

1965

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

United States Department of the Interior
Geological Survey - Water Resources Division

WATER RESOURCES DATA
FOR
CALIFORNIA
1965

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Great Basin, and Pacific Slope
Basins excluding Central Valley

Prepared in cooperation with

California Department of Water Resources
Alameda County Flood Control and Water Conservation District
Alameda County Water District
Calaveras County Water District
Contra Costa County Flood Control and Water Conservation District
Lake County Flood Control and Water Conservation District
Montecito County Water District
Monterey County Flood Control and Water Conservation District
San Bernardino County Flood Control District
Santa Clara County Flood Control and Water Conservation District
Orange County Flood Control District
San Luis Obispo County Flood Control and Water Conservation District
San Mateo County
Santa Barbara County Water Agency
Santa Cruz County Flood Control and Water Conservation District
San Francisco (county and city)
Santa Barbara (city)
San Diego (city)
Antelope Valley-East Kern Water Agency
East Bay Municipal Utility District
Georgetown Divide Public Utility District
Imperial Irrigation District
San Bernardino Valley Water Conservation District
Santa Maria Valley Water Conservation District
Ventura River Municipal Water 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

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
345 Middlefield Road
Menlo Park, California, 94025

Water-resources records, 1965, 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

CALENDAR FOR WATER YEAR 1965

OCTOBER 1964

S	M	T	W	T	F	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER 1964

S	M	T	W	T	F	S
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15	16	17	18	19	20	21
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29	30					

DECEMBER 1964

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JANUARY 1965

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31						

FEBRUARY 1965

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28						

MARCH 1965

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APRIL 1965

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MAY 1965

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30	31					

JUNE 1965

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JULY 1965

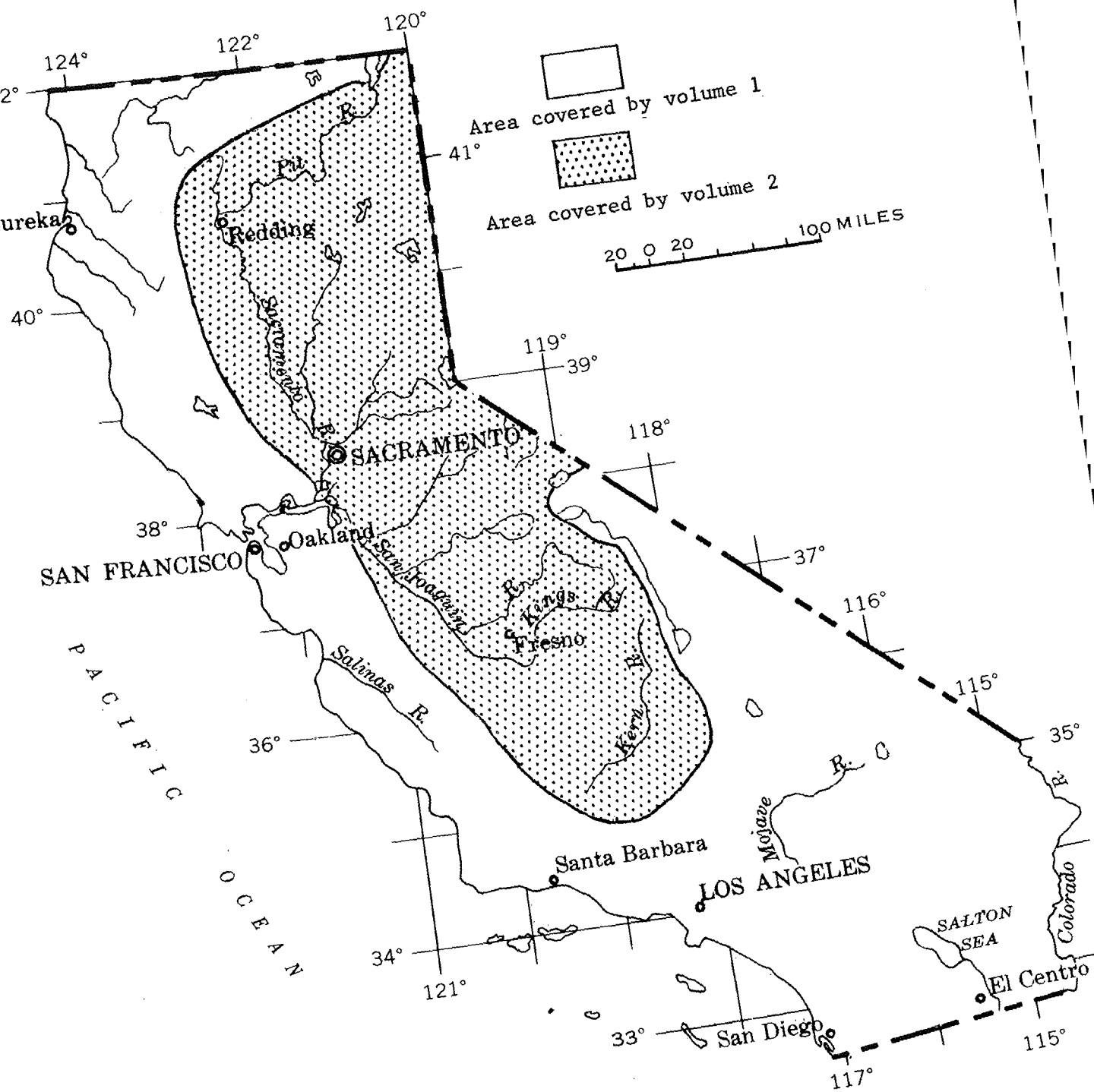
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

AUGUST 1965

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

SEPTEMBER 1965

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
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WATER RESOURCES DATA FOR CALIFORNIA, 1965

Part 1. SURFACE WATER RECORDS

INTRODUCTION

The surface-water records for the 1965 water year for gaging stations, partial-record stations, and miscellaneous sites within California are given in this report. For convenience, also included are records for a few pertinent gaging stations in bordering States. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey, under the direction of Walter Hofmann, district chief, Menlo Park, Calif.

Through September 30, 1960, the records of discharge and stage of streams 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." Since 1951 there have been 20 volumes in the series; each volume covered an area whose boundaries coincided with those of certain natural drainage areas. The records in California were contained in parts 9, 10, and 11 of that series.

Beginning with the 1961 water year, streamflow records and related data are being released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these basic-data reports is limited and is made primarily for local needs. The records later will be published in Geological Survey water-supply papers at 5-year intervals. These water-supply papers will show daily discharge and will be compiled for the same geographical areas used for the annual series.

COOPERATION

In California the work was done under cooperative agreements with:

California Department of Water Resources, W. E. Warne, Director.
 Alameda County Flood Control and Water Conservation District,
 Richard W. Karn, Engineer-Manager.
 Alameda County Water District, M. P. Whitfield, General Manager.
 Calaveras County Water District, Paul E. Lewis, Secretary-Manager.
 Contra Costa County Flood Control and Water Conservation District,
 C. C. Rich, Chief Engineer.
 Lake County Flood Control and Water Conservation District, Willard D. Hansen,
 Manager.
 Montecito County Water District, Delbert D. Smith, General Manager.
 Monterey County Flood Control and Water Conservation District,
 Loren Bunte, Jr., District Engineer.
 San Bernardino County Flood Control District, M. A. Nicholas, Chief Engineer.
 Santa Clara County Flood Control and Water Conservation District,
 Donald K. Currilin, Manager-Counsel.
 Orange County Flood Control District, H. G. Osborne, Chief Engineer.
 San Luis Obispo County Flood Control and Water Conservation District,
 Robert H. Born, County Hydraulic Engineer.
 Santa Barbara County Water Agency, Curtis Tunnell, Chairman.
 Santa Cruz County Flood Control and Water Conservation District,
 Warren M. Harrison, Director of Public Works.
 San Mateo County, D. S. Wilson, County Engineer and Road Commissioner.
 San Diego (city), R. E. Graham, Director of Utilities.
 Santa Barbara City Water Department, Clyde Richardson, Director.
 Antelope Valley-East Kern Water Agency, R. G. Lunt, Chief Engineer and
 General Manager.
 East Bay Municipal Utility District, J. W. McFarland, General Manager.
 Georgetown Divide Public Utility District, J. E. Christensen, Manager.
 Imperial Irrigation District, R. F. Carter, General Manager.
 San Bernardino Valley Water Conservation District, E. F. Dibble, Engineer and
 Secretary.
 Santa Maria Valley Water Conservation District, L. H. Adam, President.
 Ventura River Municipal Water District, L. G. Bennett, General Manager and
 Chief Engineer.

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, 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., California Water and Telephone Co., Irvine Ranch,
 Kings River Water Association, 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 Water Resources Division, and Helix, Madera,
 Merced, Modesto, Nevada, Serrano and Carpenter, Turlock, Oakdale, Oroville-
 Wyandotte, South San Joaquin, Vista, and Woodbridge Irrigation Districts.

DEFINITION OF TERMS AND ABBREVIATIONS

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

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.

Hydrologic bench mark is an area or basin in which the hydrologic regimen will likely be governed solely by natural conditions. Such a basin provides a reference for separating the effects of cultural changes in other basins with similar climate, physiography, and geology.

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

Cubic foot per second (cfs) is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

Cubic feet per second per square mile (cfsm) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Runoff in inches (in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Acre-foot (ac-ft) is the quantity of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet.

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, 1.983471 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

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

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, a long reach of the channel, or an artificial structure.

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.

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

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

DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in the same downstream order used in the water-supply papers. Records are listed in a downstream direction along the main stem with all stations on a tributary entering above a main-stem station listed before that station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents of this report represents one rank. This downstream order and system of indention shows which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. The numbers have been assigned in the same downstream order used in the annual series of water-supply papers. In assigning station numbers, no distinction is made between partial-record and continuous-record gaging stations, so that the 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 number for each station, such as 11-1208.00 includes the part number "11" and a six-digit station number. In this report, the part number and only the essential digits of the station number are 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.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained from a water-stage recorder that gives a continuous chart of the fluctuations (for digital recorders, a tape punched at 15-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge.

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, or computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating tables 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 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.

At some 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. For such stations, the rate of change in stage is used as a factor in determining discharge.

At some gaging stations the stage-discharge relation is affected by ice during the winter, and computing the discharge in the usual manner is impossible. 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 engineers, and comparable records of discharge for other stations in the same or nearby basins.

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 the daily discharge. This can happen when the recorder stops or otherwise fails to operate properly, when intakes are plugged, or when the float is held by ice. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjacent good record, discharge measurements, weather records, and comparison with station records from the same or nearby basins.

The data in this report generally comprise a description of the station, a skeleton rating table, and a table showing the daily discharge and monthly and yearly discharge of the stream. Records are published for the water year which begins October 1 and ends September 30. A calendar for the 1965 water year is shown on page III.

The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, and general remarks. The location of the gaging station and the drainage area are obtained from the most accurate maps available. Under "Records available" are given the periods for which there are published records for the present station or for generally equivalent stations. Under "Gage" are given the type of gage currently in use and the datum of the gage above mean sea level and a condensed history of the types, locations, and datums of previous gages used during the period of records available. The references to "datum of 1929" and adjustments of other years are to the datum and adjustments of the U.S. Coast and Geodetic Survey. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having fewer than 5 complete years of record or for stations where changes in water development cause the figure to have little significance. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height if it is significant. In the first paragraph, the data given are for the complete current water year unless otherwise specified. In the second paragraph, the data given are for the periods of record within the calendar year dates in the heading (not necessarily those for the complete years indicated by the heading dates). Reliable information concerning major floods that have occurred outside the period of record are given in the third or last paragraph under "Extremes." Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder, a crest-stage indicator, 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, it is given separately. Information pertaining to the accuracy of the records and to conditions which affect the natural flow at the gaging station is given under "Remarks."

Skeleton rating tables are published for all stations, except those for which the daily discharge for the greater part of the open-water (ice-free) period was determined by the shifting-control method, the slope method, or other special methods involving an equivalent adjustment to the gage height of more than 0.1 foot. Skeleton rating tables generally are not published for canals, ditches, or springs.

The daily table gives the discharge corresponding to the daily mean gage height, unless the discharge changes greatly during a day. For days having large or rapid changes, the discharge is computed by averaging the mean discharges for several parts of the day. For digital recorders, the daily mean discharge is 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.

In the monthly summary below the daily table, the "Total" is the sum of the daily figures; it is the total cfs-days for the month. The "Mean" is the average flow in cubic feet per second during the month. Discharge for the month is expressed in acre-feet ("Ac-ft"). For three stations only discharge for the month is expressed in cubic feet per second per square mile ("Cfsm"), in inches ("In."), and in acre-feet ("Ac-ft"). For those stations equipped with a tipping-bucket rain gage, precipitation, in inches, is given for the month.

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges, not the momentary discharges when the water was at crest stage. Likewise, the minimums in this summary are the minimum daily discharges.

Peak discharges and the times of their occurrence and corresponding gage heights for most stations are listed below the table of daily and monthly discharge. 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 stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330 hours.

Footnotes to the table of daily discharge indicate periods for which discharge was computed or estimated by unusual or special methods because of no gage-height record, ice effect, or other conditions that reduce the degree of accuracy of the records.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published each year for all reservoirs for which records are published on a daily basis, but it is not published for reservoirs for which there are only monthly data.

For those stations equipped with a thermograph, a table of daily maximum and minimum water temperatures is included.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of streamflow 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 states the degree of accuracy of the records. "Excellent" indicates that, in general, the error in the daily records is less than 5 percent; "good," less than 10 percent; "fair," less than 15 percent; and "poor," more than 15 percent. The records of monthly and yearly mean discharge and runoff are, in general, more nearly accurate than the daily records.

Discharge at some stations, as indicated by the monthly mean, may vary widely from natural runoff, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes or to 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 when large negative adjustments are made or when evaporation is large in comparison with the observed discharge.

SUPPLEMENTAL DATA

Data from partial-record stations and measurements made at miscellaneous sites are given at the end of this report. 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 is on file in the district office; information, such as discharge measurements and recorder charts or nonrecording-gage readings. Most gaging-station records in the State through 1958 have been analyzed with an electronic computer to give: (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. A few of these gaging-station records have been further updated, some through 1965. Continuous temperature records are obtained from thermographs at some gaging stations. Water samples are collected at many gaging stations for analysis

to determine chemical quality, suspended-sediment load, and particle-size distribution. These data are published in part 2 of this report. A reference is made, under the "Remarks" paragraph of the gaging-station description, to regularly collected water-quality records.

HYDROLOGIC CONDITIONS

The runoff for the first $2\frac{1}{2}$ months of the 1965 water year was near median, except for southern California where it was deficient. Storms of extreme intensity occurred in northern California during the latter part of December and the first part of January and produced floods that were the most damaging in the history of that area. Peak discharges at many locations were the greatest of record. Thirty-one stream-gaging stations were destroyed and many others were severely damaged. A comprehensive report on the floods is being prepared. Nearly 50 percent of the water-year runoff occurred during December and January. For the remainder of the year streamflow was generally below median in the north, except for those streams affected by the melting of the above-average snowpack. Streamflow remained deficient in the south throughout the water year. Runoff in the north-coastal area ranged from about 100 to 200 percent of median and averaged 160 percent of median, whereas runoff in the south-coastal area averaged 50 percent of median. Runoff averaged about 115 percent of median in the central-coastal area and about 225 percent in the San Francisco Bay area. In the Sacramento and San Joaquin Valleys runoff averaged about 195 and 150 percent of median, respectively. Major reservoirs had their greatest carryover storage in recent years. Water stored in these reservoirs at the end of the water year totaled 65 percent of their combined capacities and 120 percent of their average carryover storage.

9-4230. Colorado River below Davis Dam, Ariz.-Nev.

Location.--Lat 35°11'30", long 114°34'15", in SE 1/4 sec. 1, T.32 S., R.66 E., Mount Diablo meridian, on right bank half a 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.

Records available.--June 1905 to September 1907 (published as "at Hardyville"), March 1949 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 500.00 ft above mean sea level, datum of 1929. 1905-7, staff gage at site 4 1/4 miles downstream at datum about 13.4 ft lower. Mar. 16 to May 3, 1949, water-stage recorder at site half a 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.--16 years (1949-65), 13,480 cfs (9,759,000 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 28,500 cfs Aug. 17 (gage height, 6.89 ft); minimum daily, 1,620 cfs Apr. 7.

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

1949-65: Maximum discharge, 31,200 cfs Apr. 22, 1952 (gage height, 13.91 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. Discharge measurements generally made two to three times a month. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,400	6,890	5,940	4,740	8,330	13,700	17,300	17,400	11,100	16,500	9,050	14,400
2	11,100	6,930	5,920	6,440	8,330	15,300	17,300	9,320	16,200	17,400	16,700	13,300
3	9,900	7,810	5,090	4,750	8,330	15,800	8,910	16,600	16,100	17,500	16,800	13,200
4	5,920	7,610	5,020	6,040	8,200	15,700	5,020	16,800	15,800	9,210	16,900	13,100
5	10,300	7,690	4,980	6,010	8,110	15,500	5,910	16,800	15,000	12,000	16,800	8,130
6	10,400	7,600	4,740	6,160	8,100	15,600	3,790	14,200	7,950	17,600	16,600	8,930
7	10,300	7,590	4,970	6,080	4,990	6,950	1,620	13,800	14,100	18,700	17,600	12,700
8	10,800	7,900	6,390	5,970	9,080	14,400	1,690	14,100	14,000	19,200	12,000	12,800
9	10,900	5,800	6,690	5,970	8,300	14,600	1,690	8,080	14,700	19,200	18,900	13,900
10	10,800	6,310	6,620	4,860	8,260	14,300	1,840	11,700	17,000	19,400	18,700	13,500
11	7,340	6,330	6,630	4,730	8,170	14,700	1,630	11,900	16,300	9,090	18,500	14,900
12	9,880	6,380	6,550	4,540	8,230	15,000	1,640	11,900	16,400	18,300	19,000	10,000
13	10,000	6,290	4,780	6,100	8,440	14,600	7,430	14,200	8,640	18,500	19,000	14,500
14	10,000	6,370	6,540	6,130	5,000	6,940	13,800	14,100	16,300	18,300	19,200	13,400
15	9,280	4,850	6,720	6,040	8,340	11,300	14,800	14,100	15,900	18,500	8,890	13,500
16	9,410	6,080	7,690	6,100	9,600	10,100	15,300	8,310	15,100	17,700	18,100	12,200
17	9,360	6,180	7,830	4,990	9,740	9,910	14,400	13,800	16,500	18,400	18,300	11,900
18	7,450	6,300	6,670	5,800	9,690	8,950	5,600	12,700	16,000	8,960	18,200	12,000
19	6,490	6,040	6,740	5,640	9,690	8,990	16,900	12,600	16,000	17,700	17,500	9,350
20	6,510	6,140	4,880	5,740	9,780	8,810	15,900	12,600	8,430	17,800	17,500	10,700
21	5,670	6,030	4,430	8,300	5,060	7,020	15,900	13,000	15,300	17,700	17,700	10,900
22	5,410	4,720	4,010	8,510	8,760	14,600	16,000	12,900	15,600	18,100	8,120	13,100
23	5,380	6,110	3,970	8,490	11,900	13,700	16,100	8,330	15,300	18,100	17,200	11,800
24	5,410	5,050	4,090	5,220	11,800	14,700	16,000	13,400	15,400	18,100	17,300	14,000
25	5,360	4,840	4,880	8,160	12,900	15,300	8,020	16,300	15,900	8,980	17,700	14,200
26	6,940	4,690	5,110	8,290	13,800	14,900	15,900	16,700	15,600	16,500	15,200	10,200
27	6,910	4,880	5,030	8,260	14,000	15,000	17,000	14,600	8,430	16,700	15,300	11,400
28	6,880	4,940	6,730	8,440	6,980	8,140	17,400	14,300	14,700	16,600	15,300	11,500
29	6,850	4,800	6,610	8,300	-	16,300	17,100	12,000	15,000	16,500	8,130	11,100
30	6,760	5,790	6,500	8,380	-----	17,200	17,200	8,070	15,000	16,500	14,100	11,200
31	6,850	-----	6,520	5,070	-----	17,400	-----	11,200	-----	16,500	14,600	-----
Total	255,960	184,940	179,270	198,250	251,910	405,410	329,090	405,810	434,750	510,240	494,890	365,810
Mean	8,257	6,165	5,783	6,395	8,997	13,080	10,970	13,090	14,490	16,460	15,960	12,190
Ac-ft	507,700	366,800	355,600	393,200	499,700	804,100	652,700	804,900	862,300	1,012,000	981,600	725,600

Calendar year 1964: Max 19,800 Min 3,970 Mean 11,050 Ac-ft 8,022,000

Water year 1964-65: Max 19,400 Min 1,620 Mean 11,000 Ac-ft 7,966,000

9-4235. Colorado River at Needles, Calif.

Location.--Lat 34°51'05", long 114°36'35", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.9 N., R.23 E., San Bernardino meridian, 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.

Drainage area.--170,600 sq mi, approximately.

Records available.--April 1931 to September 1965 (elevations only).

Gage.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level, datum of 1929; gage readings have been reduced to elevations above mean sea level. Prior to May 15, 1942, at site 750 ft downstream and May 15, 1942, to Jan. 12, 1952, at present site, both at datum 66.23 ft higher.

Extremes.--Maximum elevation recorded during year, 471.06 ft July 16; minimum recorded 461.34 ft Jan. 12.

1931-65: Maximum elevation, 475.77 ft Nov. 30, 1944; minimum that of Jan. 12, 1965.

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

Mean elevation, in feet, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	466.17	464.00	463.30	463.19	-	465.13	468.53	468.18	466.00	467.53	-	467.30
2	466.21	464.03	463.45	462.82	-	467.03	468.59	467.18	466.08	468.84	-	467.36
3	466.02	463.97	463.40	463.19	-	468.05	467.47	466.27	468.01	468.59	-	466.49
4	465.12	464.72	462.87	462.86	-	467.87	463.48	468.05	468.29	467.40	-	466.85
5	464.21	464.47	462.81	463.25	-	467.80	463.55	468.07	468.20	465.53	-	-
6	465.58	464.47	462.78	463.30	-	467.82	-	467.97	468.13	467.12	-	-
7	465.72	464.48	462.68	463.14	-	466.61	-	466.61	-	468.85	-	-
8	465.82	464.40	462.83	463.25	-	464.82	-	467.45	-	469.74	-	-
9	466.05	464.37	463.68	463.17	-	467.72	-	465.87	-	469.25	-	-
10	465.94	463.46	463.70	462.85	-	467.52	-	465.02	-	469.44	-	467.29
11	465.58	463.82	463.68	462.87	-	467.14	-	466.33	-	468.15	-	467.29
12	464.45	463.73	463.68	462.12	464.50	467.72	-	466.23	467.93	465.73	-	466.62
13	465.51	463.71	463.55	462.66	464.20	467.69	-	466.55	467.60	469.49	-	465.96
14	465.47	463.77	462.81	463.10	463.97	465.73	466.01	467.30	465.87	469.06	-	466.90
15	465.45	463.43	463.60	463.40	463.23	465.36	467.29	467.30	467.99	469.03	-	-
16	465.14	463.09	463.72	463.10	464.44	465.02	467.67	466.11	467.98	469.14	-	-
17	465.17	463.62	464.60	463.10	465.40	465.03	467.49	465.67	468.30	468.92	-	-
18	464.88	463.64	463.93	462.61	465.14	465.18	465.64	466.80	468.16	467.59	-	-
19	464.35	463.65	463.76	462.81	465.20	464.80	465.95	466.46	468.15	-	-	-
20	463.90	463.58	463.43	462.92	465.25	464.75	467.97	466.72	466.46	-	-	-
21	463.68	463.58	463.00	463.10	464.40	464.29	467.98	466.48	466.26	-	468.56	-
22	463.10	463.40	462.19	464.49	463.11	464.95	467.64	466.67	467.90	-	466.89	465.62
23	463.30	463.00	462.11	464.25	465.40	467.27	467.96	466.08	467.94	-	466.39	466.77
24	463.17	463.66	462.19	463.94	466.08	467.16	467.87	465.22	467.67	-	468.42	466.41
25	463.17	462.83	462.36	463.05	466.40	468.09	466.85	467.43	467.95	-	468.80	467.31
26	463.21	462.86	462.72	464.15	466.76	467.44	465.73	469.32	467.95	-	468.67	466.80
27	464.09	462.77	462.58	464.31	467.22	467.66	467.74	467.22	466.72	-	467.33	464.92
28	464.00	462.90	463.02	464.04	465.87	467.10	468.83	467.42	465.87	-	467.77	465.99
29	464.00	462.85	463.79	464.40	-	465.24	468.43	467.39	467.68	-	466.47	465.61
30	463.98	462.80	463.65	-	-----	468.55	468.51	465.78	467.61	-	465.42	465.74
31	463.92	-----	463.56	-	-----	468.70	-----	464.63	-----	-	467.38	-----

d Computed from reconstructed gage-height record.

Note.--No gage-height record Jan. 30 to Feb. 11, April 6-13, June 7-11, July 19 to Aug. 20, Sept. 5-9, 15-21.

9-4240. Colorado River near Topock, Ariz.

Location.--Lat 34°41'15", long 114°27'45", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.13, T.15 N., R.21 W., Gila and Salt River meridian, 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.

Records available.--January 1917 to September 1965. Daily mean elevations published since October 1938.

Gage.--Water-stage recorder. Datum of gage is 423.02 ft above mean sea level, datum of 1929; 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. Since May 1, 1939, supplementary water-stage recorder at former highway bridge at Topock, 2.7 miles upstream from base gage at datum 13.33 ft higher.

Average discharge.--17 years (1917-34), 20,260 cfs (14,670,000 acre-ft per year); 31 years (1934-65), 13,620 cfs (9,860,000 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 18,600 cfs Aug. 15; maximum elevation, 456.66 ft Aug. 15; minimum discharge, 1,690 cfs Apr. 13; minimum elevation, 449.13 ft Apr. 13.

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

1934-65: 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. Discharge measurements generally made twice a month. 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.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11.000	7.210	5.710	6.530	6.150	9.840	15.200	15.800	11.600	14.500	15.500	14.300
2	11.100	7.190	5.970	5.370	7.960	12.000	15.600	15.700	11.600	15.400	13.200	14.200
3	10.800	7.070	5.970	6.370	8.090	13.100	15.900	13.300	13.400	16.000	15.000	13.400
4	10.400	7.790	5.310	5.370	8.170	13.700	11.100	14.700	14.300	15.900	15.500	13.300
5	8.000	7.730	5.110	6.250	8.130	14.100	9.400	15.100	14.700	13.300	15.700	13.100
6	9.780	7.810	5.060	6.330	7.920	14.400	7.810	15.400	14.500	13.200	15.800	9.820
7	10.000	7.880	4.810	6.390	8.170	14.000	5.110	14.600	12.400	14.900	16.100	10.000
8	10.200	7.860	4.980	6.390	6.310	11.200	3.740	14.200	13.300	16.100	15.500	12.400
9	10.500	7.920	6.070	6.310	8.550	13.000	2.700	13.800	13.600	16.800	14.800	12.800
10	10.500	6.810	6.470	6.210	8.150	13.500	2.210	11.700	14.200	17.300	16.700	13.700
11	10.400	6.950	6.450	5.370	8.250	13.500	2.320	12.000	15.200	17.300	17.000	13.400
12	8.880	6.930	6.370	4.850	8.380	13.900	1.940	12.100	15.400	14.000	17.300	13.800
13	9.620	6.870	6.430	4.850	8.280	14.100	1.800	12.400	15.500	15.900	17.500	11.000
14	9.800	6.790	5.060	6.070	8.320	13.400	7.550	13.200	13.400	16.600	17.700	13.100
15	9.870	6.630	6.170	6.550	6.390	11.200	11.700	13.400	14.500	16.900	16.800	13.000
16	9.580	5.630	6.390	6.250	8.060	11.100	12.600	13.300	15.000	17.200	13.900	12.800
17	9.470	6.430	7.150	6.210	8.940	10.600	13.200	11.900	15.200	17.200	16.400	11.800
18	9.450	6.510	7.250	5.430	9.180	10.500	12.700	12.800	15.600	16.900	16.800	11.600
19	8.530	6.490	6.710	5.830	9.320	9.890	10.000	12.800	15.700	14.300	17.100	11.400
20	7.810	6.370	6.650	5.790	9.360	9.510	13.700	12.800	15.300	15.700	16.800	9.910
21	7.470	6.330	5.470	5.990	9.340	9.030	14.100	12.900	13.500	16.300	16.800	10.400
22	6.610	6.270	4.710	7.650	6.710	8.610	14.400	12.900	14.300	16.500	16.000	10.500
23	6.530	5.290	4.120	7.860	8.680	11.700	14.800	12.700	14.800	17.000	12.600	12.000
24	6.310	6.270	4.090	7.830	10.200	11.900	15.000	11.400	14.800	17.000	15.800	11.600
25	6.190	5.570	4.300	6.170	10.600	13.100	14.700	12.400	15.200	16.500	16.500	13.200
26	6.010	5.290	5.000	7.690	11.400	13.100	12.200	14.400	15.400	14.000	16.700	13.000
27	7.130	5.090	5.190	7.940	12.200	13.600	13.800	14.300	15.000	15.300	15.300	9.730
28	7.210	5.230	5.410	7.880	12.200	13.800	15.000	14.200	12.900	15.400	15.200	10.700
29	7.150	5.130	6.590	8.190	-----	11.000	15.500	14.200	13.800	15.600	14.800	10.600
30	7.230	4.920	6.650	8.190	-----	13.700	15.800	13.100	14.300	16.000	10.700	10.500
31	7.110	-----	6.650	8.110	-----	14.700	-----	11.500	-----	15.900	14.100	-----
Total	270,640	196,260	178,270	202,220	243,410	380,780	321,580	415,000	428,400	490,900	485,600	361,060
Mean	8,730	6,542	5,751	6,523	8,693	12,280	10,720	13,390	14,280	15,840	15,660	12,040
Ac-ft	536,800	389,300	353,600	401,100	482,800	755,300	637,800	823,100	849,700	973,700	963,200	716,200

Calendar year 1964: Max 17,300 Min 4,090 Mean 11,030 Ac-ft 8,006,000
 Water year 1964-65: Max 17,700 Min 1,800 Mean 10,890 Ac-ft 7,883,000

9-4240. Colorado River near Topock, Ariz.--Continued

Mean elevation, in feet, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	453.67	452.03	451.35	451.70	451.42	453.19	455.48	455.54	453.75	455.01	455.44	454.81
2	453.68	452.02	451.48	451.11	452.32	454.13	455.67	455.52	453.77	455.37	454.46	454.80
3	453.57	451.96	451.48	451.60	452.38	454.61	455.81	454.50	454.52	455.62	455.23	454.43
4	453.38	452.32	451.15	451.09	452.42	454.86	454.36	455.09	454.92	455.59	455.41	454.41
5	452.32	452.29	451.05	451.53	452.40	455.03	453.11	455.27	455.09	454.51	455.52	454.30
6	453.14	452.33	451.02	451.56	452.30	455.15	452.68	455.40	455.01	454.43	455.53	452.88
7	453.27	452.36	450.89	451.58	452.42	455.01	451.49	455.07	454.11	455.18	455.69	452.97
8	453.32	452.35	450.98	451.58	451.50	453.76	450.73	454.90	454.49	455.68	455.44	454.00
9	453.49	452.38	451.53	451.53	452.60	454.58	450.18	454.71	454.63	455.96	455.15	454.16
10	453.49	451.83	451.73	451.47	452.41	454.76	449.81	453.81	454.87	456.17	455.91	454.57
11	453.46	451.90	451.72	451.05	452.46	454.80	449.65	453.93	455.29	456.15	456.05	454.45
12	452.76	451.89	451.68	450.77	452.52	454.96	449.43	453.99	455.40	454.79	456.17	454.64
13	453.11	451.86	451.71	450.76	452.47	455.04	449.22	454.10	455.43	455.61	456.26	453.43
14	453.19	451.83	451.02	451.38	452.49	454.74	451.96	454.43	454.54	455.89	456.33	454.37
15	453.22	451.75	451.58	451.62	451.54	453.78	453.78	454.55	455.02	456.00	455.98	454.32
16	453.10	451.26	451.69	451.47	452.37	453.73	454.17	454.51	455.20	456.13	454.76	454.25
17	453.05	451.66	452.07	451.45	452.78	453.54	454.45	453.88	455.32	456.11	455.78	453.82
18	453.05	451.71	452.12	451.06	452.89	453.46	454.22	454.28	455.47	456.01	455.95	453.76
19	452.63	451.71	451.85	451.26	452.95	453.21	453.07	454.26	455.51	454.93	456.05	453.65
20	452.30	451.65	451.82	451.24	452.97	453.04	454.67	454.29	455.35	455.51	455.90	453.03
21	452.13	451.64	451.23	451.34	452.96	452.82	454.85	454.31	454.56	455.75	455.89	453.27
22	451.71	451.61	450.84	452.17	451.70	452.63	454.95	454.31	454.92	455.85	455.56	453.32
23	451.67	451.13	450.53	452.27	452.66	453.98	455.15	454.25	455.12	456.05	454.10	453.97
24	451.57	451.62	450.50	452.26	453.33	454.10	455.22	453.68	455.15	456.07	455.46	453.80
25	451.51	451.28	450.61	451.43	453.50	454.60	455.11	454.12	455.29	455.84	455.73	454.51
26	451.43	451.14	450.97	452.19	453.85	454.59	454.01	454.95	455.40	454.79	455.82	454.43
27	451.99	451.04	451.06	452.31	454.21	454.82	454.72	454.93	455.22	455.33	455.23	452.99
28	452.03	451.11	451.17	452.28	454.23	454.90	455.23	454.88	454.34	455.37	455.22	453.43
29	452.00	451.06	451.75	452.43	-	453.70	455.42	454.87	454.71	455.46	455.03	453.37
30	452.04	450.95	451.77	452.43	-----	454.87	455.54	454.40	454.91	455.62	455.25	453.31
31	451.98	-----	451.76	452.39	-----	455.30	-----	453.69	-----	455.58	454.73	-----

COLORADO RIVER MAIN STEM

9-4240.5. Chemehuevi Wash tributary near Needles, Calif.

Location.--Lat 34°30'30", long 114°36'10", on right bank on Havasu Lake road, 22 miles south of Needles, San Bernardino County.

Drainage area.--2.04 sq mi.

Records available.--December 1959 to September 1965. Peak discharges only December 1959 to September 1962.

Gage.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,580 ft (from topographic map). December 1959 to April 1963, crest-stage gage only at same site and datum.

Extremes.--No flow during year.

1959-65: Maximum discharge, 114 cfs Sept. 26, 1962 (gage height, 8.51 ft, from crest-stage gage), based on computation of maximum flow through culvert; no flow for most of each year.

Remarks.--No flow since Sept. 26, 1962. No regulation or diversion above station.

DIVERSIONS FROM LAKE HAVASU

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

Location--Lat 34°19'00", long 114°09'25", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.3 N., R.27 E., San Bernardino meridian, 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.

Records available--January 1939 to September 1965 (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.

Average discharge--26 years, 581 cfs (420,600 acre-ft per year).

Extremes--1939-65: Maximum daily diversion, 3,966 acre-ft (2,000 cfs) Dec. 15, 1960; 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 from Gene and Copper Basin Reservoirs was measured in 4 washes between pumping plant and Copper Basin Wash by means of weirs, each about 1 mile from Colorado River. Percolation amounted to 5,110 acre-ft during the water year and was not subtracted from the diversion record.

Cooperation--Records furnished by Metropolitan Water District of Southern California.

Monthly diversions, in acre-feet, water year October 1964 to September 1965

Month	Maximum	Minimum	Mean	Total
October.....	3,586	2,915	3,297	102,192
November.....	3,833	2,755	3,184	95,522
December.....	3,783	2,805	3,238	100,379
Calendar year 1964.....	3,840	0	3,106	1,136,698
January.....	3,448	2,716	3,157	97,865
February.....	3,709	0	2,568	71,897
March.....	3,510	2,715	3,380	104,794
April.....	3,821	3,001	3,398	101,933
May.....	3,039	3,557	3,394	105,210
June.....	3,594	3,088	3,407	102,214
July.....	3,558	519	3,132	97,093
August.....	3,551	3,029	3,415	105,875
September.....	3,942	2,668	3,334	100,009
Water year 1964-65.....	3,942	0	3,247	1,184,983

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

Location.--Lat 34°19'00", long 114°09'25", in NW¼SW¼ sec.28, T.3 N., R.27 E., San Bernardino meridian, 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, which is 156 miles downstream from Hoover Dam.

Drainage area.--178,800 sq mi, approximately.

Records available.--July 1938 to September 1965. Published as Parker Reservoir near Parker Dam 1938.

Gage.--Water-stage recorder. Datum of gage is 400.54 ft above mean sea level, datum of 1929. Gage readings have been reduced to elevations above mean sea level.

Extremes.--Maximum contents during year, 615,600 acre-ft June 20 (elevation, 450.35 ft); minimum, 506,500 acre-ft Mar. 3 (elevation, 444.51 ft).

1938-65: 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, 619,400 acre-ft between elevation 400.54 (sill of regulating gates) and 450.54 ft (top of regulating gates) above mean sea level, based on re-survey of Lake Havasu made in April 1957 by Bureau of Reclamation between elevations 430.54 and 450.54 ft. Prior to Oct. 1, 1956, different capacity table used. Dead storage, 28,600 acre-ft below 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	548,100	547,900	543,400	540,900	538,400	512,800	542,000	556,900	594,200	589,300	580,200	562,000
2	550,300	546,300	545,000	539,600	537,700	508,000	548,100	562,200	589,100	588,400	572,800	565,400
3	550,400	544,900	546,700	540,700	538,200	507,200	566,900	564,200	591,800	587,800	569,000	567,600
4	549,200	545,000	546,300	540,200	538,600	510,700	581,300	566,700	595,600	587,400	566,300	566,700
5	544,500	547,000	545,400	539,500	536,600	515,500	590,400	573,500	600,400	581,500	563,700	565,200
6	543,800	546,300	543,200	541,100	537,300	520,200	595,600	581,700	603,800	573,500	561,100	557,700
7	545,200	544,300	540,900	544,100	539,800	524,700	595,000	585,700	599,600	568,200	556,000	551,000
8	546,700	542,200	538,700	544,900	537,300	521,800	588,900	590,100	596,400	567,800	550,800	550,300
9	548,100	541,600	539,100	546,300	540,400	523,300	578,900	594,200	596,000	567,500	544,100	553,000
10	549,500	539,500	540,900	546,800	542,500	525,800	569,900	594,000	599,000	568,400	542,300	553,300
11	552,200	538,600	540,400	546,700	543,400	533,700	565,900	595,400	602,200	570,100	542,500	553,700
12	550,400	540,400	541,100	546,300	543,800	539,500	552,800	595,200	605,400	566,900	546,300	555,400
13	550,100	541,100	539,800	541,300	543,100	547,400	535,100	596,000	607,200	565,600	548,600	553,700
14	552,800	541,300	537,300	543,200	541,300	553,900	524,700	599,800	604,600	566,900	550,100	554,800
15	556,200	540,400	536,000	544,100	537,100	555,200	526,300	603,200	605,400	571,300	553,500	557,500
16	560,000	538,600	535,500	544,000	534,200	557,300	526,900	606,600	606,800	573,500	549,400	560,500
17	563,300	539,100	536,200	543,400	534,200	559,400	526,300	604,400	610,200	579,800	584,300	561,100
18	565,900	541,400	538,600	541,400	534,400	562,900	525,200	605,000	611,000	581,900	548,800	558,100
19	566,300	544,900	540,900	539,100	532,100	559,800	517,500	604,600	611,400	578,300	553,300	554,100
20	565,900	547,400	543,800	537,100	529,200	554,300	517,000	604,400	610,600	576,400	556,500	549,400
21	566,100	550,300	544,900	535,500	528,100	548,500	519,500	599,400	605,400	575,400	559,400	546,300
22	565,600	552,200	547,400	537,300	526,300	540,200	524,900	595,200	602,400	578,300	561,100	542,900
23	562,900	551,700	546,800	538,000	519,500	538,600	528,800	592,600	601,200	579,800	554,400	544,700
24	559,000	553,000	545,900	541,300	517,700	538,600	532,300	589,300	603,000	582,300	553,500	544,900
25	555,400	554,400	543,100	537,500	517,900	540,200	535,500	585,900	601,000	584,000	554,400	546,700
26	552,800	554,800	539,600	538,400	517,900	540,000	532,600	589,100	601,200	580,200	560,000	549,900
27	553,000	552,200	537,300	539,500	517,900	541,300	532,800	596,000	600,200	580,800	563,800	547,700
28	553,100	549,200	535,900	541,600	517,500	542,300	537,100	602,000	594,600	579,400	565,400	548,500
29	553,900	545,800	534,800	542,500	-	536,900	545,000	605,400	590,800	581,500	567,300	548,500
30	552,600	543,800	536,000	543,600	-----	533,700	550,600	605,600	589,300	580,600	560,900	550,400
31	550,400	-----	539,300	542,700	-----	535,100	-----	599,400	-----	581,300	560,200	-----
(+)	+4,100	-6,600	-4,500	+3,400	-25,200	+17,600	+15,500	+48,800	-10,100	-8,000	-21,100	-9,800

Calendar year 1964..... + 4,500

Water year 1964-65..... + 4,100

+ Change in contents, in acre-feet.

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

Elevation, in feet, at 2400, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	446.84	446.83	446.58	446.44	446.30	444.88	446.50	447.32	449.28	449.03	448.55	447.59
2	446.96	446.74	446.67	446.37	446.26	444.60	446.84	447.60	449.02	448.98	448.16	447.77
3	446.97	446.66	446.76	446.43	446.29	444.55	447.85	447.71	449.16	448.95	447.96	447.89
4	446.90	446.67	446.74	446.40	446.31	444.76	448.61	447.84	449.35	448.93	447.82	447.84
5	446.64	446.78	446.69	446.36	446.20	445.03	449.09	448.20	449.59	448.62	447.68	447.76
6	446.60	446.74	446.57	446.45	446.24	445.29	449.35	448.63	449.76	448.20	447.54	447.36
7	446.68	446.63	446.44	446.62	446.38	445.54	449.32	448.84	449.55	447.92	447.27	447.00
8	446.76	446.51	446.32	446.66	446.24	445.38	449.01	449.07	449.39	447.90	446.99	446.96
9	446.84	446.48	446.34	446.74	446.41	445.46	448.48	449.28	449.37	447.88	446.62	447.11
10	446.92	446.36	446.44	446.77	446.53	445.60	448.01	449.27	449.52	447.93	446.52	447.13
11	447.07	446.31	446.41	446.76	446.58	446.04	447.80	449.34	449.68	448.02	446.53	447.15
12	446.97	446.41	446.45	446.74	446.60	446.36	447.10	449.33	449.84	447.85	446.74	447.24
13	446.95	446.45	446.38	446.46	446.56	446.80	446.12	449.37	449.93	447.78	446.87	447.15
14	447.10	446.46	446.24	446.57	446.46	447.16	445.54	449.56	449.80	447.85	446.95	447.21
15	447.28	446.41	446.17	446.62	446.23	447.23	445.63	449.73	449.84	448.08	447.14	447.35
16	447.48	446.31	446.14	446.61	446.07	447.34	445.66	449.90	449.91	448.20	446.91	447.51
17	447.66	446.34	446.18	446.58	446.07	447.45	445.63	449.79	450.08	448.53	446.85	447.54
18	447.80	446.47	446.31	446.47	446.08	447.64	445.57	449.82	450.12	448.64	446.88	447.38
19	447.82	446.66	446.44	446.34	445.95	447.47	445.14	449.80	450.14	448.45	447.13	447.17
20	447.80	446.80	446.60	446.23	445.79	447.18	445.11	449.79	450.10	448.35	447.30	446.91
21	447.81	446.96	446.66	446.14	445.73	446.86	445.25	449.54	449.84	448.30	447.45	446.74
22	447.78	447.07	446.80	446.24	445.63	446.40	445.55	449.33	449.69	448.45	447.54	446.55
23	447.64	447.04	446.77	446.28	445.25	446.31	445.77	449.20	449.63	448.53	447.19	446.65
24	447.43	447.11	446.72	446.46	445.15	446.31	445.96	449.03	449.72	448.66	447.14	446.66
25	447.24	447.19	446.56	446.25	445.16	446.40	446.14	448.85	449.62	448.75	447.19	446.76
26	447.10	447.21	446.37	446.30	445.16	446.39	445.98	449.02	449.63	448.55	447.48	446.94
27	447.11	447.07	446.24	446.36	445.16	446.46	445.99	449.37	449.58	448.58	447.69	446.82
28	447.12	446.90	446.16	446.48	445.14	446.52	446.23	449.67	449.30	448.51	447.77	446.86
29	447.16	446.71	446.10	446.53	-	446.22	446.67	449.84	449.11	448.62	447.87	446.86
30	447.09	446.60	446.17	446.59	-----	446.04	446.98	449.85	449.03	448.57	447.53	446.97
31	446.97	-----	446.35	446.54	-----	446.12	-----	449.54	-----	448.61	447.49	-----

9-4280. Colorado River below Parker Dam, Ariz.-Calif.

Location.--Lat $34^{\circ}15'30''$, long $114^{\circ}09'00''$, in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.16, T.2 N., R.27 E., San Bernardino meridian, on right bank 3.9 miles downstream from Parker Dam, 10.4 miles upstream from Headgate Rock Dam, and 11 miles northeast of Parker, Ariz.

Drainage area.--178,800 sq mi, approximately.

Records available.--February to September 1934 (gage heights and fragmentary discharge records), October 1934 to September 1965. Prior to October 1937 published as "near Parker, Ariz."

Gage.--Water-stage recorder. Datum of gage is 346.23 ft above mean sea level, datum of 1929.

Average discharge.--31 years (1934-65), 13,050 cfs (9,448,000 acre-ft per year) unadjusted.

Extremes.--Maximum discharge during year, 19,900 cfs Aug. 5; maximum gage height, 22.40 ft Aug. 5; minimum daily discharge, 1,710 cfs Dec. 22.

1934-65: 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 except those below 4,000 cfs, which are good. Discharge measurements generally made twice a month. Flow regulated by Lake Mead since Feb. 1, 1935, Lake Mohave since Jan. 17, 1950, and by Lake Havasu since July 1, 1936. Many diversions above station. For record of diversion to Colorado River aqueduct and return flows, see record for Colorado River aqueduct near Parker Dam (sta 9-4241.5).

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.870	6.470	3.740	3.840	6.720	11.400	10.700	10.700	11.300	12.200	14.200	11.100
2	7.750	6.000	3.170	3.980	6.330	12.200	11.300	10.700	10.600	13.200	14.500	10.200
3	8.850	6.000	3.160	3.970	5.890	12.600	5.970	11.200	9.580	14.100	14.400	10.600
4	9.080	5.560	3.460	3.970	5.920	10.300	6.720	10.500	9.340	14.300	14.500	11.600
5	8.240	4.960	3.590	4.630	7.270	10.100	6.770	9.710	10.000	14.100	14.500	11.900
6	7.740	6.460	3.810	3.870	5.740	10.500	5.830	8.990	10.600	14.100	15.300	11.200
7	7.470	6.640	3.540	3.770	5.070	10.800	6.450	9.910	12.100	15.100	16.300	10.800
8	7.260	6.740	3.760	3.770	5.370	10.700	6.110	9.330	12.300	13.400	16.300	10.200
9	7.680	6.180	3.620	3.870	5.410	10.500	6.530	9.440	11.600	14.800	16.400	9.180
10	7.850	6.380	3.340	4.070	5.420	10.300	8.560	8.790	10.300	14.600	16.000	11.000
11	7.410	5.030	4.620	3.580	5.220	8.580	9.040	8.120	11.000	14.300	14.600	11.000
12	8.180	4.130	4.590	3.380	6.270	9.160	9.410	8.720	11.600	13.700	13.700	10.700
13	7.920	5.240	4.060	5.830	6.720	8.370	10.300	8.600	12.200	13.300	14.300	10.300
14	6.860	4.540	5.140	3.020	7.160	8.790	10.600	8.820	12.100	13.600	14.900	10.600
15	5.940	4.290	5.120	3.880	6.580	9.050	9.930	8.790	11.700	12.200	14.600	9.300
16	5.700	4.960	5.200	4.540	7.570	8.160	11.800	8.810	11.600	13.200	14.300	8.730
17	5.980	4.140	5.120	4.730	6.990	7.680	12.600	8.970	11.200	13.000	14.600	10.000
18	6.310	3.130	4.150	4.630	7.480	7.590	12.500	9.480	12.400	13.500	14.600	10.700
19	5.950	2.650	3.700	5.200	9.120	9.210	11.700	9.730	13.400	13.900	13.400	10.700
20	5.840	2.850	3.410	5.430	9.130	10.200	11.900	10.000	13.400	13.900	13.400	10.400
21	5.450	2.750	3.090	5.270	9.400	9.620	11.000	11.700	13.200	13.700	13.600	9.770
22	5.240	2.640	1.710	5.350	9.340	9.850	10.100	12.100	13.500	13.000	13.900	10.500
23	5.880	3.730	2.860	5.430	9.740	10.200	10.700	11.600	12.800	13.800	13.800	8.770
24	6.430	3.390	3.320	5.760	10.500	10.700	11.300	10.200	11.600	13.900	14.200	9.900
25	5.660	2.950	4.510	5.580	10.300	10.400	11.400	10.800	13.000	13.500	13.900	10.000
26	5.040	2.550	4.780	5.680	10.500	11.600	11.400	10.200	13.200	14.200	12.300	9.470
27	4.750	4.540	5.620	5.610	10.800	11.200	11.400	8.580	13.500	14.400	11.800	9.360
28	5.250	5.040	4.680	5.090	11.300	12.200	10.700	8.940	13.200	14.000	12.600	8.860
29	4.750	4.680	5.380	5.550	—	12.200	9.620	9.930	12.900	13.500	12.300	8.200
30	5.970	3.980	4.510	5.920	—	13.000	10.600	10.400	12.700	14.200	12.200	7.120
31	6.020	—	2.750	6.700	—	12.700	—	10.800	—	13.800	11.700	—
Total	206,320	138,600	123,510	145,900	213,260	319,860	292,940	304,560	357,920	426,500	437,100	302,160
Mean	6,655	4,620	3,984	4,706	7,616	10,320	9,765	9,825	11,930	13,760	14,100	10,070
Ac-ft	409,200	274,900	245,000	289,400	423,000	634,400	581,000	604,100	709,900	846,000	867,000	599,300

Calendar year 1964: Max 15,900 Min 1,710 Mean 9,164 Ac-ft 6,652,000
 Water year 1964-65: Max 16,400 Min 1,710 Mean 8,955 Ac-ft 6,483,000

9-4285.3. Arch Creek near Earp, Calif.

Location.--Lat 34°09'55", long 114°22'20", in NE $\frac{1}{2}$ sec.20, T.1 N., R.25 E., on right bank on Parker Dam road, 4 miles east of Earp.

Drainage area.--1.52 sq mi.

Records available.--January 1960 to September 1965.

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

Average discharge.--5 years, 0.002 cfs (1.4 acre-ft per year).

Extremes.--Maximum discharge during year, 68 cfs Mar. 11 (gage height, 5.10 ft); no flow for most of year.

1960-65: Maximum discharge, that of Mar. 11, 1965; no flow for most of each year.

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

Remarks.--Records good. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 0.6; January, 0.1; February, 0.4; March, 1.0; April, 1.8; August, 0.1; the water year, 4.0.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Mar. 11.....2.6
Apr. 12......4

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
March 1965.....	2.6	-	-	0.08	5.2
April.....	0.4	-	-	.01	.3
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	2.6	0	.008	6.0

Note.--Flow occurred only on days listed above.

9-4290. Palo Verde Canal near Blythe, Calif.

Location.--Lat 33°43'54", long 114°30'43", in SE 1/4 NW 1/4 sec. 19, T.5 S., R.24 E., San Bernardino meridian, 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.

Records available.--January 1922 to December 1923, January 1925 to September 1965 (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, both to datum of 1929. Aug. 7, 1950, to Nov. 30, 1952, water-stage recorder on tailrace and auxiliary recorder half a mile downstream and Dec. 1, 1952, to Oct. 28, 1957, recording gage above and below former intake structure a quarter of a mile upstream, at different datums.

Average discharge.--15 years (1950-65), 1,194 cfs (864,400 acre-ft per year).

Extremes.--1950-65: Maximum daily discharge, 2,180 cfs Aug. 7, 1962; no flow at times in several years.

Remarks.--Records excellent except those below 1,000 cfs, which are good. Discharge measurements generally made three times a month. Daily diversions computed on basis of head on intake gates and gate openings. Records published herein represent flow diverted from Colorado River during 1965 for irrigation of 84,279 acres. Return flows to Colorado River are measured by 10 wasteways and drains extending throughout the project; 1 of these is equipped with water-stage recorder and Parshall flume, 3 are equipped with Sparling flowmeters and 3 with total-flow meters on Parshall flumes. 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.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,200	777	428	0	846	1,570	1,010	1,270	1,510	1,920	1,830	1,630
2	1,050	851	541	0	834	1,510	1,050	1,180	1,500	1,910	1,790	1,700
3	1,050	842	450	0	859	1,460	430	1,240	1,610	1,920	1,790	1,750
4	1,020	749	404	0	839	1,550	0	1,290	1,630	1,880	1,830	1,760
5	986	789	296	0	960	1,520	150	1,260	1,660	1,820	1,890	1,610
6	979	729	335	0	900	1,450	155	1,170	1,680	1,840	1,920	1,610
7	986	750	388	0	758	1,370	158	1,210	1,720	1,810	1,880	1,650
8	1,050	707	369	0	727	1,420	133	1,100	1,850	1,830	1,750	1,670
9	996	776	532	0	640	1,390	131	948	1,790	1,890	1,810	1,800
10	915	771	483	0	717	1,400	132	1,100	1,660	1,900	1,860	1,790
11	913	851	561	0	814	1,260	152	1,080	1,670	1,890	1,830	1,690
12	978	780	586	0	822	1,120	309	1,150	1,560	1,900	1,860	1,500
13	845	727	650	0	851	867	403	1,160	1,570	1,860	1,870	1,560
14	857	734	619	306	775	797	636	1,150	1,590	1,840	1,840	1,560
15	802	708	573	330	964	870	667	1,030	1,640	1,890	1,800	1,550
16	852	631	613	714	1,000	829	797	959	1,740	1,900	1,860	1,620
17	755	655	644	690	1,130	792	975	1,050	1,710	1,710	1,800	1,670
18	688	485	518	854	1,210	876	978	1,110	1,720	1,620	1,860	1,520
19	766	360	609	850	1,280	984	1,090	1,170	1,640	1,630	1,740	1,310
20	678	348	602	882	1,230	1,080	1,200	1,310	1,540	1,670	1,530	1,420
21	749	428	656	857	1,180	1,070	1,380	1,330	1,580	1,720	1,360	1,390
22	865	506	569	767	1,260	1,180	1,370	1,340	1,640	1,850	1,360	1,350
23	916	469	609	672	1,240	1,150	1,390	1,330	1,570	1,920	1,500	1,250
24	923	497	429	603	1,270	1,170	1,330	1,390	1,740	1,870	1,540	1,170
25	808	482	264	737	1,410	1,280	1,180	1,410	1,730	1,840	1,660	1,070
26	867	413	546	702	1,530	1,210	1,200	1,370	1,770	1,870	1,690	888
27	806	394	577	768	1,530	1,130	1,200	1,400	1,680	1,880	1,680	948
28	838	424	691	821	1,510	917	1,250	1,360	1,710	1,940	1,750	997
29	796	363	706	945	-	1,060	1,320	1,250	1,780	2,040	1,530	1,080
30	782	480	769	965	-----	1,080	1,400	1,350	1,870	2,040	1,530	1,070
31	789	-----	466	814	-----	1,100	-----	1,520	-----	2,000	1,530	-----
Total	27,505	18,476	16,483	13,277	29,086	36,462	23,576	37,987	50,060	57,600	53,470	43,583
Mean	887	616	532	428	1,039	1,176	786	1,225	1,669	1,858	1,725	1,453
Ac-ft	54,560	36,650	32,690	26,330	57,690	72,320	46,760	75,350	99,290	114,200	106,100	86,450
(†)	39,450	33,190	28,830	24,700	26,920	37,730	33,440	36,480	37,760	43,240	46,800	45,380
Calendar year 1964:	Max 2,160		Min 264		Mean 1,278		Ac-ft 927,900		+530,100			
Water year 1964-65:	Max 2,040		Min 0		Mean 1,117		Ac-ft 808,400		+433,900			

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

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, 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.

Records available.--March 1956 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 260.00 ft above mean sea level, datum of 1929.

Average discharge.--9 years (1957-65) 9,031 cfs (6,538,000 acre-ft per year).

Extremes.--Maximum discharge during year, 15,900 cfs July 13 (gage height, 16.46 ft, result of sluicing operation at dam); minimum daily, 1,770 cfs Dec. 23.

1956-65: Maximum discharge, 24,300 cfs Mar. 21, 1958; maximum gage height, 17.94 ft May 4, 1958; minimum daily discharge, 1,380 cfs Dec. 21, 1961.

Remarks.--Records excellent. Discharge measurements made two to three times a month. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,920	4,500	3,690	3,620	5,110	8,510	9,740	8,770	8,890	9,660	10,900	9,120
2	6,580	4,860	3,380	3,720	5,110	8,580	7,910	8,920	8,860	9,510	11,300	8,630
3	6,470	4,520	2,960	3,720	5,110	10,500	10,200	8,860	8,510	10,700	11,900	7,500
4	7,530	4,480	2,850	3,720	4,780	8,540	5,970	8,820	7,320	11,000	11,100	7,910
5	7,200	4,210	3,350	3,760	4,780	7,720	6,690	8,870	7,680	11,000	11,200	8,770
6	6,920	3,800	3,490	4,060	5,700	7,780	6,850	8,140	8,010	11,300	12,500	9,030
7	6,380	4,980	3,570	3,230	4,900	8,300	7,030	7,410	8,420	12,300	12,800	8,550
8	6,020	5,240	3,550	3,180	4,360	8,280	5,540	8,510	9,260	11,100	13,300	8,040
9	5,880	5,250	3,410	3,730	4,640	9,040	6,330	8,190	9,100	11,300	13,500	7,500
10	6,080	4,980	3,290	4,080	4,570	7,650	6,670	8,200	9,110	11,500	13,100	7,060
11	6,180	4,880	2,970	4,030	4,560	7,840	8,020	7,460	7,850	11,900	12,100	8,280
12	5,300	3,970	4,060	3,720	4,510	7,200	8,090	7,050	9,550	11,400	11,600	8,680
13	6,400	3,430	3,740	3,340	5,000	7,540	8,940	7,190	8,510	11,100	11,100	8,360
14	6,200	3,980	3,560	4,580	5,680	7,420	9,400	7,000	9,560	11,200	11,400	7,930
15	5,420	3,700	4,220	2,820	5,840	7,650	9,550	7,560	9,390	10,300	11,900	8,120
16	4,580	3,780	4,100	3,280	5,580	8,440	8,950	7,740	8,850	10,100	11,500	7,460
17	4,660	4,080	4,200	3,720	5,870	6,530	9,960	7,730	9,060	10,500	11,100	6,230
18	4,940	3,880	4,330	3,760	5,490	6,910	10,500	7,690	8,850	11,000	11,900	7,900
19	5,020	3,500	3,450	3,700	6,030	6,620	10,800	7,990	10,100	11,300	11,400	8,660
20	4,920	2,760	3,110	4,030	6,710	7,870	9,990	7,920	10,700	11,500	10,500	8,620
21	4,680	2,740	2,800	4,090	7,320	8,760	10,000	8,280	10,500	11,700	10,500	8,040
22	4,140	2,600	2,500	4,000	7,240	8,170	9,110	9,680	11,100	11,200	11,200	7,650
23	3,820	2,760	1,770	4,210	7,390	8,370	8,270	9,430	10,000	10,700	11,000	8,270
24	4,450	3,230	2,310	4,400	7,830	8,670	9,130	9,470	9,990	11,600	10,800	7,340
25	4,740	3,070	2,790	4,380	8,360	7,780	9,520	8,840	9,290	10,800	10,900	8,200
26	4,270	2,630	3,500	4,520	7,650	8,810	9,420	9,360	9,930	11,300	10,800	8,530
27	4,000	2,630	3,600	4,480	8,310	9,230	9,450	8,030	10,700	11,500	9,030	7,920
28	3,660	4,030	3,820	4,520	8,380	9,790	9,450	7,260	10,700	11,100	9,170	7,790
29	4,030	4,510	3,280	4,030	---	9,860	8,850	7,140	10,300	10,900	9,740	7,300
30	3,560	4,160	3,730	4,360	---	9,920	7,680	8,040	10,100	10,700	9,360	6,790
31	4,480	-----	3,250	4,510	-----	12,600	-----	8,640	-----	11,100	9,480	-----
Total	165,430	117,140	104,630	121,300	166,810	260,880	258,010	254,190	280,190	342,270	348,080	240,180
Mean	5,336	3,905	3,375	3,913	5,958	8,415	8,600	8,200	9,340	11,040	11,230	8,006
Ac-ft	328,100	232,300	207,500	240,600	330,900	517,400	511,800	504,200	555,700	678,900	690,400	476,400

Calendar year 1964: Max 12,900 Min 1,770 Mean 7,311 Ac-ft 5,308,000
 Water year 1964-65: Max 13,500 Min 1,770 Mean 7,285 Ac-ft 5,274,000

Note.--Portions of Oct. 16, Nov. 19, 20, Dec. 22, 23, Aug. 27 to Sept. 3, reconstructed from gage-height record for station 1.2 miles upstream, operated by Palo Verde Irrigation District.

9-4295, Colorado River at Imperial Dam, Ariz.-Calif.

Location.--Lat 32°53'00", long 114°27'50", in W½ sec.9, T.15 S., R.24 E., San Bernardino meridian, 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.

Records available.--Flow of Colorado River passing Imperial Dam: October 1960 to September 1965. Flow of Colorado River reaching Imperial Dam: 1903-34 (yearly discharge only), July 1934 to September 1965 (monthly discharge only since October 1942). Prior to 1943 published as "near Picacho, Calif."

Gage.--Water-stage recorder for obtaining head on gates. Datum of gage is 162.00 ft above mean sea level (U.S. Bureau of Reclamation bench mark). July 1, 1934, to Sept. 30, 1942, water-stage recorder at site 14½ miles upstream at datum 167.38 ft above mean sea level, datum of 1929. Oct. 1, 1942, to Sept. 30, 1960, no gage on river at this site (see Remarks).

Average discharge (flow reaching Imperial Dam).--31 years (1934-65), 12,190 cfs (8,825,000 acre-ft per year).

Extremes (flow reaching Imperial Dam).--1934-65: 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. Discharge measurements generally made twice a month. 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 cfs-days of Colorado River at this station, and at gaging stations on All-American Canal near Imperial Dam (sta 9-5230), and Gila Gravity Main Canal at Imperial Dam (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.

Cooperation.--Records of gate openings 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	335	289	319	284	346	465	367	397	384	384	449	359
2	294	289	319	463	288	356	516	397	384	384	613	359
3	294	289	319	586	288	288	1,060	397	384	384	665	359
4	294	289	319	400	288	288	569	397	384	384	453	359
5	294	289	319	299	288	388	601	397	821	384	384	359
6	294	289	319	299	288	388	559	397	817	384	384	359
7	294	289	319	299	426	388	397	397	402	384	384	359
8	294	289	319	299	608	388	397	397	384	384	384	359
9	294	289	319	299	288	388	397	397	384	384	384	359
10	294	289	319	299	288	388	397	569	384	384	384	595
11	294	289	319	299	288	388	397	392	438	384	596	379
12	294	389	319	299	288	388	397	441	724	384	1,030	379
13	294	389	319	299	288	388	397	387	536	440	419	379
14	294	289	319	299	288	388	397	387	485	875	414	379
15	294	469	319	299	288	388	397	387	400	479	384	379
16	294	423	319	299	288	288	397	387	384	384	379	379
17	372	325	319	299	288	288	397	387	384	384	379	379
18	864	325	319	299	388	288	397	387	384	384	379	379
19	888	454	319	299	388	288	397	387	384	384	379	379
20	777	486	319	299	288	288	397	387	384	384	374	279
21	895	630	319	299	288	388	397	387	384	384	374	279
22	546	1,050	319	299	288	388	397	387	384	384	374	279
23	375	1,120	319	299	288	288	397	387	384	396	374	350
24	289	1,120	319	299	288	288	397	387	384	659	369	279
25	289	952	319	299	288	273	397	387	600	529	369	279
26	289	598	474	299	288	273	397	387	384	640	369	279
27	289	413	740	299	288	268	397	1,060	384	397	369	279
28	289	319	347	299	288	268	397	790	384	384	364	279
29	289	434	284	299	-	368	397	611	384	384	364	279
30	289	337	284	299	-----	368	397	430	482	384	364	279
31	289	-----	284	518	-----	368	-----	387	-----	384	359	-----
Total	11,774	13,701	10,388	10,025	8,780	10,643	13,200	13,671	13,385	13,247	13,266	10,377
Mean	380	457	335	323	314	343	440	441	446	427	428	346
Ac-ft	23,350	27,180	20,600	19,880	17,410	21,110	26,180	27,120	26,550	26,280	26,310	20,580
(+)	6,468	4,709	4,222	4,408	5,969	8,917	9,510	8,919	9,708	11,530	11,980	9,078
(+)	397,700	280,200	259,600	271,000	331,500	548,300	565,900	548,400	577,700	708,900	736,600	540,200
Calendar year 1964:	Max	2,380	Min	284	Mean	607	Ac-ft	440,400	+8,131	+5,903,000		
Water year 1964-65:	Max	1,120	Min	268	Mean	390	Ac-ft	282,600	+7,964	+5,766,000		

+ 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.

COLORADO RIVER MAIN STEM

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, on right bank in California, 1,000 ft downstream from Yuma Main Canal wasteway, 0.6 mile downstream from 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.

Records available.--October 1963 to September 1965. 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, datum of 1929.

Extremes.--Maximum discharge during year, 2,080 cfs Jan. 3; maximum gage height, 11.97 ft Nov. 21; minimum daily discharge, 626 cfs Oct. 13.

1963-65: Maximum discharge, 2,860 cfs Mar. 3, 1964 (gage height, 12.40 ft); minimum daily, that of Oct. 13, 1964.

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

Remarks.--Records excellent. Discharge measurements generally made every two weeks. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	668	828	1,010	1,710	891	758	996	1,160	1,310	863	1,030	912
2	656	807	996	1,700	828	764	982	1,180	1,320	856	982	905
3	782	807	1,030	1,910	794	788	1,100	1,220	1,310	863	828	884
4	704	807	905	1,740	814	782	1,410	1,230	1,310	870	828	877
5	668	849	877	1,210	821	758	1,080	1,260	1,330	982	926	982
6	680	828	961	884	842	794	1,100	1,260	1,360	1,160	1,180	1,200
7	674	800	877	849	835	877	975	1,290	1,440	919	919	1,130
8	650	835	905	807	794	891	975	1,280	1,430	884	905	919
9	656	828	968	776	734	863	996	1,310	1,470	891	912	919
10	662	814	926	788	807	898	982	1,320	1,760	870	905	1,640
11	656	835	926	776	982	912	947	1,610	1,730	891	912	1,290
12	632	891	933	794	975	926	947	1,450	961	884	975	1,330
13	626	954	891	752	1,020	919	1,290	1,300	926	933	961	1,300
14	638	954	877	776	1,000	940	1,060	1,310	968	982	954	1,300
15	740	863	891	954	954	947	989	1,360	947	940	961	1,300
16	1,180	1,110	814	800	947	947	1,050	1,310	870	961	919	1,310
17	800	1,090	788	668	982	856	940	1,300	821	919	919	1,300
18	835	1,400	764	656	1,010	828	842	1,310	870	933	891	1,300
19	1,100	1,460	912	656	1,260	849	856	1,290	1,140	919	877	1,300
20	1,080	1,770	912	698	1,490	828	828	1,280	1,320	905	870	1,300
21	1,150	1,620	1,000	692	788	856	828	1,290	975	1,020	884	1,290
22	1,120	1,360	996	680	758	919	776	1,310	940	1,200	933	1,260
23	919	1,450	1,030	674	758	919	758	1,310	905	884	989	1,270
24	870	1,410	1,070	698	740	856	1,600	1,300	891	919	975	1,270
25	870	1,420	1,180	680	758	842	1,370	1,300	912	947	947	1,260
26	849	1,160	1,230	704	752	821	1,130	1,290	919	940	982	1,250
27	814	912	1,310	686	752	1,190	1,080	1,230	912	905	989	1,270
28	849	989	1,360	710	764	1,020	1,140	1,280	919	912	989	1,320
29	835	1,130	1,350	674	-	919	1,180	1,730	863	898	1,030	1,240
30	828	1,070	1,350	680	-----	954	1,200	1,240	856	1,050	1,050	1,300
31	821	-----	1,350	764	-----	982	-----	1,300	-----	1,220	968	-----
Total	25,012	32,051	31,389	27,546	24,850	27,403	31,407	40,610	33,685	29,320	29,390	36,128
Mean	807	1,068	1,013	889	888	884	1,047	1,310	1,123	946	948	1,204
Ac-ft	49,610	63,570	62,260	54,640	49,290	54,350	62,290	80,550	66,810	58,160	58,290	71,660

Calendar year 1964: Max 2,640 Min 626 Mean 1,188 Ac-ft 862,400
Water year 1964-65: Max 1,910 Min 626 Mean 1,010 Ac-ft 731,500

9-5220. Colorado River at northerly international boundary
above Morelos Dam, near Andrade, Calif.

Location.--Lat 32°43'00", long 114°43'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T.8 S., R.24 W., Gila and Salt River meridian, on left bank at northerly international boundary, half a mile east of Andrade, 1.1 miles upstream from Morelos Dam, 1.1 miles downstream from Rockwood Gate, and 7.0 miles downstream from gaging station on Colorado River at Yuma, Ariz.

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

Records available.--January 1950 to September 1965. Prior to October 1958, published as "at international boundary."

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, leveling of 1941. Supplementary water-stage recorder 1,680 ft upstream at same datum.

Extremes.--Maximum discharge during year, 8,040 cfs Apr. 5; maximum elevation, 108.33 ft Apr. 5; minimum discharge, 640 cfs Oct. 1; minimum elevation, 102.16 ft Oct. 2.
1950-65: Maximum discharge, 25,390 cfs Jan. 1, 1953; maximum elevation, 114.24 ft Jan. 28, 1958; minimum discharge, 570 cfs Feb. 24, 1956 (elevation, 103.00 ft).

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. Discharge measurements generally made six times a week.

Cooperation.--Records furnished by International Boundary and Water Commission, United States Section (discharge figures rounded in accordance with Geological Survey standard practice).

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	672	898	1,050	1,690	940	2,200	3,090	1,300	1,350	3,060	3,440	2,330
2	689	884	1,020	1,770	912	2,170	3,300	1,300	1,400	3,080	3,720	2,200
3	779	894	1,060	2,000	864	2,290	4,920	1,320	1,400	3,140	3,760	2,150
4	803	888	958	1,840	872	2,240	6,860	1,290	1,390	3,190	3,800	2,170
5	763	902	932	1,920	918	2,250	7,240	1,330	1,420	3,200	3,750	2,220
6	774	899	994	1,960	935	2,230	6,380	1,310	1,450	3,130	3,720	2,200
7	771	875	934	2,300	894	2,650	5,110	1,330	1,500	3,130	3,780	2,190
8	751	903	932	2,170	1,300	2,330	4,180	1,320	1,490	3,140	3,790	2,090
9	757	910	1,020	1,830	1,760	2,210	4,310	1,300	1,510	3,230	3,640	1,940
10	759	895	1,010	1,980	881	2,260	3,800	1,320	1,790	3,200	3,530	1,610
11	749	901	954	1,920	1,050	3,030	3,620	1,560	1,870	3,340	3,590	1,330
12	718	925	989	2,040	1,040	3,210	3,510	1,430	2,070	3,370	3,680	1,310
13	708	990	962	2,040	1,160	3,150	3,450	1,300	1,970	3,360	4,490	1,320
14	701	1,000	970	1,810	1,140	3,620	3,480	1,290	2,130	3,320	4,310	1,300
15	732	888	1,000	2,020	1,040	2,980	3,510	1,350	2,190	3,330	4,440	1,310
16	1,270	1,130	942	1,580	1,010	3,350	3,510	1,320	2,160	3,400	4,190	1,330
17	925	1,140	919	770	1,050	3,540	3,290	1,310	2,150	3,400	3,960	1,310
18	953	1,410	826	742	1,110	3,390	3,250	1,310	2,150	3,390	3,960	1,340
19	1,110	1,490	1,020	725	1,310	2,990	3,210	1,310	2,270	3,410	3,660	1,300
20	1,180	1,760	1,010	788	1,580	2,570	2,840	1,320	2,440	3,480	3,630	1,350
21	1,180	1,680	1,090	800	1,980	2,760	2,720	1,270	2,610	3,480	3,670	1,310
22	1,240	1,430	1,110	739	1,930	2,770	2,420	1,330	2,940	3,410	4,310	1,310
23	1,030	1,490	1,130	750	1,830	2,760	2,080	1,310	3,040	3,440	3,780	1,300
24	945	1,470	1,140	762	1,780	2,790	1,710	1,310	3,070	3,480	3,400	1,340
25	948	1,450	1,270	752	1,910	2,820	1,590	1,330	3,040	3,480	3,580	1,300
26	955	1,240	1,310	765	1,920	2,770	1,350	1,330	3,070	3,550	3,470	1,290
27	925	911	1,360	762	1,910	2,880	1,280	1,230	3,100	3,490	3,460	1,330
28	927	962	1,390	794	1,930	2,870	1,330	1,290	3,060	3,420	3,360	1,390
29	884	1,050	1,410	757	-	2,920	1,340	1,730	3,050	3,470	3,530	1,290
30	905	1,200	1,370	719	-----	2,910	1,370	1,330	3,090	3,510	2,780	1,350
31	900	-----	1,330	791	-----	2,980	-----	1,330	-----	3,600	2,680	-----
Total	27,403	33,465	33,412	42,286	36,956	85,890	100,050	41,410	66,170	103,630	114,860	47,510
Mean	884	1,116	1,078	1,364	1,320	2,771	3,335	1,336	2,206	3,343	3,705	1,584
Ac-ft	54,350	66,380	66,270	83,870	73,300	170,400	198,400	82,140	131,200	205,500	227,800	94,230

Calendar year 1964: Max 4,490 Min 672 Mean 2,069 Ac-ft 1,502,000
Water year 1964-65: Max 7,240 Min 672 Mean 2,008 Ac-ft 1,454,000

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

9-5225. Gila Gravity Main Canal at Imperial Dam, Ariz.-Calif.

Location.--Lat 32°52'35", long 114°27'15", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.6 S., R.21 W., Gila and Salt River meridian, on right bank 3,200 ft downstream from intake at east end of Imperial Dam.

Records available.--August 1943 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 160.00 ft above mean sea level, datum of 1929.

Extremes.--1943-65: 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. Discharge measurements generally made two to three times a month. 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 1965 water year, water was used for irrigation of 91,371 acres divided as follows: North and South Gila Valleys, 13,144 acres; Yuma Mesa Division, 16,976 acres; Wellton-Mohawk Division, 58,040 acres; Yuma Mesa Auxiliary Division, 3,211 acres.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

7.0	0	9.0	116
7.1	1	10.0	230
7.3	5	12.0	540
7.7	20	15.0	1,200
8.3	57	19.0	2,260

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1400	744	1700	302	634	1040	1450	1810	1800	1940	1450	1790
2	1420	890	1670	246	718	1250	1340	1600	2000	1880	1780	1730
3	1300	1060	1360	210	746	1310	880	1920	1870	1660	1860	1760
4	932	1120	1180	548	684	1290	473	1920	1850	1490	1890	1600
5	1200	952	947	416	644	1220	513	1980	1650	1820	1710	1380
6	1510	807	447	333	513	1120	644	1910	1280	1990	1790	1640
7	1540	720	484	194	318	822	598	1830	1570	2000	1760	1830
8	1490	512	630	235	418	1070	464	1600	1760	1950	1410	1810
9	1360	970	578	247	477	1320	444	1290	1830	1960	1710	1660
10	1140	1270	515	199	534	1360	446	1530	1900	1910	2030	1750
11	890	1250	502	326	590	1110	414	1750	1830	1700	2090	1640
12	1340	1320	266	332	506	1070	1070	1740	1610	1940	1990	1130
13	1380	1570	160	364	510	919	1060	1700	1340	2080	1800	1760
14	1380	904	585	358	370	678	1160	1670	1580	1980	1640	1880
15	1280	29	753	396	471	1180	1110	1490	1900	1850	1400	1870
16	1080	0	879	362	757	1440	1120	1220	2050	1860	1770	1850
17	954	0	881	264	803	1360	930	1670	2060	1780	1980	1870
18	604	0	792	517	690	1270	748	1970	1910	1420	2030	1750
19	757	0	564	688	853	1030	1330	2020	1760	1640	1910	1420
20	986	0	411	688	730	930	1640	1900	1420	1900	1880	1740
21	1070	0	502	606	692	724	1740	1870	1660	2050	1770	1980
22	968	0	638	536	846	1070	1680	1720	1940	1970	1420	1830
23	984	0	568	502	1060	1240	1580	1380	1920	1740	1670	1500
24	905	0	65	292	1040	1290	1520	2220	1910	1610	1830	1490
25	753	0	7	677	927	1170	1360	2240	1840	1490	1900	1200
26	995	785	254	877	1090	1260	1720	2160	1620	1700	1830	901
27	1090	786	238	846	1060	1160	1740	2050	1430	1820	1780	1140
28	1040	587	929	736	803	903	1750	1860	1750	1810	1540	1300
29	848	305	977	654	-	1260	1750	1590	1910	1840	1240	1440
30	908	1530	883	517	-----	1540	1910	1440	1960	1900	1540	1440
31	797	-----	538	344	-----	1520	-----	1560	-----	1780	1690	-----
Total	34,301	18,111	20,903	13,812	19,484	35,926	34,584	54,610	52,910	56,460	54,090	48,081
Mean	1,106	604	674	446	696	1,159	1,153	1,762	1,764	1,821	1,745	1,603
Ac-ft	68,040	35,920	41,460	27,400	38,650	71,260	68,600	108,300	104,900	112,000	107,300	95,370

Calendar year 1964: Max 2,090 Min 0 Mean 1,235 Ac-ft 896,200

Water year 1964-65: Max 2,240 Min 0 Mean 1,214 Ac-ft 879,200

9-5230. All-American Canal near Imperial Dam, Ariz.-Calif.

Location.--Lat 32°52'15", long 114°28'50", in SE¼NW¼ sec.17, T.15 S., R.24 E., San Bernardino meridian, on left bank 6,000 ft downstream from intake at west end of Imperial Dam and 13½ miles upstream from turnout to Yuma Main Canal.

Records available.--October 1938 to September 1965. Monthly discharge only prior to October 1939, published in WSP 1313.

Gage.--Water-stage recorder. Datum of gage is 150.00 ft above mean sea level, datum of 1929 (subject to undetermined changes caused by earthquake of May 18, 1940). Since Aug. 21, 1952, auxiliary water-stage recorder 18½ miles downstream from base gage.

Average discharge.--24 years (1941-65), 7,163 cfs (5,186,000 acre-ft per year).

Extremes.--1938-65: Maximum daily discharge, 13,500 cfs Apr. 16, 1938; no flow at times in several years.

Remarks.--Records excellent. Discharge measurements generally made weekly. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,630	3,930	2,820	3,490	3,980	6,790	8,560	7,350	6,500	8,740	9,040	8,280
2	6,550	4,190	3,060	3,440	4,060	7,050	8,840	7,240	6,360	8,770	9,210	8,340
3	6,620	4,220	3,130	3,700	4,320	7,460	9,270	6,940	6,860	8,840	9,210	8,390
4	6,440	4,280	3,150	3,510	4,580	7,680	9,660	7,020	6,800	8,660	9,700	8,120
5	6,060	4,180	3,270	3,730	4,480	7,800	9,830	7,150	6,680	8,580	10,100	7,630
6	6,030	4,240	3,060	3,750	4,200	7,540	8,010	7,350	6,320	8,670	9,560	7,080
7	5,780	4,250	3,210	4,160	4,070	7,570	7,180	7,010	6,310	9,180	10,100	7,150
8	5,830	4,200	3,260	4,190	4,700	7,110	6,980	6,750	6,610	9,520	10,400	7,290
9	5,730	4,240	3,310	3,480	4,930	7,050	6,930	6,750	6,920	9,710	10,200	7,180
10	5,720	4,230	3,420	3,390	3,970	7,010	6,440	6,480	7,140	9,770	10,500	6,820
11	5,570	4,170	3,590	3,640	4,180	7,890	6,430	6,670	6,810	9,620	10,400	6,590
12	5,120	4,130	3,350	3,880	4,300	7,670	6,650	6,620	7,350	9,560	10,400	6,510
13	5,190	3,980	3,200	3,880	4,570	7,550	6,780	6,410	7,170	9,530	11,200	6,760
14	5,230	3,760	3,590	3,850	4,270	7,280	7,410	6,290	7,250	9,330	10,700	6,820
15	5,320	3,790	3,510	3,880	4,270	6,860	8,120	6,290	7,310	9,570	10,500	6,790
16	5,190	3,930	3,610	3,440	4,550	6,650	8,030	6,150	7,470	9,450	9,960	6,830
17	4,890	3,910	3,740	2,990	4,660	6,920	8,320	5,980	7,630	9,570	9,850	6,410
18	4,510	4,280	3,750	2,960	4,940	7,340	8,680	5,890	7,690	9,140	9,960	6,460
19	4,070	4,340	3,650	3,140	4,970	6,880	8,920	6,150	7,660	8,670	9,940	6,290
20	4,030	4,270	3,590	3,370	5,130	6,930	8,540	6,500	7,430	9,050	9,860	6,310
21	4,090	3,290	3,470	3,540	5,530	6,940	8,590	6,640	7,900	8,950	10,100	6,860
22	4,400	2,620	2,980	3,690	5,980	6,970	8,820	6,510	8,320	8,970	10,200	6,930
23	4,290	2,530	2,760	3,750	5,970	7,350	8,550	6,840	8,650	9,530	9,420	7,190
24	4,230	2,380	2,650	3,990	6,050	7,570	7,660	7,130	8,760	9,550	9,270	7,260
25	4,080	2,650	2,350	3,560	6,410	7,730	7,460	7,060	8,700	9,530	9,500	7,380
26	3,990	2,750	2,440	3,580	6,400	7,780	6,970	7,110	8,650	9,360	9,750	7,260
27	3,970	2,680	2,700	3,610	6,820	7,700	7,050	6,910	8,380	9,420	9,570	7,410
28	3,840	2,540	3,130	3,810	6,590	7,840	7,380	6,890	8,350	9,470	9,400	7,400
29	3,700	2,840	3,120	3,710	—	8,190	7,750	6,980	8,380	9,690	9,280	6,980
30	3,520	2,660	3,420	3,840	-----	8,260	7,700	6,670	8,590	9,790	8,370	7,160
31	3,800	-----	3,290	3,850	-----	8,510	-----	6,490	-----	9,510	8,370	-----
Total	154,420	109,460	99,580	112,800	138,880	229,870	237,510	208,220	224,950	287,700	304,020	213,880
Mean	4,981	3,649	3,212	3,639	4,960	7,415	7,917	6,717	7,498	9,281	9,807	7,129
Ac-ft	306,300	217,100	197,500	223,700	275,500	455,900	471,100	413,000	446,200	570,600	603,000	424,200

Calendar year 1964: Max 10,200 Min 1,960 Mean 6,290 Ac-ft 4,566,000
 Water year 1964-65: Max 11,200 Min 2,350 Mean 6,360 Ac-ft 4,604,000

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

9-5265. All-American Canal above Pilot Knob wasteway, Calif.

Location.--Lat 32°45'00", long 114°42'20", in NW¼SE¼ sec.24, T.16 S., R.21 E., San Bernardino meridian, near right bank on downstream side of pier of bridge on U. S. Highway 80, 1.1 miles upstream from Pilot Knob wasteway, 5 miles downstream from turnout to Yuma Main Canal, 5½ miles northwest of Yuma, and 19½ miles downstream from intake at Imperial Dam.

Records available.--October 1938 to June 1965 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 150.00 ft above mean sea level, datum of 1. Prior to Oct. 3, 1961, at datum 1.48 ft lower. Auxiliary water-stage recorder, in NE¼NW¼ sec.15, T.16 S., R.22 E., on wash overcut structure 4.4 miles upstream at same datum.

Average discharge.--23 years (1941-64), 5,362 cfs (3,882,000 acre-ft per year).

Extremes.--1938-64: Maximum daily discharge, 11,400 cfs Apr. 28, 1958; no flow (since continuous operation of canal began Sept. 18, 1940) Dec. 17-20, 1940.

Remarks.--Records excellent. Discharge measurements generally made once a week. First flow in All-American Canal at this point began Feb. 5, 1939. Water is used for power development, irrigation in Coachella and Imperial Valleys, and can be released back to Colorado River through Pilot Knob powerplant and wasteway for power, for regulatory purposes, or downstream use in Mexico.

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

Discharge, in cubic feet per second, October 1964 to June 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.700	3.370	2.430	2.310	3.450	6.210	7.910	6.120	5.190			
2	5.850	3.610	2.420	2.310	3.580	6.390	8.090	6.210	5.270			
3	5.790	3.490	2.290	2.170	3.700	6.630	8.690	5.760	5.680			
4	5.710	3.610	2.430	2.170	3.700	6.700	9.440	5.830	5.440			
5	5.350	3.490	2.860	3.040	3.580	6.920	9.660	5.760	5.270			
6	5.270	3.610	2.720	3.450	3.700	6.700	7.780	6.140	5.100			
7	5.180	3.710	2.860	3.940	3.580	6.840	6.850	6.210	5.020			
8	5.180	3.710	2.860	3.940	4.060	6.160	6.420	5.600	5.190			
9	5.180	3.820	2.720	3.180	4.260	6.160	6.350	5.440	5.440			
10	5.180	3.820	2.720	3.180	3.320	6.160	6.120	5.100	5.510			
11	5.030	3.610	2.860	3.450	3.320	7.130	6.270	5.100	5.510			
12	4.510	3.610	2.720	3.700	3.450	7.060	6.200	5.270	6.640			
13	4.510	3.610	2.580	3.700	3.830	6.920	6.120	5.190	6.440			
14	4.610	3.370	2.860	3.450	3.830	6.780	6.780	5.190	6.570			
15	4.920	3.490	2.720	3.700	3.450	6.270	7.520	5.100	6.850			
16	4.750	3.370	2.860	3.180	3.700	5.970	7.520	5.100	6.850			
17	4.560	3.000	2.970	2.580	3.830	6.270	7.850	4.750	6.990			
18	4.310	3.130	2.970	2.740	3.830	6.570	8.330	4.650	6.990			
19	3.820	3.250	2.970	2.740	3.580	6.040	8.450	4.850	6.920			
20	3.820	3.000	2.940	3.040	3.680	6.120	8.030	5.100	6.780			
21	3.920	2.430	2.670	3.180	4.820	6.200	7.970	5.760	7.180			
22	4.020	2.430	2.380	3.320	5.420	6.200	8.030	6.060	7.610			
23	3.820	2.430	2.210	3.320	5.330	6.640	7.590	6.140	7.770			
24	3.820	2.280	1.860	3.700	5.420	7.060	6.040	6.060	7.880			
25	3.490	2.280	1.670	3.040	5.720	7.060	5.890	5.980	7.860			
26	3.250	2.280	1.650	2.890	5.820	7.060	5.570	5.910	7.800			
27	3.250	2.100	1.840	3.040	6.270	6.990	5.490	5.760	7.570			
28	3.250	1.920	2.590	3.180	6.130	7.260	5.740	5.760	7.380			
29	3.490	1.920	2.170	3.040	—	7.520	6.120	5.680	7.440			
30	3.250	1.720	2.450	3.450	-----	7.590	6.200	5.600	7.660			
31	3.490	-----	2.310	3.450	-----	7.780	-----	5.270	-----			
Total	138,280	91,470	76,560	97,580	118,360	207,360	215,020	172,450	195,800			
Mean	4,461	3,049	2,534	3,148	4,227	6,689	7,167	5,563	6,527			
Ac-ft	274,300	181,400	155,800	193,500	234,800	411,300	426,500	342,000	388,400			

Calendar year 1964: Max 9,300 Min 1,650 Mean 5,500 Ac-ft 3,993,000
 Water year : Max - Min - Mean - Ac-ft -

9-5270. Pilot Knob powerplant and wasteway near Pilot Knob, Calif.

Location.--Lat 32°44'15", long 114°42'55", in NW¹/₄SW¹/₄ sec.25, T.16 S., R.21 E., San Bernardino meridian, 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.

Records available.--February 1939 to September 1965. Prior to October 1943, monthly discharge only, published in WSP 1313. Prior to October 1956, published as Pilot Knob wasteway near Pilot Knob.

Gage.--Water-stage recorder on right bank of All-American Canal, 550 ft upstream from wasteway gates and 1,800 ft from entrance to powerplant (also used as auxiliary gage for station 9-5275, All-American Canal below Pilot Knob wasteway). Datum of gage is 150.00 ft above mean sea level, datum of 1929. Tailrace gage is on left bank 680 ft downstream from powerplant, with automatic recording equipment in control house. All bypass gates are equipped with calibrated openings, which are read on all gate changes. Datum of tailrace is at mean sea level, datum of 1929. Elevation of sill of wasteway gates is 147.88 ft, datum of 1929.

Extremes.--1939-65: 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. Discharge measurements generally made three times a month during flow. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	0	1.480	2.040		0	2.130	2.360	1.390
2				0	0	1.470	2.290		0	2.140	2.720	1.210
3				0	0	1.480	4.210		0	2.250	2.950	1.270
4				0	0	1.470	5.530		0	2.290	2.960	1.340
5				563	0	1.480	6.040		0	2.180	2.840	1.200
6				1.060	0	1.450	5.290		0	1.880	2.500	838
7				1.300	0	1.830	3.890		0	2.210	2.820	870
8				1.280	556	1.370	3.040		0	2.230	2.880	1.060
9				960	883	1.350	3.260		0	2.330	2.680	872
10				1.070	0	1.360	2.670		0	2.300	2.640	0
11				978	0	2.110	2.590		0	2.450	2.640	0
12				1.100	0	2.290	2.440		1.000	2.460	2.700	0
13				1.130	0	2.230	2.060		928	2.410	3.550	0
14				962	0	2.740	2.310		1.130	2.310	3.320	0
15				962	0	1.990	2.430		1.160	2.460	3.510	0
16				560	0	2.460	2.300		1.210	2.400	3.210	0
17				0	0	2.700	2.180		1.240	2.410	3.010	0
18				0	0	2.560	2.300		1.190	2.390	3.060	0
19				0	0	2.120	2.220		1.050	2.460	2.830	0
20				0	0	1.880	1.860		939	2.530	2.730	0
21				0	1.110	1.920	1.710		1.600	2.410	2.920	0
22				0	1.110	1.850	1.470		1.980	2.120	3.410	0
23				0	1.040	1.860	1.150		2.150	2.550	2.650	0
24				0	1.060	1.960	0		2.190	2.550	2.490	0
25				0	1.150	1.960	0		2.160	2.510	2.660	0
26				0	1.150	1.960	0		2.100	2.520	2.440	0
27				0	1.150	1.710	0		2.120	2.480	2.440	0
28				0	1.160	1.880	0		2.030	2.440	2.380	0
29				0	—	2.030	0		2.150	2.530	2.420	0
30				0	—	1.950	0		2.170	2.460	1.690	0
31				0	—	2.020	—		—	2.310	1.680	—
Total	0	0	0	11,925	10,369	58,920	65,280	0	30,497	73,100	85,090	10,050
Mean	0	0	0	385	370	1,901	2,176	0	1,017	2,358	2,745	335
Ac-ft	0	0	0	23,650	20,570	116,900	129,500	0	60,490	145,000	168,800	19,930
(+)	0	0	0	103	0	0	0	0	0	0	0	0

Calendar year 1964: Max 3,130 Min 0 Mean 807 Ac-ft 585,500 † -
 Water year 1964-65: Max 6,040 Min 0 Mean 946 Ac-ft 684,800 †103

† Return flow, in acre-feet, by Pilot Knob wasteway (also 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°44'05", long 114°43'25", in NW¼SE¼ sec.26, T.16 S., R.21 E., San Bernardino meridian, on left bank 0.4 mile downstream from Pilot Knob wasteway, 6½ miles west of Yuma, Ariz., 15 miles upstream from turnout to Coachella Canal, and 21.2 miles downstream from intake at Imperial Dam.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 150.00 ft above mean sea level, datum of 1929. 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 power-plant and wasteway). Datum of auxiliary gage is 150.00 ft above mean sea level, datum of 1929.

Extremes.--1961-65: Maximum daily discharge, 7,220 cfs July 12, 1963; minimum daily, 798 cfs Dec. 15, 1961.

Remarks.--Records excellent. Discharge measurements generally made three times a month. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.610	3.140	2.370	2.220	3.450	4.750	5.730	6.030	5.190	5.770	6.230	5.990
2	5.590	3.360	2.380	2.210	3.590	4.900	5.790	5.940	5.290	5.710	6.050	6.170
3	5.630	3.390	2.420	2.240	3.670	5.210	4.450	5.620	5.550	5.660	5.780	6.200
4	5.560	3.490	2.530	2.250	3.800	5.240	3.810	5.650	5.420	5.480	6.030	5.960
5	5.310	3.450	2.670	2.370	3.660	5.360	3.780	5.720	5.320	5.500	6.450	5.740
6	5.300	3.580	2.720	2.260	3.460	5.240	2.650	5.900	5.110	5.770	6.190	5.490
7	5.110	3.660	2.910	2.360	3.430	4.890	2.990	5.840	5.020	5.960	6.390	5.440
8	5.120	3.620	2.890	2.560	3.520	4.970	3.380	5.680	5.010	6.200	6.620	5.390
9	5.080	3.640	2.780	2.240	3.590	4.890	3.060	5.520	5.270	6.340	6.710	5.320
10	5.080	3.530	2.830	2.020	3.330	4.830	2.990	5.240	5.540	6.520	6.880	5.460
11	4.970	3.510	2.890	2.340	3.410	5.050	3.210	5.200	5.450	6.390	6.900	5.450
12	4.550	3.550	2.760	2.450	3.460	4.850	3.580	5.220	5.410	6.360	6.890	5.330
13	4.520	3.310	2.660	2.490	3.820	4.830	4.110	5.170	5.370	6.300	6.850	5.520
14	4.530	3.310	2.930	2.600	3.860	4.130	4.490	5.000	5.340	6.090	6.710	5.560
15	4.690	3.330	2.860	2.580	3.680	4.270	5.030	5.090	5.370	6.140	6.380	5.540
16	4.600	3.340	3.020	2.560	3.860	3.670	5.040	5.070	5.510	6.090	6.160	5.500
17	4.350	3.110	3.180	2.730	3.840	3.660	5.390	4.840	5.670	6.280	6.180	5.120
18	4.100	3.130	3.180	2.620	4.000	4.040	5.770	4.750	5.710	6.030	6.010	5.130
19	3.810	3.300	3.030	2.690	3.860	4.080	6.130	4.840	5.770	5.570	6.310	5.130
20	3.710	3.050	3.000	2.670	3.810	4.330	6.120	5.130	5.760	5.710	6.340	5.080
21	3.690	2.360	2.780	2.930	3.840	4.320	6.190	5.390	5.550	5.730	6.400	5.430
22	3.850	2.340	2.350	3.120	4.030	4.330	6.440	5.350	5.500	6.020	6.170	5.610
23	3.640	2.360	2.100	3.190	4.200	4.560	6.480	5.640	5.660	6.200	6.050	5.800
24	3.500	2.280	1.950	3.220	4.300	4.610	6.310	5.840	5.730	6.290	6.020	5.900
25	3.440	2.300	1.690	3.080	4.510	4.950	6.130	5.870	5.640	6.300	5.930	6.050
26	3.310	2.230	1.670	3.060	4.600	5.060	5.730	6.000	5.720	6.070	6.120	5.960
27	3.230	2.150	1.810	3.060	4.920	5.300	5.730	5.780	5.590	6.110	6.050	5.980
28	3.320	1.920	1.980	3.220	4.780	5.290	5.940	5.700	5.590	6.140	6.140	5.970
29	3.180	2.060	2.200	3.210	---	5.510	6.270	5.670	5.510	6.320	6.150	5.720
30	3.040	2.080	2.410	3.280	---	5.570	6.290	5.490	5.630	6.490	6.000	5.850
31	3.190	-----	2.300	3.390	-----	5.690	-----	5.170	-----	6.390	5.900	-----
Total	134,610	89,880	79,250	83,220	108,280	148,380	149,010	169,350	164,200	187,930	194,990	168,790
Mean	4,342	2,996	2,556	2,685	3,867	4,786	4,967	5,463	5,473	6,062	6,290	5,626
Ac-ft	267,000	178,300	157,800	165,100	214,800	294,300	295,600	335,900	325,700	372,800	386,800	334,800

Calendar year 1964: Max 6,800 Min 1,670 Mean 4,656 Ac-ft 3,380,000

Water year 1964-65: Max 6,900 Min 1,670 Mean 4,597 Ac-ft 3,328,000

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) and from the Yuma Main Canal (see stas 9-5240 and 9-5255).

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 three-quarters of a mile upstream from outlet to Colorado River.

Records available.--Monthly discharge October 1960 to September 1965.

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

Cooperation.--Record furnished by Bureau of Reclamation.

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.

Records available.--Monthly discharge October 1960 to September 1965.

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

Cooperation.--Record furnished by Bureau of Reclamation.

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 $\frac{1}{2}$ miles downstream from Laguna Dam.

Records available.--Monthly discharge October 1960 to September 1965.

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, which are made on a weekly basis at bridge 1,000 ft above outlet.

Cooperation.--Record furnished by Bureau of Reclamation.

9-5290.5 North Gila Drain No. 3.

Location.--Enters Gila River in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.18, T.8 S., R.21 W., 10 miles upstream from mouth.

Records available.--Monthly discharge April 1962 to September 1965.

Remarks.--Record shows seepage from Gila Gravity Main Canal. There is no gage; records are computed by interpolation between discharge measurements made five to six times a year.

Cooperation.--Record furnished by Bureau of Reclamation.

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 $\frac{1}{4}$ miles upstream from outlet to Gila River.

Records available.--Monthly discharge October 1960 to September 1963, October 1964 to September 1965.

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

Cooperation.--Record furnished by Bureau of Reclamation.

9-5291.5 North Gila Main Canal wasteway.

Location.--Water-stage recorder and sharp-crested weir, in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.8 S., R.22 W., 1 mile upstream from outlet to Gila River.

Records available.--Monthly discharge October 1960 to September 1965.

Remarks.--Record shows waste water from North Gila Valley Irrigation District less flow diverted for irrigation between gage and Gila River. Flow record computed from standard weir rating occasionally checked by discharge measurements.

Cooperation.--Record furnished by Bureau of Reclamation.

9-5291.6 South Gila Pump Outlet Channel No. 3.

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

Records available.-- January 1965 to September 1965.

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

Cooperation.--Record furnished by Bureau of Reclamation.

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

9-5292. Bruce Church Drain.

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

Records available--Monthly discharge April 1962 to September 1965.

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

Cooperation--Record furnished by Bureau of Reclamation.

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.

Records available--Monthly discharge October 1960 to September 1965.

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

Cooperation--Record furnished by Bureau of Reclamation.

9-5293. Wellton-Mohawk Main Outlet Drain.

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

Records available--Monthly discharge October 1960 to September 1965.

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. Flow records computed from discharge measurements made on a weekly basis.

Cooperation--Record furnished by Bureau of Reclamation.

9-5293.3 South Gila Pump Outlet Channel No. 2.

Location--Water-stage recorder in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.8 S., R.22 W., a quarter of a mile upstream from outlet to Wellton-Mohawk Main Outlet Drain. Prior to Aug. 1, 1965, Sparling meter at outlet to Wellton-Mohawk Main Outlet Drain.

Records available--Monthly discharge January 1962 to September 1965.

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

Cooperation--Record furnished by Bureau of Reclamation.

9-5293.6 South Gila Pump Outlet Channel No. 1.

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

Records available--Monthly discharge August 1961 to September 1965.

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

Cooperation--Record furnished by Bureau of Reclamation.

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.

Records available--Monthly discharge October 1960 to September 1965.

Remarks--Record shows waste water from South Gila Valley Unit returned to Colorado River.

Cooperation--Record furnished by Bureau of Reclamation.

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.

Records available--March 1965 to September 1965.

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

Cooperation--Record furnished by Bureau of Reclamation.

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 mile upstream from outlet to Colorado River.

Records available--July to September 1965.

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

9-5300. Reservation Main Drain No. 4.

Location--Water-stage recorder in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.16 S., R.22 E., San Bernardino meridian, 500 ft upstream from crossing of U. S. Highway 80. 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.

Records available--Monthly discharge January 1913 to April 1920, October 1921 to March 1925, January 1934 to September 1965. Prior to October 1955, published as California drainage canal.

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. Discharge measurements made once a week.

Cooperation--Record furnished by Bureau of Reclamation.

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

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.

Records available.--Monthly discharge March 1948 to September 1965. Prior to October 1955, published as Araz drain.

Remarks.--Record shows waste and drainage water west of Yuma Main Canal on the Reservation Division. There is no gage, but due to fairly constant drainage, flow record is computed by Bureau of Reclamation by interpolation between discharge measurements, of which 51 were made during year by Imperial Irrigation District.

Cooperation.--Record furnished by Bureau of Reclamation.

9-5320. Cooper wasteway.

Location.--Water-stage recorder and weir, in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.33, T.8 S., R.24 W., half a mile downstream from Morelos Dam.

Records available.--Monthly discharge January 1934 to September 1965.

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 NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.8, T.9 S., R.24 W., 3 $\frac{1}{4}$ miles downstream from Morelos Dam.

Records available.--January 1924 to September 1965.

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.--Recording gage and flume, in NE $\frac{1}{4}$ sec.35, T.10 S., R.25 W., 17 $\frac{1}{2}$ miles downstream from Morelos Dam.

Records available.--March 1939 to September 1965.

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.--Pumping plant in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.11 S., R.25 W., half a mile west of San Luis, Ariz. Water-stage recorder at outlet, and at inlet since May 8, 1953.

Records available.--Monthly discharge January 1919 to September 1965.

Remarks.--Record computed from rated pumps checked by discharge measurements made once a month by International Boundary and Water Commission (U. S. Section). Flow consists mostly of drainage water from the Valley Division which is pumped across the Arizona-Sonora boundary for use in Mexico.

Cooperation.--Record furnished by Yuma County Water Users' Association, and 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., a quarter of a mile east of Main drain pumping plant and a quarter of a mile west of San Luis, Ariz.

Records available.--Monthly discharge January 1924 to June 1928, January 1932 to December 1933, April 1935 to September 1965. 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).

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

Monthly return flows, in acre-feet, water year October 1964 to September 1965

Month	Laguna Canal wasteway	Levee Canal wasteway	North Gila Drain No.1	North Gila Drain No.3	Fortuna wasteway	North Gila Main Canal wasteway
October.....	9.9	1,930	885	92	46	659
November.....	94	398	543	74	13	132
December.....	279	657	492	76	133	210
Calendar year 1964.....	3,720	11,060	7,900	945	---	6,140
January.....	39	458	472	61	56	156
February.....	54	265	365	56	70	129
March.....	53	361	565	61	123	593
April.....	43	818	432	68	80	639
May.....	115	754	708	61	124	717
June.....	271	759	787	62	60	701
July.....	54	910	809	67	112	666
August.....	86	1,510	785	61	220	951
September.....	34	894	774	60	110	374
Water year 1965.....	1,130	9,710	7,620	799	1,150	5,930
Month	South Gila Pump Outlet Channel No. 3	Bruce Church Drain	Bruce Church wasteway	Wellton- Mohawk Main Outlet Drain	South Gila Pump Outlet Channel No. 2	South Gila Pump Outlet Channel No. 1
October.....	-	61	664	12,910	1,450	2,360
November.....	-	60	259	13,810	1,780	2,060
December.....	-	61	688	10,770	1,510	1,570
Calendar year 1964.....	-	725	5,920	181,000	13,870	23,930
January.....	8.1	61	711	10,740	1,460	1,480
February.....	17	56	539	9,770	1,490	2,330
March.....	97	61	523	18,060	1,540	2,990
April.....	1,050	60	520	16,330	1,740	2,880
May.....	1,040	61	314	13,280	2,140	2,300
June.....	1,200	60	320	16,420	1,720	2,680
July.....	2,630	61	348	19,300	1,820	2,670
August.....	2,520	61	448	18,890	1,930	2,380
September.....	8.7	60	256	14,440	1,800	2,560
Water year 1965.....	8,570	723	5,590	174,700	20,380	28,260
Month	South Gila Drain No.2	South Gila Terminal wasteway	South Gila Pump Outlet Channel No. 4	Reservation Main Drain No. 4	Drain 8-B	Cooper wasteway
October.....	-	-	-	3,390	345	110
November.....	-	-	-	3,020	270	108
December.....	-	-	-	3,020	204	71
Calendar year 1964.....	0	-	-	43,760	3,220	1,470
January.....	-	-	-	2,830	184	59
February.....	-	-	-	2,630	115	81
March.....	35	-	-	3,920	222	85
April.....	122	-	-	3,200	182	92
May.....	145	-	-	3,470	167	125
June.....	60	-	-	3,430	234	119
July.....	7.9	99	99	3,680	240	82
August.....	54	1,120	300	3,500	232	92
September.....	91	300	300	3,270	262	103
Water year 1965.....	0	515	1,510	39,360	2,660	1,130
Month	Eleven Mile wasteway	Twenty- one Mile wasteway	Main drain	East Main Canal wasteway		
October.....	496	217	11,580	436		
November.....	654	334	11,100	590		
December.....	410	308	10,350	458		
Calendar year 1964.....	8,150	5,010	135,000	8,220		
January.....	594	219	9,730	393		
February.....	511	282	9,780	412		
March.....	400	403	11,880	316		
April.....	400	237	10,820	279		
May.....	304	272	11,450	418		
June.....	306	210	10,810	261		
July.....	381	178	10,960	181		
August.....	584	230	11,420	233		
September.....	132	289	10,900	581		
Water year 1965.....	5,170	3,180	130,800	4,560		

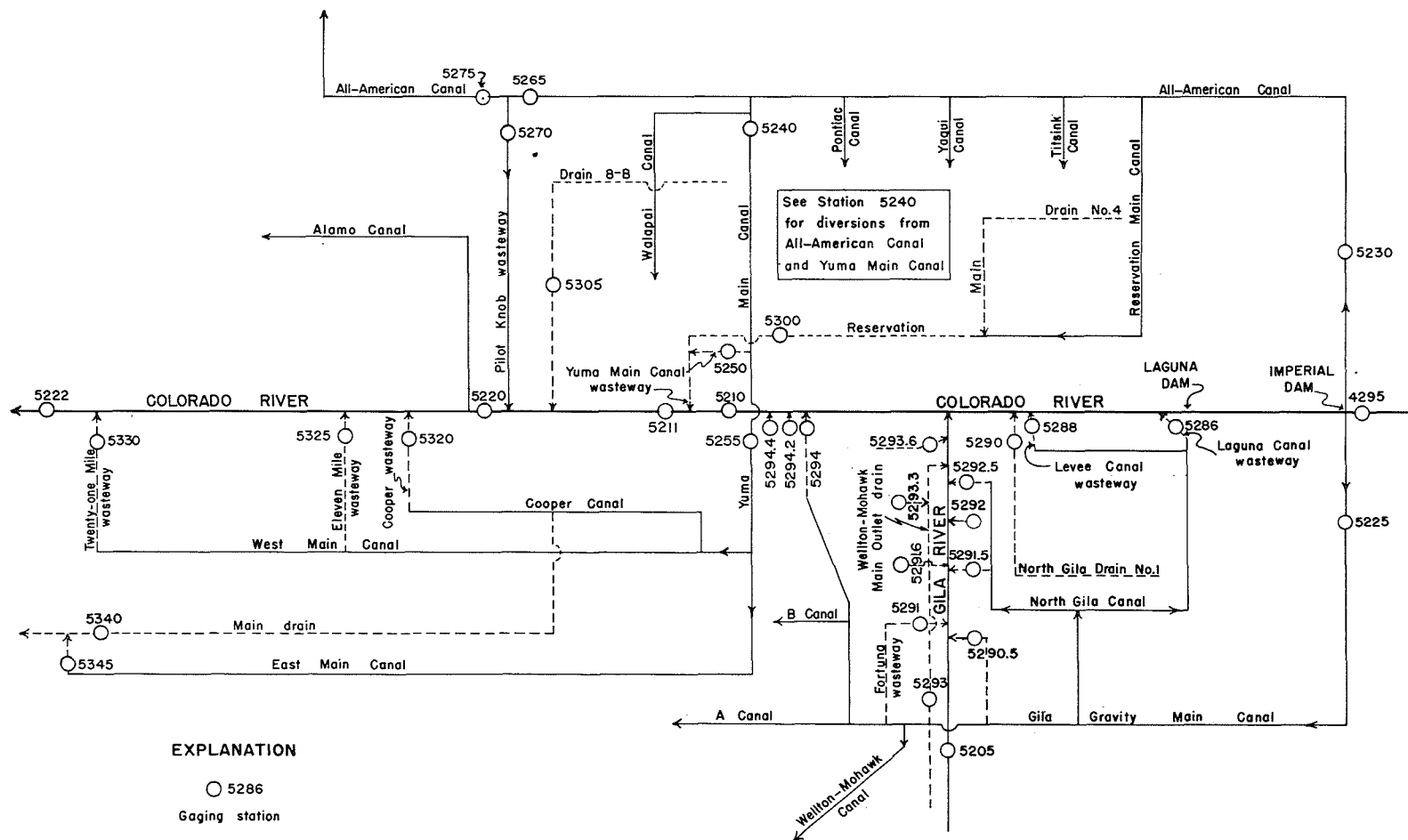


Figure 1.--Schematic diagram showing gaging stations on streams, diversions, and return flows between Imperial Dam and the southerly international boundary

PANAMINT VALLEY

10-2506. Wildrose Creek near Wildrose Station, Calif. .
(Hydrologic bench-mark station)

Location.--Lat 36°15'55", long 117°10'40", in Death Valley National Monument, on left bank 0.4 mile east of Wildrose Ranger Headquarters, 2 miles east of Wildrose Spring and 2½ miles east of Wildrose Station, Inyo County.

Drainage area.--23.7 sq mi.

Records available.--October 1960 to September 1965. 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, anemometer, and max-min 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 8,400, 7,400, 7,200, 6,400, and 5,300 ft..

Average discharge.--5 years, 0.008 cfs (5.8 acre-ft per year).

Extremes.--Maximum discharge during year, 3.0 cfs July 24 (gage height, 3.32 ft), on basis of field estimate of maximum flow; no flow all year except Oct. 29 and July 24, when mean daily discharge was less than 0.05 cfs.
1960-65: Maximum discharge, 330 cfs Aug. 5, 1961 (gage height, 5.10 ft), on basis of slope-area measurement of maximum flow; no flow for most of each year.

Remarks.--No regulation or diversion above station. Discharge for calendar year 1964 is as follows: maximum daily, 7.3 cfs; minimum, zero; mean, 0.02 cfs; total, 14 acre-ft. Data from weather instruments follows:

Period	Pan evaporation (inches)	Temperature (°F) at altitude:				Average wind velocity (mph)	
		9,990 ft		5,750 ft		at altitude:	
		Maximum	Minimum	Maximum	Minimum	9,990 ft	5,750 ft
1964							
June 22-July 10.....	-	77	44	94	55	5.65	2.67
July 10-July 28.....	-	82	46	97	58	4.43	2.16
July 28-Aug. 9.....	-	75	45	92	62	4.74	1.66
Aug. 9-Sept. 9.....	-	94	10	108	36	4.84	2.01
Sept. 9-Sept. 25.....	-	69	32	86	49	6.70	2.36
Sept. 25-Oct. 27.....	9.69	44	32	85	45	4.08	6.40
Oct. 27-Nov. 30.....	3.55	50	-10	88	-2	7.97	2.84
Nov. 30-Jan. 22.....	4.09	69	-3	84	0	6.37	-
1965							
Jan. 22-Feb. 9.....	1.97	-	-	64	28	9.27	-
Feb. 9-Mar. 10.....	3.94	41	28	66	28		2.99
Mar. 10-Apr. 21.....	3.56	82	-8	98	3	5.57	2.73
Apr. 21-June 3.....	11.93	66	28	80	41	-	2.96
June 3-July 21.....	18.55	-	-	83	56	-	2.77
July 21-Aug. 4.....	-	92	32	-	-	-	-
Aug. 4-Oct. 6.....	24.63	90	10	101	30	4.82	6.60

Month	Precipitation (inches) at altitude:							
	9,990 ft	5,750 ft	8,400 ft	4,300 ft	6,400 ft	7,400 ft	7,200 ft	5,300 ft
June 1964.....	-	-	-	-	-	-	-	-
July.....	3.00	0.61	1.67	1.2	1.40	0	1.6	0.45
August.....	2.18	1.61	.92	.6	3.15	1.2	1.47	.95
September.....			0	0	0	0	0	0
October.....			.05	.3	.12	.37	.20	.17
November.....			.37	.4	.57	.23	.31	.10
December.....			0	0	0	0	0	0
Calendar year 1964	-	-	-	-	-	-	-	-
January 1965.....	3.8	4.2	0	0	0	0	0	0
February.....			.37	.1	.01	.10	.24	.07
March.....			.88	.7	.25	.47	.66	.53
April.....			1.08	2.3	1.48	1.51	2.49	1.56
May.....			.36	.3	.31	.27	.31	.21
June.....	.08	.03	.03	0	0	.01	.08	0
July.....	1.96	1.34	-	1.8	1.87	2.26	1.99	2.67
August.....	3.57	2.27	1.35	.6	1.46	.48	1.87	.49
September.....	0	0	0	0	0	0	0	0
Water year 1964-65	9.41	7.84	4.49	6.5	6.07	5.70	8.15	5.80

10-2508. Darwin Creek near Darwin, Calif.

Location.--Lat 36°19'15", long 117°31'20", in SE 1/4 SW 1/4, sec. 34, T.18 S., R.41 E., 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.

Records available.--October 1962 to September 1965.

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

Extremes.--Maximum discharge during year, 90 cfs Aug. 15 (gage height, 3.64 ft), on basis of slope-area measurement of maximum flow; minimum daily, 0.2 cfs June 21-24.

1962-64: Maximum discharge, that of Aug. 15, 1965; minimum daily, 0.2 cfs for many days in each year.

Remarks.--Records good prior to Apr. 19 and poor thereafter. No regulation above station. Town of Darwin pumps water above station for municipal supply. Monthly precipitation, in inches, is as follows: October, 0.10; November, 0.27; December, 0.17; January, 0.02; February, 0.02; March, 0.29; April, 1.65; May, 0.18; June, 0.27; July, 1.12; August, 0.32; the water year, 4.41.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4
2	.3	.4	.3	.4	.3	.3	.3	.3	.3	.3	.4	.4
3	.3	.4	.3	.4	.3	.3	.4	.3	.3	.3	.4	.4
4	.3	.4	.3	.4	.3	.3	.4	.3	.3	.3	.4	.4
5	.3	.4	.3	.4	.3	.3	.4	.3	.3	.3	.4	.4
6	.3	.4	.3	.4	.3	.3	.4	.3	.3	.3	.4	.4
7	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	.4	.4
8	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	.4	.4
9	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	.4	.4
10	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	.4	.4
11	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	1.2	.4
12	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	.6	.4
13	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	.5	.4
14	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	.5	.4
15	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	3.4	.4
16	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	.5	.3
17	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	3.4	.3
18	.3	.4	.4	.4	.3	.3	.4	.3	.3	.3	.5	.3
19	.3	.4	.4	.4	.3	.3	.3	.3	.3	.3	.5	.3
20	.3	.4	.4	.4	.3	.3	.3	.3	.3	.3	.5	.3
21	.3	.4	.4	.4	.3	.3	.3	.3	.2	.3	.5	.3
22	.3	.4	.4	.4	.3	.3	.3	.3	.2	.3	.5	.3
23	.3	.4	.4	.4	.3	.3	.3	.3	.2	.3	.5	.3
24	.3	.4	.4	.4	.3	.3	.3	.3	.2	1.4	.5	.3
25	.3	.4	.4	.4	.3	.3	.3	.3	.3	.5	.5	.3
26	.3	.4	.4	.4	.3	.3	.3	.3	.3	.5	.4	.3
27	.3	.4	.4	.4	.3	.3	.3	.3	.3	.4	.4	.3
28	.3	.4	.4	.4	.3	.3	.3	.3	.3	.4	.4	.3
29	.4	.4	.4	.4	-----	.3	.3	.3	.3	.4	.4	.3
30	.4	.4	.4	.3	-----	.3	.3	.3	.3	.6	.4	.3
31	.4	-----	.4	.3	-----	.3	-----	.3	-----	.6	.4	-----
Total	9.6	12.0	11.9	12.2	8.4	9.3	10.6	9.3	8.6	11.7	20.6	10.5
Mean	0.31	0.40	0.38	0.39	0.30	0.30	0.35	0.30	0.29	0.38	0.66	0.35
Ac-ft	19	24	24	24	17	18	21	18	17	23	41	21

Calendar year 1964 Max 4.1 Min 0.2 Mean 0.28 Ac-ft 235

Water year 1964-65 Max 3.4 Min 0.2 Mean 0.37 Ac-ft 257

Peak discharge (base, 10 cfs).--July 24 (1500 hrs) 30 cfs (2.73 ft); Aug. 15 (1630 hrs) 90 cfs (3.64 ft); Aug. 17 (1630 hrs) 56 cfs (3.18 ft).

DEATH VALLEY

10-2510. Big Dip Creek near Stovepipe Wells, Calif.

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

Drainage area--0.95 sq mi.

Records available---Water years 1959-63 (annual maximum), April 1963 to September 1965.

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 only at same site and datum. Recording rain gage at site 0.5 mile upstream.

Extremes---Maximum discharge during year, 9.7 cfs July 17 (gage height, 10.95 ft, from crest-stage gage); no flow for most of year. 1959-65: Maximum discharge, 46 cfs Aug. 22, 1961 (gage height, 13.58 ft), based on computation of maximum flow through culvert; no flow for most of each year.

Remarks---Records poor. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: January, 0.4; March, 1.24; April, 0.36; July, 0.30; the water year, 2.3.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Mar. 11.....0.2

Apr. 12......1

July 17......4

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
March.....	0.2	-	-	0.006	0.4
April.....	.1	-	-	.003	.2
July.....	.4	-	-	.01	.8
Calendar year 1964.....	-	0.3	0	.0008	.6
Water year 1964-65.....	-	.4	0	.002	1.4

Note---Flow occurred only on days listed above.

10-2513. Amargosa River at Tecopa, Calif.

Location.--Lat 35°50'55", long 116°13'45", in NW 1/4 sec. 9, T.20 N., R.7 E., on right bank 20 ft upstream from county road and 0.2 mile west of Tecopa.

Records available.--October 1961 to September 1965.

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

Extremes.--Maximum discharge during year, 250 cfs July 18 (gage height, 3.80 ft), from rating curve extended above 8.0 cfs as explained below; no flow for many days.

1961-64: Maximum discharge, 257 cfs Feb. 10, 1963 (gage height, 3.84 ft), from rating curve extended above 8.0 cfs on basis of computation of flow through culvert at gage height 3.41 ft; no flow for many days in each year.

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 periods of no gage-height record, which are poor. Monthly precipitation, in inches, is as follows: November, 0.1; March, 0.7; April, 1.2; July, 0.7; the water year, 2.7.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 20-30)

0.7	0	1.3	8.1
.8	.1	1.5	15
.9	.8	1.7	24
1.0	1.9	2.0	41
1.1	3.5	2.4	71

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.2	0.6	1.1	1.5	1.1	3.0	0.1	0.1	0	0.1	
2	0	.2	.6	1.1	1.5	1.1	2.0	.1	.1	0	0	
3	0	.2	.6	1.3	1.5	1.1	5.0	.1	.2	0	0	
4	0	.2	.6	1.4	1.5	1.1	4.0	.2	.2	0	0	
5	0	.3	.6	1.4	1.3	1.1	2.0	.3	.2	0	0	
6	0	.3	.6	1.2	1.3	1.2	3.0	.3	.1	0	0	
7	0	.3	.6	1.4	1.7	1.2	4.0	.2	.1	0	0	
8	0	.3	.6	1.0	.8	1.2	5.0	.2	.1	0	0	
9	0	.3	.7	1.1	1.3	1.2	10	.2	.1	0	0	
10	0	.3	.7	1.2	.9	1.1	20	.2	.1	0	0	
11	0	.3	.7	1.4	.8	9.1	10	.1	.1	0	0	
12	0	.3	.8	1.5	.8	8.6	8.0	.1	0	0	0	
13	.1	.3	.5	1.3	.8	3.0	6.4	.1	0	0	0	
14	.1	.4	.6	1.3	.8	1.7	5.0	.1	0	0	0	
15	.1	.4	.8	1.4	.8	1.2	4.3	.1	0	0	0	
16	.1	.4	1.0	1.4	.9	1.1	2.7	.1	0	0	0	
17	.1	.5	1.0	1.4	.9	1.1	1.5	.1	.1	.3	0	
18	.1	.5	1.1	1.4	.9	1.1	.9	.1	.1	70	0	
19	.1	.4	1.0	1.5	.9	1.0	.6	.1	.1	4.6	0	
20	.1	.4	1.0	1.8	.9	.8	.5	.1	.1	.4	0	
21	.1	.5	1.0	1.7	1	.9	.4	.1	.1	.1	0	
22	.2	.6	1.1	1.5	1	.9	.3	.1	.1	.1	0	
23	.2	.6	1.2	1.4	1	.8	.3	.1	0	0	0	
24	.2	.6	1.2	1.2	1	.7	.3	.1	0	0	0	
25	.2	.6	1.2	1.0	1	.8	.3	.1	0	21	0	
26	.2	.6	1.2	1.2	1	.8	.2	.1	0	11	0	
27	.2	.6	1.0	1.1	.6	.6	.2	.1	0	1.0	0	
28	.2	.6	.7	1.3	1	.8	.2	.1	0	.2	0	
29	.2	.6	.8	1.4	-----	.8	.2	.1	.1	.1	0	
30	.2	.6	1.1	1.4	-----	.8	.2	.1	0	.1	0	
31	.2	-----	1.1	1.4	-----	.8	-----	.1	-----	.1	0	
Total	2.9	12.4	26.3	41.2	29.8	48.8	100.5	4.0	2.1	109.0	0.1	0
Mean	0.09	0.41	0.85	1.33	1.06	1.57	3.35	0.13	0.07	3.52	0.003	0
Ac-ft	5.8	25	52	82	59	97	199	7.9	4.2	216	0.2	0

Calendar year 1964 Max 8.0 Min 0 Mean 0.64 Ac-ft 466
Water year 1964-65 Max 70 Min 0 Mean 1.03 Ac-ft 748

Peak discharge (base, 15 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-11	2130	1.60	19	7-18	0830	3.80	250
4-10	unknown	1.99	40	7-25	1730	2.50	80

Note.--No gage height record Feb. 12 to Mar. 8, Mar. 29 to Apr. 12, May 5 to June 1.

DEATH VALLEY

10-2513.5. Horse Thief Creek near Tecopa, Calif.

Location.--Lat 35°46'50", long 115°53'35", T.20 N., R.10 E., on left bank 0.6 mile northwest of Horse Thief Springs and 19.2 miles southeast of Tecopa, San Bernardino County.

Drainage area.--3.06 sq mi.

Records available.--October 1960 to September 1965.

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

Average discharge.--5 years, 0.004 cfs (2.9 acre-ft per year).

Extremes.--No flow during year.

1960-65: Maximum discharge, 411 cfs Aug. 23, 1961 (gage height, 3.13 ft), from rating curve extended above 10 cfs on basis of slope-area measurement of maximum flow; no flow for most of each year.

Remarks.--No flow since Aug. 23, 1961. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 0.2; February, 0.2; March, 0.4; April, 3.9; July, 0.7; August, 0.3; the water year, 5.7.

IVANPAH VALLEY

10-2523. China Spring Creek near Mountain Pass, Calif.

Location.--Lat 35°28'05", long 115°30'30", in E½ sec.31, T.16 N., R.14 E., on upstream right bank of State highway culvert on U.S. Highway 466 and 91 and 2.0 miles east of Mountain Pass.

Drainage area.--0.94 sq mi.

Records available.--January 1959 to September 1965.

Gage.--Water-stage recorder with rain-gage attachment, crest-stage gage, and box-culvert control. Altitude of gage is 4,400 ft (from topographic map).

Average discharge.--6 years (1960-65), 0.001 cfs (0.7 acre-ft per year).

Extremes.--No flow during year.

1959-65: 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.--No flow since Aug. 5, 1964. No regulation or diversion above station. Discharge for calendar year 1964 is as follows: maximum daily, 2.4 cfs; minimum, zero; mean, 0.007 cfs; total, 5.2 acre-ft. Monthly precipitation, in inches, is as follows: November, 0.5; January, 0.5; February, 0.5; March, 1.2; April, 2.2; May, 0.2; July, 0.3; August, 2.1; the water year, 7.5.

10-2523.3. Wheaton Wash near Mountain Pass, Calif.

Location.--Lat 35°28'00", long 115°29'10", in NE¼ sec.32, T.16 N., R.14 E., on left bank, 35 ft upstream from westbound lane U.S. Highway 15, 1.3 miles downstream from China Spring Creek, and 3.1 miles east of Mountain Pass.

Drainage area.--10.2 sq mi.

Records available.--October 1964 to September 1965.

Gage.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 4,120 ft (from topographic map).

Remarks.--No flow since Oct. 1, 1964, date of establishment. No regulation or diversion above station.

BRISTOL LAKE BASIN

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10-2525.5. Caruthers Creek near Ivanpah, Calif.

Location.--Lat 35°14'35", long 115°17'55", in NW 1/4 sec. 6, T.13 N., R.16 E., on left bank 6.6 miles south of Ivanpah.

Drainage area.--1.13 sq mi.

Records available.--October 1963 to September 1965.

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

Extremes.--Maximum discharge during year, 230 cfs Aug. 15 (gage height, 3.75 ft), on basis of slope-area measurement of maximum flow; no flow for most of year.

1963-65: Maximum discharge, that of Aug. 15, 1965; 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	0	0.1				0	
2					0	0	0				0	
3					0	0	1.4				0	
4					0	0	1.3				0	
5					0	0	2.8				0	
6					0	0	4.6				0	
7					0	0	2.2				0	
8					.7	0	1.0				0	
9					.2	0	1.8				0	
10					0	0	1.6				0	
11					0	.8	1.2				0	
12					0	1.8	1.3				0	
13					0	1.8	1.5				0	
14					0	.5	2.2				0	
15					0	.8	2.0				11	
16					0	1.8	1.5				1.2	
17					0	.3	1.2				.9	
18					0	.1	.5				.2	
19					0	.1	.2				0	
20					0	0	0				0	
21					0	0	0				0	
22					0	0	0				0	
23					0	0	0				0	
24					0	0	0				0	
25					0	0	0				0	
26					0	0	0				0	
27					0	0	0				0	
28					0	0	0				0	
29					-----	0	0				0	
30					-----	0	0				0	
31					-----	0	-----				0	-----
Total	0	0	0	0	0.9	8.0	28.4	0	0	0	13.3	0
Mean	0	0	0	0	0.03	0.26	0.95	0	0	0	0.43	0
Ac-ft	0	0	0	0	1.8	16	56	0	0	0	24	0

Calendar year 1964 Max 0.1 Min 0 Mean 0.0005 Ac-ft 0.4

Water year 1964-65 Max 11 Min 0 Mean 0.14 Ac-ft 98

Peak discharge (base, 5.0 cfs).--Apr. 6 (0100 hrs) 6.0 cfs (1.49 ft); Aug. 15 (2000 hrs) 230 cfs (3.75 ft).

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., on left bank about 0.3 mile downstream from road crossing and 14.9 miles southeast of Essex.

Drainage area.--3.04 sq mi.

Records available.--October 1962 to September 1965.

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.

Extremes.--No flow during year.

1962-65: 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. Monthly precipitation, in inches, is as follows: November, 0.17; December, 0.03; February, 0.29; March, 0.93; April, 4.03; the water year, 5.45.

DALE LAKE BASIN

10-2533.2. Quail Wash near Joshua Tree, Calif.

Location.--Lat 34°07'05", long 116°18'30", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.1 S., R.6 E., on right bank 0.2 mile downstream from Coyote Hole Spring and 1.1 miles south of Joshua Tree.

Drainage area.--100 sq mi.

Records available.--March 1964 to September 1965.

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

Remarks.--No flow since Mar. 16, 1964, date of establishment. No regulation or diversion above station.

10-2533.5. Fortynine Palms Creek near Twentynine Palms, Calif.

Location.--Lat 34°07'15", long 116°05'45", 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, San Bernardino County.

Drainage area.--8.55 sq mi.

Records available.--October 1962 to September 1965.

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

Extremes.--Maximum discharge during year, 645 cfs Aug. 14 (gage height, 3.65 ft), from rating curve extended above 0.2 cfs on basis of slope-area measurements at gage heights 2.55 and 4.55 ft; no flow all year except Aug. 14.

1962-65: 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.--Records poor. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 1.1; March, 0.6; April, 1.0; May, 0.1; July, 0.2; August, 2.4; the water year, 5.4.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Aug. 14.....50

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
August 1965.....	50	-	-	1.61	99
Calendar year 1964.....	-	0.7	0	.002	1.4
Water year 1964-65.....	-	50	0	.14	99

Note.--Flow occurred only on day listed above.

10-2535.4, Corn Springs Wash near Desert Center, Calif.

Location.--Lat 33°37'30", long 115°19'20", on right bank 0.1 mile downstream from unnamed tributary and 7.6 miles southeast of Desert Center, Riverside County.

Drainage area.--24.1 sq mi.

Records available.--October 1963 to September 1965.

Gage.--Flood-hydrograph recorder. Recording rain gage at site 3.2 miles upstream. Altitude of gage is 1,600 ft (from topographic map).

Extremes.--No flow during year.

1963-65: Maximum discharge, 600 cfs Aug. 2, 1964 (gage height, 4.02 ft), on basis of field estimate of maximum flow; no flow for most of each year.

Remarks.--No flow since Aug. 2, 1964. No regulation or diversion above station. Discharge for calendar year 1964 is as follows:

maximum daily, 12 cfs; minimum, zero; mean, 0.03 cfs; total, 24 acre-ft. Monthly precipitation, in inches, is as follows: November, 0.48; December, 0.10; February, 0.02; March, 0.02; April, 1.03; July, 0.21, August, 0.03; the water year, 1.89.

10-2536, Eagle Creek at Eagle Mountain, Calif.

Location.--Lat 33°51'50", long 115°29'50", on right bank in Joshua Tree National Monument, 0.6 mile from Eagle Mountain and 11.8 miles northwest of Desert Center, Riverside County.

Drainage area.--7.63 sq mi.

Records available.--October 1960 to September 1965.

Gage.--Water-stage recorder with rain-gage attachment. Datum of gage is 1,514.97 ft (revised) above mean sea level (levels by Kaiser Industries). Prior to Mar. 12, 1962, at site 0.2 mile downstream at datum 39.77 ft lower.

Average discharge.--5 years, 0.01 cfs (7.2 acre-ft per year).

Extremes.--Maximum discharge during year, 180 cfs (estimated) Aug. 16 (gage height, 3.10 ft), on basis of field estimate of maximum flow; no flow all year except that of Aug. 16.

1960-65: Maximum discharge, about 380 cfs Aug. 23, 1961 (gage height, 3.19 ft, present datum), on basis of field estimate of maximum flow; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station. Precipitation records were incomplete during 1965.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Aug. 16.....7.5

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
August 1965.....	7.5	-	-	0.24	15
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	7.5	0	.02	15

Note.--Flow occurred only on day listed above.

SALTON SEA BASIN

10-2540.05. Salton Sea near Westmoreland, Calif.

Location.--Lat 33°11'37", long 115°49'54", in NE 1/4 SW 1/4 sec.21, T.11 S., R.11 E., at outer end of third mooring pier from western shore at Sandy Beach 15.5 miles northwest of Westmoreland.

Drainage area.--8,360 sq mi, approximately.

Records available.--November 1904 to September 1965. Records prior to 1932 are published in WSP 735.

Gage,--Water-stage recorder. Datum of gage is 250.00 ft below mean sea level, datum of 1929, adjustment of 1934; gage readings have been converted to elevations below mean sea level. Prior to January 1925, staff gages at various sites along eastern shore, but all elevations have been converted to datum of 1901. Jan. 1925 to Oct. 22, 1951, staff gages and reference marks at site on western shore 22 miles northwest originally set to 1901 datum and on Mar. 2, 1956, found at mean-sea-level datum 0.91 ft lower than 1929 datum, adjustment of 1934 (levels by U.S.C. & G.S.).

Extremes.--Maximum elevation during year, 232.1 ft below mean sea level Apr. 18 to May 5; minimum, 233.3 ft below mean sea level Sept. 20-23, 27-30.

1904-65: Maximum elevation, 195.9 ft below mean sea level (present datum) in February and March 1907; minimum since 1906, 251.6 ft below mean sea level (present datum) 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. Corrected area and capacity tables for sea dated Jan. 8, 1965, based on resurveys made in 1957 above elevation -240 ft and in 1962 below -236 ft, is given below.

Elevation (feet below mean sea level)	Area (acres)	Capacity (acre-feet)	Elevation (feet below mean sea level)	Area (acres)	Capacity (acre-feet)
277.7	0	0	252	148,800	2,250,000
276	3,800	2,300	248	163,700	2,874,000
274	20,600	25,700	244	179,700	3,562,000
272	40,300	86,000	240	196,900	4,315,000
270	62,900	188,700	235	221,800	5,360,000
268	81,600	334,100	230	235,800	6,504,000
266	94,600	510,600	225	249,000	7,716,000
264	105,600	711,000	220	262,000	8,993,000
262	114,800	932,000	215	275,000	10,340,000
260	122,600	1,170,000	210	288,500	11,740,000
256	134,700	1,684,000	200	315,500	14,760,000

Month-end elevations, in feet below mean sea level, water year October 1964 to September 1965

Date		Elevation (feet)	Date		Elevation (feet)
Sept. 30	.....	232.6	Apr. 30	.....	232.1
Oct. 31	.....	232.6	May 31	.....	232.3
Nov. 30	.....	232.8	June 30	.....	232.6
Dec. 31	.....	232.7	July 31	.....	232.7
Jan. 31	.....	232.5	Aug. 31	.....	232.9
Feb. 28	.....	232.4	Sept. 30	.....	233.3
Mar. 31	.....	232.3			

Inflow to Salton Sea, Calif.

Salton Sea, located near the northwest corner of Imperial County, is a closed basin consisting of 8,360 sq mi. A systematic record of inflow was not attempted until the fall of 1960. The following table shows monthly and annual inflow, in acre-feet, for the water year October 1964 to September 1965. Inflow from Imperial Valley is the sum of flows in Alamo River (see p. 44), New River (see p. 45), and 21 drains and wasteways. Inflow from Coachella Valley is the sum of flows in Whitewater River and 20 drains. Flow in the river was measured by a gaging station (see p. 58), but that for the drains was furnished by Coachella Valley County Water District. (See pp. 46 to 59 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.

Inflow from	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
Imperial Valley	92,260	68,290	61,630	63,240	70,930	91,000	87,700	83,080	78,000	86,850	93,780	96,070	972,800
Coachella Valley	10,620	8,420	9,060	9,720	9,100	11,780	11,280	11,840	11,420	11,590	12,640	12,660	130,100
Total	102,880	76,710	70,690	72,960	80,030	102,780	98,980	94,920	89,420	98,440	106,420	108,730	1,103,000

Flow from Mexico at International Boundary

Alamo River	195	123	132	152	153	183	143	150	160	138	141	171	1,840
New River	7,550	7,200	7,690	7,890	8,000	9,360	9,090	8,450	7,940	8,880	10,130	10,610	102,800

10-2540.5. Salt Creek near Mecca, Calif.

Location.--Lat 33°26'50", long 115°50'35", in NE 1/4 SW 1/4 sec. 28, T.8 S., R.11 E., on pier of Southern Pacific Railroad bridge, 0.3 mile upstream from mouth and 16 miles southeast of Mecca.

Drainage area.--269 sq mi.

Records available.--January 1961 to September 1965.

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

Extremes.--Maximum discharge during year, 36 cfs Apr. 4 (gage height, 3.16 ft); minimum daily, 1.9 cfs June 12.
1961-65: Maximum discharge, about 200 cfs Oct. 17, 1963 (gage height, 6.54 ft); minimum daily, 1.2 cfs July 10-12, 1961.

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

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	4.2	6.7	7.2	7.9	6.5	7.2	3.0	6.7	4.0	2.8	3.1
2	3.0	4.6	7.2	7.2	7.6	5.2	7.4	2.7	4.6	3.6	2.5	3.5
3	3.1	4.6	6.9	7.2	12	11	9.8	2.7	4.2	3.1	2.5	3.6
4	3.5	4.4	6.1	7.4	22	7.8	30	3.1	4.0	3.0	2.5	3.5
5	3.6	4.4	5.6	7.6	7.9	6.1	15	4.0	3.6	2.8	2.5	3.5
6	5.6	4.6	5.2	7.9	7.2	6.5	9.9	3.3	3.5	2.7	2.5	3.8
7	5.5	4.8	5.6	7.9	7.9	6.9	8.2	4.2	3.3	2.5	2.5	3.6
8	3.5	5.2	5.0	8.2	6.9	6.9	7.4	3.6	7.0	2.5	2.7	3.8
9	3.6	5.4	5.8	6.5	9.3	6.9	6.5	3.8	3.8	2.5	2.8	4.0
10	3.5	5.6	6.7	6.5	7.2	7.2	6.5	4.2	3.5	2.8	2.7	4.2
11	3.5	5.6	6.5	7.4	12	8.7	5.8	4.6	2.2	3.0	2.7	4.2
12	3.5	5.6	6.7	7.9	7.4	9.9	5.6	5.4	1.9	3.0	3.0	4.0
13	3.5	5.6	6.3	7.4	6.1	7.4	5.8	4.8	2.4	3.0	3.0	3.8
14	3.6	5.6	4.8	7.2	6.9	6.7	5.8	5.0	2.4	3.1	2.7	3.8
15	4.0	5.4	6.3	6.9	8.2	7.2	5.6	4.6	2.5	3.3	2.7	3.8
16	4.6	5.4	6.9	7.4	6.7	19	5.6	4.0	2.5	3.3	2.8	4.0
17	5.2	5.6	8.2	7.2	5.8	14	5.8	3.5	2.5	3.1	2.7	4.2
18	5.2	9.9	7.9	6.9	6.9	15	5.6	5.6	3.0	2.8	2.7	4.4
19	4.4	16	8.7	9.2	7.4	8.7	5.0	3.8	3.1	2.7	2.8	4.6
20	3.6	7.6	8.2	11	7.9	5.6	5.0	3.5	3.1	2.5	3.0	5.2
21	4.0	6.7	8.2	8.7	8.2	4.8	4.8	3.1	4.8	2.1	2.8	7.6
22	4.4	8.2	8.4	7.9	7.9	5.0	4.6	3.1	11	2.2	2.7	5.6
23	4.6	12	9.7	7.4	7.6	7.2	4.4	3.8	3.5	2.4	2.7	5.2
24	4.8	6.7	17	7.4	5.6	7.2	4.0	3.8	3.0	2.4	3.0	5.2
25	4.8	6.5	9.0	7.6	5.2	5.4	3.8	3.8	2.8	2.4	3.1	5.0
26	4.8	6.7	8.4	6.1	6.5	5.2	3.6	4.0	2.7	2.4	3.1	5.4
27	5.0	6.7	8.2	5.4	7.2	5.6	3.5	3.8	2.5	2.4	3.3	5.6
28	5.2	6.5	8.4	6.3	7.4	5.8	3.3	4.0	2.7	2.2	3.5	9.4
29	5.2	6.1	6.3	7.4	-----	6.1	3.1	3.6	9.6	2.5	3.3	5.4
30	4.6	6.3	6.3	7.9	-----	5.4	3.1	3.5	5.0	3.0	3.1	4.2
31	4.4	-----	6.7	7.6	-----	5.6	-----	11	-----	3.0	3.0	-----
Total	130.5	192.5	227.9	231.8	226.8	236.5	201.7	126.9	117.4	86.3	87.7	137.2
Mean	4.21	6.42	7.35	7.48	8.10	7.63	6.72	4.09	3.91	2.78	2.83	4.57
Ac-ft	259	382	452	450	450	469	400	252	233	171	174	272
Calendar year 1964	Max	24	Min	1.6	Mean	5.62	Ac-ft	4,080				
Water year 1964-65	Max	30	Min	1.9	Mean	5.49	Ac-ft	3,970				

SALTON SEA BASIN

10-2547.3, Alamo River near Niland, Calif.

Location.--Lat 33°12'03", long 115°36'07", in NE 1/4 NW 1/4 sec.22, T.11 S., R.13 E., on left bank 0.6 mile upstream from mouth and 5.8 miles southwest of Niland.

Records available.--January 1943 to September 1965. 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).

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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	994	729	493	440	653	833	950	781	724	752	829	833
2	989	724	507	431	677	805	932	781	677	738	814	884
3	975	719	563	464	616	776	1,070	743	681	771	856	911
4	1,010	738	525	497	635	847	1,050	752	700	790	829	890
5	1,020	752	516	539	681	829	852	776	686	733	795	847
6	1,040	686	488	493	733	861	771	842	667	714	786	861
7	979	681	497	521	766	866	724	795	667	757	790	838
8	960	719	525	511	747	814	677	781	700	743	809	805
9	903	795	525	478	714	838	667	762	719	771	875	781
10	899	781	530	502	658	814	686	762	729	771	861	762
11	899	738	516	459	635	833	620	752	733	795	843	809
12	951	700	530	502	597	852	620	743	747	852	847	795
13	932	639	563	474	635	852	620	738	696	819	791	885
14	856	620	582	549	667	823	635	710	714	786	856	947
15	838	620	570	530	724	847	681	705	710	809	861	873
16	894	653	560	525	714	795	724	729	696	833	937	804
17	871	738	549	521	696	762	781	738	710	790	836	745
18	856	752	530	544	766	743	823	747	733	814	805	786
19	861	663	563	573	747	757	852	681	752	842	856	856
20	852	630	597	587	729	786	852	653	771	800	858	881
21	814	649	658	573	719	829	838	667	805	766	894	918
22	776	606	606	568	733	847	838	696	795	747	856	902
23	752	568	616	611	724	852	842	681	700	771	833	934
24	738	544	558	639	681	800	885	710	696	795	876	958
25	705	493	516	625	733	757	894	733	757	814	852	1,100
26	696	530	450	611	729	786	871	738	729	814	820	1,110
27	743	511	397	573	771	829	847	776	738	814	753	1,070
28	719	493	445	577	781	842	786	766	766	795	852	1,040
29	705	493	402	611	-----	871	738	762	747	795	833	992
30	724	502	426	639	-----	894	766	752	738	800	852	992
31	729	-----	459	649	-----	913	-----	752	-----	814	807	-----
Total	26,680	19,466	16,262	16,816	19,661	25,553	23,902	23,004	21,683	24,405	25,962	26,809
Mean	861	649	525	542	702	824	797	742	723	787	837	894
Ac-ft	52,920	38,610	32,260	33,350	39,060	50,680	47,410	45,630	43,010	48,410	51,490	53,170

Calendar year 1964 Max 1,240 Min 397 Mean 776 Ac-ft 563,500
 Water year 1964-65 Max 1,110 Min 397 Mean 740 Ac-ft 535,900

10-2555.5. New River near Westmoreland, Calif.

Location.--Lat 33°06'17", long 115°39'49", in SW¹/₄SW¹/₄SW¹/₄ sec.19, T.12 S., R.13 E., on right bank 3.5 miles upstream from mouth and 5.2 miles northwest of Westmoreland.

Records available.--January 1943 to September 1965. 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).

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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	586	424	386	380	444	517	547	475	464	436	500	572
2	543	422	394	375	413	504	547	490	463	436	507	572
3	572	426	379	371	406	523	718	507	485	494	498	526
4	592	420	377	379	427	545	697	513	470	498	483	563
5	576	433	384	362	429	547	655	521	463	475	483	561
6	600	420	400	371	485	540	542	504	505	477	487	568
7	607	420	413	398	453	538	498	504	509	470	485	564
8	598	413	409	386	448	519	488	505	473	483	500	545
9	584	411	408	382	494	504	505	521	455	475	528	551
10	566	417	409	380	436	490	532	523	468	487	559	570
11	549	400	402	383	426	502	538	511	461	488	507	570
12	530	380	411	417	429	500	525	498	483	500	580	590
13	507	384	424	404	429	487	540	485	468	507	695	588
14	502	398	424	382	451	519	505	473	481	504	636	580
15	538	411	408	388	477	568	488	492	463	511	564	574
16	543	436	424	392	496	586	481	500	435	504	551	540
17	534	448	417	394	475	545	517	459	448	509	547	496
18	515	427	422	396	457	505	523	446	457	519	513	530
19	503	433	442	418	446	507	525	466	494	504	511	555
20	500	400	433	409	459	483	543	475	492	466	496	572
21	485	409	435	408	466	468	553	479	449	453	515	600
22	483	422	427	404	461	494	564	477	454	477	534	584
23	494	398	390	409	473	496	564	455	483	494	538	598
24	472	411	375	433	459	485	582	494	496	509	590	600
25	451	408	361	415	496	515	555	504	477	504	576	621
26	459	398	341	408	485	543	538	511	453	504	566	630
27	472	373	344	411	496	513	507	519	487	494	540	613
28	475	361	343	411	517	490	483	507	485	492	549	632
29	463	368	348	420	-----	507	481	483	479	551	555	580
30	426	382	368	424	-----	507	475	492	444	519	557	586
31	426	-----	398	431	-----	542	-----	463	-----	488	596	-----
Total	16,151	12,253	12,296	12,341	12,833	15,989	16,216	15,252	14,154	15,228	16,746	17,231
Mean	521	408	397	398	458	516	541	492	472	491	540	574
Ac-ft	32,040	24,300	24,390	24,480	25,450	31,710	32,164	30,250	28,070	30,200	33,220	34,180

Calendar year 1964 Max 718 Min 341 Mean 504 Ac-ft 365,900
 Water year 1964-65 Max 718 Min 341 Mean 487 Ac-ft 350,500

10-2557. San Felipe Creek near Julian, Calif.

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

Drainage area.--89.2 sq mi (revised).

Records available.--August 1958 to September 1965.

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.--7 years, 0.25 cfs (181 acre-ft per year).

Extremes.--Maximum discharge during year, 1.5 cfs Apr. 3 (gage height, 1.42 ft); no flow Oct. 1 to Dec. 7, May 18-21, 28-31, June 5 to Sept. 30.
1958-65; Maximum discharge, 16 cfs Sept. 13, 1961, and Oct. 18, 1964 (gage height, 1.85 ft); no flow for many days each year.

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

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0.2	0.3	0.2	0.7	0.1	0.1			
2			0	.2	.3	.2	.7	.1	.1			
3			0	.2	.3	.2	.9	.1	.1			
4			0	.2	.3	.2	.5	.1	.1			
5			0	.2	.3	.2	.5	.2	0			
6			0	.2	.4	.3	.4	.1	0			
7			0	.2	.4	.3	.4	.2	0			
8			.1	.2	.3	.3	.4	.1	0			
9			.1	.2	.3	.3	.5	.1	0			
10			.1	.2	.3	.3	1.0	.2	0			
11			.1	.3	.3	.3	.7	.1	0			
12			.1	.3	.3	.3	.5	.1	0			
13			.1	.3	.3	.3	.5	.2	0			
14			.1	.3	.3	.3	.4	.2	0			
15			.2	.3	.3	.2	.4	.1	0			
16			.2	.3	.2	.2	.3	.1	0			
17			.2	.3	.2	.2	.3	.1	0			
18			.2	.3	.3	.2	.3	0	0			
19			.2	.3	.3	.2	.3	0	0			
20			.2	.3	.3	.2	.2	0	0			
21			.2	.3	.3	.2	.2	0	0			
22			.2	.3	.3	.2	.2	.1	0			
23			.2	.3	.2	.2	.2	.1	0			
24			.2	.3	.2	.3	.2	.1	0			
25			.2	.2	.2	.3	.2	.1	0			
26			.2	.2	.3	.3	.2	.1	0			
27			.2	.2	.3	.3	.2	.1	0			
28			.3	.3	.2	.3	.1	0	0			
29			.2	.3	-----	.3	.1	0	0			
30			.2	.3	-----	.3	.1	0	0			
31		-----	.2	.3	-----	.4	-----	0	-----			-----
Total	0	0	4.2	8.0	8.0	8.0	11.6	2.8	0.4	0	0	0
Mean	0	0	0.14	0.26	0.29	0.26	0.39	0.09	0.01	0	0	0
Ac-ft	0	0	8.3	16	16	16	23	5.6	0.8	0	0	0

Calendar year 1964 Max 2.8 Min 0 Mean 0.18 Ac-ft 128

Water year 1964-65 Max 1.0 Min 0 Mean 0.12 Ac-ft 86

Peak discharge (base, 50 cfs).--No peak above base.

10-2558, Coyote Creek near Borrego Springs, Calif.

Location.--Lat 33°22'25", long 116°25'39", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T.9 S., R.5 E., on right bank 500 ft upstream from Box Canyon and 8.5 miles northwest of Borrego Springs.

Drainage area.--144 sq mi.

Records available.--October 1950 to September 1965. Monthly discharge only for October and November 1950, published in WSP 1734.

Gage.--Water-stage recorder (digital). Altitude of gage is 1,250 ft (from topographic map).

Average discharge.--15 years, 2.21 cfs (1,600 acre-ft per year).

Extremes.--Maximum discharge during year, 625 cfs Aug. 14 (gage height, 12.10 ft, from outside gage), on basis of slope-area measurement of maximum flow; minimum daily, 0.7 cfs July 25, 26.

1950-65: Maximum discharge, 3,800 cfs July 28, 1951 (gage height, 14.14 ft, from floodmark), on basis of slope-area measurement of maximum flow; minimum daily, that of July 25, 26, 1965.

Remarks.--Records good except that for Aug. 14, which is poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.4	1.4	1.9	1.6	1.6	1.6	1.8	1.3	1.2	1.1	0.9	1.1
2	1.4	1.4	1.9	1.6	1.6	1.6	2.3	1.5	1.1	1.0	.9	1.1
3	1.4	1.4	1.9	1.6	1.6	1.7	2.5	1.6	1.1	1.0	.9	1.1
4	1.4	1.4	2.1	1.6	1.6	1.9	1.9	1.8	1.1	1.0	.9	1.2
5	1.1	1.4	2.1	1.6	1.6	2.2	1.9	1.7	.9	1.0	.9	1.2
6	1.2	1.4	1.9	1.6	1.7	2.0	1.9	1.7	.9	1.0	.9	1.2
7	1.2	1.4	1.9	1.6	1.6	2.0	1.7	1.9	.9	1.0	1.0	1.3
8	1.1	1.4	1.9	1.4	1.6	2.0	1.9	1.9	1.1	1.0	1.0	1.3
9	1.1	1.6	1.9	1.4	1.6	2.1	2.0	1.9	1.1	1.0	1.0	1.2
10	1.1	1.6	1.7	1.6	1.6	2.0	3.1	1.9	1.0	1.0	1.0	1.2
11	1.1	1.6	1.7	1.6	1.6	2.0	1.8	1.7	.9	1.0	1.1	1.2
12	1.1	1.6	1.7	1.6	1.6	2.0	1.8	1.7	1.0	1.0	1.2	1.1
13	1.1	1.6	1.7	1.6	1.9	2.0	1.8	1.7	1.0	1.0	1.1	1.1
14	1.1	1.7	1.7	1.6	1.9	2.0	1.7	1.7	1.1	1.0	43	1.1
15	1.4	1.9	1.7	1.7	1.7	1.9	1.8	1.7	1.2	1.1	2.7	1.1
16	1.4	1.9	1.7	1.7	1.9	1.8	1.8	1.6	1.2	1.0	1.4	1.2
17	1.4	2.5	1.7	1.7	1.9	1.9	1.5	1.4	1.2	1.1	1.4	1.3
18	1.4	1.9	1.7	1.7	1.9	1.9	1.5	1.4	1.2	1.0	1.4	1.5
19	1.4	1.7	1.7	1.7	1.7	1.7	1.5	1.2	1.3	1.0	1.6	1.5
20	1.4	1.7	1.7	1.7	1.6	1.7	1.4	1.2	1.2	.8	1.5	1.5
21	1.4	1.6	1.6	1.9	1.6	1.8	1.3	1.4	1.2	.8	1.6	1.5
22	1.4	1.6	1.4	1.9	1.6	1.8	1.4	1.6	1.2	.8	1.6	1.3
23	1.4	1.7	1.2	1.7	1.6	1.9	1.4	1.6	1.1	.8	1.5	1.2
24	1.4	1.9	1.4	1.7	1.7	1.8	1.5	1.6	1.1	.8	1.5	1.3
25	1.4	1.9	1.4	1.7	1.7	1.9	1.3	1.6	1.2	.7	1.3	1.3
26	1.4	1.9	1.4	1.7	1.7	2.0	1.1	1.2	1.4	.7	1.1	1.3
27	1.4	1.9	1.4	1.7	1.7	2.0	1.2	1.2	1.3	.8	1.1	1.3
28	1.4	1.9	1.7	1.6	1.6	1.6	1.2	1.2	1.2	.8	1.0	1.2
29	1.4	1.9	1.6	1.6	-----	1.7	1.3	1.1	1.1	1.0	1.0	1.3
30	1.4	1.9	1.6	1.6	-----	1.7	1.2	1.1	1.1	1.0	1.0	1.3
31	1.4	-----	1.6	1.6	-----	1.9	-----	1.1	-----	.9	1.0	-----
TOTAL	40.6	50.7	52.5	50.9	47.0	58.1	50.5	47.2	33.6	29.2	79.5	37.6
MEAN	1.31	1.69	1.69	1.64	1.68	1.87	1.68	1.52	1.12	0.94	2.57	1.25
AC-FT	81	101	104	101	93	115	100	94	67	58	158	75

CALENDAR YEAR 1964 MAX 10 MIN 0.9 MEAN 1.52 AC-FT 1,100
WATER YEAR 1964-65 MAX 43 MIN 0.7 MEAN 1.58 AC-FT 1,150

Peak discharge (base, 50 cfs).--Aug. 14 (about 1700 hrs) 625 cfs (12.10 ft, from outside gage).

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, on left bank 3.3 miles northwest of Borrego Springs, San Diego County.

Drainage area.--21.8 sq mi (revised).

Records available.--October 1950 to September 1965. Prior to October 1960, published as "Palm Canyon Creek." 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.--15 years, 0.37 cfs (268 acre-ft per year); median of yearly mean discharges, 0.2 cfs (140 acre-ft per year).

Extremes.--Maximum discharge during year, 4.5 cfs Apr. 10 (gage height, 2.25 ft); no flow Oct. 1 to Dec. 28, May 8 to Sept. 30. 1950-65: Maximum discharge, about 2,000 cfs Aug. 23, 1955 (gage height, 9.9 ft, from floodmarks), on basis of velocity-area study; no flow for several months in each year.

Remarks.--Records fair. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0.1	0.2	0.2	0.4	0.1				
2			0	.1	.2	.2	.8	.1				
3			0	.1	.2	.2	1.2	.1				
4			0	.1	.2	.2	1.2	.1				
5			0	.1	.2	.2	1.4	.1				
6			0	.1	.3	.2	1.2	.1				
7			0	.2	.4	.2	1.0	.1				
8			0	.2	.3	.2	1.0	0				
9			0	.2	.3	.2	1.4	0				
10			0	.2	.3	.2	3.2	0				
11			0	.2	.3	.2	2.0	0				
12			0	.2	.3	.3	1.5	0				
13			0	.2	.3	.3	1.2	0				
14			0	.2	.3	.3	1.0	0				
15			0	.2	.2	.3	1.0	0				
16			0	.2	.2	.3	1.1	0				
17			0	.2	.2	.3	1.1	0				
18			0	.2	.2	.2	.8	0				
19			0	.2	.2	.2	.6	0				
20			0	.2	.2	.2	.4	0				
21			0	.2	.2	.2	.4	0				
22			0	.2	.2	.2	.4	0				
23			0	.2	.2	.2	.3	0				
24			0	.2	.2	.2	.3	0				
25			0	.2	.2	.2	.2	0				
26			0	.2	.2	.2	.2	0				
27			0	.2	.2	.2	.2	0				
28			0	.2	.2	.2	.1	0				
29			.2	.2	-----	.1	.1	0				
30			.2	.2	-----	.1	.1	0				
31		-----	.2	.2	-----	.2	-----	0	-----			-----
Total	0	0	0.6	5.6	6.6	6.6	25.8	0.7	0	0	0	0
Mean	0	0	0.02	0.18	0.24	0.21	0.86	0.02	0	0	0	0
Ac-ft	0	0	1.2	11	13	13	51	1.4	0	0	0	0

Calendar year 1964 Max 3.4 Min 0 Mean 0.16 Ac-ft 114
 Water year 1964-65 Max 3.2 Min 0 Mean 0.13 Ac-ft 91

Peak discharge (base, 15 cfs).--No peak above base.

10-2558.2 Yaqui Pass Wash near Borrego, Calif.

Location.--Lat 33°08'50", long 116°21'00", in NE¼SE¼ sec.9, T.12 S., R.6 E., at culvert on county road, 5.1 miles southwest of Borrego, and 7.6 miles south of Borrego Springs.

Drainage area.--0.041 sq mi.

Records available.--Water years 1960-65 (annual maximum), February to September 1965.

Gage.--Flood-hydrograph recorder with rain-gage attachment 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.--1960-65: 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 Feb. 24, 1965, date of establishment. No regulation or diversion above station. Precipitation records were unreliable and should not be used.

10-2558.5. Vallecito Creek near Julian, Calif.

Location.--Lat 32°59'10", long 116°25'10", in SW 1/4 sec. 1, T.14 S., R.5 E., on right bank 0.2 mile downstream from Cottonwood Wash, and 12.6 miles southeast of Julian.

Drainage area.--39.7 sq mi.

Records available.--October 1963 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1,950 ft above mean sea level (from topographic map). USWB non-recording rain gage at site 2.0 miles upstream.

Extremes.--Maximum discharge during year, 30 cfs Aug. 12 (gage height, 2.68 ft); minimum daily, 0.1 cfs for many days.

1963-65: Maximum discharge, 73 cfs July 31, 1964 (gage height, 3.20 ft in gage well, 3.48 ft from flood mark), on basis of slope-area measurement of maximum flow; minimum daily, 0.1 cfs for some days in each year.

Remarks.--Records good. No regulation or diversion above station. Flow is diverted for irrigation 300 ft below gage.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1
2	.1	.2	.2	.2	.2	.2	.1	.2	.2	.1	.1	.1
3	.1	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1
4	.1	.2	.2	.2	.3	.2	.1	.2	.2	.1	.1	.1
5	.1	.1	.2	.2	.3	.3	.1	.2	.2	.1	.1	.1
6	.1	.1	.2	.2	.3	.3	.1	.2	.2	.1	.1	.1
7	.1	.1	.2	.2	.3	.3	.2	.2	.2	.1	.1	.1
8	.1	.1	.2	.2	.2	.3	.1	.2	.2	.1	.1	.1
9	.1	.1	.2	.2	.2	.3	.2	.2	.2	.1	.1	.1
10	.1	.1	.2	.2	.2	.3	.2	.2	.2	.1	.1	.1
11	.2	.1	.2	.2	.2	.3	.2	.2	.2	.1	.1	.1
12	.2	.1	.2	.2	.2	.3	.2	.2	.2	.1	1.0	.1
13	.2	.2	.2	.2	.2	.3	.2	.2	.2	.1	.1	.1
14	.2	.2	.2	.2	.2	.3	.2	.2	.2	.1	.1	.1
15	.3	.2	.2	.2	.2	.3	.2	.2	.2	.1	.1	.1
16	.2	.2	.2	.2	.2	.3	.2	.2	.2	.1	.1	.1
17	.2	.2	.2	.2	.2	.3	.2	.2	.2	.1	.1	.1
18	.2	.2	.2	.2	.1	.3	.2	.1	.2	.1	.1	.1
19	.2	.2	.2	.2	.1	.3	.2	.1	.2	.1	.1	.1
20	.2	.2	.2	.2	.1	.3	.2	.1	.2	.1	.1	.1
21	.2	.2	.2	.2	.1	.3	.2	.2	.2	.1	.1	.1
22	.2	.2	.2	.2	.1	.3	.2	.2	.2	.1	.1	.1
23	.2	.2	.2	.2	.1	.3	.2	.2	.2	.1	.1	.1
24	.2	.2	.2	.2	.1	.3	.2	.2	.1	.1	.2	.1
25	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1
26	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1
27	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1
28	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1
29	.2	.2	.2	.2	-----	.1	.2	.2	.1	.1	.1	.1
30	.2	.2	.2	.2	-----	.1	.2	.2	.1	.1	.1	.1
31	.2	-----	.2	.2	-----	.1	-----	.2	-----	.1	.1	-----
Total	5.3	5.2	6.2	6.2	5.3	7.9	5.4	5.9	5.3	3.1	4.1	3.0
Mean	0.17	0.17	0.20	0.20	0.19	0.25	0.18	0.19	0.18	0.10	0.13	0.10
Ac-ft	11	10	12	12	11	16	11	12	11	6.1	8.1	6.0
(†)	0.43	1.38	0.81	0	0.60	0.29	2.49	0	0	0.30	0.34	0.09

Calendar year 1964: Max 4.3 Min 0.1 Mean 0.22 Ac-ft 159

Water year 1964-65: Max 1.0 Min 0.1 Mean 0.17 Ac-ft 126

Peak discharge (base, 15 cfs).--Aug. 12 (1700 hrs) 30 cfs (2.68 ft).

† Precipitation, in inches.

SALTON SEA BASIN

10-2558.85. San Felipe Creek near Westmoreland, Calif.

Location.--Lat 33°07'25", long 115°51'05", in NW 1/4 sec. 17, T. 12 S., R. 11 E., on left bank 320 ft downstream from U.S. Highway 99 and 14.6 miles northwest of Westmoreland.

Drainage area.--1,693 sq mi.

Records available.--December 1960 to September 1965.

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

Extremes.--Maximum discharge during year, 584 cfs Aug. 12 (gage height, 6.68 ft, from outside gage); no flow for most of year. 1960-65: Maximum discharge, 7,230 cfs Oct. 19, 1963 (gage height, 11.85 ft, from profile of flood marks), from rating curve extended above 260 cfs on basis of slope-area measurement of maximum flow; 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 1964 to September 1965

July 18.....	1.7	Aug. 13.....	1.0
19.....	1.8	15.....	.68
30.....	.4	16.....	2.7
31.....	.3	17.....	.60
Aug. 1.....	.2	18.....	.4
12.....	.62		

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
July 1965.....	4.2	-	-	0.14	8.3
August.....	194.3	-	-	6.27	385
Calendar year 1964.....	-	48	0	.14	99
Water year 1964-65.....	-	68	0	.54	393

Peak discharge (base, 200 cfs).--Aug. 12 (0600 hrs) 584 cfs (gage height, 6.68 ft, from outside gage).

Note.--Flow occurred only on days listed above.

10-2560. Whitewater River at White Water, Calif.

Location.--Lat 33°56'48", long 116°38'24", in NW 1/4 NE 1/4 sec. 2, T. 3 S., R. 3 E., on right bank 1.5 miles north of White Water and 3 1/2 miles upstream from San Geronio River.

Drainage area.--57.4 sq mi.

Records available.--October 1948 to September 1965.

Gage.--Water-stage recorder and supplementary water-stage recorder 200 ft upstream on river; water-stage recorder and Cipolletti weir on diversion 500 ft downstream. Feb. 24, 1950, to Sept. 30, 1952, supplementary gage used as base gage. Since Apr. 13, 1960, supplementary gage 150 ft upstream at datum 5.0 ft higher. Datum of gage is 1,610.98 ft above mean sea level, supplementary adjustment of 1934.

Average discharge (river only).--17 years, 9.43 cfs (6,830 acre-ft per year).
(combined).--16 years (1949-65), 10.9 cfs (7,890 acre-ft per year); median of yearly mean discharges, 8.8 cfs (6,400 acre-ft per year).

Extremes (river only).--Maximum discharge during year, 84 cfs Apr. 9 (gage height, 6.73 ft), from rating curve extended above 10 cfs on basis of field estimate at gage height 7.04 ft; minimum daily, 0.2 cfs Nov. 19.
1948-65: Maximum discharge, about 1,500 cfs Apr. 3, 1958 (gage height, 8.35 ft), from rating curve extended above 230 cfs on basis of slope-area measurement at gage height 7.52 ft; no flow Jan. 9, 11, 1957.
Maximum discharge known, 42,000 cfs Mar. 2, 1938, from slope-area measurement of maximum flow, at site 2.5 miles upstream (drainage area, 51.4 sq mi).

Remarks.--Records good. 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 Whitewater Mutual Water Co.; records of diversion, 15 miles upstream, furnished by Southern California Edison Co.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	5.2	3.9	1.8	4.9	5.0	4.5	4.2	7.1	3.6	4.7	6.9
2	7.4	5.8	3.6	1.6	5.3	5.0	6.3	3.5	7.2	6.8	7.9	6.4
3	6.8	6.3	3.4	1.6	5.3	5.3	4.3	5.6	6.9	5.6	7.8	7.1
4	4.3	6.3	4.2	2.7	4.9	5.1	2.8	5.5	7.1	5.5	7.7	5.5
5	7.4	6.2	2.5	2.6	4.9	5.7	2.8	5.5	6.0	6.4	7.4	4.7
6	8.0	6.7	2.5	2.5	4.1	4.7	4.7	5.5	5.2	7.2	7.5	6.2
7	7.9	5.8	3.8	3.4	2.1	4.2	3.7	6.1	6.6	7.1	7.4	5.9
8	7.5	5.5	3.6	3.4	3.9	5.2	5.9	5.5	7.0	6.7	6.2	6.7
9	7.4	6.2	3.9	3.2	5.0	5.2	11	3.3	6.9	7.4	7.1	6.1
10	6.5	5.9	3.6	2.0	5.0	5.2	11	5.2	6.7	6.4	7.8	6.8
11	4.2	4.9	4.0	2.6	4.6	4.3	7.2	6.0	6.8	5.2	7.1	5.3
12	7.1	5.3	2.5	4.0	5.2	5.3	7.2	6.1	6.5	7.1	7.6	4.7
13	7.4	5.4	2.8	4.2	4.3	4.8	7.2	6.4	5.9	7.2	7.7	5.9
14	7.6	5.2	3.9	4.1	3.9	4.3	8.2	6.1	6.2	7.9	6.6	6.4
15	7.3	4.7	3.6	3.7	4.9	3.1	11	5.9	7.0	7.3	7.7	6.9
16	7.3	6.0	4.1	3.3	4.9	1.7	16	5.9	7.0	7.1	7.6	6.5
17	7.0	3.4	3.7	2.9	4.9	1.7	20	7.6	6.7	6.1	7.4	7.1
18	4.1	.3	4.2	3.8	4.8	3.1	22	7.7	6.9	5.0	7.3	6.4
19	7.5	.2	4.1	3.7	5.6	4.9	23	7.5	6.6	7.1	6.7	6.0
20	7.4	.5	3.1	3.9	4.7	4.6	20	7.3	5.7	7.5	7.4	6.4
21	7.1	1.2	3.6	3.5	4.2	9.4	18	7.8	6.7	7.4	5.7	6.9
22	6.9	2.0	3.9	3.7	5.1	12	16	6.3	6.8	6.7	5.1	7.7
23	7.3	3.6	4.1	3.1	5.1	10	14	5.5	6.9	7.1	6.3	7.5
24	6.0	4.6	3.9	2.7	5.2	12	13	6.8	6.8	5.6	6.7	7.9
25	4.0	4.7	3.7	2.9	4.8	14	12	6.8	5.9	5.0	6.7	7.1
26	5.7	4.4	2.8	4.0	5.2	7.3	10	7.3	5.7	7.1	6.8	6.0
27	6.5	4.6	14	3.9	4.5	5.1	9.4	7.0	4.8	7.3	7.1	6.9
28	6.3	4.2	20	3.0	4.0	5.1	6.7	5.8	5.2	7.3	5.7	7.3
29	6.3	3.2	4.7	4.1	-----	5.9	5.5	6.0	7.0	7.3	4.9	7.5
30	6.6	4.1	3.4	3.1	-----	6.3	4.9	5.2	6.8	7.7	6.3	7.4
31	5.8	-----	3.6	2.6	-----	4.6	-----	6.6	-----	7.4	6.9	-----
Total	206.2	132.4	138.7	97.6	131.3	180.1	308.3	187.5	194.6	206.1	212.8	196.1
Mean	6.65	4.41	4.47	3.15	4.69	5.81	10.3	6.05	6.49	6.65	6.87	6.54
Ac-ft	409	263	275	194	260	357	612	372	386	409	422	389
(†)	422	283	305	270	274	372	648	389	413	432	438	405
(‡)	53	57	62	58	62	68	35	106	84	69	62	60

Calendar year 1964	Max	50	Min	0.2	Mean	5.80	Ac-ft	4,210	Mean †	6.59	Ac-ft †	4,770
Water year 1964-65	Max	23	Min	0.2	Mean	6.00	Ac-ft	4,350	Mean †	6.42	Ac-ft †	4,650

Peak discharge (base, 100 cfs).--No peak above base.

† Combined discharge of river and infiltration line.

‡ Discharge diverted from basin 15 miles upstream.

SALTON SEA BASIN

10-2565. Snow Creek near White Water, Calif.

Location.--Lat 33°52'10", long 116°40'50", in NW¼ sec.33, T.3 S., R.3 E., 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 (revised).

Records available.--July to December 1921, May 1922 to February 1927, December 1927 to September 1931, October 1959 to September 1965. Yearly discharge only for 1930, published in WSP 1314.

Gage.--Water-stage recorder (digital). Altitude of gage is 2,100 ft (from topographic map). Prior to Dec. 16, 1927, at site 500 ft upstream at different datum.

Average discharge.--13 years (1922-26, 1928-31, 1959-65), 6.24 cfs (4,520 acre-ft per year).

Extremes.--Maximum discharge during year, 230 cfs Dec. 27 (gage height, 3.75 ft) from rating curve extended as explained below; minimum daily, 2.7 cfs Oct. 7-12, Nov. 13, 14, Sept. 15.

1921-31, 1959-65: Maximum discharge, 285 cfs Dec. 2, 1961 (gage height, 3.87 ft), from rating curve extended above 65 cfs; minimum daily, 2.1 cfs June 23-27, Sept. 5-11, 1961.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.8	2.2	2.6	22
2.0	4.0	2.8	35
2.2	7.2	3.0	55
2.4	13	3.2	84

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.8	3.2	3.4	5.6	4.0	4.2	6.7	14	7.0	4.0	3.0	2.9
2	2.9	3.1	3.4	5.0	4.0	4.3	9.4	12	6.6	4.0	2.9	3.0
3	2.8	3.1	3.5	4.7	4.0	4.3	11	11	6.5	4.0	2.9	2.9
4	2.8	3.0	3.5	4.5	3.9	4.3	7.9	10	6.5	4.0	2.9	3.0
5	2.8	3.1	3.5	4.3	3.9	4.2	6.2	9.7	6.8	4.0	2.8	3.1
6	2.8	3.0	3.5	4.2	6.5	4.2	6.1	9.2	6.8	4.0	2.8	3.0
7	2.7	3.0	3.6	5.2	6.3	4.3	5.8	8.7	6.4	4.0	2.8	3.0
8	2.7	2.9	3.6	4.9	5.5	4.3	7.1	7.8	6.2	4.0	2.8	2.9
9	2.7	3.1	3.6	4.4	5.1	4.3	11	7.2	5.9	4.0	2.8	2.9
10	2.7	3.4	3.6	4.3	4.9	4.4	13	7.0	5.7	4.0	2.8	2.9
11	2.7	3.5	3.5	4.1	4.7	4.6	7.5	6.8	6.2	4.0	4.2	2.8
12	2.7	2.9	3.5	4.0	4.6	4.4	6.6	6.7	6.2	4.0	3.6	2.8
13	2.8	2.7	3.5	3.9	4.5	4.7	6.1	7.0	5.8	3.8	3.5	2.8
14	2.8	2.7	3.5	3.9	4.4	4.0	6.1	7.6	5.5	3.8	8.5	2.8
15	3.1	2.8	3.5	3.8	4.3	4.0	6.4	7.9	5.3	3.9	5.8	2.7
16	3.2	2.8	3.5	3.8	4.3	3.8	7.7	8.9	5.2	3.8	4.5	2.9
17	3.2	3.2	3.4	3.8	4.5	3.6	11	9.5	5.0	5.0	4.0	3.0
18	3.1	3.8	3.4	3.9	4.7	3.5	16	10	4.9	4.0	3.7	3.2
19	2.9	3.4	3.4	3.8	4.6	3.4	20	9.8	4.9	3.8	3.7	3.3
20	3.0	3.4	3.4	3.8	4.6	3.5	22	9.2	4.8	3.5	3.5	3.2
21	3.0	3.5	3.3	3.8	4.6	3.5	21	9.1	4.7	3.4	3.4	3.1
22	3.0	3.5	3.3	3.8	4.5	3.6	20	8.5	4.9	3.3	3.3	3.0
23	3.2	3.5	3.4	3.7	4.4	3.6	17	7.8	4.8	3.4	3.3	3.0
24	3.3	3.5	3.8	3.9	4.4	3.6	16	7.2	4.7	3.2	3.2	2.9
25	3.3	3.6	4.1	4.0	4.4	3.8	18	6.9	4.6	3.2	3.2	2.9
26	3.2	3.7	4.1	4.0	4.3	3.7	18	6.7	4.5	2.9	3.1	2.9
27	3.2	3.6	71	4.0	4.2	3.8	18	6.7	4.3	2.9	3.1	2.9
28	3.2	3.6	24	4.0	4.3	3.8	18	6.9	4.2	2.9	3.1	2.9
29	3.1	3.6	11	4.0	-----	3.9	18	7.1	4.2	2.9	2.9	3.0
30	3.2	3.6	7.8	4.0	-----	3.8	15	7.1	4.1	3.2	2.9	3.0
31	3.1	-----	6.4	4.0	-----	4.1	-----	6.9	-----	3.0	2.9	-----
TOTAL	92.0	97.8	212.0	129.1	128.4	123.5	372.6	260.9	163.2	113.9	107.9	88.7
MEAN	2.97	3.26	6.84	4.17	4.59	3.98	12.4	8.42	5.44	3.67	3.48	2.96
AC-FT	182	194	420	256	255	245	739	517	324	226	214	176

CALENDAR YEAR 1964 MAX 71 MIN 2.6 MEAN 5.36 AC-FT 3,900
WATER YEAR 1964-65 MAX 71 MIN 2.7 MEAN 5.18 AC-FT 3,750

Peak discharge (base, 50 cfs).--Dec. 27 (1630 hrs) 230 cfs (3.75 ft).

10-2578. Long Creek near Desert Hot Springs, Calif.

Location.--Lat 33°57'55", long 116°26'35", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 2 S., R. 5 E., 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.

Records available.--April 1963 to September 1965.

Gage.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,520 ft (from topographic map).

Extremes.--No flow during year.

1963-65: 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.--No flow since Oct. 18, 1963. No regulation or diversion above station.

10-2580. Tahquitz Creek near Palm Springs, Calif.

Location.--Lat 33°48'18", long 116°33'30", in NE 1/4 SW 1/4 sec. 22, T.4 S., R.4 E., on left bank 2.2 miles southwest of Palm Springs and 7 miles upstream from mouth.

Drainage area.--16.7 sq mi.

Records available.--October 1947 to September 1965.

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

Average discharge.--18 years, 2.30 cfs (1,670 acre-ft per year); median of yearly mean discharges, 1.3 cfs (940 acre-ft per year).

Extremes.--Maximum discharge during year, 16 cfs Dec. 27 (gage height, 1.83 ft); no flow Oct. 1 to Dec. 26, Aug. 9-13, Aug. 18 to Sept. 30.

1947-65: Maximum discharge, 1,570 cfs Aug. 31, 1954 (gage height, 8.45 ft in gage well, 10.0 ft outside, from floodmarks), from rating curve extended above 70 cfs on basis of slope-area measurement of maximum flow; no flow for parts of each year.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 4-13)

0.5	0	1.0	2.4
.6	.2	1.2	4.5
.7	.5	1.5	8.9
.8	1.0	2.0	20

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0.8	0.4	0.5	1.3	1.2	3.6	0.7	0.1	
2			0	.7	.4	.5	1.6	1.1	3.5	.6	.1	
3			0	.6	.4	.5	1.8	9.6	3.4	.6	.1	
4			0	.5	.4	.5	1.6	8.1	3.3	.6	.1	
5			0	.5	.4	.5	1.4	7.6	3.0	.5	.1	
6			0	.4	.5	.5	1.3	7.3	2.8	.4	.1	
7			0	.5	1.3	.5	1.2	7.0	2.7	.3	.1	
8			0	.6	1.1	.5	1.2	6.2	2.7	.3	.1	
9			0	.6	.9	.5	1.4	5.8	2.6	.2	0	
10			0	.5	.7	.5	2.2	5.4	2.4	.2	0	
11			0	.4	.6	.6	1.4	5.1	2.3	.2	0	
12			0	.4	.6	.6	1.4	5.2	2.2	.2	0	
13			0	.4	.6	.6	1.6	5.2	2.2	.2	0	
14			0	.4	.6	.6	1.6	5.5	2.1	.2	.1	
15			0	.4	.6	.7	1.6	5.4	2.1	.2	.1	
16			0	.4	.6	.8	1.8	5.6	2.1	.2	.1	
17			0	.4	.5	.7	2.1	5.8	1.9	.2	.1	
18			0	.4	.5	.6	1.9	5.8	1.8	.3	0	
19			0	.4	.5	.6	3.6	5.8	1.8	.6	0	
20			0	.5	.5	.6	4.8	5.4	1.7	.4	0	
21			0	.6	.5	.6	6.2	5.4	1.6	.4	0	
22			0	.6	.5	.6	7.3	5.4	1.5	.3	0	
23			0	.6	.5	.7	7.8	5.1	1.4	.3	0	
24			0	.6	.5	.7	8.6	4.8	1.4	.2	0	
25			0	.7	.5	.7	9.8	4.6	1.3	.2	0	
26			0	.6	.5	.7	11	4.4	1.2	.2	0	
27			2.0	.6	.5	.6	11	4.1	1.2	.2	0	
28			5.5	.6	.5	.6	12	4.0	1.1	.2	0	
29			1.8	.6	-----	.7	12	3.9	.9	.2	0	
30			1.4	.5	-----	.6	12	3.8	.8	.1	0	
31			1.1	.5	-----	.7	-----	3.7	-----	.1	0	
Total	0	0	11.8	16.3	16.1	18.6	134.5	184.0	52.6	9.5	1.2	0
Mean	0	0	0.38	0.53	0.58	0.60	4.48	5.94	2.09	0.31	0.04	0
Ac-ft	0	0	23	32	32	37	267	365	124	19	2.4	0

Calendar year 1964 Max 7.9 Min 0 Mean 1.01 Ac-ft 733

Water year 1964-65 Max 12 Min 0 Mean 1.25 Ac-ft 901

Peak discharge (base, 20 cfs).--No peak above base.

10-2585. Palm Canyon Creek near Palm Springs, Calif.

Location.--Lat 33°44'55", long 116°32'15", in S $\frac{1}{2}$ sec. 11, T.5 S., R.4 E., on right bank three-quarters of a mile upstream from Murray Canyon Creek and 6 miles south of Palm Springs.

Drainage area.--93.3 sq mi (revised).

Records available.--January 1930 to January 1942, October 1947 to September 1965.

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.--29 years (1930-41, 1947-65), 3.80 cfs (2,750 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

Extremes.--Maximum discharge during year, 181 cfs July 17 (gage height, 3.65 ft), on basis of velocity-area study; no flow for most of year.

1930-42, 1947-65: Maximum discharge, 3,850 cfs Feb. 6, 1937 (gage height, 5.60 ft, datum then in use), from rating curve extended above 120 cfs on basis of velocity-area study; no flow for several months in most years.

Remarks.--Records fair. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	0.5		0	0	
2							.9	.5		0	0	
3							1.7	.4		0	0	
4							1.3	.4		0	0	
5							1.0	.3		0	0	
6							.9	.2		0	0	
7							.8	.2		0	0	
8							.8	.2		0	5.9	
9							1.7	.1		0	.2	
10							4.2	0		0	0	
11							2.1	0		0	0	
12							1.5	0		0	.3	
13							1.4	0		0	.4	
14							1.5	0		0	3.5	
15							2.1	0		0	.4	
16							2.5	0		0	8.8	
17							3.2	0		14	.1	
18							3.9	0		.1	0	
19							4.2	0		0	0	
20							4.2	0		0	0	
21							3.9	0		0	0	
22							3.2	0		0	0	
23							2.7	0		0	0	
24							2.3	0		0	0	
25							1.5	0		0	0	
26							1.4	0		0	0	
27							1.2	0		0	0	
28							.8	0		0	0	
29							.8	0		0	0	
30							.7	0		0	0	
31								0		0	0	
Total	0	0	0	0	0	0	58.4	2.8	0	14.1	19.6	0
Mean	0	0	0	0	0	0	1.95	0.09	0	0.45	0.63	0
Ac-ft	0	0	0	0	0	0	116	5.6	0	28	39	0

Calendar year 1964 Max 7.8 Min 0 Mean 0.20 Ac-ft 142

Water year 1964-65 Max 14 Min 0 Mean 0.26 Ac-ft 189

Peak discharge (base, 100 cfs).--July 17 (1600 hrs) 181 cfs (3.65 ft); Aug. 16 (1500 hrs) 122 cfs (3.38 ft).

10-2590. Andreas Creek near Palm Springs, Calif.

Location--Lat 33°45'36", long 116°32'57", in NW 1/4 Sec. 3, T.5 S., R.4 E., 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 (revised).

Records available--October 1948 to September 1965.

Gage--Water-stage recorder (digital) 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--17 years, 1.73 cfs (1,250 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

Extremes--Maximum discharge during year, 59 cfs Dec. 27 (gage height, 2.51 ft); no flow Sept. 13, 15.

1948-65: 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 1961, 1963, 1965.

Remarks--Records good. No regulation above station. One small diversion for domestic use about 1 mile above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.3	0	1.6	4.5
1.4	1.1	1.8	9.9
1.5	2.6	2.0	19

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.4	0.6	0.9	1.7	1.4	1.8	2.8	2.2	1.0	0.5	0.4	0.3
2	.4	.6	1.0	1.6	1.6	1.9	3.0	2.0	1.0	.4	.4	.4
3	.4	.6	1.1	1.5	1.7	2.0	3.3	2.1	1.0	.3	.4	.4
4	.4	.5	1.1	1.5	1.7	1.7	2.4	1.9	1.0	.3	.3	.4
5	.4	.5	1.1	1.5	1.7	1.5	2.1	1.9	.9	.3	.3	.7
6	.5	.5	1.1	1.5	2.0	1.5	2.0	1.9	.9	.3	.3	.6
7	.4	.6	1.0	1.9	1.8	1.4	2.0	1.9	.8	.2	.4	.5
8	.4	.6	1.1	1.7	1.7	1.3	2.3	1.8	.8	.3	.4	.4
9	.3	.8	1.1	1.7	1.6	1.3	2.8	1.8	.8	.3	.3	.4
10	.3	1.2	1.0	1.6	1.7	1.3	3.7	1.7	.8	.4	.4	.2
11	.3	1.1	1.1	1.5	1.6	1.5	2.5	1.8	.8	.3	.6	.1
12	.3	1.0	1.0	1.5	1.7	1.4	2.3	1.8	.7	.3	.6	.1
13	.4	.9	1.1	1.5	1.6	1.5	2.3	1.6	.7	.3	.6	0
14	.5	.8	1.1	1.4	1.4	1.5	2.2	1.7	.9	.4	.7	.1
15	.5	.8	1.3	1.4	1.4	1.6	2.3	1.7	.9	.4	.6	0
16	.7	.9	1.4	1.4	1.4	1.4	2.5	1.6	.9	.4	.6	.1
17	.5	1.6	1.5	1.4	1.4	1.4	2.8	1.5	.9	3.8	.6	.3
18	.5	2.0	1.5	1.4	1.4	1.4	3.2	1.5	.9	1.0	.6	.5
19	.4	1.4	1.7	1.4	1.4	1.4	3.5	1.4	.9	.6	.6	.5
20	.4	1.4	1.5	1.5	1.5	1.3	3.7	1.4	.9	.5	.5	.4
21	.4	1.2	1.3	1.5	1.4	1.3	3.3	1.4	.9	.5	.3	.3
22	.4	1.1	1.2	1.5	1.4	1.4	3.1	1.5	.9	.5	.4	.3
23	.5	1.1	1.1	1.5	1.4	1.4	3.0	1.6	.9	.5	.4	.3
24	.5	1.0	1.1	1.8	1.4	1.4	3.1	1.6	.9	.5	.4	.3
25	.5	1.0	1.1	1.7	1.5	1.4	3.2	1.5	.7	.4	.3	.3
26	.5	1.0	1.3	1.7	1.4	1.5	3.2	1.4	.7	.4	.3	.3
27	.5	1.1	1.8	1.8	1.6	1.4	2.9	1.3	.7	.4	.3	.2
28	.6	1.0	5.7	1.7	1.9	1.5	2.7	1.2	.6	.4	.3	.3
29	.5	1.0	2.5	1.7	-----	1.5	2.6	1.1	.6	.7	.3	.5
30	.6	.9	2.0	1.6	-----	1.5	2.5	1.0	.6	.6	.3	.5
31	.5	-----	1.8	1.4	-----	2.1	-----	1.0	-----	.5	.3	-----
TOTAL	13.9	28.8	60.8	48.5	43.7	46.5	83.3	49.8	25.0	16.7	13.2	9.7
MEAN	.45	.96	1.96	1.57	1.56	1.50	2.78	1.61	0.83	0.54	0.43	0.32
AC-FT	28	57	121	96	87	92	165	99	50	33	26	19

CALENDAR YEAR 1964 MAX 18 MIN 0.10 MEAN 1.17 AC-FT 850
WATER YEAR 1964-65 MAX 18 MIN 0 MEAN 1.21 AC-FT 873

Peak discharge (base, 30 cfs)--Dec. 27 (1530 hrs) 59 cfs (2.51 ft); July 17 (1515 hrs) 35 cfs (2.22 ft).

10-2592. Deep Creek near Palm Desert, Calif.

Location--Lat 33°37'50", long 116°23'30", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.6 S., R.6 E., on left bank 500 ft downstream from unnamed tributary, and 6.3 miles south of Palm Desert.

Drainage area--30.6 sq mi.

Records available--May 1962 to September 1965.

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

Extremes--Maximum discharge during year, 18 cfs Aug. 7 (gage height, 2.07 ft), on basis of area-velocity study; no flow for most of year.

1962-65: Maximum discharge, 52 cfs July 26, 1964 (gage height, 2.66 ft), on basis of slope-area measurement of maximum flow; 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 1964 to September 1965

Apr. 20.....0.1	Apr. 27.....0.3	May 4.....0.2
21......6	28......3	5......1
22......5	29......2	6......1
23......4	30......2	7......1
24......4	May 1......2	8......1
25......4	2......2	9......1
26......3	3......2	Aug. 7.....1.4

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	3.7	-	-	0.12	7.3
May.....	1.3	-	-	.04	2.6
August.....	1.4	-	-	.05	2.8
Calendar year 1964.....	-	2.8	0	.04	27
Water year 1964-65.....	-	1.4	0	.02	13

Peak discharge (base, 20 cfs)--No peak above base.

Note--Flow occurred only on days listed above.

10-2595.4. Whitewater River near Mecca, Calif.

Location.--Lat 33°30'39", long 116°03'35", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.33, T.7 S., R.9 E., on left bank 0.3 mile upstream from mouth and 4.3 miles south of Mecca.

Drainage area.--1,299 sq mi.

Records available.--October 1960 to September 1965 in reports of Geological Survey. May 1957 to September 1960 in reports of Coachella Valley County Water District.

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Coachella Valley County Water District).

Extremes.--1960-65: Maximum daily discharge, 151 cfs Aug. 18, Sept. 6, 1965: minimum daily, 37 cfs Nov. 25-29, 1960.

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

Cooperation.--Water-stage recorder graph and 56 discharge measurements furnished by Coachella Valley County Water District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123	87	92	89	106	125	126	123	131	115	137	119
2	123	84	92	90	105	124	126	123	135	113	147	127
3	123	83	92	91	105	125	126	123	129	119	129	127
4	123	84	92	91	105	125	126	125	133	119	119	123
5	122	83	92	91	107	125	124	119	129	117	115	143
6	119	83	92	92	107	125	124	121	131	115	117	151
7	118	83	93	94	107	126	124	121	139	119	119	149
8	116	82	92	94	101	126	125	121	141	115	119	139
9	115	81	92	95	101	126	127	123	125	113	125	139
10	112	83	92	97	100	127	123	123	125	117	125	137
11	109	81	92	98	98	127	125	127	129	113	129	135
12	111	81	91	98	100	126	123	125	133	115	143	135
13	111	82	91	96	105	128	122	125	125	110	145	133
14	111	82	91	95	107	125	121	123	129	117	139	133
15	111	84	94	94	105	124	122	119	129	119	147	127
16	109	85	96	94	102	126	122	119	125	125	149	133
17	106	82	92	95	100	125	121	119	117	131	147	127
18	111	94	92	97	105	125	120	119	121	125	151	131
19	109	93	93	97	110	125	120	119	119	125	149	127
20	100	91	93	97	112	125	121	119	123	121	149	133
21	100	90	95	97	114	125	122	121	123	117	141	131
22	98	90	95	98	114	125	122	125	117	121	139	135
23	98	91	94	98	114	125	121	125	115	119	139	127
24	95	92	94	102	115	126	123	123	117	125	131	127
25	92	92	93	103	118	125	124	115	129	125	135	137
26	88	92	92	103	121	125	125	117	123	119	125	139
27	89	91	92	102	123	127	125	125	115	123	119	123
28	89	89	91	101	124	127	125	127	112	117	119	127
29	88	88	91	102	-----	129	125	137	117	129	127	119
30	87	92	91	103	-----	128	124	127	121	137	127	119
31	88	-----	91	105	-----	128	-----	127	-----	131	123	-----
Total	3,294	2,595	2,865	2,999	3,031	3,900	3,704	3,805	3,757	3,726	4,125	3,952
Mean	106	86.5	92.4	96.7	108	126	123	123	125	120	133	132
Ac-ft	6,530	5,150	5,680	5,950	6,010	7,740	7,350	7,550	7,450	7,390	8,180	7,840
Calendar year 1964	Max	132	Nin	81	Mean	104	Ac-ft	75,330				
Water year 1964-65	Max	151	Nin	81	Mean	114	Ac-ft	82,820				

10-2596. Cottonwood Wash near Cottonwood Spring, Calif.

Location.--Lat 33°44'40", long 115°49'35", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T.5 S., R.11 E., on right bank on Cottonwood Spring road, one mile northwest of Cottonwood Spring.

Drainage area.--0.71 sq mi.

Records available.--October 1959 to September 1965.

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

Average discharge.--6 years, 0.0002 cfs (0.1 acre-ft per year).

Extremes.--Maximum discharge during year, 0.1 cfs Apr. 3 (gage height, 2.75 ft); no flow all year including maximum day, which was less than 0.05 cfs.

1959-65: Maximum discharge, 11 cfs Oct. 17, 1963 (gage height, 3.80 ft, from crest-stage gage), on basis of field estimate of maximum flow; no flow for most of each year.

Remarks.--No flow since Oct. 17, 1963. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 0.5; March, 0.3; April, 0.9; the water year, 1.7.

EMERSON LAKE BASIN

10-2602. Pipes Creek near Yucca Valley, Calif.

Location.--Lat 34°10'20", long 116°32'45", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T.1 N., R.4 E., on left bank 2.8 miles upstream from Antelope Wash and 6.8 miles northwest of Yucca Valley.

Drainage area.--15.1 sq mi.

Records available.--September 1958 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 4,435.40 ft above mean sea level, datum of 1929.

Remarks.--No flow since Sept. 3, 1958, date of establishment. No regulation or diversion above station.

LUCERNE DRY LAKE BASIN

10-2604. Cushenbury Creek near Lucerne Valley, Calif.

Location.--Lat 34°21'50", long 116°50'35", in NE $\frac{1}{4}$ sec. 14, T.3 N., R.1 E., 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.

Records available.--August 1957 to September 1965.

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

Average discharge.--8 years, 0.003 cfs (2.2 acre-ft per year).

Extremes.--Maximum discharge during year, 20 cfs Aug. 16 (gage height, 1.78 ft), on basis of field estimate of maximum flow; no flow for most of year.

1957-65: Maximum discharge, 35 cfs Apr. 11, 1958 (gage height, 1.90 ft), on basis of field estimate of maximum flow; no flow in most years.

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

Discharge, in cubic feet per second, water year October 1964 to September 1965

Aug. 16.....0.5

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
August 1965.....	0.5	-	-	0.02	1.0
Calendar year 1964.....	-	0.1	0	.0003	.2
Water year 1964-65.....	-	.5	0	.001	1.0

Note.--Flow occurred only on day listed above.

MOJAVE RIVER BASIN

10-2605, Deep Creek near Hesperia, Calif.

Location.--Lat 34°20'30", long 117°13'40", in SE¼ sec.18, T.3 N., R.3 W., 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 (revised).

Records available.--October 1904 to September 1922, October 1929 to September 1965. Monthly discharge only prior to January 1930, published in WSP 1314. Combined creek and canal, October 1950 to September 1965.

Gage.--Water-stage recorder (digital) and broad-crested weir since December 1938. Altitude of gage is 3,050 ft (from topographic map). Prior to Sept. 30, 1922, staff gage and water-stage recorder at same site at different datum. December 1929 to Apr. 20, 1938, at same site at different datum. Apr. 21 to Dec. 10, 1938, at site 0.25 mile downstream at different datum.

Average discharge (creek only).--54 years, 65.3 cfs (47,280 acre-ft per year); median of yearly mean discharges, 44 cfs (31,900 acre-ft per year).

(combined).--15 years, 35.7 cfs (25,850 acre-ft per year); median of yearly mean discharges, 20 cfs (14,500 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 443 cfs Apr. 23 (gage height, 2.90 ft); minimum daily, 0.2 cfs Aug. 10. 1904-22, 1929-65: Maximum discharge, 46,600 cfs Mar. 2, 1938, based on slope-area measurement of maximum flow; no flow July 17, 18, 1961.

(combined).--Same as creek; no diversion during year.

1950-65: Maximum discharge, 12,400 cfs Apr. 3, 1958 (gage height, 8.59 ft), from rating curve extended above 3,500 cfs on basis of slope-area measurement at gage height 11.3 ft; no flow July 17, 18, 1961.

Remarks.--Records good. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft), used principally for recreation. Hesperia Water Co.'s canal diverts water about 2½ miles above station for irrigation of about 1,500 acres and domestic use below station. No diversion since May 9, 1959.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.6	0.1	1.0	3.4	1.8	30
.7	.4	1.2	7.3	2.1	76
.8	1.0	1.4	9.6	2.4	166
.9	2.0	1.6	16	2.7	313

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.4	2.7	5.9	13	11	9.3	46	148	10	4.0	1.3	0.3
2	3.6	2.7	5.9	11	11	9.0	99	115	12	3.5	1.2	.4
3	2.3	3.0	5.9	10	10	8.8	93	90	15	3.3	1.0	.4
4	1.7	3.0	5.6	9.9	10	8.8	63	69	14	2.7	.9	.5
5	1.5	2.2	5.3	9.6	9.9	8.9	44	59	12	2.3	.7	.5
6	1.5	1.6	5.2	9.6	11	8.9	42	53	10	2.0	.7	.5
7	2.3	1.7	5.0	14	20	8.8	39	48	10	1.8	.7	.5
8	2.3	1.8	4.7	26	17	9.1	61	42	9.8	1.6	.6	.5
9	2.0	2.1	4.8	17	15	9.3	79	38	9.9	1.5	.3	.4
10	1.6	2.4	4.7	14	14	9.5	111	35	9.8	1.5	.2	.4
11	3.7	4.1	4.8	12	12	9.5	72	33	9.7	1.5	.4	.4
12	2.5	4.7	4.8	11	11	9.5	56	30	9.5	1.3	.5	.6
13	1.9	3.7	4.7	11	11	9.7	51	29	9.2	1.1	.4	.4
14	1.7	3.4	4.7	11	12	9.9	65	28	8.2	1.1	1.3	.6
15	1.8	3.4	4.9	11	11	9.7	75	29	7.2	1.4	1.0	.7
16	1.9	3.3	5.1	10	10	10	98	26	7.5	1.5	.9	.7
17	1.6	4.5	5.1	11	10	10	137	23	8.5	1.7	1.0	.7
18	1.6	5.3	5.1	13	9.9	11	183	22	8.1	1.7	.8	.7
19	1.6	4.6	5.1	14	9.8	12	234	20	7.4	1.4	.8	1.0
20	1.5	4.4	5.2	15	9.8	12	308	19	6.8	1.2	.8	1.1
21	1.6	4.3	5.6	15	9.7	10	291	19	5.8	1.1	.7	1.4
22	1.6	4.4	6.5	14	9.7	9.8	286	18	5.5	1.1	.8	1.3
23	1.7	4.6	6.2	13	9.6	9.9	302	18	5.5	1.1	.7	1.3
24	1.5	5.1	6.2	13	9.6	9.8	291	18	5.4	1.1	.5	1.1
25	1.2	5.1	6.3	22	9.5	9.7	313	18	6.1	1.0	.4	.9
26	1.2	5.5	6.5	16	9.5	9.7	302	17	6.0	.8	.3	.9
27	1.3	5.7	6.9	14	9.4	9.6	269	16	5.4	.7	.3	.8
28	1.6	5.5	95	12	9.4	9.5	238	16	5.2	.7	.3	.9
29	2.0	4.9	37	11	-----	9.5	209	15	5.0	.8	.3	1.0
30	2.3	5.6	22	11	-----	9.5	183	11	4.4	1.0	.3	.8
31	2.4	-----	16	11	-----	9.6	-----	10	-----	.9	.3	-----
TOTAL	60.4	115.3	316.7	405.1	311.8	300.3	4,640	1,132	248.9	48.4	20.4	21.5
MEAN	1.95	3.84	10.2	13.1	11.1	9.69	155	36.5	8.30	1.56	0.66	0.72
AC-FT	120	229	628	804	618	596	9,200	2,250	494	96	40	43

CALENDAR YEAR 1964 MAX 275 MIN 0.3 MEAN 13.5 AC-FT 9,780
 WATER YEAR 1964-65 MAX 313 MIN 0.2 MEAN 20.9 AC-FT 15,120

Peak discharge (base, 400 cfs).--Apr. 23 (0030 hrs) 443 cfs (2.90 ft).

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., 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 (revised).

Records available.--October 1904 to September 1922, October 1929 to September 1965. 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.

Average discharge.--54 years, 38.1 cfs (27,580 acre-ft per year); median of yearly mean discharges, 22 cfs (15,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,460 cfs Apr. 9 (gage height, 5.20 ft); no flow Oct. 1 to Mar. 31, May 24 to Sept. 30.
1904-22, 1929-65: 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 good. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							21	14				
2							207	12				
3							209	10				
4							98	9.4				
5							66	8.4				
6							41	7.4				
7							33	6.6				
8							202	5.8				
9							387	5.1				
10							492	4.4				
11							184	3.8				
12							111	3.5				
13							79	3.2				
14							81	3.2				
15							88	3.0				
16							88	1.8				
17							86	1.1				
18							86	.5				
19							78	.3				
20							72	.2				
21							61	.1				
22							52	.1				
23							44	.1				
24							42	0				
25							39	0				
26							36	0				
27							33	0				
28							30	0				
29					-----		23	0				
30					-----		18	0				
31		-----			-----		0	0	-----			-----
Total	0	0	0	0	0	0	3,087	104.0	0	0	0	0
Mean	0	0	0	0	0	0	103	3.35	0	0	0	0
Ac-ft	0	0	0	0	0	0	6,120	206	0	0	0	0

Calendar year 1964 Max 112 Min 0 Mean 1.01 Ac-ft 732
Water year 1964-65 Max 492 Min 0 Mean 8.74 Ac-ft 6,330

Peak discharge (base, 500 cfs).--Apr. 9 (2330 hrs) 1,460 cfs (5.20 ft).

10-2615. Mojave River at lower narrows, near Victorville, Calif.

Location.--Lat 34°34'22", long 117°19'08", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.6 N., R.4 W., on left bank 1,000 ft upstream from bridge on county road, formerly U.S. Highway 66, 2,500 ft downstream from Atchison, Topeka and Santa Fe Railway bridge, and 3 miles northwest of Victorville.

Drainage area.--514 sq mi (revised).

Records available.--February 1899 to September 1906, October 1930 to September 1965. 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). Prior to Aug. 1, 1906, staff gage and Nov. 12, 1930, to Dec. 8, 1936, water-stage recorder, at site 3.8 miles upstream at different datum. Dec. 9, 1936, to Mar. 28, 1938, at present site at datum 2.00 ft higher.

Average discharge.--42 years, 70.9 cfs (51,330 acre-ft per year); median of yearly mean discharges, 38 cfs (27,500 acre-ft per year).

Extremes.--Maximum discharge during year, 400 cfs Aug. 11 (gage height, 3.17 ft); minimum daily, 8.1 cfs July 22, Sept. 4.

1930-65: Maximum discharge, 70,600 cfs Mar. 2, 1938 (gage height, 18.7 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 fair. 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. Records of water temperature for the water year 1965 are published in part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	17	23	34	40	36	38	20	20	16	13	11
2	13	17	23	32	38	36	38	21	17	14	11	9.3
3	13	17	23	30	32	36	48	21	17	14	11	8.7
4	13	18	23	29	32	32	42	23	18	14	10	8.1
5	13	20	23	26	34	34	38	23	18	13	12	8.7
6	12	23	23	26	36	34	32	23	18	13	13	10
7	12	23	21	26	36	32	30	23	18	13	12	11
8	13	21	20	28	40	32	30	21	17	13	12	13
9	13	21	20	32	36	32	41	21	17	14	11	12
10	13	24	20	34	36	32	100	21	17	13	11	12
11	13	21	20	34	38	32	52	21	17	12	55	12
12	13	23	21	34	40	32	38	21	17	12	49	12
13	13	26	23	34	38	32	36	21	17	10	30	14
14	13	24	24	34	34	30	34	21	17	10	27	18
15	13	23	26	34	36	30	32	21	17	11	24	18
16	13	24	23	34	36	30	30	21	17	13	23	18
17	14	26	23	34	36	30	27	21	17	12	21	17
18	14	27	23	34	36	30	26	20	18	11	21	17
19	14	29	23	32	36	32	24	21	18	10	20	17
20	14	30	23	32	36	32	21	21	17	9.3	18	16
21	14	26	23	32	36	32	20	21	16	8.7	17	14
22	14	26	27	32	36	32	20	21	16	8.1	16	14
23	14	26	32	32	36	32	20	21	16	8.7	14	12
24	14	26	38	34	36	32	20	20	16	10	21	11
25	14	26	38	34	38	32	20	20	17	10	24	11
26	14	26	36	36	38	34	20	20	17	10	24	11
27	14	24	36	38	36	34	20	20	16	10	18	11
28	16	24	36	38	36	34	20	20	16	10	17	11
29	16	24	36	40	-----	34	20	20	16	11	12	20
30	17	23	36	40	-----	32	20	20	16	11	12	20
31	17	-----	36	40	-----	34	-----	20	16	12	11	17
Total	426	705	822	1,029	1,018	1,008	957	649	511	359.8	589	394.8
Mean	13.7	23.5	26.5	33.2	36.4	32.5	31.9	20.9	17.0	11.6	19.0	13.2
Ac-ft	845	1,400	1,630	2,040	2,020	2,000	1,900	1,290	1,010	714	1,170	783

Calendar year 1964 Max 42 Min 8.7 Mean 21.4 Ac-ft 15,560
 Water year 1964-65 Max 100 Min 8.1 Mean 23.2 Ac-ft 16,800

Peak discharge (base, 200 cfs).--Aug. 11 (2000 hrs) 400 cfs (3.17 ft)

10-2618. Beacon Creek at Helendale, Calif.

Location.--Lat $34^{\circ}45'00''$, long $117^{\circ}18'53''$, in SE $\frac{1}{4}$ sec.29, T.8 N., R.4 W., on county road (formerly U.S. Highway 66 and 91), 0.6 mile northeast of Helendale.

Drainage area.--0.72 sq mi.

Records available.--Water year 1959-60 (annual maximum), October 1960 to September 1965.

Gage.--Water-stage recorder with rain-gage attachment, crest-stage gage, and corrugated-pipe culvert control. Altitude of gage is 2,470 ft (from topographic map). Jan. 13, 1959, to Sept. 30, 1960, crest-stage gage at same site and datum.

Average discharge.--5 years, 0.001 cfs (0.7 acre-ft per year).

Extremes.--Maximum discharge during year, 43 cfs Aug. 17 (gage height, 14.06 ft), from rating curve extended above computation of flow through culvert at gage height 13.12 ft; no flow for most of year.
1959-65: Maximum discharge, that of Aug. 17, 1965; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: October, 0.1; November, 0.7; January, 0.5; February, 0.2; March, 0.5; April, 0.6; August, 0.5; the water year, 3.1.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Aug. 17.....1.7

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
August 1965.....	1.7	-	-	0.05	3.4
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	1.7	0	.005	3.4

Note.--Flow occurred only on day listed above.

10-2625. Mojave River at Barstow, Calif.

Location.--Lat $34^{\circ}54'25''$, long $117^{\circ}01'20''$, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.10 N., R.1 W., on left bank 75 ft upstream from bridge on U.S. Highway 91 at Barstow.

Drainage area.--1,290 sq mi.

Records available.--October 1930 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 2,089.80 ft above mean sea level, unadjusted.

Average discharge.--35 years, 22.7 cfs (16,430 acre-ft per year); median of yearly mean discharges, zero.

Extremes.--Maximum discharge during year, 68 cfs July 24 (gage height, 2.70 ft); no flow for most of year.
1930-65: Maximum discharge, 64,300 cfs Mar. 3, 1938 (gage height, 8.60 ft), by slope-area measurement of maximum flow; no flow for several months in 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 15,000 acres above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

July 24.....2.8
Aug. 15......2

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
July 1965.....	2.8	-	-	0.09	5.6
August.....	.2	-	-	.006	.4
Calendar year 1964.....	-	.4	0	.001	.8
Water year 1964-65.....	-	2.8	0	.008	6.0

Peak discharge (base, 100 cfs).--No peak above base.

Note.--Flow occurred only on days listed above.

MOJAVE RIVER BASIN

10-2630. Mojave River at Afton, Calif.

Location.--Lat 35°02'15", long 116°23'00", in SE $\frac{1}{4}$ sec.18, T.11 N., R.6 E., on downstream end of right pier of Union Pacific Railroad bridge, 0.3 mile west of Afton.

Drainage area.--2,120 sq mi.

Records available.--October 1929 to September 1932, October 1952 to September 1965. Records for the water year 1930 incomplete, yearly estimate published in WSP 1314.

Gage.--Water-stage recorder. Datum of gage is 1,400.15 ft above mean sea level, datum of 1929, supplementary adjustment of 1943. Dec. 21, 1929, to Sept. 30, 1932, water-stage recorder at site 1.7 miles downstream at different datum.

Average discharge.--16 years, 1.87 cfs (1,350 acre-ft per year); median of yearly mean discharges, 1.1 cfs (800 acre-ft per year).

Extremes.--Maximum discharge during year, 22 cfs July 18 (gage height, 3.37 ft), on basis of field estimate of maximum flow; no flow for some days.

1929-32, 1952-65: Maximum discharge, 3,550 cfs Feb. 10, 1932 (gage height, 4.70 ft, site and datum then in use); no flow for some days in 1961-65.

Remarks.--Records fair. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.6	0.8	0.9	1.1	1.1	1.6	0.9	0.4	0	0.1	0
2	.4	.6	.8	.9	1.1	1.1	1.6	.9	.4	0	0	0
3	.4	.6	.8	.9	1.1	1.1	2.0	.9	.4	0	0	.1
4	.4	.6	.8	.9	1.1	1.1	2.0	.9	.4	0	0	.1
5	.4	.6	.8	.9	1.1	1.1	1.8	.9	.4	0	0	.1
6	.4	.6	.8	.9	1.1	1.1	1.8	.9	.4	0	0	.2
7	.4	.6	.8	.9	1.1	1.2	1.8	.9	.4	0	.5	.2
8	.5	.6	.8	.9	1.1	1.2	2.0	1.1	.4	0	.2	.2
9	.5	.6	.8	.9	1.1	1.2	2.6	1.1	.4	0	.1	.2
10	.5	.7	.8	.9	1.2	1.2	5.4	.9	.4	0	0	.2
11	.5	.7	.8	.9	1.2	4.3	2.6	.9	.4	0	.1	.2
12	.5	.7	.8	.9	1.2	2.4	8.0	.9	.4	0	.1	.2
13	.5	.7	.8	.9	1.2	1.8	5.7	.9	.4	0	.1	.2
14	.6	.7	.9	.9	1.2	1.6	1.8	.8	.4	0	.1	.2
15	.6	.7	.9	.9	1.2	1.6	1.5	.8	.4	0	.1	.2
16	.6	.8	.9	.9	1.2	1.5	1.3	.8	.4	0	.1	.1
17	.6	.8	.9	.9	1.2	1.5	1.2	.8	.4	1.6	.2	.1
18	.6	.9	.9	.9	1.2	1.5	1.1	.6	.3	9.1	.1	.2
19	.6	.8	.9	.9	1.2	1.5	.9	.6	.2	11.5	.6	.4
20	.6	.8	.9	.9	1.2	1.5	.9	.6	.2	.3	0	.4
21	.6	.8	.9	1.1	1.2	1.5	.9	.7	.2	.2	0	.4
22	.6	.8	.9	1.1	1.2	1.5	.9	.7	.1	.2 → .1	0	.4
23	.6	.8	.9	1.1	1.2	1.5	.9	.7	.1	.1	0	.4
24	.6	.8	.9	.9	1.1	1.5	.9	.7	.1	.1	0	.4
25	.6	.8	.9	.9	1.1	1.5	.9	.6	.1	.1	0	.3
26	.6	.8	.9	.9	1.1	1.5	.9	.6	.1	.1	0	.3
27	.6	.8	.9	.9	1.1	1.5	.9	.6	.1	.1	0	.3
28	.6	.8	.9	.9	1.1	1.5	.9	.6	.1	.1	0	.3
29	.6	.8	.9	.9	-----	1.6	.9	.5	.1	.1	0	.3
30	.6	.8	.9	1.1	-----	1.6	.9	.5	.1	1.2	0	.4
31	.6	-----	.9	1.1	-----	1.6	-----	.5	-----	.2	0	-----
Total	16.6	21.7	26.6	28.9	32.2	47.4	56.6	23.8	8.6	14.0	1.9	7.0
Mean	0.54	0.72	0.86	0.93	1.15	1.53	1.89	0.77	0.29	0.45	0.06	0.23
Ac-ft	33	43	53	57	64	94	112	47	17	28	3.8	14

Calendar year 1964 Max 3.6 Min 0 Mean 0.68 Ac-ft 495

Water year 1964-65 Max 9.1 Min 0 Mean 0.78 Ac-ft 566

Peak discharge (base, 100 cfs).--No peak above base.

10-2635. Big Rock Creek near Valyermo, Calif.

Location.--Lat 34°25'15", long 117°50'19", in NW 1/4 sec. 20, T. 4 N., R. 9 W., on left bank 0.1 mile upstream from Punchbowl Canyon and 1.9 miles southwest of Valyermo.

Drainage area.--22.9 sq mi (revised).

Records available.--January 1923 to September 1965. 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.--42 years, 14.6 cfs (10,570 acre-ft per year); median of yearly mean discharges, 8.1 cfs (5,900 acre-ft per year).

Extremes.--Maximum discharge during year, 46 cfs Apr. 26 (gage height, 2.30 ft); minimum daily, 1.6 cfs Oct. 5-13, 22-27. 1923-65: Maximum discharge, 8,300 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 0.7 cfs Nov. 5, 1951.

Remarks.--Records good. 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 1965 are published in Part 2 of this report.

Cooperation.--Thirty-two discharge measurements furnished by Los Angeles County Flood Control District.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.3	1.0	1.7	9.6
1.4	2.2	1.8	14
1.5	4.0	2.0	25
1.6	6.4	2.2	41

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	1.8	1.9	4.4	3.4	3.0	5.2	29	9.3	6.7	4.6	3.6
2	1.8	1.8	1.9	4.2	3.4	3.0	5.4	25	9.3	6.4	4.4	3.6
3	1.8	1.8	1.9	4.0	3.4	3.0	4.4	21	9.3	6.4	4.4	3.6
4	1.8	1.8	1.9	3.8	3.4	3.0	4.0	18	9.0	6.4	4.4	3.6
5	1.6	1.8	1.9	3.6	3.4	3.0	3.8	16	9.0	6.2	4.2	3.8
6	1.6	1.8	1.9	3.4	3.4	3.0	3.6	16	9.0	6.2	4.2	3.8
7	1.6	1.8	1.9	3.4	3.4	3.0	3.6	15	9.0	6.2	4.2	3.8
8	1.6	1.9	1.9	3.4	3.4	3.0	4.6	14	9.0	6.2	4.0	3.8
9	1.6	1.9	1.9	3.4	3.4	3.0	5.4	13	9.0	5.9	4.0	3.8
10	1.6	1.9	1.9	3.2	3.4	3.0	5.9	12	9.0	5.6	4.0	3.8
11	1.6	1.9	1.9	3.2	3.4	3.0	5.2	12	9.0	5.4	4.0	3.8
12	1.6	1.9	1.9	3.2	3.4	3.0	4.9	11	9.0	5.2	4.2	3.8
13	1.6	1.9	1.9	3.4	3.2	3.0	4.6	11	9.0	5.2	4.0	3.8
14	1.8	1.9	1.9	3.2	3.2	3.0	4.4	11	9.0	5.2	4.0	3.8
15	1.8	1.9	2.0	3.2	3.2	3.0	4.2	11	9.3	5.2	4.0	3.8
16	1.8	1.9	2.0	3.2	3.2	2.8	4.4	11	9.0	5.2	4.0	3.8
17	1.8	2.0	2.0	3.2	3.0	2.8	6.7	11	8.6	5.4	4.0	3.8
18	1.8	2.0	2.0	3.2	3.0	2.8	9.0	12	8.3	5.4	4.0	4.0
19	1.8	2.0	2.2	3.2	3.0	2.8	13	12	8.3	5.4	3.9	4.0
20	1.8	2.0	2.2	3.2	3.0	2.8	23	12	8.0	5.4	3.9	3.8
21	1.8	2.0	2.2	3.2	3.0	2.8	29	12	7.7	5.4	3.8	3.6
22	1.6	2.0	2.4	3.2	3.0	2.8	32	12	7.4	5.2	3.8	3.6
23	1.6	2.0	2.5	3.2	3.0	2.8	32	12	7.4	5.2	3.7	3.6
24	1.6	2.0	2.6	3.4	3.0	2.8	32	11	7.4	5.2	3.7	3.6
25	1.6	2.0	3.2	3.4	3.0	2.8	36	11	7.4	5.2	3.7	3.6
26	1.6	2.0	3.6	3.4	3.0	2.8	38	11	7.0	4.9	3.6	3.6
27	1.6	2.0	3.8	3.4	3.0	3.0	36	11	7.0	4.9	3.6	3.6
28	1.8	2.0	4.5	3.4	3.0	3.2	35	10	7.0	4.9	3.6	3.6
29	1.8	2.0	4.9	3.4	-----	3.2	33	10	6.7	4.9	3.6	3.6
30	1.8	1.9	4.4	3.4	-----	3.2	32	10	6.7	4.9	3.6	3.6
31	1.8	-----	4.4	3.4	-----	3.6	-----	9.3	-----	4.9	3.6	-----
Total	52.8	57.6	77.5	105.8	89.6	92.0	450.3	412.3	250.1	170.8	122.7	111.6
Mean	1.70	1.92	2.50	3.41	3.20	2.97	15.3	13.3	8.34	5.51	3.96	3.72
Ac-ft	105	114	154	210	178	182	913	818	496	339	243	221

Calendar year 1964 Max 9.7 Min 1.6 Mean 3.64 Ac-ft 2,640
 Water year 1964-65 Max 38 Min 1.6 Mean 5.49 Ac-ft 3,970

Peak discharge (base, 50 cfs).--No peak above base.

10-2639. Buckhorn Creek near Valyermo, Calif.

Location.--Lat 34°20'35", long 117°55'13", in SW $\frac{1}{4}$ sec.15, T.3 N., R.10 W., on right bank at culvert on State Highway 2, 8.1 miles southwest of Valyermo.

Drainage area.--0.48 sq mi.

