1,650	649	299	289
17	478	650	2,030	2,650	3,330	2,450	3,610	3,510	1,450	628	298	289
18	466	1,480	1,580	2,350	2,910	3,100	4,020	3,650	1,340	607	294	301
19	458	1,540	1,370	2,150	2,730	3,240	3,840	3,130	1,730	608	287	321
20	458	1,040	1,210	6,000	2,730	3,140	3,830	2,690	1,660	607	286	322
21	470	835	1,090	15,000	2,510	3,330	4,050	2,630	1,370	591	284	326
22	454	845	1,040	10,400	2,470	3,600	4,710	2,790	1,250	579	278	327
23	442	843	1,180	6,970	2,640	4,050	5,080	2,980	1,190	561	274	321
24	434	791	1,470	5,110	2,480	4,210	4,250	2,990	1,150	558	270	319
25	427	892	1,610	4,360	2,590	4,200	3,480	2,630	1,070	569	265	317
26	423	799	1,460	6,010	2,410	4,360	3,080	2,500	1,000	608	265	313
27	420	731	1,290	5,540	2,300	4,930	3,030	2,540	934	585	264	311
28	420	687	1,220	4,530	2,450	5,700	3,380	2,080	897	736	260	309
29	434	663	1,120	3,800	-----	6,340	3,670	2,040	860	753	261	307
30	538	703	1,040	3,300	-----	7,000	3,490	2,340	866	674	260	307
31	534	-----	987	2,840	-----	7,090	-----	2,340	-----	585	258	-----
TOTAL	12,626	24,109	46,074	126,235	90,150	101,960	120,790	102,890	56,767	21,841	9,842	8,954
MEAN	407	804	1,486	4,072	3,220	3,289	4,026	3,319	1,892	705	317	298
MAX	558	1,540	4,190	15,000	7,960	7,090	6,340	5,180	3,320	936	530	327
MIN	294	502	571	946	2,180	1,890	3,030	2,040	860	558	258	253
AC-FT	25,040	47,820	91,390	250,400	178,800	202,200	239,600	204,100	112,600	43,320	19,520	17,760
CAL YR 1968	TOTAL 441,909		MEAN 1,207		MAX 17,900		MIN 228		AC-FT 876,500			
WTR YR 1969	TOTAL 722,238		MEAN 1,979		MAX 15,000		MIN 253		AC-FT 1,433,000			

NOTE.--No gage-height record Jan. 18-21.

KLAMATH RIVER BASIN

11-5274. NEW RIVER AT DENNY, CALIF.

LOCATION.--Lat 40°56'45", long 123°22'55", in NE $\frac{1}{4}$ sec.33, T.7 N., R.7 E., Trinity County, Trinity National Forest, on left bank at upstream side of private road bridge, 0.3 mile northeast of Denny, and 0.5 mile downstream from Quinby Creek.

DRAINAGE AREA.--173 sq mi.

PERIOD OF RECORD.--October 1927 to December 1928 (published as "near Denny"), June 1959 to September 1969 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,349.34 ft above mean sea level. Oct. 1, 1927, to Dec. 23, 1928, at site 2.6 miles downstream at different datum. June 1, 1959, to July 23, 1965, on downstream side of bridge at same datum.

AVERAGE DISCHARGE.--11 years, 428 cfs (310,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 8,440 cfs Jan. 21 (gage height, 17.24 ft); minimum daily, 23 cfs Aug. 21.

Period of record: Maximum discharge, 60,000 cfs Dec. 22, 1964 (gage height, 38.7 ft, from floodmarks), by field estimate of maximum flow; minimum daily, 18 cfs Oct. 5-7, 1961.

REMARKS.--Records fair. No regulation or diversion above station.

REVISIONS (WATER YEARS).--WSP 1445: 1928.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	61	262	402	930	479	1,730	920	518	124	41	29
2	30	93	237	426	845	465	1,530	860	507	121	40	29
3	30	103	223	538	774	472	1,320	820	510	117	39	29
4	30	78	220	779	747	465	1,160	756	500	115	38	29
5	30	82	319	915	729	465	1,210	752	475	111	38	28
6	30	82	367	990	702	461	1,100	910	428	109	37	27
7	32	84	346	950	648	454	1,010	1,130	384	106	36	27
8	32	95	433	855	648	447	950	1,270	345	101	35	27
9	32	228	426	761	815	440	940	1,400	316	99	34	26
10	32	180	2,100	680	865	426	950	1,450	306	94	33	26
11	43	185	1,410	756	1,340	412	1,010	1,420	284	91	31	26
12	97	339	855	1,160	1,500	402	1,170	1,360	272	87	30	26
13	84	204	734	1,970	1,240	398	1,110	1,280	266	85	30	26
14	61	156	738	1,880	1,040	398	1,020	1,110	251	82	29	26
15	64	149	1,280	1,300	975	405	930	955	247	78	29	26
16	58	140	1,040	1,040	955	465	905	920	236	74	27	26
17	53	195	761	885	890	582	995	945	220	71	27	26
18	50	635	626	810	840	774	1,110	950	210	69	25	32
19	49	468	542	1,250	810	779	1,060	825	237	67	24	37
20	55	313	472	4,800	770	770	1,050	743	216	65	24	35
21	56	245	423	6,080	738	738	1,120	738	194	61	23	37
22	50	276	405	3,190	680	774	1,310	774	179	59	25	35
23	47	253	526	2,190	639	860	1,440	792	167	56	28	33
24	44	276	729	1,720	610	905	1,180	752	164	59	29	33
25	43	297	707	1,540	586	975	1,000	684	156	56	30	32
26	42	279	586	2,210	526	1,080	905	662	153	52	30	30
27	42	259	507	1,780	503	1,320	900	626	144	49	29	29
28	41	242	475	1,480	503	1,540	990	534	140	47	29	28
29	50	242	465	1,240	-----	1,780	1,030	526	132	46	30	27
30	80	262	440	1,090	-----	2,000	970	566	128	45	31	27
31	75	-----	416	985	-----	2,000	-----	566	-----	42	31	-----
TOTAL	1,492	6,501	19,070	46,652	22,848	23,931	33,105	27,996	8,285	2,438	962	874
MEAN	48.1	217	615	1,505	816	772	1,104	903	276	78.6	31.0	29.1
MAX	97	635	2,100	6,080	1,500	2,000	1,730	1,450	518	124	41	37
MIN	30	61	220	402	503	398	900	526	128	42	23	26
AC-FT	2,960	12,890	37,820	92,530	45,320	47,470	65,660	55,530	16,430	4,840	1,910	1,730

CAL YR 1968 TOTAL 127,480

MEAN 348

MAX 6,640

MIN 27

AC-FT 252,900

WTR YR 1969 TOTAL 194,154

MEAN 532

MAX 6,080

MIN 23

AC-FT 385,100

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1200	13.17	3,750	1-21	0045	17.24	8,440
1-13	1915	12.69	3,300				

11-5285. HAYFORK CREEK NEAR HYAMPOM, CALIF.

LOCATION.--Lat 40°37'35", long 123°26'00", in NW $\frac{1}{4}$ sec.19, T.3 N., R.7 E., Trinity County, Trinity National Forest, on right bank 1.2 miles upstream from mouth, and 1.3 miles northeast of Hyampom.

DRAINAGE AREA.--378 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,270.67 ft above mean sea level.

AVERAGE DISCHARGE.--16 years, 516 cfs (373,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 13,800 cfs Jan. 20 (gage height, 14.04 ft); minimum daily, 27 cfs Oct. 2.

Period of record: Maximum discharge, 28,800 cfs Dec. 22, 1964 (gage height, 19.14 ft), from rating curve extended above 6,700 cfs on basis of slope-area measurement at gage height 18.00 ft; minimum daily, 16 cfs Aug. 26, Sept. 27, Oct. 4, 5, 1964.

REMARKS.--Records good. No regulation; diversions for irrigation of about 700 acres above station. Records of water temperatures for the water year 1969 are published in Part 2 of the report.

