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Tom
Tom Chandler

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

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Water Resources Division

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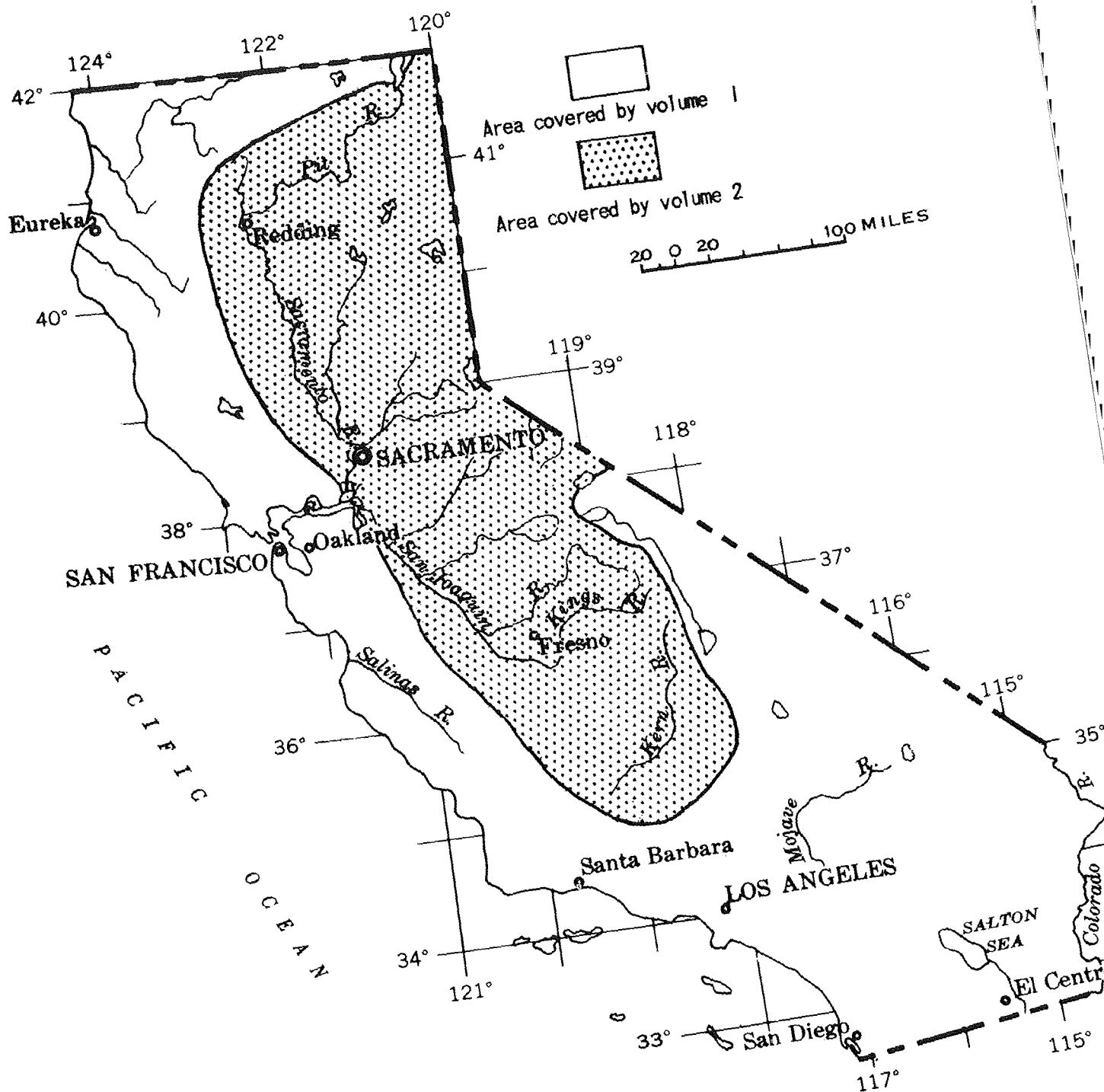
Water-resources records, 1968, for California are in the following reports of the U.S. Geological Survey:

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

Copies of these reports may be obtained from
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Prepared in cooperation with

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WATER RESOURCES DATA FOR CALIFORNIA, 1968

Part 1. SURFACE WATER RECORDS

INTRODUCTION

The surface-water records for the 1968 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 R. Stanley Lord, 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, William R. Gianelli, director.
Alameda County Flood Control and Water Conservation District, Paul E. Lanferman, engineer-manager.
Alameda County Water District, M. P. Whitfield, general manager.
Bollinas Harbor District, Gene McDaniel, president.
Calaveras County Water District, T. Stanley Edwards, secretary-manager.
Coachella Valley County Water District, Lowell O. Weeks, general manager-chief engineer.
Contra Costa County Flood Control and Water Conservation District, C. C. Rich, deputy chief engineer.
Lake County Flood Control and Water Conservation District, Williard D. Hansen, manager.
Montecito County Water District, Delbert D. Smith, general manager.
Monterey County Flood Control and Water Conservation District, Loran Bunte, Jr., district engineer.
Santa Clara County Flood Control and Water District, Donald K. Currilin, manager-counsel.
Orange County Flood Control District, H. G. Osborne, chief engineer.
Riverside County Flood Control and Water Conservation District, John W. Bryant, chief engineer.
San Benito County Water Conservation and Flood Control District, Ernest E. Ricotti, manager.
San Luis Obispo County Flood Control and Water Conservation District, Robert H. Born, county hydraulic engineer.
Santa Barbara County Water Agency, Curtis Tunnell, chairman; succeeded by Francis H. Beattie.
Santa Cruz County Flood Control and Water Conservation District, Warren M. Harrison, director of public works.
San Mateo County, Don S. Wilson, County Engineer and Road Commissioner.
San Diego (city), R. E. Graham, director of utilities.
Santa Barbara City Water Department, Neil Mendenall, superintendent.
Antelope Valley-East Kern Water Agency, W. G. Spinarski, manager.
East Bay Municipal Utility District, J. S. Harnett, chief engineer and assistant general manager.
Georgetown Divide Public Utility District, J. E. Christensen, manager.

Imperial Irrigation District, R. F. Carter, general manager.
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, Robert McKinney, general manager and chief engineer.
University of California (Berkeley), A. Starker Leopold, professor of zoology.

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

The following organizations and individuals aided in collecting records: Pacific Power and Light Co., Bear Valley Mutual Water Co., California American Water Co., Metropolitan Water District of California, Fontana Union Water 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 Flood Control District, Helix, Madera, Merced, Modesto, Nevada, Serrano and Carpenter, Turlock, Oroville-Wyandotte, Oakdale-South San Joaquin, Vista, and Woodbridge Irrigation Districts, and Yuba County Water Agency.

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

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 non-contributing areas, within the area unless otherwise noted.

WSP is an abbreviation for "Water-Supply Paper" in reference 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 the 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 8-digit number for each station, such as 11-1208.00 includes the part number "11" plus a 6-digit number. In this report, the nonessential zeros are not shown. For example, the complete number 11-1208.00 would

appear as 11-1208., just to the left of the station name. In this report, the records are listed in downstream order by parts. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number.

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 graphic water-stage recorder that gives a continuous chart of the fluctuations from a digital recorder that produces 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 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.

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."

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 local standard time, for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330 hours.

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

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 lakes and reservoirs for which records are published on a daily basis, but it is not published for lakes and reservoirs for which there are only monthly data.

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, under "Remarks," states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good," within 10 percent; and "fair," within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

For most gaging stations equipped with digital recorders the figures of mean daily discharge are shown to the nearest hundredth for discharges less than 1 cfs. At graphic recording stations nonsignificant zeros are added to the mean daily discharges which are less than 1 cfs. This has been done as a matter of uniformity in the computer program and should not be construed to indicate an accuracy greater than that used in the past.

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.

OTHER DATA AVAILABLE

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.

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

HYDROLOGIC CONDITIONS

Despite below-normal precipitation which generally prevailed over the State during October, streamflow was excessive from the higher elevations of the Sierra Nevada and from Santa Barbara, Ventura, and Los Angeles Counties in southern California. This resulted from the abnormally

high precipitation and runoff from the preceding water year. Streamflow was well above normal in the north-coastal area, but deficient in the extreme southern part of the State since the preceding storms had not penetrated that far south. Low humidity and high winds and temperatures were contributing factors resulting in an estimated 100,000 acres of brush and forest which burned in southern California. During November below-normal precipitation and above-normal temperatures in northern California reduced runoff to near normal except from the Sierra Nevada into the San Joaquin Valley which continued to be excessive, but less than the previous months. Severe storms occurred, however, in the coastal mountains of southern California. Runoff from Santa Barbara, Ventura, and Los Angeles Counties in southern California continued to be excessive although in the extreme south runoff was still deficient. Precipitation was generally below normal during December and most of January, and runoff generally declined. During the last few days of January, however, generally heavy storms over the State increased runoff, and the snowpack in the mountainous areas that was considerably below normal also increased. Although the precipitation was generally below normal in January, temperatures were above normal and runoff increased as the below-normal snowpack was depleted still further. Streamflow in February was excessive in the north-coastal area, above normal in the Sacramento River basin, and near normal in the southern part of the San Joaquin River basin and in southern California, except in the extreme south where it continued to be deficient. Streamflow was near normal in March as the snowmelt continued and precipitation was near normal. Streamflow was generally deficient during May and June because of below-normal precipitation and the declining contribution of diminished snowpack. Heavier demands were made from reservoir storage for irrigation and the above-normal contents decreased to near normal. Streamflow in July continued to be generally deficient although isolated electrical storms in the desert areas produced high runoff in some areas. In August streamflow increased to above or near normal in the northern part of the State because of storms in that area, but decreased southward along the Sierra Nevada to below normal in the southern part, although thunderstorms in scattered areas produced above-normal streamflow and peaks of record in some desert drainages. Streamflow in September was near normal in the north-coastal area and the northern part of the Sierra Nevada, but decreased southward and was deficient in the southern part. Streamflow was again below normal in southern California and deficient in the extreme south except for a few drainages where the

intense thunderstorms in August kept the streamflow higher than normal. Because of the generally dry year, heavier demands were made on reservoirs for irrigation; however, the contents at the end of the year averaged less than 10 percent below normal because of the large carryover from the preceding wet year.

Figure 1 shows the runoff for the 1968 water year, in percentage of the 1930-60 median. Runoff at the selected sites over the entire State averaged only 76 percent of median in contrast to that of last year which averaged 236 percent, 3 times greater. At individual sites the runoff varied from about one-fourth of median at one station in the extreme south-coastal area, and one station in the central-coastal area to one and one-half times median at one station in the south-coastal area. The above median runoff at the latter station was caused by exceptionally heavy storms in that particular watershed.

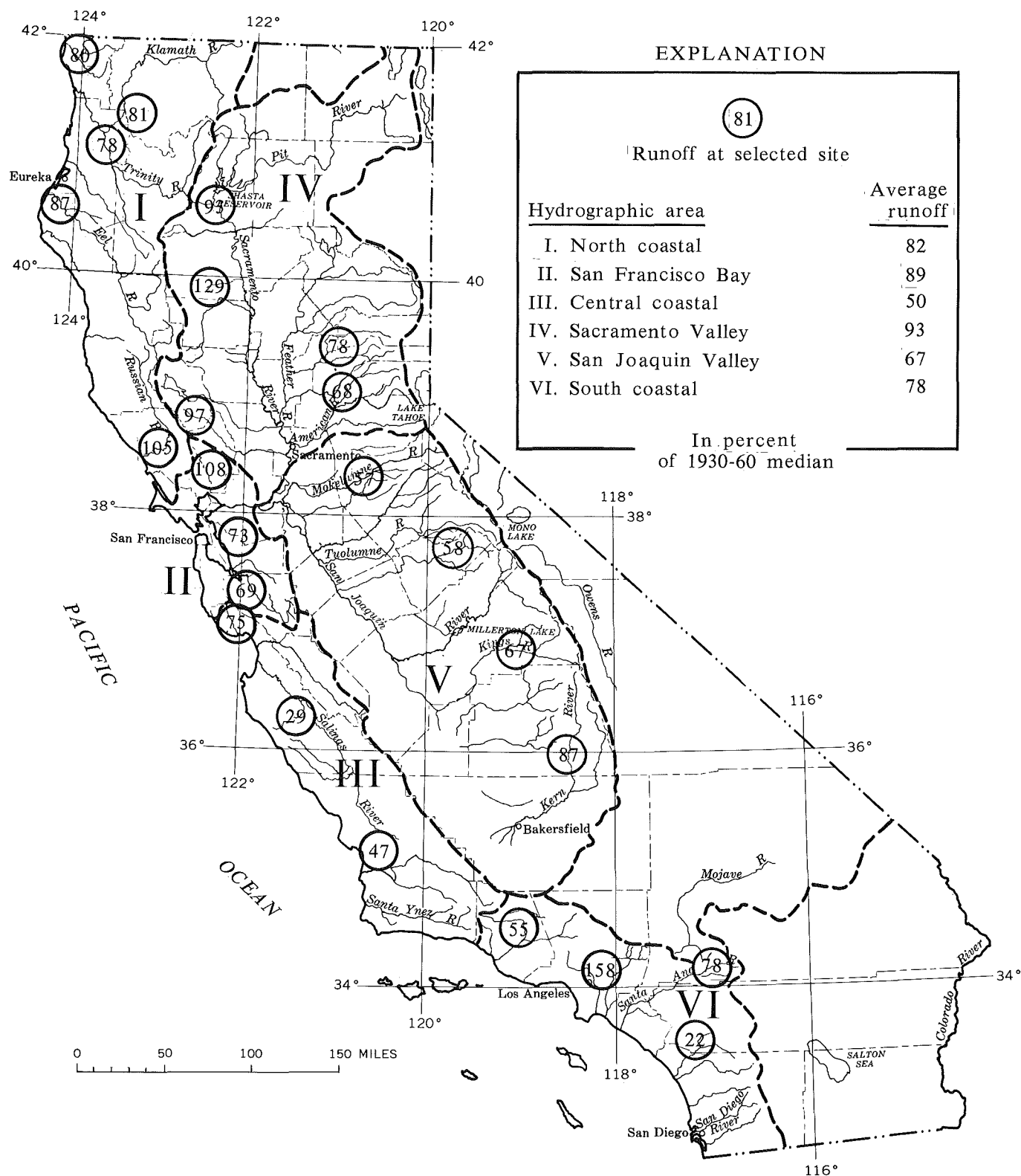


Figure 1.-- Runoff for the 1968 water year.

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

LOCATION.--Lat 35°11'30", long 114°34'15", in SE¼NE¼ sec.1, T.32 S., R.66 E., Mount Diablo meridian, on right bank 0.5 mile downstream from Davis Dam, 29 miles west of Kingman, Ariz., and 68 miles downstream from Hoover Dam.

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

RECORDS AVAILABLE.--June 1905 to September 1907 (published as "at Hardyville"), March 1949 to September 1968.

GAGE.--Digital and graphic water-stage recorders. Datum of gage is 500.00 ft above mean sea level, datum of 1929; gage readings have been reduced to elevations above mean sea level. 1905-7, staff gage at site 4.8 miles downstream at datum about 13.4 ft lower. Mar. 16 to May 3, 1949, graphic water-stage recorder at site 0.5 mile downstream at present datum. May 4, 1949, to Feb. 24, 1956, graphic water-stage recorder at site 400 ft upstream at present datum.

AVERAGE DISCHARGE.--19 years, (1949-68), 13,070 cfs (9,462,000 acre-ft per year), unadjusted.

EXTREMES.--Maximum discharge during year, 26,200 cfs June 25 (elevation, 506.06 ft); minimum daily, 2,090 cfs on several days in December.

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

1949-68: Maximum discharge, 31,200 cfs Apr. 22, 1952 (elevation, 513.91 ft); no flow at Davis Dam parts of several days July to September and Dec. 27, 1950, when gates in dam were closed; minimum daily discharge, 285 cfs Aug. 3, 1950.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8,010	8,000	3,130	6,130	5,790	10,400	16,700	13,400	14,100	14,800	11,500	13,200
2	10,400	7,980	3,040	6,320	5,520	9,910	16,800	14,400	14,300	14,600	13,200	13,700
3	9,710	7,950	3,610	7,370	6,550	9,270	16,700	14,100	14,800	13,600	14,400	12,200
4	9,420	8,040	4,090	6,380	7,440	10,700	15,300	13,300	14,300	14,100	15,000	11,900
5	8,290	7,890	3,390	6,630	10,400	10,400	15,300	13,600	13,900	14,700	13,300	12,000
6	7,980	7,840	2,180	7,900	11,700	11,000	15,200	12,900	12,400	7,510	13,900	11,800
7	8,770	7,760	2,190	7,470	12,100	11,300	15,300	11,900	12,700	5,900	15,000	13,000
8	9,170	6,780	2,090	9,100	9,340	10,400	15,700	10,200	13,400	6,190	14,500	12,300
9	9,610	6,530	2,090	8,760	7,520	7,300	15,500	8,250	13,600	10,000	15,100	11,300
10	9,630	6,380	2,110	8,590	7,620	7,240	15,000	9,860	14,600	12,800	15,400	11,700
11	10,300	6,440	6,040	7,420	8,010	9,860	15,000	14,300	14,800	15,100	15,600	11,500
12	10,100	6,460	7,980	7,070	9,250	10,000	14,100	13,500	12,200	15,200	16,100	10,600
13	8,270	7,970	8,190	7,870	8,640	12,000	14,000	12,700	11,700	14,500	15,800	10,700
14	8,230	7,420	6,940	8,150	5,780	14,900	12,200	11,900	13,000	16,600	14,700	10,700
15	7,720	7,460	3,700	8,320	7,120	13,000	14,200	11,200	15,300	16,800	13,900	10,700
16	7,650	7,320	2,100	7,560	7,100	14,200	14,500	9,090	15,700	18,000	14,000	10,800
17	7,640	7,800	2,090	7,740	9,200	15,600	14,400	10,200	16,700	17,100	14,100	12,000
18	7,890	6,410	2,100	5,100	10,300	17,300	13,700	12,200	13,900	15,300	13,700	11,000
19	11,900	5,350	2,100	5,460	9,020	15,900	14,100	13,200	17,500	16,100	13,200	12,100
20	10,800	5,660	2,100	5,150	9,070	15,400	15,100	14,900	16,100	16,100	12,900	12,700
21	10,700	3,320	2,090	6,140	9,090	16,000	14,800	14,800	16,400	15,000	13,600	11,900
22	7,700	2,720	2,100	5,280	8,860	16,300	13,100	14,200	16,000	15,300	13,200	11,800
23	8,520	2,130	2,100	5,990	11,800	17,200	12,300	13,200	16,400	15,500	13,400	12,100
24	8,480	3,960	2,090	6,000	13,200	14,400	12,500	12,700	16,500	14,600	12,900	12,000
25	8,590	4,380	2,100	7,960	13,900	14,500	12,400	13,100	16,500	15,000	13,000	12,000
26	5,800	3,820	2,090	8,260	14,300	14,800	13,800	13,800	14,900	14,400	11,200	10,500
27	5,600	3,100	2,990	7,550	14,100	14,500	14,100	13,200	15,500	14,600	12,300	11,400
28	7,510	3,210	4,920	8,010	14,100	15,800	13,800	13,100	15,200	16,000	10,500	11,300
29	7,640	3,180	8,090	6,610	14,100	17,500	14,900	12,900	15,900	14,400	10,900	11,500
30	7,960	3,070	7,130	7,290	-----	17,300	13,100	15,500	15,100	15,100	12,300	11,100
31	7,940	-----	6,100	7,430	-----	17,000	-----	15,100	-----	12,700	12,700	-----
TOTAL	267,930	176,330	113,060	221,010	280,920	411,380	433,600	396,700	443,400	437,600	421,300	351,500
MEAN	8,643	5,878	3,647	7,129	9,687	13,270	14,450	12,800	14,780	14,120	13,590	11,720
MAX	11,900	8,040	8,190	9,100	14,300	17,500	16,800	15,500	17,500	18,000	16,100	13,700
MIN	5,600	2,130	2,090	5,100	5,520	7,240	12,200	8,250	11,700	5,900	10,500	10,500
AC-FT	531,400	349,700	224,300	438,400	557,200	816,000	860,000	786,800	879,500	868,000	835,600	697,200
CAL YR 1967	TOTAL 3,959,020		MEAN 10,850		MAX 18,200		MIN 2,020		AC-FT 7,853,000			
WTR YR 1968	TOTAL 3,954,730		MEAN 10,810		MAX 18,000		MIN 2,090		AC-FT 7,844,000			

COLORADO RIVER MAIN STEM

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 1968 (elevations only).

GAGE.--Digital water-stage recorder. Datum of gage is 400.00 ft above mean sea level, datum of 1929. Prior to Mar. 24, 1966, graphic water-stage recorder; at site 750 ft downstream prior to May 15, 1942; at datum 66.23 ft higher prior to Jan. 12, 1952.

EXTREMES.--Maximum elevation during year, 470.05 ft Aug. 17; minimum, not determined.
1931-68: Maximum elevation, 475.77 ft Nov. 30, 1944; minimum, about 460.0 ft Dec. 23, 31, 1965.

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

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64.67	63.41	-	62.22	-	65.99	67.76	65.79	66.23	66.63	65.35	65.31
2	63.58	63.57	-	62.45	61.99	64.53	67.14	66.02	65.98	66.52	65.26	66.15
3	64.35	63.28	-	-	61.78	64.32	67.76	66.56	66.47	66.24	65.92	65.73
4	63.92	63.46	-	62.98	62.60	63.86	67.42	66.02	66.08	66.55	66.50	65.43
5	64.25	63.38	-	62.38	62.92	64.91	67.04	65.94	66.11	66.46	66.21	65.05
6	63.28	63.36	-	62.81	64.75	64.64	66.87	65.63	65.74	66.00	65.98	65.44
7	64.16	63.28	-	63.03	65.34	64.43	66.70	65.57	65.44	62.50	66.25	64.98
8	63.95	63.12	-	63.01	64.75	65.47	67.19	64.94	65.64	61.68	66.57	65.63
9	63.54	62.94	-	64.02	63.32	63.85	67.03	63.94	65.97	63.01	66.26	65.18
10	64.05	62.17	-	63.64	63.11	62.76	66.80	63.43	65.72	64.70	66.73	65.08
11	64.53	62.45	-	63.47	63.21	63.71	66.86	65.00	66.38	65.88	66.73	64.99
12	64.51	62.95	62.58	62.66	62.94	63.96	66.71	66.02	65.93	67.54	67.04	64.72
13	64.02	62.27	63.49	62.63	63.93	65.11	66.24	65.72	65.16	66.20	66.83	64.47
14	63.69	63.20	63.30	62.86	63.20	65.85	66.28	65.03	65.35	67.00	66.83	64.58
15	63.08	63.14	62.82	63.22	61.67	66.17	65.78	65.07	65.99	67.30	66.39	64.62
16	63.33	63.10	-	63.34	62.91	66.04	66.42	64.39	66.77	67.72	65.92	64.66
17	63.30	63.30	-	62.81	62.61	67.05	66.46	63.89	66.98	67.98	66.16	64.76
18	63.26	62.87	-	62.82	64.30	68.04	66.50	64.54	66.42	67.56	66.08	64.96
19	63.94	62.67	-	-	64.21	67.28	66.11	65.55	67.81	66.93	66.03	64.88
20	65.76	61.72	-	61.61	63.79	67.23	66.37	65.80	66.74	67.34	65.45	65.43
21	64.44	61.96	-	-	64.09	67.18	66.83	66.63	67.29	67.15	65.76	65.27
22	64.21	-	-	62.38	63.82	67.35	66.26	66.30	67.05	66.79	65.73	65.22
23	63.54	-	-	-	63.72	67.17	65.58	65.98	66.91	67.00	65.89	65.13
24	63.70	-	-	62.38	66.33	67.11	65.51	65.63	67.42	66.83	65.84	65.15
25	63.78	61.42	-	-	65.89	66.44	65.50	66.01	67.28	66.67	65.64	65.20
26	63.27	-	-	63.27	66.50	66.80	65.53	66.00	66.85	66.58	65.93	64.98
27	62.09	-	-	63.34	66.14	66.56	66.82	65.61	66.77	66.10	64.73	64.58
28	62.27	-	-	62.83	66.35	66.76	66.03	65.45	66.81	66.70	64.81	64.81
29	62.97	-	-	62.88	66.33	68.02	65.90	65.47	66.87	66.91	64.63	64.76
30	63.62	-	63.76	-	-----	67.76	66.32	66.17	66.61	66.63	64.49	65.01
31	63.59	-----	62.37	-	-----	68.05	-----	66.73	-----	66.63	65.80	-----
MAX	65.76	63.57	63.76	64.02	66.50	68.05	67.76	66.73	67.81	67.98	67.04	66.15
MIN	62.09	61.42	62.37	61.61	61.67	62.76	65.50	63.43	65.16	61.68	64.49	64.47
MEAN	63.76	-	-	-	-	65.95	66.52	65.51	66.43	66.31	65.93	65.07

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

COLORADO RIVER MAIN STEM

17

9-4240. COLORADO RIVER NEAR TOPOCK, ARIZ.

LOCATION.--Lat 34°41'15", long 114°27'45", in SW¼NW¼ 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 1968. Daily mean elevations published since October 1938.

GAGE.--Digital 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, graphic water-stage recorder at site about 1 mile upstream at different datum. Dec. 3, 1922, to Apr. 25, 1966, graphic water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--17 years (1917-34), 20,260 cfs (14,670,000 acre-ft per year); 34 years (1934-68), 13,350 cfs (9,665,000 acre-ft per year), unadjusted.

EXTREMES.--Maximum discharge during year, 18,400 cfs July 17; maximum elevation, 456.07 ft July 17; minimum daily discharge, 1,970 cfs Dec. 27; minimum elevation, 448.62 ft Dec. 9.

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

1934-68: Maximum discharge, 35,700 cfs Jan. 29, 1942; maximum elevation, 457.37 ft July 9, 1959; minimum discharge, 375 cfs Feb. 14, 1935; minimum daily, 422 cfs Feb. 14, 1935.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,100	7,770	3,110	5,790	6,880	13,400	16,300	13,200	13,300	14,400	13,000	11,700
2	8,160	7,860	3,060	5,870	5,890	10,900	16,200	13,300	12,900	14,500	12,100	12,600
3	9,720	7,640	3,040	5,930	5,340	10,200	16,400	14,100	13,000	14,300	13,000	12,600
4	9,290	7,770	3,450	6,730	6,340	9,500	15,900	13,600	13,200	14,400	13,800	11,700
5	9,690	7,810	3,900	6,270	7,260	10,600	15,200	13,200	13,100	14,200	14,100	11,200
6	8,210	7,660	3,360	6,340	9,440	10,600	14,900	12,800	12,800	14,400	12,900	11,600
7	8,780	7,610	2,510	7,240	10,900	10,800	14,700	12,500	12,100	10,100	13,200	11,200
8	8,960	7,530	2,310	7,130	11,500	11,300	15,100	11,800	12,200	8,490	14,000	12,100
9	8,380	6,820	2,010	8,400	9,340	10,500	15,200	10,700	12,600	8,840	13,600	11,600
10	9,320	6,460	2,110	8,330	7,970	8,080	15,100	9,330	12,600	11,000	14,100	11,100
11	9,590	6,180	2,220	8,170	8,150	8,070	14,900	10,500	13,300	12,700	14,300	11,100
12	9,970	6,460	5,070	7,150	7,900	9,760	14,800	12,700	13,500	15,000	14,700	10,900
13	9,660	6,280	6,940	6,730	9,100	10,700	14,100	12,500	12,000	14,200	14,900	10,300
14	8,590	7,330	7,600	7,220	8,760	11,800	14,000	11,700	11,800	14,500	14,800	10,500
15	8,060	7,110	6,950	7,530	6,400	13,400	12,900	11,400	12,400	15,200	13,800	10,500
16	7,770	7,170	4,050	7,860	7,150	12,700	14,000	11,000	13,700	16,000	13,300	10,500
17	7,750	7,220	2,490	7,220	7,260	13,900	14,200	9,850	14,000	16,900	13,500	10,500
18	7,680	7,310	2,430	7,260	8,980	15,600	14,200	10,300	14,200	16,300	13,500	11,400
19	7,900	6,480	2,390	5,860	9,890	15,700	13,800	11,600	13,900	14,800	13,500	11,400
20	11,000	5,460	2,220	5,880	9,150	15,200	14,000	12,200	14,400	15,600	12,700	11,900
21	10,200	5,480	2,130	5,410	9,250	15,000	14,600	13,200	14,400	15,200	12,700	11,800
22	10,000	3,770	2,040	6,180	9,240	15,300	14,200	13,000	14,600	14,600	12,700	11,200
23	8,010	3,040	2,030	5,460	8,980	15,300	13,100	12,800	14,500	15,200	12,800	11,200
24	8,330	2,570	2,030	6,040	11,900	15,900	12,600	12,100	14,900	14,800	12,600	11,300
25	8,400	3,830	1,990	5,810	12,600	14,200	12,600	12,400	15,000	14,100	12,400	11,300
26	8,380	4,330	1,990	7,420	13,300	14,200	12,700	12,400	14,900	14,100	12,300	11,300
27	6,280	3,740	1,970	7,830	13,300	14,200	13,800	12,200	14,100	14,100	10,900	10,300
28	5,940	3,250	2,640	7,370	13,500	14,200	13,600	12,100	14,500	14,500	11,200	10,700
29	6,940	3,350	4,130	7,480	13,600	15,900	13,500	12,100	14,400	15,200	10,700	10,700
30	7,480	3,240	7,120	6,300	-----	16,600	14,200	12,400	14,600	14,500	10,400	11,100
31	7,830	-----	6,640	6,880	-----	16,800	-----	13,700	-----	14,600	11,900	-----
TOTAL	267,370	178,530	105,930	211,090	269,270	400,310	430,800	376,680	406,900	436,730	403,400	337,300
MEAN	8,625	5,951	3,417	6,809	9,285	12,910	14,360	12,150	13,560	14,090	13,010	11,240
MAX	11,100	7,860	7,600	8,400	13,600	16,800	16,400	14,100	15,000	16,900	14,900	12,600
MIN	5,940	2,570	1,970	5,410	5,340	8,070	12,600	9,330	11,800	8,490	10,400	10,300
AC-FT	530,300	354,100	210,100	418,700	534,100	794,000	854,500	747,100	807,100	866,200	800,100	669,000

CAL YR 1967 TOTAL 3,829,730 MEAN 10,490 MAX 17,500 MIN 1,970 AC-FT 7,596,000
WTR YR 1968 TOTAL 3,824,310 MEAN 10,450 MAX 16,900 MIN 1,970 AC-FT 7,585,000

COLORADO RIVER MAIN STEM

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

Mean elevation, in feet, water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.40	52.10	49.54	51.15	51.69	54.19	55.32	54.09	54.61	54.77	53.98	53.46
2	52.17	52.14	49.51	51.19	51.20	53.17	55.27	54.18	54.42	54.76	53.65	53.84
3	52.84	52.05	49.49	51.22	50.86	52.85	55.32	54.56	54.48	54.67	53.98	53.83
4	52.66	52.10	49.79	51.61	51.34	52.57	55.15	54.42	54.56	54.70	54.32	53.45
5	52.83	52.12	50.08	51.40	51.73	53.03	54.86	54.31	54.53	54.62	54.42	53.23
6	52.20	52.06	49.72	51.43	52.63	53.04	54.77	54.23	54.38	54.69	53.94	53.39
7	52.45	52.03	49.12	51.86	53.20	53.12	54.69	54.19	54.11	52.93	54.07	53.20
8	52.53	51.99	48.98	51.81	53.39	53.33	54.82	53.94	54.16	52.23	54.38	53.58
9	52.27	51.67	48.76	52.38	52.50	52.99	54.86	53.53	54.34	52.38	54.23	53.34
10	52.67	51.49	48.83	52.35	51.91	51.96	54.81	52.98	54.32	53.28	54.42	53.13
11	52.79	51.35	48.91	52.29	52.00	51.96	54.74	53.48	54.62	53.94	54.52	53.14
12	52.95	51.49	50.75	51.81	51.88	52.68	54.69	54.38	54.67	54.83	54.68	53.04
13	52.81	51.40	51.71	51.63	52.40	53.07	54.43	54.29	54.09	54.52	54.73	52.80
14	52.37	51.89	52.02	51.85	52.26	53.53	54.39	53.98	54.00	54.62	54.70	52.88
15	52.13	51.80	51.73	51.99	51.18	54.18	53.97	53.86	54.26	54.86	54.30	52.88
16	52.02	51.82	50.14	52.14	51.54	53.90	54.40	53.69	54.76	55.17	54.10	52.85
17	52.01	51.85	49.10	51.85	51.59	54.39	54.46	53.20	54.91	55.50	54.19	52.88
18	51.99	51.88	49.07	51.87	52.35	55.03	54.47	53.40	54.96	55.29	54.20	53.25
19	52.09	51.50	49.04	51.19	52.74	55.06	54.32	53.93	54.85	54.68	54.18	53.23
20	53.42	50.98	48.91	51.20	52.42	54.88	54.37	54.16	55.03	55.00	53.87	53.43
21	53.09	50.99	48.85	50.95	52.47	54.81	54.63	54.58	54.97	54.85	53.87	53.39
22	53.01	49.99	48.78	51.35	52.46	54.90	54.46	54.47	55.06	54.62	53.89	53.17
23	52.16	49.50	48.77	50.99	52.35	54.91	54.03	54.41	54.98	54.85	53.93	53.15
24	52.32	49.16	48.77	51.28	53.59	55.16	53.83	54.15	55.11	54.70	53.82	53.20
25	52.34	50.02	48.74	51.16	53.86	54.48	53.83	54.27	55.13	54.44	53.76	53.19
26	52.34	50.35	48.74	51.93	54.16	54.47	53.86	54.24	55.08	54.41	53.70	53.18
27	51.37	49.97	48.72	52.13	54.12	54.49	54.33	54.16	54.73	54.41	53.15	52.78
28	51.22	49.65	49.21	51.93	54.23	54.47	54.22	54.14	54.87	54.59	53.27	52.97
29	51.70	49.72	50.20	51.97	54.24	55.15	54.18	54.11	54.80	54.85	53.06	52.95
30	51.96	49.64	51.77	51.42	-----	55.41	54.48	54.26	54.85	54.58	52.93	53.10
31	52.12	-----	51.58	51.69	-----	55.49	-----	54.76	-----	54.62	53.55	-----
MAX	53.42	52.14	52.02	52.38	54.24	55.49	55.32	54.76	55.13	55.50	54.73	53.84
MIN	51.22	49.16	48.72	50.95	50.86	51.96	53.83	54.76	54.00	52.23	52.93	52.78
MEAN	52.39	51.16	49.66	51.65	52.49	53.96	54.53	54.08	54.65	54.46	53.99	53.20

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

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.--Water years 1960-62 (annual maximum), October 1962 to September 1968 (discontinued as a continuous-record station); continued as a crest-stage gage partial record station.

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.

AVERAGE DISCHARGE.--6 years (1963-68), 0.003 cfs (2.2 acre-ft per year).

EXTREMES.--No flow during year.

1959-68: Maximum discharge, 114 cfs Sept. 26, 1962 (gage height, 8.51 ft, from crest-stage gage), from rating curve based on 3 computations of flow through culvert; no flow for all or most of each year.

REMARKS.--No flow since Sept. 25, 1967. No regulation or diversion above station. Discharge for calendar year 1967 is as follows: Maximum daily, 2.0 cfs; minimum, zero; mean, 0.005 cfs; total, 4.0 acre-ft.

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 1968 (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. Digital water-stage recorders with weirs on 4 percolation returns; prior to October 1964 miscellaneous measurements only.

Average discharge.--29 years, 684 cfs (495,200 acre-ft per year).

Extremes.--1939-68: Maximum daily diversion, 3,916 acre-ft (1,970 cfs) June 24, 1966; no diversion at times.

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

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

Monthly diversions and percolation return flow, in acre-feet, water year October 1967 to September 1968

Month	Total percolation	Diversions			
		Maximum	Minimum	Mean	Total
October.....	395	3,854	1,328	3,118	96,660
November.....	420	3,536	3,038	3,422	102,670
December.....	436	3,409	0	1,516	46,986
Calendar year 1967.....	4,710	3,916	0	3,076	1,122,633
January.....	428	3,089	1,550	2,327	72,145
February.....	375	3,460	150	2,594	75,238
March.....	383	3,862	1,641	2,735	84,793
April.....	376	3,649	2,476	3,271	98,120
May.....	364	3,911	3,204	3,520	109,134
June.....	351	3,911	3,279	3,526	105,766
July.....	350	3,568	2,403	3,427	106,222
August.....	357	3,820	2,845	3,501	108,524
September.....	358	3,659	2,798	3,475	104,251
Water year 1968.....	4,590	3,911	0	3,034	1,110,509

COLORADO RIVER MAIN STEM

9-4275. Lake Havasu 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 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 1968. 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, 622,000 acre-ft June 13 (elevation, 450.67 ft); minimum, 528,700 acre-ft Feb. 24 (elevation, 445.76 ft).

1938-68: 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 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	558,600	546,100	547,000	543,600	552,800	547,400	556,500	598,000	606,800	612,400	588,600	563,300
2	553,000	548,300	545,200	544,000	550,800	547,400	558,800	601,400	606,600	612,600	585,700	560,900
3	552,400	549,400	545,400	544,000	546,100	544,100	563,500	604,800	605,600	611,400	583,400	560,300
4	553,000	549,400	547,700	543,800	540,900	539,500	568,400	606,400	605,400	611,000	582,800	559,000
5	556,000	549,700	551,500	543,600	534,600	538,900	571,300	607,600	607,200	609,200	582,500	558,400
6	554,300	549,900	554,300	541,800	531,000	539,500	572,800	609,400	612,200	617,600	578,500	556,200
7	553,000	550,400	555,000	540,700	535,900	542,700	570,500	612,800	612,200	618,400	576,400	552,400
8	550,300	552,600	556,200	538,900	543,800	548,800	569,900	615,600	612,800	613,600	577,200	550,300
9	546,700	553,500	553,300	540,500	547,700	559,200	570,100	616,200	612,600	607,400	576,200	548,800
10	545,900	552,200	549,700	544,000	545,900	561,500	572,000	609,200	613,000	603,600	574,300	548,100
11	546,100	549,200	544,700	546,800	543,600	556,500	577,200	602,200	616,000	599,800	572,400	548,100
12	547,000	546,300	545,600	546,800	538,700	552,800	581,000	602,000	618,600	592,600	571,400	548,500
13	547,700	543,100	547,400	545,600	543,100	547,400	585,100	604,800	617,800	594,000	573,200	549,000
14	549,500	541,400	549,400	544,700	547,400	549,700	586,500	608,000	613,200	589,500	575,100	549,000
15	547,700	541,100	555,600	544,700	543,800	550,400	584,000	611,400	609,200	585,100	577,700	549,500
16	543,200	543,400	559,200	545,800	540,900	545,800	582,300	614,800	608,000	582,800	578,100	547,400
17	540,500	545,600	557,300	547,400	537,800	544,100	584,900	609,800	605,400	584,600	578,900	544,100
18	541,300	548,100	555,600	549,400	537,100	544,000	585,100	603,800	604,000	588,000	578,100	545,600
19	544,900	549,700	555,200	547,700	538,000	544,500	584,200	599,800	603,400	585,900	577,300	548,100
20	549,000	553,100	555,000	545,600	537,300	545,000	583,000	597,800	605,600	585,100	577,200	550,100
21	550,600	557,300	554,400	541,400	535,900	546,100	587,600	599,600	606,600	585,100	576,400	551,500
22	552,100	556,400	553,000	543,100	534,100	546,500	585,900	603,600	607,400	585,100	576,200	550,100
23	549,900	554,600	551,500	540,900	530,100	545,400	587,000	605,400	605,800	583,400	576,600	548,600
24	550,300	551,700	550,300	539,500	528,700	546,800	589,500	606,600	604,800	584,000	574,300	550,100
25	551,900	549,900	549,000	538,400	531,900	545,400	591,800	607,400	605,200	585,500	573,200	551,500
26	556,700	550,100	548,100	539,100	532,800	545,400	591,600	608,000	607,600	584,900	571,400	555,600
27	555,600	550,300	546,800	541,400	534,200	546,500	594,400	607,400	610,600	582,800	570,300	556,000
28	553,500	549,900	543,800	545,000	536,200	547,000	595,400	606,000	610,000	584,400	569,900	554,800
29	551,300	548,100	540,200	550,100	541,300	548,500	595,800	604,000	610,200	584,400	570,500	555,600
30	549,400	547,400	540,900	549,900	-----	552,200	597,400	603,600	611,600	584,800	567,600	556,400
31	547,000	-----	544,000	550,800	-----	554,800	-----	606,000	-----	585,300	566,300	-----
(#)	-12,800	+400	-3,400	+6,800	-9,500	+13,500	+42,600	+8,600	+5,600	-26,300	-19,000	-9,900
Max	558,600	557,300	559,200	550,800	552,800	561,500	597,400	616,200	618,600	618,400	588,600	563,300
Min	540,500	541,100	540,200	538,400	528,700	538,900	556,500	597,800	603,400	582,800	566,300	544,100

Calendar year 1967 # +5,600

Water year 1968 # -3,400

Change in contents, in acre-feet.

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

Elevation, in feet, at 2400, water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	447.41	446.73	446.78	446.59	447.10	446.80	447.30	449.47	449.91	450.19	448.99	447.66
2	447.11	446.85	446.68	446.61	446.99	446.80	447.42	449.64	449.90	450.20	448.84	447.53
3	447.08	446.91	446.69	446.61	446.73	446.62	447.67	449.81	449.85	450.14	448.72	447.50
4	447.11	446.91	446.82	446.60	446.44	446.36	447.93	449.89	449.84	450.12	448.69	447.43
5	447.27	446.93	447.03	446.59	446.09	446.33	448.08	449.95	449.93	450.03	448.67	447.40
6	447.18	446.94	447.18	446.49	445.89	446.36	448.16	450.04	450.18	450.45	448.46	447.28
7	447.11	446.97	447.22	446.43	446.16	446.54	448.04	450.21	450.18	450.49	448.35	447.08
8	446.96	447.09	447.28	446.33	446.60	446.88	448.01	450.35	450.21	450.25	448.39	446.96
9	446.76	447.14	447.13	446.42	446.82	447.44	448.02	450.38	450.20	449.94	448.34	446.88
10	446.72	447.07	446.93	446.61	446.72	447.56	448.12	450.03	450.22	449.75	448.24	446.84
11	446.73	446.90	446.65	446.77	446.59	447.30	448.39	449.68	450.37	449.56	448.14	446.84
12	446.78	446.74	446.70	446.77	446.32	447.10	448.59	449.67	450.50	449.50	448.09	446.86
13	446.82	446.56	446.80	446.70	446.56	446.80	448.81	449.81	450.46	449.27	448.18	446.89
14	446.92	446.47	446.91	446.65	446.80	446.93	448.88	449.97	450.23	449.04	448.28	446.89
15	446.82	446.45	447.25	446.65	446.60	446.97	448.75	450.14	450.03	448.81	448.42	446.92
16	446.57	446.58	447.44	446.71	446.44	446.71	448.66	450.31	449.97	448.69	448.44	446.80
17	446.42	446.70	447.34	446.80	446.27	446.62	448.80	450.06	449.84	448.78	448.48	446.62
18	446.46	446.84	447.25	446.91	446.23	446.61	448.81	449.76	449.77	448.96	448.44	446.70
19	446.66	446.93	447.23	446.82	446.28	446.64	448.76	449.56	449.74	448.85	448.40	446.84
20	446.89	447.12	447.22	446.70	446.24	446.67	448.70	449.46	449.85	448.81	448.39	446.95
21	446.98	447.34	447.19	446.47	446.16	446.73	448.94	449.55	449.90	448.81	448.35	447.03
22	447.06	447.29	447.11	446.56	446.06	446.75	448.85	449.75	449.94	448.81	448.34	446.95
23	446.94	447.20	447.03	446.44	445.84	446.69	448.91	449.84	449.86	448.72	448.36	446.87
24	446.96	447.04	446.96	446.36	445.76	446.77	449.04	449.90	449.81	448.75	448.24	446.95
25	447.05	446.94	446.89	446.30	445.94	446.69	449.16	449.94	449.83	448.83	448.18	447.03
26	447.31	446.95	446.84	446.34	445.99	446.69	449.15	449.97	449.95	448.80	448.09	447.25
27	447.25	446.96	446.77	446.47	446.07	446.75	449.29	449.94	450.10	448.69	448.03	447.27
28	447.14	446.94	446.60	446.67	446.18	446.78	449.34	449.87	450.07	448.77	448.01	447.21
29	447.02	446.84	446.40	446.95	446.46	446.86	449.36	449.77	450.08	448.77	448.04	447.25
30	446.91	446.80	446.44	446.94	-----	447.07	449.44	449.75	450.15	448.79	447.89	447.29
31	446.78	-----	446.61	446.99	-----	447.21	-----	449.87	-----	448.82	447.82	-----
Max	447.41	447.34	447.44	446.99	447.10	447.56	449.44	450.38	450.50	450.49	448.99	447.66
Min	446.42	446.45	446.40	446.30	445.94	446.33	447.30	449.46	449.74	448.69	447.82	446.62

COLORADO RIVER MAIN STEM

9-4280. COLORADO RIVER BELOW PARKER DAM, ARIZ.-CALIF.

LOCATION.--Lat 34°15'30", long 114°09'00", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.16, T.2 N., R.27 E., San Bernardino meridian, 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 1968. Prior to October 1937 published as "near Parker, Ariz."

GAGE.--Graphic water-stage recorder. Datum of gage is 346.23 ft above mean sea level, datum of 1929. Supplementary digital water-stage recorder 3.8 miles upstream at datum 300.54 ft above mean sea level, datum of 1929.

AVERAGE DISCHARGE.--34 years (1934-68), 12,690 cfs (9,187,000 acre-ft per year), unadjusted.

EXTREMES.--Maximum discharge during year, 18,900 cfs Aug. 11 (gage height, 22.49 ft); minimum daily discharge, 1,900 cfs Dec. 22.

1934-68: Maximum discharge, 42,400 cfs Feb. 8, 1937; no flow at Parker Dam for parts of several days in 1942 when gates in dam were closed; minimum daily discharge, 1,440 cfs Feb. 15, 1935.

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

REMARKS.--Records excellent. Flow regulated by Lake Mead since Feb. 1, 1935, Lake Mohave since Jan. 17, 1950, and by Lake Havasu since July 1, 1938. Many diversions above station. For record of diversion to Colorado River aqueduct and return flows, see record for Colorado River aqueduct near Park Dam (sta. no. 9-4241.5.). Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9,730	6,750	1,920	4,720	4,870	9,240	14,200	10,700	12,000	12,800	10,300	12,000
2	9,370	5,130	2,070	4,730	5,430	9,550	13,400	9,360	11,900	12,700	11,700	11,900
3	7,900	4,860	2,240	5,330	6,380	9,970	12,200	10,600	12,000	12,700	12,100	11,600
4	7,400	5,780	2,170	5,170	6,970	10,100	12,000	10,500	11,600	12,200	12,200	11,100
5	6,430	5,780	2,060	5,230	9,320	8,760	12,500	10,600	10,700	13,900	13,000	10,000
6	7,200	5,700	2,000	6,040	9,160	8,240	13,000	10,400	9,040	8,350	12,900	11,300
7	6,980	5,300	2,040	6,600	6,520	7,650	14,000	8,780	10,700	6,770	13,200	11,600
8	8,060	4,660	2,090	6,830	6,010	6,840	14,000	8,180	10,700	7,710	12,200	11,600
9	8,670	4,350	2,940	6,370	5,740	4,630	13,200	7,640	10,600	8,710	12,800	11,000
10	7,950	5,320	3,290	5,290	6,740	5,020	12,000	10,200	11,000	10,300	13,500	9,800
11	7,650	5,900	3,590	5,980	7,150	7,500	10,600	10,800	10,300	11,600	13,400	9,490
12	7,530	5,890	4,540	6,230	8,140	9,620	10,700	10,900	10,800	13,500	13,500	8,930
13	7,810	6,180	4,730	6,140	4,880	11,000	10,600	9,740	10,500	14,800	13,200	8,270
14	7,010	6,110	4,640	6,390	4,800	9,370	11,500	8,830	12,200	15,000	12,500	8,330
15	6,440	5,540	3,000	6,320	6,620	11,800	11,900	7,910	12,500	15,600	11,300	8,960
16	8,240	4,270	2,040	6,160	7,130	13,600	12,400	7,380	13,100	15,600	11,500	10,100
17	7,870	4,370	2,040	6,000	7,550	13,500	12,200	9,550	14,300	14,300	11,600	9,860
18	6,490	3,950	2,090	5,000	7,610	14,000	10,800	10,800	13,900	13,300	11,900	8,720
19	5,190	4,270	2,120	5,820	7,910	14,500	12,100	11,600	13,300	13,900	12,200	7,740
20	7,010	2,270	2,020	6,020	7,910	13,300	12,800	11,500	12,600	14,500	11,400	9,680
21	8,020	2,050	1,970	6,450	8,210	13,300	12,100	11,100	12,900	13,700	11,600	9,860
22	7,640	2,490	1,900	4,710	8,170	13,600	11,500	10,300	13,100	14,000	10,800	10,100
23	7,090	2,010	1,940	5,610	9,460	14,200	10,600	10,200	13,700	14,000	11,900	9,750
24	6,520	2,370	1,950	5,700	10,300	14,000	9,340	10,500	14,400	13,000	12,400	9,420
25	5,620	2,730	1,950	5,300	10,900	13,400	9,110	10,600	13,900	12,200	11,400	9,020
26	4,320	2,500	1,940	5,370	11,200	12,700	10,400	10,600	12,700	12,300	11,600	7,650
27	4,810	1,950	1,940	5,250	11,500	12,200	10,700	11,100	11,500	13,300	10,300	8,590
28	5,040	2,080	3,310	4,760	10,700	12,200	10,800	11,100	12,600	12,900	9,940	9,580
29	6,090	2,030	5,170	5,740	9,830	12,900	11,000	11,500	12,900	13,400	8,720	8,920
30	6,070	2,010	5,300	6,000	-----	12,800	11,000	10,900	12,700	13,300	10,000	8,820
31	6,940	-----	4,590	5,430	-----	13,300	-----	11,700	-----	12,600	10,600	-----
TOTAL	219,090	124,600	85,590	176,690	227,110	342,790	352,650	315,570	364,140	392,940	365,660	293,690
MEAN	7,067	4,153	2,761	5,700	7,831	11,060	11,760	10,180	12,140	12,680	11,800	9,790
MAX	9,730	6,750	5,300	6,830	11,500	14,500	14,200	11,700	14,400	15,600	13,500	12,000
MIN	4,320	1,950	1,900	4,710	4,800	4,630	9,110	7,380	9,040	6,770	8,720	7,650
AC-FT	434,600	247,100	169,800	350,500	450,500	679,900	699,500	625,900	722,300	779,400	725,300	582,500
CAL YR 1967	TOTAL 3,187,520		MEAN 8,733		MAX 15,100		MIN 1,900		AC-FT 6,322,000			
WTR YR 1968	TOTAL 3,260,520		MEAN 8,909		MAX 15,600		MIN 1,900		AC-FT 6,467,000			

9-4285.3. ARCH CREEK NEAR EARP, CALIF.