Records available.--October 1960 to September 1965.

Gage.--Water-stage recorder with rain-gage attachment, crest-stage gage, and corrugated-pipe culvert control. Altitude of gage is 6,720 ft (from topographic map).

Average discharge.--5 years, 0.17 cfs (123 acre-ft per year).

Extremes.--Maximum discharge during year, 9.4 cfs Apr. 27 (gage height, 1.93 ft); no flow for most of year.

1960-65: Maximum discharge, 27 cfs Feb. 11, 1962 (gage height, 2.66 ft), from rating curve extended above 5 cfs on basis of computation of flow through culvert at gage heights 1.9, 2.4 and 2.7 ft; no flow for most of each year.

Remarks.--Records good. No regulation above station. Flow of spring above station diverted to ranger station for domestic use.

Monthly precipitation, in inches, is as follows: November, 2.8; December, 2.2; January, 1.1; February, 1.1; March, 0.3; April, 2.4; September, 1.1; the water year, 11.0.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 17.....0.3	Apr. 28.....6.3	Apr. 9.....0.6
18......6	29.....6.6	10......6
19.....1.4	30.....5.6	11......5
20.....1.6	May 1.....4.5	12......4
21.....1.6	2.....3.6	13......5
22.....2.3	3.....2.5	14......5
23.....2.5	4.....1.8	15......5
24.....3.1	5.....1.4	16......5
25.....4.5	6.....1.2	17......4
26.....5.3	7.....1.0	18......4
27.....6.2	8......8	19......2

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	47.9	-	-	1.60	95
May.....	21.9	-	-	.71	43
Calendar year 1964.....	-	1.4	0	.04	25
Water year 1964-65.....	-	6.6	0	.19	138

Note.--Flow occurred only on days listed above.

10-2640. Little Rock Creek near Little Rock, Calif.

Location (revised).--Lat $34^{\circ}27'47''$, long $118^{\circ}01'04''$, in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.14 N., R.11 W., on right bank 0.3 mile upstream from Santiago Creek, 1.65 miles upstream from Little Rock Palmdale Irrigation District's dam, and 5 miles south of Little Rock.

Drainage area.--49.0 sq mi.

Records available.--October 1930 to February 1938, May to September 1938, April 1939 to September 1965.

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.--33 years (1930-37, 1939-65), 15.4 cfs (11,150 acre-ft per year); median of yearly mean discharges, 7.4 cfs (5,400 acre-ft per year).

Extremes.--Maximum discharge during year, 155 cfs Apr. 19 (gage height, 4.67 ft); no flow for many days.
1930-65: 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	2.2	5.7	2.3	2.3	13	64	6.2	1.1	0.2	
2		0	2.0	5.1	2.2	2.2	17	52	6.4	1.0	.2	
3		0	1.8	4.2	2.2	2.2	14	43	6.4	.8	.2	
4		0	1.8	3.6	2.2	2.2	11	34	6.0	.6	.1	
5		0	1.7	3.2	2.2	2.2	10	30	5.5	.6	.1	
6		0	1.7	3.1	2.3	2.2	12	26	4.9	.6	.1	
7		0	1.7	3.2	2.4	2.2	11	24	4.4	.5	.1	
8		0	1.7	4.2	3.2	2.2	13	22	4.2	.5	.1	
9		0	1.6	3.8	3.1	2.3	15	20	4.2	.5	.1	
10		0	1.6	3.8	2.9	2.3	18	18	4.0	.5	0	
11		0	1.6	3.6	2.7	2.3	14	17	3.6	.4	0	
12		0	1.6	3.4	2.7	2.3	13	15	3.4	.4	0	
13		0	1.6	3.2	2.7	2.3	12	15	3.1	.4	0	
14		0	1.6	3.1	2.7	2.3	14	15	2.9	.4	0	
15		0	1.6	3.1	2.5	2.3	23	14	2.7	.4	0	
16		0	1.6	2.9	2.5	2.2	36	14	2.9	.4	0	
17		0	1.4	2.9	2.5	2.2	54	13	3.1	.5	0	
18		0	1.4	2.7	2.3	2.0	69	12	2.9	.5	0	
19		0	1.4	2.7	2.3	2.0	92	12	2.7	.4	.3	
20		0	1.4	2.7	2.3	1.8	115	11	2.3	.3	.5	
21		0	7.2	2.7	2.3	1.8	114	10	2.2	.3	.6	
22		0	6.7	2.7	2.3	1.8	107	9.8	2.0	.3	.5	
23		0	6.0	2.7	2.3	1.8	111	9.5	1.8	.2	.5	
24		0	6.0	2.7	2.2	1.8	100	9.2	2.0	.2	.4	
25		0	6.0	3.1	2.2	1.8	107	8.6	2.0	.2	.3	
26		0	5.3	2.9	2.2	1.8	110	8.1	1.8	.2	.2	
27		0	5.3	2.7	2.3	2.0	98	7.8	1.8	.2	.2	
28		0	9.2	2.7	2.3	2.0	92	7.2	1.6	.2	.2	
29		.2	8.1	2.7	-----	2.0	84	6.7	1.4	.2	.1	
30		1.7	7.0	2.5	-----	1.8	74	6.2	1.2	.2	0	
31		-----	6.4	2.5	-----	3.5	-----	6.2	-----	.2	0	-----
Total	0	1.9	106.2	100.1	69.3	66.1	1,573	560.3	99.6	13.2	5.0	0
Mean	0	0.06	3.43	3.23	2.48	2.13	52.4	18.1	3.32	0.43	0.16	0
Ac-ft	0	3.8	211	199	137	131	3,120	1,110	198	26	9.9	0

Calendar year 1964 Max 38 Min 0 Mean 3.47 Ac-ft 2,520
 Water year 1964-65 Max 115 Min 0 Mean 7.11 Ac-ft 5,150

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., 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.

Records available.--August 1957 to September 1965.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 4,100 ft (from topographic map).

Average discharge.--8 years, 0.63 cfs (456 acre-ft per year).

Extremes.--Maximum discharge during year, 63 cfs Aug. 16 (gage height, 2.09 ft), from rating curve extended above 14 cfs; no flow for much of year.

1957-65: Maximum discharge, that of Aug. 16, 1965; no flow for some months in each year.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.5	0
.6	.1
.7	.3
.8	1.0
.9	2.1

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0.2	0.2	0.1	0.1	0	
2						0	.2	.2	.1	0	0	
3						0	.2	.2	.1	0	0	
4						0	.2	.2	.1	0	0	
5						0	.2	.2	.1	0	0	
6						0	.2	.2	.1	0	0	
7						0	.2	.2	.1	0	0	
8						0	.2	.2	.1	0	0	
9						0	.2	.2	.1	0	0	
10						0	.2	.1	.1	0	0	
11						.1	.3	.1	.1	0	0	
12						.1	.3	.1	.1	0	.1	
13						.1	.2	.1	.1	0	0	
14						.1	.2	.1	.1	0	0	
15						.1	.2	.1	.1	0	0	
16						.1	.2	.1	.1	0	2.0	
17						.1	.2	.1	.1	0	.1	
18						.1	.2	.1	.1	0	0	
19						.1	.2	.1	.1	0	0	
20						.1	.2	.1	.1	0	0	
21						.1	.2	.1	.1	0	0	
22						.1	.2	.1	.1	0	0	
23						.1	.2	.1	.1	0	0	
24						.1	.2	.1	.1	0	0	
25						.1	.2	.1	.1	0	0	
26						.1	.2	.1	.1	0	0	
27						.1	.2	.1	.1	0	0	
28						.1	.2	.1	.1	0	0	
29						.1	.2	.1	.1	0	0	
30						.1	.2	.1	.1	0	0	
31						.2	.2	.1	.1	0	0	
Total	0	0	0	0	0	2.2	6.2	4.0	3.0	0.1	2.2	0
Mean	0	0	0	0	0	0.07	0.21	0.13	0.10	0.003	0.07	0
Ac-ft	0	0	0	0	0	4.4	12	7.9	6.0	0.2	4.4	0

Calendar year 1964 Max 0.4 Min 0 Mean 0.12 Ac-ft 84

Water year 1964-65 Max 2.0 Min 0 Mean 0.05 Ac-ft 35

Peak discharge (base, 10 cfs).--Aug. 16 (1600 hrs) 63 cfs (2.09 ft).

10-2647.5. Pine Tree Creek near Mojave, Calif.

Location.--Lat 35°13'50", long 118°05'05", in SE $\frac{1}{4}$ sec.14, T.31 S., R.36 E., 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.

Records available.--July 1958 to September 1965.

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.--7 years, 0.34 cfs (246 acre-ft per year).

Extremes.--Maximum discharge during year, about 10 cfs Apr. 1 (gage height, unknown); no flow for most of year.

1958-65: Maximum discharge, about 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. Monthly precipitation, in inches, is as follows: October, 0.2; November, 0.6; December, 0.2; March, 2.4; April, 2.4; June, 0.1; July to September, incomplete; the water year, incomplete.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Mar. 13.....0.1
15......1
Apr. 1......6

Apr. 3.....0.1
4......1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
March 1965.....	0.2	-	-	0.006	0.4
April.....	.8	-	-	.03	1.6
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	.6	0	.003	2.0

Peak discharge (base, 10 cfs).--Apr. 1 (about 0100 hrs) about 10 cfs (gage height, unknown).

Note.--Flow occurred only on days listed above.

INDIAN WELLS VALLEY

10-2648.7. Little Lake Creek near Little Lake, Calif.

Location.--Lat 35°57'35", long 117°54'50", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.6, T.23 S., R.38 E., on upstream end of right wingwall of culvert on U.S. Highway 395, 1.5 miles north of Little Lake.

Drainage area.--8.60 sq mi.

Records available.--October 1963 to September 1965.

Gage.--Water-stage recorder with rain-gage attachment and multiple culvert control. Altitude of gage is 3,260 ft (from topographic map).

Extremes.--Maximum discharge during year, 0.9 cfs July 16 (gage height, 2.59 ft); no flow all year except July 16.

1963-65: Maximum discharge, 7 cfs Aug. 4, 1964 (gage height 2.96 ft) on basis of field estimate of maximum flow; no flow for most of each year.

Remarks.--Records fair. No regulation or diversion above station. At times water is released from Los Angeles aqueduct to creek at site 1.0 mile upstream. Monthly precipitation, in inches, is as follows: March, 0.1; April, 2.4; the water year, 2.5.

Discharge, in cubic feet per second, water year October 1964 to September 1965

July 16.....0.1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
July 1965.....	0.1	-	-	0.003	0.2
Calendar year 1964.....	-	0.2	0	.001	.4
Water year 1964-65.....	-	.1	0	.0003	.2

Note.--Flow occurred only on day listed above.

INDIAN WELLS VALLEY

10-2648.78, Ninemile Creek near Brown, Calif.

Location--Lat 35°50'35", long 117°55'35", on left bank 600 ft upstream from Los Angeles aqueduct and 6.4 miles northwest of Brown, Inyo County.

Drainage area--10.4 sq mi.

Records available--October 1961 to September 1965.

Gage--Water-stage recorder. Altitude of gage is 3,350 ft (from topographic map).

Extremes--Maximum discharge during year, 168 cfs probably occurred on Apr. 1 (gage height, 5.09 ft), from rating curve extended above 20 cfs on basis of slope-area measurement of maximum flow; no flow for most of year.

1961-65: 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. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 1.....10	Apr. 9.....0.1	May 4.....0.1
2......5	10......1	5......1
3..... 1.0	28......1	6......1
4..... 5.0	29......1	7......1
5..... 2.0	30......1	8......1
6..... 1.0	May 1......1	9......1
7......5	2......1	10......1
8......2	3......1	11......1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	16.2	-	-	0.54	32
May.....	1.1	-	-	.04	2.2
Calendar year 1964.....	-	0.3	0	.014	10
Water year 1964-65.....	-	10	0	.05	34

Peak discharge (base, 10 cfs)--168 cfs probably occurred Apr. 1 (5.09 ft); Apr. 4, time and discharge unknown.

10-2652. Convict Creek near Mammoth Lakes, Calif.

Location.--Lat 37°36'30", long 118°50'55", in NE $\frac{1}{4}$ sec.14, T.4 S., R.28 E., 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.

Records available.--July 1925 to September 1965. 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, staff gage at same site and datum.

Average discharge.--40 years, 23.4 cfs (16,940 acre-ft per year).

Extremes.--Maximum discharge during year, 122 cfs Aug. 15 (gage height, 2.41 ft); minimum daily, 6.0 cfs Dec. 15-17.
1925-65: 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	7.5	6.5	19	12	7.4	6.4	18	38	75	76	36
2	8.0	6.5	6.5	18	11	7.4	6.4	19	40	79	80	36
3	8.0	6.5	6.5	18	12	7.4	6.9	21	41	84	76	36
4	8.0	6.5	6.5	18	12	7.4	7.4	21	41	89	72	36
5	8.0	7.0	6.5	20	12	7.4	7.4	21	41	95	67	35
6	8.0	7.0	6.5	20	12	7.4	7.4	21	43	103	64	35
7	8.0	7.0	6.5	18	11	7.4	7.4	21	47	108	60	35
8	8.0	7.0	6.5	18	11	7.4	7.4	20	52	112	57	34
9	8.0	7.5	6.5	18	11	7.4	7.9	20	58	112	54	34
10	7.5	9.0	6.5	18	12	7.4	8.4	19	60	108	53	33
11	7.5	9.0	7.0	18	11	7.4	7.9	18	65	103	58	32
12	7.5	9.6	6.5	18	13	7.4	8.4	18	76	98	80	31
13	7.5	9.0	6.5	18	10	7.4	8.4	18	84	91	98	30
14	7.5	8.5	6.5	18	10	7.4	8.4	18	88	84	107	30
15	7.5	8.5	6.0	16	10	7.4	8.4	17	83	82	115	29
16	7.5	8.0	6.0	16	10	7.4	8.4	18	78	82	120	28
17	7.0	8.0	6.0	16	10	7.4	7.9	19	69	90	117	27
18	7.0	8.0	6.5	15	10	7.4	7.9	21	61	98	110	27
19	7.0	8.0	7.0	13	10	7.4	7.9	24	55	101	103	27
20	7.0	8.0	8.0	13	9.6	7.4	7.9	28	52	99	92	26
21	7.0	8.0	10	13	9.0	6.9	8.4	30	52	95	85	26
22	7.0	8.0	10	13	7.9	6.9	9.0	32	57	87	76	25
23	7.0	8.0	16	13	7.4	6.9	9.0	33	64	80	68	25
24	7.0	8.0	20	14	7.4	6.9	9.0	32	72	72	62	24
25	7.0	8.5	21	14	7.4	6.4	9.0	30	76	72	57	24
26	6.5	9.0	13	13	7.4	6.4	10	29	72	77	52	23
27	6.5	7.5	12	13	7.9	6.9	11	28	68	84	48	22
28	7.0	7.0	13	13	7.4	6.9	12	28	67	74	44	22
29	7.5	6.5	18	13	-----	6.9	13	28	67	67	42	21
30	7.5	6.5	21	12	-----	6.9	16	30	67	65	39	21
31	7.5	-----	19	12	-----	6.4	-----	32	-----	68	37	-----
Total	230.0	233.1	304.0	489	281.4	222.4	260.9	732	1834	2734	2269	870
Mean	7.42	7.77	9.81	15.8	10.1	7.17	8.70	23.6	61.1	88.2	73.2	29.0
Ac-ft	456	462	603	970	558	441	517	1450	3640	5420	4500	1730
Calendar year 1964	Max	58	Min	6.0	Mean	16.5	Ac-ft	11960				
Water year 1964-65	Max	120	Min	6.0	Mean	28.7	Ac-ft	20750				

OWENS LAKE BASIN

10-2657. Rock Creek at Little Round Valley, near Bishop, Calif.

Location.--Lat 37°33'10", long 118°41'00", in SE 1/4 sec. 32, T.4 S., R.30 E., on right bank just upstream from diversion to Little Round Valley, 0.6 mile south of Toms Place, and 20 miles northwest of Bishop, Mono County.

Drainage area.--35.8 sq mi.

Records available.--January to December 1918, January 1920 to September 1965. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

Gage.--Water-stage recorder and Parshall flume since May 1953. Altitude of gage is 7,450 ft (from topographic map). Prior to May 24, 1926, staff gage at same site at different datums. May 24, 1926, to May 28, 1953, water-stage recorder at same site at different datums.

Average discharge.--45 years (1920-65), 29.8 cfs (21,570 acre-ft per year).

Extremes.--Maximum discharge during year, 110 cfs July 8 (gage height, 2.60 ft); minimum daily, 7.2 cfs Oct. 27, 28.
1926-65: Maximum discharge, 270 cfs July 26, 1952 (gage height, 2.93 ft, datum then in use); 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.0	8.2	9.8	4.7	9.5	9.0	9.5	37	68	68	77	26
2	8.7	8.2	9.5	58	9.2	9.5	9.8	37	67	72	80	25
3	8.7	8.2	9.8	58	9.2	9.8	9.8	36	59	77	74	24
4	8.7	8.2	13	47	9.2	9.5	10	34	54	84	63	24
5	8.5	8.5	9.2	17	9.2	9.2	10	31	52	92	54	25
6	8.5	8.5	14	16	9.0	9.2	10	30	60	98	48	28
7	8.5	8.2	10	16	11	11	10	28	68	105	44	28
8	8.5	7.9	9.2	15	9.5	10	10	27	74	110	43	27
9	8.5	7.9	9.2	15	9.5	9.8	11	26	74	107	43	27
10	8.5	9.0	9.2	14	16	9.0	11	24	71	101	43	26
11	8.5	11	9.2	13	18	9.0	14	23	75	91	45	26
12	8.5	9.8	9.4	13	21	9.2	11	23	89	82	68	24
13	8.5	11	9.5	12	19	11	10	26	98	83	98	24
14	8.5	12	9.6	11	9.0	9.8	10	28	92	74	88	22
15	8.5	13	9.7	11	9.5	9.8	10	30	83	74	78	22
16	8.5	13	9.8	11	8.2	9.8	10	33	74	80	83	21
17	8.5	14	11	11	7.7	9.2	11	42	68	89	87	21
18	8.5	13	10	11	8.2	9.5	12	56	60	97	81	21
19	8.5	16	9.8	11	8.2	9.5	13	67	52	97	68	21
20	8.5	14	11	10	8.2	9.5	15	67	50	94	54	21
21	8.5	11	11	10	8.2	9.5	16	68	53	85	46	21
22	8.5	11	13	10	8.2	9.5	18	63	60	75	42	21
23	7.9	11	34	9.8	9.8	9.5	18	56	69	65	38	21
24	7.4	11	30	9.5	8.2	9.2	20	49	77	59	35	20
25	7.4	10	23	13	7.9	9.5	21	44	77	60	31	20
26	7.4	11	20	10	7.9	9.2	23	42	71	60	29	20
27	7.2	10	19	10	8.5	9.5	27	42	66	56	28	20
28	7.2	10	14	10	8.7	9.8	30	44	63	52	27	20
29	7.4	10	20	10	-----	9.8	32	50	64	49	26	19
30	7.9	9.8	26	10	-----	9.5	35	58	56	50	25	19
31	8.2	-----	33	10	-----	9.5	-----	65	-----	60	25	-----
Total	256.1	314.4	444.9	529.3	285.7	296.8	457.1	1,286	2,054	2,446	1,671	684
Mean	8.26	10.5	14.4	17.1	10.2	9.57	15.2	41.5	68.5	78.9	53.9	22.8
Ac-ft	508	624	882	1,050	567	589	907	2,550	4,070	4,850	3,310	1,360
Calendar year 1964	Max	55	Min	7.2	Mean	18.9	Ac-ft	13,740				
Water year 1964-65	Max	110	Min	7.2	Mean	29.4	Ac-ft	21,270				

10-2670. Pine Creek at division box, near Bishop, Calif.

Location.--Lat 37°25'00", long 118°37'15", in NW $\frac{1}{4}$ sec.19, T.6 S., R.31 E., on right bank 0.25 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.

Records available.--October 1921 to September 1965. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

Gage.--Water-stage recorder and Parshall flume since November 1938. Altitude of gage is 5,280 ft (from topographic map).

Average discharge.--44 years, 43.6 cfs (31,570 acre-ft per year).

Extremes.--Maximum discharge during year, 225 cfs July 7 (gage height, 4.07 ft); minimum daily, 20 cfs for several days.
1921-65: Maximum discharge, 356 cfs June 4, 1957; 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	20	25	34	31	29	29	53	116	147	117	42
2	21	21	26	33	31	29	28	51	91	149	103	40
3	21	21	27	33	31	29	28	47	74	158	85	39
4	21	21	26	34	31	29	28	42	72	167	70	38
5	21	21	27	34	30	29	28	40	114	175	67	37
6	21	20	26	34	30	29	28	38	141	189	60	36
7	21	20	26	33	30	29	28	36	140	191	60	36
8	21	20	26	33	30	29	28	35	145	179	56	33
9	21	21	27	33	30	29	28	34	107	165	52	32
10	21	21	26	33	29	29	27	33	133	147	52	31
11	21	22	26	32	29	29	27	33	176	128	82	30
12	21	23	27	32	30	29	28	34	194	112	166	29
13	21	25	27	32	30	28	28	37	179	108	135	28
14	21	25	28	33	29	28	28	42	147	112	92	28
15	21	25	28	32	29	28	28	43	107	115	137	27
16	21	26	29	32	29	28	28	53	84	133	156	26
17	21	26	29	32	30	28	28	78	77	147	125	26
18	21	27	29	32	30	28	28	107	70	129	106	26
19	20	27	29	32	29	28	28	112	84	131	84	26
20	20	27	28	32	29	28	29	102	112	131	72	26
21	20	27	28	32	29	28	29	86	137	108	70	27
22	21	27	29	32	30	28	30	69	155	91	67	28
23	21	27	48	32	30	28	30	58	163	80	59	28
24	21	27	53	32	29	28	31	53	148	80	58	27
25	20	27	41	31	29	28	33	49	125	92	54	27
26	20	26	39	31	29	28	36	53	102	84	49	27
27	20	26	37	31	29	28	39	66	104	80	47	27
28	21	26	36	31	29	28	43	89	117	71	46	27
29	21	26	34	31	-----	29	48	109	122	65	42	27
30	20	26	34	31	-----	29	51	125	138	79	42	26
31	20	-----	34	31	-----	29	-----	121	-----	129	42	-----
Total	643	724	955	1,000	831	883	930	1,928	3,674	3,872	2,453	907
Mean	20.7	24.1	30.8	32.3	29.7	28.5	31.0	62.2	122	125	79.1	30.2
Ac-ft	1,280	1,440	1,890	1,980	1,650	1,750	1,840	3,820	7,290	7,680	4,870	1,800
Calendar year 1964	Max	124	Min	20	Mean	36.1	Ac-ft	26,250				
Water year 1964-65	Max	194	Min	20	Mean	51.5	Ac-ft	37,290				

OWENS LAKE BASIN

10-2687, Silver Canyon Creek near Laws, Calif.

Location.--Lat 37°24'15", long 118°18'30", in NW¼ sec.25, T.6 S., R.33 E., on right bank at mouth of canyon, 2.0 miles east of Laws.

Drainage area.--22.4 sq mi.

Records available.--March 1930 to September 1965. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 4,600 ft (from topographic map). Prior to Feb. 24, 1943, staff gage and Cipolletti weir at site 1½ miles downstream at different datum.

Average discharge.--35 years, 1.54 cfs (1,110 acre-ft per year).

Extremes.--Maximum discharge during year, 2.5 cfs Apr. 27 (gage height, 0.73 ft); minimum daily, 0.7 cfs July 11-13, 1930-65; Maximum discharge, 8.4 cfs Oct. 19, 1958; 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	1.6	1.6	1.6	1.8	1.7	1.6	1.7	1.8	1.7	1.6	1.5
2	1.5	1.7	1.6	1.6	1.8	1.7	1.6	1.7	1.8	1.7	1.6	1.5
3	1.5	1.7	1.6	1.6	1.8	1.6	1.7	1.7	1.8	1.6	1.6	1.5
4	1.5	1.7	1.6	1.6	1.8	1.6	1.7	1.8	1.8	1.5	1.6	1.5
5	1.5	1.7	1.6	1.6	1.8	1.6	1.7	1.8	1.7	1.5	1.6	1.5
6	1.5	1.6	1.6	1.6	1.8	1.6	1.7	1.8	1.7	1.5	1.5	1.5
7	1.5	1.6	1.5	1.6	1.8	1.6	1.7	1.7	1.7	1.5	1.5	1.5
8	1.5	1.6	1.5	1.6	1.8	1.6	1.7	1.8	1.8	.9	1.5	1.5
9	1.5	1.7	1.5	1.6	1.7	1.6	1.7	1.8	1.8	.8	1.5	1.5
10	1.5	1.7	1.5	1.6	1.7	1.6	1.7	1.9	1.7	.8	1.6	1.5
11	1.6	1.7	1.5	1.6	1.7	1.5	1.7	1.9	1.7	.7	1.6	1.5
12	1.6	1.6	1.5	1.6	1.7	1.5	1.7	1.9	1.7	.7	1.6	1.5
13	1.6	1.6	1.5	1.6	1.6	1.5	1.7	1.9	1.7	.7	1.5	1.5
14	1.6	1.6	1.6	1.6	1.6	1.5	1.7	1.9	1.7	1.0	1.6	1.5
15	1.5	1.6	1.6	1.6	1.6	1.4	1.7	1.8	1.7	1.6	1.6	1.4
16	1.5	1.6	1.6	1.6	1.6	1.3	1.7	1.8	1.7	1.6	1.6	1.4
17	1.5	1.6	1.5	1.6	1.6	1.5	1.7	1.8	1.7	1.6	1.6	1.4
18	1.6	1.6	1.5	1.6	1.6	1.5	1.7	1.8	1.7	1.7	1.6	1.4
19	1.6	1.6	1.5	1.7	1.6	1.6	1.7	1.8	1.7	1.6	1.6	1.4
20	1.6	1.7	1.5	1.8	1.7	1.6	1.7	1.8	1.7	1.6	1.5	1.4
21	1.6	1.7	1.5	1.8	1.7	1.6	1.7	1.8	1.6	1.6	1.5	1.4
22	1.6	1.7	1.5	1.8	1.8	1.6	1.7	1.8	1.5	1.6	1.6	1.4
23	1.6	1.7	1.5	1.8	1.8	1.6	1.7	1.8	1.7	1.6	1.6	1.4
24	1.6	1.7	1.5	1.8	1.8	1.6	1.7	1.8	1.7	1.6	1.6	1.4
25	1.6	1.7	1.5	1.8	1.8	1.6	1.7	1.8	1.7	1.5	1.6	1.4
26	1.6	1.7	1.5	1.8	1.8	1.6	1.7	1.8	1.7	1.5	1.5	1.4
27	1.6	1.6	1.5	1.8	1.7	1.6	1.7	1.8	1.6	1.5	1.5	1.5
28	1.7	1.6	1.6	1.8	1.7	1.6	1.7	1.8	1.6	1.5	1.5	1.5
29	1.7	1.6	1.6	1.8	-----	1.6	1.7	1.8	1.6	1.5	1.6	1.5
30	1.6	1.6	1.6	1.8	-----	1.6	1.7	1.8	1.6	1.6	1.6	1.5
31	1.6	-----	1.6	1.8	-----	1.6	-----	1.8	-----	1.6	1.6	-----
Total	48.5	49.4	47.8	52.1	48.2	48.7	50.8	55.9	50.9	43.4	48.6	43.8
Mean	1.56	1.65	1.54	1.68	1.72	1.57	1.69	1.80	1.70	1.40	1.57	1.46
Ac-ft	96	98	95	103	96	97	101	111	101	86	96	87

Calendar year 1964 Max 1.9 Min 1.4 Mean 1.68 Ac-ft 1220
 Water year 1964-65 Max 1.9 Min 0.7 Mean 1.61 Ac-ft 1170

10-2760. Big Pine Creek near Big Pine, Calif.

Location.--Lat 37°08'40", long 118°18'55", in NW $\frac{1}{4}$ sec. 25, T.9 S., R.33 E., on left bank 0.3 mile downstream from Little Pine Creek, 0.5 mile downstream from powerhouse No. 3, and 2.2 miles southwest of Big Pine.

Drainage area.--39.0 sq mi.

Records available.--November 1907 to February 1911, January 1920 to September 1965; combined records of creek and diversions, June 1930 to September 1965. 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 4,550 ft (from topographic map). Prior to January 1923, staff gage at same site and datum.

Average combined discharge.--35 years (1930-65), 40.2 cfs (29,100 acre-ft per year), including diversion to upper and lower Giroux ditches.

Extremes (creek only).--Maximum discharge during year, 266 cfs Aug. 12 (gage height, 4.52 ft); minimum daily, 9.5 cfs Apr. 9, 11.

1907-11, 1920-65: Maximum discharge, 458 cfs July 3, 1932 (gage height, 6.55 ft); no flow Dec. 3-12, 1935.

(combined).--Maximum discharge during year, 280 cfs Aug. 12; minimum daily, 12 cfs for some days.

1907-11, 1920-65: 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. 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	14	15	12	11	11	11	27	41	95	109	30
2	15	14	15	12	11	11	10	25	36	95	102	31
3	15	15	14	14	11	10	11	24	30	104	81	29
4	15	15	14	15	11	10	11	21	27	115	72	26
5	15	14	14	17	11	10	10	18	36	122	66	24
6	15	14	14	16	11	11	10	17	52	142	66	22
7	15	14	14	17	11	10	9.8	17	56	156	66	21
8	15	14	14	17	11	11	9.8	16	60	150	62	19
9	15	14	14	15	10	11	9.5	16	46	136	67	18
10	14	14	14	15	11	10	9.8	15	47	116	71	17
11	14	15	14	15	12	11	9.5	15	61	99	114	16
12	14	15	13	15	12	10	9.8	15	76	89	202	15
13	13	14	14	14	11	10	9.8	15	73	89	175	14
14	13	12	14	14	11	10	10	17	60	94	126	13
15	13	14	14	14	11	9.8	9.8	18	49	95	118	12
16	13	14	14	14	11	10	9.8	22	43	100	100	13
17	13	14	13	13	11	9.8	9.8	30	38	114	86	14
18	13	14	13	13	11	9.8	9.8	38	34	118	78	13
19	12	13	14	13	11	9.8	11	39	38	125	63	11
20	12	15	14	14	11	9.8	13	37	47	104	56	12
21	12	15	13	13	11	10	13	29	56	91	49	15
22	12	15	14	13	11	11	14	23	64	77	42	14
23	12	15	24	13	11	10	14	21	68	74	41	14
24	12	15	24	13	11	10	15	19	66	81	38	14
25	11	15	18	13	11	10	16	17	62	80	37	15
26	12	15	17	13	11	10	17	18	54	75	32	14
27	15	15	17	13	11	10	19	21	58	72	28	13
28	16	15	15	13	11	10	21	26	58	67	28	13
29	16	15	15	13	-----	9.8	24	31	80	66	30	13
30	15	15	14	13	-----	9.8	26	35	88	74	34	13
31	15	-----	13	12	-----	10	-----	39	-----	104	33	-----
Total	427	432	463	431	309	315.6	383.2	721	1,614	3,119	2,272	508
Mean	13.8	14.4	14.9	13.9	11.0	10.2	12.8	23.3	53.8	101	73.3	16.9
Ac-ft	847	857	918	855	613	626	760	1,430	3,200	6,190	4,510	1,010

Calendar year 1964 Max 72 Min 7.4 Mean 23.5 Ac-ft 17,040
 Water year 1964-65 Max 202 Min 9.5 Mean 30.1 Ac-ft 21,820

Location.--Lat 37°00'55", long 118°13'30", in SE $\frac{1}{4}$ sec. 2, T.11 S., R.34 E., on left bank 0.1 mile downstream from Little Seeley Spring, 0.15 mile downstream from Charles Butte, and 10.8 miles southeast of Big Pine.

Records available.--January 1906 to September 1965. Monthly discharge only for some periods, published in WSP 1314. Published as "near Tinemaha" prior to 1912.

Extremes.--Maximum discharge during year, 619 cfs Oct. 18 (gage height, 5.09 ft); minimum daily, 5.0 cfs Oct. 6.

1906-65: Maximum discharge during year, 619 cfs Oct. 10 (gage height, 7.09 ft); minimum daily, 310 cfs Oct. 8.
1906-65: Maximum discharge, about 3,220 cfs 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; furnished figures rounded by Geological Survey.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	495	506	16	529	564	533	532	458	240	431	469	239
2	421	505	15	526	565	533	530	434	378	427	469	240
3	63	505	14	527	557	534	529	442	378	424	470	273
4	54	511	13	527	567	533	490	441	378	424	471	300
5	10	517	10	529	568	533	456	424	377	425	471	301
6	50	520	10	529	569	532	458	424	377	410	471	302
7	76	518	10	521	569	532	459	423	377	388	470	296
8	490	521	10	470	563	534	476	428	378	386	471	306
9	559	502	10	473	466	530	498	432	350	394	470	390
10	570	473	10	475	466	521	503	428	326	409	471	434
11	558	473	10	474	468	523	504	402	350	408	471	462
12	554	476	10	475	469	523	504	398	379	409	473	474
13	571	474	10	477	469	524	508	404	379	409	464	485
14	586	476	10	475	472	524	515	406	379	419	412	491
15	610	476	10	477	470	523	516	403	381	432	410	481
16	615	478	10	479	475	523	517	409	387	449	424	484
17	615	479	10	478	475	525	519	410	387	449	448	493
18	618	474	198	482	477	523	516	403	389	446	450	502
19	616	470	517	479	480	523	517	401	390	446	449	511
20	580	468	517	477	479	521	519	387	387	448	453	513
21	516	468	517	475	477	521	516	372	389	449	451	485
22	515	466	517	475	477	523	520	375	391	451	451	469
23	517	466	514	477	476	524	520	382	391	451	452	480
24	521	393	515	479	491	524	499	375	391	449	451	488
25	519	77	519	479	529	524	463	358	391	410	452	480
26	517	39	517	479	532	525	463	371	390	421	451	476
27	515	30	521	479	533	527	468	380	389	440	449	474
28	510	21	522	514	532	524	454	380	391	468	451	472
29	511	17	522	567	-----	525	455	387	410	458	450	471
30	511	16	526	564	-----	528	455	383	429	471	365	484
31	511	-----	527	563	-----	530	-----	209	-----	468	238	-----
Total	14,349.0	11,815	7,137	15,430	14,235	16,322	14,879	12,329	11,329	13,379	13,818	12,756
Mean	463	394	230	498	508	527	496	398	378	432	446	425
Ac-ft	28,460	23,430	14,160	30,600	23,230	32,370	29,510	24,450	22,470	26,540	27,410	25,300

Calendar year 1964	Max	618	Min	5.0	Mean	397	Ac-ft	283,100
Water year 1964-65	Max	618	Min	5.0	Mean	432	Ac-ft	312,900

OWENS LAKE BASIN

10-2818. Independence Creek below Pinyon Creek, near Independence, Calif.

Location.--Lat 36°46'45", long 118°15'45", in NE $\frac{1}{4}$ sec.27, T.13 S., R.34 E., on right bank 0.2 mile downstream from Pinyon Creek and 4.0 miles southwest of Independence.

Drainage area.--18.2 sq mi.

Records available.--January 1923 to September 1965. Prior to October 1959, monthly discharge only, published in WSP 1734.

Gage.--Water-stage recorder and Parshall flume (Cipolletti weir Oct. 1 to Dec. 23 and Jan. 7 to Apr. 19). Altitude of gage is 5,300 ft (from topographic map). Prior to Sept. 12, 1934, water-stage recorder; Sept. 12, 1934, to Dec. 13, 1936, water-stage recorder and Cipolletti weir (removed during high water), at same site and datum.

Average discharge.--42 years, 12.7 cfs (9,190 acre-ft per year).

Extremes.--Maximum discharge during year, 91 cfs June 12 (gage height, 3.00 ft); minimum daily, 2.6 cfs Oct. 9-12, 19-27. 1923-65: Maximum discharge, 138 cfs June 21, 1963 (gage height 3.98 ft); minimum daily, 0.7 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	3.2	3.0	1.5	5.3	5.0	5.4	22	47	64	46	15
2	2.8	3.0	3.0	1.2	5.3	5.0	5.2	22	44	67	48	14
3	2.8	3.2	3.0	5.9	5.3	5.0	5.2	22	40	68	45	14
4	2.8	3.0	2.8	6.4	5.3	5.0	5.4	20	38	73	41	14
5	2.8	3.0	3.0	6.0	5.3	4.9	5.3	19	52	78	37	14
6	2.8	3.0	3.0	6.0	5.3	5.0	5.3	18	52	80	35	14
7	2.8	2.8	3.0	6.0	5.3	5.0	5.3	18	62	80	34	13
8	2.8	2.8	3.0	7.1	5.2	4.9	5.3	17	66	82	33	13
9	2.6	3.0	3.0	6.8	4.9	4.9	5.3	16	59	83	33	12
10	2.6	2.8	3.0	6.6	5.9	4.8	5.4	15	58	80	34	12
11	2.6	3.2	3.0	6.3	5.8	4.9	5.4	15	68	75	37	12
12	2.6	3.6	3.0	6.2	6.2	4.9	5.5	15	85	70	37	11
13	2.8	3.6	2.8	6.0	5.4	4.8	5.3	15	82	65	37	11
14	2.8	3.5	2.8	6.0	4.9	4.8	5.2	15	73	63	36	9.7
15	2.8	3.9	2.8	5.9	4.8	4.7	5.3	16	67	62	35	9.5
16	2.8	3.9	2.8	5.9	4.8	4.7	5.4	18	63	64	33	8.7
17	2.8	3.9	3.2	5.9	4.7	4.7	5.7	23	55	64	31	8.9
18	2.8	4.0	2.8	5.8	4.7	4.7	6.2	32	50	66	28	9.1
19	2.6	3.8	3.0	5.8	4.7	4.7	7.1	39	48	66	26	9.1
20	2.6	3.6	3.0	5.8	4.8	4.7	7.5	43	51	61	24	8.7
21	2.6	3.5	3.0	5.7	4.8	4.7	8.1	42	55	57	23	8.5
22	2.6	3.5	3.5	5.7	4.7	4.8	8.9	39	58	52	22	8.1
23	2.6	3.2	13	5.5	4.6	4.8	8.9	36	60	48	20	7.7
24	2.6	3.2	21	6.0	4.8	4.7	9.7	33	60	47	19	7.3
25	2.6	3.4	13	6.3	4.9	4.7	11	31	58	45	18	7.0
26	2.6	3.2	11	5.8	5.0	4.7	12	29	55	44	17	6.6
27	2.6	3.0	11	5.7	5.4	4.7	13	30	53	42	16	6.4
28	2.8	3.0	7.7	5.5	5.3	4.7	15	32	54	39	16	6.2
29	3.4	3.0	9.3	5.4	-----	4.7	18	38	56	36	15	6.2
30	3.2	3.0	8.3	5.3	-----	4.8	20	42	60	40	15	6.0
31	3.2	-----	7.7	5.3	-----	5.0	-----	44	-----	45	15	-----
Total	85.6	98.8	167.5	199.6	143.4	149.4	236.3	816	1,719	1,906	906	302.7
Mean	2.76	3.29	5.40	6.44	5.12	4.82	7.88	26.3	57.3	61.5	29.2	10.1
Ac-ft	170	196	332	396	284	296	469	1,620	3,410	3,780	1,800	600
Calendar year 1964	Max	29	Min	2.6	Mean	7.17	Ac-ft	5,210				
Water year 1964-65	Max	85	Min	2.6	Mean	18.4	Ac-ft	13,350				

10-2824.8. Mazourka Creek near Independence, Calif.

Location.--Lat 36°50'50", long 118°05'05", in NE $\frac{1}{4}$ lot 19, N $\frac{1}{2}$ sec.5, T.13 S., R.36 E., on right bank 7 miles northeast of Independence.Drainage area.--15.6 sq mi.Records available.--October 1960 to September 1965.Gage.--Water-stage recorder. Altitude of gage is 4,800 ft (from topographic map).Average discharge.--5 years, 0.00006 cfs (0.04 acre-ft per year).Extremes.--No flow during year.

1960-65: Maximum discharge, 1.0 cfs July 26, 1964 (gage height, 1.37 ft), on basis of area-velocity study; no flow for most of each year.

Remarks.--No flow since July 26, 1964. No regulation or diversion above station. Discharge for calendar year 1964 is as follows: maximum daily, 0.1 cfs; minimum, zero; mean, 0.0003 cfs; total, 0.2 acre-ft.

10-2857. Owens River at Keeler Bridge, near Lone Pine, Calif.

Location.--Lat 36°34'30", long 118°00'45", in NW $\frac{1}{4}$ sec.1, T.16 S., R.36 E., 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.Records available.--January 1927 to September 1965. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.Gage.--Water-stage recorder (destroyed by vandals Nov. 22, 1964) and Cipolletti weir, staff gage read weekly thereafter. Altitude of gage is 3,600 ft (from topographic map). Prior to Oct. 19, 1930, staff gage, and Oct. 20, 1930, to Feb. 14, 1935, staff gage and Cipolletti weir, all at present site at different datum.Extremes.--Maximum discharge observed during year, 6.7 cfs Apr. 9, 16 (gage height 0.34 ft); minimum observed, 0.3 cfs July 30 (gage height, 0.04 ft).

1927-65: Maximum daily discharge, 1,200 cfs July 9, 1938 (gage height, 7.06 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 drainage is diverted out of basin above gage 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	2.6	3.1	3.7	3.9	5.4	5.8	5.6	2.3	0.9	0.5	0.4
2	1.2	2.8	3.1	3.7	3.9	5.4	5.8	5.4	2.3	.9	.6	.4
3	1.2	3.0	3.2	3.7	3.9	5.5	5.9	5.2	2.2	.9	.7	.4
4	1.2	3.2	3.2	3.7	3.9	5.5	6.1	5.0	2.2	.9	.8	.4
5	1.4	3.7	3.2	3.7	4.0	5.5	6.2	4.8	2.1	.8	1.0	.4
6	1.4	4.0	3.2	3.7	3.9	5.6	6.3	4.7	2.0	.8	1.1	.4
7	1.4	3.7	3.2	3.8	3.9	5.6	6.4	4.5	1.9	.8	1.1	.4
8	1.4	3.5	3.2	4.0	3.8	5.6	6.5	4.3	1.8	.8	1.1	.4
9	1.4	3.5	3.2	4.0	3.8	5.7	6.7	4.2	1.8	.8	1.1	.4
10	1.4	3.2	3.2	4.0	3.8	5.7	6.7	4.0	1.7	.8	1.1	.4
11	1.4	3.0	3.2	4.0	3.8	5.8	6.7	3.9	1.6	.8	1.1	.4
12	1.6	2.8	3.3	4.0	3.7	5.8	6.7	3.8	1.6	.8	1.1	.4
13	1.6	2.6	3.4	4.0	3.8	5.8	6.7	3.6	1.6	.8	1.1	.4
14	1.6	2.6	3.4	4.0	3.9	5.9	6.7	3.5	1.6	.9	1.1	.4
15	1.6	2.6	3.5	4.0	4.0	5.9	6.7	3.4	1.6	.9	1.1	.4
16	1.6	2.6	3.6	3.9	4.1	6.0	6.7	3.4	1.6	.9	1.1	.4
17	1.6	2.6	3.6	3.9	4.2	6.0	6.4	3.4	1.6	.9	1.1	.4
18	1.8	2.6	3.7	3.8	4.4	6.0	6.2	3.3	1.6	.8	1.1	.6
19	1.8	2.8	3.7	3.8	4.5	6.1	6.0	3.3	1.5	.8	1.1	.7
20	1.8	2.8	3.7	3.8	4.6	6.1	5.7	3.3	1.4	.7	1.1	.9
21	2.0	2.8	3.7	3.8	4.7	6.1	5.5	3.2	1.4	.7	1.0	1.1
22	2.0	2.8	3.7	3.7	4.8	6.1	5.2	3.2	1.3	.7	.9	1.2
23	2.2	2.8	3.7	3.7	4.9	6.1	5.0	3.0	1.2	.6	.8	1.4
24	2.2	2.8	3.7	3.8	5.0	6.1	5.1	3.0	1.1	.6	.7	1.6
25	2.2	2.8	3.7	3.8	5.2	6.1	5.2	2.9	1.1	.5	.6	1.6
26	2.2	3.0	3.7	3.8	5.3	6.1	5.3	2.8	1.0	.5	.5	1.7
27	2.2	3.0	3.7	3.8	5.3	6.0	5.5	2.7	1.0	.4	.4	1.7
28	2.2	3.0	3.7	3.8	5.3	6.0	5.6	2.6	1.0	.4	.4	1.8
29	2.2	3.0	3.7	3.8	-----	6.0	5.7	2.5	1.0	.3	.4	1.8
30	2.2	3.0	3.7	3.8	-----	5.9	5.8	2.4	1.0	.3	.4	1.9
31	2.4	-----	3.7	3.9	-----	5.9	-----	2.4	-----	.4	.4	-----
Total	53.6	89.2	107.6	118.9	120.3	181.3	180.8	113.3	47.1	22.1	26.6	24.8
Mean	1.73	2.97	3.47	3.84	4.30	5.85	6.03	3.65	1.57	0.71	0.86	0.83
Ac-ft	1.06	1.77	2.13	2.36	2.39	3.60	3.59	2.25	.93	.44	.53	.49
Calendar year 1964	Max	11	Min	0	Mean	4.30	Ac-ft	3.120				
Water year 1964-65	Max	6.7	Min	0.3	Mean	2.97	Ac-ft	2.150				

10-2860. Cottonwood Creek near Olancho, Calif.

Location.--Lat 36°26'20", long 118°04'40", in Inyo National Forest, just downstream from intake to Cottonwood powerhouse, and 11.2 miles north of Olancho, Inyo County.

Drainage area.--39.9 sq mi.

Records available.--January 1906 to March 1911, January 1914 to September 1965; combined records of creek and flow through powerhouse, November 1938 to September 1965. January 1914 to September 1959 monthly discharge only, published in WSP 1314 and 1734.

Gage.--Water-stage recorder and Parshall flume (Cipolletti weir Oct. 1 to Apr. 20, Aug. 20 to Sept. 30) on creek; water-stage recorder and Cipolletti weir on powerhouse diversion. Prior to Sept. 9, 1908, staff gage at site about 2 miles downstream at different datum. Sept. 9, 1908, to Mar. 31, 1911, and Jan. 1, 1914, to Mar. 6, 1921, staff gage and Mar. 7, 1921, to Oct. 31, 1938, water-stage recorder, at site just upstream from intake to Cottonwood powerhouse at different datum.

Average combined discharge.--55 years (1906-10, 1914-65), 22.1 cfs (16,000 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 125 cfs May 19 (gage height, 3.17 ft); minimum daily, 0.1 cfs for many days. 1906-11, 1914-65: Maximum discharge observed, 434 cfs June 13, 1906 (discharge measurement); no flow for some days in 1959, 1961, 1964.

(combined).--Maximum discharge during year, 144 cfs May 19; minimum daily, 4.3 cfs Oct. 1-6.

1906-11, 1914-65: Maximum discharge observed, 434 cfs June 13, 1906; 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.1	0.7	0.1	0.1	0.1	0.2	33	50	24	3.1	0.1
2	.1	.1	.1	.1	.1	.1	.2	32	43	23	1.8	.1
3	.1	.1	.1	.1	.1	.1	.2	34	42	21	1.6	.1
4	.1	.1	.1	.1	.1	.1	.2	28	47	19	1.1	.1
5	.1	.1	.1	.1	.1	.1	.2	27	46	19	.9	.1
6	.1	.1	.1	.1	.1	.1	.1	26	50	21	.7	.1
7	.1	.1	.1	.2	.1	.1	.1	22	54	21	.5	.9
8	.1	.1	.1	.2	.1	.1	.1	18	58	20	.3	.2
9	.2	.1	.1	.2	.1	.1	.1	16	50	20	.2	.4
10	.2	.1	.1	.2	.1	.1	.1	14	58	19	.2	.1
11	.2	.1	.1	.2	.1	.1	.1	12	61	16	4.8	.1
12	.2	.1	.1	.2	.1	.1	.1	12	69	14	7.5	.1
13	.2	.1	.1	.2	.1	.1	.1	16	71	12	2.8	.1
14	.2	.1	.2	.2	.2	.1	.1	20	67	10	1.2	.1
15	.2	.1	.2	.2	.2	.1	.1	25	64	19	2.2	.1
16	.1	.1	.2	.2	.2	.1	.1	40	64	31	4.5	.1
17	.1	.1	.2	.2	.2	.1	.1	60	60	37	6.4	.1
18	.1	.1	.2	.3	.2	.1	.1	77	53	26	4.5	.1
19	.1	.1	.2	.3	.2	.1	.1	71	47	21	1.8	.1
20	.1	.1	.2	.3	.2	.1	.4	67	45	15	1.1	.1
21	.1	.1	.2	.3	.1	.1	.7	66	43	8.7	.9	.1
22	.1	.2	.2	.3	.1	.1	1.9	56	41	6.4	.7	.2
23	.1	.2	.2	.2	.1	.1	1.8	53	41	5.6	.5	.2
24	.1	.2	.2	.2	.2	.1	3.1	39	39	5.6	.3	.2
25	.1	.2	.2	.2	.1	.1	5.8	39	36	5.8	.2	.2
26	.1	.1	.3	.2	.1	.1	8.9	40	31	3.6	.2	.2
27	.1	.1	.3	.1	.1	.1	12	47	31	2.5	.1	.1
28	.1	.1	.2	.1	.1	.1	17	50	29	1.6	.1	.1
29	.1	.1	.2	.1	-----	.1	24	52	28	1.4	.1	.1
30	.1	.2	.2	.1	-----	.1	30	50	26	14	.1	.1
31	.1	-----	.2	.1	-----	.2	-----	49	-----	7.3	.1	-----
Total	3.8	3.5	5.7	5.6	3.6	3.2	108.0	1,191	1,444	470.5	50.5	4.7
Mean	0.12	0.12	0.18	0.18	0.13	0.10	3.60	38.4	48.1	15.2	1.63	0.16
Ac-ft	7.5	6.9	11	11	7.1	6.3	214	2,360	2,860	933	100	9.3

Calendar year 1964 Max 12 Min 0 Mean 0.54 Ac-ft 391
 Water year 1964-65 Max 77 Min 0.1 Mean 9.02 Ac-ft 6,530

10-2860. Cottonwood Creek near Olancha, Calif.--Continued.

Combined discharge, in cubic feet per second, of Cottonwood Creek and powerhouse
near Olancha, Calif., water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.3	6.4	6.4	8.3	6.6	6.4	9.0	52	70	44	23	16
2	4.3	5.6	5.8	9.3	6.6	6.4	8.7	52	62	43	22	16
3	4.3	5.8	5.8	9.3	6.6	6.4	8.7	54	62	41	22	14
4	4.3	5.8	5.6	8.1	6.4	6.4	8.4	48	66	39	21	14
5	4.3	5.8	5.6	8.1	6.4	6.4	10	46	66	39	21	14
6	4.3	6.1	5.6	8.6	6.4	6.4	9.5	46	70	41	21	14
7	4.6	5.8	5.6	7.9	6.1	6.4	9.3	42	74	41	20	14
8	4.6	5.8	5.6	7.9	6.4	6.4	9.3	38	78	40	19	12
9	4.4	5.6	5.6	9.0	5.6	6.4	9.3	36	70	40	19	12
10	4.7	5.1	5.6	8.2	5.6	6.1	9.3	34	78	39	19	12
11	4.7	6.1	5.6	7.9	5.6	6.4	9.3	32	81	36	26	12
12	4.7	6.4	5.3	7.6	5.8	6.4	9.5	32	89	34	28	12
13	4.7	5.8	5.1	7.3	6.1	6.1	9.3	36	91	32	23	12
14	4.7	4.6	5.7	7.3	6.2	6.4	9.3	40	87	30	21	11
15	4.7	5.8	5.7	7.0	6.2	6.4	9.5	45	83	39	23	11
16	4.6	6.6	5.7	7.0	5.9	6.4	9.5	59	84	51	26	11
17	4.6	7.2	5.7	7.0	5.9	6.6	11	78	80	57	28	11
18	4.6	7.8	5.7	7.1	6.2	6.6	12	95	73	46	26	12
19	4.6	6.9	5.7	6.8	6.2	6.6	14	90	67	41	23	14
20	4.6	5.8	5.7	6.8	6.5	6.6	17	86	65	35	22	14
21	4.6	5.8	5.7	6.8	6.4	6.9	18	86	63	29	21	12
22	4.6	5.7	5.9	6.8	6.4	7.2	20	76	61	26	21	12
23	4.6	5.7	8.2	6.7	6.1	7.5	21	73	61	26	20	11
24	4.6	5.9	11	6.2	5.4	7.5	22	59	59	26	20	11
25	4.6	5.9	8.7	6.2	6.1	7.5	25	59	56	26	18	11
26	4.6	5.6	8.8	6.7	6.1	7.5	29	59	51	24	17	10
27	4.8	5.1	8.5	6.6	6.4	7.5	32	66	51	22	17	9.6
28	5.6	5.3	7.3	6.6	6.1	7.2	37	70	49	22	16	9.6
29	6.9	5.6	6.2	6.6	-----	7.8	43	72	48	21	16	9.6
30	6.4	5.9	7.3	6.6	-----	8.3	50	70	46	34	16	9.3
31	6.6	-----	9.0	6.6	-----	9.0	-----	69	-----	27	16	-----
Total	148.5	177.3	199.7	228.9	172.3	212.1	498.9	1800	2041	1091	651	363.1
Mean	4.79	5.91	6.44	7.38	6.15	6.84	16.6	58.1	68.0	35.2	21.0	12.1
Ac-ft	295	352	396	454	342	421	990	3,570	4,050	2,160	1,290	720
Calendar year 1964	Max	28	Min	3.4	Mean	8.61	Ac-ft	6,250				
Water year 1964-65	Max	95	Min	4.3	Mean	20.8	Ac-ft	15,040				

MONO LAKE BASIN

10-2870. Mono Lake near Mono Lake, Calif.

Location (revised).--Lat 37°58'46", long 119°08'11", in NW¼ sec.5, T.2 N., R.26 E., on west bank 1 mile south of town of Mono Lake.

Records available.--June 1912 to September 1965. Records prior to September 1934 are published in WSP 765.

Gage.--Staff gage or reference point read once a week. Gage readings have been reduced to elevations above mean sea level.

Extremes.--1912-65: Maximum elevation observed, 6,428.1 ft July 18, 1919, present datum; minimum observed, 6,389.07 ft Sept. 27, 1965.

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 1964 to September 1965

Date	Elevation	Date	Elevation	Date	Elevation	Date	Elevation
Oct. 1	6,390.54	Jan. 7	6,390.10	Apr. 12	6,390.20	July 8	6,389.62
5	6,390.51	11	6,390.06	23	6,390.05	12	6,389.61
12	6,390.47	18	6,390.05	26	6,390.07	19	6,389.58
19	6,390.41	25	6,390.13	30	6,390.02	26	6,389.53
26	6,390.37	Feb. 1	6,390.06	May 3	6,389.98	Aug. 2	6,389.49
Nov. 2	6,390.27	8	6,389.97	10	6,389.94	9	6,389.35
9	6,390.25	15	6,389.94	17	6,389.93	19	6,389.37
16	6,390.10	26	6,389.93	24	6,389.88	23	6,389.34
23	6,390.08	Mar. 5	6,389.96	June 1	6,389.83	30	6,389.25
30	6,390.02	11	6,390.18	7	6,389.79	Sept. 6	6,389.21
Dec. 7	6,389.95	15	6,390.17	14	6,389.73	13	6,389.18
18	6,389.98	22	6,390.17	21	6,389.73	22	6,389.08
21	6,389.89	29	6,390.17	28	6,389.71	27	6,389.07
29	6,390.09	Apr. 5	6,390.16	July 1	6,389.63		

10-2874. Rush Creek above Grant Lake, near June Lake, Calif.

Location.--Lat 37°48'20", long 119°06'30", in NE $\frac{1}{4}$ sec.4, T.2 S., R.26 E., 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.

Records available.--December 1936 to September 1965. 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.--28 years (1937-65), 79.8 cfs (57,770 acre-ft per year).

Extremes.--Maximum discharge during year, 265 cfs Aug. 13 (gage height, 2.58 ft); minimum daily, 8.9 cfs Oct. 19.
1936-65: Maximum daily discharge, 711 cfs June 28, 1938; minimum daily, 5.5 cfs Sept. 6-8, 14, 1954.

Remarks.--Flow regulated by Gem Lake, Lake Agnew, and 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	36	39	72	80	60	39	138	175	178	175	104
2	45	43	40	64	64	58	36	135	170	178	184	95
3	18	43	38	65	60	57	36	133	161	180	178	95
4	14	43	38	62	58	60	36	123	159	182	153	99
5	22	39	37	68	58	59	36	123	171	185	136	100
6	52	42	38	65	61	59	35	121	184	188	128	101
7	51	45	38	62	60	59	36	121	190	190	123	104
8	82	43	39	66	60	59	36	120	192	185	119	102
9	89	45	38	65	60	59	36	120	184	180	115	93
10	90	56	37	65	59	59	36	118	178	172	115	97
11	90	43	40	64	58	59	27	115	190	164	121	100
12	90	38	37	61	58	60	26	115	200	156	164	99
13	90	38	37	62	58	58	26	117	200	153	254	99
14	77	33	37	62	58	58	30	107	190	151	246	99
15	25	27	37	61	59	59	30	83	177	153	232	99
16	15	26	37	61	58	53	33	91	166	153	241	99
17	11	37	36	73	59	49	30	131	157	156	224	99
18	9.8	36	36	77	59	52	26	151	152	161	188	99
19	8.9	36	40	77	58	53	35	160	151	159	160	99
20	9.3	36	41	80	58	30	89	163	152	152	136	99
21	10	35	38	80	58	24	105	157	159	151	123	99
22	10	36	48	80	58	26	111	146	172	142	118	99
23	12	39	95	80	58	36	111	140	182	138	114	98
24	15	39	101	85	58	37	111	135	187	135	111	98
25	16	39	82	77	59	38	113	129	182	139	111	98
26	16	38	68	77	61	40	101	131	171	152	107	98
27	16	38	64	74	62	40	114	135	167	161	105	97
28	17	34	62	77	61	37	123	140	168	157	104	97
29	19	43	56	80	-----	36	133	151	170	147	102	97
30	17	39	56	80	-----	38	135	164	177	144	102	96
31	30	-----	57	80	-----	40	-----	171	-----	161	104	-----
Total	1,157.0	1,165	1,487	2,202	1,678	1,512	1,871	4,084	5,234	5,003	4,593	2,958
Mean	37.3	38.8	48.0	71.0	59.9	48.8	62.4	132	174	161	148	98.6
Ac-ft	2,290	2,310	2,950	4,370	3,330	3,000	3,710	8,100	10,380	9,920	9,110	5,870

Calendar year 1964 Max 125 Min 8.0 Mean 51.9 Ac-ft 41,270
Water year 1964-65 Max 254 Min 8.9 Mean 90.3 Ac-ft 65,340

10-2879, Lee Vining Creek near Lee Vining, Calif.

Location.--Lat 37°55'45", long 119°10'10", in SW $\frac{1}{4}$ sec.24, T.1 N., R.25 E., on right bank 0.8 mile upstream from Gibbs Canyon and 3.3 miles southwest of Lee Vining.

Drainage area.--35.2 sq mi.

Records available.--April 1934 to September 1965. 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). Prior to Aug. 6, 1944, staff gage at same site at different datum. Aug. 6, 1944, to Oct. 17, 1955, water-stage recorder at same site at different datum.

Average discharge.--31 years, 66.2 cfs (47,930 acre-ft per year).

Extremes.--Maximum discharge during year, 326 cfs July 7 (gage height, 3.59 ft); minimum daily, 18 cfs Dec. 1,2. 1934-65: Maximum discharge observed, 503 cfs June 9, 1938 (gage height, 3.07 ft, datum then in use); no flow Nov. 29, 1935.

Remarks.--Flow regulated by Ellery, Saddlebag, and Tioga Lakes (combined capacity, 13,269 acre-ft) and 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; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	30	18	41	43	64	40	84	198	201	156	65
2	23	34	18	55	33	66	40	97	174	198	155	39
3	20	49	26	60	29	62	40	88	168	192	152	41
4	24	28	42	43	39	66	64	86	174	199	71	40
5	22	25	46	37	43	64	38	47	192	202	149	59
6	32	26	26	72	42	66	39	43	231	258	93	73
7	32	26	23	37	47	66	47	61	227	297	90	45
8	22	26	26	36	38	66	38	39	234	238	88	60
9	22	26	26	68	38	66	40	42	195	213	109	72
10	22	26	25	34	39	64	38	61	185	195	90	44
11	22	26	26	34	56	67	33	36	216	179	121	64
12	54	26	25	34	34	55	33	75	246	169	149	35
13	28	26	26	54	64	34	42	48	237	165	151	49
14	36	26	26	34	67	64	42	93	201	165	154	63
15	26	26	26	33	69	42	44	69	179	166	150	36
16	23	26	35	34	69	49	42	97	171	168	162	59
17	23	27	24	35	69	51	28	153	113	179	124	45
18	22	30	24	55	69	42	28	165	107	171	160	37
19	22	29	28	34	69	55	34	168	141	169	120	55
20	22	26	23	32	69	50	51	186	170	168	93	44
21	23	25	34	35	69	49	31	182	177	161	90	45
22	23	25	53	56	68	53	42	153	213	158	64	42
23	28	20	209	33	67	56	70	139	243	155	86	33
24	28	20	180	30	67	74	42	94	234	121	51	49
25	30	25	122	31	66	45	46	82	207	120	57	67
26	29	24	94	33	66	42	77	77	182	155	80	35
27	30	38	80	39	67	29	81	127	177	112	46	39
28	23	28	69	33	64	40	88	153	189	128	90	36
29	40	25	96	34	-----	55	112	160	180	92	66	35
30	64	23	45	35	-----	48	127	164	207	125	77	67
31	42	-----	42	36	-----	40	-----	182	-----	156	83	-----
Total	881	817	1,563	1,257	1,560	1,690	1,517	3,251	5,768	5,375	3,337	1,473
Mean	28.4	27.2	50.4	40.5	55.7	54.5	50.6	105	192	173	108	49.1
Ac-ft	1,750	1,620	3,100	2,490	3,090	3,350	3,010	6,450	11,440	10,660	6,620	2,920
Calendar year 1964	Max	209	Min	18	Mean	45.0	Ac-ft	32,680				
Water year 1964-65	Max	297	Min	18	Mean	78.0	Ac-ft	56,500				

11-100. Cottonwood Creek at Morena Dam, Calif.

Location.--Lat 32°41'01", long 116°32'45", in NE¼ sec.23, T.17 S., R.4 E., on Morena Dam outlet tower.

Drainage area.--120 sq mi, approximately.

Records available.--January 1916, October 1936 to September 1965.

Gage.--Staff gage read once daily. Datum of gage is 2,882.4 ft above mean sea level.

Average discharge.--29 years (1936-65), 10.6 cfs (7,680 acre-ft per year); median of yearly mean discharges, 2.7 cfs (1,950 acre-ft per year).

Remarks.--Records of discharge represent all water reaching Morena Reservoir, including precipitation on reservoir surface. Discharge computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using a coefficient of 1.00, excepting the period January 1962 to June 1963, when the mass-transfer method was used. Prior to October 1963 a coefficient of 0.80 was used. Area and capacity tables for reservoir are based on a survey made in 1948. Dam completed and storage began in 1910. Capacity of reservoir at permanent spillway level (gage height, 157.00 ft), 50,210 acre-ft. Dead storage, 654 acre-ft below outlet No. 3 at gage height 70.5 ft. No regulation or diversion above reservoir. Water is released down Cottonwood Creek to Barrett Reservoir as required.

Cooperation.--Records computed in cooperation with city of San Diego.

Monthly discharge, water year October 1964 to September 1965

Month	Gage height (feet)†	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Evapo-ration (acre-feet)	Spill plus leakage (acre-feet)	Discharge (acre-feet)
	Morena Reservoir						
Sept. 30.....	63.5	252	-	-	-	-	-
Oct. 31.....	63.1	235	-17	0	16	1	0
Nov. 30.....	63.1	235	0	0	6	1	7
Dec. 31.....	63.3	243	+8	0	4	2	14
Calendar year 1964.....	-	-	-83	0	232	21	170
Jan. 31.....	63.4	248	+5	0	6	2	13
Feb. 28.....	63.8	265	+17	0	7	2	26
Mar. 31.....	63.8	265	0	0	9	2	11
Apr. 30.....	65.7	357	+92	0	13	2	107
May 31.....	65.2	332	-25	0	24	2	1
June 30.....	64.8	312	-20	0	26	2	8
July 31.....	64.1	280	-32	0	34	1	3
Aug. 31.....	63.3	243	-37	0	31	1	-5
Sept. 30.....	62.8	222	-21	0	18	1	-2
Water year 1964-65.....	-	-	-30	0	194	19	183

† Gage height at 0800 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing 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.

11-110. Cottonwood Creek at Barrett Dam, near Dulzura, Calif.

Location.--Lat 32°40'46", long 116°40'11", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.22, T.17 S., R.3 E., on Barrett Dam outlet tower, 7.0 miles northeast of Dulzura.

Drainage area.--250 sq mi.

Records available.--January 1906 to December 1915, October 1945 to September 1965. Published as "near Jamul" prior to October 1912 and as "near Dulzura" October 1912 to December 1915. October 1936 to September 1945, published as "near Dulzura"; records not equivalent, as they were computed to represent runoff from Cottonwood Creek Basin below Morena Dam (drainage area, 130 sq mi).

Gage.--Staff gage read once daily. Datum of gage is 1,446.12 ft above mean sea level. January 1906 to December 1915, staff gage at same site at different datum (prior to completion of dam).

Remarks.--Records of inflow represent all water reaching Barrett Reservoir, including precipitation on the reservoir and water passing down Cottonwood Creek from Morena Reservoir. Inflow computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using a coefficient of 0.76. Prior to October 1964 a coefficient of 0.80 was used excepting the period January 1962 to June 1963, when the mass-transfer method was used. Area-capacity tables for reservoir are based on a resurvey made in 1948, 1951, and 1955. Barrett Dam was completed and storage began in 1922. Capacity of reservoir at top of flash gates on spillway (gage height, 168.88 ft), 44,760 acre-ft. Dead storage, 719 acre-ft below lowest outlet at gage height 58.88 ft, included in these records. Flow partly regulated by Morena Reservoir (see preceding page). Water drawn from Barrett Reservoir is diverted out of drainage basin to Lower Otay Reservoir by Dulzura conduit for municipal use.

Cooperation.--Records computed in cooperation with city of San Diego.

Monthly inflow, water year October 1964 to September 1965

Month	Gage height (feet) [†]	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Evaporation (acre-feet)	Spill plus leakage (acre-feet)	Inflow (acre-feet)
	Barrett Reservoir						
Sept. 30.....	64.1	1,057	-	-	-	-	-
Oct. 31.....	63.7	1,029	-28	1	24	0	-3
Nov. 30.....	63.7	1,029	0	1	10	0	11
Dec. 31.....	63.9	1,043	+14	0	6	0	20
Calendar year 1964.....	-	-	-188	2	291	0	105
Jan. 31.....	63.9	1,043	0	0	8	0	8
Feb. 28.....	64.0	1,050	+7	0	10	0	17
Mar. 31.....	63.9	1,043	-7	0	13	0	6
Apr. 30.....	70.5	1,576	+533	0	20	0	553
May 31.....	70.1	1,539	-37	0	33	0	-4
June 30.....	69.7	1,504	-35	0	33	0	-2
July 31.....	69.1	1,452	-52	0	45	0	-7
Aug. 31.....	68.5	1,401	-51	0	48	0	-3
Sept. 30.....	68.1	1,367	-34	0	31	0	-3
Water year 1964-65.....	-	-	+310	2	281	0	593

[†]Gage height 0800 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of inflow may appear. This arises primarily from the difficulty of computing 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.

11-120. Cottonwood Creek above Tecate Creek, near Dulzura, Calif.

Location.--Lat 32°34'30", long 116°45'10", in SW $\frac{1}{4}$ sec.26, T.18 S., R.2 E., on right bank 0.8 mile upstream from confluence with Tecate Creek and 5.1 miles south of Dulzura.

Drainage area.--316 sq mi.

Records available.--October 1936 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 569.40 ft above mean sea level (levels by International Boundary and Water Commission).

Average discharge.--29 years, 7.55 cfs (5,470 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

Extremes.--Maximum discharge during year, 24 cfs Apr. 10 (gage height, 2.12 ft); no flow for most of year.

1936-65: 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 (see p. 85) and Barrett Reservoir (see 86). Water released from Barrett Reservoir through Dulzura conduit is diverted to Lower Otay Reservoir.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 4.....1.4	Apr. 11.....10	Apr. 18.....1.0	Apr. 24.....0.3
5.....1.9	12.....7.0	19......8	25......2
6.....1.3	13.....5.1	20......6	26......1
7.....1.5	14.....3.4	21......6	27......1
8.....3.3	15.....2.3	22......5	28......1
9.....10	16.....1.7	23......4	29......1
10.....17	17.....1.2		

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	71.9	-	-	2.40	143
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	17	0	.20	143

Note.--Flow occurred only on days listed above.

11-125. Campo Creek near Campo, Calif.

Location.--Lat 32°35'25", long 116°31'30", in SE $\frac{1}{4}$ sec.24, T.18 S., R.4 E., on left bank just upstream from bridge on State Highway 94, about 3.5 miles southwest of Campo.

Drainage area.--84 sq mi, approximately, of which 4 sq mi are in Mexico.

Records available.--October 1936 to September 1965.

Gage.--Water-stage recorder and broad-crested weir. Datum of gage is 2,178.92 ft (revised) above mean sea level, datum of 1929. Prior to Dec. 1, 1954, at datum 1 ft higher.

Average discharge.--29 years, 2.17 cfs (1,570 acre-ft per year); median of yearly mean discharges, 0.2 cfs (72 acre-ft per year).

Extremes.--Maximum discharge during year, 0.6 cfs Feb. 6 (gage height, 1.22 ft); no flow for most of year.

1936-65: 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 poor. Flow partly regulated since August 1956 by small conservation reservoir. No diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Dec. 27.....0.1	Apr. 2.....0.1
Feb. 6......1	3......1
Mar. 31......1	9......1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
December 1964.....	0.1	-	-	0.003	0.2
February 1965.....	.1	-	-	.003	.2
March.....	.1	-	-	.003	.2
April.....	.3	-	-	.01	.6
Calendar year 1964.....	-	0.1	0	.0003	.2
Water year 1964-65.....	-	.1	0	.002	1.2

Peak discharge (base, 20 cfs).--No peak above base.

Note.--Flow occurred only on days listed above.

11-130. Tia Juana River near Dulzura, Calif.

Location.--Lat 32°33'50", long 116°46'25", in sec.33, T.18 S., R.2E., on left bank 0.5 mile downstream from confluence of Cottonwood and Tecate Creeks and 5.5 miles south of Dulzura.

Drainage area.--478 sq mi, of which 62 sq mi are in Mexico.

Records available.--October 1936 to September 1965.

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.--29 years, 12.1 cfs (8,760 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).

Extremes.--Maximum discharge during year, 27 cfs Apr. 10 (gage height, 2.60 ft); no flow for most of year.

1936-65: 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 fair. Flow regulated by Morena Reservoir (see p. 85) and Barrett Reservoir (see p. 86). Water diverted from Cottonwood Creek at Barrett Dam by Dulzura conduit to Jamul Creek.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 9.....	4.5	Apr. 14.....	1.9	Apr. 19.....	0.2
10.....	14	15.....	1.2	20.....	.2
11.....	8.2	16.....	.7	21.....	.1
12.....	6.0	17.....	.5	22.....	.1
13.....	3.5	18.....	.3	23.....	.1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	41.5	-	-	1.38	82
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	14	0	.11	82

Note.--Flow occurred only on days listed above.

11-132. Rodriguez Reservoir at Rodriguez Dam, Baja California, Mexico

Location.--Lat 32°26'40", long 116°54'25", at Rodriguez Dam on Rio de las Palmas, a quarter of a mile upstream from Arroyo Matanuco and 10 miles southeast of Tijuana, Baja California, Mexico.

Drainage area.--988 sq mi, of which 7 sq mi are in the United States.

Records available.--April 1937 to September 1965. Published with record for Tia Juana 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.--Staff gage read once a day. Altitude of gage is 250 ft (from topographic map).

Extremes.--Maximum contents during year, 450 acre-ft Apr. 13; reservoir dry Oct. 1 to Apr. 9, Aug. 21 to Sept. 30.

1937-65: 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 Sept. 30, 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 top 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 is used to store water for irrigation of about 3,000 acres on both banks one-half to 5½ miles downstream and for municipal supply of 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 1964 to September 1965

Month	Contents (acre- feet)	Change in contents (acre-feet)	Month	Contents (acre- feet)	Change in contents (acre-feet)
Sept. 30.....	0	-	Apr. 30.....	355	+355
Oct. 31.....	0	0	May 31.....	253	-102
Nov. 30.....	0	0	June 30.....	154	-99
Dec. 31.....	0	0	July 31.....	36	-118
	- - - - -	- - - - -	Aug. 31.....	0	-36
Calendar year 1964.....	-	-15	Sept. 30.....	0	0
	- - - - -	- - - - -		-	0
Jan. 31.....	0	0	Water year 1964-65.....		
Feb. 28.....	0	0			
Mar. 31.....	0	0			

11-135. Tia Juana River near Nestor, Calif.

Location.--Lat 32°33'05", long 117°05'00", on line between secs. 3 and 4, T.19 S., R.2 W., on downstream side of county highway bridge, 1.7 miles south of Nestor and 2.9 miles upstream from mouth.

Drainage area.--1,668 sq mi, of which 1,198 sq mi are in Mexico.

Records available.--October 1914 to September 1915, October 1936 to September 1965.

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.--30 years, 37.1 cfs (26,860 acre-ft per year); median of yearly mean discharges, 3.4 cfs (2,500 acre-ft per year).

Extremes.--Maximum discharge during year, 3.3 cfs Apr. 10 (gage height, 2.80 ft); no flow for most of year.

1936-65: 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 (see p. 85) and Barrett Reservoir (see p. 86) in the United States, and Rodriguez Reservoir (see 88) 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.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 9.....0.7
10.....1.0

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	1.7	-	-	0.06	3.4
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	1.0	0	.005	3.4

Note.--Flow occurred only on days listed above.

OTAY RIVER BASIN

11-140. Jamul Creek near Jamul, Calif.

Location.--Lat 32°38'15", long 116°53'00", in NE¼ sec.4, T.18 S., R.1 E., 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.

Records available.--April 1940 to September 1965.

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, datum of 1929. Prior to Oct. 1, 1951, at datum 1.00 ft higher.

Extremes.--Maximum discharge during year, 46 cfs Apr. 10 (gage height, 2.54 ft); no flow for most of year.

1940-65: 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 records for this station (see p. 87).

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 8.....1.3 Apr. 18.....1.0 Apr. 27.....0.7
9.....7.0 19.....1.0 28......3
10.....24 20.....1.0 29......2
11.....6.4 21......9 30......2
12.....3.9 22......9 May 1......2
13.....2.6 23......9 2......2
14.....1.9 24......7 3......2
15.....1.5 25......7 4......1
16.....1.4 26......7 5......1
17.....1.3

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	60.5	-	-	2.02	120
May.....	0.8	-	-	.03	1.6
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	24	0	.17	122

Note.--Flow occurred only on days listed above.

11-148.5. Japacha Creek near Descanso, Calif.

Location.--Lat 32°55'04", long 116°34'14", in Cuyamaca State Park on right side of culvert on State Highway 79, 5.1 miles northeast of Descanso, San Diego County.

Drainage area.--2.40 sq mi.

Records available.--Water years 1962-64 (annual maximum), October 1964 to September 1965.

Gage.--Water-stage recorder with rain-gage attachment. Altitude of gage is 4,070 ft (from topographic map). Prior to Dec. 24, 1964, crest-stage gage only.

Extremes.--Maximum discharge during year, 13 cfs Apr. 10 (gage height, 3.06 ft), from rating curve extended above 6.0 cfs on basis of culvert computation of flow at gage height 3.00 ft; no flow Oct. 1 to Feb. 5, July 25 to Sept. 30.
1962-65: Maximum discharge, that of Apr. 10, 1965: no flow for much of each year.

Remarks.--Records good. No regulation above station. Ranger station diverts water from Japacha Spring.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	0.1	0.5	0.5	0.3	0.2		
2					0	.1	3.7	.5	.2	.2		
3					0	.1	2.7	.5	.3	.2		
4					0	.1	2.4	.4	.2	.2		
5					0	.1	5.3	.4	.2	.2		
6					.3	.1	2.1	.4	.2	.1		
7					.4	.1	1.8	.4	.2	.1		
8					.3	.1	1.9	.4	.2	.1		
9					.3	.1	3.0	.4	.2	.1		
10					.2	.1	6.5	.4	.2	.1		
11					.2	.1	3.5	.3	.1	.1		
12					.2	.1	2.4	.3	.1	.1		
13					.2	.1	2.3	.3	.1	.1		
14					.2	.1	3.3	.3	.2	.1		
15					.1	.1	4.2	.3	.2	.1		
16					.1	.1	3.6	.2	.2	.1		
17					.1	.1	2.7	.2	.2	.1		
18					.1	.1	2.0	.3	.2	.1		
19					.1	.1	1.6	.2	.2	.1		
20					.1	.1	1.4	.2	.1	.1		
21					.1	.1	1.2	.2	.1	.1		
22					.1	.1	1.0	.3	.1	.1		
23					.1	.1	1.0	.3	.1	.1		
24					.1	.1	1.0	.3	.1	.1		
25					.1	.1	.8	.3	.2	0		
26					.1	.1	.7	.2	.2	0		
27					.1	.1	.6	.2	.2	0		
28					.1	.1	.6	.2	.2	0		
29					-----	.1	.5	.2	.2	0		
30					-----	.1	.5	.2	.2	0		
31					-----	.1	-----	.5	-----	0		
Total	0	0	0	0	3.7	3.1	64.8	9.6	5.4	2.9	0	0
Mean	0	0	0	0	0.13	0.10	2.16	0.31	0.18	0.09	0	0
Ac-ft	0	0	0	0	7.3	6.1	129	19	11	5.8	0	0
(†)	-	-	4.1	1.8	3.0	3.6	7.7	0.1	0	1.2	0	0.6
Calendar year 1964	Max	-	Min	-	Mean	-	Ac-ft	-				
Water year 1964-65	Max	6.5	Min	0	Mean	0.25	Ac-ft	178				

† Precipitation, in inches.

11-150. Sweetwater River near Descanso, Calif.

Location.--Lat 32°50'05", long 116°37'20", in NW¼SE¼ sec.25, T.15 S., R.3 E., 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.

Records available.--October 1905 to September 1927, October 1956 to September 1965. 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 September 1965.

Gage.--Water-stage recorder on river. Datum of gage is 3,269.24 ft above mean sea level, datum of 1929. Prior to June 25, 1927, staff gages at several sites within 0.1 mile upstream at various datums. Water-stage recorder on concrete diversion.

Average discharge (creek only).--31 years, 11.6 cfs (8,400 acre-ft per year); median of yearly mean discharges, 6.6 cfs (4,800 acre-ft per year).

(combined).--9 years, 1.97 cfs (1,430 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 415 cfs Apr. 10 (gage height, 5.05 ft); no flow Oct. 1 to Dec. 26, Dec. 30 to Jan. 3, July 3 to Sept. 30.

1905-27, 1956-65: Maximum discharge, 11,200 cfs Feb. 16, 1927 (gage height, 13.2 ft, from floodmark, site and datum then in use), on basis of slope-area measurement of maximum flow; no flow for many days in most years.

(combined).--Maximum discharge during year, 415 cfs Apr. 10; no flow Oct. 1 to Dec. 26, Dec. 30 to Jan. 3, July 3 to Sept. 30. 1956-65: Maximum discharge, 1,290 cfs Apr. 3, 1958; no flow for many days in each year.

Remarks.--Records good. No regulation above station. Sweetwater River diversion diverts about 0.3 mile above station for irrigation below. For records of combined discharge of river and diversion, see following page.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 11-16)

2.2	0	3.0	20
2.3	.2	3.5	61
2.4	.8	3.9	114
2.5	2.1	4.2	174
2.7	6.4		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0	.2	.1	2.8	2.6	0.4	.1		
2			0	0	.2	.1	3.5	2.4	.6	.1		
3			0	0	.2	.1	5.2	2.4	.7	0		
4			0	.1	.2	.1	2.6	2.4	.5	0		
5			0	.1	.2	.1	8.7	2.2	.4	0		
6			0	.1	2.5	.1	7.3	2.2	.4	0		
7			0	.3	1.6	.1	5.5	2.1	.2	0		
8			0	.2	.5	.1	10	2.0	.3	0		
9			0	.2	.4	.1	50	2.0	.2	0		
10			0	.2	.3	.1	161	2.0	.2	0		
11			0	.2	.2	.3	59	2.1	.2	0		
12			0	.2	.2	.6	28	1.8	.2	0		
13			0	.2	.2	.4	15	2.0	.2	0		
14			0	.2	.2	.2	14	2.0	.2	0		
15			0	.2	.2	.4	14	2.0	.2	0		
16			0	.2	.2	.6	14	1.4	.2	0		
17			0	.2	.2	.4	12	1.1	.2	0		
18			0	.2	.2	.3	9.5	.8	.1	0		
19			0	.2	.2	.2	8.8	.5	.2	0		
20			0	.4	.2	.2	8.0	.4	.2	0		
21			0	.3	.2	.4	7.0	.3	.2	0		
22			0	.2	.2	.4	6.0	.4	.2	0		
23			0	.2	.1	.4	5.2	.9	.2	0		
24			0	.4	.1	.4	4.7	1.5	.1	0		
25			0	.3	.1	.5	4.0	1.1	.2	0		
26			0	.2	.1	.2	3.4	1.0	.2	0		
27			.1	.2	.1	.2	3.2	.7	.2	0		
28			.2	.2	.1	.4	2.7	.6	.2	0		
29			.1	.2	-----	.4	2.6	.5	.2	0		
30			0	.2	-----	.2	2.6	.4	.1	0		
31			0	.2	-----	1.2	-----	.3	-----	0		
Total	0	0	0.4	6.0	9.3	9.3	480.3	44.1	7.6	0.2	0	0
Mean	0	0	0.01	0.19	0.33	0.30	16.0	1.42	0.25	0.006	0	0
Ac-ft	0	0	0.8	12	18	18	953	87	15	0.4	0	0

Calendar year 1964 Max 9.7 Min 0 Mean 0.25 Ac-ft 180
Water year 1964-65 Max 161 Min 0 Mean 1.53 Ac-ft 1,100

Peak discharge (base, 100 cfs).--Apr. 10 (0100 hrs) 415 cfs (5.05 ft).

11-150. Sweetwater River near Descanso, Calif.--Continued.

Combined discharge, in cubic feet per second, of Sweetwater River and Sweetwater River Diversion
near Descanso, Calif., water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0	.2	.1	2.8	2.9	.9	.1		
2			0	0	.2	.1	3.6	2.7	1.1	.1		
3			0	0	.2	.1	5.3	2.7	1.2	0		
4			0	.1	.2	.1	2.6	2.8	.9	0		
5			0	.1	.2	.1	8.7	2.6	.8	0		
6			0	.1	2.5	.1	7.3	2.6	.8	0		
7			0	.3	1.6	.1	5.5	2.5	.6	0		
8			0	.2	.5	.1	10	2.4	.7	0		
9			0	.2	.4	.1	50	2.4	.6	0		
10			0	.2	.3	.1	161	2.4	.6	0		
11			0	.2	.2	.3	59	2.5	.5	0		
12			0	.2	.2	.6	28	2.2	.4	0		
13			0	.2	.2	.4	15	2.4	.2	0		
14			0	.2	.2	.2	14	2.3	.2	0		
15			0	.2	.2	.4	14	2.3	.2	0		
16			0	.2	.2	.6	14	1.6	.2	0		
17			0	.2	.2	.4	12	1.3	.2	0		
18			0	.2	.2	.3	9.9	1.0	.1	0		
19			0	.2	.2	.2	9.2	.8	.2	0		
20			0	.4	.2	.2	8.4	.8	.2	0		
21			0	.3	.2	.4	7.4	.7	.2	0		
22			0	.2	.2	.4	6.4	.8	.2	0		
23			0	.2	.1	.4	5.6	1.3	.2	0		
24			0	.4	.1	.4	5.1	1.9	.1	0		
25			0	.3	.1	.5	4.4	1.5	.2	0		
26			0	.2	.1	.2	3.8	1.3	.2	0		
27			.1	.2	.1	.2	3.6	1.0	.2	0		
28			.2	.2	.1	.4	3.0	.8	.2	0		
29			.1	.2	-----	.4	2.9	.7	.2	0		
30			0	.2	-----	.2	2.9	.7	.1	0		
31		-----	0	.2	-----	1.2	-----	.7	-----	0		-----
Total	0	0	0.4	6.0	9.3	9.3	485.4	54.6	12.4	0.2	0	0
Mean	0	0	0.01	0.19	0.33	0.30	16.2	1.76	0.41	0.006	0	0
Ac-ft	0	0	0.8	12	18	18	963	108	24	0.4	0	0

Calendar year 1964 Max 9.9 Min 0 Mean 0.32 Ac-ft 229

Water year 1964-65 Max 161 Min 0 Mean 1.58 Ac-ft 1,140

Peak discharge (base, 100 cfs).--Apr. 10 (0100 hrs) 415 cfs.

11-155, Sweetwater River at Loveland Dam, near Alpine, Calif.

Location.--Lat 32°46'54", long 116°47'35", in SE 1/4 SW 1/4 sec. 17, T. 16 S., R. 2 E., on upstream face near center of Loveland Dam, 4 miles southwest of Alpine.

Drainage area.--98.1 sq mi.

Records available.--October 1944 to September 1965.

Gage.--Staff gage read once daily. Datum of gage is 1,215 ft above mean sea level.

Average discharge.--21 years, 4.45 cfs (3,220 acre-ft per year); median of yearly mean discharges, 1.2 cfs (900 acre-ft per year).

Remarks.--Records of discharge represent all water reaching Loveland Reservoir, including precipitation on the reservoir. Discharge computed on the basis of records of storage, release (draft), spill, leakage, and evaporation. Evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using a coefficient of 0.66, excepting the period October 1960 to June 1963, when the mass-transfer method was used, and prior to October 1960 when a coefficient of 0.80 was used. Area and capacity tables for the reservoir are dated April 1946. Loveland Dam was completed in July 1945; storage began in March 1945. Capacity of reservoir at spillway level (gage height, 140.00 ft), 25,387 acre-ft. Dead storage, 125 acre-ft below lowest outlet at gage height -1.25 ft, included in these records. One small diversion for irrigation. Water is released down Sweetwater River to Sweetwater Reservoir as required.

Cooperation.--Records of stage, draft and spill plus leakage furnished by California Water & Telephone Co.

Monthly discharge, water year October 1964 to September 1965

Month	Elevation (feet)†	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Evapo- ration (acre- feet)	Spill plus leakage (acre- feet)	Discharge (acre- feet)
	Lake Loveland						
October.....	1,251.89	1,372	-15	0	24	0	9
November.....	1,251.67	1,357	0	0	11	0	11
December.....	1,251.67	1,357	+9	0	10	0	19
Calendar year 1964.....	-	-	-49	0	244	0	195
January.....	1,251.80	1,366	+2	0	9	0	11
February.....	1,251.83	1,368	+3	0	12	0	15
March.....	1,251.88	1,371	+1	0	13	0	14
April.....	1,251.90	1,372	+762	0	20	0	782
May.....	1,261.64	2,134	+1	0	32	0	33
June.....	1,261.65	2,135	-22	0	30	0	8
July.....	1,261.41	2,113	-47	0	35	0	-12
August.....	1,260.89	2,066	-54	0	38	0	-16
September.....	1,260.28	2,012	-32	0	25	0	-7
October.....	1,259.91	1,980	-	-	-	-	-
Water year 1964-65.....	-	-	+608	0	259	0	867

† On first day of month.

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 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.

SWEETWATER RIVER BASIN

11-165, Sweetwater River at Sweetwater Dam, Calif.

Location.--Lat 32°41'20", long 117°00'35", in La Nacion Grant, at Sweetwater Dam, 6 miles east of National City, San Diego County, and 8 miles upstream from mouth.

Drainage area.--182 sq mi.

Records available.--October 1887 to September 1965.

Gage.--Staff gage read once daily. Datum of gage is 149.12 ft above mean sea level, datum of 1929.

Remarks.--Records of total inflow represent all water reaching Sweetwater Reservoir, including precipitation on reservoir and supplemental Colorado River water delivered through aqueduct of San Diego County Water Authority. Total inflow computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Records of net inflow exclude supplemental water from Colorado River. Monthly evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using coefficient of 0.80. Area and capacity tables for reservoir are dated December 1947. Capacity of reservoir at spillway level (gage height, 89.70 ft), 27,690 acre-ft. Dead storage, 4 acre-ft below lowest outlet at gage height 19.7 ft, included in these records. Diversions for irrigation. Regulation at Loveland Reservoir (see p. 93). Water is released as required for irrigation and domestic use in Chula Vista, National City, and contiguous areas.

Cooperation.--Records furnished by California Water & Telephone Co.

Monthly net inflow, water year October 1964 to September 1965

Month	Gage height (feet)†	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Evaporation (acre-feet)	Spill plus leakage (acre-feet)	Total inflow (acre-feet)	Colorado River water imported (acre-feet)	Net inflow (acre-feet)
	Sweetwater Reservoir								
October.....	43.34	2,622	-120	135	95	0	110	91	19
November.....	42.84	2,502	+12	60	58	0	130	87	43
December.....	42.89	2,514	-40	141	37	0	138	80	58
Calendar year 1964.....	-	-	+184	1,363	1,083	0	2,630	2,125	505
January.....	42.72	2,474	-46	125	46	0	125	98	27
February.....	42.52	2,428	-218	313	55	0	150	169	-19
March.....	41.57	2,210	+43	172	66	0	281	217	64
April.....	41.76	2,253	+226	76	71	0	373	239	134
May.....	42.74	2,479	+21	44	110	0	175	173	2
June.....	42.83	2,500	+194	0	102	0	296	299	-3
July.....	43.64	2,694	-27	28	142	0	143	94	49
August.....	43.53	2,667	-21	23	143	0	145	110	35
September.....	43.44	2,646	+26	42	101	0	169	144	25
October.....	43.55	2,672	-	-	-	0	-	-	-
Water year 64-65.....	-	-	+50	1,159	1,026	0	2,235	1,801	434

† On first day of month.

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.

11-170. Boulder Creek at Cuyamaca Reservoir, near Julian, Calif.

Location.--Lat 32°59'20", long 116°35'10", in NE $\frac{1}{4}$ sec.5, T.14 S., R.4 E., on outlet tower at Cuyamaca Dam, 7 miles south of Julian.

Drainage area.--12.1 sq mi.

Records available.--October 1935 to September 1965 (inflow to Cuyamaca Reservoir; precipitation on water surface deducted October 1939 to September 1944). June 1912 to September 1926, records not equivalent as they represent only outflow (draft) from Cuyamaca reservoir.

Gage.--Staff gage read periodically. Datum of gage is 4,600.2 ft above mean sea level (Helix Irrigation District bench mark).

Average discharge.--25 years (1935-39, 1944-65), 4.09 cfs (2,960 acre-ft per year); median of yearly mean discharges, 1.4 cfs (990 acre-ft per year).

Remarks.--Records of discharge represent all water reaching Cuyamaca 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 a coefficient of 0.80. Area and capacity tables for reservoir are based on a resurvey made in the fall of 1949. Capacity of reservoir at spillway level (gage height, 35.4 ft), 11,540 acre-ft. No dead storage. Small diversions for local use near dam. Water is released down Boulder Creek to El Capitan Reservoir.

Cooperation.--Records of reservoir operation furnished by Helix Irrigation District.

Monthly runoff, water year October 1964 to September 1965

	Gage height (feet)†	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Evapo- ration (acre- feet)	Spill plus leakage (acre- feet)	Discharge (acre- feet)
	Cuyamaca Reservoir						
Sept. 30.....	-	0	-	-	-	-	-
Oct. 31.....	-	0	0	0	0	0	0
Nov. 30.....	-	0	0	0	0	0	0
Dec. 31.....	12.9	31	+31	0	0	0	31
Calendar year 1964.....	-	-	+30	763	98	0	891
Jan. 31.....	13.1	39	+8	0	7	0	15
Feb. 28.....	14.1	99	+60	0	25	0	85
Mar. 31.....	14.1	99	0	0	0	0	0
Apr. 30.....	19.4	1,139	+1,040	0	82	0	1,122
May 31.....	-	0	-1,139	1,100	41	0	2
June 30.....	-	0	0	0	0	0	0
July 31.....	-	0	0	0	0	0	0
Aug. 31.....	-	0	0	0	0	0	0
Sept. 30.....	-	0	0	0	0	0	0
Water year 1964-65.....	-	-	0	1,100	155	0	1,255

† Gage height at 0800 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing 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.

11-205. San Diego River at El Capitan Dam, Calif.

Location.--Lat 32°53'00", long 116°48'25", in NE 1/4 Sec. 7, T.15 S., R.2 E., on outlet tower of El Capitan Dam, 7 miles east of Lakeside.

Drainage area.--188 sq mi.

Records available.--October 1945 to September 1965. October 1936 to September 1945, records not equivalent owing to exclusion of greater part of flow released from Cuyamaca Reservoir.

Gage.--Staff gage read daily. Datum of gage is 553.0 ft above mean sea level.

Remarks.--Records of total inflow represent all water reaching El Capitan Reservoir, including precipitation on reservoir, water passing down Boulder Creek from Cuyamaca Reservoir, and supplemental Colorado River water delivered through aqueduct of San Diego County Water Authority. Total inflow computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Records of net inflow exclude the supplemental Colorado River water. October 1957 to June 1963 and since October 1964 evaporation from reservoir surface computed by mass-transfer method. At other times a Colorado land pan was used. Area and capacity tables for reservoir are based on a resurvey completed in 1955. Dam was completed in 1935. Capacity of reservoir at spillway level (gage height, 197.00 ft), 112,810 acre-ft. Dead storage, 59.2 acre-ft below outlet at gage height 21.0 ft, included in these records. No significant diversion above reservoir. Flow partly regulated by Cuyamaca Reservoir (see preceding page). Water is released as required for municipal use and irrigation.

Cooperation.--Records computed in cooperation with city of San Diego.

Monthly net inflow, water year October 1964 to September 1965									
Month	Gage height (feet)†	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Evapo- ration (acre- feet)	Spill plus leakage (acre- feet)	Total inflow (acre- feet)	Colorado River water included (acre- feet)	Net inflow (acre- feet)
	El Capitan Reservoir								
Sept. 30.....	80.08	8,827	-	-	-	-	-	-	-
Oct. 31.....	79.56	8,654	-173	31	189	0	47	0	47
Nov. 30.....	79.47	8,624	-30	6	120	0	96	0	96
Dec. 31.....	79.52	8,640	+16	1	74	0	91	0	91
Calendar year 1964.....	-	-	-1,279	1,495	1,925	0	2,141	0	2,141
Jan. 31.....	80.43	8,946	+306	2	80	0	388	402	-14
Feb. 28.....	85.49	10,741	+1,795	74	92	0	1,961	1,324	637
Mar. 31.....	87.62	11,545	+804	19	116	0	939	956	-17
Apr. 30.....	94.10	14,209	+2,664	1	153	0	2,818	0	2,818
May 31.....	96.54	15,314	+1,105	3	252	0	1,360	0	1,360
June 30.....	96.09	15,105	-209	2	227	0	20	0	20
July 31.....	95.57	14,868	-237	3	260	0	26	0	26
Aug. 31.....	94.98	14,600	-268	3	317	0	52	0	52
Sept. 30.....	94.47	14,373	-227	3	292	0	68	0	68
Water year 1964-65.....	-	-	+5,546	148	2,172	0	7,866	2,682	5,184

† Gage height at 0800 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of inflow may appear. This arises primarily from the difficulty of computing 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.

11-225. San Diego River near Santee, Calif.

Location.--Lat 32°49'29", long 117°03'17", in Ex Mission San Diego Grant, on right bank in Mission Gorge, 0.2 mile upstream from left tributary and 6 miles west of Santee, San Diego County.

Drainage area.--377 sq mi.

Records available,--May 1912 to December 1915, March 1916 to September 1965. Monthly discharge only for some periods and yearly estimates only for 1924-25, published in WSP 1315-B.

Gage.--Water-stage recorder (digital) and unfinished rubble dam control. Altitude of gage is 180 ft (from topographic map). Prior to Nov. 10, 1920, staff gage at site $\frac{1}{2}$ 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,--52 years, 24.3 cfs (17,590 acre-ft per year); median of yearly mean discharges, 4.6 cfs (3,300 acre-ft per year).

Extremes.--Maximum discharge during year, 460 cfs Apr. 9 (gage height, 4.45 ft); no flow Oct. 1 to Nov. 26, Nov. 29-30, July 4 to Sept. 30.

1912-65: 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, El Capitan (see p. 95, 96) and San Vicente Reservoirs. 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 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1		0	0.2	2.1	1.9	1.5	16	1.7	1.0	0.1		
2		0	.3	1.8	1.0	1.2	14	1.8	.8	.1		
3		0	.4	2.2	.7	1.0	81	2.0	.9	.1		
4		0	.5	2.8	.7	1.2	16	1.7	.9	0		
5		0	.4	2.4	.9	1.3	14	1.7	.7	0		
6		0	.3	2.1	7.6	1.3	7.7	1.3	.9	0		
7		0	.2	3.5	26	1.1	16	1.4	1.0	0		
8		0	.3	3.8	5.8	.8	72	1.1	1.1	0		
9		0	.4	2.2	3.4	1.0	142	1.5	.9	0		
10		0	.5	1.7	2.7	1.2	76	1.7	.8	0		
11			.4	2.2	1.8	1.4	36	1.6	.7	0		
12		0	.4	2.3	1.4	1.5	28	1.1	.6	0		
13		0	.4	1.6	1.2	1.7	18	1.2	.3	0		
14		0	.5	1.1	1.6	1.6	13	.9	.3	0		
15		0	.5	1.1	1.9	1.8	9.8	1.3	.3	0		
16		0	.5	1.5	1.6	2.1	7.2	2.4	.2	0		
17		0	.4	2.1	1.4	1.5	5.9	2.4	.1	0		
18		0	.4	2.0	1.4	.9	5.3	1.1	.1	0		
19		0	.5	1.6	1.8	.7	4.7	2.3	.4	0		
20		0	.6	1.1	1.6	1.0	3.7	1.4	.3	0		
21		0	.8	.9	1.5	1.1	3.2	1.1	.3	0		
22		0	1.0	1.0	1.6	.9	3.0	.9	.4	0		
23		0	1.3	1.8	1.6	.8	3.1	.6	.5	0		
24		0	1.0	2.7	1.2	.7	2.9	.8	.4	0		
25		0	.8	3.8	1.1	.6	3.1	1.5	.4	0		
26		0	1.2	2.4	1.1	.5	3.9	1.0	.3	0		
27		.1	1.8	1.2	1.5	.4	3.2	1.0	.2	0		
28		.1		.8	1.8	.3	3.0	.8	.1	0		
29		0	9.3	.7	-----	.4	2.8	.8	.1	0		
30		0	4.8	1.0	-----	.6	2.3	.6	.1	0		
31		---	3.1	1.7	-----	.9	-----	1.0	-----	0		--- --
TOTAL	0	0	0.2	57.2	59.2	77.8	33.0	616.8	41.7	15.1	0.3	0
MEAN	0	0	0.007	1.85	1.91	2.78	1.07	20.6	1.35	.50	0.01	0
AC-FT	0	0	0.4	113	117	154	65	1,220	83	30	0.6	0

CALENDAR YEAR	1964	MAX	87	MIN	0	MEAN	1.41	AC-FT	1,020
WATER YEAR	1964-65	MAX	142	MIN	0	MEAN	2.47	AC-FT	1,780

LOS PENASQUITOS CREEK BASIN

11-233.4. Los Penasquitos Creek near Poway, Calif.

Location.--Lat 32°56'35", long 117°07'15", in Los Penasquitos Grant, on left bank 1.0 mile downstream from Cypress Creek and 5.5 miles miles southwest of Poway, San Diego County.

Drainage area.--42.1 sq mi.

Records available.--October 1964 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 260 ft (from topographic map).

Extremes.--Maximum discharge during year, 74 cfs Apr. 8 (gage height, 3.55 ft), from rating curve extended above 25 cfs; minimum daily, 0.1 cfs Jan. 5-9.

Remarks.--Records good. 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 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNF	JULY	AUG.	SEPT.
1	0.5	0.5	0.5	0.4	0.3	1.0	1.1	1.2	0.9	0.4	0.4	0.5
2	.5	.5	.5	.2	.3	1.1	1.0	1.2	1.0	.4	.4	.5
3	.5	.5	.4	.2	.4	1.1	1.7	1.3	.5	.4	.5	.4
4	.6	.5	.4	.2	.4	1.1	6.0	1.2	.4	.4	.4	.5
5	.6	.5	.4	.1	.4	1.0	4.0	1.1	.3	.4	.4	.5
6	.6	.6	.4	.1	.6	1.0	2.4	1.2	.3	.4	.4	.5
7	.6	.6	.4	.1	.9	1.0	2.5	1.0	.6	.4	.4	.5
8	.6	.6	.4	.1	.7	.8	13	.7	.7	.4	.5	.4
9	.5	.6	.4	.1	.6	.6	22	.5	.8	.4	.4	.3
10	.5	.6	.4	.4	.6	.6	19	.3	.7	.4	.4	.4
11	.5	.6	.7	.5	.6	.7	9.0	.3	.6	.4	.4	.4
12	.5	.5	.7	1.0	.4	.5	7.2	.4	.5	.4	.4	.3
13	.5	.5	.7	1.1	.3	.4	5.0	.5	.4	.4	.4	.3
14	.5	.4	.6	1.1	.3	.4	3.2	.5	.4	.4	.4	.3
15	.5	.4	.5	1.1	.2	.4	2.3	.7	.4	.4	.4	.3
16	.5	.4	.5	1.2	.2	.4	1.8	.7	.7	.4	.4	.3
17	.4	.4	.6	.7	.2	.3	1.6	.6	1.1	.4	.4	.6
18	.4	.6	.6	.6	.2	.2	1.5	1.0	.9	.4	.5	.5
19	.4	.4	.5	.6	.2	.2	1.3	1.1	.8	.4	.5	.4
20	.4	.4	.5	.6	.2	.2	1.4	1.0	.8	.5	.6	.4
21	.4	.4	.5	.6	.2	.2	1.3	.9	.7	.4	.9	.4
22	.4	.4	.3	.6	.3	.5	1.2	.6	.6	.4	.8	.3
23	.4	.4	.5	.6	.4	1.2	1.2	.4	.5	.4	.5	.3
24	.4	.5	.7	.6	.5	1.4	1.1	.5	.4	.5	.3	.4
25	.4	.5	.7	.5	.5	1.4	1.1	.3	.4	.4	.2	.4
26	.4	.5	.7	.5	.5	1.1	1.1	.3	.4	.4	.3	.5
27	.4	.5	1.0	.5	.5	1.2	1.1	.2	.4	.4	.5	.6
28	.4	.5	.9	.3	.6	.8	1.1	.3	.4	.3	.5	.6
29	.4	.5	.8	.3	-----	.6	1.1	.3	.4	.4	.5	.6
30	.4	.4	.8	.3	-----	.7	1.2	.3	.4	.5	.5	.4
31	.4	-----	.8	.2	-----	1.0	-----	.4	-----	.5	.6	-----
TOTAL	14.5	14.7	17.8	15.4	11.5	23.1	118.5	21.0	17.4	12.7	14.2	12.8
MEAN	0.47	0.49	0.57	0.50	0.41	0.75	3.95	0.68	0.58	0.41	0.46	0.43
AC-FT	29	29	35	31	23	46	235	42	35	25	28	25

Calendar year 1964 MAX - MIN - MEAN - AC-FT -
 Water year 1964-65 MAX 22 MIN 0.10 MFAN 0.80 AC-FT 583

Peak discharge (base, 60 cfs).--Apr. 8 (2230 hrs) 74 cfs (3.55 ft).

11-240. Santa Ysabel Creek at Sutherland Dam, Calif.

Location.--Lat 33°07'05", long 116°47'10", in NW 1/4 sec. 21, T.12 S., R.2 E., 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.

Records available.--December 1912 to September 1928, October 1936 to September 1965. 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). Prior to Oct. 1, 1936, water-stage recorder at same site at various datums. Oct. 1, 1936, to Sept. 30, 1953, at site 1 mile downstream at different datum. Mar. 7 to Nov. 29, 1954, staff gage at present site and datum.

Average discharge.--44 years (1913-28, 1936-65), 17.8 cfs (12,860 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 1964 to September 1965							
Month	Gage height (feet)†	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.....	66.38	2,844	-	-	-	-	-
Oct. 31.....	65.99	2,789	-55	0	61	0	6
Nov. 30.....	65.99	2,789	0	0	34	0	34
Dec. 31.....	66.03	2,794	+5	0	26	0	31
Calendar year 1964.....	-	-	-81	0	629	0	548
Jan. 31.....	66.04	2,796	+2	0	31	0	33
Feb. 28.....	66.28	2,830	+34	0	33	0	67
Mar. 31.....	66.27	2,828	-2	0	34	0	32
Apr. 30.....	71.55	3,637	+809	0	50	0	859
May 31.....	71.59	3,643	+6	0	69	0	75
June 30.....	71.26	3,589	-54	0	66	0	12
July 31.....	70.75	3,506	-83	0	102	0	19
Aug. 31.....	70.08	3,399	-107	0	105	0	-2
Sept. 30.....	69.65	3,331	-68	.1	68	0	0
Water year 1964-65.....	-	-	+487	0.1	679	0	1,166

† Gage height at 0800 hours.

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

11-255. Santa Ysabel Creek near Ramona, Calif.

Location.--Lat 33°06'25", long 116°51'55", in SW 1/4 NE 1/4 sec. 27, T.12 S., R.1 E., on left bank 1.6 miles downstream from Temescal Creek and 4.5 miles north of Ramona.

Drainage area.--112 sq mi.

Records available.--February 1912 to February 1923, October 1943 to September 1965. 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). Prior to Jan. 31, 1916, staff gage at site 0.5 mile upstream at different datum. Jan. 31, 1916, to Feb. 3, 1923, staff gage or water-stage recorder at present site at datum 0.3 ft higher.

Extremes.--Maximum discharge during year, 117 cfs Apr. 10 (gage height, 3.59 ft); no flow for most of year. 1912-23, 1943-65: 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 for parts of some years.

Remarks.--Records fair. Flow regulated since July 1954 by Sutherland Reservoir (see preceding page). Some small diversions above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	0.1	0.9				
2						0	.5	.7				
3						0	2.0	.7				
4						0	2.0	.7				
5						0	2.7	.7				
6						0	6.7	.6				
7						0	4.3	.6				
8						0	8.2	.6				
9						0	27	.5				
10						0	57	.4				
11						0	27	.3				
12						0	22	.3				
13						0	13	.3				
14						0	8.7	.3				
15						0	6.8	.3				
16						0	5.5	.2				
17						0	4.6	.2				
18						0	4.0	.1				
19						0	3.5	.1				
20						0	3.0	0				
21						0	2.8	0				
22						0	2.4	0				
23						0	2.2	0				
24						0	2.0	.1				
25						0	1.7	.1				
26						0	1.4	.2				
27						0	1.2	.1				
28						.1	1.1	0				
29					-----	.1	.9	0				
30					-----	.1	.9	0				
31		-----			-----	.1	-----	0	-----			-----
Total	0	0	0	0	0	0.4	225.2	9.0	0	0	0	0
Mean	0	0	0	0	0	0.01	7.51	0.29	0	0	0	0
Ac-ft	0	0	0	0	0	0.8	447	18	0	0	0	0

Calendar year 1964	Max	1.4	Min	0	Mean	0.02	Ac-ft	12
Water year 1964-65	Max	57	Min	0	Mean	0.64	Ac-ft	466

11-260. Santa Ysabel Creek near San Pasqual, Calif.

Location.--Lat 33°05'10", long 116°54'56", in NE 1/4 sec. 31, T.12 S., R.1 E., on left bank 1.1 miles downstream from Clevenger Canyon and 2 miles east of San Pasqual.

Drainage area.--128 sq mi.

Records available.--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 September 1965. 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 and concrete control since April 1947. Altitude of gage is 510 ft (from topographic map). Dec. 17, 1905, to Sept. 30, 1912, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--13 years (1906-10, 1912, 1957-65), 17.1 cfs (12,380 acre-ft per year); median of yearly mean discharges, 7.5 cfs (5,400 acre-ft per year).

Extremes.--Maximum discharge during year, 171 cfs Apr. 10 (gage height, 2.97 ft); no flow for most of year. 1905-12, 1947-65: 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 p. 99). Small diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.4	0	1.1	2.4
.5	.1	1.3	4.2
.6	.2	1.4	5.7
.7	.4	1.5	8.0
.8	.7	1.7	19
.9	1.1	2.2	76

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	0	0.1	0.4				
2					0	0	.2	.4				
3					0	0	.2	.3				
4					0	0	.1	.3				
5					0	0	.5	.3				
6					.1	0	5.2	.3				
7					.1	0	3.9	.3				
8					0	0	4.4	.2				
9					0	0	26	.2				
10					0	0	76	.2				
11					0	0	27	.2				
12					0	0	19	.2				
13					0	0	11	.2				
14					0	0	7.7	.2				
15					0	.1	6.1	.2				
16					0	.1	5.2	.2				
17					0	0	4.3	.1				
18					0	0	3.7	.1				
19					0	0	3.0	.1				
20					0	0	2.6	.1				
21					0	0	2.3	.1				
22					0	0	2.0	.1				
23					0	0	1.8	.1				
24					0	0	1.6	0				
25					0	0	1.3	0				
26					0	0	1.0	0				
27					0	0	.9	0				
28					0	0	.7	0				
29					-----	0	.6	0				
30					-----	0	.4	0				
31					-----	.1	-----	0	-----			-----
Total	0	0	0	0	0.2	0.3	218.8	4.8	0	0	0	0
Mean	0	0	0	0	0.007	0.01	7.29	0.15	0	0	0	0
Ac-ft	0	0	0	0	0.4	0.6	434	9.5	0	0	0	0

Calendar year 1964	Max	0.2	Min	0	Mean	0.01	Ac-ft	11
Water year 1964-65	Max	76	Min	0	Mean	0.61	Ac-ft	444

11-270, Guejito Creek near San Pasqual, Calif.

Location.--Lat 33°06'57", long 116°57'08", in NW 1/4 sec. 23, T.12 S., R.1 W., 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.

Records available.--December 1946 to September 1965.

Gage.--Water-stage recorder (digital) and concrete control. Altitude of gage is 560 ft (from topographic map).

Average discharge.--18 years (1947-65), 0.93 cfs (673 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

Extremes.--Maximum discharge during year, 125 cfs Apr. 10 (gage height, 3.02 ft); no flow for most of year.

1946-65: Maximum discharge, 1,660 cfs Apr. 3, 1958 (gage height, 5.83 ft), from rating curve extended above 440 cfs on basis of slope-area measurement of maximum flow; no flow at times in most years.

Remarks.--Records good. No regulation above station. Diversion for irrigation about a quarter of a mile upstream.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.1	0	1.8	7.6
.2	.1	2.0	12
.5	.7	2.2	19
1.0	2.4	2.4	32
1.5	4.7		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1					0	0	.2	0.1				
2					0	0	.2	.1				
3					0	0	.5	.1				
4					0	0	.4	.1				
5					0	0	.5	.1				
6					0	0	.3	.1				
7					.1	0	.2	.1				
8					.1	0	.8	.1				
9					.1	0	3.8	.1				
10					.1	0	28	.1				
11					0	0	5.2	.1				
12					0	0	2.7	.1				
13					0	0	1.4	.1				
14					0	0	.8	.1				
15					0	.1	.5	.1				
16					0	.1	.4	.1				
17					0	.1	.3	.1				
18					0	.1	.2	.1				
19					0	.1	.1	.1				
20					0	.1	.1	0				
21					0	.1	.1	0				
22					0	0	.1	0				
23					0	0	.1	0				
24					0	0	.1	0				
25					0	0	.1	0				
26					0	0	.1	0				
27					0	0	.1	0				
28					0	0	.1	0				
29						0	.1	0				
30						0	.1	0				
31		-----				0	-----	0	-----			
TOTAL	0	0	0	0	0.4	0.7	47.6	1.9	0	0	0	0
MEAN	0	0	0	0	0.01	0.02	1.59	0.06	0	0	0	0
AC-FT	0	0	0	0	0.8	1.4	94	3.8	0	0	0	0

CALENDAR YEAR 1964 MAX 1.8 MIN 0 MEAN 0.04 AC-FT 31
 WATER YEAR 1964-65 MAX 28 MIN 0 MEAN 0.14 AC-FT 100

Peak discharge (base, 30 cfs).--Apr. 10 (0300 hrs) 125 cfs (3.02 ft).

11-285. Santa Maria Creek near Ramona, Calif.

Location.--Lat 33°03'08", long 116°56'41", in SE¹₄SE¹₄ sec.11, T.13 S., R.1 W., on left bank 3.75 miles northwest of Ramona and 4.6 miles upstream from mouth.

Drainage area.--57.6 sq mi.

Records available.--November 1912 to September 1920, October 1946 to September 1965.

Gage.--Water-stage recorder and concrete control since October 1946. Datum of gage is 1,294.44 ft above mean sea level, datum of 1927. Prior to Oct. 1, 1946, at datum 1.78 ft lower.

Average discharge.--26 years (1913-20, 1946-65), 3.97 cfs (2,870 acre-ft per year); median of yearly mean discharges, 0.1 cfs (72 acre-ft per year).

Extremes.--Maximum discharge during year, 15 cfs Apr. 12 (gage height, 1.62 ft); no flow for most of year.

1912-20, 1946-65: 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. City of Ramona pumps water from stream above station for municipal supply.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 10.....4.0
11.....1.2
12.....7.5
13.....1.2
14......2

Month	Cfs-days	Maximum	Minimum	Mean	acre-feet
April 1965.....	14.1	-	-	0.47	28
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	7.5	0	.04	28

Peak discharge (base, 20 cfs).--No peak above base.

Note.--Flow occurred only on days listed above.

11-290. San Dieguito River near San Pasqual, Calif.

Location.--Lat 33°04'00", long 117°02'05", in San Bernardo Grant, on right bank 1.5 miles downstream from Bach Creek, 4.5 miles south-east of Escondido, and 5 miles west of San Pasqual, San Diego County.

Drainage area.--249 sq mi.

Records available.--April 1947 to April 1956 (irrigation seasons only), May 1956 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 325 ft (from topographic map).

Extremes.--No flow during year.

1956-65: Maximum discharge, about 3,600 cfs Apr. 3, 1958 (gage height, 7.35 ft), based on field estimate of maximum flow; no flow in most months each year.

Remarks.--No flow since May 13, 1958. Flow regulated since July 1954 by Sutherland Reservoir (see p. 99). Diversions for irrigation and pumping from wells along river in San Pasqual Valley above station.

SAN DIEGUITO RIVER BASIN

11-300. San Dieguito River at Lake Hodges, Calif.

Location.--Lat 33°02'48", long 117°07'33", in NE 1/4 sec. 18, T.13 S., R.2 W., on right bank 800 ft upstream from Lake Hodges Dam and 6.2 miles southwest of Escondido.

Drainage area.--303 sq mi.

Records available.--January 1916 to September 1965. Published as "near Bernardo" prior to October 1920 and as "near Escondido" October 1920 to September 1925.

Gage.--Staff gage read once daily. Datum of gage is 200.0 ft above mean sea level. Prior to January 1919, at different datum (prior to completion of dam).

Remarks.--Records of total inflow represent all the water reaching Lake Hodges, including precipitation on the lake and supplemental water from Colorado River delivered through aqueduct of San Diego County Water Authority. Total inflow computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Records of net inflow exclude supplemental water from Colorado River. Area and capacity tables for lake are based on a resurvey in 1948. Evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using a coefficient of 0.80, excepting the period October 1957 to June 1963, when the mass-transfer method was used. Lake Hodges Dam was completed and storage began Feb. 1, 1919. Capacity of lake at spillway level (gage height, 115.00 ft), 33,550 acre-ft. Dead storage, 1,160 acre-ft below lowest outlet at gage height 54.0 ft, included in these records. Water drawn from Lake Hodges passes through a conduit to San Dieguito re-regulating reservoir, from which it is released as required for municipal use. Flow regulated since July 1954 by Sutherland Reservoir (see p. 99). Diversions for irrigation above Lake Hodges.

Cooperation.--Records computed in cooperation with city of San Diego.

Monthly net inflow, water year October 1964 to September 1965

Month	Gage height (feet)†	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Evaporation (acre-feet)	Spill plus leakage (acre-feet)	Total inflow (acre-feet)	Colorado River water included (acre-feet)	Net inflow (acre-feet)
Lake Hodges									
Sept. 30.....	62.87	2,575	-	-	-	-	-	-	-
Oct. 31.....	62.80	2,561	-14	849	69	0	904	932	-28
Nov. 30.....	65.20	3,054	+493	382	43	.1	918	897	21
Dec. 31.....	63.28	2,656	-398	482	32	.1	116	54	62
Calendar year 1964.....	-	-	-827	8,805	819	2.0	8,797	9,097	-300
Jan. 31.....	61.31	2,275	-381	377	33	.1	29	30	-1
Feb. 28.....	62.28	2,460	+185	381	42	.1	608	565	43
Mar. 31.....	59.35	1,924	-536	501	50	0	15	4	11
Apr. 30.....	57.86	1,682	-242	336	53	0	147	23	124
May 31.....	56.80	1,525	-157	81	65	0	-11	0	-11
June 30.....	56.06	1,420	-105	30	61	0	-14	0	-14
July 31.....	54.83	1,259	-161	77	74	0	-10	0	-10
Aug. 31.....	54.28	1,191	-68	0	76	0	8	0	8
Sept. 30.....	53.92	1,148	-43	0	50	0	7	0	7
Water year 1964-65.....	-	-	-1,427	3,496	648	0.4	2,717	2,505	212

† Gage height at 0800 hours.

Note.--For months when inflow to the lake 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.

11-315. Agua Caliente Creek near Warner Springs, Calif.

Location--Lat 33°17'20", long 116°39'08", in San Jose del Valle Grant, on left bank 60 ft upstream from highway bridge, 1.2 miles upstream from Canada Verde Creek and 1.2 miles northwest of Warner Springs, San Diego County.

Drainage area--19.0 sq mi.

Records available--February 1961 to September 1965.

Gage--Water-stage recorder. Altitude of gage is 2,950 ft (from topographic map).

Extremes--Maximum discharge during year, 79 cfs Apr. 10 (gage height, 3.74 ft); no flow Oct. 1 to Mar. 31, July 7 to Sept. 30.
1961-65: Maximum discharge, 88 cfs Mar. 6, 1962 (gage height, 3.76 ft); maximum gage height, 3.97 ft Apr. 1, 1964; 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0.2	0.2	0.1	0.1		
2							17	.1	.1	.1		
3							10	.1	.1	.1		
4							6.0	.1	.1	.1		
5							5.7	.1	.1	.1		
6							2.1	.1	.1	.1		
7							1.0	.1	.1	0		
8							3.8	.1	.1	0		
9							14	.1	.1	0		
10							28	.1	.1	0		
11							7.0	.1	.1	0		
12							5.1	.1	.1	0		
13							5.7	.1	.1	0		
14							8.0	.1	.1	0		
15							6.8	.1	.1	0		
16							4.9	.1	.1	0		
17							3.4	.1	.1	0		
18							2.6	.1	.1	0		
19							2.1	.1	.1	0		
20							1.4	.1	.1	0		
21							1.0	.1	.1	0		
22							.7	.1	.1	0		
23							.6	.1	.1	0		
24							.5	.1	.1	0		
25							.4	.1	.1	0		
26							.4	.1	.1	0		
27							.3	.1	.1	0		
28							.3	.1	.1	0		
29							.2	.1	.1	0		
30							.2	.1	.1	0		
31								.1		0		
Total	0	0	0	0	0	0	139.4	3.2	3.0	0.6	0	0
Mean	0	0	0	0	0	0	4.65	0.10	0.10	0.02	0	0
Ac-ft	0	0	0	0	0	0	276	6.3	6.0	1.2	0	0

Calendar year 1964 Max 27 Min 0 Mean 0.22 Ac-ft 163
Water year 1964-65 Max 28 Min 0 Mean 0.40 Ac-ft 290

Peak discharge (base, 50 cfs)--Apr. 10 (0230 hrs) 79 cfs (3.74 ft).

SAN LUIS REY RIVER BASIN

11-330. 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, 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, San Diego County.

Drainage area.--25.5 sq mi.

Records available.--January 1913 to November 1915, October 1956 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 2,800 ft (from topographic map). Prior to Oct. 1, 1956, at different datum.

Average discharge.--10 years (1913-15, 1957-65), 6.64 cfs (4,810 acre-ft per year); median of yearly mean discharges, 1.7 cfs (1,200 acre-ft per year).

Extremes.--Maximum discharge during year, 405 cfs Apr. 9 (gage height, 7.36 ft); no flow for some days.

1913-15, 1956-65: Maximum discharge, 2,060 cfs Mar. 16, 1958 (gage height, 10.77 ft), from rating curve extended above 400 cfs on basis of slope-area measurement of maximum flow; no flow at times in most years.

Remarks.--Records fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 8-27, Apr. 6-10, May 27 to Sept. 30)

4.3	0	4.9	9.8
4.4	.2	5.2	23
4.5	1.0	5.5	44
4.6	2.2	6.0	94
4.8	6.6	6.5	169

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.1	0.1	0	0.2	0.1	0.2	20	3.7	0.6	0.5	0.3	0.1
2	.1	0	0	.1	.1	.2	39	3.5	.6	.5	.3	.1
3	0	.1	0	.1	.1	.1	40	3.3	.6	.4	.3	.1
4	0	0	0	.1	.1	.2	27	3.4	.6	.4	.3	.2
5	0	0	0	.1	.1	.2	38	3.3	.6	.4	.3	.2
6	0	0	.1	.2	3.6	.2	15	3.2	.5	.4	.2	.2
7	0	0	.1	.1	6.3	.3	15	3.0	.4	.3	.2	.2
8	.1	0	.1	.1	3.2	.3	44	2.8	.5	.4	.2	.2
9	0	0	.1	.1	1.3	.4	83	2.8	.5	.4	.3	.1
10	0	.1	.1	.1	1.3	.3	118	2.6	.5	.4	.3	.1
11	0	.1	.1	.2	.5	.4	42	2.5	.5	.4	.2	.1
12	0	0	.1	.1	.3	.4	29	2.3	.5	.4	.2	.1
13	0	.1	.1	.1	.2	.6	27	2.3	.5	.4	.2	.1
14	0	0	.1	.2	.2	.9	33	2.1	.5	.4	.3	.1
15	.1	.1	.1	.1	.2	.8	31	1.9	.6	.4	.2	.1
16	.1	0	.1	.1	.1	2.2	25	1.6	.6	.5	.2	.2
17	.1	.1	.1	.1	.2	1.3	22	1.3	.6	.4	.3	.2
18	.1	.1	.1	.2	.2	1.0	20	1.2	.6	.4	.3	.3
19	0	.1	.1	.1	.2	.7	16	1.0	.6	.4	.3	.3
20	.1	.1	0	.1	.2	.7	15	1.0	.7	.3	.2	.2
21	.1	.1	0	.1	.1	.7	13	.8	.6	.3	.2	.2
22	0	.1	0	.1	.2	.7	10	.9	.6	.3	.2	.2
23	.1	.1	0	.1	.2	.6	8.8	1.0	.6	.3	.2	.1
24	.1	.1	0	.1	.1	.7	7.4	1.3	.6	.3	.2	.1
25	.1	.1	0	.1	.2	.8	6.6	1.4	.6	.3	.2	.1
26	.1	.1	0	.1	.2	1.0	5.9	1.1	.6	.3	.2	.2
27	.1	0	.1	.1	.2	.8	5.3	.8	.5	.3	.1	.2
28	.1	0	3.9	.1	.2	.8	4.8	.6	.5	.3	.1	.2
29	0	0	1.9	.1	-----	.7	4.3	.6	.4	.3	.1	.2
30	.1	0	.2	.1	-----	.6	4.0	.6	.4	.4	.1	.1
31	.1	-----	.2	.1	-----	1.1	-----	.7	-----	.3	.1	-----
TOTAL	1.7	1.6	7.7	3.6	19.9	19.9	769.1	58.6	16.5	11.5	6.8	4.8
MEAN	0.06	0.05	0.25	0.12	0.71	0.64	25.6	1.89	0.55	0.37	0.22	0.16
AC-FT	3.4	3.2	15	7.1	39	39	1,530	116	33	23	13	9.5

CALENDAR YEAR 1964 MAX 63 MIN 0 MEAN 1.12 AC-FT 813
WATER YEAR 1964-65 MAX 118 MIN 0 MEAN 2.53 AC-FT 1,830

Peak discharge (base, 100 cfs).--Apr. 9 (2345 hrs) 405 cfs (7.36 ft).

11-350. San Luis Rey River at Lake Henshaw, near Mesa Grande, Calif.

Location.--Lat 33°14'20", long 116°45'43", in Valle de San Jose Grant, at Henshaw Dam, 4 miles north of Mesa Grande, San Diego County.

Drainage area.--206 sq mi.

Records available.--October 1922 to September 1965. October 1911 to September 1922 at site 1 mile downstream published as "near Mesa Grande"; records not equivalent owing to change in natural water losses resulting from creation of Lake Henshaw. Monthly net runoff only October to December 1922, published in WSP 1315-B.

Gage.--Staff gage read once daily. Datum of gage is 2,620 ft above mean sea level. Prior to June 14, 1912, staff gage at same site at different datum. June 14, 1912, to Oct. 7, 1922, water-stage recorder at site 1 mile downstream at different datum.

Average discharge.--11 years (1911-22), 59.6 cfs (43,160 acre-ft per year), below damsite; 43 years (1922-65), 25.0 cfs (18,120 acre-ft per year), discharge at Lake Henshaw, exclusive of 90 percent of precipitation on lake surface; median of yearly mean discharges, 14 cfs (10,400 acre-ft per year).

Remarks.--Records of net discharge represent all water reaching Lake Henshaw, exclusive of 90 percent of rainfall on water surface of lake and supplemental water obtained by pumping ground water from lake bed. Net discharge computed on basis of records of storage, release (draft), spill, leakage, evaporation, precipitation, and ground-water pumpage. Monthly evaporation from lake surface computed on basis of evaporation from a floating pan using a coefficient of 0.87, except during periods when winds swamp the floating pan. Net evaporation for these periods is computed on basis of Colorado land pan using coefficient of 0.80. Storage began on Oct. 7, 1922. Area and capacity tables for lake are based on resurvey made in October 1951. Capacity of lake at spillway level (gage height, 107.00 ft), 194,300 acre-ft. No dead storage. No flow over spillway since dam was completed. Water is released down San Luis Rey River for diversion downstream for irrigation, power, and domestic use. No diversion above Lake Henshaw.

Cooperation.--Records furnished by Vista Irrigation District.

Monthly net discharge, water year October 1964 to September 1965

Month	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Net evapo- ration (acre-feet)†	Spill plus leakage (acre-feet)	Pumped ground water (acre-feet)	Net discharge (acre-feet)
	Lake Henshaw							
Sept. 30.....	38.83	5,370	-	-	-	-	-	-
Oct. 31.....	38.56	5,174	-196	889	247	0	1,031	-91
Nov. 30.....	39.55	5,920	+746	10	-65	0	730	-39
Dec. 31.....	40.46	6,670	+750	3	-72	0	679	2
Calendar year 1964.....	-	-	+102	7,332	2,639	0	10,289	-216
Jan. 31.....	40.94	7,091	+421	185	74	0	706	-26
Feb. 28.....	40.36	6,585	-506	1,103	57	0	643	11
Mar. 31.....	40.44	6,653	+68	643	19	0	737	-7
Apr. 30.....	42.72	8,818	+2,165	304	-154	0	608	1,707
May 31.....	42.21	8,295	-523	424	558	0	440	19
June 30.....	41.82	7,911	-384	181	566	0	412	49
July 31.....	40.28	6,517	-1,394	1,197	586	0	396	-7
Aug. 31.....	38.89	5,414	-1,103	982	543	0	464	-42
Sept. 30.....	38.15	4,886	-528	929	314	0	745	-30
Water year 1964-65.....	-	-	-484	6,850	2,673	0	7,591	1,448

† During the year the amount of precipitation excluded was 1,288 acre-ft.

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.

11-377. Pauma Creek near Pauma Valley, Calif.

Location.--Lat 33°20'10", long 116°58'25", in Pauma Grant, on right bank 0.3 mile downstream from unnamed tributary, and 2.2 miles north of Pauma Valley, San Diego County.

Drainage area.--11.0 sq mi.

Records available.--October 1964 to September 1965.

Gage.--Water-stage recorder; water-stage recorder (digital) and Parshall Flume on diversion. Altitude of gage is 1,240 ft (from topographic map).

Extremes (creek only).--Maximum discharge during year, 68 cfs Apr. 10 (gage height, 3.35 ft); no flow for much of year.
(combined).--Maximum discharge during year, 68 cfs Apr. 10; minimum daily, 0.1 cfs for several days.

Remarks.--Records good. No regulation above station. Pauma Valley Water Co. diverts from a site 0.25 mile upstream. For records of combined discharge of Pauma Creek and Pauma Valley Water Co.'s diversion, see following page.

Rating table (gage height, in feet and discharge, in cubic feet per second)

1.5	0	2.0	3.8
1.6	.1	2.3	10
1.7	.3	2.7	24
1.8	.6	3.0	41
1.9	1.4		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0.4	0.1	0.1	8.1	4.3	0.6	0.1		
2		0	0	.4	.1	.1	24	4.2	.6	.1		
3		0	0	.4	.1	.1	19	4.2	.6	.1		
4		0	0	.5	.1	.1	14	4.2	.5	.1		
5		0	0	.5	.1	.1	26	4.4	.5	.1		
6		0	0	.5	3.2	0	14	4.4	.4	0		
7		0	0	1.6	4.0	0	12	4.0	.4	0		
8		0	0	.7	2.5	0	18	3.6	.4	0		
9		0	0	.5	1.9	0	21	3.4	.4	0		
10		0	0	.4	1.4	0	37	3.4	.3	0		
11		0	0	.4	1.4	.1	20	3.2	.2	0		
12		.1	0	.4	1.4	.3	16	3.2	.2	0		
13		0	0	.4	1.0	.9	13	3.0	.2	0		
14		0	0	.4	.6	.9	13	2.8	.2	0		
15		0	0	.4	.5	1.0	15	1.9	.2	0		
16		0	0	.4	.6	2.2	19	1.4	.3	0		
17		0	0	.3	.6	1.4	22	.9	.3	0		
18		.2	0	.3	.5	.9	21	.8	.2	0		
19		.1	0	.3	.5	.8	21	.8	.2	0		
20		0	0	.3	.4	.6	17	.8	.2	0		
21		0	0	.4	.2	.4	13	.8	.2	0		
22		0	0	.4	.2	.2	12	.8	.2	0		
23		0	0	.3	.2	.2	10	.8	.2	0		
24		0	0	.5	.1	.3	8.3	1.6	.2	0		
25		0	0	.6	.1	.4	7.8	1.2	.2	0		
26		0	0	.5	.1	.4	7.0	.8	.2	0		
27		0	3.8	.3	.1	.5	6.0	.6	.2	0		
28		0	7.6	.1	.1	.6	5.0	.6	.2	0		
29		0	5.2	.1	-----	.6	4.6	.5	.1	0		
30		0	1.9	.1	-----	.3	4.4	.5	.1	0		
31		-----	.7	.1	-----	.8	-----	.6	-----	0		-----
Total	0	0.4	19.2	12.9	22.1	14.3	448.2	67.7	8.7	0.5	0	0
Mean	0	0.01	0.62	0.42	0.79	0.46	14.9	2.18	0.29	0.02	0	0
Ac-ft	0	0.8	38	26	44	28	889	134	17	1.0	0	0

Calendar year 1964 Max - Min - Mean - Ac-ft -
 Water year 1964-65 Max 37 Min 0 Mean 1.63 Ac-ft 1,180

Peak discharge (base, 50 cfs).--Apr. 10 (0030 hrs) 68 cfs (3.35 ft).

11-377. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.4	0.5	1.1	0.8	1.0	8.9	5.4	1.7	0.8	0.4	0.1
2	.2	.4	.5	1.1	.8	1.0	24	5.3	1.7	.8	.3	.1
3	.2	.4	.5	1.0	.8	1.0	20	5.3	1.7	.7	.3	.1
4	.2	.4	.5	1.0	.8	.9	15	5.3	1.6	.6	.3	.1
5	.2	.4	.4	1.0	.8	.9	27	5.5	1.6	.6	.3	.2
6	.2	.4	.4	1.0	3.9	.8	15	5.5	1.5	.4	.2	.4
7	.2	.4	.5	1.9	5.1	1.1	13	5.1	1.5	.4	.2	.4
8	.2	.4	.5	.9	3.2	1.2	19	4.7	1.5	.4	.2	.3
9	.2	.4	.4	.7	2.2	1.1	22	4.4	1.5	.4	.1	.2
10	.2	.5	.4	.5	1.6	1.0	37	4.3	1.4	.4	.1	.2
11	.2	.7	.4	.6	1.6	1.2	20	4.1	1.3	.4	.2	.2
12	.2	.8	.4	.8	1.6	1.2	16	4.2	1.2	.4	.2	.2
13	.2	.6	.4	.8	1.3	1.3	13	4.0	1.2	.4	.1	.2
14	.2	.6	.4	.8	1.2	1.4	13	3.8	1.2	.4	.1	.2
15	.2	.5	.4	.8	1.2	1.5	15	2.9	1.2	.4	.1	.1
16	.3	.5	.4	.8	1.0	2.6	19	2.4	1.3	.4	.1	.2
17	.3	.6	.4	.7	1.0	1.8	22	2.0	1.3	.4	.2	.3
18	.3	1.0	.5	.7	1.1	1.3	21	1.9	1.2	.3	.2	.4
19	.3	.8	.5	.7	1.3	1.2	21	1.9	1.1	.3	.2	.7
20	.3	.6	.5	.7	1.7	1.0	17	1.9	1.1	.3	.2	.6
21	.3	.5	.5	.8	1.4	1.1	14	1.9	1.1	.3	.2	.4
22	.3	.5	.5	.7	1.5	1.0	13	1.9	1.1	.3	.2	.3
23	.3	.5	.5	.7	1.4	1.0	11	1.9	1.1	.3	.2	.3
24	.3	.4	.5	.9	1.3	1.1	9.3	2.7	1.1	.3	.2	.3
25	.3	.4	.5	1.0	1.1	1.2	8.8	2.3	1.1	.3	.1	.3
26	.3	.5	.5	.9	1.1	1.2	8.0	1.9	1.1	.3	.1	.3
27	.3	.5	4.2	.9	1.1	1.0	6.7	1.7	1.1	.3	.1	.3
28	.3	.5	7.7	.9	1.1	1.0	5.4	1.7	1.0	.3	.1	.4
29	.3	.5	5.3	.9	-----	1.0	5.4	1.6	.9	.4	.1	.3
30	.3	.5	2.2	.8	-----	1.1	5.5	1.6	.8	.9	.1	.2
31	.3	-----	1.4	.8	-----	1.8	-----	1.7	-----	.6	.1	-----
Total	7.8	15.6	32.7	26.9	43.0	37.0	465.0	100.8	38.2	13.5	5.5	8.3
Mean	0.25	0.52	1.05	0.87	1.54	1.19	15.5	3.25	1.27	0.44	0.18	0.28
Ac-ft	15	31	65	53	85	73	922	200	76	27	11	16

Calendar year 1964 Max - Min - Mean - Ac-ft -
 Water year 1964-65 Max 37 Min 0.1 Mean 2.18 Ac-ft 1,570

Peak discharge (base, 50 cfs)--Apr. 10 (0030 hrs) 68 cfs.

11-400. San Luis Rey River at Monserate Narrows, near Pala, Calif.

Location.--Lat 33°20'15", long 117°08'10", in NE $\frac{1}{4}$ sec.6, T.10 S., R.2 W., on left bank 4 miles southwest of Pala and 6 miles northeast of Bonsall.

Drainage area.--373 sq mi.

Records available.--December 1935 to March 1938 (fragmentary), April 1938 to November 1941, October 1946 to September 1965.

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.--22 years (1938-41, 1946-65), 7.71 cfs (5,580 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

Extremes.--No flow during year.

1935-41, 1946-65: Maximum gage height, 8.7 ft Feb. 7, 1937, datum then in use (discharge not determined); no flow at times in 1948-65.

Remarks.--No flow since Apr. 30, 1959. Flow regulated by Lake Henshaw (see p. 107). Several diversions above station.

11-410. San Luis Rey River near Bonsall, Calif.

Location.--Lat 33°15'13", long 117°14'48", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.1, T.11 S., R.4 W., on left bank 0.7 mile downstream from bridge on State Highway 76 and 2.8 miles southwest of Bonsall.

Drainage area.--512 sq mi.

Records available.--July 1916 to September 1918 (gage heights and discharge measurements only), October 1929 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 108.10 ft above mean sea level, datum of 1929. July 1916 to September 1918, staff gages at site 0.8 mile upstream at different datums. October 1929 to Nov. 15, 1945, water-stage recorder at present site at datum 3.44 ft higher and Nov. 16, 1945, to Sept. 16, 1946, at datum 1.44 ft higher.

Average discharge.--36 years (1929-65), 19.4 cfs (14,050 acre-ft per year); median of yearly mean discharges, 4.6 cfs (3,300 acre-ft per year).

Extremes.--No flow during year.

1929-65: 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.--No flow since Nov. 21, 1961. Flow regulated by Lake Henshaw (see p. 107). Several diversions above station.

11-420. 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., 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.

Records available.--April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 20 ft (from topographic map). April 1912 to September 1914, staff gage at site three-quarters of a mile upstream at different datum. January 1916, staff gage a quarter of a mile downstream at different datum.

Average discharge.--33 years (1912-14, 1929-41, 1946-65), 16.2 cfs (11,730 acre-ft per year); median of yearly mean discharges, zero.

Extremes.--No flow during year.

1912-14, 1916, 1929-42, 1946-65: Maximum discharge, 95,600 cfs Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in each year.

Remarks.--No flow since Apr. 13, 1958. Flow regulated by Lake Henshaw (see p. 107). Several diversions for irrigation and domestic use above station. Average discharge represents flow to ocean during period of record, regardless of upstream development.

11-424. Temecula Creek near Aguanga, Calif.

Location.--Lat 33°27'33", long 116°55'22", in NE 1/4 SW 1/4 sec. 19, T.8 S., R.1 E., on right bank, 1.6 miles downstream from Long Canyon, and 3.5 miles northwest of Aguanga.

Drainage area.--131 sq mi.

Records available.--August 1957 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 1,590 ft (from topographic map).

Average discharge.--8 years, 2.47 cfs (1,790 acre-ft per year).

Extremes.--Maximum discharge during year, 640 cfs Apr. 10 (gage height, 4.06 ft); no flow Oct. 1 to Jan. 10, Jan. 12-14, July 16 to Sept. 30.

1957-65: Maximum discharge, 3,540 cfs Apr. 3, 1958 (gage height, 6.57 ft), from rating curve extended above 800 cfs; no flow for several months each year.

Remarks.--Records good. No regulation above station. Pumping for irrigation above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 1-16, Mar. 7-17, June 27 to July 25)

0.7	0	1.3	5.2
.8	.1	1.4	8.0
.9	.4	1.5	12
1.0	.9	1.9	42
1.1	1.8	2.6	140
1.2	3.2		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1				0	.5	0.5	2.8	1.9	0.4	0.1		
2				0	.7	.4	35	1.9	.4	.1		
3				0	.5	.4	24	1.8	.4	.1		
4				0	.8	.4	19	1.8	.4	.1		
5				0	.9	.4	11	1.7	.4	.1		
6				0	1.0	.4	7.4	1.6	.4	.1		
7				0	1.1	.4	5.4	1.2	.4	.1		
8				0	1.0	.4	13	1.0	.3	.1		
9				0	.9	.4	74	1.2	.3	.1		
10				.1	.8	.4	136	1.3	.3	.1		
11				.1	.7	.4	33	1.4	.3	.1		
12				0	.7	.4	23	1.4	.3	.1		
13				0	.7	.5	17	1.0	.3	.1		
14				0	.7	.5	14	1.0	.3	.1		
15				.1	.7	.8	11	.9	.3	.1		
16				.1	.7	.7	10	.7	.3	.1		
17				.1	.7	.4	8.8	.9	.3	0		
18				.1	.7	.4	7.6	.9	.3	0		
19				.1	.6	.4	6.6	.9	.3	0		
20				.1	.6	.4	6.0	.8	.2	0		
21				.1	.6	.4	5.2	.6	.2	0		
22				.1	.6	.4	4.5	.6	.2	0		
23				.1	.6	.4	4.0	.6	.2	0		
24				.2	.6	.3	3.5	.7	.2	0		
25				.3	.6	.3	3.2	.9	.2	0		
26				.4	.5	.3	2.9	.8	.2	0		
27				.4	.5	.3	2.7	.5	.1	0		
28				.4	.5	.3	2.5	.5	.1	0		
29				.4	-----	.3	2.0	.5	.1	0		
30				.4	-----	.3	2.0	.4	.1	0		
31				.4	-----	.5	-----	.4	-----	0		
TOTAL	0	0	0	4.0	19.5	12.8	497.1	31.8	8.2	1.6	0	0
MEAN	0	0	0	0.13	0.70	0.41	16.6	1.03	0.27	0.05	0	0
AC-FT	0	0	0	7.9	39	25	986	63	16	3.2	0	0

CALENDAR YEAR 1964 MAX 28 MIN 0 MEAN 0.83 AC-FT 599
WATER YEAR 1964-65 MAX 136 MIN 0 MEAN 1.58 AC-FT 1,140

Peak discharge (base, 50 cfs).--Apr. 2 (0130 hrs) 115 cfs (2.54 ft); Apr. 10 (0015 hrs) 640 cfs (4.06 ft).

SANTA MARGARITA RIVER BASIN

11-425. Temecula Creek at Vail Dam, Calif.

Location.--Lat 33°29'44", long 116°58'33", in Pauba Grant, at Vail Dam 0.2 mile downstream from Arroyo Seco, and 10 miles east of Temecula, Riverside County.

Drainage area.--320 sq mi.

Records available.--October 1948 to September 1965. 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.W.B. non-recording rain gage one-fourth 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 (6,010 acre-ft per year), see records available; 17 years (1948-65), 3.99 cfs (2,890 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 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 circular, screened ground pan using coefficient of 0.98. Prior to June 1964, a Colorado land pan with a coefficient of 0.77 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 (gage height, 120.00 ft), 49,370 acre-ft. Dead storage, 2.4 acre-ft below lowest outlet at gage height 2.5 ft included in these records. Water is released down Temecula Creek for diversion about 1 mile below dam as required. Monthly precipitation, in inches, from U.S.W.B. non-recording rain gage is as follows: November, 1.53; December, 1.20; January, 0.23; February, 0.80; March, 1.30; April, 6.23; May, 0.08; August, 0.4; September, 1.07; the water year, 12.84.

Monthly discharge, water year October 1964 to September 1965

Month	Elevation (feet)†	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Evapo- ration (acre- feet)	Discharge (acre- feet)
	Vail Lake					
Sept. 30.....	1,383.79	1,516	-	-	-	-
Oct. 31.....	1,383.54	1,485	-31	0	86	55
Nov. 30.....	1,383.69	1,503	+18	0	37	55
Dec. 31.....	1,383.84	1,522	+19	0	23	42
Calendar year 1964.....	-	-	-67	0	777	710
Jan. 31.....	1,383.98	1,539	+17	0	24	41
Feb. 28.....	1,384.16	1,561	+22	0	42	64
Mar. 31.....	1,384.41	1,593	+32	0	39	71
Apr. 30.....	1,389.72	2,351	+758	10	60	828
May 31.....	1,389.34	2,291	-60	0	79	19
June 30.....	1,389.00	2,237	-54	0	85	31
July 31.....	1,388.47	2,156	-81	0	115	34
Aug. 31.....	1,387.82	2,059	-97	0	125	28
Sept. 30.....	1,387.53	2,017	-42	0	85	43
Water year 1964-65.....	-	-	+501	10	800	1,311

† Elevation at 2400 hours.

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.

11-430. Murrieta Creek at Temecula, Calif.

Location.--Lat 33°28'47", long 117°08'35", in Temecula Grant, on right bank 0.4 mile upstream from mouth and 1.0 mile south of Temecula, Riverside County.

Drainage area.--222 sq mi.

Records available.--October 1924 to September 1965. 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).

Prior to Jan. 6, 1931, staff gage and sharp-crested weir at site 0.4 mile downstream at different datum. Jan. 6, 1931, to Dec. 16, 1938, supplemental water-stage recorder and sharp-crested weir at site 0.4 mile downstream at different datum used to record low flows.

Average discharge.--41 years, 8.63 cfs (6,250 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,400 acre-ft per year).

Extremes.--Maximum discharge during year, 555 cfs Apr. 10 (gage height, 3.61 ft); minimum daily, 0.1 cfs for some days.

1930-65: Maximum discharge, 17,500 cfs Jan. 23, 1943 (gage height, 13.82 ft); minimum daily, 0.1 cfs for several days in some years.

Remarks.--Records good. No regulation above station. Pumping above station for irrigation of about 2,500 acres.

Rating table (gage height, in feet, and discharge in cubic feet per second)
(Shifting-control method used Oct. 11, 12, Apr. 9, 10, Sept. 24)

0.2	0.1	.6	3.0	1.3	30
.3	.4	.7	4.7	1.5	46
.4	.9	.9	10	1.8	80
.5	1.8	1.1	18	2.1	130

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.1	0.2
2	.2	.2	.2	.2	.2	.2	.4	.3	.2	.2	.1	.2
3	.2	.2	.2	.2	.2	.2	.4	.3	.2	.2	.1	.2
4	.2	.2	.2	.2	.2	.2	.4	.3	.2	.2	.1	.2
5	.1	.2	.2	.2	.2	.2	.3	.3	.2	.2	.1	.2
6	.1	.2	.2	.2	.3	.2	.3	.3	.2	.2	.1	.2
7	.1	.2	.2	.2	.2	.2	.3	.3	.2	.2	.1	.2
8	.1	.2	.2	.2	.2	.2	.8	.3	.2	.2	.1	.2
9	.1	.2	.2	.2	.2	.2	5.4	.3	.2	.2	.1	.2
10	.1	.2	.2	.2	.2	.2	120	.3	.2	.2	.1	.2
11	.1	.2	.2	.2	.2	.2	4.7	.2	.2	.2	.1	.2
12	.1	.2	.2	.2	.2	.2	2.5	.2	.2	.2	.1	.2
13	.2	.2	.2	.2	.2	.2	1.9	.2	.2	.2	.1	.2
14	.2	.2	.2	.2	.2	.2	1.1	.2	.2	.2	.1	.2
15	.2	.2	.2	.3	.2	.3	.7	.2	.2	.2	.1	.2
16	.2	.2	.2	.3	.2	.2	.5	.2	.2	.2	.1	.2
17	.2	.4	.2	.3	.2	.2	.5	.2	.2	.2	.1	.2
18	.2	.2	.2	.3	.2	.2	.4	.2	.2	.2	.2	.2
19	.2	.2	.2	.3	.2	.2	.4	.2	.2	.2	.2	.2
20	.2	.2	.2	.3	.2	.2	.4	.2	.2	.2	.2	.2
21	.2	.2	.2	.3	.2	.2	.4	.2	.2	.2	.2	.2
22	.2	.2	.2	.2	.2	.2	.4	.2	.2	.2	.1	.2
23	.2	.2	.2	.2	.2	.2	.4	.2	.2	.2	.1	.2
24	.2	.2	.2	.2	.2	.2	.4	.2	.2	.2	.1	.6
25	.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.1	.3
26	.2	.2	.2	.2	.2	.2	.3	.2	.2	.1	.1	.2
27	.2	.2	.3	.2		.2	.3	.2	.2	.1	.2	.2
28	.2	.2	.3	.2	.2	.2	.3	.3	.2	.1	.2	.2
29	.2	.2	.2	.2	-----	.2	.3	.3	.2	.2	.2	.2
30	.2	.2	.2	.2	-----	.2	.3	.2	.2	.1	.1	.2
31		-----	.2	.2	-----	.3	-----	.2	-----	.1	.1	-----
Total	5.4	6.2	6.4	6.9	5.7	6.4	145.2	7.4	6.0	5.7	3.8	6.5
Mean	0.17	0.21	0.21	0.22	0.20	0.21	4.84	0.24	0.20	0.18	0.12	0.22
Ac-ft	11	12	13	14	11	13	288	15	12	11	7.5	13

Calendar year 1964 Max 15 Min 0.1 Mean 3.86 Ac-ft 281
Water year 1964-65 Max 120 Min 0.1 Mean 0.58 Ac-ft 420

Peak discharge (base, 55 cfs).--Apr. 10 (0300 hrs) 555 cfs (3.61 ft).

11-440. Santa Margarita River near Temecula, Calif.

Location.--Lat 33°28'26", long 117°08'30", in Temecula Grant, on left bank at upper end of Temecula Canyon, 0.1 mile downstream from Murrieta Creek and 1.4 miles south of Temecula, Riverside County.

Drainage area.--588 sq mi.

Records available.--January 1923 to September 1965. 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).

Average discharge.--25 years (1923-48), 28.2 cfs (20,420 acre-ft per year), 17 years (1948-65), 8.88 cfs (6,430 acre-ft per year); median of yearly mean discharges (1923-48), 13 cfs (9,400 acre-ft per year); (1948-65), 5.4 cfs (3,900 acre-ft per year).

Extremes.--Maximum discharge during year, 552 cfs Apr. 10 (gage height, 3.95 ft); minimum daily, 1.6 cfs Oct. 8, Aug. 10.

1923-65: Maximum discharge, 25,000 cfs Feb. 16, 1927 (gage height, 14.6 ft), from rating curve extended above 10,000 cfs; minimum, 0.4 cfs July 16, 1925.

Remarks.--Records good. Flow partly regulated since November 1948 by Vail Lake (see p. 112). Pumping above station for irrigation.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	2.1	2.3	2.6	2.7	2.8	3.8	2.8	2.7	2.3	3.8	2.3
2	2.0	2.1	2.3	2.7	2.7	2.8	4.0	2.8	2.7	2.4	2.8	2.3
3	2.0	2.1	2.3	2.7	2.7	2.8	3.5	2.8	2.7	2.4	2.6	2.6
4	1.8	2.1	2.3	2.7	2.6	2.8	3.0	2.8	2.7	2.4	3.3	2.6
5	2.1	2.1	2.4	3.4	2.6	2.7	3.0	2.8	2.7	2.4	2.0	2.6
6	2.4	2.1	2.6	2.6	3.0	2.7	2.8	2.8	2.7	2.4	2.6	2.6
7	1.8	2.0	2.6	2.7	2.7	3.0	3.3	2.8	2.7	2.7	2.3	2.6
8	1.6	1.9	2.7	2.7	2.6	2.7	6.0	2.8	2.7	3.0	3.2	2.0
9	1.9	2.1	2.7	2.7	2.6	2.6	16	2.7	2.7	3.5	2.0	2.8
10	1.9	2.1	2.7	2.7	2.6	2.6	124	2.7	2.6	3.3	1.6	2.8
11	1.9	2.0	2.7	2.7	2.4	2.6	15	2.7	2.6	3.2	1.8	2.8
12	1.9	2.0	2.7	2.7	2.4	2.4	10	2.7	2.6	3.0	2.4	3.0
13	2.3	2.0	2.6	2.7	2.4	2.4	7.9	2.6	2.6	1.9	2.4	3.3
14	2.6	2.1	2.6	2.7	2.4	2.4	5.5	2.6	2.6	1.9	3.0	3.0
15	2.7	2.3	2.7	2.7	2.4	2.8	4.6	2.6	2.6	2.3	3.0	2.7
16	2.6	2.3	2.7	2.7	2.4	2.4	4.2	2.6	2.6	2.1	2.8	3.5
17	2.1	4.0	2.7	2.6	2.4	2.4	4.0	2.6	2.6	2.7	2.4	2.7
18	2.0	3.3	2.8	2.6	2.3	2.4	3.8	2.8	2.6	3.3	3.0	2.8
19	2.0	2.6	2.8	2.7	2.3	2.3	3.8	3.2	2.6	2.8	2.6	2.7
20	1.9	2.6	2.8	2.8	2.3	3.3	3.7	2.8	2.6	3.2	2.4	2.6
21	1.9	2.6	2.8	2.8	2.3	2.3	3.5	2.7	2.6	2.6	2.3	2.7
22	2.0	2.6	2.8	2.8	2.4	2.3	3.3	2.7	2.6	3.5	2.6	2.6
23	2.0	2.6	2.8	2.8	2.7	2.4	3.2	2.7	2.4	2.8	2.8	2.1
24	2.3	2.6	2.8	2.8	2.7	2.4	3.0	2.8	2.4	3.0	2.7	3.0
25	2.1	2.6	2.8	2.7	2.7	2.4	3.0	2.7	2.4	3.3	3.2	2.8
26	2.1	2.6	2.8	2.7	2.6	2.4	3.0	2.7	2.3	4.0	3.2	2.6
27	2.0	2.6	3.3	2.7	2.6	2.4	3.0	2.7	2.3	3.3	2.7	2.6
28	2.0	2.4	3.2	2.8	2.7	2.6	3.0	2.6	2.6	3.2	3.2	3.2
29	2.0	2.3	2.8	2.8	-----	2.6	2.8	2.7	2.6	3.2	2.6	3.2
30	2.1	2.3	2.7	2.7	-----	2.7	2.8	2.7	2.6	3.8	2.7	3.2
31	2.1	-----	2.7	2.7	-----	3.3	-----	2.7	-----	3.3	2.7	-----
Total	64.1	71.1	83.5	84.7	71.2	79.7	252.5	84.7	77.7	89.2	82.7	82.3
Mean	2.07	2.37	2.69	2.73	2.54	2.57	8.75	2.73	2.59	2.88	2.67	2.74
Ac-ft	127	141	166	168	141	158	521	158	154	177	164	153

Calendar year 1964 Max. 20 Min. 1.5 Mean 2.87 Ac-ft 2,080
 Water year 1964-65 Max. 124 Min. 1.6 Mean 3.11 Ac-ft 2,250

11-445. Santa Margarita River near Fallbrook, Calif.

Location.--Lat 33°25'54", long 117°15'44", in NE 1/4 sec. 14, T.9 S., R.4 W., 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.

Records available.--October 1924 to September 1965. Monthly discharge only for October to November 1924, published in WSP 1315-B.

Gage.--Water-stage recorder (digital) and concrete-road control since October 1955. Altitude of gage is 280 ft (from topographic map). 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), 17 years (1948-65), 9.20 cfs (6,660 acre-ft per year); median of yearly mean discharges (1924-48), 17 cfs (12,300 acre-ft per year); (1948-65), 4.6 cfs (3,300 acre-ft per year).

Extremes.--Maximum discharge during year, 404 cfs Apr. 10 (gage height, 4.16 ft); no flow Oct. 1 to Nov. 11, Aug. 12-17. 1924-65: 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 during recent years.

Remarks.--Records good. Flow partly regulated since November 1948 by Vail Lake (see p. 112). Several small diversions above station for irrigation. The Fallbrook Public Utility District pumped 133 acre-ft of water from a well in the streambed 2.1 miles upstream from the station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method Apr. 9-10)

2.0	0	2.4	10
2.1	.5	2.6	26
2.2	2.2	2.9	63
2.3	5.5	3.2	120

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1		0	1.4	3.6	2.8	1.8	7.2	3.8	2.3	1.2	1.3	0.7
2		0	1.6	3.6	2.2	1.6	7.6	3.8	2.6	1.0	1.3	.7
3		0	1.6	3.6	2.2	1.6	7.2	3.8	2.4	.8	1.3	.7
4		0	1.6	3.6	2.8	1.6	7.5	3.8	2.4	.7	.8	.6
5		0	1.6	3.6	2.8	1.6	6.9	3.5	2.3	.6	.5	.7
6		0	2.0	3.6	4.0	1.6	5.7	3.6	2.0	.7	.4	.9
7		0	1.8	4.4	4.4	1.7	5.3	3.6	1.8	.6	.2	1.1
8		0	1.6	4.0	4.0	3.2	5.8	3.4	2.2	.3	.2	1.1
9		0	1.6	3.6	3.6	3.9	12	3.3	2.1	.4	.6	.9
10		0	1.8	3.6	3.3	3.1	106	3.3	2.2	.3	.4	.8
11		0	1.8	3.3	3.0	3.0	40	3.2	2.1	.9	.2	1.0
12		1.6	1.8	3.3	3.0	3.0	20	3.1	1.8	1.4	0	1.0
13		2.0	1.8	3.3	2.8	3.0	17	3.0	1.7	1.3	0	1.0
14		1.8	2.0	3.3	2.8	3.0	13	3.0	1.5	1.2	0	1.1
15		1.8	2.0	3.3	2.8	3.5	11	2.9	1.5	.9	0	1.2
16		2.0	2.0	3.3	2.5	3.7	9.5	2.5	1.7	.7	0	1.3
17		3.3	2.0	3.3	2.5	3.4	8.6	2.4	1.5	.7	0	1.7
18		4.7	2.2	3.0	2.5	3.3	8.0	2.4	1.4	.7	.2	1.9
19		4.4	2.5	2.5	2.0	3.3	7.5	2.4	1.3	.8	.6	2.2
20		3.3	2.5	2.5	1.8	3.2	7.1	2.5	1.3	1.3	.7	2.2
21		2.8	2.5	2.5	1.6	3.1	7.0	2.6	1.4	1.3	.7	1.6
22		2.8	2.0	2.5	1.6	1.4	6.8	2.7	1.4	1.3	.7	1.3
23		2.5	2.0	2.5	1.6	1.6	6.6	2.8	1.6	1.3	.8	1.4
24		2.0	2.5	2.8	1.6	3.9	6.5	3.1	1.7	1.4	.9	1.5
25		2.0	2.5	3.0	1.6	3.4	7.8	3.7	1.7	1.4	.8	1.5
26		2.0	3.0	2.8	1.6	3.0	4.7	3.2	1.8	1.4	.7	1.7
27		2.0	4.4	2.8	1.6	3.0	5.7	2.6	1.6	1.6	.7	1.5
28		2.0	5.5	2.8	1.8	3.0	5.9	2.2	1.3	1.5	.7	1.4
29		1.8	4.7	2.8	-----	3.0	4.2	2.1	1.2	1.5	.7	1.3
30		1.6	4.0	2.8	-----	3.0	3.9	2.1	1.3	1.7	.7	1.5
31		--	4.0	2.8	-----	4.2	-----	2.1	-----	1.6	.6	-----
TOTAL	0	46.4	74.3	98.4	70.8	86.7	372.0	92.5	53.1	32.5	16.7	37.5
MEAN	0	1.55	2.40	3.17	2.53	2.80	12.4	2.98	1.77	1.05	0.54	1.25
AC-FT	0	92	147	195	140	172	738	183	105	64	33	74

CALENDAR YEAR 1964 MAX 22 MIN 0 MEAN 2.17 AC-FT 1,570
WATER YEAR 1964-65 MAX 106 MIN 0 MEAN 2.69 AC-FT 1,940

11-446. Santa Margarita River tributary near Fallbrook, Calif.

Location.--Lat 33°24'39", long 117°16'45", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.10, T.9 S., R.4 W., on left bank at culvert on DeLuz Road, 2.5 miles northwest of Fallbrook.

Drainage area.--0.52 sq mi.

Records available.--October 1961 to September 1965. Discontinued as a continuous-record station; converted to a crest-stage gage partial-record station.

Gage.--Water-stage recorder with rain-gage attachment, crest-stage gage, and concrete-pipe culvert control. Altitude of gage is 750 ft (from topographic map).

Extremes.--Maximum discharge during year, 1.2 cfs Dec. 27 (gage height, 1.95 ft); no flow for most of year.

1961-65: Maximum discharge, 2.3 cfs Jan. 22, 1964 (gage height, 2.12 ft), by indirect measurement of maximum flow through culvert; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: October, 0.1; November, 2.2; December, 2.6; January, 0.6; February, 0.4; March, 1.8; April, 7.0; July, 0.1; September, incomplete; the water year, incomplete.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Nov. 17.....0.1	Feb. 6.....0.1
Dec. 27......3	Apr. 8......1
28......3	9......1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
November 1964.....	0.1	-	-	0.003	0.2
December.....	.6	-	-	.02	1.2
February 1965.....	.1	-	-	.004	.2
April.....	.2	-	-	.007	.4
Calendar year 1964.....	-	.3	0	.004	2.8
Water year 1964-65.....	-	.3	0	.003	2.0

Note.--Flow occurred only on days listed above.

11-449. De Luz Creek near Fallbrook, Calif.

Location.--Lat 33°22'10", long 117°19'15", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec 29, T.9 S., R.4 W., on left bank 0.65 mile upstream from mouth and 4.2 miles west of Fallbrook.

Drainage area.--47.5 sq mi.

Records available.--February 1951 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 150 ft (from topographic map). Prior to Dec. 23, 1958, at site 750 ft upstream at same datum.

Average discharge.--14 years, 4.40 cfs (3,190 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

Extremes.--Maximum discharge during year, 448 cfs Apr. 10 (gage height, 6.80 ft), on basis of slope-area measurement of maximum flow; no flow for most of year.

1951-65: Maximum discharge, 2,800 cfs Apr. 1, 1958 (gage height, 9.95 ft, at present site, from floodmarks), from rating curve extended above 300 cfs on basis of slope-area measurement of maximum flow; no flow for several months of each year.

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

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 8..... 2.9
9..... 7.7
10.....47

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	57.6	-	-	1.92	114
Calendar year 1964.....	-	9.3	0	.03	24
Water year 1964-65.....	-	47	0	.16	114

Peak discharge (base, 200 cfs).--Apr. 10 (0015 hrs) 448 cfs (6.80 ft).

Note.--Flow occurred only on days listed above.

11-460. Santa Margarita River at Ysidora, Calif.

Location.--Lat 33°14'38", long 117°22'56", in NE 1/4 Sec. 3, T.11 S., R.5 W., on right bank 1 mile downstream from Ysidora and about 2.5 miles upstream from mouth.

Drainage area.--739 sq mi.

Records available.--February 1923 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 10 ft (from topographic map). Prior to Feb. 16, 1927, at site 1 mile upstream at different datum (destroyed by flood). Feb. 16, 1927, to Feb. 1, 1931, no gage in operation; records based on discharge measurements. Feb. 2, 1931, to Nov. 27, 1935, at same site at datum 1.00 ft higher.

Average discharge.--42 years, 27.9 cfs (20,200 acre-ft per year); median of yearly mean discharges, 7.4 cfs (5,400 acre-ft per year).

Extremes.--No flow during year.

1923-65: Maximum discharge, 33,600 cfs Feb. 16, 1927, on basis of slope-area measurement of maximum flow; no flow for part of most years.

Remarks.--No flow since June 1, 1958. Flow partly regulated by Vail Lake since November 1948 (see p. 112). Diversions for irrigation on Santa Margarita Ranch and Pauba Ranch. Average discharge represents flow to ocean during period of record, regardless of upstream development.

LAS FLORES CREEK BASIN

11-461. Las Flores Creek near Oceanside, Calif.

Location.--Lat 33°17'32", long 117°27'21", in NW 1/4 Sec. 24, T.10 S., R.6 W., on upstream side and at center of bridge on Atchison, Topeka and Santa Fe Railway, 0.5 mile upstream from mouth and 8.5 miles northwest of Oceanside.

Drainage area.--26.6 sq mi.

Records available.--May 1951 to September 1965.

Gage.--Water-stage recorder and multiple concrete culvert control. Altitude of gage is 35 ft (from topographic map).

Average discharge.--14 years, 0.70 cfs (507 acre-ft per year); median of yearly mean discharges, 0.2 cfs (140 acre-ft per year).

Extremes.--Maximum discharge during year, 80 cfs Apr. 1 (gage height, 0.87 ft); no flow for most of year.

1951-65: Maximum discharge, 960 cfs Jan. 16, 1952 (gage height, 4.75 ft), based on critical-depth determination of maximum flow; no flow for most of each year.

Remarks.--Records fair. Rising water from area, which bypasses the station 1,000 ft to the northwest, amounted to 19 acre-ft this year. No regulation above station. Some pumping above station for irrigation.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Nov. 17.....0.2	Mar. 31.....0.5	Apr. 7.....0.1	Apr. 12.....0.2
Dec. 27......6	Apr. 1.....3.3	8.....3.2	13......8
28......1	3......2	9......5	14......3
Mar. 15......2	4......5	10......9	15......1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
November 1964.....	0.2	-	-	.007	0.4
December.....	.7	-	-	.02	1.4
March 1965.....	.7	-	-	.02	1.4
April.....	10.1	-	-	.34	20
Calendar year 1964.....	-	4.1	0	.02	17
Water year 1964-65.....	-	3.3	0	.03	23

Peak discharge (base, 100 cfs).--No peak above base.

Note.--Flow occurred only on days listed above.

11-462. San Onofre Creek near San Onofre, Calif.

Location.--Lat 33°23'23", long 117°30'50", in SE¹SW¹ sec.16, T.9 S., R.6 W., 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.

Drainage area.--34.6 sq mi.

Records available.--October 1950 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 170 ft (from topographic map). Prior to June 22, 1957, at datum 1.00 ft higher. June 22, 1957, to Oct. 7, 1960, at site 50 ft upstream at same datum.

Average discharge.--15 years, 2.16 cfs (1,560 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 562 cfs Apr. 9 (gage height, 3.72 ft, from inside gage), on basis of slope-area measurement of maximum flow; no flow for most of year.

1950-65: Maximum discharge, 2,680 cfs Apr. 1, 1958 (gage height, 5.90 ft), from rating curve extended above 370 cfs on basis of maximum flows for station at San Onofre; 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 1964 to September 1965

Apr. 8.....30
9.....40
10.....35
11.....2.5

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	107.5	-	-	3.58	213
Calendar year 1964.....	-	22	0	.09	63
Water year 1964-65.....	-	40	0	.29	213

Peak discharge (base, 150 cfs).--Apr. 9 (2330 hrs) 562 cfs (3.72 ft, from inside gage).

Note.--Flow occurred only on days listed above.

11-462.5. San Onofre Creek at San Onofre, Calif.

Location.--Lat 33°23'00", long 117°34'22", in SE¹SE¹ sec.14, T.9 S., R.7 W., on left bank 0.2 mile north of San Onofre, 0.3 mile upstream from U.S. Highway 101, and 0.5 mile upstream from mouth.

Drainage area.--42.2 sq mi.

Records available.--October 1946 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 15 ft (from topographic map).

Average discharge.--19 years, 1.13 cfs (818 acre-ft per year); median of yearly mean discharges, 0.03 cfs (22 acre-ft per year).

Extremes.--Maximum discharge during year, 1,380 cfs Apr. 10 (gage height, 7.62 ft, from floodmark), from rating curve extended above 180 cfs on basis of slope-area measurement at gage height 6.92 ft; no flow all year except Apr. 10.

1946-65: Maximum discharge, 2,600 cfs Apr. 1, 1958 (gage height, 6.90 ft); no flow for most or all of each year.

Remarks.--Records poor. No regulation above station. Pumping above station for irrigation and water supply.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 10.....104

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	104	-	-	3.47	206
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	104	0	.28	206

Note.--Flow occurred only on day listed above.

11-463. San Mateo Creek near San Clemente, Calif.

Location.--Lat 33°28'15", long 117°28'20", in ~~SE 1/4~~ ^{NE 1/4} sec.23, T.8 S., R.6 W., on left bank 0.4 mile downstream from mouth of Devil Canyon and 8.6 miles northeast of San Clemente.

Drainage area.--80.8 sq mi.

Records available.--October 1952 to September 1965.

Gage.--Water-stage recorder with rain-gage attachment. Altitude of gage is 405 ft (from topographic map).

Average discharge.--13 years, 5.48 cfs (3,970 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

Extremes.--Maximum discharge during year, 790 cfs Apr. 9 (gage height, 7.31 ft); no flow Oct. 1 to Jan. 27, May 29 to Sept. 30.
1952-65: Maximum discharge, 4,800 cfs Apr. 1, 1958 (gage height, 9.10 ft), from rating curve extended above 2,000 cfs; no flow for several months in each year.

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

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	0.1	0.1	6.8	0.7				
2				0	.1	.1	7.5	.7				
3				0	.1	.1	7.1	.6				
4				0	.1	.1	7.5	.6				
5				0	.1	.1	6.0	.6				
6				0	.1	.1	4.1	.6				
7				0	.2	.1	4.6	.6				
8				0	.1	.2	84	.5				
9				0	.1	.2	144	.4				
10				0	.1	.2	146	.4				
11				0	.1	.2	26	.4				
12				0	.1	.2	18	.4				
13				0	.1	.3	16	.4				
14				0	.1	.3	12	.5				
15				0	.1	.4	8	.5				
16				0	.1	.3	6	.4				
17				0	.1	.3	5	.3				
18				0	.1	.3	4	.2				
19				0	.1	.3	3.5	.2				
20				0	.1	.2	3	.2				
21				0	.1	.2	2.5	.1				
22				0	.1	.2	2	.1				
23				0	.1	.2	1.9	.1				
24				0	.1	.2	1.7	.1				
25				0	.1	.2	1.5	.1				
26				0	.1	.2	1.4	.1				
27				0	.1	.2	1.1	.1				
28				.1	.1	.2	.9	.1				
29				.1	-----	.2	.8	0				
30				.1	-----	.2	.8	0				
31		-----		.1	-----	.6	-----	0	-----			-----
Total	0	0	0	0.4	2.9	6.7	533.7	10.0	0	0	0	0
Mean	0	0	0	0.01	0.10	0.22	17.8	0.32	0	0	0	0
Ac-ft	0	0	0	0.8	5.8	13	1,060	20	0	0	0	0
(†)	0.16	0.78	0.70	0.32	0.39	2.26	3.25	0.03	0.03	0.1	0	0.1
Calendar year 1964:	Max	20	Min	0	Mean	0.47	Ac-ft	342				
Water year 1964-65:	Max	146	Min	0	Mean	1.52	Ac-ft	1,100				
Peak discharge (base, 200 cfs).--Apr. 9 (2230 hrs) 790 cfs (7.31 ft).												

† Precipitation, in inches.

SAN MATEO CREEK BASIN

11-463.5. Cristianitos Creek near San Clemente, Calif.

Location.--Lat 33°26'57", long 117°34'13", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.25, T.8 S., R.7 W., on right bank 900 ft downstream from Talenga Canyon, 2.3 miles upstream from mouth, and 2.8 miles northeast of San Clemente.

Drainage area.--29.0 sq mi.

Records available.--October 1950 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 165 ft (from topographic map). Prior to Sept. 19, 1952, at datum 3.92 ft higher.

Average discharge.--15 years, 1.40 cfs (1,010 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

Extremes.--Maximum discharge during year, 110 cfs Apr. 9 (gage height, 5.00 ft); no flow for most of year.

1950-65: Maximum discharge, 1,800 cfs Jan. 16, 1952 (gage height, 8.86 ft, present datum), from rating curve extended above 360 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records fair. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 8.....2.1
9.....12
10.....12
17......4

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	26.5	-	-	0.88	53
Calendar year 1964.....	-	6.6	0	.03	24
Water year 1964-65.....	-	12	0	.07	53

Peak discharge (base, 100 cfs).--Apr. 9 (2330 hrs) 110 cfs (5.00 ft).

11-463.7. San Mateo Creek at San Onofre, Calif.

Location.--Lat 33°23'46", long 117°35'21", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.14, T.9 S., R.7 W., 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 2.25 miles downstream from Cristianitos Creek.

Drainage area.--132 sq mi.

Records available.--October 1946 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 20 ft (from topographic map).

Average discharge.--19 years, 4.24 cfs (3,070 acre-ft per year); median of yearly mean discharges, zero.

Extremes.--No flow during year.

1946-65: Maximum discharge, 4,650 cfs Apr. 1, 1958 (gage height, 5.62 ft); no flow for all or several months in each year.

Remarks.--No flow since Mar. 27, 1962. Minor flows regulated by percolation basins. No diversion above station.

11-465. San Juan Creek near San Juan Capistrano, Calif.

Location.--Lat 33°31'08", long 117°37'27", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T.7 S., R.7 W., on right pier of bridge on State Highway 74, 2.5 miles northeast of San Juan Capistrano.

Drainage area.--106 sq mi.

Records available.--October 1928 to September 1965. Combined records of creek and diversion, October 1954 to September 1965.

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 $2\frac{1}{2}$ 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).--37 years, 11.3 cfs (8,180 acre-ft per year); median of yearly mean discharges, 2.3 cfs (1,700 acre-ft per year).

(combined).--11 years, 6.44 cfs (4,660 acre-ft per year); median of yearly mean discharges, 2.8 cfs (2,000 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 11 cfs Apr. 10 (gage height, 1.92 ft); no flow for several months.

1929-65: Maximum discharge, 13,000 cfs Mar. 2, 1938, slope-area measurement, by Corps of Engineers; no flow at times in most years.

(combined).--Maximum discharge during year, 13 cfs Nov. 21; no flow July 3-28, Aug. 5-26, Aug. 30 to Sept. 23, Sept. 26-30. 1954-65: Maximum discharge, 3,920 cfs Mar. 16, 1958; no flow for many days in 1961-65.

Remarks.--Records good. 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.--Sixteen discharge measurements furnished by Orange County Flood Control District.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.2	0	1.6	1.1
1.3	.1	1.7	2.3
1.4	.2	1.8	4.6
1.5	.5		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0.6	0.5	0.3	0.5	.4	0.1			
2			0	.6	.4	.3	.4	.4	.2			
3			0	.5	.4	.2	.5	.4	.2			
4			0	.5	.4	.2	.5	.3	.2			
5			0	.5	.4	.3	.5	.4	.2			
6			0	.5	.4	.3	.5	.4	.2			
7			0	.5	.4	.3	.5	.3	.2			
8			0	.5	.4	.3	1.3	.3	.2			
9			0	.5	.4	.3	2.8	.3	.1			
10			0	.5	.4	.3	3.5	.3	0			
11			.1	.5	.4	.3	2.8	.3	0			
12			.1	.5	.4	.2	1.3	.3	0			
13			.1	.5	.4	.1	1.0	.2	0			
14			.1	.5	.4	0	.9	.2	0			
15			.1	.5	.3	0	.9	.2	0			
16			.1	.5	.3	0	.8	.1	0			
17			.1	.5	.3	0	.8	.1	0			
18			.2	.5	.3	0	.7	.1	0			
19			.2	.5	.3	0	.8	.1	0			
20			.2	.5	.3	.1	1.0	.1	0			
21			.2	.5	.3	.2	.8	0	0			
22			.2	.5	.3	.2	.5	0	0			
23			.2	.5	.3	.2	.5	0	0			
24			.2	.5	.3	.2	.5	0	0			
25			.2	.5	.3	.2	.5	0.1	0			
26			.2	.4	.3	.2	.5	.1	0			
27			.3	.5	.3	.2	.5	.1	0			
28			.5	.5	.3	.2	.5	.1	0			
29			.6	.5	-----	.2	.4	.1	0			
30			.6	.5	-----	.2	.4	.1	0			
31			.6	.5	-----	.3	-----	.1	-----			
Total	0	0	5.1	15.6	9.9	5.8	27.1	5.9	1.6	0	0	0
Mean	0	0	0.16	0.50	0.35	0.19	0.90	0.19	0.05	0	0	0
Ac-ft	0	0	10	31	20	12	54	12	3.2	0	0	0

Calendar year 1964 Max 1.4 Min 0 Mean 0.22 Ac-ft 155
 Water year 1964-65 Max 3.5 Min 0 Mean 0.19 Ac-ft 142

Peak discharge (base, 200 cfs).--No peak above base.

11-465. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	0.2	0.9	0.8	0.6	1.2	0.6	0.1			0.1
2	0	.1	.2	.9	.7	.6	1.0	.6	.3			.3
3	0	.1	.2	.8	.7	.5	1.0	.6	.3			.2
4	0	.1	.3	.8	.7	.5	1.1	.5	.2			.2
5	0	.1	.3	.7	.7	.6	1.1	.7	.2			0
6	0	0	.3	.7	.8	.6	1.0	.6	.2			.8
7	0	0	.3	.7	.6	.6	1.1	.4	.2			.1
8	0	.1	.3	.7	.4	.6	2.7	.4	.2			0
9	0	.1	.5	.7	.4	.5	4.5	.4	.1			0
10	0	.1	.3	.7	.4	.6	4.8	.4	0			0
11	0	.1	.4	.7	.6	.6	3.9	.4	0			0
12	0	.1	.4	.7	.7	.5	2.3	.4	0			0
13	0	.1	.4	.7	.7	.4	2.0	.9	0			0
14	0	.2	.4	.7	.8	.3	1.8	1.2	0			0
15	0	.2	.4	.7	.6	.4	1.3	.4	0			0
16	0	.2	.4	.7	1.0	.3	.8	.3	0			0
17	0	.3	.4	.6	1.0	.3	.8	.3	0			0
18	0	.2	.5	.6	.7	.3	.7	.3	0			0
19	0	.2	.5	.6	.7	.2	.9	.4	0			.4
20	0	.2	.5	.6	.7	.2	1.1	.3	0			.2
21	0	.2	.5	.6	.7	.3	1.0	.2	0			.2
22	0	.2	.5	.7	.7	.3	.9	.2	0			0
23	0	.2	.6	.7	.7	.6	.2	.2	0			.2
24	.7	.3	.6	.7	.7	.5	.9	.2	0			.1
25	.5	.3	.6	.7	.6	.4	.9	.3	0			0
26	0	.3	.6	.6	.6	.3	.9	.2	0			0
27	0	.2	.8	.7	.7	.3	.8	.2	0			0
28	0	.2	.8	.7	.6	.3	.8	.2	0			0
29	0	.2	.9	.8	-----	.3	.7	.1	0			0
30	0	.3	.9	.8	-----	.3	.6	.1	0			0
31	0	-----	.9	.8	-----	.7	-----	.1	-----			-----
Total	1.2	4.9	14.9	22.0	19.0	13.5	43.5	12.1	1.8	0	0	2.8
Mean	0.04	0.16	0.48	0.71	0.68	0.44	1.45	0.39	0.06	0	0	0.09
Ac-ft	2.4	9.7	30	44	38	27	86	24	3.6	0	0	5.6

Calendar year 1964 Max 1.8 Min 0 Mean 0.45 Ac-ft 329
Water year 1964-65 Max 4.8 Min 0 Mean 0.37 Ac-ft 270

Peak discharge (base, 200 cfs).--No peak above base.

11-470. Arroyo Trabuco near San Juan Capistrano, Calif.

Location.--Lat 33°31'36", long 117°40'08", in NE 1/4 NW 1/4 sec. 36, T.7 S., R.8 W., 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.

Records available.--October 1930 to September 1965. 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.--35 years, 4.36 cfs (3,160 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 31 cfs Apr. 8 (gage height, 2.27 ft); no flow for most of year.

1930-65: Maximum discharge, 9,240 cfs Feb. 6, 1937; no flow at times in each year.

Remarks.--No regulation or diversion above station.

Cooperation.--Records furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0		0			0	0.2	0	0	0.1	0	0
2	0		0			0	0	0	0	0	0	0
3	0		0			0	.6	0	0	0	0	0
4	0		0			0	.4	0	0	0	.1	0
5	0		0			0	0	0	0	0	0	0
6	0		0			.1	0	0	0	0	0	.1
7	0		0			0	.2	0	0	0	0	.1
8	0		0			0	6.9	0	0	0	.1	.1
9	0		0			0	.2	0	0	0	.1	.1
10	0		0			0	0	0	0	0	0	.1
11	.1		0			0	0	0	0	0	0	.1
12	0		0			0	0	0	0	0	0	0
13	.1		0			.1	0	0	0	0	0	0
14	0		0			0	0	0	0	0	0	0
15	0		0			0	0	0	0	0	0	0
16	0		0			0	0	0	0	0	0	0
17	0		0			.1	0	0	0	0	0	0
18	0		0			.1	0	0	0	0	0	0
19	0		0			.1	0	0	0	0	0	0
20	0		.1			.3	0	0	.1	0	0	0
21	0		.1			.2	0	0	.1	0	0	0
22	.1		.1			.3	0	0	.1	0	0	0
23	.1		.1			.2	0	0	.1	.1	0	0
24	.1		0			.1	0	0	0	0	0	0
25	.1		0			0	0	0	.1	0	0	0
26	.1		0			0	0	.1	.1	0	0	0
27	.1		0			0	0	0	0	.1	0	0
28	.1		0			0	0	.1	0	0	0	0
29	0		0			0	0	.1	.1	0	0	0
30	0		0			0	0	0	.1	0	0	0
31	0		0			.1	0	0	0	0	0	0
Total	0.9	0	0.4	0	0	1.7	8.5	0.3	0.8	0.3	0.3	0.6
Mean	0.03	0	0.01	0	0	0.05	0.28	0.01	0.03	0.01	0.01	0.02
Ac-ft	1.8	0	0.8	0	0	3.4	17	0.6	1.6	0.6	0.6	1.2
Calendar year 1964	Max	0.4	Min	0	Mean	0.01	Ac-ft	9.4				
Water year 1964-65	Max	6.9	Min	0	Mean	0.04	Ac-ft	28				

ALISO CREEK BASIN

11-475, Aliso Creek at El Toro, Calif.

Location.--Lat 33°37'34", long 117°41'03", in Canada de los Alisos Grant, near center of channel on upstream side of Second Street Bridge at El Toro, Orange County.

Drainage area.--7.97 sq mi.

Records available.--October 1930 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 440 ft (from topographic map). Prior to July 1962, at different datum.

Extremes.--Maximum discharge during year, 73 cfs Apr. 10 (gage height, 2.83 ft); no flow for many days.
1930-65: Maximum discharge, 1,950 cfs Feb. 6, 1937; 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.8	0	0.2	0	1.0	0.6	0.4	0.1	0.8	0.1	0.1
2	0	0	0	.1	0	1.0	.4	.7	.2	.4	.2	0
3	.1	0	0	.1	0	0	.5	.5	.6	0	0	0
4	.2	0	0	0	0	.3	.3	0	.6	.3	.2	.1
5	.3	0	0	0	0	.2	.1	.1	.5	1.5	0	.4
6	.3	.2	.1	.2	0	.3	.1	.3	.8	.9	0	.8
7	0	0	0	.3	0	1.1	.1	0	.5	.4	0	.1
8	0	0	0	.2	0	1.1	5.5	.1	0	0	0	.1
9	0	0	0	.1	0	.2	4.5	.2	0	.2	0	0
10	.5	.8	0	.1	.1	0	7.6	.4	0	1.0	0	0
11	.6	.6	0	.1	.1	0	.6	.1	.1	0	.2	0
12	.6	.5	0	.1	.2	.2	.7	.3	.2	.4	0	1.0
13	.3	.3	.2	.1	.2	.1	.5	.4	.9	.1	0	.4
14	0	.1	0	.1	0	.3	.4	.2	.5	0	0	.4
15	0	0	.1	.1	0	.5	.4	.1	.5	.2	0	.3
16	.4	.2	0	.2	.2	.2	.3	0	.1	.9	0	.1
17	.1	0	0	.2	.1	.4	.2	0	.4	.5	0	.2
18	.3	.1	0	.1	.1	.4	.3	0	.4	.9	0	.3
19	.2	0	.1	0	0	.4	.2	0	1.2	.6	0	.9
20	0	0	0	.1	0	.1	.1	0	1.6	0	.1	.2
21	.3	.2	0	.2	0	.1	.3	0	1.0	0	.3	0
22	.3	.6	0	.1	.1	.2	.1	0	0	0	.3	.1
23	1.4	.1	0	0	.7	.6	0	0	.2	0	0	.4
24	1.0	0	.4	.2	.7	.2	.1	.1	.7	.1	0	.3
25	.7	0	.2	.2	.3	.4	.6	.1	0	.1	0	.3
26	.1	.1	.3	.1	0	.1	0	1.0	0	.1	0	.5
27	.1	.2	.7	.1	0	.1	0	.8	0	.1	0	.4
28	.5	.3	.8	0	0	0	0	.1	.1	.1	0	.1
29	.1	.5	.5	0	-----	.3	.1	0	.5	0	0	0
30	0	.4	.3	0	-----	.2	0	0	.3	.1	0	0
31	0	-----	.1	0	-----	.7	-----	0	-----	.1	0	-----
Total	8.7	6.0	3.8	3.3	2.8	10.7	24.6	5.9	12.0	9.6	1.4	7.5
Mean	0.28	0.20	0.12	0.11	0.10	0.35	0.82	0.19	0.40	0.31	0.05	0.25
Ac-ft	17	12	7.5	6.5	5.6	21	49	12	24	19	2.8	15

Calendar year 1964	Max	4.6	Min	0	Mean	0.49	Ac-ft	360
Water year 1964-65	Max	7.6	Min	0	Mean	0.26	Ac-ft	191

11-485, San Diego Creek near Irvine, Calif.

Location.--Lat 33°40'20", long 117°47'10", in San Joaquin Grant, on left bank 200 ft downstream from Jeffrey Road Bridge and 1.5 miles west of Irvine, Orange County.

Drainage area.--40.3 sq mi.

Records available.--October 1949 to September 1965.

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.--16 years, 1.70 cfs (1,230 acre-ft per year); median of yearly mean discharges, 1.0 cfs (720 acre-ft per year).

Extremes.--Maximum discharge during year, 410 cfs Apr. 1 (gage height, 3.20 ft); no flow for many days.

1949-65: Maximum discharge, 4,040 cfs Jan. 18, 1952 (gage height, 7.70 ft), from rating curve extended above 1,000 cfs on basis of slope-area measurement of maximum flow; no flow for most of each year.

Remarks.--Records good. Pumping from wells along stream causes low-flow fluctuation in discharge.

Cooperation.--Seventeen discharge measurements furnished by Orange County Flood Control District.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

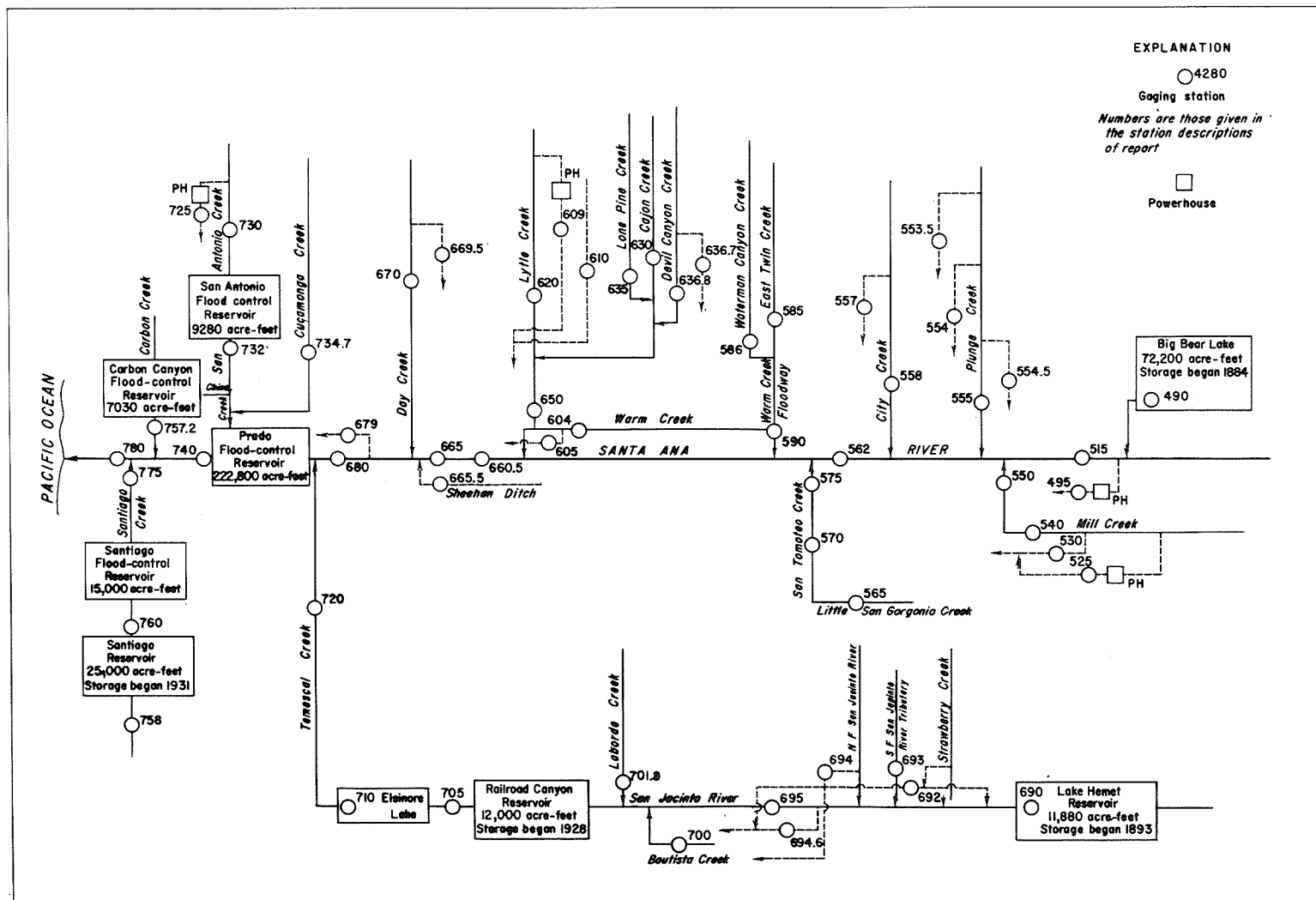
1.05	0	1.5	11
1.1	.1	1.7	27
1.2	.6	1.9	53
1.3	2.2	2.1	84
1.4	5.6		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	1.2	0	0	0	0.2	68		0	0.5	0.8	0.4
2	.6	1.0	0	0	0	.2	1.3		0	.7	.5	.4
3	.6	.7	0	0	.6	.4	30		0	0	.7	.4
4	.6	.7	0	0	1.1	.6	7.7		0	0	.6	.4
5	.5	.7	0	.4	.7	.6	.8		0	0	.6	.2
6	.7	.8	0	1.0	1.8	.7	0		0	0	.7	.4
7	.4	1.0	0	4.2	.4	2.8	3.5		0	0	1.2	.2
8	.8	.7	0	.4	.2	.6	78		.1	0	1.4	.4
9	1.1	1.0	.1	.8	.8	.4	66		.2	.1	.7	.5
10	1.4	2.8	.1	1.1	.5	.3	18		.1	.1	.6	.6
11	2.0	.6	.1	1.2	.6	.6	0		.4	.2	.6	.4
12	1.6	.3	.1	1.0	.6	.7	.3		.4	.2	1.0	.4
13	1.2	.1	0	1.4	.5	.8	.2		.4	.1	1.1	.4
14	1.1	0	0	1.4	.5	.2	.1		.1	.3	.8	.2
15	1.2	0	0	1.6	.5	6.0	.3		0	.4	.8	.2
16	1.1	0	.1	1.2	.6	.1	.1		0	.3	.6	.4
17	.7	6.0	.1	.6	.2	0	0		.1	.4	.3	.4
18	1.1	1.5	1.0	1.4	.2	0	0		.5	.2	.7	1.2
19	.7	0	.2	2.0	.5	0	0		.3	.3	.7	2.2
20	1.0	0	.2	1.6	.2	0	0		.6	.1	.4	.1
21	1.0	0	0	1.6	.2	0	0		.2	.4	.5	0
22	1.4	0	0	1.4	.1	0	0		.1	.6	.4	.1
23	1.0	0	.1	1.2	.5	0	0		.5	.8	.7	.3
24	1.6	0	.1	4.0	.3	0	0		.2	.6	.8	.4
25	1.2	0	0	1.2	.1	0	0		.4	.6	.8	.4
26	1.6	0	0	1.2	.4	0	0		.4	.7	1.2	.4
27	1.4	0	18	1.2	.6	.2	0		.2	.6	.8	.6
28	1.6	0	20	1.2	.2	.1	0		.1	.8	.8	.5
29	2.0	0	.5	1.1	-----	.1	0		0	1.2	.4	.5
30	1.6	0	0	.4	-----	0	0		.2	1.4	.4	.5
31	1.6	-----	0	.3	-----	15	-----		-----	.8	.3	-----
Total	34.6	19.1	40.7	36.1	12.9	30.6	274.3	0	5.5	12.4	21.9	13.5
Mean	1.12	0.64	1.31	1.16	0.46	0.99	9.14	0	0.18	0.40	0.71	0.45
Ac-ft	69	38	81	72	26	61	544	0	11	25	43	27

Calendar year 1964 Max 39 Min 0 Mean 0.79 Ac-ft 572
 Water year 1964-65 Max 78 Min 0 Mean 1.37 Ac-ft 997

Peak discharge (base, 200 cfs).--Apr. 1 (0900 hrs) 410 cfs (3.20 ft); Apr. 8 (1600 hrs) 292 cfs (2.90 ft).



11-490. Big Bear Lake near Big Bear Lake, Calif.

Location.--Lat $34^{\circ}14'20''$, long $116^{\circ}58'50''$, in SW $\frac{1}{4}$ sec.22, T.2 N., R.1 W., at Big Bear Lake Dam on Bear Creek, 4 miles west of town of Big Bear Lake and $7\frac{1}{2}$ miles upstream from mouth.

Drainage area.--71.5 sq mi.

Records available.--October 1950 to September 1965 in reports of Geological Survey. February 1884 to September 1950 in files of Bear Valley Mutual Water Co.

Gage.--Staff gage read once daily. Datum of gage is 6,670.9 ft above mean sea level (levels by Bear Valley Mutual Water Co.). Prior to 1912, staff gage at old dam 200 ft upstream at same datum (spillway at gage height 52.4 ft).

Extremes.--Maximum contents observed during year, 8,404 acre-ft May 31; minimum contents, 2,423 acre-ft Oct. 31.

1884-1965: Maximum contents unknown, lake spilled in 1916, 1917, 1922, 1923, 1938, 1939; 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.

Cooperation.--Record of contents furnished by Bear Valley Mutual Water Co.

Month-end contents, water year October 1964 to September 1965		
Month	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	2,930	-
Oct. 31.....	2,423	-507
Nov. 30.....	2,542	+119
Dec. 31.....	2,761	+239
Calendar year 1964.....	-	-29
Jan. 31.....	3,079	+298
Feb. 28.....	3,258	+179
Mar. 31.....	3,410	+152
Apr. 30.....	7,579	+4,169
May 31.....	8,404	+825
June 30.....	7,785	-619
July 31.....	7,269	-516
Aug. 31.....	6,784	-485
Sept. 30.....	6,402	-382
Water year 1964-65.....	-	+3,472

SANTA ANA RIVER BASIN

11-515. Santa Ana River near Mentone, Calif.

Location.--Lat 34°06'40", long 117°05'54", in NW 1/4 sec. 4, T.1 S., R.2W., on left bank near mouth of canyon, 1.8 miles upstream from Mill Creek and 3.5 miles northeast of Mentone.

Drainage area.--209 sq mi, including area tributary to Baldwin Lake at head of Bear Valley.

Records available.--July 1896 to September 1965. 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; water-stage recorder on powerhouse diversion. Datum of gage is 1,984.28 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1914, staff gages at various sites within 1,000 ft of point 1 1/2 miles upstream at various datums. Oct. 1, 1914, to Jan. 17, 1916, staff gage at site 10 ft upstream at different datum. Jan. 18, 1916, to Sept. 2, 1917, staff gage at same site and datum.

Average discharge (river only).--51 years (1914-65), 27.9 cfs (20,200 acre-ft per year); median of yearly mean discharges, 8.1 cfs (5,900 acre-ft per year).
(combined).--69 years, 80.1 cfs (57,990 acre-ft per year); median of yearly mean discharges, 65 cfs (47,000 acre-ft per year).

Extremes (river only).--Maximum discharge during year, 688 cfs Apr. 9 (gage height 7.88 ft); no flow for most of year.
1896-1965: Maximum discharge, 52,300 cfs Mar. 2, 1938 (gage height, 14.3 ft), on basis of slope-area measurement of maximum flow; no flow at times in some years.
(combined).--Maximum discharge during year, 768 cfs Apr. 9; minimum daily, 14 cfs Aug. 5, 6.
1896-1965: Maximum discharge, 52,300 cfs Mar. 2, 1938; minimum daily, 3 cfs Nov. 21, 22, 1909.

Remarks.--Records good except those for Apr. 13-27, which are poor. Flow partly regulated by Big Bear Lake (see preceding page). 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 519 acre-ft into canal below canal gage. Prior to Oct. 1, 1952, pumped water entered canal above gage.

Cooperation.--Twelve 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0	0		18	23	0.9	0.3	0.1	
2		0	0	0	0		46	18	.9	.3	.1	
3		0	0	0	0		30	14	.9	.3	.1	
4		0	0	0	0		24	11	.8	.2	.1	
5		0	0	0	0		10	5.8	.7	.2	.1	
6		0	0	0	.4		3.6	5.4	.7	.2	.1	
7		0	0	.3	.2		2.4	2.0	.7	.2	.1	
8		0	0	7.9	0		15	2	.7	.2	.1	
9		0	0	0	0		113	2	.6	.2	.1	
10		0	0	0	0		125	2	.6	.2	.1	
11		.1	0	0	0		.9	1.9	.5	.2	.1	
12		0	0	0	0		.8	1.7	.5	.2	.1	
13		0	0	0	0		.5	1.4	.5	.2	.1	
14		0	0	0	0		.3	1.3	.5	.2	.1	
15		0	0	0	0		.1	1.2	.5	.2	.1	
16		0	0	0	0		1	1.1	.5	.2	.1	
17		0	0	0	0		5	1.0	.5	.2	.1	
18		0	0	0	0		7	1.0	.5	.1	.1	
19		0	0	0	0		10	1.0	.5	.1	.1	
20		0	0	0	0		13	1.0	.5	.1	.1	
21		0	0	0	0		15	1.0	.5	.1	.1	
22		0	0	0	0		18	1.0	.4	.1	0	
23		0	0	0	0		21	.9	.4	.1	0	
24		0	0	.5	0		25	.9	.4	.1	0	
25		0	0	.1	0		28	.9	.4	.1	0	
26		0	0	0	0		31	.9	.4	.1	0	
27		0	13	0	0		35	.9	.4	.1	0	
28		0	41	0	0		31	.9	.4	.1	0	
29		0	13	0	-----		31	.9	.4	.1	0	
30		0	0	0	-----		29	.9	.4	.1	0	
31		-----	0	0	-----		-----	.9	-----	.1	0	
Total	0	0.1	67	8.8	0.6	0	689.6	107.9	16.6	5.1	2.1	0
Mean	0	0.03	2.16	0.28	0.02	0	23.0	3.48	0.55	0.16	0.07	0
Ac-ft	0	0.2	133	17	1.2	0	1,370	214	33	10	4.2	0

Calendar year 1964 Max 41 Min 0 Mean 0.51 Ac-ft 370
Water year 1964-65 Max 125 Min 0 Mean 2.46 Ac-ft 1,780

Peak discharge (base, 150 cfs).--Apr. 2 (1000 hrs) 152 cfs (6.67 ft); Apr. 9 (2300 hrs) 688 cfs (7.88 ft).

11-515. Santa Ana River near Mentone, Calif.

Combined discharge, in cubic feet per second, of Santa Ana River and Southern California Edison Co.'s canal near Mentone, Calif., water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	16	17	23	21	21	66	97	33	21	16	19
2	19	16	17	20	22	21	104	87	33	20	15	20
3	19	16	17	20	22	21	83	79	32	20	15	20
4	19	16	17	20	22	21	69	68	31	19	15	20
5	19	15	17	20	22	20	54	60	29	19	14	21
6	18	15	17	20	28	21	46	57	29	19	14	23
7	20	15	17	27	26	21	43	52	29	19	21	22
8	20	15	18	32	24	22	58	49	31	19	23	21
9	20	18	18	22	23	21	164	47	30	18	20	20
10	21	22	18	22	21	22	187	45	28	18	22	20
11	21	22	18	21	22	23	45	44	26	18	25	21
12	21	19	18	21	20	23	43	44	26	18	29	20
13	22	19	18	21	22	24	48	43	26	18	25	20
14	22	18	17	20	21	23	54	43	26	18	28	19
15	21	17	18	20	21	24	57	42	28	20	29	19
16	21	18	18	20	20	25	61	41	30	21	28	18
17	20	19	17	21	22	23	68	41	30	19	27	18
18	18	17	18	21	22	24	73	40	28	19	25	19
19	19	16	18	21	21	22	85	40	28	18	21	19
20	17	17	19	21	21	21	92	39	28	17	19	18
21	19	18	19	21	21	20	95	40	26	17	18	19
22	21	19	19	20	21	20	97	40	25	17	17	19
23	22	19	19	20	21	20	100	39	26	16	17	18
24	22	18	19	28	20	20	104	39	25	17	17	18
25	22	18	18	24	21	20	107	36	26	16	17	17
26	22	18	18	23	21	20	109	35	27	16	20	17
27	22	18	33	22	21	22	113	33	25	16	21	18
28	21	18	42	22	21	20	109	32	24	15	19	18
29	20	18	27	21	-----	21	109	31	23	15	19	18
30	19	18	26	21	-----	20	107	31	22	19	19	16
31	17	-----	24	21	-----	24	-----	32	-----	18	19	-----
Total	623	528	616	676	610	670	2,550	1,446	830	560	634	575
Mean	20.1	17.6	19.9	21.8	21.8	21.6	85.0	46.6	27.7	18.1	20.5	19.2
Ac-ft	1,240	1,050	1,220	1,340	1,210	1,330	5,060	2,870	1,650	1,110	1,260	1,140
Calendar year 1964	Max	93	Min	15	Mean	24.3	Ac-ft	17,640				
Water year 1964-65	Max	187	Min	14	Mean	28.3	Ac-ft	20,480				

Peak discharge (base, 150 cfs).--Apr. 2 (1000 hrs) 185 cfs; Apr. 9 (2300 hrs) 768 cfs.

11-540, Mill Creek near Yucaipa, Calif.

Location.--Lat 34°05'27", long 117°02'12", in NW 1/4 sec. 13, T.1 S., R.2 W., 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.

Records available.--January 1919 to September 1938, October 1947 to September 1965. Monthly figures only for April and May 1923, published in WSP 1315-B. Prior to October 1954, published as "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). Prior to August 1926, at site 100 ft upstream at different datums. August 1926 to Mar. 2, 1938, at site 500 ft downstream at different datum (destroyed by flood).

Average discharge (creek only).--37 years, 9.83 cfs (7,120 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).

(combined).--37 years, 30.0 cfs (21,720 acre-ft per year); median of yearly mean discharges, 21 cfs (15,200 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 235 cfs Aug. 14 (gage height, 7.04 ft); minimum daily, 0.1 cfs for many days. 1919-38, 1947-65: Maximum discharge, 18,100 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow at times in some years.

(combined).--Maximum discharge during year, 240 cfs Aug. 14; minimum daily, 4.7 cfs Dec. 14. 1919-38, 1947-65: Maximum discharge, 18,100 cfs Mar. 2, 1938; minimum daily, 2.7 cfs Feb. 23, 1949.

Remarks.--Records (creek) poor; records (combined) good. 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.

Cooperation.--Water-stage recorder graph and 10 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.1	0.1	1.3	0.1	0.1	7.0	6.1	1.3	0.1	0.1	0.1
2	.2	.1	.1	1.3	.1	.1	8.2	4.8	1.6	.1	.1	.1
3	.2	.1	.1	1.3	.1	.1	8.7	5.4	1.0	.2	.1	.1
4	.2	.1	.1	1.3	.1	.1	7.4	5.1	.6	.2	.1	.1
5	.2	.1	.1	1.3	.1	.1	2.3	3.9	.4	.2	.1	.1
6	.2	.1	.1	.8	.6	.1	1.4	3.6	.2	.1	.1	.1
7	.1	.1	.1	3.2	.5	.1	4.0	3.6	.1	.1	.1	.1
8	.1	.1	.1	1.5	.7	.1	4.0	3.6	.1	.1	.1	.1
9	.1	.1	.1	.7	.5	.1	7.0	3.4	.1	.1	.2	.1
10	.1	.2	.1	.1	.5	.1	5.0	4.9	.1	.1	.2	.1
11	.1	.1	.1	.1	.5	.1	5.0	4.2	.1	.1	.9	.1
12	.1	.1	.2	.4	.6	.1	4.0	2.4	.1	.1	.3	.1
13	.1	.1	.2	.4	.4	.1	4.0	3.6	.1	.1	.4	.1
14	.1	.1	.2	.5	.4	.1	1.8	2.9	.1	.1	27	.1
15	.1	.1	.1	.5	.4	.1	.1	1.1	.1	.1	10	.1
16	.1	.1	.1	.5	.5	.1	.1	.1	.1	.1	3.0	.1
17	.1	.1	.1	.5	.5	.1	.2	.1	.1	.1	.8	.1
18	.1	.1	.1	.5	.1	.1	.4	.1	.1	.1	.1	.4
19	.1	.1	.1	.5	.1	.1	1.3	.1	.1	.1	.1	.4
20	.1	.1	.1	.4	.1	.1	4.8	.2	.1	.1	.1	.2
21	.1	.1	.1	.1	.1	.1	1.8	.2	.1	.1	.1	.2
22	.1	.1	.1	.1	.1	.1	3.9	.2	.1	.1	.2	.1
23	.1	.1	.1	.1	.1	.1	4.5	.1	.1	.1	.2	.1
24	.1	.1	.1	2.0	.1	.1	5.1	.1	.1	.1	.1	.1
25	.1	.1	.1	.5	.1	.1	6.1	.2	.1	.1	.1	.1
26	.1	.1	1.5	.1	.1	.1	5.8	.2	.1	.1	.1	.1
27	.2	.1	1.6	.1	.1	.1	7.0	.1	.1	.2	.1	.1
28	.2	.1	7.5	.1	.1	.1	6.5	.2	.1	.1	.1	.2
29	.2	.1	1.4	.1	-----	.1	7.4	.8	.1	.1	.1	.1
30	.1	.1	1.2	.1	-----	.1	8.7	.7	.1	.1	.1	.1
31	.1	-----	1.1	.1	-----	1.2	-----	.7	-----	.1	-----	-----
Total	4.0	3.1	31.5	20.5	7.7	4.2	133.5	62.7	7.5	3.5	45.2	3.9
Mean	0.13	0.10	1.02	0.66	0.28	0.14	4.45	2.02	0.25	0.11	1.46	0.13
Ac-ft	7.9	6.1	62	41	15	8.3	265	124	15	6.9	90	7.7

Calendar year 1964 Max 24 Min 0 Mean 0.42 Ac-ft 307

Water year 1964-65 Max 27 Min 0.1 Mean 0.90 Ac-ft 649

Peak discharge (base, 50 cfs).--Dec. 27 (1300 hrs) 105 cfs (6.50 ft); Aug. 14 (1730 hrs) 235 cfs (7.04 ft).

11-540. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	12	11	9.1	14	12	18	34	26	21	16	14
2	6.8	12	12	8.9	14	12	18	33	25	20	15	14
3	6.8	12	11	8.8	14	12	20	30	27	20	15	14
4	11	11	11	8.8	12	12	17	29	26	20	15	14
5	12	11	11	8.8	12	12	14	27	24	19	15	14
6	12	11	11	8.9	13	12	15	26	26	18	14	14
7	12	11	12	12	13	13	17	28	26	18	14	14
8	12	11	13	10	8.9	12	16	27	27	18	14	14
9	12	13	13	9.5	12	12	19	27	27	18	14	14
10	12	14	13	9.4	8.7	13	15	27	26	18	14	14
11	11	12	13	9.3	9.7	14	16	24	26	18	16	14
12	11	11	13	9.4	13	13	15	24	26	18	18	14
13	12	11	12	9.4	13	11	14	24	25	18	18	13
14	12	10	4.7	9.2	13	10	15	26	25	18	39	13
15	12	11	6.6	9.4	9.8	11	17	28	26	20	12	13
16	12	13	6.6	9.4	8.1	11	18	27	26	18	8.0	14
17	12	12	7.1	9.3	8.4	9.5	19	28	25	17	13	15
18	12	8.3	7.1	11	8.3	9.3	24	27	25	17	17	16
19	11	9.5	8.4	11	10	14	29	28	24	17	17	16
20	11	9.0	11	12	14	9.2	30	28	24	17	16	15
21	11	8.5	13	14	13	9.0	30	28	23	17	16	14
22	11	8.5	12	13	13	9.2	27	28	23	16	16	14
23	11	8.5	12	13	13	10	28	27	23	16	16	13
24	12	8.6	13	15	13	12	31	26	23	16	16	13
25	12	8.8	12	12	12	10	32	25	23	16	15	13
26	12	8.8	14	13	12	11	32	25	23	16	15	13
27	12	9.5	23	14	12	11	33	24	23	16	15	14
28	11	10	14	14	12	12	34	24	22	16	15	13
29	12	10	11	14	-----	13	35	25	22	16	14	13
30	12	10	9.7	14	-----	14	37	25	21	15	14	13
31	12	-----	9.1	14	-----	15	-----	25	-----	14	14	-----
Total	347.4	316.0	350.3	343.6	328.9	360.2	685	834	738	542	486.0	416
Mean	11.2	10.5	11.3	11.1	11.7	11.6	22.8	26.9	24.6	17.5	15.7	13.9
Ac-ft	689	627	695	682	652	714	1,350	1,650	1,450	1,080	964	825

Calendar year 1964 Max 39 Min 4.7 Mean 13.8 Ac-ft 10,030
 Water year 1964-65 Max 39 Min 4.7 Mean 15.7 Ac-ft 11,400

Peak discharge (base, 50 cfs).--Dec. 27 (1300 hrs) 107 cfs; Aug. 14 (1730 hrs) 240 cfs.

11-550. Mill Creek near Mentone, Calif.

Location.--Lat 34°05'14", long 117°06'46", in NE 1/4 Sec. 17, T.1 S., R.2 W., on downstream side of right pier of Bear Valley Mutual Water Co.'s pipeline crossing, 0.4 mile upstream from mouth, and 1.6 miles northeast of Mentone.

Drainage area.--46.3 sq mi.

Records available.--February 1939 to September 1965. Monthly discharge only for February 1939, published in WSP 1315-B.

Gage.--Water-stage recorder and broad-crested weir. Altitude of gage is 1,780 ft (from topographic map).

Average discharge.--26 years, 2.66 cfs (1,930 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

Extremes.--Maximum discharge during year, 49 cfs Apr. 8 (gage height, 4.23 ft); no flow for many days.

1939-65: Maximum discharge, 1,500 cfs Dec. 23, 1945 (gage height, 6.5 ft), on basis of slope-area measurement of maximum flow; no flow for parts of each year.

Remarks.--Records good. No regulation above station. The Zanja and Mill Creek spreading grounds divert most of low streamflow above station. Pumping from wells along stream above station for irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.2	0
3.3	.5
3.4	2.0
3.5	4.5
3.6	7.8
3.7	12

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	0	0	0	0.7	0.1	2.2	0.6	0	0	0	0
2	2.6	0	0	0	1.0	0	1.3	.5	0	0	0	0
3	2.0	.1	0	0	.1	0	3.4	.5	0	0	0	.3
4	.2	.1	0	0	.1	.2	.1	.2	0	0	0	.4
5	.1	.1	0	0	0	.1	0	.5	0	0	0	.3
6	.1	.1	0	0	.4	.1	0	1.2	0	.1	0	.2
7	.1	.1	.1	.3	0	.5	0	1.2	.1	.1	0	.1
8	0	0	.1	2.6	0	.5	5.6	.8	0	.1	0	0
9	0	.4	0	0	0	.1	4.6	1.2	0	0	.1	0
10	0	.6	.2	0	0	.3	2.5	.4	0	0	.1	0
11	.2	.2	.3	.1	0	.8	3.1	0	0	0	1.0	0
12	.1	.1	.1	0	.1	.4	1.8	1.3	.2	0	3.1	0
13	.1	.1	.2	.1	.8	.2	0	.6	.1	0	1.5	0
14	.1	.1	.1	0	1.4	.1	0	.1	0	0	6.1	0
15	.1	0	0	0	.6	.2	.1	.1	0	0	8.6	0
16	.1	.1	0	0	.2	0	3.6	.2	.3	0	7.2	.2
17	.1	.2	.1	.1	.2	0	3.4	.2	.3	0	3.4	.2
18	.1	.2	.1	.3	.2	0	2.6	.7	.3	0	0	.9
19	0	0	.2	.2	.7	0	3.4	.2	.2	0	0	.6
20	0	0	.5	.3	.2	0	3.6	.2	.3	.1	0	.9
21	.1	0	.1	.2	.4	0	2.0	.1	.2	0	0	.6
22	.1	0	.1	0	.4	0	3.1	0	.2	.2	0	.6
23	.1	0	0	0	.1	0	2.8	.5	.1	.2	0	.5
24	.1	0	0	.2	.4	0	2.2	1.1	.1	.2	0	.4
25	0	0	.1	0	.1	0	2.4	1.1	0	.2	0	.3
26	0	0	.2	0	0	0	2.0	.1	0	.2	0	.2
27	1.2	0	11	0	.1	0	1.2	.3	0	.1	0	.1
28	.1	0	3.4	.1	.1	0	1.8	.1	0	0	0	.1
29	.2	0	0	.1	-----	0	1.2	0	0	0	0	0
30	.1	0	0	.1	-----	0	1.1	0	0	0	0	0
31	0	-----	.5	.2	-----	.1	-----	0	-----	0	-----	-----
Total	10.4	2.5	17.4	4.9	8.3	3.7	61.1	14.0	2.4	1.5	31.1	6.9
Mean	0.34	0.08	0.56	0.16	0.30	0.12	2.04	0.45	0.08	0.05	1.00	0.23
Ac-ft	21	5.0	35	9.7	16	7.3	121	28	4.8	3.0	62	14

Calendar year 1964 Max 11 Min 0 Mean 0.27 Ac-ft 194
 Water year 1964-65 Max 11 Min 0 Mean 0.45 Ac-ft 327

11-555. 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., 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 (revised).

Records available.--January 1919 to September 1965; combined records of creek and diversions, March 1951 to September 1965.

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).--46 years, 5.34 cfs (3,870 acre-ft per year); median of yearly mean discharges, 3.5 cfs (2,500 acre-ft per year).

(combined).--14 years, 5.12 cfs (3,710 acre-ft per year); median of yearly mean discharges, 3.5 cfs (2,500 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 371 cfs Apr. 9 (gage height, 1.83 ft); no flow for most of year.

1919-65: 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).--Maximum discharge during year, 371 cfs Apr. 9; no flow Nov. 12, Sept. 29.

1951-65: Maximum discharge, 1,720 cfs Apr. 3, 1958; minimum daily, 0.1 cfs Nov. 4, 1953, Nov. 3, 1959, and Nov. 14, 1961.

Remarks.--Records good. 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.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 10

May 11 to Sept. 30

0.1	0	0.6	10	0.1	0
.2	.4	.8	24	.2	.4
.3	1.8	1.0	50	.3	1.2
.4	3.7	1.3	120		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0.2	0.1	0	12	9.5			0	
2		0	0	.1	.1	0	20	3.9			0	
3		0	0	.1	.1	0	20	2.8			0	
4		0	0	0	.1	0	17	1.6			0	
5		0	0	0	.1	0	14	.3			0	
6		0	0	.2	5.4	0	14	.1			0	
7		0	0	5.5	5.4	0	12	1.7			0	
8		0	0	4.1	2.3	.1	17	2.1			0	
9		0	0	2.8	.1	.1	81	1.0			0	
10		0	0	2.2	.1	0	101	0			0	
11		.1	0	2.1	.1	.1	36	0			.5	
12		0	0	1.6	.1	.1	27	0			.5	
13		.1	0	1.3	.1	4.1	21	0			0	
14		0	0	1.2	0	4.4	18	0			0	
15		0	0	1.2	0	4.6	20	0			0	
16		0	0	1.2	0	4.1	21	0			0	
17		.2	0	1.2	0	3.7	23	0			0	
18		.8	.1	1.2	0	3.7	26	0			0	
19		.2	.4	1.2	0	3.4	32	0			0	
20		.1	.4	1.2	0	2.8	32	0			0	
21		.1	.2	1.2	0	2.1	31	0			0	
22		.1	.1	1.2	0	1.9	27	0			0	
23		0	.1	1.2	0	1.9	26	0			0	
24		0	.1	3.6	0	1.9	26	0			0	
25		0	.1	1.2	0	1.9	26	0			0	
26		0	.1	.6	0	1.8	22	0			0	
27		0	15	1.3	0	1.8	20	0			0	
28		0	17	.6	0	1.8	14	0			0	
29		0	7.6	1.0	-----	1.8	10	0			0	
30		0	4.1	.1	-----	1.8	11	0			0	
31		-----	1.2	.1	-----	2.4	-----	0			0	
Total	0	1.7	46.5	40.7	14.1	52.3	777	23.0	0	0	1.0	0
Mean	0	0.06	1.50	1.31	0.50	1.69	25.9	0.74	0	0	0.03	0
Ac-ft	0	3.4	92	81	28	104	1,540	46	0	0	2.0	0

Calendar year 1964 Max 24 Min 0 Mean 0.73 Ac-ft 530

Water year 1964-65 Max 101 Min 0 Mean 2.62 Ac-ft 1,900

Peak discharge (base, 130 cfs).--Apr. 9 (2330 hrs) 371 cfs (1.83 ft).