REVISIONS (WATER YEARS).--WSP 1395: 1954(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	55	150	275	1,300	1,140	3,390	1,400	363	189	59	39
2	27	78	143	289	1,190	1,120	3,040	1,320	349	177	59	35
3	29	140	128	328	1,100	1,090	2,670	1,260	338	174	55	35
4	28	100	118	388	1,070	1,010	2,430	1,180	314	171	55	35
5	28	96	115	525	1,090	1,010	2,620	1,140	310	162	59	37
6	29	90	123	670	1,030	1,030	2,390	1,240	307	159	58	37
7	30	88	133	745	944	1,010	2,160	1,390	300	150	58	37
8	30	86	180	730	1,080	962	2,070	1,390	303	140	55	39
9	30	86	201	655	1,960	944	2,090	1,390	307	138	55	36
10	28	84	2,160	590	1,940	890	2,140	1,370	338	138	51	33
11	31	86	1,640	660	3,980	848	2,230	1,270	314	128	51	35
12	45	120	710	5,410	4,170	836	2,450	1,190	310	123	55	35
13	55	128	530	9,460	2,880	824	2,310	1,110	296	123	51	36
14	48	110	550	4,530	2,390	830	2,050	994	282	120	47	33
15	50	115	2,290	2,850	2,350	872	1,870	854	272	115	40	33
16	45	110	1,420	2,090	2,130	1,040	1,850	795	247	110	44	35
17	44	118	765	1,600	1,870	1,320	1,990	775	240	110	47	33
18	42	201	560	1,380	1,770	1,850	2,060	760	251	100	47	37
19	41	349	480	2,980	1,700	1,770	1,960	690	303	92	47	44
20	42	225	400	9,220	1,620	1,730	1,930	650	349	92	44	48
21	41	171	345	10,300	1,480	2,040	1,980	620	282	90	47	48
22	41	143	328	5,810	1,350	2,110	2,140	570	244	86	47	37
23	41	128	314	3,790	1,300	2,240	2,220	550	234	80	44	39
24	42	130	352	2,690	1,230	2,260	1,810	525	234	84	44	40
25	42	201	456	2,570	1,170	2,260	1,580	505	213	80	47	44
26	41	168	420	4,290	1,040	2,390	1,420	496	207	78	37	48
27	41	145	366	3,160	1,040	2,750	1,420	496	207	78	36	48
28	40	133	338	2,430	1,160	3,220	1,540	448	204	69	39	47
29	42	125	317	1,940	-----	3,740	1,650	432	198	63	37	47
30	51	135	296	1,660	-----	4,080	1,500	412	195	63	36	37
31	55	-----	282	1,410	-----	3,860	-----	400	-----	59	39	-----
TOTAL	1,207	3,944	16,610	85,425	47,334	53,076	62,960	27,622	8,311	3,541	1,490	1,167
MEAN	38.9	131	536	2,756	1,691	1,712	2,099	891	277	114	48.1	38.9
MAX	55	349	2,290	10,300	4,170	4,080	3,390	1,400	363	189	59	48
MIN	27	55	115	275	944	824	1,420	400	195	59	36	33
AC-FT	2,390	7,820	32,950	169,400	93,890	105,300	124,900	54,790	16,480	7,020	2,960	2,310
CAL YR 1968	TOTAL	155,830	MEAN	426	MAX	6,600	MIN	22	AC-FT	309,100		
WTR YR 1969	TOTAL	312,687	MEAN	857	MAX	10,300	MIN	27	AC-FT	620,200		

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	1500	9.20	4,560	1-26	0745	9.63	5,120
12-15	1345	8.92	4,200	2-11	2145	9.65	5,150
1-13	0700	13.20	11,700	3-30	0300	9.02	4,330
1-20	2315	14.04	13,800				

KLAMATH RIVER BASIN

11-5287. SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CALIF.

LOCATION.--Lat 40°39'00", long 123°29'35", in NW¼SW¼ sec.10, T.3 N., R.6 E., Trinity County, Trinity National Forest, on left bank 0.3 mile downstream from Big Creek, 3.0 miles northeast of Hyampom, and 3.5 miles downstream from Hayfork Creek.

DRAINAGE AREA.--764 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 1,211.37 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 42,100 cfs Jan. 21 (gage height, 20.90 ft), from rating curve extended as explained below; minimum daily, 62 cfs Oct. 1-10.

Period of record: Maximum discharge, 42,100 cfs Jan. 21, 1969 (gage height, 20.90 ft), from rating curve extended above 12,000 cfs on basis of flood-routing study at gage height 30.45 ft; minimum daily, 60 cfs Sept. 30, 1967.

Flood of Dec. 22, 1964, reached a stage of 30.45 ft, from floodmarks (discharge, 88,000 cfs on basis of flood-routing study).

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	130	335	1,750	2,700	2,630	6,480	3,250	1,160	328	176	106
2	62	295	320	1,750	2,480	2,580	5,670	3,120	1,120	319	173	105
3	62	450	310	1,790	2,330	2,570	4,890	2,910	1,080	307	169	103
4	62	260	305	2,000	2,270	2,400	4,540	2,570	1,040	304	164	100
5	62	218	295	2,350	2,310	2,340	5,390	2,360	997	301	160	100
6	62	174	330	2,630	2,240	2,350	4,760	2,590	937	290	159	100
7	62	161	370	2,710	2,070	2,290	4,200	2,840	880	277	155	100
8	62	154	580	2,690	2,270	2,170	4,070	2,980	822	274	154	99
9	62	154	700	2,460	4,510	2,110	4,190	3,040	790	274	151	99
10	62	154	6,000	2,270	4,460	2,040	4,370	3,170	765	274	151	100
11	73	161	4,600	2,990	10,700	1,950	4,560	3,140	730	269	148	98
12	144	274	3,000	22,900	10,400	1,890	5,140	3,080	705	252	144	97
13	186	289	2,100	33,800	6,300	1,840	4,780	2,940	652	241	142	96
14	152	244	2,400	13,600	4,950	1,820	4,200	2,670	616	238	138	93
15	144	252	5,500	7,420	4,810	1,860	3,860	2,360	581	227	137	91
16	126	246	3,700	5,120	4,610	2,010	3,890	2,190	550	225	135	90
17	113	258	2,560	3,790	4,020	2,530	4,140	2,110	520	225	132	143
18	108	420	2,150	3,360	3,740	3,610	4,370	2,060	508	218	132	156
19	104	690	1,980	8,780	3,540	3,470	4,130	1,930	648	215	129	169
20	102	500	1,750	28,600	3,340	3,340	4,070	1,800	643	216	125	193
21	102	390	1,620	32,500	3,080	3,620	4,200	1,650	531	218	124	193
22	100	330	1,530	15,500	2,830	3,830	4,640	1,610	474	217	123	150
23	99	300	1,920	10,300	2,780	4,130	4,930	1,560	446	214	123	158
24	99	300	3,920	7,540	2,720	4,200	4,160	1,530	422	212	118	170
25	99	440	3,480	7,440	2,650	4,290	3,510	1,470	396	206	112	184
26	99	360	2,600	12,800	2,410	4,590	3,270	1,450	382	204	111	190
27	95	315	2,200	7,480	2,410	5,390	3,320	1,440	368	195	109	190
28	95	280	2,110	5,170	2,720	6,380	3,540	1,360	351	191	108	175
29	97	265	2,060	3,960	-----	7,230	3,710	1,310	347	189	108	160
30	142	300	1,920	3,290	-----	7,870	3,430	1,270	340	184	108	152
31	152	-----	1,800	2,830	-----	7,540	-----	1,230	-----	180	108	-----
TOTAL	3,051	8,764	64,465	261,570	105,600	106,870	130,410	68,990	19,801	7,484	4,226	3,960
MEAN	98.4	292	2,080	8,438	3,771	3,447	4,347	2,225	660	241	136	132
MAX	186	690	6,000	33,800	10,700	7,870	6,480	3,250	1,160	329	176	193
MIN	62	130	295	1,750	2,070	1,820	3,270	1,230	340	180	108	90
AC-FT	6,050	17,380	127,900	518,800	209,500	212,000	258,700	136,800	39,270	14,840	8,380	7,850

CAL YR 1968 TOTAL 477,967 MEAN 1,306 MAX 23,000 MIN 62 AC-FT 948,000
WTR YR 1969 TOTAL 785,191 MEAN 2,151 MAX 33,800 MIN 62 AC-FT 1,557,000

PEAK DISCHARGE (BASE, 8,600 CFS)							
DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	unknown	-	16,600	1-26	0915	13.95	15,900
12-15	unknown	-	12,000	2-11	1945	13.40	14,200
1-13	0645	20.69	41,100	3-30	0345	11.96	10,200
1-21	0015	20.90	42,100				

11-5298, WILLOW CREEK NEAR WILLOW CREEK, CALIF.

LOCATION.--Lat 40°56'50", long 123°39'35", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.7 N., R.5 E., Humboldt County, on right bank 0.1 mile upstream from Boise Creek, 1.5 miles northwest of town of Willow Creek, and 1.8 miles upstream from mouth.

DRAINAGE AREA.--41.0 sq mi.

PERIOD OF RECORD.--August 1959 to current year. Prior to October 1964, published as "at Willow Creek."

GAGE.--Water-stage recorder. Datum of gage is 585.54 ft above mean sea level. Aug. 13, 1959, to Dec. 22, 1964, at site 1.4 miles downstream at datum 85.55 ft lower.

AVERAGE DISCHARGE.--10 years, 161 cfs (116,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,490 cfs Jan. 20 (gage height, 8.31 ft); minimum daily, 9.6 cfs Oct. 28.

Period of record: Maximum discharge, 17,000 cfs Dec. 22, 1964 (gage height, 20.6 ft, present datum, from floodmarks); minimum daily, 6.8 cfs Sept. 28, 29, 1965.