LOCATION.--Lat 34°09'55", long 114°22'20", in NE $\frac{1}{4}$ 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 1968.

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

AVERAGE DISCHARGE.--8 years, 0.005 cfs (3.6 acre-ft per year).

EXTREMES.--Maximum discharge during year, 379 cfs July 6 (gage height, 8.38 ft), from rating curve based on culvert computations of flow at gage heights 3.98, 5.00, 6.45 and 13.24 ft; no flow most of year.
1960-68: Maximum discharge, 379 cfs July 6, 1968 (gage height, 8.38 ft); no flow for most of each year.
Flood of Sept. 13, 1959, reached a stage of 13.24 ft, from floodmarks (discharge, 674 cfs, based on computation of maximum flow through culvert).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	8.5	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	1.6	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	.10	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	-----	0	0	0	0	0	0	0
31	0	-----	0	0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	1.6	0	0	0	0	0	0	0	8.60	0	0
MEAN	0	.053	0	0	0	0	0	0	0	.28	0	0
MAX	0	1.6	0	0	0	0	0	0	0	8.5	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	3.2	0	0	0	0	0	0	0	17	0	0
CAL YR 1967	TOTAL	1.6	MEAN	.004	MAX	1.6	MIN	0	AC-FT	3.2		
WTR YR 1968	TOTAL	10.20	MEAN	.028	MAX	8.5	MIN	0	AC-FT	20		

TRIBUTARIES AND DIVERSIONS BETWEEN PARKER DAM AND PALO VERDE DAM

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

LOCATION.--Lat 33°43'54", long 114°30'43", in SE¼NE¼NW¼ sec.19, T.5 S., R.24 E., San Bernardino meridian, 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 1968 (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 0.5 mile downstream and Dec. 1, 1952, to Oct. 28, 1957, recording gage above and below former intake structure 0.2 mile upstream, at different datums.

AVERAGE DISCHARGE.--18 years (1950-68), 1,187 cfs (859,400 acre-ft per year).

EXTREMES.--1950-68: Maximum daily discharge, 2,180 cfs Aug. 7, 1962; no flow at times in several years.

REMARKS.--Records excellent except those below 300 cfs, which are good. Daily diversions computed on basis of head on intake gates and gate openings. Records published herein represent flow diverted from Colorado River during 1968 for irrigation of 87,791 acres. Return flows to Colorado River are measured by 11 wasteways and drains extending throughout the project; 4 of these are equipped with digital water-stage recorders and Parshall flume, 3 are equipped with Sparling flowmeters. Return flows have not been subtracted; combined monthly return flows are given in table below. Check measurements of return flows are made about once a month by the Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,070	897	386	0	879	1,570	1,410	1,690	1,600	1,610	1,820	1,460
2	1,170	842	419	0	885	1,480	1,410	1,720	1,540	1,680	1,800	1,450
3	1,100	919	413	0	869	1,330	1,400	1,710	1,550	1,690	1,770	1,450
4	1,140	790	463	0	886	1,310	1,440	1,490	1,560	1,730	1,740	1,480
5	1,180	702	507	0	924	1,290	1,430	1,320	1,610	1,700	1,720	1,610
6	1,080	718	610	0	938	1,370	1,310	1,400	1,560	1,470	1,740	1,650
7	906	711	619	0	904	1,430	1,260	1,400	1,440	1,140	1,700	1,690
8	943	737	543	0	940	1,290	1,390	1,470	1,380	1,060	1,670	1,680
9	968	775	572	471	949	1,110	1,370	1,500	1,280	954	1,690	1,650
10	854	716	559	534	955	1,020	1,530	1,410	1,260	1,010	1,610	1,630
11	909	760	594	781	840	917	1,500	1,310	1,360	1,130	1,570	1,610
12	920	737	640	842	860	924	1,500	1,270	1,480	1,330	1,720	1,570
13	1,090	791	800	870	909	1,140	1,420	1,330	1,540	1,420	1,640	1,640
14	943	838	732	809	910	1,190	1,240	1,380	1,630	1,590	1,700	1,510
15	787	816	445	827	928	1,170	1,310	1,430	1,620	1,790	1,670	1,420
16	751	795	274	849	931	1,230	1,380	1,400	1,660	1,890	1,600	1,450
17	703	675	272	887	924	1,190	1,470	1,380	1,740	1,910	1,570	1,460
18	696	638	268	884	974	1,310	1,520	1,440	1,760	1,930	1,530	1,450
19	718	552	247	883	1,060	1,300	1,570	1,400	1,740	1,920	1,540	1,360
20	713	578	234	860	1,060	1,370	1,480	1,400	1,760	1,890	1,500	1,330
21	738	660	231	781	1,110	1,400	1,410	1,430	1,750	1,930	1,540	1,290
22	707	657	235	838	1,150	1,370	1,500	1,540	1,760	1,940	1,560	1,320
23	880	568	220	920	1,190	1,450	1,500	1,550	1,840	1,880	1,670	1,390
24	949	553	225	912	1,220	1,350	1,510	1,540	1,870	1,900	1,530	1,360
25	900	529	231	906	1,240	1,420	1,590	1,400	1,850	2,010	1,510	1,410
26	895	572	442	934	1,360	1,380	1,570	1,270	1,770	1,960	1,630	1,410
27	856	468	478	884	1,450	1,360	1,570	1,420	1,610	1,930	1,740	1,390
28	746	475	620	794	1,590	1,370	1,560	1,500	1,620	1,850	1,740	1,170
29	631	482	708	838	1,600	1,330	1,670	1,600	1,630	1,810	1,750	1,100
30	784	418	717	849	-----	1,310	1,680	1,620	1,610	1,780	1,580	1,150
31	812	-----	556	893	-----	1,270	-----	1,610	-----	1,790	1,560	-----
TOTAL	27,539	20,369	14,260	19,046	30,435	39,951	43,900	45,330	48,380	51,624	51,110	43,540
MEAN	888	679	460	614	1,049	1,289	1,463	1,462	1,613	1,665	1,649	1,451
MAX	1,180	919	800	934	1,600	1,570	1,680	1,720	1,870	2,010	1,820	1,690
MIN	631	418	220	0	840	917	1,240	1,270	1,260	954	1,500	1,100
AC-FT	54,620	40,400	28,280	37,780	60,370	79,240	87,070	89,910	95,960	102,400	101,400	86,360
(a)	40,050	35,190	31,280	27,340	29,240	39,060	41,580	44,640	44,040	46,530	49,860	48,210

CAL YR 1967 TOTAL 418,514.00 MEAN 1,147 MAX 2,010 MIN 0 AC-FT 830,100 a 466,700
WTR YR 1968 TOTAL 435,484.00 MEAN 1,190 MAX 2,010 MIN 0 AC-FT 863,800 a 477,000

COLORADO RIVER MAIN STEM

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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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 260.00 ft above mean sea level, datum of 1929. Prior to June 1, 1966, graphic water-stage recorder at same site and datum.

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

EXTREMES.--Maximum discharge recorded during year, 15,600 cfs Apr. 1 (gage height, 16.33 ft); minimum daily, 1,480 cfs Dec. 7.
1956-68: 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. 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,850	5,790	1,790	5,080	4,780	7,700	11,900	8,680	9,370	9,660	9,470	8,340
2	7,990	5,780	1,630	4,600	4,360	7,810	11,900	8,580	9,700	9,810	7,790	9,490
3	7,720	4,320	1,810	4,560	4,740	7,660	10,700	7,610	9,660	9,680	8,780	9,450
4	6,430	4,080	1,880	4,930	5,560	7,850	10,400	8,470	9,580	9,560	9,240	9,350
5	6,370	4,970	1,690	4,920	6,430	8,380	9,730	8,790	8,620	9,620	9,490	8,680
6	5,380	4,960	1,490	4,950	6,710	6,800	10,800	8,600	8,420	10,500	9,900	7,850
7	6,060	4,870	1,480	5,660	6,190	6,130	11,300	8,630	7,160	7,410	9,960	8,680
8	5,370	4,440	1,540	5,860	5,780	6,330	12,100	7,240	8,600	5,170	10,100	9,100
9	6,690	3,910	1,660	5,870	5,500	5,280	12,100	6,290	8,900	6,850	9,430	9,060
10	7,270	3,640	2,390	5,520	4,980	3,750	11,000	6,290	8,680	7,270	9,940	8,580
11	6,670	4,320	2,680	4,440	6,050	4,120	10,100	8,770	8,700	8,400	10,400	7,700
12	6,480	4,870	3,000	4,810	6,360	6,350	9,060	8,830	8,270	9,750	10,500	7,370
13	6,290	4,880	3,430	4,990	7,050	7,980	8,970	9,010	8,560	10,600	10,500	6,870
14	6,420	5,080	3,700	4,980	3,510	8,940	9,080	8,010	8,340	12,000	10,100	6,480
15	6,050	5,060	4,000	5,280	4,120	8,420	9,790	7,320	9,580	11,700	9,660	6,550
16	5,650	4,560	2,620	5,190	5,350	10,100	10,100	6,610	9,980	12,300	8,940	7,030
17	7,170	3,660	1,960	4,930	5,910	11,200	10,300	6,130	10,400	11,600	9,040	7,850
18	6,920	3,630	1,910	4,770	6,320	11,200	10,100	8,130	11,400	10,900	9,240	7,750
19	5,770	3,530	1,990	3,940	6,430	11,100	8,950	8,970	11,000	10,200	9,450	7,030
20	4,680	3,250	1,960	4,990	6,670	11,500	10,300	9,520	10,300	10,900	9,470	6,200
21	5,970	1,840	1,850	5,440	6,390	11,000	10,600	9,280	9,960	11,100	8,920	7,700
22	6,910	1,750	1,770	5,960	6,660	11,200	10,000	9,030	9,790	10,400	8,980	8,020
23	6,510	2,140	1,790	6,040	6,660	11,700	9,510	8,290	10,000	10,600	8,440	8,130
24	5,970	1,700	1,810	5,410	7,770	12,000	8,770	8,480	10,700	10,700	9,390	7,930
25	5,550	2,120	1,810	4,910	8,440	11,600	7,640	8,680	10,900	9,730	9,900	7,620
26	4,880	2,380	1,620	4,660	8,940	11,100	7,240	8,970	10,500	9,210	9,390	7,220
27	3,830	2,120	1,510	4,670	9,280	10,800	8,720	8,890	9,770	9,180	8,960	6,250
28	4,170	1,640	1,500	4,710	9,060	10,200	8,610	9,090	8,900	10,500	8,000	7,020
29	4,400	1,600	2,760	4,260	8,290	10,400	8,710	8,990	9,750	9,550	7,580	7,830
30	5,090	1,660	4,020	4,930	-----	11,100	8,750	9,210	9,900	10,300	6,820	7,430
31	5,160	-----	4,340	5,300	-----	10,700	-----	8,920	-----	10,300	7,750	-----
TOTAL	187,670	108,550	69,390	156,560	184,290	280,400	297,230	258,310	285,390	305,450	285,530	234,560
MEAN	6,054	3,618	2,238	5,050	6,355	9,045	9,908	8,333	9,513	9,853	9,211	7,819
MAX	7,990	5,790	4,340	6,040	9,280	12,000	12,100	9,520	11,400	12,300	10,500	9,490
MIN	3,830	1,600	1,480	3,940	3,510	3,750	7,240	6,130	7,160	5,170	6,820	6,200
AC-FT	372,200	215,300	137,600	310,500	365,500	556,200	589,500	512,400	566,100	605,900	566,300	465,200
CAL YR 1967	TOTAL 2,644,590			MEAN 7,245		MAX 13,000		MIN 1,480		AC-FT 5,245,000		
WTR YR 1968	TOTAL 2,653,330			MEAN 7,250		MAX 12,300		MIN 1,480		AC-FT 5,263,000		

COLORADO RIVER MAIN STEM

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

LOCATION.--Lat 32°53'00", long 114°27'50", in W $\frac{1}{2}$ 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 north-east 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 1968. Flow of Colorado River reaching Imperial Dam: 1903-34 (yearly discharge only), July 1934 to September 1968 (monthly discharge only since October 1942). Prior to 1943 published as "near Picacho, Calif."

GAGE.--Water-stage recorder in forebay, 12 calibrated gates on California sluiceway, 8 calibrated gates on Gila sluiceway, and calibrated manometer on each discharge pipe from desilting basin. Datum of forebay gage is 162.00 ft above mean sea level (U.S. Bureau of Reclamation bench-mark). July 1, 1934, to Sept. 30, 1942, water-stage recorder at site 14.5 miles upstream at datum 167.38 ft above mean sea level, 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).--34 years (1934-68), 11,810 cfs (8,550,000 acre-ft per year).

EXTREMES (flow reaching Imperial Dam).--1934-68: Maximum discharge, 40,800 cfs Sept. 5, 1939; minimum, 538 cfs Aug. 3, 1934; minimum daily since regulation of Hoover Dam began, 1,450 cfs Feb. 17, 1935.

REMARKS.--Records excellent above 500 cfs and good below. Records of daily discharge show flow of Colorado River passing Imperial Dam, and include water released to river through California and Gila sluiceways, sludge from desilting basins returned to river, and leakage through dam. Records of flow reaching Imperial Dam (given in monthly and yearly summaries below) are based on combined monthly cfs-days of Colorado River at this station, and at gaging stations on All-American Canal near Imperial Dam (see sta. no. 9-5230.), and Gila Gravity Main Canal at Imperial Dam (see sta. no. 9-5225.). Records for October 1942 to September 1960 were computed as combined flow of Colorado River at Yuma (see sta. no. 9-5210.) and the All-American and Gila Gravity Main Canals, less flow of Gila River near Dome (drainage and waste return flows and channel losses between the gaging stations and Imperial Dam were neglected). Flow of Colorado River regulated by many reservoirs, principally Lake Mead, since 1935. Many diversions from Colorado River and tributaries above station. Additional regulation, beginning Jan. 31, 1966, to equalize supplies for downstream water users, is provided by pumped storage in reservoir on Senator Wash, about 2 miles upstream from Imperial Dam. Month-end contents of Senator Wash Reservoir (capacity, 13,840 acre-ft) is given in table below.

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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249	249	147	147	228	560	513	331	254	354	686	348
2	249	249	147	147	228	228	343	400	254	354	517	348
3	249	249	147	312	228	228	597	774	254	354	354	348
4	249	249	147	247	228	228	626	249	254	354	354	348
5	249	249	147	247	228	228	375	249	254	354	354	348
6	255	249	147	247	228	228	343	249	254	1,470	354	348
7	249	249	147	247	228	228	343	249	254	2,530	354	348
8	249	249	147	247	228	403	343	249	254	3,240	354	348
9	249	249	147	247	228	307	343	349	254	1,100	354	348
10	249	249	147	247	228	981	343	249	354	354	354	348
11	249	249	147	247	228	238	508	249	354	354	354	348
12	249	249	147	247	228	233	709	249	354	354	520	348
13	249	249	147	350	228	233	573	249	354	400	523	248
14	249	249	147	247	310	233	348	248	354	354	354	248
15	249	249	147	247	228	233	348	248	354	354	522	248
16	349	249	147	247	228	233	348	248	354	354	523	248
17	249	249	811	247	228	233	348	248	354	354	399	248
18	249	343	197	247	228	233	348	248	354	599	354	248
19	330	398	159	247	228	233	348	248	354	603	354	248
20	577	355	335	247	311	333	348	248	354	354	354	248
21	249	412	147	247	311	333	348	248	354	354	354	248
22	249	358	163	247	228	333	348	498	354	354	354	248
23	249	449	171	247	228	333	663	499	354	354	354	248
24	497	370	147	247	228	333	585	248	354	354	354	248
25	249	208	161	247	228	333	512	248	433	354	354	248
26	249	182	161	401	228	489	348	348	687	354	354	416
27	249	607	147	327	228	576	348	248	606	354	501	248
28	249	810	147	227	228	333	248	248	438	354	598	248
29	249	218	147	227	560	333	248	248	354	354	436	248
30	249	148	147	227	-----	333	248	248	354	354	354	414
31	249	-----	147	227	-----	333	-----	248	-----	606	354	-----
TOTAL	8,482	9,091	5,539	7,779	7,192	10,116	12,291	9,160	10,468	18,690	12,659	8,974
MEAN	274	303	179	251	248	326	410	295	349	603	408	299
MAX	577	810	811	401	560	981	709	774	687	3,240	686	416
MIN	249	148	147	147	228	228	248	248	254	354	354	248
AC-FT	16,820	18,030	10,990	15,430	14,270	20,060	24,380	18,170	20,760	37,070	25,110	17,800
(a)	6,698	4,508	2,824	5,565	6,368	9,204	10,450	8,659	9,752	10,170	9,904	8,306
(b)	411,800	268,300	173,700	342,200	366,300	565,900	621,600	532,400	580,300	625,200	609,000	494,200
(c)	8,840	13,670	8,030	5,470	5,460	4,520	6,650	4,940	6,990	8,120	4,880	6,130

CAL YR 1967 TOTAL 123,015 MEAN 337 MAX 2,000 MIN 134 AC-FT 244,000 a 7,757 b 5,615,000
WTR YR 1968 TOTAL 120,441 MEAN 329 MAX 3,240 MIN 147 AC-FT 238,900 a 7,701 b 5,591,000

a 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).

b Flow reaching Imperial Dam, in acre-feet.

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

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

LOCATION.--Lat 32°43'54", long 114°37'55", in SW¼SW¼ 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 former gaging station on Colorado River at Yuma, 1.1 miles northwest of Post Office in Yuma, 5.2 miles downstream from Gila River, and 6.4 miles upstream from northerly international boundary.

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

RECORDS AVAILABLE.--October 1963 to September 1968. If records for Yuma Main Canal wasteway at Yuma (see sta. no. 9-5250.) and Reservation Main Drain No. 4 (see sta. no. 9-5300.) are subtracted from records at this station, records equivalent to those published in 1902-64 as "Colorado River at Yuma" (see sta. no. 9-5210.) can be obtained.

GAGE.--Digital water-stage recorder. Datum of gage is 101.99 ft above mean sea level, datum of 1929. Prior to Apr. 29, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--5 years, 946 cfs (684,900 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3,710 cfs July 9 (gage height, 13.40 ft, from U.S. Bureau of Reclamation telemark record); minimum daily, 409 cfs Dec. 24.

1963-68: Maximum discharge, 4,560 cfs Dec. 21, 1965 (gage height, 14.00 ft); minimum daily, 327 cfs Jan. 10, 1967.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	626	648	440	544	736	486	1,130	932	902	575	643	630
2	622	652	651	452	732	486	1,180	910	902	569	598	935
3	632	664	635	436	745	487	1,100	962	896	575	516	768
4	644	674	640	419	749	478	908	985	936	622	583	656
5	648	650	640	500	725	458	827	1,000	939	1,040	623	635
6	642	642	640	482	755	503	781	1,000	980	906	1,060	614
7	641	649	618	514	764	512	619	985	1,020	1,230	971	601
8	683	668	635	521	714	486	860	1,020	963	3,170	681	624
9	660	643	657	572	716	537	883	997	1,030	3,100	656	617
10	681	663	662	581	710	628	766	932	1,390	895	683	946
11	680	669	635	589	714	917	646	883	1,200	701	954	1,390
12	649	680	690	592	657	949	592	931	1,260	1,090	953	1,310
13	644	653	725	595	721	913	591	911	1,130	1,000	955	996
14	643	652	783	579	959	598	576	942	559	743	915	992
15	657	668	1,050	562	1,130	597	561	964	556	707	904	1,020
16	671	688	1,310	564	520	577	919	955	552	678	896	713
17	635	681	1,300	564	530	598	969	968	597	651	862	673
18	677	675	1,260	559	525	586	683	935	793	645	870	644
19	640	719	1,080	578	540	572	629	943	921	636	898	607
20	664	612	860	554	545	620	654	925	774	604	830	579
21	672	646	495	560	510	624	661	920	630	612	632	589
22	691	651	422	553	495	628	634	924	622	643	681	605
23	653	618	413	549	485	634	614	915	620	1,060	985	586
24	654	713	409	552	656	636	626	906	608	759	939	571
25	640	612	440	571	690	638	604	909	625	644	687	584
26	633	673	1,130	635	651	635	533	926	630	621	664	590
27	639	651	1,030	1,380	519	631	846	884	609	635	646	580
28	632	1,000	1,040	960	510	622	1,480	896	586	745	670	594
29	649	860	1,020	704	495	580	1,150	933	552	656	644	576
30	661	443	1,010	764	-----	616	1,050	910	570	629	623	546
31	647	-----	1,070	748	-----	873	-----	1,020	-----	654	623	-----
TOTAL	20,210	20,117	24,390	18,733	19,198	19,105	24,072	29,223	24,352	27,795	23,845	21,771
MEAN	652	671	787	604	662	616	802	943	812	897	769	726
MAX	691	1,000	1,310	1,380	1,130	949	1,480	1,020	1,390	3,170	1,060	1,390
MIN	622	443	409	419	485	458	533	883	552	569	516	546
AC-FT	40,090	39,900	48,380	37,160	38,080	37,890	47,750	57,960	48,300	55,130	47,300	43,180
CAL YR 1967	TOTAL 284,714		MEAN 780		MAX 2,290		MIN 327		AC-FT 564,700			
WTR YR 1968	TOTAL 272,811		MEAN 745		MAX 3,170		MIN 409		AC-FT 541,100			

COLORADO RIVER MAIN STEM

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, 0.5 mile east of Andrade, 1.1 miles upstream from Morelos Dam, 1.1 miles downstream from Rockwood Gate, and 6.4 miles downstream from gaging station on Colorado River below Yuma Main Canal wasteway.

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

RECORDS AVAILABLE.--January 1950 to September 1968. 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, 4,910 cfs July 9; maximum elevation, 106.16 ft July 9; minimum discharge, 556 cfs Sept. 30; minimum elevation, 101.99 ft Sept. 30.

1950-68: Maximum discharge, 25,390 cfs Jan. 1, 1953; maximum elevation, 114.24 ft Jan. 28, 1958; minimum discharge, 555 cfs Jan. 27, 1967; minimum elevation, 101.89 ft Nov. 22, 1966.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	678	712	1,440	1,970	760	1,980	3,880	1,220	1,230	2,710	2,920	2,180
2	676	678	661	2,000	718	2,000	3,980	1,160	1,170	2,700	2,940	2,180
3	721	705	700	2,070	728	1,930	3,970	1,150	1,180	2,710	2,990	2,210
4	691	718	689	2,070	766	2,140	3,960	1,160	1,240	2,710	2,930	2,220
5	696	711	688	2,050	738	2,220	3,980	1,160	1,200	2,740	2,950	2,240
6	708	706	704	2,040	709	2,210	3,980	1,180	1,190	2,710	2,960	2,260
7	687	682	671	2,050	779	2,240	3,980	1,150	1,240	3,000	3,000	2,240
8	707	722	669	2,040	746	2,240	3,990	1,140	1,220	4,440	2,970	2,220
9	715	697	685	2,090	735	2,230	3,940	1,140	1,220	4,650	2,980	2,110
10	705	689	690	2,060	735	2,260	3,930	1,130	1,560	2,540	2,990	1,790
11	735	698	689	2,010	754	2,430	3,700	1,100	1,530	2,650	3,010	1,540
12	712	712	704	2,030	701	2,400	3,670	1,120	1,460	2,620	2,770	1,510
13	701	701	758	2,030	728	2,410	3,520	1,180	1,490	2,640	2,870	1,180
14	683	687	815	2,040	981	2,420	3,480	1,180	1,760	2,810	2,900	1,160
15	671	705	1,090	1,770	1,290	2,480	3,480	1,230	1,810	2,790	2,840	1,220
16	713	729	1,370	1,790	1,640	2,430	3,550	1,180	1,840	2,790	2,860	808
17	676	704	1,380	1,810	1,750	2,610	3,510	1,190	1,940	2,810	2,720	750
18	688	728	1,410	1,810	1,910	2,900	3,480	1,190	2,130	2,810	2,740	709
19	686	793	1,140	1,800	1,960	3,200	3,520	1,200	2,280	2,820	2,710	677
20	696	673	1,670	1,770	2,030	3,350	3,490	1,180	2,390	2,900	2,740	632
21	705	696	1,720	1,830	1,950	3,400	3,490	1,230	2,430	2,960	2,710	630
22	729	714	1,460	1,800	1,980	3,400	3,500	1,180	2,400	2,970	2,440	647
23	722	693	1,440	1,790	1,960	3,370	3,290	1,160	2,400	2,960	2,440	653
24	726	766	1,450	1,830	2,000	3,390	3,000	1,180	2,430	3,010	2,410	618
25	696	697	1,450	1,800	2,020	3,410	2,620	1,200	2,380	2,970	2,400	636
26	705	708	1,240	1,750	1,980	3,440	2,340	1,190	2,370	3,000	2,440	660
27	705	722	1,160	1,460	2,010	3,660	2,110	1,190	2,420	3,010	2,430	641
28	705	1,510	1,160	1,130	2,030	3,710	1,790	1,160	2,420	3,000	2,470	669
29	688	2,670	1,130	746	2,040	3,720	1,440	1,160	2,440	3,000	2,470	653
30	691	1,570	1,140	732	-----	3,730	1,300	1,210	2,480	2,990	2,480	625
31	670	-----	1,230	772	-----	3,740	-----	1,240	-----	2,950	2,480	-----
TOTAL	21,687	24,896	33,203	54,940	39,128	87,050	99,870	36,440	55,250	91,370	84,960	38,268
MEAN	700	830	1,071	1,772	1,349	2,808	3,329	1,175	1,842	2,947	2,741	1,276
MAX	735	2,670	1,720	2,090	2,040	3,740	3,990	1,240	2,480	4,650	3,010	2,260
MIN	670	673	661	732	701	1,930	1,300	1,100	1,170	2,540	2,400	618
AC-FT	43,020	49,380	65,860	109,000	77,610	172,700	198,100	72,280	109,600	181,200	168,500	75,900
CAL YR 1967	TOTAL 666,797		MEAN 1,827		MAX 6,850		MIN 661		AC-FT 1,323,000			
WTR YR 1968	TOTAL 667,062		MEAN 1,823		MAX 4,650		MIN 618		AC-FT 1,323,000			

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

29

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 1968.

GAGE.--Digital and graphic water-stage recorders. Datum of gage is 160.00 ft above mean sea level, datum of 1929. Prior to Apr. 1, 1966, graphic water-stage recorder only at same site and datum.

AVERAGE DISCHARGE.--9 years, (1959-68), 1,187 cfs (859,400 acre-ft per year).

EXTREMES.--1943-68: Maximum daily discharge, 2,240 cfs May 25, 1965; no flow at canal intake at times in several years when intake gates were closed.

REMARKS.--Records excellent except those below 100 cfs, which are fair. Gila Gravity Main Canal diverts water from Colorado River at left end of Imperial Dam for irrigation of lands on Gila Project in Arizona. Diversion to this canal began Aug. 17, 1943. Diversion to North Gila Valley from this canal began Dec. 16, 1954. During the 1967 water year, water was used for irrigation of 96,487 acres divided as follows: North and South Gila Valleys, 15,935 acres; Yuma Mesa Division, 17,168 acres; Wellton-Mohawk Division, 61,190 acres; Yuma Mesa Auxiliary Division, 3,301 acres. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	988	1,040	234	155	531	1,150	1,340	1,870	1,750	1,830	1,730	1,340
2	1,300	993	598	497	404	1,080	1,700	1,740	1,490	1,850	1,760	1,540
3	1,310	817	334	563	375	928	1,570	1,630	1,680	1,830	1,570	1,640
4	1,450	644	520	679	301	1,190	1,530	1,510	1,940	2,020	868	1,730
5	1,450	495	512	649	667	1,310	1,500	1,330	1,900	1,980	1,220	1,550
6	1,290	749	548	407	992	1,370	1,260	1,550	1,720	1,200	1,500	1,540
7	981	978	476	277	1,020	1,320	1,230	1,640	1,930	940	1,600	1,410
8	785	1,070	383	506	953	953	1,480	1,820	1,570	1,300	1,550	1,030
9	1,350	914	363	493	779	814	1,640	1,700	1,470	1,500	1,520	1,460
10	1,360	763	427	615	646	490	1,690	1,580	1,710	1,460	1,330	1,640
11	1,440	564	582	713	557	1,040	1,530	1,240	1,750	1,550	1,090	1,600
12	1,360	451	606	574	908	1,280	1,530	996	1,870	1,720	1,520	1,600
13	1,340	799	678	374	857	1,150	1,110	1,560	1,820	1,560	1,690	1,500
14	855	1,070	699	311	705	1,210	897	1,770	1,830	1,390	1,780	1,250
15	721	1,210	385	720	756	1,200	1,600	1,720	1,580	1,740	1,780	1,180
16	1,020	1,150	109	846	698	997	1,770	1,810	1,420	1,940	1,730	1,490
17	1,160	864	232	780	604	851	1,870	1,720	1,870	1,880	1,500	1,620
18	1,190	676	507	776	412	1,210	1,620	1,310	1,980	1,750	1,280	1,650
19	1,160	859	282	624	818	1,410	1,680	1,140	2,000	1,790	1,610	1,640
20	1,020	1,430	82	592	1,030	1,460	1,570	1,630	2,110	1,460	1,710	1,540
21	744	1,470	113	398	958	1,370	1,290	1,860	2,140	1,270	1,670	1,320
22	475	585	210	938	884	1,320	1,580	1,830	1,840	1,610	1,700	994
23	1,020	13	193	958	870	1,190	1,500	1,690	1,410	1,750	1,590	1,430
24	1,180	0	69	952	909	1,000	1,560	1,620	1,900	1,830	1,210	1,710
25	1,090	0	2.0	861	796	1,370	1,530	1,550	1,960	2,000	1,030	1,580
26	1,070	0	379	700	1,250	1,520	1,430	1,450	1,780	1,990	1,390	1,440
27	910	0	555	554	1,340	1,520	1,260	1,730	1,820	1,550	1,640	1,460
28	696	0	585	468	1,510	1,540	1,170	1,910	1,880	1,160	1,540	1,120
29	646	0	612	646	1,340	1,380	1,470	1,740	1,790	1,480	1,530	1,010
30	1,050	0	363	706	-----	1,150	1,750	1,920	1,650	1,630	1,660	1,190
31	1,040	-----	211	734	-----	1,030	-----	1,930	-----	1,670	1,470	-----
TOTAL	33,451	19,604	11,849.0	19,066	23,870	36,803	44,657	50,496	53,560	50,630	46,768	43,204
MEAN	1,079	653	382	615	823	1,187	1,489	1,629	1,785	1,633	1,509	1,440
MAX	1,450	1,470	699	958	1,510	1,540	1,870	1,930	2,140	2,020	1,780	1,730
MIN	475	0	2.0	155	301	490	897	996	1,410	940	868	994
AC-FT	66,350	38,880	23,500	37,820	47,350	73,000	88,580	100,200	106,200	100,400	92,760	85,690
CAL YR 1967	TOTAL 424,486.00		MEAN 1,163		MAX 2,180		MIN 0		AC-FT 842,000			
WTR YR 1968	TOTAL 433,958.00		MEAN 1,186		MAX 2,140		MIN 0		AC-FT 860,700			

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

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

LOCATION.--Lat 32°52'15", long 114°28'50", in SE1/4 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 13.5 miles upstream from turnout to Yuma Main Canal.

RECORDS AVAILABLE.--October 1938 to September 1968. 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 18.5 miles downstream from base gage.

AVERAGE DISCHARGE.--27 years (1941-68), 7,068 cfs (5,117,000 acre-ft per year).

EXTREMES.--1938-68: Maximum daily discharge, 13,500 cfs Apr. 16, 1938; no flow at times in several years.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,980	4,680	2,340	3,820	4,390	7,060	9,150	7,320	7,250	8,170	7,920	6,420
2	5,780	5,050	1,710	4,030	4,530	7,140	9,140	7,350	6,850	8,180	8,100	6,460
3	5,900	4,890	1,750	4,520	4,420	6,630	9,280	7,220	6,980	8,240	8,250	6,740
4	6,130	4,800	1,790	4,820	4,270	6,710	9,800	7,000	7,120	8,300	7,310	7,160
5	6,090	4,170	2,140	4,980	4,500	6,850	9,570	6,690	7,310	8,200	7,580	7,540
6	5,900	4,250	2,180	5,290	5,000	6,860	9,140	6,450	7,470	6,640	7,450	7,710
7	5,950	4,430	2,240	4,910	5,210	6,530	8,910	6,520	7,130	5,860	7,800	7,570
8	5,390	4,430	1,960	4,860	5,640	5,450	9,190	6,500	6,910	5,510	8,870	7,140
9	5,190	4,470	1,830	5,250	5,820	4,560	9,380	6,710	6,610	6,000	8,890	7,030
10	5,340	4,250	1,980	5,170	5,330	4,590	9,750	6,350	6,800	5,720	8,900	7,100
11	5,600	4,110	2,060	5,380	5,020	4,790	9,720	6,570	6,710	6,470	8,330	7,120
12	5,780	3,940	2,400	5,060	4,420	4,300	9,400	5,920	6,960	6,450	7,960	7,200
13	5,640	3,980	2,810	4,720	4,630	4,940	9,250	5,950	7,090	6,540	8,390	6,610
14	5,730	4,070	2,980	4,570	4,990	5,850	8,430	6,520	7,420	7,700	8,740	6,470
15	5,520	3,940	2,960	4,290	5,200	6,900	8,150	6,690	7,590	8,350	8,650	6,120
16	5,300	3,980	2,580	4,390	4,730	7,410	7,800	6,680	7,260	8,990	8,450	5,790
17	5,190	4,000	2,290	4,580	4,790	7,750	7,800	6,260	7,320	9,190	7,820	5,810
18	5,210	3,830	2,060	4,730	4,570	8,490	8,370	6,360	7,500	9,310	7,630	5,880
19	5,570	3,130	2,330	4,670	4,880	8,980	8,580	6,130	7,890	9,260	7,790	6,190
20	5,590	2,860	2,440	4,880	5,120	9,480	8,820	6,610	8,430	9,120	7,660	6,180
21	5,530	2,710	2,620	4,450	5,350	9,700	8,230	6,430	8,610	8,900	7,830	6,300
22	5,100	2,600	2,180	4,640	5,840	9,750	8,150	6,900	8,410	8,820	8,200	6,300
23	5,260	2,510	2,210	4,790	6,120	9,580	8,310	7,040	8,060	8,690	7,880	6,310
24	5,350	2,330	2,150	4,980	6,140	9,450	8,250	7,000	8,200	8,880	7,770	6,280
25	5,320	2,300	2,150	5,290	5,900	9,550	8,050	6,940	8,270	8,800	7,580	6,550
26	5,230	2,030	1,900	5,040	6,280	9,950	8,010	6,810	8,400	8,760	7,840	6,530
27	4,820	1,430	2,000	4,730	6,680	10,400	7,380	6,630	8,630	8,330	7,880	6,600
28	4,540	2,430	2,180	4,490	6,850	10,100	6,710	6,850	8,530	7,960	8,000	6,190
29	3,940	2,770	2,440	4,090	6,980	9,960	6,730	7,190	8,530	8,070	7,750	5,870
30	3,960	2,180	2,710	4,100	-----	9,620	7,000	7,570	8,280	8,420	7,210	5,820
31	3,860	-----	2,800	4,150	-----	9,070	-----	7,620	-----	8,080	7,170	-----
TOTAL	165,690	106,550	70,170	145,670	153,600	238,400	256,450	208,780	228,520	245,910	247,600	196,990
MEAN	5,345	3,552	2,264	4,699	5,297	7,690	8,548	6,735	7,617	7,933	7,987	6,566
MAX	6,130	5,050	2,980	5,380	6,980	10,400	9,800	7,620	8,630	9,310	8,900	7,710
MIN	3,860	1,430	1,710	3,820	4,270	4,300	6,710	5,920	6,610	5,510	7,170	5,790
AC-FT	328,600	211,300	139,200	288,900	304,700	472,900	508,700	414,100	453,300	487,800	491,100	390,700

CAL YR 1967 TOTAL 2,283,640 MEAN 6,257 MAX 9,910 MIN 1,430 AC-FT 4,530,000
WTR YR 1968 TOTAL 2,264,330 MEAN 6,187 MAX 10,400 MIN 1,430 AC-FT 4,491,000

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

LOCATION.--Lat 32°44'15", long 114°42'55", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 1968. Prior to October 1943, monthly discharge only, published in WSP 1313. Prior to October 1956, published as Pilot Knob wasteway near Pilot Knob.

GAGE.--Totalizing flowmeter on each turbine. In addition water-stage recorder in forebay on right bank of All-American Canal (also used as auxiliary gage for sta. no. 9-5275.); tailrace gage with remote recorder logged hourly in control house; calibrated wicket gates for turbine flow and calibrated bypass gates for wasteway flow which are logged for each change. Datum of forebay gage staff is 150.00 ft; that of tailrace gage staff is 0.00 ft; elevation of sill of bypass gates is 147.88 ft, all of which are to mean sea level, datum of 1929.

EXTREMES.--1939-68: Maximum daily discharge, 8,350 cfs Jan. 26, 1958; no for long periods.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	913	1,340	0	1,230	2,890		0	1,890	2,030	1,310
2		0	0	1,470	10	1,230	2,900		0	1,850	2,120	1,060
3		0	0	1,540	0	1,160	2,950		0	1,810	2,260	1,140
4		0	0	1,560	0	1,380	3,080		0	1,800	2,060	1,330
5		0	0	1,380	0	1,430	3,150		0	1,410	2,130	1,370
6		0	0	1,420	0	1,460	3,150		0	1,420	1,760	1,400
7		0	0	1,430	0	1,420	3,140		0	1,710	1,760	1,360
8		0	0	1,420	0	1,480	2,970		0	1,790	2,020	1,350
9		0	0	1,380	0	1,430	2,900		0	1,880	2,060	1,240
10		0	0	1,300	0	1,450	2,990		0	1,250	2,080	711
11		0	0	1,320	0	1,250	2,790		0	1,740	2,030	0
12		0	0	1,350	0	1,240	2,800		0	1,360	1,780	0
13		0	0	1,340	0	1,120	2,670		0	1,410	1,910	0
14		0	0	1,280	0	1,540	2,650		1,030	1,880	1,940	0
15		0	0	1,050	34	1,600	2,730		1,010	1,900	1,900	0
16		0	0	1,100	998	1,610	2,400		957	1,900	1,950	0
17		0	0	1,100	1,000	1,820	2,260		1,060	1,910	1,780	0
18		0	0	1,120	1,130	2,050	2,490		914	1,940	1,810	0
19		0	0	1,100	1,170	2,470	2,570		1,030	1,940	1,780	0
20		0	827	1,130	1,200	2,540	2,600		1,310	2,100	1,760	0
21		0	1,140	1,150	1,150	2,550	2,560		1,540	2,130	1,800	0
22		0	1,000	1,130	1,250	2,510	2,610		1,480	2,110	1,550	0
23		0	1,010	1,190	1,280	2,500	2,350		1,540	1,740	1,280	0
24		0	1,000	1,180	1,130	2,510	2,030		1,520	1,920	1,230	0
25		0	998	1,100	1,060	2,510	1,740		1,470	2,090	1,490	0
26		0	0	980	1,080	2,560	1,620		1,490	2,130	1,560	0
27		0	0	0	1,250	2,860	1,020		1,550	2,150	1,570	0
28		773	0	0	1,260	2,850	0		1,590	2,030	1,610	0
29		1,660	0	0	1,260	2,850	0		1,680	2,060	1,660	0
30		1,040	0	0	-----	2,930	0		1,720	2,100	1,660	0
31		-----	44	0	-----	2,870	-----		-----	2,000	1,620	-----
TOTAL	0	3,473	6,932	32,860	16,262	60,410	70,010	0	22,891	57,350	55,950	12,271
MEAN	0	116	224	1,060	561	1,949	2,334	0	763	1,850	1,805	409
MAX	0	1,660	1,140	1,560	1,280	2,930	3,150	0	1,720	2,150	2,260	1,400
MIN	0	0	0	0	0	1,120	0	0	0	1,250	1,230	0
AC-FT	0	6,890	13,750	65,180	32,260	119,800	138,900	0	45,400	113,800	111,000	24,340
(a)	0	0	0	0	20	0	0	0	0	121	0	0
CAL YR 1967	TOTAL	324,560.00	MEAN	889	MAX	4,900	MIN	0	AC-FT	643,800	a	0
WTR YR 1968	TOTAL	338,409.00	MEAN	925	MAX	3,150	MIN	0	AC-FT	671,200	a	141

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

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

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

LOCATION.--Lat 32°44'05", long 114°43'25", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.26, T.16 S., R.21 E., San Bernardino meridian, on left bank 0.4 mile downstream from Pilot Knob wasteway, 6.5 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 1968.

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. no. 9-5270., Pilot Knob powerplant and wasteway). Datum of auxiliary gage is 150.00 ft above mean sea level, datum of 1929.

AVERAGE DISCHARGE.--7 years, 4,696 cfs (3,400,000 acre-ft per year).

EXTREMES.--1961-68: Maximum daily discharge, 7,220 cfs July 12, 1963; no flow Jan. 4, 1967.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,010	3,760	1,100	2,100	3,580	5,180	5,920	5,710	5,920	5,610	5,140	4,700
2	4,880	4,040	1,240	2,190	3,700	5,150	5,800	5,840	5,640	5,510	5,040	4,780
3	4,970	4,030	1,280	2,410	3,610	5,000	5,910	5,710	5,600	5,510	5,150	4,920
4	5,160	4,080	1,260	2,580	3,500	4,950	5,920	5,580	5,600	5,660	4,890	5,160
5	5,100	3,610	1,590	2,960	3,690	4,970	5,620	5,380	5,670	5,840	5,080	5,470
6	4,880	3,610	1,650	3,310	3,930	4,890	5,380	5,220	5,850	4,640	5,200	5,570
7	4,920	3,630	1,670	3,130	4,050	4,390	5,270	5,250	5,560	3,650	5,400	5,530
8	4,620	3,590	1,440	3,100	4,460	3,410	5,630	5,250	5,570	3,190	5,710	5,320
9	4,420	3,680	1,400	3,390	4,650	2,370	5,800	5,280	5,380	3,500	5,690	5,210
10	4,510	3,530	1,530	3,360	4,320	2,410	6,070	5,120	5,270	3,700	5,730	5,410
11	4,700	3,380	1,650	3,560	4,120	2,920	6,210	5,240	5,260	3,950	5,410	5,610
12	4,860	3,280	1,850	3,310	3,600	2,520	5,900	4,710	5,370	4,310	5,250	5,740
13	4,760	3,340	2,110	3,030	3,600	3,060	5,790	4,840	5,520	4,380	5,410	5,400
14	4,860	3,420	2,430	2,990	3,880	3,370	5,330	5,130	5,420	4,990	5,620	5,180
15	4,690	3,240	2,200	2,970	3,940	4,280	4,960	5,180	5,650	5,610	5,630	4,940
16	4,530	3,280	1,560	2,960	3,110	4,900	4,880	5,110	5,430	6,060	5,460	4,860
17	4,520	3,270	1,340	3,150	3,160	5,250	5,020	4,780	5,440	6,300	5,230	4,900
18	4,420	3,210	1,340	3,250	3,040	5,860	5,110	4,930	5,590	6,420	5,230	4,950
19	4,600	2,990	1,520	3,200	3,260	5,990	5,130	4,790	5,820	6,400	5,360	5,170
20	4,570	2,740	1,090	3,320	3,350	6,280	5,360	5,110	6,070	6,150	5,400	5,180
21	4,600	2,570	1,240	3,020	3,520	6,360	5,060	5,270	5,990	5,940	5,470	5,290
22	4,270	2,510	990	3,190	3,710	6,360	5,040	5,380	5,950	5,960	5,680	5,310
23	4,360	2,380	971	3,170	3,860	6,330	5,220	5,580	5,740	6,100	5,630	5,320
24	4,480	2,180	952	3,290	4,130	6,340	4,870	5,490	5,890	5,970	5,610	5,280
25	4,490	2,050	957	3,600	4,160	6,340	5,440	5,390	5,870	5,780	5,320	5,450
26	4,410	1,540	1,080	3,420	4,470	6,440	5,520	5,340	5,850	5,670	5,480	5,470
27	4,100	1,060	1,140	3,490	4,690	6,500	5,510	5,270	6,030	5,390	5,490	5,490
28	3,990	1,130	1,200	3,740	4,890	6,240	5,430	5,390	5,950	5,300	5,510	5,240
29	3,500	924	1,490	3,500	5,060	6,210	5,390	5,550	5,920	5,310	5,270	5,000
30	3,440	906	2,000	3,410	-----	5,990	5,480	5,870	5,830	5,500	4,920	4,950
31	3,370	-----	2,060	3,380	-----	5,890	-----	5,910	-----	5,250	5,010	-----
TOTAL	139,990	86,960	45,330	97,480	113,040	156,150	163,970	164,600	170,650	163,550	166,420	156,800
MEAN	4,516	2,899	1,462	3,145	3,898	5,037	5,466	5,310	5,688	5,276	5,368	5,227
MAX	5,160	4,080	2,430	3,740	5,060	6,500	6,210	5,910	6,070	6,420	5,730	5,740
MIN	3,370	906	952	2,100	3,040	2,370	4,870	4,710	5,260	3,190	4,890	4,700
AC-FT	277,700	172,500	89,910	193,300	224,200	309,700	325,200	326,500	338,500	324,400	330,100	311,000
CAL YR 1967	TOTAL 1,632,698.00			MEAN 4,473		MAX 6,590	MIN 0	AC-FT 3,238,000				
WTR YR 1968	TOTAL 1,624,940			MEAN 4,440		MAX 6,500	MIN 906	AC-FT 3,223,000				

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

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

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

Diversions for irrigation in the Gila project in Arizona are made at Imperial Dam by the Gila Gravity Main Canal (see sta 9-5225). Diversions for the Yuma project in Arizona and California are made at Imperial Dam by the All-American Canal (see sta 9-5230) and by the Yuma Main Canal (see stas 9-5240 and 9-5255). See p. for records of diversions.

See figure 3 on p. for a schematic diagram showing location of diversions and return flows.

9-5250. Yuma Main Canal wasteway.--See daily table elsewhere in this report.

9-5270. Pilot Knob powerplant and wasteway.--See daily table elsewhere in this report.

9-5286. Laguna Canal wasteway.

Location.--Digital 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. Prior to June 1, 1966, graphic water-stage recorder at same site and datum.

Records available.--Monthly discharge October 1960 to September 1968.

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

9-5288. Levee Canal wasteway.

Location.--Digital 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. Prior to May 27, 1966, graphic water-stage recorder at same site and datum.

Records available.--Monthly discharge October 1960 to September 1968.

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

9-5290. North Gila Drain No. 1.

Location.--Enters Colorado River in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.9, T.8 S., R.22 W., $\frac{5}{8}$ miles downstream from Laguna Dam.

Records available.--Monthly discharge October 1960 to September 1968.

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 monthly basis.

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 1968.

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

9-5291. Fortuna wasteway.

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

Records available.--Monthly discharge October 1960 to September 1963, October 1964 to September 1968.

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

9-5291.5 North Gila Main Canal wasteway.

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

Records available.--Monthly discharge October 1960 to September 1968.

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

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

Location.--Digital water-stage recorder in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 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. Aug. 1, 1965, to June 26, 1966, graphic water-stage recorder at same site and datum.

Records available.--Monthly discharge January 1965 to September 1968.

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

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

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 1968.Remarks.--Record shows seepage water from parts of secs.15, 16, and 21 (Bruce Church Ranch). Flow determined from pump rating.

9-5292.4 South Gila Pump Outlet Channel No. 2.

Location.--Digital water-stage recorder in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.8 S., R.22 W., half a mile upstream from outlet to Gila River; prior to Oct. 18, 1965, outlet was to Wellton-Mohawk Main Outlet Drain. Prior to Aug. 1, 1965, Sparling meter at outlet to Wellton-Mohawk Main Outlet Drain. Aug. 1, 1965, to June 9, 1966, graphic water-stage recorder at same site and datum.Records available.--Monthly discharge January 1962 to September 1968.Remarks.--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete channel to Gila River.

9-5292.5 Bruce Church wasteway.

Location.--Digital 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. Prior to June 8, 1966, graphic water-stage recorder at same site and datum.Records available.--Monthly discharge October 1960 to September 1968.Remarks.--Record shows waste water from North Gila Valley Irrigation District returned to Gila River.

9-5293. Wellton-Mohawk Main Outlet Drain (Conveyance Channel).

Location.--Digital 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. Feb. 20, 1962, to June 10, 1967, graphic water-stage recorder at same site and datum.Records available.--Monthly discharge October 1960 to September 1968.Remarks.--Record shows water pumped from numerous wells in Wellton-Mohawk Irrigation and Drainage District to lower the water table. Drainage is conveyed by concrete and earth channels to Gila River or Colorado River (see stas 9-5293.5, 9-5318, and 9-5319).

9-5293.5 Main Outlet Drain above Gila River.

Location.--Digital water-stage recorder in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.30, T.8 S., R.22 W., about 1,000 ft upstream from outlet to Gila River (M.O.D.E. 1), which is half a mile upstream from mouth of Gila River, and 8 miles downstream from sta 9-5293. Prior to March 1967, graphic water-stage recorder at same site and datum.Records available.--Monthly discharge October 1965 to September 1968.Remarks.--Record shows water pumped from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. Above this station flow passes through 8 miles of unlined channel. After completion of the Main Outlet Drain Extension on Nov. 15, 1965, flow can be returned to the Gila or Colorado River by any one of, or combination of, three outlets. Operationally, these outlets are known as: M.O.D.E. 1 (release to the Gila River about 1,000 ft below sta 9-5293.5); M.O.D.E. 2 (see sta 9-5318), release to Colorado River above Morelos Dam; and M.O.D.E. 3 (see sta 9-5319), release to Colorado River below Morelos Dam. For the 1968 water year 9,190 acre-ft was released to Gila River through M.O.D.E. 1.

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

Location.--Digital 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. Aug. 1, 1965, to June 6, 1966, graphic water-stage recorder at same site and datum.Records available.--Monthly discharge August 1961 to September 1968.Remarks.--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete channel to Gila River.

9-5294. South Gila Drain No. 2.

Location.--Sparling total-flow meter, near center of sec.24, T.8 S., R.23 W., at outlet to Colorado River.Records available.--Monthly discharge October 1960 to September 1968.Remarks.--Record shows ground-water drainage and occasional waste water from South Gila Valley Unit returned to Colorado River. Flow estimated from discharge measurements made monthly, when flow is less than will operate Sparling meter.