SANTA ANA RIVER BASIN

11-555. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.4	0.7	1.9	2.1	1.8	12	13	2.8	1.2	0.6	0.3
2	.4	.4	.7	1.7	2.1	1.7	20	8.7	2.8	1.1	.6	.3
3	.4	.3	.7	1.6	2.1	1.7	20	8.1	2.8	1.0	.6	.3
4	.3	.3	.7	1.4	2.0	1.7	17	7.5	2.6	.9	.6	.3
5	.4	.4	.8	1.5	1.9	1.7	14	6.6	2.5	.9	.5	.4
6	.3	.4	.8	1.5	6.2	1.7	14	6.4	2.1	.8	.5	.5
7	.4	.4	.7	7.9	5.5	1.8	12	6.0	2.0	.9	.4	.5
8	.4	.4	.7	6.5	3.8	2.4	17	5.7	2.2	.9	.4	.4
9	.4	.6	.8	4.8	2.7	2.0	81	5.1	2.1	.8	.4	.4
10	.4	.7	.9	4.0	2.6	1.9	101	4.9	1.9	.8	.5	.4
11	.3	.1	.8	3.8	2.5	2.7	36	4.7	1.8	.8	1.5	.3
12	.3	0	.7	3.5	2.4	3.1	27	4.6	1.7	.8	2.2	.3
13	.3	.2	.8	3.4	2.2	5.6	21	4.6	1.6	.8	.6	.3
14	.3	.4	.9	3.3	2.2	4.5	18	4.5	1.7	.8	.6	.2
15	.3	.5	.7	3.1	2.1	4.7	20	4.0	1.9	.8	.5	.3
16	.3	.4	.7	3.1	2.1	4.1	21	3.7	2.0	.8	.5	.4
17	.3	.6	.7	3.1	2.1	3.7	23	3.4	1.8	.8	.5	.5
18	.3	1.2	.9	3.1	2.1	3.7	26	3.4	1.7	.7	.5	.5
19	.3	.9	1.0	3.1	2.0	3.4	32	3.2	1.7	.7	.4	.5
20	.3	.9	1.0	3.1	2.0	3.1	33	3.1	1.6	.7	.4	.4
21	.4	.8	1.0	3.1	2.0	2.7	33	2.9	1.5	.7	.4	.4
22	.4	.8	.9	3.0	2.0	2.4	29	3.1	1.7	.7	.4	.4
23	.4	.7	.9	3.0	1.9	2.3	28	3.2	1.8	.7	.4	.4
24	.4	.7	.9	7.9	2.1	2.3	27	3.4	1.7	.7	.4	.4
25	.4	.7	1.0	5.4	1.8	2.3	28	3.1	1.7	.7	.5	.4
26	.4	.7	.9	3.7	1.8	2.2	23	2.7	1.9	.7	.3	.3
27	.4	.7	1.6	3.8	1.8	2.2	21	2.4	1.6	.7	.3	.4
28	.4	.7	1.7	2.9	1.8	2.1	17	2.2	1.4	.6	.3	.2
29	.4	.7	7.6	3.3	-----	2.1	14	2.0	1.2	.7	.3	0
30	.4	.7	4.1	2.1	-----	2.1	12	2.2	1.2	.7	.3	0
31	.4	-----	2.4	2.1	-----	2.9	-----	2.7	-----	.6	.3	-----
Total	11.1	16.7	68.4	105.5	67.9	82.6	797	141.1	56.8	24.5	16.5	10.6
Mean	0.36	0.56	2.21	3.40	2.42	2.66	26.6	4.55	1.89	0.79	0.53	0.35
Ac-ft	22	33	136	209	135	164	1,580	280	113	49	33	21

Calendar year 1964 Max 24 Min 0 Mean 1.94 Ac-ft 1,410
 Water year 1964-65 Max 1.01 Min 0 Mean 3.83 Ac-ft 2,780

Peak discharge (base, 130 cfs).--Apr. 9 (2330 hrs) 371 cfs.

11-558, City Creek near Highland, Calif.

Location.--Lat 34°08'38", long 117°11'16", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.1 N., R.3 W., on right bank 0.6 mile upstream from Highland Avenue and 1.5 miles northeast of Highland.

Drainage area.--19.6 sq mi (revised).

Records available.--October 1919 to September 1965; combined records of creek and canal, June 1924 to September 1965.

Gage.--Water-stage recorder (digital) on creek; water-stage recorder on canal. Altitude of gage is 1,580 ft (from topographic map). Prior to Mar. 1, 1939, at site a quarter of a mile downstream at different datum.

Average discharge (creek only).--46 years, 7.53 cfs (5,450 acre-ft per year); median of yearly mean discharges, 4.7 cfs (3,400 acre-ft per year).
(combined).--41 years, 9.04 cfs (6,540 acre-ft per year); median of yearly mean discharges, 6.2 cfs (4,500 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 292 cfs Apr. 9 (gage height, 3.92 ft); no flow for many days.

1919-65: Maximum discharge, 6,900 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow for several months in some years.

(combined).--Maximum discharge during year, 292 cfs Apr. 9; no flow Oct. 11, 19, Aug. 9, 10.

1924-65: Maximum discharge, 6,900 cfs Mar. 2, 1938; no flow at times in some years.

Remarks.--Records good. No regulation above station. City Creek Water Co.'s canal has diverted above station for irrigation throughout period of record. Combined discharge of City Creek and canal is given on following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.1	0.2	0.2	3.9	0.1	0.3	34	1.7	0.6	0.1	0	0
2	.1	.1	.1	3.3	.1	.2	47	1.1	.6	.1	0	0
3	.1	.1	.1	3.0	.1	.2	44	1.0	.6	.1	0	0
4	0	.1	.1	2.8	.1	.3	32	.8	.5	.1	0	0
5	0	.1	.2	2.7	.1	.4	24	.8	.4	.1	0	0
6	.1	.1	.1	2.5	3.3	.3	19	.8	.4	.1	0	0
7	.1	.2	.1	8.3	2.4	.3	18	.6	.4	.1	0	0
8	.1	.1	.1	6.0	1.7	.3	48	.4	.4	.1	0	0
9	.1	.2	.1	4.8	1.6	.3	90	.4	.4	.1	0	0
10	.1	2.1	0	4.3	1.3	.3	97	.4	.3	.1	0	0
11	0	1.0	.1	4.5	1.2	.4	34	.3	.2	.1	.6	0
12	0	0	.2	3.0	.9	.7	30	.3	.1	.1	0	0
13	0	0	.1	.6	.3	5.4	27	.3	.1	.1	0	0
14	0	0	.1	.5	.3	4.6	24	.3	.2	.1	0	0
15	0	0	.1	.4	.2	4.3	28	.2	.2	.1	0	0
16	0	0	.1	1.4	.2	4.0	28	.2	.2	.1	0	0
17	0	.9	0	2.4	.2	3.6	28	.2	.2	.1	0	.1
18	0	2.4	.1	.8	.2	3.2	27	.2	.5	.1	0	0
19	0	1.9	1.1	.1	.2	2.9	27	.2	.2	.3	0	0
20	.1	1.9	2.4	.1	.3	2.7	25	.2	.2	.2	0	0
21	.1	1.9	1.7	.1	.3	2.5	22	.2	.2	.1	0	0
22	0	1.9	.2	.1	.4	2.3	19	.2	.1	.1	0	0
23	0	1.9	.3	.1	.3	2.4	16	.5	.2	.1	0	0
24	0	1.9	.2	3.5	.3	2.4	13	.3	.2	.1	.1	0
25	0	1.8	.2	3.7	.3	2.2	11	.4	.3	.1	0	0
26	0	1.8	.2	2.1	.3	2.1	9.9	.2	.2	.1	0	0
27	.1	1.7	10	1.6	.3	2.0	9.6	.2	.2	.1	0	0
28	.2	1.7	32	.4	.3	1.8	8.3	.2	.2	0	0	0
29	.2	1.5	12	.1	-----	1.8	4.4	.1	.2	0	0	0
30	.1	1.1	6.9	.1	-----	1.7	3.0	.2	.1	0	0	0
31	.1	-----	4.8	.1	-----	1.5	-----	.4	-----	0	0	-----
TOTAL	1.7	28.6	73.9	67.3	17.3	57.4	847.2	13.3	8.6	3.0	.7	.1
MEAN	0.06	0.95	2.38	2.17	0.62	1.85	28.2	0.43	0.29	0.10	0.02	0.003
AC-FT	3.4	57	147	133	34	114	1,680	26	17	6.0	1.4	.2

CALENDAR YEAR 1964 MAX 39 MIN 0 MEAN 1.23 AC-FT 891
WATER YEAR 1964-65 MAX 97 MIN 0 MEAN 3.07 AC-FT 2,220

Peak discharge (base, 150 cfs).--Apr. 9 (2215 hrs) 292 cfs (3.92 ft).

11-558. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.6	1.6	3.9	2.1	2.5	3.6	7.7	4.0	1.3	0.5	0.1
2	.2	.7	1.5	3.3	2.1	2.4	4.8	7.1	4.0	1.2	.5	.1
3	.2	.6	1.6	3.0	2.1	2.4	4.5	7.3	4.2	1.1	.3	.1
4	.1	.6	1.5	2.8	2.1	2.3	3.3	6.8	3.7	1.1	.3	.1
5	.1	.6	1.5	2.7	2.1	2.3	2.5	6.6	3.2	.9	.2	.3
6	.2	.6	1.4	2.5	3.5	2.3	1.9	6.5	3.0	.9	.1	1.5
7	.2	.6	1.5	8.3	4.4	2.4	1.8	6.1	3.0	.8	.1	1.2
8	.2	.5	1.5	6.0	3.7	2.8	4.8	5.8	3.2	.8	.1	1.0
9	.2	1.6	1.5	4.8	3.6	2.4	9.0	5.7	3.1	.8	0	.8
10	.2	2.7	1.4	4.3	3.5	2.5	9.7	5.4	2.7	.8	0	.6
11	0	2.3	1.5	4.5	3.0	3.8	3.4	5.0	2.4	.8	3.3	.5
12	.1	1.6	1.5	3.0	3.1	4.7	3.0	5.2	2.3	.8	1.8	.4
13	.1	1.5	1.4	2.6	2.8	8.3	2.7	5.4	2.3	.8	.7	.3
14	.1	1.4	1.5	2.5	2.8	5.7	2.4	5.4	2.7	.8	.5	.3
15	.2	1.2	1.5	2.4	2.7	5.3	2.8	4.6	3.0	.8	.4	.3
16	.1	1.2	1.5	3.4	2.7	5.0	2.8	4.1	3.3	.8	.4	.5
17	.1	1.6	1.4	4.4	2.7	4.5	2.8	3.9	3.0	.7	.6	1.9
18	.1	2.4	1.6	2.8	2.6	4.0	2.7	3.9	2.6	.7	.5	2.2
19	0	1.9	1.8	2.1	2.6	3.7	2.7	3.7	2.4	.8	.5	1.0
20	.2	1.9	2.4	2.1	2.6	3.4	2.5	3.7	2.3	.8	.4	.5
21	.2	1.9	2.3	2.1	2.5	3.2	2.2	3.7	2.2	.7	.3	.5
22	.1	1.9	1.8	2.1	2.7	2.9	1.9	4.0	2.1	.7	.3	.5
23	.2	1.9	1.8	2.1	2.6	3.0	1.6	4.3	2.4	.7	.4	.5
24	.2	1.9	1.6	5.5	2.6	3.1	1.3	5.2	2.3	.8	.4	.5
25	.3	1.8	1.6	5.7	2.5	2.9	1.1	4.8	2.6	.9	.2	.5
26	.3	1.8	1.6	4.1	2.5	2.7	9.9	4.1	2.9	1.1	.1	.5
27	.3	1.7	1.1	3.6	2.5	2.7	9.6	3.7	2.2	1.2	.1	.5
28	.3	1.7	3.2	2.4	2.5	2.5	8.3	3.4	1.6	.5	.1	.5
29	.4	1.5	1.2	2.1	-----	2.5	6.9	2.9	1.6	.5	.1	.5
30	.5	1.7	6.9	2.1	-----	2.4	7.3	2.9	1.5	1.0	.1	.5
31	.5	-----	4.8	2.1	-----	3.3	-----	3.6	-----	.7	.1	-----
Total	6.1	43.9	108.5	105.3	77.0	103.9	860.0	152.5	81.8	26.3	13.4	18.7
Mean	0.20	1.46	3.50	3.40	2.75	3.35	28.7	4.92	2.73	0.85	0.43	0.62
Ac-ft	12	87	215	209	153	206	1,710	302	162	52	27	37

Calendar year 1964 Max 39 Min 0 Mean 2.57 Ac-ft 1,720
 Water year 1964-65 Max 97 Min 0 Mean 4.38 Ac-ft 3,170

Peak discharge (base, 150 cfs).--Apr. 9 (2215 hrs) 292 cfs.

11-562, Santa Ana River at Waterman Avenue, at San Bernardino, Calif.

Location,--Lat 34°04'14", long 117°16'41", in San Bernardino Grant, 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, San Bernardino County.

Drainage area,--354 sq mi (revised).

Records available,--October 1954 to December 1961, January 1964 to September 1965. 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.

Extremes,--Maximum discharge during year, 850 cfs Aug. 11 (gage height, 3.15 ft); no flow for most of year.

1928-37, 1954-61, 1964-65: Maximum discharge, 11,200 cfs Feb. 6, 1937 (gage height, 4.80 ft, site and datum then in use); no flow for most of each year.

Maximum discharge known, about 75,700 cfs Mar. 2, 1938, from combined discharges of Santa Ana River near Mentone, Mill Creek near Yucaipa, and Plunge Creek near East Highlands.

Remarks,--Records poor. Flow partly regulated by Big Bear Lake (see p. 127). Natural flow of stream affected by ground-water withdrawals and diversions for domestic use and irrigation above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	0	0	0	0	36				0	0
2	0	.1	0	0	0	0	35				0	0
3	0	0	0	0	0	0	47				0	0
4	0	.1	0	0	0	0	.5				0	0
5	0	.2	0	0	0	0	0				0	0
6	0	.5	0	0	4.2	0	0				0	0
7	0	1.4	0	0	0	0	0				0	0
8	0	.6	0	0	0	0	52				0	0
9	0	2.2	0	0	0	0	39				0	0
10	0	.3	0	0	0	.2	43				0	0
11	0	0	0	0	0	2.7	0				31	0
12	0	0	0	0	0	.4	0				0	0
13	0	0	0	0	0	1.2	0				0	0
14	0	0	0	0	0	0	0				0	0
15	.2	0	0	0	0	9.2	0				0	.4
16	0	0	0	0	0	0	0				0	2.1
17	0	22	0	0	0	0	0				0	5.6
18	0	.7	0	0	0	0	0				0	9.4
19	0	0	.2	0	0	0	0				0	3.4
20	0	0	0	0	0	0	0				0	2.7
21	0	0	0	0	0	0	0				0	2.7
22	0	0	0	0	0	0	0				0	3.4
23	.2	0	0	0	0	0	0				0	3.4
24	1.4	0	0	3.5	0	0	0				0	1.8
25	2.7	0	0	0	0	0	0				0	0
26	1.9	0	0	0	0	0	0				0	0
27	1.8	0	8.4	0	0	0	0				0	0
28	3.4	0	2.0	0	0	0	0				0	0
29	3.0	0	0	0	-----	0	0				0	.7
30	.2	0	0	0	-----	0	0				0	.8
31	.1	-----	0	0	-----	12	-----				0	-----
Total	14.9	28.2	10.6	3.5	4.2	25.7	252.5	0	0	0	31	36.4
Mean	0.48	0.94	0.34	0.11	0.15	0.83	8.42	0	0	0	1.00	1.21
Ac-ft	30	56	21	6.9	8.3	51	501	0	0	0	51	72

Calendar year 1964 Max - Min - Mean - Ac-ft -
 Water year 1964-65 Max 52 Min 0 Mean 1.12 Ac-ft 807

Peak discharge (base, 350 cfs),--Apr. 8 (1700 hrs) 434 cfs (2.25 ft); Aug. 11 (1630 hrs) 850 cfs (3.15 ft).

SANTA ANA RIVER BASIN

11-565. Little San Geronio Creek near Beaumont, Calif.

Location--Lat 34°01'45", long 116°56'40", in NW¹SW¹NE¹ sec.1, T.2 S., R.1 W., 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.

Records available--October 1948 to September 1965.

Gage--Water-stage recorder and concrete control. Altitude of gage is 4,320 ft (from topographic map).

Average discharge--17 years, 0.06 cfs (43 acre-ft per year).

Extremes--No flow during year.

1948-65: Maximum discharge, 319 cfs Aug. 23, 1955 (gage height, 2.18 ft), from rating curve extended above 1 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks--No flow since Apr. 2, 1964. No regulation above station. Several small diversions above station for irrigation.

Discharge for calendar year 1964 is as follows: maximum daily, 0.3 cfs; minimum, zero; mean, 0.001 cfs; total, 0.8 acre-ft.

11-570. San Timoteo Creek near Redlands, Calif.

Location--Lat 34°01'59", long 117°12'29", in NE¹NE¹NE¹ sec.5, T.2 S., R.3 W., on downstream side of right abutment of county highway bridge, 2.0 miles southwest of Redlands and 3.4 miles downstream from Yucaipa Creek.

Drainage area--119 sq mi.

Records available--October 1926 to September 1965.

Gage--Water-stage recorder and concrete control. Altitude of gage is 1,280 ft (from topographic map). Prior to Oct. 30, 1934, at site 2 miles upstream at different datum.

Average discharge--39 years, 1.28 cfs (927 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes--Maximum discharge during year, 708 cfs Sept. 18 (gage height, 3.17 ft); no flow for most of year.

1926-65: Maximum discharge, 7,460 cfs Mar. 2, 1938, result of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks--Records poor. No regulation above station. Low flow normally diverted above station for irrigation. At times small amounts of irrigation waste water passes station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 1.....	7.1	Apr. 9.....	20
2.....	.7	10.....	25
3.....	5.1	Aug. 11.....	12
4.....	4.8	14.....	12
8.....	39	Sept. 18.....	58

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	101.7	-	-	3.39	202
August.....	24	-	-	.77	48
September.....	58	-	-	1.93	115
Calendar year 1964.....	-	14	0	.06	45
Water year 1964-65.....	-	58	0	.50	365

Peak discharge (base, 150 cfs, revised)--Apr. 8 (1900 hrs) 412 cfs (2.56 ft); Aug. 11 (1615 hrs) 407 cfs (2.55 ft); Sept. 18 (1400 hrs) 708 cfs (3.17 ft).

Note--Flow occurred only on days listed above.

11-575, San Timoteo Creek near Loma Linda, Calif.

Location.--Lat 34°04'03", long 117°16'42", in San Bernardino Grant, on right bank 100 ft downstream from Waterman Avenue bridge, 0.2 mile upstream from mouth, and 1.5 miles northwest of Loma Linda, San Bernardino County.

Drainage area.--125 sq mi.

Records available.--October 1954 to September 1965 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 1,010 ft (from topographic map). Prior to Apr. 10, 1958, at site 100 ft upstream at datum 4.51 ft higher. Apr. 10, 1958, to June 12, 1961, at site 100 ft upstream at datum 3.51 ft higher.

Average discharge.--11 years, 1.36 cfs (985 acre-ft per year); median of yearly mean discharges, 1.1 cfs (800 acre-ft per year).

Extremes.--Maximum discharge during year, 635 cfs Sept. 18 (gage height, 4.67 ft), from rating curve extended above 90 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.3 cfs Oct. 17.
1954-65: Maximum discharge, 1,050 cfs Apr. 1, 1958 (gage height, 8.74 ft, present datum), from rating curve extended above 400 cfs; minimum daily, 0.2 cfs at times in some years.

Remarks.--Records fair. No regulation above station. Minor diversions above station by pumping. Loma Linda sewage disposal plant discharges into stream above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	2.0	1.0	0.8	0.9	1.2	9.8	0.9	1.4	1.0	0.7	1.6
2	1.2	1.0	1.0	1.2	.7	.7	17	1.0	1.0	.8	.8	1.6
3	.7	1.2	.9	1.4	1.0	.6	16	1.4	.8	.6	.9	1.4
4	.7	.7	.9	1.4	1.0	.9	3.8	1.2	.7	.7	1.4	1.4
5	.7	.9	.9	1.2	1.6	.6	2.2	1.2	.7	.8	1.0	1.4
6	.7	.8	.9	.8	7.8	.7	1.4	1.2	.7	.9	1.0	1.6
7	1.0	.5	1.2	1.4	1.2	.8	1.9	1.2	.9	.9	.8	1.2
8	1.4	.8	.8	1.4	1.8	1.0	34	1.2	.9	.9	.8	1.4
9	1.4	4.1	.8	1.0	1.6	1.4	17	1.0	1.0	.9	1.0	1.2
10	.8	2.8	1.0	1.2	1.4	1.6	20	1.2	.9	.8	1.8	1.4
11	.7	.6	1.2	1.0	1.4	1.0	2.0	1.2	.9	.7	5.0	1.4
12	.8	.7	1.0	1.0	1.2	.8	1.5	1.4	.8	.8	2.0	1.6
13	1.4	.7	1.4	.7	1.2	1.2	1.0	1.4	1.0	1.0	1.2	1.8
14	1.6	.5	.8	.7	1.2	1.0	1.0	1.2	1.2	1.0	8.0	1.9
15	1.8	.7	.8	.8	1.4	4.8	1.2	1.2	1.4	1.0	2.0	2.0
16	.8	.7	1.0	.7	1.6	1.6	1.0	.9	1.4	.7	1.4	1.8
17	.3	11	2.0	1.0	.6	1.4	.7	1.0	1.2	.5	1.2	1.9
18	.6	1.6	1.4	1.0	.5	1.6	.8	1.2	1.4	.6	1.4	47
19	.5	1.2	.7	1.0	.7	1.0	1.0	1.2	1.2	.7	1.6	2.4
20	.5	1.2	1.2	1.0	.7	.6	.7	1.0	.8	.6	1.8	1.6
21	.5	.8	1.2	1.0	.7	1.0	.7	1.2	1.2	.5	1.6	1.6
22	.7	1.0	1.4	1.0	.6	1.9	.7	.9	1.4	.7	1.6	1.6
23	.7	1.2	1.6	1.6	.7	2.0	.7	1.0	.9	.7	1.6	1.6
24	.4	1.2	2.0	3.7	1.2	1.6	.7	.9	.9	.6	1.6	1.4
25	.5	1.2	.9	.8	.9	1.0	1.0	.9	1.2	.7	1.6	1.4
26	.6	1.2	.7	.8	.7	.9	1.0	1.0	.7	.9	1.6	1.0
27	1.0	1.2	8.3	1.0	.7	.7	1.0	.8	.8	.9	1.8	1.2
28	1.2	.7	3.0	1.6	.9	.8	1.0	.9	.8	.9	1.8	1.2
29	1.4	.8	1.0	1.4	-----	.9	1.0	1.0	.8	.9	1.9	1.4
30	1.2	.8	.8	.8	-----	1.0	1.0	.9	.9	.8	1.9	1.0
31	1.4	-----	.8	1.6	-----	6.0	-----	1.0	-----	.5	1.9	-----
Total	28.2	43.8	42.6	36.0	35.9	42.3	142.8	33.7	29.9	24.0	54.7	91.0
Mean	0.91	1.46	1.37	1.16	1.28	1.36	4.76	1.09	1.00	0.77	1.76	3.03
Ac-ft	56	87	84	71	71	84	283	67	59	48	108	180

Calendar year 1964 Max 22 Min 0.2 Mean 1.16 Ac-ft 837
Water year 1964-65 Max 34 Min 0.3 Mean 1.66 Ac-ft 1,200

Peak discharge (base, 150 cfs, revised).--Apr. 10 (0100 hrs) 200 cfs (3.50 ft); Sept. 18 (1500 hrs) 635 cfs (4.67 ft).

11-585. East Twin Creek near Arrowhead Springs, Calif.

Location.--Lat 34°10'45", long 117°15'53", in NW 1/4 sec. 14, T.1 N., R.4 W., 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 (revised).

Records available.--December 1919 to September 1965. Prior to October 1952, published as Strawberry Creek near Arrowhead Springs.

Gage.--Water-stage recorder and broad-crested weir since September 1938. Altitude of gage is 1,590 ft (from topographic map).

Average discharge.--45 years (1920-65), 4.23 cfs (3,060 acre-ft per year); median of yearly mean discharges, 2.8 cfs (2,000 acre-ft per year).

Extremes.--Maximum discharge during year, 114 cfs Apr. 10 (gage height, 3.15 ft); minimum daily, 0.2 cfs Oct. 1 to Nov. 7.

1919-65: 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. No regulation above station. One small diversion for domestic use above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.3	0	2.0	6.6
1.4	.2	2.2	11
1.5	.6	2.5	24
1.6	1.2	2.7	40
1.8	3.4		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.2	0.2	0.6	1.2	1.2	1.2	14	2.0	1.5	1.0	0.4	0.3
2	.2	.2	.6	1.2	1.5	1.2	17	2.1	1.5	1.0	.4	.3
3	.2	.2	.7	1.2	1.5	1.1	18	2.3	1.5	.9	.3	.3
4	.2	.2	.6	1.1	1.5	1.1	13	2.2	1.5	.9	.4	.3
5	.2	.2	.6	1.0	1.6	1.1	9.8	2.1	1.6	.9	.4	.3
6	.2	.2	.6	1.0	2.3	1.2	6.5	2.1	1.6	.8	.4	.5
7	.2	.2	.6	2.5	1.9	1.3	6.3	2.0	1.6	.8	.3	.3
8	.2	.4	.6	1.6	1.5	1.3	12	2.0	1.6	.8	.3	.3
9	.2	.4	.6	1.2	1.4	1.2	20	2.0	1.4	.7	.4	.2
10	.2	.9	.6	1.1	1.2	1.2	38	2.0	1.3	.7	.3	.3
11	.2	.4	.7	1.1	1.2	1.5	19	2.0	1.3	.7	.4	.3
12	.2	.3	.6	1.1	1.2	1.8	15	2.1	1.3	.6	.4	.3
13	.2	.3	.6	1.1	1.2	2.9	11	2.1	1.3	.6	.3	.3
14	.2	.4	.6	1.0	1.2	2.3	9.9	2.1	1.4	.6	.3	.3
15	.2	.4	.6	1.0	1.2	1.8	8.7	1.6	1.5	.5	.4	.3
16	.2	.4	.6	.9	1.2	1.6	7.0	1.4	1.4	.5	.4	.3
17	.2	.8	.5	.9	1.2	1.5	6.0	1.4	1.1	.5	.4	.3
18	.2	.8	.6	1.0	1.2	1.4	4.7	1.5	1.2	.4	.4	1.0
19	.2	.6	.6	1.0	1.2	1.4	3.6	1.4	1.3	.4	.4	.5
20	.2	.6	.6	1.1	1.2	1.3	3.3	1.4	1.3	.4	.4	.4
21	.2	.6	.7	1.2	1.2	1.2	3.0	1.6	1.2	.4	.4	.3
22	.2	.6	.7	1.2	1.3	1.2	2.7	1.7	1.1	.4	.4	.3
23	.2	.6	.8	1.0	1.2	1.3	2.3	1.7	1.2	.5	.4	.3
24	.2	.6	.8	4.0	1.1	1.4	2.1	2.1	1.2	.5	.4	.3
25	.2	.6	.8	2.0	1.1	1.4	2.2	2.0	1.2	.4	.4	.3
26	.2	.6	.8	1.4	1.1	1.3	2.6	1.8	1.2	.5	.4	.3
27	.2	.6	7.2	1.3	1.1	1.3	2.5	1.7	1.1	.5	.4	.4
28	.2	.6	5.7	1.2	1.3	1.3	2.2	1.6	1.1	.4	.4	.3
29	.2	.5	3.1	1.2	-----	1.2	2.1	1.5	1.1	.4	.4	.3
30	.2	.6	2.1	1.2	-----	1.2	2.1	1.5	1.0	.4	.3	.3
31	.2	-----	1.6	1.2	-----	1.9	-----	1.5	-----	.4	.3	-----
TOTAL	6.2	14.0	36.4	40.2	37.0	44.1	266.6	56.5	39.6	18.5	11.6	10.3
MEAN	.20	.47	1.17	1.30	1.32	1.42	8.89	1.82	1.32	.60	.37	.34
AC-FT	12	28	72	80	73	87	529	112	79	37	23	20

CALENDAR YEAR 1964 MAX 12 MIN 0.10 MEAN 0.88 AC-FT 641
 WATER YEAR 1964-65 MAX 38 MIN 0.20 MEAN 1.59 AC-FT 1,150

Peak discharge (base, 40 cfs).--Apr. 10 (0200 hrs) 114 cfs (3.15 ft).

11-586. Waterman Canyon Creek near Arrowhead Springs, Calif.

Location.--Lat 34°11'35", long 117°16'25", in NE 1/4 sec. 11, T.1 N., R.4 W., 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.

Records available.--November 1911 to October 1914 (published as "near San Bernardino"), December 1919 to September 1965.

Gage.--Water-stage recorder and broad-crested weir since September 1938. Datum of gage is 2,045.46 ft above mean sea level, datum of 1929. Prior to December 1919, staff gage at site 300 ft downstream at different datum.

Average discharge.--47 years (1912-14, 1920-65), 2.44 cfs (1,770 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

Extremes.--Maximum discharge during year, 84 cfs Apr. 9 (gage height, 3.08 ft); no flow for some days.
1920-65: 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.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting control method used Apr. 1-9, May 18-24)

1.5	0	2.0	3.5
1.6	.2	2.1	5.2
1.7	.6	2.2	7.6
1.8	1.3	2.4	16
1.9	2.2		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.2	0.5	0.5	0.4	7.7	1.8	1.3	0.4	0.1	0
2		0	.2	.5	.5	.4	5.5	1.9	1.3	.3	.1	0
3		0	.2	.5	.5	.4	5.7	2.0	1.2	.3	.1	0
4		0	.2	.5	.5	.4	3.8	2.0	1.2	.3	.1	0
5		0	.2	.5	.5	.4	3.0	2.0	1.1	.2	.1	0
6		0	.2	.4	1.1	.4	2.0	2.0	1.1	.2	.1	.2
7		0	.2	1.9	.7	.4	2.5	1.9	1.1	.2	.1	.1
8		0	.2	.9	.6	.4	6.5	1.7	1.1	.2	.1	.1
9		0	.2	.7	.6	.4	16	1.6	.9	.2	.1	.1
10		.8	.2	.6	.6	.5	14	1.5	.9	.2	.1	.1
11		0	.2	.6	.5	.6	8.8	1.4	.8	.2	.1	.1
12		0	.2	.6	.5	1.0	7.4	1.5	.8	.2	.1	.1
13		0	.2	.6	.5	1.4	6.6	1.5	.9	.2	0	.1
14		0	.2	.6	.5	.7	5.9	1.5	.9	.2	0	.1
15		0	.2	.6	.5	.7	5.7	1.3	1.0	.2	0	.1
16		0	.2	.5	.5	.6	5.5	1.2	1.0	.2	0	.1
17		.2	.2	.5	.5	.6	5.2	1.2	.9	.2	.1	.1
18		.2	.3	.5	.5	.6	4.9	1.2	.9	.1	.1	.3
19		.1	.3	.5	.5	.5	4.3	1.2	.8	.2	.1	.2
20		.1	.3	.5	.4	.5	4.0	1.2	.7	.2	.1	.1
21		.1	.3	.4	.4	.5	3.5	1.3	.7	.1	.1	.1
22		.1	.3	.4	.5	.4	3.4	1.4	.7	.1	.1	.1
23		.1	.3	.4	.5	.5	3.1	1.4	.9	.1	.1	.1
24		.1	.3	.2	.4	.6	2.8	1.5	.7	.1	.1	.1
25		.1	.3	1.1	.4	.5	2.5	1.3	1.0	.1	.1	.1
26		.1	.3	.8	.4	.5	2.2	1.2	.9	.2	.1	.1
27		.1	6.3	.7	.4	.5	2.1	1.1	.7	.1	.1	.1
28		.1	2.8	.6	.4	.5	2.1	1.1	.5	.1	.1	.1
29		.1	1.2	.6	-----	.5	2.0	1.1	.5	.1	.1	.1
30		.2	.8	.5	-----	.4	1.7	1.2	.4	.1	0	.1
31		-----	.6	.5	-----	1.2	-----	1.3	-----	.1	0	-----
Total	0	2.5	17.8	20.7	14.4	17.4	150.4	45.5	26.9	5.6	2.5	2.9
Mean	0	0.08	0.57	0.67	0.51	0.56	5.01	1.47	0.90	0.18	0.08	0.10
Ac-ft	0	5.0	35	41	29	35	298	90	53	11	5.0	5.8

Calendar year 1964 Max 12 Min 0 Mean 0.45 Ac-ft 326

Water year 1964-65 Max 16 Min 0 Mean 0.84 Ac-ft 608

Peak discharge (base, 35 cfs).--Apr. 9 (2100 hrs) 84 cfs (3.08 ft).

11-590, Warm Creek Floodway near San Bernardino, Calif.

Location.--Lat 34°05'30", long 117°16'50", in San Bernardino Grant, on left bank 250 ft downstream from Mill Street, and about 1.5 miles upstream from mouth, San Bernardino County.

Drainage area.--47.5 sq mi (revised).

Records available.--January 1961 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1,010 ft (from topographic map).

Extremes.--Maximum discharge during year, 3,420 cfs Apr. 9 (gage height, 3.86 ft), from rating curve extended above 180 cfs; no flow for most of year.

1961-65: Maximum discharge, that of Apr. 9, 1965; no flow for most of each year.

Remarks.--Records poor. Flow partly regulated by percolation basins. Del Rosa Water Co. diverts from East Twin Creek for domestic use and irrigation.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	0	0	0	102			0	0.1	0
2	0	0	0	0	0	0	152			0	0	.5
3	0	0	0	0	0	0	128			0	.1	0
4	0	0	0	0	0	0	3.6			0	0	0
5	0	.2	0	0	0	0	.5			0	0	0
6	0	0	0	0	2.4	0	0			0	.1	2.1
7	0	0	0	2.1	0	0	3.0			0	.1	.1
8	0	0	0	0	0	0	243			0	0	0
9	0	13	0	0	0	0	313			.1	.2	0
10	0	20	0	0	0	.4	254			0	0	0
11	0	0	0	0	0	.3	72			.3	2.2	0
12	0	0	0	0	0	.6	3.3			.3	.4	0
13	0	0	0	0	0	.7	13			0	0	0
14	0	0	0	0	0	0	1.0			0	0	0
15	0	0	0	0	0	.6	.7			0	.2	0
16	0	0	0	0	0	0	.2			.1	0	0
17	0	65	0	0	0	0	2.7			.1	0	1
18	0	0	0	0	0	0	0			.1	0	0
19	0	0	0	0	0	0	.1			.2	.2	0
20	0	0	0	0	0	0	1.4			.2	0	0
21	0	0	0	0	0	0	.1			0	0	0
22	0	0	0	0	0	0	0			.3	0	0
23	0	0	0	0	0	0	0			.2	0	0
24	0	0	0	13	0	0	0			.1	.1	0
25	0	0	0	0	0	0	0			.1	0	0
26	0	0	0	0	0	0	0			.1	0	0
27	0	0	54	0	0	0	0			.4	0	0
28	0	0	28	0	0	0	0			.1	.2	0
29	.1	0	0	0	-----	0	0			.3	0	0
30	0	0	0	0	-----	0	0			1.5	0	0
31	0	-----	0	0	-----	22	-----			.2	0	-----
Total	0.1	98.2	82	15.1	2.4	24.6	1,303.6	0	0	4.7	3.9	3.7
Mean	0.003	3.27	2.65	0.49	0.09	0.79	43.5	0	0	0.15	0.13	0.12
Ac-ft	0.2	195	163	30	4.8	49	2,590	0	0	9.3	7.7	7.3

Calendar year 1964 Max 65 Min 0 Mean 1.17 Ac-ft 850
 Water year 1964-65 Max 313 Min 0 Mean 4.21 Ac-ft 3,060

11-604, Warm Creek near San Bernardino, Calif.

Location.--Lat 34°04'50", long 117°17'50", in San Bernardino Grant, 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, San Bernardino County.

Drainage area.--15.0 sq mi (revised).

Records available.--February 1964 to September 1965.

Gage.--Water stage recorder. Altitude of gage is 975 ft (from topographic map).

Extremes.--Maximum discharge during year, 605 cfs Apr. 9 (gage height, 6.18 ft); no flow for most of year.

1964-65: Maximum discharge, 732 cfs Mar. 22, 1964 (gage height, 5.82 ft), from rating curve extended above 320 cfs; no flow for most of each year.

Remarks.--Records fair. At times discharge diverted above station to Warm Creek floodway.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Nov. 9..... 1.4	Feb. 6..... 1.4	Apr. 3..... 39
10.....26	Mar. 10..... .1	4..... 3.0
17.....60	11..... 1.6	5..... .4
18..... .2	12..... .9	7..... 4.7
Dec. 27.....39	13..... 7.8	8..... 56
28.....29	15..... 5.6	9.....100
29..... .2	31..... 31	10..... .7
Jan. 7..... 1.7	Apr. 1.....106	Sept. 17..... .8
24..... 4.2	2..... 35	18..... .7

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
November 1964.....	87.6	-	-	2.92	174
December.....	68.2	-	-	2.20	135
January 1965.....	5.9	-	-	.19	12
February.....	1.4	-	-	.05	2.8
March.....	47.0	-	-	1.52	93
April.....	344.8	-	-	11.5	684
September.....	1.5	-	-	.05	3.0
Calendar year 1964.....	-	-	-	-	-
Water year 1964-65.....	-	106	0	1.52	1,100

Note.--Flow occurred only on days listed above.

11-605. Meeks and Daley Canal near Colton, Calif.

Location.--Lat 34°04'47", long 117°18'00", in San Bernardino Grant, at point of diversion from Warm Creek and 1.5 miles northeast of Colton, San Bernardino County.

Records available.--September 1920 to September 1965. Published as Warm Creek and Meeks and Daley Canal near Colton, October 1950 to September 1961.

Gage.--Water-stage recorder. Altitude of gage is 965 ft (from topographic map).

Extremes.--1920-65: 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.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	18	0	0	12	2.7	0.3	7.6	17	11	10	9.9
2	14	18	2.9	0	18	2.7	0	7.6	17	11	10	9.9
3	14	15	9.6	0	17	2.7	0	9.7	16	11	10	9.9
4	14	15	16	0	17	2.7	0	12	16	11	10	9.9
5	14	17	17	0	16	2.7	0	12	16	11	10	9.9
6	12	18	17	0	16	2.7	0	12	16	10	10	9.9
7	11	18	14	0	16	2.7	0	14	16	10	10	9.5
8	14	18	12	0	16	3.0	0	17	16	10	10	9.5
9	18	17	13	0	16	3.0	.1	17	16	11	10	9.5
10	18	15	13	0	16	3.0	0	17	16	11	10	9.5
11	18	14	13	0	16	7.0	0	17	16	10	10	9.5
12	18	4.7	13	0	16	14	0	17	16	10	10	9.1
13	18	0	13	0	16	12	0	17	16	10	10	9.1
14	19	0	13	.8	16	14	0	17	16	10	10	9.1
15	19	0	13	2.2	16	4.5	0	17	16	10	10	9.1
16	15	.7	13	2.2	16	0	0	17	16	10	10	9.1
17	13	.2	12	2.2	16	0	0	17	15	10	10	9.1
18	13	0	12	2.2	15	0	0	17	15	10	10	8.5
19	12	0	12	2.7	16	0	0	17	15	10	10	5.0
20	12	0	12	2.4	16	.8	0	17	15	10	10	5.3
21	12	0	12	2.4	15	2.7	0	17	15	9.9	10	7.5
22	12	0	12	2.4	16	2.7	0	16	15	9.9	10	10
23	12	0	7.2	2.4	14	2.7	0	16	15	9.9	9.9	9.9
24	12	0	1.5	2.4	12	3.0	0	17	15	9.9	9.5	9.9
25	12	0	1.5	2.4	12	3.0	0	17	15	9.9	9.5	9.9
26	12	0	1.8	2.4	12	3.0	0	17	15	9.9	9.5	9.9
27	12	0	.8	2.4	7.8	3.0	1.6	14	15	9.9	9.5	9.9
28	12	0	0	2.4	2.4	6.6	3.0	13	15	9.9	9.5	9.9
29	13	0	0	2.4	-----	12	5.2	13	13	9.9	9.5	9.9
30	16	0	0	2.4	-----	13	7.6	15	12	9.9	9.5	9.9
31	18	-----	0	2.4	-----	7.3	-----	17	-----	9.9	9.9	-----
Total	443	188.6	277.3	41.1	410.2	139.2	17.8	467.9	463	315.9	306.7	277.0
Mean	14.3	6.29	8.95	1.33	14.6	4.49	0.59	15.1	15.4	10.2	9.89	9.23
Ac-ft	879	374	550	82	814	276	35	928	918	627	608	549
Calendar year 1964	Max	21	Min	0	Mean	11.8	Ac-ft	8,570				
Water year 1964-65	Max	19	Min	0	Mean	9.17	Ac-ft	6,640				

11-620. Lytle Creek near Fontana, Calif.

Location.--Lat 34°12'44", long 117°27'26", in SE¹/₄ NW¹/₄ SE¹/₄ sec. 36, T.2 N., R.6 W., 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.

Records available.--October 1918 to September 1965. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to September 1965 (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 and dual arch-culvert control (since 1964), effective at higher stages; 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. 22, 1938, at site 1 mile downstream at different datum. Prior to Nov. 20, 1963, at site 75 feet downstream at datum 4.58 ft lower.

Average discharge (creek only).--47 years, 9.76 cfs (7,070 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

(combined).--62 years, 40.2 cfs (29,100 acre-ft per year); median of yearly mean discharges, 31 cfs (22,400 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 80 cfs Apr. 9 (gage height, 2.82 ft), on basis of velocity-area study; no flow most of year.

1918-65: Maximum discharge, 25,200 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow in parts of each year.

(combined).--Maximum discharge during year, 84 cfs Apr. 9; minimum daily, 6.4 cfs Nov. 10.

1898-99, 1904-65: Maximum discharge, 25,200 cfs Mar. 2, 1938; minimum daily, 6.0 cfs Nov. 7, 1963.

Remarks.--Combined records good; creek 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. 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 1964 to September 1965

Nov. 10.....	0.9	Apr. 20.....	11
Dec. 28.....	.2	21.....	10
Apr. 1.....	12	22.....	7.4
2.....	17	23.....	4.6
8.....	15	24.....	1.5
9.....	28	25.....	.9
10.....	31	26.....	.7
11.....	4.5	27.....	1.1
16.....	.2	28.....	2.2
17.....	2.6	29.....	1.8
18.....	5.4	30.....	.4
19.....	8.9		

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
November 1964.....	0.9	-	-	0.03	1.8
December.....	0.2	-	-	.006	.4
April 1965.....	166.2	-	-	5.54	330
Calendar year 1964.....	-	116	0	.46	335
Water year 1964-65.....	-	31	0	.46	332

Peak discharge (base, 200 cfs).--No peak above base.

Note.--Flow occurred only on days listed above.

SANTA ANA RIVER BASIN

11-620. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.6	9.7	12	13	12	12	26	29	18	12	10	9.3
2	8.4	9.7	12	13	12	12	30	28	17	13	9.7	9.3
3	8.4	9.2	12	13	12	12	23	27	17	13	9.7	10
4	8.6	9.2	12	13	12	12	21	26	16	13	9.9	10
5	8.8	9.4	12	13	12	12	18	24	16	12	9.9	10
6	8.4	9.4	12	13	13	12	17	24	16	12	9.9	11
7	8.4	9.7	12	14	13	12	16	23	16	12	10	11
8	8.8	9.9	12	13	12	12	36	22	17	11	10	10
9	9.1	7.4	12	13	12	12	48	21	17	11	10	10
10	9.1	6.4	12	14	12	12	49	21	15	12	9.9	10
11	9.3	11	12	14	13	12	31	20	15	12	9.9	9.9
12	9.3	12	12	14	13	12	28	21	15	12	9.9	9.4
13	9.3	12	12	14	12	12	27	21	15	11	9.5	9.9
14	9.5	12	12	13	12	12	25	21	15	11	9.7	9.9
15	9.7	12	12	13	12	12	27	19	16	12	9.9	9.9
16	9.6	12	12	13	12	12	28	19	15	12	9.7	10
17	9.2	11	12	13	12	12	31	19	15	12	9.7	10
18	9.1	12	12	13	12	12	35	19	14	11	9.9	10
19	9.0	12	12	13	12	12	40	20	14	11	9.9	10
20	9.2	12	13	13	12	12	43	19	14	11	9.7	10
21	9.2	12	12	13	12	12	43	19	14	11	9.7	10
22	8.8	12	12	13	12	12	38	19	14	11	9.7	9.5
23	8.9	12	12	13	12	12	34	19	14	10	9.7	9.4
24	8.9	12	12	14	12	12	30	19	14	11	9.7	9.4
25	9.3	12	12	13	12	12	30	18	14	10	9.9	9.9
26	9.4	12	12	13	12	12	29	18	14	11	9.9	10
27	9.2	12	14	13	12	12	29	17	14	10	9.7	10
28	9.0	12	12	13	12	12	31	17	13	10	11	10
29	9.8	12	13	13	-----	12	31	17	12	10	11	9.9
30	9.4	12	13	12	-----	12	29	17	12	10	9.3	9.9
31	9.2	-----	13	12	-----	14	-----	17	-----	10	9.3	-----
Total	280.9	328.0	378	407	340	374	923	640	448	350	305.7	297.6
Mean	9.06	10.9	12.2	13.1	12.1	12.1	30.8	20.6	14.9	11.3	9.86	9.92
Ac-ft	557	651	750	807	674	742	1,830	1,270	889	694	606	590

Calendar year 1964 Max 122 Min 6.4 Mean 12.3 Ac-ft 8,950

Water year 1964-65 Max 49 Min 6.4 Mean 13.9 Ac-ft 10,060

Peak discharge (base, 200 cfs).--No peak above base.

11-630, Cajon Creek near Keenbrook, Calif.

Location.--Lat $34^{\circ}16'03''$, long $117^{\circ}27'30''$, in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T.2 N., R.6 W., on right bank 1,600 ft upstream from Lone Pine Creek and 1.2 miles north of Keenbrook.

Drainage area.--40.6 sq mi.

Records available.--December 1919 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 2,630 ft (from topographic map). Prior to Oct. 24, 1935, at site 1,300 ft downstream at different datum.

Average discharge.--45 years (1920-65), 8.32 cfs (6,020 acre-ft per year); median of yearly mean discharges, 5.5 cfs (4,000 acre-ft per year).

Extremes.--Maximum discharge during year, 559 cfs Apr. 9 (gage height, 4.38 ft); minimum daily, 1.0 cfs Nov. 4, 6.

1919-65: Maximum discharge, 14,500 cfs Mar. 2, 1938 (gage height, 19.3 ft), result of slope-area measurement of maximum flow; minimum, 0.05 cfs June 25, 1920.

Remarks.--Records good below 10 cfs and poor above. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.2	1.1	1.6	1.7	2.1	2.2	100	4.1	2.0	2.0	1.7	1.6
2	1.4	1.2	1.7	1.7	2.0	2.0	32	3.9	2.5	1.9	1.9	1.6
3	1.5	1.1	1.9	1.9	2.0	1.9	23	3.2	2.7	1.8	1.9	1.6
4	1.5	1.0	1.9	1.9	2.1	1.9	14	4.0	2.6	1.7	1.7	1.6
5	1.6	1.1	1.6	1.7	2.3	1.9	10	4.2	2.5	1.7	1.7	1.6
6	1.7	1.0	1.6	1.5	2.3	2.0	8.7	3.8	2.4	1.7	1.7	1.9
7	2.0	1.1	1.6	1.8	2.2	2.0	7.2	3.7	2.3	1.7	1.7	1.6
8	2.0	1.1	1.5	1.5	2.2	2.0	113	3.6	2.3	1.9	1.6	1.8
9	2.1	1.4	1.6	1.5	2.2	2.0	106	3.4	2.3	1.9	1.5	1.7
10	2.1	1.4	1.7	1.5	2.1	2.0	37	3.4	2.2	1.9	1.5	1.7
11	2.0	1.3	1.7	1.6	2.1	2.1	14	3.6	2.2	1.7	1.3	1.7
12	1.9	1.4	1.7	1.6	2.2	2.2	13	3.9	2.2	1.7	2.1	1.6
13	2.0	1.3	1.7	1.6	2.2	2.0	13	3.9	2.2	1.7	2.1	1.5
14	1.9	1.3	1.3	1.6	2.2	1.9	12	3.8	2.2	1.7	2.0	1.5
15	1.9	1.3	1.3	1.7	2.2	1.9	12	3.6	2.4	1.7	1.9	1.5
16	1.7	1.3	1.4	1.7	2.2	2.0	11	3.3	2.7	1.6	1.7	1.6
17	1.7	2.1	1.3	1.6	2.1	2.1	11	3.1	2.6	1.7	1.7	1.6
18	1.5	1.8	1.4	1.7	2.2	1.9	9.6	3.1	2.6	1.7	1.7	1.6
19	1.5	1.7	1.5	1.6	2.2	2.0	8.9	3.2	2.5	1.6	1.6	1.6
20	1.5	1.7	1.8	1.7	2.2	1.9	8.4	3.2	2.4	1.6	1.6	1.8
21	1.5	1.6	1.6	1.7	2.2	1.9	7.7	3.2	2.3	1.7	1.6	1.9
22	1.5	1.6	1.5	1.6	2.1	1.9	5.9	3.2	2.4	1.6	1.7	1.9
23	1.5	1.5	1.5	1.6	2.2	2.1	5.2	3.2	2.5	1.7	1.6	1.7
24	1.6	1.6	1.6	2.1	2.2	2.1	4.7	3.1	2.4	1.6	1.6	1.6
25	1.5	1.5	1.6	2.2	2.2	2.1	4.3	2.8	2.3	1.9	1.6	1.7
26	1.5	1.6	1.6	2.2	2.2	2.0	3.9	2.6	2.3	1.8	1.6	1.8
27	1.3	1.7	2.3	2.2	2.1	2.1	3.5	2.5	2.1	1.7	1.6	1.9
28	1.2	1.7	1.7	2.1	2.2	1.9	3.9	2.5	2.0	1.7	1.7	1.8
29	1.5	1.5	1.8	2.1	-----	1.9	3.8	2.2	2.0	1.7	1.6	1.7
30	1.3	1.5	1.7	2.0	-----	1.9	3.9	1.9	2.0	1.7	1.6	1.7
31	1.2	-----	1.7	2.2	-----	8.9	-----	2.0	-----	1.7	1.6	-----
TOTAL	50.3	42.5	50.4	55.1	60.7	68.7	610.6	101.2	70.1	53.7	64.1	50.6
MEAN	1.62	1.42	1.63	1.78	2.17	2.22	20.4	3.27	2.34	1.73	2.07	1.69
AC-FT	100	84	100	109	120	136	1,210	201	139	107	127	100

CALENDAR YEAR 1964 MAX 28 MIN 1.0 MEAN 2.02 AC-FT 1,460
 WATER YEAR 1964-65 MAX 113 MIN 1.0 MEAN 3.50 AC-FT 2,530

Peak discharge (base, 140 cfs).

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
4-1	1830	3.54	304	8-11	1330	3.34	200
4-9	2015	4.38	559				

11-635. Lone Pine Creek near Keenbrook, Calif.

Location.--Lat 34°15'59", long 117°27'47", in SE $\frac{1}{4}$ Sec. 12, T.2 N., R.6 W., 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.

Records available.--December 1919 to September 1938, June 1949 to September 1965.

Gage.--Water-stage recorder and concrete control. Datum of gage is 2,605.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1946. Prior to Mar. 2, 1938, water-stage recorder (destroyed by flood) and Mar. 2 to Sept. 30, 1938, staff gage, at same site at datum 0.98 ft higher.

Average discharge.--34 years (1920-38, 1949-65), 1.12 cfs (811 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

Extremes.--Maximum discharge during year, 100 cfs Apr. 8 (gage height, 3.39 ft), on basis of field estimate of maximum flow; no flow Aug. 6-8, Sept. 29-30.

1919-38, 1949-65: 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. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.1	0.1	0.1	0.1	0.1	7.6	0.1	0.1	0.1	0.1	0.1
2	.1	.1	.1	.1	.1	.1	1.0	.1	.1	.1	.1	.1
3	.1	.1	.1	.1	.1	.1	.7	.1	.1	.1	.1	.1
4	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
5	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
6	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	0	.1
7	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	0	.1
8	.1	.1	.1	.1	.1	.1	7.6	.1	.1	.1	0	.1
9	.1	.1	.1	.1	.1	.1	6.2	.1	.1	.1	.1	.1
10	.1	.1	.1	.1	.1	.1	.3	.1	.1	.1	.1	.1
11	.1	.1	.1	.1	.1	.1	.2	.1	.1	.1	.1	.1
12	.1	.1	.1	.1	.1	.1	.2	.1	.1	.1	.1	.1
13	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
14	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
15	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
16	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
17	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
18	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
19	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
20	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
21	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
22	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
23	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
24	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
25	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
26	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
27	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
28	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
29	.1	.1	.1	.1	-----	.1	.1	.1	.1	.1	.1	.1
30	.1	.1	.1	.1	-----	.1	.1	.1	.1	.1	.1	0
31	.1	-----	.1	.1	-----	1.3	-----	.1	-----	.1	.1	0
Total	3.1	3.0	3.1	3.1	2.8	4.3	26.0	3.1	3.0	3.1	2.8	2.8
Mean	0.10	0.10	0.10	0.10	0.10	0.14	0.87	0.10	0.10	0.10	0.09	0.09
Ac-ft	6.1	6.0	6.1	6.1	5.6	8.5	52	6.1	6.0	6.1	5.6	5.6

Calendar year 1964 Max 2.3 Min 0.1 Mean 0.11 Ac-ft 83
 Water year 1964-65 Max 7.6 Min 0 Mean 0.16 Ac-ft 120

Peak discharge (base, 80 cfs).--Apr. 8 (1300 hrs) 100 cfs (3.39 ft).

11-636.8. Devil Canyon Creek near San Bernardino, Calif.

Location.--Lat 34°12'12", long 117°20'02", in Muscupiabe Grant, on right bank 1.0 mile downstream from confluence of East Fork and West Fork and 7.0 miles northwest of San Bernardino, San Bernardino County.

Drainage area.--5.61 sq mi.

Records available.--November 1911 to September 1912, October 1913 to September 1914, December 1919 to September 1965. 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, staff gage at site 500 ft downstream at different datum.

Average discharge (creek only).--46 years (1913-14, 1920-65), 1.53 cfs (1,110 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).
(combined).--32 years (1913-14, 1934-65), 3.12 cfs (2,260 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

Extremes.--Maximum discharge during year, 47 cfs Apr. 9 (gage height, 2.29 ft); no flow for most of year.
1913-14, 1919-65: Maximum discharge, 3,320 cfs Mar. 2, 1938, by rainfall-runoff studies; no flow at times in most years.

Remarks.--Records good. No regulation above station. City of San Bernardino diverts above station for municipal supply.

Cooperation.--Records of diversion furnished by city of San Bernardino.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0				1.1	0.1	0.1			
2			0				5.8	.1	.1			
3			0				6.7	.1	.1			
4			0				4.6	.1	.1			
5			0				3.6	.1	.1			
6			0				2.6	.1	.1			
7			0				2.4	.1	0			
8			0				8.2	.1	0			
9			0				18	.1	0			
10			0				22	.1	0			
11			0				9.8	.1	0			
12			0				7.2	.1	0			
13			0				5.8	.1	0			
14			0				5.2	.1	0			
15			0				5.1	.1	0			
16			0				4.9	.1	0			
17			0				3.7	.1	0			
18			0				3.0	.1	0			
19			0				1.7	.1	0			
20			0				.6	.1	0			
21			0				.2	.1	0			
22			0				.2	.1	0			
23			0				.2	.1	0			
24			0				.2	.1	0			
25			0				.2	.1	0			
26			0				.2	.1	0			
27			0				.1	.1	0			
28			.3				.1	.1	0			
29			0				.1	.1	0			
30			0				.1	.1	0			
31			0					.1				
Total	0	0	0.3	0	0	0	123.6	3.1	0.6	0	0	0
Mean	0	0	0.01	0	0	0	4.12	0.10	0.02	0	0	0
Ac-Ft	0	0	0.6	0	0	0	245	6.1	1.2	0	0	0
(†)	25	33	45	50	57	56	363	125	83	49	29	31

Calendar year 1964: Max 5.0 Min 0 Mean 0.03 Ac-ft 22 Ac-ft(†) 561
 Water year 1964-65: Max 22 Min 0 Mean 0.35 Ac-ft 253 Ac-ft(†) 946

Peak discharge (base, 25 cfs).--Apr. 9 (2300 hrs) 47 cfs (2.29 ft).

† Combined discharge of Devil Canyon Creek and city of San Bernardino diversion.

11-650. Lytle Creek at Colton, Calif.

Location.--Lat 34°04'44", long 117°18'17", in San Bernardino Grant, on right bank 400 ft downstream from Colton Avenue, 1,930 ft upstream from outlet end of channel, and 1.3 miles northeast of Colton, San Bernardino County.

Drainage area.--172 sq mi.

Records available.--October 1957 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 974.67 ft above mean sea level (Corps of Engineers bench mark).

Average discharge.--8 years, 1.16 cfs (840 acre-ft per year).

Extremes.--Maximum and minimum discharges for the water years 1958-65 are contained in the following table:

Water Year	Date	Maximum		Minimum
		Discharge (cfs)	Gage Height (feet)	
1958	Feb. 4, 1958	4,080	†5.05	0
1959	Feb. 16, 1959	1,120	2.96	0
1960	Jan. 12, 1960	52	1.85	0
1961	Aug. 4, 1961	64	1.88	0
1962	Feb. 11, 1962	1,520	3.29	0
1963	Sept. 18, 1963	138	2.02	0
1964	Mar. 22, 1964	594	3.12	0
1965	Dec. 28, 1964	470	2.61	0

† From inside highwater mark.

1957-65: Maximum discharge, 4,080 cfs Feb. 4, 1958 (gage height, 5.05 ft, from inside highwater mark), from rating curve extended above 790 cfs on basis of computation of flow in concrete-lined channel; no flow for most of each year.

Remarks.-- Records 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.

Discharge, in cubic feet per second, water years October 1957 to September 1965

Dec. 15, 1957... 7.8	Feb. 21, 1959... 0.4	Jan. 20, 1962... 14	Nov. 21, 1963... 0.3
16..... 2.2	Apr. 26..... .4	Feb. 8..... 9.0	Dec. 9..... .1
17..... 38	Nov. 2..... .7	9..... 2.6	Jan. 21, 1964... 20
Jan. 26, 1958... 11	Dec. 24..... 2.5	11..... 371	22..... 23
Feb. 3..... 50	25..... 1.2	12..... 158	Feb. 29..... .2
4..... 417	Jan. 10, 1960... 1.3	13..... 1.9	Mar. 2..... 28
5..... 14	12..... 2.2	15..... 28	12..... .3
6..... .2	14..... 1.2	16..... 19	22..... 67
19..... 37	15..... .3	19..... 47	23..... 19
20..... .9	25..... .3	20..... 17	24..... .5
25..... 3.8	Feb. 1..... 2.5	Mar. 9..... 1.7	31..... .4
Mar. 6..... 2.3	2..... .3	May 26..... .1	Apr. 1..... 50
11..... 1.4	8..... .7	Feb. 9, 1963... 9.0	28..... 2.5
12..... .3	10..... 1.2	10..... 28	Nov. 9..... 2.2
15..... 2.5	29..... .3	14..... .3	10..... 23
16..... 143	Mar. 1..... .1	Mar. 8..... 2.0	17..... 87
17..... 15	28..... .8	16..... 2.2	Dec. 27..... 42
22..... 28	Apr. 27..... 1.7	17..... 3.4	28..... 46
27..... 2.3	Nov. 6..... .7	28..... 1.5	Jan. 7, 1965... 1.4
Apr. 1..... 194	7..... 2.6	Apr. 14..... 2.1	24..... 1.5
3..... 488	26..... .7	15..... .2	Feb. 6..... .4
4..... 119	Dec. 2..... .2	17..... 4.9	Mar. 10..... .3
5..... 60	Jan. 26, 1961... .1	21..... 1.2	11..... .3
6..... 34	Mar. 24..... .4	26..... 3.7	13..... 2.8
7..... 74	25..... 2.2	June 11..... .3	15..... .3
8..... 31	28..... .9	Sept. 4..... 1.5	31..... 12
May 11..... .9	Aug. 4..... 2.3	17..... 8.5	Apr. 1..... 17
Jan. 6, 1959... 12	Nov. 21..... .9	18..... 11	2..... 28
Feb. 8..... 2.6	25..... 1.5	Oct. 18..... .5	3..... 18
11..... 12	Dec. 2..... 8.4	Nov. 6..... .3	8..... 55
16..... 118	Jan. 12, 1962... .9	15..... .8	9..... 60
17..... 14	13..... .7	20..... 14	10..... 38

Note.--Flow occurred only on days listed.

11-650. Lytle Creek at Colton, Calif.--Continued

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
December 1957.....	48.0	-	-	1.55	95
January 1958.....	11	-	-	.35	22
February.....	522.9	-	-	18.7	1,040
March.....	194.8	-	-	6.28	386
April.....	1,000	-	-	33.3	1,980
May.....	.9	-	-	.03	1.8
Calendar year 1957.....	-	-	-	-	-
Water year 1957-58.....	-	488	0	4.87	3,520
January 1959.....	12	-	-	.39	24
February.....	147.0	-	-	5.25	292
April.....	.4	-	-	.01	.8
Calendar year 1958.....	-	488	0	4.74	3,430
Water year 1958-59.....	-	118	0	.44	317
November 1959.....	.7	-	-	.02	1.4
December.....	3.7	-	-	.12	7.3
January 1960.....	5.3	-	-	.17	11
February.....	5.0	-	-	.17	9.9
March.....	.9	-	-	.03	1.8
April.....	1.7	-	-	.06	3.4
Calendar year 1959.....	-	118	0	.45	326
Water year 1959-60.....	-	2.5	0	.05	35
November 1960.....	4.0	-	-	.13	7.9
December.....	.2	-	-	.006	.4
January 1961.....	.1	-	-	.003	.2
March.....	3.5	-	-	.11	6.9
August.....	2.3	-	-	.07	4.6
Calendar year 1960.....	-	2.6	0	.05	34
Water year 1960-61.....	-	2.6	0	.03	20
November 1961.....	2.4	-	-	.08	4.8
December.....	8.4	-	-	.27	17
January 1962.....	15.6	-	-	.50	31
February.....	653.5	-	-	23.3	1,300
March.....	1.7	-	-	.05	3.4
May.....	.1	-	-	.003	.2
Calendar year 1961.....	-	8.4	0	.05	34
Water year 1961-62.....	-	371	0	1.87	1,360
February 1963.....	37.3	-	-	1.33	74
March.....	9.1	-	-	.29	18
April.....	12.1	-	-	.40	24
June.....	.3	-	-	.01	.6
September.....	21.0	-	-	.70	42
Calendar year 1962.....	-	371	0	1.84	1,330
Water year 1962-63.....	-	28	0	.22	159
October 1963.....	.5	-	-	.02	1.0
November.....	15.4	-	-	.51	31
December.....	.1	-	-	.003	.2
January 1964.....	43	-	-	1.39	85
February.....	.2	-	-	.007	.4
March.....	115.2	-	-	3.72	228
April.....	52.5	-	-	1.75	104
Calendar year 1963.....	-	28	0	.26	191
Water year 1963-64.....	-	50	0	.62	450
November 1964.....	112.2	-	-	3.74	223
December.....	88	-	-	2.84	175
January 1965.....	2.9	-	-	.09	5.8
February.....	.4	-	-	.01	.8
March.....	15.7	-	-	.51	31
April.....	216	-	-	7.20	428
Calendar year 1964.....	-	87	0	1.12	815
Water year 1964-65.....	-	87	0	1.19	864

SANTA ANA RIVER BASIN

11-660.5. Santa Ana River at Colton, Calif.

Location.--Lat 34°03'45", long 117°18'30", in San Bernardino Grant, on right bank 60 ft downstream from Southern Pacific Railroad bridge, 200 ft downstream from Warm Creek, and 1 mile southeast of Colton, San Bernardino County.

Drainage area.--721 sq mi (revised).

Records available.--December 1961 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 940 ft (from topographic map).

Extremes.--Maximum discharge during year, 990 cfs Apr. 1 (gage height, 8.18 ft); minimum daily, 14 cfs Oct. 25.
1961-65: Maximum discharge, 1,950 cfs Sept. 18, 1963 (gage height, 10.03 ft); minimum daily, 7.2 cfs Mar. 1-4, Apr. 7, 1962.

Remarks.--Records poor. Flow partly regulated by Big Bear Lake (see p. 127). Natural streamflow affected by ground-water withdrawals or diversions for domestic use and irrigation above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	16	19	16	20	21	338	18	21	20	20	21
2	17	21	19	18	20	20	203	18	22	20	24	22
3	16	20	19	17	20	21	226	21	22	20	23	21
4	15	20	20	20	19	20	24	21	21	19	24	20
5	18	20	21	21	19	21	20	20	19	21	24	18
6	18	19	20	21	18	19	36	21	17	23	24	19
7	18	18	20	20	18	18	56	21	21	22	22	22
8	18	16	20	20	21	21	350	18	22	23	20	23
9	18	26	20	19	20	19	303	16	21	23	24	22
10	16	45	19	18	20	20	284	22	20	22	24	22
11	15	20	17	20	20	19	32	21	20	20	52	20
12	17	18	17	20	20	19	25	19	20	23	22	19
13	17	19	18	20	19	18	20	19	19	20	24	22
14	16	18	20	20	17	18	20	20	21	21	23	23
15	16	17	20	19	21	48	22	18	21	20	21	22
16	16	20	20	19	20	20	20	18	21	30	25	21
17	15	233	19	18	20	20	19	21	21	24	24	22
18	16	22	19	21	19	20	17	20	21	24	24	75
19	17	21	18	19	21	20	23	20	20	27	23	19
20	16	21	17	19	19	19	19	21	19	23	22	22
21	16	20	21	18	17	17	19	21	22	23	21	21
22	15	18	20	18	19	20	19	20	21	24	19	21
23	15	21	19	19	21	19	19	18	21	23	22	22
24	15	21	19	37	22	19	19	21	21	22	22	22
25	14	21	16	20	22	19	15	20	20	21	22	20
26	18	18	19	20	19	18	20	19	20	24	21	19
27	17	20	111	19	18	17	21	20	18	23	22	22
28	16	20	77	20	16	19	21	19	20	23	21	22
29	17	18	21	20	-----	21	21	18	19	23	20	22
30	19	21	20	19	-----	20	21	17	21	24	22	23
31	16	-----	20	17	-----	116	-----	19	-----	22	21	-----
Total	510	828	745	612	545	726	2252	605	612	697	722	689
Mean	16.5	27.6	24.0	19.7	19.5	23.4	75.1	19.5	20.4	22.5	23.3	23.0
Ac-ft	1,010	1,640	1,480	1,210	1,080	1,440	4,470	1,200	1,210	1,380	1,430	1,370
Calendar year 1964	Max	233	Min	10	Mean	20.8	Ac-ft	15,100				
Water year 1964-65	Max	350	Min	14	Mean	26.1	Ac-ft	18,920				

11-665. Santa Ana River at Riverside Narrows, near Arlington, Calif.

Location.--Lat 33°57'53", long 117°27'55", in SW $\frac{1}{4}$ sec. 25, T.2 S., R.6 W., 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 (revised).

Records available.--October 1927 to September 1965. Monthly discharge only for October 1927 to January 1929, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Datum of gage is 666.87 ft above mean sea level (levels by Riverside County Engineer). Prior to Nov. 15, 1943, at site $\frac{1}{4}$ miles upstream at different datum. During this period temporary stations were maintained at different sites and datums within a quarter of a mile of the permanent gage. Nov. 15, 1943, to Aug. 31, 1954, at datum 3.00 ft higher. Sept. 1, 1954, to Jan. 17, 1955, at datum 2.00 ft higher.

Extremes.--Maximum discharge during year, 808 cfs Apr. 10 (gage height, 5.75 ft); minimum daily, 15 cfs Nov. 7.

1927-65: Maximum discharge, 100,000 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 13 cfs July 28-30, Aug. 10, 1962, Aug. 21, 1964.

Remarks.--Records fair. Flow partly regulated by Big Bear Lake (see p. 127). Natural streamflow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. At times, since April 1948, effluent from city of Riverside disposal plant is released to river 0.6 mile upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	17	18	17	19	21	25	162	24	21	21	17	18
2	17	19	18	19	22	25	97	24	21	21	18	18
3	17	18	19	19	22	26	160	23	21	20	18	18
4	17	17	19	19	22	26	86	22	21	20	18	18
5	17	17	21	18	22	27	35	22	21	20	18	18
6	17	16	22	19	23	27	29	22	21	20	18	18
7	18	15	24	23	20	26	29	21	22	19	18	18
8	17	16	24	20	19	24	73	21	22	19	18	18
9	17	32	24	20	19	25	181	22	22	19	17	18
10	18	34	23	20	19	25	377	23	21	19	17	19
11	17	19	25	20	24	26	58	23	21	19	18	19
12	17	21	25	20	24	27	41	23	22	19	18	20
13	16	17	28	20	23	33	33	23	22	19	17	21
14	16	17	29	21	22	25	31	23	22	19	17	22
15	17	19	29	21	22	74	30	22	22	19	19	22
16	17	18	21	21	24	29	29	22	22	19	18	22
17	17	159	18	21	24	24	28	22	22	19	17	21
18	17	98	18	21	23	23	27	22	22	19	17	33
19	17	19	17	21	23	23	26	23	21	19	17	30
20	17	16	17	21	23	23	26	23	21	18	17	21
21	17	17	17	21	23	24	26	24	21	18	17	20
22	17	16	18	21	23	24	26	23	21	18	17	20
23	18	17	18	22	23	25	36	23	21	18	18	19
24	19	16	18	30	24	24	38	23	21	18	18	19
25	19	16	19	21	25	26	27	23	21	18	18	19
26	18	16	19	21	24	27	23	21	21	18	19	19
27	18	16	31	21	24	27	22	21	21	18	19	18
28	18	16	30	21	24	26	22	21	21	18	20	18
29	19	17	22	21	-----	24	23	21	21	18	20	18
30	19	17	19	21	-----	25	24	21	21	18	19	18
31	18	-----	19	21	-----	47	-----	21	-----	18	19	-----
TOTAL	540	769	668	644	631	862	1,825	692	640	585	556	600
MEAN	17.4	25.6	21.5	20.8	22.5	27.8	60.8	22.3	21.3	18.9	17.9	20.0
AC-FT	1,070	1,530	1,320	1,280	1,250	1,710	3,620	1,370	1,270	1,160	1,100	1,190
CALENDAR YEAR 1964	MAX 159	MIN 13	MEAN 21.4	AC-FT 15,540								
WATER YEAR 1964-65	MAX 377	MIN 15	MEAN 24.7	AC-FT 17,870								

Peak discharge (base, 500 cfs).--Nov. 17 (1845 hrs) 620 cfs (4.50 ft); Apr. 10 (0745 hrs) 808 cfs (5.75 ft).

11-670. Day Creek near Etiwanda, Calif.

Location.--Lat 34°11'05", long 117°32'20", in NW 1/4 sec. 8, T.1 N., R.6 W., 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.

Records available.--October 1927 to September 1965. Combined records of creek and diversion, October 1950 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder and broad-crested weir since September 1938 (affected by debris at times); 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).--38 years, 3.21 cfs (2,320 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).

(combined).--15 years, 2.81 cfs (2,030 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 18 cfs Apr. 9 (gage height, 1.52 ft); minimum daily, 0.1 cfs for several months.

1927-65: Maximum discharge, 4,200 cfs Mar. 2, 1938, based on rainfall-runoff studies; no flow Oct. 5 to Nov. 1, 1950.

(combined).--Maximum discharge during year, 21 cfs Apr. 9; minimum daily, 0.4 cfs for some days.

1950-65: Maximum discharge, 367 cfs Feb. 16, 1959; minimum daily, 0.3 cfs on several days in 1961 and 1963.

Remarks.--Records good. No regulation above station. Etiwanda Water Co. has diverted water above station during entire period of record. For records of combined discharge of creek and Etiwanda Water Co.'s diversion, see following page. In addition, an infiltration gallery, unwatering the gravel in the bed of the stream at gaging station, produced 421 acre-ft during year.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.3	0	0.7	1.9
.4	.2	.8	2.8
.5	.6	1.0	5.2
.6	1.2	1.2	8.8

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.1	0.1	0.2	0.4	0.3	0.5	1.5	0.2	0.2	0.2	0.1	0.1
2	.1	.2	.2	.3	.3	.5	2.9	.2	.2	.2	.1	.1
3	.1	.2	.2	.3	.3	.4	1.9	.2	.2	.2	.1	.1
4	.1	.2	.2	.3	.3	.3	1.7	.2	.2	.2	.1	.1
5	.1	.2	.2	.3	.3	.3	1.5	.2	.2	.2	.1	.1
6	.1	.2	.2	.3	.4	.3	1.3	.2	.1	.2	.1	.1
7	.1	.2	.2	.4	.4	.3	1.1	.2	.1	.2	.1	.1
8	.1	.2	.2	.4	.4	.3	2.4	.2	.1	.2	.1	.1
9	.1	.3	.3	.4	.4	.3	5.6	.2	.1	.2	.1	.1
10	.1	.4	.3	.3	.4	.3	5.6	.2	.1	.2	.1	.1
11	.1	.3	.3	.4	.4	.3	2.9	.2	.1	.2	.1	.1
12	.1	.1	.4	.4	.4	.3	2.1	.2	.1	.2	.1	.1
13	.1	.1	.3	.4	.4	.4	1.1	.2	.1	.2	.1	.1
14	.1	.1	.3	.3	.4	.3	.6	.2	.1	.2	.1	.1
15	.1	.1	.3	.3	.4	.3	.5	.2	.1	.2	.1	.1
16	.1	.1	.3	.3	.4	.3	.5	.1	.1	.2	.1	.1
17	.1	.2	.3	.2	.4	.3	.4	.1	.2	.2	.1	.1
18	.1	.2	.3	.2	.4	.4	.4	.1	.2	.2	.1	.2
19	.1	.2	.3	.2	.4	.4	.4	.1	.2	.2	.1	.2
20	.1	.2	.4	.2	.4	.4	4.4	.2	.1	.2	.1	.1
21	.1	.2	.4	.2	.3	.4	4.0	.2	.1	.2	.1	.1
22	.1	.2	.4	.2	.3	.4	2.0	.2	.2	.2	.1	.1
23	.1	.2	.4	.2	.4	.4	1.5	.2	.2	.2	.1	.1
24	.1	.2	.4	.3	.5	.4	3.3	.2	.2	.1	.1	.1
25	.1	.2	.4	.2	.5	.5	.4	.2	.2	.1	.1	.1
26	.1	.2	.4	.2	.5	.5	.4	.2	.2	.1	.1	.1
27	.1	.2	.8	.2	.5	.5	.3	.1	.2	.1	.1	.1
28	.1	.2	.7	.2	.5	.5	.3	.1	.2	.1	.1	.1
29	.2	.2	.5	.2	-----	.5	.3	.1	.2	.1	.1	.1
30	.2	.2	.5	.2	-----	.5	.3	.2	.2	.1	.1	.1
31	.1	-----	.4	.3	-----	.6	-----	.2	-----	.1	.1	-----
TOTAL	3.3	5.8	10.7	8.7	11.0	12.1	51.6	5.5	4.7	5.4	3.1	3.2
MEAN	0.11	0.19	0.35	0.28	0.39	0.39	1.72	0.18	0.16	0.17	0.10	0.11
AC-FT	6.5	12	21	17	22	24	102	11	9.3	11	6.1	6.3

CALENDAR YEAR 1964 MAX 8.8 MIN 0.1 MEAN 0.34 AC-FT 244

WATER YEAR 1964-65 MAX 5.6 MIN 0.1 MEAN 0.34 AC-FT 248

Peak discharge (base, 25 cfs).--No peak above base.

SANTA ANA RIVER BASIN

11-670. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.6	0.9	1.7	1.2	0.8	3.7	4.9	2.3	1.4	0.9	0.7
2	.4	.8	.9	1.4	1.2	.9	5.5	4.7	2.3	1.4	.9	.7
3	.4	.6	.9	1.3	1.1	1.1	4.4	4.4	2.2	1.3	.9	.7
4	.4	.6	.9	1.2	1.1	1.0	4.1	4.0	2.0	1.3	.9	.7
5	.4	.6	.9	1.1	1.2	1.0	3.8	3.7	2.0	1.3	.8	.8
6	.4	.6	.9	1.1	1.7	1.0	3.5	3.4	1.8	1.2	.8	1.1
7	.4	.7	.9	2.4	1.5	1.0	3.1	3.2	1.9	1.2	.7	1.0
8	.4	.7	.9	2.3	1.4	1.0	5.0	3.0	2.0	1.3	.7	.9
9	.4	1.3	1.0	2.1	1.4	1.0	8.4	2.9	2.0	1.3	.7	.9
10	.4	1.6	1.0	1.9	1.4	1.0	8.6	2.7	1.8	1.2	.7	.8
11	.4	1.2	1.0	1.9	1.3	1.0	5.8	2.6	1.7	1.3	.7	.8
12	.4	1.3	1.1	1.9	1.3	1.1	4.6	2.6	1.7	1.2	.7	.8
13	.4	1.1	1.1	1.8	1.3	1.4	5.0	2.7	1.7	1.2	.7	.8
14	.4	1.1	1.1	1.7	1.2	1.1	4.4	2.7	1.9	1.2	.7	.7
15	.5	1.0	1.0	1.6	1.1	1.1	4.3	2.6	2.0	1.2	.8	.7
16	.5	1.0	1.0	1.6	1.1	1.1	4.5	2.4	2.0	1.1	.8	.9
17	.5	1.3	1.0	1.5	1.0	1.1	4.4	2.4	2.0	1.2	.8	1.1
18	.5	1.2	1.0	1.5	1.0	1.1	4.6	2.5	1.8	1.2	.8	1.3
19	.4	1.1	1.1	1.5	1.0	1.1	5.3	2.5	1.7	1.2	.8	1.3
20	.4	1.2	1.9	1.5	1.0	1.1	7.5	2.6	1.6	1.2	.8	1.1
21	.4	1.2	1.6	1.5	.8	1.1	10	2.6	1.5	1.2	.8	1.0
22	.4	1.2	1.4	1.5	.8	1.1	9.9	2.6	1.6	1.1	.8	.9
23	.5	1.2	1.3	1.5	.9	1.1	9.7	2.7	1.7	1.1	.8	.9
24	.5	1.1	1.4	1.7	1.0	1.1	7.0	2.7	1.7	1.0	.8	.9
25	.5	1.1	1.3	1.3	.9	1.2	8.4	2.4	1.8	1.0	.7	.9
26	.6	1.0	.4	1.3	.9	1.2	8.1	2.2	1.8	1.0	.7	.9
27	.5	1.0	.8	1.2	.9	1.2	7.1	2.0	1.7	1.0	.7	1.1
28	.5	1.0	3.2	1.2	.9	1.2	6.0	1.9	1.5	.9	.7	1.1
29	.8	1.0	2.5	1.1	-----	1.1	5.5	1.5	1.5	.9	.7	.9
30	.7	1.0	2.1	1.1	-----	1.1	5.2	2.2	1.4	1.0	.7	.7
31	.6	-----	1.8	1.2	-----	1.6	-----	2.2	-----	.9	.7	-----
Total	14.4	30.4	38.3	47.6	31.6	34.0	177.4	87.5	54.6	36.0	23.7	27.1
Mean	0.46	1.01	1.24	1.54	1.13	1.10	5.91	2.82	1.82	1.16	0.76	0.90
Ac-ft	29	60	76	94	63	67	352	174	108	71	47	54

Calendar year 1964 Max 9.4 Min 0.4 Mean 1.24 Ac-ft 903

Water year 1964-65 Max 10 Min 0.4 Mean 1.65 Ac-ft 1,200

Peak discharge (base, 25 cfs).--No peak above base.

11-680. Santa Ana River at Auburndale Bridge, near Corona, Calif.

Location.--Lat 33°55'25", long 117°35'50", in La Sierra (Yorba) Grant, on right bank just downstream from Auburndale Bridge on River Road, 1.7 miles upstream from Temescal Creek, and 3.8 miles northwest of Corona, Riverside County.

Drainage area.--1,003 sq mi.

Records available.--May 1930 to November 1965 (irrigation seasons only).

Gage.--Water-stage recorder. Altitude of gage is 500 ft (from topographic map). Prior to May 1946, at various sites within 1,000 ft of bridge and at different datums. May 1946 to Sept. 12, 1961, at site 100 ft upstream at different datum.

Remarks.--Records poor. Flow partly regulated by Big Bear Lake (see p. 127). The natural flow is affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Water diverted into Durkee ditch, a quarter of a mile above station, bypasses station; discharge measurements of flow in ditch are given below.

Cooperation.--Fifteen discharge measurements furnished by Orange County Flood Control District.

Discharge measurements, in cubic feet per second, January to October 1965

Date	Discharge	Date	Discharge	Date	Discharge
Jan. 6	3.51	May 3	3.83	Sept. 2	2.30
Feb. 10	3.42	July 13	3.44	Oct. 1	2.25
11	3.54	26	3.11	26	3.53
Mar. 17	3.05	Aug. 17	2.51		

Discharge in cubic feet per second, May to November 1965

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	
1					32	31	28	17	22	25	21	
2					32	30	27	17	22	25	21	
3					32	30	26	17	22	24	22	
4					36	34	24	17	21	23	23	
5					37	31	20	18	21	21	24	
6	+ 39				38	32	22	18	22	19	25	
7					38	30	25	19	21	18	25	
8					36	27	27	18	22	18	26	
9					34	28	27	17	22	18	27	
10		+ 37			32	31	27	15	23	18	28	
11		+ 42			31	22	27	15	24	18	29	
12					31	26	22	16	24	18	30	
13				+ 60	31	28	24	17	24	18	31	
14					32	30	24	17	24	18	32	
15	+ 34				35	30	23	17	24	18	35	
16					38	30	22	19	25	18	-	
17			+ 54		37	31	28	21	25	18	-	
18					34	28	25	21	26	18	+ 120	
19			+ 42		34	29	24	18	62	20	-	
20					35	32	25	17	30	35	-	
21					37	25	24	18	25	31	-	
22					37	24	20	19	21	25	-	
23				+ 50	36	27	22	21	21	23	-	
24					35	30	21	21	21	22	-	
25					35	35	22	20	22	22	-	
26		+ 40			27	34	24	22	25	22	-	
27					28	29	30	22	25	22	-	
28					28	29	19	22	25	22	-	
29					27	30	18	22	26	22	-	
30					30	27	19	20	25	20	-	
31					30		16	22		20		
Total					1,035	880	732	580	742	659	-	
Mean					33.4	29.3	23.6	18.7	24.7	21.3	-	
Ac-ft					2,050	1,750	1,450	1,150	1,470	1,310	-	

Calendar year 1964 Max - Min - Mean - Ac-ft -

Irrigation season: Max - Min - Mean - Ac-ft -

+ Result of discharge measurement.

11-690, Lake Hemet near Idyllwild, Calif.

Location.--Lat 33°39'55", long 116°42'20", in NE¼ sec.7, T.6 S., R.3 E., 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.

Records available.--October 1961 to September 1965.

Gage.--Staff gage read once daily. Datum of gage is 4,201.5 ft above mean sea level (levels by Lake Hemet Municipal Water District).

Extremes.--Maximum contents observed during the year, 2,307 acre-ft July 18-22 (elevation, 4,294.78 ft); minimum 608 acre-ft Oct. 17-19 (elevation, 4,275.42 ft).
1961-65: Maximum contents, that of July 18-22, 1965; 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 Water Co.). 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.

Cooperation.--Elevations furnished by Lake Hemet Municipal Water District.

Month-end elevation and contents, water year October 1964 to September 1965

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	4,280.75	925	-
Oct. 31.....	4,276.75	677	-248
Nov. 30.....	4,277.42	714	+37
Dec. 31.....	4,280.00	874	+160
Calendar year 1964.....	-	-	+197
Jan. 31.....	4,281.92	1,009	+135
Feb. 28.....	4,283.42	1,125	+116
Mar. 31.....	4,285.00	1,257	+132
Apr. 30.....	4,293.17	2,106	+849
May 31.....	4,294.50	2,271	+165
June 30.....	4,294.75	2,303	+32
July 31.....	4,294.00	2,208	-95
Aug. 31.....	4,292.67	2,047	-161
Sept. 30.....	4,290.17	1,774	-273
Water year 1964-65.....	-	-	+849

† Elevation at 0800 hours.

11-693. South Fork San Jacinto River tributary near Valle Vista, Calif.

Location.--Lat 33°43'20", long 116°48'00", in W $\frac{1}{2}$ sec.20, T.5 S., R.2 E., 6 ft upstream from private-road culvert, 0.3 mile above mouth and 5.6 miles southeast of Valle Vista.

Drainage area.--2.20 sq mi.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder with rain-gage attachment, crest-stage gage, and corrugated-pipe culvert control. Altitude of gage is 2,320 ft (from topographic map).

Extremes.--Maximum discharge during year, 9.3 cfs Apr. 10 (gage height, 3.86 ft); no flow for most of year.
1961-65: Maximum discharge that of Apr. 10, 1965; no flow for most of each year.

Remarks.--Records good. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 1.6; December, 1.6; January 0.6; February 1.1; March, 3.0; April, 5.0; June 0.1; July, 1.0; August 0.2; September, 0.7; the water year, 14.9.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	0.1	0.1	0		
2							0	.1	.1	0		
3							.2	.1	.1	0		
4							.5	.1	.1	0		
5							2.8	.1	.1	0		
6							1.1	.1	.1	0		
7							.9	.1	.1	0		
8							1.0	.1	.1	0		
9							1.8	.1	0	0		
10							4.0	.1	0	0		
11							3.5	.1	0	0		
12							3.0	.1	0	0		
13							3.0	.1	0	0		
14							2.8	.1	0	0		
15							2.7	.1	0	0		
16							2.5	.1	0	0		
17							1.9	.1	0	0		
18							1.3	.1	0	0		
19							.9	.1	0	0		
20							.6	.1	0	0		
21							.5	.1	0	0		
22							.4	.1	0	0		
23							.2	.1	0	0		
24							.2	.1	0	0		
25							.1	.1	0	0		
26							.1	.1	0	0		
27							.1	.1	0	0		
28							.1	.1	0	0		
29							.1	.1	0	.1		
30							.1	.1	0	0		
31								.1	0	0		
Total	0	0	0	0	0	0	36.4	3.1	0.8	0.1	0	
Mean	0	0	0	0	0	0	1.21	0.10	0.03	0.003	0	
Ac-ft	0	0	0	0	0	0	72	6.1	1.6	0.2	0	

Calendar year 1964 Max 2.2 Min 0 Mean 0.01 Ac-ft 10
Water year 1964-65 Max 4.0 Min 0 Mean 0.11 Ac-ft 80

Peak discharge (base, 10 cfs).--No peak above base.

11-695, San Jacinto River near San Jacinto, Calif.

Location--Lat 33°44'15", long 116°49'35", in SW 1/4 Sec. 13, T.5 S., R.1 E., 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.

Records available--October 1920 to February 1927, March 1927 to September 1965; combined records of river and diversions, October 1948 to September 1965. Monthly discharge only for October 1920 and July to September 1926, published in WSP 1315-B.

Gage--Water-stage recorder on river; water-stage recorders on canals; staff gage on pipeline. Datum of gage is 1,982.75 ft above mean sea level (Corps of Engineers bench mark). Prior to Feb. 15, 1927, water-stage recorder at site about 150 ft upstream at different datum. Feb. 15, 1927, to December 1929, staff gage at same site at different datum. December 1929 to Feb. 6, 1937, water-stage recorder at same site at different datum. Feb. 7, 1937, to Jan. 23, 1948, staff gage at same site at various datums.

Average discharge (river only)--44 years (1920-26, 1927-65), 16.5 cfs (11,950 acre-ft per year); median of yearly mean discharges, 5.6 cfs (4,100 acre-ft per year).
(combined)--17 years (1948-65), 13.9 cfs (10,060 acre-ft per year); median of yearly mean discharges, 8.2 cfs (5,900 acre-ft per year).

Extremes (river only)--Maximum discharge during year, 126 cfs Apr. 10 (gage height, 4.47 ft); no flow for many months.
1920-65: 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)--Maximum discharge during year, 127 cfs Apr. 10; minimum daily, 0.7 cfs July 26.
1948-65: Maximum discharge, 1,780 cfs Mar. 22, 1958; no flow at times in 1951, 1952, and 1957.

Remarks--Records good. Flow partly regulated by Lake Hemet (see p. 158). 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. For records of combined daily discharge of San Jacinto River and diversions, see following page. Diversion above station began prior to 1920.

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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	2.6	0.3	0.4	20	16		0	0.7	0
2		0	0	1.9	.3	.4	46	12		0	.7	0
3		0	0	1.6	.3	.4	49	9.1		0	.5	0
4		0	0	1.4	.3	.4	43	7.4		0	.2	0
5		0	0	1.2	.3	.4	56	5.6		0	.2	0
6		0	0	1.1	5.0	.4	34	4.6		0	.1	0
7		0	0	3.3	4.6	.4	31	4.3		0	.1	0
8		0	0	4.6	1.9	.4	31	4.3		0	.1	0
9		0	0	2.6	.9	.5	50	4.0		0	.1	0
10		0	0	2.0	.6	.5	82	1.4		0	.1	0
11		0	0	1.8	.5	.6	55	.1		0	0	0
12		0	0	1.6	.5	.6	45	.1		0	.1	0
13		0	0	1.5	.5	.9	45	.1		0	0	0
14		0	0	1.3	.5	.8	52	.1		0	.8	0
15		0	0	1.2	.5	5.8	56	.1		0	.7	0
16		0	0	.8	.5	5.6	61	.1		0	.6	0
17		.4	0	.9	.5	4.8	63	.1		0	.7	0
18		.4	0	1.0	.5	3.6	73	.1		0	.4	.5
19		0	0	.5	.5	3.6	81	.1		0	.3	.1
20		0	0	.6	.5	3.6	86	.1		0	.2	0
21		0	0	.6	.5	3.6	86	.1		0	.2	0
22		0	0	.5	.5	2.2	81	.1		0	.1	0
23		0	0	.5	.5	.9	77	.1		0	.1	0
24		0	0	.6	.5	.8	74	.1		0	.1	0
25		0	0	.7	.5	.8	72	.1		0	0	0
26		0	0	.4	.5	.7	65	0		0	0	0
27		0	26	.3	.5	.6	50	0		0	0	0
28		0	48	.3	.5	.6	30	0		0	0	0
29		0	13	.3		.6	23	0		0	0	0
30		0	5.8	.3		5.8	18	0		8.6	0	0
31			3.6	.3		5.7		0		.7	0	
Total	0	0.8	96.4	38.3	23.5	56.4	1,635	70.2	0	9.3	7.1	0.6
Mean	0	0.03	3.11	1.24	0.84	1.82	54.5	2.26	0	0.30	0.23	0.02
Ac-ft	0	1.6	191	76	47	112	3,240	139	0	18	14	1.2

Calendar year 1964 Max 85 Min 0 Mean 2.23 Ac-ft 1,620
Water year 1964-65 Max 86 Min 0 Mean 5.31 Ac-ft 3,840

Peak discharge (base, 100 cfs)--Dec. 27 (2100 hrs) 115 cfs (4.36 ft); Apr. 10 (0030 hrs) 126 cfs (4.47 ft).

11-695. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	3.4	1.1	5.2	3.9	4.1	29	50	13	3.7	5.3	3.8
2	3.1	3.4	1.1	4.3	3.5	3.9	55	42	14	3.4	4.8	3.8
3	3.1	3.3	1.1	4.1	3.4	3.5	55	38	14	3.1	4.6	3.8
4	3.1	3.3	1.1	3.9	3.6	3.4	49	35	13	2.6	4.5	4.0
5	3.4	3.3	1.1	3.6	3.3	3.6	62	32	12	2.3	4.5	4.3
6	3.6	3.3	1.0	3.6	12	3.8	40	29	11	2.1	4.3	4.5
7	3.7	3.3	1.0	6.2	13	4.5	37	28	10	1.9	4.2	4.6
8	3.8	3.6	1.0	7.7	9.9	4.5	36	25	10	1.8	4.1	4.5
9	3.9	4.1	.9	5.6	8.8	4.6	52	23	10	1.8	4.1	4.3
10	3.9	4.8	.9	4.9	7.6	4.6	82	23	9.2	1.7	4.2	4.2
11	3.7	3.2	1.0	4.6	7.0	5.8	55	22	8.7	1.6	4.5	4.2
12	3.6	1.8	1.0	4.3	6.4	6.9	46	21	8.3	1.5	4.9	4.0
13	3.9	1.6	.9	4.2	6.2	7.7	47	20	8.2	1.4	4.7	3.9
14	4.0	1.2	.9	4.0	6.1	7.3	54	20	8.1	1.3	6.1	4.1
15	4.4	1.0	.9	4.0	5.9	13	59	19	8.2	1.0	6.4	4.0
16	3.9	.9	.8	4.0	5.6	13	66	18	8.8	1.2	6.3	4.6
17	3.8	1.6	.8	4.2	5.5	12	67	17	8.6	1.2	6.0	4.9
18	3.6	2.1	.9	4.7	5.4	11	77	17	7.8	1.7	5.6	5.9
19	3.2	1.4	.9	5.0	5.3	11	94	17	7.7	1.4	5.5	5.9
20	3.0	1.1	1.0	5.8	5.4	10	106	16	7.3	1.2	5.4	5.1
21	3.2	1.1	1.0	5.9	5.2	10	106	16	6.8	.9	5.6	3.7
22	3.2	1.0	.9	5.5	5.1	10	101	16	6.7	.9	5.6	3.3
23	3.1	1.0	1.0	5.1	5.0	9.9	97	18	6.5	.9	5.4	3.0
24	2.7	1.0	1.0	6.5	4.8	9.3	94	19	6.1	.8	5.2	3.2
25	3.2	.9	1.0	6.4	4.6	8.7	92	18	6.4	.8	4.5	3.3
26	3.3	.9	1.0	5.3	4.5	7.8	85	16	6.1	.7	4.1	3.3
27	3.3	1.3	28	4.8	4.3	7.6	75	14	5.3	.9	3.9	3.4
28	3.3	1.2	51	4.6	4.3	7.2	69	14	4.5	2.1	4.0	3.5
29	3.3	.8	16	4.5	-----	6.8	65	14	4.3	3.6	4.0	3.3
30	3.3	.9	8.5	4.4	-----	7.4	56	13	4.0	14	3.9	3.1
31	3.3	-----	6.3	4.1	-----	10	-----	13	-----	6.2	3.9	-----
Total	107.2	61.8	135.1	151.0	155.6	232.9	2,008	683	254.6	69.7	150.1	121.5
Mean	3.46	2.06	4.36	4.87	5.91	7.51	66.9	22.0	8.49	2.25	4.84	4.05
Ac-ft	213	123	258	300	328	462	3,980	1,350	505	138	298	241

Calendar year 1964 Max 90 Min 0.3 Mean 7.74 Ac-ft 5,610
 Water year 1964-65 Max 106 Min 0.7 Mean 11.3 Ac-ft 8,210

Peak discharge (base, 100 cfs).--Dec. 27 (2100 hrs) 118 cfs; Apr. 10 (0030 hrs) 127 cfs.

SANTA ANA RIVER BASIN

11-700. Bautista Creek near Hemet, Calif.

Location.--Lat 33°41'40", long 116°51'00", in NE 1/4 SW 1/4 sec. 35, T.5 S., R.1 E., on left bank a quarter of a mile upstream from unnamed tributary, 6 miles upstream from mouth, and 8 miles southeast of Hemet.

Drainage area.--39.4 sq mi.

Records available.--October 1947 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 2,250 ft (from topographic map).

Average discharge.--18 years, 0.49 cfs (355 acre-ft per year); median of yearly mean discharges, 0.01 cfs (7 acre-ft per year).

Extremes.--Maximum discharge during year, 32 cfs Apr. 10 (gage height, 3.14 ft) on basis of field estimate of maximum flow; no flow for most of year.

1947-65: Maximum discharge, 1,440 cfs Apr. 3, 1958 (gage height, 4.65 ft); no flow for most of each year.

Remarks.--Records poor. No regulation above station. One diversion above station for irrigation of about 15 acres.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 9.....0.3
10.....6.6
July 30......2

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	6.9	-	-	0.23	14
July.....	.2	-	-	.006	.4
Calendar year 1964.....	-	2.8	0	.02	14
Water year 1964-65.....	-	6.6	0	.02	14

Peak discharge (base, 20 cfs)--Apr. 10 (0100 hrs) 32 cfs (3.14 ft).

Note.--Flow occurred only on days listed above.

11-705. San Jacinto River near Elsinore, Calif.

Location.--Lat 33°39'51", long 117°17'35", in SE 1/4 sec. 9, T.6 S., R.4 W., on right bank 2 miles east of Elsinore and 2.1 miles downstream from Railroad Canyon Dam.

Drainage area.--728 sq mi.

Records available.--January 1916 to September 1965. 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, staff gage at site 0.75 mile downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, staff gage at present site at different datum.

Average discharge (river only).--38 years (1927-65), 8.82 cfs (6,390 acre-ft per year); median of yearly mean discharges, 0.1 cfs (72 acre-ft per year), since construction of Railroad Canyon Reservoir.

(combined).--38 years (1927-65), 10.9 cfs (7,890 acre-ft per year); median of yearly mean discharges, 1.1 cfs (800 acre-ft per year), since construction of Railroad Canyon Reservoir.

Extremes.--Maximum discharge during year, 305 cfs Apr. 23 (gage height, 4.99 ft); no flow for most of year.

1916-65: 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 p. 158) 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. diverts from Railroad Canyon Reservoir for irrigation below station in vicinity of Corona. Discharge Apr. 23 to May 16 was imported Colorado River water for replenishment of Lake Elsinore and was excluded from Average discharge.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.0	0	2.7	8.9
2.1	.1	3.0	21
2.2	.4	3.3	39
2.3	1.1	3.6	66
2.4	2.2	4.0	117
2.5	3.9	4.5	205

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	0	0.8	83				
2					0	0	.8	155				
3					0	0	.6	164				
4					0	0	.3	119				
5					0	0	.2	4.7				
6					0	0	.2	1.3				
7					0	0	.1	1.2				
8					0	0	.3	.8				
9					0	0	.6	.6				
10					0	0	.6	.5				
11					0	0	.3	.5				
12					0	0	.7	.4				
13					0	0	2.5	.4				
14					0	0	2.5	.4				
15					0	0	2.4	.3				
16					0	0	1.7	.2				
17					0	0	.2	0				
18					0	0	.2	0				
19					0	0	.2	0				
20					0	0	.2	0				
21					0	0	.1	0				
22					0	0	.1	0				
23					.1	0	75	0				
24					0	0	167	0				
25					0	0	167	0				
26					.1	0	171	0				
27					.1	.1	180	0				
28					0	.2	181	0				
29					-----	.3	183	0				
30					-----	.4	171	0				
31					-----	.5	-----	0				
Total	0	0	0	0	0.3	1.5	1,310.6	532.3	0	0	0	0
Mean	0	0	0	0	0.01	0.05	43.7	17.2	0	0	0	0
Ac-ft	0	0	0	0	0.6	3.0	2,600	1,060	0	0	0	0
(†)	0	0	0	0	0.6	38	2,700	1,160	164	235	240	195

Calendar year 1964:	Max	302	Min	0	Mean	37.5	Ac-ft	27,260	Mean†	0	Ac-ft†	0
Water year 1964-65:	Max	183	Min	0	Mean	5.05	Ac-ft	3,660	Mean†	1.53	Ac-ft†	1,110

† Combined discharge of river and diversion

* Combined discharge, Colorado River water excluded.

11-710, Elsinore Lake at Elsinore, Calif.

Location--Lat 33°40'10", long 117°22'20", in Elsinore State Park, near northwest shore at Elsinore, Riverside County.Drainage area--768 sq mi.Records available--December 1915 to September 1965.Gage--Staff gage read monthly. Gage heights have been reduced to elevations above mean sea level. Prior to Feb. 13, 1951, staff gage at numerous sites on northeast shore at various datums. Feb. 13, 1951, to Aug. 4, 1964, staff gages at various sites, at datum 10.2 ft higher.Extremes--Maximum elevation observed during year, 1,230.4 ft May 7; minimum observed, 1,228.2 ft Sept. 1.

1915-65: Maximum elevation observed, 1,265.6 ft Mar. 20-25, 1916, during period of overflow; maximum observed since cessation of overflow in June 1917, 1,259.8 ft May 6, 11-20, 1922; lake dry during parts of water years 1951, 1954-59, 1964, and all of 1960-63.

Remarks--Lake replenished with imported Colorado River water during year. Elsinore Lake overflows into Temescal Creek, which is its outlet, only during and after years of unusually heavy rainfall. Elevation at which lake is dry, about 1,223.0 ft. There has been no outflow since June 30, 1917. History of lake prior to 1916 is published in WSP 441. Summary of high stages that have occurred from 1916 to 1942 is contained in WSP 961. Flow partly regulated by Lake Hemet (see p. 158) and regulated since 1928 by Railroad Canyon Reservoir (capacity, 12,000 acre-ft).

Elevation, in feet, water year October 1964 to September 1965

Date	Elevation	Date	Elevation	Date	Elevation
Oct. 2	1,229.9	Feb. 25	1,229.2	May 7	1,230.4
Nov. 6	1,229.5	Mar. 23	1,229.0	25	1,230.1
Dec. 3	1,229.5	30	1,229.0	June 29	1,229.5
30	1,229.5	Apr. 26	1,229.6	July 29	1,228.9
Jan. 28	1,229.4	30	1,230.1	Sept. 1	1,228.2

11-720, Temescal Creek near Corona, Calif.

Location--Lat 33°50'29", long 117°30'37", in El Sobrante de San Jacinto Grant, on left bank 0.2 mile downstream from unnamed tributary and 3.8 miles southeast of Corona, Riverside County.Drainage area--164 sq mi (not including 768 sq mi above Elsinore Lake).Records available--October 1927 to September 1965. Monthly discharge only for the period October 1927 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--38 years, 2.82 cfs (2,040 acre-ft per year); median of yearly mean discharges, 0.05 cfs (36 acre-ft per year).Extremes--Maximum discharge during year, 153 cfs Apr. 9 (gage height, 8.13 ft); no flow for most of year.

1927-65: 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 Elsinore Lake and several storage reservoirs. Many diversions above station for irrigation. Metropolitan Water District of Southern California reported about 20 acre-ft was released down creek in February when tunnel at Lake Mathews was de-watered.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Nov. 17.....0.9	Apr. 2..... 0.2
Dec. 28.....1.9	8..... .6
Feb. 2.....3.3	9.....11
Mar. 15.....3.0	10..... .2
31.....1.2	11..... .4
Apr. 1.....9.7	July 30..... .1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
November 1964.....	0.9	-	-	0.03	1.8
December.....	1.9	-	-	.06	3.8
February 1965.....	3.3	-	-	.12	6.5
March.....	4.2	-	-	.14	8.3
April.....	22.1	-	-	.74	44
July.....	0.1	-	-	.003	.2
Calendar year 1964.....	-	4.2	0	.04	27
Water year 1964-65.....	-	11	0	.09	65

Note--Flow occurred only on days listed above.

11-730. San Antonio Creek near Claremont, Calif.

Location.--Lat 34°12'58", long 117°40'04", in SE 1/4 sec. 36, T.2 N., R.8 W., 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.

Records available.--January 1917 to September 1965; combined records of creek and conduit, March 1901 to December 1916 (fragmentary, published as "near Upland"), January 1917 to September 1965.

Gage.--Water-stage recorder (digital) and 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. Altitude of gage is 3,400 ft (from topographic map). Prior to Aug. 24, 1907, staff gage at site 0.5 mile upstream, just above intake to Sierra powerplant, at different datum. Aug. 24, 1907, to Jan. 24, 1917, hook gage and rectangular weir in powerplant tailrace 0.5 mile downstream at different datum; creek flow estimated. Jan. 25, 1917, to Jan. 9, 1939, water-stage recorder at site 50 ft downstream at different datum.

Average discharge (creek only).--48 years (1917-65), 8.34 cfs (6,040 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

(combined).--60 years (1901-2, 1903-4, 1905-9, 1910-15, 1916-65), 21.1 cfs (15,280 acre-ft per year); median of yearly mean discharges, 15 cfs (10,900 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 36 cfs Apr. 30 (gage height, 1.98 ft); minimum daily, 0.2 cfs for many days. 1917-65: 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).--Maximum discharge during year, 48 cfs May 4; minimum daily, 4.8 cfs Oct. 4-7, 9-11, 21.

1917-65: Maximum discharge, 21,400 cfs Mar. 2, 1938; minimum daily, 0.3 cfs Dec. 8-19, 1954, Dec. 12-17, 1963.

Remarks.--Records (creek) fair, (combined) good. No regulation above station. For records of combined discharge of San Antonio Creek and Southern California Edison Co.'s Sierra conduit, which diverts above station, see following page.

Cooperation.--Twenty six discharge measurements furnished by Los Angeles County Flood Control District. Water-stage recorder graph for conduit and records of river pickup furnished by Southern California Edison Co.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 18-25, Mar. 11-17, Sept. 29, 30)

1.0	0.1	1.5	6.3
1.1	.4	1.6	9.8
1.2	1.1	1.7	14
1.3	2.1	1.9	27
1.4	3.9		

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.2	0.3	0.3	0.7	0.3	0.3	2.2	12	1.2	0.7	0.4	0.3
2	.2	.3	.3	.6	.3	.3	2.7	17	1.2	.6	.4	.3
3	.2	.2	.3	.6	.3	.2	2.3	20	1.2	.6	.4	.3
4	.2	.2	.3	.5	.3	.3	1.9	21	1.3	.5	.4	.2
5	.2	.2	.3	.5	.3	.3	1.7	17	1.2	.5	.4	.3
6	.2	.2	.3	.5	.4	.2	1.6	13	1.0	.5	.3	.3
7	.2	.2	.3	.7	.3	.3	1.5	11	1.0	.5	.3	.3
8	.2	.2	.3	.6	.3	.2	2.4	9.2	1.0	.5	.3	.3
9	.2	.3	.3	.7	.3	.2	4.4	7.2	1.0	.5	.3	.3
10	.2	.3	.3	.6	.3	.2	4.1	5.7	1.0	.5	.3	.3
11	.2	.3	.3	.5	.3	.2	3.0	5.4	.9	.5	.3	.3
12	.2	.3	.3	.4	.3	.2	2.3	5.3	.8	.6	.4	.2
13	.2	.3	.3	.4	.3	.3	1.8	4.7	.8	.5	.4	.3
14	.2	.2	.3	.4	.3	.3	1.6	3.5	.8	.5	.4	.3
15	.3	.3	.3	.4	.3	.2	1.9	4.1	.8	.5	.4	.3
16	.3	.3	.3	.4	.3	.2	2.3	3.1	.9	.5	.3	.3
17	.3	.3	.3	.4	.3	.2	3.0	2.6	.8	.8	.4	.4
18	.3	.3	.3	.3	.3	.2	3.7	2.5	.8	.8	.4	.4
19	.3	.3	.3	.3	.3	.2	3.8	2.3	.8	.5	.4	.4
20	.2	.3	.3	.3	.3	.3	3.9	2.3	.8	.5	.3	.4
21	.2	.3	.4	.3	.3	.3	3.9	2.2	.8	.5	.4	.3
22	.2	.3	.4	.3	.3	.3	3.6	2.5	.8	.5	.4	.3
23	.2	.3	.4	.3	.3	.3	3.4	2.2	.8	.4	.3	.3
24	.3	.3	.4	.3	.3	.3	3.2	1.9	.8	.4	.3	.3
25	.3	.3	.4	.3	.3	.3	3.4	1.6	.8	.4	.3	.3
26	.3	.3	.4	.3	.3	.3	3.8	1.5	.8	.4	.3	.3
27	.3	.3	.6	.3	.3	.3	3.9	1.4	.8	.4	.3	.3
28	.3	.3	.7	.3	.3	.3	5.0	1.3	.7	.4	.3	.3
29	.3	.3	.9	.3	-----	.3	11	1.2	.7	.4	.3	.3
30	.3	.3	.8	.3	-----	.3	17	1.2	.7	.4	.3	.3
31	.3	-----	.8	.3	-----	.4	-----	1.1	-----	.4	.3	-----
TOTAL	7.5	8.3	12.2	13.1	8.5	8.2	110.3	187.0	27.0	15.7	10.7	9.4
MEAN	0.24	0.28	0.39	0.42	0.30	0.27	3.68	6.03	0.90	0.51	0.35	0.31
AC-FT	15	16	24	26	17	16	219	371	54	31	21	19

CALENDAR YEAR 1964 Max 3.0 Min 0.1 Mean 0.42 Ac-ft 306
WATER YEAR 1964-65 Max 21 Min 0.2 Mean 1.14 Ac-ft 829

Peak discharge (base, 50 cfs).--No peak above base.

11-730. 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.1	5.2	5.5	6.1	6.0	5.7	9.7	34	20	13	9.4	7.1
2	5.1	5.2	5.5	6.0	6.0	5.7	10	39	20	13	9.1	7.1
3	5.1	5.1	5.5	6.0	6.0	5.6	9.4	42	20	13	9.1	7.1
4	4.8	5.1	5.2	5.9	6.0	5.7	8.6	43	19	12	9.1	7.1
5	4.8	5.1	5.5	5.9	6.0	5.7	8.1	40	19	12	9.1	7.4
6	4.8	5.1	5.5	5.9	6.7	5.6	7.9	37	18	12	8.7	7.4
7	4.8	5.1	5.5	6.7	6.3	6.0	8.0	35	18	12	8.3	7.4
8	5.1	5.1	5.5	6.0	6.3	5.6	10	33	18	12	8.3	7.1
9	4.8	5.5	5.5	6.1	6.3	5.6	12	31	17	12	8.7	7.1
10	4.8	5.7	5.5	6.0	6.3	5.6	13	30	17	12	8.3	7.1
11	4.8	5.5	5.5	5.9	6.3	5.6	10	29	16	12	8.7	7.1
12	5.1	5.5	5.2	5.8	6.3	5.9	10	28	16	12	8.8	7.1
13	5.1	5.2	5.2	5.8	6.3	6.0	9.4	28	16	12	8.4	6.9
14	5.1	5.1	5.2	5.8	6.3	6.0	9.4	26	16	12	8.4	6.9
15	5.2	5.2	5.2	5.8	6.0	5.9	9.7	26	16	12	8.4	7.1
16	5.2	5.2	5.2	5.8	6.0	5.9	10	25	16	10	8.3	7.1
17	5.2	5.5	5.2	5.8	6.0	5.9	11	25	15	11	8.4	7.2
18	5.2	5.5	5.2	5.7	6.0	5.6	12	24	15	11	8.4	7.5
19	5.2	5.2	5.2	5.7	6.0	5.6	12	24	15	10	8.4	7.2
20	5.1	5.5	5.5	5.7	6.0	5.7	13	24	15	10	8.3	7.2
21	4.8	5.5	5.3	6.0	6.0	5.7	14	24	15	10	8.4	7.1
22	5.1	5.5	5.3	6.0	6.0	5.7	14	24	15	10	8.4	7.1
23	5.1	5.5	5.3	6.0	6.0	5.7	13	24	15	10	8.0	7.1
24	5.2	5.5	5.3	6.0	6.0	5.7	13	24	14	9.7	8.0	7.1
25	5.2	5.5	5.3	6.0	6.0	5.7	14	24	15	9.7	7.7	7.1
26	5.2	5.5	5.3	6.0	6.0	5.7	16	22	14	9.7	7.7	7.1
27	4.9	5.5	6.6	6.0	6.0	5.7	18	22	14	9.7	7.7	7.1
28	5.2	5.5	6.4	6.0	6.0	5.7	19	21	14	9.7	7.7	7.1
29	5.2	5.5	6.3	6.0	-----	5.7	26	21	14	9.7	7.4	6.9
30	5.2	5.2	6.2	6.0	-----	5.7	33	21	13	9.7	7.4	6.9
31	5.2	-----	6.2	6.0	-----	6.4	-----	21	-----	9.7	7.4	-----
Total	156.7	160.3	170.8	184.4	171.1	178.3	383.2	871	485	342.6	258.4	213.8
Mean	5.05	5.34	5.51	5.95	6.11	5.75	12.8	28.1	16.2	11.1	8.34	7.13
Ac-ft	311	318	339	366	339	354	760	1,730	962	680	513	424

Calendar year 1964 Max 14 Min 4.8 Mean 7.43 Ac-ft 5,390

Water year 1964-65 Max 43 Min 4.8 Mean 9.80 Ac-ft 7,100

Peak discharge (base, 50 cfs).--No peak above base.

11-732. San Antonio Creek below San Antonio Dam, Calif.

Location.--Lat 34°09'26", long 117°40'50", in NE 1/4 sec. 23, T.1 N., R.8 W., 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.

Records available.--October 1962 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 2,093.54 ft above mean sea level (Corps of Engineers bench mark).

Extremes.--1962-63: No flow during year.

1963-64: Maximum discharge during water year, 0.4 cfs Apr. 1 (gage height, 1.08 ft); no flow for most of year.

1964-65: Maximum discharge during water year, 48 cfs Apr. 2 (gage height, 1.49 ft); no flow for most of year.

Remarks.--Records poor. Flow regulated by San Antonio flood-control reservoir (capacity, 9,110 acre-ft). Water diverted out of basin for power, domestic use and irrigation.

Discharge, in cubic feet per second, water years October 1962 to September 1965

Apr. 1, 1964...0.1
2......1
Oct. 22......1
Apr. 2, 1965...2.8
3......1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1964.....	0.2	-	-	0.007	0.4
October.....	.1	-	-	.003	.2
April 1965.....	2.9	-	-	.10	5.8
Calendar year 1962.....	-	-	-	-	-
Water year 1962-63.....	-	0	0	0	0
Calendar year 1963.....	-	0	0	0	0
Water year 1963-64.....	-	.1	0	.0005	.4
Calendar year 1964.....	-	.1	0	.0008	.6
Water year 1964-65.....	-	2.8	0	.008	6.0

Note.--Flow occurred only on days listed above.

11-734.7. Cucamonga Creek near Upland, Calif.

Location.--Lat 34°10'26", long 117°37'51", in SW 1/4 sec. 17, T.1 N., R.7 W., on right bank 0.5 mile downstream from unnamed tributary on left and 5.3 miles north of Upland.

Drainage area.--10.1 sq mi.

Records available.--October 1927 to September 1965. Monthly discharge only for October to December 1928, published in WSP 1315-B.

Gage.--Water-stage recorder (digital) and broad-crested weir since December 1938. Altitude of gage is 2,360 ft (from topographic map). Prior to Jan. 17, 1935, and Apr. 15, 1935, to Nov. 11, 1936, at site 2,500 ft downstream at different datums. Jan. 18 to Apr. 14, 1935, at site 1,200 ft downstream at different datum. Nov. 12, 1936, to Dec. 13, 1938, at site 300 ft downstream at different datum.

Average discharge.--38 years, 6.68 cfs (4,840 acre-ft per year); median of yearly mean discharges, 4.3 cfs (3,100 acre-ft per year).

Extremes.--Maximum discharge during year, 93 cfs Apr. 9 (gage height, 3.04 ft); minimum daily, 0.5 cfs Nov. 25-28.

1927-65: Maximum discharge, 10,300 cfs Mar. 2, 1938, based on rainfall-runoff study; minimum daily, 0.3 cfs Oct. 5, 6, 1962.

Remarks.--Records fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.6	1.0	1.5	1.5	1.9	1.5	6.9	8.3	4.5	2.1	1.2	1.0
2	.6	1.0	1.5	1.3	2.0	1.5	14	8.5	4.0	2.0	1.1	1.0
3	.6	1.0	1.7	1.1	1.9	1.5	10	9.4	4.6	2.0	1.1	1.0
4	.6	1.0	1.6	1.0	2.0	1.5	7.3	8.2	4.2	1.9	1.1	1.0
5	.6	1.0	1.9	1.0	2.1	1.5	6.6	7.3	4.0	1.8	1.0	1.5
6	.6	1.0	1.5	.9	2.1	1.5	4.7	5.9	3.9	1.7	1.0	2.8
7	.6	1.0	1.5	2.7	2.1	1.5	3.1	5.9	3.8	1.8	.9	1.9
8	.6	1.0	1.5	1.7	1.8	1.5	6.4	5.2	4.0	1.9	.9	1.8
9	.6	3.1	1.6	1.5	1.7	1.3	20	5.0	3.8	2.0	.8	1.5
10	.6	3.8	1.5	1.8	1.7	1.4	29	4.9	3.7	1.9	.8	1.4
11	.7	1.8	1.5	2.0	1.6	1.7	14	4.7	3.5	2.0	.9	1.3
12	.7	1.1	1.6	2.2	1.6	1.7	8.5	4.4	3.2	2.0	1.1	1.2
13	.7	.8	1.5	2.5	1.5	2.4	7.6	4.4	3.0	1.8	1.0	1.1
14	.7	.8	1.7	2.7	1.7	2.1	7.7	4.4	2.9	1.7	1.0	1.1
15	.7	.6	2.0	2.4	1.7	2.1	7.1	4.2	2.9	1.7	1.1	1.2
16	.7	.6	2.0	2.5	1.7	2.0	6.2	4.1	3.4	1.7	1.1	1.5
17	.8	1.6	2.1	2.3	1.7	2.0	7.7	4.8	2.7	1.9	1.4	2.0
18	.7	1.1	2.1	2.1	1.7	1.8	10	4.8	2.5	1.7	1.4	2.7
19	.7	.8	2.0	2.1	1.7	1.8	9.3	4.9	2.5	1.7	1.4	2.3
20	.7	.8	2.6	2.3	1.7	1.7	7.7	5.1	2.3	1.5	1.2	1.6
21	.7	.8	2.9	2.1	1.7	1.4	11	5.3	2.0	1.4	1.2	1.5
22	.7	.7	3.1	2.1	1.7	1.4	18	5.2	2.1	1.4	1.3	1.4
23	.7	.6	3.0	2.4	1.6	1.4	17	5.4	2.3	1.3	1.3	1.1
24	.7	.6	3.1	3.3	1.5	1.4	13	5.4	2.1	1.3	1.4	1.1
25	.8	.5	3.1	2.2	1.5	1.4	11	5.1	2.5	1.4	1.3	1.2
26	.9	.5	3.3	1.8	1.5	1.4	9.2	4.8	2.3	1.4	1.1	1.4
27	.9	.5	5.1	1.7	1.5	1.5	9.4	4.9	2.0	1.2	1.0	1.7
28	.9	.5	3.1	1.7	1.5	1.7	8.3	4.8	2.0	1.1	1.0	1.8
29	1.2	.7	2.4	1.7	-----	1.8	7.9	4.3	2.0	1.1	1.0	1.3
30	1.0	1.3	1.9	1.6	-----	1.6	7.8	3.9	2.1	1.4	1.0	1.2
31	1.0	-----	1.7	1.9	-----	2.4	-----	4.4	-----	1.3	.9	-----
TOTAL	22.6	31.6	67.6	60.1	48.4	51.4	306.4	167.9	90.8	51.1	34.0	44.8
MEAN	0.73	1.05	2.18	1.94	1.73	1.66	10.2	5.42	3.03	1.65	1.10	1.49
AC-FT	45	63	134	119	96	102	608	333	180	101	67	89

CALENDAR YEAR 1964 MAX 17 MIN 0.5 MEAN 1.82 AC-FT 1,320
 WATER YEAR 1964-65 MAX 29 MIN 0.5 MEAN 2.68 AC-FT 1,940

Peak discharge (base, 80 cfs).--Apr. 9 (2015 hrs) 93 cfs (3.04 ft).

SANTA ANA RIVER BASIN

11-740. Santa Ana River below Prado Dam, Calif.

Location.--Lat 33°53'00", long 117°38'40", in La Sierra Grant, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam and 4.5 miles west of Corona, Riverside County.

Drainage area.--1,485 sq mi (revised), not including 768 sq mi above Elsinore Lake.

Records available.--May 1930 to November 1939 (irrigation seasons only), March 1940 to September 1965. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, & 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.--Maximum discharge during year, 598 cfs Apr. 10 (gage height, 3.68 ft); minimum daily, 18 cfs Oct. 13.
1940-65: Maximum discharge, 2,260 cfs Dec. 24, 1940 (gage height, 3.20 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 p. 127). 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.

Cooperation.--Nineteen discharge measurements and records of bypass flow furnished by Orange County Flood Control District.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31

Apr. 1 to Sept 30

1.9 14
2.1 40
2.3 85
2.6 175

1.9 14
2.0 26
2.3 70
2.6 130
3.0 265
3.5 495
4.0 860

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	32	40	56	54	50	247	53	44	38	27	21
2	25	32	40	54	54	44	374	50	41	38	27	21
3	23	32	42	52	50	44	287	48	41	38	27	23
4	22	32	38	54	50	42	272	45	43	37	27	23
5	21	32	37	56	52	40	127	49	41	31	27	23
6	21	32	38	57	62	44	97	50	40	30	26	23
7	20	35	42	56	78	46	91	49	40	30	27	23
8	20	37	42	65	60	52	142	49	38	30	26	23
9	21	38	42	54	58	56	424	49	38	30	23	22
10	20	52	42	54	56	58	570	45	40	30	23	22
11	20	58	44	54	54	58	451	44	37	30	21	23
12	20	62	46	52	52	65	162	45	38	28	23	23
13	18	58	46	52	52	95	112	44	40	28	23	25
14	20	44	50	52	52	80	99	44	40	28	25	25
15	21	40	48	52	52	125	91	45	41	28	22	25
16	22	44	48	52	52	114	85	45	38	28	25	26
17	23	61	46	56	52	75	84	41	38	31	22	26
18	23	142	46	56	50	65	85	38	38	28	22	30
19	22	90	48	58	50	56	80	41	38	26	21	41
20	21	55	50	60	50	50	73	43	38	27	20	37
21	23	58	50	60	52	46	72	45	38	27	21	30
22	30	54	54	58	54	40	68	45	38	27	22	27
23	30	52	54	54	52	44	63	45	38	27	22	27
24	31	50	56	65	48	44	70	45	38	26	22	27
25	32	50	56	80	48	46	67	44	38	26	22	28
26	31	50	56	60	54	46	56	43	38	28	21	30
27	32	48	87	56	54	50	56	43	38	27	21	30
28	37	40	147	56	54	50	58	43	38	27	22	30
29	38	46	102	56	-----	50	58	43	38	28	22	27
30	31	44	70	56	-----	50	56	44	38	30	21	26
31	31	-----	60	56	-----	76	-----	44	-----	27	21	-----
Total	776	1,520	1,667	1,759	1,506	1,801	4,577	1,401	1,172	914	721	787
Mean	25.0	50.7	53.8	56.7	53.8	58.1	153	45.2	39.1	29.5	23.3	26.2
Ac-ft	1,540	3,010	3,310	3,490	2,990	3,570	9,080	2,780	2,320	1,810	1,430	1,560
(†)	1,540	3,010	3,310	3,490	2,990	3,570	9,080	2,780	2,320	2,100	1,910	1,970
Calendar year 1964	Max	282	Min	17	Mean	42.9	Ac-ft	31,120	Ac-ft†	31,120		
Water year 1964-65	Max	570	Min	18	Mean	51.0	Ac-ft	36,890	Ac-ft†	36,070		

† Combined discharge of river and water pumped from wells in Prado Reservoir.

11-757.2. Carbon Creek below Carbon Canyon Dam, Calif.

Location--Lat 33°54'50", long 117°50'30", in SW¹/₄NE¹/₄ sec.17, T.3 S., R.9 W., 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 (revised).

Records available--October 1961 to September 1965.

Gage--Water-stage recorder. Datum of gage is 398.29 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Extremes--Maximum discharge during year, 114 cfs Apr. 2 (gage height, 0.94 ft); no flow for most of year.
1961-65: Maximum discharge, that of Apr. 2, 1965; 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.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Mar. 17.....	0.6	Apr. 9.....	0.2
Apr. 1.....	.1	10.....	.1
2.....	9.3	11.....	.1
3.....	5.8	12.....	.1
4.....	4.4	20.....	7.0
5.....	.7	Sept. 20.....	2.6
8.....	.2		

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
March 1965.....	0.6	-	-	0.02	1.2
April.....	28.0	-	-	.93	56
September.....	2.6	-	-	.09	5.2
Calendar year 1964.....	-	3.8	0	.02	12
Water year 1964-65.....	-	9.3	0	.09	62

Note--Flow occurred only on days listed above.

SANTA ANA RIVER BASIN

11-758. Santiago Creek at Modjeska, Calif.

Location.--Lat 33°42'32", long 117°38'05", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T.5 S., R.7 W., 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.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 1,258.77 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 175 cfs Apr. 9 (gage height, 3.18 ft); no flow Oct. 1 to Feb. 11, Feb. 26 to Mar. 2, June 28 to Sept. 30.
1961-65: Maximum discharge, 302 cfs Feb. 11, 1962 (gage height, 3.53 ft); no flow for several months in each year.

Remarks.--Records good. Slight regulation by Modjeska Reservoir on Harding Creek. No diversion above station.

Cooperation.--Three discharge measurements furnished by Orange County Flood Control District.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 15, May 12 to June 4)

1.3	0	1.8	5.6
1.4	.2	1.9	8.8
1.5	.5	2.1	18
1.6	1.4	2.3	33
1.7	3.1	2.6	65

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	0	0.5	1.4	0.4			
2					0	0	3.1	1.2	.3			
3					0	.4	4.0	1.2	.3			
4					0	.5	5.0	1.2	.3			
5					0	.5	6.1	1.2	.3			
6					0	.5	5.0	1.1	.2			
7					0	.2	4.2	1.1	.2			
8					0	.2	21	1.1	.2			
9					0	.1	49	1.0	.2			
10					0	.1	65	.9	.2			
11					0	.1	23	.9	.2			
12					.1	.1	12	.8	.2			
13					.1	.1	9.6	.8	.2			
14					.1	.1	7.1	.8	.2			
15					.1	.2	5.6	.8	.2			
16					.1	.1	5.3	.7	.2			
17					.1	.1	4.7	.6	.2			
18					.1	.1	4.0	.6	.1			
19					.1	.1	3.3	.6	.1			
20					.1	.1	3.3	.5	.1			
21					.1	.1	3.1	.5	.1			
22					.1	.1	2.9	.5	.1			
23					.1	.1	2.7	.5	.1			
24					.1	.1	2.5	.5	.1			
25					.1	.1	2.3	.5	.1			
26					0	.1	2.1	.5	.1			
27					0	.1	1.9	.4	.1			
28					0	.1	1.8	.4	0			
29					-----	.1	1.6	.4	0			
30					-----	.1	1.5	.4	0			
31					-----	.2	-----	.4	-----			
Total	0	0	0	0	1.4	4.8	263.2	23.5	5.0	0	0	0
Mean	0	0	0	0	0.05	0.15	8.77	0.76	0.17	0	0	0
Ac-ft	0	0	0	0	2.8	9.5	522	47	9.9	0	0	0

Calendar year 1964 Max 14 Min 0 Mean 0.44 Ac-ft 317
Water year 1964-65 Max 65 Min 0 Mean 0.82 Ac-ft 591

Peak discharge (base, 100 cfs).--Apr. 9 (2300 hrs) 175 cfs (3.18 ft).

11-760. 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, on upstream face near left end of Santiago Dam, 0.3 mile upstream from Fremont Canyon, and 5.7 miles southeast of Villa Park, Orange County.

Drainage area,--63.1 sq mi.

Records available,--October 1931 to September 1960, October 1961 to September 1965.

Gage,--Staff gage read on last day of each month. Datum of gage is at mean sea level.

Average discharge,--33 years, 15.5 cfs (11,250 acre-ft per year); median of yearly mean discharges, 9.0 cfs (6,500 acre-ft per year).

Remarks,--Records of total inflow represents 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. This earth-fill 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. Dead storage below lowest outlet included in these records. Minor diversions in basin above this reservoir.

Cooperation,--Reservoir operation records and related data furnished by Serrano and Carpenter Irrigation Districts and Irvine Co.

Monthly net inflow, water year October 1964 to September 1965									
Month	Elevation (feet)†	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.....	744.2	5,712	-	-	-	-	-	-	-
Oct. 31.....	740.6	4,832	-880	2,495	91	0	1,706	1,576	130
Nov. 30.....	739.0	4,490	-342	1,474	56	0	1,188	1,067	121
Dec. 31.....	738.7	4,427	-63	1,139	40	0	1,116	1,008	108
Calendar year 1964.....	-	-	+1,602	12,942	1,237	0	15,781	14,295	1,486
Jan. 31.....	739.2	4,532	+105	958	48	0	1,111	1,026	85
Feb. 28.....	747.3	6,480	+1,948	1,259	72	0	3,279	3,343	-64
Mar. 31.....	753.9	8,394	+1,914	2,714	93	0	4,721	4,886	-165
Apr. 30.....	755.9	9,047	+653	1,015	120	0	1,788	893	895
May 31.....	755.5	8,915	-132	1,759	146	0	1,773	1,536	237
June 30.....	766.2	12,907	+3,992	2,519	149	0	6,660	6,612	48
July 31.....	759.2	10,197	-2,710	2,867	226	0	383	0	383
Aug. 31.....	751.9	7,770	-2,427	2,651	200	0	424	0	424
Sept. 30.....	743.2	5,473	-2,297	2,613	120	0	436	0	436
Water year 1964-65.....	-	-	-239	23,463	1,361	0	24,585	21,947	2,638

† 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

11-775. Santiago Creek at Santa Ana, Calif.

Location.--Lat 33°46'09", long 117°52'54", in NE 1/4 SW 1/4 sec. 1, T.5 S., R.10 W., on left bank at end of Baker Street, Santa Ana, 2,400 ft upstream from mouth.

Drainage area.--95.0 sq mi.

Records available.--October 1928 to September 1965. 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 0.96 ft higher.

Average discharge.--37 years, 4.17 cfs (3,020 acre-ft per year); median of yearly mean discharges, 0.7 cfs (510 acre-ft per year).

Extremes.--Maximum discharge during year, 275 cfs Apr. 1 (gage height, 3.65 ft); no flow for most of year.

1928-65: Maximum discharge, 4,400 cfs Mar. 2, 1938 (gage height, 8.36 ft, present datum), from rating curve extended above 1,200 cfs; 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 preceding page). 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.

Cooperation.--Five discharge measurements furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Nov. 17.....2.0	Mar. 15.....25	Apr. 4.....5.6
Dec. 27.....4.2	31.....21	8.....29
28.....1.2	Apr. 1.....54	9.....23
Jan. 24......6	2.....9.0	10.....3.0
Mar. 13.....2.9	3.....12	

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
November 1964.....	2.0	-	-	0.07	4.0
December.....	5.4	-	-	.17	11
January 1965.....	.6	-	-	.02	1.2
March.....	48.9	-	-	1.58	97
April.....	135.6	-	-	4.52	269
Calendar year 1964.....	-	17	0	.18	132
Water year 1964-65.....	-	54	0	.53	382

Note.--Flow occurred only on days listed above.

11-780. Santa Ana River at Santa Ana, Calif.

Location--Lat 33°44'56", long 117°54'30", in NW 1/4 Sec. 10, T.5 S., R.10 W., on center 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 Elsinore Lake).

Records available--January 1923 to September 1965.

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); 25 years (1940-65), 12.6 cfs (9,120 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

Extremes--Maximum discharge during year, 432 cfs Apr. 1 (gage height, 3.22 ft); no flow for most of year.
1923-1965: Maximum discharge, 46,300 cfs Mar. 3, 1938 (gage height, 10.20 ft, former site and datum), 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 p. 127), and Santiago Reservoir (capacity, 25,000 acre-ft). Flows up to 100 cfs can be diverted from Carbon Creek to Coyote Creek, 1.5 miles upstream from mouth of Carbon Creek.

Cooperation--Seven discharge measurements furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0		0	110	0	0	0	0	0.6
2		0	0	0		0	7.7	0	0	0	0	0
3		0	0	0		0	24	0	0	0	0	0
4		0	0	0		0	23	0	0	0	0	0
5		0	0	0		0	0	0	0	0	0	0
6		0	0	0		0	0	0	0	.2	0	0
7		0	0	.6		0	0	0	0	1.5	0	0
8		0	0	0		0	75	0	0	1.8	0	0
9		2.1	0	0		0	56	0	0	.4	0	0
10		.7	0	0		0	12	0	0	0	0	0
11		0	0	0		0	3.7	0	.2	0	0	0
12		.1	0	0		0	52	0	.1	0	.5	0
13		0	0	0		4.5	0	0	0	0	.7	0
14		0	0	0		0	0	0	.2	1.2	0	0
15		0	0	0		31	0	0	1.2	1.6	0	0
16		0	0	0		0	0	0	1.7	.8	.5	0
17		9.5	0	0		0	0	0	1.6	.1	.9	0
18		0	0	0		0	0	.5	.7	0	.9	0
19		0	0	0		0	0	1.5	.2	0	.9	.5
20		0	0	0		0	0	.3	0	0	1.1	0
21		0	0	0		0	0	.1	2.1	0	.9	0
22		0	0	0		0	0	0	1.3	0	.9	0
23		0	0	0		0	0	0	2.6	0	.9	0
24		0	0	2.6		0	0	0	1.2	0	.9	0
25		0	0	0		0	0	.8	.7	0	.9	0
26		0	0	0		0	0	0	0	0	1.0	0
27		0	12	0		0	0	0	0	0	.8	0
28		0	2.7	0		0	0	0	0	0	.4	0
29		0	0	0	-----	0	0	0	0	0	.3	0
30		0	0	0	-----	0	0	0	0	0	.7	0
31		-----	0	0	-----	39	-----	0	-----	0	.7	-----
Total	0	12.4	14.7	3.2	0	74.5	363.4	3.2	13.8	7.4	13.9	1.1
Mean	0	0.41	0.47	0.10	0	2.40	12.1	0.10	0.46	0.24	0.45	0.04
Ac-ft	0	25	29	6.3	0	148	721	6.3	27	15	28	2.2

Calendar year 1964 Max 41 Min 0 Mean 0.41 Ac-ft 298

Water year 1964-65 Max 110 Min 0 Mean 1.39 Ac-ft 1010

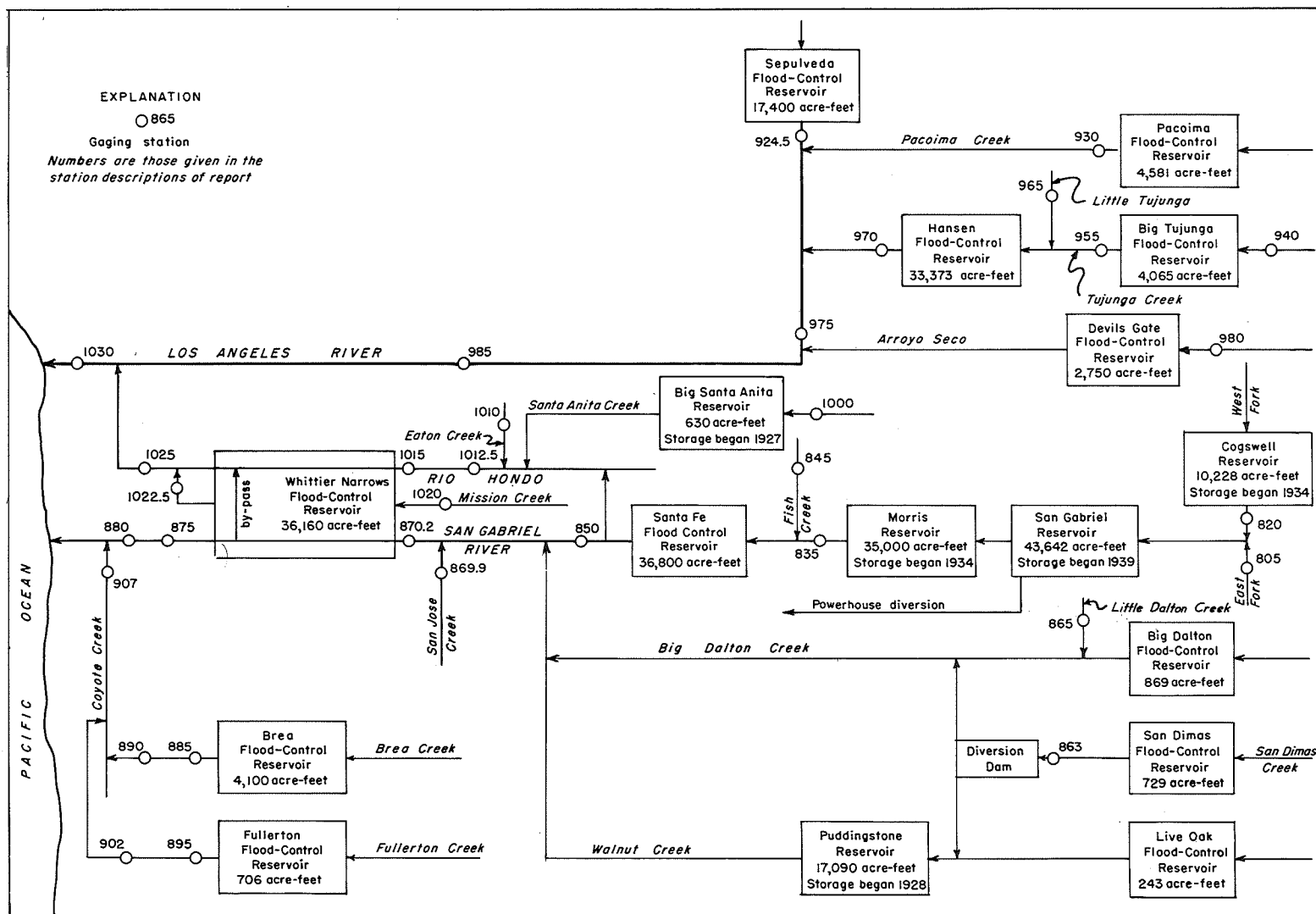


Figure 3.--Schematic diagram showing diversions and storage in San Gabriel and Los Angeles river basins.

11-805. East Fork San Gabriel River near Camp Bonita, Calif.

Location (revised).--Lat 34°14'09", long 117°48'18", in NE 1/4 sec. 27, T.2 N., R.9 W., 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.

Records available.--December 1932 to September 1965. 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.--32 years (1933-65), 63.1 cfs (45,680 acre-ft per year); median of yearly mean discharges, 40 cfs (29,000 acre-ft per year).

Extremes.--Maximum discharge during year, 274 cfs Apr. 9 (gage height, 9.30 ft); minimum daily, 5.4 cfs Oct. 5-7. 1932-65: 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.

Cooperation.--Records furnished by Los Angeles County Flood Control district and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	8.9	11	20	15	13	58	158	54	26	13	10
2	5.9	9.3	10	19	15	13	90	149	51	24	13	9.9
3	5.9	8.4	11	18	15	14	67	136	54	23	13	9.9
4	5.9	8.0	11	17	15	14	50	119	49	23	13	9.9
5	5.4	7.6	11	16	15	14	41	112	48	21	12	11
6	5.4	7.6	12	15	20	14	39	106	48	21	12	12
7	5.4	8.0	12	21	18	15	36	101	48	21	11	12
8	5.9	8.0	12	20	17	14	70	95	46	20	11	11
9	5.9	11	12	20	16	14	120	87	42	20	10	10
10	5.9	15	12	20	16	14	126	83	41	20	10	9.9
11	5.9	13	12	20	16	14	84	80	40	20	11	9.9
12	5.9	12	11	19	16	14	66	80	39	20	11	9.9
13	5.9	12	11	19	16	17	59	80	39	19	11	9.9
14	6.3	12	12	19	16	14	57	80	38	18	11	9.3
15	6.7	12	11	18	16	15	58	77	38	17	11	9.3
16	6.7	11	11	17	16	15	66	78	36	17	11	10
17	7.2	14	11	17	16	14	80	77	36	17	19	13
18	7.2	12	12	17	15	14	102	75	34	17	19	14
19	5.9	12	12	17	15	14	128	75	34	17	16	15
20	5.9	12	15	16	15	14	165	75	33	16	14	13
21	5.9	12	18	16	14	13	175	72	32	16	14	12
22	6.3	12	16	16	14	13	184	71	32	16	14	11
23	6.7	12	15	16	14	13	178	66	33	15	14	11
24	7.6	12	15	18	14	14	173	62	33	15	13	10
25	8.0	12	15	17	14	14	175	59	33	15	12	10
26	7.6	12	15	16	14	13	175	58	33	15	11	10
27	7.6	12	24	16	14	13	170	55	31	15	10	11
28	7.6	11	31	15	14	12	168	54	30	14	10	12
29	8.9	10	26	15	-----	12	161	54	28	14	10	10
30	8.9	10	23	15	-----	12	161	54	27	15	10	9.9
31	8.9	-----	20	15	-----	17	-----	54	-----	14	10	-----
Total	2051	3288	450	540	431	430	3,282	2,582	1,160	561	380	325.8
Mean	6.62	11.0	14.5	17.4	15.4	13.9	109	83.3	38.7	18.1	12.3	10.9
Ac-ft	407	652	893	1,070	855	853	6,510	5,120	2,300	1,110	754	646

Calendar year 1964 Max 102 Min 5.0 Mean 18.6 Ac-ft 13,490
 Water year 1964-65 Max 184 Min 5.4 Mean 29.2 Ac-ft 21,170

SAN GABRIEL RIVER BASIN

11-820. West Fork San Gabriel River at Camp Rincon, Calif.

Location (revised).--Lat 34°14'28", long 117°51'45", in SE $\frac{1}{4}$ sec.19, T.2 N., R.9 W., 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.

Records available.--October 1927 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 1,474.94 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Nov. 19, 1930, at site $1\frac{1}{2}$ miles downstream at different datum. Aug. 27, 1938, to July 3, 1941, at datum 6.41 ft higher.

Average discharge.--38 years, 58.7 cfs (42,500 acre-ft per year); median of yearly mean discharges, 32 cfs (23,200 acre-ft per year).

Extremes.--Maximum discharge during year, 534 cfs Apr. 9 (gage height, 9.32 ft); minimum daily, 1.7 cfs Oct. 12, 13.
1927-65: Maximum discharge, 34,000 cfs (estimated) Mar. 2, 1938; no flow at times in 1928-29.

Remarks.--Flow regulated by Cogswell flood-control reservoir since 1934 (capacity, 10,228 acre-ft, revised). No 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.1	3.1	6.2	13	9.5	8.4	107	52	29	21	17	17
2	2.1	3.3	5.9	12	9.5	8.0	158	50	29	21	17	17
3	1.9	3.1	5.9	11	9.5	8.4	99	45	30	21	17	16
4	1.9	3.1	5.9	11	9.5	8.4	64	42	29	20	17	16
5	1.9	3.1	6.2	10	9.7	8.4	56	39	28	20	17	17
6	2.1	3.3	6.5	10	16	8.7	78	38	27	19	17	18
7	1.9	3.3	6.5	15	13	8.7	79	35	27	19	16	17
8	1.9	3.3	6.5	14	11	8.7	180	33	27	20	16	17
9	1.9	9.7	6.2	13	11	8.4	228	30	27	20	16	16
10	1.9	11	6.2	13	11	8.4	201	28	26	20	15	16
11	1.9	8.7	6.2	12	10	8.4	134	27	25	19	15	16
12	1.7	7.2	6.2	11	10	8.7	103	28	25	19	16	16
13	1.7	6.2	6.2	11	10	9.5	61	29	25	19	16	16
14	2.1	5.9	6.5	11	10	9.1	53	27	24	18	16	16
15	2.1	5.6	6.5	11	10	9.1	57	25	24	17	16	15
16	2.3	5.3	6.5	11	9.8	9.1	73	24	25	19	15	17
17	2.3	9.5	6.5	11	9.8	8.7	89	23	24	19	18	18
18	2.3	9.5	6.9	11	9.5	8.4	101	23	23	18	18	19
19	2.1	8.4	8.7	11	9.5	8.0	112	23	23	18	17	20
20	2.1	7.2	14	10	9.5	7.6	120	23	23	19	17	19
21	2.1	7.2	15	10	9.1	7.2	113	23	23	20	16	18
22	2.3	7.2	12	10	9.5	7.6	106	23	23	20	16	17
23	2.5	6.5	11	10	9.1	7.6	96	23	23	18	16	17
24	2.7	6.5	9.8	11	9.1	8.0	91	23	23	18	16	17
25	2.9	6.9	9.8	10	8.7	8.4	89	24	24	18	16	17
26	2.9	6.5	9.5	9.8	8.7	8.0	83	30	24	17	16	17
27	3.1	6.5	20	9.8	8.7	8.0	76	30	23	17	17	17
28	3.1	6.5	22	9.8	8.4	8.4	68	28	23	16	16	18
29	3.8	5.9	17	9.8	-----	8.0	59	28	23	16	16	17
30	3.3	5.9	15	9.8	-----	7.6	56	28	22	18	16	17
31	3.1	-----	14	9.5	-----	13	-----	28	-----	17	16	-----
Total	72.0	185.4	291.3	341.5	279.1	262.9	2,990	932	751	581	506	511
Mean	2.32	6.18	9.40	11.0	9.97	8.48	99.7	30.1	25.0	18.7	16.3	17.0
Ac-ft	143	368	578	677	554	521	5,930	1,850	1,490	1,150	1,000	1,010

Calendar year 1964 Max 195 Min 1.7 Mean 12.8 Ac-ft 9,310
Water year 1964-65 Max 228 Min 1.7 Mean 21.1 Ac-ft 15,270

11-835. San Gabriel River near Azusa, Calif.

Location.--Lat 34°10'11", long 117°53'16", in SW 1/4 SW 1/4 sec.13, T.1 N., R.10 W., on right bank 1.1 miles downstream from Morris Dam and 2.7 miles northeast of Azusa.

Drainage area.--214 sq mi.

Records available.--May to November 1894, September 1895 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 867.59 ft above mean sea level (from Los Angeles County Flood Control District bench mark). Prior to August 1917, staff gages and August 1917 to Sept. 30, 1937, water-stage recorders at several sites from 1½ to 2 miles downstream at different datum. Oct. 1, 1937, to Feb. 21, 1938, water-stage recorder at site half a mile downstream at different datum. Feb. 22, 1938, to Feb. 7, 1939, water-stage recorder at site a quarter of a mile upstream at different datum. Datum lowered 4.35 ft May 9, 1950.

Average discharge (combined).--70 years (1895-1965), 144 cfs (104,300 acre-ft per year), adjusted for diversions, importations, and regulation and evaporation in Cogswell, San Gabriel, and Morris Reservoirs; median of yearly mean discharges, 95 cfs (68,800 acre-ft per year).

Extremes.--Maximum discharge during year, 291 cfs June 12 (gage height, 5.91 ft); no flow for most of year.

1894, 1895-1965: Maximum discharge, 65,700 cfs Mar. 2, 1938, by computation of maximum flow over Morris Dam; no flow for several months in most years.

Remarks.--Records poor. Flow regulated by Cogswell Reservoir since 1934 and San Gabriel flood-control reservoir since 1939 (combined capacity, 53,870 acre-ft, revised) and by Morris Reservoir since 1934 (capacity, 35,000 acre-ft). Azusa Canal diverts above high-water level of Morris Reservoir or from San Gabriel Reservoir about 5 miles above station. The Metropolitan Water District of Southern California reports a release of 600 acre-ft of Colorado River water into San Gabriel River below Morris Dam and above station during the water year. They also furnished records of combined discharge for San Gabriel River computed on basis of flow in river above Morris Reservoir plus Azusa canal, adjusted for storage and evaporation in Cogswell, San Gabriel, and Morris Reservoirs, as shown in table below. These figures of discharge are equivalent to combined records of San Gabriel River and Southern California Edison Co.'s canal as published from 1894 to 1933.

Month	Combined discharge (acre-feet)	Month	Combined discharge (acre-feet)
October.....	531	April.....	15,340
November.....	1,040	May.....	6,810
December.....	1,660	June.....	3,280
		July.....	1,590
Calendar year 1964.....	22,510	August.....	974
		September.....	837
January.....	1,860	Water year 1964-65.....	36,810
February.....	1,470		
March.....	1,420		

Cooperation.--Sixteen discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Oct. 15..... 6.3	Oct. 28.....7.8	Nov. 10..... 0.1	June 17.....219
16.....38	29.....7.8	Apr. 9..... .3	18.....219
17.....26	30.....7.5	10..... .4	19.....216
18.....26	31.....7.5	June 7.....165	20.....216
19.....26	Nov. 1.....7.2	8.....276	21..... 78
20.....26	2.....7.2	9.....276	22..... .1
21.....26	3.....7.2	10.....246	Aug. 30..... 6.9
22.....25	4.....6.9	11.....276	31..... 18
23.....26	5.....7.2	12.....276	Sept. 1..... 7.1
24.....26	6.....6.9	13.....276	6..... .5
25.....26	7.....6.9	14.....250	28..... 5.1
26.....26	8.....6.9	15.....225	29..... 8.8
27.....17	9.....6.4	16.....222	30..... 4.2

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
October 1964.....	350.9	-	-	11.3	696
November.....	62.9	-	-	2.10	125
April 1965.....	0.7	-	-	.02	1.4
June.....	3,436.1	-	-	115	6,820
August.....	24.9	-	-	.80	49
September.....	25.7	-	-	.86	51
Calendar year 1964.....	-	38	0	1.35	981
Water year 1964-65.....	-	276	0	10.7	7,740

Note.--Flow occurred only on days listed above.

11-845. Fish Creek near Duarte, Calif.

Location.--Lat 34°10'100", long 117°55'25", in SW 1/4 sec. 15, T.1 N., R.10 W., on left bank 0.8 mile upstream from mouth of canyon and 3 miles northeast of Duarte.

Drainage area.--6.36 sq mi.

Records available.--July to September 1916, July 1917 to September 1965.

Gage.--Water-stage recorder and broad-crested weir since July 1917, restored in December 1938. Altitude of gage is 1,000 ft (from topographic map). Prior to July 28, 1917, staff gage at same site at different datum. July 28, 1917, to Mar. 2, 1938, water-stage recorder at same site at different datum (destroyed by flood of Mar. 2, 1938). Mar. 3 to Dec. 7, 1938, staff gage at same site at different datum. Dec. 7, 1938, to Oct. 3, 1951, water-stage recorder at same site at datum 1 ft higher.

Average discharge.--48 years (1917-65), 3.68 cfs (2,660 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

Extremes.--Maximum discharge during year, 163 cfs Apr. 9 (gage height, 3.56 ft); no flow for some days.

1916-65: Maximum discharge, 2,100 cfs Mar. 2, 1938, and Jan. 23, 1943; 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 above 10 cfs, which are poor. No regulation or diversion above station.

Cooperation.--Seven discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.2	0.4	1.4	0.6	0.2	18	1.6	0.9	0.4	0.1	0
2	0	.2	.4	1.3	.6	.2	28	1.6	.9	.4	.1	0
3	0	.2	.4	1.3	.6	.2	17	1.6	.8	.4	.1	0
4	0	.2	.4	1.2	.6	.2	11	1.6	.8	.3	.1	0
5	0	.1	.4	1.2	.8	.2	7.8	1.6	.7	.3	.1	.1
6	0	.1	.3	1.1	1.7	.2	6.1	1.6	.7	.2	.1	.6
7	0	.1	.3	2.5	1.2	.4	5.3	1.5	.7	.2	0	.3
8	0	.1	.3	1.3	1.0	.4	25	1.4	.7	.3	0	.2
9	0	1.6	.2	1.1	1.0	.4	48	1.4	.7	.3	0	.2
10	0	1.8	.2	1.0	.9	.4	43	1.3	.6	.3	0	.1
11	0	1.0	.3	.9	.8	.4	20	1.3	.6	.3	.1	.1
12	0	.8	.3	.8	.8	.5	10	1.4	.6	.3	0	.1
13	0	.8	.3	.8	.8	.9	4.2	1.4	.6	.3	0	.1
14	0	.7	.4	.8	.7	.7	3.9	1.4	.6	.3	0	0
15	0	.6	.4	.8	.6	.6	3.5	1.1	.6	.2	0	0
16	0	.5	.4	.8	.5	.6	3.3	.9	.6	.2	0	.1
17	0	1.6	.4	.8	.6	.7	3.2	.8	.6	.2	0	.2
18	0	1.1	.5	.8	.5	.7	3.3	.8	.5	.2	0	.4
19	0	.8	.7	.8	.5	.7	3.0	.8	.5	.2	0	.5
20	0	.7	2.0	.8	.4	.7	2.9	.8	.5	.1	0	.4
21	0	.7	1.5	.8	.4	.7	3.0	.9	.5	.1	0	.2
22	0	.6	1.2	.8	.4	.7	2.9	.9	.5	.1	.1	.1
23	0	.6	1.0	.8	.4	.8	2.7	.9	.6	.1	.1	.1
24	0	.5	.9	1.1	.4	.8	2.6	1.1	.5	.1	.1	.1
25	0	.5	.8	.8	.3	.8	2.3	1.0	.7	.1	.1	.1
26	.1	.5	.8	.8	.2	.8	2.2	.9	.7	.1	0	.1
27	.1	.5	4.0	.8	.2	.7	1.8	.9	.5	.1	0	.2
28	.1	.5	3.5	.8	.2	.5	2.0	.8	.5	.1	0	.2
29	.2	.5	1.8	.7	-----	.5	1.8	.8	.4	.1	0	.2
30	.2	.4	1.6	.7	-----	.4	1.7	.8	.4	.2	0	.1
31	.2	-----	1.5	.6	-----	1.0	-----	.9	-----	.1	0	-----
Total	0.9	18.5	27.6	30.2	17.7	17.0	289.5	35.8	18.5	6.6	1.1	4.8
Mean	0.03	0.62	0.89	0.97	0.63	0.55	9.65	1.15	0.62	0.21	0.04	0.16
Ac-ft	1.8	37	55	60	35	34	574	71	37	13	2.2	9.5

Calendar year 1964 Max 48 Min 0 Mean 0.91 Ac-ft 662
 Water year 1964-65 Max 48 Min 0 Mean 1.28 Ac-ft 930

Peak discharge (base, 60 cfs).--Apr. 1 (2300 hrs) 76 cfs (3.03 ft); Apr. 9 (2100 hrs) 163 cfs (3.56 ft).

11-850. San Gabriel River below Santa Fe Dam, near Baldwin Park, Calif.

Location.--Lat 34°06'44", long 117°58'07", in SE¹NE¹SW¹ sec.6, T.1 S., R.10 W., 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.

Records available.--October 1942 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level (levels by Corps of Engineers).

Extremes.--No flow during year.

1942-65: Maximum discharge, 8,000 cfs Jan. 23, 1943; no flow for several months of each year.

Remarks.--No flow since Aug. 16, 1962. Flow regulated by Cogswell and San Gabriel flood-control reservoirs (combined capacity, 53,870 acre-ft revised), Morris Reservoir (capacity, 35,000 acre-ft), Santa Fe flood-control reservoir (capacity, 36,800 acre-ft). Diversions above station for irrigation, power development, and ground-water replenishment. No water diverted to headwaters of Rio Hondo during year.

Cooperation.--Records of diversion to Rio Hondo furnished by Los Angeles County Flood Control District.

11-863. San Dimas Creek below San Dimas Dam, Calif.

Location.--Lat 34°09'10", long 117°46'18", in SW¹SE¹ sec.24, T.1 N., R.9 W., 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.

Records available.--October 1951 to September 1965. 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.--Maximum discharge during year, 179 cfs Apr. 9 (gage height, 1.70 ft); minimum daily, 0.1 cfs for many days.

1951-65: Maximum discharge, 404 cfs Feb. 9, 1963 (gage height, 1.88 ft); no flow for part of each year.

Remarks.--Flow regulated by San Dimas flood-control reservoir (capacity, 729 acre-ft, revised) and at times by old water tunnel 150 ft upstream. No 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.1	0.1	2.1	0.4	1.5	0.5	4.9	1.3	0.5	0.7	0.4
2	.1	.1	.1	.3	.5	2.2	.2	4.6	1.3	.5	.7	.4
3	.1	.1	.1	.3	.5	2.4	.1	4.3	1.9	.5	.7	.4
4	.1	.1	.1	.3	.5	2.4	.1	4.1	1.7	.5	.8	.4
5	.1	.1	.1	.3	.6	2.4	8.3	4.0	1.5	.5	.8	.4
6	.1	.1	.1	.3	.6	2.4	15	3.8	1.3	.5	.8	.4
7	.1	.1	.1	2.3	.6	2.4	15	3.6	1.1	.5	.9	.4
8	.1	.1	.1	.8	.5	2.4	15	3.4	1.0	.5	.9	.4
9	.1	.2	.1	.8	.5	2.4	40	3.2	.9	.5	.9	.4
10	.1	.3	.1	.8	.5	2.4	49	3.0	.9	.5	1.0	.4
11	.1	.3	.1	.8	.5	2.4	25	2.9	.9	.5	1.0	.4
12	.2	.4	.1	.8	.4	2.4	23	2.7	.9	.5	1.0	.4
13	.2	.6	.1	.9	.4	2.2	18	2.8	.9	.5	1.0	.4
14	.2	.7	.1	.9	.4	2.2	12	3.0	1.0	.5	.9	.4
15	.2	.7	.1	.8	.5	2.2	7.5	2.9	1.0	.5	.8	.4
16	.2	.7	.1	.8	.5	2.2	12	2.6	1.0	.6	.7	.4
17	.2	.7	.1	.7	.5	2.1	8.0	2.4	1.0	.6	.6	.4
18	.2	.7	.1	.7	.4	2.1	6.0	2.2	1.0	.5	.5	.4
19	.2	.8	.1	.6	.4	2.1	4.9	2.0	1.0	.5	.5	.4
20	.2	.7	.1	.5	.5	2.1	4.1	1.8	1.0	.5	.5	.4
21	.2	.7	.2	.5	.5	1.9	4.9	1.7	.9	.5	.5	.4
22	.2	.6	.3	.5	.5	1.9	4.8	1.6	.9	.5	.5	.4
23	.2	.5	.3	.5	.5	1.8	5.0	1.5	.9	.5	.4	.4
24	.2	.1	.3	.5	.5	1.8	5.0	1.4	.8	.5	.4	.4
25	.1	.1	.3	.5	.5	1.8	5.0	1.3	.8	.6	.4	.5
26	.1	.1	.3	.5	.5	1.9	8.6	1.3	.7	.6	.4	.3
27	.1	.2	.6	.5	.5	1.5	2.5	1.3	.7	.6	.4	.3
28	.1	.2	1.9	.5	.5	2.5	5.0	1.3	.6	.6	.4	.2
29	.1	.1	3.3	.4	-----	2.7	5.3	1.3	.6	.6	.4	.2
30	.1	.1	3.1	.4	-----	2.2	5.1	1.3	.5	.6	.4	.2
31	.1	-----	2.9	.4	-----	1.0	-----	1.5	-----	.6	.4	-----
Total	4.4	10.3	15.5	21.0	13.7	65.9	314.7	79.5	30.0	16.4	20.3	11.1
Mean	0.14	0.34	0.50	0.68	0.49	2.13	10.5	2.56	1.00	0.53	0.65	0.37
Ac-ft	8.7	20	31	42	27	131	624	158	60	33	40	22

Calendar year 1964 Max 24 Min 0.1 Mean 1.05 Ac-ft 759
 Water year 1964-65 Max 49 Min 0.1 Mean 1.65 Ac-ft 1,200

11-865. Little Dalton Creek near Glendora, Calif.

Location.--Lat 34°10'03", long 117°50'15", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.1 N., R.9 W., on left bank 0.2 mile upstream from Angeles National Forest boundary and 2.6 miles northeast of Glendora.

Drainage area.--2.72 sq mi.

Records available.--December 1938 to September 1965. January 1929 to November 1938, at site 0.8 mile downstream; records not equivalent because diversion was not included.

Gage.--Water-stage recorder. Datum of gage is 1,334.38 ft above mean sea level (levels by Los Angeles County Flood Control District).

Average discharge.--27 years, 0.60 cfs (434 acre-ft per year); median of yearly mean discharges, 0.2 cfs (145 acre-ft per year).

Extremes.--Maximum discharge during year, 62 cfs Apr. 9 (gage height, 2.65 ft); no flow for most of year.

1938-65: Maximum discharge, 1,700 cfs Nov. 20, 1961 (gage height, 5.24 ft); no flow at times in each year.

Flood of Mar. 2, 1938, 960 cfs (estimated). Flood of February 1914, 1,020 cfs, result of slope-area measurement.

Remarks.--No regulation above station. Prior to December 1938, diversion by Glendora Irrigating Company then in 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	0		4.9	0.1	0			
2				0	0		3.6	.1	0			
3				0	0		2.2	.1	.1			
4				0	0		1.1	.2	0			
5				0	0		.9	.2	0			
6				0	.1		.7	.2	0			
7				.1	.1		.5	.1	0			
8				0	0		3.4	.1	0			
9				0	0		9.8	.1	0			
10				0	0		7.5	0	0			
11				0	0		3.0	.1	0			
12				0	0		2.7	.1	0			
13				0	0		2.1	.1	0			
14				0	0		1.7	.1	0			
15				0	0		1.2	.1	0			
16				0	0		1.0	.1	0			
17				0	0		1.0	0	0			
18				0	0		1.0	0	0			
19				0	0		.9	0	0			
20				0	0		.8	0	0			
21				0	0		.7	0	0			
22				0	0		.4	0	0			
23				0	0		.4	0	0			
24				.1	0		.3	.1	0			
25				0	0		.3	.1	0			
26				0	0		.3	0	0			
27				0	0		.2	0	0			
28				0	0		.1	0	0			
29				0	-----		.1	0	0			
30				0	-----		.1	0	0			
31		-----		0	-----		-----	0	-----			-----
Total	0	0	0	0.2	0.2	0	52.7	2.0	0.1	0	0	0
Mean	0	0	0	0.006	0.007	0	1.76	0.06	0.003	0	0	0
Ac-ft	0	0	0	0.4	0.4	0	105	4.0	0.2	0	0	0
Calendar year 1964	Max	2.9	Min	0	Mean	0.04	Ac-ft	31				
Water year 1964-65	Max	9.8	Min	0	Mean	0.15	Ac-ft	110				

11-869.9. San Jose Creek near El Monte, Calif.

Location.--Lat 34°01'55", long 118°00'40", in El Monte Grant, on right bank of San Jose flood channel, 1,650 ft upstream from Workman Mill Road bridge, and 2.7 miles southeast of El Monte, Los Angeles County.

Drainage area.--87.8 sq mi.

Records available.--October 1964 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 248.52 ft above mean sea level (levels by Los Angeles County Flood Control District).

Extremes.--Maximum discharge during year, 4,540 cfs Apr. 9 (gage height, 6.61 ft); no flow for some days.

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 Spada and at Lemon Street. Effective Oct. 1, 1964 the 200 cfs bypass from San Jose Flood channel to the original San Jose Creek channel was closed.

Cooperation.--Records furnished by Los Angeles County Flood Control District, and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	4.4	4.2	5.0	4.0	513	5.0	4.5	2.3	2.6	2.2
2	0	.1	4.2	4.1	5.8	3.8	223	4.7	4.7	2.3	2.2	2.3
3	0	.1	4.1	4.1	5.0	3.6	143	4.7	4.5	3.4	1.9	3.1
4	0	.1	4.1	4.1	5.0	3.6	40	4.7	4.5	3.4	1.9	2.8
5	.2	.2	4.1	4.1	5.3	3.6	10	4.7	4.2	3.6	1.9	2.1
6	.1	.2	4.1	4.1	4.8	4.2	10	5.0	4.2	3.4	2.2	3.1
7	0	.2	4.0	3.7	4.7	2.6	12	4.7	4.2	3.9	2.2	2.1
8	0	0	3.8	5.3	4.4	7.5	479	4.7	4.2	3.9	2.1	1.9
9	.2	3.6	3.8	4.7	4.2	5.5	1080	4.5	3.9	3.6	1.9	2.2
10	.1	5.1	3.8	4.6	4.4	4.7	120	4.5	3.9	3.6	1.9	2.3
11	.1	9.9	4.0	4.6	4.4	5.8	13	4.2	3.9	3.1	2.6	1.9
12	.1	5.3	4.0	5.0	4.4	12	9.6	4.2	4.2	3.1	1.9	2.1
13	.2	4.4	3.8	5.0	4.4	7.2	8.6	4.5	3.4	2.3	1.7	2.1
14	.1	4.2	4.4	5.0	4.2	4.7	7.4	4.2	3.4	3.1	1.8	2.1
15	0	4.4	4.6	5.3	4.2	5.0	6.6	4.5	3.6	3.1	1.7	2.2
16	.2	4.4	4.7	5.3	4.2	4.7	7.0	4.2	3.9	3.1	1.7	2.8
17	.1	10.1	5.3	5.0	4.0	4.6	6.2	4.2	3.9	2.8	1.6	4.5
18	0	6.1	6.1	4.7	3.8	4.6	6.6	4.5	3.4	2.3	1.5	2.18
19	.2	1.0	6.1	4.7	4.0	4.6	6.2	4.2	3.6	2.2	1.6	7.3
20	0	.4	5.0	5.0	4.0	4.6	6.2	3.9	3.4	2.2	1.6	5.4
21	.1	4.6	8.4	4.7	4.1	4.6	6.6	3.9	3.4	2.1	1.8	4.2
22	0	4.6	4.7	5.0	4.2	4.6	7.0	3.9	3.1	2.8	1.8	3.9
23	.2	4.6	4.7	5.0	4.2	4.6	7.0	4.2	3.1	2.8	1.9	3.9
24	.1	4.7	5.0	4.4	4.2	4.6	6.2	4.5	2.8	2.1	1.8	4.2
25	.1	5.5	4.7	4.4	4.2	4.6	6.2	4.5	3.4	2.6	1.9	4.5
26	0	5.5	4.4	4.6	4.2	4.4	6.2	5.0	3.1	2.6	1.9	4.2
27	0	5.5	19.6	4.6	4.0	4.4	5.8	4.7	2.8	2.1	2.1	4.2
28	0	3.1	4.2	4.7	4.1	4.4	5.4	4.5	2.6	2.1	2.1	4.7
29	.1	4.4	6.4	4.6	-----	4.6	5.4	4.5	2.3	1.9	2.1	4.7
30	.1	4.6	4.2	4.6	-----	4.6	5.0	4.5	2.1	2.0	2.1	4.2
31	.1	-----	4.1	4.6	-----	180	-----	4.2	-----	2.6	2.3	-----
Total	2.4	276.2	418.0	216.7	166.6	459.5	2768.2	138.2	108.2	104.4	60.3	380.9
Mean	0.08	9.21	13.5	6.99	5.95	14.8	92.3	4.46	3.61	3.37	1.95	12.7
Ac-ft	4.8	548	829	430	330	911	5,490	274	215	207	120	756

Calendar year 1964 Max - Min - Mean - Ac-ft -
 Water year 1964-65 Max 1080 Min 0 Mean 14.0 Ac-ft 10,110

11-870.2. (revised). San Gabriel River above Whittier Narrows Dam, Calif.

Location.--Lat 34°02'00", long 118°02'14", in La Puente Grant, on downstream side of bridge near center, on San Gabriel River Parkway, 0.8 mile downstream from San Jose Flood channel, 1 $\frac{1}{4}$ miles upstream from axis of Whittier Narrows Dam, and 1.8 miles south of El Monte.

Drainage area.--353 sq mi.

Records available.--October 1955 to September 1957, October 1963 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 220 ft (from topographic map).

Extremes.--Maximum discharge during year, 9,460 cfs Apr. 9 (gage height, 7.04 ft, from inside high-water mark); no flow June 5-16, July 16, 18-29, Aug. 1 to Sept. 14.

1955-57, 1963-65: Maximum discharge, about 12,000 cfs Jan. 26, 1956 (gage height, 8.16 ft. from flood marks) on basis of maximum discharge for station at Pico; no flow for part of each year.

Remarks.--Records good. Flow regulated by San Gabriel, Cogswell, and Santa Fe flood control reservoirs (combined capacity, 90,670 acre-ft, revised), 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. No water diverted from San Gabriel River below Santa Fe Dam to Rio Hondo during year. Puddingstone Reservoir was dewatered in September; 5,900 acre-ft released via Walnut Creek from this source.

Cooperation.--Records of Colorado River water released to river furnished by Los Angeles County Flood Control District.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 27, Dec. 29 to Apr. 1)

Oct. 1 to Apr. 1				Apr. 1 to Sept. 30			
3.9	5.6	4.6	150	3.6	0	4.3	93
4.0	12	4.8	250	3.7	.3	4.5	190
4.1	21	5.1	500	3.8	1.8	4.7	330
4.2	35	5.5	1,050	3.9	6.0	5.0	660
4.4	75			4.0	16	5.3	1,350
				4.1	35	5.5	1,600

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	190	186	174	141	170	946	135	168	135		0
2	162	178	186	178	27	186	376	135	168	122		0
3	162	196	186	86	14	186	373	152	174	127		0
4	162	208	186	22	15	174	67	174	69	127		0
5	154	202	190	160	15	142	8.0	184	0	122		0
6	138	202	196	170	80	112	4.5	190	0	122		0
7	130	202	88	170	24	53	9.0	179	0	122		0
8	130	196	10	170	89	47	899	162	0	122		0
9	150	240	8.9	170	122	118	1,520	162	0	131		0
10	162	227	8.9	170	146	130	144	162	0	162		0
11	178	78	10	170	142	126	14	157	0	168		0
12	170	187	50	170	142	19	9.0	152	0	168		0
13	182	154	182	174	142	103	9.0	157	0	174		0
14	202	196	178	178	146	16	5.0	157	0	179		0
15	202	196	178	182	146	64	3.0	162	0	69		73
16	190	185	182	182	146	45	2.4	162	0	0		266
17	186	286	182	182	146	150	2.1	162	50	3.6		290
18	186	55	152	174	150	154	1.5	162	179	0		291
19	186	170	16	170	154	129	68	162	157	0		102
20	170	182	98	170	154	146	146	162	157	0		254
21	138	182	63	170	154	146	152	168	157	0		314
22	154	186	182	120	154	146	157	168	157	0		290
23	202	186	174	138	162	142	157	168	157	0		250
24	196	186	178	97	170	138	157	174	157	0		244
25	186	186	178	72	174	134	162	179	157	0		244
26	190	186	178	166	174	126	162	174	157	0		214
27	196	186	344	170	170	122	152	168	157	0		202
28	190	186	46	170	166	122	140	168	157	0		202
29	201	186	45	170	-----	122	140	162	157	0		208
30	202	186	174	170	-----	101	140	162	140	13		91
31	196	-----	174	162	-----	256	-----	168	-----	.4		-----
Total	5,282	5,586	4,209.8	4,827	3,465	3,825	6,125.5	5,089	2,675	2,057.0	0	3,545
Mean	170	186	136	156	124	123	204	164	89.2	66.7	0	118
Ac-ft	10,480	11,080	8,350	9,570	6,870	7,590	12,150	10,090	5,310	4,100	0	7,030
(†)	14,680	12,720	9,560	10,700	12,740	11,520	4,610	12,440	8,040	6,300	0	2,560

Calendar year 1964 Max 417 Min 0 Mean 71.3 Ac-ft 51,740 Ac-ft† 59,890
Water year 1964-65 Max 1,520 Min 0 Mean 128 Ac-ft 92,620 Ac-ft† 104,900

† Colorado River water released to San Gabriel River at site 4.2 miles upstream.

11-875. San Gabriel River at Pico, Calif.

Location.--Lat 34°00'23" (revised), long 118°04'05", in Paso de Bartolo Grant, in downstream end of mid-span pier of Beverly Boulevard bridge, 0.7 mile downstream from San Jose Creek, and 0.8 mile northeast of Pico, Los Angeles County.

Drainage area.--448 sq mi.

Records available.--October 1928 to September 1965. Since 1954, Colorado River water released to San Gabriel River above station. Records since 1954 not equivalent.

Gage.--Water-stage recorder. Altitude of gage is 180 ft (from topographic map). Prior to Feb. 4, 1937, at site 0.8 mile downstream at different datum. Feb. 4, 1937, to Nov. 14, 1947, at site 1,200 ft downstream at different datum. Nov. 15, 1947, to Mar. 5, 1952, at site 1,000 ft downstream at different datum.

Extremes.--Maximum discharge during year, 5,590 cfs Apr. 9 (gage height, 9.57 ft); no flow for some days. 1928-65: Maximum discharge, 22,700 cfs Mar. 2, 1938; no flow for periods in each year.

Remarks.--Flow regulated by Cogswell Reservoir since 1934 and San Gabriel flood-control reservoir since 1939 (combined capacity, 53,870 acre-ft, revised), Morris Reservoir since 1934 (capacity, 35,000 acre-ft), Santa Fe flood-control reservoir since October 1942 (capacity, 36,800 acre-ft), Whittier Narrows flood-control reservoir since January 1956 (capacity, 36,160 acre-ft), and several small flood-control reservoirs (combined capacity, 19,100 acre-ft). Diversions for irrigation, power development, and ground-water replenishment. For Colorado River water released to San Gabriel River at site 6.7 miles upstream for ground-water replenishment in the San Gabriel River (see p. 182). During the year, no water was diverted from the San Gabriel River below Santa Fe Dam and above Whittier Narrows Dam to Rio Hondo.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	171	163	156	98	144	1,100	106	116	115	14	0
2	141	156	163	144	16	163	317	99	112	102	4.6	0
3	144	182	159	77	0	152	337	117	122	102	13	1.1
4	144	190	171	14	0	141	60	136	61	102	14	15
5	137	171	175	152	0	82	.9	143	0	99	16	18
6	119	163	175	163	47	55	0	146	0	99	20	16
7	106	156	72	152	5.0	16	.6	136	0	96	20	17
8	100	156	7.6	60	49	16	803	129	0	93	17	21
9	119	200	6.5	159	90	90	1,410	119	0	106	16	19
10	152	194	0	159	130	96	302	109	5.1	136	13	20
11	167	38	0	159	113	113	4.1	109	14	136	7.6	20
12	163	139	8.3	167	106	2.5	2.0	109	14	139	7.6	19
13	172	86	148	163	110	75	.8	109	14	146	6.0	18
14	182	156	133	156	119	0	0	112	13	150	10	21
15	182	148	141	148	113	49	0	116	12	77	10	48
16	186	144	137	152	116	11	0	119	7.7	18	9.9	250
17	175	273	152	152	106	113	0	122	16	18	11	286
18	163	11	131	144	110	130	0	125	136	18	13	289
19	163	118	7.2	126	110	97	17	129	132	18	13	68
20	137	156	63	123	106	113	106	122	143	18	13	188
21	87	156	20	116	110	93	119	116	150	18	15	268
22	113	152	137	72	116	93	132	116	146	12	15	238
23	179	163	119	105	119	93	139	119	136	0	15	209
24	190	159	133	65	133	106	139	112	136	0	14	197
25	175	148	123	30	137	96	139	116	132	0	16	193
26	186	141	123	137	137	85	129	116	136	0	16	161
27	194	137	438	133	137	82	119	116	139	3.2	9.7	150
28	182	137	60	126	130	82	99	116	136	14	0	154
29	197	144	29	130	-----	85	106	119	136	16	0	172
30	175	159	141	119	-----	81	109	119	105	33	0	72
31	167	-----	144	113	-----	230	-----	119	-----	13	0	-----
Total	4,713	4,504	3,479.6	3,872	2,563.0	2,784.5	5,690.4	3,696	2,269.8	1,897.2	3,49.4	3,148.1
Mean	152	150	112	125	91.5	89.8	190	119	75.7	61.2	11.3	105
Ac-ft	9,350	8,930	6,900	7,680	5,080	5,520	11,290	7,330	4,500	3,760	693	6,240

Calendar year 1964 Max 530 Min 0 Mean 62.8 Ac-ft 45,620
 Water year 1964-65 Max 1,410 Min 0 Mean 107 Ac-ft 77,270

SAN GABRIEL RIVER BASIN

11-880, San Gabriel River at Spring Street, near Los Alamitos, Calif.

Location (revised).--Lat 33°48'43", long 118°05'24", in SE 1/4 sec. 24, T.4 S., R.12 W., on right levee, 455 ft upstream from Spring Street bridge, 1.3 miles upstream from Coyote Creek, and 1.3 miles northwest of Los Alamitos. Prior to Nov. 17, 1964, at site 455 ft downstream.

Drainage area.--472 sq mi.

Records available.--October 1927 to September 1951, October 1952 to September 1965. 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 (revised) 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.--37 years, 22.1 cfs (16,000 acre-ft per year); median of yearly mean discharges, 2.7 cfs (2,000 acre-ft per year).

Extremes.--Maximum discharge during year, 4,540 cfs Apr. 9 (gage height, 6.10 ft); no flow for most of year. 1936-51, 1952-65: Maximum discharge, 27,000 cfs (estimated) Mar. 2, 1938; no flow for several months in each year.

Remarks.--Flow regulated by San Gabriel Reservoir since 1939 and Cogswell flood-control reservoir since 1934 (combined capacity, 53,870 acre-ft, revised), Morris Reservoir since 1934 (capacity, 35,000 acre-ft), Santa Fe flood-control reservoir since October 1942 (capacity, 36,800 acre-ft), Whittier Narrows flood-control reservoir since January 1956 (capacity, 36,160 acre-ft), and several small flood-control reservoirs (combined capacity, 19,100 acre-ft). Many diversions for irrigation, power development, and ground-water replenishment. Average discharge represents flow to ocean during period of record, regardless of upstream development. The Los Angeles County Flood Control District reported no water diverted from San Gabriel River below Santa Fe Dam and above Whittier Narrows Dam to Rio Hondo during year.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0	0	0	959				0	
2		0	0	0	0	0	144				0	
3		0	0	0	0	0	410				0	
4		0	0	0	0	0	95				0	
5		0	0	0	.1	0	.1				0	
6		0	0	0	.3	0	0				0	
7		0	0	1.0	0	0	0				0	
8		0	0	0	0	0	657				0	
9		16	0	0	0	0	1,070				0	
10		8	0	0	0	0	581				0	
11		0	0	0	0	0	22				0	
12		0	0	0	0	0	2.7				.2	
13		0	0	0	0	12	2.3				0	
14		0	0	0	0	0	1.4				0	
15		0	0	0	0	12	.5				0	
16		0	0	0	0	0	.7				0	
17		75	0	0	0	0	.7				0	
18		16	0	0	0	0	0				0	
19		0	.1	0	0	0	0				0	
20		0	8.7	0	0	0	0				0	
21		0	.8	0	0	0	0				0	
22		0	0	0	0	0	0				0	
23		0	0	0	0	0	0				0	
24		0	0	.7	0	0	0				0	
25		0	0	0	0	0	0				0	
26		0	0	0	0	0	0				0	
27		0	232	0	0	0	0				0	
28		0	14	0	0	0	0				0	
29		0	.9	0	-----	0	0				0	
30		0	0	0	-----	0	0				0	
31		-----	0	0	-----	74	-----				0	-----
Total	0	115	256.5	1.7	0.4	98	3,946.4	0	0	0	0.2	0
Mean	0	3.83	8.27	0.05	0.01	3.16	132	0	0	0	0.006	0
Ac-ft	0	228	509	3.4	0.8	194	7,830	0	0	0	0.4	0
Calendar year 1964	Max	383	Min	0	Mean	2.97	Ac-ft	2,160				
Water year 1964-65	Max	1,070	Min	0	Mean	12.1	Ac-ft	8,770				

11-885. Brea Creek below Brea Dam, near Fullerton, Calif.

Location.--Lat 33°53'16", long 117°55'32", in NE 1/4 sec. 28, T.3 S., R.10 W., on right bank 0.2 mile downstream from Brea Dam and 1 mile north of Fullerton.

Drainage area.--21.6 sq mi (revised).

Records available.--January 1942 to September 1965.

Gage.--Water-stage recorder and 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.--23 years, 0.64 cfs (463 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

Extremes.--Maximum discharge during year, 235 cfs Apr. 9 (gage height, 4.33 ft); no flow for most of year.
1942-65: Maximum discharge, 655 cfs Feb. 29, 1944 (gage height, 6.13 ft, present datum); 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.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0	0	0	47					0
2		0	0	0	0	0	14					0
3		0	0	0	0	0	16					0
4		0	0	0	0	0	1.4					0
5		0	0	0	.1	0	.4					0
6		0	0	0	6.8	0	.1					0
7		0	0	.1	.4	0	.3					0
8		0	0	0	0	0	48					0
9		1.1	0	0	0	0	55					0
10		.6	0	0	0	0	8.7					0
11		0	0	0	0	0	.3					0
12		0	0	0	0	.1	.2					0
13		0	0	0	0	6.1	.2					0
14		0	0	0	0	0	.1					0
15		0	0	0	0	12	.1					0
16		0	0	0	0	.2	.1					0
17		12	0	0	0	0	.1					0
18		.7	0	0	0	0	.1					2.7
19		0	0	0	0	.1	.1					.1
20		0	.3	0	0	0	.1					0
21		0	0	0	0	0	.1					0
22		0	0	0	0	0	.1					0
23		0	0	0	0	0	.1					0
24		0	0	2.9	0	0	.1					0
25		0	0	0	0	0	.1					0
26		0	0	0	0	0	.1					0
27		0	13	0	0	0	.1					0
28		0	7.2	0	0	0	0					0
29		0	0	0	-----	0	0					0
30		0	0	0	-----	0	0					0
31		-----	0	0	-----	14	-----					-----
Total	0	14.4	20.5	3.0	7.3	32.5	193.0	0	0	0	0	2.8
Mean	0	0.48	0.66	0.10	0.26	1.05	6.43	0	0	0	0	0.09
Ac-ft	0	29	41	6.0	14	64	383	0	0	0	0	5.6
Calendar year 1964	Max	13	Min	0	Mean	0.21	Ac-ft	153				
Water year 1964-65	Max	55	Min	0	Mean	0.75	Ac-ft	543				

SAN GABRIEL RIVER BASIN

11-890. 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., between Malden Avenue and Spadra Road at Fullerton.Drainage area.--23.6 sq mi.Records available.--October 1930 to September 1965.Gage.--Water-stage recorder. Altitude of gage is 160 ft (from topographic map). From Oct. 1, 1930, to Sept. 30, 1935, at site a quarter of a mile upstream at different datum. Oct. 1, 1935, to Jan. 19, 1940, at site a quarter of a mile downstream at different datum.Average discharge.--35 years, 1.07 cfs (775 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).Extremes.--Maximum discharge during year, 144 cfs Apr. 9 (gage height, 0.75 ft); no flow for most of year.

1930-65: Maximum discharge, 3,700 cfs Mar. 14, 1941 (gage height, 5.45 ft); no flow for most of each year.

Remarks.--Flow regulated by Brea flood-control reservoir since January 1942 (capacity, 4,100 acre-ft). No diversion above station.Cooperation.--Records furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	0	0	0	44	0		0	0	0
2	0	0	0	0	0	0	19	0		0	0	0
3	0	0	0	0	0	.2	24	.2		0	.1	0
4	0	0	0	0	0	0	6.1	0		0	0	0
5	0	0	0	0	.2	0	1.2	0		0	0	0
6	0	0	0	0	4.9	.1	.5	0		0	0	0
7	0	0	0	.8	.7	.1	.7	0		0	0	0
8	0	0	0	0	0	.2	50	0		0	0	0
9	0	3.5	0	0	0	0	50	0		0	0	0
10	0	1.6	0	0	0	0	13	0		0	0	0
11	0	.3	0	0	0	0	1.6	0		0	0	0
12	0	.2	0	0	0	.8	1.0	0		.3	0	0
13	0	0	0	0	0	7.2	0	0		0	0	0
14	0	0	0	0	0	.1	0	0		0	0	0
15	0	0	0	.1	0	13	0	0		0	0	0
16	0	0	0	0	0	.4	0	0		0	0	0
17	0	6.4	0	0	0	0	0	0		0	0	.3
18	0	.8	0	0	0	0	0	0		0	0	8.6
19	0	0	0	0	0	0	0	0		0	0	1.2
20	0	0	1.3	0	0	0	.6	0		0	0	0
21	0	0	0	0	0	0	.4	.1		0	0	0
22	0	0	0	0	0	0	.4	0		0	0	0
23	0	0	0	0	0	0	.6	0		0	0	0
24	0	0	0	0	0	0	.6	.2		0	.2	.2
25	0	0	0	4.8	0	0	.6	0		0	0	0
26	0	0	0	0	0	0	.6	.1		.1	0	0
27	0	0	8.5	0	0	0	.6	0		0	0	0
28	0	0	7.0	0	0	0	.2	0		0	0	0
29	.7	0	.1	0	-----	0	0	0		0	0	0
30	0	0	.1	0	-----	0	0	0		0	0	0
31	0	-----	0	0	-----	18	-----	0	-----	0	.1	-----
Total	0.7	12.8	17.0	5.7	5.8	40.1	215.7	0.6	0	0.4	0.4	10.3
Mean	0.02	0.43	0.55	0.18	0.21	1.29	7.19	0.02	0	0.01	0.01	0.34
Ac-ft	1.4	25	34	11	12	80	428	1.2	0	0.8	0.8	20
Calendar year 1964	Max	18	Min	0	Mean	0.31	Ac-ft	225				
Water year 1964-65	Max	50	Min	0	Mean	0.85	Ac-ft	614				

11-895. Fullerton Creek below Fullerton Dam, near Brea, Calif.

Location.--Lat 33°53'45", long 117°53'07", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T.3 S., R.10 W., on left bank of outlet channel of Fullerton Dam, 1.6 miles southeast of Brea.

Drainage area.--4.94 sq mi (revised).

Records available.--October 1941 to September 1965.

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), 0.19 cfs (138 acre-ft per year); median of yearly mean discharges, 0.02 cfs (14 acre-ft per year); 11 years (1954-65), 0.42 cfs (304 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 20 cfs Apr. 9 (gage height, 0.76 ft); no flow for most of year.
1941-65: Maximum discharge, 298 cfs Mar. 16, 1943 (gage height, 3.80 ft); no flow at times each year.

Remarks.--Records good. Flow regulated by Fullerton flood-control reservoir (capacity, 706 acre-ft), resurvey of 1962. Small tributary formerly entering below station diverted into reservoir since December 1954.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Dec. 27.....0.1	Apr. 2.....1.1
28......1	3.....1.7
Jan. 24......1	4......2
Mar. 13......1	8.....8.0
15......5	9.....7.5
31......5	10.....6.8
Apr. 1.....5.7	11......1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
December 1964.....	0.2	-	-	0.006	0.4
January 1965.....	.1	-	-	.003	.2
March.....	1.1	-	-	.04	2.2
April.....	31.1	-	-	1.04	62
Calendar year 1964.....	-	0.8	0	.008	5.6
Water year 1964-65.....	-	8.0	0	.09	65

Note.--Flow occurred only on days listed above.

11-902. Fullerton Creek at Richman Avenue at Fullerton, Calif.

Location.--Lat 33°51'45", long 117°55'55", in NW 1/4 Sec. 33, T.3 S., R.10 W., on right bank 125 ft east of Richman Avenue, in Fullerton.

Drainage area.--12.1 sq mi.

Records available.--October 1959 to September 1965.

Gage.--Water stage recorder. Datum of gage is 126.4 ft above mean sea level (levels by Orange County Flood Control District).

Average discharge.--6 years, 0.80 cfs (579 acre-ft per year).

Extremes.--Maximum discharge during year, 240 cfs Apr. 1 (gage height, 2.71 ft); no flow for many days.

1959-65: Maximum discharge, 540 cfs Feb. 19, 1962 (gage height, 4.09 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.

Cooperation.--Records furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	0	0	0	56	0.1	0.1	0.1	0.1	0.1
2	0	0	0	0	0	0	1.6	.1	.1	0	.1	.2
3	1.0	0	0	0	0	0	2.9	.1	.1	.1	.1	.5
4	2.2	0	0	0	0	0	3.2	0	.1	.1	.1	.1
5	2.8	0	0	0	.8	0	1.0	0	.1	.1	0	0
6	2.4	0	0	0	.4	.1	1.0	0	.1	.1	0	.2
7	3.0	0	0	1.8	0	.2	1.0	0	0	.1	0	.1
8	2.9	0	0	0	0	0	30	.1	0	.1	0	.1
9	.9	7.0	0	0	0	0	25	.1	0	.1	.1	.1
10	.1	2.3	0	0	0	0	6.4	.1	.1	0	.1	.1
11	.1	.1	.1	0	0	0	.2	0	0	.1	.1	.1
12	.1	.5	.1	0	0	0	2.1	0	0	.1	.1	.1
13	.1	0	.1	0	0	0	.1	0	.1	.1	.1	.1
14	.1	0	0	0	.1	7.0	0	.1	.1	.1	.1	.1
15	.1	0	0	0	0	18	0	.1	.1	.1	.1	.1
16	.1	0	.1	0	0	.3	0	.1	.1	.1	.1	.1
17	.1	12	.1	0	0	.1	0	.1	.1	.1	0	.1
18	.1	.1	.1	0	0	.1	0	.1	.1	.1	0	.1
19	.1	0	.1	.1	0	0	0	.1	.1	.1	.1	20
20	.1	0	3.4	0	.1	0	0	.1	.1	.1	0	1.2
21	.1	0	0	0	.1	0	0	.1	.1	.1	0	0
22	.1	0	0	.1	0	0	0	.1	.1	.1	0	0
23	.1	0	0	.1	0	0	0	.1	0	.1	0	0
24	.1	0	.1	7.1	0	0	0	0	.1	.1	0	0
25	.1	0	0	0	0	0	.1	0	0	.1	0	0
26	.1	0	0	0	0	0	.1	0	0	.1	0	0
27	.2	0	12	0	0	.1	.1	.2	0	.1	0	0
28	.1	0	10	0	0	0	.1	.1	.1	0	0	0
29	1.4	0	.2	0	-----	0	0	.1	.1	0	0	0
30	0	0	0	0	-----	0	.1	.1	.1	.1	0	0
31	0	-----	0	.1	-----	22	-----	.1	-----	.1	.1	-----
Total	18.6	22.0	26.4	9.3	1.5	61.0	129.3	2.2	2.1	2.7	1.4	23.4
Mean	0.60	0.73	0.85	0.30	0.05	1.97	4.31	0.07	0.07	0.09	0.05	0.78
Ac-ft	37	44	52	18	3.0	121	256	4.4	4.2	5.4	2.8	46

Calendar year 1964 Max 16 Min 0 Mean 0.47 Ac-ft 344
 Water year 1964-65 Max 56 Min 0 Mean 0.82 Ac-ft 594

11-907. Coyote Creek at Los Alamitos, Calif.

Location.--Lat 33°48'38", long 118°04'28", in NW 1/4 NE 1/4 SW 1/4 sec. 19, T.4 S., R.11 W., on right bank about 250 ft downstream from center line of Spring Street, 0.5 mile northwest of Los Alamitos, Orange County.

Drainage area.--136 sq mi.

Records available.--October 1963 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 7.37 ft above mean sea level (levels by Los Angeles County Flood Control District).

Extremes.--Maximum discharge during year, 3,350 cfs Apr. 9 (gage height, 3.82 ft); minimum daily, 0.3 cfs Oct. 4, 14.

1963-65: Maximum discharge, that of Apr. 9, 1965, but may have been exceeded Nov. 15, 1963; 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.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	0.5	1.2	1.9	1.2	1.7	821	2.3	1.3	2.6	1.5	2.1
2	.5	.6	1.2	2.8	1.5	1.3	148	2.6	1.4	2.8	1.3	1.9
3	.4	.6	1.2	3.0	1.5	1.4	384	2.3	1.5	2.6	1.2	1.9
4	.3	.7	1.2	3.0	1.2	1.2	167	2.6	1.7	2.3	1.5	1.8
5	1.1	4.8	1.3	2.8	4.0	1.1	4.4	2.1	1.7	2.8	1.9	1.8
6	1.9	.8	1.3	2.8	153	11	1.7	1.7	1.7	2.8	2.3	1.7
7	2.8	.8	1.4	4.4	5.9	25	5.0	1.9	1.5	3.2	2.8	1.7
8	4.4	1.1	1.4	3.4	1.4	1.9	800	1.5	1.5	2.1	3.0	1.6
9	3.4	100	1.4	1.7	1.2	1.4	792	2.1	1.4	2.6	2.3	1.6
10	1.7	49	1.5	1.7	1.1	1.3	172	2.3	1.5	2.1	2.3	1.6
11	.6	3.6	1.9	1.5	.8	23	5.1	2.3	1.2	1.9	3.0	1.6
12	.5	5.9	1.7	1.5	.7	13	4.4	3.0	1.7	2.3	6.0	1.6
13	.4	1.4	1.8	1.4	.8	175	8.2	3.0	1.7	1.7	1.7	1.5
14	.3	.7	1.8	1.0	1.1	3.4	2.3	3.0	1.9	2.1	1.5	1.5
15	.4	.6	1.9	1.1	1.3	348	2.1	3.0	1.5	2.6	1.5	1.5
16	.8	.8	1.4	1.5	1.3	3.2	1.9	2.8	2.3	3.2	2.1	1.5
17	.8	163	1.2	2.3	1.3	1.9	1.9	3.0	2.1	2.3	2.6	1.5
18	1.4	27	1.2	2.3	1.3	1.5	2.1	2.8	2.1	2.1	2.8	25
19	1.3	2.8	1.1	2.1	1.3	1.5	2.8	1.9	2.6	1.9	2.6	12
20	.7	1.3	98	1.5	1.3	1.4	3.2	2.1	2.3	2.1	2.8	1.7
21	.6	1.2	9.6	1.3	1.5	1.4	5.9	2.6	2.1	1.9	3.0	1.7
22	1.0	1.4	1.5	1.2	1.9	1.3	2.1	2.1	2.1	1.9	2.8	1.9
23	1.0	1.3	1.2	1.2	1.9	1.2	2.8	1.9	2.3	2.1	2.3	1.9
24	.6	1.3	1.4	115	1.9	1.2	2.6	1.7	2.3	1.9	2.3	1.7
25	1.0	1.4	1.4	2.6	2.6	1.1	2.6	1.5	2.3	2.8	2.6	1.9
26	1.1	1.3	1.2	1.3	1.9	1.0	2.3	1.3	2.1	2.8	2.6	1.7
27	.6	1.3	277	1.3	1.5	1.5	2.3	1.2	2.1	2.3	2.1	2.3
28	1.2	1.2	131	1.3	1.7	1.5	2.6	1.3	2.1	2.3	2.3	2.3
29	3.8	1.1	7.4	1.4	-----	1.4	2.6	1.5	2.6	2.3	2.3	1.9
30	2.6	1.0	3.0	1.4	-----	1.7	2.8	1.5	2.8	2.1	1.9	1.4
31	1.0	-----	2.6	1.3	-----	427	-----	1.2	-----	1.5	2.3	-----
Total	38.9	378.5	562.4	212.6	198.1	1059.5	3,357.7	66.1	57.4	72.0	73.2	85.8
Mean	1.25	12.6	18.1	6.86	7.08	34.2	112	2.13	1.91	2.32	2.36	2.86
Ac-ft	77	751	1,120	422	393	2,100	6,660	131	114	143	145	170
Calendar year 1964	Max	288	Min	0	Mean	6.50	Ac-ft	4,720				
Water year 1964-65	Max	821	Min	0.3	Mean	16.9	Ac-ft	12,230				

11-924.5. Los Angeles River at Sepulveda Dam, Calif.

Location.--Lat 34°09'42", long 118°27'57", in Ex Mission de San Fernando Grant, on right bank of outlet channel of Sepulveda Dam, 200 ft upstream from Sepulveda Boulevard in city of Los Angeles, and 1.85 miles southwest of Van Nuys, Los Angeles County.

Drainage area.--158 sq mi.

Records available.--January 1929 to February 1938, May 1938 to September 1965. Monthly discharge only for January 1929 to September 1940 and May 1943 to September 1950, published in WSP 1315-B. Records for May 1943 to September 1950, published in WSP 981, 1011, 1041, 1061, 1091, 1121, 1151, and 1181, have been found to be unreliable and should not be used. Equivalent daily discharge, published as "below Sepulveda Dam," 1943-45, and as "below Sepulveda Boulevard" (in reports of Los Angeles County Flood Control District), 1946-50, supersede the discredited records.

Gage.--Water-stage recorder. Altitude of gage is 670 ft (from topographic map). 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.--35 years (1929-37, 1938-65), 22.7 cfs (16,430 acre-ft per year); median of yearly mean discharges, 18 cfs (13,000 acre-ft per year).

Extremes.--Maximum discharge during year, 5,540 cfs Apr. 9 (gage height, 6.10 ft); minimum daily 3.1 cfs Dec. 25.

1929-37, 1938-65: Maximum discharge, 11,400 cfs Feb. 12, 1962 (gage height, 10.00 ft); no flow Sept. 19, 20, 1930.

Flood of Mar. 2, 1938, amounted to 12,000 cfs (estimated).

Revisions.--The figures of maximum discharge for some water years have been revised as shown in the following table. They supersede figures published in water-supply papers or basic data reports indicated.

Report	Water year	Date	Discharge (cfs)	Gage Height (feet)
WSP 1565	1958	Dec. 15, 1957	8,980	8.45
WSP 1635	1959	Jan. 6, 1959	8,880	8.39
WSP 1715	1960	Jan. 11, 1960	4,860	5.58
Basic data report	1961	Nov. 5, 1960	5,230	5.86
Basic data report	1962	Feb. 12, 1962	11,400	10.00
Basic data report	1963	Feb. 9, 1963	6,900	7.07
Basic data report	1964	Jan. 22, 1964	5,140	5.79

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.

Cooperation.--Eighteen discharge measurements furnished by Los Angeles County Flood Control District. Records of released water from reservoirs furnished by City of Los Angeles.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.1	0.9	0.6	40	1.0	165
.2	3.8	.7	60	1.5	490
.3	8.5	.8	85	2.0	880
.4	16	.9	115	3.0	1,830
.5	25				

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	8.5	9.1	4.2	36	5.4	1,250	22	6.4	9.1	10	33
2	4.6	7.9	7.4	4.2	36	5.0	446	20	6.4	9.1	13	32
3	4.6	8.5	8.5	4.2	34	5.0	462	23	6.4	9.1	28	34
4	4.4	7.9	7.4	4.6	33	5.4	444	24	5.9	9.1	26	33
5	28	8.5	9.1	6.9	47	5.9	42	27	5.0	8.5	26	38
6	6.9	8.5	6.9	19	153	5.9	14	26	5.0	8.5	26	28
7	6.9	7.9	7.4	56	34	6.9	8.5	26	5.4	8.5	27	11
8	6.4	8.5	7.9	7.4	31	5.4	1,460	22	5.4	8.5	28	26
9	6.4	522	7.4	24	13	5.9	1,150	19	5.4	8.5	26	26
10	5.9	117	7.9	24	13	5.4	86	19	5.9	7.4	27	26
11	5.9	5.4	7.9	27	14	10	57	23	7.3	6.9	98	26
12	5.9	5.4	7.9	36	14	5.4	37	27	7.9	6.9	27	27
13	5.9	3.8	7.4	36	14	13	49	27	6.4	7.9	21	30
14	5.0	6.4	7.9	34	13	14	5.4	27	6.9	7.9	22	33
15	5.4	5.9	8.5	33	12	72	5.9	27	6.9	8.5	21	34
16	5.9	5.4	7.4	33	6.9	5.0	6.9	27	7.3	8.5	18	36
17	6.4	193	8.5	33	5.4	5.4	7.4	27	5.9	7.9	19	36
18	6.9	5.0	6.4	34	5.4	5.4	6.9	27	5.9	8.5	21	38
19	7.4	5.4	173	34	5.0	6.9	5.9	27	6.9	10	22	59
20	8.5	5.4	498	33	5.4	6.4	6.4	28	5.9	10	23	24
21	8.5	6.4	119	24	4.6	6.4	6.4	27	6.4	9.1	24	38
22	8.5	6.4	5.4	32	4.2	6.4	7.9	26	6.9	9.1	24	36
23	7.9	6.4	4.2	33	4.2	6.9	5.9	26	7.4	9.1	24	33
24	8.5	7.9	4.6	140	4.2	6.9	5.9	24	7.4	9.7	26	36
25	9.1	7.9	3.1	42	4.6	7.9	5.4	6.4	9.1	8.5	32	34
26	9.7	6.9	5.0	36	5.0	8.5	5.9	6.4	9.1	8.5	32	32
27	22	6.4	458	34	5.4	8.5	5.9	5.4	9.1	11	28	32
28	30	6.4	35	34	5.4	9.1	5.4	5.4	9.1	11	27	32
29	88	6.9	5.4	34	-----	9.7	9.2	6.4	9.1	10	27	33
30	5.0	7.4	19	34	-----	11	26	5.4	9.1	10	28	33
31	8.5	-----	4.2	34	-----	826	-----	5.0	-----	8.5	30	-----
Total	509.4	1,015.3	1,474.8	964.5	562.7	1,169.1	5,634.2	6,384.4	2,072.2	2,738.1	831	969
Mean	16.4	33.8	47.6	31.1	20.1	37.7	188	206	69.1	88.3	26.8	32.3
Ac-ft	1,010	2,010	2,930	1,910	1,120	2,320	11,180	1,270	411	543	1,650	1,920
(+)	310	0	0	1,360	560	0	50	920	0	0	1,140	1,270

Calendar year 1964: Max 804 Min 2.8 Mean 27.6 Ac-ft 20,070 Ac-ft + 4,840
 Water year 1964-65: Max 1,460 Min 3.1 Mean 39.0 Ac-ft 28,270 Ac-ft + 5,610

+ Release, in acre-feet, from city of Los Angeles distributing reservoirs. This is included in flow that passes station.

11-930. Pacoima Creek near San Fernando, Calif.

Location.--Lat $34^{\circ}20'07''$, long $118^{\circ}23'50''$, in SE $\frac{1}{4}$ sec. 24, T.3 N., R.15 W., on right bank 500 ft downstream from Pacoima Dam, a third of a mile upstream from mouth of canyon, and 4 miles northeast of San Fernando.

Drainage area.--28.5 sq mi.

Records available.--March to July 1916 (fragmentary), December 1916 to September 1965.

Gage.--Water-stage recorder and flume or weir control since June 1937. Altitude of gage is 1,650 ft (from topographic map). Prior to September 1929, at site 0.5 mile downstream at different datum. September 1929, to Mar. 23, 1933, records based on outflow from Pacoima Dam. Mar. 24, 1933, to Feb. 1, 1935, at site 450 ft downstream at different datum.

Average discharge.--48 years (1917-65), 8.20 cfs (5,940 acre-ft per year); median of yearly mean discharges, 4.0 cfs (2,900 acre-ft per year).

Extremes.--Maximum discharge during year, 5.3 cfs May 7 (gage height, 1.35 ft); no flow for most of year. 1916-65: 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, 4,581 acre-ft, revised). Flow passing over Pacoima Dam spillway enters creek below station. No 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0			0	4.3	4.2	4.0	3.9
2					0			0	4.3	4.2	4.0	3.9
3					0			0	4.3	4.2	4.0	2.8
4					0			0	4.3	4.2	4.0	.2
5					.1			0	4.3	4.2	4.0	.1
6					.1			0	4.3	4.2	4.0	.1
7					.1			1.5	4.3	4.2	4.0	.1
8					.1			5.1	4.3	4.2	4.0	0
9					0			5.1	4.3	4.2	4.0	0
10					0			5.1	4.3	4.2	4.0	0
11					0			5.1	4.3	4.1	4.0	0
12					0			5.1	4.3	4.0	4.0	0
13					0			5.1	4.3	4.0	4.0	0
14					0			5.1	4.3	4.0	4.0	0
15					0			5.1	4.3	4.0	4.0	0
16					0			4.8	4.3	4.0	4.0	0
17					0			4.5	4.2	4.0	4.0	0
18					0			4.5	4.2	4.0	4.0	.1
19					0			4.5	4.2	4.0	4.0	0
20					0			4.5	4.2	4.0	4.0	0
21					0			4.5	4.2	4.0	4.0	0
22					0			4.5	4.2	4.0	4.0	0
23					0			4.5	4.2	4.0	4.0	0
24					0			4.5	4.2	4.0	4.0	0
25					0			4.5	4.2	4.0	4.0	0
26					0			4.5	4.2	4.0	3.9	0
27					0			4.3	4.2	4.0	3.9	0
28					0			4.3	4.2	4.0	3.9	0
29					-----			4.3	4.2	4.0	3.9	0
30					-----			4.3	4.2	4.0	3.9	0
31					-----			4.3	4.2	4.0	3.9	0
Total	0	0	0	0	0.4	0	0	113.6	127.6	126.1	123.4	11.2
Mean	0	0	0	0	0.01	0	0	3.66	4.25	4.07	3.98	0.37
Ac-ft	0	0	0	0	0.8	0	0	225	253	250	245	22

Calendar year 1964	Max	19	Min	0	Mean	0.91	Ac-ft	659
Water year 1964-65	Max	5.1	Min	0	Mean	1.38	Ac-ft	996

LOS ANGELES RIVER BASIN

11-940. Tujunga Creek below Mill Creek, near Colby Ranch, Calif.

Location.--Lat 34°18'33", long 118°08'40", on left bank 500 ft downstream from Mill Creek and 2 miles west of Colby Ranch, Los Angeles County.

Drainage area.--64.9 sq mi.

Records available.--January 1948 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 2,650 ft (from topographic map).

Average discharge.--17 years, 5.85 cfs (4,240 acre-ft per year); median of yearly mean discharges, 2.2 cfs (1,600 acre-ft per year).

Extremes.--Maximum discharge during year, 99 cfs Apr. 19 (gage height, 6.94 ft); no flow Oct. 1-23, July 5 to Sept. 17, Sept. 20-30. 1948-65: Maximum discharge, 2,860 cfs Feb. 11, 1962 (gage height, 10.90 ft); no flow at times in most years. Maximum discharge recorded since November 1930, 14,800 cfs Jan. 23, 1943, but was exceeded by flood of Mar. 2, 1938.

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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	0.4	0.6	0.6	0.7	15	3.7	1.4	0.1		0
2	0	.1	.4	.6	.6	.7	38	3.6	1.5	.1		0
3	0	.1	.6	.6	.6	.7	20	3.4	1.6	.1		0
4	0	.1	.6	.6	.6	.7	14	3.2	1.5	.1		0
5	0	.1	.6	.6	.6	.7	8.8	3.1	1.2	0		0
6	0	.1	.4	.6	1.3	.7	7.8	3.0	.9	0		0
7	0	.1	.4	1.1	1.3	.8	6.1	3.0	.8	0		0
8	0	.2	.4	.7	1.0	.9	27	2.8	.9	0		0
9	0	1.3	.4	.7	.9	.7	37	2.7	1.0	0		0
10	0	1.2	.4	.6	.8	.6	29	2.5	.8	0		0
11	0	.4	.4	.6	.8	.6	15	2.4	.6	0		0
12	0	.4	.4	.6	.7	.7	11	2.2	.4	0		0
13	0	.4	.4	.6	.7	1.0	9.7	2.2	.3	0		0
14	0	.3	.6	.6	.7	.9	12	2.2	.3	0		0
15	0	.3	.6	.6	.6	.9	21	1.9	.3	0		0
16	0	.3	.6	.6	.6	.8	34	1.7	.4	0		0
17	0	.6	.6	.6	.6	.7	46	1.6	.8	0		0
18	0	.7	.6	.6	.6	.7	56	1.5	.4	0		.1
19	0	.6	.6	.6	.6	.6	64	1.5	.3	0		.2
20	0	.6	1.5	.6	.6	.6	50	1.4	.3	0		0
21	0	.6	.8	.6	.6	.6	38	1.4	.2	0		0
22	0	.4	.6	.6	.6	.6	32	1.5	.2	0		0
23	0	.4	.6	.6	.7	.6	23	1.7	.3	0		0
24	.1	.4	.6	.9	.7	.6	15	1.7	.3	0		0
25	.1	.4	.6	.6	.7	.6	10	1.5	.3	0		0
26	.1	.4	.6	.6	.7	.6	7.8	1.3	.3	0		0
27	.1	.4	1.4	.6	.7	.6	6.6	1.2	.3	0		0
28	.1	.4	1.3	.6	.7	.6	5.5	1.0	.2	0		0
29	.2	.4	.8	.6	-----	.6	4.9	.9	.2	0		0
30	.1	.4	.6	.6	-----	.6	4.0	.8	.2	0		0
31	.1	-----	.6	.6	-----	2.4	-----	1.0	-----	0		-----
Total	0.9	12.2	19.4	19.6	20.2	23.1	668.2	63.6	18.2	0.4	0	0.3
Mean	0.03	0.41	0.63	0.63	0.72	0.75	22.3	2.05	0.61	0.01	0	0.01
Ac-ft	1.8	24	38	39	40	46	1,330	126	36	0.8	0	0.6

Calendar year 1964 Max 55 Min 0 Mean 1.13 Ac-ft 823
 Water year 1964-65 Max 64 Min 0 Mean 2.32 Ac-ft 1,680

11-955. Tujunga Creek near Sunland, Calif.

Location.--Lat 34°18'02", long 118°16'04" (revised), near center of SW $\frac{1}{4}$ sec.32, T.3 N., R.13 W., 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.

Records available.--October 1916 to September 1965.

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.--48 years, 25.0 cfs (18,100 acre-ft per year); median of yearly mean discharges, 11 cfs (8,000 acre-ft per year).

Extremes.--Maximum discharge during year, 220 cfs Apr. 9 (gage height, 12.31 ft); minimum daily, 0.1 cfs Oct. 4-7, 11, 12.
1916-65: Maximum discharge, 50,000 cfs (estimated) Mar. 2, 1938; minimum, 0.1 cfs at times in some years.

Remarks.--Flow regulated since July 1931 by Big Tujunga flood-control reservoir (capacity, 4,240 acre-ft). Several small 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.5	0.5	1.7	0.8	1.2	30	4.1	5.0	3.5	2.9	7.0
2	.2	.5	.3	1.7	.8	1.2	44	4.1	5.0	3.2	2.6	6.5
3	.2	.5	.3	1.5	.8	1.2	28	4.1	4.7	3.2	2.6	6.5
4	.1	.3	.5	1.7	.8	1.2	16	4.1	4.4	3.2	2.6	6.5
5	.1	.2	.5	1.8	.8	1.2	11	3.8	4.4	3.2	2.6	7.0
6	.1	.2	.5	1.7	1.0	1.2	8.0	3.5	4.7	3.2	2.6	8.0
7	.1	.2	.5	2.3	1.0	1.2	7.0	3.2	4.7	3.2	2.6	7.5
8	.2	.3	.6	2.3	1.0	1.2	40	3.2	5.0	3.2	2.6	7.0
9	.2	11	.6	1.8	1.0	1.2	77	3.2	5.0	3.2	2.6	6.5
10	.2	4.7	.8	1.7	1.0	1.2	60	2.9	4.7	3.2	2.6	6.5
11	.1	2.9	.8	1.7	1.0	1.2	28	4.1	4.4	3.5	2.9	6.5
12	.1	1.8	.8	1.7	1.0	1.2	21	4.7	4.7	3.5	2.9	6.5
13	.2	1.3	.6	1.7	1.0	1.2	16	5.5	4.7	3.2	2.9	6.5
14	.3	.8	.6	1.7	1.0	1.2	14	5.5	5.0	3.2	2.6	6.5
15	.3	.8	.6	1.7	1.0	1.2	13	5.0	5.0	3.2	2.6	6.5
16	.3	1.0	.6	1.3	1.0	1.2	11	5.5	5.0	3.5	2.9	7.0
17	.5	1.8	.6	1.3	1.2	1.2	11	5.5	5.0	3.2	3.2	7.0
18	.3	1.5	.8	1.3	1.2	1.2	9.5	5.5	4.7	3.2	3.2	7.5
19	.2	1.2	1.0	1.2	1.0	1.2	8.5	5.5	4.7	3.2	2.9	9.0
20	.2	1.2	1.2	1.3	1.0	1.2	8.5	5.2	4.7	2.9	4.1	7.0
21	.3	1.2	1.2	1.3	.8	1.2	8.0	5.5	4.4	2.9	6.0	6.0
22	.3	1.2	1.2	1.3	1.0	1.2	7.5	5.5	4.4	2.9	6.0	6.0
23	.3	1.2	1.2	1.2	1.0	1.2	6.5	5.5	4.4	2.9	6.5	6.0
24	.3	1.0	1.2	1.2	1.0	1.2	5.5	6.0	4.4	2.9	7.0	6.0
25	.3	.6	1.0	1.2	1.0	1.2	5.0	5.5	4.4	2.9	7.0	6.5
26	.3	.6	1.0	1.0	1.2	1.2	4.7	5.0	4.1	2.9	6.0	6.5
27	.3	.6	1.8	1.0	1.2	1.2	4.7	4.7	3.8	2.9	6.0	6.5
28	.3	.6	2.9	1.0	1.2	1.2	4.4	4.1	3.8	2.9	6.0	7.0
29	.8	.5	2.0	1.0	-----	1.0	4.1	4.1	3.8	2.9	6.0	6.0
30	.8	.5	1.8	1.0	-----	1.0	4.1	4.4	3.8	3.2	6.5	5.5
31	.5	-----	1.7	.8	-----	1.7	-----	4.7	-----	2.9	7.0	-----
Total	8.6	40.7	29.7	45.1	27.8	37.3	516.0	143.2	136.8	97.1	126.5	201.0
Mean	0.28	1.36	0.96	1.45	0.99	1.20	17.2	4.62	4.56	3.13	4.08	6.70
Ac-ft	17	81	59	89	55	74	1,020	284	271	193	251	399
Calendar year 1964	Max 44		Min 0.1	Mean 3.08	Ac-ft 2,240							
Water year 1964-65	Max 77		Min 0.1	Mean 3.86	Ac-ft 2,790							

11-965. Little Tujunga Creek near San Fernando, Calif.

Location (revised).--Lat 34°16'28", long 118°22'18", in Tujunga Grant, on downstream side of Foothill Boulevard Bridge, 4 miles east of San Fernando, Los Angeles County.

Drainage area.--21.1 sq mi.

Records available.--October 1928 to September 1965. Monthly discharge for April 1931, published in WSP 1315-B.

Gage.--Water-stage recorder and 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.--37 years, 2.18 cfs (1,580 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

Extremes.--Maximum discharge during year, 223 cfs Apr. 9 (gage height, 2.79 ft); no flow for most of year.
1928-65: Maximum discharge, 8,500 cfs (estimated) Mar. 2, 1938; no flow for several months each year.

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 1964 to September 1965

Dec. 27.....	0.2	Apr. 10.....	2.4
Apr. 1.....	.2	11.....	3.9
2.....	1.0	12.....	1.8
3.....	.2	13.....	1.2
4.....	1.4	14.....	.6
5.....	.4	15.....	.3
8.....	1.4	Sept. 18.....	2.4
9.....	.50		

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
December 1964.....	0.2	-	-	0.006	0.4
April 1965.....	99.0	-	-	3.30	196
September.....	2.4	-	-	.08	4.8
Calendar year 1964.....	-	20	0	.10	75
Water year 1964-65.....	-	50	0	.28	201

Note.--Flow occurred only on days listed above.

11-970. Tujunga Creek below Hansen Dam, Calif.

Location.--Lat 34°15'10", long 118°23'20", in Ex Mission San Fernando Grant, 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, Los Angeles County.

Drainage area.--150 sq mi.

Records available.--May 1932 to February 1938, August 1940 to September 1965. 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, datum of 1929 (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.--No flow during year.

1940-65: Maximum discharge, 3,130 cfs Feb. 12, 1962 (gage height, 3.86 ft); no flow for parts of each year.
Maximum discharge known since May 1932, 54,000 cfs (estimated) Mar. 2, 1938.

Remarks.--No flow since May 9, 1962. 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. No water diverted from outlet channel upstream from gage to spreading grounds during year.

Cooperation.--Records of diversion furnished by Los Angeles County Flood Control District.

11-975. Los Angeles River at Los Angeles, Calif.

Location (revised).--Lat 34°04'52", long 118°13'36", on right bank near Figueroa Street, Los Angeles, 800 ft upstream from Arroyo Seco.

Drainage area.--514 sq mi.

Records available.--October 1929 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 292.58 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to May 26, 1938, at site 150 ft downstream at different datum. May 26, 1938, to Dec. 8, 1939, at site 350 ft downstream at different datum.

Average discharge.--36 years, 56.0 cfs (40,540 acre-ft per year); median of yearly mean discharges, 33 cfs (23,900 acre-ft per year).