REMARKS.--Records good. No regulation; small diversion for irrigation of about 40 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	188	243	534	270	543	238	35	25	17	13
2	13	67	174	264	508	273	445	219	34	25	17	12
3	13	60	137	294	486	288	350	201	34	24	17	12
4	13	41	118	335	476	264	312	176	35	25	16	12
5	13	42	383	368	458	249	367	193	34	25	17	13
6	13	36	279	380	443	240	325	267	34	25	17	12
7	13	42	196	403	421	219	303	317	35	25	16	12
8	13	67	193	398	453	196	290	326	36	24	16	12
9	13	213	176	343	708	182	305	319	36	24	16	12
10	13	148	619	300	642	165	307	317	37	24	16	12
11	18	213	610	573	903	151	316	302	38	24	16	12
12	35	586	445	1,200	781	140	347	268	37	24	16	12
13	22	264	433	1,440	592	140	322	225	36	24	15	12
14	18	185	433	969	508	140	297	180	35	23	15	12
15	20	202	863	757	619	151	262	146	34	23	15	12
16	16	202	749	646	613	185	266	128	32	22	15	12
17	13	279	552	530	523	240	325	122	31	21	15	12
18	13	530	483	458	445	345	366	122	32	20	14	16
19	12	443	443	979	428	320	326	94	39	20	14	16
20	20	279	338	1,810	398	297	309	69	41	19	14	16
21	17	188	255	1,860	350	288	324	65	39	19	13	16
22	14	188	225	1,300	318	308	343	61	34	19	13	15
23	14	157	508	985	300	328	370	52	29	19	13	14
24	13	343	706	797	273	338	348	47	30	18	13	14
25	11	597	631	785	258	353	318	43	29	19	13	14
26	10	348	518	1,010	231	390	289	53	28	18	14	14
27	10	279	433	784	225	445	289	47	28	18	14	13
28	9.6	279	430	670	285	510	313	39	28	18	14	12
29	10	258	403	585	-----	589	318	37	27	18	14	12
30	24	185	330	566	-----	622	274	35	25	18	14	12
31	21	-----	264	528	-----	646	-----	35	-----	18	13	-----
TOTAL	470.6	6,738	12,515	22,560	13,179	9,272	9,869	4,743	1,002	668	462	390
MEAN	15.2	225	404	728	471	299	329	153	33.4	21.5	14.9	13.0
MAX	35	597	863	1,860	903	646	543	326	41	25	17	16
MIN	9.6	17	118	243	225	140	262	35	25	18	13	12
AC-FT	933	13,360	24,820	44,750	26,140	18,390	19,570	9,410	1,990	1,320	916	774
CAL YR 1968	TOTAL 51,140.4		MEAN 140		MAX 1,290		MIN 9.6		AC-FT 101,400			
WTR YR 1969	TOTAL 81,868.6		MEAN 224		MAX 1,860		MIN 9.6		AC-FT 162,400			

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1-13	0700	6.77	1,670	1-26	0300	5.70	1,200
1-20	2015	8.31	2,490				

KLAMATH RIVER BASIN

11-5300. TRINITY RIVER AT HOOPA, CALIF.

LOCATION.--Lat 41°03'00", long 123°40'15", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.25, T.8 N., R.4 E., Humboldt County, in Hoopa Valley Indian Reservation, on left bank at Hoopa 0.4 mile upstream from Supply Creek.

DRAINAGE AREA.--2,865 sq mi.

PERIOD OF RECORD.--October 1911 to January 1914, October 1916 to September 1918, October 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near Hoopa" 1931-64.

GAGE.--Water-stage recorder. Datum of gage is 274.82 ft above mean sea level. Prior to October 1931, non-recording gage at site 0.4 mile upstream at different datum. October 1931 to Dec. 22, 1964, water-stage recorder at site 2.5 miles upstream at datum 31.67 ft higher.

AVERAGE DISCHARGE.--42 years (1911-13, 1916-18, 1931-69), 5,373 cfs (3,893,000 acre-ft per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 71,400 cfs Jan. 21 (gage height, 36.17 ft); minimum, 321 cfs Sept. 2.

Period of record: Maximum discharge, 231,000 cfs Dec. 22, 1964 (gage height, 40.3 ft, from floodmarks, site and datum then in use); minimum, 162 cfs Oct. 4, 1931.

REMARKS.--Records good. Flow regulated by Clair Engle Lake 84 miles upstream since November 1960 (see sta 11-5254). Small diversions above station for mining and irrigation. Records of chemical analyses, water temperatures and suspended-sediment loads for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1565: 1913.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	456	946	1,980	4,650	11,700	9,180	20,900	8,040	4,190	1,680	898	335
2	457	1,290	1,870	4,620	10,600	8,620	17,900	7,520	4,630	1,690	818	321
3	460	1,820	1,640	4,880	9,880	9,110	15,600	7,160	5,020	1,660	722	378
4	457	1,490	1,510	5,740	9,440	8,300	12,800	6,750	5,440	1,600	674	418
5	462	1,290	1,970	7,120	9,490	8,040	13,500	6,570	5,620	1,570	650	434
6	468	1,230	2,200	8,140	9,180	7,980	12,500	7,360	5,420	1,550	634	442
7	469	1,230	2,030	8,580	8,360	7,660	10,700	9,060	5,080	1,490	618	450
8	468	1,240	2,300	8,440	8,240	7,420	9,900	10,200	4,660	1,440	610	450
9	464	2,010	2,580	7,400	13,600	7,160	9,880	11,100	4,260	1,370	586	442
10	465	2,150	10,700	6,950	13,800	6,950	10,200	11,800	4,020	1,380	570	442
11	516	1,740	11,100	8,100	30,000	6,570	10,600	11,900	3,810	1,360	554	442
12	890	2,940	8,660	23,300	23,500	6,370	12,200	11,400	3,560	1,320	530	434
13	1,170	2,620	6,710	56,100	20,000	6,250	12,400	10,700	3,440	1,300	522	426
14	1,050	2,020	7,840	41,200	17,500	6,170	10,900	9,540	3,260	1,250	506	418
15	994	2,150	13,600	27,500	15,300	6,260	9,590	8,040	3,070	1,230	482	418
16	858	1,920	13,000	19,600	14,000	6,860	9,230	7,480	3,010	1,190	466	426
17	826	1,960	8,990	14,300	12,500	8,060	9,850	7,540	2,750	1,150	466	418
18	834	4,020	6,730	11,500	13,400	11,100	11,100	7,760	2,560	1,120	450	474
19	794	5,100	5,710	11,500	12,000	11,500	10,500	6,880	3,110	1,100	418	522
20	834	3,020	3,840	28,000	11,500	10,800	10,000	6,080	3,280	1,080	410	538
21	834	2,140	3,700	54,300	10,600	11,100	10,400	5,850	2,700	1,060	402	546
22	794	2,030	3,760	34,700	9,800	11,700	12,000	6,030	2,430	1,030	386	530
23	746	1,900	5,830	24,900	9,540	12,800	13,600	6,280	2,290	994	378	514
24	730	2,120	10,900	21,900	9,200	13,300	11,600	6,260	2,230	978	356	498
25	714	3,190	11,000	20,100	9,060	13,600	9,080	5,470	2,120	970	349	482
26	698	2,520	8,520	27,700	8,160	14,100	8,100	5,260	2,020	978	356	466
27	690	2,040	7,040	23,900	7,780	15,700	7,920	5,270	1,910	954	356	450
28	674	1,760	6,570	19,900	8,870	18,100	8,500	4,470	1,830	1,030	356	426
29	714	1,620	6,260	16,500	-----	20,200	9,160	4,090	1,750	1,130	349	418
30	922	1,750	5,560	14,300	-----	22,500	8,600	4,330	1,700	1,090	349	410
31	1,070	-----	4,820	12,200	-----	23,000	-----	4,520	-----	986	342	-----
TOTAL	21,978	63,256	188,920	578,020	347,000	336,460	339,210	230,710	101,170	38,730	15,563	13,368
MEAN	709	2,109	6,094	18,650	12,390	10,850	11,310	7,442	3,372	1,249	502	446
MAX	1,170	5,100	13,600	56,100	30,000	23,000	20,900	11,900	5,620	1,690	898	546
MIN	456	946	1,510	4,620	7,780	6,170	7,920	4,090	1,700	954	342	321
AC-FT	43,590	125,500	374,700	1,146M	688,300	667,400	672,800	457,600	200,700	76,820	30,870	26,520
CAL YR 1968	TOTAL	1,256,438	MEAN	3,433	MAX	45,100	MIN	319	AC-FT	2,492,000		
WTR YR 1969	TOTAL	2,274,385	MEAN	6,231	MAX	56,100	MIN	321	AC-FT	4,511,000		

PEAK DISCHARGE (BASE, 22,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-10	2000	26.48	27,000	1-26	1430	27.25	31,200
1-13	1645	34.72	63,500	2-11	unknown	-	38,000
1-21	0945	36.17	71,400	3-31	1400	25.11	24,100

11-5301.5. MAREEP CREEK NEAR WEITCHPEC, CALIF.

LOCATION.--Lat 41°16'22", long 123°47'20", Humboldt County, Hoopa Valley Indian Reservation, on left bank 70 ft upstream from culvert on county highway, 7.3 miles northwest of Weitchpec.

DRAINAGE AREA.--3.56 sq mi.

PERIOD OF RECORD.--Annual maximums, water years 1962-67, October 1966 to current year.

GAGE.--Water-stage recorder, float-operated rain gage and crest-stage gage. Altitude of gage is 500 ft (from topographic map). Aug. 31, 1961, to Aug. 31, 1966, crest-stage gage at site 60 ft downstream at same datum.