9-5294.2 South Gila Terminal wasteway.

Location.--Digital 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. Aug. 1, 1965, to June 15, 1966, graphic water-stage recorder at same site and datum.Records available.--Monthly discharge March 1965 to September 1968.Remarks.--Record shows waste water from South Gila Canal of South Gila Valley Unit returned to Colorado River.

9-5294.4 South Gila Pump Outlet Channel No. 4.

Location.--Digital 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. Prior to May 26, 1966, graphic water-stage recorder at same site and datum.Records available.--Monthly discharge July 1965 to September 1968.Remarks.--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete-lined channel to Colorado River.

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

9-5296. Reservation Drain No. 7.

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

Records available.--Monthly discharge March 1966 to September 1968.

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

9-5297. Reservation Main Drain No. 6.

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

Records available.--Monthly discharge March 1966 to September 1968.

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

9-5298. Reservation Drain No. 2.

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

Records available.--Monthly discharge March 1966 to September 1968.

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

9-5299. Reservation Drain No. 3.

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

Records available.--Monthly discharge March 1966 to September 1968.

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

9-5300. Reservation Main Drain No. 4.

Location.--Digital 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 1968 (calendar year discharge only 1934-36). Prior to October 1955, published as California drainage canal. Prior to January 1937, no gage; 1937 to Apr. 16, 1941, staff gages at same site at different datums; Apr. 16, 1941, to May 26, 1966, graphic water-stage recorder at same site and datum.

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

9-5304. Reservation Drain No. 11.

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

Records available.--Monthly discharge March 1966 to September 1968.

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

9-5305. Drain 8-B.

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

Records available.--Monthly discharge March 1948 to September 1968. Prior to October 1955, published as Araz drain.

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

9-5318. Main Outlet Drain Extension above Morelos Dam (M.O.D.E. 2).

Location.--Water-stage recorder and Parshall flume in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.16 S., R.21 E., San Bernardino meridian, at outlet to Colorado River $1\frac{1}{2}$ miles upstream from Morelos Dam.

Records available.--November 1965 to September 1968.

Remarks.--Record shows water conveyed to Colorado River $1\frac{1}{2}$ miles above Morelos Dam, from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. (See also stas 9-5293, 9-5293.5, 9-5319.)

Cooperation.--Record furnished by Bureau of Reclamation.

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

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

9-5319. Main Outlet Drain Extension below Morelos Dam (M.O.D.E. 3).

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

Records available.--November 1965 to September 1968.

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

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

9-5320. Cooper wasteway.

Location.--Water-stage recorder and weir, in 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 1968.

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., $3\frac{1}{2}$ miles downstream from Morelos Dam.

Records available.--Monthly discharge January 1924 to September 1968.

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.--Monthly discharge March 1939 to September 1968.

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 1968.

Remarks.--Record computed from rated pumps checked by discharge measurements made 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 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 1968. 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 1967 to September 1968

Month	Laguna Canal wasteway (9-5286)	Levee Canal wasteway (9-5288)	North Gila Drain No. 1 (9-5290)	North Gila Drain No. 3 (9-5290.5)	Fortuna wasteway (9-5291)
October.....	3.6	471	676	6.3	37
November.....	2.2	319	468	5.0	34
December.....	.10	87	290	5.6	35
Calendar year 1967.....	400	5,170	6,110	253	540
January.....	6.0	183	305	15	37
February.....	.4	153	345	17	32
March.....	0	197	474	27	30
April.....	.2	318	585	26	20
May.....	.3	316	676	28	17
June.....	.4	245	730	37	16
July.....	4.1	266	700	38	18
August.....	0	194	573	28	23
September.....	11	141	619	20	3.8
Water year 1968.....	28	2,890	6,440	253	302

Month	North Gila Main Canal wasteway (9-5291.5)	South Gila Pump Outlet Channel No. 3 (9-5291.6)	Bruce Church Drain (9-5292)	South Gila Pump Outlet Channel No. 2 (9-5292.4)	Bruce Church wasteway (9-5292.5)
October.....	180	1,290	6.1	2,730	329
November.....	291	988	6.0	2,600	273
December.....	36	81	6.1	2,680	267
Calendar year 1967.....	3,410	10,750	913	20,110	2,900
January.....	42	1,170	6.1	2,620	527
February.....	71	1,270	23	2,470	321
March.....	94	1,680	6.1	2,410	263
April.....	140	1,330	2.0	2,340	180
May.....	176	8.6	15	285	118
June.....	189	797	12	1,390	142
July.....	277	2,310	18	2,240	562
August.....	255	2,720	12	2,410	214
September.....	109	751	6	942	260
Water year 1968.....	1,860	14,400	118	25,120	3,450

Month	Wellton-Mohawk Main Outlet Drain (9-5293)	Main Outlet Drain above Gila River (9-5293.5)	South Gila Pump Outlet Channel No. 1 (9-5293.6)	South Gila Drain No. 2 (9-5294)	South Gila Terminal wasteway (9-5294.2)
October.....	18,660	17,700	2,980	9.9	75
November.....	18,860	17,920	2,770	12	122
December.....	19,390	18,500	2,970	6.1	41
Calendar year 1967.....	212,600	202,900	28,990	129	1,750
January.....	18,990	18,630	2,930	13	73
February.....	15,460	15,020	2,630	16	68
March.....	19,280	18,420	2,510	2.0	52
April.....	17,430	16,960	2,560	6.0	97
May.....	17,970	17,150	382	4.3	131
June.....	17,670	16,630	1,740	1.8	181
July.....	19,400	18,050	2,230	1.4	244
August.....	18,390	17,620	2,430	.9	134
September.....	17,770	17,100	2,280	.8	129
Water year 1968.....	219,300	209,700	28,410	74	1,350

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

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

Monthly return flows, in acre-feet, water year October 1967 to September 1968

Month	South Gila Pump Outlet Channel No. 4 (9-5294.4)	Reservation Drain No. 7 (9-5296)	Reservation Main Drain No. 6 (9-5297)	Reservation Drain No. 2 (9-5298)	Reservation Drain No. 3 (9-5299)
October.....	3.1	132	1,110	18	296
November.....	8.5	88	998	18	248
December.....	1.8	80	867	15	223
Calendar year 1967.....	5,050	1,430	12,530	263	3,070
January.....	325	116	942	17	220
February.....	428	101	920	23	231
March.....	1,220	146	1,110	33	264
April.....	1,440	156	1,190	43	260
May.....	7.7	172	1,250	41	290
June.....	784	185	1,190	36	293
July.....	1,480	187	1,230	43	290
August.....	1,530	152	1,200	40	295
September.....	337	132	1,010	28	312
Water year 1968.....	7,560	1,650	13,020	355	3,220

Month	Reservation Main Drain No. 4 (9-5300)	Reservation Drain No. 11 (9-5304)	Drain 8-B (9-5305)	M.O.D.E. 2 (above Morelos Dam) (9-5318)	M.O.D.E. 3 (below Morelos Dam) (9-5319)
October.....	3,010	10	74	0	17,600
November.....	2,660	6.0	65	0	17,700
December.....	2,330	6.1	62	2,210	16,290
Calendar year 1967.....	35,810	99	858	97,570	100,000
January.....	2,490	6.1	39	6,020	12,360
February.....	2,710	11	67	4,870	9,990
March.....	3,230	14	90	16,040	1,940
April.....	3,130	12	67	12,580	1,050
May.....	3,190	12	67	9,070	8,020
June.....	3,170	22	89	13,440	3,300
July.....	3,460	13	100	15,670	2,530
August.....	3,350	12	98	10,530	1,510
September.....	2,870	6.3	54	5,880	10,890
Water year 1968.....	35,620	130	872	96,300	103,200

Month	Cooper wasteway (9-5320)	Eleven Mile wasteway (9-5325)	Twenty-one Mile wasteway (9-5330)	Main drain (9-5340)	East Main Canal wasteway (9-5345)
October.....	51	534	242	11,860	449
November.....	96	513	239	10,910	411
December.....	65	164	183	9,880	384
Calendar year 1967.....	1,020	3,830	2,190	125,200	4,710
January.....	83	220	144	9,600	335
February.....	57	201	138	10,360	304
March.....	96	426	214	11,030	547
April.....	84	247	160	10,880	398
May.....	114	182	164	11,260	467
June.....	132	130	131	10,670	311
July.....	92	133	124	9,970	259
August.....	76	289	208	9,980	391
September.....	52	162	120	9,710	398
Water year 1968.....	998	3,200	2,070	126,100	4,660

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 2.5 miles east of Wildrose Station, Inyo County.

DRAINAGE AREA.--23.7 sq mi.

RECORDS AVAILABLE.--October 1960 to September 1968. Weather records since June 1964.

INSTRUMENTATION.--Graphic water-stage recorder with rain-gage attachment at altitude of 4,300 ft (from topographic map). Recording and storage-type precipitation gages, recording anemometer, and 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 7,200, 6,400, 5,200 (Jan. 23 to Sept. 30), and 5,300 ft; flow meter recording ground water withdrawals at altitude of 4,300 ft (Oct. 1 to May 21).

AVERAGE DISCHARGE.--8 years, 0.029 cfs (21 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1.0 cfs Aug. 7 (gage height, unknown); no flow during year, including maximum day.

1960-68: Maximum discharge, 1,060 cfs Sept. 4, 1967 (gage height, 6.24 ft), on basis of slope-area measurement of maximum flow; no flow for most of each year.

REMARKS.--No flow since Sept. 4, 1967. No regulation or diversion above station. Discharge for the calendar year 1967 is as follows: Maximum daily, 46 cfs; minimum, zero; mean, 0.128 cfs; total, 93 acre-ft.

Period	Pan evaporation (inches)	Temperature (°C) at altitude:				Ground water (acre-feet) 4,300 ft
		9,990 ft		5,750 ft		
		Maximum	Minimum	Maximum	Minimum	
Sept. 26 to Nov. 28...	14.96	-	-	14	0	1.30
Nov. 28 to Jan. 23....	2.34	-	-	18	4	1.23
Jan. 23 to Apr. 17....	13.50	-	-	20	0	1.10
Apr. 17 to May 21.....	9.28	19	0	27	0	1.44
May 21 to June 18.....	10.54	23	0	32	15	-
June 18 to Aug. 28....	20.51	21	8	29	9	-
Aug. 28 to Sept. 10...	14.96	19	-	14	0	-

Precipitation (inches) at location and altitude:

Month	117°05'05" 36°13'05"	117°04'15" 36°15'30"	117°06'50" 36°13'55"	117°06'40" 36°15'10"	117°08'10" 36°16'15"	117°09'50" 36°14'45"	117°10'40" 36°15'55"
	9,990 ft	7,200 ft	6,400 ft	5,750 ft	5,300 ft	5,200 ft	4,300 ft
October 1967....	0.06	0	0	0	0	-	0
November.....	1.99	5.97	3.15	2.90	2.36	-	2.2
December.....	.33	.39	.46	.26	.04	-	.2
Cal yr 1967...	7.02	12.01	11.87	9.15	8.34	-	7.6
January 1968...	.20	0	0	0	0	-	0
February.....	.56	2.28	1.39	1.80	1.16	2.04	1.7
March.....	.23	.20	0	.20	.07	1.15	.6
April.....	.13	.39	1.00	.24	.43	.38	.3
May.....	0	0	0	0	0	0	0
June.....	.59	1.45	.52	.45	.50	.32	.3
July.....	4.21	2.03	2.85	1.90	.94	.95	.9
August.....	.69	.90	0	.50	.38	.39	.5
September.....	0	0	0	0	0	0	0
Wtr yr 1967-68	8.99	13.61	9.37	8.25	5.88	-	6.7

Average Wind Velocity (mph) at location and altitude:
117°05'05", 36°13'05" 117°06'40", 36°15'10"

Month	9,990 ft	5,750 ft
October 1967....	8.59	6.36
November.....	-	5.32
December.....	-	5.20
Cal yr 1967...	-	-
January 1968...	-	5.52
February.....	-	5.19
March.....	-	5.94
April.....	-	5.72
May.....	-	5.60
June.....	7.50	5.95
July.....	7.17	5.40
August.....	7.08	5.77
September.....	8.56	5.80
Wtr yr 1967-68	-	-

10-2508. DARWIN CREEK NEAR DARWIN, CALIF.

LOCATION.--Lat 36°19'15", long 117°31'20", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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 1968.

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

AVERAGE DISCHARGE.--6 years, 0.453 cfs (328 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,300 cfs July 29 (gage height, 9.36 ft), on basis of slope-conveyance measurement of maximum flow; minimum daily, 0.10 cfs June 19 to July 6.

1962-68: Maximum discharge, 3,130 cfs Sept. 4, 1967 (gage height, 7.34 ft), on basis of slope-area measurement of maximum flow; minimum daily, 0.10 cfs June 19 to July 6, 1968.

REMARKS.--Records fair. No regulation above station. Town of Darwin pumps water above station for municipal supply.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	.20	.30	.30	.20	.20	.20	.20	.10	.20	.30
2	.20	.20	.20	.30	.30	.20	.20	.20	.20	.10	.20	.30
3	.20	.20	.20	.30	.30	.20	.20	.20	.20	.10	.20	.30
4	.20	.20	.20	.30	.30	.20	.20	.20	.20	.10	.20	.30
5	.20	.20	.30	.30	.30	.20	.20	.20	.20	.10	.20	.30
6	.20	.20	.30	.30	.30	.20	.20	.20	.20	.10	.20	.30
7	.20	.20	.30	.30	.30	.20	.20	.30	.20	.20	.20	.30
8	.20	.20	.30	.30	.30	.30	.20	.30	.20	.20	.20	.30
9	.20	.20	.30	.30	.30	.30	.20	.30	.20	.21	.20	.30
10	.20	.20	.30	.30	.30	.30	.20	.30	.20	1.9	.20	.30
11	.20	.20	.30	.30	.30	.30	.20	.20	.20	.30	.20	.30
12	.20	.20	.30	.30	.30	.30	.20	.20	.20	.20	.20	.30
13	.20	.20	.30	.30	.20	.30	.20	.20	.20	.20	.20	.30
14	.20	.20	.30	.30	.20	.40	.20	.20	.20	.20	.20	.30
15	.20	.20	.30	.30	.20	.40	.20	.20	.20	.20	.20	.30
16	.20	.30	.30	.30	.20	.40	.20	.20	.20	.20	.20	.30
17	.20	.20	.30	.30	.20	.40	.20	.20	.20	.20	.20	.30
18	.20	.20	.30	.30	.20	.40	.20	.20	.20	.20	.20	.30
19	.20	.20	.30	.30	.20	.20	.20	.20	.10	.20	.20	.30
20	.20	.20	.30	.30	.20	.20	.30	.20	.10	.20	.20	.30
21	.20	.20	.30	.30	.20	.20	.30	.20	.10	.20	.20	.30
22	.20	.20	.30	.30	.20	.20	.30	.20	.10	.20	.20	.30
23	.20	.20	.30	.30	.20	.20	.30	.20	.10	.20	.20	.30
24	.20	.20	.30	.30	.20	.20	.30	.20	.10	.20	.20	.30
25	.20	.20	.30	.30	.20	.20	.20	.20	.10	.20	.20	.30
26	.20	.20	.30	.30	.20	.20	.20	.20	.10	.20	.20	.30
27	.20	.20	.30	.30	.20	.20	.20	.20	.10	.20	.20	.30
28	.20	.20	.30	.30	.20	.20	.20	.20	.10	.20	.20	.30
29	.20	.20	.30	.30	.20	.20	.20	.20	.10	.46	.20	.30
30	.20	.20	.30	.30	-----	.20	.20	.20	.10	1.2	.20	.30
31	.20	-----	.30	.30	-----	.20	-----	.20	-----	.20	.20	-----
TOTAL	6.20	6.10	8.90	9.30	7.00	7.80	6.50	6.60	4.80	75.00	6.20	9.00
MEAN	.20	.20	.29	.30	.24	.25	.22	.21	.16	2.42	.20	.30
MAX	.20	.30	.30	.30	.30	.40	.30	.30	.20	.46	.20	.30
MIN	.20	.20	.20	.30	.20	.20	.20	.20	.10	.10	.20	.30
AC-FT	12	12	18	18	14	15	13	13	9.5	149	12	.18
†	0	1.32	0	0	1.17	.16	.05	0	.22	1.13	.69	0
CAL YR 1967	TOTAL 275.50			MEAN .75	MAX 153	MIN .20	AC-FT 546					
WTR YR 1968	TOTAL 153.40			MEAN .42	MAX 46	MIN .10	AC-FT 304					

Peak discharge (base, 10 cfs).--July 9 (1530 hrs) 358 cfs (6.17 ft); July 29 (1730 hrs) 2,300 cfs (9.38 ft).

† Precipitation, in inches.

Note.--No gage-height record July 10-28, July 30 to Sept. 30.

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 1968.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,620 ft (from topographic map). Jan. 16, 1959, to Apr. 7, 1963, crest-stage gage only at same site and datum. Recording rain gage at site 0.5 mile upstream.

AVERAGE DISCHARGE.--5 years, 0.007 cfs (5.1 acre-ft per year).

EXTREMES.--Maximum discharge during year, 10 cfs July 28 (gage height, 11.01 ft); no flow all year except July 28.

1958-68: Maximum discharge, 199 cfs Dec. 6, 1966 (gage height, 15.11 ft, from floodmarks), on basis of culvert and road-overflow computation of maximum flow; no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										0		
2										0		
3										0		
4										0		
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										.40		
30										0		
31										0		
TOTAL	0	0	0	0	0	0	0	0	0	0.40	0	0
MEAN	0	0	0	0	0	0	0	0	0	.013	0	0
MAX	0	0	0	0	0	0	0	0	0	.40	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	.8	0	0
CAL YR 1967	TOTAL 0		MEAN 0		MAX 0		MIN 0		AC-FT 0			
WTR YR 1968	TOTAL .40		MEAN .001		MAX .40		MIN 0		AC-FT 0.8			

DEATH VALLEY

43

10-2513. AMARGOSA RIVER AT TECOPA, CALIF.

LOCATION.--Lat 35°50'55", long 116°13'45", in NW¼SE¼ 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 1968.

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

AVERAGE DISCHARGE.--7 years, 2.21 cfs (1,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 149 cfs Aug. 5 (gage height, 3.10 ft), from rating curve extended above 8.0 cfs as explained below; no flow for many days.

1961-68: Maximum discharge, 950 cfs Dec. 9, 1965 (gage height, 10.10 ft), from rating curve extended above 8.0 cfs on basis of computation of flow through culvert at gage height 8.1 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.40	1.1	.60	.90	1.7	.70	.30	0	0	8.0	
2	.20	.50	.80	.70	.80	1.5	.80	.30	.10	0	.40	
3	.10	.50	.70	.90	.80	1.4	.80	.30	.10	0	59	
4	.10	.50	.70	.50	.80	1.4	.60	.30	0	0	57	
5	.10	.60	.70	.70	.80	1.2	.50	.10	0	0	42	
6	.10	.60	.80	.80	.90	1.2	.50	.20	0	0	8.1	
7	.10	.70	.70	.80	.80	1.3	.40	.20	0	0	2.7	
8	.20	.70	.80	.80	.90	9.6	.50	.20	0	0	.60	
9	.30	.70	.40	1.1	4.2	6.8	.40	.20	.10	8.3	.20	
10	.40	.70	.40	.80	9.5	5.6	.40	.20	.10	36	.10	
11	.40	.80	.60	1.0	11	1.7	.40	.20	.10	6.8	.10	
12	.40	.80	1.0	.60	19	1.3	.40	.10	.10	.60	.10	
13	.40	.80	.10	.70	24	1.1	.30	.10	0	.10	0	
14	.40	.80	.10	.80	28	1.1	.40	.10	0	0	0	
15	.20	.80	.60	1.0	21	1.2	.40	.20	.10	0	0	
16	.20	.90	2.1	1.0	15	1.0	.30	.20	.10	0	0	
17	.20	.90	1.0	1.0	10	.90	.40	.10	0	0	0	
18	.30	.90	1.0	.90	7.6	1.0	.40	.20	0	0	0	
19	.40	1.0	1.3	1.2	5.6	.90	.40	.20	0	0	0	
20	.40	1.1	1.1	1.3	5.2	.80	.40	.10	0	0	0	
21	.40	1.2	.70	1.2	5.6	.60	.60	0	0	0	0	
22	.50	20	.70	1.2	5.0	.80	.40	0	0	0	0	
23	.50	4.0	.70	1.0	3.9	.90	.40	0	0	0	0	
24	.50	5.0	.90	.90	3.7	.90	.40	.10	0	0	0	
25	.50	2.9	.80	.90	3.2	.90	.40	.10	0	0	0	
26	.50	2.1	.80	.80	2.7	.80	.40	.10	0	0	0	
27	.50	.90	.50	.70	2.4	.70	.40	.10	0	0	0	
28	.60	1.1	.60	.60	1.7	.80	.20	.10	0	0	0	
29	.60	1.2	.70	.60	1.5	.80	.20	.10	0	0	0	
30	.40	.80	.60	.70	-----	.80	.30	0	0	0	0	
31	.40	-----	.50	.80	-----	.80	-----	0	-----	4.3	0	-----
TOTAL	10.50	53.90	23.50	26.60	196.50	51.50	13.10	4.40	0.80	56.10	178.30	0
MEAN	.34	1.80	.76	.86	6.78	1.66	.44	.14	.027	1.81	5.75	0
MAX	.60	20	2.1	1.3	28	9.6	.80	.30	.10	36	59	0
MIN	.10	.40	.10	.50	.80	.60	.20	0	0	0	0	0
AC-FT	21	107	47	53	390	102	26	8.7	1.6	111	354	0
†	0	0	.1	0	.1	.1	0	0	0	0	0	0
CAL YR 1967	TOTAL 311.70		MEAN .85		MAX 21	MIN 0		AC-FT 618				
WTR YR 1968	TOTAL 615.20		MEAN 1.68		MAX 59	MIN 0		AC-FT 1,220				

PEAK DISCHARGE (BASE, 15 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-22	0200	2.52	82	07-09	2330	2.70	101
02-14	0830	1.83	31	08-05	0300	3.10	149
03-08	1400	1.56	17				

†Precipitation, in inches.

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 1968.

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

AVERAGE DISCHARGE.--8 years, 0.004 cfs (2.9 acre-ft per year).

EXTREMES.--No flow during year.

1960-68: 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 Sept. 6, 1967. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 1.1; December, 0.4; January, 0.1; February, 0.6; March, 1.5; April, 0.5; June, 0.1; July, 0.3; the water year, 4.6.

IVANPAH VALLEY

45

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 1968.

GAGE.--Graphic water-stage recorder with rain-gage attachment, crest-stage gage, and box-culvert control since Oct. 9, 1963. Altitude of gage is 4,400 ft (from topographic map). Prior to Oct. 9, 1963, at different datum.

AVERAGE DISCHARGE.--9 years (1960-68), 0.0005 cfs (0.7 acre-ft per year).

EXTREMES.--Maximum discharge during year, 10 cfs (estimated) July 24 (gage height, 2.20 ft, from floodmarks); no flow all year except July 24.
1959-68: Maximum discharge, 113 cfs Aug. 5, 1964 (gage height, 2.75 ft), by computation of maximum flow through culvert; no flow in most years.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										0		
2										0		
3										0		
4										0		
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										0.20		
25										0		
26										0		
27										0		
28										0		
29										0		
30										0		
31										0		
TOTAL	0	0	0	0	0	0	0	0	0	0.20	0	0
MEAN	0	0	0	0	0	0	0	0	0	.007	0	0
MAX	0	0	0	0	0	0	0	0	0	.20	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	.4	0	0
†	0	1.4	1.1	0	.1	1.0	.3	.6	0	2.4	2.3	0
CAL YR 1967	TOTAL .40		MEAN .001		MAX .40	MIN 0		AC-FT .8				
WTR YR 1968	TOTAL .20		MEAN .0005		MAX .20	MIN 0		AC-FT .4				

† Precipitation, in inches.

IVANPAH VALLEY

10-2523.3. WHEATON WASH NEAR MOUNTAIN PASS, CALIF.

LOCATION.--Lat 35°28'00", long 115°29'10", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1968 (discontinued).

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

47

10-2525.5. CARUTHERS CREEK NEAR IVANPAH, CALIF.

LOCATION.--Lat 35°14'35", long 115°17'55", in NW¼NE¼ 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 1968.

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

AVERAGE DISCHARGE.--5 years, 0.082 cfs (59 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3.5 cfs Dec. 23 (gage height, 1.36 ft); no flow for most of year.
1963-68: Maximum discharge, 230 cfs Aug. 15, 1965 (gage height, 3.75 ft), from rating curve extended to slope-area measurement of maximum flow; no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.10		0						
2			0	0		0						
3			0	0		0						
4			0	0		0						
5			0	0		0						
6			0	0		0						
7			0	0		0						
8			0	0		.40						
9			0	0		.20						
10			0	0		.10						
11			0	0		0						
12			0	0		0						
13			0	0		0						
14			0	0		0						
15			0	0		0						
16			0	0		0						
17			0	0		0						
18			0	0		0						
19			0	0		0						
20			.40	0		0						
21			.40	0		0						
22			.60	0		0						
23			1.6	0		0						
24			1.8	0		0						
25			1.0	0		0						
26			.60	0		0						
27			.40	0		0						
28			.30	0		0						
29			.10	0		0						
30			.10	0	-----	0						
31		-----	.10	0	-----	0	-----		-----			-----
TOTAL	0	0	7.40	0.10	0	0.70	0	0	0	0	0	0
MEAN	.0	0	.24	.003	0	.023	0	0	0	0	0	0
MAX	0	0	1.8	.10	0	.40	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	15	.2	0	1.4	0	0	0	0	0	0

CAL YR 1967 TOTAL 8.00 MEAN .022 MAX 1.8 MIN 0 AC-FT 16

WTR YR 1968 TOTAL 8.20 MEAN .022 MAX 1.8 MIN 0 AC-FT 16

Peak discharge (base, 10 cfs).--No peak above base.

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 1968.

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

AVERAGE DISCHARGE.--6 years, 0.035 cfs (25 acre-ft per year).

EXTREMES.--No flow during year.

1962-68: 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, 1.20; December, 1.80; February, 0.60; March, 0.85; July, 0.60; the water year, 5.05.

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 1968.

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

EXTREMES.--Maximum discharge during year, 2.5 cfs July 6 (gage height, 1.94 ft, from outside gage), on basis of slope-conveyance measurement of maximum flow; no flow all year except July 6.

1964-68: Maximum discharge, 2.5 cfs July 6, 1968 (gage height, 1.94 ft, from outside gage), on basis of slope-conveyance measurement of maximum flow; no flow for all or most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										0		
2										0		
3										0		
4										0		
5										0		
6										.20		
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	0	0	0	0	0	0.20	0	0
MEAN	0	0	0	0	0	0	0	0	0	.007	0	0
MAX	0	0	0	0	0	0	0	0	0	.20	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	.4	0	0
CAL YR 1967	TOTAL .10		MEAN .0003	MAX .10	MIN 0	AC-FT .2						
WTR YR 1968	TOTAL .20		MEAN .0005	MAX .20	MIN 0	AC-FT .4						

DALE LAKE BASIN

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 1968.

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

AVERAGE DISCHARGE.--6 years, 0.121 cfs (88 acre-ft per year).

EXTREMES.--No flow during year.

1962-68: Maximum discharge, 1,240 cfs Aug. 7, 1963 (gage height, 4.55 ft, from crest-stage gage), from rating curve extended above 0.2 cfs on basis of slope-area measurement at gage heights 2.55 and 4.55 ft; no flow for most of each year.

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

REMARKS.--No flow since Sept. 2, 1967. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: October, 0.2; November, 0.4; December, 1.0; March, 1.5; April, 0.2; May, 0.1; June, 0.3; July, 3.1; August, 0.1; the water year, 6.9.

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 1968.

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

AVERAGE DISCHARGE.--5 years, 0.027 cfs (20 acre-ft per year).

EXTREMES.--Maximum discharge during year, 27 cfs July 7 (gage height, 4.98 ft); no flow all year except that of July 6, 7.

1963-68: Maximum discharge, 668 cfs Sept. 5, 1967 (gage height, 5.76 ft), on basis of slope-area measurement of maximum flow; no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

July 6..... 0.20
7..... .80

Month	Cfs-days	Maximum	Minimum	Mean	Acre-feet
July 1968.....	1.00	0.80	0	0.032	2.0
Calendar year 1967.....	36.60	29	0	0.100	73
Water year 1967-68.....	1.00	.80	0	.003	2.0

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

Precipitation (inches) at location and altitude indicated

Month	115°21'40" 33°16'10" 2,720 ft	115°25'30" 33°38'25" 2,440 ft	115°23'00" 33°37'10" 2,320 ft	115°22'35" 33°38'05" 2,050 ft	115°19'20" 33°37'30" 1,600 ft
October.....	0	0	0	0	0
November.....	.33	.39	.29	.29	.4
December.....	1.49	.99	1.74	1.30	1.7
Calendar year 1967.....	5.90	5.96	5.62	2.85	6.2
January 1968.....	0	0	.35	0	0
February.....	0	.14	0	.21	.3
March.....	0	.30	.01	0	.3
April.....	0	0	.13	0	0
May.....	0	0	0	0	0
June.....	0	0	0	0	0
July.....	.72	-	.20	0	1.6
August.....	.90	-	.66	0	0
September.....	.02	.65	.34	0	0
Water year 1967-68.....	3.46	-	3.72	1.80	4.3

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

RECORDS AVAILABLE.--November 1904 to September 1968. Records prior to 1932 are published in WSP 735.

EXTREMES.--Maximum elevation during year, 231.7 ft below mean sea level Mar. 28 to Apr. 21, Apr. 27 to May 7;
 minimum, 232.7 ft below mean sea level Oct. 1 to Nov. 18, Sept. 19-30.
 1904-68: 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.

MONTH-END ELEVATIONS, IN FEET BELOW MEAN SEA LEVEL, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

INFLOW TO SALTON SEA, CALIF.

Inflow from	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Imperial Valley	110,900	89,430	57,080	77,450	87,160	110,300	104,800	95,050	83,820	89,360	85,580	102,100
Coachella Valley	10,310	9,310	10,340	10,220	10,170	14,090	11,450	11,560	11,270	13,060	11,700	11,690
Total Cal yr 1967			986,200	Ac-ft								
Total Wtr yr 1967-68			1,228,000	Ac-ft								

Cal yr 1967:	Alamo River	1,560 Ac-ft	Wtr yr 1968:	1,520
Cal yr 1967:	New River	96,880 Ac-ft	Wtr yr 1968:	107,700

SALTON SEA BASIN

53

10-2540.5. SALT CREEK NEAR MECCA, CALIF.

LOCATION.--Lat 33°26'50", long 115°50'35", in NE¼SE¼SW¼ 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 1968.

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

AVERAGE DISCHARGE.--7 years, 5.94 cfs (4,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,080 cfs July 6 (gage height, 6.66 ft), from rating curve extended above 10 cfs on basis of slope-area measurement at gage height 6.62 ft; minimum daily, 0.80 cfs June 30.
1961-68: Maximum discharge, that of July 6, 1968; minimum daily, 0.40 cfs Aug. 10, 1966.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3.5	5.1	6.1	7.0	5.3	5.3	2.4	1.4	1.0	4.0	2.2
2	2.2	4.4	5.1	6.1	6.7	5.8	5.3	2.4	1.4	1.0	3.0	2.2
3	2.3	3.7	4.6	6.7	7.0	6.1	5.3	2.6	1.4	1.3	2.8	2.2
4	2.3	4.6	5.1	6.4	7.0	6.1	5.1	2.7	1.3	1.2	4.0	2.2
5	2.4	4.0	5.3	6.1	6.7	6.1	4.8	2.7	1.5	3.5	3.3	2.2
6	2.4	3.7	5.3	6.4	7.2	5.8	4.8	2.7	1.3	273	4.4	2.2
7	2.5	4.6	5.3	6.7	7.5	5.8	4.6	2.7	1.3	59	2.8	2.1
8	2.6	4.6	5.5	7.0	7.2	17	4.2	2.7	1.4	30	2.2	2.1
9	2.7	4.6	5.8	7.2	7.8	22	4.0	2.7	1.4	5.1	2.1	2.1
10	2.8	4.6	4.6	7.2	9.1	14	3.5	2.7	1.5	3.7	2.1	2.0
11	2.9	4.4	4.6	7.2	8.8	17	3.3	2.6	1.5	2.8	2.1	1.8
12	3.0	4.4	5.3	7.0	8.1	9.1	3.3	2.6	1.5	2.2	2.0	1.8
13	3.0	4.4	5.8	6.7	9.5	6.1	3.5	2.4	1.4	2.0	2.0	1.8
14	2.8	4.4	5.8	6.7	16	6.4	3.5	2.4	1.7	1.7	2.0	1.8
15	2.4	4.6	6.4	7.0	11	5.8	3.5	2.4	2.1	1.7	2.1	1.7
16	2.1	4.6	9.1	7.0	8.8	5.8	5.3	2.4	1.5	1.8	2.1	3.0
17	2.2	4.8	9.8	7.0	8.1	6.1	3.7	2.4	1.3	1.8	2.1	20
18	3.0	5.1	8.4	7.8	7.5	5.8	3.5	2.2	1.2	2.0	2.1	2.8
19	3.3	4.8	9.8	6.1	7.2	5.3	3.5	2.1	1.1	2.1	2.1	2.6
20	3.5	5.1	18	6.1	7.2	5.1	3.5	2.0	1.0	2.1	2.1	2.6
21	3.2	5.3	9.1	6.7	7.2	4.6	3.7	2.0	1.0	2.0	2.0	2.6
22	2.6	6.4	7.2	7.0	7.2	4.6	3.5	1.8	.90	1.8	2.0	2.6
23	2.4	8.4	6.7	7.0	6.7	5.1	3.0	1.7	1.0	1.8	2.0	2.4
24	2.4	6.4	7.0	6.7	6.4	5.3	2.8	1.7	1.0	2.0	2.0	2.2
25	2.4	5.5	7.2	6.7	6.4	5.8	3.7	1.7	1.0	1.8	2.0	2.4
26	3.0	6.1	7.5	7.0	6.7	6.4	3.3	1.7	1.1	1.7	2.1	2.6
27	4.0	5.5	7.5	7.2	6.7	5.5	3.2	1.7	1.0	1.7	2.1	2.6
28	4.0	5.8	7.2	7.0	6.7	5.1	3.0	1.6	1.0	44	2.1	2.7
29	3.5	5.5	7.0	6.1	6.1	4.8	2.7	1.7	.90	61	2.1	2.8
30	3.0	5.1	7.0	6.1	-----	4.8	2.2	1.6	.80	16	2.1	3.0
31	3.2	-----	6.7	6.4	-----	5.1	-----	1.4	-----	6.4	2.1	-----
TOTAL	86.3	148.9	214.8	208.4	225.5	223.6	114.6	68.4	37.90	539.2	74.0	87.3
MEAN	2.78	4.96	6.93	6.72	7.78	7.21	3.82	2.21	1.26	17.4	2.39	2.91
MAX	4.0	8.4	18	7.8	16	22	5.3	2.7	2.1	273	4.4	20
MIN	2.1	3.5	4.6	6.1	6.1	4.6	2.2	1.4	.80	1.0	2.0	1.7
AC-FT	171	295	426	413	447	444	227	136	75	1,070	147	173
CAL YR 1967	TOTAL 1,836.90		MEAN 5.03		MAX 195		MIN .80		AC-FT 3,640			
WTR YR 1968	TOTAL 2,028.90		MEAN 5.54		MAX 273		MIN .80		AC-FT 4,020			

SALTON SEA BASIN

10-2547.3. ALAMO RIVER NEAR NILAND, CALIF.

LOCATION.--Lat 33°12'03", long 115°36'07", in NE¹/₄SW¹/₄NE¹/₄ 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 1968. Monthly discharge only for January 1943 to September 1960, published in WSP 1734.

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

EXTREMES.--1960-68: Maximum daily discharge, 2,080 cfs Nov. 27, 1967; minimum daily, 288 cfs Jan. 2, 1966.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,140	856	450	440	743	913	1,150	889	819	757	771	776
2	1,110	932	402	464	786	927	1,140	903	814	762	766	781
3	1,080	941	445	464	814	936	1,100	889	795	747	771	757
4	1,040	922	483	469	819	989	1,060	917	800	766	738	814
5	1,050	936	483	554	814	994	1,060	922	790	823	747	823
6	1,020	965	440	597	847	960	1,060	899	747	951	724	856
7	1,060	932	435	620	866	927	1,020	866	771	1,230	700	875
8	1,140	847	445	658	889	917	1,000	856	795	932	719	955
9	1,160	833	445	714	903	1,040	1,020	856	800	705	771	989
10	1,100	790	407	714	970	842	1,060	861	805	597	805	1,020
11	984	790	445	738	941	635	1,100	889	757	568	800	989
12	994	776	511	757	922	601	1,110	917	738	582	795	922
13	1,030	757	539	724	917	653	1,080	899	752	611	781	903
14	1,140	776	544	686	852	677	1,040	866	781	630	743	894
15	1,070	743	649	681	833	710	1,010	833	795	691	724	875
16	1,010	790	738	672	814	819	965	838	800	729	762	908
17	1,060	814	488	672	833	951	866	833	786	710	733	941
18	1,060	809	450	672	805	984	805	819	790	729	752	989
19	1,080	790	507	672	743	1,020	805	786	805	747	743	951
20	1,050	738	511	691	766	1,070	871	809	795	795	781	970
21	1,070	729	440	710	762	1,110	899	766	819	781	762	965
22	1,090	733	383	681	781	1,160	917	776	823	786	743	1,040
23	1,040	677	387	649	776	1,110	927	781	819	790	814	1,030
24	1,020	592	378	653	795	1,170	922	805	823	795	819	1,070
25	989	582	383	705	809	1,210	951	838	823	771	838	1,070
26	989	677	383	719	833	1,200	955	838	829	743	838	1,090
27	979	2,080	411	733	866	1,250	960	829	814	762	889	1,080
28	998	894	474	733	866	1,220	903	805	786	927	847	1,110
29	970	573	469	771	899	1,200	903	795	771	899	866	1,140
30	856	516	435	800	-----	1,240	908	823	776	871	795	1,080
31	838	-----	421	752	-----	1,190	-----	829	-----	823	771	-----
TOTAL	32,217	24,790	14,381	20,565	24,264	30,625	29,567	26,232	23,818	24,010	24,108	28,663
MEAN	1,039	826	464	663	837	988	986	846	794	775	778	955
MAX	1,160	2,080	738	800	970	1,250	1,150	922	829	1,230	889	1,140
MIN	838	516	378	440	743	601	805	766	738	568	700	757
AC-FT	63,900	49,170	28,520	40,790	48,130	60,740	58,650	52,030	47,240	47,620	47,820	56,850
CAL YR 1967	TOTAL 313,140		MEAN 858		MAX 2,080		MIN 354		AC-FT 621,100			
WTR YR 1968	TOTAL 303,240		MEAN 829		MAX 2,080		MIN 378		AC-FT 601,500			

1U-2552. MYER CREEK TRIBUTARY NEAR JACUMBA, CALIF.

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

DRAINAGE AREA.--0.11 sq mi.

RECORDS AVAILABLE.--Water years 1960-66 (annual maximum), February 1966 to September 1968.

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

EXTREMES.--No flow during year.

1960-68: Maximum discharge, 41 cfs Aug. 12, 1965 (gage height, 12.97 ft, from crest-stage gage), on basis of computation of maximum flow through culvert; no flow for all or most of each year.

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

SALTON SEA BASIN

10-2555.5. NEW RIVER NEAR WESTMORELAND, CALIF.

LOCATION.--Lat 33°06'17", long 115°39'49", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 1968. Monthly discharge only for January 1943 to September 1960, published in WSP 1734.

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

EXTREMES.--1960-68: Maximum daily discharge, 1,180 cfs Sept. 19, 1963; minimum daily, 293 cfs Jan. 6, 1967.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	677	509	406	431	523	578	687	626	536	453	449	555
2	674	523	355	409	521	568	689	632	543	461	433	549
3	702	509	348	433	509	592	641	643	515	444	451	511
4	714	519	379	446	509	561	657	666	526	438	438	519
5	668	521	361	461	511	605	659	649	479	426	444	519
6	603	502	364	451	526	619	660	647	488	683	455	545
7	617	513	406	470	519	596	640	615	487	881	475	542
8	668	521	373	487	542	641	601	584	504	615	521	558
9	697	515	382	519	576	746	603	586	504	479	592	547
10	677	502	370	459	564	698	596	570	477	451	488	521
11	677	504	377	451	557	530	624	605	498	455	513	545
12	716	525	394	479	534	511	634	578	485	436	470	578
13	655	504	392	555	551	479	611	568	463	433	440	566
14	600	483	362	528	509	475	636	521	470	435	446	557
15	586	477	446	504	511	502	601	534	481	444	473	547
16	578	487	483	500	498	523	622	532	507	463	470	521
17	590	487	392	488	513	563	605	555	500	477	459	526
18	543	457	364	523	536	572	586	561	479	498	498	534
19	515	477	390	492	542	638	563	547	435	457	532	530
20	549	457	494	507	525	624	566	566	459	463	502	563
21	594	444	451	517	515	645	622	576	440	479	496	607
22	584	457	366	509	532	710	561	532	451	494	492	601
23	655	435	373	488	580	673	568	564	455	515	513	609
24	609	413	418	523	574	698	557	517	483	523	500	626
25	584	370	398	504	549	736	557	507	525	530	473	655
26	611	449	408	517	528	728	586	511	448	449	475	632
27	566	800	361	502	549	732	619	534	448	442	530	609
28	570	834	314	488	559	698	641	523	451	502	515	628
29	574	500	307	507	564	674	660	517	472	547	488	615
30	570	431	326	551	-----	681	657	528	485	549	500	615
31	572	-----	394	526	-----	702	-----	543	-----	473	483	-----
TOTAL	19,195	15,125	11,954	15,225	15,526	19,298	18,509	17,637	14,494	15,395	15,014	17,030
MEAN	619	504	386	491	535	623	617	569	483	497	484	568
MAX	716	834	494	555	580	746	689	666	543	881	592	655
MIN	515	370	307	409	498	475	557	507	435	426	433	511
AC-FT	38,070	30,000	23,710	30,200	30,800	38,280	36,710	34,980	28,750	30,540	29,780	33,780
CAL YR 1967	TOTAL 193,206		MEAN 529		MAX 1,060		MIN 293		AC-FT 383,200			
WTR YR 1968	TOTAL 194,402		MEAN 531		MAX 881		MIN 307		AC-FT 385,600			

SALTON SEA BASIN

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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.

RECORDS AVAILABLE.--August 1958 to September 1968.

GAGE.--Digital water-stage recorder and concrete low-water control. Datum of gage is 1,872.69 ft above mean sea level (datum of 1929). Prior to Jan. 31, 1968, graphic water-stage recorder.

AVERAGE DISCHARGE.--10 years, 0.289 cfs (209 acre-ft per year); median of yearly mean discharges, 0.2 cfs (140 acre-ft per year).

EXTREMES.--Maximum discharge during year, 4.0 cfs Dec. 19 (gage height, 1.61 ft); no flow Oct. 5-16, May 29 to Sept. 30.

1958-68: Maximum discharge, 1,050 cfs Aug. 22, 1967 (gage height, 4.08 ft), from rating curve extended above slope-area measurement at gage height 3.50 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	.30	.30	.32	.28	.26	.20				
2	.10	.10	.30	.30	.33	.29	1.3	.20				
3	.10	.10	.30	.30	.32	.29	.36	.20				
4	.10	.10	.30	.30	.33	.27	.24	.20				
5	0	.10	.30	.30	.32	.24	.21	.20				
6	0	.10	.30	.30	.38	.25	.19	.22				
7	0	.10	.30	.30	.38	.27	.30	.20				
8	0	.10	.30	.30	.24	.41	.30	.17				
9	0	.20	.20	.30	.31	.40	.30	.16				
10	0	.20	.20	.30	.31	.34	.30	.16				
11	0	.20	.20	.30	.32	.32	.31	.16				
12	0	.20	.20	.30	.33	.30	.25	.25				
13	0	.20	.50	.30	.34	.30	.30	.27				
14	0	.20	.40	.30	.42	.29	.30	.23				
15	0	.20	.50	.30	.35	.30	.30	.21				
16	0	.20	1.0	.30	.34	.24	.23	.17				
17	.10	.20	.80	.30	.31	.22	.31	.14				
18	.10	.20	.70	.30	.30	.24	.36	.11				
19	.10	.20	2.8	.30	.33	.23	.27	.09				
20	.10	.30	1.4	.30	.30	.23	.30	.07				
21	.10	.30	.40	.30	.31	.22	.30	.07				
22	.10	.40	.30	.30	.34	.24	.30	.09				
23	.10	.50	.30	.30	.34	.20	.30	.11				
24	.10	.40	.30	.30	.33	.18	.30	.11				
25	.10	.30	.30	.30	.28	.18	.20	.09				
26	.10	.30	.30	.30	.26	.17	.20	.07				
27	.10	.30	.30	.30	.27	.17	.20	.05				
28	.10	.30	.30	.30	.25	.17	.20	.02				
29	.10	.30	.30	.30	.27	.16	.20	0				
30	.10	.30	.30	.30	-----	.15	.20	0				
31	.10	-----	.30	.30	-----	.16	-----	0	-----			-----
TOTAL	1.90	6.70	14.70	9.30	9.23	7.71	9.09	4.22	0	0	0	0
MEAN	.061	.22	.47	.30	.32	.25	.30	.14	0	0	0	0
MAX	.10	.50	2.8	.30	.42	.41	1.3	.27	0	0	0	0
MIN	0	.10	.20	.30	.24	.15	.19	0	0	0	0	0
AC-FT	3.8	13	29	18	18	15	18	8.4	0	0	0	0

CAL YR 1967 TOTAL 204.70 MEAN .56 MAX 87 MIN 0 AC-FT 406
WTR YR 1968 TOTAL 62.85 MEAN .17 MAX 2.8 MIN 0 AC-FT 125

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

SALTON SEA BASIN

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

LOCATION.--Lat 33°22'06", long 116°25'14", in NE¼NE¼NE¼ sec.26, T.9 S., R.5 E., on left bank 0.5 mile downstream from Box Canyon, 1.8 miles northwest of Rancho De Anza, and 8.2 miles northwest of Borrego Springs.

DRAINAGE AREA.--144 sq mi.

RECORDS AVAILABLE.--October 1950 to September 1968. Monthly discharge only for October and November 1950, published in WSP 1734.

GAGE.--Digital water-stage recorder. Altitude of gage is 1,250 ft (from topographic map). Oct. 1, 1950 to Mar. 4, 1965, graphic water-stage recorder. Prior to Mar. 24, 1967, at site 0.6 mile upstream at different datum.

AVERAGE DISCHARGE.--18 years, 2.12 cfs (1,530 acre-ft per year).

EXTREMES.--Maximum discharge during year, 137 cfs July 28 (gage height, 9.10 ft from inside gage); minimum daily, 0.80 cfs July 12.
1950-68: Maximum discharge, 3,800 cfs July 28, 1951 (gage height, 14.14 ft from floodmarks, site and datum then in use), on basis of slope-area measurement of maximum flow; minimum daily, 0.58 cfs June 21, 22, 1967.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.1	1.3	1.2	1.1	1.2	1.2	.99	.96	.84	.96	1.1
2	1.3	1.2	1.2	1.2	1.1	1.1	1.3	1.0	.87	.83	.93	1.2
3	1.2	1.2	1.1	1.2	1.1	1.1	1.2	1.0	.87	.83	.96	1.2
4	1.2	1.2	1.1	1.2	1.1	1.2	1.2	.93	.89	.84	.93	1.2
5	1.2	1.2	1.1	1.2	1.1	1.1	1.2	.92	.95	.87	1.0	1.2
6	1.2	1.3	1.1	1.2	1.1	1.1	1.3	.90	1.1	.99	2.8	1.2
7	1.1	1.3	1.1	1.2	1.1	1.1	1.2	1.0	1.1	.98	1.4	1.2
8	1.1	1.3	1.1	1.2	1.2	1.3	1.2	1.1	1.1	.91	1.3	1.2
9	1.0	1.3	1.1	1.2	1.2	1.2	1.2	1.1	1.1	.89	1.3	1.2
10	1.1	1.3	1.1	1.2	1.2	1.2	1.3	1.1	1.1	.85	1.2	1.2
11	1.1	1.3	1.1	1.2	1.2	1.2	1.3	1.1	1.1	.82	1.2	1.2
12	1.1	1.2	1.1	1.2	1.2	1.1	1.3	1.2	1.0	.80	1.2	1.2
13	1.1	1.2	1.1	1.2	1.4	1.1	1.4	1.1	.97	.82	1.2	1.2
14	1.0	1.2	1.1	1.2	1.3	1.2	1.3	1.1	.96	.85	1.2	1.2
15	1.0	1.2	1.1	1.2	1.3	1.1	1.2	1.1	.97	.85	1.2	1.2
16	1.0	1.2	1.0	1.2	1.3	1.1	1.2	1.1	.93	.85	1.1	1.2
17	1.0	1.2	1.0	1.2	1.3	1.2	1.3	1.0	.90	.88	1.1	1.2
18	1.0	1.2	1.4	1.2	1.4	1.3	1.2	1.0	.89	.93	1.1	1.1
19	1.0	1.2	1.5	1.2	1.3	1.3	1.2	.98	.85	.92	1.1	1.1
20	1.1	1.2	1.5	1.2	1.3	1.3	1.3	.97	.83	.93	1.1	1.2
21	1.1	1.5	1.4	1.2	1.3	1.4	1.2	.99	.81	.93	1.1	1.2
22	1.1	1.5	1.4	1.2	1.2	1.3	1.2	1.0	.81	.96	1.1	1.2
23	1.1	1.5	1.4	1.2	1.2	1.3	1.2	.99	.81	.95	1.1	1.2
24	1.1	1.4	1.3	1.2	1.2	1.3	1.2	1.0	.84	.94	1.1	1.1
25	1.1	1.4	1.3	1.1	1.2	1.4	1.1	.96	.86	.94	1.1	1.1
26	1.1	1.4	1.3	1.1	1.1	1.4	1.1	.92	.86	.96	1.1	1.1
27	1.1	1.4	1.3	1.1	1.1	1.3	1.2	.90	.83	1.0	1.1	1.1
28	1.1	1.3	1.3	1.1	1.2	1.2	1.0	.90	.82	5.3	1.1	1.1
29	1.1	1.3	1.3	1.1	1.2	1.2	1.0	.90	.84	1.0	1.1	1.2
30	1.1	1.3	1.2	1.1	-----	1.2	.99	.90	.85	.94	1.1	1.1
31	1.1	-----	1.2	1.1	-----	1.1	-----	.94	-----	.94	1.1	-----
TOTAL	34.2	38.5	37.6	36.5	35.0	37.6	36.19	31.09	27.77	32.34	36.38	35.1
MEAN	1.10	1.28	1.21	1.18	1.21	1.21	1.21	1.00	.93	1.04	1.17	1.17
MAX	1.3	1.5	1.5	1.2	1.4	1.4	1.4	1.2	1.1	5.3	2.8	1.2
MIN	1.0	1.1	1.0	1.1	1.1	1.1	.99	.90	.81	.80	.93	1.1
AC-FT	68	76	75	72	69	75	72	62	55	64	72	70
CAL YR 1967	TOTAL 573.32			MEAN 1.57		MAX 100		MIN .58		AC-FT 1,140		
WTR YR 1968	TOTAL 418.27			MEAN 1.14		MAX 5.3		MIN .80		AC-FT 830		

Peak discharge (base, 50 cfs).--July 28 (0400 hrs) 137 cfs (9.10 ft).