Extremes.--Maximum discharge during year, 12,500 cfs Apr. 9 (gage height, 5.55 ft); no flow for many days. 1929-65: 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.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	0	1.9	0	0	2,080	0.1	0.1	0.1	0.1	0.1
2	0	.1	0	.3	0	0	1,070	.1	.1	.1	.1	.1
3	0	.1	0	.2	0	0	875	.1	.1	.1	.1	.1
4	0	0	0	.2	0	0	645	.1	.1	.1	.1	.1
5	0	0	0	.2	29	0	46	4.1	.1	.1	.2	.1
6	0	0	0	.4	282	0	16	11	.1	.1	.1	88
7	0	0	0	317	28	82	30	2.8	.1	.1	.1	4.3
8	0	0	0	5.8	.5	6.8	2,880	1.4	.1	.1	.1	.4
9	0	1,110	0	2.2	.2	.6	2,290	1.2	.1	.1	.1	.2
10	0	331	0	.4	.2	.2	284	.3	.1	.1	.1	.2
11	0	20	0	.3	.2	5.0	24	.2	.1	.1	62	.2
12	0	3.4	0	.3	.2	5.5	59	.1	.1	.1	11	.2
13	0	1.4	0	.3	.2	111	123	.1	.1	.1	.4	.2
14	0	.3	0	.2	.2	3.3	2.8	.1	.1	.1	.1	.2
15	0	.2	0	.2	.1	185	.8	.1	.1	.1	.1	.2
16	0	.2	0	.1	.1	6.6	.5	.1	.1	.1	.1	.2
17	0	395	0	.1	.1	.5	.4	.1	.1	.1	.1	.2
18	0	21	0	.1	.1	.4	.3	.1	.1	.1	.1	464
19	0	1.9	184	0	.1	.6	.3	.1	.1	.1	.1	159
20	0	.4	860	0	.1	.6	.3	.1	.1	.1	.1	9.5
21	0	.2	168	0	.1	.3	.2	.1	.1	.1	.1	.6
22	0	.2	4.2	0	.1	.2	.2	.1	.1	.1	.1	.3
23	0	.1	1.0	0	.1	.4	.2	.1	.1	.1	.1	.3
24	0	.1	.5	258	.1	.3	.1	.1	.1	.1	.1	.3
25	0	.1	.1	14	.1	.2	.1	.1	.1	.1	.1	.3
26	0	.2	.1	.2	.1	.2	.1	.1	.1	.1	.1	.3
27	0	.1	835	0	.1	.2	.1	.1	.1	.1	.1	.2
28	0	.1	58	0	.1	.2	.1	.1	.1	.1	.1	.2
29	158	0	7.3	0	-----	.2	.1	.1	.1	.1	.1	.2
30	3.2	0	3.1	0	-----	.2	.1	.1	.1	.1	.1	.2
31	.1	-----	9.1	0	-----	1,140	-----	.1	.1	.1	.1	.2
Total	161.3	1,886.2	2,130.4	602.4	342.1	1,550.5	10,428.7	23.4	3.0	3.1	76.3	730.4
Mean	5.20	62.9	68.7	19.4	12.2	50.0	348	0.75	0.10	0.10	2.46	24.3
Ac-ft	320	3,740	4,230	1,190	679	3,080	20,680	46	6.0	6.1	151	1,450

Calendar year 1964 Max 1,800 Min 0 Mean 29.9 Ac-ft 21,730
 Water year 1964-65 Max 2,880 Min 0 Mean 49.1 Ac-ft 35,580

LOS ANGELES RIVER BASIN

11-980. Arroyo Seco near Pasadena, Calif.

Location.--Lat 34°13'20", long 118°10'36", near north line of sec.31, T.2 N., R.12 W., on right bank 1.5 miles upstream from Millard Canyon and 5.5 miles northwest of Pasadena.

Drainage area.--16.0 sq mi.

Records available.--December 1910 to September 1965.

Gage.--Water-stage recorder and broad-crested weir since November 1938. Datum of gage is 1,397.88 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1916, staff gage at different datum. Oct. 1, 1916 to Oct. 19, 1945, water-stage recorder at datum 4.00 ft lower.

Average discharge.--51 years (1913-15, 1916-65), 8.32 cfs (6,020 acre-ft per year); median of yearly mean discharges, 4.3 cfs (3,100 acre-ft per year).

Extremes.--Maximum discharge during year, 194 cfs Apr. 9 (gage height, 3.00 ft); minimum daily, 0.1 cfs Oct. 4-27, 30, 31, Nov. 1-8. 1910-64: 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.

Cooperation.--Nine discharge measurements furnished by Los Angeles County Flood Control District.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 9-13, Jan. 17 to Feb. 12, Mar. 28-31, May 2-11)

0.5	0	1.2	17
.6	.7	1.6	34
.7	2.5	2.0	61
.9	7.6	2.5	113

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.1	0.8	1.5	1.0	0.8	25	6.0	2.5	1.0	0.6	0.4
2	.2	.1	.8	1.1	1.0	.8	58	6.0	2.5	.8	.5	.4
3	.2	.1	.8	1.1	1.1	.7	33	5.4	2.5	.8	.4	.4
4	.1	.1	.8	1.0	1.3	.7	28	5.2	2.5	.8	.4	.4
5	.1	.1	.7	.8	1.3	.8	17	5.0	2.7	.8	.4	.5
6	.1	.1	.7	.8	3.7	.8	12	4.7	3.0	.8	.4	1.3
7	.1	.1	.7	5.8	2.5	1.1	11	4.7	3.0	.8	.4	.6
8	.1	.1	.7	3.2	1.9	1.1	42	4.2	3.2	.8	.4	.6
9	.1	9.0	.7	2.3	1.9	1.1	73	4.2	3.0	.8	.3	.5
10	.1	7.2	.8	2.1	1.9	1.1	61	4.0	2.7	.8	.3	.5
11	.1	3.4	.8	2.1	1.7	1.3	33	3.7	2.5	.8	.3	.6
12	.1	1.8	.8	1.9	1.7	1.3	25	3.7	2.3	.8	.3	.6
13	.1	1.1	.7	1.8	1.7	1.7	21	3.7	2.1	.8	.3	.5
14	.1	1.0	.7	1.5	1.5	1.3	20	3.4	2.1	.8	.3	.5
15	.1	.7	.7	1.5	1.3	1.3	21	3.2	1.9	.8	.3	.5
16	.1	.7	.7	1.5	1.3	1.3	21	3.0	1.9	.8	.3	.6
17	.1	2.3	.8	1.5	1.1	1.3	18	2.7	1.9	.7	.4	.8
18	.1	1.5	.8	1.5	1.1	1.3	17	2.7	1.7	.7	.4	.8
19	.1	1.1	1.7	1.5	1.1	1.1	16	2.5	1.5	.7	.4	1.0
20	.1	.8	7.7	1.3	1.1	1.1	14	2.7	1.5	.7	.4	.7
21	.1	.7	5.7	1.1	1.1	1.1	13	3.2	1.3	.7	.4	.8
22	.1	.7	4.0	1.1	1.1	1.1	12	3.2	1.3	.7	.4	.7
23	.1	.6	2.7	1.0	1.3	1.1	11	3.2	1.5	.7	.4	.7
24	.1	.6	2.1	3.2	1.3	1.3	9.6	3.4	1.5	.7	.4	.7
25	.1	.6	1.7	2.1	1.1	1.3	8.5	3.2	2.1	.7	.4	.7
26	.1	.6	1.9	1.7	1.1	1.3	7.1	3.0	2.1	.7	.4	.8
27	.1	.6	1.1	1.5	1.1	1.3	7.1	2.5	1.5	.7	.4	.8
28	.2	.6	7.4	1.3	1.0	1.3	6.8	2.3	1.1	.6	.4	.8
29	.3	.6	4.4	1.3	-----	1.3	6.6	1.9	1.1	.6	.4	.8
30	.1	.8	3.0	1.3	-----	1.1	6.3	2.3	1.0	.7	.4	.8
31	.1	-----	2.1	1.3	-----	5.3	-----	2.3	-----	.7	.4	-----
Total	3.7	37.8	68.9	52.7	40.3	39.5	654.0	111.2	61.5	23.3	11.9	19.8
Mean	0.12	1.26	2.22	1.70	1.44	1.27	21.8	3.59	2.05	0.75	0.38	0.66
Ac-ft	7.3	75	137	105	80	78	1,500	221	122	46	24	39

Calendar year 1964 Max 68 Min 0.1 Mean 1.89 Ac-ft 1,370

Water year 1964-65 Max 73 Min 0.1 Mean 3.08 Ac-ft 2,230

Peak discharge (base, 150 cfs).--Apr. 9 (2030 hrs) 194 cfs (3.00 ft).

11-985. Los Angeles River near Downey, Calif.

Location (revised).--Lat 33°56'58", long 118°10'23", in San Antonio Grant, on right bank 400 ft downstream from Firestone Boulevard Bridge, 1 mile upstream from Rio Hondo, and 2.5 miles west of Downey, Los Angeles County.

Drainage area.--599 sq mi.

Records available.--March 1928 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 96.12 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Apr. 11, 1938, at site 1,600 ft downstream at different datum. Apr. 11, 1938, to Nov. 3, 1949, at site 400 ft upstream at datum 0.96 ft lower, and Nov. 4, 1949, to Dec. 11, 1956, at site 400 ft upstream at datum 2.25 ft higher.

Average discharge.--37 years, 92.2 cfs (66,750 acre-ft per year); median of yearly mean discharges, 56 cfs (40,500 acre-ft per year).

Extremes.--Maximum discharge during year, 18,700 cfs Apr. 9 (gage height, 5.80 ft); minimum daily, 4.3 cfs Oct. 20, 25, Nov. 7. 1928-65: Maximum discharge, 79,700 cfs Mar. 2, 1938, on basis of slope-area measurements; no flow for parts of 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.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.1	7.4	8.4	8.9	7.0	6.0	2,130	8.0	8.9	7.4	8.4	10
2	8.9	7.4	8.4	6.5	8.4	6.0	1,190	6.5	8.9	8.9	12	10
3	7.5	7.0	7.0	5.5	7.0	7.4	1,160	5.6	10	6.5	12	10
4	7.5	6.5	7.4	6.0	7.9	6.5	709	8.9	10	6.0	12	9.4
5	10	6.5	6.5	7.9	4.2	7.0	78	8.9	8.5	5.5	9.4	13
6	14	5.0	5.0	8.9	270	6.5	22	25	6.0	7.9	8.9	135
7	14	4.3	6.5	422	53	6.2	48	14	7.6	7.9	8.4	16
8	14	4.5	6.0	14	7.4	15	3,380	7.4	8.1	8.4	8.4	8.9
9	7.9	1,470	5.5	6.5	7.0	8.9	3,020	7.0	7.6	14	11	8.4
10	7.0	459	6.0	5.0	6.5	7.9	472	7.0	15	24	12	8.4
11	6.5	6.7	7.0	6.0	5.5	37	47	7.0	8.1	8.4	7.3	6.0
12	7.9	21	5.5	6.5	5.5	29	109	7.4	7.5	18	39	6.0
13	7.9	14	5.5	6.5	5.5	301	127	7.0	5.5	6.5	10	7.4
14	6.5	10	5.5	6.0	5.5	14	22	6.5	12	6.5	7.4	7.9
15	6.5	8.9	7.0	7.0	6.5	219	11	5.5	9.4	6.5	7.4	7.0
16	6.5	8.9	7.0	5.5	5.5	18	8.1	6.0	13	7.0	8.4	7.9
17	5.5	484	6.5	4.5	5.0	7.9	7.5	7.4	8.4	5.5	8.4	27
18	5.0	61	12	6.5	5.5	6.5	7.0	7.4	8.9	7.0	9.4	692
19	6.5	14	190	6.5	6.0	7.0	7.1	7.4	8.4	7.0	13	208
20	4.3	12	913	6.5	6.0	6.5	8.9	7.9	7.9	7.9	9.4	32
21	5.5	8.9	190	6.5	4.5	6.0	11	7.4	9.4	7.4	8.9	6.5
22	5.0	7.9	20	6.0	5.0	6.0	9.7	7.0	8.9	7.4	7.4	6.5
23	5.0	7.4	15	5.0	6.0	6.5	9.7	7.0	8.9	8.4	11	5.5
24	4.5	6.5	13	249	6.5	6.5	6.5	7.4	9.4	6.5	12	7.0
25	4.3	7.4	8.9	30	6.0	6.0	6.5	7.9	8.9	6.5	12	6.5
26	5.5	7.4	7.9	7.4	6.5	6.0	8.9	7.0	8.4	8.9	12	7.0
27	7.5	7.0	851	7.0	6.0	6.0	11	9.7	7.9	7.0	10	8.4
28	18	7.0	148	6.5	6.0	5.5	10	11	12	7.4	9.4	8.9
29	193	6.5	17	6.5	-----	7.0	12	12	8.9	8.9	7.9	6.0
30	14	7.0	10	5.5	-----	8.4	11	6.5	12	9.4	9.4	6.5
31	6.5	-----	19	7.0	-----	1,160	-----	6.1	-----	8.4	9.4	-----
Total	430.8	2,751.4	2,525.5	889.1	519.2	2,003.0	12,659.9	256.8	274.4	263.0	397.3	1,299.1
Mean	13.9	91.7	81.5	28.7	18.5	64.6	422	8.28	9.15	8.48	12.8	43.3
Ac-ft	854	5,450	5,010	1,750	1,030	3,970	25,110	509	544	522	788	2,580

Calendar year 1964 Max 1,980 Min 2.6 Mean 48.1 Ac-ft 34,930
 Water year 1964-65 Max 3,380 Min 4.3 Mean 66.5 Ac-ft 42,140

LOS ANGELES RIVER BASIN

11-1000. Santa Anita Creek near Sierra Madre, Calif.

Location.--Lat 34°11'30", long 118°00'59", in SW 1/4 NE 1/4 sec. 10, T.1 N., R.11 W., 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.

Records available.--July 1916 to September 1965.

Gage.--Water-stage recorder (digital). Datum of gage is 1,475.3 ft above mean sea level (levels by U.S. Forest Service). Prior to Mar. 2, 1938, at same site at datum 0.4 ft lower (destroyed by flood). Mar. 18 to Sept. 27, 1938, at same site at datum 0.7 ft higher.

Average discharge.--49 years, 5.46 cfs (3,950 acre-ft per year); median of yearly mean discharges, 3.4 cfs (2,500 acre-ft per year).

Extremes.--Maximum discharge during year, 134 cfs Apr. 9 (gage height, 2.59 ft); minimum daily, 0.2 cfs Oct. 6, 7.

1916-65: Maximum discharge, about 5,200 cfs Mar. 2, 1938, based on inflow to Big Santa Anita flood-control reservoir; practically no flow Aug. 18 to Sept. 14, 1929.

Remarks.--Records good. Debris dams above station built in December 1959 cause little or no regulation. No diversion above station.

Cooperation.--Two discharge measurements furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.3	0.5	0.8	2.4	1.1	0.8	36	4.9	2.2	1.4	1.0	0.7
2	.3	.5	.8	2.1	1.1	.9	49	4.8	2.3	1.3	.9	.7
3	.3	.5	.8	1.9	1.0	.9	26	4.7	2.3	1.3	.9	.7
4	.3	.4	.8	1.7	1.0	.9	23	4.6	2.2	1.2	.9	.6
5	.3	.4	.8	1.6	1.2	.9	14	4.5	2.1	1.2	.9	.9
6	.2	.4	.8	1.3	3.4	.9	11	4.4	2.2	1.3	.8	1.8
7	.2	.4	.8	4.0	2.5	1.0	8.3	4.2	2.2	1.3	.8	1.4
8	.3	.4	.8	2.4	1.8	1.0	31	4.0	2.2	1.3	.7	1.1
9	.3	2.7	.8	1.8	1.6	1.0	53	3.8	2.1	1.3	.7	.9
10	.3	2.6	.8	1.6	1.4	1.0	50	3.7	2.0	1.3	.7	.8
11	.3	2.0	.8	1.5	1.4	1.0	28	3.6	2.0	1.3	.7	.8
12	.3	1.5	.8	1.4	1.3	1.1	18	3.4	1.9	1.3	.9	.7
13	.3	1.2	.8	1.3	1.2	1.6	16	3.4	2.1	1.3	.8	.7
14	.4	1.1	.7	1.2	1.2	1.3	13	3.4	2.1	1.2	.8	.7
15	.4	.9	.7	1.3	1.2	1.5	12	3.2	2.1	1.2	.9	.7
16	.4	.8	.8	1.2	1.0	1.4	12	2.9	2.2	1.2	.9	.7
17	.4	2.3	.7	1.2	1.0	1.3	13	2.8	2.2	2.2	.9	.9
18	.4	1.6	.8	1.1	1.0	1.2	13	2.8	2.1	1.4	.9	1.2
19	.3	1.3	1.1	1.1	1.0	1.1	12	2.7	1.8	1.3	.9	1.2
20	.3	1.1	5.2	1.2	.9	1.0	11	2.7	1.8	1.2	.8	1.0
21	.3	1.0	3.9	1.2	.9	1.0	10	2.7	1.7	1.2	.8	.8
22	.3	.9	2.5	1.2	.9	1.0	8.9	2.7	1.8	1.2	.8	.7
23	.4	.9	1.9	1.1	.9	1.0	8.3	2.6	1.8	1.1	.8	.7
24	.4	.8	1.7	1.6	.8	.9	7.6	2.8	1.8	1.1	.8	.7
25	.4	.8	1.6	1.3	.8	1.0	7.1	2.6	1.7	1.1	.8	.7
26	.4	.8	1.5	1.3	.8	1.0	6.9	2.5	1.7	1.1	.7	.8
27	.4	.8	7.6	1.2	.8	.9	5.9	2.3	1.6	1.0	.7	.8
28	.4	.8	6.0	1.1	.8	.9	5.5	2.1	1.5	1.0	.7	.8
29	.7	.7	3.9	1.1	-----	.9	5.2	2.1	1.4	.9	.7	.7
30	.5	.8	3.1	1.1	-----	.8	5.0	2.2	1.4	1.2	.7	.7
31	.4	-----	2.7	1.1	-----	2.0	-----	2.2	-----	1.1	.7	-----
TOTAL	10.9	30.9	56.8	46.6	34.0	33.2	519.7	101.3	58.5	38.5	25.0	25.6
MEAN	0.35	1.03	1.83	1.50	1.21	1.07	17.3	3.27	1.95	1.24	0.81	0.85
AC-FT	22	61	113	92	67	66	1,030	201	116	76	50	51

CALENDAR YEAR 1964 MAX 37 MIN 0.2 MEAN 1.47 AC-FT 1,070
 WATER YEAR 1964-65 MAX 53 MIN 0.2 MEAN 2.69 AC-FT 1,940.

Peak discharge (base, 40 cfs).--Apr. 1 (2400 hrs) 121 cfs (2.39 ft); Apr. 9 (2030 hrs) 134 cfs (2.59 ft).

11-1010, Eaton Creek near Pasadena, Calif.

Location.--Lat 34°11'37", long 118°06'13", in SW 1/4 sec. 2, T.1 N., R.12 W., on right bank at mouth of canyon just upstream from bridge on old Mount Wilson toll road, and 4.5 miles northeast of Pasadena.

Drainage area.--6.47 sq mi.

Records available.--March 1918 to September 1965. Combined monthly records of creek and diversions, July 1923 to September 1965.

Gage.--Water-stage recorder and broad-crested weir since October 1938; flow meter on each diversion. Altitude of gage is 1,230 ft (from topographic map). Prior to Oct. 28, 1938, at site 75 ft downstream at different datum. Oct. 28, 1938, to Nov. 4, 1959, at same site at datum 1.00 ft higher.

Average discharge (creek only).--47 years, 2.01 cfs (1,460 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

(combined).--42 years, 3.13 cfs (2,270 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 78 cfs Apr. 1 (gage height, 2.48 ft); no flow for most of year.

1918-65: Maximum discharge, 2,400 cfs Mar. 2, 1938, from record of inflow to Eaton flood-control reservoir; no flow at times during each year.

Flood of January 1916, 1,500 cfs, from slope-area measurement, by local engineering student.

Remarks.--Records fair. No regulation above station. Water diverted during period of record, at sites 300 ft and 1.2 miles upstream for municipal supply. In addition, 78 acre-ft was diverted from two infiltration galleries, one 800 ft upstream and the other 500 ft downstream from station.

Cooperation.--Records of diversions furnished by city of Pasadena.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.0	0	1.5	7.7
1.1	1.0	1.8	17
1.3	3.9		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0	0	0	16					
2		0	0	0	0	0	24					
3		0	0	0	0	0	17					
4		0	0	0	0	0	14					
5		0	0	0	0	0	8.3					
6		0	0	0	.4	0	3.2					
7		0	0	.4	.2	0	1.2					
8		0	0	0	0	0	21					
9		3.6	0	0	0	0	29					
10		2.7	0	0	0	0	25					
11		1.7	0	0	0	0	13					
12		.8	0	0	0	0	12					
13		0	0	0	0	0	8.2					
14		0	0	0	0	0	4.7					
15		0	0	0	0	0	9.0					
16		0	0	0	0	0	10					
17		.8	0	0	0	0	5.3					
18		.6	0	0	0	0	1.0					
19		0	0	0	0	0	.9					
20		0	2.3	0	0	0	.4					
21		0	1.9	0	0	0	.2					
22		0	0	0	0	0	0					
23		0	0	0	0	0	0					
24		0	0	0	0	0	.3					
25		0	0	0	0	0	0					
26		0	0	0	0	0	0					
27		0	4.5	0	0	0	0					
28		0	1.9	0	0	0	0					
29		0	.5	0	-----	0	0					
30		0	0	0	-----	0	0					
31		-----	0	0	-----	.2	-----					
Total	0	10.2	11.1	0.4	0.6	0.2	223.7	0	0	0	0	0
Mean	0	0.34	0.36	0.01	0.02	0.06	7.46	0	0	0	0	0
Ac-ft	0	20	22	0.8	1.2	0.4	444	0	0	0	0	0
(†)	5.4	36	57	61	38	33	670	104	62	29	16	15

Calendar year 1964	Max	28	Min	0	Mean	0.21	Ac-ft	149	Meant	0.69	Ac-ft†	496
Water year 1964-65	Max	29	Min	0	Mean	0.67	Ac-ft	488	Meant	1.56	Ac-ft†	1130

Peak discharge (base, 55 cfs).--Apr. 1 (2200 hrs) 78 cfs (2.48 ft); Apr. 9 (2000 hrs) 64 cfs (2.47 ft).

† Combined discharge for creek and diversion by city of Pasadena.

LOS ANGELES RIVER BASIN

11-1012.5. Rio Hondo above Whittier Narrows Dam, Calif.

Location.--Lat 34°03'30", long 118°04'15", in Portrero Grande Grant, 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, Los Angeles County.

Drainage area.--91.2 sq mi.

Records available.--February 1956 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 220 ft (from topographic map).

Average discharge.--9 years, 19.9 cfs (14,410 acre-ft per year).

Extremes.--Maximum discharge during year, 5,600 cfs Apr. 9 (gage height, 4.05 ft); minimum daily, 0.2 cfs May 9.
1956-65: Maximum discharge, 8,150 cfs Jan. 6, 1959 (gage height, 4.90 ft, from floodmark); no flow on many days in most years.

Remarks.--Records good except those for periods of no gage-height record, which are fair. 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. No water diverted during year from San Gabriel River below Santa Fe Dam to Rio Hondo above station.

Cooperation.--Nine discharge measurements and records of diversion furnished by the Los Angeles County Flood Control District.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 31					June 1 to Sept. 30				
1.07	0.2	1.8	27		1.1	0.2	1.7	19	
1.1	.4	1.9	57		1.2	1.2	1.8	32	
1.2	1.6	2.0	107		1.3	3.1	1.9	70	
1.3	3.4	2.1	220		1.4	5.6	2.0	130	
1.5	8.2	2.2	420		1.5	8.2	2.1	250	
1.6	11	2.3	750		1.6	12	2.2	500	
1.7	15								

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	1.6	2.8	0.5	1.0	0.5	390	1.4	2.8	2.3	1.1	2.5
2	1.9	1.2	2.6	.6	1.0	4.0	62	1.4	2.6	2.3	2.1	2.5
3	1.6	1.9	1.8	.6	1.0	6.0	76	12	4.1	1.2	2.5	2.5
4	2.1	1.8	2.1	.6	3.6	4.9	11	1.3	2.7	1.0	2.7	2.5
5	1.6	2.1	1.9	.6	15	1.3	38	.9	2.1	1.7	2.5	4.5
6	1.3	1.3	1.9	.6	69	1.3	3.0	.8	1.6	2.7	2.5	27
7	.9	.9	2.1	116	1.0	102	11	1.8	1.9	2.3	2.3	2.1
8	1.4	.8	1.9	.8	1.0	1.6	468	.6	1.0	2.3	1.2	1.7
9	1.8	109	2.3	.6	1.0	1.3	616	.2	.8	2.3	2.1	1.2
10	.8	98	2.3	.6	1.0	1.3	7.6	1.0	1.0	2.9	1.9	2.5
11	.6	2.1	2.3	.6	.9	3.6	4.0	1.2	1.1	1.4	5.5	2.5
12	.6	5.1	2.1	.6	.9	3.9	7.1	1.9	2.1	2.9	58	.7
13	.8	2.3	1.6	.9	.9	68	4.6	1.2	.8	2.3	1.7	2.5
14	.7	2.3	1.6	.5	.8	3.0	2.6	1.3	1.1	1.9	2.1	2.9
15	1.0	2.3	1.6	.6	.8	51	2.8	1.4	1.4	1.9	2.1	2.9
16	1.2	2.4	1.0	.8	.8	2.3	2.6	1.4	1.0	1.9	2.5	3.8
17	.8	112	.9	.6	.7	2.3	2.3	1.8	1.1	1.9	3.1	11
18	.6	1.9	1.5	.9	.7	.9	2.4	1.6	1.2	1.1	3.0	266
19	1.4	1.8	10	.9	.7	.8	3.2	1.3	2.4	2.3	3.7	36
20	1.3	1.3	83	.7	.6	.7	2.8	1.6	1.0	2.3	3.8	1.3
21	3.4	1.3	3.6	.7	.6	.6	2.4	1.8	1.7	2.1	5.2	1.2
22	3.4	1.3	.8	.8	.6	1.2	2.4	1.6	1.6	1.9	1.6	1.6
23	2.3	1.8	.8	.7	.5	1.2	2.4	.6	.8	1.7	4.4	1.7
24	3.6	2.3	.8	48	.5	1.2	1.6	2.5	1.4	1.7	5.1	1.9
25	2.1	2.6	.8	1.0	.5	.8	1.6	.7	2.1	.7	4.6	1.7
26	3.3	2.1	.8	1.0	.5	1.0	2.1	1.8	.8	1.7	4.1	1.0
27	7.9	2.1	117	1.0	.5	.8	3.2	1.8	.4	2.1	3.1	2.5
28	6.6	1.9	98	1.0	.5	.7	3.2	2.3	1.1	2.2	3.6	1.9
29	24	1.9	.8	1.0	-----	1.3	2.1	1.2	1.4	2.3	2.7	1.7
30	1.4	2.3	.8	1.0	-----	1.9	1.3	.5	1.1	5.3	3.4	1.7
31	1.2	-----	.6	1.0	-----	111	-----	1.4	-----	1.7	2.9	-----
Total	83.2	371.7	263.9	185.8	106.6	382.4	1705.1	52.3	46.2	64.3	147.1	395.5
Mean	2.68	12.4	8.51	5.99	3.81	12.3	56.8	1.69	1.54	2.07	4.75	13.2
Ac-ft	165	737	523	369	211	758	3380	104	92	128	292	784

Calendar year 1964 Max 524 Min 0.2 Mean 7.37 Ac-ft 5350
Water year 1964-65 Max 616 Min 0.2 Mean 10.4 Ac-ft 7540

Note.--No gage-height record Dec. 16, Jan. 5, 6, Jan. 29 to Feb. 3, Feb. 8 to Mar. 3.

11-1015, Rio Hondo near Montebello, Calif.

Location (revised).--Lat 34°01'59", long 118°04'22", in Potrero Grande Grant, on right bank 900 ft upstream from Mission Bridge and 2 miles northeast of Montebello, Los Angeles County.

Drainage area.--116 sq mi (excluding area above Santa Fe Dam).

Records available.--October 1928 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 190.77 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Oct. 23, 1956, at datum 3.86 ft higher. Oct. 23, 1956, to Sept. 17, 1962, at site 67 ft upstream at datum 2.06 ft higher.

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.--Maximum discharge during year, 6,590 cfs Apr. 9 (gage height, 10.97 ft); no flow for some days.

1928-65: 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, at times imported Colorado River water has been released to Rio Hondo 1.6 miles above station for ground-water recharge.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	34	183	190	142	80	671	144	203	69	1.0	1.5
2	0	35	183	192	8.3	66	215	175	200	56	1.0	1.3
3	0	67	183	158	2.1	68	208	192	200	56	1.3	1.5
4	0	83	183	150	3.3	103	111	173	126	56	1.3	1.5
5	0	110	183	190	54	145	7.3	164	43	68	1.1	2.5
6	0	97	183	192	185	170	5.3	166	3.5	69	0.8	54
7	0	92	96	314	116	330	20	179	3.1	60	1.0	1.0
8	0	91	2.1	217	139	206	788	188	2.8	61	.1	.1
9	0	357	1.5	185	131	175	925	177	2.8	61	.5	0
10	0	240	1.2	183	128	183	35	162	3.4	60	1.3	0
11	0	5.2	1.2	183	124	164	10	158	3.4	59	3.6	.1
12	0	70	87	181	126	230	17	160	3.8	58	42	0
13	0	142	179	181	126	413	8.5	173	2.8	56	3.0	0
14	0	151	154	181	126	238	5.3	198	1.8	58	2.5	0
15	11	169	135	185	126	307	78	200	2.1	37	2.5	.1
16	38	163	152	187	126	195	193	179	2.6	2.8	2.0	.5
17	52	346	161	190	126	147	196	175	1.8	2.1	2.0	20
18	50	36	116	192	126	88	198	171	19	1.9	2.0	170
19	27	116	42	196	126	128	79	171	46	1.7	2.0	60
20	1.2	150	223	192	124	201	77	171	45	1.5	2.1	75
21	1.2	159	49	194	124	201	150	171	45	1.8	2.4	179
22	0	165	170	124	124	207	150	171	47	2.1	1.5	171
23	23	167	196	182	108	207	148	184	47	2.4	2.1	184
24	53	169	196	326	95	207	146	200	48	2.0	2.8	177
25	66	171	196	184	92	203	144	203	49	1.5	3.4	177
26	66	173	198	173	92	203	144	200	47	1.6	2.6	166
27	60	173	388	173	92	203	142	205	46	2.0	2.0	160
28	65	175	94	173	92	201	142	203	45	1.6	2.1	162
29	64	177	205	171	-----	201	142	200	56	1.6	1.5	166
30	20	177	185	171	-----	69	140	203	71	3.7	1.8	162
31	58	-----	187	159	-----	254	-----	205	-----	1.1	1.6	-----
Total	658.4	4,270.2	4,513.0	5,869	2,993.7	5,793	5,295.4	5,621	1,416.9	915.2	96.9	2,093.1
Mean	21.6	142	146	189	107	187	177	181	47.2	29.5	3.09	69.8
Ac-ft	1,330	3,470	8,950	11,640	5,940	11,490	10,500	21,480	2,810	1,820	192	4,150
(†)	1,140	7,040	7,720	7,680	5,700	9,970	4,430	10,830	2,680	1,720	0	3,590
Calendar year 1964:		Max 686		Min 0		Mean 75.8		Ac-ft 55,030		Ac-ft(†) 47,700		
Water year 1964-65:		Max 925		Min 0		Mean 108		Ac-ft 88,770		Ac-ft(†) 62,500		

† Colorado River water, in acre-ft, released to Rio Hondo via Alhambra Wash 1.6 miles upstream for ground-water recharge in Rio Hondo basin.

LOS ANGELES RIVER BASIN

11-1020. Mission Creek near Montebello, Calif.

Location--Lat 34°01'45", long 118°04'06" (revised), in La Merced Grant, on upstream side of right abutment of San Gabriel Boulevard Bridge, 2 miles northeast of Montebello, Los Angeles County.

Drainage area--4.16 sq mi.

Records available--October 1929 to September 1965. Yearly estimate for 1938, published in WSP 1315-B. Prior to October 1944, published as Rio Hondo Slough near Montebello.

Gage--Water-stage recorder. Altitude of gage is 195 ft (from topographic map). Prior to Nov. 3, 1938, at datum 6.30 ft higher.

Average discharge--36 years, 12.6 cfs (9,120 acre-ft per year); median of yearly mean discharges, 13 cfs (9,400 acre-ft per year).

Extremes--Maximum discharge during year, 1.9 cfs Apr. 9 (gage height, 5.92 ft); no flow for most of year.

1929-65: 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.

Cooperation--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 8.....0.1
9......2

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	0.3	-	-	0.01	0.6
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	0.2	0	.0008	.6

Note--Flow occurred only on days listed above.

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, on left bank about 500 ft downstream from axis of Whittier Narrows Dam, and 1.4 miles north of Pico, Los Angeles County.

Records available--December 1955 to September 1965.

Gage--Water-stage recorder and Parshall flume. Datum of gage is 187.1 ft above mean sea level (Corps of Engineers Survey).

Extremes--Maximum daily discharge during year, 7.2 cfs Apr. 10; no flow for most of year.

1955-65: 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. At times flow regulated or diverted above station by Whittier Narrows Dam.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 9.....2.7
10.....7.2

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	9.9	-	-	0.33	20
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	7.2	0	.03	20

Note--Flow occurred only on days listed above.

11-1025. Rio Hondo near Downey, Calif.

Location (revised).--Lat 33°56'48", long 118°09'43", in San Antonio Grant, 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, Los Angeles County.

Drainage area.--143 sq mi (excluding area above Santa Fe dam).

Records available.--March 1928 to September 1965.

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.--Maximum discharge during year, 8,780 cfs Apr. 9 (gage height, 5.97 ft); no flow for most of year.

1928-65: Maximum discharge, 24,400 cfs Mar. 3, 1938 (gage height, 12.0 ft, present datum), from rating curve extended above 10,000 cfs on basis of slope-area measurement of maximum flow; 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 small 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 flow in Rio Hondo has been diverted to percolation basin from a site 5.5 miles upstream.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.2	0	0	0.1	0	176	0.3	0.2	0	0.2	0
2	0	0	0	0	0	0	76	.3	.2	0	.1	0
3	0	0	0	0	0	0	59	.3	.2	0	0	0
4	0	0	0	0	0	0	43	.2	.1	0	0	.1
5	0	0	0	0	.2	0	1.6	.2	0	0	0	.2
6	0	0	0	0	11	0	.2	.2	.1	0	0	6.8
7	0	0	0	22	.2	.2	.3	0	.2	0	0	.2
8	0	0	0	0	0	.2	272	.1	.2	0	0	0
9	0	30	0	0	0	0	1,130	.2	0	0	0	0
10	0	47	0	0	0	0	261	.1	0	0	0	.1
11	0	0	0	0	0	9.3	.2	.2	0	0	.3	.2
12	0	1.5	0	0	0	6.2	.3	.3	.1	0	8.7	.1
13	0	0	0	0	0	44	1.6	.2	.2	0	.2	.2
14	0	0	0	0	0	.2	0	.2	.2	0	.2	.3
15	0	0	0	0	0	25	0	.3	.1	0	.2	0
16	0	0	0	0	0	.2	0	.3	0	.2	.2	0
17	0	88	0	0	0	0	0	.2	0	.3	0	0
18	0	0	0	0	0	.1	.3	.3	0	.2	0	49
19	0	0	14	0	0	0	0	0	.2	.2	0	1.8
20	0	0	54	0	0	0	.1	0	.2	0	0	0
21	0	0	1.8	0	.2	0	.2	0	0	0	0	0
22	0	0	.2	0	.2	0	.2	0	0	0	0	0
23	0	0	.2	0	0	0	0	0	0	0	0	.1
24	0	0	.3	28	0	0	0	0	0	.2	0	.2
25	0	0	0	0	0	0	.1	0	0	.3	0	.2
26	0	0	0	0	0	0	0	.1	0	.2	0	.2
27	0	0	68	0	.1	0	.2	0	0	.3	0	.1
28	.8	0	10	0	.2	0	.2	0	0	.2	0	.1
29	11	0	0	0	-----	.1	.2	0	0	.2	0	0
30	0	0	0	0	-----	0	.3	.2	0	.2	0	0
31	0	-----	0	0	-----	96	-----	.2	-----	.2	0	-----
Total	11.8	166.7	148.5	50	12.2	181.5	2,024.5	4.4	2.2	2.7	10.1	59.9
Mean	0.38	5.55	4.79	1.61	0.44	5.85	67.5	0.14	0.07	0.09	0.33	2.00
Ac-ft	23	331	295	99	24	360	4,020	8.7	4.4	5.4	20	119

Calendar year 1964 Max 136 Min 0 Mean 2.33 Ac-ft 1,690
 Water year 1964-65 Max 1,130 Min 0 Mean 7.33 Ac-ft 5,310

LOS ANGELES RIVER BASIN

11-1030. Los Angeles River at Long Beach, Calif.

Location (revised).--Lat 33°49'02", long 118°12'20", in Los Cerritos Grant, on right bank 5,000 ft upstream from Willow Street, 3.4 miles north of Long Beach, Los Angeles County, and 3.7 miles upstream from mouth.

Drainage area.--832 sq mi.

Records available.--December 1928 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 11.91 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Oct. 31, 1931, at site 3 miles downstream at different datum. Oct. 31, 1931, to Jan. 19, 1956, at site 2 miles downstream at different datum.

Average discharge.--36 years (1929-65), 135 cfs (97,740 acre-ft per year); median of yearly mean discharges, 84 cfs (60,800 acre-ft per year).

Extremes.--Maximum discharge during year, 30,100 cfs Apr. 9 (gage height, 8.05 ft); minimum daily, 4.1 cfs Nov. 15.

1928-65: Maximum discharge, 99,000 cfs Mar. 2, 1938, on basis of records for stations upstream; 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.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	8.5	13	12	12	12	2,700	12	14	12	12	13
2	14	10	14	7.2	16	12	1,710	11	14	13	14	15
3	12	12	12	7.2	13	12	1,930	10	15	11	19	14
4	12	12	11	10	15	12	1,170	14	15	9.5	21	15
5	15	8.5	9.5	10	31	12	135	14	13	7.2	19	17
6	19	8.5	8.0	12	457	14	41	30	10	10	20	175
7	19	9.0	9.0	579	154	70	57	18	12	12	19	35
8	19	8.0	11	41	12	28	4,880	12	13	13	15	14
9	18	1,590	12	12	11	15	5,150	10	12	15	20	13
10	15	599	12	9.5	9.5	17	1,130	10	12	45	25	12
11	13	121	12	9.0	10	153	63	14	13	25	100	9.5
12	13	41	10	11	9.0	48	119	15	12	29	97	7.2
13	16	15	9.5	11	9.0	804	267	15	10	17	14	10
14	16	6.0	8.5	10	9.0	39	44	12	11	13	12	12
15	18	4.1	11	10	10	481	16	12	12	14	12	12
16	15	6.0	11	10	12	43	13	10	15	15	13	12
17	15	786	11	8.0	11	15	12	11	11	12	13	22
18	12	121	25	9.5	12	12	12	15	11	10	14	974
19	14	16	241	12	12	12	12	15	11	11	19	316
20	12	12	1,690	12	12	14	14	15	9.5	15	15	79
21	11	8.5	367	13	9.5	10	16	13	9.5	13	15	15
22	12	7.2	43	12	9.5	10	15	12	12	13	10	19
23	13	9.0	23	10	11	12	15	10	12	15	12	18
24	12	10	17	535	10	12	12	11	12	12	15	18
25	10	12	8.5	29	10	10	11	15	12	11	17	15
26	11	10	8.5	18	12	12	14	14	10	14	15	10
27	13	8.5	1,780	13	10	15	18	15	8.5	12	15	12
28	32	10	288	14	10	13	15	16	12	14	13	18
29	295	9.0	40	12	-----	12	17	16	13	14	10	13
30	40	9.5	16	11	-----	13	16	11	16	15	12	12
31	10	-----	27	11	-----	1,870	-----	11	-----	15	13	-----
Total	759	3,487.3	4,758.5	1,480.4	918.5	3,814	19,624	419	362.5	456.7	640	1,926.7
Mean	24.5	116	154	47.8	32.8	123	654	13.5	12.1	14.7	20.6	64.2
Ac-ft	1,510	6,920	9,440	2,940	1,820	7,560	38,920	831	719	906	1,270	3,820
Calendar year 1964	Max	2,430	Min	4.1	Mean	65.2	Ac-ft	47,340				
Water year 1964-65	Max	5,150	Min	4.1	Mean	106	Ac-ft	76,650				

11-1035. Ballona Creek near Culver City, Calif.

Location.--Lat 33°59'48", long 118°24'07", in La Ballona Grant, on downstream side of Sawtelle Boulevard Bridge, 1.7 miles south of Culver City, Los Angeles County, and 4 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.

Records available.--February 1928 to September 1965 (after December 1950, flow of Sepulveda Creek excluded).

Gage.--Water-stage recorder. Datum of gage is 11.06 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. 23, 1961, at datum 0.2 ft higher.

Average discharge.--22 years (1928-50), 35.2 cfs (25,480 acre-ft per year); 15 years (1950-65), 37.1 cfs (26,860 acre-ft per year); median of yearly mean discharges, 30 cfs (21,700 acre-ft per year).

Extremes.--Maximum discharge during year, 17,600 cfs Apr. 9 (gage height, 11.82 ft); minimum daily, 3.9 cfs Nov. 15.

1928-65: Maximum discharge, 19,000 cfs Mar. 2, 1938 (gage height, 15.4 ft, present datum); no flow in parts of some years.

Remarks.--No regulation above station. Occasional discharge of imported Owens River water from several distribution reservoirs of the City of Los Angeles Department of Water and Power 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	4.6	8.8	6.7	9.5	12	577	10	10	10	7.4	13
2	10	6.7	8.1	5.3	8.1	10	580	9.5	9.5	15	12	16
3	9.5	7.4	9.5	5.3	8.1	10	626	10	9.5	8.8	13	17
4	12	6.7	8.1	6.7	8.1	10	166	10	12	7.4	14	15
5	13	6.7	6.0	7.4	211	10	9.5	10	8.8	8.1	14	25
6	14	8.8	7.4	8.8	9.4	8.1	8.9	10	8.1	10	15	32
7	12	6.7	7.4	280	4.6	85	54	13	12	12	12	14
8	12	6.0	8.8	7.4	6.7	9.5	1,560	8.8	12	9.5	12	14
9	10	668	8.1	5.3	7.4	6.7	1,590	8.1	9.5	10	16	14
10	9.5	281	8.8	4.6	8.1	6.7	36	12	9.5	8.1	15	16
11	7.4	12	7.4	6.7	8.1	24	13	12	9.5	7.4	27	13
12	10	23	8.1	6.7	7.4	100	105	10	9.5	10	15	9.5
13	12	6.0	5.3	6.7	7.4	332	31	13	6.7	9.5	16	14
14	12	5.3	6.7	8.1	6.0	58	15	14	8.8	10	16	13
15	17	3.9	8.1	8.1	8.1	123	14	8.1	8.8	10	13	13
16	8.8	6.7	8.1	6.7	8.8	7.4	9.5	7.4	9.5	12	16	13
17	8.1	185	7.4	6.0	14	7.4	8.1	9.5	9.5	9.5	17	23
18	6.7	8.8	10	8.1	10	7.4	6.7	9.5	10	8.8	16	180
19	7.4	10	376	9.5	9.5	7.4	10	9.5	8.8	9.5	15	24
20	9.5	7.4	612	7.4	8.1	7.4	10	10	6.0	9.5	17	13
21	9.5	6.0	28	7.4	7.4	5.3	10	10	8.1	10	13	8.8
22	8.1	6.0	8.8	8.1	10	8.1	13	8.1	8.8	10	10	8.8
23	8.1	8.1	9.5	10	17	8.1	14	9.5	8.1	10	14	10
24	8.1	8.1	7.4	186	12	7.4	12	16	9.5	8.1	13	10
25	5.5	7.4	4.6	6.7	10	8.8	10	14	13	6.7	13	9.5
26	7.4	4.6	5.3	8.1	9.5	8.8	14	12	8.8	10	14	8.1
27	31	5.3	483	8.1	7.4	8.1	13	12	12	10	14	9.5
28	27	6.7	37	8.1	8.1	7.4	13	12	10	10	13	10
29	176	6.0	8.1	8.1	-----	10	13	14	9.5	12	8.8	10
30	8.1	8.1	8.1	7.4	-----	14	13	8.8	10	16	14	10
31	6.0	-----	7.4	6.7	-----	676	-----	10	-----	9.5	13	-----
Total	505.2	1,337.0	1,737.3	676.2	534.4	1,604.0	5,554.7	330.8	285.8	307.4	438.2	588.2
Mean	16.3	44.6	56.0	21.8	19.1	51.7	185	10.7	9.53	9.92	14.1	19.6
Ac-ft	1,000	2,650	3,450	1,340	1,060	3,180	11,020	656	567	610	869	1,170

Calendar year 1964 Max 704 Min 3.9 Mean 25.2 Ac-ft 18,270
 Water year 1964-65 Max 1,590 Min 3.9 Mean 38.1 Ac-ft 27,570

TOPANGA CREEK BASIN

11-1040. Topanga Creek near Topanga Beach, Calif.

Location.--Lat 34°03'52" (revised), long 118°35'10", in Boca de Santa Monica Grant, on downstream side of right abutment of highway bridge, 1.7 miles north of Topanga Beach, Los Angeles County.

Drainage area.--18.0 sq mi.

Records available.--January 1930 to September 1938, October 1939 to September 1965.

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.--34 years, 4.76 cfs (3,450 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 acre-ft per year).

Extremes.--Maximum discharge during year, 716 cfs Apr. 9 (gage height, 5.16 ft); minimum daily, 0.01 cfs Oct. 20, 21, Sept. 4, 30, 1930-38, 1939-65: Maximum discharge, 7,960 cfs Mar. 2, 1938; 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.02	0.05	0.04	0.1	0.1	0.1	35	0.3	0.1	0.07	0.04	0.02
2	.02	.05	.04	.1	.1	.1	14	.3	.1	.07	.05	.02
3	.02	.04	.05	.1	.1	.07	39	.2	.1	.07	.05	.02
4	.02	.04	.05	.1	.1	.07	16	.2	.1	.05	.04	.01
5	.02	.02	.05	.1	.1	.07	5.3	.3	.1	.05	.04	.02
6	.02	.02	.05	.1	.4	.07	2.5	.3	.1	.05	.04	.05
7	.02	.04	.05	1.1	.2	.2	1.5	.2	.1	.05	.02	.05
8	.02	.04	.05	.2	.1	.2	44	.4	.1	.05	.02	.04
9	.02	.3	.05	.1	.1	.2	148	.3	.1	.05	.04	.04
10	.02	.6	.05	.1	.1	.1	42	.2	.1	.05	.04	.04
11	.02	.1	.07	.1	.1	.1	12	.2	.1	.05	.04	.02
12	.04	.1	.07	.1	.1	.1	7.8	.2	.1	.05	.04	.02
13	.04	.07	.05	.1	.1	.2	6.2	.2	.1	.05	.02	.02
14	.04	.07	.04	.1	.1	.1	4.2	.2	.1	.05	.02	.02
15	.04	.07	.04	.1	.1	.1	3.4	.2	.1	.05	.02	.02
16	.04	.05	.04	.1	.1	.1	2.7	.2	.1	.05	.04	.04
17	.04	.1	.04	.1	.1	.1	2.1	.2	.1	.05	.04	.04
18	.04	.1	.04	.1	.1	.1	1.8	.2	.1	.05	.04	.04
19	.02	.1	1.0	.1	.1	.1	1.7	.2	.1	.05	.04	.04
20	.01	.1	8.4	.1	.1	.1	1.4	.2	.1	.05	.04	.04
21	.01	.05	1.1	.1	.1	.1	1.1	.2	.07	.05	.04	.05
22	.02	.05	.4	.1	.1	.1	.9	.2	.07	.05	.04	.04
23	.02	.04	.2	.1	.1	.1	.8	.2	.07	.05	.04	.04
24	.02	.04	.2	.2	.1	.07	.7	.2	.07	.05	.04	.05
25	.02	.04	.1	.2	.1	.07	.5	.1	.07	.05	.04	.04
26	.02	.04	.1	.1	.1	.07	.6	.1	.07	.05	.04	.05
27	.02	.04	1.1	.1	.1	.07	.5	.1	.07	.05	.04	.05
28	.04	.05	.6	.1	.1	.07	.5	.1	.07	.05	.04	.02
29	.07	.05	.2	.1	-----	.07	.3	.1	.07	.05	.02	.02
30	.05	.04	.2	.1	-----	.07	.2	.1	.07	.05	.02	.01
31	.05	-----	.2	.1	-----	8.0	-----	.1	-----	.04	.02	-----
Total	0.87	2.50	14.67	4.4	3.2	11.07	396.7	6.2	2.70	1.60	1.10	0.98
Mean	0.028	0.083	0.473	0.14	0.11	0.357	13.2	0.20	0.090	0.052	0.035	0.033
Ac-ft	1.7	5.0	29	8.7	6.3	22	787	12	5.4	3.2	2.2	1.9

Calendar year 1964 Max 17 Min 0.01 Mean 0.237 Ac-ft 172
 Water year 1964-65 Max 148 Min 0.01 Mean 1.22 Ac-ft 884

11-1055, Malibu Creek at Crater Camp, near Calabasas, Calif.

Location.--Lat 34°04'40" (revised), long 118°42'03", in SW $\frac{1}{4}$ sec.18, T.1 S., R.17 W., 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.

Records available.--January 1931 to September 1965.

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.--34 years, 16.8 cfs (12,160 acre-ft per year); median of yearly mean discharges, 5.6 cfs (4,100 acre-ft per year).

Extremes.--Maximum discharge during year, 521 cfs Apr. 9 (gage height, 5.17 ft); minimum daily, 0.02 cfs July 10.

1931-65: Maximum discharge, 13,600 cfs Mar. 15, 1952 (gage height, 16.8 ft, present datum); no flow at times in some years.

Remarks.--Flow 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.06	0.03	0.06	0.2	0.2	0.6	9.3	3.3	1.3	0.3	0.5	0.06
2	.06	.03	.06	.2	.2	.6	16	3.3	1.5	.3	.4	.06
3	.06	.03	.06	.06	.2	.5	42	3.3	1.2	.5	.4	.06
4	.06	.03	.06	.06	.2	.5	25	2.9	1.0	.4	.5	.2
5	.06	.03	.06	.2	.2	.5	7.4	2.4	1.0	.3	.5	.2
6	.06	.03	.06	.2	.2	.5	3.0	2.4	.8	.3	.5	.2
7	.06	.06	.06	.2	.2	.9	2.0	2.6	1.0	.4	.4	.2
8	.06	.06	.06	.06	.2	.5	28	2.4	1.2	.3	.4	.06
9	.06	.3	.06	.06	.2	.6	148	2.3	1.2	.06	.4	.06
10	.06	.3	.06	.06	.2	.6	132	2.1	1.2	.02	.2	.06
11	.06	.2	.06	.2	.2	.6	46	2.0	1.4	.03	.3	.03
12	.06	.06	.06	.2	.2	.5	40	2.0	1.4	.03	.2	.03
13	.06	.06	.06	.2	.06	.6	30	2.1	1.5	.06	.2	.03
14	.06	.06	.06	.2	.2	.5	11	2.3	1.4	.4	.2	.03
15	.06	.06	.06	.2	.2	.4	15	1.5	1.2	.2	.1	.03
16	.06	.06	.06	.2	.06	.4	13	1.7	1.0	.3	.1	.06
17	.06	.06	.06	.2	.2	.4	9.3	2.0	1.0	.2	.1	.06
18	.06	.06	.1	.2	.2	.6	7.4	1.8	.8	.4	.2	.06
19	.06	.06	.3	.2	.2	.8	5.8	1.4	.4	.5	.3	.2
20	.03	.06	.6	.2	.2	.4	5.5	1.8	.4	1.0	.2	.2
21	.03	.06	.2	.2	.3	.3	4.8	1.4	.6	1.2	.2	.2
22	.03	.06	.06	.2	.3	.8	4.6	1.0	.3	.8	.1	.2
23	.03	.06	.2	.06	.3	.8	4.4	1.4	.4	.5	.03	.2
24	.03	.06	.2	.06	.3	.6	4.2	2.0	.4	.06	.06	.3
25	.03	.06	.3	.06	.6	.5	3.7	1.9	.4	.06	.06	.3
26	.03	.06	.3	.06	.6	.5	3.5	1.9	.4	.6	.06	.3
27	.03	.06	.3	.06	.4	.3	3.3	1.6	.3	.6	.2	.2
28	.03	.06	.2	.06	.5	.3	3.5	1.2	.2	.2	.3	.2
29	.03	.06	.2	.06	-----	.3	3.3	.6	.2	.2	.3	.06
30	.03	.06	.2	.2	-----	.3	3.0	1.4	.2	.3	.3	.06
31	.03	-----	.2	.2	-----	1.4	-----	1.4	-----	.4	.2	-----
Total	1.50	2.24	4.38	4.52	7.02	17.1	634.0	61.4	25.3	10.92	7.91	3.91
Mean	0.048	0.075	0.141	0.146	0.251	0.55	21.1	1.98	0.84	0.352	0.255	0.130
Ac-ft	3.0	4.4	8.7	9.0	14	34	1,260	122	50	22	16	7.8

Calendar year 1964 Max 17 Min 0.02 Mean 0.466 Ac-ft 337
 Water year 1964-65 Max 148 Min 0.02 Mean 2.14 Ac-ft 1,550

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, 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.

Records available.--October 1952 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 794.93 ft above mean sea level, datum of 1929.

Average discharge.--13 years, 11.4 cfs (8,250 acre-ft per year); median of yearly mean discharges, 5.5 cfs (4,000 acre-ft per year).

Extremes.--Maximum discharge during year, 1,390 cfs Apr. 9 (gage height, 7.18 ft), from rating curve extended above 200 cfs; no flow for many days,
1952-65: Maximum discharge, 9,100 cfs Feb. 11, 1962 (gage height, 9.65 ft), from rating curve extended above 2,200 cfs on basis of slope-area measurement of maximum flow; no flow at times in some years.

Remarks.--Records good. No regulation above station. Flow affected by pumping from wells along stream for irrigation.

Cooperation.--Water-stage recorder graph and 50 discharge measurements furnished by Ventura County Water Resources Division; 16 discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.4	0.7	1.1	1.1	0.9	46	1.4	0.8	0.1	0	0
2	0	.4	.8	.9	1.1	.8	95	1.2	.8	.1	.1	0
3	0	.3	.8	.9	.9	.9	26	1.2	.7	.1	0	0
4	0	.2	.9	.9	.9	.9	29	1.2	.6	.1	0	0
5	0	.2	1.1	.9	.9	1.1	3.0	1.2	.6	0	0	0
6	0	.2	1.2	1.1	2.3	1.2	2.8	1.2	.6	0	0	0
7	0	.2	.9	1.2	1.7	1.7	2.5	1.1	.7	0	0	0
8	0	.3	.8	1.1	1.4	1.2	185	.9	.7	.3	0	0
9	0	.4	.8	1.1	1.4	1.2	254	.8	.7	.1	0	0
10	0	.5	.8	1.1	1.4	1.4	91	.8	.7	.2	0	0
11	0	.5	.9	1.1	1.1	1.5	3.8	.8	.7	.2	0	0
12	0	.5	.9	1.1	1.1	1.7	3.0	.9	.7	.2	0	0
13	0	.4	.8	1.1	1.2	1.7	3.2	1.1	.7	.2	0	0
14	0	.4	.8	1.1	1.2	1.5	3.0	1.1	.7	.1	0	0
15	0	.4	.8	1.1	1.2	1.9	2.8	.8	.7	.1	0	0
16	0	.5	.9	.9	1.2	1.5	2.5	.7	.7	.4	0	0
17	0	.7	1.2	.9	1.2	1.4	2.3	.7	.7	.1	0	0
18	0	.6	1.2	.9	1.2	1.5	2.1	.7	.6	.1	0	0
19	0	.5	1.4	.9	1.2	1.5	2.1	.8	.6	.1	0	.1
20	0	.5	3.0	.9	1.1	1.2	1.9	.9	.6	.1	0	.1
21	0	.5	1.9	.9	1.1	.8	1.9	.8	.6	.1	0	0
22	0	.5	1.2	.9	1.1	.8	2.1	.8	.6	.1	0	0
23	0	.6	1.1	.9	1.1	1.2	1.7	.8	.7	.1	0	0
24	0	1.1	1.1	1.1	.9	1.2	1.5	.9	.7	.1	0	0
25	0	1.2	1.1	.9	.9	1.2	1.4	.8	.9	.2	0	0
26	0	.8	1.1	.9	.9	1.1	1.4	.8	.8	.6	.1	0
27	.1	.7	1.7	.9	.9	.9	1.4	.8	.3	.2	.1	0
28	.4	.7	1.5	.9	.9	.9	1.4	.8	.4	0	0	0
29	.5	.7	1.4	.9	-----	.9	1.4	.8	.4	0	0	0
30	.4	.6	1.2	1.1	-----	.9	1.4	.8	.4	0	0	0
31	.4	-----	1.2	1.1	-----	1.9	-----	.8	-----	0	0	-----
Total	1.8	15.5	35.2	30.8	32.6	38.5	776.6	28.4	19.4	4.0	0.3	0.2
Mean	0.06	0.52	1.14	0.99	1.16	1.24	25.9	0.92	0.65	0.13	0.01	0.007
Ac-ft	3.6	31	70	61	65	76	1,540	56	38	7.9	0.6	0.4

Calendar year 1964 Max 88 Min 0 Mean 1.42 Ac-ft 1,030

Water year 1964-65 Max 254 Min 0 Mean 2.69 Ac-ft 1,950

Peak discharge (base, 750 cfs).--Apr. 9 (2100 hrs) 1,390 cfs (7.18 ft).

11-1096, Piru Creek above Lake Piru, Calif.

Location.--Lat 34°31'40", long 118°45'21", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.10, T.5 N., R.18 W., 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.

Records available.--October 1955 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 1,063.62 ft above mean sea level (levels by Ventura County Water Resources Division).

Average discharge.--10 years, 33.7 cfs (24,400 acre-ft per year); median of yearly mean discharges, 13 cfs (9,400 acre-ft per year).

Extremes.--Maximum discharge during year, 484 cfs Apr. 9 (gage height, 3.56 ft); no flow Oct. 1 to Nov. 18, Aug. 5-15, Sept. 5-7. 1955-65: Maximum discharge, 12,200 cfs Feb. 10, 1962 (gage height, 12.20 ft), from rating curve extended above 4,000 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

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

Cooperation.--Eighteen discharge measurements furnished by the Ventura County Water Resources Division.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 22, Apr. 4-9, 12-30, Aug. 16)

1.0	0	1.6	16
1.1	.3	1.8	32
1.2	1.4	2.1	65
1.3	3.5	2.5	135
1.4	6.6	3.0	255

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	1.4	13	8.2	7.0	86	28	7.0	1.1	0.2	.1
2		0	1.6	12	8.2	7.0	86	26	7.0	1.0	.2	.1
3		0	1.6	12	8.2	7.0	89	25	6.6	.8	.1	.1
4		0	1.8	11	8.2	7.0	126	24	6.2	.7	.1	.1
5		0	2.0	10	8.2	7.0	72	22	5.9	.6	0	0
6		0	2.4	10	8.2	7.4	59	21	5.6	.5	0	0
7		0	2.6	10	7.8	8.2	50	20	5.2	.4	0	0
8		0	2.6	10	7.8	7.8	162	19	5.6	.4	0	.1
9		0	2.6	10	7.8	7.8	233	18	5.6	.4	0	.1
10		0	2.8	10	7.4	8.2	157	17	4.9	.4	0	.1
11		0	3.0	10	7.4	8.2	86	16	4.6	.4	0	.1
12		0	3.3	10	7.4	8.2	72	16	4.3	.4	0	.1
13		0	3.3	9.6	7.4	8.2	60	15	4.3	.4	0	.1
14		0	3.5	8.6	7.4	8.2	53	15	4.0	.4	0	.1
15		0	3.5	8.6	7.4	8.6	51	14	3.5	.4	0	.1
16		0	3.5	8.6	7.4	9.1	54	12	3.5	.4	60	.1
17		0	3.8	8.2	7.4	9.1	97	12	3.8	.3	52	.1
18		0	3.8	8.2	7.4	8.6	116	12	3.5	.2	13	.1
19		.4	15	8.2	7.4	8.2	156	11	3.3	.2	3	.1
20		.4	144	8.2	7.4	7.4	169	10	3.0	.2	2	.1
21		.5	89	8.2	7.0	7.0	153	10	3.0	.2	1	.1
22		.6	49	8.2	7.0	7.0	127	9.6	2.8	.2	.5	.1
23		.6	30	8.2	7.0	7.0	103	9.1	2.6	.2	.4	.1
24		.7	22	8.2	7.0	7.0	82	8.6	2.8	.2	.3	.1
25		.8	18	8.2	7.0	7.0	61	8.2	3.0	.2	.2	.1
26		1.0	16	8.2	7.0	6.6	54	7.8	3.3	.2	.1	.1
27		1.1	16	8.2	7.0	6.2	46	7.0	3.0	.2	.1	.1
28		1.2	15	8.2	7.0	6.2	40	6.6	2.2	.2	.1	.1
29		1.4	15	8.2	-----	5.9	36	6.2	1.8	.2	.1	.1
30		1.4	15	8.2	-----	5.9	31	5.9	1.2	.3	.1	.1
31		-----	14	8.2	-----	16	-----	6.2	-----	.2	.1	-----
Total	0	10.1	507.1	286.4	210.0	240.0	2,787	438.2	123.1	11.9	133.6	2.7
Mean	0	0.34	16.4	9.24	7.50	7.74	92.9	14.1	4.10	0.38	4.31	0.09
Ac-ft	0	20	1,010	568	417	476	5,530	869	244	24	265	5.4

Calendar year 1964 Max 184 Min 0 Mean 7.73 Ac-ft 5,620
Water year 1964-65 Max 233 Min 0 Mean 13.0 Ac-ft 9,430

Peak discharge (base, 800 cfs).--No peak above base.

SANTA CLARA RIVER BASIN

11-1105. Hopper Creek near Piru, Calif.

Location.--Lat 34°24'03", long 118°49'32", in NE 1/4 SW 1/4 sec. 25, T.4 N., R.19 W., 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.

Records available.--October 1930 to September 1932, October 1933 to September 1936, October 1937 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 590 ft (from topographic map).

Average discharge.--33 years, 4.52 cfs (3,270 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).

Extremes.--Maximum discharge during year, 504 cfs Apr. 9 (gage height, 4.28 ft), from rating curve extended above 120 cfs on basis of slope-area measurement at gage height 8.66 ft; no flow for much of year.

1930-32, 1933-36, 1937-65: Maximum discharge, 8,000 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow for several months in most years.

Remarks.--Records good. No regulation above station. Some pumping along stream for irrigation.

Cooperation.--Water-stage recorder graph and 41 discharge measurements furnished by Ventura County Water Resources Division.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	1.0	0.6	0.4	36	0.5	0.2			
2		0	0	.8	.6	.3	11	.5	.2			
3		0	0	.8	.6	.3	22	.5	.1			
4		0	0	.8	.6	.3	22	.4	.1			
5		0	0	.8	.6	.4	8.6	.4	.1			
6		0	0	.8	.9	.5	4.2	.4	.1			
7		0	0	1.7	.8	.6	2.6	.4	.1			
8		0	0	1.0	.6	.5	44	.3	.1			
9		0	0	.8	.6	.4	114	.4	.1			
10		2.1	0	.8	.6	.4	62	.3	.1			
11		1.4	0	.8	.6	.4	11	.2	0			
12		.1	0	.8	.6	.4	6.6	.2	0			
13		0	0	.8	.5	.6	6.0	.4	.1			
14		0	0	.8	.5	.5	6.0	.4	.1			
15		0	0	.7	.5	.6	4.4	.2	.1			
16		0	0	.7	.5	.6	3.4	.1	.1			
17		0	0	.6	.5	.5	2.4	.1	.1			
18		0	0	.6	.4	.4	2.1	.1	.1			
19		0	.27	.6	.4	.4	1.6	.1	.1			
20		0	146	.6	.4	.3	1.6	.1	.1			
21		0	13	.6	.4	.2	1.3	.1	.1			
22		0	3.2	.6	.4	.2	1.3	.1	.1			
23		0	1.7	.6	.4	.2	1.1	.1	.1			
24		0	1.2	.9	.4	.3	1.0	.1	.1			
25		0	1.0	.7	.4	.3	.8	.1	.2			
26		0	.9	.6	.4	.3	.6	.1	.2			
27		0	4.7	.6	.4	.3	.6	.1	.1			
28		0	3.7	.6	.4	.3	.6	0	0			
29		0	1.7	.6	-----	.3	.5	0	0			
30		0	1.4	.6	-----	.3	.5	0	0			
31		-----	1.2	.6	-----	2.2	-----	.1	-----			
Total	0	3.6	206.7	23.3	14.6	13.7	379.8	6.8	2.9	0	0	0
Mean	0	0.12	6.67	0.75	0.52	0.44	12.7	0.22	0.10	0	0	0
Ac-ft	0	7.1	410	46	29	27	753	13	5.8	0	0	0

Calendar year 1964 Max 146 Min 0 Mean 1.08 Ac-ft 782
 Water year 1964-65 Max 146 Min 0 Mean 1.78 Ac-ft 1,290

Peak discharge (base, 90 cfs).

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-20	0200	3.81	304	4-9	1800	4.28	504
4-1	1800	3.28	142				

11-1115. Sespe Creek near Wheeler Springs, Calif.

Location.--Lat $34^{\circ}34'40''$, long $119^{\circ}15'25''$, in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.6 N., R.22 W., 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.

Records available.--January 1948 to September 1965. 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 Water Resources Division).

Average discharge.--18 years (1947-65), 7.13 cfs (5,160 acre-ft per year); median of yearly mean discharges, 2.4 cfs (1,700 acre-ft per year).

Extremes.--Maximum discharge during year, 69 cfs Apr. 16 (gage height, 4.79 ft); no flow Oct. 1-18.

1948-65: Maximum discharge, about 3,800 cfs Feb. 10, 1962 (gage height, 10.6 ft, from floodmarks), on basis of field estimate of maximum flow; no flow for many days in most years.

Remarks.--Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station. Records of water temperatures for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.4	0.2	1.5	1.1	0.9	5.3	6.4	1.9	0.8	0.3	0.1
2	0	.4	.4	1.4	1.1	.9	4.7	6.4	2.0	.8	.3	.1
3	0	.3	.4	1.4	1.1	.9	6.0	6.0	1.9	.8	.3	.1
4	0	.3	.5	1.5	1.1	.9	8.8	5.6	1.6	.8	.2	.1
5	0	.3	.5	1.5	1.1	1.0	9.2	5.3	1.5	.7	.2	.1
6	0	.2	.6	1.5	1.1	1.0	6.4	5.0	1.5	.7	.2	.1
7	0	.2	.6	2.2	1.1	1.1	5.3	4.7	1.5	.7	.2	.1
8	0	.2	.7	1.8	1.1	1.1	7.1	4.4	1.5	.6	.2	.1
9	0	5.0	.9	1.8	1.1	1.1	9.6	4.2	1.5	.6	.2	.1
10	0	4.0	1.2	1.6	1.1	1.1	12	4.2	1.4	.6	.2	.1
11	0	1.0	1.8	1.5	1.1	1.1	11	3.9	1.3	.6	.2	.1
12	0	.8	1.9	1.5	1.0	1.1	10	3.6	1.3	.6	.2	.1
13	0	.7	1.5	1.4	1.1	1.1	14	3.4	1.2	.6	.1	.1
14	0	.6	.8	1.4	1.0	1.1	16	3.2	1.2	.5	.1	.1
15	0	.6	.7	1.4	1.0	1.4	24	3.0	1.2	.5	.1	.1
16	0	.5	.7	1.4	1.0	1.4	36	2.7	1.4	.5	.1	.1
17	0	.5	.8	1.3	1.0	1.3	39	2.5	1.5	.5	.1	.1
18	0	.4	.9	1.3	1.0	1.2	41	2.5	1.3	.5	.1	.1
19	.1	.4	5.7	1.2	.9	1.2	40	2.3	1.2	.5	.1	.1
20	.1	.4	26	1.2	.9	1.2	30	2.3	1.2	.5	.1	.1
21	.1	.4	4.2	1.2	.9	1.2	26	2.3	1.0	.5	.1	.1
22	.1	.3	3.0	1.2	.9	1.2	18	2.3	1.0	.5	.1	.1
23	.1	.3	2.5	1.2	1.0	1.2	14	2.3	.9	.5	.1	.1
24	.1	.3	2.0	1.3	1.0	1.2	12	2.2	1.0	.5	.1	.1
25	.1	.3	2.0	1.3	1.0	1.2	10	2.2	1.0	.5	.1	.1
26	.1	.3	3.0	1.3	.9	1.2	9.2	2.2	1.0	.5	.1	.1
27	.1	.2	2.0	1.2	.9	1.2	8.2	2.2	.9	.4	.1	.1
28	.1	.2	1.9	1.2	.9	1.2	7.4	2.0	.9	.4	.1	.1
29	3.0	.2	1.6	1.2	-----	1.2	7.1	1.9	.8	.4	.1	.1
30	.4	.2	1.6	1.2	-----	1.1	6.8	1.9	.8	.4	.1	.1
31	.4	-----	1.5	1.1	-----	3.7	-----	1.9	-----	.3	-----	-----
Total	4.8	19.9	72.1	43.2	28.5	37.7	454.1	105.0	38.4	17.3	4.6	3.0
Mean	0.15	0.66	2.33	1.39	1.02	1.22	15.1	3.39	1.28	0.56	0.15	0.10
Ac-ft	9.5	39	143	86	57	75	901	208	76	34	9.1	6.0

Calendar year 1964 Max 116 Min 0 Mean 1.47 Ac-ft 1,060
 Water year 1964-65 Max 41 Min 0 Mean 2.27 Ac-ft 1,640

Peak discharge (base, 50 cfs).--Apr. 16 (2230 hrs) 69 cfs (4.79 ft)

Note.--No gage-height record Oct. 30 to Nov. 19, Nov. 24-29.

SANTA CLARA RIVER BASIN

11-1130. Sespe Creek near Fillmore, Calif.

Location.--Lat $34^{\circ}27'03''$, long $118^{\circ}55'30''$, in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 4 N., R. 20 W., on right bank 0.1 mile downstream from Little Sespe Creek and 3.5 miles north of Fillmore.

Drainage area.--251 sq mi.

Records available.--September 1911 to September 1913, October 1927 to September 1965; combined records of creek and canal, October 1927 to September 1965. Published as "at Sespe," prior to 1935.

Gage.--Water-stage recorder; water-stage recorder and Parshall flume on canal. Altitude of gage is 580 ft (from topographic map). Prior to Sept. 30, 1913 staff gage, and Oct. 1, 1927, to Nov. 4, 1934, water-stage recorder, at site 3 miles downstream at different datum. Nov. 5, 1934, to Mar. 2, 1938, water-stage recorder at same site at different datum (destroyed by flood; reestablished at present datum Feb. 2, 1939). Prior to Jan. 17, 1946, staff gage read once daily on Fillmore Irrigation Co.'s canal.

Average discharge (creek only).--40 years, 88.8 cfs (64,290 acre-ft per year); median of yearly mean discharges, 45 cfs (32,600 acre-ft per year).

(combined).--38 years, 94.1 cfs (68,130 acre-ft per year); median of yearly mean discharges, 49 cfs (35,500 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 2,440 cfs Apr. 9 (gage height, 6.70 ft); no flow Oct. 4.

1927-65: Maximum discharge, 56,000 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow at times in some years.

(combined).--Maximum discharge during year, 2,440 cfs Apr. 9; minimum daily, 2.1 cfs Oct. 4-12.

1927-65: Maximum discharge, 56,000 cfs Mar. 2, 1938; minimum daily, 1.1 cfs July 31, Aug. 2, 1951.

Remarks.--Records good. No regulation above station. Fillmore Irrigation Co. has diverted water 1 mile upstream since September 1911. For records of combined discharge of Sespe Creek and Fillmore Irrigation Co.'s canal, see following page.

Cooperation.--Six discharge measurements furnished by Ventura County Water Resources Division.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.4	0.4	4.1	15	2.4	197	59	8.9	0.6	0.2	0.2
2	.1	.4	.3	36	15	1.7	130	55	9.3	.5	.2	.2
3	.1	.4	.2	33	14	1.6	180	53	9.7	.6	.2	.2
4	0	.3	.2	31	14	1.6	219	51	9.7	.6	.2	.3
5	.1	.3	.2	29	15	2.8	167	46	8.5	.5	.2	.4
6	.1	.3	.2	29	19	3.7	113	44	7.4	.5	.2	.6
7	.1	.3	.2	40	18	4.4	96	41	7.1	.4	.2	.5
8	.1	.6	.2	53	16	3.7	462	39	6.7	.4	.1	.4
9	.1	28	.2	44	14	3.2	937	39	6.1	.4	.1	.4
10	.1	24	.2	36	14	3.2	691	35	5.5	.4	.1	.4
11	.1	14	.2	31	13	3.7	369	33	5.2	.4	.2	.4
12	.1	8.9	.2	28	13	5.2	236	31	4.6	.4	.2	.4
13	.2	7.1	.2	24	13	12	186	31	4.2	.4	.2	.4
14	.2	6.1	.1	23	13	12	186	30	3.2	.6	.2	.4
15	.2	6.1	.2	21	14	13	198	28	1.7	.5	.2	.4
16	.2	6.1	.2	21	12	9.7	231	25	1.0	.3	.2	.5
17	.3	5.8	.2	20	8.5	8.1	288	21	1.0	.2	.2	.5
18	.3	5.8	.2	18	7.8	7.1	268	20	1.0	.2	.2	.5
19	.2	4.0	160	18	7.8	6.4	296	19	.9	.2	.2	.7
20	.2	2.8	1,260	18	7.8	6.1	275	18	.8	.2	.2	.4
21	.2	2.6	283	17	7.8	6.1	230	18	.8	.2	.2	.3
22	.2	2.6	110	17	5.5	6.1	192	17	.8	.2	.2	.3
23	.3	2.6	69	17	4.4	6.1	167	17	.8	.2	.3	.3
24	.3	2.2	63	20	3.7	6.1	136	16	1.2	.2	.2	.3
25	.4	1.8	59	18	3.5	6.1	120	15	.9	.2	.2	.4
26	.4	2.0	55	17	3.5	5.8	104	14	.8	.2	.2	.4
27	.4	2.2	66	16	3.5	5.5	92	13	.8	.2	.2	.4
28	.5	2.2	84	16	3.5	5.5	83	8.9	.6	.2	.2	.3
29	1.0	2.2	69	15	-----	5.5	71	6.7	.7	.2	.2	.3
30	1.4	1.4	55	15	-----	5.2	66	6.1	1.2	.3	.2	.3
31	.5	-----	47	15	-----	3.9	-----	7.4	-----	.2	.2	-----
Total	8.5	143.5	2,383.8	777	299.3	208.6	6,986	857.1	111.1	10.6	6.1	11.4
Mean	0.27	4.78	76.9	25.1	10.7	6.73	233	27.6	3.70	0.34	0.20	0.38
Ac-ft	17	285	4,730	1,540	594	414	1,860	1,700	220	21	12	23

Calendar year 1964 Max 1,260 Min 0 Mean 18.3 Ac-ft 13,260

Water year 1964-65 Max 1,260 Min 0 Mean 32.3 Ac-ft 23,420

Peak discharge (base, 1,300 cfs).--Dec. 20 (0500 hrs) 1,710 cfs (6.45 ft); Apr. 9 (1900 hrs) 2,440 cfs (6.70 ft).

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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	3.4	4.1	41	17	12	198	62	20	7.9	4.0	3.2
2	2.3	3.4	4.1	36	17	12	131	58	20	7.4	3.9	3.2
3	2.3	3.4	4.0	33	16	12	181	56	21	6.9	3.8	3.2
4	2.1	3.3	3.8	31	16	12	220	54	21	6.6	3.6	3.2
5	2.1	3.3	3.7	29	17	12	168	50	20	6.2	3.6	3.6
6	2.1	3.3	3.6	29	20	13	114	49	17	5.9	3.5	4.7
7	2.1	3.3	3.7	40	19	14	97	46	17	5.7	3.1	4.2
8	2.1	3.3	3.7	54	18	14	463	44	16	5.6	2.8	4.0
9	2.1	28	3.8	46	16	13	938	44	16	5.6	2.8	3.8
10	2.1	24	3.8	38	16	13	691	42	16	5.5	2.8	3.7
11	2.1	14	3.8	32	15	13	369	41	15	5.3	3.2	3.7
12	2.1	8.9	3.8	30	15	12	236	40	15	5.3	3.3	3.6
13	2.4	7.1	3.6	26	15	13	186	41	14	5.2	3.1	3.5
14	2.5	6.1	3.5	24	15	13	186	40	13	4.9	3.1	3.3
15	2.5	6.1	3.6	22	15	14	199	37	12	5.1	3.1	3.3
16	2.6	6.1	3.7	22	16	13	232	34	12	4.9	3.2	3.6
17	2.8	5.8	3.8	22	14	13	290	31	12	4.6	3.3	3.9
18	2.9	5.8	3.8	20	14	12	270	31	12	4.5	3.4	3.9
19	2.7	5.5	162	20	15	11	297	30	12	4.5	3.6	5.8
20	2.6	5.3	1260	20	15	10	276	29	12	4.5	3.6	4.8
21	2.5	5.1	283	19	15	10	231	29	12	4.4	3.8	4.1
22	2.6	5.1	110	19	14	12	193	28	11	4.4	3.9	3.7
23	2.9	5.1	69	19	14	13	169	28	10	4.2	3.9	3.6
24	3.1	4.7	63	22	14	13	137	28	11	4.2	3.8	3.6
25	3.3	4.3	59	20	13	13	121	26	11	4.3	3.6	3.8
26	3.4	4.5	55	19	13	12	104	25	10	4.4	3.5	3.8
27	3.6	4.7	66	18	13	12	93	25	10	4.3	3.3	3.8
28	4.2	4.7	84	18	13	12	83	22	9.5	4.1	3.3	3.8
29	4.2	4.7	69	17	-----	12	72	21	8.8	4.2	3.2	3.7
30	3.9	4.6	55	17	-----	12	68	19	8.6	4.4	3.2	3.4
31	3.5	-----	47	17	-----	42	-----	19	-----	4.3	3.3	-----
Total	84.2	196.9	2,449.9	820	430	414	7,013	1,129	414.9	159.3	105.6	113.5
Mean	2.72	6.56	79.0	26.5	15.4	13.4	234	36.4	13.8	5.14	3.41	3.78
Ac-ft	167	391	4,860	1,630	853	821	13,910	2,240	823	316	209	225

Calendar year 1964 Max 1,260 Min 1.6 Mean 22.3 Ac-ft 16,200

Water year 1964-65 Max 1,260 Min 2.1 Mean 36.5 Ac-ft 26,440

Peak discharge (base, 1,300 cfs).--Dec. 20 (0500 hrs) 1,710 cfs; Apr. 9 (1500 hrs) 2,440 cfs.

SANTA CLARA RIVER BASIN

11-1135, Santa Paula Creek near Santa Paula, Calif.

Location.--Lat $34^{\circ}23'44''$, long $119^{\circ}04'32''$, in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T.4 N., R.21 W., 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. Prior to July 29 at site 50 ft upstream.

Drainage area.--40.0 sq mi.

Records available.--October 1927 to September 1965. March 1912 to September 1913, at site 2.5 miles upstream; records not equivalent.

Gage.--Water-stage recorder (digital) 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 same site and datum. Dec. 6, 1963 to July 29, 1965, at site 50 ft upstream at same datum.

Average discharge.--38 years, 17.5 cfs (12,670 acre-ft per year); median of yearly mean discharges, 8.5 cfs (6,200 acre-ft per year).

Extremes.--Maximum discharge during year, 548 cfs Apr. 9 (gage height, 3.76 ft); no flow Oct. 20.

1927-65: Maximum discharge, 13,500 cfs Mar. 2, 1938 (gage height, 10.56 ft), from rating curve extended above 2,100 cfs on basis of slope-area measurement of maximum flow; no flow at times in 1949, 1951-52, 1965.

Remarks.--Records good. No regulation above station. Diversion above station for irrigation of about 60 acres by Santa Paula Water Works began prior to October 1927; 322 acre-ft was diverted during year.

Cooperation.--Four discharge measurements furnished by Ventura County Water Resources Division; record of diversion furnished by Santa Paula Water Works.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.2	1.3	1.3	6.0	5.8	3.0	15	12	4.1	2.2	1.3	0.6
2	.2	1.1	1.4	5.2	5.8	3.0	8.3	12	3.7	1.8	1.2	1.1
3	.1	.7	1.3	5.0	5.8	3.2	17	12	3.8	1.6	1.1	1.3
4	.1	.6	1.3	4.8	5.8	3.2	15	11	4.1	1.6	1.1	1.3
5	.6	.6	1.3	4.4	5.8	3.5	15	11	4.3	1.6	1.2	1.4
6	.9	1.0	1.4	4.5	5.5	4.4	13	12	4.6	2.2	1.1	1.7
7	1.0	.8	1.9	5.5	4.3	6.9	11	7.5	4.4	2.4	1.0	1.1
8	1.0	1.7	1.9	6.8	4.1	5.5	51	6.3	4.3	2.1	.9	.8
9	1.2	4.2	1.9	7.6	4.1	4.5	164	6.9	4.0	1.7	.8	.7
10	.5	4.2	1.7	7.8	4.1	4.3	58	12	3.7	2.0	.7	.7
11	.3	2.8	1.9	7.8	4.1	4.5	44	12	3.6	2.6	.5	.7
12	.4	2.5	1.7	7.8	4.0	4.6	40	7.0	3.9	2.4	.5	.8
13	.5	2.3	1.0	7.5	3.8	5.9	36	7.5	4.1	1.8	.6	.7
14	.6	2.1	1.1	7.2	3.8	4.8	38	7.5	3.4	1.7	.5	.7
15	.5	2.0	1.0	6.9	3.8	4.9	46	5.7	3.2	1.3	.6	.7
16	.5	1.9	.9	6.6	3.8	4.6	52	5.2	3.3	1.5	.4	.9
17	.5	1.9	1.0	6.9	3.6	4.6	52	5.4	3.5	1.3	.4	1.0
18	.6	1.9	1.1	6.5	3.2	4.6	52	5.3	3.4	1.4	.7	1.2
19	.2	1.9	8.3	6.5	2.7	4.4	52	5.0	3.6	1.8	.7	1.2
20	0	1.9	163	6.5	2.8	4.2	49	4.7	3.9	1.3	.7	1.1
21	.3	1.9	36	6.5	2.8	4.1	41	4.6	4.0	1.5	.9	.5
22	.3	1.9	17	6.5	3.0	4.2	34	4.8	3.6	1.6	1.1	.4
23	.4	1.9	12	6.8	2.7	4.4	30	4.9	3.7	1.4	1.0	.4
24	.9	2.1	7.3	9.8	2.7	4.3	25	4.9	4.2	1.5	1.0	.4
25	1.0	2.0	5.1	6.9	2.7	4.4	22	5.1	4.3	1.5	.6	.5
26	.9	2.2	4.6	6.9	3.0	4.5	19	4.6	4.0	1.5	.5	.6
27	1.0	2.3	12	6.9	3.3	4.6	17	4.2	3.5	1.5	.3	.7
28	1.2	2.2	16	6.8	3.4	4.6	15	4.0	3.1	1.4	.4	.7
29	2.2	2.3	10	5.9	-----	4.5	14	3.6	3.2	1.4	.6	.5
30	1.8	1.7	8.1	5.4	-----	4.4	13	3.9	2.9	1.5	.6	.3
31	1.4	-----	7.1	5.6	-----	5.8	-----	4.4	-----	1.3	.6	-----
TOTAL	21.3	57.9	331.6	201.8	110.3	138.4	1,060.3	217.0	113.4	52.4	23.6	24.7
MEAN	0.69	1.93	10.7	6.51	3.94	4.47	35.3	7.00	3.78	1.69	0.76	0.82
AC-FT	42	115	658	400	219	275	2,100	430	225	104	47	48

CALENDAR YEAR 1964 MAX 239 MIN 0 MEAN 4.40 AC-FT 3,190

WATER YEAR 1964-65 MAX 164 MIN 0 MEAN 6.45 AC-FT 4,660

Peak discharge (base, 200 cfs).--Dec. 20 (1045 hrs) 305 cfs (3.35 ft); Apr. 9 (1745 hrs) 548 cfs (3.76 ft).

11-1145, Matilija Creek above reservoir, near Matilija Hot Springs, Calif.

Location.--Lat 34°29'41", long 119°19'48", in SW 1/4 SW 1/4 sec. 19, T.5 N., R.23 W., on left bank 1.6 miles upstream from Matilija Dam and 1.7 miles northwest of Matilija Hot Springs.

Drainage area.--50.7 sq mi.

Records available.--May 1948 to September 1965. Published as "near Matilija" prior to October 1953.

Gage.--Water-stage recorder (digital). Datum of gage is 1,160.20 ft above mean sea level (levels by Ventura County Water Resources Division).

Average discharge.--17 years, 18.1 cfs (13,100 acre-ft per year); median of yearly mean discharges, 7.6 cfs (5,500 acre-ft per year).

Extremes.--Maximum discharge during year, 328 cfs Apr. 9 (gage height, 4.05 ft); minimum daily, 0.7 cfs Oct. 20-23.

1948-65: Maximum discharge, 8,800 cfs Jan. 15, 1952 (gage height, 12.1 ft), from rating curve extended above 5,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.3 cfs Oct. 17-20, 25, 27, 1951.

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

Cooperation.--Sixty-two discharge measurements furnished by Ventura County Water Resources Division.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Feb. 15)

Oct. 1 to Feb. 15				Feb. 16 to Sept. 30			
2.2	0.4	2.6	16	2.3	0.4	2.8	25
2.3	1.5	2.8	42	2.4	1.6	2.9	38
2.4	4.0	3.1	100	2.5	4.0	3.1	78
2.5	8.6	3.4	170	2.6	8.5	3.4	165
				2.7	15		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	1.5	1.9	10	7.2	4.8	24	20	9.8	4.7	2.4	1.6
2	.8	1.5	2.1	10	6.8	4.8	25	20	9.8	4.5	2.2	1.6
3	.8	1.4	2.1	9.3	6.8	4.8	34	19	9.2	4.3	2.2	1.6
4	.8	1.4	2.1	9.3	6.8	4.4	58	19	8.5	4.1	2.2	1.5
5	.8	1.4	2.1	9.3	6.8	4.8	37	18	8.5	3.8	2.1	1.6
6	.8	1.4	2.1	10	6.8	5.1	30	17	7.8	3.7	2.1	1.8
7	.8	1.4	2.1	11	6.8	5.1	24	17	7.8	3.6	2.1	1.7
8	.8	1.9	2.1	11	6.8	5.1	90	16	7.8	3.5	2.0	1.6
9	.8	3.6	2.1	10	6.8	5.1	147	15	7.4	3.4	1.9	1.5
10	.8	3.1	2.1	9.3	6.3	5.1	116	15	7.4	3.4	2.0	1.5
11	.8	2.3	2.1	9.3	6.3	5.1	73	14	6.8	3.3	2.0	1.7
12	.8	2.1	2.1	9.3	6.3	5.1	63	14	6.8	3.3	2.0	1.7
13	.8	2.1	2.1	8.6	6.3	5.1	58	14	6.4	3.2	2.0	1.6
14	.8	1.9	2.3	8.6	5.8	5.1	51	14	6.4	3.1	2.0	1.5
15	.8	1.7	2.3	7.7	5.8	5.1	47	13	6.0	2.9	2.0	1.5
16	.8	1.7	2.3	7.7	5.5	4.8	52	12	6.4	2.9	2.0	1.8
17	.8	1.7	2.3	7.7	5.5	4.8	69	12	6.4	2.8	2.0	1.8
18	.8	1.7	2.3	7.7	5.5	4.8	67	11	6.0	2.7	2.0	1.8
19	.8	1.7	9.1	7.7	5.1	4.4	69	11	6.0	2.7	2.0	1.8
20	.7	1.7	167	7.7	5.1	4.4	43	11	6.0	2.7	2.0	1.6
21	.7	1.7	39	7.7	5.1	4.4	37	11	6.0	2.8	2.0	1.5
22	.7	1.7	20	7.7	5.1	4.4	34	11	6.0	2.8	2.1	1.4
23	.7	1.7	13	7.7	5.1	4.4	32	11	6.0	2.7	2.0	1.4
24	.8	1.7	12	8.1	5.1	4.4	29	11	6.0	2.7	2.0	1.4
25	.8	1.7	10	7.7	5.1	4.4	26	11	6.0	2.6	1.8	1.5
26	.8	1.7	10	7.7	5.1	4.0	25	10	6.0	2.6	1.7	1.5
27	.8	1.7	15	7.2	5.1	4.0	22	9.8	5.5	2.6	1.5	1.5
28	1.0	1.9	13	7.2	4.8	4.0	21	9.2	5.3	2.6	1.4	1.5
29	1.7	1.9	12	7.2	-----	4.0	21	8.5	5.1	2.6	1.4	1.4
30	1.5	1.9	12	7.2	-----	4.4	21	8.5	5.0	2.6	1.5	1.3
31	1.5	-----	11	7.2	-----	7.8	-----	9.8	-----	2.5	1.6	-----
Total	26.9	54.8	381.7	253.8	165.6	148.0	1,445	412.8	204.1	97.7	60.2	47.2
Mean	0.87	1.83	12.3	8.51	5.91	4.77	48.2	13.3	6.80	3.15	1.94	1.57
Ac-ft	53	109	757	523	328	294	2,870	819	405	194	119	94

Calendar year 1964 Max 167 Min 0.7 Mean 4.80 Ac-ft 3,480
Water year 1964-65 Max 167 Min 0.7 Mean 9.06 Ac-ft 6,560

Peak discharge (base, 200 cfs).--Dec. 20 (0600 hrs) 292 cfs (3.93 ft); Apr. 9 (1830 hrs) 328 cfs (4.05 ft).

VENTURA RIVER BASIN

11-1150. Matilija Reservoir at Matilija Hot Springs, Calif.

Location.--Lat 34°29'02", long 119°18'28", in SW¹/₄SE¹/₄ sec. 29, T.5 N., R.23 W., on upstream face near right end of Matilija Dam on Matilija Creek, 0.2 mile west of Matilija Hot Springs.

Drainage area.--54.4 sq mi.

Records available.--March 1948 to September 1965. Prior to October 1953, published as "at Matilija."

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Ventura County Water Resources Division). Prior to Oct. 1, 1954, at datum 1,000 ft higher.

Extremes.--Maximum contents during year, 2,442 acre-ft Dec. 28-31 (elevation, 1,075.76 ft); minimum, 76 acre-ft August and September 1965.

1948-65: Maximum contents, 7,399 acre ft Apr. 3, 1958 (elevation, 1,128.10 ft); minimum, 54 acre-ft (sluice gate open) July 27, 1951, to Jan. 11, 1952.

Remarks.--Reservoir is formed by concrete dam, completed in 1948. Storage began Mar. 14, 1948. Capacity table for reservoir is based on surveys made in 1948. Capacity below outlet gate (elevation, 1,025.0 ft), zero acre-ft (revised); below cut in dam (elevation, 1,095.0 ft), 3,500 acre-ft (revised). Water released from reservoir passes down natural channel of Matilija Creek.

Cooperation.--Water-stage recorder graph furnished by Ventura River Municipal Water District.

Month-end elevation and contents, water year October 1964 to September 1965

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	1,069.29	2,038	-
Oct. 31.....	1,067.04	1,906	-132
Nov. 30.....	1,066.86	1,896	-10
Dec. 31.....	1,075.72	2,439	+543
Calendar year 1964.....	-	-	-714
Jan. 31.....	1,075.28	2,411	-28
Feb. 28.....	1,074.20	2,342	-69
Mar. 31.....	1,074.49	2,360	+18
Apr. 30.....	-	100	-2,260
May 31.....	-	100	0
June 30.....	-	100	0
July 31.....	-	92	-8
Aug. 31.....	-	76	-16
Sept. 30.....	-	76	0
Water year 1964-65.....	-	-	-1,962

† Elevation at 2400 hours

Note.--Contents Apr. 30 to Sept. 30 estimated.

11-1155, Matilija Creek at Matilija Hot Springs, Calif.

Location.--Lat 34°28'58", long 119°18'03", in SW 1/4 SW 1/4 sec. 28, T.5 N., R.23 W., on right bank 0.2 mile east of Matilija Hot Springs, 0.2 mile upstream from North Fork, and 0.45 mile downstream from Matilija Dam.

Drainage area.--54.6 sq mi.

Records available.--October 1927 to September 1965. Combined monthly records for creek and diversion since May 1951. 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.--Maximum discharge during year, 460 cfs Apr. 3 (gage height, 3.93 ft); minimum daily, 0.2 cfs May 5-7.

1927-65: Maximum discharge, 15,900 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 0.1 cfs for several days in some years of regulated flow.

Remarks.--Records good. Flow regulated since March 1948 by Matilija Reservoir (see preceding page); water diverted at dam by Matilija conduit to Ventura River basin and Ojai Valley for irrigation since May 1951. Combined monthly discharge of creek and Matilija conduit diversion is given below.

Cooperation.--Records of diversion from Matilija Reservoir and thirteen discharge measurements furnished by Ventura River Municipal Water District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	0.8	1.7	12	6.8	4.0	60	21	9.3	4.3	2.1	1.1
2	.9	.8	1.8	12	6.8	4.0	250	21	9.0	4.3	1.6	1.0
3	.9	.7	1.8	12	6.8	4.1	302	20	8.7	4.1	1.3	1.1
4	.9	.7	1.8	12	6.8	4.1	404	8.6	8.0	4.1	1.3	.9
5	.9	.7	1.8	12	7.0	3.8	230	.2	7.5	4.1	1.3	1.1
6	.9	.7	1.8	12	7.0	3.5	40	.2	7.5	3.8	1.4	1.4
7	.9	.8	1.8	12	6.8	3.5	33	.2	7.5	3.0	1.4	2.0
8	.9	.9	1.8	12	6.8	3.5	72	4.1	7.5	3.0	1.5	2.5
9	.9	1.2	1.8	12	6.8	3.2	123	5.8	7.5	3.0	1.4	2.5
10	.9	1.0	1.7	12	6.8	3.1	209	12	7.5	3.0	1.4	2.4
11	.9	.9	1.7	11	6.8	3.8	140	12	7.2	3.1	1.4	2.3
12	.9	1.6	1.7	9.9	6.2	4.0	70	8.6	6.8	3.1	1.4	2.3
13	.9	2.4	1.7	9.9	5.8	4.0	57	10	6.8	2.8	1.4	1.9
14	.8	2.4	1.7	9.9	5.8	4.0	50	13	6.8	2.9	.5	1.2
15	.8	2.3	1.7	9.9	5.8	4.0	47	15	6.8	2.9	.6	1.5
16	.8	2.3	1.8	10	5.8	4.0	52	15	6.4	2.8	1.8	1.6
17	.7	2.3	1.8	10	5.8	4.0	60	13	6.2	2.8	2.1	1.7
18	.7	2.3	1.8	10	5.8	4.0	64	8.9	6.2	2.9	2.4	2.1
19	.7	2.3	2.6	10	5.6	4.0	64	7.7	6.2	2.5	2.9	1.9
20	.7	1.8	2.9	10	5.6	4.0	52	8.0	6.2	2.9	2.9	1.9
21	.7	1.3	1.8	10	5.6	4.0	40	9.6	6.2	2.7	2.9	2.0
22	.7	1.3	6.7	10	5.6	4.0	34	11	6.2	2.7	2.9	2.4
23	.7	1.3	12	10	5.6	4.0	32	12	6.2	2.6	3.0	1.9
24	.7	1.3	12	10	4.8	4.0	29	12	6.2	2.6	2.8	2.0
25	.7	1.4	12	8.5	4.1	4.0	27	11	6.2	2.5	2.8	1.5
26	.7	1.4	12	6.8	4.1	4.0	25	11	6.2	2.5	1.9	1.0
27	.7	1.5	12	6.8	4.1	4.0	25	11	6.2	2.5	1.3	1.0
28	.7	1.6	12	6.8	4.0	4.1	24	11	6.0	2.7	1.3	1.0
29	.9	1.6	12	6.8	-----	4.1	22	10	5.4	2.6	1.4	1.0
30	.8	1.7	12	6.8	-----	3.8	22	9.9	5.0	2.4	1.3	1.0
31	.8	-----	12	6.8	-----	4.3	-----	9.6	-----	2.1	1.4	-----
Total	25.1	43.3	153.7	309.9	165.3	120.9	2,659	322.4	205.4	93.3	55.1	49.2
Mean	0.81	1.44	4.96	10.0	5.90	3.90	89.0	10.4	6.85	3.01	1.78	1.64
Ac-ft	50	86	305	615	328	240	5,290	639	407	185	109	98
Ac-ft†	180	86	305	615	387	270	5,290	647	416	205	129	98

Calendar year 1964 Max 13 Min 0.7 Mean 3.44 Ac-ft 2,500 Meant 5.83 Ac-ft† 4,220
 Water year 1964-65 Max 404 Min 0.2 Mean 11.5 Ac-ft 3,360 Meant 11.9 Ac-ft† 3,630

† Combined discharge of creek and diversion.

11-1160, North Fork Matilija Creek at Matilija Hot Springs, Calif.

Location,--Lat 34°29'33", long 119°18'20", in NE 1/4 NW 1/4 sec. 29, T. 5 N., R. 23 W., 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.

Records available,--October 1928 to September 1932, October 1933 to September 1965. Prior to October 1953, published as "at Matilija."

Gage,--Water-stage recorder. Datum of gage is 1,142.02 ft above mean sea level (levels by Ventura County Water Resources Division). Prior to Nov. 12, 1948, at site 0.3 mile downstream at different datum.

Average discharge,--36 years, 8.41 cfs (6,090 acre-ft per year); median of yearly mean discharges, 3.8 cfs (2,800 acre-ft per year).

Extremes,--Maximum discharge during year, 205 cfs Dec. 20 (gage height, 2.43 ft from outside gage); minimum daily, 0.2 cfs for many days.

1928-32, 1933-65: Maximum discharge, 5,580 cfs Mar. 2, 1938; minimum daily, 0.1 cfs for several days in some years.

Remarks,--Records good. No regulation or diversion above station.

Cooperation,--Water-stage recorder graph and 67 discharge measurements furnished by Ventura County Water Resources Division.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.6	0.9	3.3	2.0	1.4	5.9	3.6	2.1	0.8	0.4	0.2
2	.2	.6	.9	3.0	2.0	1.4	6.3	3.6	2.1	.8	.3	.2
3	.2	.6	.9	2.8	2.0	1.4	9.8	3.6	2.1	.6	.3	.2
4	.2	.5	.9	2.6	2.0	1.4	16	3.6	2.0	.6	.3	.2
5	.2	.5	.9	2.6	2.0	1.4	10	3.6	1.8	.6	.3	.2
6	.2	.5	.9	2.8	2.0	1.6	7.0	3.3	1.8	.6	.2	.4
7	.2	.5	.9	3.6	1.8	1.6	5.4	2.8	1.8	.6	.2	.4
8	.2	.7	.9	3.0	1.8	1.5	29	2.8	1.8	.6	.2	.4
9	.2	5.3	.9	3.0	1.8	1.4	65	2.6	1.8	.5	.2	.4
10	.2	2.6	.9	2.8	1.6	1.4	50	2.6	1.6	.5	.2	.4
11	.2	1.5	.9	2.6	1.6	1.5	26	2.6	1.6	.5	.2	.4
12	.2	1.4	.9	2.6	1.6	1.5	17	2.6	1.6	.5	.2	.4
13	.2	1.1	.9	2.6	1.6	1.6	16	2.6	1.6	.5	.2	.3
14	.2	1.0	.9	2.4	1.6	1.6	15	2.6	1.5	.5	.2	.2
15	.2	1.0	.9	2.4	1.6	1.6	15	2.4	1.5	.5	.2	.2
16	.2	1.0	.9	2.4	1.6	1.5	12	2.1	1.5	.5	.2	.2
17	.2	1.0	1.0	2.2	1.6	1.5	9.8	2.1	1.5	.5	.2	.4
18	.2	1.0	1.0	2.2	1.5	1.5	8.1	2.1	1.5	.5	.2	.4
19	.2	1.0	2.3	2.2	1.5	1.4	6.7	2.1	1.5	.5	.3	.4
20	.2	1.0	97	2.2	1.4	1.2	6.4	2.1	1.5	.5	.3	.4
21	.2	1.0	14	2.4	1.4	1.2	6.0	2.1	1.5	.5	.3	.3
22	.2	.9	7.8	2.4	1.4	1.2	5.4	2.1	1.5	.5	.4	.2
23	.3	.9	5.1	2.4	1.4	1.2	5.1	2.1	1.6	.4	.4	.2
24	.4	.9	4.0	2.6	1.4	1.2	4.8	2.1	1.6	.4	.4	.2
25	.4	.9	3.3	2.2	1.4	1.1	4.6	2.1	1.8	.4	.2	.2
26	.4	.9	3.0	2.2	1.4	1.1	4.0	2.0	1.5	.4	.2	.3
27	.4	.9	8.1	2.1	1.4	1.1	3.8	1.8	1.2	.4	.2	.3
28	.5	.9	5.1	2.1	1.4	1.1	3.8	1.6	1.1	.4	.2	.3
29	1.1	.9	4.3	2.0	-----	1.0	3.6	1.6	1.0	.4	.2	.3
30	.6	.9	3.8	2.0	-----	1.0	3.6	1.8	.9	.4	.2	.3
31	.6	-----	3.6	2.0	-----	2.6	-----	2.0	-----	.4	.2	-----
Total	9.1	32.5	198.5	77.7	45.8	43.2	381.1	76.7	47.9	15.8	7.7	8.9
Mean	0.29	1.08	6.40	2.51	1.64	1.39	12.7	2.47	1.60	0.51	0.25	0.30
Ac-ft	18	64	394	154	91	86	756	152	95	31	15	18

Calendar year 1964 Max 127 Min 0.2 Mean 2.10 Ac-ft 1,520
 Water year 1964-65 Max 97 Min 0.2 Mean 2.59 Ac-ft 1,870

Peak discharge (base, 40 cfs),--Dec. 20 (0430 hrs) 205 cfs (2.43 ft); Apr. 9 (1800 hrs) 190 cfs (2.37 ft from outside gage).

11-1165.5, Ventura River near Meiners Oaks, Calif.

Location.--Lat 34°27'45", long 119°17'20", in Santa Ana Grant, 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, Ventura County.

Drainage area.--76.4 sq mi.

Records available.--May 1959 to September 1965.

Gage.--Water-stage recorder and concrete control. Datum of gage is 744.60 ft above mean sea level (Bureau of Reclamation bench mark).

Extremes.--Maximum discharge during year, 92 cfs Apr. 7 (gage height, 1.92 ft); no flow for several months of year.

1959-65: Maximum discharge, 7,590 cfs Feb. 10, 1962 (gage height, 7.1 ft), from rating curve extended above 50 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records good. Flow regulated by Matilija Reservoir (see p. 218). 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.

Cooperation.--One discharge measurement furnished by Ventura River Municipal Water District.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.0	0	1.4	13
1.1	.3	1.5	22
1.2	1.8	1.6	36
1.3	5.7		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	14	6.9	1.6	13	12	7.5	0.6		
2		0	0	14	6.9	2.3	29	12	6.9	.6		
3		0	0	14	6.9	2.3	23	13	6.9	.4		
4		0	0	14	6.9	2.3	21	14	6.9	.4		
5		0	0	14	6.3	2.0	25	4.7	7.5	.4		
6		0	0	14	6.3	1.8	23	3.3	7.5	.2		
7		0	0	14	6.3	1.4	35	2.6	8.2	0		
8		0	0	13	6.3	1.0	31	3.3	7.5	0		
9		1.4	0	13	6.3	1.0	12	6.3	5.7	0		
10		0	0	13	6.3	.7	11	15	3.7	0		
11		0	0	12	6.3	.6	12	15	3.7	0		
12		0	0	9.6	5.7	.7	13	11	3.7	0		
13		.3	0	9.6	5.2	1.2	13	10	3.7	0		
14		.4	0	9.6	4.7	1.6	12	14	4.2	0		
15		.3	0	9.6	4.7	1.6	17	14	5.2	0		
16		.1	0	9.6	4.2	1.6	19	14	5.2	0		
17		0	0	9.6	4.2	1.6	13	15	3.7	0		
18		0	0	9.6	4.2	1.4	11	14	3.3	0		
19		0	2.9	9.6	3.7	.7	12	8.2	3.0	0		
20		0	14	9.6	3.3	.4	13	7.5	2.3	0		
21		0	20	9.6	3.3	.3	12	6.9	2.3	0		
22		0	9.6	9.6	3.3	.3	11	10	2.6	0		
23		0	14	9.6	3.3	1.4	10	12	2.6	0		
24		0	14	9.6	3.0	1.6	12	12	2.6	0		
25		0	14	8.9	2.3	1.2	12	12	2.3	0		
26		0	14	8.2	1.6	.6	12	11	2.0	0		
27		0	16	8.2	1.4	.3	12	8.9	1.8	0		
28		0	15	7.5	1.6	.6	12	8.2	1.6	0		
29		0	14	7.5	-----	.6	12	8.2	.7	0		
30		0	14	7.5	-----	.2	12	8.2	.6	0		
31		-----	14	6.9	-----	1.1	-----	8.2	-----	0		
Total	0	2.5	175.5	328.5	131.4	36.0	475	314.5	125.4	2.6	0	0
Mean	0	0.08	5.66	10.6	4.69	1.16	15.8	10.1	4.18	0.08	0	0
Ac-ft	0	5.0	348	652	261	71	942	624	249	5.2	0	0
Calendar year 1964	Max	23	Min	0	Mean	1.62	Ac-ft	1,180				
Water year 1964-65	Max	35	Min	0	Mean	4.36	Ac-ft	3,160				

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, on downstream side of bridge on U. S. Highway 399, 0.2 mile upstream from mouth, and 0.9 mile north of Casitas Springs, Ventura County.

Drainage area--51.2 sq mi.

Records available--October 1949 to September 1965.

Gage--Water-stage recorder. Datum of gage is 307.25 ft above mean sea level (levels by Ventura County Water Resources Division). Prior to Jan. 30, 1962, at datum 0.30 ft higher.

Average discharge--16 years, 5.19 cfs (3,760 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

Extremes--Maximum discharge during year, 710 cfs Apr. 9 (gage height, 7.08 ft); no flow Oct. 1 to Dec. 18, Mar. 16-31, June 5 to Sept. 30.
1949-65: Maximum discharge, 5,240 cfs Apr. 3, 1958 (gage height, 12.80 ft, present datum), 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--Records fair. No regulation above station; pumping from wells along creek for irrigation.

Cooperation--Water-stage recorder graph, 35 discharge measurements furnished by Ventura County Water Resources Division.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0.8	0.4	0.2	0.1	1.1	0.3			
2			0	.8	.4	.2	1.4	1.1	.2			
3			0	.8	.4	.2	2.4	1.0	.1			
4			0	.8	.4	.1	7.1	1.0	.1			
5			0	.8	.4	.1	.7	1.0	0			
6			0	.8	.5	.1	.7	.8	0			
7			0	1.3	.5	.1	.7	.7	0			
8			0	.8	.4	.1	4.1	.6	0			
9			0	.8	.3	.1	15.3	.5	0			
10			0	.8	.2	.1	4.7	.4	0			
11			0	.8	.2	.1	14	.4	0			
12			0	.8	.2	.1	7.3	.4	0			
13			0	.8	.2	.1	5.1	.4	0			
14			0	.7	.2	.1	4.0	.4	0			
15			0	.6	.2	.1	3.2	.4	0			
16			0	.6	.2	0	2.8	.4	0			
17			0	.6	.2	0	2.4	.4	0			
18			0	.7	.2	0	2.2	.4	0			
19			.1	.7	.2	0	2.2	.4	0			
20			6.7	.6	.2	0	2.0	.4	0			
21			5.2	.6	.2	0	2.0	.4	0			
22			.8	.5	.2	0	2.0	.4	0			
23			.4	.5	.2	0	1.8	.4	0			
24			.4	.4	.2	0	1.6	.4	0			
25			.4	.4	.2	0	1.4	.4	0			
26			.4	.4	.2	0	1.3	.3	0			
27			6.3	.4	.2	0	1.3	.3	0			
28			1.4	.4	.2	0	1.3	.3	0			
29			.8	.4	-----	0	1.3	.3	0			
30			.8	.4	-----	0	1.1	.3	0			
31			.8	.4	-----	0	-----	.3	-----			
Total	0	0	84.8	20.2	7.5	1.8	314.4	16.0	0.7	0	0	0
Mean	0	0	2.74	0.65	0.27	0.06	10.5	0.52	0.02	0	0	0
Ac-ft	0	0	168	40	15	3.6	624	32	1.4	0	0	0

Calendar year 1964 Max 67 Min 0 Mean 0.54 Ac-ft 390
 Water year 1964-65 Max 153 Min 0 Mean 1.22 Ac-ft 884

11-1176. Coyote Creek near Oak View, Calif.

Location.--Lat 34°25'00", long 119°22'00", in Santa Ana Grant, on right bank 1,000 ft downstream from Los Padres National Forest boundary, 0.6 mile upstream from Poplin Creek, and 4.2 miles west of Oak View, Ventura County.

Drainage area.--13.2 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 560 ft (from topographic map).

Average discharge.--7 years, 2.60 cfs (1,880 acre-ft per year).

Extremes.--Maximum discharge during year 925 cfs Apr. 9 (gage height, 6.00 ft); no flow Oct. 2-15, 19-24, Sept. 23-30.

1958-65: Maximum discharge, 1,700 cfs Feb. 9, 1962 (gage height, 7.45 ft in gage well, 7.81 ft from outside gage), on basis of slope-area measurement of maximum flow; no flow at times in most years.

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

Cooperation.--Two discharge measurements furnished by Ventura River Municipal Water District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.1	0.1	1.4	1.0	0.6	4.8	1.5	0.8	0.6	0.2	0.1
2	0	.1	.1	1.4	1.0	.6	8.0	1.5	.8	.5	.2	.1
3	0	.1	.1	1.3	.9	.6	15	1.5	.7	.5	.2	.1
4	0	.1	.1	1.2	.9	.6	32	1.4	.7	.5	.2	.1
5	0	.1	.2	1.2	1.0	.6	7.4	1.4	.7	.5	.2	.1
6	0	.1	.2	1.2	.9	.6	4.2	1.4	.8	.4	.2	.1
7	0	.1	.2	1.8	.9	.5	3.4	1.3	.8	.4	.1	.1
8	0	.1	.2	1.4	.9	.5	97	1.2	.8	.4	.1	.1
9	0	.2	.2	1.4	.9	.5	237	1.2	.7	.4	.1	.1
10	0	.3	.2	1.3	.8	.5	77	1.1	.7	.4	.1	.1
11	0	.2	.2	1.2	.8	.5	24	1.1	.7	.4	.1	.1
12	0	.2	.2	1.2	.8	.5	17	1.1	.7	.4	.1	.1
13	0	.1	.2	1.1	.7	.5	12	1.1	.7	.4	.1	.1
14	0	.1	.2	1.1	.7	.5	10	1.1	.7	.3	.1	.1
15	0	.1	.2	1.1	.7	.5	8.2	.9	.7	.3	.1	.1
16	.1	.1	.2	1.0	.7	.5	7.2	.9	.7	.3	.1	.1
17	.1	.1	.2	1.0	.7	.5	6.2	.9	.7	.3	.1	.1
18	.1	.1	.2	1.0	.6	.5	5.4	.9	.7	.3	.1	.1
19	0	.1	16	1.0	.6	.5	4.8	.9	.7	.3	.1	.1
20	0	.1	133	1.0	.6	.5	4.4	.8	.7	.3	.1	.1
21	0	.1	9.3	1.0	.6	.4	3.9	.8	.6	.3	.1	.1
22	0	.1	3.1	1.0	.6	.4	3.5	.8	.7	.3	.1	.1
23	0	.1	2.0	1.0	.6	.4	3.2	.8	.7	.3	.1	0
24	0	.1	1.5	1.0	.6	.4	2.8	.8	.7	.3	.1	0
25	.1	.1	1.4	1.0	.6	.4	2.6	.8	.7	.3	.1	0
26	.1	.1	1.4	1.0	.6	.4	2.3	.8	.6	.3	.1	0
27	.1	.1	3.2	1.0	.6	.4	2.2	.8	.6	.3	.1	0
28	.1	.1	3.4	1.0	.6	.4	1.9	.8	.6	.2	.1	0
29	.1	.1	2.1	1.0	-----	.4	1.8	.8	.6	.2	.1	0
30	.1	.1	1.8	1.0	-----	.4	1.6	.8	.6	.2	.1	0
31	.1	-----	1.6	1.0	-----	.8	-----	.8	-----	.2	.1	-----
Total	1.1	3.5	183.0	35.3	20.9	15.4	610.8	32.0	20.9	10.8	3.7	2.2
Mean	0.04	0.12	5.90	1.14	0.75	0.50	20.4	1.03	0.70	0.35	0.12	0.07
Ac-ft	2.2	6.9	36.3	70	41	31	1,210	63	41	21	7.3	4.4

Calendar year 1964 Max 133 Min 0 Mean 0.97 Ac-ft 701

Water year 1964-65 Max 237 Min 0 Mean 2.57 Ac-ft 1,860

Peak discharge (base, 150 cfs).--Dec. 20 (0730 hrs) 268 cfs (4.57 ft); Apr. 9 (1700 hrs) 925 cfs (6.00 ft).

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, on downstream end of right abutment of bridge, 400 ft upstream from unnamed tributary, and 3.0 miles northwest of Oak View, Ventura County.

Drainage area.--9.11 sq mi..

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 610 ft (from topographic map).

Average discharge.--7 years, 2.18 cfs (1,580 acre-ft per year).

Extremes.--Maximum discharge during year, 362 cfs Apr. 9 (gage height, 4.68 ft); no flow for much of year.
1958-65: Maximum discharge, 2,200 cfs Feb. 9, 1962 (gage height, 6.77 ft); no flow for part of each year.

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

Cooperation.--Three discharge measurements furnished by Ventura River Municipal Water District.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 19, 20, Apr. 8-10)

2.0	0	2.6	7.7
2.1	.1	2.8	17
2.2	.5	3.0	32
2.3	1.2	3.2	54
2.4	2.5	3.6	120
2.5	4.7		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	1.6	0.7	0.2	2.5	1.4	0.2	0.2		
2		0	0	1.5	.7	.2	5.1	1.3	.2	.2		
3		0	0	.9	.7	.2	7.8	1.2	.2	.2		
4		0	0	.9	.7	.2	17	1.2	.2	.2		
5		0	0	.9	.7	.2	8.8	1.1	.4	.2		
6		0	0	.9	.9	.3	4.4	.9	.4	.2		
7		0	0	2.0	.8	.4	3.5	.9	.4	.2		
8		0	0	1.4	.7	.3	34	.8	.4	.2		
9		.1	0	.9	.7	.3	103	.7	.4	.2		
10		.1	0	.9	.7	.3	49	.7	.4	.2		
11		0	0	.7	.6	.1	29	.7	.2	.2		
12		0	0	.7	.1	.1	20	.7	.1	.2		
13		0	0	.6	.1	.1	12	.8	.1	.2		
14		0	0	.6	.1	.1	10	.8	.1	.1		
15		0	0	.5	.1	.1	7.4	.7	.1	.1		
16		0	0	.4	.1	.2	6.5	.6	.1	.1		
17		0	0	.3	.1	.3	5.9	.7	.1	.1		
18		0	0	.2	.3	.3	5.0	.8	.2	.1		
19		0	11	.1	.4	.3	4.2	.9	.2	.1		
20		0	99	.1	.4	.3	3.7	.9	.2	.1		
21		0	9.7	.2	.4	.3	3.5	.9	.2	.1		
22		0	3.7	.2	.4	.2	3.3	.9	.2	.1		
23		0	2.2	.2	.3	.3	2.9	.9	.2	.1		
24		0	1.6	.4	.3	.3	2.7	.9	.3	0		
25		0	1.3	.4	.3	.3	2.5	.9	.4	0		
26		0	1.3	.4	.3	.2	2.2	.8	.4	0		
27		0	3.9	.4	.4	.3	2.0	.4	.3	0		
28		0	3.7	.4	.2	.4	1.9	.3	.2	0		
29		0	2.5	.4	-----	.3	1.5	.3	.2	0		
30		0	2.0	.4	-----	.3	1.4	.3	.2	0		
31		-----	1.9	.7	-----	.7	-----	.3	-----	0		
Total	0	0.2	143.8	20.2	12.2	8.1	362.7	24.7	7.2	3.6	0	0
Mean	0	0.007	4.64	0.65	0.44	0.26	12.1	0.80	0.23	0.12	0	0
Ac-ft	0	0.4	285	40	24	16	719	49	14	7.1	0	0

Calendar year 1964 Max 99 Min 0 Mean 0.64 Ac-ft 453
Water year 1964-65 Max 103 Min 0 Mean 1.60 Ac-ft 1,160

Peak discharge (base, 150 cfs).--Dec. 20 (0400 hrs) 215 cfs (4.25 ft); Apr. 9 (1700 hrs) 362 cfs (4.68 ft).

11-1185, Ventura River near Ventura, Calif.

Location.--Lat 34°21'05", long 119°18'23", in southeast corner of Santa Ana Grant, on right bank 500 ft downstream from county highway bridge at Foster Memorial Park, 0.2 mile downstream from Coyote Creek, and 5 miles north of Ventura, Ventura County.

Drainage area.--188 sq mi.

Records available.--September 1911 to January 1914, October 1929 to September 1965; combined records of river and diversion, October 1932 to September 1965.

Gage.--Water stage recorder on river; water-stage recorder (digital) and Parshall flume on diversion. Altitude of gage is 200 ft (from topographic map). Prior to Jan. 18, 1914, chain gage at site 370 ft upstream at different datum (destroyed by flood). October 1929 to Nov. 2, 1949, at site 370 ft upstream at present datum.

Average discharge (river only).--38 years (1911-13, 1929-65), 54.2 cfs (39,240 acre-ft per year); median of yearly mean discharges, 21 cfs (15,200 acre-ft per year).
(combined).--33 years, 63.6 cfs (46,040 acre-ft per year); median of yearly mean discharges, 25 cfs (18,100 acre-ft per year).

Extremes (river only).--Maximum discharge during year, 744 cfs Apr. 9 (gage height, 11.43 ft); no flow for several months.

1911-14, 1929-65: Maximum discharge, 39,200 cfs Mar. 2, 1938 (gage height, 19.2 ft), from rating curve extended above 7,700 cfs on basis of slope-area and contracted opening measurement of maximum flow; no flow at times in many years.

(combined).--Maximum discharge during year, 750 cfs Apr. 9; minimum daily 1.0 cfs Dec. 9.

1932-65: Maximum discharge, 39,200 cfs Mar. 2, 1938; minimum daily, 0.1 cfs Sept. 3, 4, 13, 1961.

Remarks.--Combined records good; river records fair. Flow partly regulated since March 1948 by Matilija Reservoir (see p. 218) 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. For records of combined discharge of river and Ventura City diversion, see following page. Average discharge (river only) represents flow to ocean, regardless of upstream development.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0.6	1.2	0.4	2.8	2.7	3.5	0.4	0.3	
2			0	.8	.5	.4	3.4	2.7	2.5	.4	.3	
3			0	1.5	.3	.4	3.9	2.7	2.8	.3	.3	
4			0	2.0	.3	.3	7.7	2.7	3.2	.8	.3	
5			0	1.1	.8	.3	6.9	2.7	3.9	1.9	.3	
6			0	.7	1.2	.3	16	2.6	5.5	1.1	.2	
7			0	2.0	1.4	.3	15	2.6	7.6	.6	.2	
8			0	1.3	1.4	.4	64	2.6	6.9	.4	.2	
9			0	.9	1.6	.4	179	2.6	3.5	.3	.2	
10			0	.8	1.3	.4	68	2.6	1.5	.2	.3	
11			0	1.3	.8	.4	35	2.5	2.1	.2	.3	
12			0	2.1	.8	.4	25	2.5	6.3	.2	.3	
13			0	1.0	.8	.4	21	2.5	5.2	.2	.2	
14			0	.5	.8	.6	16	2.5	4.7	.2	.2	
15			0	.3	.7	.4	13	2.8	3.5	.1	.2	
16			0	.2	.7	.4	18	3.0	1.4	.1	.2	
17			0	.2	.7	.4	13	3.2	.8	.1	.2	
18			0	.1	.7	.4	12	3.1	1.6	.1	.2	
19			.2	0	.5	.4	11	2.6	5.5	.1	.2	
20			55	0	.5	.4	11	2.8	3.5	.1	.2	
21			.6	0	.5	.4	6.6	2.8	2.5	.1	.2	
22			.3	0	.5	.6	4.2	2.6	1.1	.1	.2	
23			.3	0	.4	.6	4.7	2.6	1.0	.1	.2	
24			.2	0	.4	.6	4.4	2.6	.8	.1	.2	
25			.2	0	.4	.5	5.0	2.8	1.0	.2	.2	
26			.2	.2	.3	.5	5.5	3.1	2.1	.4	.2	
27			.5	.3	.3	.5	6.6	2.5	2.1	.6	.1	
28			.4	.6	.3	.6	5.5	4.2	1.4	.4	.1	
29			.4	1.1	-----	.9	3.2	5.8	.7	.4	.1	
30			.5	1.4	-----	1.0	2.7	5.8	.5	.4	.1	
31		-----	.6	1.4	-----	1.9	-----	5.2	-----	.3	.1	-----
Total	0	0	59.4	22.4	20.1	15.9	590.1	94.0	88.7	10.9	6.5	0
Mean	0	0	1.92	0.72	0.72	0.51	19.7	3.03	2.96	0.35	0.21	0
Ac-ft	0	0	118	44	40	32	1,170	186	176	22	13	0

Calendar year 1964 Max 55 Min 0 Mean 0.34 Ac-ft 248

Water year 1964-65 Max 179 Min 0 Mean 2.49 Ac-ft 1,800

Peak discharge (base, 500 cfs).--Apr. 9 (1700 hrs) 744 cfs (11.43 ft).

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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	2.9	2.5	1.3	6.2	5.2	7.2	16	13	13	6.2	9.2
2	3.5	2.9	2.5	1.7	6.5	8.3	7.0	16	14	7.5	9.8	8.9
3	3.4	2.9	2.5	3.7	5.1	7.5	7.6	16	14	6.7	11	8.7
4	3.6	2.8	2.5	4.0	4.2	8.0	12	17	13	6.7	11	8.4
5	3.4	2.8	2.5	5.7	4.7	7.4	11	16	13	7.6	10	8.2
6	3.4	2.8	2.5	3.7	5.1	6.0	20	15	14	11	10	5.0
7	3.4	2.8	2.5	4.0	5.3	4.2	20	15	13	14	7.2	6.4
8	3.4	2.8	2.5	5.2	5.3	4.3	70	14	13	12	5.4	8.1
9	3.4	2.8	1.0	4.8	5.5	7.3	185	13	14	12	6.6	8.0
10	3.4	2.7	1.2	3.9	6.0	6.8	73	11	14	11	10	7.8
11	3.4	2.7	2.7	2.5	6.1	6.4	39	8.2	12	6.5	10	7.5
12	3.4	2.7	2.6	6.3	5.9	6.7	29	7.8	11	7.3	8.0	5.2
13	3.4	2.7	2.6	9.4	5.9	4.6	25	11	12	12	7.2	6.3
14	3.4	2.7	2.6	9.1	5.3	4.7	20	14	12	12	6.4	7.5
15	3.2	2.7	2.6	8.9	7.4	6.8	18	11	13	11	2.9	7.2
16	3.2	2.6	2.6	7.7	9.3	7.0	24	6.6	14	8.9	8.3	6.9
17	3.2	2.6	2.5	4.1	9.1	5.5	18	6.4	13	7.6	9.2	6.6
18	3.2	2.6	2.5	4.8	7.5	6.1	14	10	9.2	7.0	8.9	6.2
19	2.3	2.6	2.7	4.8	7.3	8.4	15	14	9.9	8.1	9.1	4.4
20	3.1	2.6	5.9	4.1	8.8	5.6	17	14	10	11	9.1	4.9
21	3.1	2.6	4.2	4.4	5.1	4.4	18	13	12	12	4.7	6.5
22	3.1	2.6	2.2	3.7	1.8	7.2	15	12	11	9.5	3.1	6.3
23	3.0	2.6	4.9	3.7	5.7	8.6	16	13	12	7.6	6.5	6.2
24	3.0	2.6	5.9	3.7	6.3	8.4	17	12	12	6.8	9.3	5.6
25	3.0	2.6	3.1	2.6	6.1	8.3	17	10	9.6	6.3	9.3	4.3
26	3.0	2.6	3.1	3.3	7.1	8.1	16	11	9.1	10	9.1	3.4
27	2.9	2.6	4.1	4.1	5.8	6.0	15	14	8.0	10	9.4	4.6
28	2.9	2.5	4.3	4.4	3.8	3.7	15	13	11	10	4.1	5.1
29	2.9	2.5	4.3	5.0	-----	6.4	16	13	10	11	4.1	6.1
30	2.9	2.5	1.9	5.3	-----	7.2	16	14	8.3	10	6.8	6.2
31	2.9	-----	1.3	5.3	-----	7.7	-----	14	-----	8.5	8.5	-----
Total	98.9	80.4	143.9	145.2	168.2	202.8	792.8	391.0	354.1	294.6	241.2	195.7
Mean	3.19	2.68	4.64	4.68	6.01	6.54	26.4	12.6	11.8	9.50	7.78	6.52
Ac-ft	196	159	285	288	334	402	1,570	776	702	584	478	388

Calendar year 1964 Max 59 Min 1.0 Mean 5.26 Ac-ft 3,820

Water year 1964-65 Max 185 Min 1.0 Mean 8.52 Ac-ft 6,160

Peak discharge (base, 500 cfs).--Apr. 9 (1,700 hrs) 750 cfs.

11-1195. Carpinteria Creek near Carpinteria, Calif.

Location.--Lat 34°24'04", long 119°29'08", in El Rincon Grant, 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, Santa Barbara County.

Drainage area.--13.1 sq mi.

Records available.--January 1941 to September 1965.

Gage.--Water-stage recorder and box-culvert control. Altitude of gage is 130 ft (from topographic map). Prior to July 1, 1958, at datum 2.00 ft higher.

Average discharge.--24 years, 1.72 cfs (1,250 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

Extremes.--Maximum discharge during year, 326 cfs Apr. 9 (gage height, 5.62 ft); no flow for most of year.

1941-65: Maximum discharge, 2,440 cfs Jan. 15, 1952 (gage height, 9.75 ft, present datum), from rating curve extended above 500 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

Remarks.--Records good. No regulation above station. Gobernador Land and Water Co. diverts from Gobernador Creek 1.8 miles above station. Small lake three-quarters of a 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 into Gobernador Creek 1,000 ft above station. No pumping occurred this year. Discharge in May was the result of reservoir being flushed by Goleta County Water District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0			0.2	0				
2		0	0	0			.4	0				
3		0	0	0			1.1	0				
4		0	0	0			5.9	0				
5		0	0	0			1.2	1.6				
6		0	0	.1			.2	2.8				
7		0	0	.2			0	2.6				
8		0	0	.1			20	2.3				
9		1.1	0	0			64	1.3				
10		2.2	0	0			36	.1				
11		.2	0	0			13	.1				
12		0	0	0			7.6	0				
13		0	0	0			5.1	0				
14		0	0	0			2.4	0				
15		0	0	0			1.1	0				
16		0	0	0			.6	0				
17		0	0	0			.3	0				
18		0	0	0			.1	0				
19		0	.2	0			0	0				
20		0	27	0			0	0				
21		0	1.8	0			0	0				
22		0	.2	0			0	0				
23		0	0	0			0	0				
24		0	0	0			0	0				
25		0	0	0			0	0				
26		0	0	0			0	0				
27		0	.2	0			0	0				
28		0	.1	0			0	0				
29		0	0	0	-----		0	0				
30		0	0	0	-----		0	0				
31		-----	0	0	-----		-----	0	-----			-----
Total	0	3.5	29.5	0.4	0	0	159.2	10.8	0	0	0	0
Mean	0	0.12	0.95	0.01	0	0	5.31	0.35	0	0	0	0
Ac-ft	0	6.9	59	0.8	0	0	316	21	0	0	0	0

Calendar year 1964 Max 27 Min 0 Mean 0.15 Ac-ft 110

Water year 1964-65 Max 64 Min 0 Mean 0.56 Ac-ft 404

Peak discharge (base, 25 cfs).--Dec. 20 (0930 hrs) 58 cfs (4.29 ft); Apr. 9 (1800 hrs) 326 cfs (5.62 ft).

11-1200. Atascadero Creek near Goleta, Calif.

Location.--Lat 34°25'29", long 119°48'39", in La Goleta Grant, on downstream side of left-bank abutment of private road bridge 400 ft downstream from Maria Ygnacio Creek, 1.3 miles upstream from mouth, and 1.3 miles southeast of Goleta, Santa Barbara County.

Drainage area.--18.8 sq mi.

Records available.--October 1941 to September 1965. Prior to October 1947, published as Alascadero Creek near Goleta.

Gage.--Water-stage recorder. Altitude of gage is 20 ft (from topographic map).

Average discharge.--24 years, 2.68 cfs (1,940 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

Extremes.--Maximum discharge during year, 1,530 cfs Nov. 9 (gage height, 11.61 ft, from profile of flood marks), from rating curve extended above 430 cfs on basis of slope-area measurement of maximum flow; no flow for many days.

1941-65: Maximum discharge, about 4,500 cfs Jan. 15, 1952 (gage height, 10.85 ft), estimated on basis of records for nearby streams; no flow for many days in each year.

Remarks.--Records fair. 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. Forest fire in September 1964 denuded a large portion of the drainage.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting control method used Oct. 1 to Nov. 9, Nov. 17-19, Dec. 27 to Jan. 6, Mar. 31 to Apr. 8)

Oct. 1 to Apr. 8

Apr. 8 to Sept. 30

4.7	0	5.2	12	4.4	0	5.0	21
4.8	.2	5.3	18	4.5	.4	5.5	58
4.9	1.0	5.5	33	4.6	2.0	6.0	112
5.0	3.0	6.0	85	4.7	5.0	7.0	255
5.1	6.6	6.5	146	4.8	9.4	8.0	455

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.1	0	0.9	0.2	0.1	76	0.4	0	0.4	0	0
2	.2	0	0	.4	.2	.1	41	.4	0	.1	0	0
3	.2	0	0	.4	.1	.1	26	.2	.1	.1	.1	0
4	.2	0	0	.4	.2	.3	62	.2	.1	.1	.5	0
5	.2	0	0	.4	2.1	.7	18	.1	.1	0	.2	0
6	.2	0	0	6.8	1.2	2.2	37	.1	0	0	.2	0
7	.2	0	0	12	.3	1.4	9.4	.1	0	0	.2	0
8	.1	11	0	1.2	.1	.3	213	.1	0	0	.3	0
9	.2	121	0	1.0	.1	.2	288	.1	.2	0	.2	0
10	.2	75	0	.2	.1	.1	35	.1	.1	.1	.1	0
11	.1	2.0	0	.2	.1	.4	11	.4	.1	.2	0	0
12	.1	3.3	0	.4	.1	2.3	7.9	.2	.5	.3	0	0
13	0	.6	0	.4	.1	4.5	5.0	.1	.6	.5	0	0
14	0	.2	0	.4	.1	0	2.8	.1	.5	.1	0	0
15	0	.2	0	.2	.1	0	1.4	.1	.5	0	0	0
16	0	.1	0	.2	.1	0	11	0	.7	0	0	0
17	0	.1	0	.2	.1	0	.5	0	.7	0	.1	0
18	0	.1	0	.2	.1	0	.3	.1	.5	0	0	0
19	0	0	40	.2	.1	0	.3	.1	.2	.1	0	0
20	0	0	139	.4	.1	0	.2	.2	.2	.1	0	0
21	0	0	3.6	.3	.1	0	.2	.5	.3	.1	0	0
22	0	0	.7	.2	.1	0	.7	.1	.3	.1	0	0
23	0	0	.4	.4	0	0	.4	0	.2	.1	0	0
24	0	0	.2	1.2	.1	0	.3	.1	.1	.1	0	0
25	0	0	.1	.3	.1	0	.2	0	.3	.1	0	0
26	0	0	.4	.2	.1	0	.2	0	.2	.1	0	.1
27	0	0	9.5	.2	.1	0	.2	0	.2	.1	0	0
28	11	0	2.5	.1	.1	0	.2	0	.1	.1	0	0
29	4.8	0	.5	.1	-----	0	.2	0	.1	.1	0	0
30	.3	0	1.4	.1	-----	0	.3	0	.1	.1	0	0
31	.1	-----	3.4	.1	-----	65	-----	0	.2	.1	0	0
Total	18.3	213.7	201.7	29.7	6.3	77.7	848.7	3.8	7.1	3.1	1.9	0.1
Mean	0.59	7.12	6.51	0.96	0.22	2.51	28.3	0.12	0.24	0.10	0.06	0.003
Ac-ft	36	424	400	59	12	154	1,680	7.5	14	6.1	3.8	0.2

Calendar year 1964 Max 139 Min 0 Mean 1.59 Ac-ft 1,150
Water year 1964-65 Max 288 Min 0 Mean 3.87 Ac-ft 2,800

Peak discharge (base, 60 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-9	0700	11.61	1,530	4-4	0600	6.05	124
12-20	0330	8.40	480	4-9	1600	10.75	1,220
3-31	1500	7.12	238				

11-1205. San Jose Creek near Goleta, Calif.

Location--Lat 34°27'33", long 119°48'29", in La Goleta Grant, on left pier of Patterson Avenue Bridge, 1.1 miles downstream from unnamed tributary, and 1.7 miles northeast of Goleta, Santa Barbara County.

Drainage area--5.51 sq mi.

Records available--January 1941 to September 1965.

Gage--Water-stage recorder and concrete low-water control since October 1962. Altitude of gage is 100 ft (from topographic map). 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--24 years, 1.54 cfs (1,110 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

Extremes--Maximum discharge during year, 360 cfs Apr. 9 (gage height, 4.40 ft), from rating curve extended above 100 cfs on basis of slope-area measurement at gage height 3.94 ft; no flow Oct. 18-21.

1941-65: Maximum discharge, 1,960 cfs Apr. 4, 1941, from rating curve extended above 850 cfs; 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.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.5	0	2.0	5.4
1.6	.2	2.1	9.0
1.7	.6	2.2	14
1.8	1.5	2.6	43
1.9	3.0	3.1	105

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.2	0.2	1.2	0.4	0.2	1.2	0.5	0.4	0.2	0.1	0.1
2	.1	.2	.2	.9	.4	.2	9.1	.5	.4	.2	.1	.1
3	.1	.2	.2	.8	.4	.2	5.7	.5	.4	.2	.1	.1
4	.1	.2	.2	.8	.4	.2	17	.5	.4	.2	.1	.1
5	.1	.2	.2	.7	.5	.3	5.4	.5	.4	.2	.1	.1
6	.1	.2	.2	5.4	.6	.4	3.2	.5	.5	.2	.1	.1
7	.1	.2	.2	12	.4	.7	2.5	.6	.4	.2	.1	.1
8	.1	.2	.2	3.2	.4	.8	6.4	.6	.3	.2	.1	.1
9	.1	3.0	.2	2.0	.4	.5	96	.5	.2	.2	.1	.1
10	.1	5.1	.3	1.6	.3	.4	34	.5	.2	.2	.1	.1
11	.1	1.1	.3	1.2	.3	.4	11	.5	.3	.2	.1	.1
12	.1	.6	.3	1.0	.3	.4	6.6	.5	.3	.2	.1	.1
13	.1	.3	.3	.9	.3	.5	5.1	.5	.3	.2	.1	.1
14	.1	.3	.3	.8	.3	.5	3.6	.5	.3	.1	.1	.1
15	.1	.3	.3	.7	.3	.4	2.8	.4	.3	.1	.1	.1
16	.1	.2	.3	.7	.2	.4	2.5	.4	.3	.1	.1	.1
17	.1	.2	.3	.6	.2	.4	2.0	.4	.4	.1	.1	.1
18	0	.2	.3	.6	.2	.3	1.8	.4	.3	.1	.1	.1
19	0	.2	4.8	.6	.2	.3	1.5	.4	.4	.1	.1	.1
20	0	.2	77	.5	.2	.3	1.2	.4	.4	.1	.1	.1
21	0	.2	11	.5	.2	.3	1.0	.3	.4	.1	.1	.1
22	.1	.2	2.6	.5	.2	.3	1.0	.3	.4	.1	.1	.1
23	.1	.2	1.6	.5	.2	.3	.9	.3	.4	.1	.1	.1
24	.1	.2	1.0	.7	.2	.3	.7	.4	.3	.1	.1	.1
25	.1	.2	.7	.5	.2	.2	.6	.4	.3	.1	.1	.1
26	.1	.2	.7	.4	.2	.2	.6	.4	.2	.1	.1	.1
27	.1	.2	1.6	.4	.2	.2	.6	.4	.2	.1	.1	.1
28	.3	.2	1.5	.4	.2	.2	.5	.4	.2	.1	.1	.1
29	.3	.2	1.0	.4	-----	.2	.5	.4	.2	.1	.1	.1
30	.2	.2	1.0	.4	-----	.2	.5	.4	.2	.1	.1	.1
31	.2	-----	1.2	.4	-----	11	-----	.4	-----	.1	.1	-----
Total	3.3	15.3	110.2	41.3	8.3	21.2	293.9	13.7	9.7	4.4	3.1	3.0
Mean	0.11	0.51	3.55	1.33	0.30	0.68	9.80	0.44	0.32	0.14	0.10	0.10
Ac-ft	6.5	30	219	82	16	42	583	27	19	8.7	6.1	6.0

Calendar year 1964 Max 77 Min 0 Mean 0.63 Ac-ft 457

Water year 1964-65 Max 96 Min 0 Mean 1.44 Ac-ft 1,050

Peak discharge (base, 100 cfs)--Dec. 20 (0500 hrs) 157 cfs (3.42 ft); Apr. 9 (1600 hrs) 360 cfs (4.40 ft).

SANTA YNEZ RIVER BASIN

11-1210. Santa Ynez River at Jameson Lake, near Montecito, Calif.

Location.--Lat $34^{\circ}29'32''$, long $119^{\circ}30'25''$, on upstream side of Juncal Dam, 6.5 miles north of Carpinteria, and 8 miles northeast of Montecito, Santa Barbara County.

Drainage area.--13.8 sq mi (not including Alder Creek).

Records available.--December 1930 to September 1965. 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 (Bureau of Reclamation bench mark), or 2,000 ft above arbitrary datum (called sea level) generally used for works in this vicinity.

Average discharge.-- $3\frac{1}{4}$ years (1931-65), 5.18 cfs (3,750 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 1964 to September 1965

Month	Gage height (feet)†	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Spill and release (acre-feet)	Evaporation (acre-feet)	Total inflow (acre-feet)	Rain on reservoir (acre-feet)	Net discharge (acre-feet)
	Jameson Lake								
Sept. 30.....	190.45	2,768	-	-	-	-	-	-	-
Oct. 31.....	188.45	2,598	-170	158	0	19	7	8	-1
Nov. 30.....	187.29	2,502	-96	115	0	5	24	26	-2
Dec. 31.....	188.04	2,563	+61	91	0	4	156	48	108
Calendar year 1964.....	-	-	-1,450	1,835	0	304	689	182	507
Jan. 31.....	187.47	2,516	-47	86	0	5	44	4	40
Feb. 28.....	186.86	2,467	-49	78	0	11	40	2	38
Mar. 31.....	186.12	2,407	-60	102	0	12	54	13	41
Apr. 30.....	192.89	2,986	+579	81	0	15	675	60	615
May 31.....	191.69	2,878	-108	168	0	32	92	0	92
June 30.....	190.23	2,749	-129	154	0	36	61	0	61
July 31.....	187.98	2,558	-191	181	0	41	31	0	31
Aug. 31.....	184.67	2,294	-264	254	0	37	27	0	27
Sept. 30.....	181.62	2,066	-228	208	0	20	0	0	0
Water year 1964-65.....	-	-	-702	1,676	0	237	1,211	161	1,050

† Gage height at 2400 hours.

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 $34^{\circ}31'37''$, long $119^{\circ}41'10''$, on upstream side of Gibraltar Dam, 7 miles north of Santa Barbara, Santa Barbara County.

Drainage area.--216 sq mi.

Records available.--April 1920 to September 1965. 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 following page). Datum of reservoir gage is mean sea level (datum of 1929). Prior to August 1916, staff gage 900 ft downstream at different datum. August 1916 to June 1918, water-stage recorder at Gibraltar damsite at different datum. June to November 1918, staff gage at several sites and datums near dam. Apr. 1, 1920, to Oct. 1, 1955, at datum 21.82 ft higher. Since Oct. 1, 1955, supplemental gage 15 ft to right of spillway, used for elevation above 1,386 ft.

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 are based on surveys made in 1956. Reservoir capacity at spillway level (elevation, 1,399.82 ft), 14,777 acre-ft (increased to 15,210 acre-ft with flash boards in place). Dead storage, 716 acre-ft, below lowest outlet at elevation 1,333.86 ft, included in these records. Flow regulated by Jameson Lake since December 1930 (see preceding page).

Cooperation.--Reservoir-operation records and related data furnished by city of Santa Barbara.

Monthly net inflow, water year October 1964 to September 1965

Month	Elevation (feet)†	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 inflow (acre- feet)
	Gibraltar Reservoir								
Sept. 30.....	1,376.77	7,216	-	-	-	-	-	-	-
Oct. 31.....	1,374.94	6,808	-408	360	5	73	30	21	9
Nov. 30.....	1,374.51	6,716	-92	203	6	20	137	75	62
Dec. 31.....	1,378.05	7,514	+798	187	14	12	1,011	97	914
Calendar year 1964.....	-	-	-877	3,328	63	951	3,465	419	3,046
Jan. 31.....	1,379.31	7,822	+308	192	2	23	525	20	505
Feb. 28.....	1,379.33	7,826	+4	172	0	37	213	8	205
Mar. 31.....	1,379.54	7,879	+53	179	6	53	291	56	235
Apr. 30.....	1,400.31	14,989	+7,110	355	970	96	8,531	193	8,338
May 31.....	1,399.78	14,760	-229	815	164	171	921	4	917
June 30.....	1,398.22	14,102	-658	702	74	182	300	0	300
July 31.....	1,395.66	13,065	-1,037	851	139	219	172	0	172
Aug. 30.....	1,393.26	12,144	-921	729	61	205	74	0	74
Sept. 30.....	1,391.25	11,412	-732	606	38	121	33	0	33
Water year 1964-65.....	-	-	+4,196	5,351	1,479	1,212	12,238	474	11,764

† Elevation at 1800 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 YNEZ RIVER BASIN

11-1230. Santa Ynez River below Gibraltar Dam, near Santa Barbara, Calif.

Location.--Lat 34°31'28", long 119°41'11", in southwest portion of Los Padres National Forest, on left bank 700 ft downstream from Gibraltar Dam, and 7 miles north of Santa Barbara, Santa Barbara County.

Drainage area.--216 sq mi.

Records available.--April 1920 to September 1965 (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, staff gage and Oct. 16, 1952, to May 20, 1958, water-stage recorder, at same site at datum 5.00 ft higher.

Extremes.--Maximum discharge during year, 369 cfs Apr. 22 (gage height, 7.58 ft); no flow for many days.
1920-65: Maximum discharge, 35,500 cfs Mar. 2, 1938, computed from spillway rating; no flow at times in most years.

Remarks.--Records good. Flow regulated by Jameson Lake and Gibraltar Reservoir (see pp. 230, 231). City of Santa Barbara diverted 5,350 acre-ft during the water year from Gibraltar Reservoir; Montecito County Water District diverted 1,680 acre-ft during the water year from Jameson Lake.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.08	0.07	0.08	0		0	0.9	12	0.2	3.0	1.4	0.8
2	.3	.07	.09	0		0	1.2	10	.2	3.0	1.4	.6
3	0	.07	.09	0		0	0	9.0	.2	3.0	1.4	.6
4	.03	.08	.08	0		0	1.1	7.8	.2	3.0	1.4	.6
5	.07	.08	.08	0		0	0	6.8	.2	2.9	1.4	.6
6	.07	.08	.08	0		0	0	4.6	.2	2.8	1.0	.6
7	.07	.08	.08	0		0	0	3.7	.2	2.8	.8	.6
8	.07	.08	.08	0		0	5.6	3.6	.2	2.8	.9	.6
9	.08	.10	.08	0		0	13	3.6	.2	2.8	1.1	.7
10	.09	.5	.08	0		0	19	2.9	.2	2.8	1.1	.8
11	.09	.10	.08	0		0	16	2.4	.2	2.8	1.1	.8
12	.09	.2	.08	0		0	15	1.9	.2	2.8	1.1	.8
13	.08	.1	.08	0		0	13	2.2	.2	2.5	1.0	.8
14	.07	.08	.08	0		0	14	2.0	.2	2.1	1.0	.7
15	.07	.08	.08	0		0	10	1.7	.2	2.1	1.0	.6
16	.07	.08	.08	0		0	7.0	1.3	.2	2.1	1.0	.6
17	.07	.08	.08	0		0	5.8	.9	.2	2.2	1.0	.6
18	.07	.08	.08	0		0	7.2	.7	.2	2.2	.9	.6
19	.07	.08	1.0	0		0	12	.6	.2	2.2	.9	.6
20	.07	.08	2.7	0		0	24	.6	1.4	2.2	.8	.6
21	.07	.08	.5	0		0	53	.6	3.4	2.1	.8	.6
22	.07	.08	.3	.2		0	76	.6	3.4	2.0	.8	.6
23	.07	.08	.2	0		0	14	.6	3.2	1.9	.8	.6
24	.07	.08	.2	0		0	21	.6	3.2	1.8	.8	.6
25	.07	.08	.2	0		2.7	33	.5	3.2	1.8	.8	.6
26	.07	.08	.2	.6		.1	37	.4	3.4	1.6	.8	.6
27	.07	.08	.2	0		0	29	.3	3.2	1.4	.8	.6
28	.07	.08	.2	0		0	26	.2	3.0	1.4	.8	.6
29	.07	.08	0	0		0	21	.2	2.9	1.4	.8	.6
30	.07	.08	0	0		0	14	.2	3.0	1.4	.9	.6
31	.07		0	0		0		.2		1.4	1.0	
Total	2.38	2.97	7.16	0.8	0	2.8	488.8	82.7	37.1	70.3	30.8	19.2
Mean	0.077	0.099	0.231	0.03	0	0.09	16.3	2.67	1.24	2.27	0.99	0.64
Ac-ft	4.7	5.9	14	1.6	0	5.6	970	164	74	139	61	38
Calendar year 1964	Max	2.7	Min	0	Mean	0.087	Ac-ft	63				
Water year 1964-65	Max	7.6	Min	0	Mean	2.04	Ac-ft	1,480				

Note.--Discharge Oct. 1, Oct. 4 to Nov. 9, 11, Nov. 14 to Dec. 18 obtained from unpublished records for supplementary gage on outlet channel below dam.

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, on left bank 0.3 mile downstream from Los Laureles Canyon Creek and 13.3 miles east of Santa Ynez, Santa Barbara County.

Drainage area,--277 sq mi.

Records available,--April 1947 to September 1965. 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, datum of 1929.

Extremes,--Maximum discharge during year, 1,080 cfs Apr. 8 (gage height, 6.97 ft); no flow for several months.

1947-65: Maximum discharge, 33,000 cfs Jan. 15, 1952 (gage height, 15.6 ft), from rating curve extended above 6,400 cfs on basis of slope-area measurement of maximum flow for station below Gibraltar Dam; no flow for several months in each year.

Remarks,--Records good. Flow regulated by Jameson Lake and Gibraltar Reservoir (see pp. 230, 231). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Flow affected by intermittent pumping for irrigation and from infiltration gallery in river bed at station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0.3	0.5	0.2	18	19	0.6	0.2		
2		0	0	.3	.5	.3	33	18	.6	.2		
3		0	0	.2	.5	.3	30	16	.6	.2		
4		0	0	.2	.5	.4	57	15	.6	.2		
5		0	0	.2	.6	.4	40	13	.6	.2		
6		0	0	2.4	.6	.4	33	12	.5	.1		
7		0	0	5.0	.5	.5	29	12	.4	.1		
8		0	0	1.6	.4	.5	428	11	.4	.1		
9		.2	0	.8	.5	.4	449	10	.4	0		
10		3.0	0	.7	.5	.4	294	9.5	.4	0		
11		0	0	.6	.4	.4	119	8.9	.4	0		
12		0	0	.6	.4	.4	75	8.3	.4	0		
13		0	0	.6	.4	.4	53	7.7	.4	0		
14		0	0	.6	.4	.4	41	7.1	.4	0		
15		0	0	.6	.4	.4	30	6.5	.4	0		
16		0	0	.6	.3	.4	24	5.5	.3	0		
17		0	0	.6	.3	.4	20	4.6	.2	0		
18		0	0	.7	.3	.5	16	3.8	.1	0		
19		0	9.1	.7	.3	.5	14	3.2	.2	0		
20		0	94	.6	.3	.4	12	2.9	.3	0		
21		0	22	.6	.3	.4	13	2.3	.3	0		
22		0	2.6	.7	.3	.4	27	2.3	.2	0		
23		0	1.0	.7	.3	.4	33	2.0	.1	0		
24		0	.6	.6	.3	.4	18	1.8	0	0		
25		0	.5	.5	.4	.4	20	1.4	0	0		
26		0	.5	.5	.2	.4	25	1.2	0	0		
27		0	.5	.6	.2	.4	27	.8	0	0		
28		0	.5	.6	.1	.4	24	.8	.2	0		
29		0	.4	.6	-----	.4	23	.8	.2	0		
30		0	.4	.6	-----	.4	22	.7	.2	0		
31		-----	.4	.6	-----	7.3	-----	.7	-----	0		
Total	0	3.2	132.5	24.5	10.7	19.3	2,047	208.8	9.4	1.3	0	0
Mean	0	0.11	4.27	0.79	0.38	0.62	68.2	6.74	0.31	0.04	0	0
Ac-ft	0	6.3	263	49	21	38	4,060	414	19	2.6	0	0

Calendar year 1964 Max 94 Min 0 Mean 0.60 Ac-ft 438
 Water year 1964-65 Max 449 Min 0 Mean 6.73 Ac-ft 4,870

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, on right bank 0.6 mile downstream from Pine Canyon and 9.9 miles east of Santa Ynez, Santa Barbara County.

Drainage area.--73.9 sq mi.

Records available.--October 1941 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 786.63 ft above mean sea level (levels by Bureau of Reclamation). Prior to Jan. 22, 1943, at site 1.9 miles downstream at different datum (destroyed by flood). Jan. 22, 1943, to Sept. 26, 1952, at site 1.7 miles downstream at different datum.

Average discharge.--24 years, 12.2 cfs (8,830 acre-ft per year); median of yearly mean discharges, 5.6 cfs (4,100 acre-ft per year).

Extremes.--Maximum discharge during year, 308 cfs Apr. 9 (gage height, 5.16 ft); no flow Oct. 1 to Dec. 19, Aug. 2 to Sept. 30, 1941-65; Maximum discharge, 4,520 cfs Feb. 9, 1962 (gage height, 9.75 ft), from rating curve extended above 2,100 cfs; flood of Jan. 22, 1943 may have exceeded that of Feb. 9, 1962, gage height and discharge not determined; no flow at times in 1953-65.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.7	0	3.3	12
2.8	.2	3.5	22
2.9	1.0	3.7	37
3.0	2.5	4.0	67
3.1	4.7	4.5	145
3.2	7.8		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	5.8	3.7	2.7	16	14	6.4	1.2	0.1	
2			0	4.7	3.7	2.7	21	14	6.2	1.1	0	
3			0	4.0	3.7	2.7	18	14	5.8	.8	0	
4			0	4.0	3.7	2.7	36	13	5.2	.7	0	
5			0	9.7	4.0	3.1	32	12	5.0	.5	0	
6			0	19	5.2	3.1	20	12	4.4	.3	0	
7			0	95	4.4	3.3	18	12	4.4	.3	0	
8			0	34	4.0	3.1	113	12	4.4	.3	0	
9			0	18	3.7	3.1	142	12	4.2	.3	0	
10			0	12	3.5	3.1	98	11	4.2	.3	0	
11			0	9.6	3.5	3.1	60	11	4.0	.3	0	
12			0	8.2	3.5	3.3	45	11	3.7	.3	0	
13			0	7.1	3.3	4.2	35	11	3.3	.2	0	
14			0	6.8	3.3	3.7	32	10	3.3	.2	0	
15			0	6.4	3.1	3.7	39	10	3.3	.2	0	
16			0	6.2	3.1	3.7	80	9.6	3.3	.2	0	
17			0	5.8	3.1	3.3	101	9.2	3.3	.2	0	
18			0	5.6	3.1	3.1	90	8.8	3.3	.2	0	
19			0	5.2	2.9	2.9	90	8.5	2.9	.2	0	
20			51	5.2	2.9	2.7	66	8.5	2.5	.2	0	
21			28	5.0	2.9	2.5	50	8.5	2.3	.2	0	
22			7.4	4.7	2.9	2.3	43	8.5	2.3	.1	0	
23			2.2	4.7	2.9	2.3	35	8.5	2.3	.1	0	
24			.5	6.8	2.9	2.3	29	8.2	2.3	.1	0	
25			.1	5.8	2.9	2.2	26	7.8	2.3	.1	0	
26			.1	5.0	2.9	2.2	21	7.4	2.3	.1	0	
27			34	4.7	2.9	2.2	18	7.1	2.3	.1	0	
28			40	4.4	2.9	2.2	17	5.8	1.9	.1	0	
29			17	4.2	-----	2.0	16	5.6	1.5	.1	0	
30			9.2	4.0	-----	2.0	15	5.6	1.4	.1	0	
31			7.4	3.7	-----	7.2	-----	5.6	-----	.1	0	
Total	0	0	196.9	325.3	94.6	92.7	1,422	302.2	104.0	9.2	0.1	0
Mean	0	0	6.35	10.5	3.38	2.99	47.4	9.75	3.47	0.30	0.003	0
Ac-ft	0	0	391	645	188	184	2,820	599	206	18	0.2	0

Calendar year 1964 Max 67 Min 0 Mean 1.42 Ac-ft 1,030
 Water year 1964-65 Max 142 Min 0 Mean 6.98 Ac-ft 5,050

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-20	1430	4.39	125	4-9	1600	5.16	308
1-7	0130	4.49	143	4-16	2400	4.53	151

11-1255. Lake Cachuma near Santa Ynez, Calif.

Location.--Lat 34°34'57", long 119°58'47", at Cachuma Dam on Santa Ynez River, in Lomas de la Purification Grant, on upstream face near left end of dam, 6.1 miles east of Santa Ynez, Santa Barbara County.

Drainage area.--417 sq mi.

Records available.--November 1952 to September 1965. Prior to October 1960, published as Cachuma Reservoir near Santa Ynez.

Gage.--Staff gage read once daily. Datum of gage is at mean sea level, datum of 1929 (Bureau of Reclamation bench mark).

Extremes.--Maximum contents during year, 141,385 acre-ft Oct. 1 (elevation, 726.88 ft); minimum, 122,308 acre-ft Sept. 30 (elevation, 718.66 ft).

1952-65: Maximum contents, 206,863 acre-ft Apr. 17, 1958 (elevation, 750.64 ft); minimum, since initial filling in April 1958, that of Sept. 30, 1965.

Remarks.--Reservoir is formed by earth-fill 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 1964 to September 1965

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (acre-feet)	Total Diversions (acre-feet)
Sept. 30.....	726.93	141,506	-	-
Oct. 31.....	725.83	138,848	-2,658	1,898
Nov. 30.....	725.62	138,345	-503	396
Dec. 31.....	725.47	137,986	-359	640
Calendar year 1964.....	-	-	-30,588	20,701
Jan. 31.....	725.17	137,268	-718	532
Feb. 28.....	724.73	136,222	-1,046	540
Mar. 31.....	724.04	134,588	-1,634	1,307
Apr. 30.....	726.17	139,666	+5,078	526
May 31.....	725.20	137,340	-2,326	1,347
June 30.....	723.77	133,955	-3,385	2,046
July 31.....	722.12	130,117	-3,838	2,373
Aug. 31.....	720.10	125,518	-4,599	3,082
Sept. 30.....	718.66	122,308	-3,210	2,238
Water year 1964-65.....	-	-	-19,198	16,925

† Elevation at 0845 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 on right bank, 1.1 miles downstream from Cachuma Dam, and 5 miles southeast of Santa Ynez, Santa Barbara County.

Drainage area.--422 sq mi.

Records available.--December 1928 to September 1931, October 1932 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 552.9 ft, datum of 1929. Prior to Oct. 1, 1955, at site 2.1 miles downstream at different datum.

Extremes.--Maximum discharge during year, 190 cfs Apr. 11 (gage height, 2.90 ft); no flow for many days.

1928-31, 1932-65: Maximum discharge, 43,700 cfs Mar. 2, 1938 (gage height, 17.90 ft, site and datum then in use), from rating curve extended above float measurement of 34,100 cfs; no flow at times in some years.

Remarks.--Records good except those for Dec. 22 to Jan. 3, which are poor. Flow regulated by Jameson Lake since December 1930, Gibraltar Reservoir, and Lake Cachuma since November 1952 (see pp. 230, 231, 235). 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	15	6.8	6.5	8.0	46	5.7	0.1	0.1	3.5
2			0	15	8.0	5.3	7.2	25	18	.2	1.3	4.4
3			0	16	12	4.7	7.6	25	19	0	2.6	4.7
4			0	13	12	5.0	7.6	25	19	0	2.8	4.7
5			0	8.0	12	5.0	33	25	20	2.2	3.5	5.0
6			0	8.0	12	4.7	63	25	20	9.2	3.7	3.7
7			0	8.0	12	5.0	64	26	18	11	3.7	.7
8			0	7.6	9.6	8.8	82	25	7.2	11	3.7	.4
9			0	7.6	5.9	7.6	54	22	7.6	11	3.7	.2
10			0	7.6	5.6	7.6	12	22	7.2	12	2.8	0
11			0	10	5.6	7.6	89	18	6.5	12	2.6	0
12			0	15	5.6	7.6	113	5.9	7.2	9.6	2.4	0
13			0	15	5.6	7.6	27	2.4	6.8	4.0	2.4	0
14			0	15	5.6	7.6	26	.4	8.4	4.0	2.4	0
15			0	16	4.7	7.6	56	0	10	4.0	2.4	0
16			0	15	2.6	7.2	86	0	9.2	3.5	4.2	0
17			0	15	2.2	7.2	88	3.8	9.6	3.2	8.0	0
18			0	12	1.9	7.6	82	28	9.2	3.5	8.8	0
19			0	8.4	2.0	7.6	59	33	10	3.7	9.2	0
20			0	8.0	1.5	7.2	58	34	9.6	3.7	8.8	0
21			0	8.0	1.6	7.2	59	34	10	3.7	8.8	0
22			2.0	8.0	3.8	8.8	59	33	11	4.0	8.4	0
23			5.0	8.0	5.6	11	59	28	10	4.0	6.0	0
24			5.0	8.0	6.8	12	59	21	11	4.4	1.0	0
25			5.0	7.2	6.8	12	59	8.4	11	4.7	.6	0
26			5.0	4.2	6.2	12	59	8.4	12	4.4	.7	0
27			5.0	4.0	7.2	12	59	9.2	12	2.2	.2	0
28			10	3.7	6.8	12	59	8.8	8.8	1.0	0	0
29			15	3.7	-----	12	61	8.8	2.4	.1	0	0
30			15	3.7	-----	4.7	64	8.8	.5	1.6	2.5	0
31		-----	15	3.5	-----	8.4	-----	6.8	-----	3	4.2	-----
Total	0	0	82.0	297.2	178.0	247.1	1,619.4	566.7	316.9	138.3	111.5	27.3
Mean	0	0	2.65	9.59	6.36	7.97	54.0	18.3	10.6	4.46	3.60	0.91
Ac-ft	0	0	163	589	353	490	3,210	1,120	629	274	221	54

Calendar year 1964 Max 28 Min 0 Mean 3.42 Ac-ft 2,480
 Water year 1964-65 Max 113 Min 0 Mean 9.82 Ac-ft 7,110

Note.--No gage-height record Dec. 22 to Jan. 3.

11-1265. Santa Agueda Creek near Santa Ynez, Calif.

Location.--Lat 34°35'40", long 120°01'30", in Canada de los Pinos Grant, on left downstream wingwall of highway bridge, 0.8 mile upstream from mouth, and 3.5 miles southeast of Santa Ynez, Santa Barbara County.

Drainage area.--55.8 sq mi.

Records available.--October 1940 to September 1965. 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.--25 years, 3.2⁴ cfs (2,350 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

Extremes.--Maximum discharge during year, 355 cfs Apr. 9 (gage height, 3.00 ft); no flow for most of year.

1940-65: Maximum discharge, 5,760 cfs Feb. 19, 1958 (gage height, 6.14 ft), from rating curve extended above 2,000 cfs; no flow at times in most years.

Remarks.--Records fair. No regulation above station. Small diversions for irrigation above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Jan. 7.....	0.1	Apr. 10.....	14
Apr. 8.....	22	11.....	1.1
9.....	59	12.....	.1

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
January 1965.....	0.1	-	-	0.003	0.2
April.....	96.2	-	-	3.21	191
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	59	0	.26	191

Peak discharge (base, 50 cfs).--Apr. 9 (1730 hrs) 355 cfs (3.00 ft).

Note.--Flow occurred only on days listed above.

SANTA YNEZ RIVER BASIN

11-1280. Santa Ynez River at Grand Avenue, near Santa Ynez, Calif.

Location--Lat 34°35'06", long 120°06'00", in Canada de los Pinos Grant, on downstream side of first pier from right bank of highway bridge, 0.2 mile downstream from Zanja de Cota Creek, and 2.2 miles southwest of Santa Ynez, Santa Barbara County.

Drainage area--513 sq mi.

Records available--October 1954 to September 1965 (discontinued).

Gage--Water-stage recorder. Altitude of gage is 420 ft (from topographic map).

Extremes--Maximum discharge during year, 413 cfs Apr. 9 (gage height, 3.77 ft); no flow for many days.
1954-65: Maximum discharge, about 6,000 cfs Mar. 21, 1958; no flow at times in most years.

Remarks--Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir and Lake Cachuma (see pp. 230, 231, 235). 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.8	1.5	1.5	4.1	10	58	2.0	0.7	0.2	
2		0	.8	1.5	2.0	3.7	10	34	2.2	1.2	.2	
3		0	.7	1.5	2.2	2.5	9.2	28	1.5	.6	.1	
4		0	.7	1.8	2.0	1.5	9.2	26	1.8	.7	.1	
5		0	.8	1.8	3.4	2.2	7.6	26	3.4	1.0	0	
6		0	1.0	1.8	4.9	3.4	32	27	5.7	.4	0	
7		0	1.2	2.0	5.3	3.7	46	26	7.8	.4	0	
8		0	1.2	1.8	6.1	4.1	89	24	7.6	.3	0	
9		0	1.0	1.5	5.7	5.3	139	23	4.1	.2	.1	
10		0	1.0	1.2	4.1	5.7	96	21	3.4	.1	.1	
11		0	1.0	1.3	4.1	6.6	45	19	2.5	.3	.2	
12		0	1.0	1.3	4.1	8.1	151	14	2.2	.4	.1	
13		0	1.2	1.3	4.5	7.6	50	6.1	2.8	.8	0	
14		.1	1.2	1.3	4.5	5.7	38	4.1	4.1	.8	0	
15		.2	1.2	1.3	4.9	5.7	38	3.4	2.5	.8	0	
16		.3	1.2	1.2	4.9	7.1	78	3.4	3.4	.7	0	
17		.3	1.2	1.3	4.9	6.6	84	3.4	2.5	.2	0	
18		.3	1.2	1.3	4.9	8.6	84	2.2	2.2	.2	0	
19		.4	2.0	1.3	4.9	9.8	61	4.1	2.8	.4	0	
20		.4	2.5	1.3	4.5	10	54	10	3.4	.4	0	
21		.4	2.5	1.3	4.9	8.1	53	13	3.7	.4	0	
22		.5	2.2	1.2	4.5	8.1	53	13	2.8	.3	0	
23		.5	2.0	1.5	3.7	6.6	53	14	3.0	.2	.1	
24		.5	1.8	1.3	3.7	6.1	53	12	3.0	.2	0	
25		.6	1.8	1.2	3.7	5.7	53	10	3.4	.4	0	
26		.6	1.8	1.2	3.7	5.7	53	5.7	3.4	.4	0	
27		.6	1.8	1.2	4.5	5.7	53	4.9	3.0	.3	0	
28		.7	1.8	1.2	4.9	7.6	53	3.4	2.8	.3	0	
29		.7	1.5	1.5	-----	8.1	53	2.2	1.8	.2	0	
30		.7	1.5	1.5	-----	7.6	60	2.5	1.2	.3	0	
31		-----	1.5	1.5	-----	12	-----	2.2	-----	.2	0	-----
Total	0	7.8	43.1	43.9	117.0	193.3	1,668.0	445.6	96.0	13.8	1.2	0
Mean	0	0.26	1.39	1.42	4.18	6.24	55.6	14.4	3.20	0.45	0.04	0
Ac-ft	0	15	85	87	232	383	3,310	884	190	27	2.4	0
Calendar year 1964	Max	22	Min	0	Mean	1.54	Ac-ft	1,120				
Water year 1964-65	Max	151	Min	0	Mean	7.20	Ac-ft	5,220				

11-1284, Alisal Creek near Solvang, Calif.

Location (revised).--Lat 34°35'01", long 120°08'37", in Nojoqui Grant, on right bank at footbridge, 0.1 mile upstream from mouth, and 0.9 miles southwest of Solvang, Santa Barbara County.

Drainage area.--12.2 sq mi (revised).

Records available.--October 1954 to September 1955, October 1955 to September 1956 (monthly discharge only), October 1956 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 380 ft (from topographic map). 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.--11 years, 4.99 cfs (3,610 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).

Extremes.--Maximum discharge during year, 307 cfs Apr. 9 (gage height, 3.88 ft); no flow for much of year.

1954-65: Maximum discharge, 2,960 cfs Feb. 9, 1962 (gage height, 8.15 ft), from rating curve extended above 1,000 cfs; no flow for several months in each year.

Remarks.--Records good. No regulation or diversion above station. At times waste irrigation water pumped from Santa Ynez River causes minor flow.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.6	0	2.2	9.0
1.7	.1	2.4	20
1.8	.4	2.8	59
1.9	1.3	3.2	128
2.0	3.1		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0	0.5	0.2	3.3	1.9	0.1			
2		0	0	0	.5	.2	5.5	1.8	.1			
3		0	0	0	.4	.1	5.2	1.6	.1			
4		0	0	0	.4	.2	5.5	1.4	.1			
5		0	0	0	.8	.2	5.2	1.3	.1			
6		0	0	36	.7	.2	5.8	1.2	.1			
7		0	0	36	.5	.2	6.8	1.1	.1			
8		0	0	12	.5	.1	94	1.0	.1			
9		0	0	7.1	.5	.1	124	.9	.1			
10		.1	0	5.2	.4	.1	66	.9	0			
11		0	0	4.1	.5	.1	32	.9	0			
12		0	0	3.3	.4	.1	20	.8	0			
13		0	0	2.5	.4	.2	14	.7	0			
14		0	0	2.1	.5	.1	11	.6	0			
15		0	0	1.8	.4	.1	9.0	.5	0			
16		0	0	1.6	.2	.1	7.7	.5	0			
17		0	0	1.4	.2	.1	6.8	.5	0			
18		0	0	1.3	.2	0	6.4	.5	0			
19		0	0	1.2	.2	0	5.8	.4	0			
20		0	21	1.1	.3	0	5.2	.4	0			
21		0	4.1	1.0	.2	0	4.7	.3	0			
22		0	0	1.0	.1	0	4.4	.3	0			
23		0	0	1.0	.1	0	3.8	.3	0			
24		0	0	1.0	.2	0	3.6	.3	0			
25		0	0	.9	.2	0	3.1	.2	0			
26		0	0	.8	.2	0	2.9	.2	0			
27		0	0	.8	.3	0	2.5	.2	0			
28		0	0	.8	.2	0	2.3	.1	0			
29		0	0	.8	-----	0	2.1	.1	0			
30		0	0	.6	-----	0	1.9	.1	0			
31		-----	0	.6	-----	6.3	-----	.1	-----			
Total	0	0.1	25.1	126.0	10.0	8.7	470.5	21.1	0.9	0	0	0
Mean	0	0.003	0.81	4.06	0.36	0.28	15.7	0.68	0.03	0	0	0
Ac-ft	0	0.2	50	250	20	17	933	42	1.8	0	0	0

Calendar year 1964 Max 21 Min 0 Mean 0.16 Ac-ft 119
 Water year 1964-65 Max 124 Min 0 Mean 1.81 Ac-ft 1,310

Peak discharge (base, 100 cfs)--Jan. 6 (1900 hrs) 139 cfs (3.25 ft); Apr. 9 (1600 hrs) 307 cfs (3.88 ft).

SANTA YNEZ RIVER BASIN

11-1285. Santa Ynez River at Solvang, Calif.

Location.--Lat 34°35'05", long 120°08'35", in San Carlos de Jonata Grant, on downstream side of right abutment of Mission Bridge, 25 ft downstream from Alisal Creek, and 0.9 mile south of Solvang, Santa Barbara County.

Drainage area.--579 sq mi.

Records available.--October 1928 to November 1936, June 1937 to November 1940 (irrigation seasons only), October 1946 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 350 ft (from topographic map). 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 Jan. 26, 1955, water-stage recorder on center bridge pier at same datum.

Extremes.--Maximum discharge during year, 402 cfs Apr. 9 (gage height, 5.58 ft); no flow for much of year. 1928-36, 1946-65: Maximum discharge, 37,000 cfs Jan. 15, 1952 (gage height, 14.80 ft, datum then in use), from rating curve extended above 10,000 cfs; no flow for several months in many years.

Remarks.--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (see pp. 230, 231, 235). 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0	0	2.0	2.8	16	50	1.6	0.3		
2	0	0	0	0	1.8	2.6	20	33	1.5	0		
3	0	0	0	0	1.9	1.9	20	27	1.1	0		
4	0	0	0	0	2.0	2.4	20	23	.5	0		
5	0	0	0	0	3.2	2.6	20	21	.5	0		
6	0	0	0	16	4.4	3.4	30	20	3.0	0		
7	0	0	0	31	4.4	3.9	52	19	7.1	0		
8	0	0	0	12	5.3	3.9	166	19	10	0		
9	0	.1	0	7.1	5.6	3.9	245	18	6.8	0		
10	0	.2	0	4.7	5.0	4.7	196	16	4.7	0		
11	0	0	0	3.4	4.2	5.0	85	16	3.6	0		
12	0	0	0	2.8	4.4	5.8	152	14	1.8	0		
13	0	0	0	2.2	4.4	6.8	79	9.6	1.1	0		
14	0	0	0	1.9	4.4	6.1	52	7.1	2.2	0		
15	0	0	0	1.5	4.4	6.1	43	5.8	2.4	0		
16	0	0	0	1.2	4.2	6.8	70	4.7	1.5	0		
17	0	0	0	1.1	3.9	6.8	76	4.4	1.8	0		
18	0	0	0	.9	3.4	7.1	78	4.4	1.9	0		
19	0	0	0	.9	3.4	7.5	65	3.9	1.3	0		
20	0	0	5.7	.9	3.2	7.8	60	6.1	1.5	0		
21	0	0	.8	.9	3.0	7.5	59	10	2.2	0		
22	0	0	0	1.1	2.8	7.1	59	13	2.0	0		
23	0	0	0	1.2	2.6	6.8	59	13	1.9	0		
24	0	0	0	1.5	2.6	6.1	58	12	1.9	0		
25	0	0	0	1.6	2.4	6.8	58	10	1.6	0		
26	0	0	0	1.8	2.6	5.3	57	6.1	1.9	0		
27	0	0	0	2.0	2.6	6.1	54	3.6	1.6	0		
28	0	0	0	2.2	3.0	7.1	51	2.6	1.8	0		
29	.1	0	0	2.2	-----	8.2	49	1.8	1.3	0		
30	0	0	0	2.2	-----	8.2	51	2.0	.6	0		
31	0	-----	0	2.4	-----	19	-----	1.5	-----	0		-----
Total	0.1	0.3	6.5	106.7	97.1	186.1	2,100	397.6	72.7	0.3	0	0
Mean	0.003	0.01	0.21	3.44	3.47	6.00	70.0	12.8	2.42	0.01	0	0
Ac-ft	0.2	0.6	13	212	193	359	4,170	789	144	0.6	0	0
Calendar year 1964	Max	25	Min	0	Mean	1.32	Ac-ft	960				
Water year 1964-65	Max	245	Min	0	Mean	8.13	Ac-ft	5,890				

11-1298, Zaca Creek near Buellton, Calif.

Location--Lat 34°38'55", long 120°11'00", in San Carlos de Jonata Grant, 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, Santa Barbara County.

Drainage area--32.8 sq mi.

Records available--September 1963 to September 1965.

Gage--Water-stage recorder. Datum of gage is 471.54 ft above mean sea level.

Extremes--1963-64: Maximum discharge during water year, 7.7 cfs Nov. 19 (gage height, 2.46 ft) from rating curve extended as explained below; no flow for most of year.

1963-65: Maximum discharge, 8.0 cfs Nov. 12, 1964 (gage height, 2.48 ft) from rating curve extended above 2.6 cfs; no flow for most of each year.

Remarks--Records good. Some regulation by Zaca Lake. Some pumping from wells along stream for irrigation above station.

Discharge, in cubic feet per second, water years October 1963 to September 1965

Nov. 19, 1963.....	0.4	Jan. 7, 1965.....	0.1
20 .....	.2	Apr. 8 .....	.7
Jan. 22, 1964.....	.1	9 .....	.6
Nov. 12 .....	.5	10 .....	.2
Dec. 31 .....	.2		

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
November 1963.....	0.6	-	-	0.02	1.2
January 1964.....	.1	-	-	.003	.2
Calendar year 1963.....	-	-	-	-	-
Water year 1963-64.....	-	0.4	0	.002	1.4
November 1964.....	.5	-	-	.02	1.0
December.....	.2	-	-	.006	.4
January 1965.....	.1	-	-	.003	.2
April.....	1.5	-	-	.05	3.0
Calendar year 1964.....	-	.5	0	.002	1.6
Water year 1964-65.....	-	.7	0	.006	4.6

Note--Flow occurred only on days listed above.

SANTA YNEZ RIVER BASIN

11-1305. Santa Ynez River near Buellton, Calif.

Location.--Lat 34°36'50", long 120°14'30", in Santa Rosa Grant, on left bank 0.5 mile downstream from Canada de los Palos Blancos and 3 miles west of Buellton, Santa Barbara County.

Drainage area.--668 sq mi.

Records available.---June 1948 to September 1952 (irrigation seasons only); October 1952 to September 1965.

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.

Extremes.--Maximum discharge during year, 422 cfs Apr. 9 (gage height, 6.24 ft); no flow Oct. 1 to Dec. 3, July 1 to Sept. 30. 1952-65: Maximum discharge, 10,600 cfs Mar. 22, 1958 (gage height, 11.10 ft, present datum), from rating curve extended above 400 cfs on basis of maximum flows for station at Buellton; no flow for many days in each year.

Remarks.--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (see pp. 230, 231, 235). 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 pumped from wells along banks of river for irrigation in valley upstream. Records of sediment data for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	1.0	1.2	1.3	1.3	51	1.1			
2			0	1.0	1.2	1.1	1.4	45	1.1			
3			0	1.0	1.2	1.0	1.3	34	1.0			
4			0.1	1.1	1.1	.8	1.4	30	.8			
5			.1	1.0	1.2	1.0	1.4	25	.3			
6			.1	1.1	1.2	1.1	1.4	24	.2			
7			.2	1.1	1.2	1.1	1.4	23	.4			
8			.2	1.1	1.1	1.2	44	22	.4			
9			.2	1.1	1.2	1.2	244	18	.4			
10			.2	1.1	1.2	1.1	246	17	.5			
11			.3	1.1	1.3	1.1	96	16	.6			
12			.4	1.1	1.4	1.2	116	15	.5			
13			.4	1.1	1.4	1.2	94	11	.5			
14			.5	1.1	1.4	1.2	61	8.6	.5			
15			.5	1.1	1.4	1.3	48	6.3	.5			
16			.6	1.1	1.4	1.3	61	5.3	.5			
17			.6	1.0	1.4	1.3	78	4.6	.4			
18			.6	1.0	1.4	1.3	82	3.9	.4			
19			.8	1.0	1.4	1.4	77	2.9	.4			
20			.8	1.0	1.4	1.4	65	2.0	.4			
21			.8	1.0	1.4	1.4	63	1.6	.3			
22			.7	1.0	1.3	1.4	60	1.9	.3			
23			.8	1.1	1.3	1.5	59	1.9	.4			
24			.8	1.1	1.3	1.4	57	1.8	.5			
25			.8	1.0	1.3	1.4	57	1.8	.4			
26			.8	1.0	1.3	1.3	56	1.6	.3			
27			1.0	1.2	1.2	1.2	52	1.4	.3			
28			1.0	1.2	1.2	1.1	50	1.4	.3			
29			1.0	1.2	-----	1.1	48	1.3	.5			
30			1.1	1.2	-----	1.0	48	1.3	.2			
31			1.1	1.2	-----	1.4	-----	1.2	-----			
Total	0	0	16.5	33.4	36.0	37.8	1871.6	381.8	14.4	0	0	0
Mean	0	0	0.53	1.08	1.29	1.22	62.4	12.3	0.48	0	0	0
Ac-ft	0	0	33	66	71	75	3,710	757	29	0	0	0

Calendar year 1964 Max 4.0 Min 0 Mean 0.77 Ac-ft 558
 Water year 1964-65 Max 246 Min 0 Mean 6.55 Ac-ft 4,740

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, on right bank 0.6 mile upstream from Canada de la Vina, and 6 miles east of Lompoc, Santa Barbara County.

Drainage area.--708 sq mi.

Records available.--October 1954 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 200 ft (from topographic map).

Extremes.--Maximum discharge during year, 400 cfs Apr. 10 (gage height, 3.46 ft); no flow for several months.

1954-65: Maximum discharge, 6,260 cfs Mar. 22, 1958 (gage height, 8.44 ft); maximum stage, 8.75 ft Feb. 11, 1962; no flow for several months in some years.

Remarks.--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see pp.230, 231, 235). 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 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1			0	0.1	0.2	0.1	0	71	1.3	0.5	0.2	0
2			0	.2	.1	.1	.1	74	1.3	.5	.2	0
3			0	.2	.1	.1	.1	60	1.2	.5	.2	0
4			0	.2	.2	.1	.1	49	.8	.5	.2	0
5			0	.2	.2	.1	.1	41	.9	.5	.2	0
6			0	.2	.2	.1	.1	34	.8	.4	.2	0
7			0	.2	.1	.1	.1	29	1.0	.4	.2	.1
8			0	.1	.1	.1	.1	30	.9	.4	.2	0
9			.1	.1	.2	.1	13	27	.9	.4	.2	.1
10			.1	.1	.1	.1	306	24	.7	.4	.2	.1
11			.1	.1	.1	.1	127	20	.6	.4	.2	.1
12			0	.1	.1	0	108	19	.6	.4	.2	.1
13			0	.1	.1	0	122	15	.6	.4	.2	.1
14			0	.1	.1	0	69	11	.6	.4	.2	.1
15			0	.1	.1	0	52	8.7	.6	.4	.1	.1
16			.1	.1	.1	0	48	6.8	.6	.4	.2	.1
17			0	.1	.1	0	74	5.8	.6	.4	.2	.1
18			0	.1	.1	0	87	4.4	.6	.4	.1	.1
19			.1	.1	.1	0	91	3.6	.6	.4	.1	.1
20			0	.1	.1	0	69	3.2	.6	.4	.1	.1
21			0	.1	.1	0	64	3.0	.6	.4	.1	.1
22			0	.1	.1	0	63	2.5	.6	.4	.1	.1
23			.1	.1	.1	0	60	2.3	.5	.4	.1	.1
24			.1	.1	.1	0	58	2.5	.5	.4	.1	.1
25			0	.1	.1	0	60	1.8	.5	.3	.1	.1
26			.1	.1	.1	0	64	1.6	.4	.3	.1	.1
27			.1	.1	.1	0	61	1.6	.3	.3	.1	.1
28			.1	.2	.1	0	64	1.6	.5	.3	.1	.1
29			.1	.2	-----	0	67	1.6	.5	.2	.1	.1
30			.1	.2	-----	0	66	1.4	.5	.2	0	.1
31			.2	.2	-----	.1	-----	1.3	-----	.2	0	-----
TOTAL	0	0	1.4	4.1	3.3	1.2	1,793.7	557.7	20.7	11.9	4.5	2.3
MEAN	0	0	0.05	0.13	0.12	0.04	59.8	18.0	0.69	0.38	0.15	0.08
AC-FT	0	0	2.8	8.1	6.5	2.4	3,560	1,110	41	24	8.9	4.6
CALENDAR YEAR 1964	MAX		0.70	MIN		0	MEAN	0.10	AC-FT		68	
WATER YEAR 1964-65	MAX		306	MIN		0	MEAN	6.58	AC-FT		4,770	

11-1325. Salsipuedes Creek near Lompoc, Calif.

Location.--Lat 34°35'20", long 120°24'27", in W $\frac{1}{2}$ sec. 24, T.6 N., R.34 W., on right bank at highway 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.

Records available.--January 1941 to September 1965.

Gage.--Water-stage recorder (digital) and concrete low-water control. Altitude of gage is 240 ft (from topographic map).

Average discharge.--24 years, 8.08 cfs (5,850 acre-ft per year); median of yearly mean discharges, 3.0 cfs (2,200 acre-ft per year).

Extremes.--Maximum discharge during year, 1,060 cfs Apr. 9 (gage height, 4.97 ft); no flow Sept. 12-30.

1941-65: Maximum discharge, 11,400 cfs Mar. 15, 1952 (gage height, 20.8 ft); no flow at times in some years.

Remarks.--Records good except those for July 29 to Aug. 16, which are fair. No regulation above station. Small diversions for irrigation above station. Records of sediment data for the water year 1965 are published in part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 11 to Jan. 4, May 5-20, Sept. 12-30)

1.0	0	1.6	24
1.1	0.3	1.8	43
1.2	1.6	2.0	67
1.3	4.9	2.5	158
1.4	10	3.0	274
1.5	16		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.1	0.2	0.6	1.8	2.5	2.8	4.6	2.7	1.2	0.5	0.2	0.2
2	.1	.2	.5	.5	2.4	3.0	12	2.3	1.2	.5	.2	.1
3	.1	.2	.6	.3	2.5	3.0	7.0	2.2	1.0	.5	.2	.1
4	.1	.2	.6	.3	2.3	4.1	5.3	2.2	1.0	.4	.2	.1
5	.1	.2	.6	30	4.3	5.9	3.9	2.0	.9	.4	.2	.1
6	.1	.2	.6	120	4.5	7.0	5.9	1.8	.9	.4	.2	.1
7	.1	.2	.6	44	3.3	3.6	7.0	1.7	.9	.4	.2	.1
8	.1	.3	.6	16	2.4	1.3	144	1.8	.9	.4	.2	.2
9	.1	.8	.6	11	2.3	1.0	264	1.4	.8	.5	.2	.1
10	.1	6.4	.7	7.8	1.9	.9	84	1.3	.7	.4	.2	.1
11	.1	1.4	.7	6.6	1.9	.9	68	1.2	.6	.4	.2	.1
12	.1	.8	.7	5.9	1.9	1.0	36	1.1	.6	.4	.2	0
13	.1	.4	.5	5.0	2.1	1.4	15	1.3	.5	.4	.2	0
14	.1	.3	.5	4.0	1.9	1.5	11	1.3	.5	.4	.2	0
15	.1	.3	.6	4.0	1.9	1.5	9.0	1.4	.4	.4	.2	0
16	.1	.2	.6	3.7	1.9	1.6	7.7	1.5	.5	.4	.2	0
17	.1	.4	.6	3.4	1.8	1.6	6.8	1.4	.5	.4	.2	0
18	.1	.4	.7	3.3	1.6	1.6	6.0	1.4	.5	.3	.3	0
19	.1	.4	9.4	3.0	1.6	1.6	5.5	1.4	.6	.3	.3	0
20	.1	.5	22	3.0	1.7	1.2	4.9	1.4	.6	.3	.4	0
21	.1	.4	7.7	3.0	1.9	1.2	4.9	1.3	.8	.3	.3	0
22	.1	.4	.9	3.0	1.6	1.2	4.1	1.2	1.1	.3	.3	0
23	.1	.6	.3	3.0	1.5	1.3	3.9	1.2	1.0	.3	.3	0
24	.1	.6	.2	3.7	1.4	1.4	3.6	1.4	1.1	.3	.3	0
25	.1	.6	.1	2.5	1.5	1.4	3.4	1.2	1.0	.3	.3	0
26	.1	.6	.1	2.2	1.6	1.4	2.9	1.2	1.0	.3	.3	0
27	.1	.6	3.7	2.4	2.0	1.2	2.6	1.2	.7	.2	.2	0
28	.3	.6	2.7	2.7	1.9	1.2	2.7	1.1	.4	.2	.2	0
29	.5	.6	.7	3.6	-----	1.3	2.5	1.0	.5	.2	.1	0
30	.2	.6	9.1	3.4	-----	1.3	2.5	1.1	.5	.2	.1	0
31	.2	-----	6.0	3.0	-----	20	-----	1.2	-----	.2	.1	-----
TOTAL	3.9	19.6	73.8	306.1	60.1	79.4	740.7	45.9	22.9	10.9	6.9	1.3
MEAN	0.13	0.65	2.38	9.87	2.15	2.56	24.7	1.48	0.76	0.35	0.22	0.04
AC-FT	7.7	39	146	607	119	154	1,470	91	45	22	14	26

CALENDAR YEAR 1964 MAX 22 MIN 0 MEAN 1.12 AC-FT 810
WATER YEAR 1964-65 MAX 264 MIN 0 MEAN 3.76 AC-FT 2,710

Peak discharge (base, 100 cfs).--Jan. 6 (1815 hrs) 346 cfs (3.24 ft); Apr. 9 (1615 hrs) 1,060 cfs (4.97 ft).

11-1330. Santa Ynez River at narrows, near Lompoc, Calif.

Location (revised).--Lat 34°38'21", long 120°25'39", in Canada de Salsipuedes Grant, on left bank 0.4 mile upstream from State Highway 150, 1.9 miles east of Lompoc, Santa Barbara County, and 2.1 miles downstream from Salsipuedes Creek.

Drainage area.--789 sq mi.

Records available.--April 1947 to September 1952 (irrigation seasons only); October 1952 to September 1963, October 1964 to September 1965.

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 2.00 ft higher, and Feb. 11, 1962, to Sept. 30, 1965, at same datum.

Extremes.--Maximum discharge during year, 782 cfs Apr. 9 (gage height, 4.67 ft); no flow Oct. 1 to Dec. 30, Aug. 17 to Sept. 30. 1952-63, 1964-65: Maximum discharge, 8,560 cfs Feb. 11, 1962 (gage height, 10.80 ft); no flow at times in each year.

Remarks.--Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir and since November 1952 by Lake Cachuma (see pp. 230, 231, 235). 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	2.0	1.2	1.2	13	39	1.0	0.4	0.1	
2			0	.5	1.2	1.2	11	39	.9	.4	.1	
3			0	.5	1.2	1.0	15	39	.9	.4	.1	
4			0	.5	1.2	1.0	7.8	34	.9	.4	.1	
5			0	10	2.1	1.3	7.0	30	.9	.4	.1	
6			0	75	2.1	1.9	6.6	26	.9	.4	.1	
7			0	70	2.1	2.1	14	24	.9	.4	.1	
8			0	16	1.9	2.3	149	22	.9	.3	.1	
9			0	9.0	1.9	2.1	224	22	.9	.3	.1	
10			0	7.4	1.7	2.1	170	22	.9	.3	.1	
11			0	4.8	1.5	2.1	143	21	.8	.3	.1	
12			0	3.6	1.3	2.1	74	21	.8	.3	.1	
13			0	3.0	1.3	2.1	79	21	.8	.3	.1	
14			0	2.5	1.3	1.7	64	18	.8	.3	.1	
15			0	2.3	1.3	1.2	46	15	.8	.3	.1	
16			0	2.3	1.2	1.2	39	13	.6	.3	.1	
17			0	2.1	1.2	1.2	40	8.2	.6	.3	0	
18			0	2.1	1.2	1.2	52	5.8	.6	.3	0	
19			0	2.1	1.2	1.2	56	4.2	.6	.2	0	
20			0	1.9	1.2	1.2	56	3.0	.6	.2	0	
21			0	1.9	1.2	1.2	49	2.5	.6	.2	0	
22			0	1.7	1.2	1.0	48	1.7	.5	.2	0	
23			0	1.7	1.2	.9	47	1.5	.5	.2	0	
24			0	1.9	1.2	.9	46	1.5	.5	.2	0	
25			0	1.7	1.2	.9	45	1.3	.4	.2	0	
26			0	1.5	1.2	.9	44	1.2	.4	.2	0	
27			0	1.5	1.2	1.8	42	1.2	.4	.1	0	
28			0	1.3	1.2	1.3	41	1.2	.4	.1	0	
29			0	1.2	-----	1.3	40	1.2	.4	.1	0	
30			0	2.6	-----	1.2	39	1.2	.4	.1	0	
31			4.0	1.0	-----	7.2	-----	1.2	-----	.1	0	-----
Total	0	0	4.0	235.6	38.9	50.0	1707.4	442.9	20.6	8.2	1.6	0
Mean	0	0	0.13	7.60	1.39	1.61	56.9	14.3	0.69	0.26	0.05	0
Ac-ft	0	0	7.9	467	77	99	3,390	878	41	16	3.2	0
Calendar year 1964	Max	-	Min	-	Mean	-	Ac-ft	-				
Water year 1964-65	Max	224	Min	0	Mean	6.87	Ac-ft	4,980				

SANTA YNEZ RIVER BASIN

11-1345. Santa Ynez River at 13th Street, near Lompoc, Calif.

Location--Lat 34°40'06", long 120°28'29", in Lompoc Grant, on right bank at 13th Street crossing, 2.3 miles northwest of Lompoc, Santa Barbara County.

Drainage area--820 sq mi.

Records available--October 1954 to September 1965.

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. Prior to Oct. 1, 1962, at datum 1.00 ft higher.

Extremes--Maximum discharge during year, 612 cfs Apr. 9 (gage height, 3.03 ft); no flow for most of year.

1954-65: Maximum discharge, 6,670 cfs Feb. 11, 1962 (gage height, 8.92 ft, present datum), from rating curve extended above 500 cfs on basis of measurements at station at H Street one mile upstream; no flow for several months in each year.

Remarks--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see pp. 230, 231, 235).

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.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.5	0	1.1	8.1
.6	.1	1.4	25
.7	.4	1.6	45
.8	1.2	1.8	72
.9	2.6	2.1	135
1.0	5.0	2.5	275

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	13				
2							0	14				
3							0	15				
4							0	12				
5							0	7.7				
6							0	4.4				
7							0	2.2				
8							10	.8				
9							139	.4				
10							154	0				
11							136	0				
12							66	0				
13							47	0				
14							49	0				
15							20	0				
16							10	0				
17							7.4	0				
18							17	0				
19							24	0				
20							24	0				
21							20	0				
22							20	0				
23							20	0				
24							19	0				
25							18	0				
26							16	0				
27							16	0				
28							15	0				
29							14	0				
30							13	0				
31								0				
Total	0	0	0	0	0	0	874.4	69.5	0	0	0	0
Mean	0	0	0	0	0	0	29.1	2.24	0	0	0	0
Ac-ft	0	0	0	0	0	0	1,730	138	0	0	0	0
Calendar year 1964	Max	0	Min	0	Mean	0	Ac-ft	0				
Water year 1964-65	Max	154	Min	0	Mean	2.59	Ac-ft	1,870				

11-1350. Santa Ynez River at Pine Canyon, near Lompoc, Calif.

Location.--Lat 34°40'20", long 120°29'30", in Lompoc Grant, on right bank at Floradale Avenue bridge crossing, 2.1 miles upstream from Santa Lucia Creek, and 3 miles northwest of Lompoc, Santa Barbara County.

Drainage area.--832 sq mi.

Records available.--May 1941 to October 1946, August 1964 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 55 ft (from topographic map). Prior to Aug. 24, 1964, at different datum.

Extremes.--1964: Maximum discharge during period August to September, 4.4 cfs Aug. 26 (gage height, 1.72 ft); minimum daily, 1.7 cfs Sept. 29.

1964-65: Maximum discharge during year, 606 cfs Apr. 9 (gage height, 6.34 ft); minimum daily, 0.9 cfs Oct. 30.

1941-46, 1964-65: Maximum discharge, 32,000 cfs (based on station near Lompoc) Jan. 23, 1943 (gage height, 21.0 ft, datum then in use, from highwater marks); no flow at times July to October 1946.

Remarks.--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see pp. 230, 231, 235). 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, period August to September 1964

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	2.6	7	-	2.6	13	-	2.5	19	-	2.5	25	2.6	2.3
2	-	2.6	8	-	2.9	14	-	2.6	20	-	2.4	26	3.0	2.2
3	-	2.8	9	-	2.9	15	-	2.6	21	-	2.4	27	2.9	2.0
4	-	2.8	10	-	2.6	16	-	2.6	22	-	2.4	28	3.0	1.9
5	-	2.6	11	-	2.6	17	-	2.5	23	-	2.4	29	2.6	1.7
6	-	2.5	12	-	2.5	18	-	2.5	24	1.2	2.3	30	2.5	1.8
												31	2.6	-
Total.....													-	73.6
Mean.....													-	2.45
Ac-ft.....													-	146

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	1.3	2.0	2.2	2.0	1.6	2.4	11	1.6	2.4	2.7	2.7
2	1.9	1.4	2.0	2.2	2.0	2.2	5.4	12	1.6	2.0	3.2	1.8
3	1.9	1.3	2.2	2.2	1.9	2.5	3.6	13	1.6	2.3	3.1	2.6
4	1.9	1.3	2.3	2.9	1.8	3.0	3.3	11	1.2	2.0	3.2	2.4
5	1.7	1.3	2.2	6.3	3.3	2.9	2.9	7.8	1.5	2.3	3.2	2.2
6	1.6	1.4	2.2	11	2.8	6.7	5.0	5.8	1.4	2.5	3.3	2.4
7	1.7	1.5	2.4	9.4	1.9	2.5	3.2	4.4	1.5	2.4	3.2	2.6
8	1.6	3.8	2.4	3.9	2.2	2.8	5.3	3.3	1.5	2.4	2.8	2.5
9	1.7	4.0	2.4	3.2	2.0	2.6	11.3	2.9	1.6	2.5	3.6	2.5
10	1.6	9.7	2.4	2.8	2.1	2.6	21.0	3.1	2.2	2.5	3.6	2.6
11	1.7	3.1	2.4	3.0	2.1	2.6	16.3	3.2	2.6	2.5	3.7	2.4
12	1.7	5.6	2.3	2.5	2.1	2.8	6.2	3.0	2.4	2.8	3.8	2.5
13	1.8	1.3	2.3	2.8	2.1	3.6	3.7	3.1	2.4	2.7	3.3	2.7
14	1.6	1.2	2.5	2.8	2.1	2.5	4.4	3.2	2.6	2.7	3.6	2.7
15	1.5	1.3	2.4	2.8	2.4	2.9	2.0	3.5	2.8	2.8	3.5	2.7
16	1.6	1.4	2.5	3.2	2.2	2.6	9.9	3.5	2.8	2.8	3.9	2.7
17	1.5	1.5	2.5	3.2	2.5	2.8	5.7	3.6	2.8	2.8	3.6	2.7
18	1.5	1.5	2.4	3.2	2.5	2.6	11	3.5	2.7	2.6	3.7	2.6
19	1.5	1.5	5.1	2.8	2.5	2.6	15	3.6	2.6	2.9	3.5	2.6
20	1.3	1.7	2.2	2.5	2.5	2.6	18	3.7	2.4	2.9	3.5	3.0
21	1.5	1.7	2.5	2.4	2.1	2.5	15	3.3	2.7	2.8	3.3	3.0
22	1.5	1.7	2.4	1.8	2.5	2.8	14	3.3	2.6	2.9	3.2	2.9
23	1.4	1.7	3.9	1.7	2.4	2.5	14	3.2	2.4	2.9	3.5	2.9
24	1.5	1.8	3.9	1.7	2.4	2.5	15	3.3	2.3	2.8	3.3	2.9
25	1.5	1.9	2.4	1.6	1.3	2.6	14	2.8	2.4	2.5	3.2	2.8
26	1.6	1.7	2.4	1.5	2.0	2.5	13	2.9	2.3	2.9	3.1	2.7
27	1.6	1.9	4.7	2.0	1.8	2.4	14	2.0	2.3	2.9	3.0	3.1
28	2.7	1.8	4.7	2.0	1.1	2.5	13	2.3	2.6	2.7	2.8	3.0
29	4.0	2.0	3.6	2.0	-----	2.6	12	2.2	2.5	2.3	2.5	2.9
30	.9	2.2	9.6	2.0	-----	2.5	11	1.0	2.3	3.2	2.8	3.0
31	1.1	-----	6.1	2.0	-----	6.0	-----	1.5	-----	3.0	2.6	-----
Total	52.4	65.5	95.3	95.6	60.6	88.4	922.4	136.0	66.2	81.7	101.3	80.1
Mean	1.69	2.18	3.07	3.08	2.16	2.85	30.7	4.39	2.21	2.64	3.27	2.67
Ac-ft	104	130	189	190	120	175	1830	270	131	162	201	159

Calendar year 1964 Max - Min - Mean - Ac-ft -
 Water year 1964-65 Max 210 Min 0.9 Mean 5.06 Ac-ft 3,660

11-1355. Santa Ynez River at barrier, near Surf, Calif.

Location.--Lat 34°41'20", long 120°35'05", in Lompoc Grant, on upstream side at center of salt-water barrier, 1.0 mile upstream from mouth, and 1.2 miles east of Surf, Santa Barbara County.

Drainage area.--895 sq mi.

Records available.--October 1946, April 1947 to September 1965 (discontinued). Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder and compound broad-crested weir. Datum of gage is 5.5 ft above mean sea level, datum of 1929.

Average discharge.--18 years (1947-65), 42.9 cfs (31,060 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,400 acre-ft per year).

Extremes.--Maximum discharge during year, 250 cfs Apr. 10 (gage height 2.05 ft); no flow for much of year.

1947-65: Maximum discharge, 36,000 cfs Jan. 16, 1952 (gage height, 6.50 ft, from rating curve extended above 200 cfs on basis of weir formula; no flow for several months in each year.

Remarks.--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (see pp. 230, 231, 235). 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 pumped from wells along banks of river for irrigation in valley upstream. Flow from Arguello drainage ditch bypasses station; this flow amounted to 177 acre-ft during water year. Average discharge represents flow to the ocean, regardless of upstream development.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	2.9		0	1.2	7.3	0.2	0.1	0.1	
2			0	3.0		0	1.6	7.1	.1	.2	0	
3		0	.1	3.0		0	2.2	7.3	.1	.3	0	
4		0	0	2.6		0	2.6	7.5	.1	.3	0	
5		0	0	.3		0	2.6	7.3	.1	.2	0	
6		0	0	.2		0	2.9	5.5	.1	.1	0	
7		0	0	.2		0	3.2	3.9	.1	.1	0	
8		0	0	.2		0	8.0	3.1	.1	.1	0	
9		0	0	.1		0	30	2.3	.1	.1	0	
10		.1	0	.1		0	150	1.7	.1	.1	0	
11		.1	0	.1		0	108	1.4	.1	.1	0	
12		.6	0	.1		0	62	1.2	.1	.1	0	
13		1.0	0	.1		0	29	1.0	.1	.1	0	
14		.4	0	0		0	20	.9	.1	.1	0	
15		.3	0	0		0	17	.7	.1	.1	0	
16		.1	0	0		0	12	.5	.1	.1	0	
17		0	0	0		0	7.6	.5	.1	.1	0	
18		0	0	0		.1	4.8	.4	.1	.1	0	
19		0	0	0		0	4.3	.4	.1	.1	0	
20		0	.1	0		0	5.8	.4	.1	.1	0	
21		0	.1	0		0	6.8	.4	.1	.1	0	
22		0	.1	0		0	7.1	.4	.2	.1	0	
23		0	.3	0		.1	7.5	.5	.3	0	0	
24		0	.7	0		.1	7.6	.5	.4	0	0	
25		0	.8	0		.1	7.8	.5	.3	0	0	
26		0	.8	0		0	7.8	.5	.3	0	0	
27		0	1.0	0		0	7.6	.5	.2	.1	0	
28		0	1.2	0		.4	7.6	.5	.1	.2	0	
29		0	2.7	0		.4	7.6	.5	.1	.1	0	
30		0	3.2	0		.4	7.5	.5	.1	.1	0	
31		-----	2.8	0		.8	-----	.3	-----	.1	0	-----
Total	0	2.6	13.9	12.9	0	2.4	549.7	65.5	4.2	3.4	0.1	0
Mean	0	0.09	0.45	0.42	0	0.08	18.3	2.11	0.14	0.11	0.003	0
Ac-ft	0	5.2	28	26	0	4.8	1,090	130	8.3	6.7	0.2	0
(\bar{x})	5.0	9.5	20	26	18	18	42	33	5.8	-	-	-

Calendar year 1964: Max 3.9 Min 0 Mean 0.14 Ac-ft 99
 Water year 1964-65: Max 150 Min 0 Mean 1.79 Ac-ft 1,300

†Discharge, in acre-feet, from Arguello drainage ditch; this is not included in discharge that passes station.
 Note.--On June 8 ditch was opened to river and no longer will be accounted for.

11-1361. San Antonio Creek near Casmalia, Calif.

Location.--Lat $34^{\circ}46'56''$, long $120^{\circ}31'47''$, in Jesus Maria Grant, 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, Santa Barbara County.

Drainage area.--135 sq mi.

Records available.--October 1955 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 160 ft (from topographic map). Prior to June 27, 1958, at datum 2.00 ft higher.

Average discharge.--10 years, 6.04 cfs (4,370 acre-ft per year); median of yearly mean discharges, 3.0 cfs (2,200 acre-ft per year).

Extremes.--Maximum discharge during year, 88 cfs Apr. 10 (gage height, 4.38 ft); minimum daily, 0.2 cfs Aug. 24, 25.
1955-65: Maximum discharge, 1,300 cfs Feb. 19, 1962 (gage height, 9.35 ft); minimum daily, 0.1 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 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.7	1.1	2.5	5.7	4.0	2.9	4.9	1.6	1.0	0.7	0.6	0.5
2	.7	1.8	2.7	5.2	4.1	2.7	6.6	1.5	1.1	.6	.6	.6
3	.6	1.1	2.7	5.7	6.2	2.6	8.2	1.5	1.0	.6	.6	.6
4	.5	.9	2.4	5.8	7.5	2.5	7.0	1.4	1.0	.6	.6	.6
5	.5	.8	2.3	6.2	8.5	4.2	6.1	1.4	1.0	.6	.6	.6
6	.5	.7	2.3	6.6	7.5	7.9	6.0	1.4	1.1	.6	.6	.6
7	.8	.7	2.3	7.4	5.8	6.7	6.7	1.3	1.1	.6	.6	.6
8	.7	.8	2.6	6.1	4.2	4.2	34	1.3	1.0	.6	.5	.6
9	.7	3.8	2.8	5.5	4.0	3.4	40	1.4	1.0	.6	.5	.6
10	.7	12	2.8	4.9	6.1	3.2	50	1.4	.9	.6	.5	.6
11	.9	8.8	2.9	4.5	7.3	3.1	16	1.4	1.0	.5	.5	.6
12	.9	20	3.1	4.6	6.4	3.3	9.5	1.5	.9	.6	.4	.6
13	1.0	8.0	2.6	4.3	4.9	3.8	6.2	1.5	1.0	.6	.4	.6
14	.9	4.0	2.5	4.8	3.7	4.4	5.2	1.4	.9	.6	.4	.6
15	1.0	3.0	2.9	6.2	3.5	5.3	4.3	1.4	.9	.6	.5	.6
16	1.0	2.4	2.9	5.5	3.3	4.9	3.8	1.3	.9	.6	.5	.7
17	1.0	2.2	2.7	4.5	3.3	3.5	3.3	1.3	.8	.5	.4	.8
18	1.0	2.1	2.7	4.3	3.3	3.2	3.0	1.2	.8	.5	.5	.7
19	.9	2.2	4.7	4.2	3.3	3.1	2.8	1.2	.8	.6	.5	.6
20	.8	2.1	5.3	4.2	3.4	3.0	2.6	1.2	.8	.5	.5	.6
21	.8	2.2	3.9	4.1	3.5	2.9	2.4	1.2	1.0	.5	.5	.6
22	.8	2.1	3.7	4.2	3.5	2.7	2.3	1.2	1.0	.6	.4	.6
23	.7	2.2	7.2	4.0	3.4	2.7	2.1	1.2	1.0	.6	.3	.6
24	.9	2.3	12	6.9	3.2	2.7	2.0	1.2	1.0	.6	.2	.7
25	1.1	2.4	6.9	5.5	2.9	2.7	1.8	1.2	1.0	.6	.2	.7
26	1.0	2.6	4.0	4.5	3.0	2.4	1.7	1.1	.9	.6	.5	.8
27	1.1	2.5	10	4.0	2.9	2.3	1.6	1.2	.8	.6	.5	.8
28	1.8	2.4	14	3.8	3.1	2.4	1.6	1.2	.7	.6	.5	.7
29	17	2.3	8.2	3.7	-----	2.6	1.6	1.0	.7	.6	.5	.7
30	3.4	2.4	5.6	3.9	-----	2.4	1.6	1.0	.7	.6	.5	.7
31	1.3	-----	5.7	3.9	-----	5.1	-----	1.1	-----	.6	.5	-----
TOTAL	45.7	101.9	138.9	154.7	125.8	108.8	244.9	40.2	27.8	18.2	14.9	19.2
MEAN	1.47	3.40	4.48	4.99	4.49	3.51	8.16	1.30	0.93	0.59	0.48	0.64
AC-FT	91	202	276	307	250	216	486	80	55	36	30	38

CALENDAR YEAR 1964 MAX 28 MIN 0.4 MEAN 2.76 AC-FT 2,000
WATER YEAR 1964-65 MAX 50 MIN 0.2 MEAN 2.85 AC-FT 2,070

Peak discharge (base, 50 cfs).--Apr. 10 (0045 hrs) 88 cfs (4.38 ft).

SANTA MARIA RIVER BASIN

11-1366.5. Aliso Canyon Creek near New Cuyama, Calif.

Location.--Lat 34°59'00", long 119°46'30", in Cuyama Grant, at culvert on State Highway 166, 5.8 miles northwest of New Cuyama, Santa Barbara County.

Drainage area.--16.1 sq mi.

Records available.--Water years 1960-63 (annual maximum), October 1963 to September 1965.

Gage.--Water-stage recorder with rain-gage attachment and arch-culvert control. 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. July 25 to Nov. 5, 1963, crest-stage gage at same site and datum.

Extremes.--No flow during year.

1959-65: Maximum discharge, 78 cfs Feb. 10, 1962 (gage height, 3.00 ft, datum then in use), based on computation of maximum flow through culvert; no flow for most of each year.

Remarks.--No flow since June 12, 1963. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: October, 0.5; November, 0.5; December, 0.8; January, 0.2; February, 0.1; March, 0.6; April, 1.9; September, 0.1; the water year, 4.7.

11-1368. Cuyama River below Buckhorn Canyon, near Santa Maria, Calif.

Location.--Lat 35°01'20", long 120°13'10", in SW $\frac{1}{4}$ sec. 14, T.11 N., R.32 W., 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.

Records available.--October 1903 to December 1905 (published as Santa Maria River near Santa Maria), October 1959 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 760 ft (from topographic map). Prior to October 1959, at different site and datum.

Average discharge.--8 years, 18.2 cfs (13,180 acre-ft per year).

Extremes.--Maximum discharge during year, 84 cfs Apr. 10 (gage height, 4.19 ft); no flow Oct. 1 to Apr. 6, Apr. 27 to Sept. 30. 1903-05, 1959-65: Maximum discharge observed, about 10,000 cfs Mar. 13, 1905 (gage height, 10.0 ft, site and datum then in use); no flow at times in most years.

Remarks.--Records good. No regulation above station. Pumping from wells along stream for irrigation in upper Cuyama Valley.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 7.....15	Apr. 14..... 7.7	Apr. 21.....3.8
8.....20	15..... 5.5	22.....2.0
9.....29	16..... 5.9	23.....1.0
10.....65	17..... 6.7	24..... .8
11.....48	18.....10	25..... .4
12.....23	19.....12	26..... .1
13.....12	20..... 5.9	

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	273.8	-	-	9.13	543
Calendar year 1964.....	-	0.3	0	.001	1.0
Water year 1964-65.....	-	65	0	.75	543

Peak discharge (base, 200 cfs).--No peak above base.

Note.--Flow occurred only on days listed above.

11-1374. Alamo Creek near Nipomo, Calif.

Location--Lat 35°02'55", long 120°18'05", in Huasna Grant, on right bank 3.2 miles upstream from mouth and 10 miles east of Nipomo, San Luis Obispo County.

Drainage area--83.3 sq mi.

Records available--March 1959 to September 1965.

Gage--Water-stage recorder. Altitude of gage is 650 ft (from topographic map).

Average discharge--6 years, 2.61 cfs (1,890 acre-ft per year).

Extremes--Maximum discharge during year, 66 cfs Apr. 10 (gage height, 1.03 ft, from inside high-water mark); no flow all year except Apr. 10.
1959-65: Maximum discharge, 1,630 cfs Feb. 9 (gage height, 4.80 ft); no flow for all or part of each year.

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

Discharge, in cubic feet per second, water year October 1964 to September 1965

Apr. 10.....12

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	12.0	-	-	0.40	24
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	12	0	.03	24

Peak discharge (base, 50 cfs)--Apr. 10 (about 0300 hrs) 66 cfs (1.03 ft).

Note--Flow occurred only on day listed above.

11-1379. Huasna River near Arroyo Grande, Calif.

Location.--Lat 35°04'40", long 120°22'15", in Huasna Grant, on right bank 300 ft downstream from mouth of Huasna Creek and 12 miles southeast of Arroyo Grande, San Luis Obispo County.

Drainage area.--104 sq mi.

Records available.--June 1959 to September 1965.

Gage.--Water-stage recorder and crest-stage gage. Altitude of gage is 640 ft (from topographic map).

Average discharge.--6 years, 6.50 cfs (4,710 acre-ft per year).

Extremes.--Maximum discharge during year, 725 cfs Apr. 9 (gage height, 5.83 ft); no flow for many days.

1959-65: Maximum discharge, 2,100 cfs Feb. 10, 1962 (gage height, 6.90 ft, from crest-stage gage); no flow for many days in each year.

Remarks.--Records good. No regulation above station. Some diversions by pumping for irrigation above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0.1	0.3	0.3	0.3	4.8	0.6	0.2	0.3	0
2		0	0	.1	.3	.3	.3	4.0	.6	.4	.8	0
3		0	0	.1	.3	.3	.3	3.3	.4	.4	.1	0
4		0	0	.4	.3	.3	.3	2.6	.3	.4	.1	0
5		0	0	24	.6	.6	.3	2.6	.3	.4	.7	0
6		0	0	38	.4	.6	.3	2.0	.3	.3	.2	0
7		0	0	285	.4	.6	.3	1.7	.3	.4	.1	.1
8		0	0	71	.4	.6	.4	1.4	.3	.4	.1	.4
9		.2	0	23	.4	.4	251	1.2	.2	.1	0	.3
10		.3	0	11	.4	.4	283	1.2	.2	.3	0	.6
11		.2	0	23	.4	.4	120	1.0	.2	.1	.1	.3
12		.2	0	.3	.4	.4	75	.8	.2	.1	0	.3
13		.1	0	.3	.4	.4	61	.8	.2	.1	0	.3
14		0	0	.3	.4	.6	48	.8	.2	0	0	.1
15		0	0	.3	.4	.6	40	.8	.2	0	0	0
16		0	0	.3	.4	.4	31	.8	.2	0	0	.1
17		.1	0	.3	.4	.4	27	1.0	.2	0	0	0
18		.1	0	.3	.4	.4	24	1.0	.1	0	0	.1
19		.1	0	.3	.4	.4	21	1.2	.1	0	0	.6
20		.1	0	.3	.4	.4	19	1.2	.2	0	0	0
21		.1	0	.3	.4	.4	17	1.0	.8	0	0	0
22		.1	0	.3	.4	.4	15	1.0	.6	0	0	.1
23		.1	0	.3	.4	.4	13	1.0	.2	0	0	.2
24		0	0	.3	.4	.4	12	1.0	.2	0	0	.1
25		0	0	.3	.4	.4	11	1.0	.2	0	0	.1
26		0	0	.3	.3	.4	7.7	1.0	.3	0	0	.1
27		0	.1	.3	.3	.4	6.7	.6	.1	.3	0	0
28		0	.1	.3	.3	.4	5.8	.6	.2	.8	0	0
29		0	0	.3	-----	.4	5.8	.6	.1	2.0	0	0
30		0	.1	.3	-----	.4	5.3	.6	0	.2	0	0
31		-----	.1	.3	-----	.4	-----	.6	-----	.6	0	-----
Total	0	1.7	0.4	461.0	10.7	13.4	1101.8	43.2	8.0	7.5	2.5	3.8
Mean	0	0.06	0.01	14.9	0.38	0.43	36.7	1.39	0.27	0.24	0.08	0.13
Ac-ft	0	3.4	0.8	914	21	27	2,190	86	16	15	5.0	7.5

Calendar year 1964 Max 2.0 Min 0 Mean 0.17 Ac-ft 122
 Water year 1964-65 Max 285 Min 0 Mean 4.53 Ac-ft 3,290

Peak discharge (base, 40 cfs).--Jan. 7 (1100 hrs) 420 cfs (4.75 ft); Apr. 9 (1900 hrs) 725 cfs (5.83 ft).

11-1381. Cuyama River below Twitchell Dam, Calif.

Location.--Lat 34°56'40", long 120°17'30", in Suey Grant, on left bank 3.5 miles upstream from mouth, 4 miles northeast of Garey, Santa Barbara County, and 4.4 miles downstream from Twitchell Dam.

Drainage area.--1,132 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map).

Extremes.--Maximum discharge during year, 268 cfs Apr. 12 (gage height, 4.69 ft); no flow for most of year.
1958-65: Maximum discharge, 548 cfs Feb. 10, 1962 (gage height, 5.76 ft); no flow for part of 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	0.3	0.3	0.1	4.6	0.3			
2				0	.3	.3	.1	3.8	.3			
3				0	.3	.3	.1	3.2	.3			
4				0	.3	.3	.2	2.4	.2			
5				0	1.0	.4	.5	2.3	.2			
6				0	1.4	.4	1.4	1.6	.2			
7				0	1.2	.3	1.8	1.4	.2			
8				10	1.2	.3	7.3	1.4	.2			
9				40	1.1	.3	23	1.4	.1			
10				45	1.0	.3	158	1.3	.1			
11				46	.7	.3	239	1.0	.1			
12				38	.5	.3	255	1.0	.1			
13				11	.4	.4	117	1.0	.1			
14				4.2	.4	.3	80	1.0	0			
15				2.6	.4	.3	61	1.0	0			
16				1.8	.3	.3	47	1.0	0			
17				1.4	.3	.3	36	1.0	0			
18				1.0	.5	.2	31	1.0	0			
19				1.0	.5	.2	28	.8	0			
20				.6	.2	.2	28	.7	0			
21				.4	.2	.2	25	.7	0			
22				.4	.3	.2	20	.6	0			
23				.4	.3	.2	18	.6	0			
24				1.3	.3	.1	14	.4	0			
25				1.0	.2	.1	12	.4	0			
26				.8	.2	.1	10	.4	0			
27				.9	.3	.1	9.2	.4	0			
28				1.0	.3	.1	8.4	.4	0			
29				.7	-----	0	7.6	.4	0			
30				.4	-----	0	6.1	.3	0			
31				.4	-----	.1	-----	.3	-----			
Total	0	0	0	210.3	14.4	7.2	1244.8	37.8	2.4	0	0	0
Mean	0	0	0	0.68	0.51	0.23	41.5	1.22	0.08	0	0	0
Ac-ft	0	0	0	417	29	14	2,470	75	4.8	0	0	0

Calendar year 1964 Max 75 Min 0 Mean 2.30 Ac-ft 1,670
 Water year 1964-65 Max 255 Min 0 Mean 4.16 Ac-ft 3,010

11-1385. Sisquoc River near Sisquoc, Calif.

Location.--Lat 34°50'25", long 120°10'00", in sec.20, T.9 N., R.31 W., on left bank 2.2 miles upstream from La Brea Creek and 7 miles east of Sisquoc.

Drainage area.--281 sq mi.