EXTREMES.--Current year: Maximum discharge, 130 cfs Jan. 12 (gage height, 2.70 ft), from rating curve extended above 46 cfs; minimum daily, 0.97 cfs Aug. 31, Sept. 11.

Period of record: Maximum discharge, 890 cfs Dec. 22, 1964 (gage height, 58.64 ft, crest-stage gage), by computation of maximum flow through culvert; minimum daily (1966-69), 0.97 cfs Aug. 31, Sept. 11, 1969.

REMARKS.--Records good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	6.1	17	27	28	18	17	9.1	4.7	4.0	2.5	1.1
2	1.7	13	14	25	26	19	17	8.7	4.7	3.9	2.4	1.1
3	1.9	8.5	11	24	25	20	16	8.5	4.6	3.9	2.4	1.3
4	2.2	7.0	11	23	25	19	16	8.3	4.5	3.9	2.4	1.2
5	2.5	9.3	24	20	24	19	19	7.9	4.6	3.7	2.3	1.2
6	2.3	7.7	18	19	23	21	17	7.6	4.6	3.7	2.3	1.1
7	2.3	8.5	17	20	21	20	15	7.5	4.6	3.5	2.3	1.8
8	2.3	12	19	18	27	18	14	7.2	4.5	3.5	2.3	1.9
9	2.3	12	16	17	32	18	13	7.2	4.4	3.5	2.2	2.7
10	2.5	7.0	33	17	30	17	13	7.1	4.7	3.3	2.2	2.3
11	4.4	11	34	30	43	16	12	6.9	4.6	3.3	2.2	.97
12	5.5	15	30	75	37	15	12	6.9	4.5	3.3	2.1	2.5
13	3.5	10	33	84	33	15	12	6.9	4.3	3.1	2.1	2.7
14	4.4	12	34	59	31	14	11	6.9	4.3	3.1	2.1	3.1
15	3.9	13	42	49	42	14	11	6.6	4.2	3.1	2.1	2.7
16	3.9	11	39	40	41	15	10	6.5	4.0	3.1	2.0	2.9
17	3.7	12	34	34	35	17	11	6.3	3.8	2.9	2.0	2.5
18	3.7	15	32	32	32	20	11	6.3	3.9	2.9	2.0	4.4
19	3.5	13	30	39	30	19	10	6.0	4.6	2.9	2.0	4.4
20	4.9	11	28	57	28	18	9.9	5.9	4.2	2.9	2.0	5.8
21	3.9	9.7	26	60	27	18	9.9	5.7	4.1	2.8	2.0	4.2
22	3.7	9.7	27	46	25	18	9.6	5.6	3.9	2.8	1.9	4.2
23	3.5	8.5	44	39	24	18	12	5.5	4.0	2.7	1.9	4.2
24	3.7	18	63	34	24	18	12	5.6	4.1	2.9	1.9	3.9
25	3.7	20	55	41	23	18	11	5.5	4.2	2.8	1.9	3.5
26	3.9	15	43	48	21	18	11	6.2	4.0	2.7	1.9	3.3
27	3.9	12	38	39	20	18	10	5.8	4.0	2.6	1.9	2.9
28	4.2	10	38	34	19	18	10	5.4	4.0	2.6	1.7	2.3
29	6.4	11	33	30	-----	17	9.5	5.3	4.2	2.6	1.6	2.3
30	10	10	30	28	-----	17	9.3	5.2	4.0	2.5	1.5	2.3
31	6.7	-----	28	27	-----	17	-----	5.0	-----	2.5	.97	-----
TOTAL	116.9	338.0	941	1,135	796	547	371.2	205.1	128.8	97.0	63.07	80.77
MEAN	3.77	11.3	30.4	36.6	28.4	17.6	12.4	6.62	4.29	3.13	2.03	2.69
MAX	10	20	63	84	43	21	19	9.1	4.7	4.0	2.5	5.8
MIN	1.7	6.1	11	17	19	14	9.3	5.0	3.8	2.5	.97	.97
AC-FT	232	670	1,870	2,250	1,580	1,080	736	407	255	192	125	160
(a)	5.0	12.8	23.5	22.5	8.8	3.3	4.1	1.0	.8	.6	0	.5

CAL YR 1968 TOTAL 3,962.0 MEAN 10.8 MAX 66 MIN 1.5 AC-FT 7,860
WTR YR 1969 TOTAL 4,819.84 MEAN 13.2 MAX 84 MIN .97 AC-FT 9,560

PEAK DISCHARGE (BASE, 80 CFS).--Jan. 12 (2130) 130 cfs (2.70 ft).

a Precipitation, in inches.

NOTE.--No gage-height record July 21 to Aug. 26.

KLAMATH RIVER BASIN

11-5303. BLUE CREEK NEAR KLAMATH, CALIF.

LOCATION.--Lat 41°27'00", long 123°53'40", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.12, T.12 N., R.2 E., Humboldt County, on left bank 600 ft downstream from West Fork, 3.0 miles upstream from mouth, and 9.2 miles southeast of Klamath.

DRAINAGE AREA.--120 sq mi.

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

GAGE.--Water-stage recorder. Elevation of gage is 140.65 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 14,800 cfs Dec. 24 (gage height, unknown); minimum daily, 61 cfs Oct. 9.

Period of record: Maximum discharge, 25,100 cfs Jan. 6, 1966 (gage height, 15.97 ft, from high-water marks), from rating curve extended above 5,500 cfs on basis of step-backwater computation at 21.55 ft; minimum daily, 43 cfs Nov. 1, 1965.

Flood of Dec. 22, 1964, reached a stage of 21.55 ft, from floodmarks (discharge, 48,000 cfs, by step-backwater computation).

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	185	776	1,500	1,440	678	1,410	830	440	158	101	73
2	66	642	708	1,600	1,200	690	1,240	745	425	161	99	72
3	65	424	660	1,500	1,110	776	1,080	695	410	159	98	71
4	64	295	684	1,540	1,030	696	920	650	381	156	97	70
5	66	366	1,720	1,450	920	678	1,140	640	369	153	96	69
6	66	345	1,310	1,410	888	714	1,020	850	345	151	96	68
7	65	408	1,060	1,410	832	690	880	980	324	148	94	68
8	64	455	1,280	1,360	1,020	672	800	1,050	309	145	93	66
9	61	1,020	1,130	1,250	1,970	618	784	1,010	298	142	92	66
10	63	612	2,190	1,950	1,610	580	760	1,040	290	141	92	66
11	123	912	2,460	3,000	2,610	545	776	1,070	283	139	90	65
12	225	1,380	1,930	4,650	2,260	515	1,020	990	275	137	88	65
13	201	864	1,730	5,090	1,780	496	1,070	910	263	134	87	64
14	169	696	2,040	3,040	1,590	478	920	790	255	132	87	64
15	193	736	2,370	2,150	1,970	478	808	655	250	131	85	64
16	156	660	2,310	1,720	2,210	555	768	605	240	129	85	64
17	135	702	1,870	1,490	1,880	904	944	630	228	127	84	65
18	119	1,600	1,610	1,370	1,630	1,480	1,290	710	221	125	82	112
19	107	1,210	1,420	1,440	1,440	1,210	1,140	650	225	123	81	93
20	147	856	1,240	2,820	1,280	1,030	980	540	223	121	81	95
21	135	708	1,060	4,020	1,220	896	970	525	211	118	80	84
22	119	1,000	1,130	3,250	1,080	864	1,080	565	205	114	79	77
23	110	832	3,170	2,220	1,020	864	1,300	575	199	113	79	74
24	101	1,160	10,600	1,770	920	840	1,210	535	203	117	77	74
25	96	1,430	6,750	1,880	864	872	1,080	485	199	114	77	72
26	91	1,070	4,550	3,030	824	960	944	640	197	112	77	71
27	87	832	3,000	2,220	824	1,140	912	710	189	109	77	69
28	85	708	4,250	1,820	720	1,250	1,000	585	187	108	76	67
29	123	714	3,200	1,650	-----	1,330	1,140	515	179	106	76	66
30	327	714	2,390	1,410	-----	1,390	940	485	173	103	75	66
31	250	-----	1,780	1,270	-----	1,550	-----	460	-----	102	74	-----
TOTAL	3,747	23,536	72,378	66,280	38,142	26,439	30,326	22,120	7,996	4,028	2,655	2,160
MEAN	121	785	2,335	2,138	1,362	853	1,011	714	267	130	85.6	72.0
MAX	327	1,600	10,600	5,090	2,610	1,550	1,410	1,070	440	161	101	112
MIN	61	185	660	1,250	720	478	760	460	173	102	74	64
AC-FT	7,430	46,680	143,600	131,500	75,650	52,440	60,150	43,870	15,860	7,990	5,270	4,280

CAL YR 1968 TOTAL 248,707 MEAN 680 MAX 10,600 MIN 61 AC-FT 493,300
WTR YR 1969 TOTAL 299,807 MEAN 821 MAX 10,600 MIN 61 AC-FT 594,700

DATE	TIME	PEAK DISCHARGE (BASE, 5,000 CFS)	DATE	TIME	G.H.	DISCHARGE
12-24	unknown	-	14,800	1-12	2900	10.13
12-28	unknown	-	5,500			7,010

NOTE.--No gage-height record Dec. 24 to Jan. 12, Apr. 28 to June 4.