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.

RECORDS AVAILABLE.--October 1950 to September 1968. Prior to October 1960, published as "Palm Canyon Creek near Borrego Springs". Monthly discharge only for October to November 1950, published in WSP 1734.

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

AVERAGE DISCHARGE.--18 years, 0.349 cfs (253 acre-ft per year); median of yearly mean discharges, 0.2 cfs (140 acre-ft per year).

EXTREMES.--Maximum discharge during year, 61 cfs July 29 (gage height, 3.94 ft), from rating curve extended above 2 cfs on basis of slope-area measurement at gage height 4.44 ft; no flow for much of year.
1950-68: Maximum discharge, 2,000 cfs (estimated) Aug. 23, 1955 (gage height, 9.9 ft, from floodmarks); no flow for several months in each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.20	.20	.20	.10	.60	.10	0		
2			0	.10	.20	.20	.80	.60	.10	0		
3			0	.10	.20	.20	.50	.60	.10	0		
4			0	.10	.20	.20	.30	.60	.10	0		
5			0	.10	.20	.10	.20	.60	.10	0		
6			0	.10	.20	.10	.20	.60	.10	0		
7			0	.10	.30	.10	.20	.60	.10	0		
8			0	.10	.30	.50	.20	.50	.10	0		
9			0	.10	.30	.70	.60	.40	.10	0		
10			0	.10	.30	.40	1.0	.40	.10	0		
11			0	.10	.30	.30	1.0	.60	.10	0		
12			0	.10	.30	.20	1.0	1.0	.10	0		
13			0	.10	.30	.20	1.0	1.0	.10	0		
14			0	.10	.30	.20	.90	.80	.10	0		
15			0	.10	.30	.20	.90	.60	.10	0		
16			0	.10	.20	.10	1.0	.50	.10	0		
17			0	.10	.20	.10	1.0	.40	0	0		
18			.30	.10	.20	.10	1.0	.30	0	0		
19			2.3	.10	.20	.10	1.0	.30	0	0		
20			1.0	.10	.20	.10	1.0	.30	0	0		
21			.40	.10	.20	.10	1.0	.30	0	0		
22			.20	.10	.20	.10	.90	.30	0	0		
23			.20	.10	.20	.10	.80	.30	0	0		
24			.20	.20	.20	.10	.80	.30	0	0		
25			.20	.20	.20	.10	.80	.20	0	0		
26			.20	.20	.20	.10	.80	.20	0	0		
27			.20	.20	.20	.10	.70	.20	0	0		
28			.20	.40	.20	.10	.60	.20	0	2.1		
29			.20	.30	.20	.10	.60	.20	0	.20		
30			.20	.20	-----	.10	.60	.10	0	0		
31		-----	.20	.20	-----	.10	-----	.10	-----	0		-----
TOTAL	0	0	6.00	4.30	6.70	5.40	21.50	13.70	1.60	2.30	0	0
MEAN	0	0	.19	.14	.23	.17	.72	.44	.053	.074	0	0
MAX	0	0	2.3	.40	.30	.70	1.0	1.0	.10	2.1	0	0
MIN	0	0	0	.10	.20	.10	.10	.10	0	0	0	0
AC-FT	0	0	12	8.5	13	11	43	27	3.2	4.6	0	0

CAL YR 1967 TOTAL 57.90
WTR YR 1968 TOTAL 61.50

MEAN .16
MEAN .17

MAX 2.3
MAX 2.3

MIN 0
MIN 0

AC-FT 115
AC-FT 122

Peak discharge (base, 15 cfs).--July 29 (1700 hrs) 61 cfs (3.94 ft).

SALTON SEA BASIN

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

LOCATION.--Lat 33°08'50", long 116°21'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.9, T.12 S., R.6 E., 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 1965 to September 1968.

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

EXTREMES.--No flow during year.

1960-68: Maximum discharge, 28 cfs Oct. 18, 1963 (gage height, 5.67 ft), on basis of computation of maximum flow through culvert; no flow for most of each year.

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

SALTON SEA BASIN

61

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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 1,950 ft above mean sea level (from topographic map). U.S. Weather Bureau non-recording rain gage at site 2.0 miles upstream. Prior to June 1, 1966, graphic water-stage recorder.

AVERAGE DISCHARGE.--5 years, 0.162 cfs (117 acre-ft per year).

EXTREMES.--Maximum discharge during year, 44 cfs Aug. 7 (gage height, 2.90 ft); no flow Oct. 7-11, Nov. 29 to Dec. 6.

1963-68: Maximum discharge, 156 cfs Aug. 22, 1967 (gage height, 4.12 ft), on basis of slope-area measurement of maximum flow; no flow at times in some years.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.04	0	.08	.07	.11	.13	.05	.03	.04	.06	.05
2	.20	.03	0	.07	.07	.11	.15	.06	.03	.05	.07	.04
3	.10	.03	0	.09	.07	.12	.11	.08	.03	.04	.06	.04
4	.10	.04	0	.08	.06	.11	.11	.07	.03	.04	.06	.04
5	.10	.03	0	.09	.06	.12	.11	.06	.04	.04	.06	.04
6	.10	.03	0	.08	.07	.12	.11	.07	.04	.04	.06	.04
7	0	.02	.01	.08	.07	.12	.11	.07	.05	.04	1.4	.04
8	0	.03	.01	.08	.07	.13	.11	.07	.04	.04	.13	.04
9	0	.03	.01	.08	.07	.10	.11	.07	.04	.04	.06	.04
10	0	.02	.01	.08	.07	.09	.10	.07	.04	.04	.05	.04
11	0	.02	.01	.08	.06	.09	.09	.06	.03	.04	.04	.04
12	.06	.02	.02	.08	.06	.09	.09	.07	.03	.04	.04	.04
13	.07	.02	.06	.08	.07	.09	.09	.07	.03	.04	.04	.04
14	.08	.03	.06	.08	.08	.09	.08	.07	.04	.04	.04	.04
15	.07	.03	.07	.08	.08	.08	.08	.06	.04	.03	.04	.05
16	.07	.03	.06	.08	.08	.07	.08	.05	.03	.03	.04	.05
17	.07	.03	.06	.09	.09	.07	.08	.05	.03	.03	.04	.05
18	.07	.03	.12	.08	.09	.07	.07	.05	.03	.04	.04	.05
19	.06	.03	.16	.08	.09	.07	.07	.05	.04	.04	.04	.05
20	.05	.03	.10	.08	.09	.07	.07	.04	.04	.04	.04	.06
21	.04	.04	.08	.08	.09	.07	.07	.04	.04	.04	.04	.07
22	.04	.05	.06	.08	.09	.07	.06	.04	.04	.04	.04	.07
23	.04	.04	.06	.08	.09	.07	.05	.04	.04	.04	.04	.07
24	.04	.04	.06	.08	.09	.08	.06	.04	.04	.03	.04	.07
25	.05	.03	.07	.08	.09	.08	.06	.03	.05	.03	.04	.07
26	.05	.30	.07	.08	.09	.08	.05	.03	.05	.04	.04	.07
27	.05	.02	.07	.07	.09	.08	.05	.03	.05	.03	.05	.07
28	.05	.02	.07	.07	.09	.08	.05	.03	.04	.26	.05	.08
29	.05	0	.07	.07	.11	.09	.05	.03	.04	.08	.05	.08
30	.05	0	.07	.07	-----	.10	.04	.02	.04	.07	.05	.08
31	.04	-----	.07	.07	-----	.11	-----	.02	-----	.07	.05	-----
TOTAL	2.00	1.11	1.51	2.45	2.30	2.83	2.49	1.59	1.14	1.51	2.90	1.61
MEAN	.065	.037	.049	.079	.079	.091	.083	.051	.038	.049	.094	.054
MAX	.30	.30	.16	.09	.11	.13	.15	.08	.05	.26	1.4	.08
MIN	0	0	0	.07	.06	.07	.04	.02	.03	.03	.04	.04
AC-FT	4.0	2.2	3.0	4.9	4.6	5.6	4.9	3.2	2.3	3.0	5.8	3.2

CAL YR 1967 TOTAL 47.56

MEAN .13

MAX 8.2

MIN 0

AC-FT 94

WTR YR 1968 TOTAL 23.44

MEAN .064

MAX 1.4

MIN 0

AC-FT 46

Peak discharge (base, 15 cfs).--Aug. 7 (1515 hrs) 44 cfs (2.90 ft).

SALTON SEA BASIN

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

LOCATION.--Lat 33°07'25", long 115°51'05", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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.--1,893 sq mi.

RECORDS AVAILABLE.--December 1960 to September 1968.

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

AVERAGE DISCHARGE.--7 years (1961-68), 4.92 cfs (3,560 acre-ft per year).

EXTREMES.--Maximum discharge during year, 6,050 cfs July 28 (gage height, 12.36 ft, from profile of floodmarks), on basis of slope-area measurement of maximum flow; no flow for most of year.
1960-68: Maximum discharge, 7,790 cfs Sept. 2, 1967 (gage height, 10.93 ft), from rating curve extended above 6 cfs on basis of slope-area measurements at gage heights 6.56, 10.18, and 10.75 ft; no flow for some months in each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	.20	.20	.10	0			0		
2		0	0	.20	.20	.10	0			0		
3		0	0	.20	.20	.10	0			0		
4		0	0	.20	.20	.10	0			0		
5		0	0	.20	.20	.10	0			4.9		
6		0	0	.20	.20	.10	0			428		
7		0	0	.20	.20	.10	0			6.9		
8		0	0	.20	.20	41	0			0		
9		0	0	.20	.20	22	1.9			0		
10		0	0	.20	.20	.20	.10			0		
11		0	0	.20	.20	.10	0			0		
12		0	.10	.20	.20	.10	0			0		
13		0	.70	.20	.20	.10	0			0		
14		0	.10	.20	.20	.30	0			0		
15		0	.20	.20	.20	.10	0			0		
16		0	.20	.20	.20	0	0			0		
17		0	.10	.20	.20	0	0			0		
18		0	.40	.20	.20	0	0			0		
19		0	17	.20	.20	0	0			0		
20		0	3.7	.20	.20	0	0			0		
21		0	.60	.20	.10	0	0			0		
22		357	.20	.20	.10	.20	0			0		
23		228	.20	.20	.10	0	0			0		
24		293	.20	.20	.10	0	0			28		
25		228	.10	.20	.10	0	0			1.2		
26		283	.10	.20	.10	0	0			0		
27		435	.20	.20	.10	.20	0			0		
28		10	.20	.20	.10	.10	0			1,050		
29		5.0	.20	.20	.10	0	0			41		
30		1.0	.20	.20	-----	0	0			5.4		
31		-----	.20	.20	-----	0	-----			0		-----
TOTAL	0	1,840.0	24.90	6.20	4.90	65.10	2.00	0	0	1,565.4	0	0
MEAN	0	61.3	.80	.20	.17	2.10	.067	0	0	50.5	0	0
MAX	0	435	17	.20	.20	41	1.9	0	0	1,050	0	0
MIN	0	0	0	.20	.10	0	0	0	0	0	0	0
AC-FT	0	3,650	49	12	9.7	129	4.0	0	0	3,100	0	0

CAL YR 1967 TOTAL 4,576.40

WTR YR 1968 TOTAL 3,508.50

MEAN 12.5

MEAN 9.59

MAX 1,680

MAX 1,050

MIN 0

MIN 0

AC-FT 9,080

AC-FT 6,960

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
11-22	1300	12.17	5,930	07-24	0500	7.50	245
11-27	0130	9.48	1,630	07-28	1700	12.36	6,050
07-06	0230	10.13	2,000				

a From floodmarks.

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

LOCATION.--Lat 33°56'48", long 116°38'24", in NW¼NW¼NE¼ sec.2, T.3 S., R.3 E., on right bank 1.5 miles north of White Water and 3.5 miles upstream from San Geronio River.

DRAINAGE AREA.--57.4 sq mi.

RECORDS AVAILABLE.--October 1948 to September 1968.

GAGE.--Graphic water-stage recorder on river; digital water-stage recorder and Cipolletti weir on diversion 500 ft downstream. Datum of gage is 1,610.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1934. Feb. 24, 1950, to Sept. 30, 1952, and Apr. 13, 1960, to June 19, 1968, supplementary gages at different sites and datums within 200 ft of base gage. Prior to July 17, 1964, graphic water-stage recorder on diversion.

AVERAGE DISCHARGE (river only).--20 years, 11.4 cfs (8,250 acre-ft per year).

(combined).--19 years (1949-68), 12.5 cfs (9,050 acre-ft per year); median of yearly mean discharges, 10 cfs (7,200 acre-ft per year).

EXTREMES (river only).--Maximum discharge during year, 850 cfs July 28 (gage height, 8.62 ft); minimum daily, 8.0 cfs Sept. 5-9.

1948-68: Maximum discharge, 24,000 cfs Nov. 22, 1965 (gage height, 13.60 ft, from high-water mark in gage well), from rating curve extended above 190 cfs on basis of field estimate of maximum flow; no flow Jan. 9, 11, 1957, Nov. 26 to Dec. 10, 1965, Jan. 1-3, 1966.

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 fair. 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	22	24	14	20	22	29	16	15	16	10	9.0
2	20	22	25	14	16	22	17	16	15	16	10	9.0
3	20	22	23	15	19	24	13	16	14	16	13	8.5
4	20	22	24	14	20	22	18	16	15	16	10	8.5
5	20	23	20	14	19	23	17	17	16	16	49	8.0
6	19	23	16	14	19	25	16	18	16	16	31	8.0
7	19	23	14	15	18	23	15	17	16	17	11	8.0
8	19	23	12	15	17	84	14	17	16	20	11	8.0
9	19	23	13	15	19	32	13	17	16	12	11	8.0
10	19	23	14	16	19	20	12	17	16	11	10	12
11	19	23	15	19	19	9.2	12	17	16	10	10	16
12	19	22	16	19	19	15	12	19	16	10	10	9.0
13	21	22	17	30	20	20	15	17	16	9.5	10	9.0
14	19	22	19	36	19	24	16	19	16	9.0	10	9.0
15	22	21	20	31	20	22	19	19	16	14	10	9.0
16	21	22	25	16	19	22	18	19	16	12	9.8	9.0
17	22	22	20	14	19	26	14	18	16	8.1	9.8	9.0
18	22	22	35	15	22	26	12	17	16	8.1	9.7	9.5
19	22	111	40	15	21	14	12	15	15	8.1	9.7	9.5
20	22	46	25	15	22	13	12	14	15	8.9	9.5	9.5
21	22	34	20	14	23	19	16	14	16	8.7	9.5	10
22	22	16	18	16	22	13	17	16	15	8.5	9.5	10
23	22	12	17	15	21	9.3	17	16	16	8.7	10	10
24	22	15	15	16	21	8.1	16	16	16	8.6	10	10
25	22	21	14	16	22	8.9	16	16	16	8.5	10	10
26	22	21	13	18	21	11	15	16	16	8.4	10	10
27	22	29	12	21	21	16	16	15	15	8.3	10	10
28	22	30	14	19	25	21	15	14	16	87	10	10
29	22	28	15	16	23	27	15	15	16	7.3	9.5	10
30	22	25	16	16	-----	24	16	16	16	14	9.5	10
31	22	-----	12	15	-----	19	-----	16	-----	10	9.5	-----
TOTAL	646	790	583	538	585	664.5	465	511	471	431.7	372.0	285.5
MEAN	20.8	26.3	18.8	17.4	20.2	21.4	15.5	16.5	15.7	13.9	12.0	9.52
MAX	22	111	40	36	25	84	29	19	16	87	49	16
MIN	19	12	12	14	16	8.1	12	14	14	7.3	9.5	8.0
AC-FT	1,280	1,570	1,160	1,070	1,160	1,320	922	1,010	934	856	738	566
AC-FT a	1,360	1,650	1,240	1,160	1,240	1,410	1,010	1,100	1,020	938	825	653
AC-FT b	242	231	228	191	157	188	196	245	208	171	167	135
CAL YR 1967	TOTAL 10,484.0			MEAN 28.7	MAX 111	MIN 5.0		AC-FT 20,790		a 17,699	b 3,480	
WTR YR 1968	TOTAL 6,342.7			MEAN 17.3	MAX 111	MIN 7.3		AC-FT 12,580		a 13,610	b 2,360	

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-19	1800	9.00	400	07-28	0600	8.62	850
03-08	0900	9.17	302	08-05	2000	7.95	305

a Combined discharge of river and infiltration line.

b Discharge diverted from basin 15 miles upstream.

SALTON SEA BASIN

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

LOCATION.--Lat 33°55'14", long 116°41'45", in NW¼SE¼SW¼ sec.8, T.3 S., R.3 E., on right bank 0.25 mile south of Interstate Highway 10 and 3.4 miles west of town of White Water.

DRAINAGE AREA.--154 sq mi.

RECORDS AVAILABLE.--February 1966 to September 1968.

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

EXTREMES.--Maximum discharge during year, 190 cfs Nov. 19 (gage height, 2.16 ft, from crest-stage gage), on basis of slope-conveyance measurement of maximum flow; no flow for most of year.

1966-68: Maximum discharge, 1,130 Dec. 6, 1966 (gage height, 3.35 ft, from floodmarks), from rating curve extended above 210 cfs on basis of slope-area measurement at gage height 6.10 ft; no flow for most of each year.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0				0	.30					
2		0				0	1.3					
3		0				0	0					
4		0				0	0					
5		0				0	0					
6		0				0	0					
7		0				0	0					
8		0				3.8	0					
9		0				0	0					
10		0				0	0					
11		0				0	0					
12		0				0	0					
13		0				0	0					
14		0				0	0					
15		0				0	0					
16		0				0	0					
17		0				0	0					
18		0				0	0					
19		16				0	0					
20		0				0	0					
21		2.3				0	0					
22		0				0	0					
23		0				0	0					
24		0				0	0					
25		0				0	0					
26		0				0	0					
27		0				0	0					
28		0				0	0					
29		0				0	0					
30		0			-----	0	0					
31		-----			-----	0	-----		-----			-----
TOTAL	0	18.3	0	0	0	3.8	1.60	0	0	0	0	0
MEAN	0	.61	0	0	0	.12	.053	0	0	0	0	0
MAX	0	16	0	0	0	3.8	1.3	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	36	0	0	0	7.5	3.2	0	0	0	0	0
CAL YR 1967	TOTAL 36.90		MEAN .10	MAX 16	MIN 0			AC-FT 73				
WTR YR 1968	TOTAL 23.70		MEAN .065	MAX 16	MIN 0			AC-FT 47				

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-19	-	a 2.16	190	03-08	-	a 1.57	90
11-21	-	a 1.49	55				

a From crest-stage gage.

Note.--No gage-height record prior to Mar. 19.

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.

RECORDS AVAILABLE.--July to December 1921, May 1922 to February 1927, December 1927 to September 1931, October 1959 to September 1968. Yearly discharge only for 1930, published in WSP 1314.

GAGE.--Digital water-stage recorder. Altitude of gage is 2,100 ft (from topographic map). Prior to September 1931, graphic water-stage recorders at various sites within 500 ft of present site at different datums. October 1959 to Nov. 19, 1963, graphic water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--16 years (1922-26, 1928-31, 1959-68), 7.18 cfs (5,200 acre-ft per year); median of yearly mean discharges, 6.0 cfs (4,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 171 cfs Nov. 19 (gage height, 3.42 ft); minimum daily, 2.7 cfs Sept. 9, 10.

1921-31, 1959-68: Maximum discharge, 4,200 cfs Nov. 22, 1965 (gage height, 12.1 ft, from floodmarks), from rating curve extended above 55 cfs on basis of velocity-area measurement of maximum flow; minimum daily, 2.1 cfs June 23-27, Sept. 5-11, 1961.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	4.3	10	8.3	5.0	5.5	7.9	6.8	7.1	4.0	4.5	3.1
2	4.8	4.5	6.5	8.1	5.0	5.0	9.5	7.5	7.0	3.9	4.3	3.0
3	4.6	4.5	5.3	6.4	5.2	4.6	7.6	8.6	6.8	3.7	4.0	2.9
4	4.5	4.7	4.8	6.2	5.0	4.3	6.9	8.3	6.7	3.9	4.1	3.0
5	4.3	4.5	4.2	6.0	4.9	4.3	6.7	8.9	7.2	3.9	4.2	2.9
6	4.2	4.7	4.0	5.8	4.9	4.2	6.4	7.8	6.6	4.3	4.4	2.8
7	4.1	4.7	3.7	5.6	4.8	4.3	6.2	7.5	6.4	5.3	4.3	2.8
8	4.0	4.7	3.5	5.6	4.7	4.8	7.3	7.2	6.3	6.6	3.8	2.8
9	4.0	4.5	3.5	5.6	5.7	19	7.4	7.2	6.3	5.5	3.5	2.7
10	3.9	4.3	3.7	5.8	5.9	11	7.0	7.5	5.8	4.3	3.4	2.7
11	3.9	4.5	3.7	6.2	6.9	7.9	7.1	7.5	5.5	4.1	3.3	2.8
12	3.8	4.3	3.7	5.8	6.4	6.9	7.2	8.9	5.7	3.9	3.2	2.9
13	3.8	4.0	3.8	5.8	7.6	6.4	7.4	7.5	5.5	3.9	3.2	2.9
14	3.8	3.7	4.0	5.6	7.0	6.5	7.3	6.6	5.5	3.9	3.5	2.9
15	3.6	3.5	4.9	5.8	6.8	6.0	7.3	6.2	5.4	3.8	3.5	3.1
16	3.7	3.2	4.9	6.4	6.4	5.8	7.7	6.2	5.4	3.7	3.6	3.1
17	3.9	3.0	5.2	6.0	7.1	5.8	8.0	6.1	5.1	3.6	3.5	3.0
18	3.8	2.9	11	5.8	8.6	5.8	7.8	6.3	5.1	3.4	3.5	3.0
19	3.8	55	12	5.6	7.3	5.6	7.0	6.9	5.0	3.6	3.5	3.1
20	3.8	38	7.5	5.4	10	5.7	6.8	8.0	4.5	3.6	3.4	3.1
21	4.0	23	6.2	5.4	11	5.6	6.6	8.8	4.3	3.5	3.5	3.3
22	4.0	17	5.8	5.4	9.0	5.6	6.0	7.8	4.3	3.7	3.5	3.2
23	4.0	11	6.0	5.2	7.7	5.8	6.0	7.3	4.3	3.8	3.3	3.2
24	4.0	7.1	7.0	5.2	7.8	5.8	5.8	6.7	4.5	3.6	3.3	3.2
25	3.8	6.6	7.0	5.2	7.3	6.1	5.8	6.8	4.6	3.4	3.4	3.1
26	4.0	5.9	9.7	5.2	7.1	6.3	6.2	7.4	4.6	3.4	3.4	3.0
27	4.0	5.7	10	5.8	7.3	6.1	6.6	7.6	4.4	3.4	3.4	3.0
28	4.0	6.9	9.7	6.0	7.5	6.0	7.0	8.1	4.3	16	3.3	3.1
29	4.3	6.0	9.4	5.3	6.5	6.1	6.4	8.1	4.1	7.2	3.2	3.2
30	4.3	10	8.3	5.0	-----	6.2	6.4	7.5	4.1	5.5	3.2	3.3
31	4.3	-----	8.3	5.1	-----	6.7	-----	7.0	-----	4.7	3.1	-----
TOTAL	126.1	266.7	197.3	180.6	196.4	238.9	209.3	230.6	162.4	141.1	111.3	90.2
MEAN	4.07	8.89	6.36	5.83	6.77	7.71	6.98	7.44	5.41	4.55	3.59	3.01
MAX	5.1	55	12	8.3	11	48	9.5	8.9	7.2	16	4.5	3.3
MIN	3.6	2.9	3.5	5.0	4.7	4.2	5.8	6.1	4.1	3.4	3.1	2.7
AC-FT	250	529	391	358	390	474	415	457	322	280	221	179

CAL YR 1967 TOTAL 3,059.4 MEAN 8.38 MAX 55 MIN 2.9 AC-FT 6,070
WTR YR 1968 TOTAL 2,150.9 MEAN 5.88 MAX 55 MIN 2.7 AC-FT 4,270

PEAK DISCHARGE (BASE. 50 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
11-19	1815	3.42	171	07-28	0645	3.25	129
03-08	0930	3.25	129				

SALTON SEA BASIN

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

LOCATION.--Lat 34°00'40", long 116°37'38", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.2 S., R.3 E., in Mission Creek Indian Reservation, 0.6 mile downstream from West Fork, and 6.8 miles northwest of Desert Hot Springs.

DRAINAGE AREA.--35.7 sq mi.

RECORDS AVAILABLE.--October 1967 to September 1968.

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

EXTREMES.--Maximum discharge during year, 545 cfs July 28 (gage height, 3.04 ft), on basis of slope-conveyance measurement of maximum flow; no flow for most of year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0			0				0		
2		0	0			0				0		
3		0	0			0				0		
4		0	0			0				0		
5		0	0			0				0		
6		0	0			0				0		
7		0	.10			0				.10		
8		0	.20			21				0		
9		0	.10			0				0		
10		0	0			0				0		
11		0	.10			0				0		
12		0	0			0				0		
13		0	0			0				0		
14		0	0			0				0		
15		0	0			1.9				0		
16		0	0			0				0		
17		0	0			0				0		
18		0	.90			0				0		
19		0	.20			2.3				0		
20		0	0			.40				0		
21		0	0			0				0		
22		.10	0			0				0		
23		0	0			0				0		
24		0	0			0				0		
25		0	0			0				0		
26		0	0			.10				0		
27		0	0			0				0		
28		0	0			0				18		
29		0	0			0				0		
30		0	0		-----	0				0		
31		-----	0		-----	0	-----		-----	0		-----
TOTAL	0	0.10	1.60	0	0	25.70	0	0	0	18.10	0	0
MEAN	0	.003	.052	0	0	.83	0	0	0	.58	0	0
MAX	0	.10	.90	0	0	21	0	0	0	18	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	.2	3.2	0	0	51	0	0	0	36	0	0
(a)	0	1.4	1.1	0	.1	1.3	.4	0	0	.7	0	0

CAL YR 1967 TOTAL - MEAN - MAX - MIN - AC-FT -
 WTR YR 1968 TOTAL 45.50 MEAN 0.12 MAX 21 MIN 0 AC-FT 90

Peak discharge (base, 50 cfs).--Mar. 8 (0800 hrs) 465 cfs (gage height, unknown); July 28 (0600 hrs) 545 cfs (3.04 ft).

a Precipitation, in inches.

SALTON SEA BASIN

67

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

LOCATION.--Lat 33°57'55", long 116°26'35", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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 1968.

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

AVERAGE DISCHARGE.--5 years, 0.001 cfs (0.7 acre-ft per year).

EXTREMES.--Maximum discharge during year, 36 cfs Aug. 20 (gage height, 1.35 ft, from floodmarks), on basis of slope-conveyance measurement of maximum flow; no flow all year except Aug. 20.
1963-68: Maximum discharge, 9,270 cfs Aug. 7, 1963 (gage height, 8.0 ft, from floodmarks), on basis of field estimate of maximum flow; no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											0	
2											0	
3											0	
4											0	
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											1.5	
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	0	0	0	0	0	0	1.5	0
MEAN	0	0	0	0	0	0	0	0	0	0	.048	0
MAX	0	0	0	0	0	0	0	0	0	0	1.5	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	0	3.0	0
CAL YR 1967	TOTAL .20		MEAN .0005		MAX .20		MIN 0		AC-FT .4			
WTR YR 1968	TOTAL 1.50		MEAN .004		MAX 1.5		MIN 0		AC-FT 3.0			

SALTON SEA BASIN

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

LOCATION.--Lat 33°48'18", long 116°33'30", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ 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.--16.8 sq mi.

RECORDS AVAILABLE.--October 1947 to September 1968.

GAGE.--Graphic 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.--21 years, 3.11 cfs (2,250 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 9.6 cfs Mar. 8 (gage height, 2.35 ft); no flow Aug. 12 to Sept. 30. 1947-68: Maximum discharge, 2,900 cfs Nov. 22, 1965 (gage height, 10.34 ft); from rating curve extended above 70 cfs on basis of slope-area measurements at gage heights 8.45 and 10.34 ft; no flow for parts of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	.90	1.5	1.9	1.7	4.0	4.5	6.0	1.9	.40	.20	
2	1.5	.90	.80	1.9	1.7	3.8	5.0	5.9	1.9	.30	.20	
3	1.5	.90	.80	1.9	1.8	3.4	4.8	5.9	1.8	.30	.10	
4	1.4	.90	.70	1.8	1.7	3.3	4.6	5.9	1.8	.30	.10	
5	1.3	.90	.70	1.7	1.7	3.3	4.6	6.0	1.8	.30	.10	
6	1.2	.90	.70	1.8	1.7	3.3	4.8	5.5	1.8	.60	.10	
7	1.2	.90	.70	1.6	1.7	3.3	4.9	5.3	1.9	1.2	.10	
8	1.1	1.0	.60	1.7	1.8	5.8	5.1	5.3	1.9	2.2	.10	
9	1.0	1.0	.60	1.7	2.5	4.8	5.1	5.1	1.8	2.2	.10	
10	1.0	1.0	.60	1.7	3.3	4.2	5.1	5.1	1.7	1.6	.10	
11	.90	1.0	.60	1.7	2.9	3.7	5.1	5.3	1.7	1.2	.10	
12	.90	1.0	.70	1.7	2.6	3.7	5.1	5.9	1.7	.80	0	
13	.90	1.0	.60	1.7	3.0	3.5	5.1	5.6	1.6	.60	0	
14	.80	1.1	.60	1.6	2.6	3.5	5.1	5.5	1.6	.50	0	
15	.80	1.1	1.4	1.7	2.4	3.5	5.1	5.0	1.4	.40	0	
16	.80	1.1	1.4	1.9	2.3	3.3	5.1	4.7	1.4	.40	0	
17	.80	1.1	1.3	1.8	2.4	3.4	5.1	4.4	1.4	.30	0	
18	.80	1.2	3.1	1.7	3.6	3.2	5.1	4.4	1.2	.30	0	
19	.80	1.3	3.4	1.7	3.3	3.2	5.1	4.2	1.1	.30	0	
20	.80	1.5	2.4	1.7	3.8	3.0	5.1	4.2	1.0	.20	0	
21	.90	1.9	2.1	1.6	4.4	3.0	5.1	4.2	.80	.20	0	
22	1.0	1.5	1.8	1.6	4.2	3.0	5.1	4.2	.60	.20	0	
23	1.0	1.3	1.7	1.6	4.2	3.1	5.1	4.0	.70	.20	0	
24	1.1	1.2	1.8	1.6	4.2	3.0	5.1	3.8	.80	.30	0	
25	1.0	1.1	1.9	1.7	4.2	3.4	5.2	3.6	.80	.30	0	
26	.90	1.1	2.2	1.7	4.1	3.5	5.5	3.2	.80	.20	0	
27	.80	1.0	2.4	1.8	4.1	3.8	5.9	3.1	.60	.20	0	
28	.80	1.0	2.3	1.8	4.0	3.8	6.2	3.0	.50	.10	0	
29	.80	1.0	2.2	1.6	4.0	3.8	6.2	2.7	.40	.20	0	
30	.90	.80	2.1	1.8	-----	3.8	6.2	2.4	.40	.20	0	
31	.90	-----	1.9	1.8	-----	4.0	-----	2.2	-----	.20	0	-----
TOTAL	31.30	32.60	45.60	53.5	85.9	111.4	155.1	141.6	38.80	16.70	1.30	0
MEAN	1.01	1.09	1.47	1.73	2.96	3.59	5.17	4.57	1.29	.54	.042	0
MAX	1.7	1.9	3.4	1.9	4.4	5.8	6.2	6.0	1.9	2.2	.20	0
MIN	.80	.80	.60	1.6	1.7	3.0	4.5	2.2	.40	.10	0	0
AC-FT	62	65	90	106	170	221	308	281	77	33	2.6	0

CAL YR 1967 TOTAL 2,447.50 MEAN 6.71 MAX 66 MIN .60 AC-FT 4,850
WTR YR 1968 TOTAL 713.80 MEAN 1.95 MAX 6.2 MIN 0 AC-FT 1,420

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

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

LOCATION.--Lat 33°34'05", long 116°30'45", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.7 S., on left bank at culvert on State Highway 74, or Pines to Palms Highway, 9.4 miles northeast of Anza.

DRAINAGE AREA.--0.47 sq mi.

RECORDS AVAILABLE.--Water years 1962-67 (annual maximum), February 1967 to September 1968.

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

EXTREMES.--No flow during year.

1961-68: Maximum discharge, 28 cfs Aug. 30, 1967 (gage height, 6.23 ft, 5.92 ft from crest-stage gage), on basis of computation of maximum flow through culvert; no flow for most of each year.

REMARKS.--No flow since Sept. 2, 1967. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 2.2; December, 1.4; January, 0.2; February, 0.5; March, 1.3; April, 1.2; May, 0.1; July, 0.9; the water year, 7.8.

SALTON SEA BASIN

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

LOCATION.--Lat 33°44'55", long 116°32'15", in S½ 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.

RECORDS AVAILABLE.--January 1930 to January 1942, October 1947 to September 1968.

GAGE.--Graphic 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.--32 years (1930-41, 1947-68), 3.66 cfs (2,650 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

EXTREMES.--Maximum discharge during year, 500 cfs July 28 (gage height, 4.26 ft), on basis of slope-conveyance measurement of maximum flow; no flow for much of year.
1930-42, 1947-68: Maximum discharge, 3,850 cfs Feb. 6, 1937 (gage height, 5.80 ft, present datum), from rating curve extended above 120 cfs on basis of velocity-area measurement of maximum flow; no flow for several months in most years.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.90	.40	0	0	0		0		
2			0	.40	.30	0	3.7	0		0		
3			0	.60	.20	0	2.8	0		0		
4			0	.50	.20	0	1.2	0		0		
5			0	.50	.20	0	.80	0		0		
6			0	.40	.20	0	.70	0		0		
7			0	.40	.20	0	.70	0		0		
8			0	.40	.10	8.3	.40	0		0		
9			0	.40	.20	4.8	.40	0		0		
10			0	.40	.40	1.9	.40	0		0		
11			0	.40	.40	.90	.40	0		0		
12			0	.40	.40	.70	.30	.10		0		
13			0	.40	.60	.70	.30	.10		0		
14			0	.40	.60	.60	.30	0		0		
15			0	.30	.50	.40	.30	0		0		
16			0	.40	.40	.40	.20	0		0		
17			2.9	.40	.40	.20	.20	0		0		
18			3.8	.30	.50	0	.20	0		0		
19			3.9	.30	.40	0	.20	0		0		
20			8.5	.30	.40	0	.10	0		0		
21			3.0	.20	.40	0	.10	0		0		
22			1.9	.20	.40	0	.10	0		0		
23			1.3	.20	.20	0	.10	0		0		
24			1.3	.20	.20	0	.10	0		0		
25			1.4	.20	.10	0	0	0		0		
26			1.9	.30	.10	0	0	0		0		
27			2.0	.40	0	0	0	0		0		
28			2.0	.70	0	0	0	0		35		
29			2.0	.50	0	0	0	0		0		
30			1.7	.50	-----	0	0	0		0		
31		-----	1.3	.40	-----	0	-----	0	-----	0		-----
TOTAL	0	0	108.2	12.80	8.40	18.90	14.00	0.20	0	35	0	0
MEAN	0	0	3.49	.41	.29	.61	.47	.007	0	1.13	0	0
MAX	0	0	3.9	.90	.60	8.3	3.7	.10	0	35	0	0
MIN	0	0	0	.20	0	0	0	0	0	0	0	0
AC-FT	0	0	215	25	17	37	28	.4	0	69	0	0

CAL YR 1967 TOTAL 403.10 MEAN 1.10 MAX 39 MIN 0 AC-FT 800
WTR YR 1968 TOTAL 197.50 MEAN .54 MAX 39 MIN 0 AC-FT 392

Peak discharge (base, 100 cfs).--Dec. 18 (1800 hrs) 145 cfs (3.05 ft); July 28 (0800 hrs) 500 cfs (4.26 ft).

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

LOCATION.--Lat 33°45'36", long 116°32'57", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.5 S., R.4 E., 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.

RECORDS AVAILABLE.--October 1948 to September 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 800 ft (from topographic map). Prior to Mar. 25, 1949, reference point at same site at different datum. Mar. 25, 1949, to Sept. 27, 1963, graphic water-stage recorder.

AVERAGE DISCHARGE.--20 years, 1.96 cfs (1,420 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 18 cfs Mar. 8 (gage height, 1.80 ft); minimum daily, 0.20 cfs Sept. 27.

1948-68: 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 one mile above station.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	2.3	2.4	3.0	2.0	2.1	1.7	1.1	.57	.66	.64
2	1.2	1.3	2.0	2.7	3.0	2.0	4.2	1.9	.99	.51	.70	.59
3	1.1	1.3	1.9	2.4	3.0	2.0	2.6	2.0	.92	.55	.68	.51
4	1.2	1.3	1.8	2.3	3.0	1.8	2.2	1.9	1.0	.67	.86	.57
5	1.1	1.2	1.9	2.3	3.0	1.8	1.9	1.9	1.1	.73	1.0	.49
6	1.2	1.3	1.9	2.2	3.0	1.8	1.9	1.9	1.2	1.1	1.1	.37
7	1.1	1.3	1.8	2.0	3.0	1.8	1.9	1.8	1.2	1.2	1.1	.39
8	1.1	1.3	1.8	2.1	2.5	6.3	1.9	1.7	1.2	1.1	.95	.39
9	1.1	1.3	1.8	2.1	2.4	3.0	2.2	1.7	1.1	.89	.73	.31
10	1.1	1.3	1.8	2.1	2.4	2.4	2.1	1.7	1.0	.70	.76	.24
11	1.2	1.3	1.8	2.1	2.4	2.3	2.1	1.6	.94	.52	.64	.23
12	1.4	1.3	1.8	2.1	2.5	2.2	2.3	2.0	.87	.41	.59	.25
13	1.1	1.4	1.9	2.1	2.6	2.2	2.1	1.9	.81	.51	.58	.27
14	1.2	1.4	2.0	2.1	2.4	2.2	2.2	1.8	.79	.60	.63	.23
15	1.2	1.4	2.3	2.1	2.2	2.1	2.0	1.7	.76	.65	.68	.42
16	1.2	1.5	2.3	2.1	2.2	2.1	2.0	1.6	.73	.61	.71	.36
17	1.2	1.4	2.3	2.3	2.3	2.1	2.1	1.4	.64	.67	.68	.32
18	1.2	1.4	4.4	2.3	2.6	2.0	2.2	1.3	.61	.69	.75	.31
19	1.2	4.7	5.8	2.3	2.6	2.0	2.0	1.2	.61	.63	.80	.35
20	1.2	3.8	5.9	2.3	2.6	1.8	2.0	1.2	.57	.60	.80	.46
21	1.3	3.5	4.0	2.3	2.5	1.7	2.0	1.2	.48	.62	.79	.53
22	1.5	2.7	3.5	2.3	2.4	1.7	1.9	1.3	.46	.81	.75	.52
23	1.6	2.2	3.2	2.3	2.3	1.7	1.9	1.4	.51	.94	.68	.48
24	1.8	2.0	3.0	2.4	2.2	1.7	1.8	1.3	.63	.81	.61	.34
25	1.8	1.7	3.0	2.4	2.1	1.7	1.8	1.3	.69	.64	.61	.28
26	1.4	1.9	3.2	2.4	2.0	1.7	1.8	1.2	.66	.58	.68	.22
27	1.3	1.8	3.2	2.4	1.9	1.8	1.7	1.1	.56	.74	.56	.20
28	1.4	2.1	3.2	2.5	1.8	1.7	1.8	1.1	.46	2.4	.42	.22
29	1.4	1.9	3.0	2.7	1.8	1.7	1.7	1.1	.49	1.5	.41	.35
30	1.3	2.3	2.7	3.0	-----	1.6	1.7	1.1	.56	1.1	.46	.47
31	1.2	-----	2.7	3.0	-----	1.6	-----	1.0	-----	.79	.60	-----
TOTAL	39.5	54.5	84.2	72.1	71.7	64.5	62.1	47.0	23.64	24.84	21.97	11.31
MEAN	1.27	1.82	2.72	2.33	2.47	2.08	2.07	1.52	.79	.80	.71	.38
MAX	1.8	4.7	5.9	3.0	3.0	6.3	4.2	2.0	1.2	2.4	1.1	.64
MIN	1.1	1.2	1.8	2.0	1.8	1.6	1.7	1.0	.46	.41	.41	.20
AC-FT	78	108	167	143	142	128	123	93	47	49	44	22

CAL YR 1967 TOTAL 1,409.57 MEAN 3.86 MAX 38 MIN .94 AC-FT 2,800
WTR YR 1968 TOTAL 577.36 MEAN 1.58 MAX 6.3 MIN .20 AC-FT 1,150

Peak discharge (base, 30 cfs).--No peak above base.

SALTON SEA BASIN

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 1968.

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

AVERAGE DISCHARGE.--6 years, 0.669 cfs (484 acre-ft per year).

EXTREMES.--Maximum discharge during year, 107 cfs Aug. 4 (gage height, 2.96 ft), on basis of slope-conveyance measurement of maximum flow; no flow for much of year.

1962-68: Maximum discharge, 1,300 cfs Nov. 23, 1965 (gage height, 5.15 ft in gage well, 6.15 ft from profile of floodmarks), from rating curve extended above 3.3 cfs on basis of slope-area measurements at gage heights 2.68 and 5.15 ft; no flow for much of each year.

REMARKS.--Records good 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10		0	.40	.30	.50	.30	.20	.10		0	
2	.10		0	.40	.30	.50	.90	.20	.10		0	
3	.10		0	.40	.30	.40	.40	.20	.10		0	
4	.10		0	.40	.30	.40	.30	.20	.10		6.3	
5	.10		0	.40	.30	.40	.30	.20	.10		.30	
6	0		0	.30	.30	.40	.30	.20	.10		.10	
7	0		0	.30	.30	.40	.30	.20	.10		.10	
8	0		0	.30	.30	1.0	.30	.20	.10		0	
9	0		0	.30	.30	1.3	.30	.20	.10		0	
10	0		0	.30	.30	.90	.30	.20	.10		0	
11	0		0	.30	.50	.70	.30	.10	.10		0	
12	0		0	.30	.50	.60	.30	.10	.10		0	
13	0		0	.30	.50	.50	.30	.10	0		0	
14	0		0	.30	.50	.50	.30	.10	0		0	
15	0		0	.30	.40	.50	.30	.10	0		0	
16	0		.40	.30	.40	.40	.30	.10	0		0	
17	0		.90	.30	.40	.40	.20	.10	0		0	
18	0		4.2	.30	.50	.40	.20	.10	0		0	
19	0		5.1	.30	.50	.40	.20	.10	0		0	
20	0		1.2	.30	.50	.40	.20	.10	0		0	
21	0		.60	.30	.80	.30	.20	.10	0		0	
22	0		.40	.30	.70	.30	.20	.10	0		0	
23	0		.40	.30	.70	.30	.20	.10	0		0	
24	0		.30	.30	.60	.30	.20	.10	0		0	
25	0		.50	.30	.60	.30	.20	.10	0		0	
26	0		1.1	.30	.60	.30	.20	.10	0		0	
27	0		1.2	.50	.60	.30	.20	.10	0		0	
28	0		1.0	.40	.60	.30	.20	.10	0		0	
29	0		.90	.40	.60	.30	.20	.10	0		0	
30	0		.70	.40	-----	.30	.20	.10	0		0	
31	0	-----	.50	.40	-----	.20	-----	.10	-----		0	-----
TOTAL	0.50	0	19.40	10.40	13.50	14.20	8.30	4.10	1.20	0	6.80	0
MEAN	.016	0	.63	.34	.47	.46	.28	.13	.040	0	.22	0
MAX	.10	0	5.1	.50	.80	1.3	.90	.20	.10	0	6.3	0
MIN	0	0	0	.30	.30	.20	.20	.10	0	0	0	0
AC-FT	1.0	0	38	21	27	28	16	8.1	2.4	0	13	0

CAL YR 1967 TOTAL 111.20 MEAN .30 MAX 24 MIN 0 AC-FT 221
WTR YR 1968 TOTAL 78.40 MEAN .21 MAX 6.3 MIN 0 AC-FT 156

Peak discharge (base, 20 cfs).--Dec. 18 (2130 hrs) 30 cfs (2.42 ft); Aug. 4 (1315 hrs) 107 cfs (2.96 ft).

Note.--No gage-height record Oct. 1-12, Jan. 3 to Feb. 7.

SALTON SEA BASIN

73

10-2593, WHITEWATER RIVER AT INDIO, CALIF.

LOCATION.--Lat 33°44'06", long 116°14'39", in NW¼NE¼SW¼ sec.15, T.5 S., R.7 E., at center bridge pier on Interstate Highway 10, 2 miles northwest of Indio.

DRAINAGE AREA.--1,073 sq mi.

RECORDS AVAILABLE.--March 1966 to September 1968.

GAGE.--Digital water-stage recorder and crest-stage gage. Altitude of gage is 5 ft (from topographic map). Prior to May 29, 1968, flood-hydrograph recorder.

EXTREMES.--Maximum discharge during year, 38 cfs June 8 (gage height, 6.65 ft); no flow for most of year.

1966-68: Maximum discharge, 4,960 cfs Dec. 7, 1966 (gage height, 11.36 ft, from crest-stage gage), from rating curve extended above 1,300 cfs on basis of slope-area measurement at gage height 15.3 ft; no flow for most of each year.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0					.40		0	0	1.5	
2		0					0		0	0	0	
3		0					0		0	0	0	
4		0					0		0	0	0	
5		0					0		0	0	0	
6		0					0		0	0	0	
7		0					0		0	0	0	
8		0					0		0	1.2	0	
9		0					0		3.9	0	0	
10		0					0		1.6	0	0	
11		0					0		0	0	0	
12		0					0		0	0	0	
13		0					0		0	0	0	
14		0					0		0	0	0	
15		0					0		0	0	0	
16		0					0		0	0	0	
17		0					0		0	0	0	
18		0					0		0	0	0	
19		0					0		0	0	0	
20		0					0		0	0	0	
21		.20					0		0	0	0	
22		0					0		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					0		0	0	0	
28		0					0		0	1.6	0	
29		0					0		0	0	0	
30		0					0		.30	0	0	
31		-----			-----		-----		-----	0	0	-----
TOTAL	0	0.20	0	0	0	0	0.40	0	5.80	2.8	1.5	0
MEAN	0	.007	0	0	0	0	.013	0	.19	.090	.048	0
MAX	0	.20	0	0	0	0	.40	0	3.9	1.6	1.5	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	.4	0	0	0	0	.8	0	12	5.6	3.0	0

CAL YR 1967 TOTAL 15.20 MEAN .042 MAX 10 MIN 0 AC-FT 30
 WTR YR 1968 TOTAL 10.70 MEAN .029 MAX 3.9 MIN 0 AC-FT 21

Peak discharge (base, 200 cfs).--No peak above base.

SALTON SEA BASIN

10-2595.4. WHITEWATER RIVER NEAR MECCA, CALIF.

LOCATION.--Lat 33°31'00", long 116°04'02", in NW¼NW¼SW¼ sec.32, T.7 S., R.9 E., on left bank 0.9 mile upstream from mouth and 3.9 miles south of Mecca.

DRAINAGE AREA.--1,299 sq mi.

RECORDS AVAILABLE.--October 1960 to September 1968.

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

EXTREMES.--1960-68: Maximum daily discharge, 1,300 cfs (estimated) Nov. 23, 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.--Forty-eight discharge measurements furnished by Coachella Valley County Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	87	107	98	110	128	148	128	114	110	120	112
2	108	87	107	100	108	128	148	125	113	107	118	104
3	102	87	107	97	108	125	148	125	112	108	116	102
4	107	87	110	84	106	124	146	125	112	107	116	102
5	108	88	108	80	108	122	146	122	112	106	116	101
6	101	84	110	85	104	119	143	119	110	104	114	100
7	106	85	113	87	102	120	140	116	108	101	113	106
8	102	84	116	88	104	125	130	114	107	100	110	106
9	104	84	119	90	106	122	114	113	101	97	110	104
10	102	87	120	92	107	119	118	113	102	91	110	104
11	101	90	132	94	107	119	119	116	97	95	107	106
12	104	92	122	95	112	119	124	116	92	101	112	110
13	101	94	95	101	110	119	122	119	91	102	106	114
14	98	91	83	97	118	119	124	119	101	104	104	116
15	101	91	87	101	118	118	124	120	104	106	107	118
16	92	94	90	102	119	119	122	120	102	106	114	119
17	94	94	97	102	120	119	120	120	102	106	122	122
18	92	94	102	102	120	116	119	114	108	106	125	119
19	90	94	112	104	118	116	119	114	107	110	128	131
20	88	94	119	106	122	118	120	112	107	119	124	124
21	87	101	110	106	122	118	113	113	113	124	125	116
22	84	101	106	107	124	124	114	107	118	125	108	116
23	83	104	104	108	130	128	113	106	120	128	112	122
24	81	106	104	110	125	128	110	110	122	126	107	122
25	83	104	108	114	124	126	108	112	120	126	107	122
26	73	102	108	118	125	134	107	118	120	126	104	120
27	74	101	107	119	126	136	116	118	119	124	108	118
28	83	106	107	116	125	140	119	116	116	124	102	114
29	84	107	104	116	128	142	120	116	114	124	100	113
30	90	107	102	114	-----	143	124	116	113	124	102	112
31	88	-----	101	113	-----	143	-----	116	-----	122	104	-----
TOTAL	2,919	2,827	3,317	3,146	3,356	3,876	3,738	3,618	3,277	3,459	3,471	3,395
MEAN	94.2	94.2	107	101	116	125	125	117	109	112	112	113
MAX	108	107	132	119	130	143	148	128	122	128	128	131
MIN	73	84	83	80	102	116	107	106	91	91	100	100
AC-FT	5,790	5,610	6,580	6,240	6,660	7,690	7,410	7,180	6,500	6,860	6,880	6,730
CAL YR 1967	TOTAL 39,908		MEAN 109		MAX 134		MIN 73		AC-FT 79,160			
WTR YR 1968	TOTAL 40,399		MEAN 110		MAX 148		MIN 73		AC-FT 80,130			

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 1968.