Records available.--October 1943 to September 1965. 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 (digital). Datum of gage is 624.30 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 24, 1951, at site 0.2 mile downstream at datum 3.70 ft lower; during this period, a supplementary gage at site 200 ft downstream from present site at different datums was generally used for periods of low flow.

Average discharge.--22 years (1943-65), 26.4 cfs (19,110 acre-ft per year); median of yearly mean discharges, 13 cfs (9,400 acre-ft per year).

Extremes.--Maximum discharge during year, 764 cfs Apr. 9 (gage height, 4.76 ft); minimum daily, 0.9 cfs Oct. 2-5.

1929-33, 1943-65: Maximum discharge, 7,640 cfs Apr. 3, 1958 (gage height, 10.62 ft), from rating curve extended above 1,400 cfs on basis of slope-area measurement at gage height 10.08 ft; minimum daily since 1943, 0.4 cfs for several days in 1947, 1951, 1957, and 1961.

Maximum discharge known, 11,000 cfs Mar. 2, 1938 (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 good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.0	1.4	1.4	3.3	10	6.5	41	46	9.4	4.3	1.7	1.4
2	.9	1.4	1.6	2.9	10	5.8	69	43	9.3	4.1	1.8	1.6
3	.9	1.3	1.4	2.6	10	4.9	84	41	8.9	4.0	1.9	1.6
4	.9	1.3	1.4	2.7	9.9	4.3	107	38	8.6	3.8	1.8	1.6
5	.9	1.3	1.4	2.4	9.8	4.7	141	36	8.2	3.7	1.6	1.6
6	1.0	1.3	1.4	2.5	11	5.0	104	34	8.6	3.2	1.5	1.6
7	1.0	1.1	1.3	179	12	5.9	93	32	8.3	3.2	1.6	1.6
8	1.0	1.3	1.4	129	11	5.8	138	30	8.2	3.3	1.6	1.4
9	1.0	1.6	1.4	65	11	5.9	311	29	7.9	3.2	1.6	1.4
10	1.0	2.2	1.4	41	11	6.0	429	28	7.5	3.1	1.5	1.4
11	1.0	2.4	1.4	29	11	6.7	192	28	7.0	2.8	1.5	1.4
12	1.1	3.2	1.4	22	11	6.9	132	25	6.6	2.9	1.5	1.4
13	1.3	2.1	1.4	16	10	7.6	123	23	6.2	2.9	1.4	1.2
14	1.3	1.7	1.4	13	9.9	7.7	114	22	5.9	2.8	1.3	1.2
15	1.3	1.6	1.4	11	9.7	8.3	111	21	5.5	2.9	1.3	1.2
16	1.4	1.4	1.4	9.9	9.7	7.8	133	19	5.1	2.8	1.4	1.2
17	1.4	1.4	1.4	8.7	9.1	7.2	204	17	4.8	2.9	1.5	1.4
18	1.2	1.3	1.2	8.0	8.9	7.0	198	16	4.5	2.9	1.6	1.4
19	1.1	1.5	1.3	8.4	8.4	6.4	247	16	4.3	2.7	1.5	1.4
20	1.0	1.4	1.3	8.6	7.9	6.2	216	15	4.1	2.6	1.4	1.2
21	1.0	1.3	1.1	9.0	7.2	6.0	164	14	4.1	2.4	1.5	1.2
22	1.0	1.3	1.1	9.1	7.0	6.0	137	14	4.1	2.4	1.4	1.4
23	1.1	1.3	1.3	9.1	7.0	6.2	125	14	4.0	2.4	1.5	1.5
24	1.0	1.4	1.4	11	7.0	6.4	92	14	4.2	2.5	1.4	1.6
25	1.0	1.3	1.1	13	6.6	6.6	86	13	4.4	2.3	1.5	1.6
26	1.1	1.2	1.2	12	6.8	6.5	78	12	4.6	2.3	1.3	1.6
27	1.1	1.3	1.6	11	6.7	6.5	67	11	4.6	2.2	1.3	1.6
28	1.4	1.3	1.5	11	7.0	6.6	56	10	4.2	2.2	1.3	1.6
29	1.9	1.5	6.6	11	-----	6.5	52	9.3	4.2	2.1	1.3	1.5
30	1.5	1.4	5.6	10	-----	6.1	51	8.8	4.3	1.6	1.5	1.4
31	1.4	-----	3.6	9.7	-----	9.3	-----	9.2	-----	1.4	1.4	-----
TOTAL	35.2	45.5	53.8	680.9	256.6	199.3	4,095	688.3	181.6	87.9	46.4	43.2
MEAN	1.14	1.52	1.74	22.0	9.16	6.43	137	22.2	6.05	2.84	1.50	1.44
AC-FT	70	90	107	1,350	509	395	8,120	1,370	360	174	92	86

CALENDAR YEAR 1964	MAX 115	MIN 0.6	MEAN 3.34	AC-FT 2,430
WATER YEAR 1964-65	MAX 429	MIN 0.9	MEAN 17.6	AC-FT 12,720

Peak discharge (base, 100 cfs).--Jan. 7 (1015 hrs) 294 cfs (3.70 ft); Apr. 9 (2315 hrs) 764 cfs (4.76 ft).

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., on right bank 2,100 ft upstream from mouth and 5.5 miles east of Sisquoc.

Drainage area.--93.8 sq mi.

Records available.--October 1943 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 550 ft (from topographic map).

Average discharge.--22 years, 4.05 cfs (2,930 acre-ft per year); median of yearly mean discharges, 0.2 cfs (140 acre-ft per year).

Extremes.--Maximum discharge during year, 275 cfs Apr. 9 (gage height, 3.45 ft); no flow Oct. 1 to Apr. 8, May 10 to Sept. 30. 1943-65: Maximum discharge, 3,320 cfs Jan. 15, 1952 (gage height, 5.94 ft); no flow for most of each year.

Remarks.--Records good. 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 1964 to September 1965

Apr. 9.....38	Apr. 17.....8.3	Apr. 25.....2.1	May 3.....0.5
10.....102	18.....6.8	26.....1.6	4......4
11.....48	19.....5.1	27.....1.3	5......3
12.....31	20.....4.5	28......9	6......3
13.....21	21.....4.5	29......8	7......2
14.....17	22.....3.7	30......7	8......1
15.....13	23.....3.2	May 1......6	9......1
16.....10	24.....2.5	2......6	

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	326.0	-	-	10.9	647
May.....	3.1	-	-	.10	6.1
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	102	0	.90	653

Peak discharge (base, 30 cfs).--Apr. 9 (2130 hrs) 275 cfs (3.45 ft).

Note.--Flow occurred only on days listed above.

11-1395. Tepusquet Creek near Sisquoc, Calif.

Location.--Lat 34°52'20", long 120°14'35", in NE $\frac{1}{4}$ sec. 9, T.9 N., R.32 W., on downstream wingwall of right bridge abutment, 1.1 miles upstream from mouth and 3 miles east of Sisquoc.

Drainage area.--28.6 sq mi.

Records available.--October 1943 to September 1965.

Gage.--Water-stage recorder (digital). 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.--22 years, 1.12 cfs (811 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 36 cfs Apr. 9 (gage height, 2.41 ft); no flow for many days.
1943-65: Maximum discharge, 500 cfs Feb. 9, 1962 (gage height, 4.25 ft), from rating curve extended above 220 cfs; no flow at times in some years.

Remarks.--Records good. 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 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	0.1	0.1	0.2	0.3	0.3	0.3	0.6	0.9	0.5	0.2	0.1
2	0	.1	.1	.2	.3	.3	.4	.6	.9	.5	.2	.1
3	0	.1	.1	.2	.3	.3	.4	.7	.9	.5	.2	.2
4	0	.1	.1	.3	.3	.3	.5	.7	.9	.5	.3	.2
5	0	0	.1	.2	.3	.3	.4	.7	.9	.4	.3	.1
6	0	.1	.1	.3	.3	.3	.4	.8	.9	.5	.3	.2
7	0	0	.1	.3	.3	.3	.4	.8	.9	.5	.3	.1
8	.1	.1	.1	.3	.3	.3	.9	.8	.9	.4	.2	.1
9	0	.3	.1	.3	.3	.3	2.8	.8	.8	.5	.2	.1
10	0	.4	.1	.3	.3	.3	6.7	.8	.8	.4	.2	.2
11	0	.7	.1	.3	.3	.3	1.2	.9	.8	.5	.2	.1
12	0	.6	.1	.3	.3	.4	.8	.9	.8	.4	.1	.1
13	0	.3	.1	.3	.3	.3	.7	.9	.8	.4	.1	.2
14	.1	.3	.1	.3	.3	.3	.7	.9	.7	.4	.1	.1
15	.1	.3	.2	.3	.2	.3	.7	.9	.7	.4	0	.1
16	.1	.3	.1	.3	.3	.3	.7	.9	.7	.4	.1	.1
17	.1	.3	.1	.3	.3	.3	.7	.9	.6	.3	.1	.1
18	0	.3	.1	.3	.2	.3	.7	.9	.5	.3	.2	.1
19	0	.2	.1	.3	.2	.3	.7	.8	.6	.3	0	.1
20	0	.2	.1	.3	.2	.3	.8	.9	.6	.3	.1	.1
21	0	.2	.1	.3	.2	.3	.8	.9	.7	.3	.1	.1
22	0	.2	.1	.3	.2	.3	.8	.8	.7	.3	.1	.1
23	.1	.2	.2	.3	.2	.3	.7	.8	.6	.3	.1	.1
24	.1	.2	.2	.4	.2	.3	.7	.8	.6	.3	.1	.1
25	.1	.2	.1	.3	.2	.3	.6	.8	.6	.3	.1	.1
26	.1	.2	.2	.3	.2	.3	.6	.8	.6	.3	0	.1
27	.1	.2	.2	.3	.2	.3	.6	.8	.6	.3	.1	.1
28	.2	.2	.2	.3	.3	.3	.6	.8	.5	.3	0	.1
29	.2	.1	.2	.3	-----	.3	.5	.8	.5	.3	.1	.1
30	.1	.1	.2	.2	-----	.3	.6	.8	.5	.2	.1	.1
31	.1	-----	.2	.3	-----	.4	-----	.8	-----	.2	.1	-----
TOTAL	1.6	6.6	4.0	8.9	7.3	9.5	27.4	25.1	21.5	11.5	4.3	3.5
MEAN	0.05	0.22	0.13	0.29	0.26	0.31	0.91	0.81	0.72	0.37	0.14	0.12
AC-FT	3.2	13	7.9	18	14	19	54	50	43	23	8.5	6.9

CALENDAR YEAR 1964 MAX 0.9 MIN 0 MEAN 0.16 AC-FT 113

WATER YEAR 1964-65 MAX 6.7 MIN 0 MEAN 0.36 AC-FT 260

Peak discharge (base, 10 cfs).--Apr. 9 (2245 hrs) 36 cfs (2.41 ft).

11-1400. Sisquoc River near Garey, Calif.

Location.--Lat 34°53'38", long 120°18'20", in SW¹/₄ sec.36, T.10 N., R.33 W., 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.--472 sq mi.

Records available.--October 1940 to September 1965. 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 360.8 ft above mean sea level (Santa Barbara County bench mark). Prior to Aug. 27, 1954, at site 3 miles upstream at different datum. Aug. 28, 1954, to Nov. 1, 1956, at site 0.7 mile upstream at different datum. Nov. 1, 1956, to Sept. 30, 1959, at same site at different datums. Since Oct. 1, 1959, supplementary gage near left bank at same datum.

Average discharge.--25 years, 30.1 cfs (21,790 acre-ft per year); median of yearly mean discharges, 5.2 cfs (3,800 acre-ft per year).

Extremes.--Maximum discharge during year, 900 cfs Apr. 10 (gage height 5.75 ft); no flow for most of year.
1940-65: Maximum discharge, 13,000 cfs Jan. 23, 1943 (gage height, 8.46 ft, site and datum then in use), from rating curve extended above 2,000 cfs on basis of records for upstream stations; no flow for several months in each year.

Remarks.--Records good. 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 1964 to September 1965

Apr. 8..... 4.4	Apr. 14..... 51	Apr. 20.....88
9.....103	15..... 39	21.....70
10.....485	16..... 40	22.....65
11.....160	17..... 74	23.....55
12.....103	18..... 86	24.....19
13..... 67	19.....101	

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
April 1965.....	1,610.4	-	-	53.7	3,190
Calendar year 1964.....	-	0	0	0	0
Water year 1964-65.....	-	485	0	4.41	3,190

Peak discharge (base, 100 cfs).--Apr. 10 (0200 hrs) 900 cfs (5.75 ft).

Note.--Flow occurred only on days listed above.

11-1410. Santa Maria River at Guadalupe, Calif.

Location.--Lat 34°58'35", long 120°34'15", in Guadalupe Grant, on downstream side of fifth bridge pier from left bank on State Highway 1, 0.5 mile north of Guadalupe, Santa Barbara County, and 4.5 miles upstream from mouth.

Drainage area.--1,742 sq mi.

Records available.--October 1940 to September 1965. Monthly discharge only, October 1940 to January 1941, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 64.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1934 (Corps of Engineers bench mark). Supplementary water-stage recorder near right bank at same datum. Jan. 19, 1941, to Aug. 11, 1955 at site 100 ft upstream at same datum. Oct. 5, 1945, to Aug. 11, 1955, supplementary gage near right bank 100 ft upstream at same datum.

Average discharge.--25 years, 30.9 cfs (22,370 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 acre-ft per year).

Extremes.--No flow during year.

1940-65: Maximum discharge, 32,800 cfs Jan. 16, 1952 (gage height, 8.18 ft); no flow for several months of each year.

Remarks.--No flow since Mar. 21, 1962. 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.

11-1413. Arroyo Grande near Arroyo Grande, Calif.

Location.--Lat 35°11'10", long 120°29'55", in NW $\frac{1}{4}$ sec.32, T.31 S., R.14 E., on downstream side of county road bridge, 0.9 mile downstream from Lopez Canyon Creek, and $6\frac{1}{4}$ miles northeast of Arroyo Grande.

Drainage area.--68.3 sq mi.

Records available.--July 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 360 ft (from topographic map). Prior to Feb. 18, 1964, at datum 4.00 ft higher.

Average discharge.--7 years, 2.37 cfs (1;720 acre-ft per year).

Extremes.--Maximum discharge during year, about 500 cfs Jan. 6 (gage height, 15.07 ft, caused by temporary road fill); no flow for most of year.

1958-65: Maximum discharge, 1,280 cfs Feb. 9, 1962 (gage height, 8.50 ft, present datum); no flow for most of each year.

Remarks.--Records good except those for Jan. 6 which are poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	2.3	0.7	0	3.8				
2				0	2.2	.6	.6	3.6				
3				0	1.7	.2	.8	3.4				
4				0	2.0	0	.7	3.0				
5				0	4.3	0	.7	2.8				
6				61	3.8	.4	.7	2.6				
7				140	2.6	.1	.9	2.5				
8				50	2.3	0	1.0	2.2				
9				27	1.9	0	4.4	2.0				
10				19	1.7	0	6.6	1.9				
11				11	1.7	0	3.6	1.6				
12				9.8	1.7	0	2.8	1.3				
13				8.2	1.6	0	2.3	1.2				
14				7.0	1.6	.4	1.9	1.0				
15				6.0	1.5	.6	1.6	.9				
16				5.7	1.5	.7	1.3	.8				
17				5.4	1.4	.7	1.2	.7				
18				5.1	1.3	.7	1.1	.7				
19				4.6	1.3	.8	9.4	.6				
20				4.0	1.2	.8	9.0	.2				
21				3.6	1.2	.8	8.2	.1				
22				3.4	1.2	.8	7.4	0				
23				3.4	1.0	.8	7.0	0				
24				4.6	.9	.7	6.4	0				
25				3.4	.9	.2	5.7	0				
26				3.0	.8	0	5.4	0				
27				3.0	.8	0	4.8	0				
28				3.0	.8	0	4.6	0				
29				2.8	-----	0	4.3	0				
30				2.5	-----	0	4.0	0				
31				2.5	-----	0	-----	0				
Total	0	0	0	399.0	47.2	10.0	349.6	36.9	0	0	0	0
Mean	0	0	0	12.9	1.69	0.32	11.7	1.19	0	0	0	0
Ac-ft	0	0	0	791	94	20	693	73	0	0	0	0

Calendar year 1964 Max 0 Min 0 Mean 0 Ac-ft 0
 Water year 1964-65 Max 140 Min 0 Mean 2.31 Ac-ft 1,670

Peak discharge (base, 40 cfs).--Jan. 6 (about 2000 hrs) about 500 cfs; Apr. 9 (1830 hrs) 176 cfs (5.99 ft).

11-1415. Arroyo Grande at Arroyo Grande, Calif.

Location.--Lat 35°07'30", long 120°34'05", in Pismo Grant, on left bank at Arroyo Grande, San Luis Obispo County, 0.7 mile upstream from U.S. Highway 101.

Drainage area.--102 sq mi.

Records available.--October 1939 to September 1965. Records for water year 1940 incomplete, yearly estimate published in WSP 1315-B.

Gage.--Water-stage recorder (digital) and broad-crested weir. Datum of gage is 97.77 ft above mean sea level, datum of 1929, supplementary adjustment of 1934. Prior to July 10, 1947, at datum 0.50 ft higher.

Average discharge.--26 years, 19.2 cfs (13,900 acre-ft per year); median of yearly mean discharges, 8.8 cfs (6,400 acre-ft per year).

Extremes.--Maximum discharge during year, 432 cfs Jan. 7 (gage height, 3.78 ft); no flow Oct. 1-30.

1939-65: Maximum discharge, 5,370 cfs Jan. 15, 1952 (gage height, 11.97 ft); no flow for several days in some years.

Remarks.--Records good. Many small and intermittent diversions by pumping from stream for irrigation of about 4,000 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	3.6	2.5	4.3	14	11	11	13	8.0	5.0	0.4	1.2
2	0	1.4	2.5	3.9	13	9.2	12	13	7.7	4.2	1.3	1.5
3	0	1.7	2.4	4.4	11	8.9	13	12	10	3.5	1.1	1.6
4	0	1.4	2.2	5.8	11	9.8	13	11	9.7	4.8	.8	1.3
5	0	1.4	2.3	7.4	14	11	13	11	9.8	2.7	1.7	1.2
6	0	1.5	2.2	13	15	11	13	9.8	7.7	2.2	1.3	2.0
7	0	1.3	2.1	175	14	11	13	10	7.4	2.8	.6	2.1
8	0	1.4	2.2	62	13	11	16	11	7.8	4.4	1.7	1.3
9	0	2.5	2.3	34	12	11	46	11	5.4	3.4	2.0	1.0
10	0	4.6	2.0	24	12	9.9	103	11	5.5	2.9	1.9	.9
11	0	2.6	1.9	19	12	10	57	9.5	7.3	4.5	.9	1.4
12	0	2.9	2.4	17	12	11	45	9.6	6.3	3.8	.5	1.0
13	0	2.8	2.4	15	12	12	39	10	7.6	2.6	.5	1.3
14	0	2.7	2.1	14	11	11	35	9.0	7.9	2.6	.4	.9
15	0	2.7	2.4	14	12	11	32	7.4	7.2	2.9	.5	.7
16	0	2.8	2.7	14	12	11	30	8.4	5.8	2.1	.5	.9
17	0	2.7	2.6	14	12	11	28	8.3	8.0	2.6	.6	1.3
18	0	2.8	2.3	14	12	10	27	8.2	6.1	3.8	.7	1.5
19	0	2.8	2.6	14	12	10	25	8.0	5.5	3.5	.6	2.0
20	0	2.6	2.5	14	12	9.2	23	8.1	6.1	3.3	.4	1.5
21	0	2.7	2.4	14	12	11	23	5.4	6.4	3.0	.5	.9
22	0	2.7	2.6	14	10	10	20	7.7	4.8	2.8	1.1	.2
23	0	2.3	2.8	14	9.8	10	19	7.5	4.5	2.5	.4	.3
24	0	2.5	2.8	15	8.8	10	18	6.7	5.2	2.0	1.3	.6
25	0	2.7	2.6	14	9.7	9.5	18	6.2	5.6	1.5	1.3	.8
26	0	2.7	2.7	14	11	9.7	18	8.5	4.6	1.0	1.1	.8
27	0	2.7	4.2	14	11	9.7	16	6.4	4.5	.7	1.6	.7
28	0	2.7	5.0	14	11	8.9	16	6.6	4.3	.5	.6	.4
29	0	2.4	4.0	14	-----	9.8	14	6.6	4.7	.4	1.9	.2
30	0	2.1	5.7	14	-----	9.5	13	8.0	4.9	.3	1.9	.2
31	.3	-----	5.4	14	-----	12	-----	8.6	-----	.3	1.4	-----
TOTAL	0.3	73.7	86.8	637.8	331.3	320.1	769	277.5	196.3	82.6	31.5	31.7
MEAN	0.01	2.46	2.80	20.6	11.8	10.3	25.6	8.95	6.54	2.67	1.02	1.06
AC-FT	0.6	146	172	1,270	657	635	1,530	550	389	164	62	63

CALENDAR YEAR 1964 MAX 7.4 MIN 0 MEAN 2.48 AC-FT 1,800
 WATER YEAR 1964-65 MAX 175 MIN 0 MEAN 7.78 AC-FT 5,640

Peak discharge (base, 40 cfs).

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-1	1200	2.29	67	4-9	2330	2.81	165
1-7	0030	3.78	432				

11-1422. Santa Rosa Creek near Cambria, Calif.

Location.--Lat 35°34'35", long 120°59'50", in NE¼ sec.21, T.27 S., R.9 E., on left bank 4.8 miles east of Cambria.Drainage area.--12.5 sq mi.Records available.--August 1957 to September 1965.Gage.--Water-stage recorder (digital). Datum of gage is 264.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.Average discharge.--8 years, 9.17 cfs (6,640 acre-ft per year).

Extremes.--Maximum discharge during year, 1,730 cfs Jan. 6 (gage height, 7.40 ft); no flow Oct. 1 to Nov. 7, Aug. 19 to Sept. 30.
 1957-65: Maximum discharge, 2,520 cfs Feb. 1, 1960 (gage height, 10.36 ft), from rating curve extended above 390 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.
 Flood of December 1955 reached a stage of 15.2 ft (from floodmarks).

Remarks.--Records fair. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1		0	1.0	22	9.1	4.1	7.2	5.5	1.9	1.2	0.3	
2		0	1.1	19	8.7	3.9	11	5.3	1.7	1.2	.3	
3		0	1.0	39	8.2	3.8	8.8	5.1	1.5	1.1	.2	
4		0	1.0	103	8.2	4.7	7.8	4.9	1.6	1.0	.2	
5		0	1.1	132	22	5.6	7.8	4.7	1.4	1.0	.2	
6		0	1.1	440	16	13	8.1	4.5	1.3	1.0	.2	
7		0	1.1	119	12	8.9	8.5	4.3	1.4	1.1	.2	
8		.1	1.0	68	10	6.3	58	4.2	1.3	1.0	.2	
9		22	.9	53	9.6	6.0	83	4.0	1.2	1.0	.2	
10		87	1.0	45	8.9	5.3	40	3.8	1.2	.9	.1	
11		25	1.0	36	7.7	5.3	25	3.7	1.1	.8	.1	
12		49	.8	31	7.4	10	22	3.6	1.0	.8	.1	
13		16	.7	26	7.1	25	22	3.5	1.0	.8	.1	
14		9.0	.7	24	7.1	11	17	3.4	1.0	.8	.1	
15		5.7	.6	22	7.0	9.4	16	3.3	.9	.8	.1	
16		4.0	.6	20	6.6	8.5	14	3.2	1.1	.8	.1	
17		3.3	.5	18	6.2	8.1	13	3.1	1.1	.8	.1	
18		2.9	.5	17	5.8	7.6	11	3.0	1.1	.8	.1	
19		2.5	39	16	5.6	7.3	11	2.9	1.1	.7	0	
20		2.1	64	15	5.5	6.9	10	2.8	1.2	.6	0	
21		1.9	68	14	5.3	6.6	9.7	2.8	1.2	.6	0	
22		1.7	53	13	5.2	6.4	9.1	2.7	1.3	.6	0	
23		1.4	69	16	4.9	6.4	9.1	2.6	1.4	.5	0	
24		1.4	43	19	4.8	6.3	8.5	2.6	1.5	.5	0	
25		1.3	28	13	4.6	5.8	7.8	2.5	1.3	.4	0	
26		1.2	198	12	4.5	5.6	7.3	2.4	1.3	.4	0	
27		1.2	68	12	4.8	6.4	6.8	2.1	1.3	.4	0	
28		1.2	33	11	4.4	6.3	6.5	2.1	1.2	.4	0	
29		1.0	28	11	-----	6.0	6.0	1.9	1.1	.3	0	
30		.8	28	10	-----	6.0	5.7	1.8	1.2	.3	0	
31		-----	31	9.4	-----	9.0	-----	2.0	-----	.3	0	-----
TOTAL	0	241.7	765.7	1,405.4	217.2	231.5	477.7	104.3	37.9	22.9	2.9	0
MEAN	0	8.06	24.7	45.3	7.76	7.47	15.9	3.37	1.26	0.74	0.09	0
AC-FT	0	479	1,520	2,790	431	459	948	207	75	45	5.8	0

CALENDAR YEAR 1964 MAX 198 MIN 0 MEAN 3.92 AC-FT 2,850
 WATER YEAR 1964-65 MAX 440 MIN 0 MEAN 9.61 AC-FT 6,960

Peak discharge (base, 300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0745	5.17	457	1-6	1115	7.40	1,730
12-26	2145	6.01	830	4-9	1415	5.00	345

Note.--No gage-height record Apr. 24 to May 25.

11-1425. Arroyo de la Cruz near San Simeon, Calif.

Location.--Lat 35°43'25", long 121°17'00", in Piedra Blanca Grant, on right bank 1.7 miles upstream from mouth and 7 miles northwest of town of San Simeon, San Luis Obispo County.

Drainage area.--41.2 sq mi (revised).

Records available.--October 1950 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 22 ft (from topographic map).

Average discharge.--15 years, 51.8 cfs (37,500 acre-ft per year); median of yearly mean discharges, 41 cfs (29,700 acre-ft per year).

Extremes.--Maximum discharge during year, 6,680 cfs Jan. 6 (gage height, 9.04 ft); no flow for several months.

1950-65: Maximum discharge, 17,700 cfs Dec. 23, 1955 (gage height, 12.40 ft), from rating curve extended above 7,600 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 20 to Dec. 9, Jan. 12 to Mar. 6,
May 24 to June 14, July 20 to 22)

1.3	0	1.9	8.6	3.3	230
1.4	.2	2.0	13	4.0	470
1.5	.6	2.1	19	5.0	1,030
1.6	1.4	2.4	47	6.0	1,900
1.7	2.9	2.8	108	7.0	3,080
1.8	5.2				

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	1.0	79	34	13	82	26	8.6	1.8		
2		0	.8	56	32	12	195	24	8.3	1.7		
3		0	.4	1,330	31	12	106	22	7.6	1.4		
4		0	.3	625	30	15	73	21	7.2	1.2		
5		0	.2	924	145	133	61	21	6.9	1.2		
6		0	.1	2,980	87	270	66	20	6.6	.9		
7		0	.1	802	57	108	71	19	6.2	.8		
8		0	.1	394	46	64	457	18	5.9	.7		
9		0	.1	326	42	54	632	17	5.5	.6		
10		237	0	200	36	43	347	17	5.2	.6		
11		171	0	162	32	38	198	16	4.7	.5		
12		491	0	139	31	41	146	15	4.5	.4		
13		80	0	116	29	128	132	15	4.3	.4		
14		34	0	97	28	68	110	15	4.3	.4		
15		20	0	88	26	54	97	14	4.3	.3		
16		13	0	80	24	44	85	14	4.0	.2		
17		10	0	71	23	38	76	13	3.8	.2		
18		8.6	0	66	21	35	68	12	3.8	.2		
19		7.2	545	61	20	32	63	12	3.8	.2		
20		5.9	462	59	19	29	57	12	3.8	.1		
21		5.0	684	55	18	27	54	11	3.8	.1		
22		4.0	402	50	17	25	50	11	3.8	.1		
23		3.4	494	57	16	24	46	11	3.8	0		
24		2.8	284	139	15	21	42	11	3.8	0		
25		2.4	141	66	14	20	33	10	3.6	0		
26		2.0	522	55	14	19	35	10	3.1	0		
27		1.7	479	50	15	21	32	10	2.9	0		
28		1.4	192	46	15	21	31	9.0	2.4	0		
29		1.2	124	43	-----	19	29	8.3	2.2	0		
30		1.2	243	38	-----	18	27	7.9	2.0	0		
31		-----	130	36	-----	180	-----	8.3	-----	0		
Total	0	1,102.8	4,705.1	9,290	917	1,626	3,501	450.5	140.7	14.0	0	0
Mean	0	36.8	152	300	32.8	52.5	117	14.5	4.69	0.45	0	0
Ac-ft	0	2,190	9,330	18,430	1,820	3,230	6,940	894	279	28	0	0

Calendar year 1964 Max 740 Min 0 Mean 24.9 Ac-ft 18,060
Water year 1964-65 Max 2,980 Min 0 Mean 59.6 Ac-ft 43,140

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0800	5.60	1,500	1-3	1630	6.78	2,780
12-19	0900	5.13	1,120	1-6	0700	9.04	6,680
12-21	1300	5.22	1,180	4-9	1500	6.17	2,070
12-26	2230	6.81	2,810				

BIG SUR RIVER BASIN

11-1430. Big Sur River near Big Sur, Calif.

Location.--Lat 36°14'45", long 121°46'20", in SW¼SW¼ sec.29, T.19 S., R.2 E., on right bank at downstream side of bridge, 0.4 mile upstream from Post Creek and 2.6 miles southeast of Big Sur.

Drainage area.--46.5 sq mi.

Records available.--March 1950 to September 1965. 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, wire-weight gage at site 0.9 mile downstream at different datum.

Average discharge.--15 years, 89.2 cfs (64,580 acre-ft per year); median of yearly mean discharges, 67 cfs (48,500 acre-ft per year).

Extremes.--Maximum discharge during year, 2,100 cfs Jan. 6 (gage height, 7.37 ft); minimum daily, 8.1 cfs Oct. 18-20.
1950-65: Maximum discharge, 5,680 cfs Apr. 2, 1958 (gage height, 11.56 ft), from rating curve extended above 1,400 cfs on basis of slope-area measurement at gage height 11.05 ft; minimum, 3.7 cfs Oct. 7, 1961.

Remarks.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 9, Nov. 22 to Dec. 18,
Aug. 16 to Sept. 30)

2.4	6.0	3.8	152
2.6	12	4.3	280
2.9	30	5.0	560
3.3	70	7.0	1,830

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	24	22	256	100	58	104	100	50	31	22	16
2	9.9	19	22	230	95	53	97	95	50	30	21	17
3	9.6	14	21	608	94	50	91	94	49	29	21	16
4	9.3	12	21	542	92	47	87	91	48	28	19	16
5	9.0	11	21	480	148	60	85	88	46	26	19	16
6	9.0	11	20	1,820	121	80	84	87	46	26	20	18
7	9.0	10	19	1,450	111	72	85	84	45	24	21	18
8	9.0	18	19	960	104	68	170	80	45	24	21	18
9	9.0	114	19	655	101	64	326	78	45	24	20	16
10	9.0	131	19	488	95	60	362	77	44	24	20	16
11	8.7	85	19	382	94	62	308	74	42	24	21	17
12	8.7	183	19	315	90	70	265	71	40	24	22	16
13	8.7	101	18	262	87	105	242	71	38	24	22	16
14	8.7	68	18	225	85	99	222	69	38	24	20	16
15	8.7	52	18	204	83	87	212	65	38	23	19	16
16	8.7	44	18	183	78	80	217	64	38	25	18	16
17	8.4	40	18	167	76	74	210	62	38	25	18	16
18	8.1	36	19	156	73	70	195	59	39	26	18	16
19	8.1	31	138	146	70	68	183	57	37	26	18	17
20	8.1	30	216	136	70	64	174	57	37	26	17	17
21	8.4	29	425	128	69	62	165	58	37	26	16	18
22	8.4	27	483	123	66	60	152	59	37	26	16	18
23	8.7	26	684	136	65	59	142	56	36	25	16	18
24	9.3	25	585	172	64	58	136	55	36	25	18	18
25	9.3	24	370	142	62	57	130	54	36	25	17	18
26	9.3	24	398	130	58	56	123	52	36	26	17	19
27	9.6	23	585	123	62	60	119	51	35	25	17	20
28	12	23	442	118	60	56	112	50	34	25	16	21
29	26	22	370	112	-----	55	109	48	32	24	15	19
30	19	22	340	108	-----	53	103	48	32	24	15	19
31	12	-----	315	103	-----	127	-----	49	-----	23	16	-----
Total	309.7	1,279	5,701	11,060	2,373	2,094	5,010	2,103	1,204	787	576	518
Mean	9.99	42.6	184	357	84.8	67.5	167	67.8	40.1	25.4	18.6	17.3
Ac-ft	614	2,540	11,310	21,940	4,710	4,150	9,940	4,170	2,390	1,560	1,140	1,030

Calendar year 1964 Max 699 Min 8.1 Mean 49.5 Ac-ft 35,740
Water year 1964-65 Max 1,820 Min 8.1 Mean 90.5 Ac-ft 65,490

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	2030	5.38	768	1-3	1430	5.40	780
12-26	2300	5.57	882	1-6	0600	7.37	2,100

Note.--No gage-height record Feb. 25 to Mar. 14.

11-1432. Carmel River at Robles del Rio, Calif.

Location.--Lat 36°28'28", long 121°43'40", in Los Laureles Grant, on downstream side of county road bridge at Robles del Rio, Monterey County, 0.2 mile downstream from Hitchcock Canyon and 11 miles southeast of town of Carmel.

Drainage area.--193 sq mi.

Records available.--August 1957 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 270 ft (from topographic map).

Average discharge.--8 years, 64.3 cfs (46,550 acre-ft per year).

Extremes.--Maximum discharge during year, 1,220 cfs Jan. 7 (gage height, 6.95 ft); no flow Oct. 1 to Dec. 1, July 30 to Sept. 30.

1957-65: Maximum discharge, 7,100 cfs Apr. 2, 1958 (gage height, 10.50 ft); no flow at times each year.

Flood of Dec. 23, 1955, reached a stage of 11.7 ft, from floodmarks (discharge, 6,930 cfs on basis of slope-area measurement of maximum flow).

Remarks.--Records good. Flow regulated by Los Padres Reservoir (capacity, 3,000 acre-ft) and San Clemente Reservoir (capacity, 1,600 acre-ft). Small diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.8	0	2.3	10	4.0	233
1.9	.1	2.6	34	5.0	445
2.0	.7	3.0	82	6.0	780
2.1	2.3	3.5	150	7.0	1,240
2.2	5.4				

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	220	87	37	90	91	28	3.1		
2			.1	188	82	34	77	86	34	2.8		
3			.1	368	76	31	73	82	35	2.5		
4			.1	388	76	28	65	78	34	2.1		
5			.1	338	105	42	61	76	33	1.7		
6			.1	889	100	72	60	70	25	1.4		
7			.1	1,040	95	76	61	69	17	1.1		
8			.1	704	87	61	123	66	16	1		
9			.2	509	85	54	248	62	14	.8		
10			.2	398	79	50	322	59	11	.6		
11			.2	328	76	50	294	54	10	.6		
12			.2	272	74	48	259	51	8.2	.6		
13			.2	231	73	73	242	48	6.8	.5		
14			.2	199	73	69	231	46	6.8	.5		
15			.3	176	70	64	228	44	7.7	.5		
16			.3	159	65	60	247	41	8.2	.4		
17			.3	141	64	57	251	38	7.2	.4		
18			.3	131	61	54	233	57	9.1	.3		
19			.5	125	51	49	213	6.8	9.1	.3		
20			.6	121	44	43	194	4.6	7.2	.2		
21			7.3	111	43	41	182	5.0	6.8	.2		
22			18	103	40	39	168	5.0	5.9	.2		
23			262	105	36	38	156	4.3	5.4	.2		
24			452	165	36	37	146	4.0	5.4	.2		
25			320	138	34	36	125	4.0	7.2	.2		
26			255	125	33	35	107	13	5.4	.2		
27			408	117	37	38	117	38	5.9	.2		
28			352	107	36	39	109	24	5.0	.1		
29			294	102	-----	38	103	16	4.0	.1		
30			282	98	-----	37	96	15	3.7	0		
31			274	94	-----	92	-----	23	-----	0		
Total	0	0	2,928.5	8,190	1,818	1,522	4,881	1,280.7	382.0	23.0	0	0
Mean	0	0	94.5	264	64.9	49.1	163	41.3	12.7	0.74	0	0
Ac-ft	0	0	5,810	16,240	3,610	3,020	9,680	2,540	758	46	0	0

Calendar year 1964 Max 592 Min 0 Mean 28.5 Ac-ft 20,720
 Water year 1964-65 Max 1,040 Min 0 Mean 57.6 Ac-ft 41,700

Peak discharge (base, 1,000 cfs).--Jan. 7 (0400) 1,220 cfs (6.95 ft).

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, on right bank 0.3 mile downstream from Potrero Canyon and 3 miles east of Carmel, Monterey County.

Drainage area.--246 sq mi.

Records available.--August 1962 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 45 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,620 cfs Jan. 7 (gage height 7.87 ft); no flow Oct. 1 to Dec. 23, July 12 to Sept. 30. 1962-65: Maximum discharge, 7,360 cfs Jan. 31, 1963 (gage height, 14.72 ft); no flow at times in each year.

Remarks.--Records fair. Flow regulated by Los Padres Reservoir (capacity, 3,000 acre-ft) and San Clemente Reservoir (capacity, 1,600 acre-ft). Small diversion above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 27, 28, Jan. 4, 6, Apr. 1 to 8, June 4 to 23)

Oct. 1 to Jan. 6				Jan. 7 to Sept. 30			
3.5	0	4.4	56	3.4	0	4.5	161
3.6	.1	5.0	152	3.5	2.4	5.0	285
3.7	.7	6.0	410	3.6	8.8	6.0	640
3.8	2.4	7.0	800	3.7	19	7.6	1,450
3.9	6.4	8.0	1,300	4.0	65		
4.1	23						

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	278	117	50	121	112	14	2.2		
2			0	220	114	48	112	101	23	2.4		
3			0	328	108	51	114	99	27	2.2		
4			0	414	105	45	103	97	29	1.9		
5			0	325	125	53	99	96	29	1.7		
6			0	829	133	70	94	90	30	1.4		
7			0	1,400	133	92	97	88	32	1.0		
8			0	885	114	85	133	83	32	.5		
9			0	628	114	69	234	79	32	1.7		
10			0	476	106	70	369	72	30	1.7		
11			0	386	101	65	369	67	25	.1		
12			0	321	92	63	330	60	20	0		
13			0	271	88	85	294	56	19	0		
14			0	236	94	88	277	55	17	0		
15			0	214	87	87	268	50	16	0		
16			0	192	78	83	277	50	16	0		
17			0	176	76	79	279	48	13	0		
18			0	159	72	70	263	50	12	0		
19			0	150	70	70	254	40	15	0		
20			0	148	67	65	226	23	16	0		
21			0	137	70	63	216	20	14	0		
22			0	129	65	63	204	17	11	0		
23			4.9	125	53	65	185	16	7.5	0		
24			315	172	56	62	172	16	4.3	0		
25			322	165	58	55	159	15	6.2	0		
26			245	152	50	58	133	14	6.9	0		
27			447	143	51	56	135	13	6.2	0		
28			414	137	62	62	129	23	6.2	0		
29			371	131	-----	56	117	13	6.2	0		
30			359	129	-----	58	106	8.2	1.9	0		
31		-----	371	117	-----	94	-----	6.8	-----	0		-----
Total	0	0	2,848.9	9,573	2,459	2,080	5,869	1,578.0	517.4	16.8	0	0
Mean	0	0	91.9	309	87.8	67.1	196	50.9	17.2	0.54	0	0
Ac-ft	0	0	5,650	18,990	4,880	4,130	11,640	3,130	1,030	33	0	0

Calendar year 1964 Max 676 Min 0 Mean 30.6 Ac-ft 22,200
Water year 1964-65 Max 1,400 Min 0 Mean 68.3 Ac-ft 49,480

Peak discharge (base, 1,200 cfs).--Jan. 7 (0600) 1620 cfs (7.87 ft).

11-1435. Salinas River near Pozo, Calif.

Location.--Lat 35°18'20", long 120°24'20", in SW¼SE¼ sec.18, T.30 S., R.15 E., on right bank 0.4 mile downstream from highway bridge, 1.5 miles downstream from Pozo Creek, 1.7 miles west of Pozo, and 7 miles upstream from Salinas Dam.

Drainage area.--74.1 sq mi.

Records available.--July 1942 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 1,347.78 ft above mean sea level datum of 1929, supplementary adjustment of 1960.

Average discharge.--23 years, 13.3 cfs (9,630 acre-ft per year); median of yearly mean discharge, 6.6 cfs (4,800 acre-ft per year).

Extremes.--Maximum discharge during year, 960 cfs Apr. 9 (gage height, 6.95 ft); no flow for many days.

1942-65: Maximum discharge, 7,210 cfs Jan. 21, 1943 (gage height, 13.35 ft); no flow at times.

Remarks.--Records poor. No regulation or diversion above station. Water is stored in Salinas Reservoir below station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	0.4	15	2.0	2.0	10	3.7	2.3	0.5	0.1	0
2	0	.1	.4	14	2.0	2.0	13	3.7	2.0	.4	0	0
3	0	.1	.4	25	2.0	2.0	15	3.7	2.3	.4	0	0
4	0	.1	.4	80	2.0	2.1	14	3.2	2.7	.5	0	.1
5	0	.2	.4	265	2.0	2.5	13	2.7	3.2	.5	0	.1
6	0	.2	.4	370	2.0	18	18	2.7	3.2	.4	0	.1
7	0	.2	.4	468	2.0	15	31	2.7	3.7	.2	0	.1
8	0	.5	.4	168	2.0	12	144	2.0	3.7	.2	0	.2
9	0	.5	.4	86	2.0	10	513	2.0	3.7	.2	0	.2
10	0	1.4	.5	52	2.0	9.0	330	2.0	3.7	.2	0	.1
11	0	.5	.5	35	2.0	10	162	2.0	3.2	.4	0	.1
12	0	.5	.5	25	2.0	26	96	2.0	3.2	.4	0	.1
13	0	.5	.7	18	2.0	39	72	2.0	2.7	.4	0	.1
14	0	.4	.7	14	2.3	29	52	2.0	2.7	.4	0	.1
15	0	.4	.7	11	2.3	16	39	2.0	2.7	.2	0	.1
16	0	.4	.7	9.2	2.3	12	31	2.0	2.3	.2	0	.1
17	0	.4	.7	7.3	2.3	9.2	25	2.0	2.3	.2	0	.1
18	0	.5	.7	6.4	2.3	10	20	2.0	2.0	.4	0	.1
19	0	.4	10	5.5	2.1	11	19	2.0	1.7	.5	0	.1
20	0	.2	13	4.8	2.0	11	15	2.0	1.7	.4	0	.1
21	0	.2	15	4.2	2.0	11	14	2.0	1.7	.4	0	.1
22	0	.2	16	3.7	2.0	12	13	2.0	1.4	.2	0	.1
23	0	.4	14	3.2	2.0	11	11	2.0	1.4	.2	.1	0
24	0	.4	10	2.7	2.0	10	10	2.0	1.1	.2	.1	.1
25	0	.4	8.0	2.3	2.0	9.2	8.2	2.0	.9	.1	.2	.1
26	0	.4	11	2.3	2.0	8.2	7.3	2.0	.9	.2	.2	0
27	0	.4	40	2.3	2.0	8.2	6.4	2.0	.9	.1	.1	.1
28	0	.4	30	2.3	2.0	8.2	5.5	2.0	.7	.1	0	.1
29	.1	.4	22	2.3	-----	8.2	4.8	2.0	.7	.1	0	.1
30	.1	.4	23	2.3	-----	8.2	4.2	2.0	.5	.1	0	0
31	.1	-----	19	2.0	-----	9.2	-----	2.3	-----	.1	0	-----
Total	0.3	11.2	240.3	1,708.8	57.6	351.2	1,716.4	70.7	65.2	8.8	0.8	2.6
Mean	0.01	0.37	7.75	55.1	2.06	11.3	57.2	2.28	2.17	0.28	0.03	0.09
Ac-ft	0.6	22	477	3,390	11.4	697	3,400	140	129	17	1.6	5.2

Calendar year 1964 Max 40 Min 0 Mean 1.33 Ac-ft 969
 Water year 1964-65 Max 513 Min 0 Mean 11.6 Ac-ft 8,390

Peak discharge (base, 100 cfs).--Jan. 6 (2100) 676 cfs (6.12 ft); Apr. 9 (1800) 960 cfs (6.95 ft).

Note.--No gage-height record Dec. 29 to Jan. 4. Stage-discharge relation indefinite Dec. 23-28, Feb. 19 to Mar. 11.

11-1440. Toro Creek near Pozo, Calif.

Location.--Lat 35°19'20", long 120°25'20", in SE¼ sec.12, T.30 S., R.14 E., on left bank 300 ft upstream from mouth and 3 miles northwest of Pozo.

Drainage area.--9.61 sq mi.

Records available.--June 1942 to September 1965. 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, datum of 1929, supplementary adjustment of 1960. Prior to Dec. 8, 1961, at site 250 ft downstream at datum 11.83 ft lower.

Extremes.--Maximum discharge during year, 15 cfs Nov. 10 (gage height, 3.90 ft); no flow at times.

1961-65: Maximum discharge, 31 cfs Feb. 9, 1962 (gage height, 4.24 ft).

1942-65: No flow at times in most years.

Remarks.--Records fair. Small diversions above station for irrigation and stock reservoir.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 17-19, May 6-24, June 14-19)

3.1 0
3.2 .2
3.3 .7

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	0.2	0.2	0.2	0.1	0.3	0.1	0.1	0.1	0.1	
2	0	.1	.2	.2	.2	.1	.1	.1	0	.1	.1	
3	0	.1	.2	.2	.2	.1	.1	.1	.1	.1	.1	
4	0	.1	.2	.6	.2	.2	.1	.1	.1	.1	.1	
5	0	.1	.2	.3	.2	.2	.1	.2	.1	.1	.1	
6	0	.1	.2	.6	.2	.2	.1	.2	.1	.1	.2	
7	0	.1	.2	.4	.2	.2	.1	.2	.2	0	.1	
8	0	.1	.2	.2	.2	.2	.5	.2	.1	0	.1	
9	0	.3	.2	.2	.2	.2	.5	.2	.1	0	.1	
10	0	1.0	.2	.2	.2	.1	.2	.2	.1	0	.1	
11	0	.1	.2	.2	.2	.1	.1	.2	.1	0	.1	
12	0	.2	.2	.2	.2	.2	.1	.2	.1	0	.1	
13	0	.1	.2	.2	.2	.2	.1	.2	.1	0	0	
14	0	.1	.1	.2	.2	.2	.1	.2	.1	0	0	
15	0	.1	.2	.2	.2	.1	.1	0	.1	0	0	
16	0	.1	.2	.2	.2	.1	.1	0	.1	0	0	
17	0	.1	.2	.2	.2	.1	.1	0	.1	0	.1	
18	0	.1	.2	.2	.2	.1	.1	.1	.1	0	0	
19	0	.1	.6	.2	.2	.1	.1	.1	.1	0	0	
20	0	.1	.3	.2	.2	.1	.1	.1	.1	.1	0	
21	0	.1	.2	.2	.1	.1	.1	.1	.1	.1	0	
22	0	.1	.2	.2	.1	.1	.1	.1	.1	.1	0	
23	0	.1	.2	.2	.2	.1	.1	.1	0	0	0	
24	0	.1	.2	.2	.2	.1	.1	.1	0	0	0	
25	.1	.1	.2	.2	.2	.1	.1	.1	.1	.1	0	
26	.1	.1	.2	.2	.2	.1	.1	.1	.1	.1	0	
27	.1	.1	.3	.2	.2	.2	.1	.1	0	.1	0	
28	.1	.1	.3	.2	.2	.2	.1	.1	0	.1	0	
29	.2	.1	.2	.2	-----	.2	.1	.1	0	.1	0	
30	.1	.1	.3	.1	-----	.1	.1	.1	.1	.1	0	
31	.1	-----	.3	.1	-----	.2	-----	.1	-----	.1	0	
Total	0.8	4.2	7.0	7.1	5.4	4.4	4.1	3.8	2.5	1.6	1.4	0
Mean	0.03	0.14	0.23	0.23	0.19	0.14	0.14	0.12	0.08	0.05	0.05	0
Ac-ft	1.6	8.3	14	14	11	8.7	8.1	7.5	5.0	3.2	2.8	0

Calendar year 1964 Max 1.6 Min 0 Mean 0.14 Ac-ft 100
Water year 1964-65 Max 0.6 Min 0 Mean 0.12 Ac-ft 84

Peak discharge (base, 10 cfs).--Nov. 10 (0800) 15 cfs (3.90 ft).

11-1445. Salinas Reservoir near Pozo, Calif.

Location.--Lat 35°20'15", long 120°30'05", in NW¼ sec.8, T.30 S., R.14 E., 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.

Records available.--December 1941 to September 1965.

Gage.--Water-stage-recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to Mar. 9, 1942, staff gage at same site and datum.

Extremes.--Maximum contents during year, 25,500 acre-ft Apr. 22-30; maximum elevation, 1,300.35 ft Apr. 26; minimum contents, 16,900 acre-ft Oct. 26-28, Oct. 30 to Nov. 8.

1941-65: Maximum contents, 30,900 acre-ft Apr. 3, 1958 (elevation, 1,306.92 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)

1,287 16,500
1,301 26,000

Contents, in acre-feet, at 2400 hours, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17,200	17,000	17,000	17,500	21,700	21,600	21,900	25,400	24,800	24,000	23,000	21,900
2	17,200	16,900	17,000	17,500	21,700	21,600	21,900	25,400	24,800	24,000	22,900	21,900
3	17,200	16,900	17,000	17,500	21,700	21,600	21,900	25,400	24,700	23,900	22,900	21,900
4	17,100	16,900	17,000	17,900	21,700	21,600	21,900	25,400	24,700	23,900	22,900	21,800
5	17,100	16,900	17,000	18,400	21,800	21,600	21,900	25,300	24,700	23,900	22,800	21,800
6	17,100	16,900	17,000	19,700	21,800	21,600	22,000	25,300	24,700	23,800	22,800	21,800
7	17,100	16,900	17,000	20,900	21,800	21,600	22,000	25,300	24,600	23,800	22,800	21,800
8	17,100	17,000	17,000	21,200	21,700	21,700	22,400	25,300	24,600	23,800	22,700	21,700
9	17,100	17,000	17,000	21,400	21,700	21,700	23,700	25,300	24,600	23,700	22,700	21,700
10	17,100	17,100	17,000	21,500	21,700	21,700	24,400	25,200	24,600	23,700	22,700	21,700
11	17,100	17,100	17,000	21,500	21,700	21,700	24,700	25,200	24,500	23,700	22,600	21,700
12	17,100	17,100	17,000	21,600	21,700	21,700	24,900	25,200	24,500	23,600	22,600	21,600
13	17,100	17,100	17,000	21,600	21,700	21,700	25,000	25,200	24,500	23,600	22,600	21,600
14	17,000	17,100	17,000	21,600	21,700	21,800	25,100	25,200	24,400	23,500	22,500	21,600
15	17,000	17,100	17,000	21,600	21,700	21,800	25,200	25,200	24,400	23,500	22,500	21,500
16	17,000	17,100	17,000	21,700	21,700	21,800	25,300	25,100	24,400	23,500	22,500	21,500
17	17,000	17,100	17,000	21,700	21,700	21,800	25,300	25,100	24,400	23,400	22,400	21,500
18	17,000	17,100	17,000	21,700	21,700	21,800	25,400	25,100	24,300	23,400	22,400	21,500
19	17,000	17,100	17,100	21,700	21,700	21,800	25,400	25,100	24,300	23,400	22,400	21,400
20	17,000	17,100	17,100	21,700	21,700	21,800	25,400	25,100	24,300	23,300	22,300	21,400
21	17,000	17,100	17,200	21,700	21,700	21,800	25,400	25,000	24,300	23,300	22,300	21,400
22	17,000	17,100	17,200	21,700	21,700	21,800	25,500	25,000	24,200	23,300	22,300	21,400
23	17,000	17,100	17,200	21,700	21,700	21,800	25,500	25,000	24,200	23,200	22,200	21,300
24	17,000	17,100	17,200	21,700	21,700	21,800	25,500	25,000	24,200	23,200	22,200	21,300
25	17,000	17,100	17,200	21,700	21,600	21,800	25,500	24,900	24,200	23,200	22,200	21,300
26	16,900	17,100	17,200	21,700	21,600	21,800	25,500	24,900	24,100	23,100	22,100	21,300
27	16,900	17,000	17,300	21,700	21,600	21,800	25,500	24,900	24,100	23,100	22,100	21,200
28	17,000	17,000	17,300	21,700	21,600	21,800	25,500	24,900	24,100	23,100	22,100	21,200
29	17,000	17,000	17,300	21,700	-	21,800	25,500	24,900	24,100	23,100	22,000	21,200
30	16,900	17,000	17,400	21,700	-----	21,800	25,400	24,800	24,000	23,000	22,000	21,200
31	16,900	-----	17,500	21,700	-----	21,800	-----	24,800	-----	23,000	22,000	-----
(†)	1,287.74	1,287.90	1,288.60	1,295.05	1,294.88	1,295.21	1,300.29	1,299.43	1,298.33	1,296.85	1,295.37	1,294.23
(‡)	-300	+100	+500	+4,200	-100	+200	+3,600	-600	-800	-1,000	-1,000	-800
(††)	97	46	35	210	235	252	253	436	480	496	539	458

Calendar year 1964..... ‡ - 3,500 †† 2,520

Water year 1964-65..... ‡ + 4,000 †† 3,460

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

†† 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°20'55", long 120°30'40", in NE¼ sec.6, T.30 S., R.14 E., 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.

Records available.--July 1942 to September 1965.

Gage.--Water-stage recorder and concrete control. Datum of gage is 1,148.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Average discharge.--23 years, 11.8 cfs (8,540 acre-ft per year).

Extremes.--Maximum discharge during year, 107 cfs July 14 (gage height, 2.66 ft); no flow for several months.

1942-65: Maximum discharge, 4,720 cfs Apr. 3, 1958 (gage height, 8.68 ft); no flow at times during 1944, 1947-65.

Remarks.--Records fair. Flow regulated by Salinas Reservoir beginning in 1941 and water diverted to Camp San Luis Obispo and city of San Luis Obispo (see preceding page).

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0.4	0	0	0.1	0.1		0	0.6	
2			0	.4	0	0	.1	.1		0	.6	
3			0	.3	0	0	.1	.1		0	.6	
4			0	1.2	0	0	.1	.1		0	.6	
5			0	3.8	.1	0	.1	.1		0	.6	
6			0	8.5	.1	0	.2	0		0	.6	
7			0	7.2	.1	0	.2	.1		0	.3	
8			0	1.5	0	0	1.1	.1		.3	.1	
9			0	.8	0	0.1	4.7	0		.3	.1	
10			0	.5	0	.1	2.9	0		.4	.1	
11			0	.4	0	0	1.4	0		.4	.1	
12			0	.3	0	.1	1.1	0		.4	.1	
13			0	.2	0	.1	.7	0		.4	0	
14			0	.1	0	.1	.5	0		18	0	
15			0	.2	0	.1	.4	0		1.2	0	
16			0	.1	0	.1	.4	0		.6	0	
17			0	.1	0	.1	.3	0		.6	0	
18			0	.1	0	.1	.3	0		.6	0	
19			0	.1	0	0	.2	0		.6	0	
20			0	.1	0	0	.2	0		.6	0	
21			0	.1	0	0	.2	0		.7	0	
22			0	.1	0	0	.1	0		.7	0	
23			0	.1	0	0	.1	0		.7	0	
24			0	.1	0	0	.1	0		.7	0	
25			0	.1	0	0	.1	0		.7	0	
26			0	.1	0	0	.1	0		.8	0	
27			0	0	0	0	.1	0		.8	0	
28			0	0	0	0	.1	0		1.1	0	
29			0	0	-----	0	.1	0		.8	0	
30			0	0	-----	0	.1	0		.8	0	
31		-----	.2	0	-----	.1	-----	0	-----	.7	0	-----
Total	0	0	0.2	26.9	0.3	1.0	16.2	0.7	0	32.9	4.4	0
Mean	0	0	0.006	0.87	0.01	0.03	0.54	0.02	0	1.06	0.11	0
Ac-ft	0	0	0.4	53	0.6	2.0	32	1.4	0	65	8.7	0
Calendar year 1964	Max	3.1	Min	0	Mean	0.04	Ac-ft	30				
Water year 1964-65	Max	18	Min	0	Mean	0.23	Ac-ft	163				

11-1470. Jack Creek near Templeton, Calif.

Location.--Lat 35°34'00", long 120°48'10", in Paso de Robles Grant, on left bank 1.4 miles upstream from mouth, 1.8 miles northwest of Oakdale School, and 5.6 miles west of Templeton, San Luis Obispo County.

Drainage area.--25.3 sq mi.

Records available.--October 1949 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 980 ft (from topographic map).

Average discharge.--16 years, 12.4 cfs (8,980 acre-ft per year); median of yearly mean discharges, 8.2 cfs (5,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,440 cfs Jan. 6 (gage height, 6.42 ft); no flow for several months.

1949-65: Maximum discharge, 5,040 cfs Jan. 25, 1956 (gage height, 9.56 ft), from rating curve extended above 1,500 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records good. No regulation; small diversions above station for irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.4	0	2.0	2.6	3.0	61
1.5	.1	2.1	4.1	3.5	136
1.6	.2	2.2	6.2	4.0	250
1.7	.5	2.3	9.0	4.5	400
1.8	.9	2.5	18	5.0	615
1.9	1.6	2.8	39		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.2	39	7.3	4.1	6.5	4.9	1.7	0.5	0.1	
2		0	.2	26	6.8	4.0	8.6	4.5	1.7	.5	0	
3		0	.2	106	6.5	3.6	8.7	4.5	1.5	.4	0	
4		0	.2	284	6.0	3.6	6.5	4.3	1.5	.4	0	
5		0	.2	324	24	5.2	6.2	4.3	1.5	.4	0	
6		0	.2	603	25	14	6.0	4.1	1.5	.3	0	
7		0	.2	292	16	16	6.0	3.8	1.4	.3	0	
8		0	.2	112	13	9.8	6.3	3.6	1.4	.3	0	
9		0	.3	71	12	9.8	192	3.6	1.3	.3	0	
10		13	.3	50	11	8.2	103	3.4	1.2	.3	0	
11		2.7	.3	37	9.4	7.6	57	3.2	1.0	.2	0	
12		4.2	.3	30	8.4	7.9	40	3.0	1.0	.2	0	
13		8.7	.3	25	8.2	36	33	2.9	.9	.2	0	
14		3.2	.3	22	8.2	20	26	2.9	.8	.2	0	
15		1.4	.3	18	7.6	16	22	2.6	.8	.2	0	
16		.7	.3	16	7.1	12	19	2.5	.9	.2	0	
17		.4	.3	14	6.2	11	16	2.4	.9	.2	0	
18		.3	.4	13	5.8	9.8	14	2.3	.9	.1	0	
19		.3	44	12	5.6	9.0	14	2.2	.8	.1	0	
20		.2	115	11	5.4	8.2	12	2.0	.8	.1	0	
21		.2	119	9.8	5.2	7.6	11	2.1	.9	.1	0	
22		.2	52	9.0	4.9	6.8	9.8	2.0	.9	.1	0	
23		.2	41	11	4.7	6.2	9.0	2.0	.9	.1	0	
24		.2	26	22	4.5	6.0	8.2	2.0	.9	.1	0	
25		.2	16	13	4.3	5.6	7.6	1.8	.8	.1	0	
26		.2	84	11	4.3	5.4	6.8	1.7	.8	.1	0	
27		.2	171	12	4.3	5.2	6.5	1.6	.7	.1	0	
28		.2	74	11	4.3	5.2	6.0	1.5	.6	.1	0	
29		.2	56	8.7	-----	4.9	5.6	1.5	.6	.1	0	
30		.2	59	8.4	-----	4.7	5.4	1.5	.6	.1	0	
31		-----	65	7.9	-----	6.8	-----	1.6	-----	.1	0	-----
Total	0	74.9	926.7	2,228.8	236.0	280.2	735.4	86.3	31.2	6.5	0.1	0
Mean	0	2.50	29.9	71.9	8.43	9.04	24.5	2.78	1.04	0.21	0.003	0
Ac-ft	0	149	1,840	4,420	468	558	1,460	171	62	13	0.2	0

Calendar year 1964 Max 171 Min 0 Mean 4.37 Ac-ft 3,170
 Water year 1964-65 Max 603 Min 0 Mean 12.6 Ac-ft 9,140

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-26	2300	5.14	685	4-9	1500	5.01	620
1-6	1100	6.42	1,440				

SALINAS RIVER BASIN

11-1470.7. Santa Rita Creek near Templeton, Calif.

Location.--Lat 35°31'26", long 120°45'54", in Asuncion Grant, on left bank 1.6 miles upstream from Paso Robles Creek and 4 miles west of Templeton, San Luis Obispo County.

Drainage area.--18.2 sq mi.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder with rain gage attachment. Altitude of gage is 860 ft (from topographic map). Auxiliary tipping bucket rain gage 5.3 miles west of gage. Altitude of gage is 1,270 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,240 cfs Jan. 6 (gage height, 7.71 ft); no flow for several months.
1961-65: Maximum discharge, 2,320 cfs Feb. 9, 1962 (gage height, 9.15 ft); no flow for several months in each year.

Remarks.--Records fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.4	0	4.3	55
3.5	.2	4.6	96
3.6	1.5	5.0	167
3.7	4.7	5.5	285
3.8	9.6	6.5	630
4.0	24		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.1	54	6.2	3.9	6.2	6.2	1.9	0.2		
2		0	.1	32	5.7	3.9	15	5.7	1.7	.1		
3		0	.1	85	5.2	3.5	11	5.7	1.7	.1		
4		0	.1	272	5.2	3.9	8.1	5.7	1.9	.1		
5		0	.1	286	31	4.7	7.6	5.2	1.9	.1		
6		0	.1	576	25	30	7.6	4.7	1.9	0		
7		0	.1	335	15	12	7.6	4.3	1.9	.1		
8		0	.1	110	12	7.6	69	4.3	1.9	.1		
9		0	.2	61	11	7.2	230	3.9	1.5	.1		
10		20	.2	40	10	5.7	129	3.9	1.3	.1		
11		3.1	.2	31	9.6	5.7	67	3.5	1.3	0		
12		32	.2	24	9.1	6.7	49	3.5	1.7	0		
13		6.2	.2	20	8.6	17	39	3.1	1.0	0		
14		2.4	.2	18	8.6	11	33	3.1	1.0	0		
15		1.5	.3	15	7.6	10	27	3.1	1.0	0		
16		.8	.3	13	7.2	8.1	24	2.7	1.5	0		
17		.6	.3	12	6.7	7.6	21	1.5	1.3	0		
18		.5	.3	11	6.7	7.2	18	2.1	1.1	0		
19		.4	10	9.6	6.7	6.2	15	2.4	1.0	0		
20		.4	42	8.6	6.2	5.7	14	2.4	1.1	0		
21		.3	53	8.1	5.7	5.7	13	2.1	1.3	0		
22		.2	34	7.6	5.7	5.7	12	2.1	1.3	0		
23		.2	49	10	5.2	5.7	11	2.1	1.1	0		
24		.2	30	23	4.7	5.7	10	1.9	1.3	0		
25		.1	18	10	4.7	5.2	9.1	2.4	.8	0		
26		.1	157	8.6	4.3	4.7	8.6	1.9	.6	0		
27		.1	168	7.6	4.7	5.2	8.1	1.7	.6	0		
28		.1	91	7.6	4.3	5.2	7.6	1.5	.7	0		
29		.1	55	7.2	-----	4.7	6.7	1.5	.3	0		
30		.1	91	7.2	-----	4.7	6.2	1.7	.2	0		
31		-----	104	6.7	-----	6.7	-----	1.9	-----	0		
Total	0	69.4	905.2	2,116.8	242.6	226.8	890.4	97.8	37.8	1.0	0	0
Mean	0	2.31	29.2	68.3	8.66	7.32	29.7	3.15	1.26	0.03	0	0
Ac-ft	0	138	1,800	4,200	481	450	1,770	194	75	2.0	0	0
(†)	1.4	5.6	6.4	5.6	0.9	2.8	4.2	0	0	0	0	0
(‡)	3.0	5.3	9.3	7.0	0.5	2.4	3.9	0	0	0	0	0

Calendar year 1964 Max 168 Min 0 Mean 4.00 Ac-ft 2,910
Water year 1964-65 Max 576 Min 0 Mean 12.6 Ac-ft 9,110

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-26	2230	6.81	750	4-9	1500	6.84	770
1-6	1230	7.71	1,240				

† Precipitation, in inches.

‡ Precipitation, in inches, at auxiliary gage.

11-1475. Salinas River at Paso Robles, Calif.

Location.--Lat 35°37'40", long 120°41'05", in Paso de Robles Grant, on downstream side of left pier of bridge on State Highway 41 at Paso Robles, San Luis Obispo County, 3.5 miles upstream from Huerhuero Creek.

Drainage area.--389 sq mi.

Records available.--October 1939 to September 1965 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 670.61 ft above mean sea level (levels by Corps of Engineers). Prior to June 14, 1951, wire-weight gage at same site and datum.

Average discharge.--26 years, 89.5 cfs (64,800 acre-ft per year); median of yearly mean discharges, 45 cfs (32,600 acre-ft per year).

Extremes.--Maximum discharge during year, 3,420 cfs Jan. 6 (gage height, 11.78 ft); no flow for several months.

1939-65: Maximum discharge, 14,200 cfs Mar. 9, 1943 (gage height, 16.2 ft, from stage graph), from rating curve extended above 6,000 cfs on basis of velocity-area studies; maximum gage height, 17.24 ft Apr. 3, 1958; no flow for several months in each year.

Remarks.--Records poor. Flow regulated by Salinas Reservoir beginning in 1941 (see p. 267). Small diversions above station. Records of chemical analysis for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	97	38	27	32	23				
2			0	49	35	23	35	23				
3			0	42	34	20	49	22				
4			0	264	32	20	45	20				
5			0	702	40	22	42	17				
6			0	1,190	93	29	41	15				
7			0	1,780	73	46	43	14				
8			0	698	58	43	126	12				
9			0	412	52	41	714	12				
10			0	277	48	38	1,190	11				
11			0	197	41	35	632	9.0				
12			0	151	39	32	435	9.8				
13			0	120	39	45	329	9.4				
14			0	100	39	66	265	9.8				
15			0	87	38	63	217	7.7				
16			0	73	34	55	185	6.1				
17			0	63	32	49	145	5.2				
18			0	58	31	46	122	3.0				
19			0	55	31	41	106	.1				
20			0	53	31	38	93	0				
21			0	49	30	35	91	0				
22			0	46	30	32	81	0				
23			0	45	29	29	71	0				
24			0	64	27	27	70	0				
25			0	59	27	25	61	0				
26			0	49	26	22	50	0				
27			78	45	26	22	41	0				
28			100	42	28	22	33	0				
29			71	41	-----	22	29	0				
30			104	40	-----	20	26	0				
31		-----	130	39	-----	24	-----	0	-----			-----
Total	0	0	483	6,987	1,081	1,059	5,399	229.1	0	0	0	0
Mean	0	0	15.6	225	38.6	34.2	180	7.39	0	0	0	0
Ac-ft	0	0	958	13,860	2,140	2,100	10,710	454	0	0	0	0

Calendar year 1964 Max 174 Min 0 Mean 4.65 Ac-ft 3,380
 Water year 1964-65 Max 1,780 Min 0 Mean 41.7 Ac-ft 30,220

Peak discharge (base, 1,100 cfs).--Jan. 6 (1930) 3,420 cfs (11.78 ft); Apr. 9 (2300) 1,710 cfs (10.21 ft).

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., on left bank 1 mile northwest of Geneseo School and 4.6 miles northwest of Creston.

Drainage area.--101 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 930 ft (from topographic map).

Average discharge.--7 years, 0.45 cfs (326 acre-ft per year).

Extremes.--Maximum discharge during year, 1.6 cfs Apr. 9 (gage height, 2.15 ft); no flow for several months.

1958-65: Maximum discharge, 808 cfs Feb. 9, 1962 (gage height, 5.57 ft), from rating curve extended above 140 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records fair. No regulation; small diversions above station for irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.9	0
2.0	.1
2.1	.7

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	0.1	0.1	0				
2					0	.1	.2	.1				
3					0	.1	.1	.1				
4					0	.1	.1	.1				
5					0	.1	.1	.1				
6					0	.1	.2	0				
7					0	.1	.2	0				
8					0	.1	.6	0				
9					0	.1	.7	0				
10					0	.1	.3	0				
11					0	.1	.3	0				
12					0	.1	.3	0				
13					0	.2	.2	0				
14					0	.1	.2	0				
15					0	.1	.2	0				
16					0	.1	.2	0				
17					0	.1	.2	0				
18					0	.1	.2	0				
19					0	.1	.2	0				
20					0	.1	.2	0				
21					0	.1	.2	0				
22					0	.1	.2	0				
23					0	.1	.2	0				
24					0	.1	.2	0				
25					0	.1	.2	0				
26					.1	.1	.1	0				
27					.1	.1	.1	0				
28					.1	.1	.1	0				
29					-----	.1	.1	0				
30					-----	.1	0	0				
31		-----			-----	.2	-----	0	-----			-----
Total	0	0	0	0	0.3	3.3	6.2	0.4	0	0	0	0
Mean	0	0	0	0	0.01	0.11	0.21	0.01	0	0	0	0
Ac-ft	0	0	0	0	0.6	6.5	12	0.8	0	0	0	0

Calendar year 1964 Max 9.7 Min 0 Mean 0.09 Ac-ft 68

Water year 1964-65 Max 0.7 Min 0 Mean 0.03 Ac-ft 20

Peak discharge (base, 40 cfs).--No peak above base.

11-1477. Cholame Creek tributary near Cholame, Calif.

Location.--Lat 35°45'10", long 120°15'50", in Cholame Grant, on right bank at culvert on State Highway 41, 2.8 miles northeast of Cholame, San Luis Obispo County.

Drainage area.--9.26 sq mi.

Records available.--October 1958 to September 1965, 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 1,213 ft above mean sea level (by vertical angles).

Average discharge.--7 years, 0.07 cfs (51 acre-ft per year).

Extremes.--Maximum discharge during year, 0.2 cfs Jan. 4 (gage height, 2.62 ft); no flow for most of the year.

1958-65: Maximum discharge, 118 cfs Feb. 9, 1962 (gage height, 4.99 ft), by indirect measurement of maximum flow through culvert; no flow for most of each year.

Remarks.--Records fair. No regulation; small diversions above station for irrigation.

Revisions (water years).--1963 Report: 1962(M).

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0								
2				0								
3				.1								
4				.1								
5				0								
6				0								
7				0								
8				0								
9				0								
10				0								
11				0								
12				0								
13				0								
14				0								
15				0								
16				0								
17				0								
18				0								
19				0								
20				0								
21				0								
22				0								
23				0								
24				0								
25				0								
26				0								
27				0								
28				0								
29				0	-----							
30				0	-----							
31		-----		0	-----		-----		-----			-----
Total	0	0	0	0.2	0	0	0	0	0	0	0	0
Mean	0	0	0	0.006	0	0	0	0	0	0	0	0
Ac-ft	0	0	0	0.4	0	0	0	0	0	0	0	0
(†)	0.6	1.1	1.3	1.5	0.4	1.0	1.7	0	0	0.2	0	0

Calendar year 1964 Max 2.6 Min 0 Mean 0.02 Ac-ft 16
 Water year 1964-65 Max 0.1 Min 0 Mean 0.001 Ac-ft 0.4

Peak discharge (base, 10 cfs).--No peak above base.

† Precipitation, in inches.

SALINAS RIVER BASIN

11-1478. Cholame Creek near Shandon, Calif.

Location.--Lat 35°41'20", long 120°20'03", in SE¼ sec.3, T.26 S., R.15 E., on left bank 500 ft upstream from highway bridge, 2.6 miles downstream from White Canyon, and 3.5 miles northeast of Shandon.

Drainage area.--227 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 1,069.0 ft above mean sea level (planetable survey).

Average discharge.--7 years, 1.31 cfs (948 acre-ft per year).

Extremes.--Maximum discharge during year, 71 cfs Apr. 10 (gage height, 3.96 ft); no flow for most of year.

1958-65: Maximum discharge, 1,100 cfs Feb. 9, 1962 (gage height, 6.90 ft), but may have been higher Feb. 16, 1959; no flow for many months in each year.

Remarks.--Records good. No regulation; small diversions above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0			0					
2				0			0					
3				0			0					
4				0			0					
5				3.1			0					
6				8.4			0					
7				35			0					
8				12			0					
9				.5			0					
10				0			26					
11				0			6.4					
12				0			.3					
13				0			0					
14				0			0					
15				0			0					
16				0			0					
17				0			0					
18				0			0					
19				0			0					
20				0			0					
21				0			0					
22				0			0					
23				0			0					
24				0			0					
25				0			0					
26				0			0					
27				0			0					
28				0			0					
29				0			0					
30				0			0					
31				0			0					
Total	0	0	0	59.0	0	0	32.7	0	0	0	0	0
Mean	0	0	0	1.90	0	0	1.09	0	0	0	0	0
Ac-ft	0	0	0	117	0	0	65	0	0	0	0	0

Calendar year 1964 Max 0 Min 0 Mean 0 Ac-ft 0
 Water year 1964-65 Max 35 Min 0 Mean 0.25 Ac-ft 182

Peak discharge (base, 100 cfs).--No peak above base.

11-1485. Estrella River near Estrella, Calif.

Location.--Lat 35°42'35", long 120°38'20", in NW¼NW¼ sec.36, T.25 S., R.12 E., on right bank 0.2 mile downstream from mouth of Ranchito Canyon and 1.9 miles northwest of Estrella.

Drainage area.--924 sq mi, not including Carrizo Plains.

Records available.--October 1954 to September 1965. Prior to October 1962, published as Estrella Creek near Estrella.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 677.59' AMSL (MSAE on 1-19-67) 710 ft (from topographic map).

Average discharge.--11 years, 12.0 cfs (8,690 acre-ft per year); median of yearly discharges, 2.7 cfs (2,000 acre-ft per year).

Extremes.--Maximum discharge during year, 11 cfs Apr. 10 (gage height, 2.10 ft); no flow for several months.

1954-65: Maximum discharge, 8,850 cfs Apr. 6, 1958 (gage height, 7.20 ft), 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.--Records fair. No regulation; pumpage from wells along river for irrigation above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.8	0
1.9	1.1
2.0	6.8
2.1	15

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	1.7	2.8	2.2					0
2				0	1.7	2.2	2.8					0
3				0	1.7	2.2	3.4					0
4				0	1.4	2.8	3.4					0
5				0	2.2	2.2	4.0					0
6				0	2.8	3.4	3.4					0
7				0	2.2	3.4	4.0					0
8				0	1.7	2.8	6.1					0
9				0	1.7	2.8	8.2					0
10				3.0	1.7	2.2	9.8					0
11				4.0	2.2	3.4	9.0					0
12				1.7	2.2	3.4	8.2					0
13				1.1	2.2	3.4	7.5					0
14				.8	2.2	3.4	6.8					0
15				.2	1.7	3.4	8.2					0
16				.2	1.7	3.4	6.1					0
17				.4	1.7	2.8	4.7					0
18				.4	1.7	2.2	2.8					0.9
19				.5	1.7	2.2	2.2					.2
20				.5	1.7	1.7	1.7					0
21				.5	1.7	1.7	1.7					0
22				.5	1.7	1.7	1.4					0
23				.6	1.7	1.4	1.4					0
24				.8	1.7	1.4	1.1					0
25				.8	1.7	1.4	1.1					0
26				.8	2.8	1.4	.8					0
27				1.1	2.8	1.4	.5					0
28				1.1	2.8	1.1	.5					0
29				1.4	-----	1.1	.1					0
30				1.4	-----	1.1	0					0
31				1.4	-----	1.7	-----					0
Total	0	0	0	23.2	54.7	71.5	113.1	0	0	0	0	1.1
Mean	0	0	0	0.75	1.95	2.31	3.77	0	0	0	0	0.04
Ac-ft	0	0	0	46	108	142	224	0	0	0	0	2.2

Calendar year 1964 Max 11 Min 0 Mean 0.92 Ac-ft 667

Water year 1964-65 Max 9.8 Min 0 Mean 0.72 Ac-ft 522

Peak discharge (base, 200 cfs).--No peak above base.

11-1488. Nacimiento River near Bryson, Calif.

Location.--Lat 35°48'06", long 121°06'50", in NW¼ sec.33, T.24 S., R.8 E., 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.

Records available.--October 1955 to September 1965. 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.--10 years, 148 cfs (107,100 acre-ft per year); median of yearly mean discharges, 110 cfs (79,600 acre-ft per year).

Extremes.--Maximum discharge during year, 11,700 cfs Jan. 6 (gage height, 14.80 ft); no flow Oct. 1 to Nov. 8, Aug. 6 to Sept. 30. 1955-65: Maximum discharge, 30,300 cfs Dec. 23, 1955 (gage height, 24.63 ft), from rating curve extended above 13,000 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

Remarks.--Records fair. No storage or diversion above station. Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Revisions (water years).--1962 Report: 1961.

Rating table (gage height, in feet and discharge, in cubic feet per second)
(Shifting-control method used Nov. 9 to Jan. 3, Jan. 6, July 7 to Aug. 5)

Oct. 1 to Jan. 5				Jan. 6 to Sept. 30			
3.6	0	4.7	71	3.2	0	4.1	66
3.7	.2	5.0	144	3.3	.1	4.4	132
3.8	.8	5.5	300	3.4	.6	4.9	305
3.9	2.6	6.0	500	3.5	2.2	5.5	635
4.0	5.3	7.0	1,040	3.6	6.0	6.0	990
4.2	13	8.0	1,760	3.7	12	8.0	2,850
4.4	27	9.0	2,680	3.9	34	12.0	7,600

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	14	395	96	45	257	77	22	5.8	0.4	
2		0	14	296	89	42	237	76	24	5.2	.4	
3		0	13	2,680	85	42	214	72	23	4.6	.4	
4		0	13	1,410	83	49	184	68	22	4.2	.2	
5		0	12	1,780	187	189	166	66	21	3.7	.1	
6		0	12	6,910	154	351	163	62	20	3.3	0	
7		0	12	3,620	130	218	163	61	19	3.0	0	
8		0	11	1,460	114	154	803	57	18	3.0	0	
9		443	11	840	107	127	1,890	52	17	2.6	0	
10		719	11	558	100	112	1,310	50	16	2.0	0	
11		177	11	411	94	114	721	47	15	1.9	0	
12		628	11	323	85	107	499	42	14	1.6	0	
13		229	11	265	83	264	406	40	13	1.6	0	
14		116	10	222	81	222	346	38	13	1.4	0	
15		78	10	194	77	190	301	37	13	1.2	0	
16		60	10	175	72	166	261	35	12	.9	0	
17		44	10	160	68	152	237	32	12	.9	0	
18		37	11	149	66	138	214	30	12	.9	0	
19		31	1,390	140	64	124	197	30	12	.9	0	
20		28	1,020	132	61	114	181	30	11	.8	0	
21		26	926	124	59	105	169	30	11	.5	0	
22		23	665	114	55	98	157	30	11	.5	0	
23		21	884	112	50	92	146	30	11	.4	0	
24		19	572	216	48	87	135	29	11	.4	0	
25		18	367	157	47	81	124	27	11	.4	0	
26		17	328	140	44	76	114	26	10	.4	0	
27		16	1,190	154	50	74	107	26	9.2	.4	0	
28		15	824	120	53	76	98	24	8.4	.4	0	
29		15	590	114	-----	70	89	22	7.4	.4	0	
30		14	665	107	-----	66	85	21	6.6	.5	0	
31		-----	532	100	-----	331	-----	21	-----	.4	0	-----
Total	0	2,774	10,160	23,578	2,302	4,076	9,974	1,288	425.6	54.2	1.5	0
Mean	0	92.5	328	761	82.2	131	332	41.5	14.2	1.75	0.05	0
Ac-ft	0	5,500	20,150	46,770	4,570	8,080	19,780	2,550	844	108	3.0	0

Calendar year 1964 Max 2,220 Min 0 Mean 69.6 Ac-ft 50,490
Water year 1964-65 Max 6,910 Min 0 Mean 150 Ac-ft 108,400

Peak discharge (base, 4,000 cfs).--Jan. 3 (1800) 4,080 cfs (10.27 ft); Jan. 6 (1000) 11,700 cfs (14.80 ft).

Note.--No gage-height record June 3 to July 6.

11-1494. Nacimiento River below Nacimiento Dam, near Bradley, Calif.

Location.--Lat 35°45'41", long 120°51'16", in NE¼NE¼ sec.14, T.25 S., R.10 E., on left bank 2.2 miles below Nacimiento Dam and 7.6 miles southwest of Bradley.

Drainage area.--322 sq mi.

Records available.--October 1957 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 597 ft above mean sea level (Corps of Engineers bench mark).

Average discharge.--8 years, 224 cfs (162,200 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 570 cfs Aug. 2, 3 (gage height, 5.70 ft); maximum gage height, 5.73 ft July 20-22; no flow for many days.

1957-65: Maximum discharge, 5,220 cfs Apr. 7, 1958 (gage height, 10.28 ft); no flow many days each year except 1964.

Remarks.--Records good. Flow regulated by Nacimiento Dam (usable capacity, 340,000 acre-ft). No diversion above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report. *verbal from MCFCD*
Must maintain min. pool of 150,000 A1
Must release when resv exceeds 200,000 A

Cooperation.--Four discharge measurements furnished by Monterey County Flood Control and Water Conservation District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	359	238	0	0	0	0.1	0	0	283	474	566	438
2	321	235	0	0	0	.1	0	0	363	474	566	438
3	321	238	0	0	0	.1	0	0	360	474	566	438
4	321	238	0	0	0	.1	0	0	360	474	566	442
5	318	185	0	.1	0	.1	0	0	360	474	562	438
6	318	128	0	.1	0	.2	0	0	360	474	558	438
7	318	128	0	.1	0	.4	0	0	360	474	554	438
8	318	128	0	.1	0	.4	.2	0	360	474	554	438
9	318	100	0	0	0	.4	.4	0	360	470	546	438
10	321	1.7	0	0	0	.5	.6	0	360	466	534	442
11	321	.3	0	0	.1	.6	.6	0	360	466	534	442
12	321	.1	0	0	.1	.6	.5	0	360	462	530	442
13	321	.1	0	0	.1	.6	.5	0	360	462	526	442
14	321	0	0	0	0	.6	.4	50	360	458	526	438
15	321	0	0	0	0	.6	.4	235	363	458	522	442
16	321	0	0	0	0	.6	.4	238	363	458	518	442
17	324	0	0	0	0	.5	.4	238	363	458	518	412
18	324	0	0	0	0	.4	.3	238	363	458	518	351
19	324	0	0	0	0	.4	.3	238	363	458	514	351
20	324	0	0	0	0	.3	.2	238	363	482	514	351
21	321	0	0	0	0	.2	.2	238	363	558	514	351
22	321	0	0	0	0	.2	.2	238	401	558	510	351
23	318	0	0	0	0	.1	.1	235	470	558	510	351
24	315	0	0	0	.1	.1	.1	235	470	558	510	351
25	315	0	0	0	.1	.1	.1	235	470	558	506	351
26	312	0	0	0	.1	.1	0	235	470	558	506	351
27	306	0	0	0	.1	.1	0	232	470	562	506	351
28	291	0	0	0	.1	0	0	232	470	566	506	351
29	240	0	0	0	-----	0	0	235	470	566	510	351
30	238	0	0	0	-----	0	0	235	470	566	506	351
31	238	-----	0	0	-----	0	-----	232	-----	566	490	-----
Total	9,670	1,620.2	0	0.4	0.8	8.5	5.9	4,057	11,668	15,522	16,366	12,011
Mean	312	54.0	0	0.01	0.03	0.27	0.20	131	389	501	528	400
Ac-ft	19,180	3,210	0	0.8	1.6	17	12	8,050	23,140	30,790	32,460	23,820

Calendar year 1964 Max 614 Min 0 Mean 280 Ac-ft 203,200
 Water year 1964-65 Max 566 Min 0 Mean 194 Ac-ft 140,700

11-1497. San Antonio River at Sam Jones Bridge, near Lockwood, Calif.

Location.--Lat 35°54'45", long 121°07'50", in Los Ojitos Grant, on downstream side of Sam Jones Bridge, 300 ft downstream from China Gulch and 3.5 miles southwest of Lockwood, Monterey County.

Drainage area.--211 sq mi.

Records available.--June 1958 to September 1959, February 1961 to September 1965 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 860 ft (from topographic map).

Average discharge.--5 years, 67.8 cfs (49,090 acre-ft per year).

Extremes.--Maximum discharge during year, 4,420 cfs Jan. 6 (gage height, 6.24 ft); no flow Aug. 28 to Sept. 30.

1958-59, 1961-65: Maximum discharge, 14,400 cfs Jan. 31, 1963 (gage height, 8.70 ft); no flow July 15 to Nov. 1, 1961, Aug. 28 to Sept. 30, 1965.

Remarks.--Records fair. No regulation; some pumping above station. Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Revisions (water years).--1964 Report: 1959.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	1.7	1.7	199	75	36	144	70	16	3.6	0.3	
2	.2	1.2	1.7	150	67	36	86	66	16	3.2	.3	
3	.2	1.2	1.7	1,070	66	37	74	64	16	2.9	.4	
4	.1	1.0	1.7	807	66	37	62	51	16	2.7	.4	
5	.1	.8	1.7	527	109	42	55	49	16	2.7	.3	
6	.1	.8	1.7	2,520	108	51	45	48	14	2.2	.4	
7	.2	.7	1.7	1,420	96	66	51	48	14	2.3	.5	
8	.2	1.3	1.8	654	79	53	99	48	14	1.8	.5	
9	.2	2.2	1.8	385	74	43	295	47	14	1.8	.5	
10	.2	2.5	1.8	315	72	44	390	45	13	1.6	.4	
11	.2	2.2	1.8	295	61	38	230	45	12	1.4	.5	
12	.2	5.1	1.8	271	61	37	170	42	12	1.4	.6	
13	.4	2.2	2.0	230	61	48	155	41	11	1.2	.5	
14	.5	1.2	2.0	199	56	61	145	40	9.6	1.0	.4	
15	.4	7.7	2.0	182	51	55	130	36	9.2	.8	.4	
16	.4	5.1	2.0	140	48	48	130	34	8.8	.7	.3	
17	.4	4.1	2.0	132	50	45	119	32	8.4	1.1	.4	
18	.4	3.1	2.3	121	51	47	117	31	8.0	1.2	.5	
19	.4	2.9	5.2	115	45	45	110	31	7.7	1.1	.6	
20	.4	2.7	21.6	108	44	39	108	28	7.3	1.2	.5	
21	.4	2.3	27.9	100	40	37	106	27	6.9	1.2	.4	
22	.4	2.3	31.5	92	40	34	98	27	6.1	.8	.6	
23	.7	2.2	33.0	86	38	31	94	27	5.8	.7	.5	
24	.7	2.0	26.7	125	37	29	92	27	5.8	.5	.5	
25	1.0	1.8	17.6	117	37	27	86	25	5.8	.5	.4	
26	1.1	1.8	13.2	104	37	25	83	24	5.6	.4	.2	
27	1.1	1.7	43.2	100	37	24	81	23	5.4	.2	.1	
28	2.0	1.7	35.5	94	36	24	79	20	4.8	.3	0	
29	2.9	1.7	27.1	92	-----	24	77	18	4.4	.3	0	
30	1.7	1.7	35.0	79	-----	35	74	16	4.1	.4	0	
31	1.6	-----	26.3	74	-----	84	-----	16	-----	.4	0	-----
Total	19.2	99.5	3,471.2	10,903	1,642	1,282	3,585	1,146	297.7	41.6	11.4	0
Mean	0.62	3.32	112	352	58.6	41.4	120	37.0	9.92	1.34	0.37	0
Ac-ft	38	197	6,890	21,630	3,260	2,540	7,110	2,270	590	83	23	0

Calendar year 1964 Max 663 Min 0.1 Mean 25.4 Ac-ft 18,450
 Water year 1964-65 Max 2,520 Min 0 Mean 61.6 Ac-ft 44,630

Peak discharge (base, 300 cfs)

Note.--No gage-height record Mar. 22-29.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-21	2100	3.98	507	1-3	1330	5.55	2,650
12-27	0600	4.33	777	1-6	1100	6.24	4,420
12-30	0400	3.93	474	4-9	2100	4.17	646

11-1500. San Antonio River at Pleyto, Calif.

Location.--Lat 35°51'55", long 120°59'30", in Pleyto Grant, on downstream side of left abutment of highway bridge at old townsite of Pleyto, Monterey County, 1.1 miles downstream from Copperhead Creek, and 11 miles (revised) west of Bradley.

Drainage area.--284 sq mi.

Records available.--April to September 1922, October 1929 to September 1965 (discontinued). Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 712.10 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to May 10, 1939, at datum 1.00 ft higher. April to September 1922, staff gage at same site at different datum.

Average discharge.--36 years (1929-65), 79.5 cfs (57,560 acre-ft per year); median of yearly mean discharges, 46 cfs (33,300 acre-ft per year).

Extremes.--Maximum discharge during year, 3,900 cfs Jan. 6 (gage height, 4.49 ft); no flow Oct. 1 to Dec. 19. 1929-65: Maximum discharge, 19,100 cfs Apr. 3, 1958 (gage height, 6.44 ft), from rating curve extended above 4,500 cfs; no flow for several months in most years.

Remarks.--Records poor. No regulation; diversion for irrigation of about 500 acres above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating table (gage-height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 20 to Jan. 10, Jan. 14 to Feb. 9, May 23 to July 4)

0.5	0	1.0	16	2.5	460
.6	.2	1.1	26	3.0	780
.7	1.2	1.3	57	3.5	1,200
.8	3.6	1.6	128	4.1	2,000
.9	8.0	2.0	255		

*SAN ANTONIO RESV Completed '65
Cap. 350,000 ac-ft
Must maintain min pool of 50,000 AF
Must release when resv exceeds 300,000*

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	245	70	40	80	65	17	1.9	0.4	0.1
2			0	203	65	39	95	65	16	1.9	.3	.1
3			0	549	65	37	78	61	16	1.7	.3	.1
4			0	531	65	40	68	61	15	1.7	.2	.1
5			0	341	80	50	63	55	14	1.9	.2	.1
6			0	1,910	112	59	59	54	14	1.4	.2	.1
7			0	916	95	61	59	52	14	1.2	.2	.1
8			0	582	85	54	85	52	13	1.2	.2	.1
9			0	460	76	52	193	50	12	1.2	.2	.1
10			0	430	70	47	370	43	12	1.2	.2	.1
11			0	374	65	45	276	39	11	.9	.2	.1
12			0	311	61	39	225	37	10	.9	.1	.1
13			0	262	59	42	203	37	8.8	.9	.1	.1
14			0	225	59	57	193	34	8.0	.9	.1	.1
15			0	196	59	54	173	32	7.6	.8	.2	.1
16			0	161	57	50	168	30	7.6	.8	.2	.1
17			0	149	57	47	164	27	7.1	.9	.2	.1
18			0	134	54	43	146	27	6.7	.8	.2	.1
19			0	128	52	42	134	26	6.2	.7	.2	.2
20			.1	120	50	39	131	26	5.8	.7	.1	.2
21			112	112	50	37	120	25	5.4	.7	.1	.2
22			216	107	47	34	110	24	4.9	.7	.1	.2
23			161	102	43	32	102	26	4.5	.7	.1	.2
24			140	120	40	30	100	25	4.0	.7	.1	.2
25			70	143	40	29	90	24	3.6	.6	.1	.2
26			34	105	40	26	85	23	3.4	.6	.1	.2
27			271	95	42	25	78	21	3.1	.5	.1	.2
28			341	85	43	24	74	20	2.4	.5	.1	.2
29			294	80	-----	24	72	20	2.2	.4	.1	.3
30			322	80	-----	24	70	19	2.2	.4	.1	.3
31			272	74	-----	39	-----	18	-----	.4	.1	-----
Total	0	0	2,233.1	9,330	1,701	1,261	3,864	1,118	257.5	29.8	5.1	4.4
Mean	0	0	72.0	301	60.8	40.7	129	36.1	8.58	0.96	0.16	0.15
Ac-ft	0	0	4,430	18,510	3,370	2,500	7,660	2,220	511	59	10	8.7

Calendar year 1964 Max 469 Min 0 Mean 20.3 Ac-ft 14,750
Water year 1964-65 Max 1,910 Min 0 Mean 54.3 Ac-ft 38,280

Peak discharge (base, 470 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-27	1330	2.95	546	1-6	1500	4.49	3,900
1-3	1730	3.74	1,670				

Note.--No gage-height record Aug. 27 to Sept. 30.

11-1505. Salinas River near Bradley, Calif.

Location.--Lat 35°55'40", long 120°52'00", in NE¼ sec.15, T.23 S., R.10 E., on left bank 6 miles northwest of Bradley and 7 miles downstream from San Antonio River.

Drainage area.--2,536 sq mi.

Records available.--October 1948 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Altitude of gage is 450 ft (from topographic map). *442.691 amsl (USAF-19-67)*

Average discharge.--17 years, 365 cfs (264,200 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 4,720 cfs Jan. 7 (gage height, 7.42 ft); minimum daily, 5.7 cfs Dec. 22.
1948-65: Maximum discharge, 28,400 cfs Apr. 3, 1958 (gage height, 12.53 ft); no flow at times in 1951, 1954-55, 1957.

Remarks.--Records poor. Flow partly regulated by Salinas Reservoir (see p. 267), and Nacimiento Reservoir beginning in November 1956 (usable capacity, 340,000 acre-ft). Several small diversions above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	394	266	14	272	140	82	78	110	277	460	609	490
2	346	255	14	222	132	83	164	102	358	466	609	460
3	316	266	14	168	128	70	182	99	394	460	567	478
4	310	238	14	987	123	69	173	95	406	454	553	466
5	310	228	14	949	118	75	155	91	412	454	539	460
6	322	113	14	1,630	130	88	142	83	406	454	518	466
7	328	88	14	4,050	180	102	142	78	412	454	532	472
8	328	82	14	2,620	280	99	182	66	418	460	546	460
9	328	78	14	1,440	200	92	426	64	412	460	560	466
10	328	78	12	1,080	170	82	1,430	58	394	448	560	484
11	328	72	12	884	150	92	1,130	49	388	442	532	484
12	328	72	12	686	130	85	716	47	400	442	532	466
13	328	66	12	546	125	66	532	47	388	442	525	460
14	322	57	11	478	122	75	466	45	400	448	532	460
15	316	55	12	430	120	126	430	42	412	448	532	472
16	316	52	12	340	117	134	388	149	418	454	532	497
17	316	49	11	299	110	121	358	233	412	472	532	518
18	316	49	6.4	266	99	110	322	246	412	472	504	472
19	310	47	9.2	233	95	102	294	255	418	448	504	430
20	310	47	7.1	206	94	85	266	288	412	442	504	412
21	310	40	6.4	196	94	78	250	294	412	525	504	394
22	304	34	5.7	186	92	75	233	277	412	588	504	382
23	299	29	16	168	90	69	206	282	454	581	504	376
24	304	26	117	168	86	66	186	294	484	574	504	370
25	304	23	147	182	83	61	160	294	484	560	504	370
26	304	20	117	191	81	55	150	288	466	574	504	370
27	310	18	102	173	79	52	142	299	454	588	504	370
28	322	17	275	168	79	52	132	288	460	602	511	388
29	272	16	310	160	-----	52	124	288	466	609	511	382
30	255	15	299	150	-----	49	116	288	466	616	532	358
31	233	-----	340	145	-----	66	-----	288	-----	616	539	-----
Total	9,717	2,496	1,977.8	19,673	3,447	2,513	9,675	5,427	12,507	15,513	16,443	13,133
Mean	313	83.2	63.8	635	123	81.1	322	175	417	500	530	438
Ac-ft	19,270	4,950	3,920	39,020	6,840	4,980	19,190	10,760	24,810	30,770	32,610	26,050

Calendar year 1964 . Max 700 Min 5.7 Mean 307 Ac-ft 222,600
Water year 1964-65 Max 4,050 Min 5.7 Mean 308 Ac-ft 223,200

Note.--No gage-height record Nov. 21 to Dec. 1, Jan. 29 to Feb. 8, Feb. 13-17, Feb. 19 to Mar. 3, Apr. 26 to May 6.

11-1513. San Lorenzo Creek below Bitterwater Creek, near King City, Calif.

Location.--Lat 36°16'05", long 121°03'50", in NW¼ sec.24, T.19 S., R.8 E., on left bank 1.2 miles downstream from Bitterwater Creek, 5 miles northeast of King City, and 10 miles upstream from mouth.

Drainage area.--233 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 480 ft (from topographic map). *436.54' AMSL (USACE - 1-7-67)*

Average discharge.--7 years, 4.75 cfs (3,440 acre-ft per year).

Extremes.--Maximum discharge during year, 256 cfs Jan. 6 (gage height, 5.29 ft), from rating curve extended above 120 cfs on basis of slope-area measurement at gage height 7.36 ft; minimum daily, 0.1 cfs for several months.

1958-65: Maximum discharge, 2,130 cfs Feb. 10, 1963 (gage height, 8.13 ft), from rating curve extended above 800 cfs; no flow for many days in 1961.

Revisions.--The maximum discharge for the water year 1964 has been revised to 585 cfs Nov. 20, 1963 (gage-height, 6.10 ft), superseding figure published in 1964 Report.

Remarks.--Records good. No regulation; small diversions above station.

Revisions (water years).--1962 Report: 1961. Revised figures of discharge, in cubic feet per second, for the water year 1964, superseding figures published in 1964 Report, are given herewith:

1963	1964
Nov. 20..... 112	Jan. 21..... 12
21..... 15	22..... 72
	23..... 24

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
November 1963.....	144.8	112	0.1	4.83	287
Calendar year 1963.....	-	518	0.1	8.17	5,910
January 1964.....	184.6	72	1.0	5.95	366
Water year 1963-64.....	-	112	0.1	1.20	871

Revised peak discharge.--1963-64: Nov. 20 (0830) 585 cfs (6.10 ft); Jan. 22 (1300) 145 cfs (4.92 ft).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 30 to Jan. 5)

3.5	0	4.1	10
3.6	.2	4.2	17
3.7	.5	4.4	39
3.8	1.1	4.7	93
3.9	2.8	5.2	225
4.0	5.7		

SALINAS RIVER BASIN

11-1513. San Lorenzo Creek below Bitterwater Creek, near King City, Calif.--Continued.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.1	0.1	5.7	0.7	0.3	3.7	0.2	0.1	0.1	0.1	0.1
2	.1	.1	.1	3.1	.6	.3	7.8	.2	.1	.1	.1	.1
3	.1	.1	.1	2.6	.6	.2	6.6	.2	.1	.1	.1	.1
4	.1	.1	.1	4.2	.6	.2	6.1	.2	.1	.1	.1	.1
5	.1	.1	.1	60	1.9	.2	3.7	.2	.1	.1	.1	.1
6	.1	.1	.1	166	1.7	.2	2.3	.1	.1	.1	.1	.1
7	.1	.1	.1	207	4.2	.3	1.7	.1	.1	.1	.1	.1
8	.1	.1	.1	45	1.9	.4	9.5	.1	.1	.1	.1	.1
9	.1	.2	.1	28	.9	.7	61	.1	.1	.1	.1	.1
10	.1	.2	.1	16	.5	.6	128	.1	.1	.1	.1	.1
11	.1	4.3	.1	10	.4	.6	54	.1	.1	.1	.1	.1
12	.1	.6	.1	7.0	.3	.5	39	.1	.1	.1	.1	.1
13	.1	.5	.1	4.8	.3	.5	70	.1	.1	.1	.1	.1
14	.1	.6	.1	3.4	.4	.5	42	.1	.1	.1	.1	.1
15	.1	.3	.2	2.1	.4	2.5	23	.1	.1	.1	.1	.1
16	.1	.2	.2	1.6	.4	2.2	15	.1	.1	.1	.1	.1
17	.1	.1	.2	1.2	.3	2.0	11	.1	.1	.1	.1	.1
18	.1	.1	.2	1.2	.3	1.9	9.1	.1	.1	.1	.1	.1
19	.1	.1	1.3	1.1	.3	1.8	6.6	.1	.1	.1	.1	.1
20	.1	.1	.8	1.3	.3	1.6	5.1	.1	.1	.1	.1	.1
21	.1	.1	.5	1.2	.3	1.5	4.5	.1	.1	.1	.1	.1
22	.1	.1	.4	.9	.3	1.4	3.4	.1	.1	.1	.1	.1
23	.1	.1	.6	.8	.3	1.4	2.3	.1	.1	.1	.1	.1
24	.1	.1	1.9	1.1	.2	1.3	1.4	.1	.1	.1	.1	.1
25	.1	.1	9.9	1.4	.2	1.2	.8	.1	.1	.1	.1	.1
26	.1	.1	4.5	1.9	.2	1.2	.4	.1	.1	.1	.1	.1
27	.1	.1	53	1.6	.2	1.1	.3	.1	.1	.1	.1	.1
28	.5	.1	27	1.3	.3	1.0	.2	.1	.1	.1	.1	.1
29	.2	.1	19	1.0	-----	1.0	.2	.1	.1	.1	.1	.1
30	.1	.1	6.1	.8	-----	1.0	.2	.1	.1	.1	.1	.1
31	.1	-----	7.8	.8	-----	3.1	-----	.1	-----	.1	.1	-----
Total	3.6	9.1	135.0	584.1	19.0	32.7	518.9	3.6	3.0	3.1	3.1	3.0
Mean	0.12	0.30	4.35	18.8	0.68	1.05	17.3	0.12	0.10	0.10	0.10	0.10
Ac-ft	7.1	18	268	1,160	38	65	1,030	7.1	6.0	6.1	6.1	6.0

Calendar year 1964 Max 72 Min 0.1 Mean 1.11 Ac-ft 802

Water year 1964-65 Max 207 Min 0.1 Mean 3.61 Ac-ft 2,620

Peak discharge (base, 200 cfs).--Jan. 6 (2100) 256 cfs (5.29 ft); Apr. 9 (2330) 253 cfs (5.28 ft).

Note.--No gage-height record Mar. 5-30.

11-1518.7. Arroyo Seco near Greenfield, Calif.

Location.--Lat 36°14'15", long 121°28'50", in NE¼SE¼ sec.36, T.19 S., R.4 E., on right bank 0.6 mile downstream from Rocky Creek and 14.5 miles southwest of Greenfield.

Drainage area.--113 sq mi.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 780 ft (from topographic map).

Extremes.--Maximum discharge during year, 4,320 cfs Jan. 6 (gage height, 8.25 ft); minimum daily, 0.4 cfs Oct. 6.
1961-65: Maximum discharge, 10,400 cfs Jan. 31, 1963 (gage height, 11.35 ft); no flow Oct. 1-5, 1961.

Remarks.--Records good except those for period of no gage-height record which are fair. No regulation; small diversion for fishponds above station by pumping. Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-29 Jan. 16 to Feb. 8)

Oct. 1 to Feb. 28						Mar. 1 to Sept. 30					
0.37	0.4	0.9	6.7	4.0	580	0.5	1.8	2.0	84		
.4	.6	1.0	10	5.0	1,070	.6	2.9	2.5	157		
.5	1.0	1.5	37	6.0	1,780	.7	4.5	3.0	265		
.6	1.6	2.0	78	8.0	3,950	.9	8.9	3.5	405		
.7	2.6	2.5	143			1.2	20	4.0	590		
.8	4.3	3.0	246			1.5	38	5.0	1,070		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	15	24	352	140	65	185	132	50	22	7.2	6.4
2	1.2	24	24	304	134	63	157	128	51	21	6.2	6.9
3	.6	15	24	1,120	128	57	138	125	47	20	5.8	7.2
4	.5	10	23	825	125	55	126	120	46	18	5.3	5.6
5	.5	8.7	23	886	228	87	118	115	44	17	4.7	2.6
6	.4	7.7	23	3,090	178	113	118	112	43	16	4.3	3.4
7	.5	7.0	24	2,020	157	94	118	108	41	15	4.7	4.2
8	.5	9.0	24	1,030	146	82	298	104	42	14	4.7	5.4
9	.6	238	25	720	137	75	618	100	43	13	4.2	5.8
10	.6	298	25	556	131	72	550	96	40	12	4.3	6.6
11	.6	117	26	464	124	69	433	92	37	11	4.9	5.6
12	.6	313	25	394	118	80	384	88	36	11	5.8	5.1
13	.6	137	24	343	114	189	363	84	34	11	7.2	4.5
14	.6	89	24	301	110	138	348	82	33	11	5.4	4.3
15	.6	68	24	272	104	120	345	80	33	11	8.1	4.3
16	.6	57	24	248	99	106	351	75	33	9.8	9.5	4.0
17	.6	48	24	227	95	98	333	73	32	9.5	8.6	4.0
18	.6	43	26	209	90	92	308	70	32	10	8.6	3.9
19	.6	38	352	194	88	87	290	68	30	9.8	8.6	4.9
20	.7	35	428	184	84	81	270	67	29	8.9	8.6	5.6
21	.7	33	552	170	82	77	248	66	29	8.6	8.4	5.4
22	.7	32	607	162	79	74	230	68	28	8.6	8.4	5.1
23	.7	30	820	183	76	71	209	65	26	8.4	8.4	4.5
24	.7	29	632	295	74	69	197	61	26	7.9	8.4	4.3
25	.8	28	414	215	72	67	185	60	26	7.6	8.6	4.2
26	.9	27	560	192	69	66	171	57	27	7.4	8.9	4.2
27	1.0	26	928	180	76	68	162	56	27	7.9	8.2	4.9
28	2.0	26	745	168	72	65	152	52	26	8.2	8.9	5.4
29	3.5	25	564	160	-----	62	143	50	23	8.2	10	5.7
30	28	24	592	153	-----	59	137	48	22	7.6	6.6	5.6
31	14	-----	446	145	-----	309	-----	47	-----	7.6	6.4	-----
Total	95.4	1,857.4	3,076	15,762	3,130	2,810	7,685	2,549	1,036	359.0	217.9	149.6
Mean	3.08	61.9	261	508	112	90.6	256	82.2	34.5	11.6	7.03	4.99
Ac-ft	189	3,680	16,020	31,260	6,210	5,570	15,240	5,060	2,050	712	432	297

Calendar year 1964 Max 1,060 Min 0.4 Mean 57.7 Ac-ft 41,860
Water year 1964-65 Max 3,090 Min 0.4 Mean 120 Ac-ft 86,720

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	2100	5.09	1,120	1-3	0800	5.81	1,630
12-26	2300	6.41	2,160	1-6	0500	8.25	4,320

Note.--No gage-height record May 4-12.

11-1520. Arroyo Seco near Soledad, Calif.

Location.--Lat 36°16'50", long 121°19'20", in SW¼NE¼ sec.16, T.19 S., R.6 E., on left bank just downstream from bridge, 1.5 miles downstream from Vaquero Creek, and 10 miles south of Soledad.

Drainage area.--244 sq mi.

Records available.--November 1901 to September 1965. 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 benchmark). Prior to June 16, 1929, staff 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, at datum 2.00 ft higher.

Average discharge.--64 years, 161 cfs (116,600 acre-ft per year); median of yearly mean discharges, 123 cfs (89,000 acre-ft per year).

Extremes.--Maximum discharge during year, 7,700 cfs Jan. 6 (gage height, 11.40 ft); no flow Oct. 1-30.

1901-65: 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.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	5.9	19	320	132	74	220	140	50	20	6.2	0.9
2	0	12	19	265	126	70	172	134	52	20	5.9	.9
3	0	15	18	1,380	122	68	158	134	50	18	4.8	.9
4	0	11	18	918	118	66	142	128	46	18	4.0	.8
5	0	8.8	18	818	186	93	136	124	44	16	3.4	.7
6	0	7.4	18	4,690	170	112	130	120	43	16	3.2	.9
7	0	6.5	17	3,100	152	114	132	118	43	15	2.8	.7
8	0	6.2	17	1,460	142	100	242	114	41	13	2.6	.7
9	0	136	17	962	136	93	650	110	41	12	2.2	.6
10	0	284	17	721	130	87	611	104	40	12	1.5	.6
11	0	148	17	529	124	86	426	100	39	12	.9	1.8
12	0	266	17	414	120	86	370	97	36	12	1.5	2.1
13	0	166	17	344	116	164	344	91	34	12	1.6	2.2
14	0	100	17	296	116	150	323	89	34	11	1.6	2.1
15	0	72	17	265	110	130	317	84	33	10	2.4	1.7
16	0	56	17	240	106	120	323	80	32	10	2.1	1.4
17	0	44	16	218	100	112	311	79	32	11	1.4	1.3
18	0	39	16	200	97	104	282	72	31	11	.9	1.2
19	0	34	254	186	95	100	270	70	30	10	1.6	1.2
20	0	30	406	177	93	97	250	69	30	10	1.7	1.0
21	0	29	573	166	87	93	235	69	28	10	1.4	.9
22	0	26	547	156	84	93	220	70	27	9.6	1.1	1.0
23	0	25	1,170	150	82	87	202	69	25	9.6	1.3	1.7
24	0	24	703	260	80	86	192	64	24	9.2	1.2	2.0
25	0	22	422	202	77	86	181	63	24	8.4	1.1	2.1
26	0	22	329	179	75	82	172	60	24	8.0	1.3	2.1
27	0	20	1,380	168	80	82	166	57	24	6.2	1.0	2.0
28	0	20	721	158	82	86	160	53	24	6.2	.7	2.0
29	0	20	522	152	-----	82	152	52	22	6.2	.7	1.9
30	0	19	475	144	-----	79	148	50	21	6.2	.9	2.1
31	5.1	-----	406	136	-----	274	-----	49	-----	6.2	1.0	-----
Total	5.1	1,674.8	8,220	19,374	3,138	3,156	7,637	2,713	1,024	354.8	64.0	41.5
Mean	0.02	55.8	265	625	112	102	255	87.5	34.1	11.4	2.06	1.38
Ac-ft	10	3,320	16,300	38,430	6,220	6,260	15,150	5,380	2,030	704	127	82

Calendar year 1964 Max 1,680 Min 0 Mean 60.5 Ac-ft 43,900
 Water year 1964-65 Max 4,690 Min 0 Mean 130 Ac-ft 94,010

Peak discharge (base, 1,400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0100	8.84	1,700	1-3	1200	9.36	2,610
12-27	0200	9.72	3,470	1-6	0830	11.40	7,700

11-1525. Salinas River near Spreckels, Calif.

Location.--Lat 36°37'50", long 121°40'40", in El Toro Grant, on first pier near left end of bridge on Salinas-Monterey highway, 0.5 mile upstream from Toro Creek, 2 miles west of Spreckels, Monterey County, and 4 miles south of Salinas.

Drainage area.--4,157 sq mi.

Records available.--January 1900 to August 1901, October 1929 to September 1965. Records for water year 1930 incomplete, yearly estimate published in WSP 1315-B. Published as "near Salinas" 1900-1901.

Gage.--Water-stage recorder. Datum of gage is 19.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1955. 1900-1901, May 10 to July 29, 1940, staff gages at same site at different datum. Mar. 17, 1941, to June 30, 1961, supplementary wire-weight or staff gages and since July 1, 1961, auxiliary water-stage recorder at site 80 ft upstream at same datum.

Average discharge.--36 years (1929-65), 395 cfs (286,000 acre-ft per year); median of yearly mean discharges, 150 cfs (109,000 acre-ft per year).

Extremes.--Maximum discharge during year, 2,830 cfs Jan. 8 (gage height, 14.25 ft); maximum gage height 14.39 ft Jan. 7; minimum daily discharge, 0.1 cfs Aug. 12.

1900-1901, 1929-65: Maximum discharge, 75,000 cfs Feb. 12, 1938 (gage height, 25.0 ft), from rating curve extended above 26,000 cfs on basis of velocity-area studies; maximum gage height, 26.85 ft Jan. 16, 1952, from floodmarks; no flow at times in 1929-40.

Remarks.--Records fair except those for periods of no gage-height record or indefinite stage discharge relation, which are poor.

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). Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.4	6.2	6.0	150	144	12	4.3	35	6.0	4.0	1.7	6.4
2	3.4	6.0	5.6	134	136	9.3	4.5	25	6.2	3.7	1.7	7.2
3	3.2	6.0	5.6	97	128	6.9	4.5	19	6.2	3.4	1.6	7.9
4	3.4	6.2	5.6	138	121	5.2	4.5	14	6.2	3.4	1.5	8.1
5	3.4	6.4	5.6	626	120	4.9	4.7	11	6.2	3.4	1.4	7.9
6	3.6	6.4	5.6	467	116	5.1	4.7	10	6.2	2.7	1.3	6.4
7	3.6	6.2	5.6	1,920	109	4.7	5.6	8.9	6.2	2.6	1.3	4.7
8	3.6	6.0	5.6	2,540	102	4.0	6.7	8.4	6.0	2.6	1.2	3.6
9	3.6	7.4	5.6	2,300	97	4.0	6.4	8.1	6.0	2.4	1.2	3.7
10	4.3	9.3	5.6	2,170	100	4.0	6.9	7.9	6.2	2.3	.4	4.0
11	4.2	8.6	5.6	1,570	97	4.0	24	7.6	6.4	2.3	.2	4.2
12	4.2	15	5.6	1,180	93	3.9	163	7.4	6.4	2.3	.1	4.3
13	4.3	15	5.6	912	88	3.8	345	7.2	6.4	2.3	.5	4.5
14	4.5	11	5.6	724	83	3.7	449	6.9	6.4	2.2	.8	4.5
15	5.1	7.9	5.6	584	81	3.7	434	6.9	6.2	2.2	.8	4.5
16	5.1	6.7	5.6	510	76	3.6	402	6.7	6.2	2.2	.8	4.5
17	4.9	6.4	5.6	450	70	3.6	372	6.4	6.2	2.2	.8	4.5
18	5.1	6.7	5.1	380	66	3.6	360	6.0	6.2	2.2	.8	4.3
19	5.1	6.2	4.9	330	60	3.6	325	6.0	6.2	2.2	.9	4.3
20	4.5	5.8	5.1	300	54	3.6	282	6.0	6.2	2.2	.9	4.3
21	4.3	6.7	5.1	275	47	3.6	244	6.2	5.8	2.2	1.0	4.3
22	4.3	8.6	5.4	255	41	3.6	209	6.0	4.9	2.1	1.0	4.2
23	4.5	4.5	6.9	235	36	3.7	177	6.2	5.6	2.1	.9	4.0
24	4.9	9.2	8.1	226	30	3.7	147	6.2	6.0	2.2	.6	3.8
25	4.9	6.2	6.4	211	25	3.8	121	6.2	5.6	2.2	.8	3.4
26	5.1	6.2	6.7	205	22	3.8	102	5.8	5.2	2.2	2.1	3.1
27	4.9	5.4	8.1	184	18	3.9	86	5.8	5.1	2.1	3.2	3.0
28	5.3	5.6	7.4	175	15	4.0	69	5.8	5.1	2.1	4.0	3.0
29	6.4	5.6	6.2	168	-----	4.0	56	5.8	4.7	2.1	4.5	3.1
30	5.6	5.8	166	161	-----	4.0	46	5.8	4.5	2.0	5.2	3.1
31	5.8	-----	152	152	-----	5.1	-----	5.8	-----	1.8	5.6	-----
Total	138.5	219.2	544.8	19,729	2,175	140.4	4,465.8	280.0	176.7	75.9	48.8	138.8
Mean	4.47	7.31	17.6	636	77.7	4.53	149	9.03	5.89	2.45	1.57	4.63
Ac-ft	275	435	1,080	39,130	4,310	278	8,860	555	350	151	97	275

Calendar year 1964 Max 516 Min 0.7 Mean 29.8 Ac-ft 21,630
 Water year 1964-65 Max 2,540 Min 0.1 Mean 77.1 Ac-ft 55,800

Note.--No gage-height record Dec. 3-16, Jan. 16-21, Mar. 12-16, 19-28. Stage-discharge relation indefinite Aug. 10-13.

11-1525.4. El Toro Creek near Spreckels, Calif.

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

Drainage area.--31.9 sq mi.

Records available.--October 1961 to September 1965. 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).

Extremes.--Maximum discharge during year, 40 cfs Jan. 7 (gage height, 3.85 ft); no flow for several months.

1961-65: Maximum discharge, 64 cfs Mar. 28, 1963 (gage height, 4.10 ft); no flow for many days in each year.

Remarks.--Records fair. No regulation or diversion above station except for minor stock ponds.

Revisions (water years).--1964 Report: 1962(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.0	0	3.4	5.0
3.1	.2	3.6	13
3.2	1.0	3.8	28
3.3	2.5		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	9.5	0.1	0.1	1.0	0.1	0.1			
2		0	.1	6.1	.1	.1	2.2	.1	.1			
3		0	0	9.5	.1	.1	1.4	.1	.1			
4		0	0	5.4	.1	.1	.7	.1	.1			
5		0	0	2.8	.2	.1	.6	.1	.1			
6		0	0	2.8	.1	.2	.2	.1	.1			
7		0	0	24	.1	.2	.2	.1	0			
8		0	0	13	.1	.1	.3	.1	0			
9		.2	0	8.2	.1	.1	.5	.1	0			
10		.2	0	5.0	.1	.1	8.2	.1	0			
11		.1	0	3.2	.1	.1	14	.1	0			
12		.2	0	1.6	.1	.1	6.8	.1	0			
13		.1	0	.3	.1	.1	4.0	.1	0			
14		.1	0	.3	.1	.1	2.8	.1	0			
15		0	0	0	.1	.1	1.6	0	0			
16		0	0	0	.1	.1	1.0	0	0			
17		0	0	0	.1	.1	1.0	0	0			
18		0	0	0	.1	.1	.3	.1	0			
19		0	0	0	.1	.1	.2	.1	0			
20		0	0	0	.1	.1	.1	.1	0			
21		0	0	0	.1	.1	.1	.1	0			
22		0	0	0	.1	.1	.1	.1	0			
23		0	.2	0	.1	.2	.1	0	0			
24		0	.2	.1	.1	.3	.1	0	0			
25		0	.1	0	.1	.3	.1	0	0			
26		0	.3	0	.1	.3	.1	0	0			
27		0	3.0	0	.1	.3	0	0	0			
28		0	6.1	0	.1	.4	0	0	0			
29		0	7.2	0	-----	.4	.1	0	0			
30		0	10	0	-----	.4	.1	.1	0			
31		-----	19	0	-----	1.8	-----	.1	-----			
Total	0	0.9	46.2	91.8	2.9	6.8	47.9	2.1	0.6	0	0	0
Mean	0	0.03	1.49	2.96	0.10	0.22	1.60	0.07	0.02	0	0	0
Ac-ft	0	1.8	92	182	5.8	13	95	4.2	1.2	0	0	0

Calendar year 1964 Max 10 Min 0 Mean 0.18 Ac-ft 135
 Water year 1964-65 Max 24 Min 0 Mean 0.55 Ac-ft 395

Peak discharge (base, 5 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-31	1100	3.72	27	1-7	0600	3.85	40
1-3	10700	-	119	4-11	0600	3.66	22

† About.

11-1529. Cedar Creek near Bell Station, Calif.

Location.--Lat 37°03'00", long 121°19'35", in San Luis Gonzaga Grant, on left bank 0.5 mile upstream from Hagerman Canyon and 1.3 miles northwest of Bell Station, Santa Clara County.

Drainage area.--12.8 sq mi.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map).

Extremes.--Maximum discharge during year, 426 cfs Jan. 6 (gage height, 3.63 ft); no flow for several months.

1961-65: Maximum discharge, 3,490 cfs Jan. 31, 1963 (gage height, 6.85 ft), from rating curve extended above 260 cfs; no flow for several months in each year.

Remarks.--Records fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 7-14)

1.1	0	1.7	7.8
1.2	.1	1.9	19
1.3	.4	2.2	49
1.4	.9	2.5	94
1.5	2.2	2.8	158
1.6	4.4	3.2	275

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	0	24	1.4	0.5	1.8	0.5	0.1			
2	0	0	0	14	1.0	.5	1.2	.5	.1			
3	0	0	0	85	.9	.5	1.2	.5	.1			
4	0	0	0	35	1.0	.5	.8	.5	.1			
5	0	0	0	20	2.9	.4	.8	.4	.1			
6	0	0	0	246	2.6	.5	.8	.4	.1			
7	0	0	0	142	1.8	.5	.7	.3	.1			
8	0	0	0	37	1.3	.5	.7	.3	.1			
9	0	.1	0	20	1.2	.5	26	.3	0			
10	0	.1	0	12	1.0	.5	47	.3	0			
11	0	.1	0	8.3	.8	.5	23	.3	0			
12	0	.2	0	5.8	.8	.5	10	.3	0			
13	0	.1	0	4.2	.8	.5	6.1	.3	0			
14	0	.1	0	3.5	.7	.5	4.0	.3	0			
15	0	.1	0	3.1	.7	.5	2.9	.3	0			
16	0	0	0	2.4	.6	.5	2.4	.2	0			
17	0	0	0	2.1	.6	.5	1.9	.2	0			
18	0	0	0	1.9	.6	.5	1.6	.2	0			
19	0	0	.1	2.2	.6	.4	1.4	.2	0			
20	0	0	.1	2.2	.5	.4	1.2	.2	0			
21	0	0	.1	1.7	.5	.4	1.0	.2	0			
22	0	0	37	1.6	.6	.4	.9	.2	0			
23	0	0	56	1.9	.6	.4	.9	.2	0			
24	0	0	28	7.5	.5	.4	.8	.2	0			
25	0	0	8.8	3.5	.5	.4	.8	.1	0			
26	0	0	30	2.6	.5	.4	.8	.1	0			
27	0	0	41	1.9	.5	.4	.6	.1	0			
28	0	0	50	1.8	.5	.4	.6	.1	0			
29	.1	0	40	1.8	-----	.4	.6	.1	0			
30	0	0	40	1.7	-----	.4	.5	.1	0			
31	0	-----	58	1.6	-----	1.6	-----	.1	-----			
Total	0.1	0.9	389.1	698.3	26.0	15.3	143.0	8.0	0.8	0	0	0
Mean	0.003	0.03	12.6	22.5	0.93	0.49	4.77	0.26	0.03	0	0	0
Ac-ft	0.2	1.8	772	1,390	52	30	284	16	1.6	0	0	0

Calendar year 1964 Max 98 Min 0 Mean 1.66 Ac-ft 1,200
Water year 1964-65 Max 246 Min 0 Mean 3.51 Ac-ft 2,550

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1800	2.92	174	1-3	1000	2.82	148
12-26	2200	2.60	102	1-6	2100	3.63	426

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, on right bank 350 ft downstream from private road bridge and 3.3 miles northeast of Dunnerville, San Benito County.

Drainage area.--146 sq mi.

Records available.--October 1939 to September 1965. 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, datum of 1929. Prior to Nov. 17, 1950, staff gage, at site 350 ft upstream at datum 6.00 ft higher. Nov. 17, 1950, to Aug. 18, 1960, staff gage, at site 350 ft upstream at datum 4.00 ft higher.

Average discharge--26 years, 32.6 cfs (23,600 acre-ft per year).

Extremes.--Maximum discharge during year, 1,220 cfs Jan. 7 (gage height, 8.13 ft); no flow for several months.

1940-65: Maximum discharge, 12,600 cfs Dec. 23, 1955 (gage height, 21.0 ft, present site and datum, from floodmarks), from rating curve extended above 820 cfs on basis of slope-area measurement of maximum flow; no flow at times.

Remarks.--Records fair. Flow regulated by Pacheco Lake (capacity, 6,150 acre-ft). Small diversions above station for irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting control method used Apr. 14-26, May 8-18, Sept. 28-30)

3.7	0	4.5	27
3.8	.4	4.8	59
3.9	1.6	5.2	127
4.0	3.6	6.0	345
4.1	6.4	7.4	865
4.3	14		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	203	18	2.8	4.3	8.6	0	13	2.0	16
2			0	102	16	2.0	5.5	7.8	0	12	1.8	24
3			0	221	14	1.4	7.5	7.1	0	14	1.6	26
4			0	136	13	.5	7.5	6.1	0	14	1.5	18
5			0	78	22	.4	6.1	5.5	0	14	1.4	16
6			0	682	38	1.4	5.8	4.6	0	14	1.4	14
7			0	832	27	2.8	5.2	4.0	0	14	.9	13
8			0	438	22	4.3	4.9	3.2	0	14	.6	12
9			0	237	19	4.0	12	2.8	0	14	.4	13
10			0	151	15	3.6	273	2.4	8.2	13	.3	13
11			0	107	13	3.0	230	1.8	21	13	.2	13
12			0	78	12	2.6	123	1.5	21	13	0	13
13			0	59	11	9.3	89	1.0	12	12	0	12
14			0	47	10	13	76	.8	11	12	0	12
15			0	38	8.9	11	59	.5	17	9.6	0	12
16			0	30	8.2	7.5	48	.4	20	8.9	0	11
17			0	25	7.1	6.4	42	.2	20	9.3	0	10
18			0	21	6.4	5.5	36	.1	18	9.3	0	9.3
19			0	20	6.1	4.3	32	0	13	9.3	0	9.3
20			0	24	5.5	3.4	31	0	14	8.2	0	9.3
21			0	21	4.9	3.0	29	0	13	6.8	0	9.3
22			0	18	4.6	2.4	25	0	13	6.8	0	9.3
23			137	18	3.8	2.0	21	0	12	8.9	0	10
24			142	87	3.4	1.8	19	0	13	10	0	10
25			36	66	3.0	1.6	17	0	13	10	0	10
26			159	46	2.8	1.5	15	0	13	10	0	9.6
27			456	38	3.0	1.8	13	0	14	7.8	0	9.3
28			585	31	2.4	1.5	11	0	15	4.3	0	8.2
29			321	26	-----	1.4	11	0	15	3	0	7.8
30			270	24	-----	1.8	9.3	0	14	2.6	0	7.1
31		-----	473	21	-----	3.2	-----	0	-----	2.2	1.8	-----
Total	0	0	2,579	3,925	320.1	111.2	1,268.1	58.4	310.2	313.0	13.9	366.5
Mean	0	0	83.2	127	11.4	3.60	42.3	1.88	10.3	10.1	0.45	12.2
Ac-ft	0	0	5,120	7,790	635	221	2,520	116	615	621	28	727
Calendar year 1964			Max 585	Min 0	Mean 8.53	Ac-ft 6,200						
Water year 1964-65			Max 832	Min 0	Mean 25.4	Ac-ft 18,390						

11-1535. Llagas Creek near Morgan Hill, Calif.

Location.--Lat 37°06'50", long 121°41'25", in Las Uvas Grant, 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, Santa Clara County.

Drainage area.--19.6 sq mi.

Records available.--October 1951 to September 1965.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 445 ft (from topographic map).

Average discharge.--14 years, 14.9 cfs (10,790 acre-ft per year); median of yearly mean discharges, 10 cfs (7,200 acre-ft per year).

Extremes.--Maximum discharge during year, 92 cfs Apr. 16 (gage height, 2.07 ft); minimum daily, 0.6 cfs Nov. 22 to Dec. 2.

1951-65: 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 (see p. 302). No diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.9	0.6	1.4	17
1.0	2.2	1.5	25
1.1	4.3	1.7	44
1.2	7.5	2.0	82
1.3	12		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	0.9	0.6	1.2	3.8	8.4	9.8	13	14	19	21	35
2	1.0	.8	.6	1.5	3.8	8.4	9.3	12	14	19	21	35
3	1.2	.8	.8	2.6	3.6	8.4	9.3	12	14	19	21	35
4	1.2	.8	.8	1.8	3.6	8.4	9.3	11	14	19	21	34
5	1.2	.8	.8	2.6	3.6	8.4	9.3	11	12	19	21	34
6	1.2	.8	.8	3.2	3.6	8.4	9.3	11	11	19	21	34
7	1.2	.8	.8	2.8	3.8	8.4	9.3	11	14	19	21	34
8	1.2	.8	.8	2.6	3.8	8.4	9.3	11	14	19	21	34
9	1.2	.8	.8	2.6	3.8	8.4	11	11	14	19	21	33
10	1.2	.9	.9	2.6	4.0	8.4	9.8	11	14	19	23	33
11	1.2	.8	.9	2.6	4.0	8.4	23	11	14	19	30	30
12	1.2	.8	1.0	2.6	4.0	8.4	46	11	14	19	30	28
13	1.2	.8	1.2	2.4	4.0	8.4	39	11	14	19	30	27
14	1.2	.8	1.7	2.4	4.0	8.4	32	11	14	19	30	27
15	1.2	.8	1.0	2.4	3.8	8.4	30	11	14	19	30	27
16	1.0	.8	3.0	2.6	3.8	8.4	70	11	14	19	30	27
17	.9	.8	1.6	2.6	6.5	8.4	52	11	14	19	30	26
18	.9	.8	1.2	2.8	9.3	8.4	40	11	15	19	30	26
19	.9	.8	5.9	3.0	9.3	8.4	34	11	16	19	30	25
20	.9	.8	8.8	3.0	9.3	8.4	30	11	16	20	31	25
21	.9	.8	1.8	3.0	8.8	8.4	28	11	16	20	31	24
22	.9	.6	2.0	3.0	8.8	8.4	23	11	16	19	31	24
23	.9	.6	1.8	3.4	8.8	8.4	20	11	16	19	33	24
24	.9	.6	1.6	3.4	8.4	8.4	19	12	16	20	35	24
25	.9	.6	1.2	3.6	8.4	9.3	18	13	16	20	33	24
26	.9	.6	1.4	3.6	8.4	9.8	16	14	18	20	33	24
27	.9	.6	1.4	3.6	8.4	9.3	14	14	19	20	33	24
28	.9	.6	1.2	3.6	8.4	9.3	14	14	19	20	37	23
29	1.0	.6	1.5	3.6	-----	9.3	14	14	19	21	38	23
30	.9	.6	1.4	3.6	-----	9.3	14	13	19	21	38	23
31	.9	-----	1.4	3.6	-----	9.8	-----	13	-----	21	36	-----
Total	32.1	22.4	75.0	87.9	163.8	267.7	671.7	364	454	602	891	846
Mean	1.04	0.75	2.42	2.84	5.85	8.64	22.4	11.7	15.1	19.4	28.7	28.2
Ac-ft	64	44	149	174	325	531	1,330	722	900	1,190	1,770	1,680

Calendar year 1964 Max 24 Min 0 Mean 3.98 Ac-ft 2,890
 Water year 1964-65 Max 70 Min 0.6 Mean 12.3 Ac-ft 8,880

11-1537. Pajaro River near Gilroy, Calif.

Location--Lat 36°56'55", long 121°30'40", on boundary between Las Animas and Llano del Tequisquita Grants, on center pier on down-stream side of highway bridge on Bolsa Road, 0.9 mile downstream from Llagas Creek, and 4.7 miles southeast of Gilroy, Santa Clara County.

Drainage area--399 sq mi.

Records available--March 1959 to September 1965.

Gage--Water-stage recorder (digital). Datum of gage is 123.88 ft above mean sea level (levels by Corps of Engineers).

Average discharge--6 years, 26.2 cfs (18,970 acre-ft per year).

Extremes--Maximum discharge during year, 1,620 cfs Jan. 6 (gage height, 10.80 ft); minimum daily, 0.1 cfs Oct. 16.

1959-65: Maximum discharge, 5,320 cfs Feb. 1, 1963 (gage height, 13.81 ft), from rating curve extended above 2,100 cfs; no flow for many days in 1961-62.

Remarks--Records fair. Flow regulated by Pacheco Lake (capacity, 6,150 acre-ft), Chesbro Reservoir (see p. 302), and San Felipe Lake. Many diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.0	0.8	0.7	495	29	9.5	11	12	10	6.8	5.2	4.9
2	.9	1.1	.8	390	27	9.6	10	11	9.8	5.8	4.7	4.8
3	1.0	.9	.7	544	25	9.9	10	12	9.9	5.2	4.8	4.6
4	.7	.6	.6	348	23	10	9.7	13	9.8	4.4	4.8	4.7
5	.5	.5	.6	236	22	9.9	9.3	13	11	3.2	5.2	4.8
6	.4	.5	.6	856	20	12	9.6	13	11	4.2	5.1	4.6
7	.4	.5	.6	768	28	11	9.7	11	8.6	4.7	4.4	4.4
8	.8	.4	.6	590	27	10	11	12	9.4	4.4	4.0	4.5
9	.7	.6	.6	450	23	10	21	10	9.8	4.5	3.9	4.5
10	1.2	1.8	.6	348	19	11	68	11	9.6	5.6	4.4	4.6
11	.7	4.2	.6	252	15	11	150	11	9.2	5.9	4.5	4.6
12	.3	5.2	.7	189	13	11	150	9.1	7.1	5.9	4.9	4.8
13	.2	2.5	.6	148	12	10	141	9.4	6.9	6.0	4.7	4.6
14	.2	1.3	.6	116	13	10	110	10	7.9	6.1	4.6	4.1
15	.2	.9	.6	86	13	11	86	9.3	7.4	6.2	4.6	3.7
16	.1	.8	.7	65	12	10	67	9.9	7.8	6.6	4.6	3.6
17	.5	.7	.6	53	11	11	76	9.3	6.5	5.5	4.5	3.6
18	1.0	.7	.6	44	11	9.5	59	11	7.4	5.5	4.7	3.3
19	.8	.6	.9	40	10	9.7	44	12	6.3	5.6	5.0	3.0
20	.4	.8	1.0	38	10	9.9	36	11	6.1	5.6	4.9	2.9
21	1.1	.7	1.0	37	10	9.4	29	11	5.0	5.5	5.2	2.7
22	.8	.7	.33	36	9.7	9.2	23	11	5.5	5.0	5.0	2.8
23	1.2	.6	120	41	9.5	9.7	18	10	6.7	4.5	4.5	2.9
24	1.2	.6	85	85	9.4	11	16	8.9	6.6	4.2	4.5	2.8
25	1.1	.7	93	86	9.3	11	15	8.4	6.8	4.3	4.7	2.6
26	.7	.7	118	80	9.2	9.6	15	13	5.7	4.4	4.7	2.8
27	.5	.6	340	68	10	10	13	13	6.1	4.7	4.5	2.6
28	.7	.7	471	53	9.5	9.3	12	11	4.0	5.1	4.6	2.7
29	3.6	.6	538	43	-----	8.9	12	12	4.9	5.2	4.9	2.4
30	1.6	.6	517	38	-----	8.9	12	11	4.8	5.2	4.8	2.5
31	.9	-----	696	33	-----	16	-----	9.9	-----	5.3	4.8	-----
TOTAL	25.4	31.9	3,025.3	6,656	439.6	319.0	1,253.3	339.2	227.6	161.1	145.7	111.4
MEAN	0.82	1.06	97.6	215	15.7	10.3	41.8	10.9	7.59	5.20	4.70	3.71
AC-FT	50	63	6,000	13,200	872	633	2,490	673	451	320	289	221

CALENDAR YEAR 1964 MAX 696 MIN 0.1 MEAN 15.5 AC-FT 11,230
 WATER YEAR 1964-65 MAX 856 MIN 0.1 MEAN 34.9 AC-FT 25,260

Peak discharge (base, 300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-31	1045	9.30	844	1-6	0745	10.80	1,620
1-3	1345	8.91	752				

11-1539. Uvas Creek above Uvas Reservoir, near Morgan Hill, Calif.

Location.--Lat 37°05'34", long 121°43'02", in Las Uvas Grant 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, Santa Clara County.

Drainage area.--21.0 sq mi.

Records available.--July 1961 to September 1965.

Gage.--Water-stage recorder with rain gage attachment. Altitude of gage is 500 ft (from topographic map).

Extremes.--Maximum discharge during the year, 2,320 cfs Jan. 5 (gage height, 10.32 ft, from floodmarks); no flow Oct. 1.

1961-65: 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 good. Minor regulation and diversion above station affects low flows. Records of suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	5.0	2.0	108	30	13	26	20	7.8	2.5	1.4	0.9
2	.1	2.4	2.0	130	28	12	23	19	7.8	2.8	1.1	.3
3	.2	1.7	2.0	436	27	11	18	18	7.5	2.2	1.0	.4
4	.2	1.4	2.0	272	27	10	16	18	6.3	2.3	1.3	.4
5	.2	1.3	2.0	430	72	10	15	17	6.8	2.5	1.2	.8
6	.1	1.4	2.1	845	41	12	14	17	5.9	2.0	.8	.9
7	.1	1.3	2.1	410	34	11	14	15	6.1	2.5	.4	.7
8	.1	1.5	2.1	224	31	10	50	15	5.9	2.9	1.2	.6
9	.2	7.0	2.1	144	28	9.4	345	15	6.3	2.6	1.0	.6
10	.2	19	2.1	108	26	9.1	179	15	7.0	2.2	1.1	.6
11	.4	8.9	2.0	88	25	8.8	92	13	5.9	2.2	.7	.4
12	.5	17	1.6	74	23	9.7	65	13	5.7	2.0	1.1	.6
13	.2	8.2	1.2	64	22	9.7	51	12	4.9	1.8	1.1	.7
14	.1	4.8	1.3	56	22	9.1	44	13	5.3	1.9	.6	.4
15	.1	3.3	1.5	50	20	8.6	40	12	5.1	1.9	1.0	.4
16	.4	2.7	1.4	45	19	8.3	150	11	5.1	1.6	1.0	.5
17	.4	2.1	1.5	42	18	8.1	76	11	5.1	1.6	.8	.4
18	.5	1.8	1.8	39	17	7.8	61	11	5.1	2.2	1.2	.3
19	.4	1.9	77	38	17	7.5	51	11	5.5	2.0	.8	.6
20	.2	1.9	104	35	16	7.5	45	11	5.5	1.6	.8	.4
21	.1	1.8	287	33	16	7.0	40	11	4.3	1.3	1.1	.3
22	.1	1.6	674	32	15	7.0	37	11	4.2	1.2	.6	.4
23	.2	1.3	524	110	15	6.8	34	10	3.9	1.1	1.0	.4
24	.3	1.3	204	84	14	6.8	31	9.4	3.4	.9	1.1	.9
25	.7	1.4	121	50	13	6.5	28	9.4	3.4	1.1	1.1	1.2
26	.6	1.4	203	43	13	6.8	27	8.3	3.5	1.1	1.1	1.3
27	.3	1.7	212	40	15	8.8	25	8.1	3.2	1.1	.8	1.0
28	.3	1.8	170	37	13	7.5	24	7.5	2.6	1.5	1.3	1.0
29	2.8	1.8	169	35	-----	7.0	22	7.3	2.4	1.6	1.4	1.1
30	2.1	1.9	148	33	-----	6.5	21	7.5	2.2	1.4	1.2	.7
31	1.2	-----	150	32	-----	5.5	-----	8.1	-----	1.5	2.5	-----
Total	13.3	110.6	3,075.8	4,167	657	318.3	1,664	384.6	153.7	57.1	32.8	19.2
Mean	0.43	3.69	99.2	134	23.5	10.3	55.5	12.4	5.12	1.84	1.06	0.64
Ac-ft	26	219	6,100	8,270	1,300	631	3,300	763	305	113	65	38
(+)	1.3	4.2	11.9	-	-	-	4.4	0	0	-	0.4	0

Calendar year 1964 Max 674 Min 0 Mean 15.0 Ac-ft 10,880
 Water year 1964-65 Max 845 Min 0 Mean 29.2 Ac-ft 21,130

Peak discharge (base, 220 cfs)

† Precipitation, in inches.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1500	8.90	1,430	1-23	1900	6.02	526
12-26	1900	6.16	483	4-9	1230	6.97	830
1-3	0200	6.76	633	4-16	0530	5.13	291
1-5	+2400	10.32	2,320				

† About.

PAJARO RIVER BASIN

11-1541. Bodfish Creek near Gilroy, Calif.

Location.--Lat 37°00'15", long 121°40'00", in Las Animas Grant, 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, Santa Clara County.

Drainage area.--7.40 sq mi.

Records available.--October 1959 to September 1965.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 360 ft (from topographic map).

Average discharge.--6 years, 3.20 cfs (2,320 acre-ft per year).

Extremes.--Maximum discharge during year, 913 cfs Dec. 22 (gage height, 8.08 ft), no flow Oct. 1-28, Sept. 30.
1959-65: Maximum discharge, 1,240 cfs Jan. 31, 1963 (gage height, 8.25 ft), from rating curve extended above 580 cfs; no flow for many days in each year.

Remarks.--Records fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 21 to Jan. 7)

2.3	0	3.0	17
2.4	.3	3.3	35
2.5	1.0	3.9	91
2.6	2.7	4.5	172
2.7	5.5	5.2	300

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.5	0.2	20	3.8	2.2	3.8	2.7	0.8	0.7	0.3	0.2
2	0	.3	.2	14	3.5	2.0	3.8	2.7	.8	.8	.3	.2
3	0	.2	.2	42	3.3	2.0	3.0	2.2	.8	.7	.3	.2
4	0	.1	.2	23	3.3	2.0	2.5	2.5	.8	.6	.3	.2
5	0	.1	.3	39	9.9	2.0	2.5	2.4	1.0	.6	.3	.2
6	0	.1	.2	136	6.2	2.2	2.4	2.4	1.0	.6	.3	.2
7	0	.1	.2	80	5.2	2.2	2.4	2.2	1.0	.5	.3	.2
8	0	.1	.2	32	4.9	2.0	3.8	2.0	.8	.6	.2	.2
9	0	1.9	.2	21	4.7	2.0	54	2.0	.8	.5	.2	.2
10	0	2.8	.2	17	4.4	1.8	29	2.2	.8	.5	.2	.2
11	0	2.6	.3	14	4.1	1.7	17	1.8	.8	.5	.3	.2
12	0	1.7	.3	12	3.8	2.0	13	1.8	.8	.5	.3	.2
13	0	.5	.2	10	3.8	2.0	9.8	2.2	.8	.4	.3	.2
14	0	.3	.2	9.0	3.5	1.8	8.3	2.0	.7	.4	.2	.1
15	0	.3	.2	8.3	3.3	1.7	7.2	1.7	.7	.4	.2	.1
16	0	.2	.2	6.9	3.0	1.7	13	1.5	.5	.3	.2	.1
17	0	.2	.2	6.6	3.0	1.5	9.0	1.3	.6	.3	.3	.1
18	0	.2	.2	5.8	3.0	1.5	7.6	1.3	.6	.3	.3	.1
19	0	.2	3.9	5.5	3.0	1.5	6.9	1.5	.5	.3	.2	.1
20	0	.2	4.7	5.2	2.7	1.5	6.6	1.7	.7	.3	.2	.1
21	0	.2	13	4.9	2.7	1.5	6.2	1.3	.7	.3	.2	.1
22	0	.2	248	4.9	2.5	1.5	5.8	1.3	.7	.3	.2	.1
23	0	.2	299	6.9	2.5	1.3	4.7	1.2	.7	.3	.2	.1
24	0	.2	70	6.9	2.2	1.3	3.8	1.0	.7	.3	.2	.1
25	0	.2	20	5.2	2.0	1.3	3.5	.8	.6	.3	.2	.1
26	0	.2	132	4.9	2.0	1.3	3.5	.8	.7	.3	.2	.2
27	0	.2	74	4.7	2.4	2.4	3.2	.8	.7	.3	.2	.2
28	0	.2	34	4.4	2.2	1.8	3.7	.8	.7	.3	.2	.1
29	.2	.2	36	4.1	-----	1.7	3.5	.8	.7	.4	.2	.1
30	.1	.1	40	3.8	-----	1.5	3.0	.8	.7	.4	.2	0
31	.1	-----	54	3.8	-----	8.2	-----	.8	-----	.3	.2	-----
Total	0.4	14.5	1,032.5	561.8	100.9	61.1	246.5	50.5	22.2	13.3	7.4	4.4
Mean	0.01	0.48	33.3	18.1	3.60	1.97	8.22	1.63	0.74	0.43	0.24	0.15
Ac-ft	0.8	29	2,050	1,110	200	121	489	100	44	26	15	8.7

Calendar year 1964 Max 299 Min 0 Mean 3.94 Ac-ft 2,860
Water year 1964-65 Max 299 Min 0 Mean 5.80 Ac-ft 4,190

Peak discharge (base, 150 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1600	8.08	913	1-5	2400	5.08	221
12-26	1700	6.07	390				

11-1542. Uvas Creek near Gilroy, Calif.

Location.--Lat 36°59'35", long 121°34'20", in Las Animas Grant, on left bank 400 ft upstream from county road bridge, 0.4 mile south-west of Gilroy, Santa Clara County, and 3.9 miles downstream from Bodfish Creek.

Drainage area.--71.2 sq mi.

Records available.--January 1959 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 190 ft (from topographic map).

Average discharge.--6 years, 26.6 cfs (19,260 acre-ft per year).

Extremes.--Maximum discharge during year, 2,270 cfs Jan. 6 (gage height, 9.22 ft); no flow for several months.

1959-65: Maximum discharge, 7,180 cfs Feb. 1, 1963 (gage height, 17.66 ft), from rating curve extended above 2,500 cfs; no flow for several months in each year.

Remarks.--Records good. Flow regulated by Uvas Reservoir (see p. 302). Diversion above station for irrigation and municipal supply of city of Gilroy.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 14, 15, July 15 to Sept. 30)

2.2	0	2.7	6.0	4.5	178
2.3	.1	2.8	10	5.0	280
2.4	.3	2.9	14	5.5	430
2.5	1.2	3.3	39	6.0	640
2.6	2.9	4.0	108	9.0	2,150

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	159	30	4.3	25	24	0	2.9	1.3	7.6
2			0	116	25	3.7	19	19	0	4.0	6.8	6.0
3			0	272	21	2.7	13	16	0	4.3	7.2	5.2
4			0	224	18	1.9	12	13	3.0	4.9	6.8	5.6
5			0	170	63	1.3	9.6	9.6	6.8	6.0	6.8	5.6
6			0	1,750	73	1.7	8.8	12	6.0	4.6	9.6	5.6
7			0	1,200	50	1.5	8.8	9.6	5.2	3.7	8.8	5.2
8			0	554	38	1.4	14	7.6	6.0	4.6	5.2	4.9
9			0	330	36	1.3	219	7.6	5.6	7.2	3.7	4.3
10			0	228	29	1.3	298	6.8	6.0	5.6	3.1	4.6
11			0	184	23	1.7	216	5.2	4.9	5.6	4.0	5.2
12			0	150	18	3.4	159	3.7	4.0	5.6	4.9	5.6
13			0	120	14	5.2	128	2.7	3.1	4.3	4.3	4.6
14			0	100	15	6.0	108	2.7	3.4	6.0	3.4	2.9
15			0	84	16	6.0	95	1.7	2.7	7.2	4.0	4.3
16			0	69	13	4.6	159	.9	2.1	6.0	5.6	5.6
17			0	59	11	4.0	156	.3	.4	6.8	6.0	6.0
18			0	48	10	3.4	119	0	.1	7.2	5.6	5.6
19			0	42	9.2	2.7	105	.2	.2	10	5.6	4.6
20			0	38	9.2	2.5	93	0	1.0	11	5.6	4.3
21			0	31	8.8	1.9	86	0	2.5	7.2	5.6	4.0
22			378	28	7.6	2.1	74	0	2.5	4.9	5.6	4.3
23			906	46	7.6	1.9	67	0	1.5	8.9	5.2	4.3
24			232	136	6.0	2.1	60	0	1.3	8.9	6.0	5.6
25			105	80	5.2	1.9	50	0	.8	5.6	6.0	6.0
26			326	59	4.3	1.5	41	0	2.6	5.6	7.7	5.6
27			232	49	5.2	3.7	36	0	2.1	5.2	6.0	5.6
28			188	48	5.2	4.3	30	0	2.3	7.2	8.3	4.0
29			189	45	-----	3.1	29	0	2.7	6.8	10	5.6
30			208	38	-----	2.9	27	0	2.3	6.8	8.4	4.6
31		-----	285	33	-----	2.7	-----	0	-----	9.2	8.8	-----
Total	0	0	3,049	6,490	571.3	113.0	2,465.2	142.6	81.1	193.8	197.6	152.9
Mean	0	0	98.4	209	20.4	3.65	82.2	4.60	2.70	6.25	6.37	5.10
Ac-ft	0	0	6,050	12,870	1,130	224	4,890	283	161	384	392	303

Calendar year 1964 Max 906 Min 0 Mean 13.6 Ac-ft 9,850
Water year 1964-65 Max 1,750 Min 0 Mean 36.9 Ac-ft 26,690

PAJARO RIVER BASIN

11-1565. San Benito River near Willow Creek School, Calif.

Location.--Lat 36°36'50", long 121°12'50", in SW¼ sec.21, T.15 S., R.7 E., on right bank 1.7 miles downstream from Willow Creek, 1.8 miles northwest of Willow Creek School, and 10.4 miles northwest of San Benito.

Drainage area.--251 sq mi.

Records available.--October 1939 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 878.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1943. Prior to Jan. 28, 1948, at same site at different datum. Jan. 28, 1948, to Nov. 10, 1955, at site 0.9 mile upstream at different datum.

Average discharge.--26 years, 22.7 cfs (16,430 acre-ft per year); median of yearly mean discharges, 11 cfs (8,000 acre-ft per year).

Extremes.--Maximum discharge during year, 114 cfs Apr. 10 (gage height, 3.43 ft); maximum gage height, 3.46 ft Jan. 8, from floodmarks; no flow Oct. 1-27.

1939-65: Maximum discharge, 8,210 cfs Apr. 3, 1958 (gage height, 8.35 ft), from rating curve extended above 600 cfs on basis of slope-area measurement of maximum flow; no flow at times in 1947, 1956, 1959, 1961-65.

Flood of February 1938 reached a stage of about 9.0 ft (former datum) from floodmarks.

Remarks.--Records poor. Flow regulated by Hernandez Dam beginning in December 1961 (capacity, 18,700 acre-ft). Small diversion above station for irrigation. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.4	0.5	26	3.2	66	20	30	6.4	0.4	0.2	0.2
2	0	.2	.5	14	2.9	66	30	28	6.0	.3	.2	.2
3	0	.1	.5	12	2.7	64	48	32	6.0	.2	.2	.2
4	0	.1	.6	12	2.8	64	47	55	5.7	.2	.2	.2
5	0	.1	.6	10	4.4	66	32	59	5.0	.1	.2	.2
6	0	.1	.6	15	3.5	67	26	62	4.6	.1	.2	.2
7	0	.1	.6	50	1.3	67	22	66	4.3	.1	.2	.2
8	0	.1	.6	62	7.5	66	32	67	4.0	.1	.2	.2
9	0	.3	.6	24	6.0	62	59	66	4.3	.1	.1	.1
10	0	.6	.7	17	5.4	59	104	66	4.3	.1	.2	.1
11	0	.7	.8	16	9.2	42	78	64	4.0	.1	.2	.2
12	0	.7	.9	14	4.2	31	48	64	3.2	.1	.4	.1
13	0	.5	.8	13	5.5	33	59	64	2.7	.1	.2	.2
14	0	.5	.8	11	5.9	32	36	64	2.5	.1	.1	.1
15	0	.5	.9	10	5.9	28	19	62	2.7	.1	.1	.1
16	0	.5	1.0	8.6	6.0	25	18	60	2.5	.1	.1	.1
17	0	.5	1.0	7.5	6.0	24	18	55	2.3	.1	.1	.1
18	0	.5	1.2	6.4	6.2	19	15	40	2.3	.1	.1	.1
19	0	.3	1.8	6.0	6.2	18	11	17	2.0	.3	.1	.1
20	0	.3	1.8	6.0	6.2	16	12	12	1.8	.4	.1	.1
21	0	.3	1.8	5.7	6.2	14	11	8.6	2.0	.4	.1	.1
22	0	.3	2.3	5.0	6.4	14	11	10	2.0	.4	.1	.1
23	0	.3	9.8	5.4	6.4	14	10	9.8	2.0	.3	.1	.1
24	0	.4	1.2	11	6.4	13	9.2	7.5	2.1	.3	.2	.1
25	0	.5	1.2	10	6.4	11	8.6	8.1	2.0	.2	.2	.1
26	0	.5	1.2	7.5	6.4	10	8.1	7.0	1.8	.3	.2	.1
27	0	.5	1.3	6.4	6.6	10	8.1	7.0	1.6	.2	.2	.1
28	1.8	.5	1.9	5.4	6.6	10	8.1	6.0	1.2	.2	.2	.1
29	2.0	.5	3.1	5.0	-----	10	24	7.0	1.0	.2	.2	.1
30	.7	.5	3.5	4.3	-----	10	28	6.4	.6	.2	.2	.1
31	.5	-----	5.4	4.0	-----	16	-----	6.4	-----	.2	.2	-----
Total	5.0	11.4	218.7	410.2	1,191.9	1,047	860.1	1,116.8	92.9	6.1	5.3	4.0
Mean	0.16	0.38	7.05	13.2	42.6	33.8	28.7	36.0	3.10	0.20	0.17	0.13
Ac-ft	9.9	23	434	814	2,360	2,080	1,710	2,220	184	12	11	8.0

Calendar year 1964 Max 115 Min 0 Mean 3.22 Ac-ft 2,340
 Water year 1964-65 Max 104 Min 0 Mean 13.6 Ac-ft 9,870

Note.--No gage-height record Nov. 10-29.

11-1567. Pescadero Creek near Paicines, Calif.

Location.--Lat 36°41'40", long 121°18'35", in SE¼ sec.21, T.14 S., R.6 E., 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.

Records available.--July 1959 to September 1965.

Gage.--Water-stage recorder and, since Sept. 10, 1963, concrete control. Altitude of gage is 720 ft (from topographic map).

Average discharge.--6 years, 0.42 cfs (304 acre-ft per year).

Extremes.--Maximum discharge during year, 23 cfs Dec. 24 (gage height, 5.46 ft); no flow Oct. 1 to Dec. 22. 1959-65: Maximum discharge, that of Dec. 24, 1964; no flow at times in each year.

Remarks.--Records good. No regulation; small diversions above station for irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

4.8	0
4.9	.1
5.0	1.0
5.1	3.2
5.2	6.6

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	3.8	0.3	0.2	0.4	0.4	0.2	0.1	0.1	0.4
2			0	.9	.3	.2	.4	.4	.2	.1	.1	.4
3			0	1.0	.3	.2	.4	.4	.2	.1	.1	.4
4			0	1.0	.3	.2	.3	.4	.2	.1	.1	.5
5			0	.9	.4	.3	.3	.4	.2	.1	.1	.7
6			0	1.0	.4	.4	.3	.4	.2	.1	.1	.9
7			0	1.4	.3	.4	.3	.4	.2	.1	.1	.9
8			0	.5	.3	.4	.4	.4	.2	.2	.1	.5
9			0	.4	.3	.4	.5	.4	.2	.2	.1	.4
10			0	.4	.3	.3	1.0	.4	.2	.2	.1	.3
11			0	.4	.3	.3	.7	.3	.1	.2	.1	.3
12			0	.4	.3	.4	2.0	.3	.1	.2	.3	.4
13			0	.4	.4	.4	2.2	.3	.1	.1	.2	.4
14			0	.4	.4	.3	2.2	.3	.1	.1	.2	.4
15			0	.4	.5	.2	2.0	.3	.2	.1	.2	.4
16			0	.3	.5	.2	1.8	.2	.2	.1	.1	.4
17			0	.3	.3	.2	1.6	.2	.1	.2	.2	.4
18			0	.3	.3	.2	1.4	.2	.1	.2	.2	.4
19			0	.3	.3	.2	1.2	.2	.1	.2	.2	.4
20			0	.4	.3	.2	1.0	.2	.1	.2	.2	.4
21			0	.4	.3	.2	1.0	.2	.1	.2	.3	.4
22			0	.4	.3	.2	.9	.2	.1	.2	.4	.4
23			.6	.8	.3	.2	.7	.2	.1	.2	.4	.4
24			6.6	.9	.2	.2	.5	.2	.1	.2	.4	.5
25			2.4	.4	.2	.2	.5	.2	.1	.2	.4	.7
26			.9	.3	.2	.2	.5	.2	.1	.2	.3	.7
27			6.0	.3	.2	.3	.5	.1	.1	.2	.3	.7
28			3.8	.3	.2	.3	.4	.1	.1	.2	.2	.5
29			4.8	.3	-----	.3	.4	.1	.1	.2	.2	.5
30			5.5	.3	-----	.3	.4	.1	.1	.2	.3	.4
31			2.4	.3	-----	.6	-----	.1	-----	.2	.4	-----
Total	0	0	33.0	19.6	8.7	8.6	26.2	8.2	4.2	5.1	6.5	14.5
Mean	0	0	1.06	0.63	0.31	0.28	0.87	0.26	0.14	0.16	0.21	0.48
Ac-ft	0	0	65	39	17	17	52	16	8.3	10	13	29

Calendar year 1964 Max 6.6 Min 0 Mean 0.24 Ac-ft 174

Water year 1964-65 Max 6.6 Min 0 Mean 0.37 Ac-ft 266

Peak discharge (base, 50 cfs).--No peak above base.

PAJARO RIVER BASIN

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, on right bank 3.5 miles southeast of Tres Pinos, San Benito County, and 6.2 miles upstream from mouth.

Drainage area.--206 sq mi.

Records available.--October 1939 to September 1965. 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.--26 years, 13.0 cfs (9,410 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 1,650 cfs Jan. 7 (gage height, 5.58 ft); minimum daily, no flow May 14.

1939-65: 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 fair. 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 (water years).--1963 Report: 1962.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.2	0.2	5.4	1.0	7.3	1.0	5.8	0.5	0.2	0.2	0.2
2	.2	.2	.2	18	1.0	26	1.2	5.0	.5	.2	.2	.2
3	.4	.1	.2	9.3	1.0	26	1.2	5.0	.6	.2	.1	.2
4	.2	.1	.2	6.6	1.0	26	1.6	5.0	.8	.2	.1	.2
5	.1	.1	.2	5.0	1.2	26	1.6	5.0	.8	.2	.1	.2
6	.1	.1	.2	20	1.2	26	1.6	4.2	1.0	.2	.1	.2
7	.1	.1	.2	813	1.2	24	2.0	3.5	.8	.2	.2	.2
8	.2	.2	.2	194	1.2	24	2.0	2.9	.5	.2	.2	.2
9	.2	.2	.2	64	1.2	24	2.9	6.6	.5	.2	.2	.2
10	.4	.4	.2	32	1.6	24	17	5.8	.4	.2	.1	.2
11	.5	.4	.2	6.6	1.6	17	35	8.2	.2	.2	.2	.2
12	.6	.4	.2	2.0	1.6	1.2	37	8.2	.4	.2	.2	.2
13	.8	.2	.2	1.0	1.2	1.0	45	4.5	.2	.2	.1	.2
14	.4	.2	.2	1.0	1.0	1.0	30	0	.2	.2	.1	.2
15	.2	.2	.2	.8	1.0	1.0	12	.5	.2	.2	.1	.2
16	.1	.2	.2	.8	1.0	1.0	2.4	.6	.2	.2	.1	.2
17	.1	.2	.2	.8	1.2	1.0	1.2	.1	.1	.2	.2	.2
18	.1	.2	.2	.8	1.6	1.0	.5	.1	.2	.2	.2	.2
19	.1	.1	.2	.8	1.6	1.0	.4	.2	.2	.2	.2	.2
20	.1	.1	.2	.8	1.6	1.0	.4	.2	.2	.1	.2	.2
21	.1	.1	.2	.8	1.6	1.0	.4	.2	.2	.1	.2	.2
22	.1	.1	.2	.8	1.6	.8	.4	.4	.4	.1	.2	.2
23	.1	.1	127	1.0	1.6	.8	.5	.5	.5	.1	.2	.2
24	.1	.2	163	1.6	1.2	.8	.8	.2	.8	.1	.2	.2
25	.1	.2	32	8.2	1.2	.8	6.6	.2	.8	.1	.1	.2
26	.2	.2	4.8	2.0	1.2	.8	6.6	.4	1.0	.1	.1	.2
27	.1	.2	412	1.2	1.2	1.0	6.6	.5	1.2	.1	.1	.2
28	.2	.2	222	1.0	1.2	1.0	6.6	.6	.5	.1	.1	.2
29	.2	.2	114	1.0	-----	1.0	6.6	.6	.2	.1	.1	.2
30	.2	.2	91	1.0	-----	1.0	5.8	.6	.2	.2	.2	.2
31	.2	-----	67	1.0	-----	1.6	-----	.5	-----	.2	.2	-----
Total	6.7	5.6	1,237.2	1,250.9	35.8	270.1	236.9	76.1	14.3	5.2	4.8	6.0
Mean	0.22	0.19	39.9	40.4	1.28	8.71	7.90	2.45	0.48	0.17	0.15	0.20
Ac-ft	13	11	2,450	2,480	71	536	470	151	28	10	9.5	12

Calendar year 1964 Max 412 Min 0.1 Mean 3.82 Ac-ft 2,770
 Water year 1964-65 Max 813 Min 0 Mean 8.63 Ac-ft 6,240

Peak discharge (base, 450 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	1730	5.34	1,260	1-7	0900	5.58	1,650
12-27	0500	5.05	830				

11-1585. San Benito River near Hollister, Calif.

Location.--Lat 36°47'17", long 121°22'11", in SW¼ sec.24, T.13 S., R.5 E., on left bank 1,500 ft downstream from Bird Creek, 0.9 miles downstream from Tres Pinos Creek, 2.7 miles west of Tres Pinos, and 4.8 miles southeast of Hollister.

Drainage area.--586 sq mi.

Records available.--October 1949 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 370 ft (from topographic map).

Average discharge.--16 years, 25.2 cfs (18,240 acre-ft per year); median of yearly mean discharges, 6.5 cfs (4,700 acre-ft per year).

Extremes.--Maximum discharge during year, 906 cfs Jan. 7 (gage height, 5.46 ft); no flow Oct. 1 to Dec. 22, Aug. 26 to Sept. 30. 1949-65: 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 for parts of each year.

Remarks.--Records fair. Flow regulated by Hernandez Dam 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	78	1.8	4.4	3.6	5.8	1.2	0.3	0.2	
2			0	21	2.0	4.8	11	11	1.2	.2	.1	
3			0	6.6	2.0	4.9	13	14	1.3	.3	.1	
4			0	4.2	2.0	4.8	24	17	1.2	.2	.1	
5			0	3.4	1.8	4.8	24	36	.9	.2	.1	
6			0	11	1.8	5.0	24	42	.8	.2	.1	
7			0	427	1.8	4.5	21	45	1.1	.2	.1	
8			0	94	1.8	4.1	18	46	1.1	.2	.1	
9			0	23	1.8	3.9	25	50	1.1	.2	.1	
10			0	7.4	1.7	3.7	46	49	1.0	.2	.1	
11			0	5.5	1.7	3.3	45	49	.8	.2	.1	
12			0	5.0	1.7	1.7	33	48	.6	.2	.2	
13			0	4.2	2.0	1.0	27	48	.7	.2	.1	
14			0	3.9	2.1	8.4	26	48	.6	.2	.1	
15			0	3.0	2.6	7.8	13	49	.6	.3	.1	
16			0	2.6	2.6	6.3	10	46	.6	.2	.1	
17			0	2.4	2.2	5.5	15	46	.6	.2	.1	
18			0	1.7	2.1	4.7	18	44	.5	.2	.1	
19			0	1.6	2.1	4.7	15	26	.6	.2	.1	
20			0	1.4	2.5	4.7	12	15	.6	.2	.1	
21			0	1.4	3.0	4.7	10	9.7	.4	.3	.1	
22			0	1.2	4.1	4.7	8.2	7.0	.4	.3	.1	
23			23	2.3	4.5	4.7	7.0	6.3	.4	.3	.1	
24			112	3.0	4.6	4.7	6.1	5.8	.3	.2	.1	
25			45	2.6	4.6	4.7	5.5	5.0	.3	.2	.1	
26			1.4	4.2	4.6	4.7	4.7	4.2	.4	.2	0	
27			244	3.2	5.4	4.4	4.2	3.2	.3	.2	0	
28			140	2.8	4.9	3.9	2.4	2.2	.3	.2	0	
29			114	2.6	-----	3.9	1.8	1.7	.2	.2	0	
30			109	2.0	-----	3.6	1.0	1.6	.3	.2	0	
31		-----	66	1.8	-----	3.6	-----	1.4	-----	.2	0	-----
Total	0	0	854.4	734.0	542.9	598.7	474.5	782.9	20.4	6.8	2.7	0
Mean	0	0	27.6	23.7	19.4	19.3	15.8	25.3	0.68	0.22	0.09	0
Ac-ft	0	0	1,690	1,460	1,080	1,190	941	1,550	40	13	5.4	0

Calendar year 1964 Max 244 Min 0 Mean 2.89 Ac-ft 2,090
 Water year 1964-65 Max 427 Min 0 Mean 11.0 Ac-ft 7,970

11-1590. Pajaro River at Chittenden, Calif.

Location.--Lat 36°54'01", long 121°35'48", in Salsipuedes Grant, on downstream side of right bank pier of State highway bridge, 0.6 mile downstream from Pescadero Creek, 0.6 mile southeast of Chittenden, Santa Cruz County, and 2.3 miles downstream from San Benito River.

Drainage area.--1,186 sq mi.

Records available.--October 1939 to September 1965. 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, datum of 1929, supplementary adjustment of 1955. Prior to May 13, 1949, wire-weight 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.--26 years, 144 cfs (104,300 acre-ft per year); median of yearly mean discharges, 76 cfs (55,000 acre-ft per year).

Extremes.--Maximum discharge during year, 3,300 cfs Jan. 6 (gage height, 12.80 ft); minimum daily 0.5 cfs Oct. 11, 12.

1939-65: 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 good. Flow regulated by Hernandez Reservoir (capacity, 18,700 acre-ft), Pacheco Lake (capacity, 6,150 acre-ft), Chesbro and Uvas Reservoirs (see p. 302), and San Felipe Lake. Many diversions above station for irrigation. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 9-23, May 11-20, July 22 to Aug. 26)

2.2	0.1	2.8	9.3	5.0	210
2.3	.6	3.1	20	6.0	400
2.4	1.4	3.5	43	8.0	965
2.5	2.7	4.0	84	10.0	1,770
2.6	4.4	4.5	139	11.4	2,490

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	6.4	3.6	951	100	23	55	34	12	5.7	6.2	5.1
2	.9	5.1	3.6	679	88	22	48	30	12	5.9	6.4	5.3
3	.8	4.1	3.6	863	74	21	42	28	11	6.4	5.7	5.1
4	.9	3.4	3.6	784	63	20	35	25	14	6.4	5.3	4.6
5	.9	3.0	3.6	526	98	20	32	24	12	5.7	5.3	4.8
6	.8	2.4	3.4	2,360	149	22	31	22	11	4.6	5.5	5.1
7	.7	1.9	3.2	2,460	126	24	31	20	12	4.4	5.7	4.8
8	.6	1.8	3.4	1,670	108	23	32	20	12	4.2	5.3	4.6
9	.6	2.3	3.6	1,020	93	22	153	20	10	4.2	4.8	4.4
10	.6	3.0	3.7	796	85	23	427	20	10	4.2	4.2	4.2
11	.5	4.2	3.9	592	62	22	440	18	9.9	5.1	4.2	4.1
12	.5	9.6	3.9	474	51	24	370	18	9.6	5.9	4.8	3.7
13	.6	14	3.9	378	45	26	320	18	9.6	6.2	4.8	4.1
14	.6	12	3.9	310	42	23	266	18	9.3	6.2	4.8	4.6
15	.6	8.0	4.1	254	42	23	225	18	8.5	6.4	5.5	3.9
16	.6	5.9	4.1	210	37	24	232	17	8.0	6.6	5.7	3.0
17	.6	4.4	4.1	178	32	24	285	18	7.4	6.4	5.3	2.2
18	.6	3.6	4.2	156	31	22	222	17	7.4	6.6	5.7	1.4
19	.6	3.6	5.3	140	30	22	184	18	7.7	7.1	5.9	1.1
20	.6	3.4	5.9	133	29	21	158	17	7.4	5.9	5.1	1.4
21	.6	3.4	7.7	120	28	21	135	15	7.4	5.7	4.6	1.3
22	.6	3.4	213	113	27	21	116	14	7.4	5.5	5.9	1.3
23	.8	3.2	1,670	107	26	22	102	13	7.7	4.6	6.4	1.8
24	1.0	3.2	656	277	26	22	94	12	8.0	4.6	5.7	2.0
25	1.1	3.2	354	243	24	22	81	12	8.2	4.4	4.6	2.4
26	1.3	2.9	471	204	24	22	59	11	8.5	4.8	4.6	2.4
27	1.5	2.7	1,210	174	24	24	49	12	8.0	4.8	4.4	2.7
28	2.7	2.7	986	153	24	24	43	13	8.0	4.4	4.2	2.7
29	4.4	3.6	978	138	-----	22	37	12	6.6	4.4	3.2	2.3
30	5.3	3.6	1,060	126	-----	22	35	14	5.9	4.6	4.1	2.3
31	6.2	-----	1,310	114	-----	32	-----	13	-----	5.7	5.3	-----
Total	39.0	134.0	8,994.3	16,703	1,588	705	4,339	561	276.5	167.6	159.2	98.7
Mean	1.26	4.47	290	539	56.7	22.7	145	18.1	9.22	5.41	5.14	3.29
Ac-ft	77	266	17,840	33,130	3,150	1,400	8,610	1,110	548	332	316	196

Calendar year 1964 Max 1,670 Min 0.5 Mean 41.0 Ac-ft 29,770
Water year 1964-65 Max 2,460 Min 0.5 Mean 92.5 Ac-ft 66,980

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	1100	10.86	2,200	1-3	1800	8.64	1,200
12-27	0230	9.61	1,590	1-6	1230	12.80	3,300
12-31	1400	9.55	1,570	1-9	2400	6.33	462

11-1591.5. Corralitos Creek near Corralitos, Calif.

Location--Lat 37°00'20", long 121°48'25", in Los Corralitos Grant, on left bank 0.5 mile downstream from Mormon Gulch, 1.2 miles upstream from Corralitos, Santa Cruz County, and 7 miles northwest of Watsonville.

Drainage area--10.6 sq mi.

Records available--October 1957 to September 1965.

Gage--Water-stage recorder (digital). Altitude of gage is 310 ft (from topographic map).

Average discharge--8 years, 8.87 cfs (6,420 acre-ft per year).

Extremes--Maximum discharge during year, 990 cfs Dec. 22 (gage height, 6.00 ft), from rating curve extended above 430 cfs as explained below; no flow Oct. 15, 16.

1957-65: Maximum discharge, 1,970 cfs Apr. 2, 1958 (gage height, 7.55 ft), from rating curve extended above 430 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.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 30 to Sept. 30)

0.4	0	1.1	10
.5	.1	1.3	19
.6	.3	1.5	31
.7	.9	2.0	70
.8	2.2	3.0	184
.9	4.2	4.0	350

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.1	6.6	0.7	45	10	4.2	13	7.3	2.8	0.9	0.2	0.1
2	.1	4.2	1.0	40	9.7	3.8	8.7	7.0	2.8	.9	.1	.2
3	.1	1.9	.8	137	9.1	4.0	6.2	7.0	2.8	.9	.1	.1
4	.5	.1	.4	105	10	4.0	5.3	6.4	2.6	.8	.1	.1
5	.4	.1	.2	117	37	3.8	5.0	6.2	2.6	.8	.1	.1
6	.1	.1	.1	227	20	5.9	4.8	5.9	2.4	.8	.2	.1
7	.1	.1	.3	134	14	1.7	5.4	5.6	2.4	.7	.1	.1
8	.1	2.7	.6	83	12	8.2	13	5.3	2.4	.6	.1	.1
9	.1	7.0	.7	62	11	5.4	80	5.3	2.2	.6	.1	.1
10	.1	13	.3	48	10	3.8	56	5.0	2.1	.6	.2	.1
11	.1	10	.9	37	9.4	3.8	35	4.8	1.9	.6	.1	.1
12	.1	11	.3	32	8.8	5.9	25	4.5	1.8	.8	.1	.1
13	.1	4.1	.3	27	8.5	6.5	19	4.2	1.6	.8	.1	.1
14	.2	2.4	.2	24	8.2	4.0	18	4.2	1.6	.3	.1	.1
15	0	2.8	.2	21	7.6	3.6	16	4.2	1.5	.8	.1	.1
16	0	1.6	.2	18	7.3	3.6	.3	3.8	1.5	1.8	.1	.1
17	.1	.4	.2	17	6.7	3.4	30	3.8	1.9	.2	.1	.1
18	.1	.3	1.3	15	6.4	3.4	23	3.6	1.4	.2	.1	.1
19	.1	.2	20	14	6.2	3.6	20	3.6	1.4	.3	.1	.1
20	.1	.2	33	13	5.9	3.6	17	3.6	1.4	.2	.1	.1
21	.1	.4	51	12	5.6	3.2	16	3.4	1.4	.2	.1	.1
22	.1	1.6	350	12	5.3	2.6	14	3.4	1.4	.1	.1	.1
23	.1	.4	319	22	5.0	2.6	12	3.2	1.2	.2	.1	.1
24	.1	.4	102	29	4.8	2.6	12	3.0	1.2	.2	.1	.1
25	.1	.7	51	21	4.5	2.6	10	3.0	1.1	.2	.1	.2
26	.1	.4	137	17	4.2	2.6	9.7	2.8	1.5	.2	.1	.2
27	.1	.5	114	15	8.2	6.7	9.1	2.6	1.0	.1	.1	.3
28	2.1	.1	66	14	6.2	4.7	8.8	2.6	.9	.1	.1	.2
29	5.6	.5	59	12	-----	2.8	8.2	2.8	1.0	.1	.2	.2
30	1.9	.5	59	12	-----	2.8	7.9	2.8	1.2	.2	.1	.1
31	.2	-----	62	12	-----	23	-----	3.0	-----	.2	.1	-----
TOTAL	13.1	74.3	1,431.7	1,394	261.6	150.7	551.1	133.9	53.0	15.4	3.5	3.7
MEAN	0.42	2.48	46.2	45.0	9.34	4.86	18.4	4.32	1.77	0.50	0.11	0.12
AC-FT	26	147	2,840	2,760	519	299	1,090	266	105	31	6.9	7.3

CALENDAR YEAR 1964 MAX 350 MIN 0 MEAN 6.13 AC-FT 4,440
WATER YEAR 1964-65 MAX 350 MIN 0 MEAN 11.2 AC-FT 8,100

Peak discharge (base, 200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1500	6.00	990	1-5	2300	4.60	485
12-26	1800	3.81	312				

11-1592. Corralitos Creek at Freedom, Calif.

Location.--Lat 36°56'22", long 121°46'10", in Los Corralitos Grant, on right bank just upstream from Green Valley Road bridge, 0.25 mile north of Freedom, Santa Cruz County, and 2.3 miles north of Watsonville.

Drainage area.--27.8 sq mi.

Records available.--October 1956 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 80 ft (from topographic map).

Average discharge.--9 years, 13.1 cfs (9,480 acre-ft per year).

Extremes.--Maximum discharge during year, 1,800 cfs Dec. 22 (gage height, 9.65 ft, from rating curve extended above 530 cfs as explained below; no flow for many days.

1956-65: Maximum discharge, 2,680 cfs Apr. 2, 1958 (gage height, 12.59 ft), from rating curve extended above 790 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.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 22, Feb. 5 to Mar. 27)

2.2	0	2.9	24
2.3	.2	3.3	66
2.4	.8	3.6	109
2.5	2.1	4.0	181
2.6	4.7	5.0	410
2.7	9.2	6.0	700

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	1.4	0.2	76	14	2.5	28	6.2	0.4	0.2	0	
2	0	1.0	.1	71	14	2.0	22	5.4	.4	.2	0	
3	0	.9	0	226	13	1.6	17	5.4	.4	.3	0	
4	0	.5	0	175	13	1.5	14	5.0	.4	.2	0	
5	0	.2	.1	152	47	1.5	13	4.4	.4	.3	0	
6	0	.5	.1	429	28	3.6	11	4.4	.4	.2	0	
7	0	.4	.1	222	18	5.1	11	3.8	.3	.2	.1	
8	0	0	.1	119	15	8.2	19	3.2	.3	.2	0	
9	0	1.4	.1	83	15	7.1	98	3.0	.3	.1	0	
10	0	9.0	.1	79	14	5.0	70	2.5	.3	.1	.1	
11	0	2.1	.4	54	13	5.0	48	1.8	.3	.1	.1	
12	0	5.2	.2	47	13	5.8	40	1.2	.2	.1	.1	
13	0	2.1	.1	43	11	8.7	32	1.0	.2	.2	0	
14	0	.4	.1	38	11	5.0	28	1.3	.2	.1	0	
15	0	.2	.1	33	11	4.7	27	1.0	.2	.1	0	
16	0	.3	.1	29	9.2	4.4	53	.6	.3	.1	.1	
17	0	.2	.1	28	8.7	4.1	42	.6	.3	.1	.1	
18	0	.1	.2	24	7.6	3.5	35	.5	.3	.1	.1	
19	0	.1	9.7	24	7.1	3.2	30	.4	.5	.1	.1	
20	0	0	18	23	6.2	2.8	27	.4	1.1	.1	0	
21	0	0	50	22	4.7	2.3	24	.4	.9	.1	0	
22	0	0	691	21	3.8	1.6	22	.4	.9	.1	0	
23	.7	0	646	28	3.2	1.6	19	.4	1.1	.1	0	
24	.5	0	206	40	2.8	1.6	18	.3	1.0	.1	0	
25	.5	0	92	28	2.3	1.5	15	.4	.8	.1	0	
26	.4	0	285	24	2.3	1.2	13	.4	.4	0	0	
27	.8	0	226	22	6.2	9.0	11	.5	.2	0	0	
28	.3	0	120	20	6.2	12	11	.4	.2	0	0	
29	.1	0	112	19	-----	6.6	8.2	.3	.2	0	0	
30	.3	.1	109	18	-----	5.4	7.6	.4	.2	0	0	
31	0	-----	120	16	-----	24	-----	.4	-----	0	0	-----
Total	3.6	26.1	2,686.9	2,233	320.3	152.1	813.8	56.4	13.1	3.6	0.8	0
Mean	0.12	0.87	86.7	72.0	11.4	4.91	27.1	1.82	0.44	0.12	0.03	0
Ac-ft	7.1	52	5,330	4,430	635	302	1,610	112	26	7.1	1.6	0

Calendar year 1964	Max	691	Min	0	Mean	10.1	Ac-ft	7,320
Water year 1964-65	Max	691	Min	0	Mean	17.3	Ac-ft	12,510

Peak discharge (base, 350 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1600	9.65	1,800	1-6	0030	6.70	910
12-26	1800	6.18	754				

11-1594. Green Valley Creek near Corralitos, Calif.

Location.--Lat 36°58'37", long 121°46'31", in Los Corralitos Grant, on right bank at culvert on Green Valley road and 1.9 miles south-east of Corralitos, Santa Cruz County.

Drainage area.--7.05 sq mi.

Records available.--Water years 1961-63 (annual maximum), October 1963 to September 1965.

Gage.--Water-stage recorder with rain gage attachment and crest-stage gage. Altitude of gage is 165 ft (from topographic map). Aug. 31, 1960 to Oct. 4, 1963, crest-stage gage only.

Extremes.--Maximum discharge during year, 600 cfs Dec. 22 (gage height, 4.45 ft), from rating curve extended above 66 cfs as explained below; no flow for many days.

1960-65: Maximum discharge 925 cfs (revised) Jan. 31, 1963 (gage height, 6.35 ft), from rating curve extended above 66 cfs on basis of computations of maximum flow through culvert at gage heights 4.45 and 6.35 ft and slope-area measurement at gage height 2.17 ft.

Remarks.--Records fair. No regulation; pumpage from wells along creek for irrigation affects flow at this station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	25	2.4	0.5	2.3	1.2	0.9	0.9	0.1	0.1
2		0	0	23	2.2	.5	1.2	1.2	.2	.4	.1	.1
3		0	0	56	2.2	.4	.9	1.2	.1	.1	.1	.1
4		0	0	36	2.2	.4	.6	1.2	.1	.1	0	0
5		0	0	70	6.0	.4	.5	1.0	.1	.1	.1	0
6		0	0	120	2.4	.6	.5	1.0	.1	.1	.1	.1
7		0	0	62	1.9	.9	.5	1.0	.1	.1	.2	0
8		0	0	38	1.7	1.2	1.0	.9	.1	.1	.1	0
9		.3	0	30	1.4	1.0	40	.9	.1	.1	.1	0
10		.6	0	24	1.2	.9	21	.7	.1	.4	.2	0
11		.7	0	20	1.0	.7	11	.7	.1	.1	.3	0
12		.4	0	14	.9	.9	8.6	.6	.1	.5	.1	0
13		.1	0	13	.9	1.0	7.0	.6	.2	.4	.1	0
14		0	0	11	.9	.7	6.0	.6	.1	0	.1	0
15		0	0	9.8	.7	.7	5.6	.7	.1	0	.1	0
16		0	0	8.6	.7	.7	11	.5	.1	0	.1	0
17		0	0	7.0	.6	.6	7.5	.5	.2	.1	.1	0
18		0	.1	5.6	.6	.6	6.0	.5	.1	.1	.1	0
19		0	.6	5.2	.5	.6	5.6	.4	.1	.1	.1	0
20		0	.6	4.8	.4	.6	4.8	.3	.1	.1	.1	0
21		0	20	4.4	.4	.5	4.4	.4	.5	.1	.4	0
22		0	215	4.4	.5	.4	4.0	.4	1.2	.1	0	0
23		0	199	4.8	.5	.4	3.0	.3	1.0	.2	0	0
24		0	73	5.6	.5	.3	2.7	.6	1.2	.2	0	0
25		0	30	4.4	.5	.3	2.4	.9	.6	.3	0	0
26		0	125	4.0	.5	.3	2.4	1.2	1.0	.3	0	0
27		0	74	3.7	.6	1.0	2.2	1.4	.9	.2	0	0
28		0	36	3.7	.5	.6	1.9	1.0	.6	.2	0	0
29		0	40	2.7	-----	.6	1.9	1.2	.6	.1	.1	0
30		0	40	2.7	-----	.6	1.7	1.4	1.0	.2	.1	0
31		-----	42	2.4	-----	6.0	-----	1.7	-----	.1	.1	-----
Total	0	2.1	895.3	625.8	34.8	24.9	168.2	26.2	11.7	5.8	3.0	0.4
Mean	0	0.07	28.9	20.2	1.24	0.80	5.61	0.85	0.39	0.19	0.10	0.01
Ac-ft	0	4.2	1,780	1,240	69	49	334	52	23	12	6.0	0.8
(†)	1.2	3.3	13.6	3.4	1.1	2.4	2.9	0	0	0	0.2	0

Calendar year 1964 Max 215 Min 0 Mean 3.40 Ac-ft 2,470

Water year 1964-65 Max 215 Min 0 Mean 4.93 Ac-ft 3,570

Peak discharge (base, 100 cfs)

† Precipitation, in inches.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1530	4.45	600	1-5	2230	3.32	419
12-26	1500	3.10	384				

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, at left end of dam on Llagas Creek and 2.5 miles west of Morgan Hill, Santa Clara County. Drainage area, 19.4 sq mi. Records available, December 1955 to September 1965. Monthly contents prior to October 1959 published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by South Santa Clara Valley Water Conservation District). Maximum contents during year, 7,610 acre-ft Apr. 16 (elevation, 525.44 ft); minimum observed, 64 acre-ft Nov. 30 (elevation, 468.2 ft). Maximum contents observed during period 1955-65, 7,950 acre-ft Apr. 3, 1958 (elevation, 526.8 ft); no contents at times in 1957, 1960-62.

Reservoir is formed by earth- and rock-fill 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 South Santa Clara Valley Water Conservation District.

11-1540.2. Uvas Reservoir.--Lat 37°04'02", long 121°41'25", in Las Uvas Grant, at center of dam on Uvas Creek and 4.8 miles southwest of Morgan Hill, Santa Clara County. Drainage area, 30.4 sq mi. Records available, December 1957 to September 1965. Monthly contents prior to October 1959 published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by South Santa Clara Valley Water Conservation District). Maximum contents observed during year, 10,500 acre-ft Jan. 6 (elevation, 488.9 ft); minimum observed, 304 acre-ft Oct. 30 (elevation, 422.6 ft). Maximum contents observed during period 1957-65, 10,760 acre-ft Feb. 1, 1963 (elevation, 489.6 ft); no contents May 18 to Nov. 30, 1961.

Reservoir is formed by earth- and rock-fill 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 South Santa Clara Valley Water Conservation District.

Month-end contents, in acre-feet, water year October 1964 to September 1965

Date	Chesbro Reservoir	Uvas Reservoir
Sept.30.....	121	384
Oct. 31.....	84	312
Nov. 30.....	64	442
Dec. 31.....	2,160	7,140
Jan. 31.....	6,880	10,000
Feb. 28.....	7,240	9,780
Mar. 31.....	7,080	9,070
Apr. 30.....	7,500	10,000
May 31.....	7,190	8,710
June 30.....	6,350	6,790
July 31.....	5,050	4,350
Aug. 31.....	3,520	2,480
Sept.30.....	1,730	1,420

Note.--Contents at 0800 hours on first day of following month.

11-1597. Aptos Creek at Aptos, Calif.

Location.--Lat 36°58'35", long 121°54'05", in Aptos Grant, on left bank at Aptos, Santa Cruz County, 0.6 mile upstream from mouth.Drainage area.--12.2 sq mi.Records available.--October 1958 to September 1965.Gage.--Water-stage recorder. Altitude of gage is 10 ft (from topographic map).Average discharge.--7 years, 7.11 cfs (5,150 acre-ft per year).Extremes.--Maximum discharge during year, 968 cfs Dec. 22 (gage height, 7.55 ft); minimum, 1.0 cfs for many days.

1958-65: Maximum discharge, 2,110 cfs Jan. 31, 1963 (gage height, 10.82 ft), from rating curve extended above 980 cfs; minimum, 0.3 cfs July 25, 1959, Oct. 8, 1961.

Remarks.--Records good. No regulation; small diversions above station for irrigation.Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 22 to Jan. 10, Apr. 9, 10)

3.3	0.4	4.0	30
3.4	1.2	4.3	64
3.5	3.0	4.6	112
3.6	5.5	5.0	192
3.7	9.6	6.0	460
3.8	16		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	3.8	1.4	27	6.7	4.8	6.7	6.3	3.5	2.5	1.5	1.2
2	1.0	2.0	1.4	25	6.7	4.2	5.2	6.3	3.5	2.5	1.5	1.2
3	1.0	1.4	1.4	134	6.3	4.0	4.8	5.9	3.2	2.3	1.5	1.2
4	1.0	1.2	1.4	94	7.0	4.2	4.8	5.5	3.2	2.3	1.5	1.2
5	1.0	1.2	1.4	53	18	4.5	4.5	5.5	3.2	2.3	1.5	1.2
6	1.0	1.2	1.5	166	13	5.0	4.5	5.5	3.2	2.1	1.5	1.2
7	1.2	1.2	1.5	89	10	4.8	4.8	5.2	3.2	2.1	1.5	1.2
8	1.2	1.6	1.5	48	9.2	4.5	7.1	5.2	3.0	2.3	1.5	1.0
9	1.2	4.6	1.5	35	8.4	4.2	60	5.2	2.8	2.3	1.5	1.0
10	1.2	6.8	1.6	27	8.0	4.2	37	5.0	2.8	2.1	1.5	1.0
11	1.2	4.4	2.0	22	7.6	4.2	20	4.8	3.0	2.1	1.6	1.0
12	1.2	4.2	2.0	20	7.1	5.0	16	4.8	3.2	2.0	1.6	1.0
13	1.2	2.3	1.8	17	6.7	5.5	13	4.8	3.0	2.0	1.4	1.0
14	1.2	1.5	1.8	14	6.7	5.0	12	4.8	3.0	2.0	1.2	1.0
15	1.2	1.4	2.0	13	6.3	4.5	11	4.8	3.0	2.0	1.2	1.0
16	1.2	1.5	2.0	11	5.9	4.5	17	4.5	3.0	2.0	1.2	1.0
17	1.2	1.5	2.0	8.2	5.5	4.5	15	4.2	3.0	2.0	1.2	1.0
18	1.2	1.5	3.1	8.8	5.5	4.2	13	4.2	3.0	2.0	1.4	1.2
19	1.2	1.5	11	8.4	5.2	4.0	11	4.2	2.8	2.0	1.5	1.0
20	1.0	1.4	8.8	7.6	5.2	4.0	11	4.0	2.8	2.0	1.5	1.0
21	1.0	1.4	25	7.6	5.0	3.8	10	4.0	2.8	1.8	1.4	1.0
22	1.0	1.4	336	8.0	5.0	3.5	9.6	3.8	3.0	1.6	1.4	1.0
23	1.0	1.2	370	9.4	4.8	3.8	9.2	3.8	3.0	1.6	1.2	1.0
24	1.2	1.2	93	14	4.8	3.8	8.8	3.5	3.0	1.6	1.2	1.2
25	1.2	1.4	44	9.6	4.8	3.8	8.4	3.5	2.8	1.6	1.2	1.2
26	1.2	1.4	123	8.8	4.5	3.8	8.0	3.5	2.8	1.6	1.2	1.2
27	1.2	1.4	92	8.4	6.3	5.2	7.5	3.2	3.0	1.5	1.2	1.2
28	2.2	1.2	41	8.0	5.0	4.0	7.1	3.2	2.8	1.5	1.2	1.0
29	4.8	1.2	47	7.6	-----	3.8	7.1	3.2	2.3	1.5	1.2	1.0
30	2.8	1.2	40	7.6	-----	3.8	6.7	3.2	2.5	1.5	1.2	1.0
31	1.8	-----	40	7.1	-----	13	-----	3.2	-----	1.5	1.2	-----
Total	42.0	59.2	1,302.1	924.1	195.2	142.1	360.8	138.8	89.4	60.2	42.4	32.4
Mean	1.35	1.97	42.0	29.8	6.97	4.58	12.0	4.48	2.98	1.94	1.37	1.08
Ac-ft	83	117	2,580	1,830	387	282	716	275	177	119	84	64

Calendar year 1964 Max 370 Min 0.8 Mean 6.32 Ac-ft 4,570
Water year 1964-65 Max 370 Min 1.0 Mean 9.28 Ac-ft 6,710

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1630	7.55	968	1-6	0100	5.58	275
12-26	1800	5.87	365	4-9	1400	5.01	136
1-3	0800	5.52	255				

SOQUEL CREEK BASIN

11-1598. West Branch Soquel Creek near Soquel, Calif.

Location.--Lat 37°03'05", long 121°56'20", in NW¼ sec.23, T.10 S., R.1 W., on left bank 0.5 mile upstream from Soquel Creek and 4.5 miles north of Soquel.

Drainage area.--12.2 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 220 ft (from topographic map).

Average discharge.--7 years, 11.3 cfs (8,180 acre-ft per year).

Extremes.--Maximum discharge during the year, 1,400 cfs Jan. 5 (gage height, 6.83 ft), minimum, 0.6 cfs Oct. 20.

1958-65: Maximum discharge, 4,120 cfs Jan. 31, 1963 (gage height, 10.88 ft), from rating curve extended above 740 cfs on basis of slope-area measurement at gage height 7.96 ft; minimum, 0.4 cfs July 16, 1961.

Remarks.--Records good. No regulation; small diversions above station for irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 20, Aug. 29 to Sept. 30)

2.7	0.4	3.8	67
2.8	.9	4.0	100
2.9	2.1	4.3	166
3.0	4.0	4.6	250
3.2	11	5.0	400
3.4	24	5.5	635
3.6	42		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	6.4	1.6	38	13	7.9	11	9.6	4.6	3.0	1.9	1.3
2	.9	3.2	1.7	55	13	7.9	8.8	9.6	4.6	3.0	1.9	1.3
3	.9	2.1	1.9	297	12	7.4	7.9	9.2	4.6	3.0	1.9	1.3
4	.9	1.9	1.9	160	13	7.9	7.0	9.2	4.6	2.9	1.9	1.3
5	.9	1.7	2.0	286	42	8.8	6.7	8.8	4.6	2.9	1.9	1.3
6	.9	1.7	2.0	328	21	10	6.7	8.3	4.6	2.9	1.7	1.3
7	.9	1.6	2.1	133	17	10	7.5	8.3	4.6	2.9	1.7	1.3
8	.9	2.8	2.1	74	15	9.2	28	7.9	4.6	2.9	1.7	1.3
9	.9	15	2.1	54	14	8.3	128	7.9	4.3	2.9	1.7	1.3
10	.9	24	2.3	44	14	7.9	62	7.4	4.3	2.7	1.7	.9
11	.9	6.3	2.7	36	13	7.9	34	7.0	4.3	2.5	1.9	.8
12	.9	7.2	2.9	30	13	8.3	24	7.0	4.0	2.5	2.0	.8
13	.9	2.9	2.7	25	11	10	20	6.7	3.8	2.5	1.9	.8
14	.9	1.9	2.5	23	11	8.3	19	6.7	3.8	2.5	1.5	.8
15	.9	1.7	2.5	20	11	7.9	25	6.7	3.8	2.5	1.5	.8
16	.8	1.7	2.7	19	10	7.4	76	6.4	3.6	2.5	1.5	.8
17	.8	1.7	2.7	18	10	7.4	34	6.4	3.6	2.1	1.5	.8
18	.8	1.6	3.0	16	10	7.0	26	6.1	3.4	2.1	1.6	.8
19	.8	1.6	43	16	9.6	7.0	23	6.1	3.4	2.1	1.6	.8
20	.8	1.6	40	15	9.2	6.7	20	5.8	3.4	2.1	1.6	.8
21	.8	1.6	127	14	8.8	6.4	19	5.8	3.4	2.1	1.5	.8
22	.8	1.7	532	14	8.8	6.4	17	5.8	3.4	2.3	1.4	.8
23	.8	1.7	436	46	8.8	6.1	16	5.2	3.4	2.3	1.4	.8
24	.8	1.7	121	46	8.3	6.1	14	5.2	3.4	2.3	1.4	.8
25	.8	1.7	52	24	8.3	5.8	14	4.9	3.4	2.3	1.4	.9
26	.8	1.7	118	20	7.9	5.8	13	4.9	3.4	2.0	1.4	.9
27	.8	1.6	97	18	11	7.4	12	4.6	3.2	2.1	1.1	1.0
28	1.8	1.6	66	16	8.3	6.1	11	4.6	3.0	2.0	1.1	1.0
29	6.4	1.6	72	16	-----	6.1	11	4.6	3.0	2.1	1.0	1.0
30	3.4	1.6	67	15	-----	5.8	10	4.6	3.0	2.0	1.1	1.0
31	2.0	-----	53	14	-----	22	-----	4.6	-----	2.0	1.1	-----
Total	36.8	105.1	1,865.4	1,930	352.0	247.2	711.6	205.9	115.1	76.0	48.5	29.6
Mean	1.19	3.50	60.2	62.3	12.6	7.97	23.7	6.64	3.84	2.45	1.56	0.99
Ac-ft	73	208	3,700	3,830	698	490	1,410	408	228	151	96	59

Calendar year 1964 Max 532 Min 0.8 Mean 8.65 Ac-ft 6,280
Water year 1964-65 Max 532 Min 0.8 Mean 15.6 Ac-ft 11,350

Peak discharge (base, 300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1600	6.64	1,280	1-5	2200	6.83	1,400
12-26	1900	4.80	320	4-9	1200	4.85	340
1-3	0300	5.19	486				

11-1600. Soquel Creek at Soquel, Calif.

Location.--Lat 36°59'29", long 121°57'17", in NE¼ sec.10, T.11 S., R.1 W., 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.

Records available.--May 1951 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 40 ft (from topographic map).

Average discharge.--14 years, 43.9 cfs (31,780 acre-ft per year); median of yearly mean discharges, 29 cfs (21,000 acre-ft per year).

Extremes.--Maximum discharge during year, 3,180 cfs Dec. 22 (gage height, 10.47 ft); minimum daily, 0.8 cfs Oct. 21.

1951-65: 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, 0.1 cfs Aug. 12, 19, 1964.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. No regulation; small diversion above station for irrigation. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	4.2	4.8	122	43	23	47	36	15	7.5	4.8	2.7
2	1.9	17	4.8	136	41	22	39	34	14	7.8	4.8	2.7
3	1.8	7.4	4.8	856	39	21	30	33	14	7.0	4.8	2.4
4	2.2	4.4	4.7	548	41	21	29	30	14	7.4	4.8	2.2
5	2.2	3.5	5.1	491	133	23	24	30	14	7.0	4.4	3.0
6	1.7	3.2	4.8	1,050	85	25	23	29	14	7.0	5.1	2.7
7	2.2	2.7	4.8	490	68	24	25	28	14	7.0	4.4	2.7
8	1.7	4.3	4.8	303	57	23	75	26	14	7.0	3.7	2.7
9	2.2	60	4.8	232	51	21	428	26	14	7.0	4.0	2.7
10	1.9	108	5.1	181	46	21	228	25	13	6.7	4.0	3.2
11	1.1	41	6.3	145	41	21	151	24	12	6.3	4.4	2.7
12	1.3	68	7.0	112	38	21	126	23	11	6.7	5.5	2.4
13	1.7	24	5.9	95	36	25	111	23	10	6.3	4.8	2.7
14	1.1	15	5.9	81	34	23	99	23	10	7.0	4.0	2.4
15	1.4	11	5.5	70	33	21	103	21	11	6.7	3.7	2.4
16	1.7	9.2	5.9	61	31	21	266	21	10	7.0	3.7	2.4
17	1.4	7.8	5.9	53	30	20	159	20	10	6.3	4.0	2.4
18	1.3	6.8	7.9	47	28	19	133	20	10	6.7	4.0	2.2
19	1.1	6.2	142	45	27	19	119	19	10	6.7	4.0	1.9
20	1.1	5.7	149	40	26	18	108	19	10	6.3	3.7	1.9
21	.8	5.4	380	35	25	18	98	19	10	6.3	3.5	1.9
22	1.0	5.2	1,610	32	24	17	86	19	11	6.3	3.0	2.2
23	1.1	5.1	1,280	84	24	17	76	17	11	5.9	3.0	1.9
24	1.4	5.0	375	169	24	17	68	16	10	5.9	3.0	1.9
25	1.4	5.0	149	100	23	16	60	16	10	5.9	3.0	1.9
26	1.4	4.9	437	86	23	16	53	16	9.7	5.5	3.0	1.9
27	1.7	4.9	373	75	29	23	48	15	9.7	5.1	3.0	1.9
28	4.4	4.9	227	68	23	20	44	14	8.3	5.1	3.0	1.9
29	27	4.9	223	61	-----	17	41	14	7.8	5.1	2.4	1.9
30	15	4.8	210	53	-----	17	38	14	7.0	4.8	2.7	1.9
31	18	-----	186	48	-----	75	-----	14	-----	4.4	2.7	-----
Total	106.6	497.3	5,839.8	5,969	1,123	685	2,935	684	338.5	1,977	1,189	697
Mean	3.44	16.6	188	193	40.1	22.1	94.7	22.1	11.3	6.38	3.84	2.32
Ac-ft	211	986	11,580	11,840	2,230	1,360	5,820	1,360	671	392	236	138

Calendar year 1964 Max 1,610 Min 0.1 Mean 26.8 Ac-ft 19,450
 Water year 1964-65 Max 1,610 Min 0.8 Mean 50.9 Ac-ft 36,820

Peak discharge (base, 750 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1730	10.47	3,180	1-5	2330	8.93	2,230
12-26	1800	6.80	1,140	4-9	1300	6.57	1,030
1-3	0900	7.10	1,280				

Note.--No gage-height record Nov. 18 to Dec. 4, Mar. 28 to Apr. 4.

SAN LORENZO RIVER BASIN

11-1603. Zayante Creek at Zayante, Calif.

Location.--Lat 37°05'10", long 122°02'45", in SE¼ sec.2, T.10 S., R.2 W., on left bank at Zayante Road bridge 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.

Records available.--October 1957 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map).

Average discharge.--8 years, 9.82 cfs (7,110 acre-ft per year).

Extremes.--Maximum discharge during year, 1,100 cfs Jan. 5 (gage height, 5.00 ft); minimum daily, 0.3 cfs Oct. 3-6, Sept. 15, 18, 19, 1957-65; 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 except those for period of no gage-height record, which are fair. No known regulation; only small diversion above station for individual use.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 12-24, Dec. 19-21, Dec. 23 to Jan. 13,
23, 24, Apr. 8-20, July 2 to Aug. 20, Aug. 22-29)

1.3	0.2	2.0	19
1.4	.6	2.2	36
1.5	1.1	2.5	70
1.6	2.2	3.0	160
1.7	4.0	3.5	310
1.8	7.0	4.0	510
1.9	12		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	3.9	1.1	29	12	6.1	7.5	10	4.0	1.8	0.9	0.8
2	.4	2.4	1.1	36	11	6.1	6.1	9.5	3.9	1.6	.9	.8
3	.3	1.2	1.0	215	10	5.8	5.8	9.0	3.8	1.8	.9	.8
4	.3	1.0	1.0	123	12	5.8	5.2	8.5	3.6	1.8	.9	1.0
5	.3	.9	1.0	240	21	7.0	5.2	8.0	3.5	1.8	.9	.6
6	.3	.9	1.0	289	16	8.3	5.2	7.5	3.4	1.6	.9	.6
7	.4	.8	1.0	116	14	6.7	5.7	7.5	3.3	1.8	.9	.7
8	.4	2.6	1.0	64	13	6.1	21	7.0	2.9	1.9	.9	.7
9	.4	9.2	.8	45	12	5.8	92	7.0	2.6	1.8	.9	.6
10	.4	20	.7	35	11	5.5	62	6.7	2.6	1.6	.8	.5
11	.8	7.8	.9	30	10	5.5	37	6.4	2.2	1.6	.9	.5
12	.4	10	.9	25	10	5.5	28	6.3	2.2	1.6	.9	.4
13	.4	5.5	.8	21	9.5	5.8	22	6.2	2.1	1.6	.7	.4
14	.4	3.3	.8	19	9.5	5.5	21	6.1	2.1	1.6	.6	.4
15	.4	2.2	.8	18	9.5	5.5	24	5.9	2.1	1.4	.9	.3
16	.4	1.9	.8	16	9.0	5.5	59	5.8	2.1	1.3	1.0	.4
17	.4	1.6	.9	15	8.0	5.2	34	5.7	2.1	1.3	1.0	.4
18	.4	1.5	1.4	14	8.0	5.2	28	5.6	2.1	1.1	1.0	.3
19	.4	1.5	23	14	8.0	5.2	25	5.5	2.0	1.1	1.0	.3
20	.4	1.4	27	12	7.5	4.9	21	5.4	2.0	1.1	1.1	.4
21	.4	1.4	94	12	7.0	4.9	19	5.2	2.0	1.1	1.5	.4
22	.4	1.8	320	11	7.0	4.9	18	5.1	2.4	1.1	1.2	.4
23	.5	1.5	278	29	6.4	4.9	16	5.0	2.4	1.1	1.2	.4
24	.6	1.4	84	26	6.4	4.9	16	4.9	2.2	1.1	1.0	.5
25	.5	1.5	40	19	6.1	4.9	15	4.8	2.1	1.1	1.0	.5
26	.5	1.2	72	18	6.1	4.9	13	4.6	2.4	1.1	1.1	.6
27	.5	1.1	64	16	8.1	4.9	12	4.5	2.1	1.1	1.0	.6
28	1.2	1.1	46	15	6.1	4.9	12	4.4	2.0	1.0	.9	.6
29	6.8	1.1	55	14	-----	4.9	11	4.3	1.9	.9	.8	.7
30	2.2	1.1	55	13	-----	4.9	10	4.2	1.9	.9	.8	.6
31	1.0	-----	39	12	-----	12	-----	4.1	-----	.9	.9	-----
Total	22.6	92.8	1,214.0	1,561	2,74.2	1,78.0	656.7	190.7	76.0	42.6	29.4	16.2
Mean	0.73	3.09	39.2	50.4	97.9	57.4	21.9	6.15	2.53	1.37	0.95	0.54
Ac-ft	45	184	2,410	3,100	544	353	1,300	378	151	84	58	32

Calendar year 1964 Max 320 Min 0 Mean 5.70 Ac-ft 4,130
Water year 1964-65 Max 320 Min 0.3 Mean 11.9 Ac-ft 8,640

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1400	4.10	560	1-5	2230	5.00	1,100
12-26	1700	3.06	156	4-9	1300	3.10	163
1-3	0330	3.77	410				

Note.--No gage-height record May 12 to June 6.

11-1605. San Lorenzo River at Big Trees, Calif.

Location.--Lat 37°01'40", long 122°03'30", in Canada del Rincon Grant, 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, Santa Cruz County.

Drainage area.--111 sq mi.

Records available.--October 1936 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Datum of gage is 217.0 ft above mean sea level (levels by Topographic Division).

Average discharge.--29 years, 134 cfs (97,010 acre-ft per year); median of yearly mean discharges, 95 cfs (68,800 acre-ft per year).

Extremes.--Maximum discharge during year, 8,450 cfs Jan. 5 (gage height, 12.93 ft); minimum daily, 12 cfs for several days in October. 1937-65: 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 June 25, 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 1965 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	16	43	25	442	179	94	122	140	62	38	27	19
2	14	38	25	490	170	89	98	135	62	38	26	19
3	12	29	25	1,660	164	85	89	128	60	36	25	19
4	13	26	25	1,510	174	88	82	120	60	36	25	19
5	13	24	25	2,020	318	115	80	115	61	35	25	19
6	12	23	25	3,010	224	141	78	109	60	35	25	19
7	12	23	25	1,520	190	108	91	105	59	34	24	19
8	13	31	25	898	188	97	343	101	59	33	25	19
9	13	195	25	655	172	92	1,080	100	58	34	24	19
10	12	330	25	535	162	89	899	96	53	34	23	19
11	14	116	26	451	153	87	558	92	54	32	23	19
12	13	139	27	390	147	94	407	89	52	32	24	20
13	13	77	27	340	139	101	324	89	50	32	24	20
14	13	51	26	306	137	94	288	88	49	32	22	19
15	13	38	26	282	131	87	323	84	50	32	22	19
16	13	34	26	256	125	84	851	80	48	32	22	18
17	13	30	26	239	120	81	512	72	48	30	21	17
18	13	29	27	224	116	81	400	73	47	31	21	18
19	14	27	284	216	113	77	348	72	47	30	22	18
20	12	26	264	204	109	74	303	72	47	28	22	18
21	12	26	919	192	106	72	282	72	46	29	21	17
22	12	28	3,350	192	100	69	248	72	47	29	21	17
23	13	26	2,910	345	101	68	232	66	47	29	21	17
24	13	25	1,280	495	100	69	220	65	45	29	21	17
25	13	25	697	321	95	66	205	65	43	29	20	19
26	14	25	845	267	91	65	190	65	43	30	20	21
27	14	25	968	237	147	87	175	65	41	29	20	17
28	19	25	779	224	103	72	165	63	41	29	20	17
29	82	25	723	211	-----	66	155	60	38	28	19	18
30	39	25	703	202	-----	66	148	53	39	28	20	18
31	21	-----	575	192	-----	187	-----	60	-----	28	19	---
TOTAL	513	1,584	14,758	18,526	4,074	2,745	9,296	2,666	1,516	981	694	554
MEAN	16.5	52.8	476	598	146	88.5	310	86.0	50.5	31.6	22.4	18.5
AC-FT	1,020	3,140	29,270	36,750	8,080	5,440	18,440	5,290	3,010	1,950	1,380	1,100

CALENDAR YEAR 1964 MAX 3,350 MIN 10 MEAN 78.5 AC-FT 57,000
 WATER YEAR 1964-65 MAX 3,350 MIN 12 MEAN 159 AC-FT 114,900

Peak discharge (base, 1,400 cfs)

Note.--No gage-height record Apr. 23 to May 5.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1800	10.53	5,590	1-5	2330	12.93	8,450
12-26	1900	5.68	1,560	4-9	1400	5.49	1,440
1-3	0400	7.08	2,510				

SAN LORENZO RIVER BASIN

11-1615, Branciforte Creek at Santa Cruz, Calif.

Location.--Lat 36°58'00", long 122°01'00", on right bank in Santa Cruz, Santa Cruz County, 15 ft downstream from Market Street bridge and 1.0 mile upstream from mouth.

Drainage area.--17.3 sq mi.

Records available.--January 1940 to September 1943, March 1952 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 11.22 ft above mean sea level (levels by Corps of Engineers). Jan. 3 to Nov. 14, 1940, staff gage at site 15 ft upstream at datum 3.90 ft higher. Nov. 15, 1940, to Nov. 25, 1941, staff gage at site 150 ft downstream and Nov. 26, 1941, to Sept. 30, 1943, water-stage recorder at site 75 ft downstream, both at datum 4.52 ft higher. Mar. 16 to July 27, 1952, staff gages at site 150 ft downstream at present datum.

Average discharge.--16 years, 20.4 cfs (14,770 acre-ft per year); median of yearly mean discharges, 17 cfs (12,300 acre-ft per year).

Extremes.--Maximum discharge during year, 2,170 cfs Dec. 22 (gage height, 11.98 ft); minimum, 0.5 cfs Sept. 17. 1940-43, 1952-65: Maximum discharge, 8,100 cfs Dec. 22, 1955 (gage height, 22.04 ft), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.1 cfs Aug. 18, 1954, Sept. 17, 1955.

Remarks.--Records fair. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	6.0	2.0	62	11	7.4	13	7.1	3.2	2.0	1.0	0.9
2	1.0	4.5	2.0	93	11	6.8	9.9	6.8	3.2	2.2	1.2	1.0
3	1.0	2.8	2.0	366	10	6.8	8.7	6.5	3	2.2	1.2	1.4
4	.9	2.6	2.0	288	14	7.1	7.7	5.8	3.2	1.8	1.4	1.8
5	1.0	2.4	2.2	223	4.4	9.3	7.4	5.8	3.2	2.0	1.2	1.6
6	1.0	2.4	2.2	264	19	11	7.4	5.8	3.2	2.0	1.6	1.8
7	1.0	2.4	2.0	109	16	9.4	9.0	5.5	3.2	2.0	1.4	1.2
8	1.2	3.9	2.4	59	14	9.4	4.5	5.0	3.0	2.6	1.4	1.0
9	1.0	2.0	2.4	43	13	7.4	232	4.8	3.0	2.4	1.2	1.4
10	1.2	4.2	2.6	34	12	7.1	9.9	4.8	3.0	2.0	1.2	.9
11	1.2	3.3	3.5	29	12	6.8	4.8	4.5	3.0	1.8	1.4	1.2
12	1.2	2.8	2.8	25	10	7.7	3.1	4.5	3.0	2.0	2.0	1.4
13	1.4	9.1	1.8	21	10	14	24	4.5	2.8	2.4	1.4	1.2
14	1.4	5.5	2.2	18	10	10	20	4.5	2.8	2.0	.8	1.2
15	1.2	4.2	2.2	15	9.5	8.4	20	4.2	2.8	2.0	1.6	1.4
16	1.2	4.0	2.4	12	9.1	7.7	29	4.0	2.4	2.0	1.4	.9
17	1.2	3.8	3.0	10	9.1	7.4	19	4.0	2.4	2.2	1.4	.6
18	1.0	3.0	5.3	9.1	8.7	6.8	17	3.8	2.2	1.6	1.6	.8
19	1.0	2.8	6.0	9.9	8.4	6.8	15	3.8	2.2	1.8	1.6	.8
20	1.0	2.6	2.7	8.4	8.4	6.1	13	3.8	2.0	1.6	1.6	.9
21	1.0	2.6	196	7.7	8.4	6.1	12	3.5	2.4	1.6	.9	.9
22	.9	3.2	797	7.7	8.1	5.8	11	3.8	2.8	1.6	1.2	.9
23	1.0	2.6	740	29	7.7	5.8	10	3.5	3.2	1.4	1.2	.8
24	1.4	2.4	234	36	7.7	6.5	9.5	3.2	2.8	1.2	1.0	.9
25	1.4	2.4	84	21	7.4	5.5	9.1	3.2	2.8	1.4	1.6	1.2
26	1.6	2.4	333	18	7.4	5.5	8.4	3.2	2.6	1.4	1.2	1.2
27	1.6	2.2	155	15	15	8.4	8.1	3.0	2.4	1.6	.7	1.4
28	4.6	2.0	97	14	8.1	5.5	8.1	3.0	2.4	1.2	.9	1.4
29	2.4	2.0	131	13	-----	5.2	7.7	2.8	2.4	1.6	1.2	1.0
30	4.5	2.0	113	12	-----	5.2	7.4	2.8	2.2	1.4	1.2	.9
31	2.4	-----	100	12	-----	3.3	-----	2.8	-----	.9	1.0	-----
Total	66.4	208.8	3,112	1,883.8	3,290	2,55.9	7,664	1,343	828	55.9	39.7	34.0
Mean	2.14	6.96	100	60.8	11.8	8.25	25.5	4.33	2.76	1.80	1.28	1.13
Ac-ft	132	414	6,170	3,740	652	508	1,520	266	164	111	79	67

Calendar year 1964 Max 797 Min 0.6 Mean 13.4 Ac-ft 9,740
 Water year 1964-65 Max 797 Min 0.6 Mean 19.1 Ac-ft 13,820

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1630	11.98	2,170	1-5	2300	8.72	963
12-26	1700	8.91	1,080	4-9	1230	8.27	759

11-1619. Scott Creek above Little Creek, near Davenport, Calif.

Location.--Lat 37°03'50", long 122°13'45", in Agua Puerco y las Trancas Grant, on left bank 600 ft upstream from Little Creek, 2.0 miles upstream from mouth, and 4.2 miles north of Davenport, Santa Cruz County.

Drainage area.--25.0 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map).

Average discharge.--7 years, 23.9 cfs (17,300 acre-ft per year).

Extremes.--Maximum discharge during year, 1,590 cfs Dec. 22 (gage height, 7.98 ft); minimum daily, 0.8 cfs for several days.

1958-65: 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, 0.2 cfs Sept. 16, 1962.

Remarks.--Records fair. No regulation; small diversions above station for irrigation.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	4.6	2.9	283	54	30	35	41	21	12	4.5	2.9
2	.8	4.7	3.2	278	53	29	32	40	20	11	4.4	2.9
3	.8	3.9	3.6	457	53	27	32	42	20	10	4.3	2.9
4	1.0	3.0	3.8	502	57	27	29	41	19	9.7	4.2	2.7
5	.9	2.7	4.0	567	75	30	29	40	19	9.0	4.1	2.7
6	1.1	2.4	4.0	653	65	33	27	38	19	8.7	4.0	2.7
7	1.4	2.3	4.0	476	58	32	29	35	18	7.8	3.9	2.9
8	1.1	4.3	4.2	324	53	31	88	34	18	7.8	3.8	2.7
9	1.1	32	4.7	251	50	30	194	33	18	7.8	3.8	2.6
10	1.1	50	5.2	211	48	29	118	31	17	6.6	4.0	2.6
11	.9	24	7.2	181	46	29	67	29	16	6.6	4.0	2.6
12	1.1	26	7.2	160	44	33	53	29	16	6.6	3.8	2.6
13	1.3	15	6.3	139	43	36	44	28	16	6.6	3.8	2.6
14	1.3	8.7	6.1	131	42	33	42	29	16	6.5	4.0	2.4
15	1.2	5.4	6.3	118	48	31	43	29	16	6.4	3.8	2.3
16	1.1	4.2	6.3	109	40	30	106	28	16	6.2	4.0	2.3
17	1.1	3.7	5.8	103	38	29	75	28	15	6.0	4.0	2.2
18	.8	3.2	6.3	98	37	29	69	26	14	5.9	3.7	2.1
19	.8	2.9	6.5	93	35	29	65	26	14	5.8	3.5	2.2
20	.8	2.6	6.6	86	34	29	60	26	14	5.7	3.2	2.2
21	.8	2.4	230	79	32	28	56	26	14	5.6	3.2	2.2
22	.8	3.7	747	84	32	28	55	27	14	5.5	3.2	2.1
23	.9	2.9	854	97	32	26	53	26	14	5.4	3.2	2.1
24	1.0	2.6	661	118	29	26	51	25	14	5.3	3.2	2.2
25	1.7	2.6	406	98	29	26	49	24	14	5.2	3.2	2.3
26	1.2	2.6	481	87	29	29	46	23	13	5.1	3.0	2.3
27	1.2	2.4	501	80	39	38	44	22	12	5.0	2.9	2.6
28	1.7	2.3	376	73	32	32	44	21	12	4.8	2.9	2.7
29	5.2	2.2	360	72	-----	30	43	20	12	4.7	2.9	2.6
30	5.2	2.2	368	63	-----	29	43	20	12	4.6	2.7	4.7
31	3.0	-----	328	57	-----	40	-----	20	-----	4.6	2.7	-----
Total	43.3	231.5	5,534.1	6,128	1,227	938	1,721	907	473	208.5	111.9	76.9
Mean	1.40	7.72	179	198	43.8	30.3	57.4	29.3	15.8	6.72	3.61	2.56
Ac-ft	86	459	10,980	12,150	2,430	1,860	3,410	1,800	938	414	222	153

Calendar year 1964 Max 854 Min 0.6 Mean 23.9 Ac-ft 17,380

Water year 1964-65 Max 854 Min 0.8 Mean 48.2 Ac-ft 34,900

Peak discharge (base, 300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1730	7.98	1,590	1-5	2200	7.24	1,390
12-26	1830	4.67	765				

Note.--No gage-height record July 14 to Aug. 8.