KLAMATH RIVER BASIN

487

11-5305. KLAMATH RIVER NEAR KLAMATH, CALIF.
(International Hydrological Decade Station)

LOCATION.--Lat 41°30'45", long 123°58'30", in SW $\frac{1}{4}$ sec.17, T.13 N., R.2 E., Del Norte County, on right bank 2.8 miles upstream from Turwar Creek, and 3.3 miles east of Klamath.

DRAINAGE AREA.--12,100 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

PERIOD OF REORD.--October 1910 to December 1926 (published as "near Requa"), October 1950 to current year.
Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 5.60 ft above mean sea level (levels by Corps of Engineers).
Prior to June 1926, nonrecording gage at same site at different datum.

AVERAGE DISCHARGE.--35 years, 17,040 cfs (12,350,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 177,000 cfs Jan. 21 (gage height, 26.87 ft) minimum daily, 2,240 cfs Oct. 1, 2.
Period of record: Maximum discharge, 557,000 cfs Dec. 23, 1964 (gage height, 55.3 ft, from floodmarks), from rating curve extended above 230,000 cfs on basis of flood-routing study; minimum observed, 1,340 cfs July 31, Aug. 1, 1924.

REMARKS.--Records excellent. Flow considerably regulated by reservoirs and powerplants above station. Large diversions for irrigation above station. Records of chemical analyses and water temperatures for the water year 1969 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1285: 1951(P). WSP 1445: 1918-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,240	4,700	12,600	19,200	43,200	25,400	52,900	30,900	19,900	6,050	3,310	2,640
2	2,240	6,380	12,500	19,000	38,600	24,900	48,800	29,100	19,700	5,950	3,210	2,610
3	2,390	10,900	11,500	19,200	34,700	26,300	44,200	28,800	19,900	5,830	3,240	2,840
4	2,390	9,080	10,900	20,900	32,100	24,700	40,800	28,300	20,000	5,570	3,240	2,900
5	2,360	8,410	13,900	23,900	31,500	24,100	42,600	27,000	20,000	5,440	3,180	2,900
6	2,740	8,470	15,100	25,500	30,200	23,900	41,700	28,000	19,600	5,210	3,120	2,860
7	3,400	8,330	13,500	26,000	27,800	22,800	39,000	33,300	17,800	5,050	3,100	2,840
8	3,420	8,410	14,300	25,900	27,300	21,800	36,900	38,400	16,400	4,960	3,070	2,830
9	3,540	11,000	14,700	23,700	43,200	20,100	35,500	42,600	15,200	4,830	3,000	2,820
10	3,440	12,400	22,500	22,200	45,500	19,000	35,000	46,100	14,400	4,700	2,980	2,810
11	2,580	10,600	52,400	26,000	55,900	18,200	33,600	47,300	13,600	4,620	2,960	2,790
12	4,140	16,400	34,400	51,500	74,400	17,700	35,700	46,900	13,100	4,490	2,980	2,760
13	5,700	14,900	26,900	124,000	64,500	17,900	38,200	45,000	13,000	4,340	2,970	2,730
14	4,660	11,900	29,700	81,700	55,200	17,900	36,000	41,700	12,600	4,200	2,950	2,710
15	4,560	12,000	34,100	63,800	55,200	17,700	33,400	37,300	12,400	4,150	2,900	2,710
16	4,120	11,200	47,300	49,800	56,700	17,600	31,300	36,300	11,900	4,090	2,890	2,720
17	3,840	10,700	34,900	40,700	50,800	19,300	31,200	36,600	11,300	3,950	2,880	2,720
18	3,640	15,500	26,900	34,400	45,800	25,200	32,500	38,900	10,800	3,900	2,840	2,830
19	3,540	21,100	23,100	36,900	42,300	27,500	30,700	37,000	10,600	3,840	2,800	2,980
20	3,640	16,300	19,700	67,700	39,500	25,400	32,500	31,500	10,800	3,810	2,780	3,010
21	4,120	13,300	17,500	157,000	36,500	24,500	33,300	28,200	9,840	3,750	2,770	3,050
22	3,840	13,300	16,200	132,000	33,500	24,600	34,800	28,600	8,840	3,670	2,760	3,060
23	3,620	13,400	26,000	90,400	31,900	25,600	32,500	29,000	8,190	3,600	2,730	3,010
24	3,500	13,900	45,800	68,600	30,100	27,000	31,400	29,000	7,840	3,600	2,690	3,040
25	3,360	18,300	44,500	60,200	29,500	27,400	30,400	26,100	7,520	3,680	2,660	3,000
26	3,420	15,300	37,100	76,400	27,200	29,300	29,700	24,400	7,230	3,650	2,660	2,980
27	3,400	13,300	29,600	78,200	24,900	32,800	29,300	25,400	6,930	3,640	2,650	2,940
28	3,140	12,000	28,600	64,600	25,100	37,700	28,200	21,800	6,700	3,570	2,640	2,900
29	3,300	11,300	27,000	53,900	-----	42,700	30,800	19,700	6,450	3,530	2,650	2,860
30	4,440	11,700	23,800	47,100	-----	48,400	33,400	19,900	6,190	3,500	2,660	2,860
31	5,540	-----	21,100	41,000	-----	52,900	-----	21,100	-----	3,420	2,670	-----
TOTAL	110,260	364,480	788,100	1,671.4M	1,133.1M	810,300	1,066.3M	1,004.2M	378,730	134,590	89,940	85,710
MEAN	3,557	12,150	25,420	53,920	40,470	26,140	35,540	32,390	12,620	4,342	2,901	2,857
MAX	5,700	21,100	52,400	157,000	74,400	52,900	52,900	47,300	20,000	6,050	3,310	3,060
MIN	2,240	4,700	10,900	19,000	24,900	17,600	28,200	19,700	6,190	3,420	2,640	2,610
AC-FT	218,700	722,900	1,563M	3,315M	2,248M	1,607M	2,115M	1,992M	751,200	267,000	178,400	170,000

CAL YR 1968 TOTAL 5,092,820 MEAN 13,910 MAX 159,000 MIN 2,160 AC-FT 10,100,000

WTR YR 1969 TOTAL 7,637,110 MEAN 20,920 MAX 157,000 MIN 2,240 AC-FT 15,150,000

PEAK DISCHARGE (BASE, 90,000 CFS).--Jan. 13 (1400) 150,000 cfs (24.55 ft); Jan. 21 (1545) 177,000 cfs (26.87 ft).

KLAMATH RIVER BASIN

RESERVOIRS IN KLAMATH RIVER BASIN, CALIF.

11-5114. COPCO LAKE NEAR COPCO.--Lat 41°58'46", long 122°20'00", on E edge of SW $\frac{1}{4}$ sec.29, T.48 N., R.4 W., Siskiyou County, 12.7 miles NE of Hornbrook. Drainage area, 4,300 sq mi. Period of record, October 1967 to current year. Pressure device and telemark. Datum of gage is at mean sea level.

Reservoir is formed by gravity type dam completed in 1922. Capacity is 77,000 acre-ft. Record of contents furnished by Pacific Power and Light Company.

11-5165.1. IRON GATE RESERVOIR NEAR HORNBOOK.--Lat 41°55'58", long 122°26'06", in SW $\frac{1}{4}$ sec.9, T.47 N., R.5 W., Siskiyou County, 6.6 miles NE of Hornbrook. Drainage area, 4,573 sq mi. Period of record, October 1967 to current year. Pressure device and telemark. Datum of gage is at mean sea level.

Reservoir is formed by earth- and rockfill dam completed in 1962. Capacity is 58,000 acre-ft. Record of contents furnished by Pacific Power and Light Company.

MONTH-END ELEVATIONS AND CONTENTS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)
Copco Lake			Iron Gate Reservoir			
Sept. 30.....	2,601.00	40,600	-	2,324.87	55,800	-
Oct. 31.....	2,602.14	41,700	+1,100	2,326.57	57,400	+1,600
Nov. 30.....	2,605.41	44,800	+3,100	2,328.28	59,100	+1,700
Dec. 31.....	2,606.74	46,100	+1,300	2,325.06	56,000	-3,100
CAL YR 1967.....	-	-	+5,300	-	-	-3,100
Jan. 31.....	2,601.78	41,400	-4,700	2,326.54	57,400	+1,400
Feb. 29.....	2,604.91	44,400	+3,000	2,326.22	57,100	-300
Mar. 31.....	2,603.42	42,900	-1,500	2,321.31	52,600	-4,500
Apr. 30.....	2,605.00	44,400	+1,500	2,326.07	56,900	+4,300
May 31.....	2,601.82	41,400	-3,000	2,327.35	58,200	+1,300
June 30.....	2,602.32	41,900	+500	2,324.85	55,800	-2,400
July 31.....	2,594.21	34,500	-7,400	2,325.89	56,800	+1,000
Aug. 31.....	2,599.63	39,400	+4,900	2,323.89	54,900	-1,900
Sept. 30.....	2,597.15	37,100	-2,300	2,321.71	52,900	-2,000
WTR YR 1968.....	-	-	-3,500	-	-	-2,900

a Elevation at 0800.