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

AVERAGE DISCHARGE.--9 years, 0.0007 cfs (0.5 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2.6 cfs Mar. 8 (gage height, 2.67 ft); no flow all year except that of Mar. 8.
1959-68: Maximum discharge, 34 cfs Oct. 3, 1966 (gage height, 3.77 ft, from crest-stage gage), on basis of culvert computation of maximum flow; no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						0						
2						0						
3						0						
4						0						
5						0						
6						0						
7						0						
8						.10						
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	0	0.10	0	0	0	0	0	0
MFAN	0	0	0	0	0	.003	0	0	0	0	0	0
MAX	0	0	0	0	0	.10	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	.2	0	0	0	0	0	0
(a)	0	.6	1.3	0	.3	.7	.1	0	.3	1.2	0	0

CAL YR 1967	TOTAL	.30	MEAN	.0008	MAX	.30	MIN	0	AC-FT	.6
WTR YR 1968	TOTAL	.10	MEAN	.0003	MAX	.10	MIN	0	AC-FT	.2

a Precipitation, in inches.

SALTON SEA BASIN

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

LOCATION.--Lat 33°31'40", long 115°58'23", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.29, T.7 S., R.10 E., on right bank of channel, 1,000 ft upstream from mouth, 2,250 ft downstream from State Highway 111, and 6.6 miles southeast of Mecca.

RECORDS AVAILABLE.--February 1966 to September 1968.

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

EXTREMES.--1966-68: Maximum daily discharge, 55 cfs Mar. 29, 1966; minimum daily, 2.6 cfs Jan. 23, 24, 1968.

REMARKS.--Records good. Discharge represents seepage and return flows from irrigated areas. At times water is wasted from Coachella Canal.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	4.4	3.5	3.2	3.0	4.1	4.4	5.4	4.4	5.0	5.4	4.7
2	6.1	4.1	3.5	3.2	6.1	4.1	4.4	5.4	4.1	5.4	4.7	4.7
3	5.4	4.1	3.2	3.2	5.4	3.2	4.7	5.4	3.8	5.4	4.4	4.7
4	4.4	4.4	3.0	3.5	4.7	2.8	4.4	5.4	3.8	5.4	4.4	4.7
5	5.0	4.1	3.5	3.2	4.1	2.8	4.4	5.0	4.7	5.7	7.8	4.7
6	5.7	4.1	3.5	3.0	3.8	3.0	4.1	5.0	4.7	5.4	4.7	4.7
7	6.1	3.8	3.2	3.0	3.8	3.2	4.1	5.0	5.0	5.4	5.0	4.7
8	6.1	3.5	3.0	3.2	4.1	4.1	4.4	4.7	5.4	4.4	4.4	5.0
9	5.4	3.5	2.8	3.2	4.2	4.1	5.4	5.0	5.0	4.1	4.7	4.7
10	4.7	3.5	2.8	3.2	3.8	4.4	5.4	5.4	4.7	4.1	4.7	5.0
11	4.7	3.5	2.8	3.0	3.8	4.7	5.4	5.7	4.7	4.4	4.7	5.0
12	4.7	3.5	3.8	3.0	4.1	22	5.7	5.7	4.7	6.9	5.7	4.7
13	4.7	3.2	3.5	3.0	4.1	23	6.1	5.7	5.0	7.7	4.7	4.7
14	4.7	3.2	3.5	2.8	5.0	4.4	6.1	6.1	5.0	5.7	5.0	4.4
15	4.7	3.5	3.5	2.8	5.7	4.4	5.7	5.4	5.0	4.7	5.0	4.4
16	4.7	3.5	3.5	2.8	4.7	4.4	5.7	5.4	6.1	5.0	5.4	4.7
17	4.7	3.8	3.5	2.8	4.4	4.7	5.7	5.4	5.7	5.0	4.4	5.0
18	4.7	3.8	3.5	2.8	4.4	5.0	6.1	5.0	5.0	5.0	4.4	5.0
19	4.7	3.8	3.5	2.8	4.7	4.7	6.1	4.4	4.7	5.4	4.4	4.7
20	5.0	3.8	3.5	3.0	4.7	4.7	6.1	4.4	4.4	5.0	4.1	4.4
21	5.4	3.8	3.2	2.8	4.7	5.0	6.1	4.4	4.1	4.7	4.4	4.4
22	4.7	3.5	3.0	2.8	4.7	5.0	6.1	4.4	4.4	4.4	4.4	5.0
23	4.4	3.5	3.0	2.6	5.0	4.7	6.1	5.0	4.7	5.0	4.4	4.4
24	4.7	3.5	3.0	2.6	4.7	5.0	6.5	6.1	4.7	5.4	4.7	4.4
25	4.7	3.5	3.0	2.8	4.4	4.4	6.9	4.7	6.1	5.7	4.7	4.4
26	4.7	3.2	3.0	2.8	4.4	4.4	6.5	4.4	4.4	5.7	4.4	4.4
27	4.4	3.2	3.0	2.8	4.1	4.4	5.7	4.1	4.4	5.7	4.1	4.4
28	4.7	3.2	3.0	2.8	3.8	4.4	5.7	4.1	4.1	6.1	4.1	4.4
29	3.8	3.2	2.8	2.8	3.8	4.4	5.7	4.1	5.4	5.7	4.1	4.1
30	4.1	4.4	3.2	3.0	-----	4.4	5.7	4.4	6.1	5.0	4.4	4.1
31	5.0	-----	3.2	3.0	-----	5.0	-----	4.4	-----	5.4	4.7	-----
TOTAL	151.8	110.1	100.0	91.5	128.2	168.9	165.4	155.0	144.3	163.9	146.4	138.6
MEAN	4.90	3.67	3.23	2.95	4.42	5.45	5.51	5.00	4.81	5.29	4.72	4.62
MAX	6.1	4.4	3.8	3.5	6.1	23	6.9	6.1	6.1	7.7	7.8	5.0
MIN	3.8	3.2	2.8	2.6	3.0	2.8	4.1	4.1	3.8	4.1	4.1	4.1
AC-FT	301	218	198	181	254	335	328	307	286	325	290	275
CAL YR 1967	TOTAL 1,782.4		MEAN 4.88		MAX 12		MIN 2.8		AC-FT 3,540			
WTR YR 1968	TOTAL 1,664.1		MEAN 4.55		MAX 23		MIN 2.6		AC-FT 3,300			

EMERSON LAKE BASIN

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

LOCATION.--Lat 34°10'20", long 116°32'45", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.1 N., R.4 E., 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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 4,435.40 ft above mean sea level, datum of 1929.

AVERAGE DISCHARGE.--10 years, 0.010 cfs (7.2 acre-ft per year).

EXTREMES.--No flow during year.

1958-68: Maximum discharge, 350 cfs Dec. 29, 1965 (gage height, 3.52 ft), on basis of field estimate of maximum flow; no flow for all or most of each year.

REMARKS.--No flow since Dec. 30, 1965. 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 1968.

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

AVERAGE DISCHARGE.--11 years, 0.005 cfs (3.6 acre-ft per year); median of yearly mean discharges, 0.0003 cfs (0.2 acre-ft per year).

EXTREMES.--No flow during year.

1957-68: Maximum discharge, 180 cfs Nov. 23, 1965 (gage height, 2.27 ft), from rating curve extended above 35 cfs; maximum gage height, 2.92 ft Dec. 29, 1965 (due to debris); no flow in most years.

REMARKS.--No flow since Sept. 2, 1967. No regulation or diversion above station. Discharge for the calendar year 1967 is as follows: Maximum daily, 0.2 cfs; minimum, zero; mean, 0.0008 cfs; total, 0.6 acre-ft.

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.

RECORDS AVAILABLE.--October 1904 to September 1922, October 1929 to September 1968. Monthly discharge only prior to January 1930, published in WSP 1314.

GAGE.--Digital water-stage recorder. Broad-crested weir since December 1938. Altitude of gage is 3,050 ft (from topographic map). Prior to Sept. 30, 1922, staff gage and graphic 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. Dec. 10, 1938, to Sept. 26, 1963, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--57 years, 66.2 cfs (47,930 acre-ft per year); median of yearly mean discharges, 49 cfs (35,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 654 cfs Nov. 20 (gage height, 3.16 ft); minimum daily, 1.8 cfs July 21-23.

1904-22, 1929-68: Maximum discharge, 46,600 cfs Mar. 2, 1938, based on slope-area measurement of maximum flow; no flow July 17, 18, 1961.

REMARKS.--Records good. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft), used principally for recreation. Hesperia Water Co.'s canal, which diverted water about 2.5 miles above station, has not been used since May 9, 1959.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	7.3	103	32	33	44	36	22	9.9	4.0	4.5	2.3
2	9.0	7.4	46	35	34	40	54	23	9.7	3.9	4.1	2.3
3	9.0	7.5	33	34	42	37	53	22	9.4	3.8	3.8	2.3
4	9.0	7.5	28	26	47	34	57	21	9.1	3.7	3.5	2.3
5	9.0	7.6	25	27	44	32	61	20	9.4	3.5	3.3	2.3
6	9.2	7.7	23	28	42	32	59	20	9.6	3.6	3.2	2.3
7	9.2	7.9	22	26	42	36	51	19	9.9	4.2	3.2	2.3
8	9.2	8.1	21	25	40	162	47	19	11	6.7	3.1	2.3
9	9.4	8.3	20	30	52	124	43	18	11	7.5	3.0	2.3
10	9.4	8.4	19	27	97	78	40	18	10	5.4	2.9	2.3
11	9.5	8.5	14	30	72	63	38	18	9.7	4.0	2.8	2.3
12	9.4	8.4	9.9	29	56	55	37	18	9.4	3.3	2.8	2.3
13	9.0	8.3	9.9	28	60	51	36	23	8.7	3.0	2.7	2.3
14	8.6	8.3	9.9	28	65	56	34	21	8.1	2.7	2.6	2.3
15	8.2	8.4	10	29	55	53	33	19	7.2	2.7	2.6	2.3
16	8.0	8.6	10	31	51	51	33	18	6.4	2.7	2.5	2.2
17	7.8	9.2	9.9	31	53	58	32	17	6.1	2.8	2.5	2.2
18	8.0	9.6	10	29	67	52	32	16	5.3	2.6	2.5	2.2
19	7.9	87	10	28	65	46	31	16	4.9	2.1	2.4	2.2
20	7.7	411	27	28	66	42	30	15	4.5	1.9	2.4	2.2
21	7.7	107	72	27	71	39	29	15	4.2	1.8	2.3	2.2
22	7.8	79	68	27	73	38	28	14	4.1	1.8	2.3	2.2
23	10	40	69	28	64	38	27	15	3.9	1.8	2.3	2.2
24	10	32	71	29	61	36	25	15	3.9	2.0	2.3	2.2
25	9.8	27	76	28	59	35	25	14	3.9	2.0	2.3	2.2
26	9.5	25	66	29	55	38	24	14	3.8	2.0	2.3	2.2
27	8.9	22	35	46	54	40	24	12	3.8	2.1	2.3	2.2
28	8.6	25	32	42	56	37	24	11	3.7	5.3	2.3	2.2
29	7.8	34	29	35	50	36	23	11	3.9	11	2.3	2.2
30	7.4	42	30	37	-----	36	22	10	4.0	6.0	2.3	2.2
31	7.4	-----	31	35	-----	35	-----	10	-----	5.2	2.3	-----
TOTAL	270.4	1,078.0	1,039.6	944	1,626	1,554	1,088	524	208.5	115.1	85.7	67.5
MEAN	8.72	35.9	33.5	30.5	56.1	50.1	36.3	16.9	6.95	3.71	2.76	2.25
MAX	10	411	103	46	97	162	61	23	11	11	4.5	2.3
MIN	7.4	7.3	9.9	25	33	32	22	10	3.7	1.8	2.3	2.2
AC-FT	536	2,140	2,060	1,870	3,230	3,080	2,160	1,040	414	228	170	134
CAL YR 1967	TOTAL 25,933.4	MEAN 71.1	MAX 591	MIN 5.7	AC-FT 51,440							
WTR YR 1968	TOTAL 8,600.8	MEAN 23.5	MAX 411	MIN 1.8	AC-FT 17,060							

Peak discharge (base, 400 cfs).--Nov. 20 (0700 hrs) 654 cfs (3.16 ft).

Note.--No gage-height record July 30 to Sept. 30.

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.

RECORDS AVAILABLE.--October 1904 to September 1922, October 1929 to September 1968. Prior to February 1930, monthly discharge only, published in WSP 1314.

GAGE.--Graphic water-stage recorder. Altitude of gage is 3,050 ft (from topographic map). Prior to June 30, 1922, staff gage and graphic water-stage recorder several hundred feet downstream at different datum. June 30, 1942, to Apr. 14, 1966, at datum 2.00 ft higher.

AVERAGE DISCHARGE.--57 years, 38.2 cfs (27,660 acre-ft per year); median of yearly mean discharges, 24 cfs (17,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 755 cfs Nov. 20 (gage height, 4.85 ft); no flow Oct. 1 to Nov. 18, Apr. 26 to Sept. 30.

1904-22, 1929-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	114	24	24	19	8.2					
2		0	54	22	20	16	55					
3		0	34	22	18	13	37					
4		0	19	20	16	10	31					
5		0	16	17	14	9.6	22					
6		0	15	15	13	9.2	20					
7		0	13	15	12	9.6	19					
8		0	10	15	10	200	17					
9		0	9.0	14	14	96	14					
10		0	9.2	14	25	55	13					
11		0	10	14	23	38	13					
12		0	9.0	13	18	29	12					
13		0	9.2	13	28	23	13					
14		0	9.2	12	74	33	13					
15		0	10	13	62	23	11					
16		0	13	12	48	19	9.0					
17		0	22	12	39	30	8.4					
18		0	52	11	33	27	8.0					
19		48	66	11	31	20	5.8					
20		325	40	9.6	29	15	4.7					
21		51	25	11	27	14	4.4					
22		36	13	11	23	13	2.5					
23		25	13	10	21	16	1.8					
24		20	12	11	19	13	1.8					
25		8.6	13	11	16	12	1.4					
26		6.5	22	9.6	15	11	0					
27		8.6	24	38	15	10	0					
28		11	24	56	14	7.5	0					
29		6.0	25	34	18	6.5	0					
30		83	28	28	-----	5.0	0					
31		-----	27	27	-----	4.7	-----					
TOTAL	0	628.7	759.6	545.2	719	807.1	346.0	0	0	0	0	0
MEAN	0	21.0	24.5	17.6	24.8	26.0	11.5	0	0	0	0	0
MAX	0	325	114	56	74	200	55	0	0	0	0	0
MIN	0	0	9.0	9.6	10	4.7	0	0	0	0	0	0
AC-FT	0	1,250	1,510	1,080	1,430	1,600	686	0	0	0	0	0

CAL YR 1967 TOTAL 20,473.30 MEAN 56.1 MAX 1,250 MIN 0 AC-FT 40,610
WTR YR 1968 TOTAL 3,805.60 MEAN 10.4 MAX 325 MIN 0 AC-FT 7,550

Peak discharge (base, 500 cfs).--Nov. 20 (0530 hrs) 755 cfs (4.85 ft).

MOJAVE RIVER BASIN

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.

RECORDS AVAILABLE.--February 1899 to September 1906, October 1930 to September 1968. 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.--Graphic 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 4.00 ft higher. Mar. 28, 1938, to Apr. 14, 1966, at present site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--45 years, 70.6 cfs (51,110 acre-ft per year); median of yearly mean discharges, 39 cfs (28,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 97 cfs Nov. 21 (gage height, 2.10 ft); minimum daily, 8.7 cfs July 17-22.

1930-68: Maximum discharge, 70,600 cfs Mar. 2, 1938 (gage height, 20.7 ft, present datum), from rating curve extended above 10,000 cfs on basis of slope-area measurement of maximum flow, minimum daily, 6 cfs Aug. 19, 21, 26, 1951.

REMARKS.--Records good. Periodic regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 5,000 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	25	34	42	40	25	26	21	15	16	14	13
2	16	26	37	45	40	25	28	21	15	16	12	13
3	17	27	39	43	40	24	27	17	15	16	12	13
4	18	29	37	39	40	26	27	17	15	16	12	14
5	19	28	37	43	40	27	27	14	15	16	13	15
6	18	29	40	43	40	28	27	14	17	14	14	15
7	18	28	40	43	43	30	28	14	17	14	14	15
8	18	28	42	43	43	35	28	16	22	14	14	17
9	18	29	40	43	44	43	27	17	20	12	13	17
10	18	29	39	42	43	36	25	17	20	11	13	17
11	17	30	42	42	40	32	26	21	20	10	13	17
12	17	31	39	39	43	35	27	22	19	9.2	13	17
13	18	30	42	40	42	32	27	24	20	9.2	13	16
14	19	29	40	43	42	34	27	24	24	9.2	14	14
15	19	30	45	39	42	30	27	23	24	9.7	14	14
16	20	34	46	40	42	31	28	22	23	9.7	14	14
17	21	34	43	39	42	35	28	22	19	8.7	14	14
18	21	34	46	39	42	34	28	18	17	8.7	14	14
19	21	46	46	39	42	34	25	18	15	8.7	14	14
20	21	48	43	42	42	31	26	16	15	8.7	13	17
21	20	54	42	42	42	32	25	14	15	8.7	12	17
22	19	46	43	42	42	26	25	14	14	8.7	13	17
23	20	43	43	42	42	26	24	18	14	9.2	13	17
24	22	42	43	42	37	28	24	21	14	10	13	20
25	23	42	45	42	35	27	23	22	14	10	13	22
26	24	42	45	42	35	28	24	21	15	10	13	21
27	24	40	42	45	32	29	23	19	15	11	13	20
28	24	40	45	40	32	29	23	18	15	18	13	21
29	24	40	42	40	30	28	23	16	15	18	13	21
30	25	32	42	42	-----	27	24	15	15	16	13	22
31	25	-----	45	40	-----	25	-----	15	-----	14	13	-----
TOTAL	621	1,045	1,294	1,287	1,159	932	777	571	513	370.4	409	498
MEAN	20.0	34.8	41.7	41.5	40.0	30.1	25.9	18.4	17.1	11.9	13.2	16.6
MAX	25	54	46	45	44	43	28	24	24	18	14	22
MIN	16	25	34	39	30	24	23	14	14	8.7	12	13
AC-FT	1,230	2,070	2,570	2,550	2,300	1,850	1,540	1,130	1,020	735	811	988

CAL YR 1967 TOTAL 27,551 MEAN 75.5 MAX 848 MIN 10 AC-FT 54,650
WTR YR 1968 TOTAL 9,476.4 MEAN 25.9 MAX 54 MIN 8.7 AC-FT 18,800

Peak discharge (base, 200 cfs).--No peak above base.

MOJAVE RIVER BASIN

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10-2619. MOJAVE RIVER AT WILD CROSSING, NEAR HELENDALÉ, CALIF.

LOCATION.--Lat 34°46'58", long 117°16'35", in NE¼NE¼SE¼ sec.15, T.8 N., R.4 W., on downstream wingwall of bridge on Indian Trail road at Wild Crossing, 4.7 miles northeast of Helendale.

DRAINAGE AREA.--960 sq mi.

RECORDS AVAILABLE.--March 1966 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 2,360 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 137 cfs Aug. 7 (gage height, 2.60 ft); no flow for most of year. 1966-68: Maximum discharge, 13,000 cfs (estimated) Dec. 7, 1966; no flow for most of each year.

REMARKS.--Records poor. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 10,000 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0								0	0	
2		0								0	0	
3		0								0	0	
4		0								0	0	
5		0								0	0	
6		0								0	0	
7		0								0	3.6	
8		0								0	.10	
9		0								0	0	
10		0								0	0	
11		0								0	0	
12		0								0	0	
13		0								0	0	
14		0								0	0	
15		0								0	0	
16		0								0	0	
17		0								0	0	
18		1.5								0	0	
19		.10								0	0	
20		0								0	0	
21		1.0								0	0	
22		.40								0	0	
23		0								0	0	
24		0								0	0	
25		0								0	0	
26		0								0	0	
27		0								0	0	
28		0								0	0	
29		0								.10	0	
30		0								0	0	
31		-----			-----		-----		-----	0	0	-----
TOTAL	0	3.00	0	0	0	0	0	0	0	0.10	3.70	0
MEAN	0	.10	0	0	0	0	0	0	0	.003	.12	0
MAX	0	1.5	0	0	0	0	0	0	0	.10	3.6	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	6.0	0	0	0	0	0	0	0	.2	7.3	0

CAL YR 1967 TOTAL 14,028.10 MEAN 38.4 MAX 921 MIN 0 AC-FT 27,820
WTR YR 1968 TOTAL 6.80 MEAN .019 MAX 3.6 MIN 0 AC-FT 13

Peak discharge (base, 100 cfs).--Aug. 7 (2000 hrs) 137 cfs (2.60 ft).

MOJAVE RIVER BASIN

10-2625. MOJAVE RIVER AT BARSTOW, CALIF.

LOCATION.--Lat 34°54'25", long 117°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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 2,089.80 ft above mean sea level, unadjusted.

AVERAGE DISCHARGE.--38 years, 21.4 cfs (15,490 acre-ft per year); median of yearly mean discharges, zero.

EXTREMES.--No flow during year.

1930-68: Maximum discharge, 64,300 cfs Mar. 3, 1938 (gage height, 8.60 ft), on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--No flow since Sept. 7, 1967. 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 for the calendar year 1967 is as follows: Maximum daily, 68 cfs; minimum, zero; mean, 0.733 cfs; total, 531 acre-ft.

MOJAVE RIVER BASIN

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10-2626. BOOM CREEK NEAR BARSTOW, CALIF.

LOCATION.--Lat 34°54'20", long 116°56'57", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.9 N., R.1 W., at culvert on U.S. Highway 91 and 466, 4.3 miles east of Barstow.

DRAINAGE AREA.--0.24 sq mi.

RECORDS AVAILABLE.--Water years 1959-66 (annual maximum); October 1966 to September 1968.

GAGE.--Graphic water-stage recorder with rain-gage attachment and crest-stage gage. Altitude of gage is 2,280 ft (from topographic map). Jan. 13, 1959, to Feb. 8, 1967, crest-stage gage only at same site and datum.

EXTREMES.--Maximum discharge during year, 33 cfs June 7 (gage height, 10.13 ft), from rating curve based on computations of flow through culvert; no flow all year except that of June 7.
1959-68: Maximum discharge, 125 cfs Sept. 1, 1960 (gage height, 14.23 ft, from crest-stage gage), on basis of culvert computation of maximum flow; no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									0			
2									0			
3									0			
4									0			
5									0			
6									0			
7									.47			
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	0	0	0	0	0.47	0	0	0
MEAN	0	0	0	0	0	0	0	0	.016	0	0	0
MAX	0	0	0	0	0	0	0	0	.47	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	.9	0	0	0
CAL YR 1967	TOTAL .20		MEAN .0005	MAX .20	MIN 0	AC-FT .4						
WTR YR 1968	TOTAL .47		MEAN .001	MAX .47	MIN 0	AC-FT 1.0						

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 1968. Records for the water year 1930 incomplete, yearly estimate published in WSP 1314.

GAGE.--Graphic 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.--19 years, 2.06 cfs (1,490 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

EXTREMES.--Maximum discharge during year, 32 cfs Nov. 22 (gage height, 6.88 ft); no flow May 4-6, June 3 to Sept. 30.

1929-32, 1952-68: Maximum discharge, 4,150 cfs Dec. 31, 1965 (gage height, 7.92 ft), from rating curve extended above 920 cfs on basis of slope-area measurement of maximum flow; no flow for some days in 1961-68.

REMARKS.--Records poor. Natural flow affected by ground-water withdrawals, diversions, municipal use, and storage in two small reservoirs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.40	1.0	.80	.80	.70	.40	.20	.30	0	0	0
2	.10	.40	1.0	.80	.80	.70	.20	.10	.10	0	0	0
3	.10	.40	1.0	.80	.70	.70	.40	.10	0	0	0	0
4	.10	.40	1.0	.80	.70	.70	.40	0	0	0	0	0
5	.10	.40	1.0	.80	.70	.60	.40	0	0	0	0	0
6	.10	.40	1.1	.80	.80	.60	.40	0	0	0	0	0
7	.10	.40	1.1	.80	.80	.70	.40	.10	0	0	0	0
8	.10	.40	1.0	.80	.80	4.9	.40	.20	0	0	0	0
9	.20	.40	1.0	.80	1.0	1.3	.40	.20	0	0	0	0
10	.20	.40	1.0	.80	1.0	.60	.40	.20	0	0	0	0
11	.20	.50	1.0	.80	.80	.40	.40	.20	0	0	0	0
12	.30	.50	1.0	.80	.80	.40	.40	.20	0	0	0	0
13	.30	.50	1.0	.80	1.0	.40	.40	.20	0	0	0	0
14	.30	.50	1.1	.80	.80	.40	.40	.30	0	0	0	0
15	.30	.50	3.2	.80	.70	.40	.40	.40	0	0	0	0
16	.30	.60	5.8	.80	.70	.40	.40	.40	0	0	0	0
17	.30	.60	2.9	.80	.80	.40	.40	.40	0	0	0	0
18	.30	.60	1.3	.80	1.1	.40	.40	.40	0	0	0	0
19	.30	.60	3.2	.80	.80	.40	.40	.60	0	0	0	0
20	.30	.60	3.2	.80	.70	.40	.40	.70	0	0	0	0
21	.30	.60	1.1	.80	.80	.40	.40	.30	0	0	0	0
22	.30	13	1.0	.80	.80	.40	.40	.30	0	0	0	0
23	.30	3.2	1.0	.80	.80	.60	.40	.20	0	0	0	0
24	.30	1.3	1.0	.80	.80	.40	.40	.70	0	0	0	0
25	.30	1.2	1.0	.80	.80	.40	.40	1.0	0	0	0	0
26	.40	1.1	1.0	.80	.80	.30	.40	1.1	0	0	0	0
27	.40	1.1	1.0	.80	.80	.40	.40	1.0	0	0	0	0
28	.40	1.0	1.0	.80	.80	.40	.60	1.0	0	0	0	0
29	.40	1.0	1.0	.80	.80	.40	.30	1.0	0	0	0	0
30	.40	1.0	1.0	.80	-----	.40	.20	.80	0	0	0	0
31	.40	-----	.80	.80	-----	.40	-----	.60	-----	0	0	-----
TOTAL	8.00	34.00	44.80	24.80	23.50	20.00	11.70	12.90	0.40	0	0	0
MEAN	.26	1.13	1.45	.80	.81	.65	.39	.42	.013	0	0	0
MAX	.40	13	5.8	.80	1.1	4.9	.60	1.1	.30	0	0	0
MIN	.10	.40	.80	.80	.70	.30	.20	0	0	0	0	0
AC-FT	16	67	89	49	47	40	23	26	.8	0	0	0

CAL YR 1967 TOTAL 353.10 MEAN .97 MAX 65 MIN 0 AC-FT 700
WTR YR 1968 TOTAL 180.10 MEAN .49 MAX 13 MIN 0 AC-FT 357

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 NW¼SE¼NE¼ 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.

RECORDS AVAILABLE.--January 1923 to September 1968. Monthly discharge only for October 1937 to January 1939, published in WSP 1314. Prior to October 1954, published as Rock Creek near Valyermo.

GAGE.--Digital 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. Prior to Apr. 21, 1966, graphic water-stage recorder.

AVERAGE DISCHARGE.--45 years, 15.3 cfs (11,080 acre-ft per year); median of yearly mean discharges, 8.8 cfs (6,520 acre-ft per year).

EXTREMES.--Maximum discharge during year, 240 cfs Nov. 19 (gage height, 2.96 ft); minimum daily, 4.9 cfs Sept. 27, 28.

1923-68: Maximum discharge, 8,300 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 0.70 cfs Nov. 5, 1951.

REMARKS.--Records 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 1968 are published in Part 2 of this report.

COOPERATION.--Sixteen discharge measurements furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.9	15	11	11	20	16	13	10	7.3	7.8	5.4
2	13	7.6	13	10	11	19	16	13	9.7	7.1	7.1	5.4
3	13	7.1	12	11	12	19	15	13	9.6	6.9	7.0	5.4
4	13	6.9	11	10	12	18	15	13	9.7	6.7	6.9	5.4
5	12	6.8	9.9	9.9	12	17	15	13	10	6.7	6.8	5.6
6	13	6.8	10	10	12	18	15	13	10	6.8	7.0	5.7
7	12	6.5	9.7	10	12	18	14	13	10	6.7	7.1	5.7
8	11	6.5	10	10	12	26	13	13	10	6.8	7.0	5.7
9	11	6.5	10	10	19	21	13	13	10	6.5	6.9	5.6
10	11	6.9	10	11	30	20	13	13	10	6.3	6.9	5.6
11	11	6.8	10	12	23	19	13	12	9.7	6.1	6.9	5.6
12	11	7.1	11	12	19	18	13	12	9.6	6.1	6.9	5.6
13	11	7.1	10	12	19	18	13	12	9.1	6.1	6.9	5.5
14	11	7.9	10	13	18	18	14	12	9.0	6.2	7.1	5.6
15	11	8.6	8.9	12	17	17	14	11	8.8	6.2	6.9	5.7
16	11	8.2	8.6	13	17	16	14	11	8.5	6.2	6.7	5.5
17	11	7.3	8.5	13	18	16	15	11	8.4	6.1	6.7	5.4
18	10	8.2	11	13	19	16	14	11	8.2	6.1	6.7	5.2
19	10	114	9.7	12	20	15	13	11	8.2	6.1	6.2	5.1
20	10	32	9.4	12	22	14	14	11	8.0	6.1	6.3	5.4
21	9.5	62	8.4	11	24	14	13	12	7.8	6.1	6.3	5.5
22	9.4	35	8.1	11	24	14	13	12	7.7	6.1	6.3	5.4
23	9.3	20	7.8	11	23	13	13	12	7.6	6.2	6.2	5.3
24	8.7	15	10	11	23	13	13	12	7.6	6.3	6.1	5.1
25	8.7	12	10	10	22	13	13	11	7.4	6.3	6.0	5.0
26	8.7	10	11	11	23	13	13	11	7.2	6.2	6.4	5.0
27	8.7	9.7	15	12	24	13	13	11	7.2	6.4	6.2	4.9
28	8.4	13	14	9.6	25	14	13	11	7.2	6.8	6.2	4.9
29	8.8	13	12	10	22	13	13	11	7.2	8.7	5.7	5.0
30	8.8	15	11	11	-----	13	13	11	7.6	8.9	5.6	5.0
31	8.1	-----	11	11	-----	14	-----	11	-----	8.2	5.5	-----
TOTAL	326.1	481.4	326.0	345.5	545	510	412	369	261.0	205.3	204.3	161.2
MEAN	10.5	16.0	10.5	11.1	18.8	16.5	13.7	11.9	8.70	6.62	6.59	5.37
MAX	13	114	15	13	30	26	16	13	10	8.9	7.8	5.7
MIN	8.1	6.5	7.8	9.6	11	13	13	11	7.2	6.1	5.5	4.9
AC-FT	647	955	647	685	1,080	1,010	817	732	518	407	405	320

CAL YR 1967 TOTAL 9,124.5 MEAN 25.0 MAX 114 MIN 6.5 AC-FT 18,100
WTR YR 1968 TOTAL 4,146.8 MEAN 11.3 MAX 114 MIN 4.9 AC-FT 8,230

Peak discharge (base, 50 cfs).--Nov. 19 (1815 hrs) 240 cfs (2.96 ft).

10-2640. LITTLE ROCK CREEK NEAR LITTLE ROCK, CALIF.

LOCATION.--Lat 34°27'47", long 118°01'04", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.3, T.4 N., R.11 W., 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 1968.

GAGE.--Graphic 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.--36 years (1930-37, 1939-68), 16.2 cfs (11,730 acre-ft per year); median of yearly mean discharges, 8.3 cfs (6,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 444 cfs Nov. 21 (gage height, 5.58 ft); no flow Sept. 11-30. 1930-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	1.1	25	18	11	24	15	9.6	4.5	.40	4.5	.10
2	.60	1.1	19	17	11	23	21	10	3.4	.40	2.2	.10
3	.60	1.1	18	17	15	21	19	10	3.4	.40	1.7	.10
4	.60	1.7	16	16	16	19	21	9.0	3.4	.40	1.1	.10
5	.60	1.1	15	15	17	17	22	8.4	3.9	.30	.60	.10
6	.60	1.1	13	15	15	17	21	8.4	5.6	.30	.40	.10
7	1.1	1.7	13	15	15	17	20	7.9	6.7	.30	.30	.10
8	1.1	1.1	12	15	15	41	17	8.4	8.4	.30	.30	.10
9	1.1	1.1	11	15	29	34	16	8.4	7.3	.30	.30	.10
10	1.1	1.1	11	15	90	28	15	8.4	6.2	.30	.30	.10
11	1.7	1.1	11	15	57	25	15	8.4	4.5	.30	.30	0
12	1.1	1.1	10	14	42	23	16	8.4	4.5	.30	.30	0
13	1.1	1.1	9.0	13	40	23	16	9.0	3.9	.20	.30	0
14	1.1	.60	7.9	13	40	23	16	9.0	3.4	.20	.20	0
15	1.1	1.1	11	12	39	22	16	8.4	3.9	.20	.20	0
16	1.1	1.1	10	12	32	22	16	6.7	3.4	.20	.20	0
17	1.1	1.7	9.6	11	32	23	16	5.6	2.2	.20	.20	0
18	1.1	2.2	13	11	38	23	16	5.0	1.7	.20	.20	0
19	1.1	139	14	9.6	36	21	15	4.5	.60	.20	.20	0
20	1.1	176	11	9.6	38	18	13	3.9	.60	.10	.20	0
21	1.1	264	8.4	10	38	17	13	4.5	.60	.10	.20	0
22	1.1	144	7.9	10	38	16	13	6.2	.60	.10	.20	0
23	1.1	67	7.3	9.6	37	15	12	6.2	.50	.10	.20	0
24	1.1	48	9.6	10	38	15	12	6.2	.50	.10	.20	0
25	1.1	32	15	10	35	14	12	5.6	.50	.10	.20	0
26	1.1	23	25	9.6	33	14	12	4.5	.50	.10	.20	0
27	1.1	21	25	15	32	13	13	3.9	.50	.10	.20	0
28	.60	21	23	13	31	13	11	2.8	.40	.10	.20	0
29	1.1	21	21	12	28	12	8.4	1.7	.40	.10	.10	0
30	1.1	23	21	11	-----	12	8.4	3.9	.40	21	.10	0
31	1.1	-----	19	10	-----	12	-----	4.5	-----	9.0	.10	-----
TOTAL	31.20	1,001.20	441.7	398.4	938	617	456.8	207.4	86.40	36.40	15.90	1.00
MEAN	1.01	33.4	14.2	12.9	32.3	19.9	15.2	6.69	2.88	1.17	.51	.033
MAX	1.7	264	25	18	90	41	22	10	8.4	21	4.5	.10
MIN	.60	.60	7.3	9.6	11	12	8.4	1.7	.40	.10	.10	0
AC-FT	62	1,990	876	790	1,860	1,220	906	411	171	72	32	2.0
CAL YR 1967	TOTAL 9,224.10		MEAN 25.3		MAX 264		MIN .60		AC-FT 18,300			
WTR YR 1968	TOTAL 4,231.40		MEAN 11.6		MAX 264		MIN 0		AC-FT 8,390			

10-2645.6. SPENCER CANYON CREEK NEAR FAIRMONT, CALIF.

LOCATION.--Lat 34°46'33", long 118°34'08", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.8 N., R.16 W., on county road culvert, 8.5 miles northwest of Fairmont.

DRAINAGE AREA.--3.60 sq mi.

RECORDS AVAILABLE.--Water years 1959-64 (annual maximum), August 1964 to September 1968.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 2,950 ft (from topographic map). Jan. 19, 1959, to Aug. 26, 1964, crest-stage gage at same site and datum.

EXTREMES.--Maximum discharge during year, 114 cfs Nov. 21 (gage height, 11.00 ft, from crest-stage gage), from rating curve extended as explained below; no flow all year except that of Nov. 21.
1959-68: Maximum discharge, 215 cfs Feb. 11, 1962 (gage height, 11.90 ft), from rating curve based on computation of flow through culvert at gage heights 11.11, 11.29 and 11.90 ft; no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0										
2		0										
3		0										
4		0										
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		4.8										
22		0										
23		0										
24		0										
25		0										
26		0										
27		0										
28		0										
29		0										
30		0										
31		-----			-----		-----		-----			-----
TOTAL	0	4.8	0	0	0	0	0	0	0	0	0	0
MEAN	0	.16	0	0	0	0	0	0	0	0	0	0
MAX	0	4.8	0	0	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	9.5	0	0	0	0	0	0	0	0	0	0
CAL YR 1967	TOTAL	10.30	MEAN	.028	MAX	5.4	MIN	0	AC-FT	20		
WTR YR 1968	TOTAL	4.80	MEAN	.013	MAX	4.8	MIN	0	AC-FT	9.5		

ANTELOPE VALLEY

10-2645.9. COTTONWOOD CREEK NEAR ROSAMOND, CALIF.

LOCATION.--Lat 34°53'10", long 118°26'10", in SE $\frac{1}{4}$ sec.11, T.9 N., R.15 W., on right side of culvert on dirt road 1.3 miles southeast of West Antelope Aqueduct Station, 8.2 miles west of town of Willow Springs, and 15.3 miles west of Rosamond.

DRAINAGE AREA.--35.7 sq mi.

RECORDS AVAILABLE.--February 1965 to September 1968.

GAGE.--Flood-hydrograph recorder. Altitude of gage is 2,880 ft (from topographic map).

EXTREMES.--No flow during year.

1965-68: Maximum discharge, 8.0 cfs (estimated) Aug. 16, 1965 (gage height, 18.04 ft, from crest gage); no flow for most of each year.

REMARKS.--No flow since Sept. 6, 1967. No regulation above station. Some pumping at Tejon Ranch Company headquarters for domestic use.

ANTELOPE VALLEY

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10-2646. OAK CREEK NEAR MOJAVE, CALIF.

LOCATION.--Lat 35°03'00", long 118°21'25", in NW $\frac{1}{4}$ 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 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 4,100 ft (from topographic map). Prior to Aug. 14, 1968, graphic water-stage recorder.

AVERAGE DISCHARGE.--11 years, 0.552 cfs (400 acre-ft per year); median of yearly mean discharges, 0.28 cfs (200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 6.2 cfs Nov. 19 (gage height, 1.12 ft); no flow Aug. 29 to Sept. 14, 18.

1957-68: Maximum discharge, 63 cfs Aug. 16, 1965 (gage height, 2.09 ft), from rating curve extended above 14 cfs; no flow for some months in each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	.40	.40	.40	.60	1.1	.90	.30	.10	.10	0
2	.10	.10	.40	.40	.40	.60	1.2	.90	.30	.10	.10	0
3	.10	.10	.40	.40	.40	.60	1.1	.90	.30	.10	.10	0
4	.10	.10	.40	.40	.40	.60	1.0	.90	.30	.10	.10	0
5	.10	.10	.40	.40	.40	.60	1.0	.90	.30	.10	.10	0
6	.10	.10	.40	.40	.50	.60	1.0	.90	.30	.10	.10	0
7	.10	.10	.40	.40	.50	.90	1.0	.90	.30	.10	.10	0
8	.10	.10	.40	.40	.50	1.3	1.0	.90	.30	.10	.10	0
9	.10	.10	.40	.40	.60	1.1	1.0	.90	.20	.10	.10	0
10	.10	.10	.40	.40	.50	1.0	1.0	.90	.20	.10	.10	0
11	.10	.10	.40	.40	.50	.90	.90	.90	.20	.10	.10	0
12	.10	.10	.40	.40	.50	.90	.90	.90	.20	.10	.10	0
13	.10	.10	.40	.40	.50	1.0	.90	1.0	.20	.10	.10	0
14	.10	.10	.30	.40	.50	.90	1.0	1.0	.20	.10	.10	0
15	.10	.10	.40	.40	.50	.90	1.0	.90	.20	.10	.10	.10
16	.10	.10	.40	.40	.50	.90	1.0	.90	.20	.10	.10	.10
17	.10	.10	.40	.40	.50	1.0	1.0	.90	.10	.10	.10	.10
18	.10	.10	.40	.40	.50	1.0	1.0	.80	.10	.10	.10	0
19	.10	1.0	.40	.40	.40	1.0	1.0	.70	.10	.10	.10	.10
20	.10	.40	.40	.40	.40	.90	1.0	.70	.10	.10	.10	.10
21	.10	1.1	.30	.40	.40	.90	1.0	.80	.10	.10	.10	.10
22	.10	.70	.30	.40	.40	.90	1.0	.90	.10	.10	.10	.10
23	.10	.50	.40	.40	.50	.90	1.0	.90	.10	.10	.10	.10
24	.10	.40	.40	.40	.50	.90	1.0	.80	.10	.10	.10	.10
25	.10	.40	.40	.40	.50	.90	.90	.70	.10	.10	.10	.10
26	.10	.40	.40	.40	.50	.90	.90	.60	.10	.10	.10	.10
27	.10	.30	.40	.40	.50	.90	.90	.60	.10	.10	.10	.10
28	.10	.30	.40	.40	.50	.80	.90	.50	.10	.10	.10	.10
29	.10	.30	.40	.40	.60	.90	.90	.50	.10	.10	0	.10
30	.10	.40	.40	.40	-----	.90	.90	.40	.10	.10	0	.10
31	.10	-----	.40	.40	-----	.90	-----	.40	-----	.10	0	-----
TOTAL	3.10	8.00	12.10	12.40	13.80	27.10	29.50	24.80	5.40	3.10	2.80	1.50
MEAN	.10	.27	.39	.40	.48	.87	.98	.80	.18	.10	.090	.050
MAX	.10	1.1	.40	.40	.60	1.3	1.2	1.0	.30	.10	.10	.10
MIN	.10	.10	.30	.40	.40	.60	.90	.40	.10	.10	0	0
AC-FT	6.2	16	24	25	27	54	59	49	11	6.2	5.6	3.0

CAL YR 1967 TOTAL 101.70 MEAN .28 MAX 1.1 MIN .10 AC-FT 202
WTR YR 1968 TOTAL 143.60 MEAN .39 MAX 1.3 MIN 0 AC-FT 285

Peak discharge (base, 10 cfs).--No peak above base.

KOEHN LAKE BASIN

10-2647.1. GOLER GULCH NEAR RANDSBURG, CALIF.

LOCATION.--Lat 35°23'34", long 117°47'43", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.29 S., R.39 E., on Garlock Road, 500 ft east of Southern Pacific Railroad and 8.0 miles west of Randsburg.

DRAINAGE AREA.--41.3 sq mi (including 3.03 sq mi in closed dry lake basin).

RECORDS AVAILABLE.--March 1966 to September 1968.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 2,100 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 492 cfs Nov. 19 (gage height, 6.14 ft), from rating curve based on computation of flow through culvert; no flow all year except Nov. 19, Feb. 10.

1966-68: Maximum discharge, 492 cfs Nov. 19, 1967 (gage height, 6.14 ft), from rating curve based on computation of flow through culvert; no flow most of each year.

Flood of Sept. 19, 1963 reached a stage of 46.18 ft, from floodmarks (discharge, 972 cfs, based on computation of flow through culvert and road overflow).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0			0							
2		0			0							
3		0			0							
4		0			0							
5		0			0							
6		0			0							
7		0			0							
8		0			0							
9		0			0							
10		0			.20							
11		0			0							
12		0			0							
13		0			0							
14		0			0							
15		0			0							
16		0			0							
17		0			0							
18		0			0							
19		11			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			-----							
31		-----			-----		-----		-----			-----
TOTAL	0	11	0	0	0.20	0	0	0	0	0	0	0
MEAN	0	.37	0	0	.007	0	0	0	0	0	0	0
MAX	0	11	0	0	.20	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	22	0	0	.4	0	0	0	0	0	0	0
CAL YR 1967	TOTAL 23.20			MEAN .064		MAX 11		MIN 0		AC-FT 46		
WTR YR 1968	TOTAL 11.20			MEAN .031		MAX 11		MIN 0		AC-FT 22		

10-2647.4. CACHE CREEK NEAR MOJAVE, CALIF.

LOCATION.--Lat 35°07'01", long 118°12'05", in NE¼NE¼SE¼ sec.27, T.32 S., R.35 E., on left wingwall of Cache Creek bridge on State Highway 58, 4.7 miles northwest of Mojave.

DRAINAGE AREA.--96.5 sq mi.

RECORDS AVAILABLE.--January 1965 to September 1968.

GAGE.--Flood-hydrograph recorder. Altitude of gage is 3,280 ft (from topographic map). Recording rain gage at site 12 miles upstream.

EXTREMES.--Maximum discharge during year, 10 cfs (estimated) July 28; no flow all year except that of July 28. 1965-68: Maximum discharge, 75 cfs Dec. 6, 1966 (gage height, 9.16 ft, from floodmarks), on basis of slope-conveyance measurement of maximum flow; no flow for most of each year.

REMARKS.--Records poor. No regulation above station. Pumping for domestic supply by Tehachapi, Monolith and Cache Creek Park.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										0		
2										0		
3										0		
4										0		
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										.40		
29										0		
30										0		
31		-----			-----		-----		-----	0		-----
TOTAL	0	0	0	0	0	0	0	0	0	0.40	0	0
MEAN	0	0	0	0	0	0	0	0	0	.013	0	0
MAX	0	0	0	0	0	0	0	0	0	.40	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	.8	0	0
(a)	0	2.33	.10	0	0	.5	.4	0	0	.1	0	0
CAL YR 1967	TOTAL	2.20		MEAN	0.006	MAX	1.0	MIN	0	AC-FT	4.4	
WTR YR 1968	TOTAL	.40		MEAN	.001	MAX	.40	MIN	0	AC-FT	.8	

a Precipitation, in inches.

KOEHN LAKE BASIN

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 1968.

GAGE.--Graphic 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.--10 years, 0.288 cfs (209 acre-ft per year); median of yearly mean discharges, 0.03 cfs (22 acre-ft per year).

EXTREMES.--No flow during year.

1958-68: Maximum discharge, 30,000 cfs Aug. 23, 1961, on basis of field estimate of maximum flow; no flow for most of each year.

REMARKS.--No flow since Dec. 6, 1966. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 0.1; December, 0.1; the water year, 0.2.

KOEHN LAKE BASIN

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10-2647.7. COTTONWOOD CREEK NEAR CANTIL, CALIF.

LOCATION.--Lat 35°18'50", long 118°02'38", in NE¼SE¼NW¼ sec.19, T.30 S., R.36 E., on downstream side of city of Los Angeles aqueduct-siphon pier, 4.3 miles west of Cantil.

DRAINAGE AREA.--163 sq mi.

RECORDS AVAILABLE.--March 1966 to September 1968.

GAGE.--Graphic water-stage recorder and crest-stage gage. Altitude of gage is 2,400 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 1,170 cfs Aug. 7 (gage height, 4.14 ft, from crest-stage gage), on basis of slope-area measurement of maximum flow; no flow all year except Aug. 7.

1966-68: Maximum discharge, 1,170 cfs Aug. 7, 1968 (gage height, 4.14 ft, from crest-stage gage), on basis of slope-area measurement of maximum flow; no flow for most of each year.

Flood of Aug. 8, 1963, 5,150 cfs, result of slope-area measurement.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											0	
2											0	
3											0	
4											0	
5											0	
6											0	
7											49	
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	0	0	0	0	0	0	49	0
MEAN	0	0	0	0	0	0	0	0	0	0	1.58	0
MAX	0	0	0	0	0	0	0	0	0	0	49	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	0	97	0
CAL YR 1967	TOTAL 11.00		MEAN .030		MAX 11		MIN 0		AC-FT 22			
WTR YR 1968	TOTAL 49.00		MEAN .13		MAX 49		MIN 0		AC-FT 97			

INDIAN WELLS VALLEY

10-2648.7. LITTLE LAKE CREEK NEAR LITTLE LAKE, CALIF.

LOCATION.--Lat 35°57'35", long 117°54'50", in NW¼SE¼ 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 1968 (discontinued as a continuous record station; converted to crest-stage partial record station).

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

AVERAGE DISCHARGE.--5 years, 0.002 cfs (1.4 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2.3 cfs Nov. 19 (gage height, 2.73 ft); no flow for most of year. 1963-68: Maximum discharge, 7.0 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 poor. No regulation or diversion above station. At times water is released from Los Angeles aqueduct to creek at site 1.0 mile upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0			0							
2		0			0							
3		0			0							
4		0			0							
5		0			0							
6		0			0							
7		0			.20							
8		0			0							
9		0			0							
10		0			0							
11		0			0							
12		0			0							
13		0			0							
14		0			0							
15		0			0							
16		0			0							
17		0			0							
18		0			0							
19		.40			0							
20		.20			0							
21		.20			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	0.80	0	0	0.20	0	0	0	0	0	0	0
MEAN	0	.027	0	0	.007	0	0	0	0	0	0	0
MAX	0	.40	0	0	.20	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	1.6	0	0	.4	0	0	0	0	0	0	0
(a)	0	2.70	0	0	0	.40	0	-	-	-	-	-
CAL YR 1967	TOTAL	1.30	MEAN	0.004	MAX	0.40	MIN	0	AC-FT	2.6		
WTR YR 1968	TOTAL	1.00	MEAN	.003	MAX	.40	MIN	0	AC-FT	2.0		

a Precipitation, in inches.

INDIAN WELLS VALLEY

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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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 3,350 ft (from topographic map).

AVERAGE DISCHARGE.--7 years, 0.391 cfs (283 acre-ft per year).