11-1625, Pescadero Creek near Pescadero, Calif.

Location.--Lat 37°15'40", long 122°19'40", in SW¼ sec.5, T.8 S., R.4 W., 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.

Records available.--April 1951 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 62.3 ft above mean sea level, datum of 1929.

Average discharge.--14 years, 41.3 cfs (29,900 acre-ft per year); median of yearly mean discharges, 24 cfs (17,400 acre-ft per year).

Extremes.--Maximum discharge during year, 3,310 cfs Jan. 5 (gage height, 14.26 ft); minimum daily, 0.6 cfs Oct. 14.
1951-65: 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 fair except those for periods of no gage-height record, which are poor. Small diversions above station by pumping. Minor regulation in San Mateo County Memorial Park. Records of water temperatures for the water year 1965 are published in Part 2 of this report.

Revisions (water years).--1962 Report: 1961.

Rating table (gage-height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-29, Nov. 5-8, Dec. 23 to Jan. 10,
July 15 to Sept. 30)

1.8	0.2	3.0	58
1.9	1.2	4.0	156
2.0	3.0	5.0	283
2.1	5.5	6.0	442
2.2	9.0	8.0	850
2.4	18	10.0	1,450
2.6	30		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	4.0	4.5	219	52	27	41	41	16	10	5.0	2.6
2	.8	10	5.0	205	49	26	32	39	16	10	5.0	2.8
3	.8	7.6	5.8	491	47	23	29	37	15	10	4.8	2.6
4	.8	4.2	5.2	546	46	22	26	36	15	9.4	4.5	2.6
5	.8	2.6	4.8	812	76	23	25	35	15	9.0	4.5	2.8
6	.8	2.3	4.2	1,350	63	26	23	34	15	8.6	4.2	3.0
7	.8	1.9	4.0	807	55	26	25	32	15	8.3	4.2	5.2
8	.8	4.0	4.0	374	49	23	92	31	16	8.0	4.2	3.2
9	.8	4.4	4.0	252	47	20	381	30	15	7.6	4.2	3.0
10	.8	57	4.0	210	44	20	310	29	14	7.6	4.0	3.0
11	.8	24	5.2	172	42	19	191	28	14	7.6	4.0	2.8
12	.8	36	6.9	141	39	22	137	26	14	7.2	4.0	3.0
13	.8	30	5.5	119	37	29	107	26	14	7.2	4.0	5.8
14	.6	18	5.0	103	37	26	91	25	13	6.9	3.8	3.0
15	.9	12	5.0	90	35	22	114	23	14	6.9	3.5	3.0
16	.9	9.0	4.8	80	34	21	429	22	13	6.9	3.2	2.5
17	1.0	7.2	4.5	72	32	19	197	22	13	6.6	3.2	2.5
18	.9	6.2	4.8	66	31	18	149	22	13	6.2	3.8	2.5
19	.8	5.0	63	64	30	17	124	21	12	6.2	4.2	2.5
20	.8	4.0	96	60	29	16	105	20	12	5.8	4.0	2.5
21	.7	4.2	194	55	29	16	120	20	12	5.5	4.0	2.5
22	.7	6.2	740	53	29	15	81	20	12	5.5	3.5	2.5
23	.7	5.2	928	75	27	14	74	19	11	5.5	3.8	2.5
24	.7	4.0	614	166	26	14	66	18	11	5.5	3.8	2.5
25	.8	4.2	360	109	25	14	60	18	11	5.5	3.2	2.5
26	.9	4.5	294	90	25	14	56	16	11	5.2	3.0	2.8
27	.8	4.2	365	80	34	22	51	14	11	5.2	3.0	3.0
28	1.2	3.8	347	72	28	22	48	16	11	5.0	2.8	3.2
29	5.9	3.5	279	66	-----	18	45	15	10	5.0	2.8	3.2
30	9.0	3.2	273	61	-----	16	43	15	10	5.0	2.6	3.0
31	3.8	-----	273	56	-----	43	-----	16	-----	5.0	2.6	-----
Total	41.5	332.0	4,913.2	7,116	1,097	653	3,272	766	394	213.9	117.4	88.6
Mean	1.34	11.1	158	230	39.2	21.1	109	24.7	13.1	6.90	3.79	2.95
Ac-ft	82	659	9,750	14,110	2,180	1,300	6,490	1,520	781	424	233	176

Calendar year 1964 Max 928 Min 0.4 Mean 21.9 Ac-Ft 15,870
Water year 1964-65 Max 1,350 Min 0.6 Mean 52.1 Ac-Ft 37,700

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0900	10.06	1,470	4-16	0400	7.24	678
1- 5	2300	14.26	3,310				

Note.--No gage-height record Oct. 5-11, Feb. 22-26, Feb. 28 to Mar. 4, Apr. 19-21.

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, on left bank 15 ft downstream from county road bridge, 3.6 miles southeast of Half Moon Bay, San Mateo County, and 4.0 miles upstream from mouth.

Drainage area.--4.83 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 380 ft (from topographic map).

Average discharge.--7 years, 2.60 cfs (1,880 acre-ft per year).

Extremes.--Maximum discharge during year, 107 cfs Dec. 23 (gage height, 4.53 ft); minimum daily, 0.3 cfs Oct. 5-12.

1958-65: Maximum discharge, 301 cfs Jan. 31, 1963 (gage height, 5.31 ft), from rating curve extended above 65 cfs on basis of slope-area measurement at gage-height 5.28 ft; minimum daily, 0.2 cfs Dec. 28, 29, 1959, Sept. 3-5, 1961.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.3	0.1	3.8	14
3.4	.8	4.0	28
3.5	2.8	4.2	47
3.6	5.6	4.4	73
3.7	9.3		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	1.1	1.0	22	5.6	3.4	5.0	5.6	3.1	2.0	1.4	1.1
2	.6	1.8	1.1	16	5.3	3.1	4.8	5.3	3.1	2.0	1.4	1.1
3	.4	1.0	1.2	34	5.0	3.1	4.5	5.0	3.1	1.8	1.4	1.1
4	.4	.8	1.2	43	5.3	2.8	3.9	4.8	3.1	1.8	1.4	1.1
5	.3	.8	1.1	46	6.7	2.8	3.9	4.8	3.1	1.8	1.4	1.1
6	.3	.7	.8	66	7.1	2.8	3.6	4.5	3.1	1.6	1.4	1.1
7	.3	.7	.8	62	6.7	2.8	4.2	4.2	3.1	1.8	1.4	1.1
8	.3	1.2	.8	41	6.5	2.8	7.4	4.2	3.1	1.8	1.2	1.1
9	.3	2.0	.8	28	6.0	2.8	31	4.2	2.8	1.6	1.2	1.1
10	.3	5.0	1.0	20	5.6	2.8	38	3.9	2.8	1.6	1.1	1.0
11	.3	2.8	2.0	17	5.3	2.5	24	3.6	2.5	1.6	1.2	1.0
12	.3	3.9	1.8	14	5.0	3.4	18	3.6	2.5	1.6	1.2	1.0
13	.4	3.1	1.4	12	5.0	3.4	13	3.6	2.5	1.6	1.2	1.0
14	.4	1.8	1.2	11	4.8	3.1	11	3.6	2.5	1.4	1.2	1.0
15	.4	1.2	1.2	8.9	4.5	2.8	11	3.6	2.5	1.4	1.2	1.0
16	.4	1.2	1.2	7.8	4.2	2.8	36	3.4	2.2	1.4	1.2	1.0
17	.4	1.0	1.1	7.4	4.2	2.5	24	3.4	2.2	1.4	1.4	1.0
18	.4	1.0	1.4	7.1	4.2	2.5	18	3.4	2.2	1.4	1.4	1.0
19	.6	.7	3.4	7.1	4.2	2.5	16	3.6	2.2	1.4	1.4	1.0
20	.6	.6	4.5	6.3	3.9	2.2	15	3.6	2.2	1.4	1.4	1.0
21	.6	.7	1.4	6.3	3.9	2.2	16	3.4	2.2	1.2	1.4	1.0
22	.6	.8	4.4	6.0	3.6	2.2	16	3.4	2.2	1.2	1.4	1.0
23	.6	.8	7.1	7.8	3.6	2.2	13	3.4	2.0	1.2	1.4	1.0
24	.7	.7	5.4	12	3.6	2.2	11	3.4	2.2	1.2	1.2	1.0
25	.7	.8	3.5	9.8	3.4	2.0	10	3.1	2.2	1.4	1.2	1.0
26	.8	.8	3.8	8.6	3.4	2.2	8.6	3.1	2.2	1.4	1.2	1.1
27	.8	.8	4.6	7.8	4.2	7.6	7.4	3.1	2.0	1.4	1.1	1.2
28	1.2	.8	2.6	7.4	3.6	5.6	6.7	2.8	2.0	1.4	1.0	1.2
29	2.8	.8	2.2	7.1	-----	4.5	6.7	2.8	1.8	1.4	1.0	1.1
30	1.1	.7	3.0	6.7	-----	3.9	6.3	2.8	1.8	1.4	1.0	1.1
31	.7	-----	3.1	6.0	-----	5.0	-----	3.1	-----	1.4	1.0	-----
Total	18.6	40.1	440.0	562.1	134.2	96.5	394.0	116.3	74.5	47.0	39.0	31.6
Mean	0.60	1.34	14.2	18.1	4.79	3.11	13.1	3.75	2.48	1.52	1.26	1.05
Ac-ft	37	80	873	1,110	266	191	781	231	148	93	77	63

Calendar year 1964 Max 71 Min 0.3 Mean 2.49 Ac-ft 1,810
 Water year 1964-65 Max 71 Min 0.3 Mean 5.46 Ac-ft 3,950

Peak discharge (base, 20 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0200	4.53	107	4- 9	1400	4.14	47
1- 5	2100	4.52	105	4-16	0700	4.13	46

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, on left bank in Orange Memorial Park, 1.0 mile southwest of South San Francisco Post Office, San Mateo County.

Drainage area.--10.9 sq mi.

Records available.--October 1963 to September 1965.

Gage.--Water-stage recorder and staff gage read once daily with additional readings during high water. Datum of gage is 12.53 ft (revised) above mean sea level datum of 1929, supplementary adjustment of 1956. Tipping-bucket rain gage 2.5 miles upstream.

Extremes.--Maximum discharge during year, 671 cfs Jan. 6 (gage height, 6.66 ft), from rating curve extended above 120 cfs as explained below; minimum, 0.1 cfs for several days.

1964-65: Maximum discharge, 1,050 cfs Jan. 20, 1964 (gage height, 8.00 ft), from rating curve extended above 120 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 5, 26, 1963.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.6	0	4.0	20
3.7	.3	4.2	51
3.8	2.4	4.5	110
3.9	8.9	5.0	226

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	19	27	3.8	0.3	0.3	1.0	1.0	0.3	1.4	1.0	0.4
2	.2	27	18	73	.8	.8	1.0	1.0	.4	.6	1.0	.4
3	.2	.1	2.4	111	1.0	.4	.8	1.0	.3	.1	1.2	.4
4	.2	.1	.6	64	16	.3	.6	.3	.3	.2	1.4	.4
5	.2	.1	.2	100	8.9	20	.3	1.0	.3	.3	2.0	.4
6	.3	.1	.2	113	1.6	5.6	.3	.4	.3	.3	2.0	.4
7	.2	.1	.2	29	1.0	.3	22	1.4	.4	.3	.6	.4
8	.3	18	.3	11	.4	.2	28	1.0	1.0	.8	.3	.4
9	.3	24	.3	8.0	.3	.2	64	1.0	.4	1.0	2.7	.4
10	.3	78	.6	5.0	.3	.3	19	.6	1.0	1.0	1.0	.4
11	.3	28	1.4	7.1	1.0	.3	2.4	.3	.6	1.0	29	.4
12	.3	21	.1	2.4	1.0	6.0	1.0	1.0	.3	1.1	.4	.4
13	.8	3.8	.1	2.4	1.1	.3	1.6	1.0	1.0	1.6	.4	.4
14	1.0	.4	.2	1.0	.3	.3	4.9	1.0	.6	1.6	.4	.4
15	1.0	.3	.3	1.0	.8	.3	32	.6	1.0	1.6	.4	.4
16	1.0	8.9	.2	1.0	.3	.3	24	.4	1.0	1.6	.4	.4
17	.2	3.4	.1	1.0	1.0	.3	2.4	.6	1.6	1.0	.4	.4
18	.2	1.6	2.0	.3	.1	.3	41	.3	1.0	.8	.4	.4
19	.3	1.1	10	6.8	.4	.2	5.0	1.0	1.0	.8	.4	.4
20	.2	1.1	20	2.4	.3	.3	37	1.0	.6	.8	.4	.4
21	.3	8.6	51	3.4	.2	.3	8.0	1.0	.3	.8	.4	.4
22	.3	3.8	66	2.4	.3	.2	3.4	.6	.3	1.4	.4	.4
23	.3	2.4	65	3.4	.3	.3	2.4	1.0	.4	1.4	.4	.4
24	.2	3.8	16	1.0	.3	.3	3.4	1.1	.3	1.1	.4	.4
25	.1	7.1	1.4	1.6	.3	.2	3.4	1.0	1.0	1.0	.4	.4
26	.3	1.4	4.4	1.6	5.4	4.0	1.6	.4	.3	1.0	.4	.5
27	1.0	8.9	41	1.0	8.7	17	1.0	1.0	.3	.8	.4	.5
28	19	3.8	16	1.0	.3	.3	.3	.8	.4	.8	.4	.5
29	36	1.6	29	1.1	-----	.3	.3	1.0	.4	.8	.4	.5
30	1.4	2.8	30	1.0	-----	9.9	.6	.3	.3	.8	.4	.5
31	.1	-----	13	1.1	-----	52	-----	.3	2.4	.8	.4	-----
Total	66.8	292.9	469.2	592.4	52.7	121.8	312.7	24.4	19.5	28.6	50.2	12.5
Mean	2.15	9.76	15.1	19.1	1.88	3.93	10.4	0.79	0.65	0.92	1.62	0.42
Ac-ft	132	581	931	1,180	105	242	620	48	39	57	100	25
(†)	1.1	4.0	5.5	4.4	0.8	2.5	3.9	-	-	-	-	-

Calendar year 1964 Max 236 Min 0.1 Mean 3.82 Ac-ft 2,770
 Water year 1964-65 Max 113 Min 0.1 Mean 5.60 Ac-ft 4,060

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0300	6.40	598	1-6	1830	6.66	671
12-22	2030	5.70	408	4-9	1030	5.85	447
1-2	2200	5.80	434				

† Precipitation, in inches.

Note.--No gage-height record Mar. 5, 6, July 8-12, July 27 to Aug. 4.

11-1627.22 Spruce Branch at South San Francisco, Calif.

Location.--Lat 37°38'46", long 122°25'15", in Buri Buri Grant, on right bank 0.5 mile upstream from mouth and 1.0 mile southwest of South San Francisco Post Office, San Mateo County.

Drainage area.--1.68 sq mi.

Records available.--February to September 1965.

Gage.--Water-stage recorder and concrete culvert control. Datum of gage is 5.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Extremes.--Maximum discharge during period, 149 cfs Apr. 9 (gage height, 8.83 ft), from rating curve extended above 61 cfs; no flow for many days.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

6.45	0
6.5	.1
6.6	1.6
6.7	5.8
6.8	11
7.0	22

Discharge, in cubic feet per second, February to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					-	0.1	0	0.1	0.1	0.1	0.1	0
2					-	.1	0	.1	.2	.1	.1	.1
3					-	.1	.1	.2	.2	.1	.1	0
4					-	.1	.1	.1	.4	.1	.1	0
5					-	4.6	.3	.1	.2	.1	.2	0
6					-	2.1	.1	.1	.1	.4	.2	0
7					-	0	3.6	.2	.1	.5	0	0
8					-	0	7.9	.2	.1	.1	.1	.1
9					-	.1	20	.2	.2	.2	.1	0
10					-	.1	3.5	.2	.4	.1	.1	0
11					-	.1	.6	.2	.2	.1	1.5	.2
12					-	1.3	.2	.1	.2	.1	0	.1
13					-	.2	.1	.1	.2	.1	0	.1
14					-	0	.8	.2	.2	.2	0	.1
15					-	.1	9.1	.2	.1	.2	0	.1
16					-	.1	3.0	.1	.2	.2	0	.1
17					-	0	.2	.2	.1	.2	0	.1
18					-	0	5.2	.2	0	.1	.1	.2
19					-	.1	.1	.2	0	.1	.2	0
20					0.1	.1	5.1	.2	.1	.2	.1	0
21					.1	.1	.6	.2	.1	.2	0	0
22					.1	.1	.1	.2	.2	.2	.1	0
23					.1	.1	.1	.2	.2	.2	.1	0
24					.1	.1	.1	.4	0	.1	.1	0
25					.1	.1	.1	.2	.1	.1	.1	0
26					.6	.4	.1	.4	.2	.1	.2	0
27					2.9	5.0	.1	.2	.2	.1	.2	0
28					.1	0	.1	.1	.2	.1	.1	0
29					-----	0	.1	.1	.2	.1	.1	0
30					-----	2.0	.1	.2	.2	.1	.1	0
31			-----		-----	11	-----	.1	-----	.1	.1	-----
Total					-	28.2	61.5	5.5	4.9	4.7	4.2	1.2
Mean					-	0.91	2.05	0.18	0.16	0.15	0.14	0.04
Ac-ft					-	56	122	11	9.7	9.3	8.3	2.4

Calendar year	Max	Min	Mean	Ac-ft
Water year	Max	Min	Mean	Ac-ft

11-1628. Redwood Creek at Redwood City, Calif.

Location--Lat 37°26'58", long 122°13'57", in Pulgas Grant, 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, San Mateo County.

Drainage area--1.82 sq mi.

Records available--September 1959 to September 1965.

Gage--Water-stage recorder (digital). Datum of gage is 83.92 ft above mean sea level, datum of 1929.

Average discharge--6 years, 0.72 cfs (521 acre-ft per year).

Extremes--Maximum discharge during year, 110 cfs Dec. 23 (gage height, 4.08 ft); no flow for many days.

1959-65: Maximum discharge, 644 cfs Jan. 31, 1963 (gage-height, 9.36 ft), from rating curve extended above 170 cfs on basis of slope-area measurement of maximum flow and computation of maximum flow through culvert; no flow for many days in each year.

Remarks--Records good. Low flow at times affected by return flow from urban irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.8	0	1.4	3.0
1.0	.1	1.6	6.2
1.1	.3	2.0	16
1.2	.9	3.0	50
1.3	1.8		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	0.1	0	2.6	0.9	0.4	0.4	0.2	0.1	0	0	0
2	0	.1	0	5.4	.9	.4	.3	.2	.1	0	0	0
3	0	0	0	11	.8	.3	.3	.2	.1	0	0	0
4	0	0	0	10	2.0	.3	.2	.2	.1	0	0	0
5	0	0	0	22	4.4	.3	.2	.2	.1	0	0	0
6	0	0	0	23	2.3	.3	.1	.2	.1	0	0	0
7	0	0	0	13	1.4	.3	.3	.2	.1	0	.1	0
8	0	.5	0	3.8	1.1	.3	2.9	.2	.1	0	.1	0
9	0	.8	0	2.6	1.0	.3	15	.2	.1	0	0	0
10	0	4.8	0	2.2	.9	.3	8.0	.2	.1	0	0	0
11	0	.7	.1	1.8	.8	.3	2.1	.1	.1	0	0	0
12	0	1.0	.1	1.4	.7	.3	1.2	.1	.1	0	0	0
13	0	.2	0	1.2	.7	.8	.8	.1	.1	.1	0	0
14	0	0	0	1.1	.7	.4	.6	.1	.1	.1	0	0
15	0	0	.1	1.0	.6	.3	3.4	.1	.1	0	0	0
16	0	0	.1	.8	.6	.3	8.8	.1	.1	0	0	0
17	0	0	.1	.6	.5	.3	1.6	.1	.1	0	0	0
18	0	0	.1	.6	.5	.2	1.2	.1	.1	0	0	0
19	0	0	.4	1.9	.5	.3	.8	.1	.1	0	0	0
20	0	0	.9	1.4	.5	.2	1.4	.1	.1	0	0	0
21	0	0	9.8	1.3	.4	.2	1.2	.1	.1	0	0	0
22	0	0	35	1.4	.4	.2	.7	.1	.1	0	0	0
23	0	0	36	12	.4	.2	.6	.1	.1	0	0	0
24	0	0	10	12	.3	.2	.5	.1	.1	0	0	0
25	0	0	2.3	2.5	.4	.2	.5	.1	.1	0	0	0
26	0	0	7.0	1.6	.3	.2	.4	.1	.1	0	0	0
27	0	0	9.6	1.4	1.3	2.0	.3	.1	0	0	0	0
28	.1	0	13	1.2	.5	.3	.3	.1	0	0	0	.1
29	.2	0	11	1.2	-----	.2	.3	.1	0	0	0	0
30	0	0	11	.9	-----	.3	.2	.1	0	0	0	0
31	0	-----	6.6	.9	-----	2.3	-----	.1	-----	0	0	-----
TOTAL	0.3	8.2	153.2	143.8	25.8	12.9	54.6	4.1	2.6	0.2	0.2	0.1
MEAN	0.01	0.27	4.94	4.64	0.92	0.42	1.82	0.13	0.09	0.006	0.006	0.003
AC-FT	0.6	16	304	285	51	26	108	8.1	5.2	0.4	0.4	0.2

CALENDAR YEAR 1964	MAX 36	MIN 0	MEAN 0.65	AC-FT 473
WATER YEAR 1964-65	MAX 36	MIN 0	MEAN 1.11	AC-FT 804

Peak discharge (base, 50 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0100	4.08	110	1-23	1700	3.23	60
1-5	2000	3.80	91				

11-1629. Sharon Creek near Menlo Park, Calif.

Location.--Lat 37°25'45", long 122°13'02", in Pulgas Grant, at Atherton City boundary, 900 ft upstream from Atherton drainage channel and 2.6 miles southwest of Menlo Park, San Mateo County.

Drainage area.--0.38 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder and concrete control. Datum of gage is 146.18 ft above mean sea level, datum of 1929.

Average discharge.--7 years, 0.097 cfs (70 acre-ft per year).

Extremes.--Maximum discharge during year, 27.4 cfs Dec. 22 (gage height, 2.22 ft); maximum gage height, 2.24 ft Nov. 10; no flow for several days.

1958-65: Maximum discharge, 68.0 cfs Jan. 31, 1963 (gage height, 3.07 ft), from rating curve extended above 27 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 3.10 ft Mar. 5, 1962, from floodmarks; no flow at times in 1958-64.

Flood of Apr. 2, 1958, reached a stage of about 4.2 ft, from floodmarks.

Remarks.--Records good except those below 1.0 cfs, which are fair. Low flow affected by runoff from urban irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.0	0	1.6	2.6
1.2	.2	1.7	3.9
1.3	.5	1.8	6.2
1.4	1.0	1.9	9.4
1.5	1.7		

Discharge, in cubic feet per second, water year October 1964 to January 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.01	0.26	0.16	0.05	0.03	0.03	0.02	0.02	0.02	0.02	0.01	0.02
2	.01	.27	.15	1.12	.05	.02	.02	.01	.01	.02	.01	.02
3	.01	.11	.02	1.22	.12	.02	.01	.01	.01	.02	.01	.02
4	.01	.12	.02	1.72	.79	.02	.01	.01	.02	.02	.01	.03
5	.04	.12	.01	4.81	.70	.03	.01	.02	.01	.02	.01	.07
6	.01	.13	.01	3.79	.16	.02	.02	.02	.01	.04	.02	.06
7	0	.14	.01	.98	.05	.01	.08	.02	.01	.02	.02	.03
8	0	.68	.01	.15	.04	.02	.51	.02	.01	.02	.01	.02
9	0	1.24	.01	.09	.03	.02	3.19	.02	.01	.02	.02	.01
10	.02	2.98	.01	.06	.03	.01	.52	.02	.01	.01	.01	.01
11	.02	.84	.02	.07	.03	.01	.05	.02	.01	.01	.01	.02
12	.02	.75	.01	.06	.03	.02	.03	.02	.01	.02	.01	.04
13	0	.20	.01	.04	.03	.09	.02	.02	.01	.02	.01	.01
14	0	.15	.01	.04	.03	.01	.02	.01	.01	.02	.01	.02
15	.02	.14	.02	.04	.03	.01	.78	.01	.01	.01	.01	.02
16	0	.14	.01	.04	.02	.01	.65	.01	.02	.02	.02	.01
17	0	.15	.01	.04	.02	.01	.03	.01	.02	.01	.01	.02
18	0	.15	.03	.03	.03	.01	.03	.01	.01	.01	.02	.01
19	0	.15	.48	.48	.03	.01	.02	.01	.01	.02	.02	.01
20	0	.14	.37	.08	.03	.01	.32	.01	.01	.01	.02	.01
21	0	.25	3.68	.23	.03	.01	.05	.01	.02	.01	.02	.01
22	0	.16	8.01	.12	.03	.01	.02	.01	.02	.14	.02	.01
23	0	.11	6.15	3.67	.03	.01	.02	.01	.02	.03	.02	.02
24	0	.19	1.15	2.33	.02	.01	.01	.01	.02	.01	.03	.01
25	.01	.16	.10	.15	.02	.03	.01	.01	.01	.01	.02	.01
26	.01	.17	2.08	.08	.02	.08	.02	.01	.02	.01	.03	.01
27	0	.15	2.30	.06	.51	.74	.02	.01	.01	.01	.02	.01
28	.15	.15	2.61	.06	.10	.12	.01	.01	.02	.02	.02	.01
29	.24	.15	1.83	.05	-----	.08	.01	.01	.02	.02	.02	.02
30	.06	.15	2.22	.05	-----	.10	.02	.01	.02	.01	.02	.01
31	.09	-----	.84	.04	-----	.58	-----	.01	-----	.02	.01	-----
Total	0.73	10.50	32.35	21.75	3.04	2.16	6.53	0.41	0.42	0.65	0.50	0.58
Mean	0.024	0.350	1.04	0.702	0.109	0.070	0.218	0.013	0.014	0.021	0.016	0.019
Cfsm	0.063	0.921	2.74	1.85	0.287	0.184	0.574	0.034	0.037	0.055	0.042	0.050
In.	0.07	1.03	3.17	2.13	0.30	0.21	0.64	0.04	0.04	0.06	0.05	0.06
Ac-ft	1.4	21	64	43	6.0	4.3	13	0.8	0.8	1.3	1.0	1.2

Calendar year 1964 Max 8.01 Min 0 Mean 0.19 Ac-ft 138
 Water year 1964-65 Max 8.01 Min 0 Mean 0.218 Ac-ft 158

Peak discharge (base, 9 cfs)

Note.--No gage-height record May 5-22.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0330	2.24	21.2	1- 5	1930	2.17	22.9
12-22	2330	2.22	27.4	1-23	1730	2.18	24.6
12-27	2345	2.05	16.4	4- 9	1115	1.89	9.08

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, 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, Santa Clara County.

Drainage area.--28.5 sq mi.

Records available.--October 1961 to September 1965. Prior to October 1962, published as "below Ladera damsite."

Gage.--Water-stage recorder (digital) and concrete control. Altitude of gage is 180 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,080 cfs Dec. 23 (gage height, 10.21 ft); no flow at times.

1961-65: Maximum discharge, 2,880 cfs Jan. 31, 1963 (gage height, 16.04 ft), from rating curve extended above 620 cfs; no flow at times in each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Searsville Lake (capacity, 952 acre-ft). Small diversions from Searsville Lake for irrigation on Stanford University campus.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 22-24, 27, 28, 30, 31, Jan. 3-7, 24, Apr. 10, 16)

2.3	0	3.0	9.4
2.4	.1	3.3	22
2.5	.4	3.6	41
2.6	1.0	4.0	79
2.7	2.2	8.0	686
2.8	4.0		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	0.1	0.2	67	13	6.5	13	7.8	0.8	0.2	0.1	0.1
2	0	.1	.1	58	13	5.9	12	7.9	.7	.2	.1	.1
3	0	.1	.2	204	12	5.4	11	8.1	.7	.2	.2	.1
4	0	.1	.2	239	15	5.4	8.5	8.0	.7	.2	.1	.1
5	0	0	.2	317	52	4.7	4.3	6.6	.7	.2	.1	.1
6	0	0	.1	460	32	6.1	.9	6.0	.6	.2	.2	0
7	0	.2	.1	350	19	8.6	8.3	5.6	.7	.2	.3	0
8	0	.3	.2	120	15	6.4	46	5.7	.7	.1	.1	0
9	0	1.8	.1	69	13	5.2	392	5.5	.4	.1	.1	0
10	.3	8.7	.1	48	12	2.1	316	4.5	.4	.1	.2	0
11	.7	1.6	.1	33	11	2.1	95	3.6	.3	.1	.2	0
12	.6	3.1	.1	27	8.3	2.0	37	3.3	.3	.1	.2	0
13	.1	.9	.1	27	3.6	5.2	32	2.1	.3	.1	.2	0
14	.2	.4	.1	21	3.5	6.7	27	1.7	.3	.1	.3	0
15	.9	.2	.1	19	5.3	5.9	43	2.6	.3	.1	.1	0
16	1.3	.1	.1	16	7.0	5.2	287	3.2	.3	.1	.1	0
17	.2	.2	.2	15	7.7	4.5	74	3.4	.3	.1	.1	0
18	.1	.1	.1	11	7.8	4.5	47	4.0	.3	.1	0	0
19	0	.1	.8	18	7.7	3.5	26	3.0	.3	.1	.1	0
20	0	.1	1.6	17	7.5	1.8	18	3.0	.3	.1	.1	0
21	0	.1	56	15	35	1.7	33	3.5	.3	.2	.1	0
22	0	.1	305	17	13	1.6	24	4.0	.3	.1	.1	0
23	0	.1	659	78	7.1	.9	22	4.5	.2	.1	.1	.1
24	.1	.1	360	187	6.1	.9	19	3.0	.2	.1	.1	.1
25	0	.2	98	49	6.0	.9	18	2.0	.2	0	.1	.1
26	0	.2	128	29	5.7	.9	12	1.5	.2	.1	.1	.1
27	0	.1	202	23	14	20	11	1.4	.2	.1	.1	0
28	0	.1	191	20	8.4	13	9.7	1.1	.2	.1	.1	0
29	0	.1	148	15	-----	8.8	9.4	.8	.3	.1	.1	0
30	.1	.1	210	5.8	-----	6.4	8.5	.9	.3	.1	.1	0
31	.1	-----	197	10	-----	23	-----	1.0	-----	.2	0	---
TOTAL	4.7	19.4	2,558.8	2,584.8	360.7	175.8	1,664.6	119.3	11.8	3.9	3.9	0.9
MEAN	0.15	0.65	82.5	83.4	12.9	5.67	55.5	3.85	0.39	0.13	0.13	0.03
AC-FT	9.3	38	5,080	5,130	715	349	3,300	237	23	7.7	7.7	1.8

CALENDAR YEAR 1964 MAX 659 MIN 0 MEAN 9.98 AC-FT 7,250
WATER YEAR 1964-65 MAX 659 MIN 0 MEAN 20.6 AC-FT 14,900

Peak discharge (base, 600 cfs)

Note.--No gage-height record Oct. 1-5, May 17-26.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0545	10.21	1,080	4-9	1200	7.81	656
1-5	2215	9.59	962				

11-1632. Los Trancos Creek tributary near Stanford University, Calif.

Location--Lat 37°24'18", long 122°11'09", in El Corte de Madera Grant, on right bank 350 ft east of wooden water tanks, 0.4 mile east of Ladera, 0.6 mile upstream from mouth, and 1.7 miles southwest of Stanford University Post Office, Santa Clara County.

Drainage area--0.47 sq mi.

Records available--October 1958 to September 1965.

Gage--Water-stage recorder and concrete control. Datum of gage is 269.13 ft above mean sea level, datum of 1929.

Average discharge--7 years, 0.037 cfs (27 acre-ft per year).

Extremes--Maximum discharge during year, 24.6 cfs Jan. 5 (gage height, 2.14 ft); no flow for most of year.

1958-65: Maximum discharge, 66.2 cfs Jan. 31, 1963 (gage height, 2.63 ft), from rating curve extended above 18 cfs on basis of slope-area measurement of maximum flow; no flow for many months in each year.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 17

Dec. 18 to Sept. 30

1.0	0	1.0	0	1.5	3.1
1.1	.1	1.1	.1	1.6	4.9
		1.2	.4	1.7	7.2
		1.3	.9		
		1.4	1.8		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	0.19	0.01	0	0					
2		0	0	.61	.01	0	0					
3		0	0	1.70	.01	0	0					
4		0	0	1.02	.12	0	0					
5		0	0	5.54	.36	0	0					
6		0	0	3.55	.10	0	0					
7		0	0	1.28	.02	0	0					
8		0	0	.25	.01	0	.03					
9		0	0	.13	.01	0	.34					
10		.01	0	.09	0	0	.12					
11		0	0	.07	0	0	.01					
12		0	0	.05	0	0	0					
13		0	0	.02	0	0	0					
14		0	0	.02	0	0	0					
15		0	0	.02	0	0	.02					
16		0	0	.02	0	0	.08					
17		0	0	.02	0	0	0					
18		0	0	.02	0	0	0					
19		0	0	.15	0	0	0					
20		0	.01	.07	0	0	.01					
21		0	.02	.05	0	0	0					
22		0	.17	.10	0	0	0					
23		0	1.15	1.65	0	0	0					
24		0	.42	1.98	0	0	0					
25		0	.04	.17	0	0	0					
26		0	.28	.07	0	0	0					
27		0	.31	.04	.01	.04	0					
28		0	1.58	.03	0	0	0					
29		0	1.35	.02	-----	0	0					
30		0	2.69	.02	-----	0	0					
31		-----	1.49	.01	-----	.06	-----		-----			-----
Total	0	0.01	9.51	18.96	0.66	0.10	0.61	0	0	0	0	0
Mean	0	0.0003	0.307	0.612	0.024	0.003	0.020	0	0	0	0	0
Cfsm	0	0.0006	0.653	1.302	0.051	0.006	0.043	0	0	0	0	0
In.	0	0.0008	0.75	1.50	0.05	0.01	0.05	0	0	0	0	0
Ac-ft	0	0	19	38	1.3	0.2	1.2	0	0	0	0	0

Calendar year 1964 Max 2.69 Min 0 Mean 0.035 Ac-ft 26
 Water year 1964-65 Max 5.54 Min 0 Mean 0.082 Ac-ft 60

Peak discharge (base, 6 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-28	0415	1.72	7.81	1- 5	2000	2.14	24.6
12-30	1400	1.84	11.5	1-23	2400	1.86	12.1

SAN FRANCISQUITO CREEK BASIN

11-1645. San Francisquito Creek at Stanford University, Calif.

Location.--Lat 37°25'24", long 122°11'18", in San Francisquito Grant at golf course, on right bank 1.1 miles downstream from Los Trancos Creek and 1.1 miles west of Stanford University Post Office, Santa Clara County.

Drainage area.--37.5 sq mi.

Records available.--October 1930 to September 1941, October 1950 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 120 ft (from topographic map).

Average discharge.--26 years, 17.2 cfs (12,450 acre-ft per year).

Extremes.--Maximum discharge during year, 1,120 cfs Dec. 23 (gage height, 5.35 ft); no flow at times. 1930-41, 1950-65; Maximum discharge, 5,560 cfs Dec. 22, 1955 (gage height, 13.60 ft); no flow at times in each year.

Remarks.--Records good except those for period of indefinite stage-discharge relation, which are poor. Flow regulated by Searsville Lake (capacity, 952 acre-ft). Diversions of about 700 acre-ft 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.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 23						Dec. 23 to Sept. 30			
1.15	0	0.6	4.4	2.0	118	0.1	0	1.0	25
.2	.1	.7	7.2	3.0	320	.2	.3	1.5	65
.3	.4	1.0	19	4.0	610	.3	1.2	2.0	130
.4	1.1	1.3	37	5.0	980	.4	2.6	3.0	340
.5	2.4	1.6	64			.5	4.6	4.0	620
						.7	10	5.0	980

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.2	0.1	82	17	9.8	19	7.9	0.1	0	0.4	0.1
2	0	.2	.1	63	16	8.8	12	7.9	.1	0	.4	.1
3	0	.1	.1	178	15	8.2	11	6.6	.1	0	.5	.1
4	0	.1	.1	211	20	7.2	8.2	6.4	.1	.1	.5	.1
5	0	.1	.1	328	75	5.9	4.9	4.4	.1	.2	.5	.1
6	0	.1	.1	533	47	7.5	.5	3.8	.1	.2	.4	.1
7	0	.1	.1	386	26	10	5.6	3.6	.1	.2	.4	.1
8	0	.2	.1	151	16	6.4	51	3.8	.2	.2	.2	.1
9	0	2.9	.1	96	14	5.2	420	3.8	.1	.2	.1	.1
10	0	1.1	.1	70	13	2.1	355	3.0	.1	.1	.1	.1
11	0	1.4	.1	49	13	2.6	130	1.4	.1	.1	.3	.1
12	0	2.6	.1	37	12	3.0	54	1.0	.1	.1	.3	.1
13	0	.8	.1	36	6.9	5.4	41	.2	.1	.1	.3	.1
14	0	.4	.1	31	6.7	6.9	36	.1	.1	.1	.3	.1
15	0	.2	.1	26	7.2	6.2	51	.2	.1	.1	.4	.1
16	0	.2	.1	21	7.5	4.2	303	.2	.1	.1	.3	.1
17	.1	.1	.1	19	7.2	3.2	91	.3	.1	.1	.2	.1
18	0	.1	.1	15	7.5	2.3	60	.4	.1	.1	.2	.1
19	0	.1	.3	28	8.5	2.0	34	.2	0	.1	.3	.1
20	0	.1	.3	23	6.0	.3	23	.2	.1	.1	.3	.1
21	0	.1	30	20	23	.2	40	.3	0	.1	.3	.1
22	0	.2	266	23	12	.1	24	.3	.1	.1	.2	.1
23	0	.1	686	93	11	.2	20	.5	.1	.1	.2	.2
24	0	0	375	214	9.4	.2	18	.4	.1	.1	.2	.2
25	0	.1	101	73	9.2	.2	17	.1	.1	.1	.2	.2
26	0	.1	119	40	9.2	.2	13	.1	.1	.1	.2	.2
27	0	.1	180	29	20	19	11	.1	.1	.1	.2	.1
28	0	.1	183	26	12	14	9.2	.1	.1	.1	.1	.1
29	.1	.1	156	21	-----	8.8	8.5	.1	0	.2	.1	.1
30	.2	.1	200	9.8	-----	6.9	7.9	.1	.1	.3	.1	.1
31	.1	-----	192	13	-----	30	-----	.1	-----	.4	.1	-----
Total	0.5	22.0	2,490.4	2,944.8	447.3	187.0	1,878.8	57.6	2.8	4.0	8.3	3.4
Mean	0.02	0.73	80.3	95.0	16.0	6.03	62.6	1.86	0.09	0.13	0.27	0.11
Ac-ft	1.0	4.4	4,940	5,840	887	371	3,730	114	5.6	7.9	16	6.7

Calendar year 1964 Max 686 Min 0 Mean 9.28 Ac-ft 6,720
 Water year 1964-65 Max 533 Min 0 Mean 22.0 Ac-ft 15,960

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0630	5.35	1,120	4-9	1230	4.26	701
1-5	2230	5.10	1,020				

Note.--Stage-discharge relation indefinite Sept. 13-30.

11-1660, Matadero Creek at Palo Alto, Calif.

Location.--Lat 37°25'10", long 122°08'10", in Rincon de San Francisquito Grant, on right bank on Ash Street, 150 ft upstream from Lambert Avenue Bridge, and 2.1 miles southeast of post office at Palo Alto, Santa Clara County.

Drainage area.--7.24 sq mi.

Records available.--July 1952 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 25 ft (from topographic map). Prior to Sept. 25, 1958, at site 150 ft downstream at different datum.

Average discharge.--13 years, 1.21 cfs (876 acre-ft per year); median of mean annual discharges, 0.5 cfs (360 acre-ft per year).

Extremes.--Maximum discharge during year, 219 cfs Jan. 5 (gage height, 2.24 ft), from rating curve extended above 92 cfs on basis of critical-depth determination at gage height 2.85 ft; no flow for most of year.
1952-65: 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 for many months in each year.

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

Rating table (gage height, in feet, and discharge in cubic feet per second)

0.1	0	0.6	7.5
.2	.1	.8	17
.3	.7	1.0	31
.4	2.1	1.2	50
.5	4.5	1.4	75

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.4	0	2.7	0	0	0.2					0
2	0	.2	0	5.6	0	0	0					0
3	0	0	0	17	0	0	0					0
4	0	0	.1	14	1.6	0	0					0
5	0	0	0	52	3.7	0	0					0
6	0	0	0	33	1.2	0	.2					0
7	0	0	0	20	.3	0	.4					0
8	0	7.0	0	3.7	0	0	3.3					0
9	0	1.9	0	2.3	0	0	19					0
10	0	12	0	1.6	0	0	13					0
11	0	2.2	0	1.2	0	0	2.1					0
12	0	1.6	0	.9	0	.1	1.0					0
13	0	.1	0	.5	0	0	.3					0
14	0	0	0	.2	0	0	0					0
15	0	0	0	3.9	0	0	.9					0
16	0	0	0	4.4	0	0	4.1					0
17	0	0	0	2.0	.1	0	.6					0
18	0	0	0	0	.1	0	.1					0
19	0	0	1.0	3.1	0	0	0					0
20	0	0	1.0	.5	0	0	1.4					0
21	0	.3	3.7	.8	0	0	.2					0
22	0	.1	20	.6	0	0	0					0
23	0	0	69	13	.1	0	0					.1
24	0	.2	8.4	20	0	0	0					0
25	0	0	.9	2.5	0	0	0					0
26	0	.1	3.3	1.2	.1	.5	0					0
27	0	0	4.8	1.0	1.4	2.8	0					0
28	.9	0	19	.8	0	0	0					.1
29	.4	0	14	.5	-----	0	0					0
30	.2	0	22	.1	-----	.3	0					.1
31	0	-----	16	0	-----	6.7	-----					-----
Total	1.5	26.1	183.2	209.1	8.6	10.4	46.8	0	0	0	0	0.3
Mean	0.05	0.87	5.91	6.75	0.31	0.34	1.56	0	0	0	0	0.01
Ac-ft	3.0	52	363	415	17	21	93	0	0	0	0	0.6

Calendar year 1964 Max 69 Min 0 Mean 0.82 Ac-ft 596
Water year 1964-65 Max 69 Min 0 Mean 1.33 Ac-ft 965

Peak discharge (base, 50 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11- 8	2300	1.49	88	12-20	1430	1.36	70
11-10	0300	1.44	81	1- 5	2030	2.24	219
12-23	0030	1.88	153	1-24	0100	1.45	82
12-28	0500	1.37	71				

STEVENS CREEK BASIN

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., at center of dam on Stevens Creek, 2.0 miles southwest of Monte Vista.

Drainage area.--17.3 sq mi.

Records available.--December 1935 to September 1965. Monthly contents prior to October 1959 published in WSP 1735.

Gage.--Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District).

Extremes.--Maximum contents observed during year, 3,860 acre-ft Jan. 6 (elevation, 537.80 ft); minimum observed, 76 acre-ft Nov. 6 (elevation, 464.94 ft).

1935-65: Maximum contents observed, 4,100 acre-ft Dec. 26, 1955 (elevation, 538.61 ft); maximum elevation, 539.48 ft Jan. 31, 1963; no contents for part of most years.

Remarks.--Reservoir is formed by earth-fill 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 Valley Water Conservation District.

Month-end contents, in acre-feet, water year October 1964 to September 1965

Date	Contents†
Sept.30.....	97
Oct. 31.....	79
Nov. 31.....	315
Dec. 31.....	3,600
Jan. 30.....	3,820
Feb. 28.....	3,800
Mar. 31.....	3,800
Apr. 30.....	3,770
May 31.....	3,570
June 30.....	2,640
July 31.....	824
Aug. 31.....	394
Sept.30.....	346

† Contents at 0800 hours on first day of following month.

11-1669. Alamitos Creek near New Almaden, Calif.

Location.--Lat 37°13'21", long 121°51'00", in Pueblo Lands of San Jose Grant, 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, Santa Clara County.

Drainage area.--31.9 sq mi.

Records available.--April 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 247 ft (from topographic map). Prior to July 15, 1958, staff gage at same site and datum.

Average discharge.--7 years, 15.1 cfs (10,930 acre-ft per year).

Extremes.--Maximum discharge during year, 427 cfs Jan. 6 (gage height, 4.13 ft); no flow Oct. 1 to Dec. 12.

1958-65: Maximum discharge, 4,300 cfs Apr. 2, 1958 (gage height, 9.67 ft), from rating curve extended above 330 cfs on basis of computed outflow from Almaden and Calero Reservoirs; no flow for parts of each year.

Remarks.--Records good. Flow regulated by Calero and Almaden Reservoirs (see p. 326); water released during summer. Small diversions above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	3.8	3.6	3.6	7.4	16	22	22	19	17
2			0	5.3	3.2	6.3	3.5	15	21	22	19	17
3			0	56	3.0	8.0	5.7	16	21	22	18	18
4			0	25	3.0	12	6.0	15	20	20	17	18
5			0	91	3.4	11	8.5	18	19	19	17	18
6			0	272	3.0	9.8	15	17	19	17	19	18
7			0	265	2.6	2.6	15	13	19	18	19	18
8			0	91	2.4	2.2	13	13	19	18	20	19
9			0	28	2.4	2.0	24	14	19	17	19	17
10			0	14	2.6	1.9	19	14	20	17	19	15
11			0	11	2.6	1.7	7.7	18	20	17	19	15
12			0	9.4	2.3	1.7	5.7	25	20	16	18	15
13			.1	8.4	2.3	1.5	7.0	25	20	16	20	15
14			.2	7.4	2.4	1.4	7.0	22	18	15	20	15
15			.3	6.6	2.4	1.3	7.4	21	16	15	20	15
16			.3	6.0	2.3	1.3	13	18	17	12	20	15
17			.3	5.2	2.2	2.2	35	14	16	11	20	15
18			.4	4.4	2.2	8.8	25	15	18	10	20	15
19			2.3	4.6	2.0	11	44	19	21	12	20	15
20			1.5	4.4	2.0	12	39	19	21	15	20	14
21			7.2	4.0	2.0	12	36	17	21	16	20	7.7
22			7.6	3.5	1.9	12	20	13	21	16	20	7.7
23			9.5	5.2	1.7	13	17	14	22	17	18	7.0
24			4.6	9.1	1.6	13	18	14	23	16	17	6.5
25			2.4	5.2	1.4	14	19	14	23	18	17	5.7
26			2.3	4.4	1.5	14	20	19	24	23	17	4.9
27			4.4	4.0	1.4	14	22	25	24	21	16	4.9
28			6.3	3.8	2.8	14	19	26	23	24	17	5.4
29			6.9	3.8	-----	14	18	26	22	32	17	5.4
30			5.4	3.6	-----	14	17	24	21	22	17	5.4
31		-----	5.2	3.6	-----	15	-----	22	-----	20	17	-----
Total	0	0	67.2	968.7	66.2	251.3	513.9	561	610	556	576	384.6
Mean	0	0	2.17	31.2	2.36	8.11	17.1	18.1	20.3	17.9	18.6	12.8
Ac-ft	0	0	133	1,920	131	498	1,020	1,110	1,210	1,100	1,140	763

Calendar year 1964 Max 137 Min 0 Mean 6.42 Ac-ft 4,660

Water year 1964-65 Max 272 Min 0 Mean 12.5 Ac-ft 9,030

Note.--Computed from once-daily staff gage readings Sept. 9-12, 18-23, 25-30, furnished by Santa Clara Valley Water Conservation District.

GUADALUPE RIVER BASIN

11-1676.6. Ross Creek at San Jose, Calif.

Location.--Lat 37°14'55", long 121°54'49", in SE¼ sec.12, T.8 S., R.1 W., on left bank 100 ft downstream from Lone Hill Creek, 500 ft upstream from Harwood Avenue, and at south city limits of San Jose.

Drainage area.--5.70 sq mi.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder (digital) and concrete control. Altitude of gage is 210 ft (from topographic map).

Extremes.--Maximum discharge during year, 542 cfs Nov. 10 (gage height, 6.34 ft); no flow for most of year.

1961-65: Maximum discharge, that of Nov. 10, 1964; no flow for many days in each year.

Remarks.--Records fair. Low flow at times affected by return flow from urban irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	6.3	0	2.3	0.5	0.1	0.2				0	0
2	0	0	.3	21	.4	0	.1				0	0
3	0	0	0	27	.3	.1	0				0	0
4	0	0	0	7.0	3.2	.1	0				0	0
5	0	0	0	76	3.5	.4	0				0	0
6	0	0	0	38	.6	.8	.1				0	0
7	0	0	0	15	.4	.3	2.7				0	.1
8	.5	2.3	0	6.3	.3	0	10				0	.1
9	0	19	0	4.3	.2	0	32				0	0
10	.4	36	0	3.2	.2	.1	11				0	0
11	0	1.8	.1	2.3	.2	0	3.8				0	0
12	0	1.0	0	1.7	.1	.1	3.4				0	0
13	0	.6	0	1.2	.1	.1	1.0				0	0
14	0	.1	0	.9	.1	.2	.9				0	.1
15	0	0	0	.8	0	0	4.0				0	.1
16	0	0	0	.7	0	0	6.3				0	0
17	0	0	0	.5	0	.1	1.0				.1	0
18	0	0	.4	.4	0	0	.5				.2	0
19	0	0	27	2.7	0	.1	.4				.1	0
20	0	0	18	.6	.2	.1	.3				.2	0
21	0	0	20	1.3	.1	.1	.5				.1	0
22	0	0	26	.6	0	.1	.1				.2	0
23	0	0	31	9.7	.1	0	.1				0	0
24	0	.1	5.8	3.6	.1	0	.1				.1	0
25	0	0	2.4	1.0	0	0	0				.1	0
26	0	0	19	.6	0	.1	0				.1	0
27	0	0	17	.5	2.4	.4	0				0	0
28	4.0	0	11	.5	.2	.1	0				.1	0
29	3.6	0	19	.5	-----	0	0				0	0
30	0	0	7.3	.3	-----	.3	0				.1	0
31	0	-----	5.9	.3	-----	12	-----				.1	-----
TOTAL	8.5	67.2	210.2	230.8	13.2	15.7	78.5	0	0	0	1.5	0.4
MEAN	0.27	2.24	6.78	7.45	0.47	0.51	2.62	0	0	0	0.05	0.01
AC-FT	17	133	417	458	26	31	156	0	0	0	3.0	0.8

CALENDAR YEAR	1964	MAX	65	MIN	0	MEAN	1.20	AC-FT	867
WATER YEAR	1964-65	MAX	76	MIN	0	MEAN	1.72	AC-FT	1,240

Peak discharge (base, 110 cfs, revised)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0430	6.34	542	1-5	1800	5.24	254
12-19	0800	4.78	172	4-9	1130	4.65	152

11-1680. Los Gatos Creek at Los Gatos, Calif.

Location.--Lat 37°12'30", long 121°59'15", in NE¼ sec.29, T.8 S., R.1 W., 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.

Records available.--October 1929 to September 1944, October 1953 to September 1965. 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 (digital). Altitude of gage is 420 ft, (from topographic map). Prior to Oct. 1, 1943, water-stage recorder, 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.--27 years, 47.1 cfs (34,100 acre-ft per year), adjusted for diversion.

Extremes.--Maximum discharge during year, 153 cfs Apr. 4-6 (gage height, 5.13 ft); minimum daily, 0.1 cfs Nov. 15 to Dec. 1. 1929-44, 1953-65: 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 and Lake Elsan (see p. 326). Several diversions for irrigation above station and diversion by San Jose Water Works. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 7-14)

3.0	0.1	3.7	9.3
3.1	.4	3.9	16
3.2	.9	4.2	34
3.3	1.8	4.6	69
3.5	4.6	5.2	168

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.4	0.8	0.1	11	58	65	22	92	59	67	27	43
2	.4	.7	.2	12	59	69	46	93	60	79	26	43
3	.4	.7	.2	33	59	72	61	71	60	69	26	43
4	.4	.7	.2	26	59	73	119	60	61	63	26	43
5	.4	.7	.2	38	57	74	150	60	62	60	26	43
6	.4	.7	.2	30	53	74	112	60	62	57	28	43
7	.4	.8	.2	20	53	74	41	59	62	56	32	43
8	.4	1.3	.2	16	53	74	33	58	63	55	32	50
9	.4	1.8	.2	12	57	73	28	58	58	54	38	54
10	.4	7.4	.2	11	55	71	18	57	52	54	41	53
11	.4	.5	.3	21	54	70	13	57	52	54	45	52
12	.4	.7	.3	32	54	70	12	56	58	54	46	44
13	.4	.3	.3	30	53	69	12	56	60	54	46	37
14	.4	.2	.3	43	54	68	12	55	59	46	45	40
15	.4	.1	.3	51	54	68	13	55	63	49	33	40
16	.4	.1	1.9	50	54	68	17	55	68	75	25	40
17	.4	.1	2.4	50	54	66	13	54	68	77	22	32
18	.4	.1	2.2	50	54	66	12	62	80	69	22	24
19	.4	.1	7.2	53	54	66	12	66	84	59	23	24
20	.4	.1	10	51	63	65	12	65	84	45	25	27
21	.4	.1	15	48	89	65	12	65	85	45	25	34
22	.3	.1	34	36	92	64	12	65	84	45	24	46
23	.4	.1	40	30	79	70	12	65	84	45	25	50
24	.4	.1	20	8.9	90	74	12	64	84	42	25	55
25	.4	.1	11	24	89	74	12	64	84	40	31	84
26	.4	.1	9.9	33	84	73	44	78	83	40	33	76
27	.5	.1	14	32	70	73	82	82	81	36	32	65
28	.6	.1	19	32	58	73	92	83	59	33	32	64
29	.8	.1	15	43	-----	71	92	66	45	27	40	62
30	.6	.1	12	55	-----	71	92	59	54	26	44	44
31	.6	-----	12	57	-----	43	-----	59	-----	27	43	-----
TOTAL	13.4	18.9	229.0	1,038.9	1,762	2,146	1,220	1,999	2,018	1,602	988	1,398
MEAN	0.43	0.63	7.39	33.5	62.9	69.2	40.7	64.5	67.3	51.7	31.9	46.6
AC-FT	27	37	454	2,060	3,490	4,260	2,420	3,960	4,000	3,180	1,960	2,770
(†)	458	147	114	1,010	1,360	1,280	1,280	1,890	1,760	1,680	1,670	1,630

CALENDAR YEAR	1964	MAX	81	MIN	0.1	MEAN	7.89	AC-FT	5,720	†	4,410
WATER YEAR	1964-65	MAX	150	MIN	0.1	MEAN	39.5	AC-FT	28,680	†	14,280

† Diversion, in acre-feet, furnished by San Jose Water Works.

11-1690, Guadalupe River at San Jose, Calif.

Location.--Lat 37°20'00", long 121°54'00", at San Jose, Santa Clara County, on right bank 100 ft downstream from Los Gatos Creek.Drainage area.--146 sq mi.Records available.--October 1929 to September 1965. 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.--Maximum discharge during year, 1,340 cfs Jan. 5 (gage height, 4.26 ft); no flow for many days.
1929-65: Maximum discharge, 9,150 cfs Apr. 2, 1958 (gage height, 16.55 ft); no flow for many days in each year.Remarks.--Records good except those for periods of fragmentary or no gage-height record, which are poor. Flow regulated by Calero, Almaden, Guadalupe and Lexington Reservoirs, and Lake Elsmar (see p. 326) with water released during summer for percolation in spreading basins on tributaries. Diversions by San Jose Water Works for urban use (see Los Gatos Creek at Los Gatos, preceding page). Diversion of 1,100 acre-ft into Alamitos Percolation Ponds from Coyote Creek basin during year.Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 12-17, Apr. 23 to Sept. 15)

Oct. 1 to Nov. 10				Nov. 10 to Sept. 30			
0.45	0	1.4	19	0.45	0	1.8	64
.5	.1	1.6	31	.5	.1	2.0	105
.6	.9	1.8	52	.6	1.2	2.5	270
.9	6.0	2.0	88	1.0	8.6	3.0	510
1.2	13	2.3	169	1.4	21	4.0	1,150
				1.6	36		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	20	0	0.3	3.1	0.2	14	0	1.9	0.2	0	0.4
2	.2	.3	.1	10	3.6	.4	4.3	0	1.1	.8	0	.4
3	0	0	0	248	3.4	1.1	72	0	1.5	2.6	0	.3
4	0	0	0	120	13	.9	4.4	0	.3	1.5	0	.3
5	0	0	0	296	17	1.6	6.1	0	0	4.5	0	.1
6	0	0	0	596	3.6	3.8	6.4	.4	0	5.3	.4	0
7	0	0	0	377	1.5	1.5	10	2.0	0	3.6	.4	0
8	0	0	0	160	5.5	2.4	23	2.2	0	2.7	.4	0
9	0	50	0	61	3.3	1.7	205	0	0	3.6	.4	0
10	0	158	0	28	4.3	1.7	170	0	0	3.4	.4	.9
11	0	8.0	.1	15	3.6	.1	57	0	0	3.1	.4	.1
12	0	16	0	6.0	1.3	.7	16	0	0	2.7	.4	.2
13	0	11	0	2.2	.1	.2	2.7	0	0	2.0	.4	0
14	0	0	0	.1	.1	1.0	2.6	0	1.2	.8	.4	.1
15	0	0	0	0	0	2.1	3.0	0	1.1	0	.2	.2
16	0	0	0	0	0	1.2	15	0	0	.8	0	.2
17	0	0	.1	0	0	3.6	25	0	0	.2	.3	.2
18	0	0	1.2	0	0	4.4	21	0	0	0	.2	.8
19	0	0	132	14	0	5.2	30	0	0	0	.1	.2
20	0	0	41	2.9	0	5.6	36	0	0	0	.1	.2
21	0	.4	30	1.0	4.0	5.3	36	0	0	0	.1	1.4
22	0	.2	50	3.2	7.3	5.5	19	0	0	0	.2	.2
23	0	0	134	36	6.4	5.5	8.2	0	0	0	0	.2
24	0	.3	25	4.1	2.6	6.0	9.9	0	0	0	.1	.2
25	0	.2	1.8	8.6	.8	6.4	.9	0	0	0	.4	.2
26	0	0	27	3.7	1.2	7.7	.1	0	0	0	.4	.2
27	0	0	47	3.9	11	15	.1	0	0	0	.4	1.9
28	14	0	47	12	.6	2.9	0	0	2.1	0	.4	1.1
29	19	0	35	8.9	-----	4.0	0	0	3.6	.4	.4	.3
30	.8	0	21	7.9	-----	5.4	0	1.6	2.7	0	0	.4
31	0	-----	26	13	-----	121	-----	2.2	-----	0	.4	-----
Total	34.2	264.4	618.3	2,075.7	102.7	224.1	797.7	8.4	15.5	38.2	7.3	10.7
Mean	1.10	8.81	19.9	67.0	3.67	7.23	26.6	0.27	0.52	1.23	0.24	0.36
Ac-ft	68	524	1,230	4,120	204	444	1,580	17	31	76	14	21

Calendar year 1964 Max 544 Min 0 Mean 6.01 Ac-ft 4,370
 Water year 1964-65 Max 596 Min 0 Mean 11.5 Ac-ft 8,330

Note.--Fragmentary or no gage-height record Feb. 13-15, July 14-16, Aug. 5 to Sept. 1.

11-1695. Saratoga Creek at Saratoga, Calif.

Location.--Lat 37°15'15", long 122°02'25", in Quito Grant, on right bank on downstream side of private road bridge, 0.5 mile southwest of Saratoga, Santa Clara County, and 0.7 mile downstream from diversion dam.

Drainage area.--9.22 sq mi.

Records available.--October 1933 to September 1965. Prior to October 1951, published as Campbell Creek at Saratoga.

Gage.--Water-stage recorder (digital) and concrete control. Altitude of gage is 500 ft (from topographic map).

Average discharge.--32 years, 9.58 cfs (6,940 acre-ft per year), adjusted for diversion.

Extremes.--Maximum discharge during year, 535 cfs Jan. 5 (gage height, 4.40 ft); no flow for many days.

1933-65: Maximum discharge, 2,730 cfs Dec. 22, 1955 (gage height, 6.40 ft), from rating curve extended above 510 cfs on basis of slope-area measurement of maximum flow; no flow for part of each year except possibly 1941, 1943, 1945.

Remarks.--Records good. Water is diverted for municipal use by San Jose Water Works at diversion dam above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 30

1.1	0	1.8	15
1.2	.3	2.0	28
1.3	1.0	2.5	79
1.4	2.2	3.0	154
1.5	4.1	3.5	258
1.6	6.8		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.1	2.6	0	41	11	2.6	6.2	10	0.5	0.5	0.1	0.1
2	.1	1.7	0	55	10	2.6	3.5	10	.4	.3	.2	.1
3	.1	1.2	0	103	9.0	2.4	3.3	10	.6	.3	.1	.1
4	.1	1.0	0	115	11	2.5	2.7	10	.6	.5	0	.1
5	.1	.9	0	206	20	6.3	1.6	9.0	.5	.5	0	0
6	.1	.8	0	240	16	7.9	1.7	9.0	.5	.3	0	.1
7	.2	.8	0	164	13	4.5	6.7	12	.8	.5	0	0
8	.2	4.8	0	106	9.7	2.8	33	7.7	.2	.3	.1	.1
9	.1	19	0	77	9.7	2.4	106	5.2	.1	.3	.1	0
10	.1	31	0	60	7.9	2.2	89	6.5	.1	.2	0	0
11	.1	12	0	50	6.3	2.3	56	4.5	.2	.2	.2	.1
12	.2	18	0	41	5.7	3.7	40	4.5	.1	.2	.1	.5
13	.2	6.3	0	36	5.2	7.0	27	3.9	.1	.1	.4	0
14	.2	4.1	0	30	4.9	5.6	19	3.9	.1	.1	0	.2
15	.1	3.3	0	27	4.6	3.3	41	3.7	.2	.2	0	0
16	.1	2.8	0	24	4.9	1.8	92	5.6	.1	1.2	.1	.2
17	.1	2.0	0	22	4.9	1.7	58	7.8	0	.5	.1	.1
18	.1	.9	.5	20	5.2	1.7	45	6.7	.2	.8	.1	0
19	.1	0	29	22	4.1	1.4	35	6.2	.3	.7	.1	0
20	.1	0	61	20	4.4	1.0	30	6.0	.4	.5	0	.1
21	.1	.3	120	16	4.1	.4	24	5.9	.6	.3	0	.3
22	.1	1.2	211	15	5.2	.5	20	5.5	.5	.3	.1	1.1
23	.1	0	233	35	5.4	.6	16	3.5	.3	.2	0	1.1
24	.2	.4	125	39	6.0	.6	15	1.6	.3	.1	.1	1.2
25	.2	.5	67	27	5.1	.7	14	1.2	.4	.1	.1	1.2
26	.2	0	54	20	3.9	.5	13	1.0	.4	.1	0	1.2
27	.2	0	67	16	9.2	4.4	12	.6	.3	.1	0	1.3
28	.6	0	71	15	5.7	1.5	16	.6	.3	0	0	1.3
29	2.6	0	71	14	-----	1.1	11	.5	.3	.1	.3	1.2
30	1.3	0	63	12	-----	.4	11	.4	.5	.1	.3	1.0
31	.9	-----	55	11	-----	14	-----	.5	-----	.2	0	---
TOTAL	9.0	115.6	1,227.5	1,679	212.1	90.4	848.7	163.5	9.9	9.8	2.6	12.7
MEAN	0.29	3.85	39.6	54.2	7.58	2.92	28.3	5.27	0.33	0.32	0.08	0.42
AC-FT	18	229	2,430	3,330	421	179	1,680	324	20	19	5.2	25
(+)	0	35	31	126	278	316	221	374	275	147	97	48

CALENDAR YEAR 1964 MAX 233 MIN 0 MEAN 4.35 AC-FT 3,150 † 775
 WATER YEAR 1964-65 MAX 240 MIN 0 MEAN 12.0 AC-FT 8,680 †1,950

Peak discharge (base, 110 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0430	2.90	137	1-23	1730	2.80	121
12-23	0400	3.98	388	4- 9	1100	3.10	172
1- 5	2130	4.40	535	4-16	0430	2.77	116

Note.--Doubtful or no gage-height record Nov. 19-29, Apr. 27 to May 7.

† Diversion, in acre-feet, furnished by San Jose Water Works.

GUADALUPE RIVER BASIN

Reservoirs in Guadalupe River basin, Calif.

- 11-1666.7. Almaden Reservoir.--Lat 37°09'54", long 121°49'39", in San Vicente Grant, at center of dam on Alamitos Creek, 0.7 mile southwest of New Almaden, Santa Clara County, and 7 miles south of Edenvale. Drainage area, 12.0 sq mi. Records available, January 1936 to September 1965. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 1,990 acre-ft Jan. 7 (elevation, 607.56 ft); no contents Oct. 1-29. Maximum contents observed during period 1936-65, 2,150 acre-ft Jan. 31, 1963 (elevation, 610.24 ft, from floodmarks); no contents for part of each year except 1942, 1943, 1962-63.
- Reservoir is formed by earth-fill dam completed in 1936. Capacity, 1,960 acre-ft 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 Valley Water Conservation District.
- 11-1667.4. Calero Reservoir.--Lat 37°11'00", long 121°47'28", in San Vicente Grant, at center of dam on Arroyo Calero, 1.7 miles northeast of New Almaden, Santa Clara County, and 6 miles southeast of Edenvale. Drainage area, 6.95 sq mi. Records available, January 1936 to September 1965. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 9,630 acre-ft Apr. 24-28 (elevation, 483.86 ft); minimum observed, 154 acre-ft Oct. 27 (elevation, 414.53 ft). Maximum contents observed during period 1936-65, 9,760 acre-ft Mar. 28, 1963 (elevation, 484.32 ft); no contents for part of each year except 1942-45, 1963-65.
- Reservoir is formed by earth-fill dam completed to crest elevation 482.55 ft in 1936 and raised to 483.90 ft in 1962. Capacity, 9,630 acre-ft between elevations 393.7 (center of outlet tunnel) and 483.90 (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. Record of contents furnished by Santa Clara Valley Water Conservation District.
- 11-1673.7. Guadalupe Reservoir.--Lat 37°11'57", long 121°52'42", in Los Capitancillos Grant, at center of dam on Guadalupe Creek, 3.6 miles northwest of New Almaden, Santa Clara County, and 5.0 miles southeast of Los Gatos. Drainage area, 5.94 sq mi. Records available, January 1936 to September 1965. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 3,460 acre-ft Jan. 16 (elevation 617.38 ft); no contents Oct. 1-30. Maximum contents observed during period 1936-65, 3,610 acre-ft Feb. 1, 1963 (elevation, 619.26 ft, from floodmarks); no contents for part of each year except 1941-43, 1962-63.
- Reservoir is formed by earth-fill 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 Valley Water Conservation District.
- 11-1679.5. Lake Elsmán.--Lat 37°07'51", long 121°55'47", in SE¼ sec.23, T.9 S., R.1 W., at center of Austrian Dam on Los Gatos Creek and 7.3 miles southeast of Los Gatos. Drainage area, 9.78 sq mi. Records available, February 1951 to September 1965. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by San Jose Water Works). Maximum contents observed during year, 6,410 acre-ft Apr. 16 (elevation, 1,112.78 ft); minimum observed 764 acre-ft Nov. 8 (elevation, 1,024.4 ft). Maximum contents observed during period 1951-65, 6,640 acre-ft Jan. 31, 1963 (elevation, 1,115.1 ft); minimum observed, 169 acre-ft Dec. 29, 1956 (elevation, 996.8 ft).
- Reservoir is formed by earth-fill dam completed in 1951. Usable capacity, 6,090 acre-ft between elevations 944 (elevation of outlet gates) and 1,110 ft (crest of spillway). 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 SE¼ sec.29, T.8 S., R.1 W., at center of dam on Los Gatos Creek and 1.7 miles south of Los Gatos. Drainage area, 37.0 sq mi. Records available, December 1952 to September 1965. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 20,330 acre-ft Feb. 7 (elevation 647.29 ft); no contents Oct. 1-28. Maximum contents observed during period 1952-65, 22,760 acre-ft Apr. 13, 1958 (elevation, 652.96 ft); no contents for part of each year except 1963.
- Reservoir is formed by earth-fill 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 Valley Water Conservation District.

Month-end contents, in acre-feet, water year October 1964 to September 1965

Date	Almaden Reservoir†	Calero Reservoir†	Guadalupe Reservoir†	Lake Elsmán††	Lexington Reservoir†
Sept.30.....	0	157	0	1,310	0
Oct. 31.....	41	156	11	841	192
Nov. 30.....	202	160	58	872	1,120
Dec. 31.....	1,010	2,820	1,730	4,520	8,500
Jan. 31.....	939	7,970	3,210	6,220	20,160
Feb. 28.....	856	8,960	2,610	6,190	18,650
Mar. 31.....	822	9,000	1,710	6,150	14,840
Apr. 30.....	1,960	9,620	2,360	6,380	17,930
May 31.....	1,820	8,800	1,860	6,020	14,110
June 30.....	1,560	7,500	1,190	5,040	10,210
July 31.....	1,110	6,200	1,170	3,850	6,990
Aug. 31.....	626	5,040	712	2,600	5,020
Sept.30.....	296	4,290	255	1,300	2,250

† Contents at 0800 hours on first day of following month.

†† Contents at 0800 hours on last day of month.

11-1698. Coyote Creek near Gilroy, Calif.

Location.--Lat 37°04'40", long 121°29'36", in NE¼SE¼ sec.11, T.10 S., R.4 E., 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.

Records available.--October 1960 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 790 ft (from topographic map). Prior to Nov. 14, 1963, at site 0.4 miles downstream at different datum.

Average discharge.--5 years, 38.2 cfs (27,660 acre-ft per year).

Extremes.--Maximum discharge during year, 5,320 cfs Jan. 6 (gage height, 10.65 ft), from rating curve extended above 920 cfs on basis of floodmarks and rating at former site downstream; no flow at times.
1960-65: 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 except those above 2,000 cfs, which are fair. No regulation or diversion above station. Records of suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 26, Jan. 5, 9, 24, June 18 to July 4)

2.4	0	2.9	9.4	4.3	190
2.5	.2	3.0	15	4.6	304
2.6	.8	3.2	29	5.0	570
2.7	2.4	3.5	56	9.0	3,840
2.8	5.3	4.0	124		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	1.2	258	37	12	45	18	4.6	1.5	0.4	0.1
2		0	1.5	161	34	11	28	18	4.6	1.5	.5	.1
3		0	1.5	1,180	30	10	22	17	4.6	1.3	.4	.1
4		0	1.5	674	28	9.0	16	16	4.3	1.3	.3	.1
5		0	1.5	553	51	8.6	14	16	4.3	1.3	.3	.1
6		0	1.5	3,500	50	12	12	16	4.0	1.2	.2	.1
7		0	1.5	2,240	37	12	12	14	4.0	1.0	.2	0
8		0	1.5	672	29	10	16	14	4.0	1.0	.2	0
9		0	1.7	224	28	9.4	560	14	4.0	1.0	.2	0
10		0	1.7	156	24	8.6	1,270	13	4.0	1.0	.2	0
11		0	1.7	128	23	8.6	710	13	3.7	.9	.2	0
12		0	1.7	107	21	9.0	401	11	3.4	.9	.2	0
13		13	1.7	87	21	12	309	11	3.1	.9	.2	0
14		20	1.8	74	20	11	196	10	2.9	.9	.2	0
15		10	1.8	63	20	9.0	147	9.0	2.9	.9	.2	0
16		5.7	1.7	53	18	8.2	128	8.2	2.9	.8	.2	0
17		3.4	1.7	46	16	7.8	107	7.8	2.9	.8	.2	0
18		2.4	1.7	41	16	7.4	84	7.4	2.4	.8	.2	0
19		2.0	8.0	40	15	6.9	72	6.9	2.4	.8	.2	0
20		1.7	7.9	42	14	6.5	60	6.9	2.2	.8	.2	0
21		1.5	126	35	14	6.1	54	7.4	2.0	.7	.2	0
22		1.3	624	31	14	5.7	48	7.4	2.0	.6	.2	0
23		1.3	1,190	38	13	5.7	40	7.4	2.0	.5	.1	0
24		1.3	849	149	12	5.7	36	6.5	1.8	.5	.1	0
25		1.3	233	95	12	5.3	33	6.1	1.8	.5	.1	0
26		1.3	488	75	12	5.3	30	5.7	1.8	.5	.1	0
27		1.3	773	64	14	7.8	27	5.3	1.8	.4	.1	0
28		1.2	826	55	15	7.8	24	5.0	1.7	.4	.1	0
29		1.2	554	50	-----	6.1	22	4.6	1.7	.4	.1	0
30		1.2	546	45	-----	6.1	20	4.3	1.7	.4	.1	0
31		-----	794	40	-----	4.1	-----	4.3	-----	.4	.1	-----
Total	0	71.1	7,118.9	10,976	638	291.6	4,543	311.2	89.5	25.9	6.2	0.6
Mean	0	2.37	230	354	22.8	9.41	151	10.0	2.98	0.84	0.20	0.02
Ac-ft	0	141	14,120	21,770	1,260	578	9,010	617	178	51	12	1.2

Calendar year 1964 Max 1,190 Min 0 Mean 28.8 Ac-ft 20,910
Water year 1964-65 Max 3,500 Min 0 Mean 66.0 Ac-ft 47,740

Peak discharge (base, 250 cfs, revised)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0800	6.61	1,860	1- 3	0900	6.45	1,730
12-26	2130	6.25	1,570	1- 6	0130	10.65	5,320
12-31	0600	5.60	1,050	4-10	0330	6.13	1,470

COYOTE CREEK BASIN

11-1700. Coyote Creek near Madrone, Calif.

Location.--Lat 37°10'06", long 121°38'55", near southeast corner of La Laguna Seca Grant, on right bank 1.2 miles downstream from Anderson Dam and 1.8 miles northeast of Madrone, Santa Clara County.

Drainage area.--196 sq mi.

Records available.--October 1902 to September 1912, December 1916 to September 1965. 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, staff gages and water-stage recorders at various sites within 1.4 miles upstream at different datums.

Average discharge.--59 years, 67.2 cfs (48,650 acre-ft per year).

Extremes.--Maximum discharge during year, 113 cfs June 19 (gage height, 2.74 ft); no flow Dec. 26-30.

1902-12, 1916-65: Maximum discharge, 25,000 cfs probably Mar. 7, 1911 (record furnished by Duryea, Haehl & Gilman); no flow at times.

Remarks.--Records good except those for period of no gage-height record, which are poor. Flow regulated by Coyote and Anderson Lakes (see p. 330); water released during summer. Water is diverted to Main Avenue percolation ponds by Santa Clara Valley Water Conservation District. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.0	0	1.6	1.6	2.2	31
1.1	.1	1.7	2.2	2.3	46
1.2	.3	1.8	3.0	2.4	67
1.3	.5	1.9	4.2	2.6	122
1.4	.8	2.0	9.1		
1.5	1.1	2.1	18		

Discharge, in cubic feet per second, water year October 1964 to September 1965												
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	0.6	2.5	19	31	42	34	80	90	102	80	77
2	.9	.6	2.4	19	36	42	36	70	90	102	80	77
3	.4	.6	2.4	21	37	42	36	59	70	105	77	77
4	.4	.6	2.4	21	37	40	36	63	63	108	75	77
5	.6	.5	2.5	22	38	40	36	63	75	108	75	77
6	.5	.2	2.4	10	37	42	40	65	93	102	75	77
7	.6	.1	2.4	5.7	36	42	46	65	93	96	72	77
8	.7	.1	2.2	5.7	36	42	50	65	99	99	72	80
9	.6	.1	2.2	5.7	69	42	31	70	63	99	59	80
10	.5	.1	2.2	6.2	88	40	6.8	72	68	96	44	80
11	.4	.1	2.2	8.3	88	40	6.2	72	102	99	46	83
12	.5	.1	2.4	15	72	40	13	75	102	99	46	88
13	.6	.1	2.4	45	56	40	34	80	105	99	48	88
14	.7	.1	6.4	63	56	38	46	80	105	102	43	90
15	.9	.1	3.0	72	59	38	46	80	93	102	32	85
16	1.1	.1	2.8	77	63	38	46	80	88	105	32	85
17	1.0	.1	2.8	77	63	44	46	80	96	105	32	90
18	1.0	.1	2.8	48	63	46	46	80	110	108	40	90
19	.8	.1	3.2	34	65	46	48	83	105	110	42	85
20	.2	.1	3.0	30	65	46	48	83	99	102	63	80
21	.1	.1	3.0	28	65	46	48	83	96	102	65	80
22	.6	.1	2.9	28	56	46	48	83	96	96	65	80
23	.8	.1	1.8	28	54	46	48	90	93	90	65	80
24	.8	.1	.2	28	50	48	48	93	93	93	70	83
25	.8	.1	.1	28	43	48	50	96	93	90	72	83
26	.4	.1	0	28	43	48	56	96	93	88	75	77
27	.2	2.0	0	30	43	48	65	96	96	90	75	77
28	.3	2.5	0	30	43	48	67	96	102	88	75	80
29	.8	2.5	0	30	30	48	75	90	105	83	80	80
30	.2	2.5	0	30	-----	48	80	88	102	83	80	77
31	.3	-----	10	30	-----	40	-----	90	-----	80	80	-----
Total	18.8	14.6	72.6	922.6	1,492	1,344	1,316.0	2,466	2,778	3,031	1,935	2,440
Mean	0.61	0.49	2.34	29.8	53.2	43.4	43.9	79.5	92.6	97.8	62.4	81.3
Ac-ft	37	29	144	1,830	2,960	2,670	2,610	4,890	5,510	6,010	3,840	4,840
(t)	0	0	0	53	311	342	241	384	268	202	228	150

Calendar year 1964 Max 131 Min 0 Mean 36.1 Ac-ft 26,180 †2,030

Water year 1964-65 Max 110 Min 0 Mean 48.9 Ac-ft 35,370 †2,180

† Diversion, in acre-feet, to Main Avenue percolation ponds, furnished by Santa Clara Valley Water Conservation District.

Note.--No gage-height record Nov. 9-30.

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, on left bank at downstream side of county road bridge, 0.1 mile upstream from Dutard Creek, near northeast limits of San Jose, Santa Clara County.

Drainage area.--21.5 sq mi.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder and, since Sept. 12, 1963, concrete control. Altitude of gage is 270 ft (from topographic map). Prior to Aug. 3, 1962, at site 0.4 mile downstream at different datum.

Extremes.--Maximum discharge during year, 800 cfs Dec. 23 (gage height, 6.5 ft, from floodmarks); no flow Oct. 21, 22, 30, 31, and Aug. 4, 5.

1961-65: Maximum discharge, that of Dec. 23, 1964; no flow at times in each year.

Maximum stage known since at least 1935, 5.37 ft Apr. 2, 1958, site and datum then in use (discharge, 2,100 cfs), from information furnished by Santa Clara Valley Water Conservation District.

Remarks.--Records fair except those for periods of no gage-height record or indefinite stage-discharge relation, which are poor. Flow partly regulated by Cherry Flat Reservoir (capacity, 500 acre-ft).

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.2	0.4	6.3	6.5	1.9	8.4	2.9	0.6	0.6	0.1	0.3
2	.1	.1	.3	4.5	5.6	1.8	6.9	2.7	.6	.5	.1	.3
3	.1	.1	.3	4.4	5.1	1.6	5.8	2.7	.6	.5	.1	.4
4	.1	.1	.3	5.5	4.8	1.5	5.3	2.6	.6	.5	0	.5
5	.1	.1	.3	5.1	7.3	1.4	4.8	2.4	.6	.5	0	.5
6	.1	.1	.3	198	6.1	1.5	4.5	2.3	.8	.4	.1	.5
7	.1	.1	.3	218	5.1	2.0	4.5	2.2	.9	.4	.1	.6
8	.1	.1	.3	7.0	3.8	2.0	5.3	2.2	1.0	.4	.3	.5
9	.1	.2	.3	3.9	2.9	1.6	5.3	2.2	.9	.4	.3	.5
10	.1	.8	.3	2.9	2.6	1.4	131	2.1	.8	.4	.2	.6
11	.1	.3	.3	2.2	2.4	1.8	5.2	2.0	.8	.4	.4	.2
12	.1	1.6	.3	1.8	2.1	2.7	4.2	1.8	.7	.4	.4	.3
13	.1	1.4	.3	1.4	2.2	4.8	3.9	1.7	.8	.4	.4	.2
14	.1	1.0	.4	9.6	2.7	3.1	2.2	1.6	1.0	.4	.3	.2
15	.1	.6	.3	8.0	2.7	2.7	1.6	1.5	.8	.4	.3	.1
16	.1	.6	.3	6.5	2.2	2.4	1.4	1.4	1.0	.3	.3	.1
17	.1	.5	.3	6.1	2.1	2.1	1.2	1.3	.8	.3	.4	.1
18	.1	.5	.3	5.8	1.9	1.9	1.2	1.2	.6	.3	.4	.1
19	.1	.5	1.4	7.7	1.9	1.8	1.0	1.2	.6	.3	.3	.1
20	.1	.5	4.0	8.4	1.8	1.9	9.2	1.3	.6	.3	.3	.1
21	0	.5	4.5	6.1	1.8	1.8	8.8	1.3	.7	.2	.3	.1
22	0	.5	2.2	5.1	1.6	1.6	8.0	1.4	.6	.2	.3	.1
23	.1	.5	308	9.8	1.6	1.8	7.3	1.3	.5	.2	.4	.1
24	.1	.5	238	2.9	1.6	1.8	6.1	1.0	.5	.2	.3	.2
25	.1	.5	6.6	2.0	1.5	1.8	5.6	1.0	.5	.2	.3	.2
26	.1	.4	6.4	1.7	1.4	1.8	5.1	.9	.5	.2	.3	.2
27	.1	.4	6.9	1.3	2.2	3.8	4.0	.9	.5	.2	.3	.2
28	.2	.4	7.5	1.0	2.6	3.1	3.8	.8	.4	.2	.3	.2
29	.1	.4	6.4	9.2	-----	2.6	3.5	.6	.2	.2	.3	.1
30	0	.4	6.0	7.7	-----	2.4	3.1	.6	.3	.2	.4	.1
31	0	-----	8.6	7.3	-----	1.0	-----	.7	-----	.1	.3	-----
Total	2.8	13.9	1,067.5	1,052.3	86.1	74.4	513.0	49.8	19.8	10.2	8.3	7.7
Mean	0.09	0.46	34.4	33.9	3.08	2.40	17.1	1.61	0.66	0.33	0.27	0.26
Ac-ft	5.6	28	2,120	2,090	171	148	1,020	99	39	20	16	15

Calendar year 1964 Max 308 Min 0 Mean 3.91 Ac-ft 2,840
 Water year 1964-65 Max 308 Min 0 Mean 7.96 Ac-ft 5,770

Peak discharge (base, 30 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0130	6.5	800	1- 6	2400	5.40	420
12-26	1700	4.08	105	1-23	2300	3.67	51

Note.--No gage-height record Nov. 15, 16, Mar. 3-10, May 6-17, July 9 to Aug. 3. Stage-discharge relation indefinite Dec. 23, 24, Jan. 6-9.

COYOTE CREEK BASIN

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., at center of dam on Coyote Creek, 3.8 miles northeast of San Martin. Drainage area, 120 sq mi. Records available, February 1936 to September 1965. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 24,510 acre-ft Jan. 9 (elevation, 777.27 ft); no contents Oct. 1 to Dec. 12. Maximum contents observed during period 1936-65, 28,120 acre-ft Dec. 8, 1950 (elevation, 782.5 ft); no contents at times.

Reservoir is formed by rock- and earth-fill 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 Valley Water Conservation District.

11-1699.2. Anderson Lake.--Lat 37°09'56", long 121°37'42", in southeast corner of La Laguna Seca Grant, at center of dam on Coyote Creek, 2.5 miles northeast of Madrone, Santa Clara County. Drainage area, 195 sq mi. Records available, December 1950 to September 1965. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 18,630 acre-ft Apr. 17 (elevation, 533.92 ft); minimum observed, 615 acre-ft Dec. 17 (elevation, 454.6 ft). Maximum contents during period 1950-65, 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 rock-fill 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 Valley Water Conservation District.

Month-end contents, in acre-feet, water year October 1964 to September 1965

Date	Coyote Lake	Anderson Lake
Sept.30.....	0	841
Oct. 31.....	0	719
Nov. 30.....	0	708
Dec. 21.....	10,700	2,980
Jan. 31.....	21,200	15,400
Feb. 28.....	22,330	12,840
Mar. 31.....	18,200	14,890
Apr. 30.....	23,160	17,610
May 31.....	22,960	12,880
June 30.....	17,690	12,190
July 31.....	10,520	12,940
Aug. 31.....	6,520	12,080
Sept.30.....	1,550	11,210

Note.--Contents at 0800 hours on first day of following month.

11-1740. San Antonio Creek near Sunol, Calif.

Location.--Lat 37°34'39", long 121°51'24", in Valle de San Jose Grant, on right bank 0.4 mile upstream from Calaveras Road Bridge, 0.85 mile above mouth, and 2 miles southeast of Sunol, Alameda County.

Drainage area.--37.0 sq mi.

Records available.--January 1912 to September 1930, February 1960 to September 1965 (discontinued). Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder and concrete control. Datum of gage is 271.56 ft above mean sea level (levels by city of San Francisco). Prior to Feb. 8, 1960, at site 0.6 mile upstream at different datum.

Average discharge.--23 years, 9.56 cfs (6,920 acre-ft per year).

Extremes.--Maximum discharge during year, 348 cfs Feb. 10 (gage height, 4.80 ft); no flow for most of year.

1912-30, 1960-65: Maximum daily discharge, 1,460 cfs Jan. 3, 1916; no flow for part of most years.

Flood of Dec. 23, 1955, discharge 5,810 cfs (by slope-area measurement of maximum flow).

Remarks.--Records good except those for period of no gage-height record, which are poor. Flow regulated by San Antonio Reservoir beginning in February 1965 (capacity, 50,500 acre-ft).

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.5	0	3.0	2.0
2.6	.1	3.1	3.4
2.7	.2	3.2	6.0
2.8	.6	3.3	10
2.9	1.1		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0	0	1.0	8.0	0	0.1					
2	.2	0	0	.8	.5	0	0					
3	.1	0	0	1.6	.9	0	0					
4	.1	0	0	1.2	1.1	0	0					
5	.1	0	0	3.1	.5	0	0					
6	.1	0	0	3.3	.3	0	0					
7	0	0	0	2.4	.2	0	0					
8	0	0	0	.8	.3	0	0					
9	0	0	0	.5	.2	0	1.0					
10	0	.3	0	.4	8.4	0	.4					
11	0	0	0	.3	.3	0	.1					
12	0	.2	0	.3	.2	1.5	.1					
13	0	0	0	.2	.2	.2	0					
14	0	0	0	.2	.2	0	0					
15	0	0	0	.2	.2	0	0					
16	0	0	0	.1	.1	0	0					
17	0	0	0	.1	.1	0	0					
18	0	0	0	.1	.6	0	0					
19	0	0	0	.2	2.8	0	0					
20	0	0	0	.2	.2	0	0					
21	0	0	1.0	.1	.1	0	0					
22	0	0	8.0	.1	.1	0	0					
23	0	0	5.0	.9	.1	0	0					
24	0	0	2.0	.6	.1	0	0					
25	0	0	.5	.2	.1	0	0					
26	0	0	.5	.2	0	0	0					
27	0	0	.5	.1	0	0	0					
28	0	0	2.0	.1	0	0	0					
29	0	0	4.0	.3	-----	0	0					
30	0	0	5.7	.2	-----	0	0					
31	0	-----	3.5	.2	-----	.1	-----					-----
Total	0.7	0.5	32.7	20.0	25.8	1.8	1.7	0	0	0	0	0
Mean	0.02	0.02	1.05	0.65	0.92	0.06	0.06	0	0	0	0	0
Ac-ft	1.4	1.0	65	40	51	3.6	3.4	0	0	0	0	0

Calendar year 1964 Max 172 Min 0 Mean 2.34 Ac-ft 1,700
 Water year 1964-65 Max 8.4 Min 0 Mean 0.23 Ac-ft 165

Note.--No gage-height record Nov. 21 to Dec. 29.

ALAMEDA CREEK BASIN

11-1760. Arroyo Mocho near Livermore, Calif.

Location.--Lat 37°37'24", long 121°42'13", NW 1/4 sec. 36, T.3 S., R.2 E., 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.

Records available.--January 1912 to September 1930, October 1963 to September 1965. 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. Altitude of gage is 750 ft (from topographic map). January 1912 to October 1914, at present site at different datum. November 1914 to September 30, 1930, at site 1 mile upstream at different datum.

Average discharge.--20 years, 4.08 cfs (2,950 acre-ft per year); median of yearly mean discharges, 2.6 cfs (1,900 acre-ft per year).

Extremes.--Maximum discharge during year, 242 cfs Dec. 23 (gage height, 4.92 ft); no flow Oct. 1 to Nov. 25, July 31 to Sept. 30.

1912-30, 1963-65: 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 good except those for periods of no gage-height record, which are fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.0	0	3.6	11
3.1	.1	3.8	23
3.2	.5	4.0	43
3.3	1.6	4.3	88
3.4	3.5	4.6	152
3.5	6.4		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.2	22	3.5	1.4	4.7	1.5	0.3	0.2		
2		0	.3	15	3.1	1.3	3.3	1.5	.3	.2		
3		0	.3	23	2.7	1.3	3.3	1.5	.3	.1		
4		0	.3	66	2.7	1.2	2.7	1.5	.3	.1		
5		0	.3	28	4.1	1.3	2.2	1.4	.3	.1		
6		0	.3	59	4.7	1.4	2.0	1.4	.3	.1		
7		0	.3	68	3.1	1.6	1.8	1.3	.3	.1		
8		0	.3	33	2.6	1.6	1.8	1.3	.3	.1		
9		0	.3	21	2.4	1.4	1.8	1.2	.3	.1		
10		0	.3	15	2.2	1.4	6.2	1.2	.3	.1		
11		0	.3	11	2.0	1.3	3.6	1.0	.3	.1		
12		0	.3	9.3	1.8	1.8	2.5	.9	.3	.1		
13		0	.3	7.2	1.8	2.4	2.0	.9	.3	.1		
14		0	.3	6.4	1.8	2.0	1.3	.9	.3	.1		
15		0	.3	5.5	1.8	1.4	9.3	.8	.3	.1		
16		0	.3	4.7	1.6	1.3	9.8	.7	.3	.1		
17		0	.3	3.8	1.8	1.2	8.5	.6	.3	.1		
18		0	.3	3.3	1.5	1.0	6.4	.6	.2	.1		
19		0	.5	5.0	1.5	1.0	5.5	.5	.2	.1		
20		0	1.3	7.2	1.5	.9	5.0	.5	.2	.1		
21		0	1.4	5.2	1.4	.9	4.7	.5	.2	.1		
22		0	2.3	4.1	1.4	.9	4.1	.6	.2	.1		
23		0	13.4	5.3	1.4	.9	3.3	.5	.2	.1		
24		0	5.0	3.0	1.4	.8	2.9	.5	.1	.1		
25		0	2.0	1.5	1.3	.8	2.7	.5	.1	.1		
26		.1	9.8	1.1	1.3	.8	2.6	.5	.2	.1		
27		.1	1.8	8.9	1.3	1.4	2.4	.4	.2	.1		
28		.1	5.2	7.7	1.5	1.4	2.2	.4	.1	.1		
29		.2	3.8	6.4	-----	1.3	1.6	.3	.1	.1		
30		.2	3.9	5.5	-----	1.1	1.6	.3	.1	.1		
31		-----	4.0	4.4	-----	1.6	-----	.3	-----	0	-----	-----
Total	0	0.7	432.3	516.9	59.2	40.1	268.4	26.0	7.2	3.2	0	0
Mean	0	0.02	13.9	16.7	2.11	1.29	8.95	0.84	0.24	0.10	0	0
Ac-ft	0	1.4	857	1,030	117	80	532	52	14	6.3	0	0

Calendar year 1964 Max 134 Min 0 Mean 1.66 Ac-ft 1,210
 Water year 1964-65 Max 134 Min 0 Mean 3.71 Ac-ft 2,690

Peak discharge (base, 30 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0900	4.92	242	1- 7	0300	4.44	115
12-28	1000	4.13	60	1-24	0800	3.97	40
1- 4	0200	4.33	94	4- 9	2400	4.24	78

Note.--No gage-height record July 6 to Aug. 2.

11-1762. Arroyo Mocho near Pleasanton, Calif.

Location.--Lat 37°41'19", long 121°52'41", in Santa Rita Grant, on left bank 320 ft downstream from Santa Rita Road, 0.7 mile upstream from Tassajara Creek, and 1.8 miles north of Pleasanton, Alameda County.

Drainage area.--143 sq mi.

Records available.--September 1962 to September 1965.

Gage.--Water-stage recorder (digital) and concrete control. Datum of gage is 328.55 ft above mean sea level (levels by Alameda County Flood Control and Water Conservation District).

Extremes.--Maximum discharge during year, 265 cfs Jan. 7 (gage height, 4.89 ft, backwater from road crossing); no flow for many days. 1962-65: Maximum discharge, 1,760 cfs Feb. 1, 1963 (gage height, 8.60 ft), from rating curve extended above 49 cfs on basis of slope-area measurement of maximum flow; no flow for many days in each year.

Remarks.--Records good except those for periods of no gage-height record or above 100 cfs, which are poor. Natural flow of stream affected by imported water from Delta-Mendota Canal by way of Arroyo Las Positas and South Bay Aqueduct. During periods of high flows, no water imported.

Revisions (water years).--1964 Report: 1962-63.

Rating table, except periods of backwater from road crossing (gage height, in feet, and discharge, in cubic feet per second)

1.05	0	1.6	9.5
1.1	.1	1.7	14
1.2	.6	1.8	21
1.3	1.6	2.0	38
1.4	3.3	2.5	98
1.5	5.9	3.1	206

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	26	46	31	35	3.5	0.4	2.9	0	44	40	44	50
2	31	5.4	32	18	3.0	.4	.4	0	43	40	28	32
3	31	.3	23	60	2.8	.4	0	0	43	40	45	33
4	30	0	10	185	4.0	.3	0	0	15	42	36	52
5	32	0	.2	53	5.0	1.5	.4	0	41	42	42	55
6	29	0	0	155	4.0	3.4	2.1	0	44	40	43	55
7	32	0	0	205	3.0	.8	1.4	0	42	40	45	56
8	30	0	0	63	2.5	.7	.8	0	38	40	47	56
9	31	0	0	20	2.2	1.4	11	0	41	40	47	58
10	26	21	0	15	2.0	.9	73	2.7	40	40	46	57
11	25	37	0	11	1.8	1.4	48	5.7	40	40	44	53
12	40	58	0	9.0	1.6	30	22	.4	40	40	36	50
13	36	10	0	7.5	1.4	13	13	12	40	40	32	52
14	40	1.0	0	6.5	1.2	.9	7.4	28	40	38	44	33
15	40	.5	0	6.0	1.1	.8	2.0	35	41	38	48	31
16	43	1.0	0	5.5	1.0	2.0	2.6	30	40	38	49	33
17	40	15	0	5.0	.9	1.4	1.4	28	35	39	46	32
18	41	29	0	4.5	.8	1.2	.1	32	41	38	47	36
19	40	32	1.4	9.0	.8	1.2	.7	28	37	38	46	48
20	41	31	5.2	12	.7	.9	2.1	40	36	37	46	48
21	40	31	4.7	3.2	.6	.1	2.0	42	41	40	46	49
22	41	32	32	2.2	.6	.7	1.0	42	40	47	46	49
23	40	31	200	33	.5	2.4	.1	42	41	46	48	51
24	43	30	140	115	.5	.7	0	41	41	47	48	51
25	42	28	35	20	.5	1.2	0	43	40	32	49	50
26	39	31	22	15	.5	1.5	0	41	37	27	58	49
27	30	31	38	12	.4	.2	0	39	36	44	52	51
28	44	31	150	10	.4	0	0	39	36	45	48	42
29	54	29	135	8.0	-----	.1	0	43	38	46	53	40
30	44	30	145	6.0	-----	1.7	0	40	41	42	55	43
31	45	-----	160	4.5	-----	1.1	-----	44	-----	37	52	-----
TOTAL	1,146	591.2	1,164.5	1,113.9	47.3	72.7	194.4	697.8	1,172	1,243	1,416	1,395
MEAN	37.0	19.7	37.6	35.9	1.69	2.35	6.48	22.5	39.1	40.1	45.7	46.5
AC-FT	2,270	1,170	2,310	2,210	94	144	386	1,380	2,320	2,470	2,810	2,770

CALENDAR YEAR 1964 MAX 200 MIN 0 MEAN 28.0 AC-FT 20,340
WATER YEAR 1964-65 MAX 205 MIN 0 MEAN 28.1 AC-FT 20,330

Peak discharge (base, 150 cfs, revised)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0830	4.70	250	1- 7	1130	4.89	265
12-29	2245	3.83	175	1-23	2200	3.28	155
1- 4	1115	4.46	215				

Note.--No gage height record Nov. 13-17, Jan. 2, 3, 9-19, Jan. 25 to Mar. 5, May 14-18, July 7-12.

ALAMEDA CREEK BASIN

11-1764. Arroyo Valle above Lang Canyon, near Livermore, Calif.

Location.--Lat 37°33'00", long 121°39'57", in SE½ sec.29, T.4 N., R.3 E., 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.

Records available.--October 1963 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 800 ft (from topographic map).

Extremes.--Maximum discharge during year, 2,330 cfs Dec. 23 (gage height, 6.12 ft); no flow Oct. 1 to Nov. 9, July 31 to Sept. 30, 1963-65; Maximum discharge, that of Dec. 23, 1964; no flow at times in each year.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.7	0	2.2	5.8	3.5	225
1.8	.1	2.3	10	4.0	420
1.9	.4	2.4	18	4.5	690
2.0	1.3	2.7	51	5.0	1,060
2.1	3.0	3.0	102	5.5	1,550

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.8	161	36	12	41	16	3.9	0.9		
2		0	1.0	110	31	10	30	15	4.2	.7		
3		0	1.0	225	30	10	25	15	4.2	.6		
4		0	1.0	364	29	9.6	19	14	3.9	.5		
5		0	1.0	218	36	9.6	16	14	3.4	.4		
6		0	1.0	844	42	10	15	14	3.4	.3		
7		0	1.1	730	35	12	13	13	3.4	.3		
8		0	1.1	302	28	13	15	13	3.4	.2		
9		0	1.2	171	25	12	169	12	3.4	.2		
10		.2	1.2	120	23	10	902	11	3.4	.2		
11		1.0	1.2	92	21	9.6	472	10	3.0	.2		
12		24	1.2	73	19	12	316	10	2.6	.2		
13		27	1.2	60	18	18	274	9.6	2.6	.2		
14		8.8	1.2	50	19	15	184	9.1	2.4	.2		
15		3.9	4.2	44	18	13	133	9.1	2.4	.1		
16		2.4	1.2	39	17	12	151	8.6	2.4	.1		
17		1.6	1.2	35	16	10	112	7.2	2.2	.1		
18		1.4	1.2	31	15	9.6	78	6.7	2.0	.1		
19		1.2	1.0	34	15	9.6	62	7.7	1.8	.2		
20		1.1	23	38	14	8.6	52	7.7	1.8	.2		
21		1.0	40	32	13	8.2	47	8.2	1.8	.1		
22		1.1	285	29	13	7.7	39	8.6	1.6	.1		
23		1.0	1,310	50	13	7.2	34	8.2	1.5	.1		
24		1.0	674	333	11	7.2	30	6.7	1.5	.1		
25		1.0	234	158	11	6.7	27	5.8	1.4	.1		
26		1.0	136	106	11	6.7	24	5.4	1.4	.1		
27		.9	244	76	14	10	22	5.1	1.4	.1		
28		.9	458	62	14	9.6	20	4.5	1.4	.1		
29		.9	297	52	-----	8.2	18	4.5	1.3	.1		
30		.8	270	46	-----	7.2	18	4.2	1.1	.1		
31		-----	253	39	-----	26	-----	3.9	-----	0		-----
Total	0	82.2	4,254.0	4,724	587	330.3	3,358	287.8	74.2	6.9	0	0
Mean	0	2.74	137	152	21.0	10.7	112	9.28	2.47	0.22	0	0
Ac-ft	0	163	8,440	9,370	1,160	655	6,660	571	147	14	0	0

Calendar year 1964 Max 1,310 Min 0 Mean 15.9 Ac-ft 11,530
 Water year 1964-65 Max 1,310 Min 0 Mean 37.5 Ac-ft 27,180

Peak discharge (base, 170 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0730	6.12	2,330	1-24	0600	4.04	440
12-28	0800	4.23	536	4-10	0600	4.88	959
1-6	0700	5.14	1,190				

Note.--No gage-height record July 21 to Aug. 2.

11-1765. Arroyo Valle near Livermore, Calif.

Location.--Lat 37°37'24", long 121°45'28", in Valle de San Jose Grant, on right bank 900 ft downstream from highway bridge, 1.1 miles upstream from Dry Creek, .4.1 miles south of Livermore, Alameda County, and 6.9 miles southeast of Pleasanton.

Drainage area.--147 sq mi.

Records available.--January 1912 to September 1930, October 1957 to September 1965. 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. Altitude of gage is 500 ft (from topographic map). 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.--26 years, 30.2 cfs (21,860 acre-ft per year); median of yearly mean discharges, 22 cfs (15,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,980 cfs Dec. 23 (gage height, 5.62 ft); no flow Oct. 1 to Dec. 20, Aug. 27 to Sept. 30. 1912-30, 1957-65: Maximum discharge, 12,200 cfs Apr. 2, 1958 (gage height, 10.91 ft); no flow at times in each year.

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. No regulation or diversion above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.0	0	2.6	21	4.0	420
2.1	.3	2.8	41	4.5	745
2.2	1.6	3.0	71	5.0	1,810
2.3	4.2	3.3	137	6.0	2,510
2.4	8.2	3.6	230		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	165	44	14	45	17	3.2	0.7	0.1	
2			0	110	40	13	36	16	3.2	.7	.3	
3			0	164	36	12	29	16	3.2	.5	.3	
4			0	350	33	12	25	16	3.2	.7	.3	
5			0	209	40	11	20	15	2.9	.5	.3	
6			0	734	47	11	19	15	3.5	.4	.4	
7			0	735	39	12	18	14	3.5	.3	.4	
8			0	312	33	13	17	13	3.2	.6	.4	
9			0	171	27	13	89	12	2.9	.3	.3	
10			0	114	26	12	898	11	2.9	.4	.2	
11			0	90	22	12	569	9.9	2.9	.7	.5	
12			0	77	21	13	344	8.8	2.9	.5	.3	
13			0	63	20	20	310	8.8	2.9	.4	.2	
14			0	55	20	18	210	8.2	1.8	.4	.2	
15			0	51	20	17	140	7.8	1.8	.2	.2	
16			0	45	18	15	148	7.8	1.8	.3	.2	
17			0	39	18	13	127	7.8	1.6	.3	.1	
18			0	37	17	13	94	7.4	1.4	.1	.1	
19			0	37	17	11	73	7.4	1.6	.4	.2	
20			0	42	17	9.9	63	7.0	2.0	.4	.2	
21			.4	38	16	9.4	55	7.0	1.8	.1	.2	
22			167	33	15	8.8	49	7.0	1.2	.1	.2	
23			1,180	33	14	8.2	41	7.4	1.4	.2	.1	
24			653	296	13	8.2	36	7.0	1.2	.2	.1	
25			272	165	13	8.2	31	6.2	1.8	.4	.1	
26			127	103	13	7.8	28	5.4	1.1	.3	.1	
27			254	77	15	10	25	4.6	1.4	.1	0	
28			414	66	16	12	23	4.6	1.1	.1	0	
29			297	58	-----	10	20	4.2	.8	.4	0	
30			258	52	-----	8.8	20	3.8	.8	.2	0	
31			238	48	-----	12	-----	3.5	-----	.2	0	-----
Total	0	0	3,860.4	4,569	670	368.3	3,602	286.6	65.0	11.1	6.0	0
Mean	0	0	124	147	23.9	11.9	120	9.26	2.17	0.36	0.19	0
Ac-ft	0	0	7,660	9,060	1,330	730	7,140	568	129	22	12	0

Calendar year 1964 Max 1,180 Min 0 Mean 15.2 Ac-ft 11,040

Water year 1964-65 Max 1,180 Min 0 Mean 36.8 Ac-ft 26,650

Peak discharge (base, 200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	1030	5.62	1,980	1-24	0900	3.95	392
12-28	1100	4.14	499	4-10	2100	4.77	973
1- 6	0800	4.82	1,020				

ALAMEDA CREEK BASIN

11-1766. Arroyo Valle at Pleasanton, Calif.

Location--Lat 37°40'02", long 121°53'02", in Valle de San Jose Grant, on right bank 0.4 mile northwest of Pleasanton, Alameda County, and 5.8 miles west of Livermore.

Drainage area--171 sq mi.

Records available--October 1957 to September 1965.

Gage--Water-stage recorder. Altitude of gage is 350 ft (from topographic map).

Average discharge--8 years, 28.6 cfs (20,710 acre-ft per year).

Extremes--Maximum discharge during year, 2,040 cfs Dec. 23 (gage height, 14.35 ft); no flow for several months.
1957-65: Maximum discharge, 11,300 cfs Apr. 3, 1958 (gage height, 25.36 ft); no flow for several months in each year.

Remarks--Records good. No regulation; pumping for irrigation above station during periods of low flow.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	226	32	0	5.3	3.6				
2			0	144	29	0	15	2.2				
3			0	149	24	0	12	.6				
4			0	380	21	0	8.2	0				
5			0	271	23	0	6.4	0				
6			0	738	27	0	6.1	0				
7			0	942	28	0	4.6	0				
8			0	479	21	0	3.6	0				
9			0	263	18	.4	10	0				
10			0	164	14	5.2	691	0				
11			0	109	12	4.9	675	0				
12			0	83	10	5.8	346	0				
13			0	64	9.4	8.2	321	0				
14			0	51	7.4	7.4	237	0				
15			0	41	7.0	6.1	166	0				
16			0	32	7.0	5.8	146	0				
17			0	24	6.1	5.2	142	0				
18			0	20	5.2	4.9	95	0				
19			0	20	4.6	4.3	68	0				
20			0	21	3.2	3.2	54	0				
21			0	20	1.0	.4	44	0				
22			0	17	0	0	37	0				
23			1,050	19	0	0	30	0				
24			773	213	0	0	24	0				
25			403	222	0	0	17	0				
26			162	124	0	0	12	0				
27			226	80	0	0	11	0				
28			429	62	0	0	8.2	0				
29			417	53	-----	0	5.5	0				
30			331	42	-----	0	4.9	0				
31			309	37	-----	.4	-----	0				
Total	0	0	4,100	5,110	309.9	62.2	3,205.8	6.4	0	0	0	0
Mean	0	0	132	165	11.1	2.01	107	0.21	0	0	0	0
Ac-ft	0	0	8,130	10,140	615	123	6,360	13	0	0	0	0

Calendar year 1964 Max 1,050 Min 0 Mean 13.3 Ac-ft 9,670

Water year 1964-65 Max 1,050 Min 0 Mean 35.1 Ac-ft 25,380

Peak discharge (base,

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	1300	14.35	2,040	1-24	1600	8.20	374
12-28	1900	8.98	575	4-11	0130	10.43	969
1-6	1330	11.09	1,180				

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, on right bank 0.3 mile downstream from railroad bridge and 1.2 miles northeast of Niles.

Drainage area.--633 sq mi.

Records available.--January 1891 to September 1965. 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 (digital) and concrete control. Datum of gage is 85.65 ft above mean sea level, datum of 1929. Prior to 1901, staff gage at site 1 mile upstream at different datum. 1901 to Sept. 30, 1916, staff gage to 1914 and water-stage recorder thereafter at site 4.5 miles upstream at different datum. Oct. 1, 1916, to Dec. 17, 1923, at site 800 ft upstream at different datum.

Average discharge.--74 years, 121 cfs (87,600 acre-ft per year).

Extremes.--Maximum discharge during year, 5,320 cfs Dec. 23 (gage height, 8.01 ft); minimum daily, 2.0 cfs Dec. 18. 1891-1965: Maximum discharge, 29,000 cfs Dec. 23, 1955 (gage height, 14.9 ft); no flow at times..

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 and by San Antonio Reservoir beginning in February 1965 (capacity, 51,000 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 chemical analyses, water temperatures, and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.2	1.5	2.8	19	4.0	300
2.3	2.6	3.0	34	4.5	600
2.4	4.0	3.2	57	5.0	980
2.5	6.0	3.4	95	6.0	1,980
2.6	9.0	3.7	180	7.0	3,400

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	26	45	32	549	72	15	34	19	48	36	42	43
2	22	36	34	326	66	14	31	17	47	34	35	36
3	27	11	32	479	59	15	34	15	49	35	36	31
4	27	5.6	17	951	54	13	28	13	37	36	37	37
5	26	3.9	9.1	743	89	13	23	13	29	37	36	44
6	29	3.3	5.0	1,640	71	16	22	12	49	36	39	44
7	27	2.7	3.7	2,150	62	34	21	13	46	36	39	44
8	28	2.4	3.4	999	50	16	20	13	40	35	41	47
9	28	4.3	3.7	511	44	14	118	12	42	33	41	44
10	27	16	3.3	350	39	14	706	11	42	36	40	45
11	18	34	4.1	260	34	16	868	14	42	35	41	44
12	22	62	3.9	198	31	44	525	15	41	33	37	44
13	35	54	3.6	161	29	105	969	11	41	35	34	44
14	34	16	3.8	140	26	37	1,010	29	41	36	34	38
15	37	8.6	3.9	134	24	28	828	37	41	36	41	33
16	37	8.1	3.4	105	23	26	739	35	40	34	41	30
17	37	13	2.4	82	23	24	719	34	36	35	41	30
18	38	27	2.0	67	21	22	538	34	36	37	41	33
19	38	33	3.1	76	21	20	392	35	39	36	42	38
20	37	29	5.3	98	19	18	302	43	36	36	41	41
21	39	37	11	72	17	16	247	48	37	35	42	42
22	38	36	215	62	17	15	184	49	38	37	42	42
23	37	34	3,400	105	17	14	135	48	38	39	42	43
24	38	34	2,170	579	15	15	103	47	39	40	42	44
25	42	37	1,030	435	16	14	81	48	37	40	41	44
26	37	31	606	244	15	14	61	47	36	26	42	49
27	33	33	794	170	19	28	48	46	35	35	43	44
28	35	32	1,270	134	17	20	38	43	34	40	40	44
29	48	32	1,200	112	-----	16	30	47	34	41	44	37
30	48	31	1,100	93	-----	15	23	46	36	41	43	41
31	42	-----	1,030	80	-----	26	-----	47	-----	35	43	-----
TOTAL	1,037	751.9	13,004.7	12,105	990	697	8,877	941	1,186	1,116	1,243	1,220
MEAN	33.5	25.1	420	390	35.4	22.5	296	30.4	39.5	36.0	40.1	40.7
AC-FT	2,060	1,490	25,790	24,010	1,960	1,380	17,610	1,870	2,350	2,210	2,470	2,420

CALENDAR YEAR 1964	MAX	3,400	MIN	1.7	MEAN	67.6	AC-FT	49,100
WATER YEAR 1964-65	MAX	3,400	MIN	2.0	MEAN	118	AC-FT	85,620

ALAMEDA CREEK BASIN

11-1805. Dry Creek at Union City, Calif.

Location.--Lat 37°36'22", long 122°01'22", in Arroyo de la Alameda Grant, on right bank 900 ft downstream from bridge on State Highway 9 in Decoto District in Union City, Alameda County, and 1.7 miles upstream from mouth.

Drainage area.--9.41 sq mi.

Records available.--October 1916 to September 1919 (published as "near Decoto"), April 1959 to September 1965.

Gage.--Water-stage recorder and concrete control. Datum of gage is 85.12 ft above mean sea level, datum of 1929. Prior to Apr. 1, 1959, at site 1.4 miles downstream at different datum.

Average discharge.--9 years, 1.21 cfs (876 acre-ft per year).

Extremes.--Maximum discharge during year, about 340 cfs Jan. 5; no flow for several months.

1916-19, 1959-65: 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.

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

Revisions (water years).--1963 Report: 1962(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.1	0	1.6	2.0	2.1	20
1.2	.1	1.7	3.6	2.2	28
1.3	.3	1.8	5.6	2.3	38
1.4	.6	1.9	8.6	2.6	77
1.5	1.1	2.0	13		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	21	1.9	0.6	1.6	0.4				
2		0	0	14	1.8	.5	1.0	.4				
3		0	0	28	1.7	.5	1.0	.4				
4		0	0	29	1.7	.5	.9	.3				
5		0	0	71	3.3	.5	.8	.3				
6		0	0	68	2.5	.6	.8	.3				
7		0	0	39	1.6	.5	.7	.2				
8		0	0	23	1.5	.5	1.0	.2				
9		0	0	14	1.0	.4	1.0	.2				
10		.2	0	9.0	.8	.4	1.1	.2				
11		.1	0	7.4	1.1	.4	5.4	.1				
12		.1	0	5.6	.8	.4	4.0	.1				
13		0	0	4.6	.9	7.1	3.1	.1				
14		0	0	4.0	1.0	3.3	2.6	.1				
15		0	0	3.3	1.0	2.0	2.0	.1				
16		0	0	3.1	.8	1.6	3.0	0				
17		0	0	2.6	.8	1.4	1.9	0				
18		0	0	2.3	.8	1.0	1.7	0				
19		0	0	3.9	.7	.9	1.6	0				
20		0	0	3.3	.7	.8	1.8	0				
21		0	0	2.5	.6	.8	2.3	0				
22		0	14	2.2	.6	.7	1.5	0				
23		0	76	5.0	.5	.7	1.0	0				
24		0	54	6.2	.5	.6	1.0	0				
25		0	32	4.2	.5	.6	.9	0				
26		0	29	3.3	.5	.6	.8	0				
27		0	33	3.1	1.2	1.6	.7	0				
28		0	36	2.8	.8	1.0	.5	0				
29		0	36	2.6	-----	.8	.5	0				
30		0	36	2.3	-----	.7	.5	0				
31		-----	36	2.0	-----	1.6	-----	0	-----			-----
Total	0	0.4	382	392.3	31.6	39.6	65.6	3.4	0	0	0	0
Mean	0	0.01	12.3	12.7	1.13	1.28	2.19	0.11	0	0	0	0
Ac-ft	0	0.8	758	778	63	79	130	6.7	0	0	0	0

Calendar year 1964 Max 76 Min 0 Mean 1.35 Ac-ft 977
 Water year 1964-65 Max 76 Min 0 Mean 2.51 Ac-ft 1,820

Peak discharge (base, 15 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	Unknown	3.05	158	1-23	2030	2.04	16
1-3	1530	2.32	49	3-12	1800	2.23	31
1-5	†2100	-	†340	4-9	1700	2.15	22

† About.

11-1807. Patterson Creek at Union City, Calif.

Location.--Lat 37°35'03", long 122°02'56", in Portero de Los Cerritos Grant, on right bank 75 ft upstream from bridge on State Highway 17 (Nimitz Freeway), 0.3 mile below effluence, and 1.9 miles southeast of Alvarado District in Union City, Alameda County.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 4.13 ft above mean sea level, datum of 1929.

Average discharge.--7 years, 29.3 cfs (21,210 acre-ft per year).

Extremes.--Maximum discharge during year, 4,580 cfs Dec. 23 (gage height, 15.98 ft); no flow most of year.

1958-65: 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. This stream is a distributary of Alameda Creek. See Remarks for Alameda Creek at Union City.

Revisions (water years).--1964 Report: 1963.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0	640	36	0.8	19					
2		0	0	365	34	.3	10					
3		0	0	475	28	.1	17					
4		0	0	950	22	.4	13					
5		0	0	741	44	.2	7.8					
6		0	0	1,520	46	.1	8.5					
7		0	0	1,790	34	8.0	3.2					
8		0	0	931	25	5.9	3.4					
9		0	0	471	18	1.8	5.7					
10		0	0	309	14	.9	5.73					
11		0	0	224	9.8	.6	8.50					
12		0	0	180	12	9.2	4.68					
13		24	0	125	9.7	10.7	8.38					
14		24	0	106	7.8	3.6	9.15					
15		.8	0	102	7.0	1.9	7.60					
16		0	0	78	6.4	12	6.56					
17		0	0	56	6.7	14	6.50					
18		0	0	38	4.0	7.8	4.90					
19		3.3	0	34	2.8	5.9	3.51					
20		4.2	0	43	2.4	4.5	2.53					
21		.5	0	36	1.2	5.2	2.11					
22		0	9.1	29	.2	1.6	1.58					
23		0	2,860	35	0	.9	1.08					
24		0	1,900	421	0	.1	.79					
25		0	1,070	381	0	0	.57					
26		0	669	205	0	0	.25					
27		0	807	135	0	1.5	.1					
28		0	1,240	95	.4	9.6	0					
29		0	1,130	78	-----	3.2	0					
30		0	1,020	64	-----	.7	0					
31		-----	1,050	46	-----	5.3	-----					
Total	0	56.8	11,755.1	10,703	371.4	262.6	7,581.0	0	0	0	0	0
Mean	0	1.89	379	345	13.3	8.47	253	0	0	0	0	0
Ac-ft	0	11.3	23,320	21,230	737	521	15,040	0	0	0	0	0

Calendar year 1964 Max 2,860 Min 0 Mean 38.0 Ac-ft 27,630
 Water year 1964-65 Max 2,860 Min 0 Mean 84.2 Ac-ft 60,960

ALAMEDA CREEK BASIN

11-1807.5. Alameda Creek at Union City, Calif.

Location.--Lat 37°35'46", long 122°03'15", in Arroyo de la Alameda Grant, 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, Alameda County.

Drainage area.--653 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Alameda County Flood Control and Water Conservation District).

Average discharge.--7 years, 2.29 cfs (1,660 acre-ft per year).

Extremes.--Maximum discharge during year, 1,070 cfs Dec. 23 (gage height, 15.98 ft); no flow for most of year.

1958-65: 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. For total flow in Alameda Creek, add flow of Patterson Creek at Union City (see Remarks for Alameda Creek near Niles). Diversion of 28,870 acre-ft to percolation ponds during the year between stations near Niles and at Union City.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	12			0	2.3				
2			0	0			0	.2				
3			0	2.3			0	0				
4			0	71			0	0				
5			0	31			0	0				
6			0	234			0	0				
7			0	364			0	0				
8			0	92			0	0				
9			0	4.0			0	0				
10			0	0			21	0				
11			0	0			48	0				
12			0	0			1.2	0				
13			0	0			47	0				
14			0	0			64	0				
15			0	0			38	0				
16			0	0			20	0				
17			0	0			20	0				
18			0	0			1.2	0				
19			0	0			0	0				
20			0	0			0	0				
21			0	0			0	0				
22			0	0			0	0				
23			620	0			0	0				
24			415	0			0	0				
25			122	0			0	0				
26			8.2	0			5.0	0				
27			28	0			34	0				
28			148	0			26	0				
29			121	0	-----		19	0				
30			91	0	-----		8.9	0				
31		-----	96	0	-----		-----	0	-----			-----
Total	0	0	1,649.2	810.3	0	0	353.3	2.5	0	0	0	0
Mean	0	0	53.2	26.1	0	0	11.8	0.08	0	0	0	0
Ac-ft	0	0	3,270	1,610	0	0	701	5.0	0	0	0	0

Calendar year 1964 Max 620 Min 0 Mean 4.64 Ac-ft 3,370
 Water year 1964-65 Max 620 Min 0 Mean 7.71 Ac-ft 5,590

11-1810. San Lorenzo Creek at Hayward, Calif.

Location.--Lat 37°41'11", long 122°03'44", in San Lorenzo Grant, on right bank at bridge on B Street, just outside city limits of Hayward, Alameda County, 0.5 mile downstream from Crow Creek.

Drainage area.--37.5 sq mi.

Records available.--October 1939 to September 1940, October 1946 to September 1965. 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, datum of 1929. January to September 1940 wire-weight gage on bridge at present site and datum.

Average discharge.--20 years, 14.2 cfs (10,280 acre-ft per year); median of yearly mean discharges, 7.0 cfs (5,100 acre-ft per year).

Extremes.--Maximum discharge during year, 1,420 cfs Jan. 5 (gage height, 10.35 ft); no flow Oct. 16-27.

1939-40, 1946-65: 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 each year.

Remarks.--Records good. Flow partly regulated by Cull Creek Reservoir beginning in October 1962 (capacity, 310 acre-ft and San Lorenzo Creek Reservoir beginning in January 1965 (capacity, 380 acre-ft). A few very small diversions above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.1	0.3	93	24	9.7	12	9.0	2.2	0.8	1.4	0.8
2	.2	.3	.3	86	22	9.0	9.7	8.6	2.2	.9	1.4	.7
3	.1	.1	.3	185	21	9.0	9.0	8.2	2.2	.8	1.4	.3
4	.1	.1	.3	148	28	9.0	9.3	8.0	2.2	.8	1.4	.1
5	.1	.1	.3	340	41	10	9.0	7.7	2.1	.8	1.5	.1
6	.1	.1	.3	401	24	10	9.3	8.6	2.2	.8	1.5	.1
7	.1	.1	.3	254	20	10	9.3	9.7	2.3	.9	1.5	.1
8	.1	.9	.3	150	18	10	17	9.3	2.2	.9	1.5	.3
9	.1	2.3	.3	114	18	9.7	133	9.3	2.1	.8	2.0	.4
10	.5	7.1	.3	93	16	9.7	64	9.3	2.1	.8	2.0	.4
11	1.1	2.7	.3	80	15	9.3	32	5.6	2.0	.8	2.2	.4
12	1.0	2.4	.3	66	15	46	24	3.4	12	.8	1.8	.4
13	1.1	.5	.2	53	15	28	20	3.1	20	.8	1.8	.4
14	1.3	.3	.3	49	16	14	18	4.9	7.2	.8	1.7	.3
15	.7	.3	.3	44	14	13	18	7.2	.9	.7	1.6	.1
16	0	.3	.2	40	13	12	52	7.0	.8	.7	1.6	.1
17	0	.3	.2	35	13	12	22	4.7	.8	.7	2.0	.1
18	0	.3	.3	32	12	11	20	2.5	.8	.7	2.4	.1
19	0	.3	.5	42	12	11	18	2.2	.8	1.0	2.5	.1
20	0	.3	1.0	34	13	10	21	2.2	.7	1.5	2.5	.1
21	0	.4	5.6	28	12	9.3	21	2.1	.8	1.7	2.5	.1
22	0	.3	94	26	11	9.0	16	2.2	.8	1.7	2.5	.3
23	0	.3	227	90	10	8.6	15	2.1	.8	1.7	2.4	.3
24	0	.3	217	73	10	8.2	14	2.2	.8	1.7	2.3	.3
25	0	.3	105	42	10	8.0	13	4.8	.8	1.7	2.5	.3
26	0	.4	140	35	10	9.3	12	6.0	.8	1.6	2.1	.3
27	0	.3	192	33	16	29	11	4.8	.8	1.6	1.4	.3
28	.4	.3	172	30	12	12	9.7	2.2	.8	1.5	.6	.4
29	.7	.3	260	27	-----	9.0	9.3	2.2	.7	1.5	.6	.3
30	.1	.3	182	24	-----	8.6	9.0	2.2	.7	1.5	.6	.3
31	.1	-----	182	26	-----	22	-----	2.2	-----	1.4	.8	-----
Total	8.1	22.1	1,783.2	2,773	461	395.4	656.6	163.5	75.6	34.4	54.0	8.3
Mean	0.26	0.74	57.5	89.5	16.5	12.8	21.9	5.27	2.52	1.11	1.74	0.28
Ac-ft	16	44	3,540	5,500	914	784	1,300	325	150	68	107	16

Calendar year 1964 Max 260 Min 0 Mean 7.91 Ac-ft 5,750
 Water year 1964-65 Max 401 Min 0 Mean 17.6 Ac-ft 12,760

Peak discharge (base, 350 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-24	0500	8.32	597	1-3	1400	7.49	357
12-29	1930	8.14	542	1-5	2100	10.35	1,420

11-1814. Wildcat Creek at Richmond, Calif.

Location--Lat 37°57'41", long 122°21'33", in San Pablo Grant, on left bank 200 ft downstream from Southern Pacific Railway bridge at east city limits of Richmond, Contra Costa County, and 2 miles upstream from mouth.

Drainage area--8.67 sq mi.

Records available--July 1964 to September 1965.

Gage--Water-stage recorder. Altitude of gage is 20 ft (from topographic map).

Extremes--1964: No flow July 17 to Sept. 30.

1964-65: Maximum discharge during water year, 450 cfs Jan. 5 (gage height, 7.59 ft), from rating curve extended above 66 cfs on basis of slope-area measurement of maximum flow; no flow for many days.

Remarks--Records good except those for period of no gage-height record, which are poor. Minor storage in Lake Anza and Jewel Lake. No diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 10, 11, 22, Dec. 18-20)

2.4	0.1	3.0	10
2.5	.4	3.2	19
2.6	1.0	3.5	34
2.7	2.2	4.0	64
2.8	4.1	4.5	100
2.9	6.8	5.0	143

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	1.0	0	6.8	2.2	1.4	1.9	1.8			0	0
2	0	2.9	0	12	2.0	1.1	1.3	1.4			0	0
3	0	0	0	106	1.9	1.0	.9	1.4			0	0
4	0	0	0	134	4.9	1.0	.9	1.3			0	0
5	0	0	0	102	9.0	2.7	.8	1.1			0	0
6	0	0	0	93	3.6	1.8	.8	.9			0	0
7	0	0	0	55	2.6	1.2	3.4	.8			0	.1
8	0	4.8	0	30	2.2	1.1	5.6	.8			0	0
9	0	5.9	0	17	1.9	.9	3.3	.7			0	.1
10	0	15	0	10	1.5	1.0	11	.7			0	0
11	0	3.0	0	6.0	1.4	.9	5.7	.7			.9	0
12	0	1.1	0	5.0	1.3	3.2	3.6	.5			0	0
13	0	.1	0	4.0	1.3	6.0	2.8	.5			0	0
14	0	0	0	3.4	1.3	2.2	2.6	.5			0	0
15	0	0	0	3.4	1.2	1.6	10	.4			0	0
16	0	0	0	3.4	1.1	1.2	36	.3			0	0
17	0	0	0	2.2	.9	1.1	8.6	.2			0	0
18	0	0	.2	2.7	1.0	1.0	15	.2			0	0
19	0	0	1.7	3.4	1.0	.9	11	.2			0	0
20	0	0	2.5	3.0	.9	.8	11	.2			0	0
21	0	.4	23	2.8	.9	.8	11	.2			0	0
22	0	0	28	2.5	.8	.8	7.8	.2			0	0
23	0	0	42	13	.8	.7	6.0	.1			0	0
24	0	0	12	13	.8	.7	4.6	.1			0	0
25	0	0	3.2	4.6	.7	.6	3.8	0			0	0
26	0	0	16	3.6	1.0	.7	3.2	.1			0	0
27	0	0	14	3.2	7.9	7.6	2.8	0			0	0
28	2.3	0	11	3.0	2.0	2.3	2.5	0			0	0
29	5.2	0	46	2.6	-----	1.3	2.3	0			0	0
30	0	0	26	2.6	-----	1.0	2.0	0			0	0
31	0	-----	24	2.3	-----	4.9	-----	0	-----		0	-----
Total	7.5	34.2	249.6	655.5	58.1	53.5	211.9	15.3	0	0	0.9	0.2
Mean	0.24	1.14	8.05	21.1	2.08	1.73	7.06	0.49	0	0	0.03	0.007
Ac-ft	15	68	495	1,300	115	106	420	30	0	0	1.8	0.4

Calendar year 1964 Max - Min - Mean - Ac-ft -
Water year 1964-65 Max 134 Min 0 Mean 3.53 Ac-ft 2,550

Peak discharge (base, 90 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-9	0530	4.68	114	1-5	2000	7.59	450
12-23	0400	4.39	91	4-9	1100	4.72	118.
12-29	1030	4.55	104				

Note--No gage-height record Jan. 7-17.

11-1820.3 Rheem Creek at San Pablo, Calif.

Location (revised).--Lat 37°58'38", long 122°21'10", in San Pablo Grant, on left bank 50 feet downstream from Santa Fe Railway bridge at San Pablo, Contra Costa County, and 0.7 mile upstream from mouth. Prior to Aug. 13, 1965, at site 0.2 mile upstream.

Drainage area.--1.09 sq mi, at former site, 0.99 sq mi.

Records available.--December 1960 to September 1965.

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.

Extremes.--Maximum discharge during year, 198 cfs Nov. 10 (gage height, 2.38 ft); no flow for many days.

1960-65: Maximum discharge, 346 cfs Jan. 20, 1964 (gage height, 3.54 ft), from rating curve extended above 140 cfs on basis of slope-area measurements at gage heights 3.30 and 3.54 ft; no flow at times in each year.

Remarks.--Records fair. Low flow affected by return flow from industrial waste, leakage and infrequent releases from off stream North Reservoir.

Revisions (water years).--1962 Report: 1961(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 3-18, Apr. 8-26)

0.0	0	0.4	9.5
.1	.6	.6	20
.2	2.4	1.0	49
.3	5.5		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	2.0	0.2	1.4	0.2	0.3	0.3	0	0	0.1	0	0.1
2	.3	3.0	.1	15	.1	.1	.2	0	.1	.1	0	.1
3	0	0	0	33	.1	.1	.3	0	0	.1	.1	.1
4	0	0	.7	27	5.0	.1	.3	0	0	.1	.2	.1
5	0	0	0	21	4.5	2.8	.1	0	0	.1	.1	.1
6	0	0	0	14	.6	.4	.1	0	0	.1	0	.1
7	0	0	.1	8.0	.3	.2	4.6	0	0	.1	0	.1
8	0	9.6	0	5.0	.2	.2	5.6	0	.1	.1	0	.1
9	0	11	0	2.5	.2	.2	19	0	0	.2	0	.1
10	0	20	0	1.5	.2	.2	.7	.1	0	.1	.2	.1
11	0	5.4	0	.9	.1	.3	.4	.4	0	.1	2.8	.1
12	0	1.8	0	.7	.2	6.6	.3	0	0	.3	.1	.1
13	0	.3	0	.7	.1	3.9	.3	0	0	.1	.1	.1
14	0	.2	0	.4	.2	.3	.3	0	.1	.1	.1	.2
15	0	.1	.1	.4	.1	.2	11	0	.1	.1	.1	.1
16	0	.1	0	.4	.1	.2	1.6	0	.1	.1	.1	.1
17	0	.1	0	.2	.1	.1	.3	0	0	.1	.1	.1
18	0	.1	1.8	.2	.1	.1	5.8	0	0	0	.1	.1
19	0	.1	3.0	.4	.1	.1	.4	0	0	0	.1	.1
20	0	.1	5.5	.4	.2	.1	3.0	0	.1	.1	.1	.1
21	0	1.4	39	.4	.1	.1	.6	0	.6	.1	.1	.1
22	0	.2	25	.3	.1	0	.4	0	0	.1	.1	.1
23	0	0	16	11	.1	0	.3	0	0	0	.1	.1
24	0	0	2.2	1.6	.1	0	.3	0	0	0	.1	.1
25	0	.1	1.0	.4	.1	0	.3	0	.1	0	.1	.1
26	0	0	15	.3	.9	1.1	.2	0	.1	.1	.1	.1
27	0	0	7.0	.3	4.3	4.4	.2	0	.1	.4	.1	.1
28	5.0	0	5.8	.3	.1	.1	.1	0	.2	.3	.1	.1
29	6.4	0	12	.3	-----	.1	.1	0	.1	0	.1	.1
30	0	0	14	.3	-----	.2	.1	0	.1	.1	.1	.1
31	0	-----	3.9	.2	-----	5.1	-----	0	-----	0	.1	-----
Total	11.9	55.6	152.4	148.5	18.5	27.6	57.2	0.5	1.9	3.2	5.4	3.1
Mean	0.38	1.85	4.92	4.79	0.66	0.89	1.91	0.02	0.06	0.10	0.17	0.10
Ac-ft	24	110	302	295	37	55	113	1.0	3.8	6.3	11	6.1

Calendar year 1964 Max 54 Min 0 Mean 1.02 Ac-ft 738
Water year 1964-65 Max 39 Min 0 Mean 1.33 Ac-ft 964

Peak discharge (base, 150 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-9	0615	2.03	156	1-5	1830	2.11	165
11-10	0245	2.38	198	4-9	1045	2.25	182

PINOLE CREEK BASIN

11-1821. Pinole Creek at Pinole, Calif.

Location.--Lat 37°58'21", long 122°14'43", in Pinole Grant, on left bank 0.2 mile downstream from county bridge on Pinole Valley Road, 0.8 mile upstream from Pinole city boundary, Contra Costa County.

Drainage area.--10.0 sq mi.

Records available.--December 1938 to September 1965. 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.--26 years (1939-65), 3.49 cfs (2,530 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 acre-ft per year).

Extremes.--Maximum discharge during year, 724 cfs Jan. 5 (gage height, 6.77 ft); no flow for many days.
1938-65: 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.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.8	0	2.0	10
1.0	.1	2.3	24
1.2	.6	2.5	41
1.4	1.3	2.8	74
1.6	2.6	3.0	100
1.8	4.6	3.5	174

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.1	5.6	3.9	2.0	1.8	1.2	0.7	0.5	0	0.1
2		.2	.2	18	3.6	1.8	1.5	1.2	.7	.4	0	.1
3		.1	.2	107	3.5	1.8	1.4	1.2	.7	.4	0	.1
4		.1	.2	58	4.6	1.8	1.2	1.2	.8	.3	0	.1
5		.1	.2	156	11	2.0	1.2	1.2	.8	.3	0	.1
6		0	.1	132	4.8	2.3	1.2	1.2	.8	.3	0	.1
7		0	.1	46	4.0	1.8	1.3	1.2	.8	.2	0	.2
8		.1	.1	18	3.8	1.8	2.9	1.2	.7	.3	0	.2
9		.4	.1	12	3.4	1.8	18	1.2	.7	.2	0	.1
10		1.7	.1	8.6	3.2	1.8	4.6	1.1	.6	.1	0	.1
11		.4	.1	7.9	3.1	1.8	2.6	1.1	.6	.1	.1	.1
12		.5	.1	6.1	2.9	3.4	2.0	1.0	.5	.1	0	.1
13		.2	.1	5.4	2.8	3.4	1.7	1.1	.5	.1	0	.1
14		.2	.1	5.0	2.9	2.6	1.7	1.1	.5	.1	0	.1
15		.2	.1	4.5	2.6	2.3	11	1.0	.5	0	0	.1
16		.1	.1	4.2	2.4	2.1	26	.8	.4	0	0	.1
17		.1	.1	4.1	2.3	2.1	4.4	.7	.4	0	0	0
18		.1	.1	3.9	2.3	2.1	6.5	.7	.5	.1	0	0
19		.1	.4	4.2	2.3	1.8	4.6	.8	.4	.2	0	0
20		.1	1.4	4.1	2.3	1.8	4.3	.8	.4	.1	0	.1
21		.1	5.5	3.9	2.3	1.7	4.2	.8	.5	.1	0	.1
22		.1	18	3.8	2.1	1.6	3.0	.8	.5	0	0	.1
23		.1	38	3.5	2.1	1.7	2.4	.8	.5	0	0	.1
24		.1	7.7	16	1.9	1.7	2.1	.7	.5	0	0	.1
25		.1	2.4	5.7	1.9	1.6	1.9	.6	.4	0	0	.1
26		.1	24	4.8	1.9	1.9	1.7	.6	.4	.1	0	.1
27		.1	25	4.4	3.3	3.9	1.6	.6	.4	.1	0	.2
28		.1	32	4.4	2.1	1.6	1.4	.6	.4	0	0	.2
29		.1	56	4.1	-----	1.4	1.4	.6	.3	0	0	.1
30		.1	46	4.0	-----	1.4	1.3	.6	.4	0	0	.1
31		-----	24	4.0	-----	3.3	-----	.7	-----	0	0	-----
Total	0	5.7	282.6	700.7	89.3	64.1	120.9	28.4	16.3	4.1	0.1	3.1
Mean	0	0.19	9.12	22.6	3.19	2.07	4.03	0.92	0.54	0.13	0.003	0.10
Ac-ft	0	11	561	1,390	177	127	240	56	32	8.1	0.2	6.2

Calendar year 1964 Max 71 Min 0 Mean 1.55 Ac-ft 1,130
Water year 1964-65 Max 156 Min 0 Mean 3.60 Ac-ft 2,610

Peak discharge (base, 80 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0400	3.09	113	1-3	1000	3.78	319
12-26	2130	3.11	115	1-5	2000	6.77	724
12-29	0930	3.58	187				

11-1824. Arroyo del Hambre at Martinez, Calif.

Location.--Lat 38°00'12", long 122°07'44", in Las Juntas Grant, on right bank 40 ft upstream from D Street Bridge in Martinez, Contra Costa County.

Drainage area.--15.0 sq mi.

Records available.--October 1964 to September 1965.

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).

Extremes.--Maximum discharge during year, 780 cfs Jan. 5 (gage height, 6.63 ft), from rating curve extended above 90 cfs on basis of computation of maximum flow over dam; no flow Oct. 11, 27.

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.7	0	2.3	14
1.8	.4	2.5	28
1.9	1.4	2.7	45
2.0	3.2	3.0	78
2.1	5.7	3.4	135
2.2	9.4		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	1.6	0.2	5.7	5.2	2.8	3.0	2.4	0.6	0.2	0.1	0.1
2	.1	.6	.1	1.3	5.0	2.8	3.4	2.0	.5	.2	.1	.1
3	.1	.1	.1	4.5	5.0	2.5	3.2	2.2	.6	.2	.1	.1
4	.1	.1	.1	2.4	7.2	3.0	3.0	2.0	.6	.2	.1	.1
5	.1	.1	.1	12.7	1.2	3.2	2.5	2.0	.6	.2	.2	.1
6	.1	.1	.1	8.5	6.1	3.2	2.2	2.0	.4	.2	.2	.1
7	.1	.1	.1	3.9	5.0	2.8	3.2	1.8	.5	.2	.2	.1
8	.1	1.0	.1	1.9	5.0	2.8	6.5	1.7	.6	.2	.2	.1
9	.1	2.1	.2	1.4	4.4	2.8	2.4	1.8	.4	.2	.2	.1
10	.1	5.9	.2	1.2	4.2	2.8	6.8	2.2	.4	.2	.2	.1
11	0	.9	.2	1.1	4.2	2.8	4.2	1.8	.3	.1	.5	.1
12	.1	.8	.2	9.0	4.2	5.9	3.7	1.4	.4	.2	.2	.1
13	.1	.3	.2	8.3	4.2	3.4	3.2	1.6	.4	.2	.2	.1
14	.1	.2	.2	7.6	4.4	3.0	2.8	1.2	.4	.2	.2	.1
15	.1	.2	.2	7.2	4.2	2.8	6.2	1.0	.3	.2	.2	.1
16	.1	.2	.2	6.4	4.0	2.8	1.7	.9	.3	.2	.2	.1
17	.1	.2	.2	6.4	4.0	2.5	4.7	.9	.2	.1	.2	.1
18	.1	.2	.5	6.1	3.7	2.5	6.8	.8	.2	.1	.2	.1
19	.1	.2	.9	7.2	3.4	2.5	5.0	.8	.2	.2	.1	.1
20	.1	.2	1.2	5.4	3.4	2.5	5.0	1.0	.1	.1	.1	.1
21	.1	.9	9.5	5.0	3.4	2.5	4.7	.9	.2	.1	.1	.1
22	.1	.3	26	5.0	3.2	2.4	3.8	.8	.1	.1	.1	.1
23	.1	.2	2.4	3.0	3.0	2.4	3.2	.8	.1	.1	.1	.1
24	.1	.1	5.4	1.8	3.0	2.5	3.2	.7	.1	.1	.1	.1
25	.1	.1	2.0	7.6	3.0	2.5	3.0	.6	.1	.1	.1	.1
26	.1	.1	9.2	6.4	3.2	2.8	2.8	.6	.2	.1	.1	.1
27	0	.1	20	6.1	4.7	5.4	2.0	.6	.1	.1	.1	.2
28	1.1	.1	2.5	5.7	3.2	2.5	1.6	.8	.2	.1	.1	.2
29	1.0	.1	30	5.4	-----	2.2	2.2	.5	.2	.1	.1	.2
30	.2	.1	20	5.4	-----	2.2	2.2	.5	.2	.1	.1	.2
31	.1	-----	1.9	5.4	-----	7.4	-----	.6	-----	.1	.1	-----
Total	4.9	17.2	195.4	558.3	125.5	94.2	145.1	38.9	9.5	4.7	4.8	3.4
Mean	0.16	0.57	6.30	18.0	4.48	3.04	4.84	1.25	0.32	0.15	0.15	0.11
Ac-ft	9.7	34	388	1,110	249	187	288	77	19	9.3	9.5	6.7

Calendar year 1964 Max - Min - Mean - Ac-ft -
 Water year 1964-65 Max 12.7 Min 0 Mean 3.29 Ac-ft 2,390

Peak discharge (base, 80 cfs)

Note.--No gage-height record Oct. 1-9.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1400	3.18	102	1- 5	2000	6.63	780
12-29	0900	3.25	112	1-23	1800	3.67	179
1- 3	1200	3.15	98	4- 9	1300	3.07	87

PACHECO CREEK BASIN

11-1825. San Ramon Creek at San Ramon, Calif.

Location.--Lat 37°46'20", long 121°59'40", in sec.8, T.2 S., R.1 W., on right bank 0.2 mile downstream from Bollinger Creek and 1.0 mile southwest of San Ramon.

Drainage area.--5.89 sq mi.

Records available.--October 1952 to September 1965.

Gage.--Water-stage recorder with rain gage attachment and concrete control. Altitude of gage is 530 ft (from topographic map).

Average discharge.--13 years, 2.80 cfs (2,030 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

Extremes.--Maximum discharge during year, 579 cfs Dec. 23 (gage height, 6.30 ft), from rating curve extended above 90 cfs as explained below; no flow at times.

1952-65: 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. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.1	19	7.0	2.8	2.4	2.2	0.9	0.4	0.1	0.1
2		0	.1	20	6.6	2.6	2.2	2.2	1.0	.3	.1	.1
3		0	.1	50	6.2	2.4	2.0	2.2	.9	.3	.1	.2
4		0	.1	33	6.6	2.2	1.8	2.2	1.1	.3	.1	.2
5		0	.1	93	9.2	2.6	1.8	2.2	1.1	.2	.1	.2
6		0	.1	85	6.6	2.6	1.8	2.2	1.1	.3	.1	.2
7		0	.1	39	5.7	2.2	1.8	2.0	1.1	.3	.1	.2
8		0	.1	25	5.2	2.2	4.1	1.8	1.1	.3	.1	.2
9		0	.1	21	4.4	2.2	33	1.8	1.1	.3	.1	.2
10		1.6	.2	17	4.1	2.2	9.6	1.6	1.1	.3	.1	.1
11		1.9	.4	16	4.1	2.2	6.2	1.5	1.1	.3	.1	.1
12		.7	.2	13	4.1	4.8	4.4	1.5	1.1	.3	.1	.1
13		.3	.1	12	4.1	2.8	3.8	1.5	1.0	.3	.1	.1
14		.1	.1	11	4.1	2.4	3.8	1.5	.8	.3	.1	.1
15		.1	.2	10	3.5	2.2	4.8	1.5	.7	.3	.1	.1
16		0	.1	9.2	3.5	2.0	20	1.4	.7	.3	.1	.1
17		0	.1	8.9	3.5	1.8	7.0	1.4	.6	.3	.1	.1
18		0	.2	8.1	3.5	1.8	6.6	1.2	.6	.3	.1	.1
19		0	.4	9.6	3.2	1.8	6.2	1.2	.6	.3	.1	.1
20		0	.7	8.5	3.2	1.8	7.0	1.2	.6	.3	.1	.1
21		.1	10	7.3	3.0	1.8	5.7	1.2	.6	.3	.1	.1
22		.1	104	7.0	2.8	1.8	4.4	1.2	.6	.3	.1	0
23		.1	191	33	2.6	1.8	3.8	1.2	.6	.3	.1	0
24		.1	78	18	2.6	1.8	3.8	1.1	.6	.3	.1	.1
25		.1	27	10	2.4	1.8	3.5	1.1	.6	.3	.1	.1
26		.1	44	8.9	2.4	2.2	3.0	1.1	.6	.3	.1	.1
27		.1	43	8.5	3.5	5.3	2.6	1.1	.6	.3	.1	.1
28		.1	32	8.1	3.0	2.4	2.4	.9	.6	.2	.1	.1
29		.1	49	8.1	-----	2.2	2.4	.9	.5	.2	.1	.1
30		.1	39	7.7	-----	2.0	2.2	.9	.5	.2	.1	.1
31		-----	32	7.3	-----	4.4	-----	.9	-----	.1	.1	-----
Total	0	5.7	652.6	632.2	120.7	75.1	164.1	45.9	24.1	8.8	3.1	3.5
Mean	0	0.19	21.0	20.4	4.31	2.42	5.47	1.48	0.80	0.28	0.10	0.12
Ac-ft	0	1.1	1,290	1,250	239	149	325	91	48	17	6.1	6.9
(†)	1.3	4.7	13.6	6.2	1.1	2.7	4.5	0	0	0.1	0.1	0

Calendar year 1964 Max 191 Min 0 Mean 2.44 Ac-ft 1,770

Water year 1964-65 Max 191 Min 0 Mean 4.76 Ac-ft 3,430

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0500	6.30	579	1- 5	2015	5.40	456
12-26	2130	3.60	196	1-23	1715	3.88	231

† Precipitation, in inches.

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, on left bank at town of Walnut Creek, Contra Costa County, 0.3 mile downstream from small tributary, and 1.2 miles upstream from confluence with Las Trampas Creek.

Drainage area.--50.8 sq mi.

Records available.--October 1952 to September 1965.

Gage.--Water-stage recorder and, since Dec. 4, 1962, concrete control. Altitude of gage is 170 ft (from topographic map).

Average discharge.--13 years, 13.8 cfs (9,990 acre-ft per year); median of yearly mean discharges, 5.3 cfs (3,800 acre-ft per year).

Extremes.--Maximum discharge during year, 2,550 cfs Dec. 23 (gage height, 8.47 ft); minimum daily 0.5 cfs Oct. 9, 15, 22.

1952-65: 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.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.0	0.2	1.6	9.5	4.0	410
1.1	.6	1.8	17	5.0	750
1.2	1.3	2.0	28	6.0	1,180
1.3	2.5	2.5	73		
1.4	4.2	3.0	152		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	4.0	1.1	57	18	8.9	11	8.3	2.6	2.2	2.2	1.3
2	.8	3.2	1.1	100	17	7.8	8.6	8.0	2.6	2.2	1.8	1.4
3	.9	2.3	1.1	364	17	8.6	8.0	7.8	2.9	2.2	1.8	1.4
4	.7	1.5	1.0	170	19	8.6	7.5	7.2	3.2	2.0	1.9	1.3
5	1.1	1.0	1.2	531	40	8.9	6.4	5.4	2.8	2.2	1.8	1.3
6	1.7	.9	1.1	542	20	11	5.6	5.2	3.4	2.2	1.8	1.4
7	1.4	.9	1.2	238	16	9.5	6.1	4.9	3.8	2.0	1.8	1.4
8	.6	1.1	1.1	80	14	8.6	17	5.4	4.0	2.6	1.8	1.4
9	.5	7.0	1.1	56	14	8.6	196	5.9	3.8	2.2	2.4	1.3
10	.7	23	1.1	46	13	5.9	53	6.1	3.4	3.1	2.8	1.3
11	.7	10	1.1	41	12	5.6	18	5.9	3.2	2.8	3.9	1.3
12	.6	14	1.1	34	12	14	15	5.2	2.9	2.3	1.9	1.3
13	.7	6.9	1.0	28	12	15	12	4.9	2.6	2.3	1.9	1.3
14	.6	3.4	1.0	26	12	9.5	11	4.7	2.6	2.3	1.9	1.3
15	.5	1.6	1.1	24	12	8.3	14	4.7	3.2	2.2	1.8	1.3
16	.6	1.2	1.1	22	11	5.9	78	4.4	3.1	2.2	1.7	1.3
17	.6	1.3	1.0	20	11	5.4	20	4.2	2.6	2.0	1.6	1.2
18	.6	1.3	1.8	19	11	5.2	19	4.4	2.5	2.0	1.6	1.2
19	.6	1.3	5.3	30	11	5.2	16	4.4	2.5	2.0	1.6	1.1
20	.7	1.2	6.5	23	10	4.9	18	4.2	2.5	2.2	1.4	.9
21	.6	1.2	55	18	10	5.9	20	4.2	2.3	2.0	1.5	.9
22	.5	1.6	598	17	10	7.2	13	4.0	2.3	2.2	1.7	1.0
23	.6	1.1	921	211	10	5.9	12	4.4	2.3	1.9	1.7	1.1
24	.6	1.1	268	155	9.2	5.2	11	5.4	2.5	2.9	1.7	1.2
25	.6	1.1	58	36	8.6	4.7	11	6.1	2.8	3.1	1.8	1.2
26	.7	1.3	127	27	8.6	4.9	98	4.9	2.3	2.9	1.8	1.2
27	.6	1.1	233	24	15	21	9.2	4.2	2.3	2.8	1.7	1.7
28	1.1	1.0	217	22	10	9.5	8.9	3.2	2.3	2.6	1.5	2.1
29	3.2	1.0	339	21	-----	8.0	8.6	2.9	2.2	2.5	1.5	3.2
30	3.8	1.1	232	20	-----	7.8	8.3	2.8	2.3	2.3	1.4	1.9
31	2.3	-----	235	19	-----	27	-----	2.8	-----	2.3	1.4	-----
Total	30.1	98.7	3,315.1	3,021	383.4	272.5	652.0	156.1	83.8	72.7	57.1	41.2
Mean	0.97	3.29	107	97.5	13.7	8.79	21.7	5.04	2.79	2.35	1.84	1.37
Ac-ft	60	196	6,580	5,990	760	540	1,290	310	166	144	113	82

Calendar year 1964 Max 921 Min 0.4 Mean 13.6 Ac-ft 9,910
 Water year 1964-65 Max 921 Min 0.5 Mean 22.3 Ac-ft 16,230

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0500	8.47	2,550	1- 5	2000	8.05	2,270
12-29	1800	4.91	714	1-23	2000	5.73	1,050
1- 3	1530	5.06	774				

11-1835. Walnut Creek at Walnut Creek, Calif.

Location.--Lat 37°54'21", long 122°03'22", in Arroyo de las Nueces y Bolbones Grant, on right bank at Southern Pacific Railroad bridge at town of Walnut Creek, Contra Costa County, 0.7 mile downstream from confluence of San Ramon and Las Trampas Creeks.

Drainage area.--79.2 sq mi.

Records available.--October 1952 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 120 ft (from topographic map). Prior to June 20, 1957, at site 0.6 mile upstream at different datum.

Average discharge.--13 years, 27.4 cfs (19,840 acre-ft per year); median of yearly mean discharges, 12 cfs (8,700 acre-ft per year).

Extremes.--Maximum discharge during year, 4,200 cfs Jan. 5 (gage height, 6.72 ft), from rating curve extended above 440 cfs on basis of theoretical rating of flow over dam; minimum daily, 1.0 cfs for several days in October.

1952-65; Maximum discharge, 12,200 cfs Apr. 2, 1958 (gage height, 20.2 ft); no flow July 29 to Nov. 7, 1954, part of July 10, 1957, Oct. 1, 1962.

Remarks.--Records good except those above 1,000 cfs, which are poor. Flow slightly regulated by storage in Lafayette Reservoir (capacity, 4,240 acre-ft). Some small diversions for irrigation above station.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 3-5)

Oct. 1 to Dec. 22					Dec. 22 to Sept. 30				
1.3	0.4	2.2	45		1.4	1.9	3.0	240	
1.4	1.2	2.5	84		1.5	3.9	3.5	435	
1.5	2.6	3.0	190		1.6	6.8	4.0	735	
1.6	5.0	3.5	345		1.8	16	5.0	1,600	
1.7	8.6	4.0	565		2.0	32			
1.8	14	5.0	1,170		2.2	56			
2.0	26	6.0	2,010		2.5	110			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.0	18	4.7	110	42	20	24	19	6.8	7.4	4.8	3.4
2	1.0	11	5.6	219	37	18	19	19	7.6	12	4.6	3.6
3	2.0	5.1	3.4	658	35	19	15	20	8.9	6.2	4.5	3.2
4	1.2	4.1	4.0	337	44	19	15	18	7.1	6.1	4.9	3.3
5	1.5	3.2	6.3	912	77	22	14	16	8.3	7.6	5.0	3.5
6	2.5	2.4	4.7	842	41	26	13	15	9.8	6.6	4.3	3.2
7	1.8	2.3	5.0	399	35	21	15	15	12	5.3	3.9	3.7
8	1.5	9.1	3.9	166	32	19	83	14	11	6.2	4.6	4.1
9	1.0	44	4.9	117	41	17	412	15	12	5.7	6.5	3.6
10	1.0	81	4.8	90	30	17	96	16	12	5.4	6.7	3.7
11	1.0	38	6.7	79	27	16	39	16	9.3	6.2	9.2	3.6
12	1.0	45	4.3	69	26	36	31	15	9.8	5.8	4.9	3.4
13	1.0	13	4.8	58	25	32	26	14	11	5.1	5.0	4.6
14	1.0	8.3	4.7	52	26	21	24	12	12	5.7	4.7	4.2
15	1.0	5.0	4.5	48	24	22	52	13	9.8	5.0	4.3	3.9
16	1.0	3.7	4.4	44	34	19	213	12	9.9	5.0	4.3	4.1
17	1.2	3.6	4.8	42	25	19	43	12	9.8	5.0	4.3	3.5
18	1.2	4.1	11	40	26	19	44	12	9.9	5.0	4.4	3.8
19	1.2	3.6	28	61	24	18	48	12	9.4	5.0	4.6	3.2
20	1.2	3.1	24	44	24	18	47	14	11	5.0	5.5	3.1
21	1.8	6.5	181	38	24	19	43	14	10	5.0	4.6	3.5
22	1.4	9.6	890	36	23	21	35	14	10	5.0	4.1	4.1
23	2.1	4.4	1,230	352	23	15	31	9.3	11	5.0	4.4	3.7
24	2.0	3.2	377	243	21	14	30	8.5	10	5.5	5.3	4.2
25	2.0	4.0	94	69	21	13	27	10	11	6.0	4.5	4.0
26	1.8	5.9	254	53	20	16	27	9.3	12	5.8	4.8	3.6
27	2.5	3.6	399	47	41	62	23	8.9	13	5.8	4.1	4.8
28	13	3.3	377	46	21	22	19	7.2	15	5.6	3.8	4.5
29	18	3.5	435	44	-----	18	20	8.1	12	5.4	4.2	6.7
30	9.6	4.8	399	43	-----	16	19	7.2	10	5.2	3.2	4.8
31	5.4	-----	361	43	-----	70	-----	7.3	-----	5.0	2.8	-----
TOTAL	84.9	356.4	5,141.5	5,401	869	704	1,547	402.8	311.4	180.6	146.8	116.6
MEAN	2.74	11.9	166	174	31.0	22.7	51.6	13.0	10.4	5.83	4.74	3.89
AC-FT	168	707	10,200	10,710	1,720	1,400	3,070	799	618	358	291	231

Calendar year 1964	Max	1,230	Min	1.0	Mean	23.3	Ac-ft	16,890
Water year 1964-65	Max	1,230	Min	1.0	Mean	41.5	Ac-ft	30,070

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0415	6.24	3,340	1- 5	2045	6.72	4,200
12-29	1845	4.00	735	1-23	1830	4.85	1,450
1- 3	1245	4.47	1,100	4- 9	1345	3.98	721

Note.--No gage-height record Oct. 5-21, June 29 to July 2, July 15 to Aug. 3.

11-4560. Napa River near St. Helena, Calif.

Location.--Lat 38°29'40", long 122°25'50", in SE¼ sec.32, T.8 N., R.5 W., on right bank 0.2 mile upstream from highway bridge, 1.3 miles northeast of Zinfandel, and 2.5 miles east of St. Helena.

Drainage area.--81.4 sq mi.

Records available.--October 1929 to September 1932, October 1939 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Altitude of gage is 200 ft (from topographic map). Prior to Nov. 22, 1958, at datum 1.00 ft higher.

Average discharge.--29 years, 88.1 cfs (63,780 acre-ft per year); median of yearly mean discharges, 66 cfs (47,800 acre-ft per year).

Extremes.--Maximum discharge during year, 11,800 cfs Jan. 5 (gage height, 14.96 ft); minimum, 0.1 cfs Oct. 5-7, 10-13, 15, 24-25. 1929-32, 1939-65: Maximum discharge, 12,600 cfs Dec. 22, 1955 (gage height, 16.17 ft, present datum); no flow at times in 1947-49, 1952-57, 1959-64.

Remarks.--Records good. No regulation; small diversions above station for irrigation. Records of chemical analyses and water temperatures for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 15 to July 1, Aug. 24 to Sept. 30)

0.2	0	1.0	15	4.0	750
.3	.4	1.2	26	6.0	1,870
.4	1.0	1.5	47	9.0	4,500
.5	2.0	2.0	102	12.0	7,760
.6	3.5	2.5	192		
.8	7.8	3.0	335		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	13	19	388	106	38	25	56	13	5.0	2.6	1.6
2	.2	22	25	546	94	36	21	51	12	4.8	1.9	1.3
3	.2	9.7	20	1,300	85	33	19	47	12	4.6	1.8	1.0
4	.2	5.0	16	1,480	84	31	18	45	11	4.8	1.9	1.0
5	.1	3.5	15	5,540	162	31	16	42	11	3.9	1.8	1.2
6	.1	3.4	13	2,520	116	32	16	41	11	3.7	1.9	1.6
7	.1	2.9	12	1,360	97	30	16	38	11	3.2	1.8	1.1
8	.2	3.2	12	785	88	28	106	36	11	2.9	2.2	1.1
9	.2	132	11	525	81	27	501	35	11	2.8	2.2	1.0
10	.1	345	11	394	77	27	296	32	10	2.8	1.9	1.4
11	.1	181	13	328	70	26	162	30	9.1	2.0	3.4	1.6
12	.1	202	14	253	66	25	116	28	9.1	1.8	3.0	1.7
13	.1	58	11	206	63	24	90	28	7.8	1.8	2.2	1.7
14	.2	31	12	179	62	23	78	28	7.6	1.9	1.7	.9
15	.1	21	11	166	58	22	193	27	8.4	2.2	1.9	.7
16	.2	16	11	166	52	22	548	25	7.3	1.9	1.8	.9
17	.3	12	10	177	54	21	256	24	7.1	1.9	1.6	1.0
18	.3	11	10	110	51	21	285	24	7.1	1.8	1.8	.8
19	.3	10	42	101	48	20	276	22	7.1	1.8	1.9	.9
20	.3	10	117	96	46	19	224	21	7.3	1.7	1.7	.9
21	.3	15	2,390	87	44	18	237	20	7.1	1.6	1.2	.9
22	.3	10	7,350	82	41	18	179	20	6.8	1.6	1.3	2.2
23	.3	8.8	3,520	348	39	18	148	18	6.6	1.5	1.3	2.2
24	.1	8.8	1,160	508	37	17	122	17	6.4	1.9	1.3	1.5
25	.1	9.4	604	267	37	16	102	16	6.1	2.3	1.2	2.2
26	.3	13	1,180	211	36	18	101	15	5.9	2.3	1.4	2.2
27	.4	8.1	1,340	177	58	39	81	14	5.9	2.4	1.4	2.2
28	.6	12	1,110	158	42	25	73	14	6.6	2.2	1.1	2.4
29	1.2	27	920	139	-----	22	72	13	6.1	1.8	1.4	2.0
30	13	17	709	124	-----	21	67	13	5.9	2.2	1.7	1.3
31	12	-----	570	115	-----	25	-----	13	-----	2.3	1.4	-----
Total	32.2	1,220.8	21,258	18,836	1,894	773	4,444	853	254.3	79.4	55.7	42.5
Mean	1.04	40.7	686	608	67.6	24.9	148	27.5	8.48	2.56	1.80	1.42
Ac-ft	64	2,420	42,160	37,360	3,760	1,530	8,810	1,690	504	157	110	84

Calendar year 1964 Max 7,350 Min 0 Mean 81.8 Ac-ft 59,390
Water year 1964-65 Max 7,350 Min 0.1 Mean 136 Ac-ft 98,650

Peak discharge (base, 2,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1930	14.90	11,700	1-5	2030	14.96	11,800
12-26	2100	6.95	2,620				

NAPA RIVER BASIN

11-4570. Dry Creek near Napa, Calif.

Location--Lat 38°21'23", long 122°21'50", in Napa Grant, on right bank 3.7 miles upstream from mouth and 5.5 miles northwest of Napa, Napa County.

Drainage area--17.4 sq mi.

Records available--January 1951 to September 1965.

Gage--Water-stage recorder and, since June 14, 1955, concrete control. Altitude of gage is 190 ft (from topographic map). Prior to June 14, 1955, at site 350 ft downstream at different datum.

Average discharge--14 years, 20.1 cfs (14,550 acre-ft per year); median of yearly mean discharges, 15 cfs (10,900 acre-ft per year).

Extremes--Maximum discharge during year, 2,970 cfs Jan. 5 (gage height, 7.62 ft); no flow for many days.
1951-65: Maximum discharge, 3,460 cfs Feb. 24, 1958 (gage height, 8.11 ft); no flow for many days in each year.

Remarks--Records good. No regulation; several small diversions for irrigation above station. Occasional diversion around station through 6-inch pipe for domestic use on farm below station.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 27, 28, June 16-18)

Oct. 1 to Dec. 23

Dec. 23 to Sept. 30

2.2	0	3.0	22	1.7	0	2.4	6.8	4.0	199
2.3	.1	3.3	51	1.8	.1	2.6	12	4.5	425
2.4	.8	3.6	106	1.9	.2	2.8	18	5.0	735
2.5	2.7	4.0	242	2.0	.6	3.1	33	6.0	1,450
2.6	5.3	4.5	470	2.1	1.5	3.4	61		
2.8	12	5.0	760	2.2	3.0	3.7	115		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	2.2	1.8	77	31	9.2	8.8	16	3.7	1.5	0.2	0.1
2	0	3.7	2.0	101	28	8.6	7.2	15	3.7	1.3	.2	.1
3	0	1.4	1.6	195	26	8.1	6.4	14	3.5	1.1	.2	.1
4	0	.5	1.4	236	26	7.9	6.2	13	3.5	1.1	.2	.1
5	0	.4	1.2	856	36	8.6	5.8	12	3.2	1.0	.2	.1
6	0	.4	1.2	484	28	8.6	5.6	12	3.2	.9	.2	.1
7	0	.3	1.0	299	24	7.9	6.7	11	3.5	.8	.2	.1
8	0	1.2	1.0	164	22	7.5	46	10	3.4	.6	.2	.1
9	0	26	.9	111	21	7.0	168	9.8	3.0	.6	.2	.1
10	0	63	1.0	85	19	7.2	80	9.2	2.8	.6	.2	.1
11	0	26	1.2	68	18	7.2	51	8.6	2.6	.8	.3	.1
12	0	26	1.0	55	17	7.0	40	8.3	2.2	.8	.3	.1
13	0	8.2	.8	47	16	7.0	33	8.1	2.6	.6	.2	.1
14	0	4.8	.9	42	15	6.6	31	8.1	2.4	.4	.1	.1
15	0	3.5	.9	37	14	6.4	66	7.5	2.0	.4	.1	.1
16	0	2.7	.9	32	13	6.2	94	7.2	2.2	.3	.1	.1
17	0	2.2	.9	29	13	6.2	60	6.6	2.6	.3	.1	.1
18	0	2.0	1.0	26	13	6.0	70	6.2	2.4	.3	.1	.1
19	0	1.8	8.4	24	12	5.8	62	6.2	2.2	.3	.1	0
20	0	1.6	27	22	12	5.6	54	6.2	2.1	.3	.1	0
21	0	1.6	354	20	11	5.4	53	6.0	2.1	.3	.1	.1
22	0	1.8	640	19	11	5.4	44	6.0	2.1	.3	.1	.1
23	0	1.4	547	104	10	5.4	39	5.4	2.1	.2	.1	.1
24	0	1.4	198	98	10	5.4	34	5.0	2.1	.2	.1	.1
25	0	1.4	111	66	9.5	5.2	30	4.8	2.1	.2	.1	.1
26	0	1.4	169	55	9.2	5.8	26	4.6	1.8	.2	.1	.1
27	0	1.4	180	49	13	11	24	4.4	1.6	.2	.1	.1
28	.1	1.8	145	44	9.8	7.2	22	4.1	1.5	.2	.1	.1
29	1.2	1.8	129	40	-----	6.4	20	3.9	1.3	.2	.1	.1
30	.6	1.6	115	36	-----	6.2	18	3.7	1.4	.2	.1	.1
31	.8	-----	96	34	-----	10	-----	3.7	-----	.2	-----	-----
Total	2.7	193.5	2,740.1	3,555	487.5	218.0	1,211.7	246.6	74.9	16.4	4.5	2.8
Mean	0.09	6.45	88.4	115	17.4	7.03	40.4	7.95	2.50	0.53	0.15	0.09
Ac-ft	5.4	384	5,430	7,050	967	432	2,400	489	149	33	8.9	5.6

Calendar year 1964 Max 640 Min 0 Mean 12.1 Ac-ft 8,750
Water year 1964-65 Max 856 Min 0 Mean 24.0 Ac-ft 17,350

Peak discharge (base, 450 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0300	5.51	1,100	1-23	1700	4.57	467
1- 5	1900	7.62	2,970				

11-4580. Napa River near Napa, Calif.

Location.--Lat 38°22'06", long 122°18'08", in Yajome Grant, on left bank at downstream side of Oak Knoll Avenue bridge, 0.4 mile downstream from Dry Creek and 5 miles north of Napa, Napa County.

Drainage area.--218 sq mi.

Records available.--October 1929 to September 1932, October 1959 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Datum of gage is 24.72 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--9 years, 128 cfs (92,670 acre-ft per year).

Extremes.--Maximum discharge during year, 14,300 cfs Jan. 5 (gage height, 25.10 ft); no flow for several days in October.
1929-32, 1959-65: Maximum discharge, 16,900 cfs Jan. 31, 1963 (gage height, 27.59 ft); no flow at times in each year.

Remarks.--Records good except those for period of fragmentary gage-height record, which are poor. Flow slightly regulated by Lake Hennessey beginning in December 1945 (capacity, 31,000 acre-ft). Numerous diversions for irrigation above station.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 11-23, May 5 to Sept. 30)

Oct. 1 to Dec. 23

Dec. 23 to Sept. 30

3.1	0	3.7	12	6.0	430	3.0	0	3.5	12	5.0	256
3.2	.2	4.0	29	8.0	1,120	3.1	.4	3.6	19	6.0	548
3.3	.7	4.3	56	12.0	2,880	3.2	1.6	3.8	36	8.0	1,300
3.4	2.0	4.6	96	16.0	5,150	3.3	4.0	4.0	58	13.0	3,850
3.5	4.3	5.0	168	18.0	6,800	3.4	7.5	4.5	142	19.0	8,350

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.1	18	25	832	266	93	62	105	23	5.7	1.2	1.9
2	.2	23	29	867	238	86	53	100	21	4.5	3.5	1.2
3	.3	28	27	2,400	223	82	50	90	22	4.8	3.5	.8
4	.3	16	23	2,250	216	75	47	85	21	5.0	2.2	1.5
5	0	10	24	6,450	360	77	45	77	21	8.1	1.5	1.1
6	0	7.4	20	8,170	285	80	44	74	19	5.3	1.8	.3
7	0	7.1	18	3,690	230	77	43	72	18	4.1	1.3	.2
8	0	7.7	18	2,020	202	72	132	69	17	5.0	2.0	2.2
9	0	100	17	1,320	188	69	868	66	17	5.0	1.7	1.9
10	.1	527	16	989	175	69	656	62	15	4.7	2.1	1.7
11	.1	170	18	902	166	69	353	58	14	5.2	4.5	1.6
12	0	382	18	727	156	66	253	54	13	4.0	8.1	1.5
13	0	95	18	554	148	61	195	52	12	2.9	8.3	2.5
14	.5	49	15	463	146	59	162	52	11	3.1	6.2	3.5
15	.7	36	17	403	140	61	237	50	11	2.8	4.4	2.6
16	.8	28	16	377	131	56	906	47	10	2.3	4.9	2.6
17	.8	23	16	369	127	54	496	44	8.0	1.5	6.5	2.1
18	.4	20	15	304	129	53	502	43	7.4	1.3	5.4	2.2
19	.1	19	30	277	121	52	519	41	8.1	3.1	4.8	1.6
20	.1	18	136	248	118	50	412	40	7.8	2.6	4.9	1.1
21	.1	20	2,520	228	114	50	415	36	9.5	1.0	3.5	.8
22	0	22	6,120	216	107	48	332	36	8.2	.7	3.4	1.0
23	0	18	6,510	760	102	48	282	36	9.6	.7	3.7	1.0
24	.1	16	2,340	1,350	96	47	238	36	7.2	1.2	3.5	1.6
25	0	16	1,290	855	95	44	204	32	7.4	1.3	2.7	4.2
26	.1	19	1,940	519	90	46	180	30	6.1	2.5	2.3	3.7
27	.2	16	2,540	430	119	75	152	29	5.6	2.0	1.8	3.5
28	.4	14	2,120	380	105	64	134	26	8.1	.8	2.0	4.2
29	4.8	27	1,830	344	-----	52	125	26	7.0	1.5	2.7	3.3
30	7.1	26	1,450	310	-----	50	114	25	5.9	1.8	3.0	2.4
31	2.8	-----	1,200	285	-----	58	-----	25	-----	1.6	2.3	---
TOTAL	20.1	1,778.2	30,376	39,289	4,593	1,943	8,211	1,618	370.9	96.1	109.7	59.8
MEAN	0.65	59.3	980	1,267	164	62.7	274	52.2	12.4	3.10	3.54	1.99
AC-FT	40	3,530	60,250	77,930	9,110	3,850	16,290	3,210	736	191	218	119

CALENDAR YEAR 1964 MAX 6,510 MIN 0 MEAN 120 AC-FT 87,220
WATER YEAR 1964-65 MAX 8,170 MIN 0 MEAN 242 AC-FT 175,470

Peak discharge (base, 2,500 cfs)

Note.--Fragmentary gage-height record Jan. 3-5.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-23	0400	21.53	10,500	1-5	2400	25.10	14,300
12-26	2200	12.96	3,830				

NAPA RIVER BASIN

11-4582. Redwood Creek near Napa, Calif.

Location.--Lat 38°19'05", long 122°20'35", in Napa Grant, on right bank 2.9 miles upstream from confluence with Browns Valley Creek and 3.4 miles northwest of Napa, Napa County.

Drainage area.--9.81 sq mi.

Records available.--July 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 170 ft (from topographic map).

Average discharge.--7 years, 7.62 cfs (5,520 acre-ft per year).

Extremes.--Maximum discharge during year, 1,450 cfs Jan. 5 (gage height, 10.44 ft), from rating curve extended above 330 cfs on basis of slope-area measurement at gage height 8.60 ft; no flow for many days.
1958-65: Maximum discharge, that of Jan. 5, 1965; no flow for many days in each year.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Small storage and release affects summer flow.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	0.1	1.1	31	11	3.9	5.5	6.7	1.1	0.4	0	0
2	.1	3.6	1.4	41	9.8	3.6	3.9	6.4	1.0	.4	0	0
3	.1	2.4	1.3	97	9.2	3.3	3.3	5.7	1.0	.4	0	0
4	.1	2.8	1.1	149	8.9	2.5	3.0	5.5	1.0	.4	0	0
5	.1	.4	1.0	417	20	2.5	2.8	5.3	1.0	.4	0	.9
6	.1	.3	.9	258	15	2.9	2.8	6.4	1.0	.3	0	0
7	1.1	.2	.8	140	9.8	2.4	2.8	4.5	1.0	.3	0	0
8	.1	.2	.8	77	8.5	2.2	2.8	4.3	1.0	.2	1.0	0
9	.1	8.4	.7	53	8.0	2.0	108	5.5	.9	.1	0	0
10	.1	25	.7	45	7.4	2.0	48	3.9	.9	.1	0	0
11	.1	8.6	.9	34	7.2	2.0	27	3.6	.9	.1	.1	0
12	0	8.7	.8	30	7.0	2.0	19	3.5	.7	.1	0	0
13	0	3.0	.7	24	7.0	2.0	14	3.2	.6	.1	0	0
14	0	1.8	.6	20	6.2	1.8	13	3.2	.5	.1	0	.5
15	0	1.4	.7	18	6.0	1.8	33	3.0	.4	.1	0	0
16	0	1.0	.7	16	5.7	1.8	54	2.8	.4	.1	.1	0
17	0	.8	.7	14	5.5	1.8	27	2.2	.4	.1	.1	0
18	0	.6	.7	13	5.5	1.8	40	2.2	.4	.1	.3	0
19	0	.6	1.5	11	5.1	1.6	36	2.2	.5	.1	.2	0
20	0	.6	10	10	4.9	1.6	27	2.2	.5	.1	.2	0
21	0	.5	100	95	4.7	1.4	30	2.0	.4	.1	.1	0
22	0	.6	500	8.9	4.7	1.4	22	2.0	.4	.1	.1	0
23	0	2.4	316	53	4.3	1.4	18	2.0	.3	.1	.9	0
24	0	3.6	98	43	4.1	1.3	15	1.6	.4	.1	.1	0
25	0	.5	47	22	4.1	1.2	13	1.4	.4	.1	.1	0
26	0	.5	184	18	3.9	1.8	11	1.4	.4	.1	.1	0
27	0	.5	110	16	6.0	5.5	9.5	1.4	.4	.1	.7	0
28	0	.5	72	14	4.3	3.6	8.5	1.4	.5	.1	.1	0
29	0	1.1	80	13	-----	2.8	8.9	1.1	.4	.1	0	0
30	.6	1.1	63	13	-----	2.6	7.7	1.1	.4	.7	0	0
31	2.5	-----	44	12	-----	5.1	-----	1.1	-----	0	0	-----
Total	6.0	81.8	1,641.1	1,720.4	203.8	73.6	641.7	98.8	19.2	5.6	4.2	1.4
Mean	0.19	2.73	52.9	55.5	7.28	2.37	21.4	3.19	0.64	0.18	0.14	0.05
Ac-ft	1.2	162	3,260	3,410	404	146	1,270	196	38	11	8.3	2.8

Calendar year 1964 Max 500 Min 0 Mean 7.63 Ac-ft 5,540
Water year 1964-65 Max 500 Min 0 Mean 12.3 Ac-ft 8,920

Peak discharge (base, 200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	†1500	9.03	1,150	1-23	1700	4.76	276
12-26	1330	5.50	420	4- 9	1230	4.66	257
1- 5	1800	10.44	1,450				

† About.

Note.--No gage-height record Dec. 7-22, Jan. 15-20, July 11-29, July 31 to Aug. 2.

11-4585. Sonoma Creek at Boyes Hot Springs, Calif.

Location.--Lat 38°18'49", long 122°29'09", in Agua Caliente Grant, on left bank 10 ft downstream from county highway bridge at Boyes Hot Springs, Sonoma County, and 2.2 miles northwest of Sonoma.

Drainage area.--58.3 62.2 sq mi.

Records available.--February 1955 to September 1965. *moved July 27, 1957*

Gage.--Water-stage recorder (digital). Altitude of gage is 75 ft (from topographic map).

Average discharge.--10 years, 66.7 cfs (48,290 acre-ft per year); median of yearly mean discharges, 49 cfs (35,500 acre-ft per year).

Extremes.--Maximum discharge during year, 7,520 cfs Jan. 5 (gage height, 15.56 ft); no flow Oct. 19, 20, 27.

1955-65: Maximum discharge, 8,880 cfs Dec. 22, 1955 (gage height, 17.10 ft), from rating curve extended above 4,100 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

Remarks.--Records good except those for period of no gage-height record, which are fair. Some regulation during summer months at swimming pools above station. No diversion above station.

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DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.1	3.0	11	185	78	29	28	44	11	2.9	2.3	1.7
2	.1	7.8	11	344	74	24	18	44	11	3.4	1.9	1.7
3	.1	2.5	9.0	647	71	21	15	44	11	3.2	1.9	1.5
4	.2	1.4	8.2	1,070	72	19	13	42	12	2.8	1.7	1.0
5	.2	1.0	7.8	2,790	124	23	11	35	14	2.4	1.3	1.3
6	.2	.8	7.0	1,490	83	30	10	33	12	2.6	1.2	1.2
7	.2	.8	6.7	740	71	26	18	31	11	3.1	1.6	1.2
8	.2	1.3	6.4	397	64	23	48	24	11	3.5	1.3	1.1
9	.2	.82	6.0	271	58	21	425	27	10	3.2	1.5	1.1
10	.2	345	6.7	210	54	20	250	26	9.1	1.9	1.5	1.0
11	.2	108	8.6	190	48	19	140	23	8.3	1.8	3.6	.9
12	.2	102	7.4	151	47	21	100	23	7.2	1.6	4.2	.8
13	.2	32	6.0	131	47	22	93	24	5.5	1.6	2.3	.7
14	.2	18	5.7	122	47	18	87	25	4.5	1.8	1.9	.8
15	.2	13	6.7	110	45	17	220	22	4.8	1.8	1.6	1.0
16	.2	12	6.7	102	40	15	292	19	5.4	1.2	1.6	1.0
17	.2	9.0	6.4	96	39	15	164	17	5.0	1.2	1.6	1.0
18	.1	7.8	6.0	89	36	15	246	17	5.0	1.1	1.4	1.2
19	0	6.7	44	89	35	13	210	16	6.1	1.1	1.4	1.4
20	0	5.7	87	83	32	12	163	18	4.4	1.3	1.8	1.4
21	.1	5.4	1,520	78	32	12	164	21	3.9	1.6	1.6	1.5
22	.1	7.4	2,420	76	31	12	124	20	4.4	1.8	1.6	1.5
23	.2	6.4	2,160	277	28	9.5	106	17	5.0	1.7	1.5	1.5
24	.2	5.2	768	250	27	9.5	92	15	4.1	1.8	1.5	1.5
25	.2	6.4	333	140	24	9.5	81	15	3.9	2.0	1.9	1.7
26	.1	6.4	820	120	24	10	68	14	4.2	2.1	2.0	1.4
27	0	6.0	744	108	55	44	60	11	3.3	2.1	2.1	1.7
28	.4	7.8	517	100	35	18	55	11	3.0	2.4	1.8	1.8
29	3.6	12	474	96	-----	12	50	13	3.2	2.3	1.5	1.6
30	2.5	9.0	352	89	-----	11	46	14	2.7	2.3	1.7	1.2
31	1.2	-----	258	87	-----	37	-----	13	-----	2.4	1.7	---
TOTAL	11.8	831.8	10,630.3	10,728	1,421	587.5	3,397	718	206.0	66.0	56.5	38.4
MEAN	.38	27.7	343	346	50.8	19.0	113	23.2	6.87	2.13	1.82	1.28
AC-FT	23	1,650	21,080	21,280	2,820	1,170	6,740	1,420	409	131	112	76

CALENDAR YEAR 1964 MAX 2,420 MIN 0 MEAN 44.8 AC-FT 32,500
 WATER YEAR 1964-65 MAX 2,790 MIN 0 MEAN 78.6 AC-FT 56,910

Peak discharge (base, 1,400 cfs)

Note.--No gage-height record Apr. 5-14.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0400	6.18	1,500	12-26	2100	6.91	1,880
12-23	0400	11.45	4,480	1- 5	1800	15.56	7,520

NOVATO CREEK BASIN

11-4595. Novato Creek near Novato, Calif.

Location.--Lat 38°06'45", long 122°35'05", in Novato Grant, on right bank 500 ft downstream from highway bridge and 1 mile west of U. S. Highway 101 in Novato, Marin County.

Drainage area.--17.5 sq mi.

Records available.--October 1946 to September 1965. Records of diversions for water years 1952-53, estimated.

Gage.--Water-stage recorder. Altitude of gage is 45 ft (from topographic map).

Average discharge.--19 years, 10.6 cfs (7,670 acre-ft per year), adjusted for diversion.

Extremes.--Maximum discharge during year, 1,120 cfs Jan. 5 (gage height, 7.53 ft); no flow Oct. 1-27, Sept. 1-15.

1946-65: Maximum discharge, 1,330 cfs Jan. 20, 1964 (gage height, 8.74 ft); 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, 3,150 acre-ft Sept. 30, 1964, and 3,100 acre-ft Sept. 30, 1965. Diversion from Stafford Lake for municipal water supply began Apr. 25, 1952, and amounted to 1,840 acre-ft for water year 1965.

Cooperation.--Record of diversions furnished by North Marin County Water District.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	5.0	0.8	20	8.6	4.1	2.0	5.3	0.8	0.5	0.2	0
2	0	4.7	.8	70	8.9	2.6	2.2	4.6	.8	.5	.2	0
3	0	.5	.6	66	8.6	2.5	1.9	4.3	.8	.5	.2	0
4	0	.4	.6	243	16	2.6	1.9	4.1	.8	.4	.2	0
5	0	.3	.6	505	33	2.8	1.9	3.5	.8	.4	.2	0
6	0	.3	.5	430	21	2.3	1.9	3.2	.8	.3	.2	0
7	0	.3	.6	236	15	2.1	10	2.9	.8	.3	.2	0
8	0	3.4	.5	130	13	2.0	20	2.8	.7	.3	.2	0
9	0	3.8	.5	84	11	2.0	87	2.8	.7	.2	.2	0
10	0	1.7	.6	57	9.8	1.8	71	2.8	.7	.2	.2	0
11	0	6.4	.6	49	8.6	2.0	38	2.3	.7	.2	.6	0
12	0	4.4	.5	38	7.5	2.7	26	2.2	.6	.2	.3	0
13	0	2.3	.5	28	6.8	1.9	18	2.1	.6	.2	.2	0
14	0	1.5	.5	21	6.6	1.6	15	1.9	.6	.3	.2	0
15	0	1.2	.5	18	6.2	1.7	24	1.9	.6	.2	.2	0
16	0	.9	.6	16	6.2	1.6	33	1.7	.6	.2	.2	.1
17	0	.9	.6	14	6.6	1.6	20	1.7	.6	.2	.2	.1
18	0	.8	1.0	12	6.6	1.5	62	1.7	.6	.3	.2	.2
19	0	.8	4.0	12	6.2	1.4	55	1.5	.6	.3	.3	.2
20	0	.7	6.0	11	6.2	1.4	38	1.5	.6	.3	.3	.2
21	0	1.2	27	10	6.6	1.4	30	1.4	.6	.3	.3	.3
22	0	.8	105	9.8	5.5	1.4	24	1.4	.4	.3	.3	.4
23	0	.7	192	42	4.6	1.4	18	1.3	.5	.3	.3	.4
24	0	.6	73	39	4.3	1.4	14	1.2	.6	.3	.2	.2
25	0	.7	34	21	4.1	1.4	10	1.1	.5	.3	.2	.2
26	0	.6	55	18	4.6	1.4	8.0	1.1	.4	.3	.2	.2
27	0	.6	58	16	11	2.9	7.8	1.0	.4	.3	.2	.2
28	6.1	.6	49	35	7.1	1.4	6.4	.9	.4	.3	.2	.2
29	11	.5	49	8.9	-----	1.4	6.2	.9	.4	.3	.2	.2
30	.8	.6	38	8.0	-----	1.7	6.4	.8	.5	.3	.2	.1
31	.3	-----	29	8.0	-----	8.7	-----	.8	-----	.2	.1	-----
Total	18.2	62.5	729.9	2,275.7	260.2	66.7	659.6	66.7	18.5	9.2	7.1	3.2
Mean	0.59	2.08	23.5	73.4	9.29	2.15	22.0	2.15	0.62	0.30	0.23	0.11
Ac-ft	36	124	1,450	4,510	516	132	1,310	132	37	18	14	6.3

Calendar year 1964 Max 192 Min 0 Mean 4.09 Ac-ft 2,980
 Water year 1964-65 Max 505 Min 0 Mean 11.4 Ac-ft 8,290

11-4600. Corte Madera Creek at Ross, Calif.

Location.--Lat 37°57'45", long 122°33'20", in Punta de Quentin Grant, on left bank behind fire station at Ross, Marin County, 1.7 miles southwest of San Rafael and 4 miles upstream from mouth.

Drainage area.--18.1 sq mi.

Records available.--February 1951 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 8 ft (from topographic map).

Average discharge.--14 years, 25.7 cfs (18,610 acre-ft per year); median of yearly mean discharges, 20 cfs (14,500 acre-ft per year).

Extremes.--Maximum discharge during year, 1,400 cfs Jan. 5 (gage height, 11.57 ft); minimum daily, 0.2 cfs Oct. 1-24, Sept. 29. 1951-65: 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 in most years.

Remarks.--Records good. Flow regulated by Phoenix Lake (capacity, 612 acre-ft). Diversion on tributary above station by Marin Municipal Water District.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-27)

4.3	0.2	4.8	19
4.4	1.0	5.0	39
4.5	3.1	6.0	175
4.6	6.6	9.0	754
4.7	12		

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DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.2	14	4.0	73	17	8.6	41	9.9	3.4	2.3	0.7	0.5
2	.2	23	4.0	259	16	7.7	28	9.5	3.1	2.3	.6	.6
3	.2	2.9	3.2	338	14	7.3	21	9.0	4.4	1.5	1.0	1.0
4	.2	2.0	3.4	678	41	7.0	16	8.5	3.1	1.4	.6	.8
5	.2	1.6	3.1	606	79	15	14	8.5	2.8	1.4	.5	.5
6	.2	1.5	2.6	508	40	12	12	8.5	2.8	1.4	.6	1.4
7	.2	1.5	2.8	285	30	8.7	35	8.5	2.8	1.3	.6	.5
8	.2	24	2.6	131	25	8.0	87	7.5	3.1	1.3	1.3	.5
9	.2	26	2.6	79	21	7.8	246	7.5	3.1	1.3	2.2	.5
10	.2	177	2.8	54	18	7.5	181	7.0	3.1	1.2	2.0	.5
11	.2	55	2.7	43	16	7.4	84	7.0	2.6	1.2	5.7	.6
12	.2	39	2.4	32	15	8.2	54	6.6	2.6	1.1	1.3	.5
13	.2	13	2.4	25	14	12	36	6.6	2.8	1.0	.9	.4
14	.2	6.6	2.6	21	12	7.6	30	6.2	2.8	1.0	.8	.5
15	.2	4.7	2.7	18	11	7.2	64	5.8	2.6	.9	.8	1.1
16	.2	4.2	2.6	16	10	6.8	80	5.8	2.4	.9	.7	.6
17	.2	4.0	2.4	15	9.5	6.6	49	5.8	2.1	.8	1.0	.4
18	.2	3.7	6.5	14	9.0	6.6	69	5.4	2.6	.8	.9	1.0
19	.2	3.7	25	14	8.6	6.3	55	5.4	2.4	.9	.8	.8
20	.2	3.4	69	13	8.4	6.2	45	5.0	2.8	.9	.7	.9
21	.2	6.7	454	12	8.0	6.2	39	5.0	2.1	.9	.9	.7
22	.2	4.1	593	11	7.5	6.0	29	4.7	2.1	.9	.8	.7
23	.2	3.4	567	116	7.1	5.8	24	4.7	1.9	.9	.9	.6
24	.2	3.2	230	91	6.8	5.8	22	4.7	1.9	.8	.8	.5
25	.3	6.5	102	51	6.6	5.7	19	4.7	1.9	.9	.7	.5
26	.3	3.5	272	38	7.8	6.1	17	4.0	2.1	.9	.6	.5
27	.9	3.4	277	31	40	38	15	4.0	1.9	.9	.6	.5
28	34	3.6	190	26	10	12	13	3.7	2.1	.8	.6	.6
29	52	3.6	124	23	-----	9.8	12	3.7	2.1	.8	.5	.2
30	4.4	3.7	112	21	-----	11	11	3.7	2.1	.8	.5	.6
31	1.5	-----	125	18	-----	92	-----	3.7	-----	.8	.5	---
TOTAL	98.2	452.5	3,195.4	3,661	508.3	362.9	1,448	190.6	77.6	34.3	31.1	19.0
MEAN	3.17	15.1	103	118	18.2	11.7	48.3	6.15	2.59	1.11	1.00	0.63
AC-FT	195	899	6,340	7,260	1,010	720	2,870	378	154	68	62	38

CALENDAR YEAR 1964 MAX 593 MIN 0.20 MEAN 16.1 AC-FT 11,720
WATER YEAR 1964-65 MAX 678 MIN 0.20 MEAN 27.6 AC-FT 19,990

Peak discharge (base, 1,000 cfs).--Dec. 23 (0330) 1,180 cfs (10.73 ft); Jan. 5 (1800) 1,400 cfs (11.57 ft).

11-4608. Walker Creek near Tomales, Calif.

Location.--Lat 38°12'35", long 122°51'35", in Nicasio Grant, on left bank 1,300 ft upstream from Chileno Creek, and 3.5 miles south-east of Tomales, Marin County.

Drainage area.--37.1 sq mi.

Records available.--June 1959 to September 1965.

Average discharge.--6 years, 31.2 cfs (22,590 acre-ft per year).

Gage.--Water-stage recorder (digital) and concrete control. Altitude of gage is 70 ft (from topographic map).

Extremes.--Maximum discharge during year, 4,340 cfs Jan. 5 (gage height, 19.86 ft); no flow for several months.

1959-65: Maximum discharge, that of Jan. 5, 1965; no flow for several months in each year.

Flood of Feb. 24, 1958, reached a stage of 19.8 ft, from floodmarks (discharge, 4,300 cfs).

Remarks.--Records good. No regulation; small diversions above station for irrigation and stock watering.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 12-17, Jan. 25 to Feb. 13, July 23 to Aug. 17)

4.2	0	4.7	5.5	7.0	313
4.3	.1	4.9	14	9.0	720
4.4	.3	5.1	29	11.0	1,220
4.5	1.0	5.5	73	14.0	2,130
4.6	3.0	6.0	146		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1		0.1	11	140	36	9.1	23	14	2.1	0.3		
2		.5	15	318	30	8.3	15	13	1.9	.3		
3		2.4	13	584	26	10	14	12	2.0	.3		
4		.9	10	963	26	12	13	11	2.3	.3		
5		.4	10	1,890	100	12	12	11	2.5	.3		
6		.3	10	1,500	53	13	12	11	2.7	.2		
7		.2	9.1	816	41	13	14	11	2.6	.2		
8		.9	8.3	372	36	12	74	11	2.3	.2		
9		31	8.3	225	31	10	323	10	2.1	.2		
10		153	8.7	159	27	9.5	274	9.5	1.8	.2		
11		60	12	128	24	8.7	146	8.7	1.4	.1		
12		64	10	96	21	9.1	97	8.3	1.1	.1		
13		47	7.9	74	19	9.5	71	8.3	.9	.1		
14		28	7.5	59	19	8.7	63	7.7	1.0	.1		
15		17	6.7	49	16	8.7	78	7.0	1.0	.1		
16		12	7.9	41	14	7.9	157	6.4	.9	.1		
17		10	6.7	36	12	7.5	85	6.0	.9	.1		
18		11	6.7	32	11	7.1	275	5.1	1.0	.1		
19		9.2	21	30	10	6.7	290	4.7	.8	.1		
20		8.0	43	29	10	6.3	192	4.7	.7	.1		
21		7.4	656	26	9.5	5.9	168	4.7	.7	0		
22		9.9	1,060	24	8.7	5.5	110	4.4	.7	0		
23		7.7	1,010	126	9.1	5.5	81	3.9	.8	0		
24		6.5	477	154	8.3	5.5	63	3.3	.7	0		
25		7.5	259	87	7.5	5.2	51	2.9	.9	0		
26		7.3	579	71	7.5	5.9	38	2.9	.6	0		
27		6.1	597	59	29	17	27	2.7	.4	0		
28		8.1	477	52	12	10	21	2.5	.3	0		
29		10	443	46	-----	9.1	18	2.3	.2	0		
30		8.5	306	42	-----	9.1	16	2.4	.3	0		
31		-----	235	39	-----	35	-----	2.3	-----	0		-- --
TOTAL	0	534.9	6,331.8	8,267	653.6	302.8	2,821	214.7	37.6	3.5	0	0
MEAN	0	17.8	204	267	23.3	9.77	94.0	6.93	1.25	0.11	0	0
AC-FT	0	1,060	12,560	16,400	1,300	601	5,600	426	75	6.9	0	0

Calendar year 1964 Max 1,060 Min 0 Mean 30.3 Ac-ft 22,030
Water year 1964-65 Max 1,890 Min 0 Mean 52.5 Ac-ft 38,030

Peak discharge (base, 1,000 cfs).--Dec. 21 (1715) 1,770 cfs (12.86 ft); Jan. 5 (1930) 4,340 cfs (19.86 ft).

11-4609.2. Salmon Creek at Bodega, Calif.

Location.--Lat 38°20'54", long 122°58'45", in Estero Americano Grant, on left bank 100 ft upstream from private road bridge, 0.3 mile upstream from unnamed tributary, and 0.4 mile northwest of Bodega, Sonoma County.

Drainage area.--15.7 sq mi.

Records available.--July 1962 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 80 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,540 cfs Jan. 5 (gage height, 16.25 ft); no flow for many days.
1962-65: Maximum discharge, that of Jan. 5, 1965; no flow for many days in each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair. No regulation or diversion above station.
Records of water temperatures for the water year 1965 are published in Part 2 of this report.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 28 to Jan. 1, May 11-18, July 28 to Sept. 30)

Oct. 1 to Dec. 20				Dec. 21 to Sept. 30			
3.6	0	4.3	4.8	5.0	29	8.0	375
3.7	.1	4.5	9.4	5.5	64	11.0	750
3.8	.2	4.7	15	6.0	115		
3.9	.5	5.0	29				
4.0	1.0	5.5	62				
4.1	1.9						

Note.--Same as preceding table
below 5.0 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	1.3	16	34	15	9.2	22	15	1.6	0.4	0.1	
2	0	2.4	12	280	14	7.7	12	15	1.5	.4	.1	
3	0	3.5	8.7	298	12	6.8	8.9	14	1.5	.2	.1	
4	0	1.2	6.8	381	22	6.1	7.7	13	1.5	.4	.1	
5	0	.7	6.8	682	90	7.7	6.5	13	1.5	.4	.1	
6	0	.5	5.2	314	37	8.9	5.6	13	1.4	.3	.1	
7	0	.5	4.8	162	25	7.0	9.4	12	1.4	.2	.1	
8	0	1.5	4.3	76	20	6.3	43	12	1.4	.2	0	
9	0	51	4.0	52	16	5.9	132	10	1.4	.3	0	
10	0	46	4.3	41	14	5.9	58	9.4	1.4	.2	0	
11	0	25	6.3	64	13	5.6	31	7.8	1.3	.2	.1	
12	0	23	4.4	42	11	5.9	22	6.8	1.3	.2	.2	
13	0	9.4	3.6	32	11	6.3	18	6.4	1.3	.2	.2	
14	0	5.4	3.5	27	10	5.0	21	5.8	1.3	.2	.1	
15	0	3.5	4.0	23	8.7	4.6	58	4.3	1.3	.2	.1	
16	0	2.6	3.5	19	7.7	4.4	86	3.5	1.3	.1	0	
17	0	2.0	3.1	17	7.2	4.4	40	2.9	1.3	.1	0	
18	0	1.7	3.4	16	7.0	4.3	215	2.1	1.3	.1	0	
19	0	1.6	25	16	6.5	4.0	141	2.3	1.3		0	
20	0	1.4	19	16	6.1	3.6	102	2.3	1.3	.1	0	
21	0	1.5	206	14	5.6	3.5	119	2.3	1.3	.1	0	
22	0	2.1	311	14	5.4	3.2	58	2.2	1.2	.1	0	
23	0	1.7	533	90	5.0	3.1	43	2.1	1.2	.1	0	
24	0	1.5	367	72	4.6	2.9	33	2.0	1.2	.1	0	
25	0	2.6	116	47	4.4	2.8	27	1.9	.9	.1	0	
26	0	2.5	366	36	5.0	4.3	24	1.8	.5	.1	0	
27	0	1.6	218	28	50	26	21	1.8	.6	.1	0	
28	0	40	150	24	12	8.9	20	1.7	.4	.1	0	
29	0	29	111	21	-----	6.3	18	1.7	.3	.1	0	
30	2.8	13	79	19	-----	5.9	16	1.7	.2	.1	0	
31	.7	-----	51	16	-----	36	-----	1.6	-----	.1	0	---
TOTAL	3.5	301.3	2,656.7	2,973	445.2	222.5	1,418.1	191.4	35.4	5.6	1.4	0
MEAN	0.11	10.0	85.7	95.9	15.9	7.18	47.3	6.17	1.18	0.18	0.05	0
AC-FT	6.9	598	5,270	5,900	883	441	2,810	380	70	11	2.8	0

CALENDAR YEAR 1964 MAX 533 MIN 0 MEAN 12.9 AC-FT 9,360
WATER YEAR 1964-65 MAX 682 MIN 0 MEAN 22.6 AC-FT 16,370

Peak discharge (base, 750 cfs).--Dec. 23 (0445) 1,130 cfs (13.64 ft); Jan. 5 (1730) 1,540 cfs (16.25 ft).

Note.--No gage-height record May 23 to June 23, July 10-27.

RUSSIAN RIVER BASIN

11-4609.4. Russian River near Redwood Valley, Calif.

Location.--Lat 39°19'10", long 123°13'20", in NW¼ sec.20, T.17 N., R.12 W., on left bank 600 ft upstream from Rocky Creek and 3.8 miles north of town of Redwood Valley.

Drainage area.--14.1 sq mi.

Records available.--August 1963 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 800 ft (from topographic map).

Extremes.--Maximum discharge during year, 4,400 cfs Dec. 22 (gage height, 11.71 ft); no flow Oct. 1 to Nov. 1, July 7 to Sept. 30. 1963-65: Maximum discharge, that of Dec. 22, 1964; no flow for several months in each year.

Remarks.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1		0	114	148	25	8.7	7.0	9.8	1.8	0.1		
2		1.6	85	164	23	8.4	6.7	8.4	1.7	.1		
3		.5	45	242	21	7.6	6.2	7.6	1.6	.1		
4		.2	29	255	21	7.0	5.7	6.7	1.5	.1		
5		.2	20	1,030	33	7.0	5.2	6.2	1.4	.1		
6		.1	15	548	24	7.0	5.0	6.2	1.3	.1		
7		.1	12	260	21	7.0	6.2	5.2	1.3	0		
8		7.4	10	136	19	6.7	8.4	5.0	1.2	0		
9		21	9.0	94	18	6.2	40	4.6	1.2	0		
10		105	18	90	16	6.2	30	4.4	1.1	0		
11		99	28	104	15	6.2	21	4.4	1.1	0		
12		59	16	79	14	6.2	16	4.4	1.0	0		
13		29	12	62	13	6.0	14	4.0	1.0	0		
14		14	14	50	12	5.7	14	4.0	.9	0		
15		8.0	14	41	11	5.4	106	3.8	.9	0		
16		5.4	11	35	11	5.2	114	3.6	.9	0		
17		4.2	9.8	30	9.8	5.2	68	3.6	.9	0		
18		3.6	10	25	9.8	5.2	134	3.4	.9	0		
19		3.3	96	23	9.0	5.0	102	3.4	.8	0		
20		3.2	217	21	9.0	5.0	102	3.6	.8	0		
21		3.3	1,410	19	8.7	4.8	92	3.4	.8	0		
22		3.2	2,560	18	8.4	4.8	66	3.4	.8	0		
23		2.6	998	92	7.6	4.8	45	3.2	.6	0		
24		4.0	503	180	7.6	4.8	36	3.0	.4	0		
25		14	258	84	7.3	4.6	30	2.8	.4	0		
26		9.8	340	61	7.6	7.6	24	2.6	.4	0		
27		20	272	49	20	28	19	2.5	.3	0		
28		245	225	41	10	11	16	2.3	.2	0		
29		84	222	37	-----	8.4	14	2.2	.2	0		
30		62	220	31	-----	8.4	11	2.0	.1	0		
31		---+ -	182	29	-----	7.6	-----	1.9	-----	0		
TOTAL	0	812.7	7,974.8	4,078	411.8	221.7	1,164.4	131.6	27.5	.6	0	0
MEAN	0	27.1	257	132	14.7	7.15	38.8	4.25	0.92	0.02	0	0
AC-FT	0	1.610	15.820	8.090	817	440	2.310	261	55	1.2	0	0

CALENDAR YEAR 1964 MAX 2,560 MIN 0 MEAN 33.5 AC-FT 24,340
 WATER YEAR 1964-65 MAX 2,560 MIN 0 MEAN 40.6 AC-FT 29,400

Peak discharge (base, 600 cfs).--Dec. 22 (1100) 4,400 cfs (11.71 ft); Jan. 5 (1000) 2,970 cfs (9.63 ft).

Note.--No gage-height record May 23 to June 23.

11-4610. Russian River near Ukiah, Calif.

Location.--Lat 39°12'07", long 123°11'55", in Yokayo Rancho Grant, on left bank 200 ft downstream from York Creek, 0.7 mile upstream from East Fork, and 3.6 miles north of Ukiah, Mendocino County.

Drainage area.--99.7 sq mi.

Records available.--August 1911 to September 1913, October 1952 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 612.02 ft above mean sea level (levels by Corps of Engineers). Prior to October 1952, staff gage at bridge 0.6 mile downstream at different datum. Oct. 1, 1952, to Feb. 16, 1959, at datum 2.00 ft higher. Feb. 17, 1959, to Sept. 30, 1961, at datum 1.00 ft higher.

Average discharge.--15 years, 175 cfs (126,700 acre-ft per year); median of yearly mean discharges, 152 cfs (110,000 acre-ft per year).

Extremes.--Maximum discharge during year, 17,900 cfs Dec. 22 (gage height, 19.44 ft); no flow Oct. 1-15.

1911-13, 1952-65: 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 except those for periods of no gage-height record, which are poor. No regulation; small diversions above station for irrigation. Records of suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	1	851	968	172	107	67	78	14	5.8	1.5	0.8
2	0	5	662	1,100	161	116	61	72	14	4.8	1.6	.8
3	0	10	389	2,090	152	116	57	66	12	4.4	1.4	.8
4	0	12	256	1,940	134	113	53	57	13	4.8	1.1	.7
5	0	12	188	5,460	204	104	50	49	13	4.4	1.0	.7
6	0	12	140	3,430	192	95	48	44	14	3.4	1.0	.6
7	0	12	113	1,910	210	86	80	43	13	2.6	.8	.5
8	0	26	97	1,170	210	70	180	42	13	2.7	.8	.5
9	0	136	85	770	201	60	540	41	14	2.7	.8	.6
10	0	721	156	622	204	49	472	40	15	2.7	.8	.5
11	0	634	441	634	204	42	364	38	13	2.4	.9	.5
12	0	588	223	505	182	42	276	36	12	3.0	1.2	.6
13	0	364	154	418	192	43	231	34	13	2.7	1.4	.6
14	0	219	152	328	188	43	213	33	13	2.0	1.2	.6
15	0	137	165	296	163	41	675	32	13	2.4	1.0	.5
16	.1	100	129	276	154	39	828	29	13	1.6	1.0	.4
17	.1	78	113	255	132	37	525	27	13	1.6	1.0	.3
18	.1	56	101	243	105	36	905	25	13	1.5	1.0	.2
19	.1	55	380	231	93	35	704	25	13	1.6	1.0	.2
20	.1	50	971	213	88	34	600	25	12	1.2	1.0	.4
21	.1	48	7,310	201	82	32	573	25	11	1.1	.9	.2
22	.1	76	13,300	190	80	31	422	25	11	1.2	.9	.1
23	.1	58	7,570	516	75	31	348	23	10	1.0	1.0	.2
24	.1	54	4,300	1,250	80	30	273	22	6.2	1.0	1.0	.3
25	.1	195	2,000	510	78	30	210	20	8.1	1.0	.9	.5
26	.1	138	2,360	344	72	43	163	20	9.6	1.0	1.0	.5
27	.1	158	2,100	306	135	186	126	18	10	1.0	.8	.6
28	.1	1,690	1,860	273	111	115	107	18	9.1	1.2	.8	.6
29	.1	721	1,920	234	-----	92	95	16	7.2	1.5	.9	.7
30	.1	491	1,680	195	-----	81	84	16	6.7	1.5	.8	.7
31	.1	-----	1,380	180	-----	73	-----	15	-----	1.5	.8	-----
Total	1.6	6,857	51,546	27,058	4,054	2,052	9,330	1,054	351.9	71.3	31.3	15.2
Mean	0.05	229	1,663	873	145	66.2	311	34.0	11.7	2.30	1.01	0.51
Ac-ft	3.2	13,600	102,200	53,670	8,040	4,070	18,510	2,090	698	141	62	30

Calendar year 1964 Max 13,300 Min 0 Mean 217 Ac-ft 157,500

Water year 1964-65 Max 13,300 Min 0 Mean 281 Ac-ft 203,100

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1200	19.44	17,900	1-5	1200	16.24	13,500
12-26	1900	7.20	4,020				

Note.--No gage-height record Oct. 1 to Nov. 2, Mar. 15-24, Mar. 30 to Apr. 7, May 12-14.

RUSSIAN RIVER BASIN

11-4615. East Fork Russian River near Calpella, Calif.

Location.--Lat 39°14'35", long 123°08'10", in NE¼ sec.13, T.16 N., R.12 W., on left bank 0.5 mile downstream from Cold Creek and 3.6 miles east of Calpella.

Drainage area.--93.0 sq mi.

Records available.--October 1941 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Altitude of gage is 800 ft (from topographic map). Prior to May 28, 1957, at site 0.9 mile downstream at different datum.

Average discharge.--24 years, 330 cfs (238,900 acre-ft per year).

Extremes.--Maximum discharge during year, 18,700 cfs Dec. 22 (gage height, 20.21 ft); minimum daily, 29 cfs Oct. 13.
1941-65: Maximum discharge, that of Dec. 22, 1964; 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 p. 392). Small diversion for irrigation above station. Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 21				Dec. 21 to Sept. 30			
0.7	26	4.0	900	1.1	91	6.0	2,300
1.0	52	6.0	2,020	1.5	146	9.0	4,900
1.5	120	8.0	3,500	2.0	245	12.0	8,000
2.0	216	10.0	5,300	3.0	560	16.0	12,800
3.0	495			4.0	1,020		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	198	305	683	915	445	364	250	372	206	188	190	200
2	202	310	557	1,230	430	359	344	368	207	195	188	209
3	200	302	430	1,270	422	357	339	361	204	198	186	218
4	202	300	346	1,920	398	326	339	363	204	203	192	221
5	185	300	355	6,080	480	192	338	360	210	200	193	221
6	174	292	362	3,240	442	194	337	335	207	192	196	207
7	284	294	352	1,670	419	198	345	361	216	187	198	206
8	308	325	346	1,090	410	188	508	361	226	188	205	202
9	313	430	342	910	402	184	747	361	217	177	202	209
10	305	790	384	812	397	204	524	340	207	185	194	204
11	301	754	435	830	392	153	438	339	223	187	206	213
12	279	526	367	717	387	104	272	336	209	178	234	241
13	29	403	356	650	386	182	356	319	204	182	246	316
14	226	316	267	609	385	165	400	317	212	192	234	307
15	274	287	358	572	381	172	928	308	192	195	236	308
16	276	308	341	544	377	170	764	306	199	197	236	308
17	292	302	336	524	374	170	582	308	202	189	205	313
18	297	300	335	512	372	173	1,080	305	207	199	193	312
19	307	300	583	512	369	164	746	307	203	192	195	295
20	307	297	1,080	496	368	164	704	310	198	189	192	293
21	302	302	5,080	456	365	163	647	337	193	191	204	294
22	302	310	12,500	428	361	161	534	342	197	192	202	308
23	294	305	5,220	762	359	160	481	337	195	198	206	290
24	297	308	2,790	1,180	356	119	447	333	194	183	190	308
25	294	346	1,510	640	357	92	429	317	193	181	189	310
26	294	325	2,040	560	359	172	415	311	193	190	197	312
27	297	307	1,960	524	447	323	395	300	199	202	209	293
28	297	1,220	1,750	496	371	225	391	278	192	200	234	288
29	300	528	1,790	470	-----	202	383	224	187	187	233	302
30	297	490	1,430	459	-----	328	376	218	184	190	199	320
31	287	-----	1,080	452	-----	337	-----	211	-----	192	190	---
TOTAL	8,220	11,882	45,765	31,530	11,011	6,465	14,839	9,945	6,080	5,919	6,374	8,028
MEAN	265	396	1,476	1,017	393	209	495	321	203	191	206	268
AC-FT	16,300	23,570	90,770	62,540	21,840	12,820	29,430	19,730	12,060	11,740	12,640	15,920

CALENDAR YEAR 1964 MAX 12,500 MIN 17 MEAN 333 AC-FT 241,400
 WATER YEAR 1964-65 MAX 12,500 MIN 29 MEAN 455 AC-FT 329,400
 Peak discharge (base, 3,300 cfs).--Dec. 22 (1330) 18,700 cfs (20.21 ft); Jan. 5 (1300) 14,400 cfs (17.19 ft).

11-4620. East Fork Russian River near Ukiah, Calif.

Location--Lat 39°11'45", long 123°11'30", in Yokayo Rancho Grant, 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, Mendocino County.

Drainage area--105 sq mi.

Records available--August 1911 to September 1913, October 1951 to June 1956, October 1957 to September 1965.

Gage--Water-stage recorder (digital) and concrete control. Datum of gage is 614.43 ft above mean sea level (levels by Corps of Engineers). Prior to October 1951, staff gage at site half a mile upstream at different datum. October 1951 to June 1956, water-stage recorder at site 1.0 mile upstream at different datum.

Average discharge--14 years (1911-13, 1951-55, 1957-65), 333 cfs (241,100 acre-ft per year).

Extremes--Maximum discharge during year, 6,780 cfs Dec. 30 (gage height, 10.82 ft); minimum daily, 4.4 cfs May 4.

1911-13, 1951-56, 1957-65: 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.

Remarks--Records good except those for periods of no gage-height record, which are fair. Flow affected by diversion from Eel River through Potter Valley powerhouse (see p. 392) and since November 1958 by storage in Lake Mendocino (capacity, 122,500 acre-ft). Small diversions above station for irrigation. Records of suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 3, Dec. 3-17)

Oct. to Dec. 21

Dec. 22 to Sept. 30

0.8	6.0	0.8	2.9	3.0	570
.9	11	.9	6.0	5.0	1,650
1.0	17	1.0	11	8.0	3,920
1.2	35	1.2	25	11.0	7,000
1.5	74	1.4	50		
2.0	175	1.7	115		
3.0	445	2.0	195		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	215	195	33	3,380	1,180	192	279	450	240	177	285	269
2	208	175	32	2,420	1,890	293	186	450	181	177	283	269
3	207	159	32	1,250	1,200	346	162	140	171	177	283	269
4	205	157	31	2,270	30	374	162	4.4	171	177	283	269
5	205	157	31	745	30	251	125	90	171	175	283	269
6	205	154	31	1,040	30	186	100	363	171	177	279	269
7	208	152	31	3,260	30	186	100	363	171	177	279	269
8	208	154	43	4,110	30	186	135	363	171	177	279	269
9	223	100	50	4,010	30	186	318	363	171	194	279	269
10	230	68	64	3,030	30	186	446	378	171	213	279	269
11	230	68	46	2,390	30	186	474	386	171	216	279	265
12	230	66	32	2,360	30	108	418	386	171	235	279	265
13	230	65	32	2,330	30	57	378	120	171	244	279	263
14	230	65	32	1,040	30	57	378	33	171	244	277	265
15	230	64	32	30	1,390	140	378	33	171	248	276	265
16	230	62	32	30	1,350	186	522	33	171	269	276	265
17	230	77	49	30	36	186	615	33	171	279	276	265
18	233	84	60	30	36	186	615	33	171	279	276	263
19	235	82	60	30	36	168	815	33	171	279	276	262
20	237	106	60	30	36	160	930	165	171	283	276	262
21	235	120	27	30	36	160	745	307	171	269	276	259
22	235	118	10	30	36	160	546	311	171	274	276	259
23	235	118	10	30	790	160	438	311	171	283	276	258
24	235	116	386	30	650	145	402	311	171	283	272	258
25	235	114	4,370	635	43	98	402	311	171	286	270	258
26	213	114	3,300	995	43	61	402	311	174	286	269	258
27	202	112	4,010	990	43	61	148	311	174	286	269	258
28	202	56	5,450	458	33	61	268	311	174	286	269	258
29	200	14	6,430	30	-----	102	378	311	174	286	269	258
30	200	24	5,980	30	-----	286	426	311	174	286	268	258
31	198	-----	5,640	30	-----	349	-----	311	-----	286	269	-----
TOTAL	6,819	3,116	36,426	37,103	9,158	5,463	11,691	7,636.4	5,224	7,508	8,565	7,912
MEAN	220	104	1,175	1,197	327	176	390	246	174	242	276	264
AC-FT	13,530	6,180	72,250	73,590	18,160	10,840	23,190	15,150	10,360	14,890	16,990	15,690

CALENDAR YEAR 1964 MAX 6,430 MIN 10 MEAN 308 AC-FT 223,500
WATER YEAR 1964-65 MAX 6,430 MIN 4.4 MEAN 402 AC-FT 290,800

Note--No gage-height record Dec. 18-28, Jan. 15-24, 29-31, Feb. 4-14, 17-22, 25-27.

RUSSIAN RIVER BASIN

11-4625. Russian River near Hopland, Calif.

Location.--Lat 39°01'35", long 123°07'45", in Rancho de Sanel Grant, on right bank at abandoned highway bridge, 0.2 mile downstream from McNab Creek, 4 miles north of Hopland, Mendocino County, and 17 miles upstream from Sulphur Creek.

Drainage area.--362 sq mi.

Records available.--October 1939 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Datum of gage is 497.43 ft above mean sea level, datum of 1929. Prior to Sept. 9, 1943, wire-weight gage at same site and datum.

Average discharge.--26 years, 707 cfs (511,800 acre-ft per year).

Extremes.--Maximum discharge during year, 41,500 cfs Dec. 22 (gage height, 26.01 ft); minimum daily, 163 cfs July 8.

1939-65: 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 except those for the period of no gage-height record, which are fair. 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 (capacity, 122,500 acre-ft). Records of chemical analyses and water temperatures for the water year 1965 are published in Part 2 of this report.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 4 to Nov. 8, May 16-24)

Oct. 1 to Dec. 22

Dec. 22 to Sept. 30

5.0	167	8.0	1,660	4.9	148	10.0	4,470
5.2	216	10.0	3,650	5.2	216	13.0	8,500
5.5	304	13.0	7,900	5.5	304	16.0	13,800
6.0	500	18.0	17,800	6.0	530	20.0	23,500
7.0	1,000	24.0	35,500	7.0	1,390	24.0	35,500

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	218	224	1,390	5,650	1,480	311	435	801	350	169	243	246
2	201	222	1,120	4,810	1,930	450	340	786	300	165	242	245
3	200	183	767	5,410	2,040	476	298	675	265	167	244	243
4	197	181	516	6,020	640	512	288	440	245	169	242	244
5	202	178	402	15,500	752	450	267	407	230	169	243	247
6	200	176	312	8,380	632	349	225	576	215	167	243	248
7	199	176	262	7,360	544	342	226	688	208	165	245	245
8	199	213	233	6,690	494	334	488	688	200	163	244	242
9	205	599	225	5,930	460	328	1,690	696	196	165	244	242
10	222	1,670	227	4,970	430	326	1,780	695	192	187	233	244
11	224	980	736	4,140	384	321	1,430	695	190	192	237	247
12	226	1,430	404	3,860	360	296	1,100	693	187	198	244	249
13	229	749	304	3,670	345	231	873	637	185	213	253	248
14	229	418	285	2,780	331	213	815	397	182	213	259	245
15	229	285	309	1,330	985	231	2,120	357	180	211	256	245
16	230	228	262	1,130	1,950	297	2,550	320	180	219	257	243
17	231	201	240	994	371	298	1,780	276	178	237	255	244
18	233	198	250	904	314	297	2,420	254	177	245	253	245
19	233	187	552	805	292	290	2,160	236	176	246	252	250
20	231	189	2,220	712	280	273	2,170	236	175	243	252	249
21	228	216	13,600	656	271	269	2,100	368	175	239	250	247
22	229	243	33,700	608	259	265	1,590	429	175	226	250	247
23	234	227	21,400	1,410	465	264	1,290	426	175	240	250	248
24	236	219	10,800	3,040	1,110	256	1,090	427	173	240	249	248
25	238	331	9,030	2,010	298	232	1,000	418	174	248	250	250
26	228	321	8,680	2,170	262	199	937	415	177	245	244	254
27	210	316	8,340	2,000	360	354	771	407	177	243	250	257
28	223	2,440	8,560	1,520	280	278	656	401	175	243	245	255
29	224	1,420	8,950	868	-----	235	748	395	172	241	241	252
30	211	643	8,360	760	-----	349	762	390	171	243	243	256
31	208	-----	7,880	696	-----	450	-----	375	-----	245	239	-----
TOTAL	6,807	15,063	150,316	106,783	18,319	9,776	34,399	15,004	5,955	6,556	7,652	7,425
MEAN	220	502	4,849	3,445	654	315	1,147	484	199	211	247	248
AC-FT	13,500	29,880	208,100	211,800	36,340	19,390	68,230	29,760	11,810	13,000	15,180	14,730

CALENDAR YEAR 1964 MAX 33,700 MIN 119 MEAN 792 AC-FT 575,000
WATER YEAR 1964-65 MAX 33,700 MIN 163 MEAN 1,052 AC-FT 761,700

Peak discharge (base, 9,600 cfs).--Dec. 22 (1900) 41,500 cfs (26.01 ft); Jan. 5 (1700) 26,800 cfs (21.11 ft).