MONTH-END ELEVATIONS AND CONTENTS, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)
Copco Lake			Iron Gate Reservoir			
Sept. 30.....	2,597.15	37,100	-	2,321.71	52,900	-
Oct. 31.....	2,594.54	34,800	-2,300	2,322.30	53,500	+600
Nov. 30.....	2,603.44	42,900	+8,100	2,319.86	51,300	-2,200
Dec. 31.....	2,603.03	42,500	-400	2,327.10	57,900	+6,600
CAL YR 1968.....	-	-	-3,600	-	-	+1,900
Jan. 31.....	2,600.85	40,500	-2,000	2,328.50	59,300	+1,400
Feb. 28.....	2,601.08	40,700	+200	2,328.54	59,300	0
Mar. 31.....	2,604.56	44,100	+3,400	2,328.96	59,700	+400
Apr. 30.....	2,604.16	43,600	-500	2,328.57	59,400	-300
May 31.....	2,606.32	45,700	+2,100	2,328.50	59,300	-100
June 30.....	2,607.37	46,700	+1,000	2,324.43	55,400	-3,900
July 31.....	2,604.91	44,300	-2,400	2,325.38	56,300	+900
Aug. 31.....	2,593.27	33,700	-10,600	2,326.24	57,100	+800
Sept. 30.....	2,604.74	44,200	+10,500	2,323.10	54,200	-2,900
WTR YR 1969.....	-	-	+7,100	-	-	+1,300

a Elevation at 0800.

11-5325. SMITH RIVER NEAR CRESCENT CITY, CALIF.

LOCATION.--Lat 41°47'20", long 124°03'20", in SW $\frac{1}{4}$ sec.10, T.16 N., R.1 E., Del Norte County, on left bank 0.5 mile downstream from South Fork, and 8 miles east of Crescent City.

DRAINAGE AREA.--609 sq mi.

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 89.61 ft above mean sea level.

AVERAGE DISCHARGE.--38 years, 3,756 cfs (2,721,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 69,400 cfs Jan. 13 (gage height, 27.32 ft); minimum daily, 232 cfs Sept. 15, 16.

Period of record: Maximum discharge, 228,000 cfs Dec. 22, 1964 (gage height, 48.5 ft, from floodmarks), from rating curve extended above 69,000 cfs on basis of slope-area measurement at gage height 39.51 ft; minimum daily, 160 cfs Oct. 24, 25, 1964.

REMARKS.--Records good. No regulation or diversion above station. Records of chemical analyses and water temperatures for the water year 1969 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	1,560	5,010	5,450	7,640	3,900	5,380	3,160	1,700	576	340	252
2	278	2,030	4,460	5,800	5,540	3,890	4,480	2,840	1,650	560	333	250
3	270	2,390	3,670	5,580	4,510	4,450	3,960	2,690	1,620	560	330	246
4	268	2,380	3,650	5,670	4,130	4,070	3,470	2,480	1,540	540	325	242
5	280	2,300	11,700	5,420	3,950	3,900	5,130	2,420	1,460	528	323	242
6	283	2,350	10,500	5,150	3,570	4,980	4,620	3,070	1,380	508	318	242
7	278	3,600	8,930	5,130	3,230	4,150	3,970	3,780	1,270	492	318	240
8	273	3,970	9,420	5,090	6,640	3,890	3,610	4,030	1,180	480	313	240
9	268	11,500	7,400	4,400	16,500	3,630	3,430	3,960	1,140	470	310	236
10	265	5,450	19,300	6,980	12,700	3,450	3,280	4,000	1,100	466	308	236
11	1,050	11,200	21,100	14,100	25,200	3,330	3,170	4,110	1,050	459	303	236
12	2,650	16,000	14,000	29,500	16,400	3,150	3,810	3,860	1,010	452	300	236
13	1,940	8,140	11,900	47,500	9,910	3,000	4,230	3,530	970	442	298	234
14	1,350	5,760	19,000	21,300	7,700	2,870	3,720	2,990	928	436	293	234
15	1,880	6,440	19,400	12,100	11,400	2,800	3,360	2,500	892	427	288	232
16	1,370	5,170	17,300	8,780	14,300	4,200	3,160	2,360	850	418	288	232
17	1,070	4,380	14,000	6,740	9,720	5,600	3,430	2,350	802	415	283	254
18	898	8,490	8,340	5,540	7,440	8,400	5,290	2,700	770	406	278	592
19	750	7,000	7,460	7,820	6,160	6,500	4,560	2,590	750	400	278	445
20	1,260	4,750	6,070	11,300	5,400	5,250	3,960	2,080	750	391	278	463
21	1,240	3,600	5,020	19,200	4,740	4,390	3,750	2,040	710	385	275	353
22	988	3,400	5,060	10,900	4,230	4,150	3,900	2,140	677	375	270	308
23	826	3,400	21,000	7,500	4,090	4,000	4,590	2,170	672	373	270	303
24	715	3,400	38,000	5,710	3,860	3,990	4,260	2,070	700	370	263	340
25	641	3,400	26,300	6,280	3,860	4,100	3,900	1,850	663	370	263	325
26	588	4,480	16,400	17,400	4,000	7,580	3,570	2,330	672	368	263	300
27	544	4,720	10,500	9,940	3,920	4,620	3,380	2,650	668	360	263	283
28	516	3,790	15,100	7,140	4,040	4,900	3,690	2,270	677	358	263	270
29	745	3,620	11,400	5,540	-----	5,200	4,240	1,960	636	353	263	265
30	3,570	3,820	8,250	4,800	-----	5,380	3,600	1,900	600	348	260	260
31	2,530	-----	6,250	4,770	-----	6,340	-----	1,830	-----	345	254	-----
TOTAL	29,864	152,490	384,540	318,530	214,680	140,060	118,900	84,710	29,487	13,431	9,012	8,591
MEAN	363	5,083	12,400	10,280	7,667	4,518	3,963	2,733	983	433	291	286
MAX	3,570	16,000	38,000	47,500	25,200	8,400	5,380	4,110	1,700	576	340	592
MIN	265	1,560	3,650	4,400	3,230	2,800	3,160	1,830	600	345	254	232
AC-FT	59,240	302,500	762,700	631,800	425,800	277,800	235,800	168,000	58,490	26,640	17,880	17,040
CAL YR 1968	TOTAL 1,435,376		MEAN 3,923		MAX 55,600		MIN 265		AC-FT 2,848,000			
WTR YR 1969	TOTAL 1,504,295		MEAN 4,121		MAX 47,500		MIN 232		AC-FT 2,984,000			

PEAK DISCHARGE (BASE, 36,000 CFS).--Dec. 24 (1630) 43,400 cfs (22.80 ft); Jan. 13 (0130) 69,400 cfs (27.32 ft).

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 partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same or practically the same site.

Discharge measurements made at low-flow partial-record stations during water year 1969

Discharge measurements made at low-flow partial-record stations during water year 1969						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Salinas River basin						
11-1470.3	Cienega Creek near Templeton	Lat 35°31'39", long 120°51'23" in Asuncion Grant, San Luis Obispo County, 0.4 mile above mouth and 9.1 miles west of Templeton.	2.51	1967-69	10-08-68	0.08
					11-14-68	.04
					12-10-68	.09
					1-09-69	.14
					1-19-69	770
					3-04-69	13.6
					5-12-69	1.09
					6-23-69	.55
11-1470.5	Santa Rita Creek tributary No. 2 near Templeton	Lat 35°32'15", long 120°50'16" in Asuncion Grant, San Luis Obispo County, 0.3 mile above mouth and 8.1 miles west of Templeton.	1.35	1967-69	10-08-68	0.01
					11-14-68	.02
					12-11-68	.02
					1-09-69	.08
					3-04-69	4.70
					6-23-69	No flow.
					8-13-69	.01
11-1470.6	South Fork Santa Rita Creek near Templeton	Lat 35°30'48", long 120°48'01" in Asuncion Grant, San Luis Obispo County, 1.1 miles above mouth and 6.0 miles west of Templeton.	3.02	1967-69	10-10-68	No flow.
					11-06-68	Do.
					12-06-68	Do.
					5-13-69	0.94
					6-19-69	.28
					9-30-69	No flow.