EXTREMES.--Maximum discharge during year, 27 cfs Nov. 21 (gage height, 3.80 ft); no flow for most of year.
1961-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.20	.20	.30	.10	1.7	0				
2		0	.20	.20	.30	.10	3.5	0				
3		0	.20	.20	.30	.10	1.2	0				
4		0	.20	.20	.30	.30	.40	0				
5		0	.20	.20	.30	1.0	.40	0				
6		0	.20	.20	.30	1.0	.30	0				
7		0	.20	.20	.30	.40	.40	0				
8		0	.20	.20	.30	.70	.30	0				
9		0	.20	.20	.30	.50	.20	0				
10		0	.10	.20	.40	.30	.20	0				
11		0	.10	.20	.30	.40	.20	0				
12		0	.10	.20	.30	.40	.20	.10				
13		0	.10	.20	.30	.30	.20	.10				
14		0	.10	.20	.30	.30	.20	.10				
15		0	.10	.20	.20	.30	.10	0				
16		0	.20	.20	.10	.30	.10	0				
17		0	.20	.20	.20	.30	.40	0				
18		0	.20	.20	.10	.30	.40	0				
19		.70	.20	.20	.10	.30	.30	0				
20		.40	.20	.20	.10	.30	.20	0				
21		1.8	.20	.20	.10	.20	.30	0				
22		.20	.20	.20	.10	.30	.10	0				
23		.20	.20	.20	.10	.60	.10	0				
24		.10	.20	.20	.10	.50	.10	0				
25		.10	.20	.20	.10	.90	.10	0				
26		.10	.20	.20	.10	.20	.10	0				
27		.10	.20	.20	.10	.20	0	0				
28		.20	.20	.20	.10	.30	0	0				
29		.20	.20	.20	.10	.50	0	0				
30		.40	.20	.20	-----	.50	0	0				
31		-----	.20	.20	-----	.90	-----	0	-----			-----
TOTAL	0	4.50	5.60	6.20	6.00	12.80	11.70	0.30	0	0	0	0
MEAN	0	.15	.18	.20	.21	.41	.39	.010	0	0	0	0
MAX	0	1.8	.20	.20	.40	1.0	3.5	.10	0	0	0	0
MIN	0	0	.10	.20	.10	.10	0	0	0	0	0	0
AC-FT	0	8.9	11	12	12	25	23	.6	0	0	0	0
CAL YR 1967	TOTAL	402.60	MEAN	1.10	MAX	89	MIN	0	AC-FT	799		
WTR YR 1968	TOTAL	47.10	MEAN	.13	MAX	3.5	MIN	0	AC-FT	93		

Peak discharge (base, 10 cfs).--Nov. 21 (2200 hrs) 27 cfs (3.80 ft).

OWENS LAKE BASIN

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 1968. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Graphic water-stage recorder and wood control. Altitude of gage is 7,450 ft (from topographic map). Prior to Nov. 15, 1928, staff gage at same site and datum.

AVERAGE DISCHARGE.--43 years, 23.7 cfs (17,160 acre-ft per year).

EXTREMES.--Maximum discharge during year, 58 cfs June 20, 21 (gage height, 1.86 ft); minimum daily, 9.0 cfs Mar. 27.

1925-68: Maximum discharge, 290 cfs June 29, 1932 (gage height, 4.43 ft); minimum daily, 1.3 cfs Jan. 10, 1951.

REMARKS.--Some regulation by Convict Lake above station. No diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	18	17	14	13	12	11	16	48	35	31	12
2	31	18	16	14	13	12	13	18	49	32	30	12
3	31	18	17	14	12	12	13	20	54	30	29	12
4	30	18	17	14	12	11	13	21	55	26	28	12
5	28	18	18	14	12	11	13	23	56	24	26	12
6	28	18	16	14	12	11	13	22	53	24	24	12
7	28	18	15	14	12	11	13	23	51	23	24	12
8	28	17	14	14	12	11	12	23	46	23	23	12
9	27	17	14	14	12	10	11	24	43	26	22	12
10	26	17	16	14	12	11	11	23	41	32	22	12
11	26	17	16	14	12	11	12	23	38	32	21	12
12	25	17	16	14	12	13	12	24	36	32	20	12
13	24	16	15	14	12	11	11	23	35	31	20	11
14	24	17	14	14	12	11	13	23	36	30	19	11
15	24	17	14	14	12	11	13	23	38	30	18	11
16	23	17	14	14	12	12	13	22	42	29	18	11
17	23	17	15	14	12	13	12	22	47	29	17	11
18	22	17	16	14	12	11	12	22	52	28	16	11
19	22	18	16	13	12	11	13	22	56	27	15	11
20	22	18	16	13	14	11	13	23	58	26	14	10
21	21	18	16	13	14	11	12	25	58	26	13	9.9
22	21	18	15	13	13	11	11	28	56	25	13	9.9
23	20	17	15	13	13	11	11	30	54	25	13	9.9
24	20	17	15	12	13	11	11	31	52	26	13	9.9
25	20	16	15	12	12	11	11	30	51	27	12	9.9
26	20	16	15	13	12	9.6	11	30	48	26	12	9.9
27	20	16	15	13	12	9.0	11	30	47	26	13	9.9
28	20	16	15	13	12	9.6	12	34	46	26	12	9.7
29	18	16	14	14	12	9.6	14	39	43	27	12	9.7
30	18	17	14	14	-----	9.6	15	43	46	29	11	9.7
31	18	-----	14	13	-----	10	-----	46	-----	30	11	-----
TOTAL	739	515	475	421	357	339.4	366	806	1,435	862	572	329.4
MEAN	23.8	17.2	15.3	13.6	12.3	10.9	12.2	26.0	47.8	27.8	18.5	11.0
MAX	31	18	18	14	14	13	15	46	58	35	31	12
MIN	18	16	14	12	12	9.0	11	16	35	23	11	9.7
AC-FT	1,470	1,020	942	835	708	673	726	1,600	2,850	1,710	1,130	653
CAL YR 1967	TOTAL 15,776.6		MEAN 43.2		MAX 257		MIN 6.7		AC-FT 31,290			
WTR YR 1968	TOTAL 7,216.8		MEAN 19.7		MAX 58		MIN 9.0		AC-FT 14,310			

10-2657. ROCK CREEK AT LITTLE ROUND VALLEY, NEAR BISHOP, CALIF.

LOCATION.--Lat 37°33'10", long 118°41'00", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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.

DRAINAGE AREA.--35.8 sq mi.

RECORDS AVAILABLE.--January to December 1918, January 1920 to September 1968. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Graphic water-stage recorder. 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.--48 years (1920-68), 29.6 cfs (21,430 acre-ft per year).

EXTREMES.--Maximum discharge during year, 54 cfs June 5 (gage height, 1.67 ft); minimum daily, 7.2 cfs Jan. 30. 1926-68: 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	14	20	13	12	12	14	22	45	30	33	8.7
2	24	14	25	12	12	11	13	23	46	27	31	9.2
3	23	14	18	13	12	11	13	25	49	26	28	8.7
4	21	14	18	14	12	11	13	26	52	25	24	9.0
5	20	14	19	13	12	11	14	27	53	25	21	9.2
6	20	15	17	14	11	11	13	26	49	24	20	9.0
7	20	15	14	12	11	11	13	26	44	24	20	9.2
8	20	15	15	12	11	12	14	26	38	24	19	9.2
9	20	14	14	11	11	11	14	26	33	28	18	9.2
10	19	14	14	11	11	11	15	26	28	28	17	9.5
11	19	14	14	12	11	11	16	25	26	29	17	9.5
12	18	14	14	12	11	11	17	26	24	29	17	9.5
13	18	14	14	12	11	11	16	25	24	27	17	9.2
14	18	14	14	11	11	11	17	24	23	25	17	9.2
15	18	14	14	11	11	11	17	23	24	23	17	9.2
16	17	14	14	11	11	11	17	22	28	23	17	9.0
17	17	14	14	11	12	13	15	22	34	23	16	8.7
18	17	14	14	12	12	14	17	21	40	22	15	8.5
19	16	16	13	12	13	13	15	22	44	22	15	8.2
20	16	17	13	12	13	14	15	24	46	22	13	8.0
21	16	16	13	12	13	12	14	26	46	22	12	8.5
22	16	16	13	12	13	11	14	28	44	22	12	8.7
23	16	15	13	12	12	11	14	28	42	21	11	9.2
24	16	15	13	12	12	11	14	27	40	21	11	9.5
25	15	15	13	12	12	11	15	24	40	19	11	9.5
26	14	14	13	11	12	11	17	23	38	19	10	9.5
27	14	14	13	11	11	11	17	25	37	20	10	9.5
28	14	15	14	13	12	12	18	29	38	19	9.5	9.5
29	14	17	13	9.8	12	13	19	35	37	23	9.0	9.5
30	14	14	12	7.2	-----	13	21	43	33	31	8.7	9.5
31	14	-----	12	12	-----	14	-----	46	-----	33	8.7	-----
TOTAL	548	439	454	365.0	340	362	461	821	1,145	756	504.9	272.8
MEAN	17.7	14.6	14.6	11.8	11.7	11.7	15.4	26.5	38.2	24.4	16.3	9.09
MAX	24	17	25	14	13	14	21	46	53	33	33	9.5
MIN	14	14	12	7.2	11	11	13	21	23	19	8.7	8.0
AC-FT	1,090	871	901	724	674	718	914	1,630	2,270	1,500	1,000	541
CAL YR 1967	TOTAL 16,325.2			MEAN 44.7		MAX 251		MIN 9.8		AC-FT 32,380		
WTR YR 1968	TOTAL 6,468.7			MEAN 17.7		MAX 53		MIN 7.2		AC-FT 12,830		

OWENS LAKE BASIN

10-2670. PINE CREEK AT DIVISION BOX, NEAR BISHOP, CALIF.

LOCATION.--Lat 37°25'00", long 118°37'15", in NW¼ 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 1968. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

GAGE.--Graphic water-stage recorder. Parshall flume since November 1938. Altitude of gage is 5,280 ft (from topographic map).

AVERAGE DISCHARGE.--47 years, 44.1 cfs (31,930 acre-ft per year).

EXTREMES.--Maximum discharge during year, 147 cfs June 3 (gage height, 3.12 ft); minimum daily, 26 cfs Sept. 26-30.

1921-68: Maximum discharge, 509 cfs July 2, 1967 (gage height, 6.05 ft); minimum daily, 10 cfs Jan. 8, 1930, Jan. 21, 1935.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	32	33	32	30	29	29	56	117	56	65	29
2	52	32	34	32	30	29	30	60	127	54	60	29
3	50	33	34	31	30	29	30	64	137	52	55	29
4	47	32	34	31	30	29	30	63	132	52	51	28
5	45	31	34	30	30	29	30	61	113	51	48	28
6	45	33	34	30	30	29	30	55	86	49	44	28
7	44	36	34	30	30	29	30	51	71	49	46	28
8	43	36	34	30	30	29	30	50	62	52	43	28
9	42	36	34	30	31	29	30	50	58	61	42	28
10	41	36	33	30	30	29	30	50	55	68	40	28
11	41	35	33	30	30	28	30	53	56	60	39	28
12	39	35	33	30	30	28	32	53	64	54	38	28
13	38	35	32	30	30	28	34	48	72	51	38	28
14	37	35	31	30	29	28	33	44	72	50	38	28
15	36	36	33	30	29	28	34	42	83	49	37	28
16	36	36	32	30	29	29	34	42	91	49	36	28
17	36	35	32	30	29	28	34	47	96	48	35	28
18	35	36	33	30	29	28	34	60	94	49	34	28
19	34	36	33	30	29	28	32	81	96	50	33	28
20	34	36	32	30	30	28	32	87	92	59	32	28
21	34	36	32	30	29	29	31	90	84	53	32	28
22	33	35	32	30	30	29	31	78	78	57	32	28
23	32	35	32	30	30	29	30	64	78	56	32	28
24	32	35	32	30	30	28	30	57	77	57	31	28
25	32	35	33	30	29	28	31	59	75	58	30	28
26	30	34	32	30	29	28	32	75	72	60	30	26
27	30	34	32	30	29	28	36	96	72	61	29	26
28	30	34	32	30	29	28	40	119	74	62	29	26
29	32	34	32	30	29	28	45	127	68	63	29	26
30	30	34	32	30	-----	28	51	120	60	64	29	26
31	31	-----	31	30	-----	28	-----	111	-----	66	29	-----
TOTAL	1,174	1,038	1,014	936	859	882	985	2,113	2,512	1,720	1,186	833
MEAN	37.9	34.6	32.7	30.2	29.6	28.5	32.8	68.2	83.7	55.5	38.3	27.8
MAX	53	36	34	32	31	29	51	127	137	68	65	29
MIN	30	31	31	30	29	28	29	42	55	48	29	26
AC-FT	2,330	2,060	2,010	1,860	1,700	1,750	1,950	4,190	4,980	3,410	2,350	1,650
CAL YR 1967	TOTAL 27,377			MEAN 75.0		MAX 424		MIN 17		AC-FT 54,300		
WTR YR 1968	TOTAL 15,252			MEAN 41.7		MAX 137		MIN 26		AC-FT 30,250		

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 1968. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Graphic water-stage recorder and Parshall flume (Cipolletti weir used Oct. 1 to Sept. 30). Altitude of gage is 4,600 ft (from topographic map). Prior to Feb. 24, 1943, staff gage and Cipolletti weir at site 1.5 miles downstream at different datum.

AVERAGE DISCHARGE.--38 years, 1.54 cfs (1,110 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2.4 cfs July 8 (gage height, 0.81 ft); minimum daily, 1.0 cfs June 16 to July 1.
1930-68: Maximum discharge, 8.4 cfs Oct. 19, 1958 (gage height, 1.63 ft); no flow at times in some years.

REMARKS.--No regulation; occasional diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.7	1.8	1.8	1.7	1.7	1.9	1.8	1.4	1.0	1.2	1.2
2	1.8	1.7	1.8	1.8	1.7	1.7	1.9	1.8	1.3	1.1	1.2	1.2
3	1.8	1.7	1.9	1.8	1.7	1.7	1.9	1.8	1.2	1.1	1.2	1.2
4	1.8	1.7	1.9	1.8	1.7	1.7	1.9	1.8	1.2	1.1	1.2	1.2
5	1.8	1.7	1.9	1.8	1.7	1.7	1.9	1.8	1.2	1.1	1.2	1.2
6	1.8	1.7	1.9	1.8	1.7	1.7	1.9	1.8	1.2	1.2	1.2	1.2
7	1.8	1.7	1.9	1.8	1.7	1.8	1.9	1.8	1.2	1.2	1.2	1.2
8	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.8	1.3	1.2	1.2	1.2
9	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.8	1.3	1.2	1.2	1.2
10	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.8	1.2	1.2	1.2	1.2
11	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.8	1.2	1.2	1.2	1.2
12	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.8	1.2	1.2	1.2	1.2
13	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.6	1.1	1.2	1.2	1.2
14	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.6	1.1	1.2	1.2	1.2
15	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.5	1.1	1.2	1.2	1.2
16	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.5	1.0	1.2	1.2	1.2
17	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.5	1.0	1.2	1.2	1.2
18	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.5	1.0	1.2	1.2	1.2
19	1.8	1.8	1.9	1.8	1.7	1.8	1.9	1.5	1.0	1.2	1.2	1.2
20	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.4	1.0	1.2	1.2	1.3
21	1.7	1.8	1.8	1.8	1.7	1.8	1.8	1.4	1.0	1.2	1.2	1.3
22	1.7	1.8	1.8	1.8	1.7	1.8	1.8	1.4	1.0	1.2	1.2	1.3
23	1.7	1.8	1.8	1.8	1.7	1.9	1.8	1.4	1.0	1.2	1.2	1.3
24	1.7	1.8	1.8	1.8	1.7	1.9	1.8	1.4	1.0	1.2	1.2	1.2
25	1.7	1.8	1.8	1.8	1.7	1.9	1.8	1.4	1.0	1.2	1.2	1.2
26	1.7	1.8	1.8	1.8	1.7	1.9	1.8	1.4	1.0	1.3	1.2	1.2
27	1.7	1.8	1.8	1.8	1.7	1.9	1.8	1.4	1.0	1.3	1.2	1.2
28	1.7	1.8	1.8	1.8	1.7	1.9	1.8	1.4	1.0	1.3	1.2	1.2
29	1.7	1.8	1.8	1.8	1.7	1.9	1.8	1.4	1.0	1.3	1.2	1.2
30	1.7	1.8	1.8	1.8	-----	1.9	1.8	1.4	1.0	1.3	1.2	1.2
31	1.7	-----	1.8	1.8	-----	1.9	-----	1.4	-----	1.3	1.2	-----
TOTAL	54.7	53.3	57.5	55.8	49.3	56.1	55.9	49.1	33.2	37.2	37.2	36.4
MEAN	1.76	1.78	1.85	1.80	1.70	1.81	1.86	1.58	1.11	1.20	1.20	1.21
MAX	1.8	1.8	1.9	1.8	1.7	1.9	1.9	1.8	1.4	1.3	1.2	1.3
MIN	1.7	1.7	1.8	1.8	1.7	1.7	1.8	1.4	1.0	1.0	1.2	1.2
AC-FT	109	106	114	111	98	111	111	97	66	74	74	72
CAL YR 1967	TOTAL 597.4		MEAN 1.64		MAX 2.1		MIN 1.0		AC-FT 1,180			
WTR YR 1968	TOTAL 575.7		MEAN 1.57		MAX 1.9		MIN 1.0		AC-FT 1,140			

OWENS LAKE BASIN

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 1968; combined records of creek and diversions, June 1930 to September 1968. Monthly discharge only for some periods, published in WSP 1314 and 1734.

GAGE.--Graphic water-stage recorder and Parshall flume since April 1949 on creek; graphic 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.--38 years (1930-68), 40.4 cfs (29,250 acre-ft per year), including diversion to upper and lower Giroux ditches.

EXTREMES (creek only).--Maximum discharge during year, 170 cfs July 30 (gage height, 3.41 ft); minimum daily, 7.4 cfs Mar. 5.

1907-11, 1920-68: Maximum discharge, 458 cfs July 3, 1932 (gage height, 6.55 ft); no flow Dec. 3-12, 1935.

(combined).--Maximum discharge during year, 185 cfs July 30; minimum daily, 12 cfs Dec. 13.

1907-11, 1920-68: Maximum discharge, 458 cfs July 3, 1932; minimum daily, 6.4 cfs Dec. 11, 12, 1935.

REMARKS.--No regulation above station. Diversions above station for power and irrigation. Since 1962 discharge from Little Pine Creek has been spread in nearby meadows and does not reach gage as surface flow. For records of combined discharge of Big Pine Creek and Giroux ditches which divert above station, see following page.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	18	17	15	15	14	15	24	56	59	98	31
2	29	18	17	15	15	14	15	25	60	60	90	30
3	28	18	16	14	15	14	15	24	63	58	82	30
4	28	18	16	14	15	9.5	15	27	67	59	75	31
5	27	17	18	14	15	7.4	15	28	52	60	66	31
6	26	17	17	13	15	8.7	14	26	37	59	60	33
7	26	17	17	13	15	9.5	15	24	32	63	71	33
8	26	16	17	13	15	12	14	23	29	72	57	33
9	25	17	16	13	14	13	14	19	26	82	48	33
10	24	17	16	13	14	13	15	18	24	102	48	31
11	24	16	16	13	14	13	20	21	26	91	48	30
12	23	16	15	13	13	14	21	21	31	78	48	26
13	22	16	11	13	14	13	20	18	37	74	48	23
14	22	17	15	13	14	13	21	17	42	74	38	21
15	22	17	22	14	13	13	21	16	49	78	32	21
16	22	18	17	13	13	13	20	16	54	78	33	20
17	22	17	16	13	13	13	20	18	62	77	30	21
18	22	17	17	13	13	13	19	22	62	75	30	20
19	21	19	17	13	14	13	19	27	63	74	27	19
20	21	20	18	14	14	13	18	29	63	74	22	16
21	19	17	16	15	14	13	18	29	60	75	22	14
22	18	17	16	16	14	12	18	24	62	82	20	13
23	18	17	16	16	14	13	18	20	65	80	20	12
24	18	17	16	16	14	13	18	18	67	76	20	12
25	17	17	16	16	14	13	18	20	72	76	20	13
26	17	16	16	16	14	13	19	29	77	71	20	13
27	17	16	15	15	14	13	20	36	83	70	20	13
28	14	16	15	15	14	13	21	43	98	82	23	14
29	16	16	15	16	14	14	22	47	86	100	27	14
30	18	17	15	16	-----	14	22	50	68	166	31	13
31	19	-----	15	16	-----	14	-----	43	-----	141	32	-----
TOTAL	680	512	502	442	409	391.1	540	802	1,673	2,466	1,306	664
MEAN	21.9	17.1	16.2	14.3	14.1	12.6	18.0	25.9	55.8	79.5	42.1	22.1
MAX	29	20	22	16	15	14	22	50	98	166	98	33
MIN	14	16	11	13	13	7.4	14	16	24	58	20	12
AC-FT	1,350	1,020	996	877	811	776	1,070	1,590	3,320	4,890	2,590	1,320
CAL YR 1967	TOTAL 19,480			MEAN 53.4		MAX 311		MIN 11		AC-FT 38,640		
WTR YR 1968	TOTAL 10,387.1			MEAN 28.4		MAX 166		MIN 7.4		AC-FT 20,600		

10-2760. BIG PINE CREEK NEAR BIG PINE, CALIF.--Continued

Combined discharge, in cubic feet per second, of Big Pine Creek and upper and lower Giroux ditches,
near Big Pine, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	20	19	16	17	17	17	27	67	74	113	42
2	33	20	19	16	17	17	17	28	71	75	105	41
3	30	20	18	16	17	17	17	27	74	73	97	41
4	30	20	18	16	17	16	17	30	80	74	90	42
5	29	19	20	16	17	16	17	31	66	75	81	42
6	28	19	18	16	17	16	16	29	51	79	75	44
7	27	19	18	16	17	16	17	27	46	78	86	44
8	27	18	18	16	17	16	16	28	43	87	72	44
9	26	19	18	16	17	16	16	28	40	97	63	44
10	25	19	18	15	17	16	17	26	38	117	63	42
11	26	18	17	15	17	16	22	30	40	106	63	41
12	25	18	16	15	16	17	23	30	46	93	63	37
13	24	18	12	15	17	16	22	26	52	89	63	33
14	24	19	16	15	17	16	23	25	57	89	53	31
15	24	19	23	16	16	16	23	24	64	93	46	31
16	24	20	18	15	16	16	22	24	69	93	47	29
17	24	19	17	15	16	16	22	26	77	92	44	31
18	24	19	18	15	16	16	21	31	77	90	44	30
19	23	21	18	15	17	16	21	36	78	89	41	29
20	23	22	19	16	17	16	20	39	78	89	36	26
21	21	19	17	17	17	16	20	40	75	90	36	24
22	20	19	17	18	17	14	20	35	77	97	32	23
23	20	19	17	18	17	15	20	31	80	95	30	22
24	20	19	17	18	17	15	20	28	82	91	30	20
25	19	19	17	18	17	15	20	31	87	91	30	20
26	19	18	18	18	17	15	22	40	92	86	30	21
27	19	18	16	17	17	15	23	48	98	85	30	21
28	16	18	16	17	17	15	24	55	113	97	33	22
29	18	18	16	18	17	16	25	59	101	115	38	22
30	20	19	16	18	-----	16	25	61	83	181	42	21
31	21	-----	16	18	-----	16	-----	54	-----	156	43	-----
TOTAL	746	572	541	506	488	492	605	1,054	2,102	2,936	1,719	960
MEAN	24.1	19.1	17.5	16.3	16.8	15.9	20.2	34.0	70.1	94.7	55.5	32.0
MAX	37	22	23	18	17	17	25	61	113	181	113	44
MIN	16	18	12	15	16	14	16	24	38	73	30	20
AC-FT	1,480	1,130	1,070	1,000	968	976	1,200	2,090	4,170	5,820	3,410	1,900
CAL YR 1967	TOTAL 21,238			MEAN 58.2		MAX 318		MIN 12		AC-FT 42,120		
WTR YR 1968	TOTAL 12,721			MEAN 34.8		MAX 181		MIN 12		AC-FT 25,230		

OWENS LAKE BASIN

10-2775. OWENS RIVER NEAR BIG PINE, CALIF.

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 Charlies Butte, and 10.8 miles southeast of Big Pine.

DRAINAGE AREA.--1,930 sq mi, approximately.

RECORDS AVAILABLE.--January 1906 to September 1968. Monthly discharge only for some periods, published in WSP 1314. Published as "near Tinemaha" prior to 1912.

GAGE.--Graphic water-stage recorder and rock control since October 1958. Altitude of gage is 3,800 ft (from topographic map). Prior to Oct. 8, 1922, staff gage at same site and datum.

EXTREMES.--Maximum daily discharge during year, 690 cfs Oct. 19; minimum daily, 3.0 cfs July 28 to Aug. 4, Sept. 2-30.

1906-68: 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	644	634	450	502	480	615	423	437	414	3.0	450
2	161	648	637	450	503	477	613	436	439	408	3.0	465
3	146	647	636	450	503	476	597	451	445	374	3.0	465
4	144	648	635	450	503	475	450	452	452	385	3.0	457
5	184	649	646	450	504	475	456	455	449	391	290	457
6	184	651	658	452	501	475	468	457	449	392	509	466
7	184	643	678	452	481	475	468	453	432	391	515	474
8	184	613	677	453	480	476	468	445	410	398	569	481
9	184	572	678	450	480	476	461	445	396	434	644	486
10	184	466	677	444	481	483	450	442	389	474	651	491
11	184	437	679	446	480	488	449	429	365	511	654	493
12	184	456	676	444	484	484	474	427	356	499	653	500
13	184	463	668	445	483	499	417	424	353	500	656	505
14	429	459	587	446	483	522	411	433	355	534	661	500
15	666	455	368	448	481	520	409	434	361	533	660	484
16	676	456	358	449	483	517	411	434	366	529	658	443
17	682	459	355	476	485	515	457	433	384	541	661	387
18	688	461	410	503	484	515	504	431	403	547	664	170
19	690	465	456	504	484	518	503	436	419	541	664	8.0
20	684	470	459	504	485	520	504	451	405	545	665	5.0
21	653	472	461	504	490	518	500	470	403	539	662	5.0
22	648	476	460	505	489	518	489	472	415	530	627	3.0
23	649	495	460	499	489	518	477	470	417	539	571	3.0
24	655	508	461	483	486	514	461	466	419	536	570	3.0
25	640	500	462	484	486	453	453	475	414	524	569	3.0
26	642	503	464	485	485	20	449	476	410	332	570	3.0
27	643	570	460	485	490	273	445	477	412	5.0	509	3.0
28	644	627	460	487	493	609	448	470	405	3.0	472	3.0
29	643	637	460	487	483	610	449	469	429	3.0	462	3.0
30	643	635	459	493	-----	615	440	472	425	3.0	445	3.0
31	643	-----	459	500	-----	616	-----	451	-----	3.0	443	-----
TOTAL	13,888	16,185	16,638	14,578	14,161	15,130	14,196	13,969	12,214	12,358.0	15,686.0	8,219.0
MEAN	448	540	537	470	488	488	473	451	407	399	506	274
MAX	690	651	679	505	504	616	615	477	452	547	665	505
MIN	144	437	355	444	480	20	409	423	353	3.0	3.0	3.0
AC-FT	27,550	32,100	33,000	28,920	28,090	30,010	28,160	27,710	24,230	24,510	31,110	16,300
CAL YR 1967	TOTAL 188,981			MEAN 518		MAX 910		MIN 20		AC-FT 374,800		
WTR YR 1968	TOTAL 167,222.0			MEAN 457		MAX 690		MIN 3.0		AC-FT 331,700		

10-2818. INDEPENDENCE CREEK BELOW PINYON CREEK, NEAR INDEPENDENCE, CALIF.

LOCATION.--Lat 36°46'45", long 118°15'45", in NE¼ 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 1968. Prior to October 1959, monthly discharge only, published in WSP 1734.

GAGE.--Graphic water-stage recorder and Parshall flume (Cipolletti weir used during low flow each year). Altitude of gage is 5,300 ft (from topographic map). Prior to Sept. 12, 1934, graphic water-stage recorder; Sept. 12, 1934, to Dec. 13, 1936, graphic water-stage recorder and Cipolletti weir (removed during high water), at same site and datum.

AVERAGE DISCHARGE.--45 years, 12.6 cfs (9,120 acre-ft per year).

EXTREMES.--Maximum discharge during year, 31 cfs June 5 (gage height, 1.53 ft); minimum daily, 3.8 cfs Sept. 26-28.

1923-68: Maximum discharge, 138 cfs June 21, 1963 (gage height, 3.98 ft); minimum daily, 0.70 cfs Jan. 25, 1926, Dec. 15, 1935.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.2	6.6	4.9	4.6	4.2	4.8	8.9	24	17	14	5.0
2	13	7.0	6.6	4.8	4.6	4.4	5.0	9.7	26	16	12	4.9
3	12	6.8	6.4	4.8	4.4	4.4	5.0	10	28	15	11	4.9
4	12	6.8	6.0	4.9	4.2	4.4	4.9	11	30	15	10	4.7
5	12	6.6	6.0	4.9	4.2	4.4	5.2	11	30	15	11	4.7
6	12	6.4	5.9	4.9	4.1	4.4	5.2	11	27	14	11	4.7
7	12	6.4	5.9	4.9	4.1	4.5	5.2	11	25	15	11	4.5
8	11	6.4	5.9	4.8	4.1	4.9	4.9	10	22	19	11	4.4
9	11	6.2	5.8	4.7	4.5	4.6	4.7	10	20	19	11	4.5
10	11	6.0	5.8	4.8	4.2	4.5	4.9	10	17	18	11	4.5
11	10	6.0	5.7	4.9	4.1	4.5	5.2	10	17	17	10	4.5
12	9.7	6.0	5.7	4.8	4.1	4.5	5.4	11	17	17	9.7	4.5
13	9.5	5.7	5.7	4.8	4.1	4.7	5.5	10	18	16	8.3	4.4
14	9.3	5.9	5.8	4.7	4.1	4.6	5.7	9.5	19	15	6.8	4.4
15	9.5	5.7	5.8	4.7	4.1	4.5	5.7	9.3	20	14	6.6	4.2
16	9.5	6.0	5.9	4.6	4.0	4.5	5.9	9.3	20	14	7.5	4.2
17	9.3	6.3	5.9	4.5	4.1	4.7	6.0	9.5	22	14	8.3	4.1
18	9.1	6.4	6.0	4.5	4.1	4.5	6.2	10	23	13	7.9	3.9
19	8.9	7.4	6.0	4.4	4.2	4.5	6.2	12	23	13	6.4	3.8
20	8.5	7.8	5.8	4.5	4.6	4.5	6.0	14	23	12	6.2	3.9
21	8.3	7.1	5.8	4.5	4.5	4.4	5.7	16	23	12	7.2	4.1
22	8.3	6.7	5.5	4.5	4.5	4.2	5.5	15	22	12	7.2	4.2
23	8.1	6.6	5.5	4.5	4.4	4.1	5.2	15	22	11	6.8	4.1
24	8.1	6.4	5.5	4.5	4.4	4.1	5.2	14	22	11	6.6	3.9
25	7.9	6.6	5.5	4.5	4.2	4.0	5.2	13	22	11	6.4	3.9
26	7.7	6.4	5.4	4.5	4.2	4.1	5.4	15	21	11	6.2	3.8
27	7.5	6.0	5.2	4.4	4.2	4.1	5.9	17	21	10	5.9	3.8
28	7.3	6.2	5.2	4.1	4.2	4.2	6.4	19	21	12	5.7	3.8
29	7.3	6.2	5.0	4.2	4.2	4.4	7.2	22	20	14	5.2	3.9
30	7.3	6.7	4.9	4.5	-----	4.7	8.1	23	19	16	5.2	3.9
31	7.2	-----	4.9	4.7	-----	4.8	-----	22	-----	14	5.0	-----
TOTAL	297.3	193.9	177.6	143.7	123.3	137.3	167.4	398.2	664	442	258.1	128.1
MEAN	9.59	6.46	5.73	4.64	4.25	4.43	5.58	12.8	22.1	14.3	8.33	4.27
MAX	13	7.8	6.6	4.9	4.6	4.9	8.1	23	30	19	14	5.0
MIN	7.2	5.7	4.9	4.1	4.0	4.0	4.7	8.9	17	10	5.0	3.8
AC-FT	590	385	352	285	245	272	332	790	1,320	877	512	254
CAL YR 1967	TOTAL 7,111.6		MEAN 19.5		MAX 115		MIN 3.0		AC-FT 14,110			
WTR YR 1968	TOTAL 3,130.9		MEAN 8.55		MAX 30		MIN 3.8		AC-FT 6,210			

OWENS LAKE BASIN

10-2824.8. MAZOURKA CREEK NEAR INDEPENDENCE, CALIF.

LOCATION.--Lat 36°50'50", long 118°05'05", in NE $\frac{1}{4}$ lot 11, N $\frac{1}{2}$ sec.5, T.13 S., R.36 E., on right bank 7 miles northeast of Independence.

DRAINAGE AREA.--15.6 sq mi.

RECORDS AVAILABLE.--October 1960 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 4,800 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 0.079 cfs (57 acre-ft per year).

EXTREMES.--No flow during year.

1960-68: Maximum discharge, 1,300 cfs Dec. 6, 1966 (gage height, 2.46 ft, from inside gage, 3.10 ft from profile of floodmarks), from rating curve extended above 1.0 cfs on basis of slope-area measurement of maximum flow; no flow for all or most of each year.

REMARKS.--No flow since Dec. 7, 1966. No regulation or diversion above station.

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.

DRAINAGE AREA.--2,604 sq mi.

RECORDS AVAILABLE.--January 1927 to September 1968. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Graphic water-stage recorder and Cipolletti weir. 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. Feb. 14, 1935, to Nov. 22, 1964, graphic water-stage recorder and Cipolletti weir at same site and datum. Nov. 23, 1964, to June 26, 1967, staff gage and Cipolletti weir at same site and datum.

EXTREMES.--Maximum daily discharge during year, 77 cfs (estimated) Aug. 30; minimum daily, 0.90 cfs July 23-25. 1927-68: 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 basin is diverted through Los Angeles aqueduct. Discharge reported herein is wasted into Owens Lake.

COOPERATION.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	8.5	12	13	15	16	13	8.2	5.0	1.4	9.8	2.0
2	12	9.2	12	13	15	16	13	8.2	5.0	1.4	56	2.0
3	11	9.2	12	12	17	16	12	8.2	4.7	1.4	77	2.0
4	10	9.2	12	12	22	16	12	8.2	4.5	1.4	67	2.0
5	10	8.8	12	12	20	16	12	7.9	4.2	1.4	42	1.8
6	10	8.8	12	12	18	16	12	7.9	4.2	1.4	24	1.8
7	10	9.2	12	12	18	16	12	7.6	4.0	1.6	16	2.0
8	9.8	9.2	12	12	18	16	12	7.6	4.5	1.8	11	2.0
9	9.5	9.5	12	12	19	17	12	7.3	7.3	2.0	8.2	2.0
10	9.2	9.5	12	12	20	17	12	7.3	7.3	2.2	7.0	2.0
11	9.2	9.8	12	12	21	16	12	7.3	6.1	2.2	6.1	2.0
12	8.8	9.8	12	12	23	16	12	7.0	5.5	1.8	5.3	2.0
13	8.5	9.8	12	12	23	16	12	7.0	4.7	1.8	4.7	2.0
14	8.5	9.8	11	13	23	16	12	7.0	4.2	1.6	4.5	2.0
15	8.2	10	10	13	22	15	12	7.0	4.0	1.4	4.0	2.0
16	8.8	10	11	13	21	15	11	7.0	4.0	1.4	3.7	2.0
17	9.5	10	11	13	21	15	11	7.3	3.0	1.4	3.5	2.0
18	10	10	11	13	20	15	10	7.3	2.8	1.2	3.2	2.0
19	11	10	11	13	20	14	10	7.3	2.6	1.2	3.0	2.0
20	11	12	12	13	20	14	10	7.0	2.6	.90	2.8	2.0
21	11	13	12	13	19	14	10	6.4	2.4	.90	2.8	2.0
22	11	13	12	13	18	14	10	6.4	2.2	.90	2.6	2.2
23	10	13	12	14	18	14	10	6.1	2.2	.80	2.6	2.2
24	10	14	12	14	18	13	9.8	6.1	2.2	.80	2.4	2.2
25	9.8	14	12	14	18	13	9.8	6.1	2.0	.80	2.4	2.2
26	9.8	14	13	14	18	13	9.5	5.8	2.0	.90	2.4	2.4
27	9.8	13	13	15	18	13	9.2	5.5	2.0	.90	2.4	2.4
28	9.8	13	13	15	17	13	8.8	5.5	1.8	.90	2.4	2.4
29	9.8	13	13	16	17	13	8.8	5.5	1.6	1.1	2.0	2.4
30	9.5	12	13	16	-----	13	8.5	5.3	1.6	1.1	2.0	2.4
31	8.8	-----	13	16	-----	13	-----	5.3	-----	1.2	2.0	-----
TOTAL	306.3	324.3	371	409	557	460	328.4	213.6	110.2	41.20	384.8	62.4
MEAN	9.88	10.8	12.0	13.2	19.2	14.8	10.9	6.89	3.67	1.33	12.4	2.08
MAX	12	14	13	16	23	17	13	8.2	7.3	2.2	77	2.4
MIN	8.2	8.5	10	12	15	13	8.5	5.3	1.6	.80	2.0	1.8
AC-FT	608	643	736	811	1,100	912	651	424	219	82	763	124
CAL YR 1967	TOTAL 3,499.40		MEAN 9.59		MAX 29		MIN .60		AC-FT 6,940			
WTR YR 1968	TOTAL 3,568.20		MEAN 9.75		MAX 77		MIN .80		AC-FT 7,080			

10-2860. COTTONWOOD CREEK NEAR OLANCHA, 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 Olancha, Inyo County.

DRAINAGE AREA.--39.9 sq mi.

RECORDS AVAILABLE.--January 1906 to March 1911, January 1914 to September 1968; combined records of creek and flow through powerhouse, November 1938 to September 1968. January 1914 to September 1959 monthly discharge only, published in WSP 1314 and 1734.

GAGE.--Graphic water-stage recorder and Parshall flume (Cipolletti weir used during low flow each year) on creek; graphic water-stage and Cipolletti weir on powerhouse diversion. Altitude of gage is 4,660 ft (from topographic map). 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, graphic water-stage recorder, at site just upstream from intake to Cottonwood powerhouse at different datum.

AVERAGE COMBINED DISCHARGE.--58 years (1906-10, 1914-68), 22.2 cfs (16,070 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 56 cfs May 4 (gage height, 1.91 ft); no flow Sept. 16. 1906-11, 1914-68: Maximum discharge observed, 434 cfs June 13, 1906 (discharge measurement); no flow for some days in some years.

(combined).--Maximum discharge during year, 57 cfs May 4; minimum daily, 5.2 cfs Sept. 16. 1906-11, 1914-68: 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	.10	.10	.70	.50	1.6	5.0	38	15	1.1	4.4	.30
2	4.8	.10	.10	.60	.50	1.6	4.7	38	16	.90	3.6	.20
3	3.7	.10	.10	.50	.50	1.6	2.1	36	16	.80	2.5	.20
4	1.8	.10	.10	.50	.50	1.6	2.6	39	16	.80	1.7	.20
5	2.3	.10	.10	.50	.50	1.6	3.9	39	16	.80	1.7	.20
6	11	.10	.10	.60	.50	1.6	3.0	36	16	.80	1.6	.20
7	18	.50	.10	.60	.50	1.7	1.6	36	21	.80	1.7	.10
8	18	.10	.10	.70	.50	1.6	1.8	34	24	11	1.8	.10
9	18	.10	.10	.70	.50	3.0	2.2	33	20	7.7	1.4	.10
10	17	.10	.10	.80	.50	3.4	3.4	30	16	5.0	1.3	.10
11	17	.10	.10	.80	.90	1.9	12	32	13	1.6	1.4	.10
12	17	.10	.10	.90	.20	8.9	15	34	11	.90	1.3	.10
13	17	.10	.10	.90	.30	11	7.3	34	10	1.1	1.2	.10
14	7.8	.10	.10	1.0	.30	9.4	8.0	28	8.9	1.2	2.6	.10
15	.30	.10	.10	1.0	.40	3.0	26	23	8.0	1.4	2.5	.10
16	.20	3.4	.10	1.1	.50	2.4	26	17	7.1	1.7	2.4	0
17	2.0	4.5	.10	1.1	.50	2.2	23	14	6.4	1.6	2.3	.10
18	.40	.60	.10	1.0	.50	2.5	22	15	5.0	1.2	2.1	.10
19	.30	.20	.10	1.0	.50	2.4	22	16	4.7	1.2	2.0	.10
20	.20	1.6	.10	.90	.50	2.4	22	17	4.3	1.2	1.9	.10
21	.20	1.8	.10	.90	.50	2.4	21	16	4.0	1.2	1.7	.10
22	.20	1.0	.10	.80	.50	2.2	19	16	4.0	1.6	1.6	.10
23	.10	1.0	.10	.80	.50	2.1	20	15	4.0	2.5	1.5	.10
24	.10	1.0	.10	.70	.50	2.4	22	15	3.1	1.2	1.4	.10
25	.10	1.0	.10	.70	.80	2.5	26	15	3.1	1.3	1.2	.10
26	.10	.90	.10	.60	1.0	2.5	31	15	2.1	1.1	1.1	.10
27	.10	.90	.10	.60	1.1	2.5	34	16	1.3	1.0	1.0	.10
28	.10	.90	.10	.60	1.1	3.1	35	16	1.1	2.6	.80	.10
29	.10	.90	.20	.60	1.1	4.1	36	16	1.0	4.0	.70	.20
30	.10	.90	.90	.50	-----	5.0	38	16	1.0	7.7	.60	.20
31	.10	-----	.80	.50	-----	5.4	-----	15	-----	10	.40	-----
TOTAL	163.10	22.50	4.70	23.20	16.70	99.6	495.6	760	279.1	77.00	53.40	3.80
MEAN	5.26	.75	.15	.75	.58	3.21	16.5	24.5	9.30	2.48	1.72	.13
MAX	18	4.5	.90	1.1	1.1	11	38	39	24	11	4.4	.30
MIN	.10	.10	.10	.50	.20	1.6	1.6	14	1.0	.80	.40	0
AC-FT	324	45	9.3	46	33	198	983	1,510	554	153	106	7.5
CAL YR 1967	TOTAL	11,118.80	MEAN	30.5	MAX	235	MIN	.10	AC-FT	22,050		
WTR YR 1968	TOTAL	1,998.70	MEAN	5.46	MAX	39	MIN	0	AC-FT	3,960		

10-2860. COTTONWOOD CREEK NEAR OLANCHA, CALIF.--Continued

Combined discharge, in cubic feet per second, of Cottonwood Creek and powerhouse
near Olanča, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	15	15	10	10	12	15	39	32	18	14	7.4
2	26	15	16	10	12	13	15	38	34	18	14	7.3
3	25	15	18	9.9	12	13	15	37	33	17	14	7.0
4	23	15	16	9.9	12	13	17	40	33	17	13	6.7
5	23	16	15	9.9	12	13	16	40	35	16	9.9	6.7
6	19	16	15	10	10	13	15	37	34	16	11	6.7
7	18	14	16	10	10	13	18	37	41	17	12	6.4
8	18	14	14	10	10	13	19	34	42	24	11	6.1
9	18	14	13	10	10	11	19	33	40	22	11	6.1
10	17	14	14	10	10	12	16	31	33	21	11	5.8
11	17	14	14	10	11	13	18	32	31	19	10	5.8
12	17	14	13	10	10	12	22	35	30	17	10	5.8
13	17	14	11	10	10	11	21	34	28	14	11	5.6
14	15	15	11	11	11	11	19	33	29	13	8.9	5.3
15	18	14	11	11	10	12	26	33	27	13	12	5.3
16	18	23	12	11	10	12	26	31	25	13	12	5.2
17	18	24	13	11	12	12	23	30	25	13	12	5.8
18	18	20	13	12	12	12	22	31	24	13	11	5.8
19	18	19	13	12	12	12	23	34	25	13	10	5.8
20	18	22	14	12	12	12	22	35	23	12	10	5.8
21	18	22	14	12	12	12	21	34	23	12	8.8	6.1
22	18	19	14	12	12	12	19	35	23	12	10	6.1
23	18	19	14	12	12	12	20	34	23	11	10	6.1
24	17	18	13	12	12	12	23	33	22	12	9.6	6.1
25	17	18	13	12	12	12	26	33	21	11	8.9	6.1
26	16	16	13	12	12	12	31	33	19	12	8.5	5.1
27	16	16	12	12	12	12	35	34	19	12	9.0	5.6
28	16	16	12	10	11	13	36	34	20	13	8.5	5.6
29	15	16	11	11	11	14	37	34	19	15	8.4	5.7
30	14	16	9.7	10	-----	15	38	34	19	18	8.0	5.9
31	14	-----	10	10	-----	15	-----	33	-----	18	7.5	-----
TOTAL	567	503	412.7	334.7	324	386	673	1,065	832	472	325.0	180.8
MEAN	18.3	16.8	13.3	10.8	11.2	12.5	22.4	34.4	27.7	15.2	10.5	6.03
MAX	27	24	18	12	12	15	38	40	42	24	14	7.4
MIN	14	14	9.7	9.9	10	11	15	30	19	11	7.5	5.1
AC-FT	1,120	998	819	664	643	766	1,330	2,110	1,650	936	645	359
CAL YR 1967	TOTAL	16,238.8	MEAN	44.5	MAX	236	MIN	8.5	AC-FT	32,210		
WTR YR 1968	TOTAL	6,075.2	MEAN	16.6	MAX	42	MIN	5.1	AC-FT	12,050		

MONO LAKE BASIN

10-2870. MONO LAKE NEAR MONO LAKE, CALIF.

LOCATION.--Lat 37°58'46", long 119°08'11", in NW $\frac{1}{4}$ sec.5, T.2 N., R.26 E., on west bank 1 mile south of town of Mono Lake.

DRAINAGE AREA.--785 sq mi.

RECORDS AVAILABLE.--June 1912 to September 1968. Records prior to September 1934 are published in WSP 765.

GAGE.--Staff gage or reference point read once a week. Gage heights prior to October 1944 are converted to elevations above mean sea level in WSP 1314. Gage readings have been reduced to elevations above mean sea level, datum of 1929.

EXTREMES.--1912-68: Maximum elevation observed, 6,428.1 ft July 18, 1919, present datum; minimum observed, 6,386.95 ft Dec. 1, 1966.

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 1967 TO SEPTEMBER 1968

Date	Elevation	Date	Elevation	Date	Elevation	Date	Elevation
Oct. 5	6388.72	Dec. 28	6388.66	Apr. 19	6388.87	July 17	6388.12
12	6388.71	Jan. 4	6388.66	26	6388.80	26	6388.01
19	6388.60	Feb. 8	6388.91	May 2	6388.78	31	6387.98
26	6388.57	13	6388.93	8	6388.75	Aug. 8	6387.89
Nov. 2	6388.56	19	6388.99	23	6388.63	15	6387.77
9	6388.57	27	6389.02	29	6388.59	21	6387.61
16	6388.59	Mar. 7	6389.00	June 6	6388.52	29	6387.49
20	6388.65	14	6389.01	10	6388.50	Sept. 5	6387.46
Dec. 1	6388.66	21	6388.97	19	6388.47	12	6387.40
8	6388.66	26	6388.97	24	6388.39	19	6387.28
14	6388.68	Apr. 5	6388.92	July 3	6388.26	26	6387.18
22	6388.66	12	6388.88	11	6388.18		

10-2874. RUSH CREEK ABOVE GRANT LAKE, NEAR JUNE LAKE, CALIF.

LOCATION.--Lat 37°48'20", long 119°06'30", in NE¼ 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 1968. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Graphic water-stage recorder and Parshall flume. Altitude of gage is 7,200 ft (from topographic map).

AVERAGE DISCHARGE.--31 years (1937-68), 81.0 cfs (58,640 acre-ft per year).

EXTREMES.--Maximum discharge during year, 114 cfs June 3 (gage height, 1.53 ft); minimum daily, 29 cfs Sept. 23.
1936-68: Maximum discharge, 1,070 cfs July 14, 1967 (gage height, 6.20 ft); minimum daily, 5.5 cfs Sept. 6-8, 14, 1954.

REMARKS.--Flow regulated by Gem Lake, Lake Agnew, 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	84	95	102	56	48	48	59	105	105	65	57
2	93	86	91	98	54	48	47	61	106	105	64	57
3	84	87	93	69	48	47	47	62	112	102	62	55
4	82	89	87	59	45	47	46	64	109	104	61	54
5	93	90	92	56	43	47	45	64	106	95	59	49
6	89	92	85	56	43	47	45	62	102	80	56	45
7	82	93	83	55	43	47	45	62	99	82	57	45
8	90	95	86	55	43	47	45	61	95	85	61	45
9	86	95	90	56	43	47	45	62	93	99	60	43
10	83	95	96	56	43	47	46	64	88	98	45	43
11	83	95	97	57	43	47	47	76	90	83	40	44
12	83	95	93	57	43	46	47	85	89	72	45	44
13	83	95	95	58	43	46	47	83	88	68	57	43
14	80	98	96	58	43	46	49	83	87	69	56	43
15	88	92	97	62	43	45	50	82	89	68	57	44
16	84	91	99	60	43	45	49	80	90	67	56	45
17	80	97	101	58	43	44	49	80	87	67	54	44
18	82	102	104	58	44	44	48	82	86	66	55	43
19	87	108	108	58	44	44	48	86	84	66	51	41
20	89	114	107	57	51	44	49	91	84	65	49	41
21	98	111	101	57	50	44	48	93	84	64	53	43
22	104	111	101	56	48	44	46	91	85	64	55	36
23	88	107	101	57	48	45	47	90	83	62	57	29
24	88	104	101	57	49	45	47	87	80	62	57	40
25	88	100	101	57	49	45	47	86	77	61	55	43
26	88	97	102	57	50	45	49	87	86	60	53	44
27	88	93	102	57	49	45	52	93	106	62	54	44
28	97	91	101	57	49	45	54	100	80	64	55	44
29	105	92	100	57	48	45	57	106	73	65	55	45
30	93	97	100	57	-----	46	59	106	104	65	55	45
31	86	-----	101	57	-----	47	-----	105	-----	65	55	-----
TOTAL	2,740	2,896	3,006	1,871	1,341	1,419	1,448	2,493	2,747	2,340	1,714	1,338
MEAN	88.4	96.5	97.0	60.4	46.2	45.8	48.3	80.4	91.6	75.5	55.3	44.6
MAX	105	114	108	102	56	48	59	106	112	105	65	57
MIN	80	84	83	55	43	44	45	59	73	60	40	29
AC-FT	5,430	5,740	5,960	3,710	2,660	2,810	2,870	4,940	5,450	4,640	3,400	2,650
CAL YR 1967	TOTAL 51,999		MEAN 142		MAX 982		MIN 26		AC-FT 103,100			
WTR YR 1968	TOTAL 25,353		MEAN 69.3		MAX 114		MIN 29		AC-FT 50,290			

MONO LAKE BASIN

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 1968. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

GAGE.--Graphic 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, graphic water-stage recorder at same site at different datum.

AVERAGE DISCHARGE.--34 years, 66.1 cfs (47,850 acre-ft per year).

EXTREMES.--Maximum discharge during year, 198 cfs June 3 (gage height, 2.76 ft); minimum daily, 13 cfs Jan. 4-7, 11-13.