Note.--No gage-height record May 30 to June 21.

11-4627. Feliz Creek near Hopland, Calif.

Location.--Lat 38°58'20", long 123°08'30", in Rancho de Sanel Grant, on left bank just upstream from county road bridge, 0.1 mile upstream from Johnson Creek, and 1.4 miles west of Hopland, Mendocino County.

Drainage area.--31.1 sq mi.

Records available.--August 1958 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 500 ft (from topographic map).

Average discharge.--7 years, 45.7 cfs (33,090 acre-ft per year).

Extremes.--Maximum discharge during year, 6,080 cfs Dec. 22 (gage height, 14.10 ft); no flow for many days.

1958-65: Maximum discharge, that of Dec. 22, 1964; no flow for several months in each year.

Flood of Dec. 23, 1955, reached a stage of 13.60 ft, from floodmarks, (discharge, 2,710 cfs on basis of slope-area measurement of maximum flow).

Remarks.--Records fair except those for periods of no gage-height record or indefinite stage-discharge relation, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	24	124	160	47	17	32	48	3.3	0.6	0.1	0.1
2	0	43	140	555	43	16	28	43	3.3	.5	.2	0
3	0	13	80	872	38	15	25	40	3.7	.5	.1	0
4	0	6.8	53	857	44	14	24	36	3.9	.5	.1	0
5	0	4.1	42	2,470	108	14	23	34	4.3	.4	.1	0
6	0	3.1	29	981	59	15	22	32	4.3	.4	0	0
7	0	2.3	23	560	46	14	30	29	4.3	.4	0	0
8	0	133	17	314	41	14	80	27	4.3	.4	0	0
9	0	406	14	214	38	13	450	24	4.1	.3	0	0
10	0	612	17	156	35	13	300	22	1.8	.3	0	0
11	0	261	56	126	32	12	180	19	3.0	.3	.1	0
12	0	287	29	95	31	14	115	17	3.8	.3	.4	0
13	0	156	22	77	28	19	87	16	3.3	.3	.2	0
14	0	71	25	70	28	13	75	14	3.1	.3	.1	0
15	0	34	25	62	26	12	1,090	13	2.8	.3	0	0
16	0	18	18	53	24	12	556	11	2.6	.3	0	0
17	0	10	15	48	22	10	329	10	1.9	.2	0	0
18	0	6.5	15	46	22	10	309	9.0	1.5	.2	0	0
19	0	4.3	417	45	21	9.7	235	8.4	1.5	.2	.1	0
20	0	2.6	881	41	20	9.7	211	8.5	.8	.2	.1	0
21	0	2.4	3,340	39	19	9.3	193	8.3	.9	.2	.2	0
22	0	3.9	4,150	37	18	9.3	159	8.1	1.9	.2	.2	0
23	0	2.2	1,500	451	17	9.3	135	7.6	1.5	.2	.2	0
24	0	2.0	864	592	16	9.3	116	7.3	1.2	.2	.2	0
25	0	5.6	322	223	15	8.9	98	7.0	1.0	.2	.2	0
26	0	4.3	424	153	16	9.7	86	6.6	.9	.2	.2	0
27	0	6.0	590	110	32	29	75	6.3	.8	.2	.2	0
28	0	323	402	85	19	15	67	5.6	.7	.2	.2	0
29	2.1	142	475	78	-----	12	60	3.6	.7	.1	.2	0
30	.3	87	362	64	-----	13	52	4.6	.6	.1	.1	0
31	0	-----	260	54	-----	13	-----	3.8	-----	.1	.1	-----
TOTAL	2.4	2,676.1	14,731	9,688	905	404.2	5,242	529.7	71.8	8.8	3.9	0.1
MEAN	0.08	89.2	475	313	32.3	13.0	175	17.1	2.39	0.28	0.13	0.002
AC-FT	4.8	5,310	29,220	19,220	1,800	802	10,400	1,050	142	17	7.7	0.2

CALENDAR YEAR 1964 MAX 4,150 MIN 0 MEAN 61.6 AC-FT 44,720
 WATER YEAR 1964-65 MAX 4,150 MIN 0 MEAN 93.9 AC-FT 67,970

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1400	14.10	6,080	4-15	1300	9.28	2,400
1-5	1200	12.85	5,080				

Note.--No gage-height record Apr. 1-14. Stage-discharge relation indefinite June 22 to July 27.

RUSSIAN RIVER BASIN

11-4630. Russian River near Cloverdale, Calif.

Location.--Lat 38°52'55", long 123°03'15", in SW¼ sec.14, T.12 N., R.11 W., on left bank at Lambert Ranch, 400 ft downstream from Cumisky Creek and 5 miles northwest of Cloverdale.

Drainage area.--502 sq mi.

Records available.--July 1951 to September 1965.

Gage.--Water-stage recorder (digital). Datum of gage is 373.44 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--14 years, 979 cfs (708,800 acre-ft per year).

Extremes.--Maximum discharge during year, 55,200 cfs Dec. 22 (gage height, 31.60 ft), from rating curve extended above 21,000 cfs on basis of determination of maximum flow at upstream and downstream stations; minimum daily, 167 cfs May 20.

1951-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 81 cfs Nov. 24, 1958.

Remarks.--Records good. 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 (capacity, 122,500 acre-ft). Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	219	268	1,580	6,660	1,150	420	498	717	295	182	265	239
2	203	284	1,420	5,920	2,370	564	386	699	236	179	265	240
3	201	225	1,090	8,210	2,290	576	335	625	212	177	265	237
4	203	209	750	8,420	930	624	335	369	203	179	264	236
5	205	206	606	23,000	1,030	606	320	306	200	179	261	240
6	207	203	510	14,000	888	480	271	457	199	174	261	244
7	204	200	447	9,810	780	464	284	510	203	176	262	241
8	203	350	403	7,770	732	436	948	502	199	175	264	238
9	204	1,560	386	6,540	684	425	2,890	494	198	174	261	237
10	221	2,920	365	5,430	654	414	2,590	482	195	184	260	238
11	223	1,490	786	4,270	612	436	1,920	488	193	188	266	241
12	226	2,100	588	3,910	570	420	1,450	476	190	190	273	243
13	227	1,260	480	3,620	522	350	1,150	427	190	199	269	242
14	226	878	436	2,890	492	306	1,090	241	191	202	264	236
15	226	695	469	1,170	822	293	3,300	213	189	200	262	236
16	230	580	425	942	2,080	365	3,480	194	186	203	262	235
17	231	510	386	822	720	365	2,130	185	184	217	263	236
18	233	471	392	720	582	355	2,550	176	188	223	262	237
19	234	441	1,130	654	528	355	2,230	170	191	224	255	239
20	233	417	3,750	582	486	335	2,130	167	193	221	255	239
21	235	446	16,000	510	447	330	2,170	284	191	219	255	237
22	238	484	42,800	458	425	325	1,570	321	188	209	255	237
23	238	472	36,500	1,440	498	320	1,290	326	185	218	252	237
24	242	453	14,500	3,870	1,240	311	1,100	326	185	245	249	238
25	245	539	10,300	2,300	576	293	1,010	325	186	269	250	240
26	242	590	10,000	2,450	492	275	935	325	186	267	248	241
27	228	575	10,400	2,270	600	447	819	320	186	263	248	245
28	249	2,150	10,300	1,850	464	350	618	315	186	264	243	245
29	275	2,120	10,900	1,100	-----	284	721	312	185	264	240	242
30	242	918	10,500	996	-----	360	703	309	183	264	240	242
31	232	-----	9,730	924	-----	498	-----	307	-----	263	239	-----
TOTAL	7,025	24,014	198,329	133,508	23,664	12,382	41,223	11,368	5,896	6,591	7,978	7,178
MEAN	227	800	6,398	4,307	845	399	1,374	367	197	213	257	239
AC-FT	13,930	47,630	393,400	264,800	46,940	24,560	81,760	22,550	11,690	13,070	15,820	14,240

CALENDAR YEAR 1964 MAX 42,800 MIN 114 MEAN 990 AC-FT 718,800
 WATER YEAR 1964-65 MAX 42,800 MIN 167 MEAN 1,313 AC-FT 950,400

Peak discharge (base, 13,000 cfs, revised).--Dec. 22 (2400) 55,200 cfs (31.60 ft); Jan. 5 (2100) 31,200 cfs (23.89 ft).

11-4632. Big Sulphur Creek near Cloverdale, Calif.

Location.--Lat 38°49'21", long 122°59'07", in SW¼SW¼ sec.4, T.11 N., R.10 W., 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.

Records available.--July 1957 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 380 ft (from topographic map).

Average discharge.--8 years, 184 cfs (133,200 acre-ft).

Extremes.--Maximum discharge during year, 15,700 cfs Dec. 22 (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, 1.8 cfs Oct. 20.

1957-65: Maximum discharge, that of Dec. 22, 1964; minimum, 1.8 cfs Sept. 24, Oct. 20, 1964.

Flood of Dec. 22, 1955, reached a stage of 16.8 ft (revised), from floodmarks, present datum (discharge, 20,000 cfs on basis of slope-area measurement of maximum flow).

Revisions.--The figures of maximum discharge for some water years have been revised as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
1565	1958	Feb. 24, 1958	14,200	14.46
1635	1959	Feb. 16, 1959	8,390	11.80
1715	1960	Feb. 8, 1960	10,600	12.90
Basic Data Report	1961	Dec. 1, 1960	9,790	12.50
Basic Data Report	1962	Feb. 13, 1962	9,050	12.13
WSP1830A, Basic Data Report	1963	Jan. 31, 1963	12,200	13.65
Basic Data Report	1964	Jan. 20, 1964	7,270	11.21

Remarks.--Records good except those for periods of no gage height record, which are fair. No regulation or diversion above station. Records of suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Revisions.--Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1958-63, superseding figures published in WSP 1565, 1635, 1715, 1830A, and Basic Data Reports, are given herewith:

Feb. 24, 1958.....6,930	Feb. 14, 1962.....3,410
Apr. 2, 1958.....4,190	Oct. 12, 1962.....4,550
Feb. 16, 1959.....4,390	Jan. 30, 1963.....3,070
Feb. 8, 1960.....5,860	Jan. 31, 1963.....7,500
Dec. 1, 1960.....4,390	Feb. 1, 1963.....2,990
Feb. 13, 1962.....4,870	

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
February 1958.....	54,933	6,930	555	1,962	109,000
April.....	21,784	4,190	136	726	43,210
Water year 1957-58.....	-	6,930	4.1	376	272,000
Calendar year 1958.....	-	6,930	4.1	333	241,200
February 1959.....	19,516	4,390	84	697	38,710
Water year 1958-59.....	-	4,390	2.5	110	79,580
Calendar year 1959.....	-	4,390	2.5	109	79,060
February 1960.....	19,083	5,860	83	658	37,850
Water year 1959-60.....	-	5,860	3.4	116	84,480
December 1960.....	11,878	4,390	63	383	23,560
Calendar year 1960.....	-	5,860	3.4	152	110,700
Water year 1960-61.....	-	4,390	3.3	130	93,760
February 1962.....	26,324	4,870	47	940	52,210
Water year 1961-62.....	-	4,870	3.1	153	110,400
October 1962.....	8,998.6	4,550	4.8	290	17,850
Calendar year 1962.....	-	4,870	3.4	183	132,600
January 1963.....	12,123	7,500	36	391	24,050
February.....	16,403	2,990	148	586	32,530
Water year 1962-63.....	-	7,500	4.8	242	175,500
Calendar year 1963.....	-	7,500	6.9	215	155,500

Revised peak discharge.--1957-58: Jan. 29 (2 p.m.) 6,030 cfs (10.52 ft); Feb. 9 (4 p.m.) 5,310 cfs (10.10 ft); Feb. 12 (5 a.m.) 6,350 cfs (10.70 ft); Feb. 24 (3 p.m.) 14,200 cfs (14.46 ft); Mar. 20 (11 p.m.) 7,430 cfs (11.30 ft); Mar. 29 (8 p.m.) 5,940 cfs (10.47 ft); Apr. 2 (12 m.) 8,590 cfs (11.90 ft).
 1958-59: Jan. 12 (6 a.m.) 7,430 cfs (11.30 ft); Feb. 16 (7 a.m.) 8,390 cfs (11.80 ft).
 1959-60: Feb. 1 (12 m.) 5,550 cfs (10.25 ft); Feb. 8 (7 a.m.) 10,600 cfs (12.90 ft).
 1960-61: Dec. 1 (6 a.m.) 9,790 cfs (12.50 ft); Jan. 31 (7 a.m.) 6,510 cfs (10.79 ft).
 1961-62: Dec. 1 (0900) 4,630 cfs (9.65 ft); Feb. 13 (1100) 9,050 cfs (12.13 ft); Mar. 5 (2000) 4,800 cfs (9.77 ft).
 1962-63: Oct. 12 (0900) 7,430 cfs (11.30 ft); Jan. 31 (1500) 12,200 cfs (13.65 ft); Mar. 27 (1800) 5,260 cfs (10.07 ft).

RUSSIAN RIVER BASIN

11-4632. Big Sulphur Creek near Cloverdale, Calif.--Continued.

Rating tables (gage-height, in feet, and discharge, in cubic feet per second
 (Shifting-control method used Oct. 1 to Nov. 8, Nov. 18-27, Dec. 7-18,
 Aug. 31 to Sept. 16)

Oct. 1 to Dec. 22

Dec. 22 to Sept. 30

2.2	1.0	3.5	87	8.0	2,720	2.4	4.0	4.0	270
2.3	2.3	3.8	160	10.0	5,150	2.5	6.0	5.0	730
2.5	6.0	4.1	260	13.0	10,800	2.7	13	6.0	1,400
2.7	12	4.5	420			3.0	32	8.0	3,250
2.9	22	5.0	660			3.2	51	10.0	5,900
3.2	46	6.0	1,220			3.5	112	13.0	11,200

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.3	53	117	648	218	87	102	173	38	21	11	6.0
2	2.2	119	109	1,060	204	81	85	164	35	20	10	6.2
3	1.9	42	91	2,180	194	76	76	155	35	19	9.6	6.2
4	1.9	21	78	2,410	197	74	70	146	33	18	9.5	6.0
5	1.9	17	72	7,750	306	79	66	136	33	17	9.1	6.2
6	1.9	16	64	3,850	238	94	63	126	33	16	8.8	6.4
7	2.0	14	57	2,330	210	81	97	120	34	16	8.3	6.5
8	2.3	105	53	1,480	197	74	406	112	34	16	8.3	6.4
9	2.6	943	49	949	185	70	1,250	107	33	15	8.3	6.2
10	2.6	1,130	49	664	176	70	642	100	31	15	8.3	6.0
11	2.5	402	56	570	167	68	382	92	29	15	9.9	5.9
12	2.3	359	49	480	161	66	294	87	28	15	11	6.0
13	2.2	197	45	406	155	64	256	83	27	14	9.7	5.9
14	2.2	134	45	362	149	62	257	81	27	14	8.6	5.7
15	2.2	101	43	330	140	60	1,940	75	27	14	8.3	5.6
16	2.0	80	42	298	132	57	1,590	70	26	14	8.1	5.6
17	2.0	66	39	274	126	56	735	67	26	14	7.7	5.4
18	2.0	57	42	256	120	54	743	64	27	13	7.6	5.3
19	1.9	50	373	246	115	52	542	62	26	13	7.7	5.5
20	1.8	46	1,540	232	112	51	470	62	26	13	7.7	5.6
21	1.9	44	5,760	214	107	49	590	61	26	13	7.6	5.8
22	2.2	47	10,400	204	102	49	414	59	26	13	7.4	5.7
23	2.3	42	5,760	670	97	48	354	55	26	12	7.4	5.7
24	2.3	39	2,940	814	92	47	314	52	26	12	7.4	5.8
25	2.3	42	1,650	466	90	46	282	51	24	12	7.4	5.8
26	2.2	38	2,260	358	90	54	256	48	24	12	7.0	6.0
27	3.5	38	1,970	314	149	249	234	46	24	12	6.7	6.3
28	24	204	1,420	282	97	126	216	44	22	12	6.5	6.4
29	45	169	1,100	260	-----	92	200	42	21	11	6.3	6.5
30	29	114	955	242	-----	87	186	41	21	11	6.2	6.1
31	19	-----	826	232	-----	107	-----	40	-----	11	5.9	-----
TOTAL	176.4	4,729	38,054	30,831	4,326	2,330	13,112	2,621	848	443	253.5	178.7
MEAN	5.69	158	1,228	995	155	75.2	437	84.5	28.3	14.3	8.18	5.96
AC-FT	350	9,380	75,480	61,150	8,580	4,620	26,010	5,200	1,680	879	503	354

CALENDAR YEAR 1964 MAX 10,400 MIN 1.8 MEAN 164 AC-FT 119,100
 WATER YEAR 1964-65 MAX 10,400 MIN 1.8 MEAN 268 AC-FT 194,200

Peak discharge (base, 3,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0315	8.56	3,240	1-5	1430	13.19	11,600
12-22	1445	15.08	15,700	1-15	2015	9.03	4,540

Note.--No gage-height record June 20, 21, July 10-26.

11-4639. Maacama Creek near Kellogg, Calif.

Location.--Lat 38°38'25", long 122°45'45", in SW¼ sec.9, T.9 N., R.8 W., on right bank 0.5 mile downstream from Redwood Creek, and 4.4 miles west of Kellogg.

Drainage area.--43.4 sq mi.

Records available.--Occasional low-flow measurements and annual maximum, water years 1958-60. December 1960 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 200 ft (from topographic map). Prior to Dec. 20, 1960, crest-stage gage only at site 700 ft upstream at different datum.

Extremes.--Maximum discharge during year, 8,920 cfs Dec. 22 (gage height, 17.56 ft); minimum daily, 0.1 cfs Oct. 2-4.

1958-65: Maximum discharge, that of Dec. 22, 1964.

1960-65: No flow for many days in August and September 1964.

Remarks.--Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station. Records of suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 1)

2.1	0.1	2.9	13	6.0	5.5
2.2	.2	3.2	26	8.0	1,250
2.3	.7	3.5	47	11.0	2,830
2.4	2.0	4.0	98	15.0	6,050
2.5	3.8	4.5	168		
2.7	8.2	5.0	262		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.2	4.2	80	350	102	32	25	55	13	6.6	2.4	0.4
2	.1	43	66	988	93	30	23	51	13	6.4	2.3	.5
3	.1	10	50	1,120	86	29	21	47	13	5.9	2.2	.7
4	.1	5.1	41	1,200	92	28	20	44	13	6.1	2.3	.8
5	.2	3.6	37	3,340	176	28	20	40	13	6.7	2.2	.8
6	.3	2.9	31	1,500	115	27	19	38	13	5.8	2.2	.9
7	.3	2.5	28	796	96	27	19	36	13	5.7	1.1	1.1
8	.3	9.3	26	515	87	26	110	34	13	5.7	1.0	1.1
9	.3	250	24	390	79	26	300	32	12	5.6	.8	2.6
10	.3	438	26	311	73	25	185	29	12	4.6	.8	2.6
11	.3	277	34	275	67	24	100	28	12	4.3	2.4	1.5
12	.3	212	27	216	63	24	76	26	9.5	4.5	3.5	1.4
13	.3	83	23	183	59	24	66	26	11	4.0	2.8	1.2
14	.4	46	22	160	55	22	63	26	11	4.5	2.3	1.0
15	.4	31	22	142	51	21	405	24	10	4.7	2.0	.7
16	.3	24	20	127	48	21	461	22	9.7	4.5	1.9	.2
17	.3	20	19	115	46	20	220	22	9.5	4.2	1.7	.3
18	.3	18	19	105	44	20	277	21	9.8	3.9	1.3	.2
19	.3	17	199	100	42	19	246	20	9.3	3.5	1.3	.8
20	.3	15	506	94	38	19	254	20	9.0	3.4	.6	.3
21	.3	15	3,300	86	36	18	328	20	8.9	3.2	.4	.2
22	.3	15	5,510	79	34	18	206	19	8.9	3.2	.4	.2
23	.4	13	2,460	461	32	18	162	18	8.7	2.6	.6	.3
24	.4	13	1,140	442	31	17	133	17	8.3	4.4	.7	1.3
25	.5	15	560	254	31	17	113	17	8.0	2.7	1.2	1.3
26	.6	13	1,120	196	38	19	95	16	7.8	2.8	.6	1.6
27	1.0	13	856	165	52	66	83	15	7.7	2.6	.4	1.3
28	2.5	205	632	146	37	29	74	15	7.0	2.5	.3	1.3
29	4.9	104	620	130	-----	24	67	14	6.6	2.3	.3	1.3
30	3.3	60	578	118	-----	24	60	14	6.9	2.3	.3	.7
31	1.5	-----	482	109	-----	26	-----	14	-----	2.1	.3	-----
TOTAL	21.1	1,977.6	19,558	14,213	1,803	768	4,226	820	307.6	131.3	42.6	29.0
MEAN	0.68	65.9	599	458	64.4	24.8	141	26.5	10.3	4.24	1.37	0.97
AC-FT	42	3,920	36,810	28,190	3,580	1,520	8,380	1,630	610	260	84	58

CALENDAR YEAR 1964 MAX 5,510 MIN 0 MEAN 74.6 AC-FT 54,130
WATER YEAR 1964-65 MAX 5,510 MIN 0.1 MEAN 118 AC-FT 85,080

Peak discharge (base, 1,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0345	8.76	1,590	1-23	1645	8.84	1,630
12-22	1515	17.56	8,920	4-15	2015	8.43	1,440
1- 5	1530	15.39	6,440				

Note.--No gage-height record Feb. 8 to Mar. 10, Apr. 8-12.

RUSSIAN RIVER BASIN

11-4639.4. Franz Creek near Kellogg, Calif.

Location.--Lat 38°36'30", long 122°41'35", in Mallacomes Grant, on left bank at downstream side of highway bridge, 100 ft downstream from Bidwell Creek, and 2 miles south of Kellogg, Sonoma County.

Drainage area.--15.7 sq mi.

Records available.--Occasional low-flow measurements, water years 1957-62, and annual maximum, water years 1956, 1958-62, October 1963 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 350 ft (from topographic map). Oct. 25, 1957 to Sept. 30, 1962, crest-stage gage only, at site 75 ft downstream at same datum.

Extremes.--Maximum discharge during year, 5,780 cfs Jan. 5 (gage height, 8.31 ft) from rating curve extended above 860 cfs on basis of slope area measurements at gage heights 6.93 and 7.8 ft; no flow for many days.
1955-65: Maximum discharge, that of Jan. 5, 1965.
1963-65: No flow at times in each year.

Remarks.--Records good except those for periods of no gage height record, which are poor. Small diversions above station for irrigation and stock ponds.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 8 to Dec. 21)

1.5	0	2.0	3.4	3.0	75
1.6	.1	2.2	7.5	3.5	205
1.7	.3	2.4	14	4.0	370
1.8	.9	2.6	25	5.0	830
1.9	1.9	2.8	42	6.0	1,750

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.8	7.3	38	21	6.8	4.5	11	1.9	0.6	0.1	0
2	0	8.0	6.4	220	19	6.4	4.1	10	1.8	.6	.1	0
3	0	2.5	5.2	314	18	5.9	3.9	9.2	1.8	.5	.1	0
4	0	.8	4.5	443	19	5.9	3.8	8.5	1.6	.4	.1	0
5	0	.6	4.7	1,630	59	5.7	3.6	7.8	1.6	.3	0	0
6	0	.5	4.1	544	32	5.7	3.4	7.4	1.6	.4	0	0
7	0	.7	3.9	282	24	5.4	3.6	6.8	2.0	.4	0	0
8	0	3.0	3.9	175	19	5.2	11	6.2	2.2	.3	.1	0
9	0	37	3.9	125	18	5.0	60	5.6	1.4	.3	.1	0
10	0	98	4.1	90	16	4.8	50	5.4	1.4	.2	.2	0
11	0	49	4.3	71	15	4.7	20	5.2	1.4	.2	.2	0
12	0	26	3.9	51	13	4.3	15	5.0	1.2	.2	.3	0
13	0	11	3.6	41	13	4.1	14	4.8	1.1	.2	.2	0
14	0	6.8	3.4	35	12	3.9	17	4.6	1.2	.1	.1	0
15	0	5.0	3.6	31	11	3.8	95	4.4	1.1	.1	.1	0
16	0	4.1	3.4	27	10	3.6	60	4.2	1.0	.1	.1	.1
17	0	3.9	3.4	24	9.8	3.4	30	4.1	1.1	.1	.1	.2
18	0	3.2	3.4	21	9.5	3.4	39	4.0	1.2	.1	.1	.2
19	0	3.0	2.2	20	9.0	3.2	33	4.0	1.0	.1	.1	.2
20	0	2.4	60	19	8.4	3.2	50	3.8	1.1	.1	0	.2
21	0	2.2	731	16	8.1	3.2	75	3.4	1.1	.1	0	.2
22	0	2.5	1,700	15	7.5	3.1	45	3.2	1.2	.1	0	.3
23	0	2.2	573	156	6.8	3.1	35	3.1	1.1	0	0	.2
24	0	2.0	207	142	6.8	3.1	28	3.0	1.0	0	0	.2
25	0	2.4	67	71	6.6	3.0	23	2.6	.9	0	0	.2
26	.1	2.2	332	47	6.4	2.8	20	2.5	.8	.1	0	.2
27	.2	1.9	300	38	12	6.9	17	2.6	.8	.1	0	.2
28	.4	8.7	211	32	7.5	4.1	15	2.5	.8	.1	0	.2
29	.8	9.0	168	28	-----	3.8	13	2.4	.7	.1	0	.1
30	.5	6.1	130	25	-----	4.1	12	1.8	.6	.1	0	.1
31	.2	-----	80	22	-----	4.7	-----	2.0	-----	.1	0	-----
Total	2.2	305.5	4,658.0	4,793	417.4	136.3	803.9	151.1	37.7	6.1	2.1	2.8
Mean	0.07	10.2	150	155	14.9	4.40	26.8	4.87	1.26	0.20	0.07	0.09
Ac-ft	4.4	606	9,240	9,510	828	270	1,590	300	75	12	4.2	5.6

Calendar year 1964 Max 1,700 Min 0 Mean 18.5 Ac-ft 13,440
Water year 1964-65 Max 1,700 Min 0 Mean 31.0 Ac-ft 22,450

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1500	6.93	3,090	1-5	1300	8.31	5,780
12-26	1500	5.02	842				

Note.--No gage-height record Oct. 9 to Nov. 7, Apr. 8 to May 19.

11-4640. Russian River near Healdsburg, Calif.

Location.--Lat 38°36'48", long 122°50'07", in Sotoyome Grant, on left bank 2 miles east of Healdsburg, Sonoma County, and 3.5 miles upstream from Dry Creek.

Drainage area.--793 sq mi.

Records available.--October 1939 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 76.84 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--26 years, 1,393 cfs (1,008,000 acre-ft per year).

Extremes.--Maximum discharge during year, 71,300 cfs Dec. 23 (gage height, 27.00 ft); minimum daily, 104 cfs July 10.

1939-65: Maximum discharge, that of Dec. 23, 1964; 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 (capacity, 122,500 acre-ft). Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	181	211	1,320	8,840	1,550	652	690	1,210	433	149	212	199
2	170	247	1,530	8,640	2,340	648	665	1,190	375	138	215	202
3	166	284	1,400	14,000	2,780	730	580	1,150	286	145	215	202
4	164	230	1,090	12,100	2,040	760	524	948	240	138	212	202
5	162	213	926	30,000	2,000	780	490	720	207	138	210	202
6	162	200	818	30,400	1,730	745	472	648	204	128	212	204
7	160	190	733	15,600	1,450	636	440	795	204	117	210	202
8	158	193	674	11,100	1,300	592	711	805	202	110	210	202
9	160	2,410	630	8,880	1,210	580	4,030	800	193	108	210	199
10	160	4,870	605	7,580	1,120	568	4,040	780	183	104	210	196
11	162	2,670	680	5,930	1,050	560	3,090	755	180	111	218	199
12	164	2,940	864	5,240	972	548	2,500	750	178	126	246	199
13	166	1,830	727	4,050	918	540	2,100	735	166	140	246	199
14	170	1,260	658	3,200	876	479	1,890	620	158	154	240	199
15	172	961	646	2,620	828	448	3,850	448	158	180	236	215
16	172	793	636	2,150	1,740	440	8,010	384	156	202	229	225
17	175	685	600	1,900	1,710	482	4,090	345	149	204	222	237
18	175	620	585	1,730	972	486	3,960	324	147	218	226	237
19	175	580	1,070	1,610	810	472	3,930	309	161	232	222	237
20	175	562	5,080	1,540	740	476	3,430	297	196	243	215	237
21	175	548	17,800	1,420	695	444	3,850	300	196	232	212	237
22	175	544	52,000	1,320	652	437	2,970	312	196	229	212	272
23	175	548	62,700	2,200	620	430	2,470	444	196	210	207	237
24	177	544	24,900	5,810	1,080	426	2,110	451	188	222	202	234
25	179	535	13,900	3,610	1,150	420	1,880	448	180	222	204	234
26	179	571	13,400	3,400	710	402	1,700	444	180	229	210	235
27	181	576	14,600	3,080	770	490	1,560	444	178	229	207	235
28	193	873	13,000	2,860	795	685	1,300	444	173	222	204	240
29	216	2,730	12,500	2,180	-----	544	1,260	444	168	207	204	240
30	236	1,410	12,500	1,850	-----	476	1,240	448	158	212	202	240
31	222	-----	11,500	1,680	-----	556	-----	444	-----	212	199	-----
Total	5,457	30,828	270,072	206,520	34,608	16,932	69,832	18,636	5,989	5,511	6,679	6,598
Mean	176	1,028	8,712	6,662	1,236	546	2,328	601	200	178	215	220
Ac-ft	10,820	61,150	535,700	409,630	68,640	33,580	138,500	36,960	11,880	10,930	13,250	13,090

Calendar year 1964 Max 62,700 Min 110 Mean 1,282 Ac-ft 931,060

Water year 1964-65 Max 62,700 Min 104 Mean 1,857 Ac-ft 1,344,000

Peak discharge (base, 19,000 cfs).--Dec. 23 (0200) 71,300 cfs (27.00 ft); Jan. 5 (2000) 45,200 cfs (20.95 ft).

11-4645. Dry Creek near Cloverdale, Calif.

Location.--Lat 38°44'59", long 123°05'28", in NE¼NE¼ sec.5, T.10 N., R.11 W., on left bank 500 ft downstream from Smith Creek and 5 miles southwest of Cloverdale.

Drainage area.--87.8 sq mi.

Records available.--October 1941 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Altitude of gage is 320 ft (from topographic map).

Average discharge.--24 years, 155 cfs (112,200 acre-ft per year); median of yearly mean discharges, 140 cfs (101,000 acre-ft per year).

Extremes.--Maximum discharge during year, 18,100 cfs Dec. 22 (gage height, 18.09 ft); minimum, 0.1 cfs Oct. 6-11, 13.

1941-65: Maximum discharge, that of Dec. 22, 1964; minimum, 0.1 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 1965 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.2	67	149	558	194	71	71	113	24	9.3	3.8	2.1
2	.2	114	137	879	180	67	55	105	24	8.8	3.3	2.1
3	.2	46	119	1,590	168	63	48	98	23	8.3	3.0	2.1
4	.2	24	106	1,410	183	59	45	91	22	7.9	2.7	2.1
5	.2	17	95	6,350	339	61	42	83	22	7.3	2.6	2.1
6	.1	14	84	3,580	199	67	41	79	22	6.8	2.4	2.1
7	.1	12	77	2,100	175	59	76	75	22	6.8	2.3	2.1
8	.1	138	68	1,270	161	56	661	70	22	6.3	2.4	2.0
9	.1	376	63	781	152	53	1,160	67	21	5.5	2.4	2.0
10	.1	672	59	581	141	52	839	64	20	5.1	2.3	1.9
11	.1	481	63	474	133	49	485	61	18	5.1	3.3	1.9
12	.2	465	53	367	125	49	328	58	16	5.2	4.4	1.9
13	.1	318	47	282	118	58	255	56	15	4.9	3.4	2.0
14	.4	232	49	230	112	47	231	54	15	4.6	3.0	2.0
15	.8	194	54	196	112	45	1,750	51	16	4.4	2.8	1.9
16	.6	165	47	175	104	42	1,490	48	15	4.3	2.7	1.9
17	.5	141	42	154	97	41	911	46	15	4.1	2.3	1.8
18	.5	127	46	137	92	40	915	44	14	4.4	2.2	1.7
19	.6	112	329	129	87	39	711	42	14	4.1	2.1	1.8
20	.8	99	619	116	84	37	620	43	13	3.8	2.2	1.9
21	1.1	95	5,230	99	80	36	559	41	10	3.9	2.3	1.8
22	1.1	101	11,700	92	76	35	406	40	12	3.8	2.4	1.8
23	.9	84	6,090	628	73	33	328	38	12	3.5	2.4	1.9
24	1.2	79	2,430	847	70	32	278	36	12	3.6	2.3	1.9
25	1.2	87	1,470	558	68	31	244	34	11	4.0	2.2	2.0
26	1.4	77	1,270	428	71	35	215	32	12	3.8	2.2	2.1
27	4.7	74	1,280	371	147	80	191	30	11	3.6	2.1	2.2
28	18	209	1,120	325	80	50	170	28	10	3.6	2.1	2.1
29	69	170	958	286	-----	40	147	27	9.6	3.5	2.1	2.1
30	28	137	835	255	-----	40	127	26	9.2	3.5	2.1	2.0
31	11	-----	696	219	-----	70	-----	25	-----	3.7	2.1	-----
TOTAL	143.7	4,927	35,385	25,467	3,621	1,537	13,399	1,705	481.8	157.5	79.9	59.3
MEAN	4.64	164	1,141	822	129	49.6	447	55.0	16.1	5.08	2.58	1.98
AC-FT	285	9,770	70,190	50,510	7,180	3,050	26,580	3,380	956	312	158	118

CALENDAR YEAR 1964 MAX 11,700 MIN 0.1 MEAN 147 AC-FT 106,700

WATER YEAR 1964-65 MAX 11,700 MIN 0.1 MEAN 238 AC-FT 172,500

Peak discharge (base, 3,300 cfs).--Dec. 22 (1400) 18,100 cfs (18.09 ft); Jan. 5 (1400) 11,900 cfs (14.32 ft).

11-4652. Dry Creek near Geyserville, Calif.

Location.--Lat 38°41'55", long 122°57'25", in Tzabaco Grant, on left bank pier of bridge, 0.3 mile downstream from Pena Creek and 3 miles west of Geyserville, Sonoma County.

Drainage area.--162 sq mi.

Records available.--October 1959 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 160 ft (from topographic map). Prior to Oct. 1, 1964, at datum 1.00 ft higher.

Average discharge.--6 years, 274 cfs (198,400 acre-ft per year).

Extremes.--Maximum discharge during year, 31,800 cfs Dec. 22 (gage height, 17.4 ft, from floodmarks); no flow Oct. 1-28.

1959-65: Maximum discharge, 32,400 cfs (revised) Jan. 31, 1963 (gage height, 17.50 ft, present datum); no flow at times in each year.

Revisions.--Figures of maximum discharge for the water years 1962 and 1963 have been revised to 25,100 cfs Feb. 13, 1962 (gage height, 16.18 ft, present datum) and 32,400 cfs Jan. 31, 1963 (gage height, 17.50 ft, present datum), superseding figures published in 1962 and 1963 Reports.

Remarks.--Records good except those for periods of no gage-height record, which are fair. No regulation; small diversion above station for orchard irrigation in summer. Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 13-15, Feb. 1-4, May 7-20, July 28 to Sept. 30)

0.6	0	1.2	10	4.0	820
.7	.2	1.4	22	5.0	1,470
.8	.7	1.7	52	7.0	3,350
.9	1.7	2.0	100	9.0	6,000
1.0	3.4	2.5	210	12.0	11,200
1.1	6.2	3.0	370	15.0	20,000

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	127	210	1,250	349	144	154	237	34	16	5.6	3.1
2	0	308	175	1,800	307	134	118	216	32	15	5.6	2.9
3	0	147	150	3,280	279	128	108	202	31	14	5.6	2.7
4	0	87	136	2,790	284	120	98	190	30	14	5.4	2.9
5	0	69	134	11,700	732	122	91	188	29	13	5.1	3.2
6	0	55	122	6,220	508	136	89	165	29	12	4.2	3.4
7	0	46	112	3,530	430	120	127	158	29	11	4.8	3.4
8	0	271	100	2,280	386	110	933	150	29	11	4.8	3.4
9	0	1,410	95	1,730	349	106	1,900	140	29	10	4.8	3.1
10	0	1,030	89	1,400	321	104	1,380	134	28	9.8	4.0	3.1
11	0	876	93	1,220	297	100	886	130	28	9.5	4.2	3.1
12	0	879	87	1,030	276	98	620	122	28	9.0	4.2	3.1
13	0	463	79	862	258	108	462	114	28	8.7	4.8	2.9
14	0	285	79	755	246	98	414	112	27	8.4	5.4	3.1
15	0	200	84	666	234	93	2,380	110	27	8.1	5.6	2.9
16	0	156	79	594	216	87	2,350	100	26	7.8	5.4	2.6
17	0	134	71	540	202	84	1,370	95	26	7.6	5.4	2.2
18	0	120	69	490	192	82	1,270	91	25	7.4	5.4	2.2
19	0	105	436	466	182	79	1,090	82	25	7.2	5.4	2.2
20	0	95	760	438	175	76	916	77	25	7.1	4.8	2.2
21	0	90	8,030	398	162	74	916	69	24	6.9	4.5	2.2
22	0	95	18,800	363	154	71	745	65	24	6.7	4.2	2.2
23	0	80	12,100	1,050	148	69	630	60	23	6.6	4.5	2.0
24	0	75	5,150	1,500	142	68	544	55	22	6.4	4.2	2.2
25	0	85	2,870	1,000	136	63	470	51	21	6.3	4.0	2.0
26	0	75	2,710	820	132	71	414	46	20	6.3	3.7	1.6
27	0	70	2,590	690	284	146	370	41	19	6.2	3.7	1.4
28	0	340	2,260	600	165	104	338	39	18	6.2	3.2	1.3
29	59	250	1,990	510	-----	84	300	38	17	6.2	3.2	1.2
30	83	195	1,800	450	-----	82	264	36	16	5.9	3.1	1.0
31	41	-----	1,620	390	-----	136	-----	35	-----	5.9	3.1	-----
Total	183	8,218	63,080	50,812	7,546	3,097	21,747	3,348	769	276.2	141.9	74.8
Mean	5.9	274	2,035	1,639	270	99.9	725	108	25.6	8.91	4.57	2.49
Ac-ft	363	16,300	125,100	100,800	14,970	6,140	43,130	6,640	1,530	548	281	148

Calendar year 1964 Max 18,800 Min 0 Mean 270 Ac-ft 196,100
Water year 1964-65 Max 18,800 Min 0 Mean 436 Ac-ft 316,000

Peak discharge (base, 4,500 cfs).--Dec. 22 (1500) 31,800 cfs (17.4 ft); Jan. 5 (1600) 20,800 cfs (15.19 ft).

Note.--No gage-height record Nov. 18 to Dec. 3, Jan. 23-31, June 23 to July 27.

11-4658. Santa Rosa Creek near Santa Rosa, Calif.

Location.--Lat 38°27'25", long 122°37'50", in Los Guillicos Grant, on left bank 500 ft downstream from highway bridge, 1,500 ft upstream from unnamed tributary, and 4.6 miles east of Santa Rosa, Sonoma County.

Drainage area.--12.5 sq mi.

Records available.--July 1959 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 335 ft (from topographic map).

Average discharge.--6 years, 15.5 cfs (11,220 acre-ft per year).

Extremes.--Maximum discharge during year, 2,480 cfs Jan. 5 (gage height, 12.28 ft), from rating curve extended above 520 cfs as explained below; no flow for many days.

1959-65: Maximum discharge, 3,200 cfs Feb. 8, 1960 (gage height, 13.35 ft, from floodmarks), from rating curve extended above 520 cfs on basis of slope-area measurements at gage heights 11.0 and 13.35 ft; no flow at times in each year.

Remarks.--Records good except those for periods of no gage-height record or indefinite stage-discharge relation, which are poor. No regulation; pumping for irrigation above station during periods of low flow.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 25, Dec. 28 to Jan. 4, Jan. 22, Feb. 1-4,
7-12, 22-26, Feb. 28 to Apr. 7, Aug. 6 to Sept. 30)

3.6	0	4.1	3.2	5.5	104
3.7	.1	4.2	5.0	6.0	192
3.8	.4	4.4	11	7.0	450
3.9	1.0	4.6	20	9.0	1,060
4.0	1.9	5.0	46		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	3.4	4.6	89	19	9.5	8.8	17	3.7	0.8	0.2	0
2	0	14	4.6	108	17	8.1	6.7	16	3.5	.8	.2	0
3	0	3.0	3.8	190	16	7.5	5.6	15	3.5	.8	.2	0
4	0	1.5	3.7	290	16	6.7	5.3	14	3.5	.7	.2	0
5	0	.9	3.7	843	30	7.5	4.8	13	3.4	.7	.2	0
6	0	.7	3.4	429	23	7.5	4.6	12	3.3	.7	.2	0
7	0	.6	3.2	236	17	6.4	6.7	11	3.2	.6	.2	0
8	0	3.7	2.9	152	16	6.4	7.7	11	3.1	.6	.1	0
9	.1	55	2.8	116	14	5.8	15.9	10	3.0	.6	.1	0
10	0	105	3.0	90	13	5.6	85	9.5	2.9	.5	.1	.1
11	0	58	3.5	78	12	5.6	49	8.8	2.9	.5	.5	.1
12	0	43	3.0	63	14	5.8	34	8.5	2.8	.5	.5	.1
13	.1	18	2.6	54	22	5.3	26	8.5	2.7	.5	.1	.1
14	.1	11	2.6	45	24	5.0	22	8.1	2.7	.4	0	.1
15	.1	7.5	2.6	38	23	4.8	70	7.2	2.6	.4	0	.1
16	.1	5.8	2.4	34	22	4.6	116	6.7	2.6	.4	0	.2
17	.1	4.8	2.3	30	22	4.4	62	6.4	2.5	.4	0	.1
18	.1	4.2	2.4	28	24	4.2	86	6.1	2.5	.4	0	0
19	.1	3.7	13	25	24	4.0	72	5.6	2.4	.4	0	.1
20	0	3.4	24	24	23	3.8	61	5.6	2.4	.4	0	.1
21	0	3.0	367	21	21	3.5	64	5.6	2.4	.3	.1	.1
22	0	3.2	917	19	12	3.5	48	5.3	2.3	.3	0	.3
23	.1	2.8	609	58	8.1	3.4	40	5.0	2.3	.3	0	.4
24	.1	2.4	276	76	7.5	3.4	34	4.6	2.2	.3	0	.5
25	.1	2.6	143	46	7.5	3.4	30	4.4	1.4	.3	0	.6
26	.1	2.4	281	37	7.5	4.2	27	4.2	.9	.3	.1	.6
27	.2	2.4	270	31	28	23	24	4.0	.8	.3	0	.6
28	.6	4.0	192	28	12	8.1	22	3.7	.8	.3	0	.6
29	1.6	5.6	163	26	-----	5.8	21	3.7	.9	.3	0	.6
30	1.1	4.4	138	24	-----	5.6	19	3.4	.9	.2	0	.5
31	.5	-----	112	21	-----	9.8	-----	3.5	-----	.2	0	---
TOTAL	5.2	380.0	3,562.1	3,349	494.6	192.2	1,290.5	247.4	74.1	- 14.2	3.0	5.9
MEAN	0.17	12.7	115	108	17.7	6.20	43.0	7.98	2.47	0.46	0.10	0.20
AC-FT	10	754	7,070	6,640	981	381	2,560	491	147	28	6.0	12

CALENDAR YEAR 1964 MAX 917 MIN 0 MEAN 14.9 AC-FT 10,860
WATER YEAR 1964-65 MAX 917 MIN 0 MEAN 26.4 AC-FT 19,080

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	0400	7.31	543	1-5	1600	12.28	2,480
12-22	1600	11.07	1,870				

Note.--No gage-height record June 5-23, July 1-25. Stage-discharge relation indefinite July 26 to Aug. 5.

11-4665. Laguna de Santa Rosa near Graton, Calif.

Location.--Lat 38°27'10", long 122°50'05", in Molinos Grant on downstream side of left bank pier of highway bridge, 0.2 mile downstream from Santa Rosa Creek, and 2 miles northeast of Graton, Sonoma County.

Records available.--February 1940 to September 1949 (contents only), October 1964 to September 1965 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.--Maximum elevation during year, 73.3 ft Dec. 23.
1949-65: Maximum elevation, that of 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.

Elevations, in feet, at 2400 hours, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	-	52.8	50.1		-					
2		-	-	55.0	50.0		-					
3		-	-	56.3	-		-					
4		-	-	58.3	50.1		-					
5		-	-	65.0	51.1		-					
6		-	-	63.9	51.0		-					
7		-	-	58.9	50.6		-					
8		-	-	55.7	50.3		51.4					
9		51.0	-	53.8	50.1		53.2					
10		52.6	-	52.7	-		52.7					
11		52.5	-	52.3	-		51.9					
12		52.2	-	51.7	-		51.1					
13		51.3	-	51.3	-		50.4					
14		50.4	-	50.8	-		50.1					
15		-	-	50.6	-		52.4					
16		-	-	50.3	-		52.9					
17		-	-	50.1	-		52.3					
18		-	-	50.0	-		53.4					
19		-	-	-	-		53.5					
20		-	-	-	-		53.0					
21		-	56.7	-	-		52.8					
22		-	68.8	-	-		52.1					
23		-	73.0	53.3	-		51.4					
24		-	65.9	53.2	-		50.8					
25		-	58.9	52.4	-		50.4					
26		-	57.9	51.7	-		50.1					
27		-	57.0	51.2	-		-					
28		-	56.0	50.7	-		-					
29		-	55.4	50.5	-----		-					
30		-	54.6	50.4	-----		-					
31		-----	53.8	50.3	-----		-----		-----			-----

RUSSIAN RIVER BASIN

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., on left bank 0.6 mile downstream from Hobson Creek and 3.4 miles east of Guerneville.

Drainage area.--1,340 sq mi.

Records available.--October 1939 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "at Guerneville".

Gage.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map). Prior to Oct. 1, 1954, wire-weight gage at bridge 5.3 miles downstream at different datum. Supplementary water-stage recorder 2.1 miles downstream used during periods of low flow 1948-54.

Average discharge.--26 years, 2,213 cfs (1,602,000 acre-ft per year); median of yearly mean discharges, 1,860 cfs (1,350,000 acre-ft per year).

Extremes.--Maximum discharge during year, 93,400 cfs Dec. 23 (gage height, 49.6 ft, from floodmarks); minimum daily, 126 cfs Sept. 26, 1939-65; Maximum discharge, that of Dec. 23, 1964; maximum gage height, 49.7 ft Dec. 23, 1955, from floodmarks; minimum daily discharge, 52 cfs May 30, 1964.

Remarks.--Records good except those for period of no gage-height record, which are fair. 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 (capacity, 122,500 acre-ft), and by diversion at Wohler pumping plant beginning in May 1959. Records of chemical analyses and water temperatures for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	195	365	1,480	14,200	2,460	984	968	1,550	515	232	223	227
2	188	508	2,100	12,700	3,000	900	900	1,490	498	225	227	231
3	170	744	1,870	26,200	3,790	960	800	1,410	456	225	223	235
4	156	508	1,350	21,900	3,180	960	720	1,280	417	232	215	239
5	152	405	974	43,500	3,680	992	676	1,040	401	228	207	239
6	142	360	734	64,100	3,160	984	644	904	389	212	207	235
7	142	335	546	43,000	2,490	920	613	996	389	210	211	235
8	142	340	420	23,600	2,170	864	1,140	1,000	377	205	227	231
9	142	5,100	340	15,900	1,920	840	6,730	980	374	200	239	231
10	142	9,530	288	12,800	1,740	824	7,950	944	362	195	231	231
11	146	6,550	271	10,400	1,610	808	5,330	904	350	190	239	223
12	156	6,860	618	9,030	1,500	792	4,030	884	338	192	263	227
13	170	4,500	453	8,030	1,390	788	3,090	864	320	192	280	227
14	173	2,780	335	7,190	1,330	736	2,540	816	311	195	271	239
15	173	1,740	293	5,420	1,240	680	5,160	668	302	200	267	267
16	173	1,100	293	4,220	1,820	644	15,700	588	296	200	263	263
17	177	728	251	3,610	2,350	664	8,310	543	284	202	255	259
18	184	497	223	3,160	1,360	668	7,280	508	281	212	251	251
19	188	365	1,060	2,850	1,150	660	7,820	484	278	230	251	235
20	188	275	7,190	2,660	1,080	648	6,290	466	266	232	247	215
21	188	219	22,800	2,390	1,010	624	6,800	459	266	228	247	211
22	188	219	61,700	2,200	956	606	5,340	526	272	225	251	223
23	191	203	90,000	3,490	904	596	4,340	582	275	218	251	227
24	199	177	43,000	10,800	1,060	585	3,590	578	272	215	239	203
25	211	163	27,000	7,420	1,460	574	2,990	560	269	222	235	156
26	219	181	25,000	6,040	984	564	2,560	568	260	225	215	126
27	228	199	26,800	5,290	1,170	640	2,270	554	258	225	263	188
28	280	340	23,000	4,680	1,180	912	1,930	518	252	220	235	231
29	365	3,470	20,300	3,850	-----	760	1,700	424	245	218	235	251
30	426	2,180	19,700	3,080	-----	660	1,660	508	240	211	235	231
31	375	-----	17,800	2,730	-----	748	-----	515	-----	219	227	-----
Total	6,169	50,941	398,189	386,440	51,144	23,585	119,871	24,111	9,813	6,635	7,430	6,787
Mean	199	1,698	12,840	12,470	1,830	761	3,996	778	327	214	240	226
Ac-ft	12,240	101,000	789,800	766,500	101,400	46,780	237,800	47,820	19,460	13,160	14,740	13,460

Calendar year 1964 Max 90,000 Min 52 Mean 1,941 Ac-ft. 1,409,000
 Water year 1964-65 Max 90,000 Min 126 Mean 2,989 Ac-ft. 2,164,000

Peak discharge (base, 23,000 cfs).--Dec. 23 (time unknown) 93,400 cfs (49.6 ft); Jan. 6 (0800) 67,800 cfs (42.35 ft).

Note.--No gage-height record Dec. 23-26.

11-4672. Austin Creek near Cazadero, Calif.

Location.--Lat 38°30'05", long 123°04'05", on left bank 0.6 mile downstream from confluence of Big Austin and East Austin Creeks, 2.3 miles southeast of Cazadero, Sonoma County, and 3.4 miles upstream from mouth.

Drainage area.--63.1 sq mi.

Records available.--May 1959 to September 1965.

Gage.--Water-stage recorder and crest-stage gage. Altitude of gage is 40 ft (from topographic map).

Average discharge.--6 years, 168 cfs (121,600 acre-ft per year).

Extremes.--Maximum discharge during year, 12,100 cfs Dec. 21 (gage height, 16.80 ft); minimum daily, 0.1 cfs Sept. 27-30.

1959-65: Maximum discharge, 15,100 cfs Feb. 13, 1962 (gage height, 20.6 ft, crest-stage gage); no flow Aug. 19 to Sept. 17, 1959.

Remarks.--Records good except those for periods of no gage-height record or indefinite stage-discharge relation, which are poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	250	152	482	161	69	170	96	30	12	3.0	0.2
2	.5	407	134	1,580	149	66	135	89	26	11	2.7	.2
3	.4	96	114	2,420	140	64	110	84	28	10	2.5	.2
4	.4	49	99	2,650	147	61	95	80	29	10	2.3	.2
5	.3	31	92	4,910	422	64	85	75	29	9.5	2.1	.2
6	.3	23	82	2,410	248	75	75	73	27	9.0	1.9	.2
7	.2	18	73	1,490	167	66	100	71	26	8.5	1.7	.2
8	.2	370	66	940	177	64	700	71	26	8.5	1.5	.2
9	.2	962	62	662	155	64	1,300	69	26	8.0	1.3	.2
10	.2	1,400	58	509	143	62	545	66	26	8.0	1.2	.2
11	.2	605	61	451	131	59	351	64	25	7.5	1.0	.2
12	.2	555	53	379	120	64	265	59	22	7.0	.9	.2
13	.2	328	50	321	114	64	223	58	21	7.0	.8	.2
14	.2	223	48	276	106	58	206	56	22	6.5	.7	.2
15	.2	170	47	237	101	56	1,000	53	20	6.0	.7	.2
16	.2	123	43	216	94	53	911	53	20	6.0	.6	.2
17	.2	99	42	193	89	53	500	51	19	5.5	.5	.2
18	.2	82	45	177	84	52	532	48	19	5.5	.5	.2
19	.2	71	461	164	82	51	455	46	18	5.0	.5	.2
20	.2	64	1,060	149	78	48	399	46	17	5.0	.4	.2
21	.2	61	5,420	134	77	47	383	43	18	5.0	.4	.2
22	.2	64	6,910	120	75	46	304	42	15	4.5	.4	.2
23	.2	52	4,640	1,020	71	46	262	38	17	4.5	.3	.2
24	.2	50	2,550	875	69	45	223	37	17	4.5	.3	.2
25	.2	55	1,210	509	66	42	196	36	16	4.0	.3	.2
26	.2	50	1,600	387	66	42	174	34	15	4.0	.3	.2
27	.2	47	1,510	314	126	300	155	33	17	3.8	.3	.1
28	9.0	212	1,110	265	77	160	131	31	14	3.7	.3	.1
29	258	227	920	230	-----	125	117	31	12	3.5	.3	.1
30	50	158	750	206	-----	110	106	30	12	3.3	0.2	.1
31	14	-----	656	183	-----	155	-----	30	-----	3.1	.2	-----
Total	337.6	6,902	30,118	24,859	3,535	2,331	10,208	1,693	629	199.4	30.1	5.6
Mean	10.9	230	972	802	126	75.2	340	54.6	21.0	6.43	0.97	0.19
Ac-ft	670	13,690	59,740	49,310	7,010	4,620	20,250	3,360	1,250	396	60	11

Calendar year 1964 Max 6.910 Min 0.2 Mean 148 Ac-ft 107,100

Water year 1964-65 Max 6.190 Min 0.1 Mean 222 Ac-ft 160,400

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-21	1500	16.80	12,100	1-23	1700	10.92	4,710
1-5	1600	14.31	8,800				

Note.--No gage-height record Oct. 1-28, Mar. 27 to Apr. 9.
Stage-discharge relation indefinite July 3 to Sept. 30.

11-4675. South Fork Gualala River near Annapolis, Calif.

Location.--Lat 38°42'14", long 123°25'13", in German Grant, on left bank 2,700 ft downstream from Wheatfield Fork Gualala River and 3.1 miles southwest of Annapolis, Sonoma County.

Drainage area.--161 sq mi.

Records available.--October 1950 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 70 ft (from topographic map). Prior to Aug. 30, 1962, at site 1,700 ft upstream at different datum.

Average discharge.--15 years, 426 cfs (308,400 acre-ft per year).

Extremes.--Maximum discharge during year, 21,400 cfs Dec. 21 (gage height, 15.94 ft); minimum, 3.3 cfs Oct. 8, 19, 20.

1950-65: 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 good except those for period of no gage-height record, which are poor. No regulation or diversion above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 3-8, Jan. 22, June 1 to Aug. 26)

2.1	1.5	2.7	34	7.0	3,250
2.2	3.7	3.0	84	10.0	7,810
2.3	6.3	3.5	250	13.0	14,100
2.4	10	4.0	475		
2.5	16	5.0	1,150		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.5	238	435	1,230	350	158	397	251	61	28	12	7.0
2	3.7	1,210	389	1,880	325	140	288	230	59	27	12	7.0
3	3.5	371	317	4,350	310	127	245	213	58	26	11	7.0
4	3.5	161	262	3,050	325	118	211	201	59	24	11	7.3
5	3.5	98	238	10,800	900	134	185	185	57	23	11	7.0
6	3.5	70	196	6,080	580	226	165	176	58	21	10	7.0
7	3.5	59	178	3,840	390	192	213	166	60	21	9.9	7.0
8	3.3	222	154	2,200	400	164	1,680	155	60	21	9.8	7.0
9	4.7	2,130	140	1,440	350	147	3,190	149	58	21	9.5	6.8
10	4.2	2,530	140	1,080	310	140	2,070	138	55	20	9.6	6.7
11	3.5	1,010	242	962	280	134	1,290	128	51	19	10	6.7
12	3.5	1,250	192	745	250	127	887	120	45	18	14	6.5
13	3.5	731	161	614	235	137	655	115	41	17	13	6.3
14	3.5	455	148	530	215	118	556	113	40	20	13	6.0
15	3.5	326	164	465	205	108	2,380	106	40	16	11	6.3
16	3.7	242	144	392	190	103	2,740	98	40	17	9.8	6.0
17	3.7	186	140	362	180	96	1,470	93	36	15	9.1	5.8
18	3.5	150	124	326	170	91	1,500	90	39	15	8.8	5.5
19	3.3	121	1,010	308	160	86	1,340	85	39	15	8.5	5.5
20	3.3	103	3,130	290	155	84	1,150	84	36	15	8.5	5.3
21	3.5	96	9,720	266	150	80	1,350	86	34	15	8.5	5.3
22	3.5	106	13,400	250	145	76	975	83	35	15	8.4	5.3
23	3.5	86	12,000	1,290	138	74	776	78	36	16	8.2	5.5
24	3.5	80	6,780	2,000	134	72	628	73	36	14	8.2	5.5
25	3.7	96	3,310	1,090	124	70	522	71	35	14	8.2	5.8
26	3.7	94	4,740	822	127	111	450	69	31	14	8.3	5.8
27	5.0	89	4,360	662	340	759	397	67	36	14	8.0	6.0
28	31	927	2,880	572	192	340	352	64	30	13	7.8	6.0
29	326	773	2,080	510	-----	242	315	62	27	13	7.6	6.0
30	175	430	1,770	450	-----	221	280	60	26	13	7.4	6.3
31	38	-----	1,620	400	-----	362	-----	58	-----	13	7.4	-----
TOTAL	668.3	14,440	70,564	49,256	7,630	5,037	28,657	3,667	1,318	553	299.5	187.2
MEAN	21.6	481	2,276	1,589	273	162	955	118	43.9	17.8	9.66	6.24
AC-FT	1,330	28,640	140,000	97,700	15,130	9,990	56,840	7,270	2,610	1,100	594	371

CALENDAR YEAR 1964 MAX 13,400 MIN 2.6 MEAN 337 AC-FT 244,500
WATER YEAR 1964-65 MAX 13,400 MIN 3.3 MEAN 499 AC-FT 361,600

Peak discharge (base, 10,000 cfs).--Dec. 21 (1800) 21,400 cfs (15.94 ft); Jan. 5 (1600) 20,800 cfs (15.69 ft).

Note.--No gage-height record Jan. 29 to Feb. 22.

11-4676. Garcia River near Point Arena, Calif.

Location.--Lat 38°55'35", long 123°37'45", in SW¼SW¼ sec.3, T.12 N., R.16 W., 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.

Records available.--Occasional low-flow measurements, water years 1951-56, and annual maximum, water years 1952-56. August 1962 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 50 ft (from topographic map). July 17, 1951, to Jan. 31, 1956, crest-stage only, at site 15 ft upstream at different datum.

Extremes.--Maximum discharge during year, 26,100 cfs Dec. 21 (gage height, 15.72 ft), from rating curve extended above 6,700 cfs on basis of slope-area measurement at gage height 15.11 ft; minimum daily, 11 cfs Oct. 17-24.
1951-56, 1962-65: Maximum discharge, 26,300 cfs Dec. 22, 1955 (gage height, 20.75 ft, from gage; 20.78 ft, from high-water profile, site and datum then in use), from rating curve extended above 4,200 cfs on basis of slope-area measurement of maximum flow. A discharge of 10.1 cfs was measured on Sept. 25, 1951.

Remarks.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1965 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	366	457	1,020	310	141	164	214	74	40	24	17
2	12	555	443	1,290	285	132	137	200	73	39	24	17
3	12	255	384	2,320	260	126	127	190	71	38	23	17
4	12	141	320	1,980	255	120	119	180	69	37	23	17
5	12	99	285	9,530	471	132	110	167	68	36	23	17
6	12	75	240	5,720	372	141	104	157	65	35	23	17
7	12	58	210	3,280	320	129	128	149	68	34	22	17
8	13	230	186	1,840	290	120	513	143	68	35	22	17
9	12	1,260	178	1,180	270	117	1,400	139	68	35	21	16
10	12	2,440	186	874	250	114	1,410	133	65	34	21	16
11	12	874	315	772	235	108	892	127	63	33	23	16
12	12	796	260	646	218	105	611	122	61	32	26	16
13	12	597	222	555	210	102	443	117	59	31	24	15
14	12	438	222	492	202	96	369	117	60	30	23	15
15	12	325	222	444	194	93	2,030	117	61	30	22	15
16	12	265	198	402	182	90	1,990	112	58	29	21	15
17	11	218	186	366	174	88	1,070	109	57	28	21	14
18	11	182	174	336	166	85	1,120	106	56	28	21	14
19	11	154	716	310	162	82	982	105	55	28	20	14
20	11	135	2,190	295	154	80	883	104	53	27	20	14
21	11	129	14,200	270	150	78	829	101	51	26	20	14
22	11	132	16,600	250	144	78	676	98	49	26	20	13
23	11	114	10,300	1,110	138	75	568	94	48	25	19	13
24	11	108	4,970	1,800	135	75	476	90	47	25	19	14
25	12	141	2,720	964	129	72	413	86	47	25	19	14
26	12	123	3,020	676	129	96	363	84	45	25	19	14
27	15	120	3,140	555	230	275	322	82	42	25	19	15
28	222	569	2,200	471	162	182	288	82	41	24	18	15
29	378	597	1,850	414	-----	140	260	79	40	25	18	14
30	214	408	1,570	378	-----	132	236	77	39	24	17	14
31	93	-----	1,290	342	-----	147	-----	77	-----	25	17	-----
TOTAL	1,227	11,904	69,454	40,882	6,197	3,551	19,033	3,758	1,721	934	652	456
MEAN	39.6	397	2,240	1,319	221	115	634	121	57.4	30.1	21.0	15.2
AC-FT	2,430	23,610	137,800	81,090	12,290	7,040	37,750	7,450	3,410	1,850	1,290	904

CALENDAR YEAR 1964 MAX 16,600 MIN 11 MEAN 320 AC-FT 232,500
WATER YEAR 1964-65 MAX 16,600 MIN 11 MEAN 438 AC-FT 316,900

Peak discharge (base, 5,000 cfs).--Dec. 21 (1800) 26,100 cfs (15.72 ft); Jan. 5 (1345) 19,400 cfs (13.80 ft).

NAVARRO RIVER BASIN

11-4678. Rancheria Creek near Boonville, Calif.

Location.--Lat 38°59'35", long 123°26'00", in SE¼ sec.7, T.13 N., R.14 W., on left bank at county road bridge, 100 ft downstream from Minnie Creek and 3.7 miles west of Boonville.

Drainage area.--65.6 sq mi.

Records available.--August 1959 to September 1965.

Gage.--Water-stage recorder (digital). Datum of gage is 427 ft above mean sea level, unadjusted (by Topographic Division).

Average discharge.--6 years, 136 cfs (98,460 acre-ft per year).

Extremes.--Maximum discharge during year, 20,000 cfs Dec. 22 (gage height, 20.52 ft), from rating curve extended above 4,200 cfs on basis of slope-area measurement of maximum flow; minimum daily, 1.2 cfs Oct. 2-8, 20.
1959-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 0.8 cfs Sept. 16-19, 1964.

Remarks.--Records good except those for the period of no gage height record, which are poor. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.5	77	120	365	165	66	84	81	24	11	5.0	2.9
2	1.2	140	115	588	155	61	65	77	24	11	4.8	2.9
3	1.2	59	100	1,140	142	58	60	74	23	10	3.6	2.8
4	1.2	30	85	828	148	55	56	72	23	9.5	4.5	2.8
5	1.2	22	73	5,040	286	55	51	68	21	9.7	4.3	2.8
6	1.2	19	65	3,520	190	56	50	64	21	9.4	4.3	2.8
7	1.2	17	61	2,140	165	52	60	61	20	8.9	4.1	2.7
8	1.2	80	59	1,170	152	51	378	58	23	8.4	4.1	2.6
9	1.5	330	57	732	140	49	709	55	21	8.5	4.1	2.6
10	1.5	650	55	588	129	48	582	50	21	8.0	4.0	2.6
11	1.5	250	74	495	120	47	308	47	20	8.0	4.4	2.5
12	1.5	200	57	365	114	46	193	44	19	8.0	4.3	2.4
13	1.5	160	48	304	108	53	140	43	18	7.8	4.1	2.4
14	1.5	120	53	255	104	46	120	42	19	7.6	4.1	2.4
15	1.5	86	55	217	98	44	1,370	40	18	7.3	3.9	2.4
16	1.5	68	48	190	92	43	846	38	18	7.2	3.4	2.3
17	1.5	55	44	165	86	42	450	37	17	6.9	3.0	2.3
18	1.5	46	44	150	80	41	450	36	17	6.8	3.6	2.2
19	1.5	40	408	138	78	40	349	34	17	6.5	3.8	2.2
20	1.2	36	964	133	76	39	311	34	16	6.3	3.7	2.2
21	1.5	34	7,720	122	73	38	297	34	15	6.0	3.7	2.2
22	1.5	32	13,100	116	67	38	230	33	14	5.8	3.5	2.2
23	1.5	31	5,650	738	65	37	193	32	14	5.8	3.4	2.2
24	1.5	31	2,130	950	62	37	165	31	13	5.6	3.5	2.2
25	1.5	31	1,160	446	60	36	140	30	13	5.6	3.4	2.2
26	1.8	32	1,200	318	62	40	127	29	13	5.4	3.4	2.2
27	3.8	32	1,250	258	116	78	118	28	13	5.3	3.4	2.2
28	26	150	970	220	74	48	106	26	12	5.2	3.2	2.2
29	37	160	853	199	-----	42	97	26	12	4.4	3.2	2.2
30	28	110	687	188	-----	52	88	25	11	5.0	3.1	2.2
31	12	-----	535	178	-----	76	-----	25	-----	5.0	2.9	-----
TOTAL	143.7	3,128	37,840	22,256	3,207	1,514	8,193	1,374	530	225.9	117.8	72.8
MEAN	4.64	104	1,221	718	115	48.8	273	44.3	17.7	7.29	3.80	2.43
AC-FT	285	6,200	75,050	44,140	6,360	3,000	16,250	2,730	1,050	448	234	144

CALENDAR YEAR 1964 MAX 13,100 MIN 0.8 MEAN 154 AC-FT 111,600
WATER YEAR 1964-65 MAX 13,100 MIN 1.2 MEAN 215 AC-FT 155,900

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1515	20.52	20,000	1-23	1715	10.39	2,200
1-5	1330	17.01	9,220	4-15	1645	10.69	2,490

Note.--No gage-height record Nov. 4 to Dec. 8.

11-4678.5 Soda Creek tributary near Boonville, Calif.

Location.--Lat 39°01'32", long 123°17'25", in SE¼ sec.33, T.14 N., R.13 W., on right bank at culvert, 70 feet upstream from Soda Creek, and 4.2 miles northeast of Boonville.

Drainage area.--1.53 sq mi.

Records available.--Water years 1962-64 (annual maximum), October 1964 to September 1965.

Gage.--Water-stage recorder with rain gage attachment and crest-stage gage. Altitude of gage is 1,580 ft (from topographic map). Aug. 23, 1961 to Sept. 2, 1964, crest-stage gage only.

Extremes.--Maximum discharge, 394 cfs Dec. 22 (gage height, 21.03 ft, from floodmarks), by computation of maximum flow through culvert and over road embankment; no flow for several months.
1961-65: Maximum discharge, that of Dec. 22, 1964.
1964-65: No flow for several months.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. No regulation or diversion.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.1	3.9	18	3.5	0.8	0.6	1.3	0.1	0.1		
2	0	.2	4.3	19	3.0	.7	.6	1.3	.1	.1		
3	0	0	3.2	31	2.9	.7	.6	1.2	.1	.1		
4	0	0	2.6	29	2.9	.6	.6	1.1	.1	.1		
5	0	0	2.2	92	3.2	.7	.5	1.1	.1	.1		
6	0	0	1.9	64	2.6	.7	.5	1.0	.1	.1		
7	0	0	1.6	37	2.3	.7	.8	.9	.2	.1		
8	0	.7	1.3	18	2.0	.6	5.3	1.0	.2	.1		
9	0	1.9	1.2	9.6	1.9	.6	11	1.0	.2	.1		
10	0	6.1	1.9	7.2	1.7	.6	18	.9	.2	.1		
11	0	3.2	3.0	5.8	1.6	.6	12	.9	.2	.1		
12	0	3.5	2.4	4.7	1.5	.6	8.7	.9	.2	.1		
13	0	2.2	1.9	3.8	1.3	.5	8.3	.8	.2	.1		
14	0	1.2	1.9	3.2	1.3	.5	7.6	.8	.2	.1		
15	0	.7	1.5	2.9	1.2	.5	26	.7	.2	.1		
16	0	.5	1.1	2.7	1.1	.4	16	.5	.2	.1		
17	0	.4	1.0	2.5	1.0	.4	7.0	.5	.2	.1		
18	0	.3	1.0	2.3	1.0	.4	4.8	.4	.2	.1		
19	0	.2	3.0	2.4	1.0	.4	3.5	.4	.2	.1		
20	0	.2	12	2.4	1.0	.4	3.5	.4	.2	.1		
21	0	.2	97	2.3	.9	.4	3.5	.4	.2	.1		
22	0	.2	270	2.2	.9	.4	3.4	.4	.2	0		
23	0	.2	160	8.3	.8	.4	2.6	.3	.2	0		
24	0	.2	86	16	.8	.4	2.3	.2	.2	0		
25	0	.3	45	12	.7	.4	2.2	.2	.2	0		
26	0	.3	32	9.2	.8	.6	1.9	.2	.2	0		
27	0	.4	34	8.3	1.1	1.0	1.7	.2	.1	0		
28	.1	8.3	26	7.4	.9	.6	1.6	.2	.1	0		
29	0	4.8	24	6.5	-----	.5	1.6	.2	.1	0		
30	0	3.4	21	5.8	-----	.5	1.5	.2	.1	0		
31	0	-----	20	5.2	-----	.6	-----	.2	-----	0		
Total	0.1	39.7	867.9	440.7	44.9	17.2	158.2	19.8	5.0	2.1	0	0
Mean	0.003	1.32	28.0	14.2	1.60	0.55	5.27	0.64	0.17	0.07	0	0
Ac-ft	0.2	7.9	1,720	874	89	34	314	39	9.9	4.2	0	0
(†)	2.9	11.0	251	9.7	1.4	1.9	5.7	0	0	0	0.5	0

Calendar year 1964 Max - Min - Mean - Ac-ft -
Water year 1964-65 Max 270 Min 0 Mean 4.37 Ac-ft 3,160

Peak discharge (base, 80 cfs).--Dec. 22 (time unknown) 394 cfs (21.03 ft); Jan. 5 (1200) 184 cfs (10.76 ft).

Note.--No gage-height record Dec. 22-27, Jan. 8-17.

† Precipitation, in inches.

NAVARRO RIVER BASIN

11-4680. Navarro River near Navarro, Calif.

Location.--Lat 39°10'15", long 123°39'55", in SE¼ sec.7, T.15 N., R.16 W., 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.

Records available.--October 1950 to September 1965,

Gage.--Water-stage recorder. *datum = 6.65 msl*
Altitude of gage is 20 ft (from topographic map).

Average discharge.--15 years, 522 cfs (377,900 acre-ft per year); median of yearly mean discharges, 455 cfs (329,000 acre-ft per year).

Extremes.--Maximum discharge during year, 52,100 cfs Dec. 22 (gage height, 38.64 ft), from rating curve extended above 19,000 cfs as explained below; minimum, 6.3 cfs Oct. 6.

1950-65: 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 good except those for periods of no gage-height record, which are poor. No regulation or diversion above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	7.7	55	570	2,700	782	215	200	325	79	41	28	12
2	8.2	197	530	2,380	694	200	185	300	77	35	26	14
3	11	194	470	4,520	610	185	175	275	75	34	24	15
4	9.5	95	390	4,750	550	180	160	255	74	33	22	15
5	6.9	64	320	13,900	726	175	155	240	72	35	19	15
6	6.3	50	275	11,400	874	170	150	225	71	35	17	15
7	6.5	47	245	6,900	806	165	180	217	70	35	17	15
8	7.1	55	225	3,730	722	160	240	205	69	34	17	15
9	7.1	996	219	2,550	646	155	2,260	200	68	34	17	14
10	7.1	2,130	219	1,980	584	152	2,630	185	68	31	15	14
11	7.8	1,030	455	1,600	528	150	1,970	175	65	32	19	13
12	7.1	1,340	420	1,340	483	145	1,370	170	61	32	36	14
13	7.1	842	348	1,110	434	145	1,050	165	59	33	40	15
14	7.1	518	312	942	408	140	906	155	58	31	30	16
15	7.8	354	312	814	381	140	3,540	150	62	30	25	14
16	8.5	267	273	710	360	135	4,720	140	59	30	25	14
17	7.8	205	240	620	336	132	2,610	135	59	28	23	13
18	8.5	161	213	550	310	130	2,510	130	56	27	21	14
19	9.3	134	427	504	290	128	2,270	125	55	27	16	12
20	9.3	112	2,110	480	275	125	1,930	120	55	28	17	11
21	9.3	103	14,500	430	255	123	1,820	115	53	26	17	11
22	9.3	98	39,800	393	240	122	1,350	110	50	25	17	17
23	9.3	95	28,700	987	220	120	1,100	105	50	25	20	17
24	8.5	94	11,000	3,780	200	119	900	100	49	25	17	15
25	9.3	130	5,630	2,310	185	118	750	95	49	29	17	20
26	10	120	5,100	1,640	180	135	630	92	47	29	16	23
27	12	113	6,440	1,370	300	380	540	90	47	28	16	20
28	30	760	4,680	1,210	245	310	475	88	46	27	17	20
29	92	800	4,350	1,090	-----	230	425	85	46	26	16	20
30	82	550	3,920	969	-----	180	370	83	43	27	14	18
31	59	-----	3,580	870	-----	156	-----	81	-----	28	13	-----
TOTAL	488.4	11,709	136,273	78,529	12,624	5,120	37,571	4,936	1,792	940	634	461
MEAN	15.8	390	4,396	2,533	451	165	1,252	159	59.7	30.3	20.5	15.4
AC-FT	969	23,220	270,300	155,800	25,040	10,160	74,520	9,790	3,550	1,860	1,260	914

CALENDAR YEAR 1964 MAX 39,800 MIN 5.5 MEAN 552 AC-FT 400,800
WATER YEAR 1964-65 MAX 39,800 MIN 6.3 MEAN 797 AC-FT 577,400

Peak discharge (base, 7,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	2000	38.64	52,100	4-15	2230	16.20	7,650
1- 5	1745	32.28	28,000				

Note.--No gage-height record Nov. 22 to Dec. 8, Feb. 18 to Apr. 8, Apr. 22 to June 10.

11-4680.1. Albion River near Comptche, Calif.

Location.--Lat 39°15'40", long 123°37'00", in SW¼ sec.11, T.16 N., R.16 W., on right bank 2,000 ft downstream from Morrison Gulch and 1.7 miles west of Comptche.

Drainage area.--14.4 sq mi.

Records available.--July 1961 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 130 ft (from topographic map).

Extremes.--Maximum discharge during year, 2,050 cfs Dec. 21 (gage height, 9.50 ft) from rating curve extended above 480 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1-25, Aug. 28 to Sept. 30.

1961-65: Maximum discharge, that of Dec. 21, 1964; no flow for many days in each year.

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
Basic Data Report	1962	Feb. 13, 1962	1,310	8.30
1830A, Basic Data Report	1963	Jan. 31, 1963	934	7.53
Basic Data Report	1964	Jan. 20, 1964	1,090	7.87

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

Revisions.--Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1962-64, superseding figures published in WSP 1830A, and Basic Data Reports, are given herewith:

Feb. 13, 1962.....615	Jan. 20, 1964.....560
Dec. 2, 1962.....209	Jan. 21, 1964.....332
Jan. 31, 1963.....515	

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
February 1962.....	2,206.7	615	4.1	78.8	4,380
Water year 1961-62.....	-	615	0	14.6	10,560
December 1962.....	1,026.9	209	5.5	33.1	2,040
Calendar year 1962.....	-	615	0	16.3	11,830
January 1963.....	727.4	515	1.9	23.5	1,440
Water year 1962-63.....	-	515	0	19.5	14,110
Calendar year 1963.....	-	515	0	18.6	13,450
January 1964.....	2,258.4	560	6.1	72.9	4,480
Water year 1963-64.....	-	560	0	11.2	8,110

Revised peak discharge.--1961-62: Jan. 19 (1600) 432 cfs (6.05 ft); Feb. 13 (1100) 1,310 cfs (8.30 ft).

1962-63: Dec. 2 (2000) 558 cfs (6.51 ft); Jan. 31 (1500) 934 cfs (7.53 ft); Apr. 6 (0400) 405 cfs (5.94 ft).

1963-64: Nov. 23 (1300) 395 cfs (5.90 ft); Jan. 20 (1700) 1,090 cfs (7.87 ft).

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.6	0	2.4	3.8	4.0	95
1.8	.2	2.5	5.6	4.5	144
1.9	.3	2.6	8.0	5.0	211
2.0	.6	2.8	15	6.0	420
2.1	1.0	3.0	24	7.0	720
2.2	1.6	3.3	41	8.0	1,150
2.3	2.5	3.6	61		

ALBION RIVER BASIN

11-4680.1. Albion River near Comptche, Calif.--Continued.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	0.3	77	106	20	6.2	10	7.2	1.1	0.4	0.1	
2	0	.9	83	90	18	5.8	9.0	6.5	1.0	.4	.1	
3	0	.4	55	238	16	5.0	7.7	6.0	1.0	.4	.1	
4	0	.3	36	174	16	4.6	7.0	5.5	1.0	.3	.1	
5	0	.2	25	300	33	4.3	6.2	4.8	.9	.3	.1	
6	0	.2	18	312	25	4.1	5.5	4.4	1.0	.3	.1	
7	0	.2	15	224	22	4.1	5.6	4.0	1.1	.3	.1	
8	0	1.1	12	121	21	3.8	11	3.7	1.2	.3	.1	
9	0	5.3	11	81	18	3.6	49	3.5	1.1	.3	.1	
10	0	26	23	58	17	3.6	89	3.2	.9	.2	.1	
11	0	17	46	49	15	3.6	65	2.9	.8	.2	.1	
12	0	22	34	39	14	3.5	43	2.6	.7	.2	.1	
13	0	14	26	33	12	3.2	30	2.6	.6	.3	.1	
14	0	8.6	25	28	12	3.0	23	2.6	.7	.2	.1	
15	0	5.8	20	24	11	2.8	64	2.4	.6	.2	.1	
16	0	4.2	17	19	9.5	2.7	74	2.2	.6	.2	.1	
17	0	2.9	14	16	8.6	2.5	61	2.2	.6	.2	.1	
18	0	2.3	13	14	8.0	2.4	74	2.0	.6	.2	.1	
19	0	1.9	35	14	7.2	2.4	63	2.0	.6	.1	.1	
20	0	1.8	54	12	6.8	2.3	65	2.3	.5	.1	.1	
21	0	1.9	803	11	6.5	2.2	54	2.1	.5	.1	.1	
22	0	3.2	1,120	9.8	6.0	2.1	44	1.9	.5	.1	.1	
23	0	2.2	807	72	5.6	2.1	34	1.7	.5	.1	.1	
24	0	3.0	454	217	5.2	2.1	26	1.6	.5	.1	.1	
25	0	14	237	114	4.8	2.0	21	1.5	.4	.1	.1	
26	.1	12	302	67	5.0	4.5	17	1.4	.4	.1	.1	
27	.1	11	278	47	14	24	14	1.3	.4	.1	.1	
28	.6	160	193	38	7.2	11	12	1.2	.4	.1	0	
29	.4	79	213	31	-----	8.3	10	1.2	.4	.1	0	
30	.1	52	217	26	-----	10	8.4	1.1	.4	.1	0	
31	.1	-----	173	23	-----	9.5	-----	1.1	-----	.1	0	---
TOTAL	1.4	453.7	5,436	2,607.8	364.4	151.3	1,002.4	88.7	21.0	6.2	2.7	0
MEAN	0.05	15.1	175	84.1	13.0	4.88	33.4	2.86	0.70	0.20	0.09	0
AC-FT	2.8	900	10,780	5,170	723	300	1,990	176	42	12	5.4	0

CALENDAR YEAR 1964 MAX 1,120 MIN 0 MEAN 24.0 AC-FT 17,390
WATER YEAR 1964-65 MAX 1,120 MIN 0 MEAN 27.8 AC-FT 20,100

Peak discharge (base, 350 cfs)--Dec. 21 (2030) 2,050 cfs (9.50 ft); Jan. 5 (1215) 432 cfs (6.05 ft).

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., on left bank 250 ft downstream from Daugherty Creek and 7.2 miles east of Comptche.

Drainage area--36.2 sq mi.

Records available--August 1960 to September 1965.

Gage--Water-stage recorder (digital). Altitude of gage is 500 ft (from topographic map).

Average discharge--5 years, 49.4 cfs (35,760 acre-ft per year).

Extremes--Maximum discharge during year, 8,200 cfs Dec. 22 (gage height, 16.30 ft), from rating curve extended above 1,700 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.8 cfs Oct. 1-9, 12.
1960-65: Maximum discharge that of Dec. 22, 1964; minimum, 0.6 cfs many days in September 1960.

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

Revisions (water years)--1962 Report: 1961(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.8	4.0	132	340	52	18	15	30	8.1	4.1	2.3	1.3
2	.8	5.2	150	248	45	17	15	28	7.9	3.9	2.2	1.3
3	.8	3.0	93	524	40	15	14	26	7.6	3.7	2.1	1.4
4	.8	2.4	63	491	38	14	13	25	7.5	3.6	1.9	1.3
5	.8	2.1	51	1,500	51	14	13	23	7.1	3.4	1.7	1.3
6	.8	1.9	47	1,240	42	13	13	22	6.9	3.4	1.6	1.3
7	.8	1.2	38	780	37	13	13	21	7.1	3.2	1.6	1.3
8	.8	8.6	28	428	33	12	55	19	7.3	3.1	1.6	1.3
9	.8	24	28	278	31	12	151	19	7.1	3.0	1.5	1.2
10	.9	81	77	203	28	12	214	17	6.7	3.0	1.4	1.1
11	.9	54	106	160	26	13	147	16	6.3	3.0	2.2	1.1
12	.8	58	65	121	24	18	93	15	5.7	3.0	3.2	1.1
13	.9	36	51	101	22	19	67	15	5.8	3.1	2.6	1.1
14	.9	23	47	86	21	20	55	14	6.2	3.0	2.2	1.2
15	.9	17	42	75	19	19	312	14	6.1	2.8	2.0	1.1
16	.9	13	39	66	18	17	334	13	5.9	2.5	1.7	1.1
17	.9	10	36	58	17	17	193	13	5.6	2.5	1.6	1.1
18	.9	8.0	34	52	16	18	200	13	5.5	2.3	1.4	1.0
19	.9	6.9	53	48	16	19	157	12	5.3	2.2	1.5	1.0
20	.9	6.2	158	45	16	16	141	12	4.8	2.2	1.5	1.0
21	.9	6.6	2,270	41	16	19	116	12	4.6	2.2	1.5	1.0
22	.9	9.2	5,520	38	16	18	92	11	4.5	2.2	1.5	1.0
23	.9	6.6	3,080	109	16	18	78	11	4.4	2.2	1.4	1.0
24	.9	6.9	1,430	407	16	18	65	11	4.4	2.1	1.5	1.1
25	1.0	18	793	221	15	18	56	10	4.3	2.2	1.5	1.1
26	1.0	17	936	150	15	18	48	9.9	4.2	2.2	1.5	1.1
27	1.2	19	860	110	36	34	44	9.3	4.1	2.1	1.5	1.2
28	3.4	217	600	92	20	18	39	9.0	4.0	2.2	1.6	1.2
29	2.7	114	610	79	-----	15	36	8.7	4.0	2.1	1.6	1.2
30	1.8	85	572	69	-----	15	23	8.5	4.0	2.1	1.6	1.2
31	1.5	-----	512	70	-----	15	-----	8.3	-----	2.3	1.3	-----
TOTAL	33.2	865.4	18,521	8,230	742	524	2,822	475.7	173.0	84.9	54.3	34.7
MEAN	1.07	28.8	597	265	26.5	16.9	94.1	15.3	5.77	2.74	1.75	1.16
AC-FT	66	1,770	36,740	16,320	1,470	1,040	5,600	944	343	168	108	69

CALENDAR YEAR 1964 MAX 5,520 MIN 0.7 MEAN 73.9 AC-FT 53,660
WATER YEAR 1964-65 MAX 5,520 MIN 0.8 MEAN 89.2 AC-FT 64,590

Peak discharge, (base, 700 cfs)--Dec. 22 (1130) 8,200 cfs (16.30 ft); Jan. 5 (1115) 3,130 cfs (10.97 ft).

Note--No gage-height record Oct. 1-7, Aug. 3-17, Sept. 5-21.

NOYO RIVER BASIN

11-4685. Noyo River near Fort Bragg, Calif.

Location.--Lat 39°25'31", long 123°44'10", in SW¼ sec.10, T.18 N., R.17 W., on right bank 0.7 mile downstream from South Fork and 3.5 miles east of Fort Bragg.

Drainage area.--106 sq mi.

Records available.--August 1951 to September 1965.

Gage.--Water-stage recorder (digital). Datum of gage is 12.1 ft above mean sea level (planetable survey).

Average discharge.--14 years, 222 cfs (160,700 acre-ft per year); median of yearly mean discharges, 185 cfs (134,000 acre-ft per year).

Extremes.--Maximum discharge during year, 24,000 cfs Dec. 22 (gage height, 26.30 ft, from rating curve extended above 7,400 cfs on basis of slope-conveyance study; minimum daily, 3.1 cfs Oct. 5, 6, 8.
1951-65: Maximum discharge, that of Dec. 22, 1964; minimum daily (revised), 2.4 cfs Aug. 25-28, Sept. 12, 1959.

Remarks.--Records good except those for period of indefinite stage-discharge relation, which are fair. No regulation or diversion above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1964, superseding figures published in 1964 Report, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1964		1964-Con.		1964-Con.		1964-Con.	
Aug. 27	2.9	Sept. 5	3.3	Sept. 14	3.8	Sept. 23	3.5
28	2.9	6	3.1	15	3.8	24	3.5
29	2.9	7	2.9	16	3.8	25	3.5
30	3.3	8	2.9	17	4.0	26	3.5
31	3.1	9	3.1	18	4.0	27	3.5
Sept. 1	3.1	10	3.1	19	4.0	28	3.5
2	2.9	11	3.1	20	3.8	29	3.5
3	2.9	12	3.3	21	3.5	30	3.3
4	2.9	13	3.5	22	3.5		

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
August 1964.....	116.6	5.5	2.9	3.76	231
September.....	102.1	4.0	2.9	3.40	203
Water year 1963-64....	-	4,000	2.9	114	83,070

11-4685. Noyo River near Fort Bragg, Calif.--Continued.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.3	16	657	1,410	267	95	110	109	35	20	9.9	5.9
2	3.3	25	761	1,110	234	87	103	102	34	20	9.7	6.0
3	3.2	23	608	1,690	210	80	96	96	33	19	9.0	6.3
4	3.2	15	378	1,730	195	77	90	91	32	18	8.3	5.7
5	3.1	11	250	2,230	244	74	86	83	32	17	7.3	5.7
6	3.1	10	176	2,880	230	73	81	77	31	17	7.2	5.7
7	3.5	8.3	140	2,460	206	74	79	74	32	16	6.9	5.7
8	3.1	11	118	1,590	191	68	83	71	31	16	7.1	5.7
9	3.8	51	108	1,130	175	66	118	69	31	15	6.9	5.7
10	3.8	269	160	878	163	66	234	66	30	15	7.1	5.4
11	3.6	131	635	761	155	65	250	63	29	14	7.4	5.4
12	3.3	157	439	653	145	65	201	60	28	15	9.1	5.1
13	3.5	126	297	560	138	64	167	58	27	14	9.5	5.1
14	3.6	75	232	470	137	61	145	57	27	14	9.0	4.8
15	3.6	43	195	400	131	60	267	54	27	13	7.9	4.5
16	3.6	26	162	347	124	59	635	52	27	13	7.7	4.5
17	3.6	20	140	302	116	58	500	51	26	13	7.5	4.2
18	3.6	14	129	272	111	57	584	49	25	11	7.4	4.2
19	3.6	11	409	248	106	55	611	48	24	11	7.2	3.8
20	3.6	9.9	1,450	230	102	55	581	49	24	11	7.4	3.8
21	3.6	9.5	8,430	210	99	54	686	48	23	11	7.4	3.8
22	3.6	11	20,500	195	98	53	584	46	23	10	7.5	3.5
23	3.6	10	12,400	212	92	52	446	43	22	10	7.5	3.3
24	3.7	10	5,250	1,660	84	52	329	43	22	9.8	7.2	3.9
25	3.8	55	3,280	1,240	79	51	261	41	22	9.6	6.9	4.4
26	4.8	78	3,290	848	79	64	212	40	22	10	6.9	4.8
27	8.3	81	2,750	626	133	238	181	39	21	10	6.3	5.1
28	19	1,150	2,090	488	106	200	157	38	21	9.7	6.3	5.1
29	25	867	1,890	398	-----	165	137	37	20	9.7	6.2	5.3
30	17	404	1,910	340	-----	145	125	36	19	9.4	6.2	5.4
31	13	-----	1,860	296	-----	125	-----	35	-----	9.9	5.9	-----
TOTAL	174.4	3,727.7	71,094	27,864	4,150	2,558	8,139	1,825	800	411.1	233.8	147.8
MEAN	5.63	124	2,293	899	148	82.5	271	58.9	26.7	13.3	7.54	4.93
AC-FT	346	7,390	141,000	55,270	8,230	5,070	16,140	3,620	1,590	815	464	293

CALENDAR YEAR 1964 MAX 20,500 MIN 2.9 MEAN 284 AC-FT 205,900
 WATER YEAR 1964-65 MAX 20,500 MIN 3.1 MEAN 332 AC-FT 240,200

Peak discharge (base, 2,400 cfs).--Dec. 22 (0230) 24,000 cfs (26.30 ft); Jan. 6 (0045) 3,070 cfs (11.80 ft).

Note.--Stage-discharge relation indefinite Oct. 1-26.

PUDDING CREEK BASIN

11-4685.4. Pudding Creek near Fort Bragg, Calif.

Location.--Lat 39°27'25", long 123°43'20", in NE¼NW¼ sec.2, T.18 N., R.17 W., on right bank at old town site of Glenblair, 0.7 miles downstream from Little Valley Creek, and 4.5 miles east north-east of Fort Bragg.

Drainage area.--12.5 sq mi.

Records available.--October 1963 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 105 ft (from topographic map).

Extremes.--Maximum discharge during year, 2,000 cfs Dec. 21 (gage height, 8.55 ft); no flow Sept. 20, 21, 23.
1963-65: Maximum discharge, that of Dec. 21, 1964; no flow at times in each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.5	0	2.6	30
1.6	.1	2.9	53
1.7	.5	3.4	113
1.8	1.3	4.0	222
1.9	2.7	5.0	480
2.0	4.8	7.0	1,240
2.2	11		

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.2	1.3	113	90	15	9.2	10	6.5	1.5	0.8	0.2	0.1
2	.2	2.7	98	74	13	7.9	8.5	5.7	1.5	.7	.2	.1
3	.2	1.7	67	195	12	7.0	7.0	5.3	1.7	.6	.2	.1
4	.2	1.1	37	144	12	6.1	6.0	5.0	1.6	.6	.2	.1
5	.2	.7	23	194	38	5.6	5.4	4.6	1.6	.5	.2	.1
6	.1	.5	15	260	25	5.6	4.8	4.1	1.7	.5	.1	.1
7	.1	.5	13	179	20	5.6	4.7	3.9	1.8	.5	.1	.2
8	.1	1.0	10	102	16	5.0	5.7	3.7	1.8	.4	.1	.1
9	.1	5.6	11	66	14	4.8	22	3.6	1.6	.4	.1	.1
10	.1	4.2	38	52	12	5.0	42	3.4	1.5	.4	.1	.1
11	.1	16	106	52	11	4.8	30	3.1	1.4	.5	.1	.1
12	.2	14	53	39	10	4.8	20	3.2	1.2	.5	.1	.1
13	.2	16	29	31	9.6	4.4	15	3.1	1.1	.4	.1	.1
14	.2	10	22	26	10	4.1	12	3.1	1.2	.4	.1	.1
15	.2	6.4	17	22	8.6	3.9	99	2.8	1.3	.4	.1	.1
16	.2	4.6	13	19	7.9	3.7	118	2.6	1.2	.3	.1	.1
17	.2	3.5	11	16	7.3	3.7	64	2.6	1.1	.3	.1	.1
18	.2	2.6	10	14	6.7	3.5	80	2.4	1.1	.3	.1	.1
19	.2	2.1	45	15	6.7	3.5	79	2.7	1.0	.3	.1	.1
20	.2	1.8	225	15	6.4	3.3	70	3.1	.8	.3	.1	0
21	.3	1.8	889	13	6.1	3.2	57	2.7	.8	.3	.1	0
22	.3	2.3	985	11	6.1	3.1	42	2.4	1.0	.3	.1	.1
23	.3	2.0	512	57	5.8	3.1	31	2.3	1.1	.3	.1	0
24	.3	2.5	405	124	5.6	3.1	22	2.1	1.0	.3	.1	.1
25	.3	16	300	78	5.0	2.9	18	2.0	.9	.3	.1	.1
26	.3	16	326	47	5.6	7.0	15	1.9	.8	.3	.1	.1
27	.3	16	223	31	26	4.3	12	1.8	.7	.2	.1	.1
28	1.3	301	184	26	11	17	10	1.7	.7	.2	.1	.2
29	3.3	146	202	22	-----	12	8.8	1.6	.7	.2	.1	.2
30	1.4	61	180	19	-----	12	7.6	1.6	.7	.2	.1	.2
31	.7	-----	142	16	-----	11	-----	1.5	-----	.2	.1	-----
TOTAL	12.2	698.7	5,304	2,049	332.4	218.9	926.5	96.1	36.1	11.9	3.6	3.1
MEAN	0.39	23.3	171	66.1	11.9	7.06	30.9	3.10	1.20	0.38	0.12	0.10
AC-FT	24	1,390	10,520	4,060	659	434	1,840	191	72	24	7.1	6.1

Calendar year 1964 Max 985 Min 0 Mean 24.9 Ac-ft 18,100

Water year 1964-65 Max 985 Min 0 Mean 26.6 Ac-ft 19,230

Peak discharge (base, 500 cfs).--Nov. 28 (1600) 514 cfs (5.11 ft); Dec. 21 (2130) cfs (8.55 ft).

Note.--No gage-height record Oct. 3-7, July 21 to Aug. 19.

Location--Lat 39°34'20", long 123°41'45", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.25, T.20 N., R.17 W., on right bank 0.9 mile upstream from confluence with North Fork Tenmile River and 15.4 miles northeast of Fort Bragg.

Records available.--August 1964 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 50 ft (from topographic map).

Extremes--1964: Maximum daily discharge during period August to September, 3.2 cfs Aug. 14; minimum daily, 2.3 cfs Sept. 12-19.
1964-65: Maximum discharge during water year, 5,670 cfs Dec. 21 (gage height, 15.34 ft); minimum daily, 2.5 cfs Oct. 8, 9.

Remarks.--Records good. No regulation or diversion. Records of water temperatures for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 14 to Nov. 10, 1964 and May 2 to June 16, 1965)

2.6	1.3	4.5	137
2.7	3.0	5.0	230
2.9	8.1	6.0	460
3.2	20	8.0	1,150
3.5	36	11.0	2,650
4.0	72	14.0	4,650

Discharge, in cubic feet per second, 1964

Discharge, in cubic feet per second, 1904														
Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	2.5	7	-	2.5	13	-	2.3	19	2.8	2.3	25	2.8	2.5
2	-	2.7	8	-	2.7	14	3.2	2.3	20	2.8	2.5	26	2.7	2.5
3	-	2.7	9	-	2.8	15	3.0	2.3	21	2.8	2.7	27	2.7	2.7
4	-	2.5	10	-	2.8	16	3.0	2.3	22	2.8	2.7	28	2.7	2.7
5	-	2.5	11	-	2.5	17	3.0	2.3	23	2.8	2.5	29	2.5	2.7
6	-	2.5	12	-	2.3	18	2.8	2.3	24	2.8	2.5	30	2.5	2.7
												31	2.5	-
Total.....													-	75.8
Mean.....													-	2.53
Ac-ft.....													-	150

TENMILE RIVER BASIN

11-4686. Middle Fork Tenmile River near Fort Bragg, Calif.--Continued

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	8.1	332	480	106	41	49	46	14	10	7.3	3.9
2	2.8	14	433	442	94	38	45	43	14	10	7.0	4.2
3	2.7	9.5	290	651	84	35	41	40	14	9.8	6.1	4.2
4	2.7	7.3	177	603	79	33	38	37	14	9.5	5.9	4.2
5	2.7	5.9	125	865	113	32	35	35	14	9.1	5.6	4.2
6	2.7	5.6	92	1,090	93	32	32	34	14	9.1	5.6	4.4
7	2.7	5.3	74	850	82	31	32	32	14	9.1	5.6	4.2
8	2.5	7.0	63	531	74	30	35	30	14	9.1	5.3	4.2
9	2.5	29	59	400	69	29	50	29	14	8.4	5.1	3.9
10	2.7	166	139	333	65	29	78	27	13	8.4	4.8	3.9
11	2.7	103	299	330	61	29	77	25	13	8.8	5.9	3.7
12	2.8	132	196	292	57	28	66	24	12	8.8	7.5	3.7
13	2.8	95	140	256	54	28	58	24	12	8.4	6.4	3.5
14	2.8	64	108	218	53	26	54	23	13	8.8	5.9	3.5
15	3.0	47	93	183	51	26	152	22	13	8.4	5.3	3.5
16	3.0	40	76	156	48	26	270	22	12	8.1	5.1	3.2
17	3.0	34	66	132	46	24	222	22	12	8.1	5.1	3.2
18	3.0	30	61	116	44	24	250	20	12	8.1	4.8	3.2
19	3.0	27	159	106	43	24	254	22	12	8.1	4.8	3.0
20	3.0	26	576	95	41	24	272	21	11	8.1	4.8	3.0
21	3.0	26	2,960	84	40	22	292	20	11	7.5	4.8	3.0
22	3.0	27	4,280	78	38	22	252	18	11	7.3	4.8	3.0
23	3.2	25	3,090	201	36	22	198	18	11	7.3	4.8	3.0
24	3.2	27	2,180	582	35	22	159	18	11	7.3	4.8	3.0
25	3.7	60	1,560	405	34	22	128	18	11	7.5	4.8	3.0
26	3.7	61	1,500	288	35	48	103	17	12	7.5	4.6	3.0
27	4.4	65	1,140	224	66	158	86	16	10	7.3	4.6	3.2
28	9.5	705	854	181	45	89	72	16	10	7.0	4.4	3.2
29	11	403	822	161	-----	65	61	15	10	6.7	4.2	3.2
30	7.5	219	822	140	-----	60	53	15	10	6.7	3.9	3.0
31	5.3	-----	682	120	-----	54	-----	14	-----	7.3	3.9	-----
Total	113.4	2,473.7	23,448	10,593	1,686	1,173	3,514	763	368	255.6	163.5	105.4
Mean	3.66	82.5	756	342	60.2	37.8	117	24.6	12.3	8.25	5.27	3.51
Ac-ft	225	4,910	46,510	21,010	3,340	2,330	6,970	1,510	730	507	324	209

Calendar year 1964 Max - Min - Mean - Ac-ft -
 Water year 1964-65 Max 4,280 Min 2.5 Mean 122 Ac-ft 88,580

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	1400	7.91	1,110	1- 5	2200	8.28	1,260
12-21	2200	15.34	5,670	1-24	0300	6.95	752

11-4690. Mattole River near Petrolia, Calif.

Location.--Lat 40°18'40", long 124°16'10", in NW¼ sec.11, T.2 S., R.2 W., on right bank 0.2 mile downstream from Clear Creek, 1.2 miles southeast of Petrolia, and 1.3 miles upstream from North Fork.

Drainage area.--240 sq mi.

Records available.--October 1911 to December 1913, October 1950 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Altitude of gage is 40 ft (from topographic map). November 1911 to December 1913, staff or chain gages at several sites upstream within 0.7 mile of present site at various datums. Dec. 11, 1950, to July 14, 1955, water-stage recorder at site 0.7 mile upstream at datum 7.48 ft higher.

Average discharge.--17 years, 1,352 cfs (978,800 acre-ft per year).

Extremes.--Maximum discharge during year, 78,500 cfs Dec. 22 (gage height, 27.86 ft), from rating curve extended above 24,000 cfs as explained below; minimum daily, 23 cfs Oct. 3-7, 18-24.

1911-13, 1950-65: Maximum discharge, 90,400 cfs Dec. 22, 1955 (gage height, 29.60 ft), 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 except those for period of no gage height record, which are poor. Small diversions for irrigation above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	24	125	7,100	4,750	1,420	481	356	940	202	95	56	38
2	24	547	6,540	5,120	1,280	438	298	860	194	91	52	38
3	23	348	4,580	7,260	1,190	408	267	790	190	88	51	38
4	23	183	3,150	5,420	1,180	385	245	720	182	86	48	37
5	23	140	2,310	10,200	1,850	368	232	670	178	84	47	37
6	23	107	1,810	10,200	1,570	363	221	620	170	81	46	37
7	23	91	1,550	7,130	1,370	350	245	585	166	78	45	37
8	24	308	1,350	5,970	1,240	332	347	545	166	73	45	37
9	24	1,400	1,260	4,860	1,150	317	471	510	166	72	45	36
10	24	4,800	2,190	4,120	1,060	308	911	480	160	71	44	36
11	24	3,220	4,600	4,980	977	287	843	450	152	70	43	36
12	24	4,310	2,850	5,080	910	268	660	420	146	71	45	36
13	24	2,310	2,130	4,230	862	255	560	400	140	71	45	36
14	24	1,440	1,840	3,340	814	241	520	378	154	69	47	35
15	24	1,050	1,860	2,470	718	233	3,000	366	158	68	47	33
16	24	833	1,580	2,120	641	223	5,000	354	140	65	46	33
17	24	675	1,400	1,860	610	213	2,600	338	132	64	47	33
18	23	570	1,310	1,660	582	207	6,000	327	128	62	45	32
19	23	492	3,360	1,500	553	199	11,000	322	125	60	44	32
20	23	433	6,820	1,390	527	193	7,800	332	122	59	44	32
21	23	402	35,300	1,270	505	186	6,000	310	117	60	44	32
22	23	426	55,200	1,180	486	180	4,400	300	113	58	43	32
23	23	390	22,900	4,930	456	175	3,500	285	106	57	43	32
24	23	426	16,200	7,300	432	169	2,900	270	106	56	42	32
25	24	1,180	9,530	4,620	412	164	2,250	265	108	56	49	32
26	24	1,110	9,240	3,360	410	272	1,900	255	105	55	47	32
27	29	1,290	8,120	2,690	938	473	1,600	250	99	56	44	33
28	404	9,820	7,090	2,270	582	363	1,370	246	98	56	42	31
29	905	6,610	6,060	1,980	-----	269	1,180	237	97	56	39	31
30	340	3,990	5,630	1,770	-----	298	1,050	224	95	55	39	30
31	148	-----	5,250	1,570	-----	339	-----	210	-----	55	39	-----
TOTAL	2,438	49,026	240,110	126,600	24,725	8,957	67,726	13,259	4,215	2,098	1,403	1,026
MEAN	78.6	1,634	7,745	4,084	883	289	2,258	428	141	67.7	45.3	34.2
AC-FT	4,840	97,240	476,300	251,100	49,040	17,770	134,300	26,300	8,360	4,160	2,780	2,040

CALENDAR YEAR 1964 MAX 55,200 MIN 23 MEAN 1,329 AC-FT 964,700
 WATER YEAR 1964-65 MAX 55,200 MIN 23 MEAN 1,484 AC-FT 1,074,000

Peak discharge (base, 10,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	1345	12.89	12,900	1-23	1745	11.51	10,100
12-22	1145	27.86	78,500	4-19	unknown	15.80	19,900
1-5	1000	13.30	13,800				

Note.--No gage-height record Apr. 13 to May 13.

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., 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.

Records available.--October 1922 to September 1928 (daily gage heights only), October 1928 to September 1965. 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 wire-weight gage: Datum of gage is 81.7 ft below mean sea level (river-profile survey). Prior to Jan. 26, 1950, staff gage at same site and datum.

Extremes.--Maximum contents during year, 91,000 acre-ft Dec. 22 (gage height, 1,911.84 ft, from floodmarks); minimum, 24,700 acre-ft Nov. 8 (gage height, 1,871.2 ft).

1922-65: Maximum contents, 95,600 acre-ft May 13, 16, 1925 (gage height, 1,910.8 ft); maximum gage height, that of Dec. 22, 1964; 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.

Cooperation.--Record of contents furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Capacity table (gage height, in feet, and contents, in acre-feet)

1,871	24,500	1,889	46,900
1,874	27,600	1,892	51,600
1,877	31,000	1,895	56,700
1,880	34,500	1,900	65,800
1,883	38,400	1,905	75,800
1,886	42,500	1,910	86,800

Contents, in acre-feet, at 2400 hours, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43,800	28,000	38,100	68,200	68,100	66,900	81,300	86,400	85,400	77,800	65,200	52,200
2	43,400	27,600	39,600	68,300	68,000	66,900	81,000	86,400	85,300	77,400	64,700	51,800
3	43,000	27,100	40,900	68,600	67,900	67,000	81,900	86,400	85,200	77,000	64,300	51,300
4	42,700	26,600	41,500	68,900	67,900	67,400	82,100	86,400	85,100	76,700	63,900	50,900
5	42,300	26,000	41,800	76,900	68,300	68,000	82,300	86,500	84,800	76,300	63,500	50,400
6	41,800	25,500	42,000	73,900	68,000	68,700	82,400	86,500	84,700	75,900	63,000	50,000
7	41,300	24,900	42,100	70,900	67,800	69,300	82,600	86,600	84,500	75,500	62,600	49,600
8	40,800	25,300	42,100	69,600	67,700	69,900	83,000	86,600	84,300	75,200	62,200	49,100
9	40,200	27,100	42,200	69,300	67,600	70,400	84,300	86,700	84,100	74,800	61,800	48,700
10	39,600	30,400	42,600	69,400	67,400	70,900	85,000	86,600	83,900	74,400	61,400	48,200
11	39,100	33,000	43,600	71,500	67,400	71,400	84,900	86,600	83,700	74,000	61,000	47,800
12	38,700	33,500	44,000	69,400	67,300	71,800	85,900	86,600	83,400	73,600	60,600	47,300
13	38,400	34,000	44,200	69,100	67,200	72,300	86,400	86,600	83,100	73,200	60,200	46,700
14	37,900	34,000	44,500	69,000	67,200	72,700	86,400	86,600	82,900	72,800	59,800	46,100
15	37,300	33,800	44,800	69,100	67,100	73,100	85,300	86,600	82,700	72,400	59,400	45,500
16	36,600	33,400	44,800	69,100	67,100	73,500	85,300	86,600	82,500	71,900	59,000	44,800
17	35,900	33,100	44,900	69,000	67,000	73,900	85,500	86,500	82,200	71,500	58,600	44,100
18	35,200	32,800	45,100	69,100	67,000	74,200	85,600	86,500	82,000	71,000	58,200	43,400
19	34,500	32,400	46,400	69,200	67,000	74,600	85,400	86,400	81,700	70,600	57,800	42,800
20	33,800	32,000	57,500	68,900	67,000	75,000	85,500	86,500	81,400	70,200	57,400	42,200
21	33,100	31,700	82,500	68,600	67,000	75,300	85,400	86,400	81,200	69,800	57,000	41,600
22	32,400	31,400	86,800	68,400	67,000	75,700	85,300	86,400	80,900	69,300	56,600	41,000
23	31,800	31,100	76,500	72,300	66,900	76,200	85,400	86,300	80,500	68,900	56,200	40,500
24	31,100	30,900	72,500	70,500	66,900	76,700	86,200	86,200	80,200	68,500	55,700	39,900
25	30,800	30,800	71,200	69,400	66,900	77,100	86,300	86,100	79,800	68,100	55,200	39,200
26	30,400	31,100	70,400	68,900	67,000	77,700	86,300	86,000	79,500	67,700	54,800	38,500
27	30,100	31,300	69,800	68,500	67,100	78,900	86,400	85,800	79,100	67,200	54,400	37,700
28	29,700	32,400	69,400	68,300	67,000	79,600	86,300	85,600	78,800	66,800	53,900	36,800
29	29,300	34,500	69,100	68,200	-	79,900	86,300	85,500	78,400	66,400	53,500	36,300
30	28,800	36,200	68,900	68,300	-----	80,300	86,400	85,500	78,100	66,000	53,000	35,900
31	28,300	-----	68,500	68,200	-----	80,800	-----	85,500	-----	65,600	52,600	-----
(†)	1,874.62	1,881.32	1,901.43	1,901.28	1,900.65	1,907.33	1,909.82	1,909.41	1,906.07	1,899.93	1,892.61	1,881.11
(‡)	-15,600	+7,900	+32,300	-300	-1,200	+13,800	+5,600	-900	-7,400	-12,500	-13,000	-16,700

Calendar year 1964..... †15,500

Water year 1964-65..... ‡8,000

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

11-4705. Eel River below Scott Dam, near Potter Valley, Calif.

Location.--Lat 39°24'30", long 122°58'15", in SE¼ sec.15, T.18 N., R.10 W., 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.

Records available.--October 1922 to September 1965. 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.--43 years, 524 cfs (379,400 acre-ft per year).

Extremes.--Maximum discharge during year, 56,300 cfs Dec. 22 (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, 26 cfs Mar. 24. 1922-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 0.1 cfs Sept. 8, 1924.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Lake Pillsbury (see preceding page). No diversion above station. Records of water temperatures for the water year 1965 are published in Part 2 of this report.

Cooperation.--Water-stage-recorder graph and 10 discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 25 to July 3)

Oct. 1 to Dec. 21					Dec. 22 to Sept. 30				
3.0	84	7.0	1,570	2.3	24	6.0	800	13.0	9,300
3.5	151	8.0	2,400	2.7	53	7.0	1,300	16.0	17,200
4.0	245	10.0	4,900	3.1	94	8.0	2,000	19.0	27,900
5.0	520	12.0	8,330	4.0	222	9.0	2,900	23.0	47,400
6.0	940			5.0	450	11.0	5,440		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	207	322	187	1,900	1,620	504	221	670	212	233	227	231
2	207	312	147	1,750	1,480	459	285	662	212	240	226	232
3	207	305	92	2,200	1,340	349	277	596	212	240	222	235
4	209	310	135	2,200	1,240	163	279	498	212	238	222	235
5	209	315	205	12,000	1,580	95	283	480	216	238	220	232
6	250	312	223	13,700	1,590	95	287	445	226	236	220	232
7	275	312	235	7,650	1,350	96	285	395	229	235	222	232
8	290	315	245	4,250	1,170	98	273	411	229	235	229	232
9	335	239	252	3,200	1,060	99	231	424	229	235	229	232
10	332	169	265	3,100	955	99	321	411	229	233	227	236
11	337	225	205	3,650	894	100	700	390	231	233	229	236
12	218	225	185	3,640	800	100	159	385	231	240	227	285
13	118	211	225	3,010	764	98	385	382	231	253	227	330
14	338	211	161	2,680	708	98	667	377	231	254	227	339
15	345	270	217	2,730	666	98	3,240	372	231	253	229	359
16	345	298	227	2,800	635	99	3,260	369	231	253	229	369
17	342	290	235	2,680	600	99	1,760	375	231	251	229	339
18	340	290	243	2,720	565	98	3,580	328	231	253	229	339
19	335	295	200	2,850	545	95	3,600	307	231	254	229	339
20	332	302	121	2,750	530	95	2,970	290	231	253	229	339
21	332	302	7,880	2,380	525	95	2,610	292	231	253	229	339
22	338	300	45,300	2,030	515	96	2,020	294	231	253	229	318
23	338	292	34,800	3,280	495	74	1,470	294	233	247	229	321
24	335	295	15,300	7,590	462	26	953	302	235	244	227	339
25	330	290	10,800	4,200	442	71	1,150	305	235	240	226	339
26	325	285	9,800	2,840	437	96	1,160	302	233	240	227	337
27	328	288	9,500	2,240	631	99	1,090	309	233	236	231	334
28	325	192	6,500	1,910	582	99	1,030	256	233	231	231	334
29	318	126	4,200	1,710	-----	177	940	229	233	231	231	332
30	310	185	2,800	1,680	-----	258	750	222	233	229	231	318
31	318	-----	2,400	1,680	-----	213	-----	212	-----	227	231	-----
Total	9,168	8,083	153,285	113,000	24,181	4,341	36,236	11,584	6,846	7,491	7,050	8,914
Mean	296	269	4,945	3,645	864	140	1,208	374	228	242	227	297
Ac-ft	18,180	16,030	304,000	224,100	47,960	8,610	71,870	22,980	13,580	14,860	13,980	17,680

Calendar year 1964 Max 45,300 Min 21 Mean 639 Ac-ft 464,000
Water year 1964-65 Max 45,300 Min 26 Mean 1,069 Ac-ft 773,800

Note.--No gage-height record Dec. 22 to Jan. 11, Feb. 16-23.

11-4710. Potter Valley powerhouse tailrace near Potter Valley, Calif.

Location.--Lat 39°21'42", long 123°07'38", in SW¼NW¼ sec.6, T.17 N., R.11 W., on right bank 100 ft downstream from powerhouse of Pacific Gas & Electric Co., 1.8 miles southwest of Van Arsdale Dam, and 2.9 miles northwest of town of Potter Valley.

Records available.--December 1909 to September 1965. 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 concrete 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, float gage and Oct. 1, 1923, to Apr. 12, 1950, water-stage recorder, at site 50 ft upstream at different datum.

Average discharge.--55 years (1910-65), 196 cfs (141,900 acre-ft per year).

Extremes.--1922-65: 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 chemical analyses, water temperatures, and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Cooperation.--Water-stage recorder graph and six discharge measurements furnished by Pacific Gas and Electric Co. in connection with a Federal Power Commission project.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	177	316	309	302	307	303	210	306	212	212	223	218
2	182	316	307	304	308	303	308	307	210	215	219	222
3	182	314	307	306	307	305	307	302	204	215	220	222
4	182	314	259	306	283	241	307	313	205	215	223	222
5	178	307	286	260	296	128	307	313	205	215	224	220
6	201	303	318	294	309	135	307	286	205	215	230	220
7	313	306	311	306	308	135	308	320	220	215	230	220
8	309	311	310	306	308	129	309	324	216	213	230	222
9	312	314	313	307	307	129	308	326	216	211	230	222
10	315	308	315	308	305	139	308	326	209	211	228	222
11	314	313	313	307	305	74	308	324	226	218	230	222
12	252	312	313	308	305	82	181	323	209	212	228	255
13	38	310	307	308	307	127	289	288	209	213	227	331
14	304	286	203	308	308	114	309	294	222	212	228	331
15	311	284	297	308	308	121	307	312	195	219	227	329
16	311	315	310	306	308	121	303	312	195	219	227	328
17	317	313	304	304	308	124	301	310	201	218	224	328
18	325	313	308	304	308	124	301	310	215	220	229	328
19	323	313	310	303	308	118	301	312	209	220	229	328
20	321	313	311	303	307	118	301	313	205	219	224	326
21	320	311	213	291	305	117	301	313	199	218	224	326
22	318	309	128	293	305	114	301	313	206	222	228	326
23	314	309	95	305	303	112	301	313	206	225	228	306
24	314	309	156	307	303	64	301	313	166	219	222	326
25	314	309	158	305	303	57	306	313	196	223	221	326
26	315	309	228	303	303	127	307	313	210	224	223	326
27	314	273	304	302	303	197	298	312	214	244	227	326
28	314	309	304	301	303	159	307	276	210	240	229	326
29	314	303	162	295	-----	171	307	227	211	227	227	326
30	313	309	9.5	301	-----	283	306	229	212	225	218	326
31	301	-----	122	307	-----	295	-----	215	-----	223	219	-----
Total	8,618	9,231	7,890.5	9,368	8,538	4,766	8,915	9,358	6,218	6,797	6,996	8,556
Mean	278	308	255	302	305	154	297	302	207	219	226	285
Ac-ft	17,090	18,310	15,650	18,580	16,930	9,450	17,680	18,560	12,330	13,480	13,880	16,970

Calendar year 1964 Max 325 Min 9.5 Mean 194 Ac-ft 141,100
 Water year 1964-65 Max 331 Min 9.5 Mean 261 Ac-ft 188,900

Note.--No gage-height record Nov. 25 to Dec. 2.

11-4715. Eel River at Van Arsdale Dam, near Potter Valley, Calif.

Location.--Lat 39°23'20", long 123°06'55", in NE¼ sec.30, T.18 N., R.11 W., 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.

Records available.--November 1909 to September 1922 (combined monthly discharge only, of Eel River at this station and Snow Mountain Water & Power Co.'s tailrace near Potter Valley), October 1922 to September 1965. 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 (digital). 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, staff gage at present site and datum.

Average discharge.--56 years (1909-65), 616 cfs (446,000 acre-ft per year), combined flow of Eel River at Van Arsdale Dam and Potter Valley powerhouse tailrace.

Extremes.--Maximum discharge during year, 64,100 cfs Dec. 22 (gage height, 33.9 ft, from floodmarks); minimum daily, 0.3 cfs Nov. 4, 1909-65: Maximum discharge, that of Dec. 22, 1964; no flow Nov. 1, 1945, Sept. 13, 14, 1953.

Remarks.--Records fair prior to Mar. 5; poor thereafter. Flow regulated by Lake Pillsbury (see p. 390). Water is diverted from Van Arsdale Reservoir through tunnel to Potter Valley powerhouse (see preceding page), 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.--Water-stage-recorder graph and 12 discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.2	2.1	58	1,930	1,560	296	2.0	2.2	2.5	3.7	1.7	2.4
2	1.2	20	205	1,790	1,540	286	2.0	2.2	2.8	3.7	1.6	3.8
3	1.2	1.0	26	2,170	1,440	223	2.0	2.4	2.8	3.7	1.4	5.4
4	1.2	.3	2.4	2,650	1,320	18	2.0	2.4	2.8	3.7	1.4	5.8
5	.9	.6	6.2	13,100	1,280	2.0	2.0	2.4	2.8	3.7	1.4	4.4
6	.4	1.0	7.5	17,300	1,310	2.0	2.0	2.4	2.8	3.7	1.4	2.8
7	.4	.8	5.1	10,300	1,300	2.0	2.0	2.4	2.8	3.7	1.4	2.6
8	1.2	1.6	4.0	5,200	1,110	2.0	2.0	2.4	2.8	3.7	1.4	2.8
9	.9	118	2.6	3,700	978	2.0	2.0	2.4	2.8	3.7	1.4	2.1
10	.4	167	25	3,200	874	2.0	2.0	2.4	2.8	3.7	1.4	1.9
11	.6	218	134	3,500	796	2.0	2.0	2.4	3.0	3.5	1.4	2.1
12	1.4	242	4.8	3,500	645	2.0	2.0	2.4	3.0	3.5	1.4	1.4
13	1.0	61	7.2	2,800	597	2.0	2.0	2.4	3.0	3.5	1.4	1.4
14	1.0	3.2	77	2,500	562	2.0	2.0	2.4	3.0	3.5	1.4	.6
15	.6	6.2	3.2	2,600	445	2.0	2.0	2.4	3.0	3.5	1.4	1.4
16	1.2	24	4.4	2,630	385	2.0	2.2	2.4	3.0	3.5	1.0	4.4
17	1.4	6.7	1.9	2,810	358	2.0	2.2	2.4	3.0	3.5	.5	3.2
18	1.6	4.8	3.2	2,790	333	2.0	2.2	2.5	3.0	3.5	.6	2.1
19	1.4	4.4	141	2,770	296	2.0	2.2	2.5	3.0	3.5	1.7	1.7
20	1.4	3.4	608	2,720	275	2.0	2.2	2.5	3.0	3.5	1.9	1.4
21	1.0	4.4	9,050	2,630	275	2.0	2.2	2.5	3.3	3.3	1.9	1.6
22	.9	18	49,500	2,020	265	2.0	2.2	2.5	3.3	3.3	1.3	1.9
23	2.1	7.7	37,000	3,700	244	2.0	2.2	2.5	3.3	3.3	1.2	1.4
24	7.2	6.6	16,700	8,190	234	2.0	2.2	2.5	3.3	3.3	1.2	1.2
25	2.1	47	11,700	4,500	192	2.0	2.2	2.5	3.3	3.3	.8	1.2
26	1.3	28	10,600	2,500	192	2.0	2.2	2.5	3.3	3.3	.6	1.3
27	1.7	71	10,200	2,200	223	2.0	2.2	2.5	3.3	3.3	.7	1.3
28	6.2	344	6,800	1,900	286	2.0	2.2	2.5	3.3	3.0	1.0	1.2
29	5.9	81	4,370	1,760	-----	2.0	2.2	2.5	3.3	2.4	1.0	2.1
30	.7	40	3,020	1,630	-----	2.0	2.2	2.5	3.3	1.7	1.0	5.1
31	.4	-----	2,460	1,550	-----	2.0	-----	2.5	-----	1.7	1.0	-----
TOTAL	50.1	1,533.8	162,726.5	122,540	19,315	877.0	63.0	75.4	90.7	103.9	38.9	72.0
MEAN	1.62	51.1	5,249	3,953	690	28.3	2.10	2.43	3.02	3.35	1.26	2.40
AC-FT	99	3,040	322,800	243,100	38,310	1,740	125	150	180	206	77	143

CALENDAR YEAR 1964	MAX 49,500	MIN 0.3	MEAN 509	AC-FT 369,800
WATER YEAR 1964-65	MAX 49,500	MIN 0.3	MEAN 842	AC-FT 610,000

Note.--Computed from daily or occasional spillway staff gage readings Dec. 22 to Jan. 7, Jan. 16-22, Jan. 30 to Mar. 4. No gage-height record Jan. 8-15, 23-29, Mar. 5 to July 27.

EEL RIVER BASIN

11-4718. Tomki Creek near Willits, Calif.

Location.--Lat 39°25'10", long 123°13'40", in NE¼ sec.18, T.18 N., R.12 W., 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.

Records available.--July 1963 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 1,590 ft (from topographic map).

Extremes.--Maximum discharge during year, 16,500 cfs Dec. 22 (gage height, 15.92 ft), from rating curve extended above 4,000 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1-28, Sept. 15-26, 29, 30.
1963-65: Maximum discharge, that of Dec. 22, 1964; no flow at times in each year.

Remarks.--Records good except for periods of doubtful or no gage-height record, which are fair. No regulation or diversion above station.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 9-23, Apr. 16 to July 1)

Oct. 1 to Dec. 22				Dec. 22 to Sept. 30			
3.17	0	4.0	100	2.4	0	4.0	200
3.2	.2	4.5	295	2.5	.5	4.5	360
3.3	1.8	5.0	515	2.6	1.7	5.0	560
3.4	5.6	6.0	1,100	2.7	3.5	6.0	1,100
3.5	11	7.0	1,860	2.8	7.0	7.0	1,860
3.6	18	9.0	3,850	2.9	13	9.0	3,850
3.7	28	12.0	8,300	3.1	31	12.0	8,300
3.8	45	15.0	14,300	3.5	89	15.0	14,300

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0	4.4	457	290	66	29	33	51	5.5	1.2	0.2	0.2
2	0	7.8	451	300	53	27	30	48	5.6	1.1	.2	.2
3	0	2.8	231	542	39	25	28	45	5.1	1.1	.2	.1
4	0	1.5	114	507	35	22	25	43	4.8	1.0	.2	.1
5	0	.9	62	3,310	70	21	24	41	4.5	1.0	.2	.2
6	0	.8	33	2,040	49	21	23	40	4.0	.9	.2	.2
7	0	.8	24	908	36	22	24	38	4.1	.9	.1	.2
8	0	28	17	479	30	20	38	36	4.6	.8	.1	.2
9	0	122	15	356	29	20	135	36	4.6	.8	.1	.1
10	0	428	69	360	28	20	112	35	4.2	.8	.2	.1
11	0	321	190	507	27	19	74	33	3.8	.8		.1
12	0	307	73	367	27	18	58	32	3.5	.7	.3	.1
13	0	159	40	269	28	18	49	31	3.3	.7	.3	.1
14	0	60	40	212	29	16	51	30	3.2	.7	.4	.1
15	0	26	40	168	30	16	491	29	3.3	.6	.3	0
16	0	18	27	141	32	15	459	28	3.1	.5	.3	0
17	0	13	21	126	30	13	269	28	2.8	.5	.3	0
18	0	10	22	112	28	13	499	28	2.7	.5	.3	0
19	0	7.8	416	106	27	12	381	28	2.6	.5	.3	0
20	0	6.1	689	97	26	12	318	30	2.4	.5	.3	0
21	0	7.8	5,200	87	25	12	294	30	2.1	.5	.3	0
22	0	13	12,400	80	24	11	198	29	2.0	.5	.3	0
23	0	9.6	4,930	365	22	11	139	22	1.9	.4	.3	0
24	0	11	2,350	702	21	11	108	12	1.9	.4	.3	0
25	0	73	1,080	322	20	10	86	7.8	1.9	.4	.2	0
26	0	45	1,140	212	20	24	75	6.4	1.8	.3	.3	0
27	0	82	992	155	64	132	75	6.1	1.7	.3	.2	.1
28	0	845	715	124	35	51	68	5.9	1.6	.3	.2	.1
29	.1	336	524	104	-----	37	62	5.8	1.3	.3	.2	0
30	.5	239	455	89	-----	41	57	5.4	1.2	.2	.2	0
31	.5	-----	381	75	-----	37	-----	5.2	-----	.2	.2	-----
TOTAL	1.1	3,186.3	33,198	13,512	950	756	4,283	845.6	95.1	19.4	7.5	2.2
MEAN	0.04	106	1,071	436	33.9	24.4	143	27.3	3.17	0.63	0.24	0.07
AC-FT	2.2	6,320	65,850	26,800	1,880	1,500	8,500	1,680	189	38	15	4.4

CALENDAR YEAR 1964 MAX 12,400 MIN 0 MEAN 138 AC-FT 100.100

WATER YEAR 1964-65 MAX 12,400 MIN 0 MEAN 156 AC-FT 112.800

Peak discharge (base, 4,000 cfs).--Dec. 22 (1100) 16,500 cfs (15.92 ft); Jan. 5 (1100) 6,090 cfs (10.66 ft).

Note.--Doubtful or no gage-height record Feb. 8-15, Apr. 26 to June 1, July 2 to Aug. 9.

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., 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.

Records available.--October 1956 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 1,020 ft (from topographic map).

Average discharge.--9 years, 436 cfs (315,700 acre-ft per year).

Extremes.--Maximum discharge during year, 77,900 cfs Dec. 22 (gage height, 30.6 ft, from floodmarks), from rating curve extended above 9,900 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.8 cfs Sept. 20, 24, 25.

1956-65: Maximum discharge, that of Dec. 22, 1964; no flow Aug. 15-17, 1959.

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the reports indicated.

Report	Water year	Date	Discharge (cfs)	Gage height (feet)
WSP 1565	1958	Feb. 12, 1958	15,200	14.32
WSP 1715	1960	Feb. 8, 1960	33,300	20.27
WSP 1830A, Basic Data Report	1963	Jan. 31, 1963	22,800	17.03
Basic Data Report	1964	Jan. 20, 1964	15,200	14.31

Remarks.--Records good except those for periods of no gage-height record which are poor. No regulation or diversion above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Revisions.--Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1958, 1960, 1963, superseding figures published in WSP 1565, 1715, 1830A, and Basic Data Report, are given herewith:

1960		1963	
Feb. 7.....	9,490	Jan. 31.....	13,700
8.....	21,500		
9.....	13,900		

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
February 1960.....	75,126	21,500	90	2,591	149,000
Water year 1959-60.....	-	21,500	1.0	387	280,800
Calendar year 1960.....	-	21,500	1.0	487	353,600
January 1963.....	18,408	13,700	38	594	36,510
Water year 1962-63.....	-	13,700	1.1	495	358,400
Calendar year 1963.....	-	13,700	2.0	449	324,900

Revised peak discharge.--1957-58: Feb. 12 (0500) 15,200 cfs (14.32 ft); Feb. 24 (1700) 14,700 cfs (14.13 ft).

11-4722. Outlet Creek near Longvale, Calif.--Continued.

Rating tables (gage height, in feet, and discharge, in cubic feet per second) -
(Shifting-control method used Oct. 1-30, Nov. 14-27, July 31 to Sept. 30)

Oct. to Dec. 21

Dec. 21 to Sept. 30

0.5	0.7	2.0	150	3.5	0	5.5	680
.6	1.2	2.5	256	3.6	1.7	6.0	1,090
.7	2.2	3.0	420	3.7	6.0	7.0	2,100
.8	4.0	4.0	900	3.9	21	9.0	4,650
.9	7.0	6.0	2,400	4.1	42	12.0	10,000
1.0	11	8.0	4,400	4.4	100	16.0	19,700
1.2	24			4.7	205	21.0	36,000
1.5	60			5.0	350	26.0	56,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.0	35	2,150	1,350	295	152	195	156	24	6.8	2.4	1.1
2	1.0	61	2,160	1,300	260	128	163	144	22	6.5	2.1	1.2
3	1.0	33	1,190	2,870	233	114	138	132	20	6.1	1.8	1.2
4	1.0	17	642	2,350	221	100	119	121	20	5.1	1.4	1.2
5	1.0	12	469	10,900	547	93	104	109	19	4.7	1.3	1.2
6	1.0	9.0	355	9,940	398	93	97	100	18	3.8	1.3	1.5
7	1.0	8.0	306	4,860	280	98	94	95	17	3.2	1.2	1.5
8	1.0	45	264	2,420	241	91	177	89	18	3.2	1.1	1.5
9	1.1	260	252	1,620	209	86	757	84	19	2.6	1.1	1.6
10	1.2	1,300	856	1,350	194	82	761	78	19	2.0	1.1	1.5
11	1.2	2,000	1,350	1,570	180	79	498	73	17	2.6	2.4	1.3
12	1.2	1,360	640	1,140	170	77	315	71	16	2.4	5.8	1.2
13	1.2	705	421	856	160	77	229	66	15	2.1	5.0	1.3
14	1.3	328	410	688	156	71	200	63	16	2.0	3.2	1.4
15	1.3	194	509	575	146	69	2,000	59	16	1.6	2.2	1.3
16	1.5	131	377	477	135	66	1,600	56	15	1.4	1.6	1.2
17	1.4	92	307	410	132	64	1,300	53	17	1.4	1.4	.9
18	1.4	68	282	368	121	62	2,200	50	15	1.3	1.3	.9
19	1.4	55	2,400	334	114	60	1,700	48	15	1.1	1.3	.9
20	1.4	46	3,860	328	107	58	1,450	50	15	1.2	1.3	.8
21	1.4	43	20,700	290	104	56	1,280	52	14	1.4	1.3	1.0
22	1.4	105	52,500	260	98	55	860	50	12	1.5	1.5	.9
23	1.4	78	28,500	1,650	91	53	600	45	11	1.2	1.5	.9
24	1.4	92	16,000	3,850	88	53	430	42	12	1.1	1.5	.8
25	1.4	496	8,000	1,770	84	52	330	38	11	1.3	1.6	.8
26	1.7	370	7,200	1,010	84	95	280	36	10	1.4	1.7	.9
27	3.8	540	4,440	712	446	859	242	35	11	1.5	1.9	.9
28	9.8	4,300	3,200	568	221	375	219	31	9.6	1.6	1.8	1.3
29	23	2,120	2,720	464	-----	194	193	29	8.9	1.6	1.4	1.5
30	18	1,450	2,530	386	-----	242	174	26	8.1	1.5	1.3	1.3
31	15	-----	2,110	334	-----	197	-----	24	-----	2.1	1.1	-----
TOTAL	101.9	16,353.0	167,100	57,000	5,515	3,951	18,705	2,105	460.6	77.3	56.9	35.0
MEAN	3.29	545	5,390	1,839	197	127	624	67.9	15.4	2.49	1.84	1.17
AC-FT	202	32,440	331,400	113,100	10,940	7,840	37,100	4,180	914	153	113	69

CALENDAR YEAR 1964 MAX 52,500 MIN 0.70 MEAN 661 AC-FT 479,800
WATER YEAR 1964-65 MAX 52,500 MIN 0.80 MEAN 744 AC-FT 538,500

Peak discharge (base, 5,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	1100	9.55	5,480	1- 5	1100	15.26	17,600
12-22	1200	30.6	77,900	1-24	0200	10.56	7,210

Note.--No gage-height record Oct. 31 to Nov. 11, Dec. 22-27, Apr. 15-27.

11-4725. Eel River above Dos Rios, Calif.

Location.--Lat 39°41'20", long 123°21'30", in SW¼ sec.7, T.21 N., R.13 W., on left bank 1.8 miles upstream from Middle Fork and 2.1 miles south of Dos Rios.

Drainage area.--705 sq mi.

Records available.--December 1950 to September 1965 (discontinued; destroyed by flood of December 1964).

Gage.--Water-stage recorder. Altitude of gage is 950 ft (from topographic map).

Average discharge.--14 years (1951-65), 1,463 cfs (1,059,000 acre-ft per year); median of yearly mean discharges, 1,300 cfs (941,000 acre-ft per year).

Extremes.--Maximum discharge during year, 184,000 cfs Dec. 22 (gage height, 55.4 ft, from floodmarks); from rating curve extended above 27,000 cfs on basis of slope-area measurement at gage height 45.4 ft; minimum daily, 1.9 cfs Oct. 3, 4.
1950-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 0.8 cfs Sept. 11, 1955.

Remarks.--Records fair except those for period of no gage-height record, which are poor. Flow regulated by Lake Pillsbury (see p. 390) and by diversion through Potter Valley powerhouse (see p. 392). Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	17	5,100	6,000	2,650	840	352	815	82	28	13	6.8
2	2.0	23	5,000	7,000	2,400	530	322	784	77	28	12	6.6
3	1.9	31	1,600	10,000	2,150	420	272	738	73	28	12	6.2
4	1.9	31	900	8,500	2,000	360	247	632	68	26	11	6.2
5	2.0	23	710	32,000	3,900	310	225	546	65	25	10	6.2
6	2.8	19	560	37,000	3,400	270	219	511	61	24	10	5.9
7	3.0	17	480	20,000	2,000	240	203	437	59	23	9.7	5.9
8	3.2	22	450	9,400	1,500	215	342	410	58	22	9.1	6.1
9	3.0	456	570	7,000	1,200	200	1,080	392	59	20	8.5	6.2
10	3.0	2,610	850	8,300	980	190	1,290	371	60	19	8.9	6.1
11	3.2	1,990	4,700	11,800	820	180	1,140	338	58	19	9.9	5.9
12	3.2	2,800	2,200	7,500	700	170	935	320	53	19	13	5.9
13	3.2	1,450	1,150	6,200	640	160	504	295	51	19	13	5.7
14	3.2	628	800	5,700	610	155	620	288	51	18	11	5.6
15	3.4	331	800	5,200	600	155	4,300	268	51	18	9.9	5.3
16	3.5	227	590	5,100	600	150	11,300	254	49	17	9.3	5.0
17	3.5	171	500	4,900	600	145	7,790	241	47	16	8.7	4.8
18	3.5	138	450	4,800	610	140	6,440	223	47	16	8.3	4.8
19	3.5	114	1,700	4,700	630	140	6,120	199	44	16	8.3	4.8
20	3.9	101	5,200	4,600	640	135	5,320	180	43	15	8.1	4.8
21	3.9	102	31,000	3,700	640	135	4,850	166	39	15	8.1	5.0
22	3.7	155	160,000	3,200	580	135	4,250	158	37	14	8.1	5.3
23	3.9	144	90,000	8,000	520	131	3,050	149	36	14	7.9	5.6
24	4.1	130	50,000	20,000	510	131	2,260	140	34	14	7.7	5.6
25	4.1	1,400	31,000	9,000	500	145	1,820	132	34	14	7.5	5.4
26	4.1	1,000	30,000	5,800	640	199	1,690	124	33	13	7.5	5.4
27	4.7	700	20,000	4,700	2,400	1,470	1,560	114	32	13	7.3	5.6
28	10	6,000	15,000	3,800	1,350	636	1,380	106	31	13	7.1	5.7
29	18	3,200	11,000	3,100	-----	374	1,230	100	30	12	7.1	5.7
30	18	1,700	9,500	3,000	-----	434	1,020	92	30	12	7.0	5.7
31	17	-----	8,800	2,900	-----	383	-----	86	-----	13	7.0	-----
Total	150.4	25,730	490,610	272,900	35,770	9,278	72,131	9,609	1,492	563	286.0	169.8
Mean	4.85	858	15,830	8,803	1,278	299	2,404	310	49.7	18.2	9.23	5.66
Ac-ft	298	51,030	973,100	541,300	70,950	18,400	143,100	19,060	2,960	1,120	567	337

Calendar year 1964 Max 160,000 Min 0.9 Mean 1,768 Ac-ft 1,283,000
Water year 1964-65 Max 160,000 Min 1.9 Mean 2,517 Ac-ft 1,822,000

Peak discharge (base, 14,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	unknown	55.4	184,000	1-24	unknown	-	†24,000
1-6	unknown	-	†45,000	4-16	unknown	-	†17,000

Note.--No gage-height record Nov. 24 to Mar. 25. Computed from once-daily staff gage readings Mar. 26 to Sept. 30.

† About.

11-4729. Black Butte River near Covelo, Calif.

Location (revised).--Lat 39°49'15", long 123°04'50", in SE¼ sec.28, T.23 N., R.11 W., on right bank 10 ft upstream from highway bridge, 0.5 mile upstream from mouth, and 9.5 miles east of Covelo. Prior to Dec. 22, 1964, at site 0.1 mile upstream.

Drainage area.--162 sq mi.

Records available.--Occasional low-flow measurements, water years 1951-56 and annual maximum, water years 1954-57, October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1,450 ft, revised (from topographic map). 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.--7 years, 269 cfs (194,700 acre-ft per year).

Extremes.--Maximum discharge during year, 29,000 cfs Dec. 22 (gage height, 26.4 ft, from floodmarks, site then in use), from rating curve extended above 4,200 cfs on basis of slope-area measurement of maximum flow; minimum, 1.4 cfs Oct. 5-9.

1953-57, 1958-65: Maximum discharge, that of Dec. 22, 1964.

1958-65: Minimum discharge, 1.2 cfs Sept. 11, 1959.

Flood of Dec. 11, 1937, reached a stage of 36.2 ft, from floodmarks at crest-stage gage site (discharge, 26,000 cfs).

Remarks.--Records good except those for periods of no gage-height record or indefinite stage-discharge relation which are poor. No regulation or diversion above station. Records of chemical analyses and water temperatures for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	13	1,500	1,200	620	268	215	745	120	36	12	6.4
2	1.6	63	1,700	2,000	600	305	215	570	110	34	12	6.4
3	1.6	30	1,000	1,800	580	400	210	455	101	33	11	5.8
4	1.5	18	600	1,700	640	435	205	370	92	31	11	5.4
5	1.4	13	450	5,400	740	390	200	320	89	29	11	5.4
6	1.4	9.9	320	6,000	680	355	200	300	85	28	10	5.4
7	1.4	8.6	250	3,200	600	335	195	290	82	25	9.8	5.4
8	1.4	13	210	2,000	560	335	195	295	80	25	9.2	5.4
9	1.4	201	300	1,600	520	350	230	310	76	24	9.2	5.4
10	1.5	322	700	2,500	500	350	315	325	71	23	9.2	5.4
11	1.5	318	1,400	3,400	450	320	295	345	66	23	17	5.4
12	1.5	581	800	1,900	420	320	270	355	61	23	20	5.0
13	1.6	188	550	1,400	400	325	245	370	58	23	15	4.7
14	1.6	102	400	1,330	380	335	230	375	66	21	12	4.7
15	1.7	73	320	1,450	370	290	800	380	62	21	11	5.0
16	1.7	57	270	1,300	350	240	1,500	380	59	21	9.8	5.0
17	1.6	47	230	1,200	330	215	1,100	380	55	19	14	4.7
18	1.7	42	200	1,350	314	210	1,600	375	52	19	23	4.7
19	1.7	37	700	1,500	280	205	2,000	355	50	18	15	4.7
20	1.7	37	4,000	1,200	305	185	1,700	310	48	17	12	4.7
21	1.7	42	16,000	1,000	280	170	1,500	270	46	17	12	4.7
22	1.7	79	25,000	900	280	159	1,300	220	45	17	9.8	4.7
23	1.7	64	17,000	2,500	255	159	1,100	185	43	17	9.8	4.7
24	1.7	58	10,000	3,600	255	177	960	160	41	15	9.8	4.4
25	1.7	260	7,000	2,000	255	226	855	155	39	14	9.2	4.4
26	1.9	220	6,500	1,300	255	255	800	155	38	14	9.2	4.4
27	2.9	180	4,500	900	400	255	800	160	37	14	8.7	4.4
28	8.0	1,000	3,000	800	365	200	800	165	37	14	8.2	4.4
29	38	600	2,000	750	-----	142	750	160	36	14	7.5	4.4
30	24	410	1,600	700	-----	205	695	150	36	13	7.2	4.4
31	12	-----	1,300	660	-----	215	-----	135	-----	13	6.8	-----
Total	126.4	5,086.5	109,800	58,540	11,984	8,331	21,480	9,520	1,881	655	351.4	149.9
Mean	4.08	170	3,542	1,888	428	269	716	307	62.7	21.1	11.3	5.00
Ac-ft	251	10,090	217,800	116,100	23,770	16,520	42,600	18,880	3,730	1,300	697	297

Calendar year 1964 Max 25,000 Min 1.4 Mean 409 Ac-ft 296,800

Water year 1964-65 Max 25,000 Min 1.4 Mean 624 Ac-ft 452,000

Peak discharge (base, 5,500 cfs).--Dec. 22 (time unknown) 29,000 cfs (26.4 ft); Jan. 5 (time unknown) about 7,000 cfs.

Note.--No gage-height record or indefinite stage-discharge relation Nov. 24 to June 29.

11-4730. Middle Fork Eel River below Black Butte River, near Covelo, Calif.

Location.--Lat 39°49'35", long 123°05'30", in NW¼ sec.28, T.23 N., R.11 W., on right bank 0.2 mile downstream from Black Butte River and 8.6 miles east of Covelo.

Drainage area.--367 sq mi.

Records available.--August 1951 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 1,434.33 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--14 years, 1,062 cfs (768,900 acre-ft per year); median of yearly mean discharges, 930 cfs (673,000 acre-ft per year).

Extremes.--Maximum discharge during year, 133,000 cfs Dec. 22 (gage height, 31.7 ft, from floodmarks), from rating curve extended above 19,000 cfs on basis of slope-area measurement at gage height 25.0 ft; minimum daily, 5.4 cfs Oct. 8-10.
1951-65: Maximum discharge, that of Dec. 22, 1964; minimum, 4.4 cfs Sept. 22-26, 1951.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. No regulation or diversion above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	4.4	4.400	2.600	2.230	1.180	760	1.280	399	92	22	23
2	5.9	176	4.300	3.500	2.230	1.160	748	1.010	364	80	20	25
3	5.8	117	2.200	4.700	2.130	1.170	712	880	364	71	22	23
4	5.7	66	1.500	4.000	2.190	1.140	690	796	350	60	19	25
5	5.7	47	1.050	15.000	3.820	1.200	640	760	298	58	19	27
6	5.6	37	850	16.000	2.990	1.080	600	712	255	51	18	27
7	5.5	32	700	10.000	2.530	1.020	560	680	220	46	18	23
8	5.4	43	600	5.000	1.890	928	580	748	185	39	16	23
9	5.4	350	800	4.100	1.450	844	660	856	175	37	18	22
10	5.4	2,300	1.100	6.000	1.370	856	800	988	170	34	18	20
11	5.5	1,650	3,250	8,400	1,320	832	760	1,160	160	34	37	20
12	5.5	2,800	1,500	5,200	1,000	940	730	1,170	154	32	46	18
13	5.5	1,250	1,100	3,600	1,020	808	700	1,080	149	32	34	16
14	5.5	650	800	3,350	916	680	690	1,120	175	28	27	15
15	5.5	400	710	3,720	844	724	1,220	1,200	171	28	20	16
16	5.5	275	630	3,850	820	748	1,630	1,320	141	27	19	15
17	5.5	200	550	3,600	832	808	1,100	1,330	125	27	19	14
18	5.5	170	500	3,600	928	772	3,150	1,260	125	28	19	13
19	5.5	150	1,750	4,350	970	690	3,880	1,170	110	28	19	11
20	5.5	145	6,000	4,100	1,000	680	2,870	1,050	99	28	22	10
21	5.5	145	30,000	2,930	1,010	690	3,030	844	92	28	20	10
22	5.5	235	105,000	2,330	1,010	784	2,750	580	89	27	19	9.4
23	5.6	225	70,000	5,880	1,000	796	2,470	492	83	27	18	8.7
24	5.6	220	35,000	8,500	950	796	1,890	492	89	27	20	8.7
25	5.6	1,200	22,000	4,350	868	748	2,470	468	83	25	27	8.7
26	6.0	930	21,000	2,630	832	784	2,490	484	86	27	28	8.7
27	8.2	800	14,000	2,130	2,130	916	2,390	530	86	25	27	8.7
28	18	5,000	8,000	1,930	1,330	850	2,410	550	86	22	27	9.4
29	6.7	3,200	4,500	1,630	-----	770	2,010	530	89	23	25	9.4
30	6.5	2,000	3,700	1,430	-----	724	1,670	510	89	23	25	8.7
31	3.9	-----	3,000	1,430	-----	808	-----	460	-----	22	25	-----
Total	342.3	24,857	350,490	149,840	41,610	26,926	47,060	26,510	5,061	1,136	713	476.4
Mean	11.0	829	11,310	4,834	1,340	869	1,569	855	169	36.6	23.0	15.9
Ac-ft	679	49,300	695,200	297,200	82,530	53,410	93,340	52,580	10,040	2,250	1,410	94.5

Calendar year 1964 Max 105,000 Min 5.4 Mean 1,354 Ac-ft 982,700
Water year 1964-65 Max 105,000 Min 5.4 Mean 1,849 Ac-ft 1,339,000

Peak discharge (base, 10,000 cfs).--Dec. 22 (time unknown) 133,000 cfs (31.7 ft); Jan. 5 (time unknown) about 22,000 cfs.

Note.--No gage-height record Oct. 1-22, Nov. 9 to Jan. 13, June 9-11. Computed from once-daily staff gage readings Jan. 14 to Feb. 3.

11-4731. Williams Creek near Covelo, Calif.

Location.--Lat 39°49'30", long 123°08'25", in SW¼NE¼ sec.25, T.23 N., R.12 W., on right bank 1.0 mile upstream from mouth and 6.1 miles northeast of Covelo.

Drainage area.--30.4 sq mi.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1,480 ft (from topographic map).

Extremes.--Maximum discharge during year, 11,300 cfs Dec. 22 (gage height, 14.25 ft), from rating curve extended above 1,900 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.1 cfs Oct. 1-11.

1961-64: Maximum discharge, that of Dec. 22, 1964; minimum, 0.1 cfs Sept. 20-29, 1962, Aug. 17 to Oct. 11, 1964.

Remarks.--Records good except those for period of no gage height record, which are poor. No regulation or diversion above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Revisions (water years).--1963 Report: 1962(M).

Rating table (gage height, in feet, and discharge, in cubic-feet per second)
(Shifting-control method used May 15 to Aug. 7)

Oct. 1 to Dec. 22				Dec. 22 to Sept. 30			
0.4	0	2.0	120	1.5	0	4.0	245
0.5	.3	2.5	267	1.6	1.0	5.0	500
0.6	1.2	3.0	503	1.7	2.9	6.0	900
0.7	3.6	3.5	852	1.8	6.0	7.0	1,430
0.8	8.4	4.0	1,340	2.0	16	9.0	3,000
0.9	12	5.0	2,210	2.5	44	11.0	5,400
1.2	30	8.0	4,950	3.0	87	13.0	8,800
1.5	56	11.0	8,050	3.5	155		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	5.5	345	207	131	57	39	61	12	2.7	0.7	0.5
2	.1	13	397	307	121	51	39	52	12	2.5	.7	.5
3	.1	7.4	190	307	110	48	37	46	10	2.5	.7	.5
4	.1	4.1	111	259	106	45	35	43	9.5	2.5	.6	.4
5	.1	3.1	83	952	141	42	34	40	9.5	2.3	.5	.4
6	.1	2.4	64	940	117	40	33	39	9.0	2.1	.5	.4
7	.1	2.4	53	521	103	39	31	36	8.5	2.0	.4	.5
8	.1	7.7	54	325	93	37	30	34	8.5	1.8	.5	.5
9	.1	4.4	66	325	85	37	36	33	8.0	1.8	.5	.4
10	.1	153	410	485	78	36	42	32	7.5	1.8	.5	.4
11	.1	129	364	649	73	36	41	31	7.0	2.0	.9	.4
12	.2	152	146	482	69	36	44	30	6.0	1.8	.7	.4
13	.2	58	97	355	67	36	42	30	5.7	1.4	.8	.4
14	.2	36	77	305	64	34	39	30	7.5	1.2	.8	.3
15	.2	29	69	315	60	33	79	28	7.0	1.2	.7	.3
16	.2	26	57	293	56	33	128	28	6.0	1.0	.7	.3
17	.2	24	49	277	53	33	99	28	5.4	.9	.8	.2
18	.2	22	45	269	51	32	357	27	5.7	1.0	.8	.2
19	.2	22	226	257	53	31	320	26	5.1	.9	.9	.2
20	.2	23	997	211	53	30	284	24	4.4	.8	.9	.2
21	.2	24	5,450	163	53	30	296	24	4.1	.8	.9	.2
22	0.2	29	7,940	133	50	30	175	22	3.8	.8	.8	.2
23	.2	28	2,380	431	46	31	133	20	3.5	.7	.8	.2
24	.3	41	1,410	516	43	30	107	19	3.5	.7	.8	.2
25	.3	32	882	269	42	30	98	18	3.5	.7	.7	.2
26	.4	25	868	227	43	34	94	16	3.8	.7	.7	.2
27	.4	97	580	194	90	58	92	16	3.5	.7	.7	.2
28	2.0	760	392	157	64	45	84	16	3.5	.7	.6	.2
29	5.5	222	315	153	-----	39	76	14	3.2	.7	.6	.2
30	4.1	209	283	149	-----	40	68	14	2.9	.7	.5	.2
31	4.1	-----	237	141	-----	42	-----	14	-----	.7	.5	-----
Total	20.6	2,230.6	24,637	10,574	2,115	1,175	3,012	891	189.6	42.1	21.2	9.4
Mean	0.66	7.44	795	341	75.5	37.9	100	28.7	6.32	1.36	0.68	0.31
Ac-ft	41	4,420	48,870	20,970	4,200	2,330	5,970	1,770	376	84	42	19

Calendar year 1964 Max 7,940 Min 0.1 Mean 107 Ac-ft 77,570
Water year 1964-65 Max 7,940 Min 0.1 Mean 123 Ac-ft 89,090

Peak discharge (base, 1,200 cfs)

Note.--No gage-height record Oct. 1-28.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	1000	3.93	1,260	12-22	1000	14.25	11,300
12-10	2000	3.97	1,310	1- 5	1200	7.17	1,540

11-4735.3. Mill Creek below Alder Creek, near Covelo, Calif.

Location.--Lat 39°50'30", long 123°16'35", in SE¼NW¼ sec.23, T.23 N., R.13 W. (corrected), on left bank 0.8 mile downstream from Alder Creek and 3.6 miles north of Covelo.

Drainage area.--17.1 sq mi.

Records available.--October 1961 to September 1965 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 1,450 ft (from topographic map).

Extremes.--Maximum discharge during year, 5,410 cfs Dec. 22 (gage height, 22.4 ft from floodmarks), from rating curve extended above 370 cfs on basis of slope-area measurement at gage height 17.73 ft.

1961-65: Maximum discharge, that of Dec. 22, 1964; no flow Sept. 24, 25, 1964.

Remarks.--No regulation or diversion above station. Records fair except those for periods of no gage height record or indefinite stage-discharge relation, which are poor.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	2.0	95	320	54	20	17	24	6.0	2.3	1.2	0.6
2	.2	2.8	152	450	50	18	17	22	5.5	2.2	1.2	.6
3	.2	1.1	55	560	46	16	16	22	5.1	2.0	1.1	.6
4	.2	.7	28	420	50	15	15	21	4.9	2.0	1.0	.6
5	.2	.6	22	1,300	55	15	14	20	4.9	1.9	1.0	.6
6	.2	.5	17	1,000	46	14	13	20	4.7	1.8	.9	.6
7	.2	.5	15	450	40	14	14	19	4.7	1.8	.9	.7
8	.2	4.3	14	280	36	13	15	18	4.4	1.8	.9	.7
9	.2	13	14	260	32	13	25	17	4.2	1.8	.9	.8
10	.2	139	61	350	28	12	29	17	4.2	1.8	.9	.7
11	.2	112	47	400	26	12	24	16	4.0	1.8	1.5	.7
12	.2	69	22	280	25	11	21	15	3.8	1.6	1.9	.7
13	.2	29	18	205	24	11	19	15	3.8	1.6	1.2	.7
14	.2	17	17	160	24	11	18	14	3.8	1.5	1.1	.6
15	.3	11	15	140	23	10	226	13	4.0	1.4	1.0	.6
16	.3	8.6	13	130	22	9.6	131	13	3.8	1.3	.9	.6
17	.3	6.8	11	120	21	9.2	130	12	3.6	1.3	1.6	.6
18	.3	5.5	13	115	20	9.0	295	11	3.6	1.2	1.3	.6
19	.3	4.9	206	110	20	8.8	269	11	3.4	1.2	.9	.6
20	.3	4.4	355	105	19	8.6	233	11	3.1	1.2	.9	.6
21	.3	5.1	1,850	90	18	8.6	134	11	2.9	1.3	.9	.6
22	.3	8.6	4,000	84	17	8.4	86	10	2.8	1.3	.9	.6
23	.3	6.0	1,800	270	16	8.4	69	10	2.8	1.3	.9	.6
24	.3	9.2	1,300	420	15	8.2	55	9.2	2.8	1.2	.9	.6
25	.3	17	1,000	180	15	8.0	50	8.9	2.9	1.2	.9	.6
26	.4	20	900	110	16	18	41	8.6	2.8	1.3	.9	.6
27	.7	67	860	94	45	55	35	8.0	2.6	1.3	.9	.6
28	1.4	273	760	82	30	27	30	7.5	2.6	1.3	.8	.7
29	2.0	52	580	72	-----	19	27	7.2	2.5	1.2	.7	.7
30	.6	85	430	64	-----	24	26	6.8	2.5	1.3	.6	.6
31	.4	-----	370	58	-----	20	-----	6.2	-----	1.3	.6	-----
Total	11.6	975.6	15,040	8,679	833	454.8	2,094	424.4	112.7	47.5	31.3	19.0
Mean	0.37	32.5	485	280	29.8	14.7	69.8	13.7	3.76	1.53	1.01	0.63
Ac-ft	23	1,940	29,830	17,210	1,650	902	4,150	842	224	94	62	38

Calendar year 1964 Max 4,000 Min 0 Mean 59.8 Ac-ft 43,300
 Water year 1964-65 Max 4,000 Min 0.2 Mean 78.7 Ac-ft 56,960

Note.--No gage-height record Dec. 22 to Jan. 1. Stage discharge relation indefinite Jan. 2 to Mar. 29.

EEL RIVER BASIN

11-4736. Short Creek near Covelo, Calif. *into mill cr.*

Location.--Lat 39°49'50", long 123°10'50", in NE¼ sec.27, T.23 N., R.12 W., 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.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1,480 ft (from topographic map).

Average discharge.--7 years, 21.2 cfs (15,350 acre-ft per year).

Extremes.--Maximum discharge during year, 3,600 cfs Dec. 22 (gage height, 9.20 ft in gage well, 10.4 ft from outside floodmarks), from rating curve extended above 690 cfs on basis of slope-area measurement of Dec. 21, 1955; no flow Oct. 1 to Nov. 8, Sept. 21-30, 1958-65; Maximum discharge, that of Dec. 22, 1964; no flow for several months in each year.
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).

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

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 13, 24-27, Dec. 5, 6)

Oct. 1 to Dec. 6

Dec. 7 to Sept. 30

1.43	0	2.1	14	0.97	0	1.5	22	4.0	400
1.5	.1	2.4	32	1.0	.1	1.8	45	5.0	690
1.6	.7	2.7	60	1.1	1.2	2.1	76	6.0	1,100
1.7	1.8	3.0	99	1.2	4.7	2.5	125	7.0	1,700
1.8	3.6	3.5	190	1.3	9.3	3.0	198	9.0	3,400
1.9	6.2								

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	76	68	28	9.3	9.3	12	2.3	1.0	0.2	0.2
2		0	107	205	25	8.8	8.8	11	2.1	1.0	.2	.2
3		0	45	217	24	7.8	7.8	10	1.8	.8	.2	.2
4		0	27	168	24	7.4	7.4	9.2	1.8	.6	.2	.2
5		0	19	670	26	7.4	6.9	8.8	1.5	.6	.2	.2
6		0	15	535	24	7.4	6.4	8.2	1.5	.5	.3	.2
7		0	14	253	19	7.4	6.4	7.8	1.5	.5	.3	.2
8		0	14	145	17	6.9	6.4	7.4	1.5	.5	.2	.2
9		.5	20	154	15	6.4	9.9	7.2	1.5	.4	.2	.2
10		74	110	196	14	6.4	14	7.0	1.5	.4	.2	.2
11		64	105	254	13	6.4	11	6.8	1.5	.5	.2	.2
12		40	40	166	12	5.9	9.9	6.6	1.5	.5	.2	.2
13		21	25	118	12	5.5	8.8	6.4	1.5	.5	.2	.2
14		11	20	112	11	5.5	8.3	6.2	1.5	.4	.1	.1
15		7.0	17	91	9.9	5.1	17	6.0	1.5	.4	.1	.1
16		4.5	14	79	8.8	5.1	33	5.6	1.5	.4	.1	.1
17		2.7	13	67	8.3	4.7	27	5.4	1.5	.4	.1	.1
18		2.0	12	58	8.3	4.7	132	5.2	1.5	.4	.1	.1
19		1.8	35	54	8.3	4.7	85	5.0	1.2	.4	.1	.1
20		1.9	300	46	8.3	4.7	74	4.7	1.2	.3	.1	.1
21		2.1	1,900	39	7.4	4.3	68	4.5	1.2	.3	.1	0
22		3.0	2,500	34	6.4	4.3	45	4.2	1.2	.3	.1	0
23		2.4	700	221	5.9	4.3	33	3.9	1.2	.2	.1	0
24		3.0	350	203	5.9	4.3	26	3.8	1.2	.2	.24	0
25		13	300	97	5.9	3.9	23	3.6	1.2	.2	.64	0
26		13	260	69	6.9	6.4	20	3.4	1.2	.2	.47	0
27		24	150	60	18	1.7	18	3.2	1.2	.2	1.5	0
28		170	110	51	10	1.0	16	3.0	1.2	.2	.3	0
29		41	95	43	-----	7.4	14	2.8	1.2	.2	.2	0
30		53	82	37	-----	12	13	2.7	1.2	.2	.2	0
31		-----	74	32	-----	10	-----	2.5	-----	.2	-----	-----
Total	0	554.9	7,549	4,542	382.3	211.4	765.3	184.1	43.4	12.9	19.7	3.3
Mean	0	18.5	244	147	13.7	6.82	25.5	5.94	1.45	0.42	0.64	0.11
Ac-ft	0	1,100	14,970	9,010	758	41.9	1,520	365	86	26	39	6.5

Calendar year 1964 Max 2,500 Min 0 Mean 31.4 Ac-ft 22,820
Water year 1964-65 Max 2,500 Min 0 Mean 39.1 Ac-ft 28,300

Peak discharge (base, 500 cfs).--Dec. 22 (time unknown) 3,600 cfs (9.20 ft); Jan. 5 (1100) 1,080 cfs (5.96 ft).

Note.--No gage-height record Nov. 14-23, Dec. 7 to Jan. 1, Apr. 28 to June 2.

11-4737. Mill Creek near Covelo, Calif.

Location.--Lat 39°44'45", long 123°10'15", in SW¼ sec.23, T.22 N., R.12 W., on right bank 50 ft upstream from unnamed tributary, 0.65 mile downstream from county road bridge, and 5.2 miles southeast of Covelo.

Drainage area.--96.9 sq mi.

Records available.--September 1956 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 1,280 ft (from topographic map).

Average discharge.--9 years, 152 cfs (110,000 acre-ft per year).

Extremes.--Maximum discharge during year, 24,100 cfs Dec. 22 (gage height, 20.97 ft), from rating curve extended above 2,300 cfs on basis of slope-area measurements at gage heights 14.50 ft and 20.97 ft; no flow for several months.
1956-65: Maximum discharge, that of Dec. 22, 1964; no flow for several months in each year.

Remarks.--Records good except those for period of no gage height record, which are fair. No regulation or diversion above station.
Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Revisions (water years).--1963 Report: 1960-62.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1		0	444	925	192	69	58	61	5.4	0.2		
2		0	589	1,470	170	62	55	58	5.0	.2		
3		0	201	2,100	152	55	46	55	4.8	.2		
4		0	80	1,360	146	49	40	49	4.4	.1		
5		0	46	5,180	200	46	36	45	3.9	.1		
6		0	31	3,980	157	46	36	43	3.8	.1		
7		0	25	1,730	126	44	34	40	3.7	.1		
8		.3	18	943	113	41	38	38	3.6	0		
9		1.8	18	956	103	39	68	36	2.5	0		
10		264	180	1,180	96	38	98	32	2.3	0		
11		283	246	1,490	90	37	70	30	1.9	0		
12		196	72	878	82	36	61	27	1.8	0		
13		75	46	636	82	33	49	24	1.6	0		
14		16	40	528	80	29	47	22	1.6	0		
15		4.3	34	499	74	29	314	20	1.6	0		
16		1.4	29	456	69	26	461	17	1.5	0		
17		.4	23	410	65	25	233	17	1.0	0		
18		.1	21	390	63	25	1,010	16	1.0	0		
19		.1	427	379	61	25	560	14	1.0	0		
20		0	1,040	342	59	23	415	15	.8	0		
21		.1	7,560	286	57	23	427	15	.7	0		
22		.1	16,800	248	51	22	270	13	.6	0		
23		0	7,000	1,020	48	21	203	12	.5	0		
24		.1	4,500	1,600	46	20	165	11	.4	0		
25		5.8	3,600	625	45	19	140	10	.4	0		
26		11	3,400	433	46	46	119	9.3	.5	0		
27		58	3,200	350	199	242	103	8.7	.4	0		
28		1,080	2,500	303	83	85	88	7.7	.3	0		
29		212	1,900	272	-----	55	75	6.8	.2	0		
30		240	1,580	240	-----	84	70	6.4	.2	0		
31		-----	1,230	215	-----	74	-----	5.7	-----	0		
TOTAL	0	2,449.5	56,880	31,424	2,755	1,468	5,389	764.6	57.4	1.0	0	0
MEAN	0	81.7	1,835	1,014	98.4	47.4	180	24.7	1.91	0.03	0	0
AC-FT	0	4,860	112,800	62,330	5,460	2,910	10,690	1,520	114	2.0	0	0

CALENDAR YEAR 1964 MAX 16,800 MIN 0 MEAN 218 AC-FT 158,200
WATER YEAR 1964-65 MAX 16,800 MIN 0 MEAN 277 AC-FT 200,700

Peak discharge (base, 3,000 cfs)

Note.--No gage-height record Dec. 23-29.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1300	20.97	24,100	1-24	0200	9.55	3,220
1-5	1300	14.50	8,960				

EEL RIVER BASIN

11-4738. Elk Creek near Hearst, Calif.

Location.--Lat 39°38'57", long 123°07'12", in NE¼ sec.30, T.21 N., R.11 W., on right bank 300 ft upstream from unnamed tributary and 13.5 miles northeast of Hearst.

Drainage area.--84.1 sq mi.

Records available.--July 1964 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1200 ft (from topographic map).

Extremes.--Maximum discharge during period, 25,000 cfs Dec. 22 (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, 0.1 cfs Sept. 24 to Oct. 11, 1964.

Remarks.--Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station. Records of water temperatures for the water year 1964-65 are published in Part 2 of this report.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)

July 17, 1964 to Aug. 3, 1965

Aug. 4 to Sept. 30

2.0	0	2.8	26	6.0	1,010	6.57	2.0
2.1	.3	3.2	62	7.0	1,720	6.6	3.5
2.2	1.4	3.6	117	9.0	3,850	6.7	14
2.3	3.4	4.0	195	12.0	8,400	6.72	17
2.4	6.0	4.5	325	17.0	18,400		
2.6	14	5.0	510				

Discharge, in cubic feet per second, July to September 1964

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										-	1.2	0.3
2										-	1.0	.4
3										-	1.0	1.2
4										-	.9	1.2
5										-	.8	.9
6										-	.6	.8
7										-	.5	.8
8										-	.5	.6
9										-	.5	.5
10										-	.4	.4
11										-	.4	.4
12										-	.5	.2
13										-	.5	.2
14										-	.6	.3
15										-	.5	.2
16										-	.5	.2
17										-	.5	.2
18										3.9	.6	.2
19										3.4	.6	.2
20										3.2	.5	.2
21										3.2	.5	.2
22										2.8	.5	.2
23										2.8	.4	.2
24										2.2	.4	.1
25										1.8	.4	.1
26										1.6	.3	.1
27										1.2	.3	.1
28										1.2	.3	.1
29										2.0	.3	.1
30										1.8	.3	.1
31										1.4	.3	
Total										-	16.6	10.7
Mean										-	0.54	0.36
Ac-ft										-	33	21

Calendar year 1963 Max - Min - Mean - Ac-ft -
 Water year 1963-64 Max - Min - Mean - Ac-ft -

EEL RIVER BASIN

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11-4738. Elk Creek near Hearst, Calif.--Continued

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	18	442	440	270	120	80	245	43	15	4.6	2.9
2	.1	43	489	610	250	108	77	210	41	14	4.5	2.9
3	.1	20	316	770	240	100	74	190	39	14	4.3	2.9
4	.1	12	218	550	230	92	72	175	38	13	4.1	2.7
5	.1	8.5	165	2,200	270	88	69	165	37	13	3.5	2.7
6	.1	6.7	131	2,100	240	84	67	155	36	12	2.9	2.7
7	.1	5.7	112	1,500	215	81	65	150	35	12	2.9	2.7
8	.1	32	100	1,000	195	79	68	140	33	11	2.4	2.7
9	.1	298	112	750	180	77	75	135	31	11	2.9	2.7
10	.1	528	185	950	165	74	88	130	30	11	3.5	2.7
11	.1	275	355	1,250	155	72	96	125	28	12	7.4	2.5
12	.2	369	200	950	145	71	98	122	26	12	5.6	2.5
13	.2	171	159	730	135	70	98	120	24	10	4.8	2.5
14	.2	103	145	660	130	69	85	118	30	7.6	4.8	2.5
15	.2	71	130	680	120	67	190	114	28	7.0	4.1	2.5
16	.2	55	114	700	115	66	330	112	25	6.4	4.1	2.4
17	.3	44	98	680	110	65	290	111	22	6.0	6.5	2.0
18	.4	37	94	660	105	64	900	110	23	5.6	1.7	2.0
19	.5	32	365	740	107	63	820	105	21	5.6	5.6	2.0
20	.5	29	955	780	108	62	770	98	19	5.4	4.8	2.0
21	.5	30	7,000	600	106	62	710	92	18	5.2	4.1	2.0
22	.5	64	19,000	500	100	61	620	87	16	5.2	3.5	2.0
23	.4	46	9,000	1,000	95	62	530	81	15	5.2	3.5	2.0
24	.4	40	6,000	1,500	91	62	470	76	15	5.0	3.5	2.0
25	.5	114	4,500	900	87	62	420	72	16	5.0	4.1	2.0
26	.6	91	4,000	600	102	77	380	68	17	4.9	3.5	2.0
27	.9	77	2,600	450	150	120	365	64	16	4.9	4.1	2.0
28	1.3	382	1,900	370	135	92	330	60	15	4.8	3.5	2.4
29	35	275	1,400	330	-----	82	305	57	15	4.7	4.1	2.4
30	16	227	900	300	-----	80	275	53	15	4.7	3.5	2.0
31	8.5	-----	600	280	-----	82	-----	49	-----	4.6	3.5	-----
Total	80.1	3,503.9	61,785	25,530	4,351	2,414	8,817	3,589	767	257.8	141.2	71.3
Mean	2.58	117	1,993	824	155	77.9	294	116	25.6	8.32	4.55	2.38
Ac-ft	159	6,950	122,500	50,640	8,630	4,790	17,490	7,120	1,520	511	280	141

Calendar year 1964 Max - Min - Mean - Ac-ft -
 Water year 1964-65 Max 19,000 Min 0.1 Mean 305 Ac-ft 220,700

Peak discharge (base, 1,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	unknown	19.8	25,000	1-24	unknown	-	†2,500
1-5	unknown	-	†3,000				

† About.

Note.--No gage-height record Dec. 21 to Aug. 3, Sept. 4-15.

11-4740. Eel River below Dos Rios, Calif.

Location.--Lat 39°44'15", long 123°22'15", in NE¼ sec.25, T.22 N., R.14 W., on left bank 1.1 miles downstream from Burger Creek, 1.7 miles northwest of Dos Rios, and 2.2 miles downstream from Middle Fork.

Drainage area.--1,484 sq mi.

Records available.--October 1911 to December 1913, October 1951 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near Laytonville" 1911 and as "at Two Rivers" 1912-13.

Gage.--Water-stage recorder (digital). Altitude of gage is 800 ft (from topographic map). Prior to Dec. 30, 1913, staff gage at bridge 500 ft downstream from Middle Fork at different datum.

Average discharge.--16 years, 3,260 cfs (2,360,000 acre-ft per year); median of yearly mean discharges, 2,740 cfs (1,980,000 acre-ft per year).

Extremes.--Maximum discharge during year, 460,000 cfs Dec. 22 (gage height, 62.5 ft, from floodmarks), from rating curve extended above 120,000 cfs on basis of maximum flow at upstream and downstream stations; minimum, 6.8 cfs Oct. 1.
1911-13, 1951-65: Maximum discharge, that of Dec. 22, 1964; minimum, 5.2 cfs Sept. 13, 1955.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow partly regulated by Lake Pillsbury (see p. 890) and by diversion through Potter Valley powerhouse (see p. 392).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	6.8	111	11,300	12,800	7,720	2,750	2,400	4,050	610	159	56	33
2	7.3	195	10,900	13,800	6,930	2,130	2,180	3,360	580	154	55	34
3	7.3	345	6,840	22,300	6,100	1,850	1,880	2,880	554	147	52	31
4	7.8	261	3,990	18,600	5,640	1,680	1,680	2,500	537	136	48	30
5	7.8	145	2,760	69,900	8,540	1,570	1,600	2,220	517	129	46	30
6	7.8	102	2,040	83,400	8,010	1,490	1,490	1,980	490	121	45	29
7	8.4	79	1,700	50,700	6,400	1,400	1,370	1,750	469	116	43	29
8	9.0	103	1,490	28,200	5,480	1,310	1,510	1,540	439	111	40	29
9	9.5	1,590	2,060	20,200	4,680	1,240	3,020	1,480	409	106	38	30
10	9.0	5,900	3,540	21,300	4,030	1,180	3,890	1,420	389	102	38	29
11	9.0	3,930	10,400	26,600	3,550	1,140	3,100	1,390	364	99	43	29
12	9.0	7,190	4,710	22,500	3,140	1,120	3,050	1,380	342	96	57	28
13	9.0	3,470	3,040	17,800	2,900	1,110	2,450	1,360	321	91	64	27
14	9.5	1,650	2,470	15,900	2,720	1,100	2,520	1,380	311	89	58	26
15	9.5	1,000	2,470	14,900	2,480	1,100	11,800	1,320	325	87	50	27
16	10	697	1,990	14,900	2,330	1,100	27,300	1,270	302	84	46	27
17	10	538	1,670	14,100	2,060	1,100	13,700	1,280	289	78	43	25
18	9.5	435	1,500	13,800	2,030	1,060	22,800	1,180	274	76	45	24
19	10	370	5,830	14,100	2,040	1,020	27,600	1,090	261	74	62	24
20	11	353	15,500	13,700	2,180	1,010	21,900	1,060	248	70	52	24
21	12	357	101,000	11,400	2,180	1,020	21,600	979	235	68	47	24
22	12	607	351,000	9,170	2,130	1,120	15,500	918	220	68	43	24
23	12	548	195,000	18,500	1,950	1,140	11,600	844	212	66	42	25
24	12	500	92,700	44,500	1,740	1,100	9,380	788	203	64	40	25
25	12	3,030	56,200	23,600	1,620	1,040	7,840	744	193	63	40	25
26	12	2,390	56,600	15,800	1,830	1,220	7,530	721	188	59	40	24
27	15	2,020	43,500	12,600	5,080	5,800	7,220	718	187	59	40	25
28	26	13,200	31,800	10,600	3,710	3,140	6,600	718	176	59	39	26
29	65	9,440	26,200	9,020	-----	1,940	5,820	702	167	58	38	27
30	159	4,980	23,300	8,620	-----	2,360	4,960	673	161	57	36	27
31	132	-----	18,800	8,440	-----	2,640	-----	640	-----	57	35	---
TOTAL	646.2	65,536	±1,092.3	681,750	109,200	49,980	255,290	44,335	9,973	2,803	1,421	817
MEAN	20.8	2,185	35,240	21,990	3,900	1,612	8,510	1,430	332	90.4	45.8	27.2
AC-FT	1,280	130,000	±2,167	±1,352	216,600	99,130	506,400	87,940	19,780	5,560	2,820	1,620

CALENDAR YEAR 1964 MAX 351,000 MIN 5.6 MEAN 4,152 AC-FT 3,015,000
WATER YEAR 1964-65 MAX 351,000 MIN 6.8 MEAN 6,340 AC-FT 4,590,000

Peak discharge (base, 22,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1600	62.5	460,000	1-24	0300	22.90	55,400
1-5	2100	29.85	105,000	4-16	0200	20.10	39,000

† Expressed in thousands.

Note.--No gage-height record Dec. 23-29, Mar. 3-14.

11-4745. North Fork Eel River near Mina, Calif.

Location (revised).--Lat 39°56'10", long 123°21'10", in SW¼SE¼ sec.7, T.24 N., R.13 W., on left bank 0.8 mile upstream from Asbill Creek and 2 miles south of Mina. Prior to July 9, 1965, at site 0.4 mile upstream.

Drainage area.--250 sq mi.

Records available.--August 1953 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1,005 ft, revised (from topographic map). Aug. 27, 1953, to Jan. 15, 1954, water-stage recorder and Jan. 16 to June 22, 1954, wire-weight gage, at bridge 0.2 mile upstream at different datums. June 23, 1954 to Dec. 21, 1964, water-stage recorder and Feb. 7 to July 8, 1965, staff gage at site 0.4 mile upstream at different datums.

Average discharge.--12 years, 624 cfs (451,800 acre-ft per year); median of yearly mean discharges, 490 cfs (355,000 acre-ft per year).

Extremes.--Maximum discharge during year, 133,000 cfs Dec. 22 (gage height, 33.6 ft, from floodmarks, site and datum then in use), from rating curve extended above 8,000 cfs on basis of slope-area measurements at gage-heights 24.00 and 33.6 ft; minimum daily, 0.7 cfs Oct. 1-9.

1953-65: Maximum discharge, that of Dec. 22, 1964; minimum, 0.1 cfs Aug. 30, 31, 1959.

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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	7.9	3,220	2,300	1,050	270	192	280	46	11	5.2	4.3
2	.7	70	3,110	2,800	950	233	206	242	44	11	5.2	4.1
3	.7	59	1,620	3,300	800	203	183	221	43	12	5.2	3.9
4	.7	22	960	2,900	670	189	162	206	42	10	5	3.9
5	.7	12	660	10,000	920	181	149	186	41	11	4.8	3.7
6	.7	7.9	468	11,000	800	170	144	170	40	10	4.5	3.6
7	.7	6.7	377	5,000	630	164	142	162	38	10	4.3	3.6
8	.7	8.2	323	3,600	550	159	156	152	35	10	4.1	3.4
9	.7	374	486	3,600	431	154	215	136	33	10	4.1	3.4
10	.8	722	2,010	4,500	347	149	319	127	33	8.9	3.9	3.4
11	.8	1,410	2,750	6,300	335	142	308	116	32	7.9	5.0	3.4
12	.8	2,180	1,190	5,200	312	139	308	103	30	7.9	6.8	3.4
13	.8	838	786	4,300	308	129	294	96	30	7.6	6.0	3.4
14	.8	380	604	3,750	298	122	270	92	30	7.3	7.0	3.4
15	.8	230	580	3,500	284	118	2,080	89	32	6.8	6.5	3.4
16	.8	165	454	3,300	270	113	2,880	86	31	6.5	6.0	3.4
17	.9	125	365	3,000	256	109	1,280	82	30	6.2	5.8	3.2
18	.9	102	323	2,700	245	103	2,820	82	28	5.8	6.8	3.0
19	1.0	85	2,190	2,400	236	99	2,840	79	27	5.5	5.8	3.0
20	1.0	77	5,870	2,100	227	96	1,850	76	26	5.2	5.5	3.0
21	1.0	74	25,200	1,800	221	93	2,000	70	24	5.2	5.5	3.0
22	1.0	151	90,000	1,500	209	90	1,340	58	22	5.2	5.5	3.0
23	.9	141	40,000	4,500	195	90	1,010	57	22	5.5	5.2	3.0
24	.9	131	17,000	10,500	183	90	780	54	20	5.8	5.2	3.0
25	.9	983	10,000	5,400	175	89	625	53	16	5.8	5.2	2.8
26	.9	660	9,500	4,000	192	88	550	53	12	5.5	5.2	2.8
27	1.4	928	8,800	3,000	550	378	455	52	12	5.5	5.0	2.8
28	3.3	5,640	5,000	2,200	287	290	395	50	15	5.5	4.5	2.8
29	7.0	2,280	3,500	1,650	-----	218	355	49	13	5.5	4.3	2.8
30	6.4	1,640	3,000	1,200	-----	266	308	48	12	5.5	4.3	2.8
31	8.5	-----	2,500	1,100	-----	236	-----	47	-----	5.5	4.3	-----
Total	47.9	19,509.7	242,846	122,400	11,931	4,970	24,616	3,374	859	231.1	161.7	98.7
Mean	1.55	650	7,834	3,948	426	160	821	109	28.6	7.45	5.22	3.29
Ac-ft	95	38,700	481,700	242,800	23,660	9,860	48,830	6,690	1,700	458	321	196

Calendar year 1964 Max 90,000 Min 0.5 Mean 950 Ac-ft 690,000

Water year 1964-65 Max 90,000 Min 0.7 Mean 1,181 Ac-ft 855,000

Peak discharge (base, 8,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	unknown	33.6	133,000	1-24	unknown	-	†14,000
1-5	unknown	-	†15,000				

Note.--No gage-height record Dec. 22 to Feb. 6, Mar. 19-21, 25, 26, June 27 to July 8.

† About.

11-4750. Eel River at Alderpoint, Calif.

Location (revised).--Lat 40°10'35", long 123°36'20", in NW¼ sec.27, T.3 S., R.5 E., on upstream side of county road bridge at Alderpoint, 400 ft upstream from Carter Creek and 11.4 miles northeast of Garberville. Prior to Dec. 22, 1964, at site 1,000 ft downstream.

Drainage area.--2,079 sq mi.

Records available.--September 1955 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 266.68 ft above mean sea level, datum of 1929. Prior to Dec. 22, 1964, at site 1,000 ft downstream at datum 2.87 ft lower.

Average discharge.--10 years, 4,805 cfs (3,479,000 acre-ft per year).

Extremes.--Maximum discharge during year, 561,000 cfs Dec. 22 (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, 12 cfs Oct. 1-5, 1955-65; Maximum discharge, that of Dec. 22, 1964; minimum, 10 cfs Aug. 30 to Sept. 5, 1964.

Remarks.--Records good except those for periods of no gage-height record or indefinite stage-discharge relation, which are fair. Flow slightly regulated by Lake Pillsbury (see p. 390) and by diversion through Potter Valley powerhouse (see p. 392). Records of water temperatures for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	178	9,850	24,000	6,100	2,990	2,160	3,060	830	220	83	54
2	12	193	16,800	26,000	5,720	2,650	2,080	2,730	780	205	78	52
3	12	295	11,600	35,000	5,440	2,450	1,980	2,520	750	190	75	50
4	12	367	6,860	29,000	5,080	2,320	1,780	2,320	720	180	73	48
5	12	259	4,750	50,000	5,720	2,080	1,710	2,120	690	173	71	47
6	13	178	3,500	90,000	6,480	1,980	1,690	1,950	660	162	70	45
7	13	135	2,810	60,000	5,510	1,960	1,610	1,860	630	153	69	44
8	13	119	2,380	35,000	4,920	1,880	1,600	1,700	630	148	68	42
9	13	404	2,630	27,000	4,440	1,800	2,010	1,630	610	141	66	41
10	13	6,880	3,860	29,000	4,110	1,720	3,490	1,580	590	135	65	40
11	13	5,760	14,900	32,000	3,840	1,710	2,960	1,540	560	130	64	39
12	14	11,500	8,130	27,000	3,610	1,690	2,960	1,510	530	126	63	39
13	14	6,360	5,140	22,000	3,360	1,640	2,630	1,500	505	123	61	39
14	14	3,000	3,940	18,000	3,220	1,600	2,370	1,500	485	120	60	39
15	14	1,910	3,720	16,000	3,020	1,440	4,760	1,460	480	118	59	39
16	14	1,220	3,230	15,000	2,850	1,420	17,400	1,410	480	115	57	39
17	14	930	2,680	14,500	2,550	1,380	7,760	1,390	475	112	56	39
18	14	773	2,290	13,500	2,450	1,300	11,400	1,360	460	110	54	39
19	14	640	5,670	13,000	2,350	1,190	16,800	1,280	445	107	53	39
20	14	550	23,400	12,500	2,350	1,180	12,400	1,230	420	105	52	39
21	14	520	113,000	11,500	2,300	1,170	12,600	1,190	400	102	52	39
22	14	616	434,000	11,000	2,250	1,190	8,820	1,140	380	100	51	38
23	14	914	333,000	19,000	2,150	1,240	6,660	1,080	360	97	51	38
24	14	858	183,000	36,000	2,100	1,240	5,460	1,040	345	95	52	39
25	15	2,970	137,000	25,000	2,000	1,210	4,740	988	325	93	57	39
26	16	4,060	124,000	18,000	1,920	1,250	4,540	958	310	92	57	39
27	17	3,580	100,000	14,000	3,490	2,810	4,400	940	290	91	57	39
28	23	19,300	66,800	12,000	3,620	3,240	4,170	928	270	90	57	39
29	50	17,400	45,500	10,000	-----	2,160	3,880	916	250	89	57	39
30	83	8,680	35,000	8,800	-----	1,970	3,490	898	230	88	56	39
31	112	-----	28,000	7,200	-----	2,340	-----	875	-----	87	55	-----
Total	636	100,549	1,737,444	761,000	102,950	56,200	160,310	46,603	14,890	3,897	1,899	1,241
Mean	21.5	3,352	56,050	24,550	3,677	1,813	5,344	1,503	496	126	61.3	41.4
Ac-ft	1,260	199,400	4,344	1,509	204,200	111,500	318,000	92,440	29,530	7,730	3,770	2,460

Calendar year 1964 Max 434,000 Min 10 Mean 6,547 Ac-ft 4,753,000
 Water year 1964-65 Max 434,000 Min 12 Mean 8,185 Ac-ft 5,925,000

Peak discharge (base, 41,000 cfs).--Dec. 22 (2000) 561,000 cfs (87.2 ft); Jan. 6 (time unknown) about 110,000 cfs.

* Expressed in thousands.

Note.--No gage-height record Dec. 22 to Feb. 1, March 10-19, July 2 to Sept. 30. Computed from twice-daily wire-weight gage readings Feb. 17-28. Stage-discharge relation indefinite June 1 to July 1.

11-4755. South Fork Eel River near Branscomb, Calif.

Location.--Lat 39°43'09", long 123°39'06", in NW¼ sec.32, T.22 N., R.16 W., 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.

Records available.--October 1946 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1,380 ft (from topographic map).

Average discharge.--19 years, 173 cfs (125,200 acre-ft per year).

Extremes.--Maximum discharge during year, 19,700 cfs Dec. 22 (gage height, 16.05 ft), from rating curve extended above 4,600 cfs as explained below; minimum, 1.4 cfs Oct. 21.

1946-65: 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, 1.3 cfs Sept. 10, 1959, Oct. 24, 1961, Sept. 22-26, 1964.

Remarks.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station. Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.7	0.7	1.4	46	6.0	2,170
.8	1.9	1.7	101	7.0	3,000
.9	3.8	2.0	170	9.0	5,340
1.0	7.5	3.0	470	12.0	10,400
1.1	13	4.0	880	15.0	17,200
1.2	21	5.0	1,430		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	1.7	954	530	172	67	74	103	21	12	6.3	3.3
2	1.9	35	930	544	152	60	68	95	20	11	5.5	3.6
3	1.8	17	586	845	140	56	63	87	19	11	5.1	3.3
4	1.8	12	409	748	136	53	56	79	19	10	4.8	3.3
5	1.6	9.0	292	1,810	192	49	54	72	18	9.5	4.8	3.3
6	1.6	7.1	222	2,300	150	49	51	67	19	9.0	4.8	3.6
7	1.6	6.7	182	1,520	130	48	51	61	19	9.5	4.4	3.6
8	1.8	9.8	150	850	115	45	53	60	20	9.0	4.1	3.6
9	1.9	39	134	614	102	43	103	54	20	8.5	4.1	3.3
10	1.9	269	461	572	95	43	120	51	18	8.5	3.8	3.1
11	1.8	217	802	758	88	42	116	46	16	8.5	5.1	3.1
12	1.8	331	467	650	82	40	107	45	16	8.5	8.5	3.3
13	1.8	211	339	516	77	39	97	43	16	8.5	6.7	3.1
14	1.8	118	277	412	73	36	91	42	19	8.0	5.1	2.7
15	1.8	79	250	313	69	35	296	39	18	7.1	4.8	2.7
16	1.8	58	200	274	66	35	448	38	17	6.7	4.4	2.5
17	1.9	46	172	230	62	35	348	36	16	6.3	3.8	2.0
18	1.8	39	160	200	60	34	592	35	16	6.3	3.8	2.2
19	1.9	32	508	182	58	32	596	36	16	5.9	4.1	2.2
20	1.6	28	1,820	160	57	31	606	36	14	6.3	4.4	2.2
21	1.4	27	10,500	150	54	30	650	34	14	6.7	4.8	2.2
22	1.6	32	16,800	138	51	30	505	32	14	6.7	4.8	2.2
23	1.6	27	8,880	479	49	29	387	30	13	6.3	4.4	1.9
24	1.9	34	5,160	1,150	48	29	301	29	13	6.3	4.4	2.0
25	2.2	164	2,670	650	45	28	242	28	13	6.7	5.1	2.0
26	2.4	138	2,490	474	46	79	203	27	14	6.7	5.1	2.5
27	3.1	176	1,680	380	147	218	170	26	13	6.7	4.4	3.1
28	14	1,540	1,080	310	81	114	150	24	12	6.7	4.1	2.9
29	22	768	870	262	-----	87	129	23	11	6.3	4.1	2.7
30	12	527	805	228	-----	89	116	22	11	6.3	3.3	2.5
31	7.5	-----	674	195	-----	79	-----	21	-----	6.3	3.1	-----
Total	105.5	5,013.6	60,924	18,444	2,597	1,684	6,843	1,421	485	241.8	146.0	84.0
Mean	3.40	167	1,970	595	92.8	54.3	228	45.8	16.2	7.80	4.71	2.80
Ac-ft	209	9,940	120,800	36,580	5,150	3,340	13,570	2,820	962	480	290	167

Calendar year 1964 Max 16,800 Min 1.3 Mean 257 Ac-ft 186,700
 Water year 1964-65 Max 16,800 Min 1.4 Mean 268 Ac-ft 194,300

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	1300	6.10	2,250	1-6	1700	6.58	2,630
12-22	1400	16.05	19,700				

Note.--No gage-height record Feb. 7-19.

EEL RIVER BASIN

11-4757. Tenmile Creek near Laytonville, Calif.

Location.--Lat 39°45'45", long 123°32'30", in NW¼ sec.16, T.22 N., R.15 W., on right bank 0.1 mile downstream from Step Gulch Creek and 6.0 miles northwest of Laytonville.

Drainage area.--50.3 sq mi.

Records available.--October 1957 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 1,450 ft (from topographic map).

Average discharge.--8 years, 155 cfs (112,200 acre-ft per year).

Extremes.--Maximum discharge during year, 14,500 cfs Dec. 22 (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; minimum, 0.2 cfs Oct. 1-10.

1957-65: Maximum discharge, that of Dec. 22, 1964; no flow at times each year except 1960, 1963-65.

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 except those for periods of no gage-height record, which are fair. No regulation or diversion above station.

Rating table (gage-height in feet, and discharge, in cubic feet per second)
(Shifting control method used Oct. 1-27, May 2 to June 16, Aug. 8 to Sept. 30.)

1.5	0.1	2.2	12	6.0	660
1.6	.4	2.5	23	7.0	1,110
1.7	1.0	3.0	47	9.0	2,420
1.8	1.9	3.5	87	12.0	4,900
1.9	3.4	4.0	145	16.0	8,900
2.0	5.6	5.0	345	20.0	13,100

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.2	13	672	439	148	68	61	64	11	5.6	2.7	0.9
2	.2	24	656	597	131	60	54	57	11	4.9	2.2	.9
3	.2	16	340	1,000	119	55	47	53	10	4.5	1.7	1.0
4	.2	12	210	802	124	48	42	49	9.8	4.0	1.5	1.0
5	.2	9.7	148	3,050	248	45	38	44	9.5	3.6	1.3	1.0
6	.2	8.7	112	2,410	148	44	37	41	9.6	3.3	1.1	.9
7	.2	8.0	99	1,050	121	43	37	39	9.8	3.5	1.0	1.0
8	.2	14	95	636	107	40	44	37	11	3.4	1.0	1.2
9	.2	44	81	590	99	39	113	34	11	3.1	1.0	1.3
10	.2	344	441	625	91	38	86	32	11	3.1	1.1	1.2
11	.3	457	362	789	85	38	64	31	9.4	3.3	2.5	.9
12	.3	373	196	555	79	36	52	28	9.0	3.3	5.3	.8
13	.3	160	141	442	76	35	46	27	8.7	2.9	3.4	.8
14	.3	68	152	360	75	33	44	25	11	2.8	2.5	.8
15	.5	42	151	315	69	32	150	25	12	2.8	2.0	.7
16	.5	33	103	266	65	31	300	23	9.9	2.5	1.8	.7
17	.5	28	89	236	60	30	250	22	9.0	2.2	1.6	.6
18	.5	25	115	214	57	29	520	22	8.8	2.1	1.7	.7
19	.5	23	1,040	207	54	29	560	21	8.9	2.1	1.5	.8
20	.5	21	1,820	186	52	28	620	21	8.8	2.0	1.5	.8
21	.6	23	9,620	162	51	27	700	20	8.2	2.3	1.6	.8
22	.6	33	12,700	148	49	27	430	19	8.1	2.5	1.5	.8
23	.6	25	6,700	1,130	46	26	300	18	7.9	2.3	1.4	.7
24	.6	82	4,000	1,140	45	25	220	17	7.3	2.0	1.7	.7
25	.7	179	2,600	530	40	25	165	16	7.0	2.0	1.7	.6
26	.7	107	2,300	379	48	55	125	16	6.7	1.9	1.7	.9
27	2.8	220	1,170	295	274	216	102	15	6.5	2.3	1.6	1.3
28	14	1,610	879	248	85	71	90	14	6.6	2.5	1.4	1.6
29	18	437	838	214	-----	50	79	13	6.7	2.4	1.3	1.5
30	12	475	808	188	-----	106	71	12	6.1	2.1	1.0	1.3
31	8.7	-----	597	164	-----	73	-----	12	-----	2.6	1.0	-----
TOTAL	65.5	4,914.4	49,230	19,367	2,646	1,502	5,447	867	270.3	89.9	54.3	28.2
MEAN	2.11	164	1,588	625	94.5	48.5	182	28.0	9.01	2.90	1.75	.94
AC-FT	130	9,750	97,650	38,410	5,250	2,980	10,800	1,720	536	178	108	56

CALENDAR YEAR 1964 MAX 12,700 MIN 0.1 MEAN .208 AC-FT 150,900
WATER YEAR 1964-65 MAX 12,700 MIN 0.2 MEAN 231 AC-FT 167,600

Peak discharge (base, 5,000 cfs).--Dec. 22 (1200) 14,500 cfs (21.3 ft).

Note.--No gage-height record Dec. 22-26, Apr. 14-26.

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., 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.

Records available.--October 1939 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Datum of gage is 217.57 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Nov. 2, 1940, staff gage at site 200 ft upstream at datum 0.8 ft higher. Nov. 2, 1940, to Oct. 31, 1944, staff gage at present site and datum.

Average discharge.--26 years, 1842 cfs (1,334,000 acre-ft per year).

Extremes.--Maximum discharge during year, 199,000 cfs Dec. 22 (gage height, 46.0 ft, from floodmarks), from rating curve extended above 52,000 cfs on basis of slope-area measurement gage height, 42.7 ft; minimum daily, 31 cfs Oct. 1-3, 12, 13, 18, 23. 1940-65: Maximum discharge, that of Dec. 22, 1964; minimum observed, 9 cfs Oct. 17, 1944.

Remarks.--Records good except those for period of no gage-height record, which are fair. 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 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	130	7,920	4,100	2,120	749	645	1,210	271	110	89	59
2	31	298	7,960	3,800	1,880	658	586	1,120	263	136	87	55
3	31	282	5,730	5,600	1,660	610	544	1,040	255	135	84	55
4	34	206	3,700	5,000	1,540	576	508	980	249	132	81	55
5	32	146	2,610	8,000	2,330	552	483	910	241	128	75	55
6	54	104	1,950	16,000	2,130	536	468	860	234	123	75	54
7	63	93	1,550	12,000	1,700	543	450	800	233	117	71	54
8	35	109	1,300	8,000	1,500	512	475	750	236	117	72	53
9	22	266	1,090	5,400	1,380	498	660	700	235	114	68	53
10	32	2,160	1,490	4,500	1,270	487	1,070	656	228	113	69	54
11	32	2,460	5,780	5,000	1,180	477	978	616	219	110	70	54
12	31	3,860	3,480	4,800	1,090	463	858	586	209	111	75	53
13	31	2,160	2,470	4,000	1,030	460	769	551	201	111	77	52
14	32	1,120	1,980	3,300	990	440	709	524	209	108	77	52
15	32	690	1,910	2,900	930	425	4,180	500	215	106	76	52
16	35	512	970	2,600	880	411	7,200	482	210	103	74	110
17	32	416	1,320	2,450	880	397	4,000	464	199	100	72	102
18	31	345	1,180	2,350	870	387	9,340	446	192	98	69	90
19	32	302	3,990	2,290	860	379	10,900	434	186	96	66	80
20	32	270	13,800	2,090	701	371	8,780	446	181	94	66	70
21	32	250	71,700	1,810	670	360	7,740	422	175	92	65	57
22	32	278	161,000	1,550	640	350	5,800	405	170	91	64	54
23	31	266	95,200	6,520	611	341	4,240	385	167	92	64	46
24	34	302	40,400	15,200	595	333	3,200	365	165	90	65	45
25	34	810	25,000	8,700	572	326	2,540	350	161	90	67	43
26	34	1,160	23,000	6,340	562	413	2,150	337	155	89	67	46
27	44	1,380	17,500	4,850	1,210	1,080	1,850	322	151	88	65	46
28	108	10,600	11,000	3,940	1,030	1,160	1,620	311	73	88	64	46
29	250	8,410	7,650	3,300	-----	728	1,450	298	131	88	64	46
30	250	4,280	5,750	2,750	-----	672	1,320	290	63	87	62	46
31	162	-----	4,750	2,900	-----	730	-----	280	-----	88	60	-----
Total	1,696	43,665	535,130	162,040	32,811	16,424	85,513	17,840	5,877	3,245	2,200	1,737
Mean	54.7	1,456	17,260	5,227	1,172	530	2,850	575	196	105	71.0	57.9
Ac-ft	3,360	86,600	1,061	321,400	65,080	32,580	169,600	35,390	11,660	6,440	4,360	3,450

Calendar year 1964 Max 161,000 Min 10 Mean 2,379 Ac-ft 1,727,000
 Water year 1964-65 Max 161,000 Min 31 Mean 2,488 Ac-ft 1,801,000

Peak discharge (base, 28,000 cfs).--Dec. 22 (1800) 199,000 cfs (46.0 ft).

Note.--No gage-height record Dec. 22 to Jan. 18. Computed from twice-daily staff gage readings Jan. 19-25.

EEL RIVER BASIN

11-4766. Bull Creek near Weott, Calif.

Location.--Lat 40°21'05", long 124°00'10", in SW¼NW¼ sec.30, T.1 S., R.2 E., on left bank 0.2 mile downstream from Albee Creek, 4.5 miles northwest of Weott, and 4.6 miles upstream from mouth. Prior to Aug. 11, 1965, at site 150 ft downstream.

Drainage area.--28.1 sq mi.

Records available.--October 1960 to September 1965.

Gage.--Water-stage recorder (digital). Datum of gage is 269.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Dec. 22, 1964, water-stage recorder, and Jan. 14, 1965 to Aug. 10, 1965, wire-weight gage at site 150 ft downstream at datum 8.90 ft higher.

Average discharge.--5 years, 116 cfs (83,980 acre-ft per year).

Extremes.--Maximum discharge during year, 6,520 cfs Dec. 22 (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, 0.9 cfs Oct. 20, 1960-65; Maximum discharge, that of Dec. 22, 1964; minimum daily, 0.9 cfs Oct. 20, 1964.

Remarks.--Records fair prior to Dec. 16, poor thereafter. Some regulation at low flow by log pond above station. Minor diversions above station for domestic use.

Cooperation.--Five discharge measurements furnished by California Division of Beaches and Parks.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	18	432	190	132	42	36	80	17	9.0	4.8	3.0
2	1.8	26	416	330	110	36	35	72	16	8.6	4.8	2.9
3	2.7	20	344	520	102	32	33	66	16	8.4	4.8	2.8
4	2.2	18	293	600	101	34	31	62	15	9.1	4.6	2.8
5	2.0	17	245	1,100	120	32	30	59	15	8.9	4.4	2.7
6	1.8	16	218	1,050	109	33	29	56	15	8.6	4.3	2.6
7	2.0	15	188	800	94	31	29	52	14	8.2	4.1	2.5
8	2.0	49	169	600	94	31	29	49	14	8.0	4.0	2.4
9	1.8	66	154	450	88	32	50	47	14	8.2	4.0	2.4
10	1.8	222	243	520	82	31	94	45	14	8.0	3.9	2.4
11	1.8	101	255	600	74	30	62	43	14	7.8	4.1	2.4
12	1.8	245	220	520	72	28	53	41	13	7.6	4.5	2.4
13	1.8	197	200	460	72	27	48	39	14	7.4	4.1	2.4
14	1.6	151	188	422	65	26	46	37	14	7.2	4.0	2.4
15	1.8	120	169	338	61	26	310	35	13	6.9	3.8	2.3
16	1.8	96	154	272	58	26	420	34	13	6.6	3.8	2.3
17	1.8	78	145	230	54	26	230	32	12	6.4	3.7	2.3
18	1.8	67	140	190	53	26	490	31	12	6.1	3.8	2.3
19	1.8	58	350	178	53	26	760	29	12	5.8	3.8	2.3
20	.9	53	1,000	163	50	25	520	28	12	6.0	3.7	2.2
21	1.2	51	2,200	152	48	25	420	27	11	6.0	3.7	2.1
22	1.2	49	4,000	154	46	25	310	26	11	5.9	3.7	2.1
23	1.4	43	1,700	496	44	24	250	25	11	5.8	3.7	2.1
24	1.6	72	1,100	536	48	24	200	25	11	5.4	3.9	2.1
25	1.4	87	750	404	50	24	160	24	11	5.4	4.2	2.1
26	1.6	104	600	317	50	31	150	23	10	5.2	3.7	2.1
27	6.4	146	440	245	52	51	130	22	10	5.0	3.6	2.1
28	38	536	300	193	44	40	108	21	9.7	5.0	3.4	2.1
29	40	380	250	176	-----	34	96	20	9.5	4.9	3.2	2.1
30	22	362	220	169	-----	33	86	19	9.2	4.9	3.1	2.1
31	17	-----	205	154	-----	34	-----	18	-----	4.9	3.1	-----
Total	168.8	3,463	17,288	12,529	2,026	945	5,245	1,187	382.4	211.2	122.3	70.8
Mean	5.45	115	558	404	72.4	30.5	175	38.3	12.7	6.81	3.95	2.36
Ac-ft	335	6,870	34,290	24,850	4,020	1,870	10,400	2,350	758	419	243	140

Calendar year 1964 Max 4,000 Min 0.9 Mean 106 Ac-ft 77,120
 Water year 1964-65 Max 4,000 Min 0.9 Mean 120 Ac-ft 86,540

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	unknown	20.6	6,520	4-19	unknown	-	†1,000
1- 5	unknown	-	†1,200				

† About.

Note.--No gage-height record Dec. 17 to Jan. 13, June 29 to Aug. 10. Stage-discharge relation indefinite Mar. 17 to June 28, Aug. 11 to Sept. 30.

11-4767. Larabee Creek near Holmes, Calif.

Location.--Lat 40°24'30", long 123°54'00", in SW¼ sec.1, T.1 S., R.2 E., on left bank 50 ft downstream from Balcom Creek, 2.8 miles upstream from mouth and 2.8 miles east of Holmes.

Drainage area.--84.1 sq mi.

Records available.--July 1959 to September 1965, discontinued as a continuous-record station; converted to a crest-stage partial-record station.

Gage.--Water-stage recorder (digital). Datum of gage is 145.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Average discharge.--6 years, 273 cfs (197,600 acre-ft per year).

Extremes.--Maximum discharge during year, 11,400 cfs Dec. 22 (gage height, 13.05 ft), from rating curve extended above 5,000 cfs; minimum daily, 5.0 cfs Oct. 21-24.
1959-65: Maximum discharge, that of Dec. 22, 1964; minimum, that of Oct. 21-24, 1964.

Remarks.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNF	JULY	AUG.	SEPT.
1	5.8	21	1,300	248	416	101	99	218	43	23	11	7.3
2	6.1	65	1,460	1,390	340	88	96	193	40	22	11	7.4
3	6.1	32	885	1,580	302	73	91	183	39	16	9.7	7.4
4	5.8	19	597	1,040	287	67	87	173	38	20	9.3	7.4
5	5.8	15	449	4,910	560	62	85	160	37	20	9.0	7.7
6	5.6	12	338	4,660	408	59	82	145	36	19	8.6	7.4
7	5.4	10	284	2,730	311	58	82	139	35	18	8.7	7.4
8	5.5	21	254	1,640	278	55	82	129	35	17	8.5	7.2
9	5.8	68	291	1,430	254	55	195	115	35	18	8.5	7.1
10	5.8	611	1,040	2,460	228	67	544	110	34	18	8.3	7.0
11	5.8	448	936	3,170	218	68	460	106	33	17	9.4	7.0
12	5.8	676	516	2,140	198	68	380	99	33	17	12	7.0
13	5.4	434	373	1,580	183	68	243	94	32	17	10	7.0
14	5.4	266	295	1,240	173	65	205	87	34	16	9.5	7.0
15	5.7	178	307	1,070	158	64	2,030	82	36	16	8.8	6.9
16	5.7	135	231	785	145	62	2,060	81	33	15	8.6	6.9
17	5.6	104	191	560	131	59	1,130	77	32	15	8.6	6.9
18	5.4	88	173	436	122	59	4,260	76	31	14	8.9	6.8
19	5.4	74	758	384	110	58	4,520	70	30	13	9.1	6.8
20	5.1	64	1,730	332	102	57	3,120	69	28	14	8.8	6.8
21	5.0	62	6,560	290	97	56	2,150	67	27	14	8.7	6.7
22	5.0	69	8,840	260	92	56	1,460	65	29	14	8.8	6.7
23	5.0	63	2,980	2,530	96	54	1,200	61	27	13	8.5	6.6
24	5.0	92	2,460	3,660	96	54	948	56	27	12	9.0	6.6
25	5.2	326	1,330	1,980	88	54	690	57	28	12	11	6.5
26	5.4	334	1,290	1,420	87	82	512	57	27	12	9.9	6.5
27	11	366	990	1,010	180	135	400	54	26	11	8.9	6.4
28	47	2,220	484	810	123	97	352	52	23	11	8.5	6.4
29	52	1,200	320	720	-----	87	278	48	26	11	8.4	6.3
30	28	966	352	560	-----	90	254	48	24	11	8.0	6.3
31	17	-----	290	464	-----	87	-----	47	-----	11	7.6	-----
TOTAL	298.6	9,039	38,304	47,489	5,783	2,165	28,095	3,018	958	477	283.6	207.4
MEAN	9.63	301	1,236	1,532	207	69.8	937	97.4	31.9	15.4	9.15	6.91
AC-FT	592	17,930	75,970	94,190	11,470	4,290	55,730	5,990	1,900	946	563	411

Calendar year 1964 Max 5,510 Min 5.0 Mean 272 Ac-ft 187,400

Water year 1964-65 Max 8,840 Min 5.0 Mean 373 Ac-ft 270,000

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1000	13.05	11,400	1-23	1630	9.91	5,420
1- 5	1615	10.34	6,140	4-15	1745	9.60	4,900
1-11	0645	8.94	3,610	4-18	1700	10.65	6,670

Note.--No gage-height record Sept. 12-30.

11-4770. Eel River at Scotia, Calif.

Location.--Lat 40°29'30", long 124°05'55", in SW¼ sec.5, T.1 N., R.1 E., 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.

Records available.--October 1910 to September 1965. Monthly discharge only for some periods and yearly estimates for 1915-16, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Datum of gage is 35.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to September 1934, staff gage at same site and datum. September 1934 to Dec. 12, 1940, wire-weight gage at same site and datum.

Average discharge.--55 years, 7,071 cfs (5,119,000 acre-ft per year).

Extremes.--Maximum discharge during year, 752,000 cfs Dec. 23 (gage height, 72.0 ft, from floodmarks), from rating curve extended above 220,000 cfs on basis of maximum flow at upstream stations; minimum daily, 67 cfs Oct. 1-4.
1910-65: Maximum discharge, that of Dec. 23, 1964; minimum observed, 10 cfs Aug. 12-14, 1924.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow slightly regulated by Lake Pillsbury (see p. 390) and by diversion through Potter Valley powerhouse (see p. 392). Records of chemical analyses, water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	67	369	26,600	32,400	11,800	4,550	3,770	6,550	1,380	414	223	152
2	67	544	31,900	33,400	10,700	3,960	3,520	5,820	1,330	405	223	147
3	67	904	27,300	48,300	9,500	3,610	3,380	5,300	1,280	441	220	143
4	67	791	15,800	41,200	8,670	3,390	3,250	4,910	1,230	445	215	141
5	68	807	10,400	71,300	9,620	3,160	3,010	4,570	1,180	430	200	140
6	68	601	7,550	140,000	12,000	2,940	2,850	4,250	1,130	415	192	138
7	70	429	6,010	96,100	9,950	2,910	2,800	4,010	1,100	391	184	134
8	74	422	5,070	51,700	8,450	2,850	2,750	3,790	1,080	364	176	131
9	88	836	4,750	38,200	7,560	2,820	3,130	3,590	1,050	352	172	130
10	82	5,990	5,870	37,800	6,750	2,790	5,510	3,510	1,020	337	170	129
11	76	11,800	20,100	43,800	6,180	2,770	5,990	3,270	982	319	167	128
12	68	17,200	17,500	39,200	5,690	2,710	5,210	3,100	938	315	165	128
13	80	13,900	17,300	30,900	5,260	2,660	4,900	2,950	882	313	163	128
14	68	7,300	7,600	25,600	5,000	2,590	4,430	2,800	879	306	160	127
15	68	4,430	6,730	23,100	4,730	2,530	9,640	2,650	886	305	158	127
16	68	3,250	6,240	20,900	4,380	2,530	31,300	2,500	862	297	155	123
17	69	2,480	5,210	19,600	4,250	2,540	21,000	2,400	868	287	153	131
18	70	1,970	4,570	18,300	4,050	2,550	27,100	2,290	825	271	152	168
19	71	1,600	7,340	17,800	3,850	2,540	44,300	2,180	797	262	150	163
20	69	1,360	35,400	17,600	3,850	2,540	33,300	2,090	748	252	148	154
21	69	1,200	133,000	16,000	3,650	2,530	29,600	2,000	717	244	148	145
22	70	1,180	521,000	14,000	3,650	2,530	23,800	1,910	678	241	148	136
23	70	1,330	648,000	17,400	3,650	2,550	18,100	1,870	626	234	145	127
24	71	1,530	311,000	53,300	3,450	2,550	14,200	1,790	608	230	155	123
25	71	3,030	190,000	36,500	3,270	2,560	12,100	1,740	596	225	165	120
26	69	6,570	176,000	25,500	3,180	2,560	10,800	1,680	578	229	165	119
27	85	6,060	126,000	20,100	3,960	3,020	10,000	1,620	553	218	163	116
28	180	26,200	95,800	16,700	5,830	5,580	9,110	1,570	550	221	160	115
29	440	41,600	65,800	14,600	-----	4,130	8,240	1,520	467	217	157	116
30	518	18,400	47,600	13,300	-----	3,660	7,460	1,480	468	218	156	116
31	447	-----	40,700	12,600	-----	3,740	-----	1,430	-----	217	155	---
TOTAL	3,515	184,083	2,617,14	1,087.2	172,080	94,350	364,550	91,140	26,288	9,415	5,263	3,995
MEAN	113	6,136	84,420	35,070	6,174	3,044	12,150	2,940	876	304	170	133
AC-FT	6,970	365,100	2,519,1	2,156	342,900	187,100	723,100	180,800	52,140	18,670	10,440	7,920

CALENDAR YEAR 1964 MAX 648,000 MIN 67 MEAN 10,710 AC-FT 7,777,000
WATER YEAR 1964-65 MAX 643,000 MIN 67 MEAN 12,770 AC-FT 9,242,000

Peak discharge (base, 72,000 cfs).--Dec. 23 (0200) 752,000 cfs (72.0 ft); Jan. 6 (0515) 148,000 cfs (36.04 ft).

* Expressed in thousands.

Note.--No gage-height record Dec. 23-29, Feb. 17-23, May 12 to June 2, Aug. 2-31.

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., 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. At site August 1953 to September 1958, 81.7 sq mi (corrected).

Records available.--August 1953 to September 1958, October 1963 to September 1965.

Gage.--Water-stage recorder (digital). Datum of gage is 1,996.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Aug. 19, 1953 to Sept. 30, 1958, at site 1.7 miles upstream at different datum.

Average discharge.--7 years, 387 cfs (280,200 acre-ft per year).

Extremes.--Maximum discharge during year, 27,000 cfs Dec. 22 (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 daily, 2.5 cfs Oct. 21, 22.

1953-58, 1963-65: Maximum discharge, that of Dec. 22, 1964; minimum, 1.8 cfs Aug. 29, 1958.

Revisions.--The maximum discharge for the water year 1964 has been revised to 13,200 cfs Jan. 20, 1964 (gage height, 15.0 ft, from floodmarks), superseding figure published in 1964 Report.

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 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.9	24	2,500	600	740	210	110	270	49	16	6.8	4.3
2	2.8	70	1,800	720	502	190	90	235	47	15	6.3	4.3
3	2.8	54	1,000	760	500	170	80	218	45	14	5.9	4.2
4	2.7	36	600	660	498	160	74	200	43	13	5.9	4.0
5	2.7	28	460	1,090	1,300	160	70	180	40	13	5.7	4.0
6	2.7	24	350	6,400	860	155	67	165	38	13	5.2	4.0
7	2.8	21	300	2,000	720	155	64	155	37	12	5.2	3.9
8	2.8	23	280	1,300	600	150	62	148	35	13	5.2	3.7
9	2.8	63	380	1,200	520	140	115	140	34	13	5.2	3.7
10	2.9	153	1,900	3,600	460	135	280	134	33	12	5.2	3.4
11	2.8	387	1,000	2,170	390	130	660	128	33	12	5.4	3.4
12	2.8	922	640	1,880	340	126	600	122	33	11	6.4	3.4
13	2.8	355	520	1,270	300	122	470	117	33	11	6.9	3.4
14	2.8	185	420	1,020	270	115	365	113	31	10	7.1	3.4
15	2.9	131	360	2,700	240	108	2,000	108	29	10	6.7	3.4
16	3.0	105	310	1,600	220	106	1,850	103	26	9.8	6.4	3.3
17	2.9	86	290	1,450	210	102	1,100	98	25	9.3	6.4	3.1
18	2.8	73	270	1,300	200	96	3,050	93	24	8.9	6.6	3.1
19	2.7	65	900	1,200	200	92	3,350	90	22	8.9	7.4	3.1
20	2.6	60	3,000	1,120	195	85	2,800	87	21	8.9	7.6	3.1
21	2.5	63	10,000	992	190	83	1,600	82	20	8.9	7.1	3.1
22	2.5	104	18,000	700	185	82	1,100	78	20	8.8	6.6	3.1
23	2.7	125	8,000	5,400	175	81	870	73	20	8.1	5.9	3.1
24	2.8	287	5,500	3,780	165	79	740	69	19	8.1	5.9	2.8
25	2.8	778	5,000	1,610	160	78	620	66	19	8.1	5.9	2.8
26	2.9	493	4,500	1,250	160	87	510	63	19	8.1	5.9	2.8
27	4.8	498	2,500	902	370	126	440	61	18	8.0	5.4	2.8
28	6.7	2,310	1,700	780	250	90	370	58	17	7.1	5.1	2.8
29	7.3	1,350	1,300	735	-----	82	310	56	17	6.8	4.8	2.8
30	23	1,060	1,000	770	-----	92	280	54	16	6.8	4.5	2.8
31	26	-----	750	762	-----	114	-----	52	-----	6.8	4.3	-----
TOTAL	140.0	9,933	75,530	51,541	10,920	3,701	24,097	3,616	863	319.4	184.9	101.1
MEAN	4.52	331	2,436	1,663	390	119	803	117	28.8	10.3	5.97	3.37
AC-FT	278	19,700	149,800	102,200	21,660	7,340	47,800	7,170	1,710	634	367	201

CALENDAR YEAR 1964 MAX 18,000 MIN 2.5 MEAN 376 AC-FT 273,300
 WATER YEAR 1964-65 MAX 18,000 MIN 2.5 MEAN 496 AC-FT 358,900

Peak discharge (base, 3,400 cfs)

Note.--No gage-height record Dec. 1 to Jan. 4, Jan. 6-10, 15-19, 23, 30, Feb. 5 to July 3.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	unknown	22.5	27,000	1-23	unknown	-	†8,000
1-6	unknown	-	†8,200	4-18	unknown	-	†6,600

† About.

11-4777. South Fork Van Duzen River near Bridgeville, Calif.