Crest-stage partial-record stations

As explained on page 10 the California district publishes annual maxima on small streams at about 304 sites in a separate publication Floods From Small Drainage Areas. In addition, discharge measurements are generally made in times of drought or flood to give better coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

The following table contains annual maximum discharges for crest-stage stations not included in the above-mentioned report. A crest-stage gage 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 water 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 in Part 11 during water year 1969

Annual maximum discharge at crest-stage partial-record stations in part II during water year 1969							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Salinas River basin							
11-1470.3 ^{1/}	Cienega Creek near Templeton	Lat 35°31'39", long 120°51'23" in Asuncion Grant, San Luis Obispo County, 0.4 mile above mouth and 9.1 miles west of Templeton.	2.51	1967-69	2-17-69	59.70	770
Pajaro River basin							
11-1560.	San Benito River below McCoy Creek, near Hernandez	Lat 36°23'22", long 120°53'42" in SW¼ sec.4, T.18 S., R.10 E., San Benito County, 0.7 mile upstream from Lorenzo Vasquez Canyon, 3.1 miles downstream from McCoy Creek, 4.3 miles downstream from Hernandez Dam, and 6 miles west of Hernandez.	108	1949-53† 1959-63†	2-24-69	8.1	4,700
Bolinas Lagoon basin							
11-4601.65	Audubon Creek near Bolinas	Lat 37°55'47", long 122°40'50" in Las Baulines Grant, Marin County, at mouth 1.5 miles north of Bolinas.	0.46	1967-69	1-20-69	7.05	65
Russian River basin							
11-4609.40	Russian River near Redwood Valley	Lat 39°19'10", long 123°13'20" in NW¼ sec.20 T.17 N., R.12 W., Mendocino County, on left bank 600 ft upstream from Rocky Creek and 3.8 miles north of town of Redwood Valley.	14.1	1964-68† 1969	1-13-69	7.19	1,580
Russian River basin							
11-4639.40	Franz Creek near Kellogg	Lat 38°36'30", long 122°45'35" in Mallacomes Grant, Sonoma County, on left bank at downstream side of highway bridge, 100 ft downstream from Bidwell Creek, and 2 miles south of Kellogg.	15.7	1956, 1958-62 1963-68† 1969	1-13-69	5.95	1,690
Jacoby Creek basin							
11-4800.	Jacoby Creek near Freshwater	Lat 40°47'30", long 124°00'10", in NW¼ sec.30, T.5 N, R.2 E., 3.7 miles northeast of Freshwater.	6.07	1954-64† 1966-69	1-13-69	4.22	626
Klamath River basin							
11-5223.	South Fork Salmon River near Forks of Salmon	Lat 41°13'20", long 123°15'00", in SE¼ sec.30, T.39 N., R.12 W., on left bank 100 ft downstream from Methodist Creek and 4.5 miles southeast of town of Forks of Salmon.	252	1958-66† 1967-69	1-20-69	8.76	4,840
11-5284.	Hayfork Creek near Hayfork	Lat 40°31'10", long 123°05'05", in SW¼ sec.23, T.31 N., R.11 W., 5.8 miles southwest of Hayfork.	86.7	1956-66† 1967-69	1-20-69	10.36	3,260
Smith River basin							
11-5320.	South Fork Smith River near Crescent City	Lat 41°47'30", long 124°01'30", in SE¼ sec.11, T.16 N., R.1 E., 9.5 miles east of Crescent City.	295	1911-13† 1954-61† 1962-69	Not determined for 1969 water year		

1. Also a low-flow partial-record station.

† Operated as a continuous-record gaging station.

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Discharge measurements made at miscellaneous sites						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Santa Margarita River basin						
De Luz Creek	Santa Margarita River	Lat 33°22'10", long 117°19'15", in NW¼NE¼ sec.29, T.9 S., R.4 W., San Diego County, on left bank 0.6 mile upstream from mouth, and 4.2 miles west of Fallbrook.	47.5	1951-67†	1-25-69†	7,800
Las Flores Creek basin						
Las Flores Creek	Pacific Ocean	Lat 33°17'32", long 117°27'21", in NW¼SE¼ sec.24, T.10 S., R.6 W., San Diego County, on upstream side and at center of bridge on Atcheson, Topeka, and Santa Fe Railway, 0.5 mile upstream from mouth, and 8.5 miles northwest of Oceanside.	26.6	1951-67†	1-25-69†	2,050
San Onofre Creek basin						
San Onofre Creek	Pacific Ocean	Lat 33°23'23", long 117°30'50", in SE¼SW¼ sec.16, T.9 S., R.6 W., San Diego County, on left bank 0.3 mile southwest of tent camp No. 2, 0.5 mile downstream from ford on Basilone Road, 4 miles east of San Onofre, and 5 miles upstream from mouth.	34.6	1950-67†	1-25-69†	3,340
San Mateo Creek basin						
San Mateo Creek	Pacific Ocean	Lat 33°28'15", long 117°28'20", in SE¼NE¼ sec.23, T.8 S., R.6 W., San Diego County, on left bank 0.4 mile downstream from mouth of Devil Canyon, and 8.6 miles northeast of San Clemente.	80.8	1952-67†	1-25-69†	9,240
Cristianitos Creek	San Mateo Creek	Lat 33°26'57", long 117°34'13", in SW¼NW¼ sec.25, T.8 S., R.7 W., San Diego County, on right bank 900 ft downstream from Talenga Canyon, 2.3 miles upstream from mouth, and 2.8 miles northeast of San Clemente.	29.0	1950-67†	1-25-69†	7,800
San Mateo Creek	Pacific Ocean	Lat 33°23'46", long 117°35'21", in NW¼NW¼NW¼ sec.14, T.9 S., R.7 W., San Diego County, on right bank 0.3 mile upstream from U.S. Highway 101, 0.8 mile upstream from mouth, 1.3 miles northwest of San Onofre, and 2.2 miles downstream from Cristianitos Creek.	132	1946-67†	1-25-69†	8,400
Santa Ana River basin						
Santa Ana River	Pacific Ocean	Lat 33°56'43", long 117°33'30", in NE¼NE¼NE¼ sec.1, T.3 S., R.7 W., Riverside County, on left bank 300 ft downstream from Hamner Avenue Bridge, 4.1 miles north of Corona, and 5 miles upstream from Temescal Creek.	994	1930-60† 1968	10-10-68 2-26-69	30.8 5,600
Santa Monica Creek basin						
Santa Monica Creek	Pacific Ocean	Lat 34°25'22", long 119°31'32", in SW¼ sec.17, T.4 N., R.25 W., Santa Barbara County, 2 miles northwest of Carpinteria.	3.5	--	1-25-69†	4,700
San Ysidro Creek basin						
Buena Vista Creek	San Ysidro Creek	Lat 34°26'56", long 119°36'36", in NE¼NW¼ sec.9, T.4 N., R.26 W., Santa Barbara County, 0.9 mile northeast of Montecito.	0.66	--	1-25-69†	2,160
San Ysidro Creek	Pacific Ocean	Lat 34°27'04", long 119°37'18", in SE¼SE¼ sec.5, T.4 N., R.26 W., Santa Barbara County, 1.0 mile north of Montecito.	2.98	--	1-25-69†	5,620

See footnotes at end of table.

Discharge measurements made at miscellaneous sites--Continued

Discharge measurements made at miscellaneous sites--Continued						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water year)	Measurements	
					Date	Discharge (cfs)
Pismo Creek basin						
Pismo Creek	Pacific Ocean	Lat 35°10'06", long 120°37'34", in Corral de Piedra Grant, San Luis Obispo County, 0.3 mile downstream from Tiber.	28.6	--	1-25-69†	10,100
San Luis Obispo Creek basin						
Prefumo Creek	San Luis Obispo Creek	Lat 35°15'30", long 120°37'34", in Laguna Grant, San Luis Obispo County, 2.3 miles southwest of San Luis Obispo.	13.3	--	1-25-69†	2,860
San Luis Obispo Creek	Pacific Ocean	Lat 35°13'15", long 120°41'22", in San Miguelito Grant, San Luis Obispo County, 4.4 miles southwest of San Luis Obispo.	65.4	--	1-25-69†	25,000
Pajaro River basin						
Tres Pinos Creek	San Benito River	Lat 36°45'54", long 121°17'53", in NW¼NE¼ sec.34, T.13 S., R.6 E., San Benito County, at bridge on State Highway 25, at Bolado Park, 2 miles southeast of Tres Pinos.	--	--	4-29-69 9-10-69	12.9 *5.52
Tres Pinos Creek	San Benito River	Lat 36°46'42", long 121°19'04", in SE¼NE¼ sec.28, T.13 S., R.6 E., San Benito County, 200 ft upstream from county road crossing, 0.7 mile south of Tres Pinos.	--	--	4-29-69 9-10-69	13.4 *5.96
Tres Pinos Creek	San Benito River	Lat 36°47'20", long 121°19'38", in NE¼SE¼ sec. 20, T.13 S., R.6 E., San Benito County, 200 ft downstream from Southside Road Bridge, 0.6 mile west of Tres Pinos.	--	--	4-29-69 9-10-69	9.40 *7.2
Tres Pinos Creek	San Benito River	Lat 36°47'19", long 121°21'33", in NW¼SW¼ sec.19, T.13 S., R.6 E., San Benito County at Southside Road Bridge, 0.4 mile upstream from mouth, and 2.2 miles west of Tres Pinos.	--	--	4-29-69	4.18
San Benito River	Pajaro River	Lat 36°47'04", long 121°21'28", in SE¼SW¼ sec.19, T.13 S., R.6 E., San Benito County, at county road bridge, 1,000 ft upstream from Tres Pinos Creek, and 2.2 miles west of Tres Pinos.	--	--	9-10-69	22.0
San Benito River	Pajaro River	Lat 36°48'07", long 121°22'42", San Justo Grant, San Benito County, 300 ft south of Blossom Lane, 1.3 miles upstream from Hospital Road, and 3.6 miles southwest of Hollister.	--	--	4-29-69	25.8
San Benito River	Pajaro River	Lat 36°48'58", long 121°23'30", San Justo Grant, San Benito County, 50 ft downstream from Hospital Road Bridge, 2.3 miles southwest of Hollister.	--	--	4-29-69 9-10-69	19.3 16.7
San Benito River	Pajaro River	Lat 36°49'37", long 121°24'03", San Justo Grant, San Benito County 300 ft downstream from Cienega Road Bridge, 1.5 miles south of Hollister.	--	--	4-29-69 9-10-69	12.4 11.5
San Benito River	Pajaro River	Lat 36°50'08", long 121°24'37", San Justo Grant, San Benito County, 2,000 ft upstream from Nash Road Bridge, 1.0 mile southwest of Hollister.	--	--	9-10-69	9.84
San Benito River	Pajaro River	Lat 36°50'20", long 121°24'27", San Justo Grant, San Benito County at Nash Road Bridge, 1 mile southwest of Hollister.	--	--	4-29-69	6.88
San Benito River	Pajaro River	Lat 36°51'06", long 121°25'46", San Justo Grant, San Benito County, at bridge on State Highway 156, 1.4 miles west of Hollister.	--	--	4-29-69 9-10-69	7.28 14.2
San Benito River	Pajaro River	Lat 36°51'38", long 121°27'18", San Justo Grant, San Benito County, 700 ft north of north end of Mitchel Road, 3 miles northwest of Hollister.	--	--	4-29-69 9-10-69	4.52 15.0