1934-68: Maximum discharge, 590 cfs July 4, 1967 (gage height, 4.42 ft); 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	44	38	45	25	41	38	61	136	60	33	25
2	57	47	28	49	22	41	38	85	161	58	32	25
3	64	47	27	21	22	43	50	124	180	47	42	49
4	65	47	37	13	23	45	53	116	160	39	49	48
5	60	50	26	13	22	31	46	80	139	39	58	47
6	63	55	37	13	22	29	37	63	96	53	54	45
7	63	55	37	13	24	29	39	62	70	57	33	25
8	56	55	38	14	24	29	39	67	67	59	46	25
9	58	53	27	14	40	29	38	70	63	85	73	45
10	54	53	27	14	70	29	38	70	62	85	48	45
11	49	46	39	13	46	31	42	71	78	50	47	46
12	49	37	34	13	38	40	56	69	128	60	44	45
13	48	47	31	13	37	46	65	67	118	69	34	43
14	40	44	26	14	37	46	66	67	118	60	40	25
15	47	44	26	16	37	46	61	67	119	56	36	24
16	40	41	25	14	37	40	54	67	122	44	47	48
17	41	46	31	14	37	36	52	67	134	45	27	47
18	39	53	35	15	37	37	51	61	140	50	26	47
19	39	68	36	16	38	36	51	88	140	51	36	46
20	38	50	34	18	46	36	50	149	140	51	60	45
21	38	40	35	19	43	36	50	150	122	48	47	25
22	56	36	35	20	43	36	44	130	109	45	49	25
23	67	31	36	21	42	36	38	81	109	50	48	50
24	58	31	36	22	41	35	38	69	104	51	26	45
25	51	25	36	21	40	35	40	63	91	51	28	45
26	44	17	37	20	40	35	50	63	75	34	56	45
27	50	32	37	20	41	37	53	98	78	32	47	40
28	63	31	36	22	40	38	73	161	97	35	48	22
29	59	31	42	24	39	38	91	178	94	65	46	27
30	60	31	48	20	-----	38	83	165	82	70	48	55
31	63	-----	45	22	-----	38	-----	147	-----	50	26	-----
TOTAL	1,628	1,287	1,062	586	1,053	1,142	1,524	2,876	3,332	1,649	1,334	1,174
MEAN	52.5	42.9	34.3	18.9	36.3	36.8	50.8	92.8	111	53.2	43.0	39.1
MAX	67	68	48	49	70	46	91	178	180	85	73	55
MIN	38	17	25	13	22	29	37	61	62	32	26	22
AC-FT	3,230	2,550	2,110	1,160	2,090	2,270	3,020	5,700	6,610	3,270	2,650	2,330
CAL YR 1967	TOTAL 33,979		MEAN 93.1		MAX 520		MIN 13		AC-FT 67,400			
WTR YR 1968	TOTAL 18,647		MEAN 50.9		MAX 180		MIN 13		AC-FT 36,990			

11-0100. COTTONWOOD CREEK AT MORENA DAM, CALIF.

LOCATION.--Lat 32°41'01", long 116°32'45", in NE $\frac{1}{4}$ sec.23, T.17 S., R.4 E., on Morena Dam outlet tower.

DRAINAGE AREA.--114 sq mi.

RECORDS AVAILABLE.--January 1916, October 1936 to September 1968 (discontinued).

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

AVERAGE DISCHARGE.--32 years (1936-68), 9.71 cfs (7,030 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 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 1967 TO SEPTEMBER 1968

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)
Morena Reservoir							
Sept. 30.....	78.0	1,300	-	-	-	-	-
Oct. 31.....	77.5	1,249	-51	0	45	1	-5
Nov. 30.....	77.7	1,269	+20	0	19	1	40
Dec. 31.....	78.4	1,341	+72	0	16	3	91
Calendar year 1967....	-	-	-21	0	463	23	465
Jan. 31.....	78.5	1,352	+11	0	15	2	28
Feb. 29.....	78.7	1,373	+21	0	16	2	39
Mar. 31.....	78.8	1,383	+10	0	30	2	42
Apr. 30.....	78.7	1,373	-10	0	41	2	33
May 31.....	78.2	1,321	-52	0	58	3	9
June 30.....	77.6	1,259	-62	0	77	3	18
July 31.....	77.0	1,200	-59	0	76	2	19
Aug. 31.....	76.4	1,142	-58	0	64	2	8
Sept. 30.....	75.7	1,076	-66	0	56	2	-8
Water year 1967-68....	-	-	-224	0	513	25	314

† 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.

TIJUANA RIVER BASIN

11-0109. WILSON CREEK TRIBUTARY NEAR DULZURA, CALIF.

LOCATION.--Lat 32°43'22", long 116°42'06", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.5, T.17 S., R.3 E., on right bank, on Japatul Lyons Valley road, 6.6 miles northeast of Dulzura.

DRAINAGE AREA.--0.61 sq mi.

RECORDS AVAILABLE.--Water years 1962-67 (annual maximum), October 1967 to September 1968.

GAGE.--Graphic water-stage recorder with rain-gage attachment, crest-stage gage and culvert control. Altitude of gage is 2,200 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 4.5 cfs Dec. 19 (gage height, 7.73 ft); no flow all year except that of Dec. 19, 20.

1961-68: Maximum discharge, 98 cfs Dec. 6, 1966 (gage height, 12.22 ft, from crest-stage gage), on basis of culvert computation of maximum flow through culvert; no flow all or most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0									
2			0									
3			0									
4			0									
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			1.3									
20			.10									
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	1.40	0	0	0	0	0	0	0	0	0
MEAN	0	0	.045	0	0	0	0	0	0	0	0	0
MAX	0	0	1.3	0	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	2.8	0	0	0	0	0	0	0	0	0
†	0	1.7	2.8	.1	.4	1.1	.4	0	0	0	0	0
CAL YR 1967	TOTAL		MEAN		MAX		MIN		AC-FT			
WTR YR 1968	TOTAL 1.40		MEAN .004		MAX 1.3		MIN 0		AC-FT 2.8			

† Precipitation, in inches.

11-0119. POTRERO CREEK TRIBUTARY NEAR BARRETT JUNCTION, CALIF.

LOCATION.--Lat 32°46'04", long 116°41'04", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.16, T.18 S., R.3 E., at culvert on State Highway 94, 1.4 miles southeast of Barrett Junction.

DRAINAGE AREA.--0.78 sq mi.

RECORDS AVAILABLE.--Water years 1962-66 (annual maximum), February 1966 to September 1968.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,220 ft (from topographic map). Dec. 12, 1961, to Feb. 17, 1966, crest-stage gage at same site and datum.

EXTREMES.--Maximum discharge during year, 104 cfs Mar. 8 (gage height, 13.16 ft); no flow for most of year. 1961-68: Maximum discharge, 294 cfs Nov. 22, 1965 (gage height, 15.25 ft, from crest-stage gage), from rating curve extended above 0.2 cfs on basis of culvert computation of maximum flow; no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0		0	0						
2		0	0		0	0						
3		0	0		0	0						
4		0	0		0	0						
5		0	0		0	0						
6		0	0		0	0						
7		0	0		0	0						
8		0	0		0	8.3						
9		0	0		0	0						
10		0	0		0	0						
11		0	0		0	0						
12		0	0		0	0						
13		0	0		.10	0						
14		0	0		0	0						
15		0	0		0	0						
16		0	0		0	0						
17		0	0		0	0						
18		0	0		0	0						
19		0	2.1		0	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		.20	0		0	0						
27		0	0		0	0						
28		0	0		0	0						
29		0	0		0	0						
30		0	0		-----	0						
31		-----	0		-----	0	-----		-----			-----
TOTAL	0	0.20	2.1	0	0.10	8.3	0	0	0	0	0	0
MEAN	0	.007	.068	0	.003	.27	0	0	0	0	0	0
MAX	0	.20	2.1	0	.10	8.3	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	.4	4.2	0	.2	16	0	0	0	0	0	0
CAL YR 1967	TOTAL	3.30	MEAN	.009	MAX	2.1	MIN	0	AC-FT	6.6		
WTR YR 1968	TOTAL	10.70	MEAN	.029	MAX	8.3	MIN	0	AC-FT	21		

TIJUANA RIVER BASIN

11-0120. 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.--310 sq mi.

RECORDS AVAILABLE.--October 1936 to September 1968.

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

AVERAGE DISCHARGE.--32 years, 6.96 cfs (5,040 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).

EXTREMES.--Maximum discharge during year, 117 cfs Mar. 8 (gage height, 3.10 ft); no flow for most of year. 1936-68: 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 sta. no. 11-0100) and Barrett Reservoir (capacity, 44,760 acre-ft). Water released from Barrett Reservoir through Dulzura conduit is diverted to Lower Otay Reservoir.

COOPERATION.--Four discharge measurements furnished by International Boundary and Water Commission.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	1.5	.20	.10	.10					
2		0	0	1.3	.10	.10	2.0					
3		0	0	1.1	.10	.10	1.0					
4		0	0	.70	.10	0	.30					
5		0	0	.60	.10	0	.20					
6		0	0	.50	.10	0	.20					
7		0	0	.40	.10	.10	.10					
8		0	0	.30	.10	16	.10					
9		0	0	.30	.10	8.3	0					
10		0	0	.30	.20	2.8	0					
11		0	0	.30	.20	1.7	0					
12		0	0	.30	.20	1.1	0					
13		0	0	.20	.60	.80	0					
14		0	0	.20	.70	.80	0					
15		0	0	.20	.20	.70	0					
16		0	.10	.20	.20	.60	0					
17		0	.60	.20	.20	.60	.10					
18		0	8.6	.10	.20	.70	.20					
19		0	44	.10	.20	1.2	.10					
20		0	18	.10	.20	.50	.10					
21		0	10	.10	.20	.30	.10					
22		0	6.4	.10	.20	.30	.10					
23		0	4.7	.10	.20	.20	0					
24		0	3.9	.10	.10	.20	0					
25		0	3.2	.10	.10	.20	0					
26		1.6	2.7	.10	.10	.20	0					
27		.30	2.3	.20	.10	.20	0					
28		0	2.2	.30	.20	.10	0					
29		0	2.0	.20	.10	.10	0					
30		0	1.7	.20	-----	.10	0					
31		-----	1.6	.20	-----	.10	-----		-----		-----	
TOTAL	0	1.90	112.00	10.60	5.40	38.20	4.70	0	0	0	0	0
MEAN	0	.063	3.61	.34	.19	1.23	.16	0	0	0	0	0
MAX	0	1.6	44	1.5	.70	16	2.0	0	0	0	0	0
MIN	0	0	0	.10	.10	0	0	0	0	0	0	0
AC-FT	0	3.8	222	21	11	76	9.3	0	0	0	0	0

CAL YR 1967 TOTAL 211.80 MEAN .58 MAX 44 MIN 0 AC-FT 420
WTR YR 1968 TOTAL 172.80 MEAN .47 MAX 44 MIN 0 AC-FT 343

11-0125. 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.--85.0 sq mi, of which 3 sq mi are in Mexico.

RECORDS AVAILABLE.--October 1936 to September 1968.

GAGE.--Graphic water-stage recorder and broad-crested weir. Datum of gage is 2,178.92 ft above mean sea level, datum of 1929. Prior to Dec. 1, 1954, at datum 1 ft higher.

AVERAGE DISCHARGE.--32 years, 1.96 cfs (1,420 acre-ft per year); median of yearly mean discharges, 0.08 cfs (58 acre-ft per year).

EXTREMES.--Maximum discharge during year, 0.60 cfs Nov. 19 (gage height, 1.21 ft); no flow all year including maximum day, which was less than 0.05 cfs.
1936-68: 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.--No flow since May 14, 1967. Flow partly regulated since August 1956 by small conservation reservoir. No diversion above station. Discharge for calendar year 1967 is as follows: Maximum daily, 0.20 cfs; minimum, zero; mean, 0.019 cfs; total, 14 acre-ft.

TIJUANA RIVER BASIN

11-0130. TIJUANA RIVER NEAR DULZURA, CALIF.
(Formerly published at Tia Juana River)

LOCATION.--Lat 32°33'50", long 116°46'25", in sec.33, T.18 S., R.2 E., on left bank 0.5 mile downstream from confluence of Cottonwood and Tecate Creeks and 5.5 miles south of Dulzura.

DRAINAGE AREA.--481 sq mi, of which 70 sq mi are in Mexico.

RECORDS AVAILABLE.--October 1936 to September 1968.

GAGE.--Graphic 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.--32 years, 11.2 cfs (8,110 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,130 cfs Mar. 8 (gage height, 5.83 ft), from rating curve extended above 520 cfs on basis of slope-area measurement at gage height 5.56 ft; no flow Oct. 1 to Nov. 18.

1936-68: Maximum discharge, 4,700 cfs Feb. 7, 1937 (gage height, 8.50 ft, present datum), from rating curve extended above 300 cfs on basis of velocity, mean-depth and area studies; no flow for part of most years.

REMARKS.--Records good except those above 100 cfs, which are poor. Flow regulated by Morena Reservoir (see sta. no. 11-0100) and Barrett Reservoir (capacity, 44,760 acre-ft). Water diverted from Cottonwood Creek at Barrett Dam by Dulzura conduit to Jamul Creek.

COOPERATION.--Ten discharge measurements furnished by International Boundary and Water Commission.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.10	1.4	1.2	.50	.90	.30	.20	.10	.10	.10
2		0	.10	1.4	1.1	.50	4.8	.30	.20	.10	.10	.10
3		0	.10	1.4	1.1	.50	3.6	.30	.20	.10	.10	.10
4		0	.20	1.5	1.0	.50	2.1	.30	.20	.10	.10	.10
5		0	.20	1.5	.90	.40	1.8	.30	.20	.10	.10	.10
6		0	.20	1.3	.90	.40	1.7	.20	.20	.10	.10	.10
7		0	.20	1.2	.90	.40	1.7	.20	.20	.10	.10	.10
8		0	.20	1.2	1.0	364	1.5	.20	.20	.10	.10	.10
9		0	.20	1.2	1.1	47	1.2	.20	.20	.10	.10	.10
10		0	.20	1.2	1.3	9.0	.90	.20	.20	.10	.10	.10
11		0	.20	1.2	1.4	5.1	.70	.20	.20	.10	.10	.10
12		0	.20	1.2	1.3	3.6	.60	.20	.20	.10	.10	.10
13		0	.20	1.1	2.4	3.0	.50	.20	.20	.10	.10	.10
14		0	.20	1.1	3.8	2.7	.50	.20	.20	.10	.10	.10
15		0	.20	1.1	2.1	2.2	.50	.20	.20	.10	.10	.10
16		0	.20	1.0	1.7	2.1	.50	.20	.20	.10	.10	.10
17		0	.20	1.0	1.3	2.4	.50	.20	.20	.10	.10	.10
18		0	4.4	1.0	1.4	2.4	.60	.20	.20	.10	.10	.10
19		.10	86	.90	1.3	2.9	.60	.20	.10	.10	.10	.10
20		.10	32	.90	1.2	2.1	.60	.20	.10	.10	.10	.10
21		.10	15	1.0	1.3	1.7	.50	.20	.10	.10	.10	.10
22		.20	8.2	.90	1.4	1.2	.50	.20	.10	.10	.10	.10
23		.20	5.3	.70	1.2	1.1	.40	.20	.10	.10	.10	.10
24		.10	4.5	.60	1.0	1.1	.40	.20	.10	.10	.10	.10
25		.10	3.8	.80	.80	1.0	.40	.20	.10	.10	.10	.10
26		.20	3.0	.90	.70	.90	.40	.20	.10	.10	.10	.10
27		.10	2.7	1.2	.60	.90	.30	.20	.10	.10	.10	.10
28		.10	2.4	1.4	.80	.90	.30	.20	.10	.10	.10	.10
29		.10	2.1	1.3	.70	.90	.20	.20	.10	.10	.10	.10
30		.10	1.8	1.2	-----	.90	.20	.20	.10	.10	.10	.10
31		-----	1.5	1.2	-----	.90	-----	.20	-----	.10	.10	-----
TOTAL	0	1.50	175.80	35.00	36.90	463.20	29.40	6.70	4.80	3.10	3.10	3.00
MEAN	0	.050	5.67	1.13	1.27	14.9	.98	.22	.16	.10	.10	.10
MAX	0	.20	86	1.5	3.8	364	4.8	.30	.20	.10	.10	.10
MIN	0	0	.10	.60	.60	.40	.20	.20	.10	.10	.10	.10
AC-FT	0	3.0	349	69	73	919	58	13	9.5	6.2	6.2	6.0
CAL YR 1967	TOTAL	411.80		MEAN	1.13	MAX	86	MIN	0	AC-FT	817	
WTR YR 1968	TOTAL	762.50		MEAN	2.08	MAX	364	MIN	0	AC-FT	1,510	

11-0132. 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.--977 sq mi, of which 10 sq mi are in the United States.

RECORDS AVAILABLE.--April 1937 to September 1968. 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, 1,432 acre-ft Oct. 1; minimum contents, 404 acre-ft Sept. 30. 1937-68: Reservoir spilled during March 1938, September 1940, February to May 1941, March 1942, and February, March 1944; reservoir dry Apr. 2, 1964, to Apr. 9, 1965, Aug. 21 to Nov. 22, 1965.

REMARKS.--Reservoir is formed by thin-shell concrete arch dam completed in 1936; storage began in 1937. Capacity table is based on surveys made in 1927. Maximum storage at 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 5.5 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 1967 TO SEPTEMBER 1968

Month	Contents (acre- feet)	Change in contents (acre- feet)
Sept. 30.....	1,432	-
Oct. 31.....	1,274	-158
Nov. 30.....	1,218	-56
Dec. 31.....	1,307	+89
Calendar year 1967...	-	-2,737
Jan. 31.....	1,203	-104
Feb. 29.....	1,111	-92
Mar. 31.....	1,012	-99
Apr. 30.....	856	-156
May 31.....	777	-79
June 30.....	692	-85
July 31.....	625	-67
Aug. 31.....	513	-112
Sept. 30.....	404	-109
Water year 1967-68...	-	-1,028

TIJUANA RIVER BASIN

11-0135. TIJUANA RIVER NEAR NESTOR, CALIF.
(Formerly published as Tia Juana River)

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.--1,690 sq mi, of which 1,236 sq mi are in Mexico.

RECORDS AVAILABLE.--October 1914 to September 1915, October 1936 to September 1968.

GAGE.--Graphic 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, graphic water-stage recorder at different datum. Apr. 10, 1953, to Aug. 5, 1958, at site 2 miles upstream at different datum.

AVERAGE DISCHARGE.--33 years, 33.9 cfs (24,540 acre-ft per year); median of yearly mean discharges, 2.7 cfs (2,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 150 cfs Dec. 18 (gage height, 3.61 ft); no flow for most of year. 1936-68: 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 sta. no. 11-0100) and Barrett Reservoir (capacity, 44,760 acre-ft) in the United States, and Rodriguez Reservoir (see sta. no. 11-0132) in Mexico. Water diverted from Cottonwood Creek at Barrett Dam by Dulzura conduit to Jamul Creek. AVERAGE DISCHARGE represents flow to the ocean regardless of upstream development.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0			0						
2		0	0			0						
3		0	0			0						
4		0	0			0						
5		0	0			0						
6		0	0			0						
7		0	0			0						
8		0	0			13						
9		0	0			7.5						
10		0	0			0						
11		0	0			0						
12		0	0			0						
13		0	0			0						
14		0	0			0						
15		0	0			0						
16		0	0			0						
17		0	0			0						
18		0	15			0						
19		0	39			0						
20		0	1.5			0						
21		.40	.10			0						
22		22	0			0						
23		3.1	0			0						
24		0	0			0						
25		0	0			0						
26		12	0			0						
27		7.3	0			0						
28		0	0			0						
29		0	0			0						
30		0	0		----	0						
31		-----	0		-----	0	-----		-----			-----
TOTAL	0	44.80	55.60	0	0	20.5	0	0	0	0	0	0
MEAN	0	1.49	1.79	0	0	.66	0	0	0	0	0	0
MAX	0	22	39	0	0	13	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	89	110	0	0	41	0	0	0	0	0	0
CAL YR 1967	TOTAL	107.70	MEAN	.30	MAX	39	MIN	0	AC-FT	214		
WTR YR 1968	TOTAL	120.90	MEAN	.33	MAX	39	MIN	0	AC-FT	240		

OTAY RIVER BASIN

119

11-0140. JAMUL CREEK NEAR JAMUL, CALIF.

LOCATION.--Lat 32°38'15", long 116°53'00", in NE¼ sec.4, T.18 S., R.1 E., 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 1968.

GAGE.--Graphic 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, 230 cfs Mar. 8 (gage height, 3.36 ft); no flow for most of year. 1940-68: Maximum discharge, 4,000 cfs Dec. 1, 1947 (gage height, 6.42 ft, present datum), from rating curve extended above 1,200 cfs; no flow at times in some years.

REMARKS.--Records good. No regulation above station. Water diverted from Cottonwood Creek by Dulzura conduit discharges into Jamul Creek via Dulzura Creek and is included in discharge for this station (see sta. no. 11-0120).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	15	.20	0	1.0					
2		0	0	15	.20	0	1.7					
3		0	0	18	.20	0	.80					
4		0	0	17	.20	0	.50					
5		0	0	16	.20	0	.40					
6		0	0	15	.10	0	.30					
7		0	0	14	.10	0	.20					
8		0	0	12	.10	36	.20					
9		0	0	11	.10	5.1	.20					
10		0	0	10	.20	1.8	.10					
11		0	0	8.7	.20	1.3	.10					
12		0	0	7.5	.20	1.0	.10					
13		0	0	6.4	.40	.90	.10					
14		0	1.7	5.7	.20	.80	0					
15		0	8.5	5.1	.10	.70	0					
16		0	12	3.4	.10	.60	0					
17		0	13	1.8	.10	.50	0					
18		0	28	1.2	.10	.40	0					
19		0	50	.90	.10	.30	0					
20		0	14	.70	.10	.20	0					
21		0	17	.60	0	2.6	0					
22		0	19	.60	0	5.3	0					
23		0	19	.40	0	5.7	0					
24		0	19	.40	0	6.6	0					
25		0	18	.30	0	8.2	0					
26		0	18	.30	0	6.0	0					
27		.10	17	.50	0	4.4	0					
28		0	17	.60	0	3.2	0					
29		0	17	.40	0	2.5	0					
30		0	16	.30	-----	2.0	0					
31		-----	16	.30	-----	1.5	-----		-----			-----
TOTAL	0	0.10	320.2	189.10	3.20	97.60	5.70	0	0	0	0	0
MEAN	0	.003	10.3	6.10	.11	3.15	.19	0	0	0	0	0
MAX	0	.10	50	18	.40	36	1.7	0	0	0	0	0
MIN	0	0	0	.30	0	0	0	0	0	0	0	0
AC-FT	0	.2	635	375	6.4	194	11	0	0	0	0	0
CAL YR 1967	TOTAL	2,163.00	MEAN	5.93	MAX	50	MIN	0	AC-FT	4,290		
WTR YR 1968	TOTAL	615.90	MEAN	1.68	MAX	50	MIN	0	AC-FT	1,220		

SWEETWATER RIVER BASIN

11-0150. SWEETWATER RIVER NEAR DESCANSO, CALIF.

LOCATION.--Lat 32°50'05", long 116°37'20", in NW¼SE¼ sec.25, T.15 S., R.3 E., 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 1968. 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 1968.

GAGE.--Graphic water-stage recorder on river; graphic water-stage recorder on concrete diversion. 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.

AVERAGE DISCHARGE (creek only).--34 years, 11.2 cfs (8,110 acre-ft per year); median of yearly mean discharges, 6.8 cfs (4,900 acre-ft per year).
(combined).--12 years, 3.10 cfs (2,240 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 39 cfs Dec. 19 (gage height, 4.15 ft); no flow for much of year.

1905-27, 1956-68: Maximum discharge, 11,200 cfs Feb. 16, 1927 (gage height, 13.2 ft, from floodmarks, site and datum then in use), on basis of slope-area measurement of maximum flow; no flow for many days in most years.

(combined).--Maximum discharge during year, 39 cfs Dec. 19; no flow for much of year.
1956-68: Maximum discharge, 3,890 cfs Dec. 6, 1966; 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.20	.60	2.1	2.0	1.4	1.1	.90	.40			
2	0	.20	.40	2.1	2.0	1.4	4.7	.90	.40			
3	0	.20	.40	2.1	1.9	1.4	3.7	.90	.40			
4	0	.20	.40	2.1	1.8	1.4	2.5	.90	.30			
5	0	.20	.40	2.0	1.7	1.5	2.1	.90	.30			
6	0	.20	.40	1.9	1.7	1.6	2.0	.90	.30			
7	0	.20	.40	1.9	1.7	1.7	1.9	.90	.40			
8	0	.20	.40	1.8	1.8	3.3	1.8	.90	.40			
9	0	.20	.20	1.8	1.9	3.8	1.7	.90	.40			
10	0	.20	.20	1.8	1.9	3.5	1.7	.90	.30			
11	.10	.20	.30	1.8	1.8	3.0	1.6	1.0	.30			
12	.10	.20	.30	1.8	1.8	2.7	1.5	1.6	.20			
13	.10	.20	.40	1.8	2.1	2.7	2.0	2.5	.20			
14	.10	.20	.40	1.8	2.0	2.9	1.3	2.0	.20			
15	.10	.20	.40	1.9	1.8	2.9	1.3	1.6	.20			
16	0	.20	.60	1.9	1.6	2.9	1.3	1.5	.10			
17	0	.20	1.2	1.9	1.4	2.9	1.4	1.4	.10			
18	0	.20	2.7	1.9	1.3	2.9	1.4	1.2	.10			
19	0	.40	1.9	1.9	1.1	2.9	1.4	1.1	.10			
20	.10	.30	4.4	1.9	1.0	2.7	1.4	1.0	.10			
21	.10	.50	2.7	1.9	1.0	2.5	1.4	1.0	.10			
22	.10	.70	2.4	1.9	1.0	2.0	1.3	.90	.10			
23	.10	.60	2.4	1.8	.90	1.6	1.2	.90	.10			
24	.10	.40	2.4	1.7	1.1	1.4	1.1	.80	.10			
25	.10	.30	2.4	1.8	1.1	1.4	1.1	.80	.10			
26	.20	.60	2.4	1.9	1.1	1.3	1.0	.70	.10			
27	.20	.80	2.4	2.2	1.2	1.2	1.0	.70	.10			
28	.20	.60	2.2	2.7	1.4	1.1	1.0	.60	.10			
29	.20	.50	2.2	2.5	1.3	1.0	.90	.60	0			
30	.20	.50	2.2	2.3	-----	1.0	.90	.50	0			
31	.20	-----	2.1	2.2	-----	.90	-----	.50	-----			
TOTAL	2.30	9.80	59.30	61.1	44.40	64.90	48.70	31.90	6.00	0	0	0
MEAN	.074	.33	1.91	1.97	1.53	2.09	1.62	1.03	.20	0	0	0
MAX	.20	.80	19	2.7	2.1	3.8	4.7	2.5	.40	0	0	0
MIN	0	.20	.20	1.7	.90	.90	.90	.50	0	0	0	0
AC-FT	4.6	19	118	121	88	129	97	63	12	0	0	0

CAL YR 1967 TOTAL 1,330.40 MEAN 3.64 MAX 84 MIN 0 AC-FT 2,640
WTR YR 1968 TOTAL 328.40 MEAN .90 MAX 19 MIN 0 AC-FT 651

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

SWEETWATER RIVER BASIN

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11-0150. SWEETWATER RIVER NEAR DESCANSO, CALIF.--Continued

Combined discharge, in cubic feet per second, of Sweetwater River and
Sweetwater diversion near Descanso, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.20	.60	2.3	2.1	1.5	1.1	1.2	.50			
2	0	.20	.40	2.3	2.1	1.5	5.1	1.2	.40			
3	0	.20	.40	2.3	2.0	1.5	4.0	1.2	.40			
4	0	.20	.40	2.3	1.9	1.5	2.9	1.2	.30			
5	0	.20	.40	2.2	1.8	1.6	2.4	1.2	.30			
6	0	.20	.40	2.1	1.7	1.7	2.2	1.2	.30			
7	0	.20	.40	2.1	1.7	1.8	2.1	1.2	.40			
8	0	.20	.50	2.0	1.8	3.6	1.9	1.2	.40			
9	0	.20	.60	2.0	1.9	4.0	1.8	1.2	.40			
10	0	.20	.70	2.0	1.9	3.6	1.8	1.2	.30			
11	.10	.20	.50	2.0	1.8	3.1	1.7	1.3	.30			
12	.10	.20	.50	2.0	1.8	2.8	1.8	1.9	.20			
13	.10	.20	.60	2.0	2.1	2.8	2.4	2.9	.20			
14	.10	.20	.60	1.9	2.0	3.0	1.7	2.4	.20			
15	.10	.20	.60	2.0	1.8	3.0	1.7	2.0	.20			
16	0	.20	.80	2.0	1.6	3.0	1.7	1.8	.10			
17	0	.20	1.4	2.0	1.4	3.0	1.8	1.7	.10			
18	0	.20	2.9	2.0	1.3	2.9	1.8	1.5	.10			
19	0	.50	19	2.0	1.1	2.9	1.8	1.3	.10			
20	.10	.30	4.6	2.0	1.0	2.7	1.8	1.2	.10			
21	.10	.50	2.9	2.0	1.1	2.5	1.8	1.2	.10			
22	.10	.80	2.5	2.0	1.1	2.0	1.7	1.1	.10			
23	.10	.60	2.4	1.9	1.0	1.6	1.6	1.1	.10			
24	.10	.40	2.5	1.8	1.2	1.4	1.5	1.0	.10			
25	.10	.30	2.6	1.9	1.4	1.4	1.5	1.0	.10			
26	.20	.70	2.6	2.0	1.3	1.3	1.4	.90	.10			
27	.20	.80	2.6	2.3	1.4	1.2	1.4	.80	.10			
28	.20	.60	2.4	2.8	1.6	1.1	1.4	.70	.10			
29	.20	.50	2.4	2.6	1.4	1.0	1.2	.70	0			
30	.20	.50	2.4	2.4	-----	1.0	1.2	.60	0			
31	.20	-----	2.3	2.3	-----	.90	-----	.60	-----			-----
TOTAL	2.30	10.10	63.90	65.5	46.3	66.90	58.2	39.70	6.10	0	0	0
MEAN	.074	.34	2.06	2.11	1.60	2.16	1.94	1.28	.20	0	0	0
MAX	.20	.80	19	2.8	2.1	4.0	5.1	2.9	.50	0	0	0
MIN	0	.20	.40	1.8	1.0	.90	1.1	.60	0	0	0	0
AC-FT	4.6	20	127	130	92	133	115	79	12	0	0	0
CAL YR 1967	TOTAL	1,335.30	MEAN	3.66	MAX	84	MIN	0	AC-FT	2,650		
WTR YR 1968	TOTAL	359.00	MEAN	.98	MAX	19	MIN	0	AC-FT	712		

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

SAN DIEGO RIVER BASIN

11-0170. 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 1968 (discontinued) (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 benchmark).

AVERAGE DISCHARGE.--28 years (1935-39, 1944-68), 4.10 cfs (2,970 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 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 coefficient of 0.80. Area and capacity tables for reservoir are based on a resurvey made in December 1967. 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. Helix Irrigation District reports 148 acre-ft of pumped water added to reservoir for recreation purposes. 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 1967 TO SEPTEMBER 1968

Month	Gage height (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Evaporation (acre-feet)	Spill plus leakage (acre-feet)	Discharge (acre-feet)
Cuyamaca Reservoir							
Sept. 30.....	-	0	-	-	-	-	-
Oct. 31.....	-	0	-	-	-	-	-
Nov. 30.....	9.2	4	+4	0	0	0	4
Dec. 31.....	14.8	90	+86	0	3	0	89
Calendar year 1967.....	-	-	-2,357	3,650	604	0	1,897
Jan. 31.....	16.4	154	+64	0	6	0	70
Feb. 29.....	16.6	163	+9	0	5	0	14
Mar. 31.....	16.9	177	+14	0	10	0	24
Apr. 30.....	21.3	447	+270	0	10	0	280
May 31.....	22.9	588	+141	0	19	0	160
June 30.....	22.7	569	-19	0	38	0	19
July 31.....	22.4	542	-27	0	36	0	9
Aug. 31.....	21.9	497	-45	0	36	0	-9
Sept. 30.....	21.6	471	-26	0	32	0	6
Water year 1967-68.....	-	-	+471	0	195	0	666

^a 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.

SAN DIEGO RIVER BASIN

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11-0225. 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 1968. Monthly discharge only for some periods and yearly estimates only for 1924-25, published in WSP 1315-B.

GAGE.--Digital water-stage recorder and unfinished rubble dam control. Altitude of gage is 180 ft (from topographic map). Prior to Nov. 10, 1920, staff gage at site 1.5 miles upstream at different datum. Nov. 10, 1920 to Dec. 1, 1954, graphic water-stage recorder at present site at datum 1.0 ft higher. Dec. 1, 1954, to Oct. 1, 1962, graphic water-stage recorder.

AVERAGE DISCHARGE.--55 years, 23.5 cfs (17,010 acre-ft per year); median of yearly mean discharges, 4.6 cfs (3,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 626 cfs Dec. 18 (gage height, 5.24 ft); no flow Oct. 1 to Nov. 6, July 16 to Sept. 30.
1912-68: Maximum discharge, 70,200 cfs Jan. 27, 1916 (gage height, 25.1 ft, site and datum then in use), based on slope-conveyance computation; no flow at times in most years.

REMARKS.--Records fair. Flow regulated by Cuyamaca Reservoir (see sta. no. 11-0170.), El Capitan Reservoir (capacity, 112,810 acre-ft), and San Vicente Reservoir (capacity, 90,230 acre-ft). Diversions by city of San Diego for municipal supply and by Helix Irrigation District. AVERAGE DISCHARGE represents flow to ocean during period of record, regardless of upstream development.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	4.5	2.4	2.0	1.9	.34	.67	.47	.03		
2		0	2.6	3.0	2.0	1.6	35	.59	.34	.03		
3		0	2.2	2.3	2.1	1.8	6.0	.65	.39	.03		
4		0	2.1	1.7	1.9	2.0	3.2	.59	.58	.03		
5		0	1.8	1.5	2.1	1.9	2.7	.49	.32	.03		
6		0	1.6	1.2	1.8	1.7	2.2	.55	.18	.03		
7		.01	1.5	1.0	1.5	1.5	1.8	.73	.17	.03		
8		.01	1.6	1.4	1.2	45	1.7	.61	.16	.03		
9		.01	1.8	1.5	1.0	12	1.3	.64	.15	.03		
10		.01	1.5	1.6	2.1	5.0	.53	1.1	.15	.03		
11		.01	1.4	2.8	3.1	4.3	.54	1.0	.14	.03		
12		.01	1.4	2.7	2.8	3.6	.70	.93	.13	.02		
13		.01	1.3	2.1	9.8	3.1	.71	2.0	.11	.02		
14		.01	1.3	1.6	9.1	3.7	.75	1.6	.11	.02		
15		.01	1.3	1.5	3.8	3.0	.82	1.4	.09	.01		
16		.01	1.6	1.5	2.7	2.3	.70	1.2	.09	0		
17		.01	7.0	1.4	2.2	2.3	1.0	1.1	.09	0		
18		.01	62	1.4	1.9	2.3	.89	1.1	.09	0		
19		.01	159	1.4	1.8	2.3	.95	1.1	.07	0		
20		10	38	1.3	1.9	2.5	.93	1.3	.07	0		
21		27	12	1.1	2.4	1.8	.98	1.2	.07	0		
22		63	7.4	1.0	2.7	1.7	.89	.96	.06	0		
23		18	5.5	.75	2.6	1.7	.74	.88	.06	0		
24		5.6	4.7	.78	2.6	1.3	.77	.78	.06	0		
25		3.9	4.2	1.1	2.5	.98	.61	.81	.05	0		
26		24	4.3	1.3	2.3	.77	.63	.49	.05	0		
27		30	3.9	2.3	2.4	1.2	.64	.46	.05	0		
28		5.0	3.6	18	2.6	1.1	.67	.68	.04	0		
29		3.9	3.9	4.7	2.5	.96	.78	.58	.04	0		
30		3.2	3.2	2.7	-----	.34	.78	.53	.03	0		
31		-----	2.7	2.1	-----	.26	-----	.39	-----	0		-----
TOTAL	0	193.73	350.9	71.13	79.4	115.91	70.25	27.11	4.41	0.40	0	0
MEAN	0	6.46	11.3	2.29	2.74	3.74	2.34	.87	.15	.013	0	0
MAX	0	63	159	18	9.8	45	35	2.0	.58	.03	0	0
MIN	0	0	1.3	.75	1.0	.26	.34	.39	.03	0	0	0
AC-FT	0	384	696	141	157	230	139	54	8.8	.8	0	0
CAL YR 1967	TOTAL	1,938.93	MEAN	5.31	MAX	200	MIN	0	AC-FT	3,850		
WTR YR 1968	TOTAL	913.24	MEAN	2.50	MAX	159	MIN	0	AC-FT	1,810		

LOS PENASQUITOS CREEK BASIN

11-0233.4. 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 southwest of Poway, San Diego County.

DRAINAGE AREA.--42.1 sq mi.

RECORDS AVAILABLE.--October 1964 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 260 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 256 cfs Mar. 8 (gage height, 3.22 ft); no flow May 16, 17.
1964-68: Maximum discharge, 2,100 cfs Dec. 6, 1966 (gage height, 6.90 ft in gage well, 7.70 ft from profile of floodmarks), from rating curve extended above 400 cfs on basis of slope-area measurement at gage height 6.23 ft; no flow May 16, 17, 1968.

REMARKS.--Records good except those for period of no gage-height record, which are poor. 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	.70	1.3	.88	1.1	2.6	3.6	1.1	.90	.80	.70	.60
2	.63	.85	1.3	.88	1.1	2.4	32	1.1	.90	.80	.70	.63
3	.63	.88	1.2	.88	1.4	1.9	5.4	1.1	.90	.80	.70	.78
4	.63	.88	1.2	1.0	2.6	1.5	1.8	1.1	.90	.80	.70	.66
5	.63	.87	1.2	1.2	1.7	1.3	1.5	.80	.90	.80	.80	.81
6	.63	.88	1.2	1.2	1.4	1.4	1.3	2.3	.90	.90	.70	.77
7	.63	.90	1.2	1.2	1.2	1.1	1.1	4.2	1.0	.90	.70	.71
8	.63	1.0	1.2	1.3	1.2	52	.99	4.0	1.0	.90	.70	.74
9	.63	1.0	1.2	1.2	1.2	20	1.2	3.6	1.0	.90	.70	.72
10	.63	1.0	1.2	1.1	1.3	5.0	.97	2.8	1.0	.80	.60	.86
11	.63	1.0	1.2	1.1	1.3	2.6	.91	.70	1.0	.80	.70	.80
12	.63	1.0	1.2	1.1	1.3	1.8	1.1	.60	1.0	.80	.70	.80
13	.63	1.0	1.1	1.1	1.1	1.7	1.1	.20	1.0	.80	.80	.80
14	.63	1.0	1.1	1.2	4.8	1.6	1.0	.10	1.0	.90	.70	.80
15	.63	1.0	1.1	1.4	1.8	1.5	.97	.10	1.0	.80	.60	.90
16	.63	1.0	1.1	1.2	1.5	1.5	.97	0	1.0	.70	.70	.90
17	.63	1.0	1.1	1.1	1.4	1.5	.98	0	1.0	.70	.80	.80
18	.63	1.0	1.2	1.2	1.5	1.8	1.0	.10	1.0	.70	.60	.80
19	.63	1.1	20	1.1	1.5	1.4	.97	.20	1.0	.70	.60	.80
20	.63	3.0	10	1.1	1.7	1.3	.97	.20	1.0	.60	.70	.70
21	.63	1.5	3.0	1.1	1.8	1.2	1.1	.20	1.0	.70	.60	.70
22	.63	4.0	1.4	1.2	1.8	1.3	.99	.30	1.0	.70	.80	.70
23	.63	2.0	1.2	1.2	1.8	1.3	.79	.90	1.0	.80	.60	.70
24	.63	1.4	1.1	1.1	1.3	1.3	.79	.90	1.0	.60	.60	.70
25	.63	1.4	1.0	1.1	.85	1.4	.79	.90	1.0	.70	.60	.70
26	.66	1.4	1.0	1.1	.80	1.3	.90	.90	.90	.70	.60	.70
27	.70	1.3	.90	1.6	.88	1.3	.87	.90	.90	.80	.60	.80
28	.70	1.3	.88	2.5	1.8	1.1	.90	.90	.90	.90	.60	.80
29	.71	1.3	.88	2.2	2.5	1.1	.90	.90	.90	.90	.60	.80
30	.71	1.3	.88	1.5	-----	1.2	1.0	.90	.90	.90	.60	.90
31	.70	-----	.88	1.2	-----	1.2	-----	.90	-----	.80	.60	-----
TOTAL	19.93	37.96	75.22	38.24	45.63	119.6	68.86	32.90	28.90	24.40	20.70	22.88
MEAN	.64	1.27	2.43	1.23	1.57	3.86	2.30	1.06	.96	.79	.67	.76
MAX	.71	4.0	20	2.5	4.8	52	32	4.2	1.0	.90	.80	.90
MIN	.63	.70	.88	.88	.80	1.1	.79	0	.90	.60	.60	.60
AC-FT	40	75	149	76	91	237	137	65	57	48	41	45

CAL YR 1967 TOTAL 1,068.89 MEAN 2.93 MAX 150 MIN .13 AC-FT 2,120
WTR YR 1968 TOTAL 535.22 MEAN 1.46 MAX 52 MIN 0 AC-FT 1,060

Peak discharge (base, 60 cfs).--Mar. (1215 hrs) 256 cfs (3.22 ft).

Note.--No gage-height record Nov. 7 to Jan. 4.

11-0240. SANTA YSABEL CREEK AT SUTHERLAND DAM, CALIF.

LOCATION.--Lat 33°07'05", long 116°47'10", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 1968. Prior to October 1953, published as "near Mesa Grande."

GAGE.--Graphic 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, graphic 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.--47 years (1913-28, 1936-68), 17.1 cfs (12,350 acre-ft per year); median of yearly mean discharges, 8.0 cfs (5,800 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 1967 TO SEPTEMBER 1968

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)
Sutherland Reservoir							
Sept. 30.....	60.53	2,087	-	-	-	-	-
Oct. 31.....	60.06	2,032	-55	0	62	0	7
Nov. 30.....	60.22	2,051	+19	0	29	0	48
Dec. 31.....	63.71	2,480	+429	0	27	0	456
Calendar year 1967.....	-	-	-3,489	7,175	591	0	4,277
Jan. 31.....	64.56	2,593	+113	0	32	0	145
Feb. 29.....	60.12	2,039	-554	665	27	0	138
Mar. 31.....	61.23	2,170	+131	0	35	0	166
Apr. 30.....	62.06	2,270	+100	0	44	0	144
May 31.....	62.34	2,306	+36	0	57	0	93
June 30.....	62.01	2,264	-42	0	70	0	28
July 31.....	61.43	2,194	-70	0	80	0	10
Aug. 31.....	60.76	2,114	-80	0	76	0	-4
Sept. 30.....	60.18	2,046	-68	0	61	0	-7
Water year 1967-68.....	-	-	-41	665	600	0	1,224

† 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

11-0255. SANTA YSABEL CREEK NEAR RAMONA, CALIF.

LOCATION.--Lat 33°06'25", long 116°51'55", in SW¼NW¼NE¼ sec.27, T.12 S., R.1 E., 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 1968. Monthly discharge only for February 1912, published in WSP 1315-B.

GAGE.--Graphic 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 graphic water-stage recorder at present site at datum 0.3 ft higher.

EXTREMES.--Maximum discharge during year, 78 cfs Mar. 8 (gage height, 3.02 ft); no flow Oct. 1 to Dec. 17, Apr. 25 to Sept. 30.
1912-23, 1943-68: 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 good except those for period of no gage-height record, which are poor. Flow regulated since July 1954 by Sutherland Reservoir (see sta. no. 11-0240). Some small diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.10	.90	.30	.50					
2			0	.10	.90	.30	3.0					
3			0	.10	.80	.30	3.3					
4			0	.20	.70	.20	2.4					
5			0	.20	.60	.20	4.3					
6			0	.20	.50	.20	2.2					
7			0	.20	.40	.20	1.1					
8			0	.20	.40	9.8	.60					
9			0	.20	.50	8.3	.40					
10			0	.20	.60	4.3	.20					
11			0	.20	.60	2.4	.20					
12			0	.20	.60	1.7	.20					
13			0	.20	.90	1.6	.20					
14			0	.20	1.0	1.6	.10					
15			0	.20	.90	1.4	.10					
16			0	.20	.80	1.4	.10					
17			0	.20	.80	1.4	.10					
18			1.0	.20	.80	1.2	.10					
19			15	.20	.70	1.2	.10					
20			10	.20	.70	1.0	.10					
21			2.4	.20	.70	1.2	.10					
22			1.4	.20	.70	1.7	.10					
23			.60	.20	.60	1.9	.10					
24			.30	.10	.50	1.1	.10					
25			.20	.10	.30	.80	0					
26			.10	.20	.30	.60	0					
27			.10	.40	.30	.50	0					
28			.10	1.2	.30	.30	0					
29			.10	1.7	.30	.30	0					
30			.10	1.4	-----	.30	0					
31		-----	.10	1.1	-----	.30	-----		-----			-----
TOTAL	0	0	31.50	10.50	18.10	48.00	19.70	0	0	0	0	0
MEAN	0	0	1.02	.34	.62	1.55	.66	0	0	0	0	0
MAX	0	0	15	1.7	1.0	9.8	4.3	0	0	0	0	0
MIN	0	0	0	.10	.30	.20	0	0	0	0	0	0
AC-FT	0	0	62	21	36	95	39	0	0	0	0	0

CAL YR 1967 TOTAL 1,526.10 MEAN 4.18 MAX 95 MIN 0 AC-FT 3,030
WTR YR 1968 TOTAL 127.80 MEAN .35 MAX 15 MIN 0 AC-FT 253

Note.--No gage-height record Dec. 18-20.

11-0260. SANTA YSABEL CREEK NEAR SAN PASQUAL, CALIF.

LOCATION.--Lat 33°05'10", long 116°54'56", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1968. Records for October to December 1910, published in WSP 447, have been found to be in error and should not be used.

GAGE.--Graphic 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.--16 years (1906-10, 1912, 1957-68), 15.3 cfs (11,080 acre-ft per year); median of yearly mean discharges, 7.0 cfs (5,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 59 cfs Mar. 8 (gage height, 2.04 ft, from floodmarks); no flow for most of year.

1905-12, 1947-68: 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 except those for periods of no gage-height record, which are poor. Flow regulated since July 1954 by Sutherland Reservoir (see sta. no. 11-0240). Small diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.10	.60	.20	.40	0	0			
2			0	.10	.50	.20	2.3	0	0			
3			0	.10	.40	.20	2.9	0	0			
4			0	.10	.40	.20	2.3	0	0			
5			0	.10	.30	.20	3.2	0	0			
6			0	.10	.30	.20	2.6	0	0			
7			0	.10	.30	.20	1.3	0	.10			
8			0	.10	.30	10	.80	0	.10			
9			0	.10	.30	8.0	.50	0	0			
10			0	.10	.40	4.0	.30	0	0			
11			0	.10	.50	2.5	.20	0	0			
12			0	.10	.50	2.0	.20	.10	0			
13			0	.10	.50	1.6	.20	.10	0			
14			0	.10	.80	1.5	.20	.10	0			
15			0	.10	.70	1.5	.20	.10	0			
16			0	.10	.60	1.4	.20	0	0			
17			0	.10	.60	1.4	.30	0	0			
18			0	.10	.60	1.3	.30	0	0			
19			18	.10	.60	1.3	.30	0	0			
20			13	.10	.50	1.2	.20	0	0			
21			3.0	.10	.50	1.0	.20	0	0			
22			1.0	.10	.50	1.6	.20	0	0			
23			.40	.10	.50	2.2	.10	0	0			
24			.30	.10	.50	1.5	.10	0	0			
25			.20	.10	.40	1.2	.10	0	0			
26			.10	.10	.30	.90	.10	0	0			
27			.10	.30	.30	.70	.10	0	0			
28			.10	.50	.30	.50	.10	0	0			
29			.10	1.0	.30	.40	0	0	0			
30			.10	1.0	-----	.40	0	0	0			
31		-----	.10	.70	-----	.30	-----	0	-----			-----
TOTAL	0	0	36.50	6.10	13.30	49.80	19.90	0.40	0.20	0	0	0
MEAN	0	0	1.18	.20	.46	1.61	.66	.013	.007	0	0	0
MAX	0	0	18	1.0	.80	10	3.2	.10	.10	0	0	0
MIN	0	0	0	.10	.30	.20	0	0	0	0	0	0
AC-FT	0	0	72	12	26	99	39	.8	.4	0	0	0

CAL YR 1967 TOTAL 1,717.30 MEAN 4.70 MAX 140 MIN 0 AC-FT 3,410
WTR YR 1968 TOTAL 126.20 MEAN .34 MAX 18 MIN 0 AC-FT 250

Note.--No gage-height record Dec. 24 to Jan. 26, Feb. 7 to Mar. 18.

SAN DIEGUITO RIVER BASIN

11-0270. GUEJITO CREEK NEAR SAN PASQUAL, CALIF.

LOCATION.--Lat 33°06'57", long 116°57'08", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.23, T.12 S., R.1 W., 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 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 560 ft (from topographic map). Prior to Oct. 1, 1963, graphic water-stage recorder.

AVERAGE DISCHARGE.--21 years (1947-68), 1.22 cfs (883 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

EXTREMES.--Maximum discharge during year, 28 cfs Dec. 19 (gage height, 2.34 ft); no flow Oct. 1 to Dec. 9. 1946-68: Maximum discharge, 2,920 cfs Dec. 6, 1966 (gage height, 6.78 ft), from rating curve extended above 440 cfs on basis of slope-area measurements at gage heights 5.83 and 6.30 ft; no flow at times in most years.