Location.--Lat 40°26'40", long 123°39'15", in SE¼ sec.19, T.1 N., R.5 E., on right bank 0.2 mile upstream from Butte Creek, 3 miles upstream from mouth, and 7.8 miles east of Bridgeville.

Drainage area.--36.2 sq mi.

Records available.--Occasional low-flow measurements, water years 1951-58 and annual maximum, water years 1954-57. September 1958 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 2,283.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Sept. 25, 1953, to Aug. 31, 1957, crest-stage gage only, at site 0.1 mile upstream at different datum.

Average discharge.--7 years, 160 cfs (115,800 acre-ft per year).

Extremes.--Maximum discharge during year, 13,600 cfs Dec. 22 (gage height, 18.70 ft), from rating curve extended above 3,000 cfs on basis of slope-area measurement at gage height, 11.91 ft, crest-stage gage; minimum, 3.6 cfs Oct. 5-7, 23, 24.
1953-57, 1958-65: Maximum discharge, that of Dec. 22, 1964.
1958-65: Minimum discharge, 2.0 cfs Sept. 24, 25, 1962.

Remarks.--Records good. No regulation or large diversion above station. Records of water temperatures for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	14	909	325	455	96	69	121	28	11	6.4	4.6
2	4.0	54	817	446	392	85	64	105	28	11	6.2	4.6
3	3.8	20	452	449	342	77	56	99	26	10	6.2	4.6
4	3.8	14	308	359	333	72	54	94	24	9.8	6.0	4.4
5	3.6	11	227	2,370	576	71	54	87	24	9.5	5.8	4.4
6	3.6	9.0	179	2,430	455	73	51	82	24	9.2	5.8	4.2
7	3.6	8.0	150	1,040	343	70	51	78	23	9.2	5.8	4.2
8	3.8	14	152	618	288	67	52	74	22	9.0	5.8	4.0
9	3.8	54	174	724	255	65	63	71	22	9.0	5.8	4.0
10	4.0	151	928	1,200	217	60	76	67	20	9.2	5.8	4.2
11	4.0	327	672	1,570	187	59	92	66	20	9.0	7.0	4.2
12	3.8	416	362	828	162	59	115	63	19	9.2	7.8	4.2
13	3.8	162	263	648	145	56	117	63	19	8.8	6.6	4.0
14	3.8	106	225	664	129	51	113	59	22	8.5	6.4	4.0
15	4.0	81	225	740	116	49	1,120	58	20	8.2	6.0	4.0
16	4.0	68	182	680	101	47	1,080	56	18	8.0	5.8	4.0
17	4.0	56	158	644	93	46	628	54	18	7.8	5.4	4.0
18	4.0	50	146	652	90	46	2,000	51	17	7.5	5.6	4.0
19	3.8	44	455	676	89	45	2,100	52	16	7.5	5.4	4.0
20	3.8	43	1,390	612	91	44	1,330	50	15	7.8	5.4	4.0
21	3.8	51	5,680	542	88	43	948	47	15	7.8	5.4	4.0
22	3.8	89	9,780	503	84	44	696	44	14	7.5	5.2	3.8
23	3.6	76	4,560	2,020	80	43	551	41	14	7.2	5.0	3.8
24	3.6	210	2,950	2,030	74	42	431	40	14	7.0	5.4	3.8
25	3.8	318	2,270	1,140	71	42	300	37	14	6.8	5.4	3.8
26	3.8	247	2,120	844	71	56	259	36	14	6.8	5.0	3.8
27	5.8	329	1,420	780	173	60	229	34	13	6.8	5.0	3.8
28	13	1,050	735	708	106	54	192	32	12	6.8	5.0	4.0
29	28	533	556	688	-----	50	166	32	12	6.6	4.8	4.0
30	18	517	466	608	-----	70	136	31	12	6.6	5.0	3.8
31	14	-----	384	527	-----	69	-----	30	-----	6.6	4.8	-----
Total	178.4	5,122.0	39,295	28,065	5,606	1,811	13,193	1,854	559	255.7	1,770	122.2
Mean	5.75	171	1,268	905	200	58.4	440	59.8	18.6	8.25	5.71	4.07
Ac-ft	354	10,160	77,940	55,670	11,120	3,590	26,170	3,680	1,110	507	351	242

Calendar year 1964 Max 9,780 Min 3.6 Mean 214 Ac-ft 144,000
Water year 1964-65 Max 9,780 Min 3.6 Mean 264 Ac-ft 190,900

Peak discharge (base, 2,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	0900	18.70	13,600	1-23	2000	11.07	3,970
1- 5	2000	10.98	3,880	4-18	1500	10.32	3,290

11-4785. Van Duzen River near Bridgeville, Calif.

Location.--Lat 40°27'50", long 123°51'25", in E½ sec.17, T.1 N., R.3 E., on downstream side of right pier of bridge on State Highway 36, 0.3 mile downstream from Pip Creek, 0.5 mile upstream from Rogers Creek, and 4 miles west of Bridgeville.

Drainage area.--216 sq mi.

Records available.--October 1950 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 400 ft (from topographic map).

Average discharge.--15 years, 898 cfs (650,100 acre-ft per year).

Extremes.--Maximum discharge during year, 48,700 cfs Dec. 22 (gage height, 22.6 ft, from floodmarks), from rating curve extended above 20,000 cfs on basis of slope-area measurement at gage height 21.3 ft; minimum daily, 7.5 cfs Oct. 21-26.
1950-65: Maximum discharge, that of Dec. 22, 1964; minimum, 5.0 cfs Sept. 13, 1959.

Remarks.--Records good prior to Dec. 23, poor thereafter. No storage or large diversion above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.5	49	6,100	1,400	1,580	558	234	540	108	37	20	14
2	8.5	113	5,500	1,500	1,410	480	210	480	104	35	20	14
3	8.5	151	2,880	1,700	1,270	438	184	440	100	34	19	14
4	8.5	82	1,720	1,400	1,160	410	172	390	96	33	19	13
5	8.5	59	1,230	7,500	1,630	380	166	370	92	31	18	13
6	8.5	49	924	8,500	1,590	370	160	350	90	31	18	13
7	8.5	41	780	4,700	1,320	360	148	330	85	30	18	13
8	8.5	47	781	2,600	1,140	335	139	310	82	29	18	12
9	8.5	142	1,070	2,500	1,020	315	190	290	81	29	18	12
10	8.5	1,000	4,350	5,500	900	305	780	270	77	29	18	12
11	8.5	1,060	5,150	6,600	804	285	1,090	260	73	30	19	12
12	8.5	2,780	2,100	3,500	719	275	1,090	250	76	30	20	12
13	8.5	1,350	1,440	2,800	670	258	916	245	80	28	21	12
14	8.0	726	1,130	3,300	635	242	740	240	72	27	21	11
15	8.0	498	1,200	4,200	564	234	4,300	230	68	26	20	11
16	8.5	395	908	3,200	498	226	3,200	220	64	25	20	11
17	8.5	310	751	2,900	462	206	2,500	210	59	25	19	11
18	8.5	258	663	2,800	444	198	7,000	207	56	25	20	11
19	8.0	214	2,190	2,800	450	184	8,000	204	53	25	22	11
20	8.0	190	7,500	2,600	438	175	5,000	200	51	25	23	11
21	7.5	184	24,200	2,400	426	169	3,300	190	50	24	22	10
22	7.5	262	33,900	2,200	420	169	2,300	180	49	24	21	10
23	7.5	310	17,800	6,200	415	166	1,900	170	48	23	19	10
24	7.5	683	10,300	7,800	385	160	1,620	160	48	22	18	10
25	7.5	2,150	7,690	5,000	360	154	1,370	150	47	22	18	10
26	7.5	1,580	7,530	3,500	345	190	1,160	140	46	22	18	10
27	11	1,560	4,550	3,000	705	242	964	135	45	22	17	10
28	31	7,700	2,780	2,700	663	210	804	130	42	22	17	9.8
29	54	4,080	2,280	2,500	-----	181	670	122	40	21	16	9.8
30	52	2,970	1,900	2,200	-----	198	610	115	39	21	15	9.8
31	50	-----	1,700	1,800	-----	234	-----	110	-----	21	15	-----
Total	411.0	30,993	162,997	111,300	22,423	8,307	50,917	7,638	2,021	828	587	342.4
Mean	13.3	1,033	5,258	3,590	801	268	1,697	246	67.4	26.7	18.9	11.4
Ac-ft	815	61,470	323,300	220,800	44,480	16,480	101,000	15,150	4,010	1,640	1,160	679

Calendar year 1964 Max 33,900 Min 7.5 Mean 927 Ac-ft 673,200
Water year 1964-65 Max 33,900 Min 7.5 Mean 1,092 Ac-ft 791,000

Peak discharge (base, 9,100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	1300	10.28	9,460	1-6	unknown	-	†15,000
12-10	2100	10.53	9,970	1-24	unknown	-	†15,000
12-22	1000	22.6	48,700	4-18	unknown	-	†12,000

† About.

Note.--No gage height record Dec. 23 to Jan. 11, April 30 to Sept. 30. Stage-discharge relation indefinite Jan. 12-31, Apr. 15-22.

11-4797. Elk River near Falk, Calif.

Location.--Lat 40°42'10", long 124°09'20", in NW¼ sec.26, T.4 N., R.1 W., on left bank 500 ft downstream from Clapp Gulch, 1,300 ft downstream from confluence of North and South Forks, 2 miles northwest of Falk, and 5 miles south of Eureka.

Drainage area.--44.2 sq mi.

Records available.--October 1957 to September 1965.

Gage.--Water-stage recorder (digital). Datum of gage is 29.61 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Average discharge.--8 years, 84.2 cfs (60,960 acre-ft per year).

Extremes.--Maximum discharge during year, 3,430 cfs Dec. 22 (gage height, 28.09 ft); minimum daily, 0.7 cfs Sept. 19, 1957-65; Maximum discharge, that of Dec. 22, 1964; minimum, 0.4 cfs Oct. 6-10, 1961, Sept. 14-23, 26-28, 1962.

Remarks.--Records good. No storage or large diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.9	4.1	801	362	61	38	28	33	7.6	3.6	1.6	1.0
2	.9	14	1,020	272	56	33	64	30	7.4	3.7	1.6	1.2
3	.9	11	421	614	51	29	42	28	7.5	3.6	1.6	1.1
4	1.0	7.2	210	513	48	26	29	26	7.4	3.6	1.5	1.1
5	1.0	18	146	1,270	47	23	22	23	7.4	2.5	1.5	1.1
6	1.2	11	109	1,040	61	20	19	21	7.2	2.5	1.3	1.1
7	1.3	5.8	87	760	56	18	16	20	7.2	2.3	1.2	1.0
8	1.2	16	73	362	51	17	15	18	7.2	2.2	1.1	1.0
9	1.2	68	105	244	48	16	59	17	7.3	2.1	1.1	.9
10	1.2	463	403	208	46	15	701	15	7.2	2.0	1.1	1.0
11	1.2	240	676	229	42	15	372	14	7.0	1.7	1.0	.9
12	1.3	512	229	194	40	14	169	13	6.9	1.5	1.1	.9
13	1.1	468	145	146	37	13	105	13	6.7	1.5	1.0	.8
14	1.0	332	107	110	42	12	77	12	7.1	1.6	1.1	1.0
15	1.1	160	94	87	37	12	1,010	12	8.4	2.1	1.0	1.0
16	1.1	88	80	71	37	11	648	11	5.6	2.2	1.1	.9
17	1.0	54	68	61	34	11	274	11	5.0	2.0	1.2	.8
18	1.0	38	60	55	33	10	295	10	4.8	1.9	1.2	.8
19	1.0	29	200	53	31	10	442	10	4.6	1.8	1.2	.7
20	1.0	23	312	62	29	10	301	10	4.4	1.8	1.2	.8
21	.9	21	1,480	60	28	10	190	9.7	4.2	1.8	1.2	.8
22	1.0	22	2,770	56	26	9.4	138	9.4	4.0	1.8	1.3	.8
23	.9	18	1,570	134	24	9.2	104	9.1	3.9	1.9	1.3	.8
24	.9	20	1,270	886	22	9.0	83	8.8	3.9	1.9	1.4	.8
25	.8	71	1,350	339	20	9.0	70	8.6	3.9	1.6	1.6	.9
26	.9	149	1,300	210	18	14	59	8.4	3.8	1.6	1.4	.9
27	.9	151	743	152	56	40	51	8.4	3.7	1.6	1.4	.8
28	6.7	995	514	118	49	28	46	8.2	3.6	1.6	1.3	.8
29	14	444	517	97	-----	17	41	8.1	3.7	1.4	1.1	.8
30	7.6	285	558	80	-----	15	37	8.0	3.7	1.6	1.0	.8
31	4.1	-----	536	68	-----	13	-----	7.7	-----	1.6	1.0	-----
TOTAL	60.3	4,738.1	17,954	8,913	1,130	526.6	5,507	441.4	172.3	64.6	38.7	27.3
MEAN	1.95	158	579	288	40.4	17.0	184	14.2	5.74	2.08	1.25	0.91
AC-FT	120	9,400	35,610	17,680	2,240	1,040	10,920	876	342	128	77	54

CALENDAR YEAR 1964 MAX 2,770 MIN 0.80 MEAN 127 AC-FT 92,300
 WATER YEAR 1964-65 MAX 2,770 MIN 0.70 MEAN 108 AC-FT 78,490

Peak discharge (base, 1,100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	1800	17.50	1,360	12-25	2045	22.04	2,150
12- 2	1500	16.81	1,250	1- 5	1300	21.89	2,120
12-10	2300	18.39	1,510	1-24	0600	18.31	1,490
12-22	0800	28.09	3,430	4-15	1845	20.48	1,870

11-4805. Mad River near Forest Glen, Calif.

Location.--Lat 40°27'30", long 123°30'35", in SW¼ sec.16, T.1 N., R.6 E., on right bank 0.7 mile downstream from Lamb Creek and 7.0 miles northwest of Forest Glen.

Drainage area.--143 sq mi.

Records available.--June 1953 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 2,408.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Dec. 22, 1955, water-stage recorder at site 0.7 mile upstream at different datum. Jan. 13 to June 18, 1956, wire-weight gage at former site at datum 4.17 ft lower than former datum.

Average discharge.--12 years, 366 cfs (265,000 acre-ft per year).

Extremes.--Maximum discharge during year, 20,100 cfs Dec. 22 (gage height, 16.80 ft), from rating curve extended above 6,600 cfs as explained below; minimum daily, 34 cfs Mar. 2, 4.

1953-65: 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, 0.6 cfs Sept. 15, 1961.

Remarks.--Records good. Flow regulated by Ruth Reservoir beginning in July 1961 (capacity, 42,000 acre-ft). No diversion above station. Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Revisions (water years).--1964 Report: 1963.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	95	327	984	968	38	212	371	77	55	47	71
2	95	100	348	904	844	34	198	295	75	45	47	71
3	95	93	267	960	748	36	190	247	73	45	47	71
4	95	93	235	874	682	34	180	162	73	45	47	71
5	95	93	215	2,660	730	35	150	105	73	45	47	71
6	95	91	198	6,170	736	39	115	98	73	45	47	71
7	98	91	190	3,360	670	42	93	95	73	45	47	71
8	98	98	198	2,570	592	52	118	95	71	45	47	69
9	98	102	201	1,820	535	67	132	93	71	45	47	69
10	95	135	336	2,070	485	91	141	93	69	45	47	71
11	93	166	335	3,480	445	108	138	93	69	45	49	71
12	93	198	255	3,410	405	110	135	93	69	45	47	71
13	95	98	231	2,430	390	110	147	98	69	44	47	71
14	95	69	223	1,910	390	108	168	100	69	44	45	71
15	95	63	235	1,820	380	105	359	100	67	44	45	71
16	95	59	235	1,810	380	102	880	100	67	44	45	71
17	95	57	223	1,690	376	100	888	98	67	44	47	71
18	93	55	209	1,650	376	95	1,700	95	67	44	47	71
19	93	53	348	1,740	376	93	2,730	93	67	44	47	65
20	93	53	1,140	1,760	371	89	2,060	91	65	44	47	73
21	93	59	8,910	1,590	367	85	1,580	89	65	45	47	71
22	93	75	18,200	1,300	362	83	1,220	87	65	45	47	71
23	93	69	14,500	2,470	362	79	960	87	63	45	50	71
24	93	115	8,360	4,990	287	79	790	85	63	45	57	71
25	93	135	6,360	3,380	38	75	658	83	61	45	65	69
26	93	110	6,000	2,110	35	91	565	81	61	45	71	69
27	100	138	5,460	1,580	60	112	495	81	61	45	71	69
28	98	420	3,700	1,260	41	123	450	79	61	45	73	69
29	98	215	2,380	1,070	-----	174	420	77	61	45	71	69
30	93	233	1,720	1,070	-----	255	410	77	59	45	71	69
31	91	-----	1,290	1,050	-----	235	-----	77	-----	45	71	-----
Total	2,935	3,431	82,829	65,942	12,431	2,879	18,282	3,518	2,024	1,397	1,630	2,110
Mean	94.7	114	2,672	2,127	444	92.9	609	113	67.5	45.1	52.6	70.3
Ac-ft	5,820	6,810	164,300	130,800	24,650	5,710	36,260	6,980	4,010	2,770	3,230	4,190

Calendar year 1964 Max 18,200 Min 21 Mean 412 Ac-ft 299,200
 Water year 1964-65 Max 18,200 Min 34 Mean 546 Ac-ft 395,500

11-4810, Mad River near Arcata, Calif.

Location.--Lat 40°54'35", long 124°03'35", in NW¼ sec.15, T.6 N., R.1 E., 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 (revised).

Records available.--October 1910 to September 1913, August 1950 to September 1965. Monthly discharge only for some periods published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 12.79 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1956. December 1910 to September 1913 staff 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 (revised) higher. Aug. 29 to Oct. 26, 1961, auxiliary water-stage recorder at site 0.5 mile downstream at different datum. Prior to Apr. 9, 1965, at datum 5.00 ft higher.

Average discharge.--18 years, 1,540 cfs (1,115,000 acre-ft per year).

Extremes.--Maximum discharge during year, 70,400 cfs Dec. 23 (gage height, 23.40 ft); minimum daily, 40 cfs Aug. 21. 1910-13, 1950-65; Maximum discharge, 77,800 cfs Dec. 22, 1955 (gage height, 27.30 ft, site and datum then in use); minimum, 16 cfs Sept. 8, 9, 1951, Sept. 11, 1959.

Revisions.--The maximum discharge for the water year 1964 has been revised to 39,200 cfs Jan. 20, 1964 (gage height, 16.04 ft), superceding figure published in 1964 Report.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Flow regulated by Ruth Reservoir beginning in July 1961 (usable capacity, 42,000 acre-ft). Since 1938, approximately 5.4 cfs diverted daily above station for municipal supply of City of Eureka. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Revisions (water years).--1964 Report: 1963.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	125	10,900	3,000	2,980	600	860	870	190	124	71	51
2	92	167	10,300	3,100	2,680	520	800	800	185	114	67	51
3	92	196	5,600	2,800	2,420	470	740	708	185	101	65	49
4	92	153	3,190	4,500	2,170	440	660	652	180	96	61	43
5	92	165	2,110	8,000	2,230	430	560	580	180	93	61	45
6	92	135	1,500	15,100	2,640	400	500	513	180	88	59	51
7	93	123	1,240	11,400	2,320	390	480	478	180	85	56	57
8	94	135	1,140	7,150	2,080	420	460	460	175	85	60	55
9	95	328	2,320	7,100	1,800	470	700	443	175	82	60	49
10	96	1,920	8,730	9,460	1,600	450	1,400	418	175	82	55	46
11	96	1,570	9,970	11,800	1,400	390	1,350	398	175	80	54	47
12	96	4,650	3,890	9,300	1,260	370	1,250	387	170	78	57	48
13	96	3,320	2,330	6,800	1,110	360	1,150	370	170	77	61	46
14	96	1,900	1,710	5,540	1,100	340	1,100	345	180	76	57	46
15	95	1,020	1,790	5,200	1,030	330	2,200	336	230	76	53	47
16	94	712	1,440	5,100	978	320	5,060	330	220	72	50	47
17	94	535	1,180	4,700	929	310	3,750	327	215	72	50	47
18	94	415	1,010	4,560	908	300	4,970	318	210	74	51	46
19	94	316	1,660	4,600	880	295	8,620	315	207	72	51	45
20	94	244	4,690	4,740	862	290	6,020	324	192	70	46	41
21	94	225	20,200	4,110	844	280	4,630	288	177	70	40	41
22	94	348	58,000	3,460	832	275	3,700	270	171	69	41	44
23	96	485	48,900	4,870	802	270	2,910	255	145	68	42	45
24	98	568	30,000	12,600	778	265	2,280	243	140	67	49	45
25	100	4,060	23,500	8,310	650	350	1,860	231	145	70	49	45
26	110	3,420	18,600	5,700	400	840	1,530	219	140	69	57	46
27	125	2,930	14,600	4,440	771	720	1,300	204	138	67	58	46
28	144	10,400	10,400	3,820	778	660	1,130	195	120	67	56	46
29	192	7,630	7,900	3,450	-----	600	976	190	114	66	51	43
30	152	4,670	7,140	3,430	-----	540	915	190	115	66	51	42
31	130	-----	6,450	3,340	-----	900	-----	190	-----	67	51	-----
Total	3,214	52,865	322,390	191,480	39,232	13,595	63,861	11,847	5,179	2,443	1,690	1,400
Mean	104	1,762	10,400	6,177	1,401	439	2,129	382	173	78.8	54.5	46.7
Ac-ft	6,370	104,900	639,500	379,800	77,820	26,970	126,700	23,500	10,270	4,850	3,350	2,780

Calendar year 1964 Max 58,000 Min 92 Mean 1,944 Ac-ft 1,411,000
 Water year 1964-65 Max 58,000 Min 40 Mean 1,943 Ac-ft 1,407,000

Peak discharge (base, 14,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	2400	11.20	16,600	1- 6	1830	10.32	15,800
12-23	0200	23.40	70,400	1-24	0600	9.77	15,100

Note.--No gage-height record Oct. 1-27, Jan. 1-5, Feb. 8-12, 26, Mar. 4 to Apr. 15, May 29 to June 18.

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., 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 (revised).

Records available.--October 1955 to September 1965.

Gage.--Water-stage recorder (digital). Datum of gage is 17.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1947

Average discharge.--10 years, 143 cfs (103,500 acre-ft per year).

Extremes.--Maximum discharge during year, 8,240 cfs Dec. 22 (gage height, 11.06 ft), from rating curve extended above 3,100 cfs on basis of slope-area measurement of maximum flow; minimum daily, 2.8 cfs Oct. 20-22.

1955-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, that of 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 except those for period of no gage-height record, which are fair. No storage or diversion above station.

Revisions (water years).--1964 Report: 1956-63.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.9	2.8	2.5	370
1.0	10	3.0	590
1.2	30	4.0	1,130
1.4	57	6.0	2,590
2.0	202	9.0	5,620

Discharge, in cubic feet per second, water year October 1964 to September 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	4.2	10	1,500	464	132	73	31	60	22	14	7.8	5.7
2	3.5	24	1,030	428	118	63	32	56	22	13	7.6	6.3
3	3.5	15	550	653	106	55	30	53	22	13	7.0	6.2
4	3.5	14	334	581	98	51	28	51	22	12	6.8	5.5
5	3.5	19	242	1,170	134	48	27	48	21	12	6.2	5.6
6	3.5	12	194	1,370	159	45	26	46	20	11	6.2	5.7
7	3.5	8.6	173	892	126	42	26	43	21	11	6.2	5.5
8	3.5	45	163	561	110	41	25	41	21	11	6.0	5.4
9	4.2	84	253	564	101	40	48	39	21	10	5.8	5.0
10	3.5	418	2,120	816	90	40	205	38	20	9.8	5.5	5.0
11	4.2	233	958	1,390	81	39	145	36	19	9.3	5.5	5.0
12	4.2	390	454	672	74	38	83	34	18	9.9	6.2	5.0
13	4.2	306	316	444	73	36	62	34	18	9.8	5.8	4.9
14	4.2	222	267	328	71	34	53	33	31	9.4	5.5	4.5
15	4.2	108	302	259	68	33	335	31	26	9.2	5.3	4.3
16	4.2	64	230	214	62	32	310	32	21	9.0	5.5	4.1
17	4.2	45	189	184	62	31	179	31	19	8.6	5.7	3.6
18	4.2	36	162	162	59	30	272	29	19	8.0	6.4	3.3
19	3.5	30	266	153	56	30	643	37	18	7.8	6.4	3.1
20	2.8	27	851	143	54	29	494	37	18	7.8	6.4	3.3
21	2.8	26	2,640	128	53	28	317	31	17	7.8	6.2	3.5
22	2.8	27	4,930	115	52	27	229	29	16	7.5	5.6	3.5
23	3.5	26	2,490	209	49	27	178	27	15	7.2	5.4	3.7
24	3.5	44	3,000	748	47	27	144	26	15	7.0	6.1	4.0
25	4.2	270	3,370	400	45	27	119	26	16	7.1	15	4.2
26	4.2	398	2,080	292	46	53	101	25	16	7.1	9.9	4.6
27	7.8	500	1,270	232	152	43	88	25	14	6.9	7.7	5.0
28	20	1,300	933	200	97	36	79	24	14	6.8	7.0	5.0
29	26	600	858	182	-----	32	72	24	13	6.8	6.3	4.2
30	13	370	799	163	-----	33	66	24	13	7.8	6.0	4.1
31	8.6	-----	637	146	-----	31	-----	23	-----	7.8	5.7	-----
TOTAL	172.7	5,671.6	33,561	14,263	2,375	1,194	4,447	1,093	568	285.4	204.7	138.8
MEAN	5.57	189	1,083	460	84.8	38.5	148	35.3	18.9	9.21	6.60	4.63
AC-FT	343	11,250	66,570	28,290	4,710	2,370	8,820	2,170	1,130	566	406	275

CALENDAR YEAR	1964	MAX	4,930	MIN	2.8	MEAN	202	AC-FT	146,500
WATER YEAR	1964-65	MAX	4,930	MIN	2.8	MEAN	175	AC-FT	126,900

Peak discharge (base, 1,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	unknown	5.3	2,030	12-25	1830	8.01	4,500
12-1	unknown	-	†1,850	1-5	1545	4.76	1,620
12-10	1700	7.72	4,140	1-11	0400	5.36	2,080
12-22	0230	11.06	8,240				

† About.

Note.--No gage-height record Nov. 27 to Dec. 1.

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., on downstream side of left pier of bridge on U. S. Highway 101 at Orick, 0.9 mile downstream from Prairie Creek.

Drainage area.---278 sq mi.

Records available.---September 1911 to September 1913, October 1953 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.---Water-stage recorder (digital). Datum of gage is 5.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Sept. 10, 1911, to Aug. 28, 1912, chain gage and Aug. 29, 1912 to Aug. 9, 1913, staff gage, at same site at different datum.

Average discharge.---14 years, 1,087 cfs (787,000 acre-ft per year).

Extremes.---Maximum discharge during year, 50,500 cfs Dec. 22 (gage height, 24.0 ft, from outside highwater marks); minimum daily, 13 cfs Sept. 19-22.

1911-13, 1953-65: Maximum discharge, that of Dec. 22, 1964; 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 good except those for periods of no gage-height record, which are fair. No regulation or diversion above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	50	10,000	3,680	1,620	669	284	620	173	90	40	28
2	20	91	8,680	3,630	1,380	600	316	580	168	88	40	30
3	22	91	5,120	3,980	1,240	550	284	540	163	84	38	29
4	21	93	3,270	4,050	1,090	522	264	510	155	82	36	28
5	20	98	2,260	8,100	1,510	491	256	480	150	79	34	28
6	19	78	1,600	12,300	1,580	468	248	450	145	76	34	27
7	20	56	1,300	6,530	1,310	450	240	430	142	72	33	25
8	19	162	1,170	5,230	1,140	432	230	410	138	65	31	25
9	19	312	2,970	6,000	1,030	414	272	390	135	59	31	23
10	19	1,560	7,670	8,330	911	406	536	375	132	57	30	22
11	19	1,180	9,950	10,900	855	393	536	360	130	56	30	22
12	19	2,560	4,610	6,530	796	379	496	350	126	55	32	20
13	19	1,810	3,300	5,560	748	365	460	340	150	54	34	17
14	19	1,230	2,630	3,840	730	347	424	330	200	52	32	17
15	19	760	2,630	3,380	684	334	1,480	320	170	53	30	16
16	20	555	1,970	3,520	645	324	2,620	315	150	49	29	17
17	20	442	1,610	2,660	615	312	1,550	310	140	48	29	16
18	19	365	1,380	2,110	595	300	2,190	300	133	48	31	15
19	19	312	2,130	2,040	565	292	4,020	325	128	47	32	13
20	18	280	4,140	2,020	545	280	3,140	320	123	45	32	13
21	18	254	16,400	1,790	527	272	2,620	285	115	45	31	13
22	17	308	43,200	1,480	518	260	2,130	270	108	47	30	13
23	17	320	36,300	1,790	491	260	1,740	255	106	45	29	15
24	17	443	27,900	4,240	473	252	1,460	245	105	43	27	15
25	17	2,080	22,400	3,480	446	244	1,270	240	104	42	50	15
26	17	2,340	18,300	3,110	442	360	1,060	230	104	45	39	15
27	20	2,990	11,800	2,700	1,070	352	920	220	101	43	35	16
28	36	6,780	7,880	2,500	814	347	830	210	97	41	32	16
29	69	4,840	6,280	2,390	-----	300	770	200	93	40	30	15
30	73	4,680	5,370	2,240	-----	284	690	190	91	41	29	15
31	56	-----	4,180	1,930	-----	276	-----	180	-----	40	28	-----
Total	747	37,120	278,400	132,040	24,370	11,535	33,336	10,580	3,975	1,731	1,018	579
Mean	24.1	1,237	8,981	4,259	870	372	1,111	341	132	55.8	32.8	19.3
Ac-ft	1,480	73,630	552,200	261,900	48,340	22,880	66,120	20,990	7,880	3,430	2,020	1,150

Calendar year 1964 Max 43,200 Min 17 Mean 1,590 Ac-ft 1,154,000

Water year 1964-65 Max 43,200 Min 13 Mean 1,467 Ac-ft 1,062,000

Peak discharge (base, 7,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	0500	12.12	7,540	12-22	2100	24.0	50,500
12- 1	0800	13.56	10,700	1- 6	unknown	-	†15,500
12-10	2200	16.75	19,800	1-11	unknown	-	†14,000

Note.--No gage-height record Apr. 27 to June 22, Aug. 25 to Sept. 1. Computed from twice-daily wire-weight gage readings Dec. 24 to Feb. 1.

† About.

11-4887. Dry Lake tributary at Perez, Calif.

Location.--Lat. 41°40'20", long 121°15'25", in NE $\frac{1}{4}$ sec. 10, T.44 N., R.6 E., at culvert on State Highway 139, 0.35 mile southwest of Perez.

Drainage area.--1.7 $\frac{1}{2}$ sq mi.

Records available.--October 1962 to September 1965

Gage.--Water-stage recorder, crest-stage gage, and float-operated recording rain gage. Altitude of gage is 4,150 ft (from topographic map). Prior to Oct. 31, 1962, crest-stage gage only, at same datum.

Extremes.--Maximum discharge during year, 88 cfs Jan. 24 (gage height, 4.99 ft), from rating curve extended above 2.3 cfs on basis of computations of flow through culvert at 2.50, 3.30, 3.80, 5.40, 6.44 ft, no flow for several months.
1962-65: Maximum discharge, 128 cfs Oct. 12, 1962 (gage height, 6.44 ft), by computation of maximum flow through culvert; no flow for several months each year.

Remarks.--Records fair except those for periods of no-gage height record which are poor. No storage or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.5	0	2.2	5.2
1.6	.1	2.4	8.6
1.7	.3	2.6	12
1.8	.8	3.0	22
1.9	1.6	3.5	38
2.0	2.6	4.0	56
		4.5	73

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	2.0	7.3							
2			0	2.0	2.2							
3			0	2.0	1.0							
4			0	2.0	2.5							
5			0	2.0	3.3							
6			0	2.0	4.5							
7			0	2.0	1.4							
8			0	2.5	.2							
9			0	2.5	.1							
10			0	2.5	0							
11			0	7.7	0							
12			0	7.0	.1							
13			0	6.5	.1							
14			0	6.0	.1							
15			0	5.5	.1							
16			0	5.5	.1							
17			0	5.5	.1							
18			0	5.5	.1							
19			0	5.4	.1							
20			0	4.6	.1							
21			.1	4.4	0							
22			36	6.0	0							
23			45	29	0							
24			3.9	63	0							
25			.5	13	0							
26			.3	4.5	0							
27			2.7	4.2	0							
28			2.0	9.4	0							
29			2.0	14								
30			2.0	22	-----							
31		-----	2.0	16	-----		-----		-----			-----
Total	0	0	96.5	265.2	23.4	0	0	0	0	0	0	0
Mean	0	0	3.11	9.55	0.84	0	0	0	0	0	0	0
Ac-ft	0	0	191	526	46	0	0	0	0	0	0	0
(+)	0.1	0.9	5.8		0.1	0	1.1	0.2	2.5	0.3	1.7	0

Calendar year 1964 Max 45 Min 0 Mean 0.47 Ac-ft 338

Water year 1964-65 Max 63 Min 0 Mean 1.06 Ac-ft 764

† Precipitation, in inches (some precipitation falling as snow may not be included).

Note.--No gage-height record Dec. 28 to Jan. 10, Jan. 12-15

11-4895. Antelope Creek near Tennant, Calif.

Location--Lat 41°32'45", long 121°55'05", in NW¼ sec.25, T.43 N., R.1 W., 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.

Records available--May 1952 to September 1965.

Gage--Water-stage recorder and concrete control. Altitude of gage is 5,080 ft (from topographic map).

Average discharge--13 years, 36.6 cfs (26,500 acre-ft per year).

Extremes--Maximum discharge during year, 638 cfs Dec. 22 (gage height, 4.00 ft), from rating curve extended above 200 cfs on basis of slope-area measurement of maximum flow; minimum daily, 9.2 cfs Oct. 5-7, 12-15.
1952-65: Maximum discharge, that of Dec. 22, 1964; maximum gage height, 4.31 ft Oct. 12, 1962; minimum daily discharge, 3.6 cfs Jan. 5, 1960.

Remarks--Records good except those for periods of ice effect, which are poor. No storage or diversion above station.

Rating table, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	8.1	2.5	142
1.6	19.5	3.0	262
1.8	35	3.5	425
2.1	71	4.0	638

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.7	15	19	65	28	22	23	123	82	31	17	14
2	9.7	13	16	50	27	22	26	109	79	29	16	14
3	9.7	12	14	47	26	22	25	101	81	23	16	13
4	9.7	11	13	49	26	22	26	94	82	27	16	13
5	9.2	11	13	39	23	22	29	85	84	26	16	13
6	9.2	11	13	40	26	22	26	77	85	25	15	13
7	9.2	11	13	39	27	22	25	73	81	25	15	13
8	9.7	19	16	40	26	22	25	71	74	24	15	13
9	9.7	23	17	33	25	22	25	63	63	24	15	13
10	9.7	17	13	37	23	23	24	70	67	23	15	13
11	9.7	16	20	38	26	23	24	73	63	23	13	13
12	9.2	15	13	35	25	24	25	77	64	22	19	13
13	9.2	14	13	33	25	22	26	82	57	22	16	13
14	9.2	13	19	32	24	22	25	85	56	22	16	13
15	9.2	12	13	32	24	23	26	87	50	21	15	13
16	9.7	12	15	31	24	24	32	97	50	22	15	12
17	9.7	12	15	30	24	23	23	99	63	24	16	12
18	9.7	13	14	30	24	23	34	92	52	23	13	12
19	9.7	13	16	30	24	22	65	99	47	21	17	12
20	9.7	13	30	29	23	24	113	96	46	20	17	12
21	9.7	13	130	23	23	25	124	96	46	20	22	12
22	9.7	13	493	27	23	25	102	96	45	20	20	12
23	9.7	14	387	32	23	25	94	81	50	19	17	12
24	9.7	13	306	34	22	24	97	77	49	13	16	12
25	9.7	15	173	29	22	24	99	74	44	18	16	12
26	10	14	155	23	22	24	102	74	39	18	16	12
27	13	13	117	27	23	23	109	77	36	13	15	12
28	15	12	96	27	22	23	132	84	33	13	15	12
29	17	13	82	23	-----	24	146	89	32	17	15	12
30	13	15	70	29	-----	25	144	90	32	17	15	12
31	12	-----	63	23	-----	26	-----	89	-----	17	14	-----
Total	319.0	416	2,413	1,081	691	719	1,806	2,690	1,742	682	504	377
Mean	10.3	13.9	77.8	34.9	24.7	23.2	60.2	89.7	53.1	22.0	16.3	12.6
Ac-ft	633	825	4,790	2,140	1,370	1,430	3,580	5,340	3,460	1,350	1,000	749

Calendar year 1964 Max 493 Min 9.2 Mean 25.7 Ac-ft 18,610
Water year 1964-65 Max 493 Min 9.2 Mean 36.8 Ac-ft 26,670

Peak discharge (base, 100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	2400	4.00	638	5-22	0100	2.37	117
4-29	1800	2.64	171				

Note.--Stage-discharge relation affected by ice Nov. 14-23, Dec. 12, 13, 16-21.

11-5107. Klamath River below John C. Boyle powerplant, near Keno, Oreg.

Location.--Lat 42°05'05", long 122°04'20", in SE¼SE¼ sec.14, T.40 S., R.6 E., 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).

Records available.--January 1959 to September 1965. Prior to Oct. 1, 1961, published as "below Big Bend powerplant."

Gage.--Water-stage recorder (digital). Datum of gage is 3,274.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1956 (levels by Pacific Power & Light Co.).

Average discharge.--6 years, 1,791 cfs (1,297,000 acre-ft per year).

Extremes.--Maximum discharge during year, 8,830 cfs Feb. 1 (gage height, 8.55 ft); minimum daily, 340 cfs July 24.

1959-65: Maximum discharge, that of Feb. 1, 1965; minimum, 311 cfs Sept. 7, 1964; minimum daily, 326 cfs Aug. 15, 30, 1964.

Remarks.--Records excellent. Flow regulated by Upper Klamath Lake (capacity, 584,000 acre-ft). Large diurnal fluctuation caused by John C. Boyle powerplant and 2 powerplants below Upper Klamath Lake. Large diversions for irrigation above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.8	325	5.0	1,810
3.2	492	6.0	3,130
3.5	648	7.0	5,030
4.0	968	8.6	8,960

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.760	1.250	1.790	7.280	8.730	7.350	4.310	940	838	517	391	1.520
2	1.800	1.830	2.050	7.350	8.700	7.080	4.660	898	718	858	700	1.570
3	1.720	1.720	2.030	7.000	8.520	6.830	3.610	1.030	718	383	761	1.520
4	1.320	1.610	2.120	7.330	8.340	6.650	2.720	1.060	755	375	844	1.520
5	1.750	1.600	2.000	7.480	8.050	6.530	3.000	1.110	383	387	891	1.300
6	1.720	1.600	1.920	7.430	7.970	6.480	3.580	968	626	648	898	1.290
7	1.730	1.440	2.110	7.330	8.000	6.430	1.850	912	632	665	526	1.790
8	1.720	1.160	2.390	7.450	7.890	6.390	1.810	912	648	671	416	1.980
9	1.670	1.710	2.370	7.660	7.840	6.360	1.710	878	660	648	997	1.930
10	1.660	1.610	1.870	7.740	7.790	6.360	1.190	1.140	637	371	1.180	2.050
11	1.290	1.190	2.730	7.970	7.710	6.340	885	1.690	526	403	1.180	1.710
12	1.730	1.600	2.620	8.020	7.580	6.390	1.300	1.680	387	671	1.180	1.690
13	1.600	1.600	2.520	8.210	7.450	6.340	1.260	1.620	391	665	1.180	1.900
14	1.660	1.550	2.620	8.210	7.380	6.220	1.060	1.610	593	665	825	1.980
15	1.790	1.250	2.750	8.150	7.400	6.120	1.050	1.570	557	665	387	2.040
16	1.730	1.620	2.820	8.130	7.480	5.770	990	1.470	567	683	1.180	2.040
17	1.720	1.660	2.850	8.020	7.500	5.540	954	1.550	940	371	1.140	2.030
18	1.290	1.660	2.750	7.950	7.580	5.030	919	1.520	1.380	395	1.220	1.770
19	1.740	1.550	2.720	7.870	7.610	5.030	1.210	1.470	1.290	683	1.440	1.710
20	1.720	1.560	2.660	7.840	7.660	5.100	1.280	1.380	1.200	604	1.200	1.960
21	1.770	1.500	3.260	7.920	7.630	5.290	1.090	1.340	990	610	507	2.030
22	1.720	1.180	5.160	7.970	7.610	5.100	825	1.480	724	805	420	2.080
23	1.720	1.620	6.650	8.000	7.690	4.920	851	1.630	730	621	1.250	2.020
24	1.610	1.610	7.230	8.050	7.660	4.710	812	1.980	626	340	1.650	2.150
25	1.260	1.540	7.180	8.210	7.630	4.730	706	2.020	632	403	1.620	1.890
26	1.740	1.300	7.560	8.340	7.580	4.640	975	1.890	379	677	1.580	1.780
27	1.730	1.530	7.450	8.280	7.450	4.560	1.240	1.870	371	637	1.610	2.260
28	1.790	1.480	7.300	8.230	7.400	4.540	1.150	1.730	577	637	1.360	2.240
29	1.740	1.150	6.950	8.340	-----	4.330	1.050	1.330	593	632	1.240	2.290
30	1.670	1.570	7.030	8.600	-----	4.330	1.030	961	593	632	1.480	2.240
31	1.480	-----	7.300	8.700	-----	4.270	-----	891	-----	387	1.410	-----
Total	51.350	45.250	120.760	245.060	217.830	175.760	49.077	42.530	20.661	17.709	32.663	56.280
Mean	1.656	1.508	3.895	7.905	7.780	5.670	1.636	1.372	689	571	1.054	1.876
Ac-ft	101.900	89.750	239.500	486.100	432.100	348.600	97.340	84.360	40.980	35.130	64.790	111.600

Calendar year 1964 Max 7.560 Min 326 Mean 1.584 Ac-ft 1.150.000
 Water year 1964-65 Max 8.730 Min 340 Mean 2.945 Ac-ft 2.132.000

11-5165.3. Klamath River below Iron Gate Dam, Calif.

Location.--Lat 41°55'40", long 122°26'35", in ~~E. 1/4~~ sec. 17, T. 47 N., R. 5 W., 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.

Records available.--October 1960 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 2,162.44 ft above mean sea level (levels by Pacific Power & Light Co.).

Average discharge.--5 years, 2,191 cfs (1,586,000 acre-ft per year).

Extremes.-- Maximum discharge during year, 29,400 cfs Dec. 22 (gage height, 13.63 ft) from rating curve extended above 12,000 on basis of slope-area measurement of maximum flow; minimum daily, 694 cfs July 29.

1960-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 647 cfs Nov. 6, 1960, Sept. 24, Oct. 1, 1961.

Remarks.--Records good. Complete regulation by Upper Klamath Lake (capacity, 584,000 acre-ft) and other smaller reservoirs; diversions above station. Records of chemical analyses and water temperatures for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1360	1870	1870	8270	11600	8470	4240	1680	1100	736	1090	1630
2	1360	1870	1870	8320	11300	8080	4980	1680	862	722	1040	1630
3	1360	1870	2210	8060	11000	7760	4900	1680	876	743	1020	1620
4	1360	1890	2860	7740	10600	7460	3730	1530	876	743	1020	1620
5	1360	1890	2890	8900	10200	7430	3700	1670	862	743	1030	1620
6	1580	1890	2730	9500	9950	7260	3680	1680	862	743	1030	1620
7	1900	1890	2650	8660	9770	7180	3640	1670	862	771	1030	1950
8	1900	1890	2790	8220	9650	7120	2440	1680	806	757	1030	2130
9	1890	1890	2830	8320	9320	7040	1920	1680	773	764	1030	2130
10	1890	1890	3300	8500	9210	6990	1770	1690	773	743	1030	2130
11	1890	1890	3270	10500	9120	7020	1610	1690	771	729	1030	2140
12	1870	1890	3460	9710	8960	7020	1570	1860	792	722	1030	2130
13	1870	1890	3430	9590	8790	7020	1520	2090	773	715	1020	2130
14	1860	1870	3450	9560	8760	6910	1410	2090	792	722	1020	2130
15	1870	1870	3460	9500	8680	6830	1410	1110	773	722	1030	2110
16	1870	1870	3430	9590	7950	6520	1570	2130	773	729	1020	2050
17	1870	1870	3400	9500	8340	6080	1520	1980	771	722	1030	2050
18	1870	1870	3410	9350	8470	5550	1500	1750	764	722	1030	2050
19	1860	1870	3440	9350	8530	5400	1550	1760	750	846	1020	2050
20	1870	1870	3470	9240	8500	5600	1660	1760	750	729	1040	2060
21	1890	1870	7560	9470	8550	5810	1700	1770	974	750	1080	2080
22	1750	1870	25000	9650	8500	5640	1700	1770	1420	743	1160	2060
23	1750	1860	23200	9920	8470	5380	1690	1780	1520	743	1540	2180
24	1870	1870	17400	10400	8420	5270	1640	2030	1160	743	1630	2260
25	1870	1870	13300	10000	8370	5120	1630	2230	743	757	1650	2280
26	1860	1870	11900	9830	8290	5120	1630	2220	743	736	1630	2280
27	1860	1870	11000	9920	8530	5160	1630	2230	750	722	1630	2270
28	1870	1870	10100	9980	8370	5070	1650	2040	750	715	1630	2260
29	1870	1860	9140	10900	-----	5010	1680	1790	757	694	1630	2400
30	1870	1860	8840	11800	-----	4760	1680	1640	764	701	1630	2500
31	1870	-----	8580	11900	-----	4400	-----	1310	-----	742	1630	-----
Total	54,990	56,270	206,240	294,150	256,200	195,480	66,950	56,670	25,967	22,869	37,460	61,550
Mean	1774	1876	6653	9489	9150	6306	2232	1828	866	738	1208	2052
Ac-ft	109,100	111,600	409,100	583,400	508,200	387,700	132,800	112,400	51,500	45,360	74,300	122,100
Calendar year 1964	Max	25,000	Min	745	Mean	2,079	Ac-ft	1,510,000				
Water year 1964-65	Max	25,000	Min	694	Mean	3,657	Ac-ft	2,648,000				

11-5166. Cottonwood Creek at Hornbrook, Calif.

Location.--Lat 41°55'00", long 122°33'45", SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.47 N., R.6 W., on right bank 0.5 mile upstream from Rancheria Gulch, and 0.6 mile northwest of Hornbrook.

Drainage area.--89.8 sq mi.

Records available.--October 1964 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 2,160 ft (from topographic map).

Extremes.--Maximum discharge during year, 5,480 cfs Dec. 22 (gage-height, 10.94 ft in gage well, 11.3 ft outside, from floodmark), from rating curve extended above 1,500 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.2 cfs Oct. 1-9.

Remarks.--Records good except those for periods of shifting control or no gage-height record, which are poor. Some diversion above station for irrigation. Records of water temperatures for the water year 1965 are published in Part 2 of this report.

Rating tables, except period of shifting control (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 24

Dec. 24 to Sept. 30

1.2	12	2.3	74	1.8	0.6	2.6	53
1.3	.3	2.5	128	1.9	1.8	2.9	113
1.4	.7	2.8	255	2.0	4.3	3.2	210
1.5	1.9	3.2	510	2.1	7.5	3.6	460
1.6	4.0	4.0	1,150	2.2	12	4.3	1,020
1.8	12	7.0	3,220	2.4	27	5.0	1,580
2.1	40	10.0	5,010				

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	1.4	46	158	548	140	99	72	21	16	1.7	2.8
2	.2	1.8	44	158	411	121	80	70	21	11	2.6	3.0
3	.2	1.9	30	164	320	103	67	67	19	3.8	2.6	3.3
4	.2	1.5	22	146	290	104	63	62	16	8.4	3.6	3.6
5	.2	1.7	13	380	284	99	67	62	14	3.0	4.0	4.9
6	.2	2.0	17	335	240	97	82	62	13	6.9	3.8	4.9
7	.2	2.3	16	260	194	97	76	58	13	6.5	3.0	4.6
8	.2	4.3	36	250	170	95	72	55	14	5.3	2.0	3.3
9	.2	3.6	46	225	149	95	68	52	14	5.3	1.8	2.0
10	.3	12	63	312	135	95	74	49	13	4.9	1.7	1.8
11	.3	15	54	596	126	92	70	42	13	4.6	1.8	1.8
12	.3	15	35	404	124	92	70	38	14	4.6	2.3	1.8
13	.3	13	25	225	124	90	67	40	12	3.3	2.6	1.6
14	.4	12	25	174	130	86	63	39	12	2.6	2.0	1.4
15	.7	9.6	32	179	113	84	62	33	13	1.8	2.0	1.4
16	1.0	9.6	25	153	116	84	62	39	15	2.8	2.0	1.4
17	1.5	10	17	152	114	80	58	37	17	3.6	2.0	1.4
18	1.1	10	18	137	112	76	103	34	16	2.8	3.0	1.6
19	1.1	10	25	149	110	74	250	37	15	2.8	3.0	1.4
20	1.3	10	83	155	103	72	153	38	14	2.6	2.6	1.4
21	.8	9.6	1,900	155	106	72	129	43	13	2.6	2.6	1.3
22	.7	9.6	4,840	121	104	76	111	43	12	2.6	2.8	1.4
23	.7	9.6	2,100	705	102	72	97	39	11	2.3	3.0	1.6
24	.7	12	1,190	926	100	72	90	35	10	2.0	5.9	1.7
25	.7	19	669	556	98	70	83	34	10	2.3	2.2	2.0
26	.6	17	521	383	105	72	86	34	11	1.8	1.3	2.0
27	.7	15	296	320	330	63	86	34	10	1.7	9.3	1.8
28	.7	20	140	334	167	65	86	33	11	1.7	8.8	1.8
29	.9	22	116	636	-----	65	82	33	11	1.6	7.5	1.8
30	1.4	23	146	780	-----	63	76	29	15	1.4	4.9	2.0
31	1.4	-----	152	692	-----	65	-----	21	-----	1.4	3.5	-----
Total	19.4	313.5	12,752	10,324	5,025	2,641	2,547	1,369	413	134.0	133.5	66.8
Mean	.63	10.4	411	333	179	85.2	83.2	44.2	13.8	4.32	4.31	2.23
Ac-ft	38	622	25,290	20,480	9,970	5,240	5,250	2,720	319	266	265	132

Calendar year 1964 Max - Min - Mean - Ac-ft -
 Water year 1964-65 Max 4,840 Min 0.2 Mean 98.2 Ac-ft 71,090

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-21	1500	7.46	3500	1-11	0300	4.81	812
12-22	1930	10.94	5480	1-23	1800	5.67	1800
12-26	1300	4.50	876	1-29	1800	4.08	876
1-5	1900	4.43	644	2-27	0400	3.90	684

Note.--No gage-height record Oct. 15, 16, Nov. 6, 7, Feb. 14-25.
 Shifting-control method used Dec. 24 to Jan. 24, Feb. 2-13.

11-5169. Little Shasta River near Montague, Calif.

Location.--Lat 41°45'11", long 122°17'58", in NW $\frac{1}{4}$ sec.15, T.45 N., R.4 W., on right bank 0.5 mile downstream from Dry Creek and 12 miles east of Montague. Prior to May 27, 1965, at site 0.25 mile downstream.

Drainage area.--48.2 sq mi.

Records available.--October 1957 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 3,360 ft (from topographic map). Prior to May 27, 1965, water-stage recorder at site 0.25 mile downstream at different datum.

Average discharge.--8 years, 17.2 cfs (12,450 acre-ft per year).

Extremes.--Maximum discharge during year, 5,910 cfs Dec. 22 (gage height, 12.2 ft, present site and datum), from slope-area measurement of maximum flow; minimum daily, 3.8 cfs Oct. 2, 9, 10.

1957-65: Maximum discharge, that of Dec. 22, 1964; minimum, 0.6 cfs Nov. 16, 1961.

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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	5.2	39	44	37	22	29	56	25	13	7.3	5.3
2	3.8	6.7	35	41	35	21	48	53	23	12	7.1	5.4
3	4.0	6.1	24	40	34	20	75	51	23	11	6.7	5.4
4	4.2	6.1	17	44	33	19	87	50	22	11	6.3	5.2
5	4.2	5.7	16	89	32	19	99	49	21	10	6.3	5.4
6	4.2	5.8	14	103	31	19	97	47	21	10	5.5	5.4
7	4.2	6.0	15	65	31	19	88	44	20	9.9	5.4	4.9
8	4.0	3.0	55	55	30	19	76	42	19	9.6	5.2	4.8
9	3.8	12	67	52	29	13	76	38	19	9.7	5.2	5.2
10	3.8	8.8	111	56	29	13	84	36	13	9.5	5.2	4.8
11	4.0	8.3	94	122	28	13	89	35	17	9.7	6.9	4.5
12	4.3	3.5	39	85	27	13	84	34	17	9.4	7.8	4.6
13	4.2	3.8	31	56	26	13	76	33	17	9.2	6.2	4.4
14	4.5	7.8	30	52	26	19	72	32	21	8.9	5.6	4.3
15	4.4	13	29	50	25	13	74	32	19	8.7	5.3	4.4
16	4.5	11	25	48	25	16	86	32	17	10	5.5	4.4
17	4.5	9.9	26	45	24	14	100	31	24	11	5.6	5.2
18	4.3	10	37	43	24	13	102	31	19	9.4	3.6	4.6
19	4.3	10	28	42	24	13	103	30	16	8.9	9.1	5.0
20	4.5	11	23	41	23	12	102	30	14	8.5	3.0	5.2
21	4.5	12	416	41	23	12	99	30	14	8.6	6.4	5.0
22	4.7	12	794	42	23	11	91	30	14	9.1	14	4.8
23	4.5	13	355	46	22	11	85	30	12	8.1	15	4.6
24	4.6	16	251	56	22	10	77	30	13	7.6	7.5	5.2
25	4.8	23	150	52	22	10	74	30	12	7.5	3.6	4.8
26	4.6	13	119	46	22	9.6	70	29	13	7.8	6.8	4.8
27	4.9	15	109	41	23	9.3	67	28	12	7.8	6.0	4.8
28	4.8	17	81	38	24	9.0	64	27	12	7.4	6.0	4.8
29	5.2	20	66	39	-----	8.7	61	27	12	7.3	5.8	5.1
30	5.2	22	56	42	-----	14	58	26	13	7.3	5.7	4.6
31	5.3	-----	49	39	-----	21	-----	26	-----	7.3	5.4	-----
Total	136.8	336.7	3,200	1,660	754	478.6	2,393	1,099	519	284.2	216.0	146.9
Mean	4.41	11.2	103	53.5	26.9	15.4	79.8	35.5	17.3	9.17	6.97	4.90
Ac-ft	271	668	6,350	3,290	1,500	949	4,750	2,180	1,030	564	423	291

Calendar year 1964 Max 79 $\frac{1}{2}$ Min 3.0 Mean 25.9 Ac-ft 18,820
 Water year 1964-65 Max 79 $\frac{1}{2}$ Min 3.8 Mean 30.8 Ac-ft 22,270

Note.--No gage-height record Dec. 21 to May 26.

11-5175. Shasta River near Yreka, Calif.

Location.--Lat 41°49'30", long 122°35'40", in E $\frac{1}{2}$ sec.24, T.46 N., R.7 W., on right bank 0.5 mile upstream from mouth and 7 miles north of Yreka.

Drainage area.--793 sq mi.

Records available.--October 1933 to December 1941, December 1944 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 2,000 ft (from topographic map). Prior to Nov. 2, 1933, staff gage at same site and datum.

Average discharge.--28 years (1933-41, 1945-65), 181 cfs (131,000 acre-ft per year); median of yearly mean discharges, 160 cfs (116,000 acre-ft per year).

Extremes.--Maximum discharge during year, 21,500 cfs Dec. 22 (gage height, 12.92 ft in gage well, 13.85 ft, from floodmarks), from rating curve extended above 4,100 cfs on the basis of slope-area measurement of maximum flow; minimum daily, 31 cfs July 30.

1933-41, 1944-65: Maximum discharge, that of Dec. 22, 1964; minimum, 3.4 cfs Aug. 13, 1939, when about 2 cfs was being diverted around gage.

Remarks.--Records good. 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 1965 are published in Part 2 of this report.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 6				Apr. 6 to Sept. 30			
3.0	73	7.0	2,740	2.7	28		
3.3	150	8.0	4,030	2.8	39		
4.0	405	9.0	5,950	3.0	73		
5.0	880	11.0	12,900	3.4	172		
6.0	1,710			4.0	388		
				5.0	880		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	100	168	253	685	565	335	325	245	98	103	32	84
2	105	168	272	635	538	328	440	211	79	96	37	94
3	120	168	268	588	516	314	403	194	91	95	48	111
4	129	168	229	592	500	307	334	166	90	84	48	93
5	120	168	209	868	480	307	320	146	67	80	62	90
6	110	168	205	1,580	464	307	497	138	63	76	63	90
7	102	171	205	1,210	440	296	479	130	67	76	67	101
8	94	178	229	826	430	290	396	122	62	65	63	113
9	98	201	321	796	422	290	348	115	62	63	70	105
10	92	205	300	745	405	286	352	110	80	79	57	76
11	88	205	363	1,800	402	276	396	106	94	88	43	70
12	94	213	279	1,300	394	268	404	103	106	74	42	76
13	96	205	241	922	388	268	368	103	109	61	55	74
14	126	205	241	766	377	265	329	115	114	69	55	65
15	135	201	261	720	363	253	310	120	146	75	46	61
16	135	201	249	710	356	205	400	99	171	71	59	60
17	132	197	225	660	352	189	502	98	164	76	60	66
18	147	193	213	630	346	189	412	104	168	85	83	70
19	171	193	241	625	342	189	408	98	154	76	96	89
20	171	197	265	630	338	189	428	107	132	60	102	102
21	174	193	737	625	335	182	436	118	124	54	114	109
22	171	197	7,880	606	332	164	457	126	115	53	95	95
23	171	193	10,400	635	321	164	352	121	94	44	70	99
24	168	193	4,090	814	318	160	306	104	67	56	103	96
25	164	197	2,230	760	318	141	299	99	64	49	175	104
26	164	201	1,820	645	318	147	242	96	75	52	141	110
27	164	201	1,680	592	366	140	198	92	75	47	135	106
28	168	197	1,300	560	356	137	201	83	80	48	151	99
29	171	193	1,030	552	-----	130	204	83	78	39	153	102
30	174	197	887	610	-----	116	256	79	73	31	112	136
31	171	-----	778	601	-----	116	-----	83	-----	33	97	-----
TOTAL	4,225	5,735	37,901	24,288	11,082	6,948	10,802	3,714	2,962	2,058	2,534	2,746
MEAN	136	191	1,223	783	396	224	360	120	98.7	66.4	81.7	91.5
AC-FT	8,380	11,380	75,180	48,170	21,980	13,780	21,430	7,370	5,880	4,080	5,030	5,450

CALENDAR YEAR 1964	MAX	10,400	MIN	7.5	MEAN	242	AC-FT	175,700
WATER YEAR 1964-65	MAX	10,400	MIN	31	MEAN	315	AC-FT	228,100

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	2130	12.92	21,500	4-1	2400	4.16	464
1-7	1530	6.05	1,760	4-6	1215	4.33	533
1-11	1345	6.42	2,120	4-17	0845	4.34	533
1-24	0815	4.96	856	4-22	1400	4.21	474
1-30	0915	4.54	630				

KLAMATH RIVER BASIN

11-5178. Beaver Creek near Klamath River, Calif.

Location.--Lat 41°53'40", long 122°49'20", in NE 1/4 sec. 30, T. 47 N., R. 8 W., on left bank 0.1 mile downstream from Buckhorn Gulch, 1.9 miles upstream from mouth, and 2.1 miles north of Klamath River.

Drainage area.--106 sq mi.

Records available.--Occasional low-flow measurements, water years 1953-58, and annual maximum, water year 1956. March 1959 to November 1964 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 1,920 ft (from topographic map). Prior to Mar. 17, 1959, crest-stage gage only and Mar. 17 to June 12, 1959, at site 0.6 mile downstream at different datum.

Average discharge.--5 years, 110 cfs (79,640 acre-ft per year).

Extremes.--Maximum discharge during year, 7,700 cfs Dec. 22 (gage height, 10.6 ft from floodmarks), from rating curve extended above 600 cfs as explained below; minimum daily during period October to November, 19 cfs Oct. 12, 13, 23, 24.

1955-56: Maximum discharge, 8,000 cfs Aug. 20, 1956 (gage height, 10.6 ft, present datum, from floodmarks), from rating curve extended above 600 cfs on basis of slope-area measurement at gage height 10.6 ft.

1959-64: Minimum discharge, 10 cfs Jan. 1, 1960.

Remarks.--Records good. Some small diversions above station for irrigation. Station destroyed by Dec. 22, 1964 flood.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 30

2.1	8.0
2.4	35
2.8	85
3.2	161
3.8	335

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	34										
2	22	45				+ 333			+ 283	+ 113		
3	22	36										
4	21	35						+ 399				
5	20	43										
6	20	35										
7	21	33										
8	23	35										
9	23	45										
10	24	47										+ 32
11	22	44			+ 341							
12	19	46										
13	19	43										
14	20	38										
15	22	36		+ 285					+ 199			
16	22	36										
17	22	36										
18	21	36										
19	20	35				+ 291						
20	20	36							+ 346			
21	20	37										
22	20	38	+ 7700									
23	19	38										
24	19	64										
25	20	93										
26	21	58										
27	23	51										
28	32	68								+ 61		
29	39	81										
30	38	125				+ 231						
31	34											
Total	709	1427										
Mean	22.9	47.6										
Ac-ft	1410	2830										

Calendar year 1964 Max - Min - Mean - Ac-ft -

Water year 1964-65 Max - Min - Mean - Ac-ft -

+ Result of discharge measurement.

11-5180.5. East Fork Scott River at Callahan, Calif.

Location.--Lat 41°18'15", long 122°46'35", in SE 1/4 sec. 22, T.40 N., R.8 W., on right bank 1.0 mile downstream from Big Mill Creek and 1.4 miles east of Callahan.

Drainage area.--110 sq mi.

Records available.--October 1959 to September 1965.

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.--6 years, 95.7 cfs (69,280 acre-ft per year).

Extremes.--Maximum discharge during year, 7,480 cfs Dec. 22 (gage height, 9.93 ft in gage well, 9.73 ft from floodmarks), from rating curve extended above 3,000 cfs on basis of slope-area measurement at gage heights 9.05 ft and 9.93 ft; minimum daily, 1.1 cfs Oct. 1-8.

1959-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 0.9 cfs Sept. 20, 21, 1962, Sept. 10-17, 1964.

Remarks.--Records good prior to Dec. 22, fair from Dec. 23 to Apr. 14, and poor thereafter. Small diversions above station for irrigation.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	7.8	126	206	310	88	115	425	178	55	6.1	7.4
2	1.1	14	105	190	250	84	110	322	156	50	6.3	7.2
3	1.1	10	70	198	222	84	96	261	150	45	6.8	7.0
4	1.1	7.0	51	182	214	81	92	220	146	40	7.3	6.8
5	1.1	6.6	43	590	214	80	102	210	139	35	8.4	6.6
6	1.1	6.6	40	354	190	80	108	196	132	30	8.0	6.3
7	1.1	6.2	36	222	166	80	96	178	118	27	7.6	6.2
8	1.1	16	40	166	150	80	90	178	102	24	7.1	6.0
9	1.2	43	51	166	139	78	88	182	98	22	6.9	5.9
10	1.2	37	82	260	128	78	88	196	92	20	6.6	5.8
11	1.2	32	117	506	122	78	86	220	90	18	6.4	5.8
12	1.2	29	78	342	112	78	84	255	82	16	11	5.6
13	1.2	24	58	240	112	77	94	285	75	15	10	5.5
14	1.2	22	54	222	106	77	182	279	75	14	9.0	5.4
15	1.4	20	48	214	95	77	637	273	75	13	8.0	5.2
16	1.4	18	43	198	92	77	385	303	84	12	7.0	5.1
17	1.5	17	35	182	88	75	261	285	80	12	7.0	5.0
18	1.5	17	35	182	84	75	385	235	80	11	20	4.9
19	1.5	17	36	222	84	73	528	245	77	10	30	4.8
20	1.5	16	43	260	84	73	666	205	73	9.5	25	4.7
21	1.5	16	1,560	250	84	73	615	210	72	9.0	20	4.6
22	1.6	17	5,350	222	84	77	492	187	88	8.5	16	4.6
23	1.6	17	4,030	923	81	77	433	150	110	8.0	20	4.6
24	1.6	28	2,460	762	81	75	417	139	95	7.7	16	4.6
25	1.6	52	1,610	390	81	72	441	153	80	7.2	13	4.6
26	1.6	35	1,390	320	84	70	457	205	70	7.0	11	4.5
27	2.5	28	858	290	139	66	519	261	60	6.7	10	4.5
28	5.8	28	414	250	100	68	635	267	50	6.6	9.0	4.5
29	11	29	300	250	-----	70	635	255	45	6.5	8.2	4.4
30	5.8	50	230	320	-----	77	528	220	45	6.2	7.8	4.4
31	4.4	-----	222	320	-----	82	-----	205	-----	5.9	7.6	-----
Total	63.8	666.2	19,615	9,399	3,696	2,380	9,465	7,205	2,817	557.8	343.1	162.5
Mean	2.06	22.2	633	303	132	76.8	316	232	93.9	18.0	11.1	5.42
Ac-ft	127	1,320	38,910	18,640	7,330	4,720	18,770	14,290	5,590	1,110	681	322

Calendar year 1964 Max 5,350 Min 0.9 Mean 87.7 Ac-ft 63,670
 Water year 1964-65 Max 5,350 Min 1.1 Mean 154 Ac-ft 111,800

Peak discharge (base,

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1300	9.93	7,480	4-15	1800	7.91	1,240
1-5	2100	7.70	810	4-20	2400	7.67	747
1-23	1600	8.39	2,400	4-28	2200	7.67	770

11-5186. Moffett Creek near Fort Jones, Calif.

Location.--Lat 41°38'02", long 122°44'50", in SE 1/4 sec. 27, T.44 N., R.8 W., on right bank 180 ft upstream from bridge, 590 ft upstream from Soap Creek, and 5.1 miles east of Fort Jones.

Drainage area.--69.8 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 2,940 ft (from topographic map). Prior to May 30, 1963, 90 ft downstream at datum 1.15 ft lower.

Average discharge.--7 years, 14.0 cfs (10,140 acre-ft per year).

Extremes.--Maximum discharge during year, 680 cfs Dec. 23 (gage height, 5.59 ft) from rating curve extended above 120 cfs on basis of slope-area measurement of peak flow; minimum daily discharge 0.3 cfs Oct. 1-7, 15.

1958-65: Maximum discharge, that of Dec. 23, 1964; no flow for several days in 1964.

Flood of Jan. 29, 1958, reached a stage of 5.54 ft present datum (discharge not determined).

Remarks.--Minor diversions upstream for irrigation.

Cooperation.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.7	1.7	78	153	43	30	38	12	5.9	1.6	5.7
2	.3	.9	2.2	74	136	40	29	38	11	6.3	1.4	8.1
3	.3	.8	1.7	70	122	40	27	38	9.7	6.0	1.5	5.7
4	.3	.9	1.5	64	110	38	26	36	8.8	6.0	1.5	4.6
5	.3	.8	1.4	100	103	36	29	35	8.6	5.6	1.3	4.1
6	.3	.8	1.3	131	95	35	31	33	9.0	4.4	1.1	3.9
7	.3	.8	1.3	109	87	34	30	31	13	4.2	1.1	3.5
8	.4	.9	1.4	96	83	33	29	30	10	4.0	1.7	2.8
9	.5	1.4	1.4	88	76	32	29	29	9.5	4.0	1.6	2.6
10	.6	1.6	1.6	87	70	31	30	27	8.6	4.0	1.1	2.2
11	.5	1.6	1.8	180	67	31	30	24	7.9	3.7	1.2	2.2
12	.4	1.7	1.7	192	63	31	29	23	7.0	3.5	1.3	2.1
13	.5	1.5	1.7	173	62	30	29	24	7.4	3.3	1.1	2.0
14	.4	1.4	1.7	158	59	29	30	24	9.3	3.6	1.0	1.9
15	.3	1.5	1.8	145	56	29	32	22	11	3.6	1.0	1.7
16	.5	1.5	1.8	145	53	28	39	20	11	4.2	.9	1.6
17	.4	1.4	1.7	141	51	28	40	20	10	3.7	1.2	1.8
18	.4	1.5	1.7	139	51	27	46	20	7.9	3.6	1.9	1.7
19	.4	1.5	2.0	150	50	26	57	19	7.4	3.7	2.1	1.6
20	.4	1.5	2.3	159	48	26	65	20	6.7	3.2	2.3	1.6
21	.5	1.4	31	153	47	25	65	22	6.3	3.0	2.9	1.4
22	.5	1.2	455	141	47	25	62	22	6.1	2.9	3.6	1.4
23	.4	1.1	487	206	45	25	58	20	5.7	2.8	5.2	1.4
24	.5	1.0	312	276	43	25	55	18	5.5	2.5	5.5	1.3
25	.5	1.0	238	217	43	25	52	16	6.3	2.6	4.5	1.3
26	.4	1.0	225	176	42	24	51	15	6.8	2.5	4.2	1.2
27	.4	.9	218	151	52	23	48	14	6.8	2.4	4.0	1.4
28	.5	1.0	164	136	46	23	45	13	6.3	2.3	3.6	1.4
29	.6	1.0	126	135	-----	23	42	13	5.3	2.2	3.4	1.1
30	.6	1.4	107	159	-----	23	39	13	5.3	2.1	2.8	1.1
31	.5	-----	88	167	-----	23	-----	12	-----	2.0	2.5	-----
Total	13.2	35.7	2484.7	4396	1960	911	1204	729	246.2	113.8	70.1	74.4
Mean	0.43	1.19	80.2	142	70	29.4	40.1	23.5	8.21	3.67	2.26	2.48
Ac-ft	26	71	4930	8720	3890	1810	2390	1450	488	226	139	148

Calendar year 1964 Max 487 Min 0.3 Mean 16.7 Ac-ft 12,100

Water year 1964-65 Max 680 Min 0.7 Mean 33.5 Ac-ft 24,290

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., on right bank 1.7 miles upstream from Snow Creek and 10.8 miles downstream from Fort Jones.

Drainage area.--653 sq mi.

Records available.--December 1941 to September 1965. Monthly discharge only October to December 1941, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 2,625.80 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--24 years, 653 cfs (472,800 acre-ft per year); median of yearly mean discharges, 570 cfs (413,000 acre-ft per year).

Extremes.--Maximum discharge during year, 54,600 cfs Dec. 22 (gage height, 25.34 ft from floodmarks), from rating curve extended above 15,000 cfs on basis of slope-area measurement at 21.40 ft; minimum daily, 30 cfs Aug. 24.
1941-65: Maximum discharge, that of Dec. 22, 1964; minimum, 20 cfs Sept. 14, 15, 1955.

Remarks.--Records good except those for periods of no gage-height record or shifting control, which are fair. Diversions for irrigation of about 30,000 acres above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Rating tables, except period of shifting control (gage height, in feet, and discharge, in cubic feet per second)
Oct. 1 to Dec. 22 Dec. 23 to Sept. 30

1.6	35	6.0	1,420	1.5	28	5.0	980
2.0	62	7.0	2,290	1.8	52	6.0	1,630
2.5	125	9.0	4,550	2.1	90	8.0	3,540
3.0	220	12.0	9,400	2.5	149	11.0	8,000
4.0	460	15.0	16,700	3.0	243	15.0	17,440
5.0	845	20.0	32,100	4.0	530	22.0	40,700

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	55	1,290	2,260	2,560	1,110	722	1,880	890	313	94	72
2	54	60	1,230	2,080	2,260	1,040	770	1,570	820	316	94	76
3	52	59	782	1,840	2,080	986	714	1,380	790	293	95	82
4	52	61	542	1,730	1,980	955	686	1,210	800	252	91	81
5	53	62	430	2,010	1,940	925	694	1,080	800	237	89	80
6	52	62	362	2,940	1,900	895	710	955	845	224	86	77
7	52	62	315	2,480	1,730	870	690	880	920	207	82	72
8	53	64	315	1,930	1,600	850	654	835	830	196	84	74
9	47	63	513	1,770	1,480	840	642	795	765	187	78	70
10	36	104	1,390	1,810	1,360	840	646	805	713	165	76	70
11	36	124	2,590	3,000	1,290	840	630	880	693	152	74	68
12	79	139	1,170	2,790	1,210	840	610	945	666	151	77	65
13	79	137	813	2,350	1,180	820	610	1,080	606	139	77	65
14	65	125	687	2,080	1,140	795	626	1,120	594	135	76	58
15	60	113	671	1,920	1,090	785	706	1,120	594	124	73	57
16	57	113	567	1,810	1,040	775	1,180	1,180	538	116	74	59
17	53	109	481	1,730	992	765	940	1,270	516	115	73	58
18	53	106	436	1,690	970	750	1,110	1,080	512	114	73	60
19	52	105	445	1,790	967	726	3,010	1,040	495	108	78	63
20	53	104	513	1,890	975	714	3,280	1,030	475	99	76	70
21	54	107	2,980	1,920	992	713	2,990	1,010	441	99	78	76
22	52	107	29,100	1,810	986	740	2,350	986	414	102	85	77
23	52	105	39,500	2,480	955	745	1,990	890	450	99	63	74
24	50	112	23,500	4,690	920	722	1,850	830	459	93	30	76
25	50	246	12,400	3,240	907	713	1,880	785	414	81	50	74
26	52	280	10,000	2,640	925	706	1,940	770	408	38	73	72
27	53	226	7,370	2,200	1,420	686	2,190	820	375	41	83	73
28	55	224	5,030	2,040	1,260	662	2,480	920	341	57	109	72
29	56	282	3,820	1,980	-----	642	2,570	1,000	303	65	82	74
30	54	345	3,180	2,260	-----	634	2,220	1,010	293	63	76	77
31	53	-----	2,660	2,610	-----	630	-----	965	-----	99	72	-----
Total	1,673	3,871	155,097	69,770	38,109	24,724	42,090	32,121	17,770	4,485	2,426	2,122
Mean	54	129	5,003	2,251	1,361	793	1,403	1,036	592	144	77.4	70.2
Ac-ft	3,320	7,680	307,600	138,400	75,590	49,040	83,480	63,710	35,250	8,900	4,810	4,210

Calendar year 1964 Max 39,500 Min 36 Mean 769 Ac-ft 558,200
Water year 1964-65 Max 39,500 Min 30 Mean 1,080 Ac-ft 782,000

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	0400	8.18	3,540	1-11	1200	7.76	3,280
12-22	about 2200	25.34	54,600	1-24	0600	9.50	5,500
				4-19	1800	7.98	3,520
1-6	0500	7.48	2,980	4-29	0600	7.28	2,780

Note.--No gage-height record Dec. 23-26. Shifting-control method used Jan. 26 to Feb. 25.

11-5205. Klamath River near Seiad Valley, Calif.

Location.--Lat 41°51'20", long 123°13'50", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T.46 N., R.12 W., on left bank 0.4 mile upstream from Bittenbender Creek, 1.4 miles downstream from Grider Creek, and 2.2 miles west of Seiad Valley.

Drainage area.--6,980 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

Records available.--October 1912 to September 1925, July 1951 to September 1965. Monthly discharge 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, staff gage at site $\frac{3}{2}$ miles upstream at different datum.

Average discharge.--27 years, 4,135 cfs (2,994,000 acre-ft per year).

Extremes.--Maximum discharge during year, 165,000 cfs Dec. 23 (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, 1,010 cfs July 30. 1912-25, 1951-65: Maximum discharge, that of Dec. 23, 1964; minimum daily, 320 cfs Nov. 25, 1917.

Remarks.--Records good except for periods of no gage-height record, which are fair. Flow considerably regulated by reservoirs and powerplants above station. Large diversions above station for irrigation. Records of chemical analyses and water temperatures for the 1965 water year are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 18 to Sept. 30)

Oct. 1 to Dec. 22

Dec. 23 to Sept. 30

3.0	1,220	9.0	11,200	3.0	900	15.0	30,600
4.0	2,190	11.0	16,900	4.0	1,750	20.0	54,600
5.0	3,500	15.0	30,600	6.0	4,040	25.0	87,000
6.0	5,050	20.0	54,700	8.0	7,240	30.0	129,000
7.0	6,800	26.0	95,000	11.0	15,000		

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,550	2,120	4,780	20,500	20,000	12,000	6,170	5,710	3,390	1,760	1,190	1,900
2	1,550	2,150	4,990	19,500	19,000	11,200	6,640	5,280	3,010	1,690	1,420	1,890
3	1,570	2,120	4,010	19,000	17,000	10,400	7,120	4,950	2,820	1,630	1,390	1,910
4	1,580	2,120	4,190	18,500	16,200	10,200	5,890	4,710	2,830	1,570	1,360	1,910
5	1,580	2,150	3,840	20,500	15,400	9,800	5,620	4,390	2,830	1,490	1,360	1,890
6	1,570	2,140	3,890	25,000	14,500	9,400	5,790	4,310	2,810	1,440	1,370	1,890
7	1,910	2,120	3,650	30,000	13,700	9,100	5,780	4,180	2,890	1,400	1,350	1,940
8	2,000	2,150	3,700	27,000	13,400	9,000	5,120	4,070	2,810	1,390	1,340	2,370
9	1,990	2,210	4,390	22,000	12,800	8,700	4,360	4,000	2,600	1,340	1,340	2,440
10	2,000	2,290	5,990	20,000	12,400	8,500	4,170	3,950	2,510	1,320	1,350	2,430
11	1,980	2,300	8,420	22,000	12,200	8,400	3,910	4,040	2,480	1,320	1,340	2,420
12	1,970	2,380	5,850	25,000	12,000	8,300	3,860	4,160	2,410	1,300	1,380	2,420
13	2,010	2,350	5,340	23,000	11,800	8,100	3,780	4,600	2,310	1,260	1,360	2,420
14	2,030	2,290	5,050	21,000	11,400	8,000	3,690	4,740	2,310	1,220	1,350	2,420
15	2,030	2,250	5,120	19,500	11,200	7,900	3,670	4,700	2,340	1,230	1,340	2,420
16	2,040	2,230	4,910	18,500	10,800	7,800	4,210	4,710	2,270	1,300	1,330	2,410
17	2,030	2,210	4,700	18,500	10,500	7,700	4,300	4,760	2,220	1,220	1,320	2,410
18	2,040	2,210	4,550	18,000	10,600	7,600	4,700	4,470	2,180	1,180	1,370	2,410
19	2,050	2,200	4,730	17,800	10,700	7,500	7,700	4,270	2,140	1,180	1,370	2,400
20	2,060	2,210	5,490	17,200	10,800	7,600	8,410	4,260	2,040	1,280	1,320	2,400
21	2,070	2,210	15,100	17,000	10,900	7,780	8,020	4,240	1,970	1,170	1,310	2,410
22	2,060	2,230	94,000	17,600	11,000	7,860	7,000	4,180	2,310	1,180	1,340	2,430
23	1,970	2,210	115,000	20,000	11,100	7,580	6,300	4,040	2,820	1,170	1,520	2,500
24	1,970	2,310	90,000	25,000	11,100	7,340	5,900	3,890	2,640	1,150	1,900	2,650
25	2,060	2,720	55,000	31,000	11,100	7,140	5,840	4,130	2,130	1,150	2,070	2,650
26	2,060	2,670	35,000	29,500	11,200	6,940	5,870	4,130	1,340	1,140	2,050	2,630
27	2,070	2,510	30,000	21,000	13,000	7,140	6,150	4,140	1,300	1,080	1,990	2,630
28	2,090	2,590	28,000	19,000	14,000	6,820	6,510	4,250	1,720	1,040	2,030	2,600
29	2,140	2,730	25,000	20,000	-----	6,800	6,640	4,090	1,680	1,020	2,010	2,600
30	2,140	2,980	23,000	21,000	-----	6,420	6,190	4,040	1,670	1,010	1,980	2,710
31	2,110	-----	21,000	23,000	-----	6,150	-----	3,770	-----	1,050	1,920	-----
Total	60,280	69,360	628,690	666,600	359,800	255,170	169,310	135,160	71,780	39,580	47,070	70,510
Mean	1,945	2,312	20,280	21,500	12,850	8,231	5,644	4,360	2,293	1,277	1,518	2,350
Ac-ft	119,600	137,600	1,247,000	1,322,000	713,700	506,100	335,800	263,100	142,400	78,510	93,360	139,900

Calendar year 1964 Max 115,000 Min 1,020 Mean 4,252 Ac-ft 3,087,000

Water year 1964-65 Max 115,000 Min 1,010 Mean 7,050 Ac-ft 5,104,000

Note.--No gage-height record Dec. 22 to Mar. 18, Sept. 7-30.

11-5215. Indian Creek near Happy Camp, Calif.

Location.--Lat 41°50'50", long 123°23'10", in SE $\frac{1}{4}$ sec.22, T.17 N., R.7 E., on left bank 1.5 miles upstream from Slater Creek, 3.8 miles north of Happy Camp, and 4.5 miles upstream from mouth.

Drainage area.--118 sq mi.

Records available.--September 1911 to September 1921 (fragmentary), December 1956 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Altitude of gage is 1,300 ft (from topographic map). Prior to December 1956, staff gages at sites 0.25 mile upstream at different datums.

Average discharge.--11 years (1911-14, 1957-65), 432 cfs (312,800 acre-ft per year).

Extremes.--Maximum discharge during year, 39,000 cfs Dec. 22 (gage height, 36.59 ft, from floodmark in gage well), from rating curve extended above 4,800 cfs on basis of slope-area measurement at gage height 29.0 ft; minimum daily, 40 cfs Oct. 12-14.

1911-21, 1956-65: Maximum discharge, that of Dec. 22; 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 maximum flow).

Remarks.--Records good except those for periods of no gage-height record, or shifting control, which are fair. Small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	42	50	1,960	786	1,760	807	471	580	278	142	77	60
2	42	62	1,680	741	1,510	750	465	545	267	135	73	59
3	42	54	793	675	1,410	705	443	519	270	127	70	59
4	42	59	508	640	1,380	705	441	509	262	123	71	59
5	41	66	372	735	1,840	681	451	498	257	119	69	58
6	41	54	307	864	1,730	660	431	482	252	117	69	56
7	42	51	269	747	1,600	660	403	465	245	112	67	57
8	42	68	452	650	1,360	658	391	457	236	106	66	55
9	42	88	679	618	1,080	660	387	451	225	108	66	55
10	42	106	2,710	727	891	658	381	461	219	106	68	53
11	41	92	1,530	1,090	777	662	365	490	214	105	69	52
12	40	130	787	945	744	658	363	522	206	103	83	54
13	40	99	560	825	618	635	369	532	199	101	75	52
14	40	80	515	741	545	618	381	515	220	99	70	52
15	42	72	619	693	505	608	475	490	203	97	68	52
16	43	67	478	735	471	595	502	512	192	96	66	51
17	44	64	397	714	485	585	461	495	185	92	69	50
18	43	63	352	702	560	562	1,400	457	181	90	93	50
19	42	62	370	738	612	535	3,750	478	176	89	85	50
20	42	62	704	804	681	520	3,100	473	170	89	74	48
21	42	65	7,500	819	735	528	1,650	435	165	89	70	49
22	41	80	30,700	804	759	548	1,140	409	161	87	69	47
23	41	96	17,700	2,290	750	540	937	385	158	84	67	48
24	41	264	9,100	3,350	720	518	893	367	152	82	70	47
25	41	505	4,880	2,280	681	492	900	359	149	81	109	47
26	42	278	3,700	1,480	732	485	964	355	146	81	89	48
27	48	217	2,700	1,100	1,550	463	1,050	363	140	79	78	47
28	53	352	2,000	1,030	1,110	443	965	361	134	77	73	48
29	62	515	1,500	1,420	-----	427	799	345	133	77	69	47
30	56	1,090	1,100	2,000	-----	428	637	329	142	77	64	46
31	50	-----	920	2,040	-----	445	-----	298	-----	77	61	-----
TOTAL	1,352	4,911	97,842	33,783	27,596	18,239	25,365	13,937	5,937	3,047	2,267	1,556
MEAN	43.6	164	3,156	1,090	986	588	846	450	198	98.3	73.1	51.9
AC-FT	2,680	9,740	194,100	67,010	54,740	36,180	50,310	27,640	11,780	6,040	4,500	3,090

CALENDAR YEAR 1964 MAX 30,700 MIN 40 MEAN 529 AC-FT 383,800
 WATER YEAR 1964-65 MAX 30,700 MIN 40 MEAN 646 AC-FT 467,800

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-1	0215	9.80	2,580	1-31	0100	11.44	2,160
12-10	1730	13.74	4,720	2-5	1630	11.32	2,020
12-22	2000	36.59	39,000	4-19	0500	14.68	4,690
1-23	1900	14.35	4,430				

Note.--No gage height record Dec. 22-31. Shifting-control method used Dec. 1, 2, Jan. 1-10, Jan. 17 to Feb. 24, Mar. 14-21, Apr. 7-17, May 13-14.

11-5223. South Fork Salmon River near Forks of Salmon, Calif.

Location.--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.

Drainage area.--252 sq mi.

Records available.--Occasional low-flow measurements, water years 1953-57 and annual maximum, water years 1954-57. August 1957 to September 1965, discontinued as a continuous-record station; converted to a crest-stage partial record station.

Gage.--Water-stage recorder. Altitude of gage is 1,450 ft (from topographic map). Sept. 13, 1953, to Aug. 23, 1957, crest-stage gage only, at datum 6.66 ft higher.

Average discharge.--8 years, 510 cfs (369,200 acre-ft per year).

Extremes.--Maximum discharge during year, 31,400 cfs Dec. 22 (gage height, 21.73 ft, from floodmarks), from rating curve extended above 7,800 cfs on basis of slope-area measurement at gage height 18.86 ft; minimum daily, 28 cfs Oct. 6, 7, 13.

1953-65: Maximum discharge, that of Dec. 22, 1964.

1957-65: Minimum discharge recorded, 27 cfs Sept. 25, 26, 1964.

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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	47	3,300	960	1,300	572	375	1,060	650	240	89	46
2	29	60	2,100	950	1,200	548	365	892	626	256	82	46
3	29	66	1,200	920	1,150	530	330	790	706	264	80	46
4	29	54	900	850	1,100	506	330	741	741	244	73	46
5	29	50	700	1,700	1,150	482	350	685	741	226	65	45
6	28	47	600	4,700	1,200	465	345	632	762	219	62	45
7	28	46	500	2,900	1,050	450	320	602	706	223	58	44
8	29	54	600	2,000	950	440	312	590	560	215	55	44
9	30	66	1,200	1,500	880	440	288	596	500	192	54	44
10	30	110	4,700	1,300	830	445	276	626	542	162	52	43
11	30	100	3,800	1,600	780	450	244	706	548	145	54	43
12	29	140	2,000	2,100	730	440	240	811	476	138	96	43
13	28	95	1,200	1,700	680	415	260	892	440	138	80	43
14	29	86	920	1,500	640	405	272	860	395	138	59	43
15	29	68	1,000	1,400	610	405	355	860	370	138	52	42
16	30	66	860	1,350	580	405	518	980	345	140	50	42
17	30	64	740	1,300	560	405	450	1,000	325	142	47	42
18	30	62	660	1,400	550	390	1,010	825	360	135	62	41
19	30	61	730	1,500	540	365	3,070	860	405	122	74	41
20	29	61	1,200	1,400	530	365	2,380	825	420	109	51	41
21	29	64	7,000	1,300	520	380	1,870	776	415	105	48	41
22	29	70	24,000	1,100	510	405	1,430	720	415	100	50	41
23	29	76	10,000	1,400	490	415	1,240	644	410	96	46	40
24	29	130	4,800	4,500	476	400	1,140	614	395	96	48	40
25	29	400	4,400	2,400	460	380	1,150	596	335	93	73	40
26	29	280	4,000	1,800	460	405	1,280	626	276	93	55	39
27	30	230	3,500	1,500	685	375	1,500	734	248	96	51	39
28	33	270	2,300	1,400	590	350	1,640	876	233	91	50	39
29	40	580	1,500	1,300	-----	345	1,530	860	248	87	48	39
30	62	700	1,100	1,400	-----	340	1,260	832	260	82	47	39
31	52	-----	1,000	1,500	-----	355	-----	790	-----	84	47	-----
Total	975	4,203	92,510	52,630	21,201	13,073	26,130	23,901	13,853	4,609	1,858	1,267
Mean	31.5	140	2,980	1,698	757	422	871	771	462	149	59.9	42.2
Ac-ft	1,930	8,340	183,500	104,400	42,050	25,930	51,830	47,410	27,480	9,140	3,690	2,510

Calendar year 1964 Max 24,000 Min 28 Mean 551 Ac-ft 399,700
 Water year 1964-65 Max 24,000 Min 28 Mean 702 Ac-ft 508,200

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12- 1	unknown	-	†3,800	1- 6	unknown	-	†5,600
12-10	unknown	-	†5,800	1-24	unknown	-	†5,300
12-22	unknown	21.73	31,400	4-19	0700	9.26	3,470

† About.

Note.--No gage-height record Oct. 1 to Feb. 23, June 13-16, Aug. 27 to Sept. 30.

11-5225. Salmon River at Somesbar, Calif.

Location (revised).--41°22'40", long 123°28'35", in NE¼ sec.3 T.11 N., R.6 E., on left bank at Somesbar 1.0 mile upstream from mouth.
Prior to July 30, 1965, at site 0.5 mile upstream.

Drainage area.--751 sq mi.

Records available.--September 1911 to September 1915, October 1927 to September 1965. 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, datum of 1929, supplementary adjustment of 1956. Prior to October 1927, staff gage, at different datum, and Oct. 1927 to Dec. 22, 1964, water-stage recorder at site 0.5 mile upstream at datum 6.54 ft higher.

Average discharge.--42 years, 1,749 cfs (1,266,000 acre-ft per year).

Extremes.--Maximum discharge during year, 133,000 cfs Dec. 22 (gage height, 43.4 ft, from floodmarks), from rating curve extended above 33,000 cfs; minimum daily, 136 cfs Oct. 2-7, 13, 14, 21-26.
1911-15, 1927-65: Maximum discharge, that of Dec. 22, 1964; minimum, 70 cfs Aug. 25, Sept. 4, 5, 1931.

Remarks.--Records good except those for period of no gage-height record, which are poor. No storage or large diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	141	194	9,000	3,200	4,700	2,500	1,550	3,200	2,400	700	304	230
2	136	310	7,400	3,100	4,400	2,500	1,650	3,100	2,350	680	300	225
3	136	302	4,600	3,100	4,200	2,400	1,600	3,100	2,250	650	288	218
4	136	235	3,100	2,900	4,000	2,300	1,550	3,050	2,200	620	281	213
5	136	235	2,300	5,000	4,300	2,200	1,500	3,000	2,150	600	264	212
6	136	200	1,900	15,000	4,500	2,100	1,500	3,000	2,100	580	250	209
7	136	182	1,700	11,000	4,100	2,100	1,450	3,000	2,000	560	244	205
8	141	207	1,900	6,000	3,800	2,000	1,400	2,950	1,900	540	236	202
9	141	334	3,000	5,100	3,700	2,000	1,300	2,950	1,800	520	237	201
10	141	590	14,000	4,700	3,500	2,000	1,200	2,900	1,700	510	240	198
11	141	540	13,000	5,400	3,300	2,000	1,100	2,900	1,600	500	261	196
12	141	795	7,200	6,500	3,100	1,950	1,050	2,900	1,550	480	288	193
13	136	570	4,000	6,000	2,900	1,900	1,100	2,900	1,500	465	292	191
14	136	395	3,400	5,500	2,800	1,850	1,300	2,850	1,400	450	269	191
15	141	318	3,700	5,100	2,700	1,850	1,800	2,850	1,300	440	256	189
16	146	326	2,700	4,800	2,600	1,840	3,000	2,800	1,250	420	252	187
17	146	278	2,200	4,600	2,500	1,800	4,500	2,800	1,200	410	250	182
18	146	263	2,100	4,900	2,500	1,800	7,000	2,750	1,150	400	286	180
19	141	256	2,700	5,200	2,400	1,750	10,500	2,750	1,100	385	309	180
20	141	249	4,000	5,000	2,400	1,660	9,500	2,700	1,000	375	280	180
21	136	263	30,000	4,600	2,300	1,600	7,700	2,700	960	365	264	180
22	136	294	100,000	4,100	2,300	1,650	7,000	2,700	920	355	261	179
23	136	318	35,000	7,000	2,200	1,750	6,200	2,650	900	350	260	177
24	136	614	16,000	14,000	2,200	1,800	5,400	2,650	860	340	264	175
25	136	2,770	14,000	7,500	2,100	1,800	4,800	2,600	820	330	340	174
26	136	1,480	13,000	6,000	2,100	1,750	4,400	2,600	800	320	305	173
27	146	1,180	7,400	5,200	2,900	1,700	4,000	2,600	780	315	276	171
28	174	1,740	4,700	4,700	2,700	1,650	3,800	2,550	760	310	261	171
29	330	2,350	4,000	4,500	-----	1,550	3,500	2,550	740	307	248	172
30	386	2,820	3,600	5,100	-----	1,550	3,300	2,500	725	303	240	172
31	235	-----	3,400	5,400	-----	1,500	-----	2,500	-----	297	234	-----
Total	4,882	20,608	325,000	180,200	87,200	58,800	105,650	87,050	42,165	13,877	8,340	5,726
Mean	157	687	10,480	5,813	3,114	1,897	3,522	2,808	1,406	448	269	191
Ac-ft	9,680	40,880	644,600	357,400	173,000	116,600	209,600	172,700	83,600	27,520	16,540	11,360

Calendar year 1964 Max 100,000 Min 136 Mean 2,155 Ac-ft 1,565,000

Water year 1964-65 Max 100,000 Min 136 Mean 2,574 Ac-ft 1,863,000

Peak discharge (base, 7,000 cfs)

Note.--No gage-height record Dec. 1 to July 30.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-1	0600	7.70	9,660	1-6	unknown	-	†18,000
12-10	unknown	-	†17,000	1-24	unknown	-	†16,000
12-22	unknown	43.3	133,000	4-19	unknown	-	†14,000

† About.

KLAMATH RIVER BASIN

11-5230. Klamath River at Somesbar, Calif.

Location.--Lat 41°22'40", long 123°29'30", in NE¼ sec.4, T.11 N., R.6 E., on left bank 300 ft downstream from Salmon River and Immlie west of Somesbar Post Office.

Drainage area.--8,480 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

Records available.--October 1927 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 446.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Average discharge.--38 years, 7,781 cfs (5,633,000 acre-ft per year).

Extremes.--Maximum discharge during year, 307,000 cfs Dec. 22 (gage height, 76.5 ft, from floodmarks, from rating curve extended above 80,000 cfs by slope-conveyance study; minimum daily, 1,910 cfs Aug. 5, 6.
1927-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 320 cfs Aug. 25, Sept. 1, 1951.

Remarks.--Records good except those for periods of no gage height record, which are poor. Flow considerably regulated by reservoirs and powerplants above station. Large diversions above station for irrigation. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,980	2,650	25,000	30,000	31,000	18,900	8,920	12,100	8,400	3,200	1,980	2,850
2	1,990	2,780	26,000	27,000	29,000	17,700	9,120	11,100	8,020	3,150	1,970	2,750
3	2,010	2,710	18,000	25,000	27,000	16,700	9,400	10,300	7,700	3,120	1,950	2,700
4	2,020	2,660	13,000	24,000	25,500	15,900	8,950	9,780	7,650	3,100	1,930	2,650
5	2,040	2,710	10,500	35,000	24,500	15,400	8,220	9,100	7,620	3,070	1,910	2,600
6	2,040	2,640	9,000	45,000	24,000	15,200	8,250	8,500	7,450	3,000	1,910	2,550
7	2,100	2,590	8,400	58,000	23,500	14,800	8,180	8,180	7,350	2,900	1,940	2,520
8	2,400	2,700	8,000	45,000	22,500	14,400	7,900	8,050	7,100	2,850	1,960	2,500
9	2,410	2,990	13,000	35,000	22,000	13,300	7,080	8,000	6,720	2,750	1,960	2,600
10	2,420	3,590	25,000	33,000	21,700	13,200	6,650	8,080	6,420	2,650	1,980	2,750
11	2,370	3,490	42,000	32,000	20,800	13,100	6,480	8,450	6,350	2,550	1,970	2,900
12	2,360	4,120	28,000	39,000	19,800	13,000	6,220	9,050	6,140	2,450	1,960	2,980
13	2,360	3,720	17,000	35,000	18,900	12,700	6,220	9,700	5,880	2,380	1,980	2,960
14	2,420	3,230	13,500	32,000	18,000	12,400	6,180	9,820	5,900	2,350	2,010	2,920
15	2,440	2,990	14,000	30,000	17,000	12,200	6,500	9,750	5,880	2,310	2,050	2,900
16	2,440	2,850	15,000	30,000	16,600	11,900	7,380	10,000	5,580	2,280	2,040	2,880
17	2,440	2,830	11,000	29,000	16,000	11,500	7,220	10,400	5,390	2,250	2,030	2,860
18	2,440	2,790	10,500	29,000	16,200	11,200	11,700	9,750	5,340	2,220	2,050	2,820
19	2,440	2,770	14,000	30,000	16,800	11,000	10,000	9,520	5,210	2,200	2,100	2,780
20	2,440	2,770	40,000	31,000	17,000	10,600	28,200	9,620	5,090	2,180	2,250	2,760
21	2,460	2,780	100,000	30,000	17,300	10,700	25,000	9,420	4,940	2,160	2,300	2,800
22	2,460	2,910	180,000	29,000	17,400	10,800	21,000	9,350	4,890	2,140	2,180	2,780
23	2,400	3,070	240,000	30,000	16,900	10,400	17,000	9,180	5,160	2,120	2,140	2,800
24	2,380	3,810	150,000	60,000	16,700	10,000	14,200	9,000	5,230	2,100	2,200	2,820
25	2,460	8,920	120,000	48,000	16,200	9,780	14,500	9,020	4,850	2,080	2,500	2,820
26	2,460	5,940	110,000	37,000	16,200	9,800	15,500	9,250	4,550	2,060	3,300	2,840
27	2,480	5,360	80,000	32,000	22,100	9,550	17,000	9,350	4,250	2,040	3,280	2,880
28	2,580	6,850	56,000	29,000	20,900	9,320	16,000	9,680	3,960	2,030	3,150	2,900
29	2,760	8,880	45,000	29,000	-----	9,100	14,500	9,650	3,660	2,010	3,000	2,950
30	2,820	9,690	37,000	31,000	-----	9,050	13,300	9,350	3,360	2,000	2,950	2,920
31	2,650	-----	33,000	32,000	-----	8,900	-----	9,080	-----	1,990	2,900	-----
Total	73,470	117,790	†1,511.9	†1,061	571,500	382,500	366,770	291,580	176,040	75,690	69,830	83,740
Mean	2,370	3,926	48,770	34,230	20,410	12,340	12,230	9,406	5,868	2,442	2,253	2,791
Ac-ft	145,700	233,600	†2,999	†2,104	†1,134	758,700	727,500	578,300	349,200	150,100	138,500	166,100

Calendar year 1964 Max 240,000 Min 1,600 Mean 9,789 Ac-ft 7,107,000
Water year 1964-65 Max 240,000 Min 1,910 Mean 13,101 Ac-ft 9,484,000

Peak discharge (base, 25,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	unknown	-	†48,000	1-24	unknown	-	†73,000
12-22	unknown	76.5	307,000	4-19	1200	19.73	33,300
1- 7	unknown	-	†70,000				

† About.

† Expressed in thousands.

Note.--No gage-height record Dec. 1 to Feb. 9, Mar. 17-23, Apr. 21-29, June 26 to Sept. 30.

11-5230.3. Red Cap Creek near Orleans, Calif.

Location.--Lat 41°14'25", long 123°32'35", in SW¼ sec.19, T.10 N., R.6 E., on left bank 0.5 mile downstream from Leary Creek, 4.4 miles south of Orleans, and 4.9 miles upstream from mouth.

Drainage area.--56.1 sq mi.

Records available.--August 1958 to September 1965 (discontinued; destroyed by flood of December 1964).

Gage.--Water-stage recorder. Altitude of gage is 630 ft (from topographic map).

Average discharge.--7 years, 180 cfs (130,300 acre-ft per year).

Extremes.--Maximum discharge during year, about 15,000 cfs Dec. 22; minimum daily, 15 cfs Oct. 12, 13, 20-26.
1958-65: Maximum discharge, that of Dec. 22, 1964; minimum, 12 cfs Sept. 25, 1963.

Remarks.--Records good prior to Dec. 2, poor thereafter. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	19	1,040	720	750	200	132	240	86	41	24	21
2	16	31	965	640	650	180	145	225	82	40	24	21
3	16	22	600	560	620	170	155	205	80	39	23	21
4	16	22	320	540	600	165	150	190	77	38	23	21
5	16	26	230	800	560	160	148	180	74	37	23	20
6	16	20	190	2,100	520	155	147	170	72	36	23	20
7	16	18	160	1,200	490	150	146	165	70	35	22	19
8	16	21	150	900	450	145	145	160	66	34	22	19
9	16	31	210	800	400	140	145	155	64	33	23	18
10	16	78	350	720	360	135	145	150	62	33	24	18
11	16	68	250	800	330	132	142	145	59	33	25	17
12	15	124	200	900	300	130	145	142	58	32	26	17
13	15	72	170	800	280	128	148	140	59	32	26	17
14	16	48	150	720	260	125	160	136	60	31	25	17
15	16	39	140	800	250	122	210	130	58	31	24	17
16	16	34	130	840	260	120	400	127	56	30	24	17
17	16	31	125	900	270	120	350	123	54	29	26	17
18	16	29	120	1,000	270	118	1,600	120	53	28	28	17
19	16	27	170	1,100	260	118	2,000	118	52	28	29	17
20	15	27	650	1,200	250	118	1,000	115	50	27	28	17
21	15	28	4,000	1,100	240	116	570	112	48	27	27	17
22	15	29	11,000	1,000	230	118	470	110	47	27	26	17
23	15	32	7,000	1,700	220	116	410	108	46	26	25	17
24	15	75	5,000	2,700	210	116	370	106	44	26	27	17
25	15	191	4,500	1,500	195	116	350	102	44	26	30	17
26	15	131	4,000	1,000	180	118	340	99	45	25	27	16
27	16	149	2,600	860	260	120	330	95	45	25	26	16
28	19	290	1,700	800	240	118	320	92	44	24	25	16
29	22	279	1,400	780	-----	120	300	91	43	24	24	17
30	20	393	1,000	900	-----	122	265	90	42	23	23	17
31	18	-----	850	950	-----	126	-----	88	-----	23	22	-----
Total	502	2,384	49,370	31,330	9,905	4,137	11,338	4,229	1,740	943	774	535
Mean	16.2	79.5	1,593	1,011	354	133	378	136	58.0	30.4	25.0	17.8
Ac-ft	996	4,730	97,920	62,140	19,650	8,210	22,490	8,390	3,450	1,870	1,540	1,060

Calendar year 1964 Max 11,000 Min 15 Mean 263 Ac-ft 191,100
Water year 1964-65 Max 11,000 Min 15 Mean 321 Ac-ft 232,400

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12- 1	0500	6.78	1,200	1-24	unknown	-	+5,000
12-22	unknown	-	+15,000	1-31	unknown	-	+1,000
1- 6	unknown	-	+2,500	4-18	unknown	-	+3,300
1-20	unknown	-	+1,400				

Note.--No gage-height record Dec. 3 to Sept. 30.

+ About.

KLAMATH RIVER BASIN

11-5230.5. Bluff Creek near Weitchpec, Calif.

Location.--Lat 41°14'25", long 123°39'25", in SW¼ sec.19, T.10 N., R.5 E., on left bank 0.8 mile upstream from Aikens Creek, 1.2 miles upstream from mouth, and 4.4 miles northeast of Weitchpec.

Drainage area.--74.6 sq mi.

Records available.--Occasional low-flow measurements, water years 1951-57 and annual maximum, water years 1955-56. August 1958 to September 1965 (discontinued; destroyed by flood of December 1964).

Gage.--Water-stage recorder (digital). Altitude of gage is 400 ft (from topographic map). Sept. 21, 1953, to Sept. 30, 1956, crest-stage gage only, at site 0.2 mile downstream at different datum.

Average discharge.--7 years, 424 cfs (307,000 acre-ft per year).

Extremes.--Maximum discharge during year, 27,000 cfs Dec. 22, by slope-area measurement of maximum flow; minimum daily, 33 cfs Sept. 22-24.

1954-56, 1958-65: Maximum discharge, that of Dec. 22, 1964.

1958-64: Minimum daily discharge, 33 cfs Sept. 22-24, 1965.

Remarks.--Records good prior to Dec. 2, poor thereafter. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	52	2,860	1,450	1,900	740	450	560	128	79	59	46
2	48	75	2,400	1,300	1,600	700	455	520	125	76	58	45
3	48	59	1,250	1,200	1,500	640	430	490	122	75	57	44
4	48	54	820	1,150	1,500	600	440	450	118	73	56	43
5	48	61	600	1,700	1,500	580	435	425	115	72	55	42
6	47	53	410	3,600	1,400	570	420	395	113	72	54	42
7	48	51	350	2,300	1,300	560	425	370	110	71	52	41
8	48	57	320	1,800	1,200	540	430	350	108	71	51	40
9	48	81	400	1,600	1,050	530	430	330	107	71	50	39
10	48	128	800	1,500	950	520	425	315	105	70	48	38
11	47	128	540	1,700	900	510	440	300	104	70	49	37
12	47	294	470	1,800	820	500	420	280	106	70	53	37
13	46	150	420	1,500	760	490	460	265	108	70	57	36
14	46	98	360	1,550	720	480	480	245	110	69	54	36
15	47	81	320	1,650	700	470	620	235	109	69	52	35
16	47	72	300	1,700	700	460	800	220	107	70	50	35
17	47	69	280	1,800	720	450	680	210	103	70	54	34
18	47	65	270	1,900	720	430	3,500	200	98	68	60	34
19	46	64	400	2,000	710	410	4,000	190	95	66	66	34
20	45	61	1,500	2,100	700	395	2,300	185	92	64	63	34
21	45	62	8,000	2,000	680	390	1,700	175	90	64	59	34
22	45	75	19,000	1,900	660	395	1,200	170	88	64	56	33
23	45	108	10,000	2,200	640	400	930	160	84	65	55	33
24	45	429	5,200	5,000	610	400	800	160	80	64	57	33
25	45	713	4,800	2,500	570	390	750	155	82	62	60	34
26	45	387	3,700	1,900	540	380	700	150	88	59	58	34
27	48	498	3,100	1,700	860	395	680	145	87	55	56	34
28	53	1,130	2,600	1,750	800	390	650	140	85	54	54	34
29	59	989	2,200	1,850	-----	365	620	138	82	56	52	35
30	56	1,320	1,900	2,000	-----	375	600	135	80	58	50	35
31	50	-----	1,600	2,200	-----	440	-----	132	-----	58	47	-----
Total	1,481	7,464	77,170	60,300	26,710	14,895	26,670	8,195	3,029	2,075	1,702	1,111
Mean	47.8	249	2,489	1,945	954	480	889	264	101	66.9	54.9	37.0
Ac-ft	2,940	14,800	153,100	119,600	53,000	29,500	52,900	16,300	6,010	4,120	3,380	2,200

Calendar year 1964 Max 19,000 Min 45 Mean 520 Ac-ft 377,200

Water year 1964-65 Max 19,000 Min 33 Mean 632 Ac-ft 457,800

Peak discharge (base, 2,700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12- 1	0230	8.33	3,680	1-20	unknown	-	+3,200
12-22	unknown	-	27,000	1-24	unknown	-	+10,700
1- 6	unknown	-	+5,800	4-18	unknown	-	+8,000

Note.--No gage-height record Dec. 3 to Sept. 30.

+ About.

11-5232. Trinity River above Coffee Creek, near Trinity Center, Calif.

Location.--Lat 41°06'26", long 122°42'23", on line between secs.31 and 32, T.38 N., R.7 W., 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

Records available.--September 1957 to September 1965

Gage.--Water-stage recorder (digital). Datum of gage is 2,533.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Average discharge.--8 years, 406 cfs (293,900 acre-ft per year).

Extremes.--Maximum discharge during year, 20,800 cfs Dec. 22 (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, 28 cfs Oct. 5, 6, 1957-65; Maximum discharge, that of Dec. 22; minimum daily, 28 cfs Sept. 27, Oct. 5, 6, 1964.
Flood of Dec. 22, 1955, reached a stage of 10.5 ft, from floodmarks (discharge, about 11,400 cfs).

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

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	93	595	593	750	357	446	1,340	576	146	53	46
2	29	132	494	553	685	345	433	1,100	551	134	62	50
3	29	87	341	523	635	333	394	982	574	123	71	46
4	29	65	260	486	620	338	415	953	573	121	60	44
5	28	59	213	585	650	342	469	899	563	114	57	44
6	28	53	184	639	595	330	446	730	545	111	54	45
7	29	51	163	541	536	330	411	665	486	106	52	44
8	30	123	181	455	496	342	393	667	413	116	51	43
9	30	320	260	412	464	361	394	699	402	102	49	42
10	30	194	669	409	423	389	372	766	392	93	49	41
11	30	154	786	499	393	411	361	873	376	95	62	41
12	30	141	444	476	381	424	381	978	337	92	95	40
13	29	116	333	445	372	393	433	1,020	393	83	66	39
14	29	101	286	441	361	402	541	980	295	85	53	39
15	29	89	251	517	342	420	379	980	266	81	54	38
16	30	87	219	600	334	433	982	1,070	238	79	52	37
17	30	83	193	630	334	433	740	964	250	83	57	37
18	30	80	188	686	353	402	866	853	250	73	81	33
19	30	80	197	764	372	385	1,550	860	229	74	78	38
20	29	80	282	716	393	389	2,000	791	216	72	63	38
21	29	81	4,820	660	411	433	1,970	740	203	71	67	36
22	29	37	17,100	585	420	487	1,500	674	256	69	63	36
23	29	87	8,730	1,060	394	487	1,300	594	337	66	59	36
24	29	150	4,880	1,120	381	464	1,330	565	242	64	60	34
25	29	312	3,060	794	364	423	1,390	567	209	63	66	34
26	30	230	2,600	655	372	411	1,580	605	199	63	60	34
27	54	186	1,920	577	424	381	1,760	685	173	61	55	34
28	116	186	1,310	532	372	363	1,990	745	153	60	53	35
29	174	184	1,020	564	-----	372	1,900	745	150	57	50	34
30	99	236	832	756	-----	402	1,650	722	143	55	48	33
31	61	-----	686	806	-----	393	-----	664	-----	55	47	-----
Total	1,266	3,932	53,502	19,094	12,642	12,205	29,286	25,481	9,915	2,687	1,357	1,176
Mean	40.8	131	1,726	616	452	394	976	822	330	86.7	59.9	39.2
Ac-ft	2,510	7,800	106,100	37,870	25,080	24,210	58,090	50,540	19,670	5,330	3,680	2,330

Calendar year 1964 Max 17,100 Min 28 Mean 318 Ac-ft 230,700
Water year 1964-65 Max 17,100 Min 28 Mean 474 Ac-ft 343,210

Peak discharge (base, 1,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1230	12.30	20,800	4-28	1930	5.78	2,380
4-20	2400	5.80	2,400				

KLAMATH RIVER BASIN

11-5237. Coffee Creek near Trinity Center, Calif.

Location.--Lat 41°05'35", long 122°45'10", in NW 1/4 sec. 2, T.37 N., R.8 W., on left bank 0.75 mile upstream from Little Boulder Creek, 3.2 miles upstream from mouth, and 8 miles northwest of new location of Trinity Center.

Drainage area.--107 sq mi.

Records available.--September 1957 to September 1965.

Gage.--Water-stage recorder (digital). Altitude of gage is 2,750 ft (from topographic map). Prior to Apr. 30, 1965 at site 75 ft upstream at datum 4.00 ft higher.

Average discharge.--8 years, 296 cfs (214,300 acre-ft per year).

Extremes.--Maximum discharge during year, 17,700 cfs Dec. 22 (gage height, 10.90 ft, from floodmarks) from rating extended above 2,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 32 cfs Oct. 11-13, 21-24.

1957-65: Maximum discharge, that of Dec. 22, 1964; minimum, 23 cfs Jan. 13, Oct. 2, 1960.

Remarks.--Records fair except those for period Dec. 4 to April 30, which are poor. Slight regulation at low flow.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	89	442	450	360	270	320	980	860	187	76	52
2	34	92	342	400	500	260	310	960	850	175	76	56
3	34	63	242	380	460	255	290	783	910	163	78	52
4	33	57	193	370	465	255	320	720	910	164	74	50
5	33	52	160	420	470	255	350	690	920	154	69	49
6	33	43	140	470	450	250	330	630	900	150	67	50
7	34	45	130	400	400	250	310	643	765	144	65	50
8	34	89	140	340	360	255	300	830	560	140	64	49
9	34	143	200	310	340	270	290	920	470	134	64	48
10	33	103	500	300	310	285	280	1030	484	123	61	48
11	32	89	560	350	295	310	270	1120	470	123	76	46
12	32	80	330	340	280	310	290	1180	413	126	83	46
13	32	70	250	320	275	300	330	1200	371	123	70	45
14	33	64	210	330	270	300	450	1200	377	109	65	44
15	34	60	180	380	260	310	650	1220	332	109	62	42
16	34	59	160	440	250	320	720	1360	305	106	60	42
17	34	57	150	470	250	310	600	1180	305	109	61	42
18	33	55	140	510	260	300	700	1110	305	103	80	42
19	33	55	150	550	280	290	1100	1160	305	105	74	42
20	33	57	300	520	290	300	1500	1060	295	102	65	42
21	32	53	4000	470	300	330	1400	1030	290	93	54	42
22	32	59	13000	440	310	360	1100	920	295	96	66	41
23	32	59	7000	700	300	355	950	840	305	93	63	41
24	32	135	3500	820	280	340	980	310	270	90	64	39
25	33	248	2200	620	270	310	1050	820	251	89	71	39
26	34	150	2000	500	285	300	1100	890	224	83	64	39
27	57	119	1500	430	305	290	1200	1020	203	86	62	39
28	117	111	1000	400	280	280	1300	1140	195	83	59	39
29	194	117	800	450	-----	280	1200	1120	187	75	55	39
30	74	193	600	540	-----	290	1100	1110	195	76	53	39
31	50	-----	500	580	-----	310	-----	990	-----	76	52	-----
Total	1,353	2,681	41,024	14,000	9,355	9,100	21,090	30,671	13,522	3,620	2,063	1,334
Mean	43.6	89.4	1,323	452	334	294	703	989	451	117	66.7	44.5
Ac-ft	2,680	5,320	81,370	27,770	18,560	18,050	41,330	60,840	26,320	7,130	4,100	2,650

Calendar year 1964 Max 13,000 Min 32 Mean 249 Ac-ft 181,000
 Water year 1964-65 Max 13,000 Min 32 Mean 410 Ac-ft 297,200

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	Unknown	10.90	17,700	5-28	2030	8.68	1,370
5-16	2015	8.80	1,610				

Note.--No gage-height record Dec. 5 to April 30, May 4-6, July 18-28.

11-5254. Clair Engle Lake near Lewiston, Calif.

Location.--Lat 40°48'05", long 122°45'44", sec.15, T.34 N., R.8 W., on side of intake structure of Trinity Dam on Trinity River, 9 miles north of Lewiston.

Drainage area.--692 sq mi.

Records available.--November 1960 to September 1965. 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, staff gage at same site and datum.

Extremes.--Maximum contents during year, 2,454,800 acre-ft May 31 (elevation, 2,370.43 ft); minimum, 1,436,000 acre-ft Nov. 23 (elevation, 2,297.77 ft).

1961-65: Maximum contents, 2,548,600 acre-ft Apr. 15, 1963 (elevation, 2,376.02 ft); minimum, 971,900 acre-ft Nov. 21, 22, 1961 (elevation, 2,251.93 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 ft (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 hrs.

Cooperation.--Records furnished by Bureau of Reclamation.

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

2,290	1,347,300	2,340	1,986,400
2,300	1,462,200	2,350	2,133,900
2,310	1,583,600	2,360	2,287,100
2,320	1,711,400	2,380	2,617,000
2,330	1,845,600		

Contents, in thousands of acre-feet, at 2400 hours, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1555.1	1459.7	1451.7	1943.8	2123.1	2167.1	2175.5	2386.8	2453.6	2381.8	2263.4	2120.8
2	1551.4	1458.1	1456.2	1949.8	2127.6	2166.7	2176.6	2393.3	2452.1	2378.6	2259.1	2116.6
3	1548.5	1456.2	1458.8	1953.9	2131.2	2168.4	2177.3	2395.7	2451.3	2375.5	2254.8	2112.6
4	1545.2	1454.4	1460.1	1957.4	2134.8	2170.0	2177.8	2396.7	2450.3	2372.3	2249.8	2108.4
5	1541.9	1452.3	1460.8	1965.4	2139.9	2171.7	2178.8	2397.2	2449.6	2368.9	2245.2	2104.5
6	1538.4	1449.4	1461.5	1974.7	2143.4	2171.7	2179.6	2398.3	2448.6	2365.7	2240.6	2100.9
7	1534.9	1446.6	1461.7	1981.1	2146.9	2170.0	2181.1	2401.4	2447.0	2362.2	2235.6	2096.9
8	1531.4	1445.5	1462.9	1985.8	2149.9	2169.0	2182.9	2405.2	2444.7	2358.8	2230.7	2092.9
9	1527.8	1445.3	1464.9	1989.6	2151.4	2168.4	2184.6	2409.1	2442.4	2354.8	2225.8	2089.0
10	1524.5	1445.8	1471.2	1993.9	2153.4	2169.4	2186.1	2413.1	2440.9	2351.1	2220.9	2084.9
11	1521.1	1446.9	1477.5	1999.6	2155.0	2169.7	2188.0	2418.5	2439.4	2347.3	2217.0	2081.0
12	1517.6	1446.6	1480.7	2004.2	2157.1	2170.0	2189.6	2424.4	2437.4	2343.5	2212.6	2077.2
13	1514.0	1446.0	1482.7	2008.6	2158.8	2169.7	2191.3	2431.0	2435.0	2339.8	2207.8	2072.9
14	1510.7	1445.3	1484.4	2012.7	2159.9	2169.9	2194.2	2437.4	2432.8	2336.0	2202.8	2068.6
15	1507.1	1444.3	1485.5	2017.0	2161.4	2170.0	2201.4	2442.4	2430.0	2332.0	2197.9	2064.7
16	1503.4	1443.1	1486.4	2022.4	2162.6	2170.0	2208.3	2445.2	2427.2	2328.4	2193.5	2060.6
17	1500.0	1442.1	1486.6	2027.7	2164.0	2170.2	2213.6	2447.7	2424.6	2324.4	2188.7	2055.9
18	1496.8	1440.5	1487.4	2033.2	2164.6	2170.6	2225.5	2448.5	2422.0	2320.6	2185.1	2051.5
19	1493.3	1439.4	1488.8	2039.7	2165.6	2171.2	2246.4	2449.0	2419.4	2316.9	2180.4	2046.9
20	1490.0	1438.7	1491.6	2045.9	2166.7	2171.7	2266.1	2449.6	2416.7	2312.5	2175.3	2042.5
21	1486.8	1438.1	1534.9	2051.6	2167.6	2172.6	2282.9	2449.8	2414.0	2308.7	2170.9	2037.5
22	1483.3	1437.1	1682.1	2056.8	2168.0	2173.7	2294.3	2449.3	2411.2	2304.7	2166.2	2032.8
23	1479.8	1436.0	1773.7	2069.3	2167.6	2174.4	2303.8	2448.2	2408.6	2300.5	2162.0	2028.0
24	1476.4	1437.4	1827.5	2080.3	2166.7	2174.3	2313.1	2447.0	2405.8	2296.8	2157.4	2023.5
25	1473.0	1438.9	1859.2	2087.5	2165.9	2174.0	2322.4	2446.0	2402.4	2292.9	2152.9	2018.6
26	1469.9	1439.1	1885.4	2093.3	2165.9	2174.4	2333.6	2446.3	2399.0	2288.6	2148.2	2014.4
27	1467.8	1439.8	1903.7	2098.4	2166.8	2174.0	2345.4	2448.0	2395.6	2284.7	2143.4	2010.0
28	1466.6	1441.8	1916.0	2102.6	2167.1	2174.1	2358.5	2450.3	2392.2	2280.5	2139.0	2006.4
29	1466.3	1442.8	1925.6	2107.2	-----	2174.1	2370.7	2452.0	2388.8	2276.5	2134.4	2001.6
30	1464.1	1445.1	1933.4	2112.4	-----	2174.6	2378.9	2453.8	2385.0	2272.1	2129.7	1997.3
31	1461.7	-----	1939.3	2118.0	-----	2174.6	-----	2454.8	-----	2268.4	2124.9	-----
(+)	2299.96	2298.55	2336.71	2348.94	2352.20	2352.69	2365.79	2370.43	2366.17	2358.80	2349.40	2340.75
(#)	-97.2	-16.6	+494.2	+178.7	+49.1	+7.5	+204.3	+75.9	-69.8	-116.6	-143.5	-127.6
(+)	2290	280	200	-	-	1250	2430	6930	8050	9820	6770	5400

Calendar year 1964..... # -276.3

Water year 1964-65..... # +438.4

+ Elevation, in feet, at end of month.

Change in contents, in thousands of acre-feet.

++ Evaporation, in acre-feet, furnished by Bureau of Reclamation. No record January, February.

Klamath River Basin

11-5254.3. Judge Francis Carr powerplant near French Gulch, Calif.

Location.--Lat 40°38'49", long 122°37'34", at powerplant 1.6 miles downstream from Mill Creek and 3.8 miles south of French Gulch.

Records available.--April 1963 to September 1965.

Gage.--Recorded powerplant output.

Extremes.--1963-65: Maximum daily discharge, 3,280 cfs for several days in May, August, September 1964; no flow May 6-9, 1963.

Remarks.--Water is diverted from Tinity River at NW¹/₄SE¹/₄ sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Reservoir.

Cooperation.--Records furnished by Bureau of Reclamation.

Contents, in acre-feet, at 2400 hours, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,121	1,531	477	703	577	1,476	1,082	559	3,257	2,266	2,591	2,325
2	1,838	1,519	479	703	583	1,496	1,126	647	3,023	2,351	2,396	2,276
3	1,503	1,544	482	700	583	570	1,043	2,158	3,033	2,276	2,425	2,151
4	1,696	1,349	485	865	573	556	959	2,565	3,027	2,206	2,614	2,171
5	1,698	1,419	560	1,005	586	514	973	2,684	2,976	2,221	2,607	1,901
6	1,696	1,486	563	717	606	1,134	989	2,020	2,964	2,205	2,606	1,906
7	1,703	1,594	559	859	610	2,188	669	593	2,977	2,199	2,673	2,100
8	1,657	1,517	561	730	584	1,370	749	667	2,973	2,300	2,680	2,090
9	1,689	1,543	478	694	869	1,370	734	539	2,335	2,334	2,676	2,090
10	1,714	1,059	535	699	813	923	550	505	2,529	2,350	2,676	2,079
11	1,685	715	543	639	801	1,370	529	500	2,512	2,204	2,674	2,062
12	1,697	357	562	604	660	1,370	520	500	2,475	2,364	2,665	2,034
13	1,651	585	557	634	802	1,370	538	501	2,437	2,317	2,672	2,092
14	1,673	713	563	695	787	1,371	584	504	2,401	2,285	2,555	2,026
15	1,571	716	559	566	781	1,372	589	1,093	2,386	2,280	2,551	2,239
16	1,677	733	565	563	801	1,223	537	2,654	2,402	2,220	2,571	2,240
17	1,679	347	553	560	790	1,163	529	3,213	2,383	2,312	2,563	2,140
18	1,664	663	553	575	1,109	1,111	566	3,257	2,477	2,126	2,566	2,245
19	1,686	655	559	595	871	1,006	622	3,257	2,423	2,296	2,490	2,253
20	1,686	656	542	596	1,141	1,049	837	2,604	2,477	2,282	2,569	2,337
21	1,681	655	602	604	1,069	1,105	726	2,462	2,524	2,315	2,533	2,401
22	1,680	657	1,422	600	1,049	1,086	577	2,395	2,514	2,123	2,553	2,481
23	1,678	655	927	596	1,364	1,116	599	3,043	2,524	2,294	2,488	2,484
24	1,691	664	774	584	1,870	1,372	616	2,719	2,515	2,234	2,420	2,474
25	1,659	869	557	630	1,950	1,372	602	2,676	2,431	2,152	2,419	2,362
26	1,687	773	507	631	1,844	1,373	591	2,341	2,493	2,221	2,394	2,155
27	1,682	811	504	619	1,240	1,369	587	2,037	2,449	2,236	2,481	2,203
28	1,694	654	562	640	1,225	1,362	642	2,106	2,476	2,226	2,428	2,203
29	1,689	653	563	445	-----	1,370	591	2,077	2,473	2,222	2,506	2,223
30	1,636	661	568	575	-----	1,380	677	1,993	2,479	2,254	2,508	2,220
31	1,513	-----	561	549	-----	1,374	-----	2,374	-----	2,197	2,523	-----
Total	52,444	28,763	19,297	20,185	26,943	38,286	20,988	57,749	78,860	69,763	79,073	65,979
Mean	1,692	959	590	651	962	1,235	700	1,863	2,629	2,251	2,551	2,199
Ac-ft	104,160	57,060	36,290	40,340	53,440	75,940	41,580	114,540	156,420	138,380	156,850	130,970
Calendar year 1964	Max	3,280	Min	477	Mean	1,756	Ac-ft	1,273,410				
Water year 1964-65	Max	3,257	Min	445	Mean	1,527	Ac-ft	1,105,570				

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., on right bank 400 ft upstream from Deadwood Creek and 0.8 mile northeast of Lewiston.

Drainage area.--728 sq mi.

Records available.--August 1911 to September 1965.

Gage.--Altitude of gage is 1,810 ft (from topographic map). Prior to Oct. 16, 1930, staff 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.--54 years, 1,652 cfs (1,196,000 acre-ft per year) adjusted for storage, evaporation and diversion.

Extremes.--Maximum discharge during year, 392 cfs July 31 (gage height, 3.75 ft); minimum daily, 148 cfs Sept. 4, 14.

1911-60 (prior to regulation by Trinity Lake); Maximum discharge, 71,600 cfs Dec. 22, 1955 (gage height, 27.3 ft, from flood-marks, site and datum then in use); minimum, 23 cfs July 30, 1924.

1961-65: Maximum discharge, 12,700 cfs Apr. 20, 1963 (gage height, 12.38 ft); minimum daily, 131 cfs May 4, 1963.

Remarks.--Records good except for periods of no gage-height record, which are fair. Flow regulated by Clair Engle Lake (see p. 443), beginning in November 1960. Diversion to Judge Francis Carr Powerplant (see preceding page), began in April 1963. Small diversions above head of Trinity Lake for irrigation, power and placer mining. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Contents, in acre-feet at 2400 hours, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	205	236	227	198	157	161	168	179	166	153	208	155
2	205	257	205	168	157	161	169	181	164	153	159	153
3	202	254	205	179	155	161	169	179	164	150	159	155
4	202	254	202	177	157	159	169	177	166	153	161	148
5	202	251	202	170	159	157	170	177	166	166	159	153
6	202	254	202	172	159	157	170	175	164	157	159	155
7	202	254	205	170	157	155	170	177	164	155	159	153
8	202	254	198	170	157	157	172	179	166	153	157	153
9	205	254	210	168	157	161	172	179	166	153	155	153
10	205	257	210	172	161	166	170	179	166	157	155	153
11	205	257	209	172	161	161	170	172	164	155	157	155
12	205	254	208	170	161	161	168	177	161	153	157	150
13	205	254	208	172	159	161	166	179	161	153	155	150
14	202	254	210	170	159	159	164	175	161	155	155	148
15	205	254	210	170	159	164	170	175	161	157	155	153
16	208	254	210	170	157	164	170	177	159	157	155	153
17	208	254	212	170	157	161	172	172	157	155	155	150
18	208	254	215	168	155	159	179	168	157	155	157	150
19	208	254	215	168	155	164	175	168	157	153	153	153
20	208	254	218	168	155	164	170	170	155	153	157	150
21	208	254	233	166	155	164	168	175	155	153	155	157
22	208	254	239	166	157	164	166	177	155	153	157	157
23	208	254	221	164	157	165	163	175	155	157	155	153
24	210	257	221	164	155	165	166	170	155	155	155	161
25	208	257	218	164	155	166	166	172	157	153	155	159
26	208	257	224	164	157	166	166	170	157	155	157	157
27	208	257	218	161	161	166	166	177	157	155	155	159
28	208	260	215	161	161	167	163	183	155	164	155	155
29	208	257	218	157	-----	167	168	177	155	168	155	157
30	205	257	215	157	-----	168	170	175	153	161	153	179
31	205	-----	218	157	-----	168	-----	170	-----	264	153	-----
Total	6,378	7,632	6,620	5,223	4,412	5,039	5,075	5,436	4,799	4,934	4,892	4,637
Mean	206	254	214	168	158	163	169	175	160	159	158	155
Ac-ft	12,650	15,140	13,130	10,360	8,750	9,990	10,070	10,780	9,520	9,790	9,700	9,200
Mean†	355	939	8,844	3,726	2,004	1,540	4,343	3,386	1,751	673	485	300
Ac-ft†	21,900	55,980	543,800	229,100	111,300	94,680	258,400	208,200	104,200	41,390	29,820	17,870
Calendar year 1964:	Max	381	Min	146	Mean	207	Ac-ft	150,100	Mean†	1,638	Ac-ft†	1,189,000
Water year 1964-65:	Max	264	Min	148	Mean	178	Ac-ft	129,100	Mean†	2,372	Ac-ft†	1,717,000

† Adjusted for change in storage, diversion, and evaporation from Clair Engle Lake.

Note.--No gage-height record March 20 to April 7, May 2, 6.

KLAMATH RIVER BASIN

11-5258. Weaver Creek near Douglas City, Calif.

Location.--Lat 40°40'15", long 122°56'30", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.33 N., R.10 W., on left bank 0.2 mile downstream from highway bridge and 1.3 miles north of Douglas City.

Drainage area.--48.4 sq mi.

Records available.--October 1958 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1,680 ft (from topographic map).

Average discharge.--7 years, 55.8 cfs (40,400 acre-ft per year).

Extremes.--Maximum discharge during year, 3,980 cfs Dec. 22 (gage height, 12.72 ft), from rating curve extended above 150 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.4 cfs Oct. 1, 3, 4.

1958-65: Maximum discharge, that of Dec. 22, 1964; no flow Aug. 26, 1964.

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the reports indicated.

Report	Water year	Date	Discharge (cfs)	Gage height (feet)
WSP 1635	1959	Jan. 12, 1959	1,750	9.45
WSP 1715	1960	Feb. 8, 1960	2,300	10.37
Basic Data Report	1961	Jan. 31, 1961	1,900	9.68
Basic Data Report	1962	Feb. 13, 1962	1,550	9.07
Basic Data Report	1963	Jan. 31, 1963	2,920	11.40
Basic Data Report	1964	Jan. 20, 1964	2,860	11.32

Remarks.--No diversion or regulation above station.

Cooperation.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

Revisions.--Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1961-64, superseding figures published in Surface Water Records of California.

Jan. 31, 1961..... 992
 Feb. 13, 1962..... 760
 Jan. 31, 1963..... 1,300
 Jan. 20, 1964..... 1,060

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
January 1961.....	1,542	922	13	49.7	3,060
Water year 1960-61.....	-	953	1.0	51.2	37,030
Calendar year 1961.....	-	953	1.0	49.6	35,910
February 1962.....	4,176	760	11	149	8,280
Water year 1961-62.....	-	760	0.4	36.2	26,220
Calendar year 1962.....	-	760	0.4	45.0	32,590
January 1963.....	1,889	1,300	-	60.9	3,750
Water year 1962-63.....	-	1,300	1.8	77.3	55,980
Calendar year 1963.....	-	1,300	1.3	71.4	51,690
January 1964.....	3,330.6	1,060	9.6	10.7	6,610
Water year 1963-64.....	-	1,060	0	32.7	23,750

11-5258. Weaver Creek near Douglas City, Calif.--Continued

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	5.9	194	132	169	52	38	79	35	11	3.5	2.4
2	.5	10	159	122	142	52	38	73	31	9.9	2.7	2.2
3	.4	7.1	81	116	137	50	36	68	29	9.1	2.7	2.0
4	.4	5.8	45	98	137	49	37	63	29	8.7	2.4	1.9
5	.5	5.2	29	748	134	48	38	59	29	8.3	2.3	1.9
6	.6	5.1	21	1010	123	48	37	57	27	8.0	2.2	1.6
7	.7	4.9	17	681	112	46	38	53	26	6.6	2.1	1.9
8	.7	7.4	28	414	106	45	44	52	24	6.2	1.8	1.8
9	.8	16	53	310	98	44	45	51	23	6.0	1.7	1.9
10	.6	33	169	378	92	42	44	51	21	6.1	1.9	1.7
11	.7	43	153	707	87	42	42	50	20	6.0	2.9	1.7
12	.7	48	54	539	83	42	41	52	20	6.0	4.5	1.5
13	1.0	27	27	378	80	41	43	52	20	5.4	3.3	1.6
14	.9	16	18	311	76	39	43	51	23	5.6	2.5	1.5
15	.8	12	16	336	72	38	63	50	22	5.4	2.3	1.4
16	1.2	10	9.8	377	70	37	79	52	20	4.7	2.0	1.3
17	1.3	9.9	6.9	369	67	37	69	52	19	4.2	2.0	1.4
18	1.5	9.3	5.6	411	66	36	274	49	18	4.2	6.6	1.5
19	1.7	8.6	31	498	64	36	351	47	16	4.2	5.1	1.6
20	1.9	8.2	94	537	63	37	218	46	15	4.3	4.0	1.7
21	1.9	9.0	1620	488	61	36	186	50	15	4.5	3.7	1.3
22	1.8	11	2570	377	62	35	140	45	14	4.1	3.6	1.4
23	1.8	10	1620	914	58	35	118	40	13	3.9	3.6	1.3
24	2.0	38	1470	588	55	34	106	40	13	3.4	4.1	1.2
25	2.3	98	1340	354	54	34	99	38	13	3.3	4.6	1.3
26	2.7	41	834	269	56	39	98	37	13	3.4	4.1	1.5
27	3.8	36	922	226	72	40	96	37	13	3.4	3.9	1.4
28	5.6	218	767	197	56	36	99	38	12	3.5	3.2	1.7
29	8.5	116	410	184	-----	36	94	38	10	3.3	2.8	1.9
30	6.1	135	249	184	-----	40	85	37	11	3.2	2.5	1.8
31	4.3	-----	175	181	-----	38	-----	37	-----	3.4	2.6	-----
Total	58.1	1004.4	13188.3	12434	2452	1264	2739	1544	594	1693	972	493
Mean	1.87	33.5	425	401	87.6	40.8	91.3	49.8	19.8	54.6	31.4	16.4
Ac-ft	115	1990	26160	24660	4860	2510	5430	3060	1180	336	193	98

Calendar year 1964 Max 2,570 Min 0 Mean 64.2 Ac-ft 46,600
 Water year 1964-65 Max 2,570 Min 0.4 Mean 97.5 Ac-ft 70,590

11-5259. Browns Creek near Douglas City, Calif.

Location--Lat 40°38'35", long 122°58'45", in NE 1/4 sec. 10, T.32 N., R.10 W., on right bank 2 miles upstream from mouth and 2.1 miles west of Douglas City.

Drainage area--71.6 sq mi.

Records available--January 1957 to September 1965.

Gage--Water-stage recorder. Altitude of gage is 1,640 ft (from topographic map).

Average discharge--8 years, 86.3 cfs (62,480 acre-ft per year).

Extremes--Maximum discharge during year, 3,790 cfs Dec. 22 (gage height, 16.29 ft) from rating curve extended above 1,400 cfs; minimum daily, 2.9 cfs Oct. 5.
1957-65: Maximum discharge, 3,950 cfs Feb. 18, 1958 (gage height, 16.60 ft), from rating curve extended above 1,400 cfs; minimum, 0.3 cfs July 31, Aug. 1, 1962.

Remarks--Small diversion for irrigation 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	34	181	269	376	86	54	131	48	22	12	8.9
2	3.0	60	180	258	329	83	58	124	46	21	12	9.0
3	3.3	30	139	231	288	81	56	119	44	20	12	9.3
4	3.7	19	106	197	255	78	56	112	41	20	11	9.1
5	2.9	16	88	518	244	80	56	107	41	19	11	8.4
6	3.6	14	73	704	216	81	58	103	41	19	9.5	8.0
7	3.6	13	62	595	188	79	56	98	40	18	8.8	7.8
8	3.3	16	57	448	175	76	73	93	39	18	9.4	8.4
9	3.8	35	54	405	160	74	77	89	38	17	9.4	8.3
10	4.0	81	64	376	148	73	77	87	36	17	8.7	7.3
11	4.4	68	88	423	137	73	75	83	34	17	11	7.3
12	4.0	101	73	421	131	71	83	81	32	16	16	7.2
13	3.6	78	70	405	126	68	105	79	34	16	13	7.3
14	3.4	53	63	385	123	67	208	76	35	15	11	7.9
15	4.1	39	61	408	118	65	543	73	35	15	10	7.9
16	4.1	32	54	439	116	63	711	72	33	14	11	7.4
17	4.6	27	48	449	111	63	468	69	33	14	11	7.2
18	4.5	23	45	484	108	63	612	67	33	13	18	7.6
19	4.8	21	67	545	105	64	733	65	31	12	16	7.9
20	4.6	20	131	548	102	58	605	65	31	12	13	7.6
21	4.6	22	1,180	508	101	50	495	69	28	12	12	7.7
22	4.6	27	2,840	456	99	48	397	65	27	13	13	7.6
23	4.9	25	2,010	741	95	50	343	63	27	12	13	6.5
24	5.1	37	1,030	966	92	52	285	60	26	12	12	6.8
25	5.5	79	759	717	88	50	243	58	25	12	13	7.7
26	5.9	77	866	556	86	52	212	55	28	11	12	8.0
27	6.3	65	841	466	111	57	189	54	25	11	12	8.2
28	14	104	640	422	91	51	175	51	24	11	11	8.8
29	34	119	500	419	-----	49	156	50	23	11	8.5	8.9
30	22	129	409	448	-----	50	141	50	23	11	9.1	8.2
31	14	-----	325	429	-----	51	-----	49	-----	11	9.5	-----
Total	197.2	1,464	13,109	14,636	4,319	2,006	7,400	2,417	1,001	462	358.9	239.2
Mean	6.36	48.8	423	472	154	64.7	247	78.0	33.4	14.9	11.6	7.94
Ac-ft	391	2,900	26,000	29,030	8,570	3,980	14,680	4,790	1,980	916	712	472

Calendar year 1964 Max 8,520 Min 0.7 Mean 70.3 Ac-ft 51,050
Water year 1964-65 Max 2,840 Min 2.9 Mean 130 Ac-ft 94,420

11-5265. North Fork Trinity River at Helena, Calif.

Location.--Lat 40°46'55", long 123°07'40", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.21, T.34 N., R.11 W., on right bank 500 ft downstream from East Fork of North Fork, 0.6 mile north of Helena, 1.0 mile upstream from mouth, and 6 miles northwest of Junction City.

Drainage area.--151 sq mi.

Records available.--August 1911 to September 1913, January 1957 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 1,380 ft (from topographic map). August 1911 to September 1913 at site three-quarters of a mile downstream at different datum.

Average discharge.--10 years, 427 cfs (309,100 acre-ft per year).

Extremes.--Maximum discharge during year, 35,800 cfs Dec. 22 (gage height, 27.93 ft from floodmark), from rating curve extended above 1,800 cfs on basis of slope-area measurement of peak flow; minimum daily, 16 cfs Oct. 5, 6, 12, 13.
1911-13, 1957-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 7.5 cfs Sept. 26, 1964.

Remarks.--No known regulation or diversion 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 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	54	1520	700	773	398	268	743	326	135	57	34
2	18	153	1130	640	688	380	264	663	295	153	58	34
3	18	94	667	580	623	361	256	555	334	155	56	32
4	17	67	402	570	587	358	253	475	374	159	53	32
5	16	56	319	630	609	354	257	425	376	145	50	32
6	16	50	296	700	598	352	253	384	308	138	49	31
7	17	45	291	600	550	348	243	368	308	145	49	30
8	17	54	376	530	508	345	232	352	291	144	48	30
9	17	143	636	490	483	348	219	357	262	133	49	30
10	17	178	2400	430	465	345	226	369	288	115	45	29
11	17	181	2010	530	451	352	218	393	303	105	47	28
12	16	267	856	520	445	353	215	461	280	101	60	29
13	16	156	515	500	422	341	223	491	228	98	52	28
14	17	111	399	520	407	334	234	476	224	97	46	27
15	19	94	382	580	420	328	328	457	198	98	43	27
16	19	89	329	660	436	328	488	480	177	100	41	27
17	19	87	290	720	432	329	429	498	171	101	39	26
18	20	84	261	770	450	317	1140	419	181	99	47	27
19	20	83	273	800	466	307	2940	409	197	90	48	27
20	19	89	519	780	435	302	2110	394	217	81	43	27
21	19	95	7210	700	480	301	1650	358	230	77	42	27
22	19	110	19,000	551	477	309	1280	313	237	75	41	26
23	19	120	10,000	1,290	457	310	1,110	291	233	71	40	26
24	18	372	6,000	2,000	436	308	1,050	274	218	67	40	26
25	19	375	3,500	1,120	405	299	1,020	273	187	66	47	25
26	20	110	3,000	687	381	307	1,060	296	155	66	44	25
27	22	76	2,000	501	495	289	1,130	339	141	65	42	25
28	47	341	1,550	435	427	273	1,140	390	139	63	39	25
29	158	453	1,050	481	-----	272	993	425	137	60	38	25
30	83	622	890	679	-----	272	864	402	145	56	35	25
31	53	-----	780	795	-----	271	-----	375	-----	55	35	-----
Total	830	4,809	68,851	21,489	13,856	10,091	22,093	12,905	7,160	3,112	1,422	841
Mean	26.8	160	2,221	693	495	326	736	416	239	100	45.9	28.0
Ac-ft	1,650	9,540	136,600	42,620	27,480	20,020	43,820	25,600	14,200	6,170	2,820	1,670

Calendar year 1964 Max 19,000 Min 7.5 Mean 426 Ac-ft 309,400
 Water year 1964-65 Max 19,000 Min 16 Mean 459 Ac-ft 332,200

11-5270. Trinity River near Burnt Ranch, Calif.

Location.--Lat 40°47'20", long 123°26'20", in S½ sec.19, T.5 N., R.7 E., 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.

Records available.--October 1931 to September 1940, October 1956 to September 1965. 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, datum of 1929, supplementary adjustment of 1956. Oct. 1, 1931 to Jan. 19, 1940, water-stage recorder, at site 2 miles upstream at different datum.

Average discharge.--18 years, 2,466 cfs (1,785,000 acre-ft per year) unadjusted.

Extremes.--Maximum discharge during year, 78,100 cfs Dec. 22 (gage height, 29.82 ft); minimum daily, 215 cfs Oct. 1.

1931-40, 1956-65: 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 good except those for periods of no gage height record, which are fair. Flow regulated by Clair Engle Lake beginning in November 1960 (see p. 443). Small diversions above station for mining and irrigation. Records of chemical analysis for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	215	424	5,060	4,160	4,360	1,320	1,070	2,060	1,190	640	420	276
2	258	615	4,320	3,850	3,910	1,280	1,080	1,900	1,110	650	432	270
3	270	655	2,930	3,710	3,540	1,260	1,070	1,760	1,130	675	357	270
4	270	536	2,090	3,360	3,280	1,250	1,040	1,660	1,190	675	340	270
5	264	484	1,660	4,270	3,180	1,240	1,040	1,590	1,230	645	332	264
6	267	456	1,390	7,460	3,010	1,230	1,050	1,520	1,210	625	318	264
7	267	440	1,230	6,840	2,760	1,220	1,030	1,440	1,210	625	306	267
8	267	444	1,170	5,310	2,560	1,210	1,040	1,390	1,100	625	303	264
9	267	620	2,160	4,610	2,400	1,200	1,090	1,370	988	600	300	264
10	270	910	4,120	4,410	2,240	1,190	1,120	1,380	994	560	297	261
11	273	922	5,820	5,610	2,090	1,180	1,080	1,400	1,060	540	303	258
12	273	1,060	3,010	5,930	1,990	1,180	1,060	1,450	1,050	535	371	258
13	270	1,010	2,210	5,260	1,910	1,180	1,090	1,530	928	510	368	255
14	270	770	1,840	4,810	1,830	1,170	1,170	1,510	860	480	343	252
15	276	665	1,720	4,820	1,740	1,170	1,420	1,470	855	468	318	249
16	273	625	1,540	5,100	1,680	1,170	3,030	1,500	775	472	300	249
17	276	590	1,400	5,120	1,600	1,170	2,400	1,570	740	484	291	246
18	276	560	1,300	5,290	1,520	1,160	3,030	1,450	745	480	332	246
19	276	552	1,380	5,820	1,480	1,120	7,420	1,380	785	448	396	246
20	276	552	19,300	5,960	1,420	1,100	5,960	1,390	820	413	350	246
21	276	556	12,200	5,640	1,360	1,090	4,890	1,340	850	399	326	249
22	276	595	52,800	5,090	1,300	1,110	3,870	1,310	865	392	318	249
23	276	600	45,100	6,180	1,280	1,120	3,230	1,220	860	378	318	249
24	276	645	24,500	10,300	1,240	1,120	2,940	1,170	840	371	318	243
25	276	2,330	17,000	7,220	1,200	1,090	2,760	1,130	780	368	332	246
26	276	1,640	15,400	5,950	1,200	1,110	2,750	1,140	720	364	332	246
27	291	1,270	12,200	5,070	1,400	1,120	2,880	1,170	645	357	322	246
28	332	1,710	8,810	4,570	1,380	1,080	2,860	1,270	625	357	303	249
29	476	2,450	6,830	4,370	-----	1,050	2,700	1,360	625	346	297	252
30	650	1,980	5,740	4,720	-----	1,040	2,310	1,340	645	346	288	252
31	472	-----	4,860	4,690	-----	1,080	-----	1,270	-----	343	276	-----
Total	9,231	26,666	271,090	165,500	58,860	36,010	69,480	44,440	27,425	15,171	10,207	7,656
Mean	298	889	8,745	5,339	2,102	1,162	2,316	1,434	914	489	329	255
Ac-ft	18,310	52,890	537,700	328,300	116,700	71,420	137,800	88,150	54,400	30,090	20,250	15,190

Calendar year 1964 Max 52,800 Min 213 Mean 1,637 Ac-ft 1,188,000
 Water year 1964-65 Max 52,800 Min 215 Mean 2,032 Ac-ft 1,471,000

Note.--No gage-height record Feb. 17 to Mar. 16, July 10-14.

11-5274. New River at Denny, Calif.

Location.--Lat 40°56'45", long 123°22'55", in NE¼ sec.33, T.7 N., R.7 E., on left bank at upstream side of private road bridge, 0.3 mile northeast of Denny, and 0.5 mile downstream from Quinby Creek. Prior to July 23, 1965, on downstream side of bridge.

Drainage area.--173 sq mi.

Records available.--October 1927 to December 1928 (published as "near Denny"), June 1959 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 1,349.34 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Oct. 1, 1927 to Dec. 23, 1928, at site 2.6 miles downstream at different datum.

Average discharge.--7 years, 447 cfs (323,600 acre-ft per year).

Extremes.--Maximum discharge during year, about 60,000 cfs Dec. 22 (gage height, 38.7 ft, from floodmarks), by field estimate of maximum flow; minimum 22 cfs Oct. 13.

1927-28, 1959-65; Maximum discharge, that of Dec. 22, 1964; minimum daily, 18 cfs Oct. 5-7, 1961.

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

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	34	3,340	1,400	2,120	550	284	535	233	90	60	35
2	23	64	2,840	1,300	1,750	515	292	515	233	86	60	35
3	23	43	1,510	1,250	1,400	475	288	465	218	82	58	35
4	23	35	750	1,200	1,360	470	281	475	215	80	58	35
5	23	33	580	2,000	1,460	442	281	410	203	76	58	34
6	23	33	450	5,000	1,350	438	278	398	200	74	58	33
7	23	31	350	4,000	1,150	422	264	342	197	72	57	33
8	24	35	300	3,000	960	418	260	354	191	68	57	33
9	25	70	400	2,100	872	410	270	298	188	66	57	33
10	25	94	800	1,600	854	402	274	292	185	64	57	33
11	24	86	1,800	2,100	814	394	270	292	185	68	58	31
12	23	185	1,300	2,200	752	390	264	288	182	66	60	31
13	22	96	900	2,000	710	386	254	292	168	66	62	31
14	24	70	700	1,700	674	382	254	284	179	66	60	31
15	25	58	550	1,800	662	374	284	278	179	68	57	31
16	25	57	480	1,900	635	370	338	284	165	68	55	30
17	26	53	440	2,000	615	362	342	284	158	66	55	30
18	26	53	370	2,200	575	362	830	284	150	64	64	30
19	25	52	400	2,400	565	354	2,980	284	142	66	64	29
20	24	53	1,500	2,600	545	350	1,870	284	142	68	57	29
21	23	57	10,000	2,400	525	346	1,520	281	138	66	53	29
22	23	64	45,000	1,900	510	342	1,080	281	132	64	53	29
23	23	72	20,000	3,000	500	338	830	274	125	62	52	29
24	23	260	8,000	6,000	500	330	716	267	118	62	50	29
25	24	744	6,600	3,700	490	323	662	270	114	62	64	28
26	25	346	6,000	2,600	485	320	662	257	112	62	53	28
27	26	260	5,200	1,920	565	309	656	260	110	62	48	27
28	36	642	4,500	1,620	704	298	650	260	106	62	45	27
29	53	907	2,600	1,450	-----	288	625	248	102	62	42	27
30	43	1,110	2,000	1,500	-----	288	585	254	96	60	39	27
31	34	-----	1,700	1,550	-----	288	-----	230	-----	60	35	-----
Total	81.2	5,697	131,360	71,390	24,102	11,736	18,444	9,820	4,866	2,108	1,706	922
Mean	26.2	190	4,237	2,303	861	379	615	317	162	68.0	55.0	30.7
Ac-ft	1,610	11,300	260,500	141,600	47,810	23,280	36,580	19,480	9,650	4,180	3,380	1,830

Calendar year 1964 Max 45,000 Min 22 Mean 674 Ac-ft 489,000
 Water year 1964-65 Max 45,000 Min 22 Mean 775 Ac-ft 561,200

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12- 1	0615	8.03	3,850	1-20	unknown	-	†3,000
12-22	unknown	38.7	†60,000	1-24	unknown	-	†11,000
1- 6	unknown	-	†6,000	4-19	unknown	10.90	3,690

† About.

Note.--No gage-height record Dec. 4 to Jan. 27, Jan. 29, 30, Feb. 8, Mar. 13. Computed twice-daily wire-weight gage readings Jan. 28, Jan. 31 to Feb. 7, Feb. 9 to Mar. 12, Mar. 14 to July 22.

11-5281. South Fork Trinity River at Forest Glen, Calif.

Location.--Lat 40°22'30", long 123°19'35", in SE¼ sec.13, T.1 S., R.7 E., on right bank 15 ft downstream from bridge on State Highway 36, at Forest Glen, and 100 ft downstream from Glen Creek.

Drainage area.--208 sq mi.

Records available.--Occasional low-flow measurements, water years 1953-57 and annual maximum, water years 1955-57. October 1959 to September 1965, discontinued as a continuous-record station; converted to a crest-stage partial-record station.

Gage.--Water-stage recorder. Datum of gage is 2,253.49 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Oct. 1, 1959, crest-stage gage only, at datum 1.26 ft lower.

Average discharge.--6 years, 406 cfs (293,900 acre-ft per year).

Extremes.--Maximum discharge during year, 41,200 cfs Dec. 22 (gage height, 27.7 ft, from floodmarks), from rating curve extended above 5,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 15 cfs Oct. 8-14, 16, 22-25. 1954-57, 1959-65: Maximum discharge, that of Dec. 22, 1964.

1959-65: Minimum daily discharge, 15 cfs Sept. 24-27, 1962, Sept. 25, 26, Oct. 8-14, 16, 22-25, 1964.

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

Revisions (water years).--1956(M), 1960(M), 1963(M).

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	33	1,480	1,600	2,110	712	313	732	173	79	37	28
2	16	65	1,450	1,500	1,780	596	310	684	166	72	37	27
3	16	51	860	1,400	1,560	553	298	648	160	69	36	27
4	16	36	542	2,000	1,430	532	292	612	158	65	35	27
5	16	30	388	3,500	1,720	508	288	564	157	64	34	26
6	16	28	301	4,500	1,660	511	280	528	151	61	34	26
7	16	27	252	2,600	1,400	497	282	500	146	59	33	26
8	15	39	232	2,300	1,210	469	275	480	141	58	33	26
9	15	114	280	2,100	1,050	448	285	455	136	55	33	26
10	15	196	600	2,000	965	444	288	427	131	55	32	25
11	15	207	1,020	2,400	865	420	280	410	128	55	34	25
12	15	528	583	2,500	815	406	298	392	125	53	39	24
13	15	225	427	2,300	748	388	307	379	120	52	35	24
14	15	126	358	2,100	712	364	307	364	123	51	33	24
15	16	91	356	2,300	676	343	578	349	120	50	32	24
16	15	74	292	2,500	604	313	1,300	337	112	48	32	24
17	16	65	255	2,650	572	313	860	325	106	47	31	24
18	16	58	232	2,830	564	304	2,220	304	104	45	32	23
19	16	54	485	3,180	580	295	3,200	298	98	44	32	23
20	16	52	2,170	3,160	865	288	2,300	292	95	44	31	23
21	16	56	12,100	2,790	935	288	1,900	278	91	44	30	23
22	15	70	33,200	2,450	800	292	1,580	262	97	43	30	22
23	15	76	16,600	5,890	724	288	1,340	245	88	42	30	22
24	15	108	8,290	6,660	636	278	1,170	232	85	41	30	22
25	15	406	5,410	3,550	564	278	1,090	218	84	41	30	22
26	16	285	4,820	2,670	572	290	1,050	210	84	40	30	22
27	24	230	4,280	2,200	1,080	319	1,020	200	80	40	29	22
28	40	1,060	3,200	1,920	855	295	960	194	79	39	28	21
29	41	835	2,420	1,990	-----	282	895	188	79	39	28	22
30	36	632	2,020	2,360	-----	304	810	184	82	38	28	22
31	29	-----	1,800	2,400	-----	304	-----	178	-----	38	28	-----
Total	574	5,857	106,703	84,300	28,052	11,922	26,376	11,469	3,499	1,571	996	722
Mean	18.5	195	3,442	2,719	1,002	385	879	370	117	50.7	32.1	24.1
Ac-ft	1,140	11,620	211,600	167,200	55,640	23,650	52,320	22,750	6,940	3,120	1,980	1,430

Calendar year 1964 Max 33,200 Min 15 Mean 487 Ac-ft 353,300
 Water year 1964-65 Max 33,200 Min 15 Mean 773 Ac-ft 559,400

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1600	27.7	41,200	1-23	1900	16.37	11,700
1-6	unknown	-	+5,000	4-19	0500	10.92	3,580
1-19	2330	10.82	3,300				

Note.--No gage-height record Dec. 9, 10, Dec. 22 to Jan. 16.

+ About.

11-5282. South Fork Trinity River near Hyampom, Calif.

Location.--Lat 40°36'30", long 123°27'00", in SW¼ sec.25, T.3 N., R.6 E., on left bank just above private road bridge, 0.3 mile downstream from Deep Gulch, 0.5 mile upstream from Hayfork Creek, and 0.7 mile south of Hyampom.

Drainage area.--342 sq mi.

Records available.--September 1956 to September 1965 (discontinued; destroyed by flood of December 1964).

Gage.--Water-stage recorder. Datum of gage is 1,259.49 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Aug. 15, 1962, water-stage recorder at site 0.7 mile upstream at datum 10.89 ft higher.

Average discharge.--9 years, 732 cfs (529,900 acre-ft per year).

Extremes.--Maximum discharge during year, about 57,000 cfs Dec. 22 (gage height, 25.8 ft, from floodmarks), by field estimate of maximum flow; minimum daily, 25 cfs Oct. 13, 14.

1956-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 24 cfs Sept. 26, 27, 1964.

Flood of Dec. 22, 1955, reached a stage of 22.2 ft, former site and datum, from floodmarks (discharge, 39,400 cfs, on basis of slope-area measurement of maximum flow).

Remarks.--Records poor. No regulation or diversion above station. Records of water temperatures for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	53	3,360	3,200	3,100	1,060	490	1,380	295	136	63	42
2	27	109	3,530	2,900	2,900	1,000	500	1,300	285	132	62	42
3	26	119	2,200	2,700	2,700	960	480	1,200	275	128	61	41
4	27	74	1,270	2,600	2,800	920	470	1,140	265	122	61	41
5	27	53	870	3,500	2,900	880	450	1,080	260	118	60	40
6	28	41	643	4,800	2,600	840	440	1,020	250	115	59	40
7	28	35	518	3,900	2,400	800	430	960	245	112	58	39
8	27	40	438	3,500	2,200	770	420	910	235	108	57	39
9	28	109	750	3,400	2,050	740	410	870	228	105	56	39
10	28	389	1,300	3,300	1,900	710	410	820	225	102	60	39
11	28	403	2,100	4,000	1,750	690	410	770	225	98	66	38
12	28	1,000	1,500	4,500	1,650	670	410	740	220	96	68	38
13	25	620	1,000	3,600	1,550	650	420	700	215	94	60	38
14	25	299	750	3,400	1,450	640	430	660	205	92	56	37
15	26	192	700	3,600	1,350	620	1,000	630	200	91	53	37
16	27	143	600	3,700	1,280	610	2,400	590	190	90	52	36
17	27	116	500	3,800	1,200	590	1,700	560	180	88	51	36
18	27	99	450	3,900	1,150	570	3,000	540	172	85	51	36
19	27	88	800	4,000	1,180	560	6,000	510	165	83	50	36
20	27	81	2,500	4,200	1,210	540	4,300	480	160	80	49	36
21	27	81	15,000	4,000	1,250	520	3,400	460	160	77	48	36
22	27	99	43,000	3,900	1,230	510	2,900	450	164	75	48	35
23	27	114	30,000	4,600	1,150	505	2,400	430	156	74	47	35
24	27	155	16,000	6,200	1,050	500	2,200	410	152	72	47	35
25	27	796	11,000	5,400	940	490	2,100	390	148	71	47	35
26	27	728	10,000	4,500	960	480	1,900	370	142	70	46	35
27	36	557	9,000	4,000	1,040	500	1,800	355	140	69	46	35
28	86	1,890	6,600	3,700	1,080	500	1,700	340	138	67	45	35
29	110	2,150	5,200	3,500	-----	490	1,600	330	136	66	45	35
30	92	1,320	4,200	3,700	-----	470	1,500	315	138	65	44	35
31	63	-----	3,600	3,500	-----	470	-----	305	-----	64	43	-----
Total	1,088	11,953	179,379	119,500	48,020	20,255	46,070	21,015	5,969	2,845	1,659	1,121
Mean	35.1	398	5,786	3,855	1,715	653	1,536	678	199	91.8	53.5	37.4
Ac-ft	2,160	23,700	355,800	237,000	95,250	40,180	91,380	41,680	11,840	5,640	3,290	2,220

Calendar year 1964 Max 43,000 Min 24 Mean 859 Ac-ft 623,900

Water year 1964-65 Max 43,000 Min 25 Mean 1,257 Ac-ft 910,000

Peak discharge (base, 4,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	unknown	25.8	+57,000	1-24	unknown	-	+14,000
1-6	unknown	-	+5,400	4-19	unknown	-	+7,000

Note.--No gage-height record Dec. 9 to Sept. 30.

† About.

11-5284. Hayfork Creek near Hayfork, Calif.

Location.--Lat 40°31'10", long 123°05'05", in SW¼ sec.23, T.31 N., R.11 W., on left bank 1,300 ft downstream from Carrier Gulch and 5.8 miles southeast of town of Hayfork.

Drainage area.--86.7 sq mi.

Records available.--October 1956 to September 1965, discontinued as a continuous-record station; converted to a crest-stage partial-record station.

Gage.--Water-stage recorder (digital). Datum of gage is 2,555.27 ft above mean sea level, datum of 1929.

Average discharge.--9 years, 117 cfs (84,700 acre-ft per year).

Extremes.--Maximum discharge during year, 7,520 cfs Dec. 22 (gage height, 14.56 ft, from rating curve extended above 3,300 cfs on basis of slope-area measurement at gage height, 11.0 ft; minimum daily, 2.4 cfs Oct. 2, 4.

1956-65: Maximum discharge, that of Dec. 22, 1964; minimum, 1.2 cfs Sept. 1, 1957.

Flood of Dec. 22, 1955, reached a stage of 11.0 ft, from floodmarks (discharge, 3,880 cfs, on basis of slope-area measurement of maximum flow).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.8	20	387	354	507	171	111	182	44	20	8.2	5.4
2	2.4	39	362	346	450	157	114	164	43	18	7.9	5.4
3	2.6	24	256	328	405	145	106	149	40	17	9.0	5.4
4	2.4	16	182	289	375	139	105	137	37	16	7.9	5.5
5	2.6	12	138	604	380	141	110	128	35	15	6.8	5.4
6	2.8	10	110	912	360	149	101	116	33	14	6.0	4.8
7	3.2	9.4	92	639	318	148	104	107	31	13	5.6	4.6
8	3.3	16	83	487	283	141	107	103	31	13	5.3	4.7
9	3.2	61	90	424	256	136	107	98	30	12	5.5	4.1
10	3.2	79	110	437	231	137	104	95	30	12	5.7	4.3
11	3.3	61	195	552	213	137	111	91	29	13	8.2	4.4
12	3.3	123	148	555	196	133	131	88	28	13	14	4.3
13	3.3	86	119	504	186	125	146	85	28	13	9.0	4.3
14	3.4	56	103	472	178	120	187	82	29	12	7.9	4.2
15	3.0	42	95	507	167	116	508	77	29	11	7.4	3.9
16	3.1	35	82	553	159	114	669	74	28	10	7.0	3.6
17	3.0	30	72	564	155	110	464	71	26	9.4	7.2	3.4
18	3.3	27	65	617	156	104	1,130	68	25	9.3	10	3.7
19	3.7	24	77	711	162	99	1,270	64	24	8.6	9.2	5.1
20	4.4	23	301	753	171	94	778	65	23	8.6	8.1	4.7
21	4.9	24	2,640	675	176	95	646	67	22	8.6	7.5	4.8
22	4.1	27	5,530	582	177	102	490	63	21	8.8	8.7	5.0
23	4.1	28	3,580	1,400	165	102	404	59	20	9.3	8.3	4.9
24	4.1	36	1,980	1,620	153	98	354	57	20	8.7	8.1	4.9
25	4.5	171	1,420	821	145	93	325	56	21	8.9	7.8	4.7
26	5.2	139	1,370	608	142	93	303	52	23	8.0	7.8	4.3
27	6.2	100	1,120	515	232	100	283	51	20	7.9	7.1	4.8
28	13	225	731	456	196	90	255	49	20	7.3	6.6	5.1
29	23	253	575	465	-----	85	230	48	19	6.7	6.1	7.1
30	21	215	489	549	-----	93	204	47	20	6.7	5.7	6.6
31	14	-----	410	558	-----	101	-----	45	-----	6.9	5.3	-----
TOTAL	166.4	2,011.4	22,912	18,857	6,694	3,668	9,957	2,638	829	345.7	234.9	143.4
MEAN	5.37	67.0	739	608	239	118	332	85.1	27.6	11.2	7.58	4.78
AC-FT	330	3,990	45,450	37,400	13,280	7,280	19,750	5,230	1,640	686	466	284

CALENDAR YEAR 1964	MAX	5,530	MIN	2.1	MEAN	113	AC-FT	82,390
WATER YEAR 1964-65	MAX	5,530	MIN	2.4	MEAN	188	AC-FT	135,800

Peak discharge (base, 1,100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1115	14.56	7,520	4-18	1600	8.30	1,950
1-23	1815	9.73	2,910				

11-5284.4, Big Creek near Hayfork, Calif.

Location.--Lat 40°33'11", long 123°08'33", in NE¼SE¼ sec.7, T.31 N., R.11 W., on right bank 30 ft upstream from bridge on Hayfork-Douglas City road and 2 miles east of Hayfork.

Drainage area.--27.1 sq mi.

Records available.--October 1960 to September 1961, October 1962 to September 1965.

Gage.--Water-stage recorder. Altitude of gage is 2,385 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,610 cfs Dec. 22 (gage height, 11.75 ft), from rating curve extended above 230 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 20-23.

1960-61, 1962-65: Maximum discharge, that of Dec. 22, 1964; no flow at times in each year.

Remarks.--City of Hayfork and large irrigators can divert up to 15 cfs daily above station for municipal supply, domestic use, and irrigation.

Cooperation.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	6.6	109	169	191	50	39	39	14	3.0	0.2	0.1
2	.3	14	101	162	173	60	38	38	13	1.9	.2	.1
3	.4	7.9	62	155	162	59	38	34	12	2.4	.2	.1
4	.2	7.2	42	145	153	58	38	33	12	1.8	.2	.1
5	.3	6.6	32	221	160	57	37	32	12	1.6	.2	.8
6	.3	6.6	27	303	151	56	37	40	12	3.5	.2	.6
7	.3	5.6	24	218	138	56	36	38	12	4.4	.2	.1
8	.4	8.2	24	175	128	54	36	37	12	4.4	.2	.6
9	.4	12	28	166	120	55	36	35	12	3.9	.2	.1
10	.4	14	40	171	112	53	35	32	9.5	4.4	.2	.5
11	.2	13	61	216	90	53	35	28	9.1	4.4	.3	.1
12	.3	15	44	214	81	52	34	24	9.1	3.9	.7	1.2
13	.3	12	35	191	65	50	34	21	8.2	3.7	.3	.1
14	.3	11	31	184	61	50	35	20	8.6	1.9	.6	.7
15	.5	9.1	29	212	58	48	72	18	8.6	2.0	.2	.4
16	.3	8.6	26	245	54	46	101	18	7.9	.5	.3	.6
17	.6	9.5	24	251	53	46	78	19	5.9	.2	.1	.3
18	.4	9.1	23	282	52	44	131	18	6.9	.2	1.8	1.1
19	.5	9.1	30	330	52	44	184	19	4.9	.2	1.8	3.0
20	0	8.6	50	322	52	44	138	17	3.0	.2	1.5	3.9
21	0	9.5	542	287	52	43	110	17	2.7	.2	1.6	1.5
22	0	9.9	1,130	243	50	43	88	17	3.0	.2	1.2	.2
23	0	9.9	898	369	46	42	75	16	2.4	.2	1.4	.3
24	.1	15	636	451	44	42	66	15	2.0	.2	.9	.3
25	.1	32	537	303	42	42	59	15	3.2	.4	.6	.3
26	.4	24	543	227	40	41	55	14	4.7	.2	.9	.3
27	.4	20	482	193	48	41	50	14	1.9	.2	.4	.4
28	2.2	48	368	175	41	40	46	14	2.0	.2	.1	.6
29	5.6	50	278	175	-----	40	44	15	1.9	.2	.4	.5
30	4.9	56	223	204	-----	40	40	13	2.7	.2	.4	.4
31	3.9	-----	193	210	-----	39	-----	14	-----	.2	.1	-----
Total	24.2	468.0	6,672	7,169	2,469	1,488	1,845	724	219.2	50.9	17.6	19.3
Mean	0.78	15.6	215	231	88.2	48.0	61.5	23.4	7.31	1.64	0.57	0.64
Ac-ft	48	928	13,230	14,220	4,900	2,950	3,660	1,440	435	101	35	38

Calendar year 1964 Max 1,130 Min 0 Mean 37.8 Ac-ft 27,400

Water year 1964-65 Max 1,130 Min 0 Mean 58.0 Ac-ft 41,980

Note.--Fragmentary or no gage-height record Mar. 20 to Apr. 13, July 16 to Sept. 19, Sept. 21-30.

KLAMATH RIVER BASIN

11-5285. Hayfork Creek near Hyampom, Calif.

Location.--Lat 40°37'35", long 123°26'00", in NW¼ sec.19, T.3 N., R.7 E., on right bank 1.2 miles upstream from mouth and 1.3 miles northeast of Hyampom.

Drainage area.--378 sq mi.

Records available.--August 1953 to September 1965.

Gage.--Water-stage recorder. Datum of gage is 1,270.67 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Average discharge.--12 years, 509 cfs (368,500 acre-ft per year).

Extremes.--Maximum discharge during year, 28,800 cfs Dec. 22 (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 Oct. 4, 5.
1953-65: Maximum discharge, that of Dec. 22, 1964; 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 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	53	1,450	1,790	2,360	685	404	562	165	100	42	35
2	17	77	1,370	1,740	2,130	640	420	526	159	94	42	34
3	18	95	1,100	1,690	1,890	604	412	490	150	90	42	32
4	16	68	725	1,560	1,810	572	392	460	142	82	42	34
5	16	58	522	2,830	1,860	563	392	430	138	80	42	35
6	17	52	404	5,430	1,790	563	404	415	138	78	41	35
7	17	50	338	3,630	1,560	563	384	395	135	77	38	35
8	17	53	298	2,710	1,390	536	400	375	132	73	38	34
9	18	81	295	2,440	1,280	509	416	358	130	68	38	34
10	19	169	314	2,380	1,170	492	416	346	128	68	35	32
11	20	184	662	2,730	1,080	480	408	326	125	68	38	32
12	19	256	554	2,760	990	472	424	306	125	68	49	32
13	19	271	428	2,450	916	448	448	294	125	66	50	31
14	20	175	363	2,230	880	428	496	282	132	65	46	31
15	20	133	338	2,320	835	408	815	270	135	61	42	29
16	19	117	298	2,560	800	396	1,960	262	130	60	41	29
17	20	107	275	2,620	780	396	1,270	246	125	55	40	29
18	20	99	256	2,740	765	396	2,290	250	122	53	44	29
19	20	93	315	3,040	770	384	3,510	238	120	52	52	29
20	20	90	1,130	3,280	775	380	2,500	234	112	52	50	31
21	20	88	7,710	3,080	780	376	1,980	234	105	50	46	35
22	21	101	21,700	2,730	780	384	1,550	230	96	50	44	35
23	23	101	14,700	4,060	750	384	1,280	214	96	50	44	32
24	23	111	8,300	6,880	710	380	1,090	210	94	49	44	32
25	23	290	5,950	4,140	680	370	966	204	94	49	46	32
26	23	334	6,620	3,180	662	384	882	195	98	49	42	32
27	25	271	6,040	2,800	790	404	819	180	100	47	42	32
28	39	558	4,000	2,430	760	388	749	180	94	47	40	32
29	48	845	2,980	2,380	-----	373	682	174	90	44	38	34
30	64	608	2,420	2,510	-----	408	616	171	100	42	36	34
31	56	-----	2,070	2,530	-----	396	-----	165	-----	41	35	-----
Total	734	5,588	93,925	89,650	31,743	14,162	28,775	9,222	3,635	1,928	1,309	972
Mean	23.6	186	3,030	2,892	1,134	457	959	297	121	62.2	42.2	32.4
Ac-ft	1,460	11,080	186,300	177,800	62,960	28,090	57,070	18,290	7,210	3,820	2,600	1,930

Calendar year 1964 Max 21,700 Min 16 Mean 483 Ac-ft 350,800
Water year 1964-65 Max 21,700 Min 16 Mean 772 Ac-ft 558,600

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1200	19.14	28,800	1-23	2300	11.96	9,390
1- 6	0300	10.07	5,690	4-18	2200	9.08	4,120

11-5290. South Fork Trinity River near Salyer, Calif.

Location.--Lat 40°50'30", long 123°34'00", in SE¼ sec.1, T.5 N., R.5 E., on left bank 4 miles south of Salyer and 8 miles upstream from mouth. Prior to July 26, 1965, on right bank.

Drainage area.--898 sq mi.

Records available.--October 1911 to September 1913, October 1950 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near China Flat" 1911-13.

Gage.--Water-stage recorder (digital). Datum of gage is 549.99 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Oct. 12, 1911 to Aug. 10, 1913, staff gage at site 7.7 miles downstream at different datum. Nov. 12, 1950 to July 26, 1965, at datum 12.55 ft lower.

Average discharge.--17 years, 1,765 cfs (1,278,000 acre-ft per year).

Extremes.--Maximum discharge during year, 95,400 cfs Dec. 22 (gage height, 47.6 ft, from floodmarks, from rating curve extended above 21,000 cfs by slope-conveyance study; minimum daily, 65 cfs Oct. 1, 2, 5.
1911-13, 1950-65: Maximum discharge, that of Dec. 22, 1964; minimum, 54 cfs Sept. 10, 1955.

Remarks.--Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station. Records of water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	158	5,720	6,200	7,280	2,290	1,250	2,700	675	325	160	112
2	65	185	5,620	5,600	6,550	2,170	1,230	2,540	655	312	158	109
3	67	259	4,390	5,200	5,970	2,070	1,200	2,400	630	300	157	108
4	67	220	2,790	5,000	5,650	2,000	1,180	2,220	610	290	153	107
5	65	174	2,140	7,500	5,970	1,940	1,170	2,110	590	278	150	106
6	66	155	1,710	9,500	5,950	1,890	1,160	2,010	575	268	146	105
7	69	144	1,440	8,600	5,330	1,860	1,150	1,930	560	257	144	104
8	69	148	1,320	7,600	4,790	1,810	1,140	1,830	545	249	144	103
9	68	202	1,510	7,000	4,360	1,730	1,120	1,740	530	241	143	104
10	69	558	2,500	6,500	4,040	1,700	1,110	1,670	510	238	144	103
11	68	758	3,990	8,000	3,770	1,660	1,150	1,590	500	232	152	102
12	69	1,450	2,880	8,600	3,560	1,610	1,180	1,520	492	229	170	101
13	66	1,360	2,250	7,400	3,350	1,570	1,240	1,470	492	224	158	100
14	66	750	1,930	7,000	3,190	1,490	1,400	1,400	491	219	148	100
15	67	518	1,870	7,200	3,050	1,450	2,500	1,340	470	213	133	100
16	68	410	1,630	7,400	2,930	1,380	5,140	1,290	455	210	131	100
17	69	352	1,440	7,600	2,820	1,300	3,670	1,210	430	206	130	98
18	71	319	1,300	8,000	2,730	1,260	6,560	1,160	410	200	130	98
19	71	293	1,570	8,400	2,680	1,220	11,500	1,110	391	197	130	98
20	71	275	4,570	8,800	2,660	1,200	8,200	1,080	382	190	129	98
21	71	269	35,000	8,000	2,630	1,200	6,660	1,040	382	190	122	98
22	70	315	70,000	7,600	2,590	1,200	5,490	990	393	183	121	100
23	70	342	50,000	8,500	2,510	1,180	4,650	940	367	182	120	101
24	71	440	25,000	12,000	2,410	1,160	4,100	900	358	179	120	98
25	71	1,780	20,000	10,000	2,300	1,180	4,000	860	349	178	119	98
26	71	1,670	18,000	9,200	2,230	1,220	3,800	835	340	176	119	98
27	81	1,330	15,000	8,050	2,450	1,250	3,580	800	330	175	119	98
28	128	3,250	11,000	7,350	2,480	1,190	3,310	775	330	172	117	95
29	180	4,210	9,500	7,090	-----	1,170	3,110	735	329	170	114	95
30	198	3,040	8,000	7,700	-----	1,180	2,890	705	331	168	112	95
31	180	-----	7,000	7,850	-----	1,220	-----	695	-----	165	112	-----
Total	2,547	25,334	321,070	240,440	106,230	46,750	95,840	43,595	13,902	6,816	4,205	3,032
Mean	82.2	844	10,360	7,756	3,794	1,508	3,195	1,406	463	220	136	101
Ac-ft	5,050	50,250	636,800	476,900	210,700	92,730	190,100	86,470	27,570	13,520	8,340	6,010

Calendar year 1964 Max 70,000 Min 62 Mean 1,823 Ac-ft 1,323,000
Water year 1964-65 Max 70,000 Min 65 Mean 2,492 Ac-ft 1,804,000

Peak discharge (base, 8,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	unknown	47.6	95,400	1-20	unknown	-	†9,000
1-6	unknown	-	†10,500	1-24	unknown	-	†26,000
1-12	unknown	-	†9,200	4-19	0200	24.00	12,500

Note.--No gage-height record Dec. 21 to Jan. 27, Mar. 16 to Apr. 15, Apr. 25 to Sept. 15.

† About.

KLAMATH RIVER BASIN

11-5298. Willow Creek near Willow Creek, Calif.
(Formerly published as Willow Creek at Willow Creek)

Location.--Lat 40°56'50", long 123°39'25", in SE¼SW¼ sec.30, T.7 N., R.5 E., on right bank 0.1 mile upstream from Boise Creek, 1.5 miles northwest of town of Willow Creek, and 1.8 mile upstream from mouth. Prior to July 14, 1965, at site 1.4 miles downstream.

Drainage area.--41.0 sq mi.

Records available.--August 1959 to September 1965. Prior to October 1964, published as "at Willow Creek."

Average discharge.--6 years, 172 cfs (124,500 acre-ft per year).

Gage.--Water-stage recorder (digital). Datum of gage is 585.54 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Aug. 13, 1959 to Dec. 22, 1964, at site 1.4 miles downstream at datum 85.55 ft lower.

Extremes.--Maximum discharge during year, about 17,000 cfs Dec. 22 (gage height, 25.3 ft, from floodmarks); minimum daily, 6.8 cfs Sept. 28, 29.

1959-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 6.8 cfs Sept. 28, 29, 1965.

Remarks.--Records good except those for period of no gage-height record, which are poor. No regulation; small diversion for irrigation of about 40 acres above station.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	14	1,540	850	620	150	86	210	38	23	17	15
2	12	38	1,500	780	500	120	90	190	37	22	17	14
3	12	21	710	700	420	110	92	175	36	22	17	12
4	12	18	350	620	400	105	100	158	35	22	16	13
5	11	26	230	800	380	100	94	145	34	22	15	13
6	12	19	190	2,200	360	95	92	130	33	21	15	11
7	12	16	160	1,200	350	92	91	120	32	21	14	12
8	12	20	150	1,000	320	90	90	110	31	21	13	10
9	12	30	180	900	300	88	90	102	31	20	14	11
10	12	109	340	820	270	86	90	95	30	20	13	11
11	12	140	250	900	250	86	91	89	29	21	12	10
12	12	268	210	1,000	230	84	92	85	30	21	13	10
13	12	130	190	850	220	82	95	81	31	21	14	11
14	12	80	170	800	200	82	108	79	31	21	14	11
15	11	60	160	850	190	80	150	74	31	19	14	11
16	12	50	150	920	180	80	245	72	30	20	15	10
17	12	43	140	980	190	79	265	69	30	19	15	8.0
18	12	40	130	1,050	190	79	450	66	29	18	15	7.7
19	11	38	250	1,150	185	78	1,600	63	28	17	17	7.4
20	11	37	600	1,300	180	78	1,050	59	28	17	17	7.4
21	11	40	4,000	1,100	180	78	790	57	27	18	17	8.0
22	11	54	12,000	950	175	78	610	54	27	18	16	8.3
23	11	60	4,500	1,200	170	77	455	52	27	19	16	8.6
24	11	228	3,100	2,500	160	76	380	50	27	18	18	8.6
25	11	422	2,900	1,200	150	76	360	48	28	18	18	8.0
26	11	338	2,200	950	140	76	345	46	28	15	18	7.1
27	12	422	1,800	800	160	75	330	45	27	15	17	7.1
28	16	979	1,500	720	190	74	300	44	25	15	18	6.8
29	19	715	1,300	750	-----	74	270	42	24	16	16	6.8
30	16	674	1,200	780	-----	72	240	41	23	16	16	7.4
31	14	-----	1,000	820	-----	78	-----	40	-----	17	15	-----
Total	379	5,129	43,100	31,440	7,260	2,678	9,141	2,691	897	593	482	292.2
Mean	12.2	171	1,390	1,014	259	86.4	305	86.8	29.9	19.1	15.5	9.74
Ac-ft	752	10,170	85,490	62,360	14,400	5,310	18,130	5,340	1,780	1,180	956	580

Calendar year 1964 Max 12,000 Min 10 Mean 247 Ac-ft 179,200
Water year 1964-65 Max 12,000 Min 6.8 Mean 285 Ac-ft 206,400

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12- 2	0300	7.37	1,820	1-24	unknown	-	±6,000
12-22	unknown	25.3	±17,000	4-19	unknown	-	±2,500
1- 6	unknown	-	±3,500				

Note.--No gage-height record Dec. 4 to July 13.

. f About.

11-5300. Trinity River at Hoopa, Calif.
(Formerly published as Trinity River near Hoopa)

Location (revised).--Lat 41°03'00", long 123°40'15", SE¼NW¼ sec.25, T.8 N., R.4 E., in Hoopa Indian Reservation, on left bank at Hoopa 0.4 mile upstream from Supply Creek. Prior to Feb. 25, 1965, at site 2.5 miles upstream.

Drainage area.--2,865 sq mi.

Records available.--October 1911 to January 1914, October 1916 to September 1918, October 1931 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near Hoopa" 1931-64.

Gage.--Water-stage recorder (digital). Datum of gage is 274.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to October 1931, staff gage at site 0.4 mile upstream at different datum, October 1931 to Dec. 22, 1964, at site 2.5 miles upstream at datum 31.67 ft higher.

Average discharge.--38 years (1911-13, 1916-18, 1931-65), 5,471 cfs (3,961,000 acre-ft per year) unadjusted.

Extremes.--Maximum discharge during year, 231,000 cfs Dec. 22 (gage height, 40.3 ft, from floodmarks); minimum, 385 cfs Oct. 1. 1911-14, 1916-18, 1931-65: Maximum discharge, that of Dec. 22, 1964; minimum, 162 cfs Oct. 4, 1931.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Clair Engle Lake beginning in November 1960 (see p. 443). Small diversions above station for mining and irrigation. Records of chemical analyses, water temperatures and suspended sediment loads for the water year 1965 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	385	715	16,300	14,000	15,000	3,030	2,850	5,700	2,330	1,310	710	555
2	394	835	16,200	12,500	13,500	2,980	2,860	5,100	2,210	1,290	795	547
3	433	1,090	11,700	11,500	12,000	2,940	2,860	4,600	2,170	1,300	737	530
4	439	940	7,580	11,000	11,000	2,910	2,850	4,300	2,220	1,270	691	530
5	436	830	5,760	13,000	10,500	2,890	2,850	4,050	2,230	1,240	677	530
6	433	745	4,590	23,000	10,500	2,880	2,870	3,850	2,200	1,210	656	514
7	439	695	3,910	20,000	10,000	2,870	2,860	3,700	2,180	1,170	645	506
8	436	715	3,720	17,000	9,500	2,850	2,870	3,600	2,030	1,150	626	506
9	436	870	5,240	15,000	8,800	2,830	2,900	3,550	1,900	1,150	618	506
10	439	1,710	11,500	14,000	8,400	2,820	2,930	3,600	1,870	1,120	615	498
11	442	2,130	16,900	17,000	7,800	2,820	2,930	3,700	1,910	1,080	620	498
12	439	2,940	9,790	19,000	7,500	2,800	2,920	3,800	1,880	1,040	695	498
13	436	3,060	6,880	17,000	7,100	2,790	2,940	3,800	1,770	1,020	740	490
14	433	1,970	5,880	15,000	6,800	2,760	3,050	3,700	1,810	994	708	490
15	439	1,510	5,680	15,500	6,500	2,740	4,500	3,500	1,830	978	665	482
16	439	1,290	4,960	16,000	6,100	2,740	8,000	3,600	1,660	962	638	482
17	439	1,180	4,380	16,000	5,700	2,740	6,500	3,300	1,560	946	623	474
18	445	1,110	3,980	17,000	5,400	2,740	8,000	3,100	1,530	922	649	474
19	445	1,060	4,540	18,000	5,100	2,740	19,000	3,050	1,550	866	722	474
20	442	1,020	8,950	19,000	4,700	2,730	14,500	3,000	1,570	818	713	466
21	439	1,030	48,700	18,000	4,300	2,740	12,000	2,900	1,570	810	670	466
22	439	1,130	168,000	16,000	3,900	2,740	9,500	2,850	1,570	800	650	474
23	439	1,200	160,000	19,000	3,500	2,750	8,000	2,750	1,530	794	634	474
24	439	1,500	108,000	32,000	3,100	2,760	7,400	2,600	1,510	770	637	474
25	442	5,060	73,500	25,000	2,950	2,760	7,200	2,500	1,440	754	675	474
26	442	4,630	64,800	21,000	2,940	2,800	7,200	2,430	1,410	746	678	466
27	457	3,800	48,800	18,000	3,140	2,820	7,400	2,440	1,330	730	652	466
28	527	6,780	34,000	16,500	3,140	2,810	7,300	2,520	1,280	714	629	466
29	660	9,460	22,500	15,000	-----	2,800	6,700	2,600	1,270	706	602	466
30	940	7,210	18,200	15,500	-----	2,810	6,200	2,560	1,290	706	587	466
31	855	-----	16,000	16,000	-----	2,840	-----	2,470	-----	706	569	-----
Total	14,748	68,215	920,940	532,500	198,870	87,230	179,940	105,220	52,610	30,072	20,526	14,742
Mean	476	2,274	29,710	17,180	7,102	2,814	6,000	3,394	1,754	970	662	491
Ac-ft	29,250	135,300	1,827	1,056	394,500	173,000	356,900	208,700	104,400	59,650	40,710	29,240

Calendar year 1964 Max 168,000 Min 376 Mean 5,234 Ac-ft 3,800,000
Water year 1964-65 Max 168,000 Min 385 Mean 6,098 Ac-ft 4,415,000

Peak discharge (base, 22,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	2000	40.3	231,000	1-24	unknown	-	†38,000
1-6	unknown	-	†27,000	4-19	unknown	-	†23,000

† About.

* Expressed in thousands.

Note.--No gage-height record Dec. 23 to Feb. 24, Apr. 14 to May 25, July 21, 22.

KLAMATH RIVER BASIN

11-5305, Klamath River near Klamath, Calif.

Location.--Lat 41°30'45", long 123°58'30", in SW¼ sec.17, T.13 N., R.2 E., 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).

Records available.--October 1910 to December 1926 (published as "near Requa"), October 1950 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Datum of gage is 5.60 ft above mean sea level (levels by Corps of Engineers). Prior to June 1926 staff gage at same site at different datum.

Average discharge.--31 years, 17,180 cfs (12,440,000 acre-ft per year).

Extremes.--Maximum discharge during year, 557,000 cfs Dec. 23 (gage height, 55.3 ft, from floodmarks), from rating curve extended above 230,000 cfs on basis of flood-routing study; minimum daily, 2,440 cfs Oct. 1, 2.

1910-26, 1950-65: Maximum discharge, that of Dec. 22, 1964; minimum observed, 1,340 cfs July 31, Aug. 1, 1924.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow considerably regulated by reservoirs and powerplants above station. Large diversions for irrigation above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1964 TO SEPTEMBER 1965

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2,440	3,600	59,000	54,000	54,400	26,300	14,100	21,500	14,000	5,300	2,790	3,340
2	2,440	3,870	61,200	50,000	50,000	24,500	14,100	19,500	13,500	5,300	2,750	3,260
3	2,460	4,190	42,700	45,000	45,700	23,300	14,300	17,900	13,000	5,250	2,730	3,200
4	2,490	4,070	26,900	43,000	42,400	22,400	14,400	16,900	12,500	5,200	2,750	3,150
5	2,500	4,060	21,000	54,000	42,100	21,600	14,100	15,300	12,200	5,080	2,730	3,100
6	2,500	3,820	17,300	80,000	42,800	21,200	13,700	14,200	12,000	4,920	2,730	3,080
7	2,490	3,570	15,200	105,000	39,700	20,800	13,500	13,600	11,800	4,750	2,710	3,060
8	2,710	3,690	14,300	86,000	37,100	20,500	13,300	13,200	11,500	4,580	2,690	3,050
9	2,960	4,440	19,100	68,000	34,700	20,200	13,100	13,000	11,200	4,420	2,670	3,180
10	2,970	7,160	45,800	58,000	32,200	20,000	12,800	13,200	11,000	4,280	2,650	3,450
11	2,970	7,840	77,900	60,000	30,500	19,900	12,500	14,000	10,700	4,120	2,630	3,540
12	2,940	10,900	43,300	70,000	29,200	19,800	12,200	15,100	10,300	3,980	2,610	3,530
13	2,920	10,500	29,200	62,000	28,000	19,600	11,800	15,400	9,500	3,850	2,630	3,520
14	2,940	7,880	24,000	56,800	27,200	19,200	11,600	15,600	9,400	3,720	2,670	3,500
15	2,980	6,160	24,400	52,800	26,300	18,900	11,400	15,900	9,300	3,630	2,670	3,480
16	3,000	5,430	21,800	52,600	25,400	18,500	14,600	15,800	9,200	3,550	2,670	3,450
17	3,010	5,030	19,700	52,100	24,300	18,100	20,200	15,800	9,000	3,450	2,650	3,420
18	3,010	4,770	17,500	51,400	24,200	17,500	21,100	15,700	8,800	3,390	2,630	3,380
19	3,010	4,600	18,400	52,900	24,300	16,900	52,700	15,500	8,600	3,330	2,790	3,350
20	3,000	4,480	29,200	55,700	24,500	16,200	55,000	15,400	8,300	3,270	2,990	3,350
21	3,000	4,450	101,000	54,500	24,500	15,900	45,600	15,100	8,200	3,210	2,770	3,360
22	3,010	4,710	388,000	51,000	24,600	16,000	37,300	14,900	8,100	3,170	2,670	3,380
23	3,010	5,140	420,000	53,300	24,000	16,300	30,800	14,600	8,600	3,110	2,690	3,400
24	2,900	6,140	270,000	107,000	23,300	16,000	27,100	14,300	9,000	3,070	2,710	3,400
25	2,890	17,900	220,000	85,400	22,700	15,600	25,300	14,000	8,100	3,010	3,350	3,420
26	3,000	17,700	200,000	65,100	22,300	15,500	24,400	14,300	7,500	2,950	4,100	3,480
27	3,040	15,900	160,000	56,200	27,900	15,500	24,800	14,900	7,000	2,910	3,950	3,540
28	3,190	24,400	110,000	51,700	29,200	15,200	25,000	15,100	6,300	2,890	3,710	3,560
29	3,420	27,900	90,000	50,600	-----	14,800	24,200	15,000	5,700	2,850	3,610	3,560
30	3,900	24,700	72,000	54,900	-----	14,500	22,400	14,800	5,400	2,830	3,550	3,550
31	3,920	-----	62,000	56,900	-----	14,300	-----	14,200	-----	2,810	3,480	-----
TOTAL	91,020	259,000	42,720.9	1,895.9	883,500	575,000	647,400	473,700	289,700	118,380	90,730	101,040
MEAN	2,936	8,633	87,770	61,160	31,550	18,550	21,580	15,280	9,657	3,812	2,927	3,368
AC-FT	180,500	513,700	45,397	43,760	1,752	1,140	1,284	939,600	574,600	234,400	180,000	200,400

CALENDAR YEAR 1964 MAX 420,000 MIN 2,200 MEAN 18,390 AC-FT 13,350,000
 WATER YEAR 1964-65 MAX 420,000 MIN 2,440 MEAN 22,320 AC-FT 16,160,000

Peak discharge (base, 50,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12- 2	0030	16.99	64,900	1- 7	unknown	-	115,000
12-11	0615	20.03	92,300	1-24	1000	22.72	118,000
12-23	0200	55.3	557,000	4-19	1815	16.91	64,300

‡ Expressed in thousands.

Note.--No gage-height record Dec. 23 to Jan. 13, May 4 to June 30, Sept. 1-8.

† About.

11-5310. Middle Fork Smith River at Gasquet, Calif.

Location.--Lat 41°50'40", long 123°57'35", in NW¼ sec.28, T.16 N., R.2 E., on left bank 0.4 mile east of Gasquet and 0.6 mile upstream from confluence with North Fork Smith River.

Drainage area.--130 sq mi.

Records available.--October 1911 to February 1918 (published as "near Crescent City"). Occasional low-flow measurements, water years 1952-57 and annual maximum, water years 1954-56. October 1958 to September 1965, discontinued as a continuous-record station; converted to a crest-stage partial-record station. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 352.65 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. October 1911 to February 1918, staff or chain gages at various sites within 0.4 mile downstream at different datums. Sept. 23, 1953, to Sept. 30, 1956, crest-stage gage only, at site 0.2 mile upstream at different datum.

Average discharge.--13 years (1911-17, 1958-65), 650 cfs (470,600 acre-ft per year).

Extremes.--Maximum discharge during year, 41,100 cfs Dec. 22 (gage height, 22.2 ft, from floodmarks), from rating curve extended above 11,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 46 cfs Oct. 23-26.

1911-18, 1953-56, 1958-65: Maximum discharge, that of Dec. 22, 1964.

1911-18, 1958-65: Minimum discharge observed, 38 cfs Oct. 21, 1915.

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

Revisions (water year).--1964 Report: 1959-60, 1961-62(P), 1963.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	59	5,440	960	1,320	620	304	545	168	89	61	57
2	50	78	4,600	1,060	1,140	520	323	510	168	86	60	56
3	50	70	1,990	1,220	984	450	294	480	162	85	59	55
4	50	74	1,220	862	869	400	280	465	160	83	59	55
5	50	94	862	1,320	1,120	370	270	445	160	83	57	54
6	50	69	706	2,230	1,140	350	270	418	155	82	56	53
7	50	63	605	1,490	939	330	262	387	152	82	56	53
8	50	83	654	808	827	320	256	371	152	80	57	53
9	50	148	932	1,100	748	310	262	351	150	77	56	53
10	50	294	5,500	2,660	706	305	308	339	145	80	57	52
11	50	270	3,640	3,250	630	295	319	331	145	77	57	52
12	50	490	1,650	1,890	620	285	319	323	142	77	66	52
13	50	312	1,170	1,180	600	280	335	319	138	75	64	51
14	50	209	1,030	953	565	270	335	301	170	75	61	50
15	50	152	1,270	862	540	270	653	276	148	73	59	50
16	50	129	1,010	897	510	270	992	276	142	72	57	50
17	50	115	843	911	450	270	682	262	140	72	56	50
18	50	107	758	918	480	259	1,850	242	133	69	62	50
19	50	102	1,300	953	422	248	4,000	262	133	69	66	50
20	50	100	4,910	946	422	248	2,420	266	121	72	62	49
21	50	100	13,400	808	422	239	1,810	239	121	73	60	50
22	49	160	32,700	646	413	236	1,580	227	119	69	59	50
23	46	266	15,500	2,290	379	236	1,160	212	117	68	58	50
24	46	740	6,540	3,020	335	236	960	206	119	66	59	49
25	46	1,270	4,880	1,580	319	236	869	200	115	65	85	50
26	46	918	4,440	1,230	335	308	808	194	115	66	77	50
27	50	1,370	2,450	1,220	1,100	298	772	191	113	68	64	50
28	59	3,230	1,400	1,700	780	273	712	191	107	66	59	49
29	62	1,880	1,200	1,930	-----	270	640	191	106	64	57	48
30	63	2,920	1,100	1,800	-----	270	580	180	92	62	57	48
31	61	-----	1,020	1,560	-----	284	-----	172	-----	60	57	-----
Total	1,578	15,872	124,720	44,254	19,115	9,556	24,625	9,372	4,108	2,285	1,880	1,539
Mean	50.9	529	4,023	1,428	683	308	821	302	137	73.7	60.6	51.3
Ac-ft	3,130	31,480	247,400	87,780	37,910	18,950	48,840	18,590	8,150	4,530	3,730	3,050

Calendar year 1964 Max 32,700 Min 46 Mean 782 Ac-ft 568,000
 Water year 1964-65 Max 32,700 Min 46 Mean 709 Ac-ft 513,500

Peak discharge (base, 7,500 cfs).--Dec. 10 (1800) 10,200 cfs (8.70 ft); Dec. 22 (2000) 41,100 cfs (22.2 ft).

Note.--No gage-height record Dec. 23 to Jan. 1, Feb. 28 to Mar. 15.

11-5325. Smith River near Crescent City, Calif.

Location.--Lat 41°47'20", long 124°03'20", in SW¼ sec.10, T.16 N., R.1 E., on left bank 0.5 mile downstream from South Fork and 8 miles east of Crescent City.

Drainage area.--609 sq mi.

Records available.--October 1931 to September 1965. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder (digital). Datum of gage is 89.61 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Average discharge.--34 years, 3,755 cfs (2,719,000 acre-ft per year).

Extremes.--Maximum discharge during year, 228,000 cfs Dec. 22 (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.
1931-65: Maximum discharge, that of Dec. 22, 1964; minimum daily, 160 cfs Oct. 24, 25, 1964.

Remarks.--Records good except those for periods of no gage-height record, which are fair. No regulation or diversion above station. Records of chemical analyses for the water year 1965 are published in Part 2 of this report.

Rating tables (gage height in feet, discharge, in cubic feet per second)

Oct. 1 to Feb. 1				Feb. 2 to Sept. 30			
3.8	160	13.0	10,300	4.1	210	9.0	2,530
3.9	180	18.0	24,500	5.0	410	11.0	4,640
4.8	440	22.0	40,200	6.0	730	15.0	11,800
6.0	990	26.0	61,500	7.0	1,170	20.0	26,200
8.0	2,510	36.0	126,000				
10.0	4,780	44.0	187,000				

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	190	204	34,800	5,200	6,800	3,610	1,500	2,370	954	460	329	283
2	190	377	25,000	5,600	6,000	3,000	1,380	2,160	942	450	323	281
3	184	349	12,000	6,400	5,200	2,740	1,320	2,000	914	425	309	278
4	180	520	7,000	4,500	4,600	2,480	1,280	1,910	914	420	302	274
5	178	484	4,000	8,000	5,400	2,320	1,300	1,810	850	430	300	270
6	178	316	3,500	13,000	6,400	2,160	1,280	1,710	830	420	296	270
7	176	259	3,000	8,000	5,000	2,050	1,300	1,600	822	420	294	266
8	182	310	3,200	4,000	4,100	1,970	1,280	1,520	798	405	292	263
9	186	720	4,500	7,000	3,600	1,900	1,360	1,460	742	395	292	262
10	184	1,850	30,000	14,000	3,230	1,840	1,560	1,410	722	405	290	258
11	180	2,240	17,000	19,000	2,910	1,790	1,620	1,390	722	400	292	255
12	176	4,510	9,000	11,000	2,660	1,730	1,640	1,380	690	400	344	254
13	174	2,700	6,000	6,000	2,480	1,640	1,660	1,370	690	387	353	257
14	174	1,740	5,200	4,800	2,350	1,550	1,680	1,300	810	383	317	247
15	174	1,200	6,200	4,500	2,250	1,490	4,020	1,250	790	376	304	240
16	182	942	5,000	4,600	2,150	1,430	6,310	1,280	742	370	298	233
17	184	805	4,200	4,700	2,000	1,390	4,430	1,230	682	370	298	225
18	176	710	3,400	4,800	2,310	1,330	12,300	1,150	658	358	316	221
19	170	652	8,000	4,900	2,390	1,280	24,700	1,300	638	352	345	220
20	166	612	25,000	5,000	2,260	1,230	15,500	1,370	635	360	323	216
21	164	604	60,000	3,700	2,230	1,230	11,300	1,200	620	369	313	224
22	164	902	180,000	3,500	2,220	1,230	8,720	1,120	610	359	305	229
23	162	1,970	70,000	12,000	2,070	1,200	6,450	1,060	600	347	298	230
24	160	4,780	30,000	18,000	1,970	1,170	5,140	1,040	600	341	303	230
25	160	12,600	25,000	9,000	1,850	1,300	4,360	1,070	590	336	425	228
26	162	7,370	22,000	6,400	1,700	1,550	3,850	1,020	580	338	390	228
27	176	9,930	15,000	6,000	5,420	1,390	3,560	995	560	344	325	228
28	235	24,400	8,000	9,000	4,400	1,290	3,220	950	540	339	305	227
29	265	15,500	6,000	10,000	-----	1,250	2,870	950	520	331	295	226
30	271	16,600	5,700	9,000	-----	1,310	2,580	962	480	326	290	222
31	218	-----	5,400	8,000	-----	1,310	-----	954	-----	321	286	-----
Total	5,721	116,156	643,100	239,600	95,950	53,160	139,470	42,291	21,245	11,737	9,752	7,345
Mean	185	3,872	20,750	7,729	3,427	1,710	4,649	1,364	708	379	315	245
Ac-ft	11,350	230,400	1,276	475,200	190,300	105,400	276,600	83,880	42,140	23,280	19,340	14,570

Calendar year 1964 Max 180,000 Min 160 Mean 4,377 Ac-ft 3,178,000
Water year 1964-65 Max 180,000 Min 160 Mean 3,796 Ac-ft 2,748,000

Peak discharge (base, 36,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12- 1	0300	22.75	43,800	12-22	2100	48.5	228,000
12-10	1600	26.26	63,100				

* Expressed in thousands.

Note.--No gage-height record Dec. 2 to Feb. 9, Feb. 15-17, June 22 to July 11, Aug. 25 to Sept. 1.

11-5330. Lopez Creek near Smith River, Calif.

Location.--Lat 41°57'36", long 124°12'08", in SE¼ sec.8, T.18 N., R.1 W., on right bank at culvert on U. S. Highway No. 101, 3.7 miles northwest of town of Smith River.

Drainage area.--0.93 sq mi.

Records available.--October 1961 to September 1965.

Gage.--Water-stage recorder with rain gage attachment and crest-stage gage. Datum of gage is 38.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Extremes.--Maximum discharge during year, 84 cfs Dec. 22 (gage height, 2.42 ft); no flow at times.

1961-65: Maximum discharge, 330 cfs (revised) May 6, 1963 (gage height, 3.68 ft); no flow at times in each year.

Revisions.--Figures of maximum discharge for the water years 1962 and 1963 have been revised to 305 cfs Nov. 23, 1961 (gage height, 3.58 ft) and 330 cfs May 6, 1963 (gage height, 3.68 ft), superseding figures published in Basic Data Reports, respectively.

Remarks.--Records good above 5 cfs and fair below. No regulation or diversion above station.

Revisions.--Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1962-63, superseding figures published in Basic Data Reports, are given herewith:

1961	1962	1963
Nov. 23.....149	Nov. 25.....20	May 5..... 74
24..... 78	26.....73	6.....187
	Dec. 2.....96	

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
November 1961.....	360.8	149	0.8	12.0	716
Water year 1961-62.....	-	149	0	4.02	2,910
November 1962.....	314.4	73	1.7	10.5	624
December.....	357.1	96	2.4	11.5	708
Calendar year 1962.....	-	96	0.2	4.66	3,370
May 1963.....	510.0	187	1.7	16.5	1,010
Water year 1962-63.....	-	187	0	6.56	4,750
Calendar year 1963.....	-	187	0	6.67	4,100

Revised peak discharge.--1962-63: Nov. 25 (2400) 247 cfs (3.31 ft); Dec. 2 (0700) 183 cfs (2.99 ft) May 6 (0800) 330 cfs (3.68 ft)

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.67	0	1.1	7.8
.7	.1	1.3	16
.8	.7	1.8	41
.9	2.6	2.3	72
1.0	5.1		

LOPEZ CREEK BASIN

11-5330. Lopez Creek near Smith River, Calif.--Continued.

Discharge, in cubic feet per second, water year October 1964 to September 1965

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.4	4.0	1.4	1.8	3.4	1.5	4.1	0.5	0.3	0.1	
2	.1	.5	3.2	1.7	1.3	3.1	1.3	3.6	.5	.3	.1	
3	0	.4	2.4	2.1	1.1	3.1	1.1	3.1	.5	.3	.1	
4	0	2.8	1.8	2.1	8.6	2.8	1.1	2.8	.4	.3	.1	
5	.1	1.1	1.3	2.4	8.2	2.8	1.1	2.6	.5	.3	.1	
6	.1	.7	1.1	2.8	7.0	2.6	1.1	2.4	.5	.2	.1	
7	.1	.5	9.8	2.7	5.9	2.4	1.1	2.2	.6	.2	0	
8	.1	.6	9.8	2.4	5.6	2.4	1.1	2.2	.6	.2	0	
9	.1	1.4	1.5	2.4	5.1	2.4	1.8	2.0	.6	.2	.1	
10	.1	6.0	4.4	3.4	4.6	2.2	2.4	1.8	.5	.2	.1	
11	.1	5.1	3.4	3.8	4.4	2.2	2.0	1.8	.5	.2	.1	
12	.1	5.6	2.4	3.1	3.8	2.2	1.7	1.5	.4	.2	.1	
13	.1	5.1	1.7	2.2	3.8	2.0	1.7	1.5	.4	.2	.1	
14	.1	4.6	1.3	1.6	3.6	2.0	1.8	1.3	.5	.2	.1	
15	.1	3.8	1.1	1.2	3.1	1.8	7.6	1.1	.5	.2	.1	
16	.1	3.1	9.0	9.8	2.6	1.8	8.6	1.5	.5	.2	.1	
17	.1	2.6	8.3	7.8	2.6	1.7	7.8	1.2	.4	.1	.1	
18	.1	2.2	9.0	7.0	2.4	1.5	2.5	.9	.4	.1	.2	
19	.1	1.8	1.6	7.0	2.2	1.5	4.8	1.6	.3	.1	.2	
20	.1	1.7	1.8	6.4	2.2	1.3	3.6	1.1	.2	.1	.1	
21	.1	1.7	4.2	5.6	2.4	1.3	2.8	.9	.2	.1	.1	
22	0	1.7	7.0	5.1	2.2	1.3	2.2	.7	.4	.1	.1	
23	0	1.5	5.4	1.5	2.0	1.1	1.6	.7	.4	.1	.1	
24	.1	4.8	5.4	2.2	2.0	1.1	1.1	.7	.4	.1	.1	
25	.1	7.5	5.9	2.0	2.0	1.5	9.0	.6	.4	.1	.2	
26	.1	1.2	5.7	1.7	3.3	2.4	7.3	.5	.4	.1	.2	
27	.2	1.3	4.3	1.8	5.1	1.8	6.4	.5	.4	.1	.1	
28	.4	2.8	3.3	3.5	3.8	1.7	5.6	.5	.4	.1	.1	
29	.5	2.4	2.6	4.0	-----	1.5	4.8	.5	.3	.1	.1	
30	.4	3.1	2.1	3.2	-----	1.5	4.3	.5	.3	.1	0	
31	.3	-----	1.7	2.4	-----	1.3	-----	.5	-----	.1	0	-----
Total	4.0	175.2	851.9	624.7	140.5	61.7	268.2	46.9	12.9	5.2	3.1	0
Mean	0.13	5.84	27.5	20.2	5.02	1.99	8.94	1.51	0.43	0.17	0.10	0
Ac-ft	7.9	348	1,690	1,240	279	122	532	93	26	10	6.1	0
(†)	2.1	14.5	20.8	11.8	2.7	1.2	9.4	1.4	0.3	0	0.8	0

Calendar year 1964 Max 70 Min 0 Mean 5.53 Ac-ft 4,010
 Water year 1964-65 Max 70 Min 0 Mean 6.01 Ac-ft 4,350

Peak discharge (base, 55 cfs)

† Precipitation, in inches

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-22	1800	2.42	84	4-19	0230	2.17	62
12-26	0900	2.33	75				

Crest-stage partial-record stations

As explained on page 8 the California District publishes annual maxima on small streams at about 290 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 above-mentioned report. A crest-stage gage is a device which will register the peak stage occurring between inspection 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 data 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 each 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 1965

Annual maximum discharge at first-stage partial record stations in Part II during water year 1965							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Jacoby Creek basin							
4800.00	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	1954-65	12-22-64	6.83	1,530
Klamath River basin							
5224.00	North Fork Salmon River near Forks of Salmon	Lat 41°16'02", long 123°18'12", in NE¼ sec.18, T.10 N., R.8 E., 1.2 miles upstream from Forks of Salmon.	203	1958-65	12-22-64	28.2	30,000
Smith River basin							
5320.00	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 1954-65	12-22-64	43.8	162,000

Determinations of peak discharge during water year October 1964 to September 1965

Determination of peak discharge during water year October 1904 to September 1905						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Eel River basin						
Elder Creek	South Fork Eel River	Lat 39°43'50", long 123°38'05", in SE¼NW¼ sec.28, T.22 N., R.16 W., 0.6 mile upstream from mouth and 4.3 miles north of Branscomb.	6.39	-	Dec. 22	3,660
South Fork Eel River	Eel River	Lat 39°52'30", long 123°43'10", in NE¼SE¼ sec.3, T.23 N., R.17 W., 0.5 mile northwest of Leggett.	248	-	Dec. 22	78,700
Yager Creek	Van Duzen River	Lat 40°34'15", long 124°02'55", in SW¼NE¼ sec.10, T.2 N., R.1 E., 2.4 miles north of Carlotta.	127	1953-60†	Dec. 22	30,000
Mad River basin						
North Fork Mad River	Mad River	Lat 40°53'10", long 123°56'30", in SW¼ sec.22, T.6 N., R.2 E., 1.2 miles northeast of Korbelt.	40.5	1957-64†	Dec. 22	15,400
Mad River	Pacific Ocean	Lat 40°45'50", long 123°53'20", in NW¼NW¼ sec.6, T.4 N., R.3 E., 5.4 miles east of Kneeland.	352	-	Dec. 22	55,000
Redwood Creek basin						
Redwood Creek	Pacific Ocean	Lat 40°54'20", long 123°48'55", in NE¼ sec.15, T.6 N., R.3 E., 9.1 miles east of town of Blue Lake.	67.6 (revised)	1953-58†	Dec. 22	16,400
Klamath River basin						
East Fork Willow Creek	Willow Creek	Lat 40°54'25", long 123°42'20", in NW¼NE¼ sec.15, T.6 N., R.4 E., 4.6 miles southwest of town of Willow Creek.	11.9	-	Dec. 22	4,900
Blue Creek	Klamath River	Lat 41°27'00", long 123°50'40", in NE¼NW¼ sec.12, T.12 N., R.2 E., 9.2 miles southeast of town of Klamath.	120	-	Dec. 22	48,000

† Operated as a continuous record gaging station.

SANTA ANA RIVER ABSORPTION STUDIES

These measurements were made by the Orange County Flood Control District to determine the rate of absorption along the streambed of the Santa Ana River, covering that portion of the river from Yorba Bridge to the Geological Survey gaging station, Santa Ana River at Santa Ana. The measurements are listed in downstream order. Flow includes release to river at Horseshoe Bend, 3 miles upstream from Yorba Bridge, by Metropolitan Water District of Southern California from Oct. 1 to Nov. 27, Jan. 18 to Feb. 1, Feb. 6 to Mar. 25, Apr. 15 to June 4, Aug. 25 to Sept. 30.

Santa Ana River, lat 33°51'30", long 117°47'12", in Canon de Santa Ana Grant, about 1,000 ft above Yorba Bridge and 2.7 miles southeast of Atwood, water year 1965
(Measured previously 1938-64)

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Oct. 2	277	Dec. 1	11.1	Jan. 29	118	Mar. 26	11.9	May 18	53.4
6	231	4	9.92	Feb. 2	26.0	30	4.37	21	50.9
9	217	8	3.45	5	18.7	Apr. 1	153	28	225
13	217	11	1.99	9	133	2	353	June 4	271
16	213	15	.71	16	102	6	105	8	3.75
20	165	18	.42	19	118	9	333	11	2.28
23	165	22	0	23	110	12	203	15	.42
27	221	28	79.2	26	108	16	150	18	0
30	228	29	68.7	Mar. 2	74.5	20	148	Aug. 24	0
Nov. 3	153	Jan. 5	25.8	5	61.7	23	96.7	27	68.0
6	149	8	46.4	9	122	27	86.4	Sept. 3	115
10	158	12	37.3	12	132	30	80.4	10	160
13	140	15	33.4	15	220	May 4	70.5	14	167
17	169	19	84.6	16	204	7	68.6	17	173
20	135	22	85.4	19	193	11	60.0	24	171
24	115	26	127	23	142	14	53.2	28	175
27	43.2								

Santa Ana River, lat 33°50'55", long 117°50'05", in SW 1/4 sec. 4, T. 4 S., R. 9 W., at Jefferson Street Bridge, 1 mile north of Olive, water year 1965
(Measured previously 1938-64)

Oct. 2	199	Nov. 13	19.4	Feb. 19	57.1	Mar. 30	0	May 11	25.5
6	127	20	68.1	23	45.8	Apr. 2	169	14	16.1
9	116	24	45.4	26	50.6	6	56.9	18	5.02
13	141	27	64.5	Mar. 2	64.9	12	119	21	10.9
16	128	Dec. 1	0	5	16.1	16	79.5	28	127
20	104	Jan. 26	0	9	58.8	20	77.0	June 4	152
23	89.8	29	38.8	12	81.7	23	47.9	8	0
30	150	Feb. 2	39.7	16	224	27	31.2	Sept. 10	0
Nov. 3	71.1	5	0	19	131	30	22.0	17	51.0
6	75.3	9	30.2	23	83.6	May 4	23.6	24	55.9
10	75.9	16	34.4	26	29.5	7	12.0	28	73.9

Santa Ana River, lat 33°50'08", long 117°51'49", in San Juan Cajon de Santa Ana Grant, at Anaheim-Olive Bridge, 1.1 miles west of Olive, water year 1965
(Measured previously 1938-64)

Oct. 2	7.37	Oct. 30	34.8	Mar. 16	0	Apr. 20	6.24	Aug. 24	20.8
6	16.0	Nov. 3	35.4	19	4.26	23	0	27	0
9	8.41	6	6.83	23	4.57	July 23	0	Sept. 3	35.7
13	19.3	10	53.1	26	0	27	21.3	14	4.78
16	19.4	13	0	Apr. 6	0	30	25.5	17	0
20	26.7	20	43.4	12	40.7	Aug. 6	6.16	24	19.1
23	0	24	1.30	16	0	13	4.70	28	23.7
27	58.8	27	0						

Santa Ana River, lat 33°47'17", long 117°52'54", in Santiago de Santa Ana Grant, at Chapman Ave. Bridge, 1.7 miles west of Orange, Orange County, water year 1965
(Measured previously 1938-47, 50, 52, 54, 56, 58, 62, 63, 64)

Note.--During the year for each date listed above a no flow observation was made at this site.

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Andreas Creek near Palm Springs-----	56	Cottonwood Wash near Cottonwood Spring-----	59
Antelope Creek (Lower Klamath Lake basin) near Tennant-----	424	Coyote Creek basin, reservoirs in-----	330
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Arch Creek near Earp-----	18	Coyote Creek (tributary to San Francisco Bay), near Gilroy-	327
Arroyo de la Cruz near San Simeon-----	261	near Madrone-----	328
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Barrett Reservoir, contents of-----	86	Day Creek near Etiwanda-----	155
Bautista Creek near Hemet-----	162	De Luz Creek near Fallbrook-----	116
Beacon Creek at Helendale-----	63	Deep Creek (Mojave River basin) near Hesperia-----	60
Beaver Creek near Klamath River-----	430	Deep Creek (Salton Sea basin) near Palm Desert-----	57
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Big Creek near Hayfork-----	455	Devil Canyon Creek near San Bernardino-----	149
Big Dip Creek near Stovepipe Wells-----	366	Dry Creek (tributary to Alameda Creek) at Union City-----	338
Big Pine Creek near Big Pine-----	75	Dry Creek (tributary to Napa River) near Napa-----	350
Big River, South Fork, near Comptche-----	383	Dry Creek (tributary to Russian River), near Cloverdale-----	370
Big Rock Creek near Valyermo-----	65	near Geyserville-----	371
Big Sulphur Creek near Cloverdale-----	365	Dry Lake tributary at Perez-----	423
Big Sur River near Big Sur-----	262	Eagle Creek at Eagle Mountain-----	41
Black Butte River near Covelo-----	398	East Twin Creek near Arrowhead Springs-----	140
Bluff Creek near Weitchpec-----	440	Eaton Creek near Pasadena-----	199
Bodfish Creek near Gilroy-----	292	Eel River, above Dos Rios-----	397
Borrego Palm Creek near Borrego Springs-----	48	at Alderpoint-----	408
Boulder Creek at Cuyamaca Reservoir, near Julian-----	95	at Scotia-----	414
Branciforte Creek at Santa Cruz-----	308	at Van Arsdale Dam, near Potter Valley-----	393
Brea Creek, at Fullerton-----	186	below Dos Rios-----	406
below Brea Dam, near Fullerton-----	185	below Scott Dam, near Potter Valley-----	391
Browns Creek near Douglas City-----	448	Middle Fork, below Black Butte River, near Covelo-----	399
Buckhorn Creek near Valyermo-----	66	North Fork, near Mina-----	407
Bull Creek near Weott-----	412	South Fork, near Branscomb-----	409
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