See footnotes at end of table.

Discharge measurements made at miscellaneous sites--Continued

Discharge measurements made at miscellaneous sites--Continued						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water year)	Measurements	
					Date	Discharge (cfs)
Pajaro River basin--Continued						
San Benito River	Pajaro River	Lat 36°51'43", long 121°29'23", San Justo Grant, San Benito County, 1,000 ft north of Bixby Road-Duncan Avenue intersection, 5 miles west of Hollister.	--	--	9-10-69	11.6
San Benito River	Pajaro River	Lat 36°52'10", long 121°30'30", San Justo Grant, San Benito County, near north end of Brown Road, 1.9 miles northeast of San Juan Bautista.	--	--	9-10-69	10.4
Alameda Creek basin						
Alameda Creek	San Francisco Bay	Lat 37°34'30", long 121°58'07", in NE¼NE¼ sec.21, T.4 S., R.1 W., Alameda County, at Mission Boulevard Bridge, in Niles District, city of Fremont.	--	--	1-27-69 1-29-69 3-13-69	564 147 177
Alameda Creek	San Francisco Bay	Lat 37°34'20", long 121°58'24", in SW¼NE¼ sec.21, T.4 S., R.1 W., Alameda County, 0.3 mile downstream from Mission Boulevard Bridge, in Niles District, city of Fremont.	--	--	1-30-69	100
Alameda Creek	San Francisco Bay	Lat 37°34'20", long 121°58'52", in SE¼NW¼ sec.21, T.4 S., R.1 W., Alameda County, 0.7 mile downstream from Mission Boulevard Bridge, in Niles District, city of Fremont.	--	--	1-30-69	104
Alameda Creek	San Francisco Bay	Lat 37°34'09", long 121°59'14", in NE¼SE¼ sec.20, T.4 S., R.1 W., Alameda County, at Western Pacific Railroad Bridge in Niles District, city of Fremont.	--	--	1-27-69 1-29-69 1-30-69 3-13-69 3-18-69	582 160 76.0 175 59.3
Alameda Creek	San Francisco Bay	Lat 37°34'33", long 122°01'29", Potrero de Los Cerritos Grant, Alameda County, at Decoto Road Bridge, 1.0 mile upstream from Dry Creek, 1.5 miles south of Union City.	--	--	1-27-69 1-29-69 3-13-69 3-18-69	610 164 168 69.2
Dry Creek	Alameda Creek	Lat 37°35'17", long 122°02'16", Arroyo de la Alameda Grant, Alameda County, at mouth, 1.5 miles southwest of Union City.	--	--	1-27-69 1-29-69 3-13-69 3-18-69	25.4 11.2 *2.11 *.39
Bollinas Lagoon basin						
Audubon Creek	Bollinas Lagoon	Lat 37°55'47", long 122°40'50", in Las Baulines Grant, Marin County, at mouth 1.5 miles north of Bollinas.	0.46	1967-69	10-04-68 11-04-68 12-04-68 1-07-69 1-13-69 2-11-69 3-05-69 4-09-69 4-30-69 7-07-69 8-05-69 9-03-69	0.01 .19 .12 .31 10.8 8.81 2.06 .62 .18 .06 .03 .03
Klamath River basin						
Fall Creek	Klamath River	NE¼ sec.36, T.48 N., R.5 W., 1,500 ft upstream from mouth and 0.8 mile south of Fall Creek powerplant and Copco Post Office.	14.6	1928-59+ 1964-68	9-02-69	*39.2
Bogus Creek	Klamath River	NE¼ sec.17, T.47 N., R.3 W., 0.5 mile downstream from Iron Gate Dam and 6.0 miles northeast of Hornbrook.	--	1965-68	9-02-69	*12.1
Beaver Creek	Klamath River	NE¼SW¼ sec.30, T.47 N., R.8 W., 1.9 miles upstream from mouth and 14.8 miles northwest of Yreka.	106	1953-58 1959-65+ 1967-68	9-04-69	*31.5
South Fork Scott River	Scott River	SW¼SE¼ sec.20, T.40 N., R.8 W., opposite unnamed tributary, 1.1 miles southwest of Callahan and 1.5 miles above East Fork Scott River.	42.5	1958-60+ 1964, 1966-68	9-05-69	*9.99

See footnotes at end of table.

Discharge measurements made at miscellaneous sites--Continued

Discharge measurements made at miscellaneous sites--Continued						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Klamath River basin--Continued						
Moffett Creek	Scott River	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.44 N., R.8 W., 590 ft upstream from Soap Creek and 5.1 miles east of Fort Jones.	69.8	1958-67† 1968	9-04-69	*0.34
Etna Creek	Scott River	SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.6, T.41 N., R.9 W., 0.1 mile below the mouth of Alder Creek and 2.7 miles southwest of Etna.	19.5	1966-68	9-05-69	*2.49
Elk Creek	Klamath River	NE $\frac{1}{4}$ sec.36, T.16 N., R.7 E., 4.0 miles upstream from mouth and 4.0 miles south of Happy Camp.	90.4	1956-64† 1967-68	9-03-69	*33.8
Thompson Creek	Klamath River	SE $\frac{1}{4}$ sec.17, T.17 N., R.5 W., 50 ft above highway bridge, 0.1 mile above mouth, and 6.0 miles northeast of Happy Camp.	--	1966, 1968	9-03-69	*16.9
Coffee Creek	Trinity River	NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.37 N., R.8 W., 0.75 mile upstream from Little Boulder Creek, 3.2 miles upstream from mouth, and 8 miles northwest of new location of Trinity Center.	--	1957-66† 1968	9-23-69	51.5
Deadwood Creek	Trinity River	SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.33 N., R.8 W., 300 ft above mouth and 0.7 mile northeast of Lewiston.	--	1965-68	9-23-69	*.51

‡ Peak flow.

† Operated as a continuous-record gaging station.

* Base flow.

TAHQUITZ CREEK SEEPAGE INVESTIGATION-GAGING STATION (10-2580) TO SUNRISE WAY, PALM SPRINGS, CALIF.

Two series of discharge measurements were made during the water year 1969, on June 3 and July 10 on Tahquitz Creek and diversion in California, to study channel gains and losses. The reach is 3.1 miles in length and extends from the gaging station (10-2580) to Sunrise Way in Palm Springs, California. The measurements were made during periods of constant flow. There had been no measureable precipitation since May 7. The diversion flow was considered a deduction and not a loss. There was no tributary inflow into the stream system. There has been no previous investigations of this reach.

Tahquitz Creek miles from mouth	Stream	Location	Discharge, in cubic feet per second			
			Meas. disch.	Gain or loss	Meas. disch.	Gain or loss
			June 3, 1969		July 10, 1969	
7.0	Tahquitz Creek	Gaging station (10-2580) 2.2 miles southeast of Palm Springs	62.5	-	16.8	-
6.95	Diversion	NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.4 S., R.4 E., 0.05 mile downstream from (10-2580)	1.13	-	.1	-
6.00	Tahquitz Creek	NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.22, T.4 S., R.4 E., 800 ft upstream from Palm Canyon Drive	50.4	-11.0	-	-
5.85	do	NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.23, T.4 S., R.4 E., at Palm Canyon Drive	46.3	-4.1	5.88	-10.82
5.65	do	NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.23, T.4 S., R.4 E., 0.45 mile upstream from Sunrise Way	-	-	0	-5.88
4.90	do	SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.23, T.4 S., R.4 E., at Sunrise Way	28.8	-17.5	0	-
		OVERALL NET GAIN OR LOSS		-32.6		-16.7

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