REMARKS.--Records fair. No regulation above station. Diversion for irrigation 0.2 mile upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.54	.62	.39	.37	.14	.07	.06	.03	.02
2			0	.54	.58	.41	2.2	.14	.07	.06	.03	.02
3			0	.54	.56	.35	1.0	.15	.07	.06	.03	.02
4			0	.54	.53	.31	.63	.18	.07	.06	.03	.02
5			0	.54	.46	.30	.50	.17	.07	.06	.03	.02
6			0	.54	.46	.32	.46	.15	.07	.06	.03	.02
7			0	.52	.46	.35	.41	.14	.06	.06	.03	.02
8			0	.52	.49	4.5	.36	.14	.06	.06	.03	.02
9			0	.52	.54	2.3	.30	.14	.06	.06	.03	.02
10			.10	.52	.67	1.0	.24	.13	.06	.06	.03	.02
11			.10	.52	.64	.74	.21	.13	.06	.05	.03	.02
12			.10	.52	.62	.61	.21	.22	.06	.05	.03	.02
13			.90	.52	.73	.59	.23	.48	.06	.05	.03	.02
14			1.0	.52	1.0	.72	.23	.36	.06	.05	.03	.02
15			.80	.52	.74	.59	.22	.24	.06	.05	.03	.02
16			.90	.50	.62	.54	.25	.19	.06	.04	.02	.02
17			1.4	.50	.56	.60	.32	.15	.06	.04	.02	.02
18			6.8	.50	.58	.59	.34	.12	.06	.04	.02	.02
19			18	.45	.54	.55	.29	.10	.06	.04	.02	.02
20			3.9	.44	.52	.47	.28	.09	.06	.04	.02	.02
21			1.4	.45	.54	.40	.29	.09	.06	.04	.02	.01
22			.90	.47	.57	.36	.28	.09	.06	.04	.02	.01
23			.60	.43	.51	.35	.23	.09	.07	.04	.02	.01
24			.60	.39	.46	.34	.18	.09	.06	.04	.02	.01
25			.60	.44	.42	.34	.16	.09	.06	.04	.02	.01
26			.54	.48	.41	.33	.15	.09	.06	.04	.02	.01
27			.54	.93	.43	.33	.16	.08	.06	.04	.02	.01
28			.54	1.3	.50	.29	.19	.08	.06	.04	.02	.01
29			.54	.79	.47	.26	.17	.08	.06	.04	.02	.01
30			.54	.65	-----	.26	.14	.07	.06	.04	.02	.01
31		-----	.54	.64	-----	.28	-----	.07	-----	.04	.02	-----
TOTAL	0	0	41.34	17.28	16.23	19.77	11.00	4.48	1.87	1.49	0.77	0.50
MEAN	0	0	1.33	.56	.56	.64	.37	.14	.062	.048	.025	.017
MAX	0	0	18	1.3	1.0	4.5	2.2	.48	.07	.06	.03	.02
MIN	0	0	0	.39	.41	.26	.14	.07	.06	.04	.02	.01
AC-FT	0	0	82	34	32	39	22	8.9	3.7	3.0	1.5	1.0

CAL YR 1967 TOTAL 336.62 MEAN .92 MAX 20 MIN 0 AC-FT 668
WTR YR 1968 TOTAL 114.73 MEAN .31 MAX 18 MIN 0 AC-FT 228

Peak discharge (base, 30 cfs).--No peak above base.

SAN DIEGUITO RIVER BASIN

129

11-0285. SANTA MARIA CREEK NEAR RAMONA, CALIF.

LOCATION.--Lat 33°03'08", long 116°56'41", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.11, T.13 S., R.1 W., on left bank 3.75 miles north-west 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 1968.

GAGE.--Graphic 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.--29 years (1913-20, 1946-68), 3.72 cfs (2,690 acre-ft per year); median of yearly mean discharges, 0.1 cfs (72 acre-ft per year).

EXTREMES.--Maximum discharge during year, 22 cfs Dec. 18 (gage height, 1.78 ft); no flow for most of year. 1912-20, 1946-68: Maximum discharge, 7,140 cfs Jan. 27, 1916 (gage height, 14.1 ft, from floodmarks, present datum), from rating curve extended above 600 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--Records good. No regulation above station. City of Ramona pumps water from stream above station for municipal supply.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0		0	0	.10	0				
2			0		0	0	1.9	0				
3			0		0	0	.20	0				
4			0		0	0	.10	.10				
5			0		0	0	.10	.10				
6			0		0	0	.10	0				
7			0		0	0	.10	0				
8			0		0	1.7	.10	.10				
9			0		0	.10	.10	.10				
10			0		0	0	.10	.10				
11			0		0	0	.10	.10				
12			0		0	0	.10	.10				
13			0		.10	0	.10	.10				
14			0		.10	0	.10	.10				
15			0		.10	0	.10	.10				
16			0		.10	0	.10	.10				
17			0		.10	0	.10	0				
18			2.3		.10	0	.10	0				
19			2.9		.10	0	.10	0				
20			2.3		.10	0	.10	0				
21			1.2		.10	0	.10	0				
22			.20		.10	0	.10	0				
23			0		0	.10	0	0				
24			0		0	.10	0	0				
25			0		0	.10	0	0				
26			0		0	.10	0	0				
27			0		0	.10	0	0				
28			0		0	.10	0	0				
29			0		0	.10	0	0				
30			0		-----	.10	0	0				
31		-----	0		-----	.10	-----	0	-----			-----
TOTAL	0	0	8.90	0	1.00	2.70	4.10	1.10	0	0	0	0
MEAN	0	0	.29	0	.035	.087	.14	.036	0	0	0	0
MAX	0	0	2.9	0	.10	1.7	1.9	.10	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	18	0	2.0	5.4	8.1	2.2	0	0	0	0
CAL YR 1967	TOTAL	155.30		MEAN	.43	MAX	27	MIN	0	AC-FT	308	
WTR YR 1968	TOTAL	17.80		MEAN	.049	MAX	2.9	MIN	0	AC-FT	35	

SAN DIEGUITO RIVER BASIN

11-0300. SAN DIEGUITO RIVER AT LAKE HODGES, CALIF.

LOCATION.--Lat 33°02'48", long 117°07'33", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ 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 1968 (discontinued). 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 1953, 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 (sta. no. 11-0240). Diversions for irrigation above Lake Hodges.

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

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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.....	72.10	4,738	-	-	-	-	-	-	-
Oct. 31.....	68.80	3,882	-856	767	115	0	26	0	26
Nov. 30.....	66.55	3,356	-526	580	56	0	110	0	110
Dec. 31.....	66.70	3,391	+35	316	29	0	380	0	380
Calendar year 1967..	-	-	-5,012	5,421	1,388	11	1,808	0	1,808
Jan. 31.....	65.00	3,010	-381	397	39	0	55	0	55
Feb. 29.....	63.75	2,750	-260	331	33	0	104	0	104
Mar. 31.....	62.70	2,542	-208	549	60	0	401	0	401
Apr. 30.....	58.34	1,758	-784	698	72	0	-14	0	-14
May 31.....	53.54	1,104	-654	487	66	0	-101	0	-101
June 30.....	47.20	531	-573	476	45	0	-52	0	-52
July 31.....	37.62	150	-381	300	20	0	-61	0	-61
Aug. 31.....	37.10	139	-11	0	12	0	1	0	1
Sept. 30.....	36.43	126	-13	0	10	3	0	0	0
Water year 1967-68..	-	-	-4,612	4,901	557	3	849	0	849

† 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.

SAN LUIS REY RIVER BASIN

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11-0315. AGUA CALIENTE CREEK NEAR WARNER SPRINGS, CALIF.

LOCATION.--Lat 33°17'19", long 116°39'11", in San Jose del Valle Grant, on downstream end of right pier of bridge on State Highway 79, 1.2 miles upstream from Canada Verde Creek and 1.2 miles northwest of Warner Springs, San Diego County.

DRAINAGE AREA.--19.0 sq mi.

RECORDS AVAILABLE.--February 1961 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 2,950 ft (from topographic map). Prior to Jan. 29, 1966, at site 120 ft upstream at same datum.

AVERAGE DISCHARGE.--7 years, 0.682 cfs (494 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1.2 cfs Dec. 19 (gage height, 3.10 ft); no flow for most of year. 1961-68: Maximum discharge, 1,200 cfs Dec. 6, 1966 (gage height, 5.18 ft), from rating curve extended above 240 cfs; 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.10	0	0	0	.10	0	0		
2			0	.10	0	0	.10	.10	0	0		
3			0	.10	0	0	.10	.10	0	0		
4			0	0	0	0	0	.10	0	0		
5			0	0	0	0	0	.10	0	0		
6			0	0	0	0	0	.10	.10	0		
7			0	0	0	0	0	.10	.10	0		
8			0	0	0	.20	0	.20	.10	0		
9			0	0	0	.20	0	.20	.10	0		
10			0	0	.10	.20	0	.20	.10	0		
11			0	0	.10	.10	0	.10	0	0		
12			0	0	.10	.10	0	.10	0	0		
13			0	0	.10	.10	0	.10	0	0		
14			0	0	.20	.10	0	.10	0	0		
15			0	0	.20	.10	0	.10	0	0		
16			0	0	.10	.10	0	.10	0	0		
17			0	0	.10	.10	0	0	0	0		
18			.10	0	.10	.10	0	0	0	0		
19			.40	0	.10	.10	0	0	0	0		
20			.20	0	.10	.10	0	0	0	0		
21			.10	0	.10	0	0	0	0	0		
22			.10	0	.10	0	0	0	0	.10		
23			.10	0	.10	0	0	0	0	0		
24			.10	0	.10	0	0	0	0	0		
25			.20	0	.10	0	0	0	0	0		
26			.20	0	0	0	.10	0	0	0		
27			.20	0	0	0	.10	0	0	0		
28			.20	0	0	0	.10	0	0	0		
29			.10	0	0	0	.10	0	0	0		
30			.10	0	-----	0	.10	0	0	0		
31		-----	.10	0	-----	0	-----	0	-----	0		-----
TOTAL	0	0	2.20	0.30	1.80	1.60	0.70	1.90	0.50	0.10	0	0
MEAN	0	0	.071	.010	.062	.052	.023	.061	.017	.003	0	0
MAX	0	0	.40	.10	.20	.20	.10	.20	.10	.10	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	4.4	.6	3.6	3.2	1.4	3.8	1.0	.2	0	0

CAL YR 1967 TOTAL 209.20 MEAN .57 MAX 15 MIN 0 AC-FT 415
WTR YR 1968 TOTAL 9.10 MEAN .025 MAX .40 MIN 0 AC-FT 18

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

SAN LUIS REY RIVER BASIN

11-0330. WEST FORK SAN LUIS REY RIVER NEAR WARNER SPRINGS, CALIF.

LOCATION.--Lat 33°17'50", long 116°45'30", in San Jose del Valle Grant, 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 2,800 ft (from topographic map). Prior to Oct. 1, 1956, graphic water-stage recorder at different datum. Oct. 1, 1956, to Sept. 30, 1963, at present datum.

AVERAGE DISCHARGE.--13 years (1913-15, 1957-68), 7.25 cfs (5,250 acre-ft per year); median of yearly mean discharges, 2.4 cfs (1,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 315 cfs Mar. 8 (gage height, 6.13 ft); minimum daily, 0.05 cfs Oct. 23.

1913-15, 1956-68: Maximum discharge, 4,200 cfs Dec. 6, 1966 (gage height, 11.87 ft), from rating curve extended above 250 cfs on basis of slope-area measurement of maximum flow; no flow at times in most years.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.11	.36	4.0	5.3	1.8	3.5	2.7	1.1	.11	.05	.11
2	.17	.11	.33	3.7	4.3	1.8	30	2.6	.94	.09	.06	.12
3	.15	.10	.33	3.5	4.0	1.8	14	2.5	.88	.08	.05	.13
4	.15	.10	.33	3.2	3.8	1.8	9.3	2.4	.84	.08	.05	.13
5	.15	.08	.33	2.9	3.6	1.8	7.4	2.2	.87	.07	.06	.14
6	1.6	.07	.30	2.9	3.4	1.8	6.1	2.2	.87	.09	.06	.14
7	1.3	.06	.29	2.7	3.4	2.4	5.6	2.2	.82	.11	.06	.14
8	.21	.07	.29	2.7	3.4	73	5.1	2.1	.85	.09	.06	.12
9	.18	.08	.27	2.9	3.4	27	4.9	2.1	.79	.08	.07	.12
10	.17	.08	.26	2.9	3.5	16	4.8	2.1	.73	.07	.07	.12
11	.15	.08	.28	4.9	3.5	11	4.7	2.1	.63	.08	.07	.13
12	.13	.08	.26	5.2	3.4	8.6	4.6	3.3	.58	.07	.06	.12
13	.12	.07	.24	4.0	4.5	7.6	4.4	4.3	.52	.07	.07	.11
14	.10	.07	.24	3.6	8.4	8.9	4.3	3.2	.49	.07	.07	.12
15	.09	.08	.24	3.6	5.0	6.8	4.0	2.6	.43	.07	.07	.11
16	.09	.08	.24	4.2	4.0	6.1	4.0	2.3	.41	.07	.07	.12
17	.08	.08	.24	3.7	3.5	6.1	4.2	2.1	.35	.07	.07	.11
18	.08	.08	.40	3.3	3.1	5.6	5.0	1.9	.34	.06	.08	.11
19	.07	.96	50	3.0	2.8	5.3	4.8	1.8	.32	.06	.09	.11
20	.07	6.8	10	2.9	2.6	4.7	4.1	1.7	.30	.06	.08	.11
21	.06	2.6	6.0	2.9	2.4	4.5	3.9	1.7	.28	.06	.08	.12
22	.06	4.1	5.0	2.9	2.3	4.2	3.8	1.8	.25	.05	.09	.11
23	.05	1.6	4.3	2.9	2.2	4.3	3.6	1.8	.24	.06	.08	.11
24	.12	.57	4.1	2.9	2.1	4.2	3.4	1.8	.21	.06	.08	.11
25	.07	.51	4.9	2.9	2.0	4.0	3.4	1.7	.20	.06	.08	.11
26	.08	.46	6.5	2.9	1.9	3.7	3.4	1.6	.17	.06	.11	.11
27	.10	.45	6.8	6.4	1.9	3.6	3.4	1.4	.17	.06	.11	.11
28	.08	.41	7.2	11	1.8	3.5	3.0	1.2	.14	.06	.10	.11
29	.08	.37	6.7	6.5	1.8	3.3	2.9	1.5	.15	.06	.10	.11
30	.10	.36	5.5	4.5	-----	3.2	2.9	1.3	.12	.06	.10	.11
31	.10	-----	4.7	5.5	-----	3.1	-----	1.2	-----	.06	.10	-----
TOTAL	6.13	20.67	126.93	121.1	97.3	241.5	168.5	65.4	14.99	2.20	2.35	3.53
MEAN	.20	.69	4.09	3.91	3.36	7.79	5.62	2.11	.50	.071	.076	.12
MAX	1.6	6.8	50	11	8.4	73	30	4.3	1.1	.11	.11	.14
MIN	.05	.06	.24	2.7	1.8	1.8	2.9	1.2	.12	.05	.05	.11
AC-FT	12	41	252	240	193	479	334	130	30	4.4	4.7	7.0
CAL YR 1967	TOTAL	4,052.32	MEAN	11.1	MAX	174	MIN	.05	AC-FT	8,040		
WTR YR 1968	TOTAL	870.60	MEAN	2.38	MAX	73	MIN	.05	AC-FT	1,730		

Peak discharge (base, 100 cfs).--Mar. 8 (1230 hrs) 315 cfs (6.13 ft).

Note.--No gage-height record Dec. 12-22.

11-0350. 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 1968 (discontinued). 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; 46 years (1922-68), 24.2 cfs (17,550 acre-ft per year), discharge at Lake Henshaw, exclusive of 90 percent of precipitation on lake surface; median of yearly mean discharges, 14 cfs (10,000 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 1967 TO SEPTEMBER 1968

Month	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Draft (acre-feet)	Net Evaporation (acre-feet)	Spill plus leakage (acre-feet)	Pumped ground water (acre-feet)	Net discharge (acre-feet)
Lake Henshaw								
Sept. 30.....	43.22	9,353	-	-	-	-	-	-
Oct. 31.....	42.69	8,787	-566	167	465	0	16	50
Nov. 30.....	41.89	7,979	-808	974	-32	0	17	117
Dec. 31.....	42.70	8,797	+818	0	-328	0	16	474
Calendar year 1967...	-	-	-5,870	11,902	3,424	0	230	9,226
Jan. 31.....	42.48	8,569	-228	440	83	0	19	276
Feb. 29.....	41.49	7,596	-973	1,138	186	0	20	331
Mar. 31.....	40.77	6,940	-656	1,321	267	0	80	852
Apr. 30.....	40.83	6,993	+53	643	292	0	513	475
May 31.....	40.01	6,291	-702	1,101	476	0	742	133
June 30.....	39.06	5,542	-749	941	556	0	822	-74
July 31.....	36.75	3,988	-1,554	2,002	515	0	990	-27
Aug. 31.....	36.30	3,725	-263	768	439	0	1,015	-71
Sept. 30.....	35.95	3,529	-196	706	360	0	987	-117
Water year 1967-68...	-	-	-5,824	10,201	3,279	0	5,237	2,419

†During the year the amount of precipitation excluded was 952 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.

SAN LUIS REY RIVER BASIN

11-0377. 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 1968.

GAGE.--Graphic water-stage recorder; digital water-stage recorder and Parshall flume on diversion. Altitude of gage is 1,240 ft (from topographic map).

EXTREMES (creek only).--Maximum discharge during year, 80 cfs Mar. 8 (gage height, 3.60 ft); no flow Oct. 1 to Nov. 18, June 15 to Sept. 30.

1964-68: Maximum discharge, 2,100 cfs Dec. 6, 1966 (gage height, 8.60 ft), from rating curve extended above 110 cfs on basis of slope-area measurement at gage height, 6.12 ft; no flow for much of each year.

(combined).--Maximum discharge during year, 80 cfs Mar. 8; minimum daily, 0.21 cfs Sept. 8.

1964-68: Maximum discharge, 2,100 cfs Dec. 6, 1966; minimum daily, 0.10 cfs for some days in most years.

REMARKS.--Records good. No regulation above station. Pauma Valley Water Co. diverts from a site 0.25 mile upstream. For records of combined discharge of Pauma Creek and Pauma Valley Water Co.'s diversion, see following page.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	4.1	2.4	3.8	1.0	1.5	1.2	.20			
2		0	2.0	2.2	3.0	.90	8.9	1.2	.20			
3		0	1.9	2.2	2.9	.90	7.3	1.3	.10			
4		0	1.4	2.1	2.5	.70	6.9	1.2	.10			
5		0	1.2	1.8	2.1	.70	4.7	1.2	.10			
6		0	1.1	1.7	2.0	.90	4.1	1.2	.10			
7		0	1.1	1.7	2.0	1.5	3.8	1.2	.40			
8		0	1.2	1.6	2.0	29	3.6	1.1	.60			
9		0	1.2	1.7	1.9	15	3.4	1.2	.60			
10		0	.90	1.7	2.2	9.1	3.4	.90	.50			
11		0	.90	2.0	2.2	7.3	3.6	1.0	.20			
12		0	.90	2.4	2.0	6.2	2.9	2.6	.20			
13		0	1.4	2.4	3.8	5.5	2.5	4.1	.10			
14		0	1.5	2.4	4.7	6.8	2.4	2.4	.10			
15		0	1.4	2.4	3.4	5.5	2.2	1.5	0			
16		0	1.6	2.5	2.9	5.0	2.6	1.2	0			
17		0	2.7	2.2	2.7	5.0	2.6	1.0	0			
18		0	5.2	1.9	2.7	4.2	2.7	.90	0			
19		12	10	1.8	2.5	3.4	2.5	.80	0			
20		7.4	5.6	1.7	2.1	3.0	2.4	.60	0			
21		4.2	3.4	1.8	2.1	2.8	2.4	.70	0			
22		3.4	2.8	1.6	2.0	2.4	2.2	.80	0			
23		2.8	2.7	1.5	1.8	1.9	1.9	.80	0			
24		2.1	2.7	1.5	1.7	1.7	1.7	.70	0			
25		2.1	2.7	1.4	1.7	1.7	1.6	.60	0			
26		1.7	2.7	1.4	1.7	1.6	1.5	.50	0			
27		1.7	2.7	4.5	1.2	1.5	1.6	.40	0			
28		2.0	2.7	5.8	1.3	1.4	1.5	.30	0			
29		2.0	2.7	3.6	1.1	1.3	1.3	.30	0			
30		2.8	2.7	2.9	-----	1.2	1.2	.20	0			
31		-----	2.6	3.6	-----	1.2	-----	.20	-----			-----
TOTAL	0	44.2	77.70	70.4	68.0	130.30	90.9	33.30	3.50	0	0	0
MEAN	0	1.47	2.51	2.27	2.34	4.20	3.03	1.07	.12	0	0	0
MAX	0	12	10	5.8	4.7	29	8.9	4.1	.60	0	0	0
MIN	0	0	.90	1.4	1.1	.70	1.2	.20	0	0	0	0
AC-FT	0	88	154	140	135	258	180	66	6.9	0	0	0
CAL YR 1967	TOTAL	2,031.40	MEAN	5.57	MAX	49	MIN	0	AC-FT	4,030		
WTR YR 1968	TOTAL	518.30	MEAN	1.42	MAX	29	MIN	0	AC-FT	1,030		

Peak discharge (base, 50 cfs).--Mar. 8 (1200 hrs) 80 cfs (3.60 ft).

SAN LUIS REY RIVER BASIN

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11-0377. PAUMA CREEK NEAR PAUMA VALLEY, CALIF.--Continued

Combined discharge, in cubic feet per second, of Pauma Creek and Pauma Valley Water Co.'s diversion
near Pauma Valley, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	.68	5.1	3.4	5.1	2.6	2.9	3.2	1.6	.94	.59	.37
2	.80	.72	3.0	3.2	4.3	2.5	10	3.2	1.5	.88	.53	.38
3	.80	.78	2.9	3.2	4.2	2.5	7.6	3.3	1.3	.84	.48	.41
4	.80	.79	2.4	3.1	3.8	2.3	7.2	3.3	1.3	.80	.46	.47
5	.80	.88	2.2	2.8	3.4	2.3	5.4	3.2	1.4	.77	.46	.42
6	.80	.92	2.0	2.7	3.3	2.4	5.0	3.2	1.5	.88	.47	.31
7	.80	.90	2.0	2.7	3.3	3.1	4.7	3.2	1.9	1.2	.47	.24
8	.80	.84	2.1	2.6	3.3	30	4.4	3.1	2.1	1.2	.48	.21
9	.80	.83	2.1	2.7	3.2	15	4.2	2.4	2.1	.87	.44	.22
10	.80	.85	1.8	2.7	3.6	9.3	4.2	2.4	2.0	.76	.41	.22
11	.80	.82	1.8	3.0	3.7	7.6	4.4	2.5	1.7	.70	.41	.22
12	.72	.82	1.8	3.4	3.5	6.6	4.4	4.1	1.6	.66	.41	.22
13	.72	.80	2.3	3.4	5.3	5.9	4.6	4.7	1.6	.66	.41	.22
14	.72	.81	2.3	3.4	6.1	7.1	4.6	3.4	1.4	.70	.46	.36
15	.68	.90	2.2	3.4	4.8	5.8	4.3	3.0	1.3	.73	.50	.43
16	.63	.92	2.4	3.5	4.2	5.3	4.7	2.7	1.2	.74	.56	.43
17	.62	.96	3.5	3.2	4.0	5.3	4.7	2.5	1.1	.69	.57	.42
18	.62	.99	6.0	3.2	4.0	5.0	4.8	2.4	1.0	.64	.59	.42
19	.64	12	11	3.0	3.9	4.5	4.6	2.3	.93	.61	.57	.43
20	.66	7.6	6.4	2.9	3.3	4.0	4.5	2.1	.93	.60	.57	.43
21	.74	4.4	4.2	3.0	3.4	3.8	4.5	2.2	.94	.56	.58	.43
22	.82	3.6	3.6	2.9	3.3	3.6	4.3	2.3	.95	.53	.57	.43
23	.79	2.9	3.5	2.8	3.0	3.5	4.0	2.3	.96	.53	.47	.41
24	.77	2.2	3.5	2.8	2.8	3.2	3.8	2.2	1.0	.53	.39	.33
25	.76	2.2	3.6	2.7	2.7	3.2	3.7	2.1	.98	.54	.38	.26
26	.78	1.8	3.8	2.7	2.7	3.1	3.6	2.0	.94	.54	.36	.23
27	.80	1.8	3.8	5.8	2.7	3.0	3.7	1.9	.95	.54	.37	.22
28	.81	2.1	3.7	7.1	3.0	2.9	3.6	1.8	.96	.64	.36	.36
29	.78	2.6	3.7	4.9	2.8	2.8	3.3	1.7	.97	.72	.34	.43
30	.63	3.9	3.7	4.2	-----	2.7	3.2	1.6	.95	.64	.34	.43
31	.65	-----	3.6	4.9	-----	2.6	-----	1.7	-----	.61	.35	-----
TOTAL	23.14	62.31	106.0	105.3	106.7	163.5	138.9	82.0	39.06	22.25	14.35	10.36
MEAN	.75	2.08	3.42	3.40	3.68	5.27	4.63	2.65	1.30	.72	.46	.35
MAX	.82	12	11	7.1	6.1	30	10	4.7	2.1	1.2	.59	.47
MIN	.62	.68	1.8	2.6	2.7	2.3	2.9	1.6	.93	.53	.34	.21
AC-FT	46	124	210	209	212	324	276	163	77	44	28	21

CAL YR 1967 TOTAL 2,616.55 MEAN 7.17 MAX 49 MIN .62 AC-FT 5,190
WTR YR 1968 TOTAL 873.87 MEAN 2.39 MAX 30 MIN .21 AC-FT 1,730

Peak discharge (base, 50 cfs).--(Same as that listed on previous page).

SAN LUIS REY RIVER BASIN

11-0391. SAN LUIS REY RIVER TRIBUTARY NEAR PALA, CALIF.

LOCATION.--Lat 33°21'37", long 117°02'33", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.9 S., R.2 W., on upstream right bank at culvert on State Highway 76, 1.9 miles east of Pala.

DRAINAGE AREA.--1.01 sq mi.

RECORDS AVAILABLE.--Water years 1962-65 (annual maximum), September 1965 to September 1968.

GAGE.--Graphic water-stage recorder with rain-gage attachment, crest-stage gage, and corrugated pipe control. Altitude of gage is 520 ft (from topographic map). Dec. 8, 1961, to Sept. 20, 1965, crest-stage gage only at same site and datum.

EXTREMES.--Maximum discharge during year, 6.8 cfs Mar. 8 (gage height, 15.85 ft), from rating curve as explained below; no flow for most of year.

1961-68: Maximum discharge, 25 cfs Nov. 22, 1965 (gage height, 16.77 ft), from rating curve defined by computation of flow through culvert; no flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0			0						
2		0	0			0						
3		0	0			0						
4		0	0			0						
5		0	0			0						
6		0	0			0						
7		0	0			0						
8		0	0			.20						
9		0	0			0						
10		0	0			0						
11		0	0			0						
12		0	0			0						
13		0	0			0						
14		0	0			0						
15		0	0			0						
16		0	0			0						
17		0	0			0						
18		0	.10			0						
19		0	.20			0						
20		0	0			0						
21		.40	0			0						
22		0	0			0						
23		0	0			0						
24		0	0			0						
25		0	0			0						
26		0	0			0						
27		0	0			0						
28		0	0			0						
29		0	0			0						
30		0	0			0						
31		-----	0		-----	0	-----		-----			-----
TOTAL	0	0.40	0.30	0	0	0.20	0	0	0	0	0	0
MEAN	0	.013	.010	0	0	.007	0	0	0	0	0	0
MAX	0	.40	.20	0	0	.20	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	.8	.6	0	0	.4	0	0	0	0	0	0
+	0	3.6	2.3	.8	.5	2.2	1.1	.2	0	.1	0	0
CAL YR 1967	TOTAL	3.40		MEAN .009	MAX .60	MIN 0		AC-FT 6.7				
WTR YR 1968	TOTAL	.90		MEAN .003	MAX .40	MIN 0		AC-FT 1.8				

+ Precipitation, in inches.

11-0400. SAN LUIS REY RIVER AT MONSERATE NARROWS, NEAR PALA, CALIF.

LOCATION.--Lat 33°20'15", long 117°08'10", in NE¼ 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 1968.

GAGE.--Graphic 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.--25 years (1938-41, 1946-68), 7.30 cfs (5,280 acre-ft per year); median of yearly mean discharges, 1.7 cfs (1,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 131 cfs Mar. 8 (gage height, 2.47 ft); no flow for most of year. 1935-41, 1946-68: Maximum gage height, 8.7 ft Feb. 7, 1937, datum then in use (discharge not determined); no flow at times in most years.

REMARKS.--Records good. Flow regulated by Lake Henshaw (see sta. no. 11-0350). Several diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	.20	.50	.30	.10					
2		0	0	.20	.50	.30	.40					
3		0	0	.20	.50	.20	.30					
4		0	0	.20	.50	.20	.20					
5		0	0	.20	.50	.20	.20					
6		0	0	.20	.50	.20	.20					
7		0	0	.30	.50	.20	.20					
8		0	0	.30	.50	28	.20					
9		0	0	.30	.50	13	.20					
10		0	0	.40	.50	1.7	.10					
11		0	0	.40	.50	1.0	.10					
12		0	0	.40	.50	.90	.10					
13		0	0	.40	.50	.90	0					
14		0	0	.40	.50	.90	0					
15		0	0	.40	.50	.80	0					
16		0	0	.40	.40	.70	0					
17		0	0	.40	.40	.80	0					
18		0	4.2	.40	.40	.80	0					
19		0	20	.40	.40	.70	0					
20		4.0	.50	.40	.40	.60	0					
21		3.7	.40	.40	.40	.50	0					
22		.80	.40	.40	.40	.50	0					
23		0	.40	.40	.40	.50	0					
24		0	.40	.40	.30	.40	0					
25		0	.40	.40	.30	.30	0					
26		0	.30	.40	.30	.40	0					
27		0	.30	.40	.30	.30	0					
28		0	.30	.40	.30	.20	0					
29		0	.30	.50	.30	.20	0					
30		0	.30	.50	-----	.20	0					
31		-----	.30	.50	-----	.10	-----		-----			-----
TOTAL	0	8.50	28.50	11.20	12.50	56.00	2.30	0	0	0	0	0
MEAN	0	.28	.92	.36	.43	1.81	.077	0	0	0	0	0
MAX	0	4.0	20	.50	.50	28	.40	0	0	0	0	0
MIN	0	0	0	.20	.30	.10	0	0	0	0	0	0
AC-FT	0	17	57	22	25	111	4.6	0	0	0	0	0
CAL YR 1967	TOTAL 352.00			MEAN .96		MAX 85		MIN 0		AC-FT 698		
WTR YR 1968	TOTAL 119.00			MEAN .33		MAX 28		MIN 0		AC-FT 236		

SAN LUIS REY RIVER BASIN

11-0410. SAN LUIS REY RIVER NEAR BONSALL, CALIF.

LOCATION.--Lat 33°15'13", long 117°14'48", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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 1968.

GAGE.--Graphic 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, graphic 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.--39 years (1929-68), 18.5 cfs (13,390 acre-ft per year); median of yearly mean discharges, 4.4 cfs (3,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 485 cfs Mar. 8 (gage height, 6.40 ft); no flow Oct. 1 to Nov. 18, July 21 to Sept. 30.

1929-68: Maximum discharge, 18,100 cfs Mar. 3, 1938 (gage height, 16.04 ft, present datum), from rating curve extended above 2,400 cfs; no flow for part of each year.

REMARKS.--Records poor. Flow regulated by Lake Henshaw (see sta. no. 11-0350). Several diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	4.0	4.4	4.1	3.3	4.0	1.3	.40	.10		
2		0	3.0	4.3	4.0	3.3	15	1.3	.40	.10		
3		0	2.5	4.2	4.0	3.2	9.5	1.2	.40	.10		
4		0	2.4	4.1	3.9	3.2	8.0	1.2	.40	.10		
5		0	2.3	4.1	3.8	3.1	6.5	1.1	.40	.10		
6		0	2.5	4.0	3.7	3.0	5.0	1.1	.40	.10		
7		0	3.0	3.9	3.7	10	4.5	1.0	.30	.10		
8		0	2.8	3.9	3.7	14.8	3.7	1.0	.30	.10		
9		0	2.5	3.9	3.7	29	3.5	1.0	.30	.10		
10		0	2.3	3.8	3.7	20	3.0	.90	.30	.10		
11		0	2.0	3.8	3.6	18	2.6	.90	.30	.10		
12		0	2.0	3.8	3.5	15	2.4	.90	.30	.10		
13		0	2.3	3.8	5.0	14	2.3	.90	.20	.10		
14		0	2.3	3.8	4.5	11	2.1	.80	.20	.10		
15		0	3.1	3.8	4.3	10	2.0	.80	.20	.10		
16		0	4.0	3.8	4.2	9.0	2.0	.80	.20	.10		
17		0	10	3.8	4.1	7.0	2.0	.70	.20	.10		
18		0	40	3.8	4.0	6.0	1.9	.70	.20	.10		
19		12	96	3.7	3.9	4.7	1.9	.70	.20	.10		
20		13	40	3.7	3.8	4.5	1.8	.70	.20	.10		
21		28	30	3.7	3.6	4.5	1.8	.70	.20	0		
22		17	20	3.7	3.6	4.4	1.7	.60	.20	0		
23		4.7	15	3.7	3.6	4.3	1.7	.60	.10	0		
24		3.3	10	3.7	3.5	4.3	1.6	.60	.10	0		
25		3.1	7.5	3.7	3.5	4.2	1.6	.60	.10	0		
26		3.0	6.0	3.7	3.5	4.1	1.6	.50	.10	0		
27		2.8	5.6	4.5	3.4	4.1	1.5	.50	.10	0		
28		2.7	5.2	4.5	3.4	4.1	1.5	.50	.10	0		
29		2.4	5.0	4.5	3.4	4.0	1.4	.50	.10	0		
30		5.0	4.7	4.3	-----	4.0	1.4	.50	.10	0		
31		-----	4.5	4.1	-----	4.0	-----	.50	-----	0		-----
TOTAL	0	97.0	342.5	122.5	110.7	371.3	99.5	25.10	7.00	2.00	0	0
MEAN	0	3.23	11.0	3.95	3.82	12.0	3.32	.81	.23	.065	0	0
MAX	0	28	96	4.5	5.0	14.8	15	1.3	.40	.10	0	0
MIN	0	0	2.0	3.7	3.4	3.0	1.4	.50	.10	0	0	0
AC-FT	0	192	679	243	220	736	197	50	14	4.0	0	0
CAL YR 1967	TOTAL	1,812.90	MEAN	4.97	MAX	248	MIN	0	AC-FT	3,600		
WTR YR 1968	TOTAL	1,177.60	MEAN	3.22	MAX	148	MIN	0	AC-FT	2,340		

11-0420. SAN LUIS REY RIVER AT OCEANSIDE, CALIF.

LOCATION.--Lat 33°12'48", long 117°22'33", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.11 S., R.5 W., 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 1968.

GAGE.--Graphic 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.--36 years (1912-14, 1929-41, 1946-68), 15.1 cfs (10,930 acre-ft per year); median of yearly mean discharges, zero.

EXTREMES.--Maximum discharge during year, 147 cfs Mar. 8 (gage height, 9.63 ft); no flow Oct. 1 to Nov. 21. 1912-14, 1916, 1929-42, 1946-68: Maximum discharge, 95,600 cfs Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in each year.

REMARKS.--Records poor. Flow regulated by Lake Henshaw (see sta. no. 11-0350). Several diversions for irrigation and domestic use above station. Average discharge represents flow to ocean during period of record, regardless of upstream development.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	4.6	3.1	2.1	2.2	2.8	2.6	1.8	5.0	1.4	.40
2		0	2.1	2.9	2.1	2.1	5.4	2.6	1.7	3.6	1.4	.30
3		0	1.6	2.8	2.1	2.1	8.0	2.6	1.6	3.0	1.4	.30
4		0	1.0	2.8	2.1	2.0	4.6	2.6	1.5	2.6	1.4	.30
5		0	.90	2.7	2.1	2.0	3.8	2.6	1.5	2.3	1.4	.30
6		0	1.2	2.6	2.0	2.0	3.2	2.6	1.4	2.0	1.3	.30
7		0	1.4	2.5	2.0	2.0	3.2	2.6	1.4	1.9	1.3	.40
8		0	1.2	2.5	1.9	36	3.2	2.6	1.4	1.8	1.2	.40
9		0	.80	2.4	1.9	77	3.2	2.6	1.3	1.7	1.2	.40
10		0	.70	2.4	2.0	36	3.2	2.6	1.3	1.6	1.1	.50
11		0	.70	2.4	2.0	30	3.2	2.7	1.3	1.6	1.1	.50
12		0	.70	2.3	1.9	26	3.2	2.7	1.3	1.5	1.0	.50
13		0	1.0	2.3	2.5	21	3.2	2.7	1.2	1.5	1.0	.60
14		0	1.0	2.3	2.7	18	3.2	2.7	1.2	1.5	.90	.60
15		0	1.5	2.3	3.5	12	3.2	2.7	1.2	1.5	.90	.60
16		0	1.9	2.3	3.2	7.3	3.2	2.7	1.2	1.5	.90	.70
17		0	2.8	2.3	3.2	5.4	3.2	2.7	1.2	1.5	.90	.70
18		0	12	2.3	3.1	11	3.2	2.7	1.1	1.5	.80	.70
19		0	74	2.3	3.0	4.1	3.2	2.7	1.1	1.5	.80	.80
20		0	52	2.2	2.9	4.0	3.2	2.7	1.1	1.5	.80	.80
21		0	25	2.2	2.8	3.8	3.0	2.8	1.1	1.4	.70	.90
22		1.2	18	2.1	2.7	3.7	3.0	2.8	1.1	1.4	.70	.90
23		3.8	14	2.1	2.6	3.6	3.0	2.8	1.1	1.4	.70	1.0
24		1.9	8.0	2.0	2.5	3.5	3.0	2.8	1.1	1.4	.60	1.0
25		.50	5.7	2.0	2.4	3.4	3.0	2.8	1.0	1.4	.60	1.1
26		.10	4.8	2.0	2.4	3.3	2.9	2.8	1.0	1.4	.60	1.1
27		.10	4.3	2.5	2.3	3.2	2.8	2.8	1.0	1.4	.50	1.2
28		.10	4.0	2.5	2.2	3.1	2.7	2.7	1.0	1.4	.50	1.2
29		.40	3.7	2.4	2.2	3.0	2.7	2.6	1.0	1.4	.50	1.3
30		1.5	3.5	2.3	-----	2.9	2.7	2.3	1.0	1.4	.40	1.3
31		-----	3.3	2.2	-----	2.8	-----	2.0	-----	1.4	.40	-----
TOTAL	0	9.60	257.40	74.0	70.4	338.5	101.4	82.2	37.2	56.0	28.40	21.10
MEAN	0	.32	8.30	2.39	2.43	10.9	3.38	2.65	1.24	1.81	.92	.70
MAX	0	3.8	74	3.1	3.5	77	8.0	2.8	1.8	5.0	1.4	1.3
MIN	0	0	.70	2.0	1.9	2.0	2.7	2.0	1.0	1.4	.40	.30
AC-FT	0	19	511	147	140	671	201	163	74	111	56	42
CAL YR 1967	TOTAL	676.80		MEAN 1.85		MAX 195		MIN 0		AC-FT 1,340		
WTR YR 1968	TOTAL	1,076.20		MEAN 2.94		MAX 77		MIN 0		AC-FT 2,130		

Note.--No gage-height record for most of year.

SANTA MARGARITA RIVER BASIN

11-0424. TEMECULA CREEK NEAR AGUANGA, CALIF.

LOCATION.--Lat 33°27'33", long 116°55'22", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.8 S., R.1 E., 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 1,590 ft (from topographic map). Prior to Mar. 8, 1965, graphic water-stage recorder.

AVERAGE DISCHARGE.--11 years, 3.52 cfs (2,550 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 72 cfs Dec. 18 (gage height, 2.22 ft); no flow Oct. 13-25, Aug. 1 to Sept. 30.
1957-68: Maximum discharge, 3,540 cfs Apr. 3, 1958 (gage height, 6.57 ft), from rating curve extended above 1,200 cfs; no flow for several months each year.

REMARKS.--Records good. No regulation above station. Pumping for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.03	1.9	3.5	2.0	1.8	3.1	1.8	.39	.12		
2	.15	.02	1.6	3.3	1.9	1.9	8.8	1.9	.34	.11		
3	.15	.02	1.4	3.2	1.9	1.8	7.2	1.8	.26	.11		
4	.15	.05	1.4	3.0	1.8	1.7	5.2	1.8	.28	.11		
5	.14	.07	1.2	2.9	1.7	1.6	4.3	1.8	.29	.10		
6	.13	.08	1.2	2.7	1.6	1.7	4.0	1.8	.31	.13		
7	.16	.09	1.2	2.6	1.6	2.0	3.6	1.6	.38	.15		
8	.12	.07	1.2	2.5	1.8	23	3.4	1.5	.47	.12		
9	.08	.09	1.2	2.6	1.8	16	3.3	1.5	.54	.10		
10	.10	.09	1.1	2.7	1.8	9.7	3.3	1.5	.46	.08		
11	.04	.09	1.1	2.7	1.9	7.3	3.1	1.4	.32	.09		
12	.01	.09	1.2	2.6	1.8	5.8	3.1	1.9	.25	.06		
13	0	.12	1.7	2.6	2.2	5.3	3.1	2.0	.23	.07		
14	0	.12	1.6	2.4	2.5	5.1	3.0	1.6	.21	.09		
15	0	.12	1.5	2.4	2.1	4.5	2.9	1.4	.14	.10		
16	0	.13	1.6	2.4	2.1	4.1	3.0	1.3	.11	.07		
17	0	.14	2.6	2.4	2.0	4.1	3.1	1.2	.11	.06		
18	0	.18	15	2.2	2.1	3.9	3.7	1.0	.09	.05		
19	0	.25	25	2.2	2.0	3.9	3.0	.88	.09	.05		
20	0	.22	12	2.0	2.0	3.5	3.0	.83	.08	.05		
21	0	.24	7.4	1.7	2.0	3.3	2.9	.87	.08	.02		
22	0	.71	5.5	1.5	2.1	3.1	2.8	.95	.10	.03		
23	0	.77	4.9	1.5	2.0	3.0	2.5	.87	.13	.03		
24	0	.65	4.8	1.6	1.9	3.0	2.4	.84	.14	.04		
25	0	.58	4.7	1.6	1.8	3.0	2.3	.74	.14	.04		
26	.02	.58	4.9	1.7	1.8	3.0	2.3	.63	.10	.04		
27	.04	.59	4.7	2.1	1.8	2.8	2.3	.48	.10	.06		
28	.04	.96	4.5	3.6	1.9	2.6	2.2	.45	.08	.09		
29	.07	1.0	4.3	2.7	1.8	2.6	1.9	.40	.08	.04		
30	.07	1.1	4.0	2.2	-----	2.6	1.8	.42	.09	.02		
31	.05	-----	3.7	2.1	-----	2.8	-----	.40	-----	.01		-----
TOTAL	1.72	9.25	130.1	75.2	55.7	140.5	100.6	37.56	6.39	2.24	0	0
MEAN	.056	.31	4.20	2.43	1.92	4.53	3.35	1.21	.21	.072	0	0
MAX	.20	1.1	25	3.6	2.5	23	8.8	2.0	.54	.15	0	0
MIN	0	.02	1.1	1.5	1.6	1.6	1.8	.40	.08	.01	0	0
AC-FT	3.4	18	258	149	110	279	200	75	13	4.4	0	0
CAL YR 1967 TOTAL	2,061.48			MEAN 5.63		MAX 125	MIN 0	AC-FT 4,090				
WTR YR 1968 TOTAL	559.26			MEAN 1.53		MAX 25	MIN 0	AC-FT 1,110				

11-0425. 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 1968. 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.--Graphic water-stage recorder with rain-gage attachment. U.S. Weather Bureau 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). Graphic water-stage recorder at site 500 ft downstream measures release and spill.

AVERAGE DISCHARGE.--25 years (1923-48), 14.5 cfs (10,500 acre-ft per year); median of yearly mean discharges, 8.3 cfs (6,000 acre-ft per year), see records available; 20 years (1948-68), 4.59 cfs (3,320 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

REMARKS.--Records of discharge represent all water reaching Vail Lake, including precipitation on lake surface. Discharge computed on basis of records of storage, release (draft), spill and evaporation. Monthly evaporation from lake surface computed on basis of evaporation from a class A evaporation pan using coefficient of 0.77, excepting the period June 1964 to September 1965, when a 24-inch diameter sunken screen pan with a coefficient of 0.98 was used. Area-capacity tables for lake are based on a survey made in 1947. Vail Dam completed in June 1949. Capacity of lake at spillway level (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. There has been no spill since Nov. 13, 1948, date of closure. Water is released as required down Temecula Creek for diversion about 1 mile below dam. Monthly precipitation, in inches, from U.S. Weather Bureau non-recording rain gage is as follows: November, 2.22; January, 2.35; February, 1.09; March, 1.30; May, 0.27; the water year, 7.23.

MONTHLY DISCHARGE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

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.....	1,423.48	12,966	-	-	-	-
Oct. 31.....	1,423.05	12,762	-204	0	245	41
Nov. 30.....	1,423.10	12,786	+24	0	160	184
Dec. 31.....	1,423.50	12,976	+190	0	87	277
Calendar year 1967.....	-	-	+2,744	1,136	2,438	6,318
Jan. 31.....	1,423.58	13,014	+38	0	113	151
Feb. 29.....	1,423.75	13,094	+80	0	100	180
Mar. 31.....	1,423.97	13,199	+105	0	141	246
Apr. 30.....	1,423.84	13,137	-62	0	189	127
May 31.....	1,423.10	12,786	-351	138	242	29
June 30.....	1,422.19	12,365	-421	212	289	80
July 31.....	a 1,421.55	12,076	-289	48	316	75
Aug. 31.....	1,421.01	11,834	-242	0	286	44
Sept. 30.....	1,420.42	11,578	-256	0	280	24
Water year 1967-68.....	-	-	-1,388	398	2,448	1,458

† Elevation at 2400 hours.

a Estimated.

Note.--For months when inflow to the lake was small and other quantities were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing discharge as a residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

SANTA MARGARITA RIVER BASIN

11-0430. 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 1968. Monthly discharge only October 1924 to September 1930, published in WSP 1315-B.

GAGE.--Graphic 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 graphic water-stage recorder and sharp-crested weir at site 0.4 mile downstream at different datum used to record low flows.

AVERAGE DISCHARGE.--44 years, 8.28 cfs (5,990 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 46 cfs Mar. 8 (gage height, 1.50 ft); minimum daily, 0.10 cfs Oct. 14-31, July 25, 26.

1930-68: Maximum discharge, 17,500 cfs Jan. 23, 1943 (gage height, 13.82 ft); minimum daily, 0.10 cfs for several days in some years.

REMARKS.--Records good. No regulation above station. Pumping above station for irrigation of about 2,500 acres.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	.30	.20	.20	.30	.30	.20	.20	.20	.20	2.1
2	.20	.20	.30	.20	.20	.30	.40	.20	.20	.20	.20	2.1
3	.20	.20	.30	.20	.20	.30	.20	.20	.20	.20	.20	2.1
4	.20	.20	.30	.20	.20	.30	.20	.20	.20	.20	.20	2.1
5	.20	.20	.30	.20	.20	.30	.20	.20	.20	.20	.30	2.1
6	.20	.20	.30	.20	.20	.30	.20	.20	.20	.20	.30	2.0
7	.20	.20	.30	.20	.20	.30	.20	.20	.20	.20	.30	2.0
8	.20	.20	.30	.20	.20	13	.20	.20	.20	.20	.20	2.0
9	.20	.20	.30	.20	.20	4.3	.20	.20	.20	.20	.20	2.0
10	.20	.20	.30	.20	.20	1.1	.20	.20	.20	.20	.30	1.9
11	.20	.20	.30	.20	.20	.40	.20	.20	.20	.20	.30	1.9
12	.20	.20	.30	.20	.20	.30	.20	.20	.20	.20	.30	1.9
13	.20	.20	.30	.20	.20	.30	.20	.20	.20	.20	.60	1.9
14	.10	.20	.30	.20	.20	.20	.20	.20	.20	.20	.80	1.9
15	.10	.20	.30	.20	.20	.20	.20	.20	.20	.20	.90	1.9
16	.10	.20	.30	.20	.20	.20	.20	.20	.20	.20	1.2	1.9
17	.10	.20	.40	.20	.20	.20	.20	.20	.20	.20	1.3	1.9
18	.10	.20	1.8	.20	.20	.20	.20	.20	.20	.30	2.0	1.9
19	.10	.50	9.2	.20	.20	.20	.20	.20	.20	.30	1.9	1.9
20	.10	.20	6.0	.20	.20	.20	.20	.20	.20	.30	2.1	2.0
21	.10	.50	.80	.20	.20	.20	.20	.20	.20	.30	2.1	2.0
22	.10	.20	.30	.20	.20	.20	.20	.20	.20	.30	2.1	1.9
23	.10	.20	.20	.20	.20	.20	.20	.20	.20	.30	2.1	1.9
24	.10	.20	.20	.20	.20	.60	.20	.20	.20	.30	2.0	2.0
25	.10	.20	.20	.20	.20	.20	.20	.20	.20	.10	1.9	2.2
26	.10	.20	.20	.20	.20	.20	.20	.20	.20	.10	1.5	2.2
27	.10	.20	.20	.20	.20	.20	.20	.20	.20	.20	2.1	2.4
28	.10	.20	.20	.30	.20	.20	.20	.20	.20	.30	2.2	2.4
29	.10	.20	.20	.20	.20	.20	.20	.20	.20	.20	2.4	2.4
30	.10	.30	.20	.20	-----	.20	.20	.20	.20	.20	2.1	2.2
31	.10	-----	.20	.20	-----	.20	-----	.20	-----	.20	2.1	-----
TOTAL	4.40	6.70	25.10	6.30	5.80	25.50	6.30	6.20	6.00	6.80	36.40	61.1
MEAN	.14	.22	.81	.20	.20	.82	.21	.20	.20	.22	1.17	2.04
MAX	.20	.50	9.2	.30	.20	13	.40	.20	.20	.30	2.4	2.4
MIN	.10	.20	.20	.20	.20	.20	.20	.20	.20	.10	.20	1.9
AC-FT	8.7	13	50	13	12	51	13	12	12	13	72	121

CAL YR 1967 TOTAL 463.80 MEAN 1.27 MAX 219 MIN .10 AC-FT 920
WTR YR 1968 TOTAL 196.60 MEAN .54 MAX 13 MIN .10 AC-FT 390

Peak discharge (base, 55 cfs).--No peak above base.

SANTA MARGARITA RIVER BASIN

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11-0440. SANTA MARGARITA RIVER NEAR TEMECULA, CALIF.

LOCATION (revised).--Lat 33°28'28", long 117°08'29", 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 1968. Prior to October 1952, published as Temecula Creek at Railroad Canyon, near Temecula.

GAGE.--Graphic water-stage recorder. Altitude of gage is 950 ft (from topographic map). Prior to Nov. 3, 1966, at site 100 ft downstream at same datum.

AVERAGE DISCHARGE.--25 years (1923-48), 28.2 cfs (20,420 acre-ft per year), 20 years (1948-68), 8.54 cfs (6,180 acre-ft per year); median of yearly mean discharges (1923-48), 13 cfs (9,400 acre-ft per year); (1948-68), 5.4 cfs (3,900 acre-ft per year).

EXTREMES.--Maximum discharge during year, 45 cfs Mar. 8 (gage height, 2.50 ft); minimum daily, 1.8 cfs June 20, Aug. 1-8.

1923-68: Maximum discharge, 25,000 cfs Feb. 16, 1927 (gage height, 14.6 ft, at site 100 ft downstream), from rating curve extended above 10,000 cfs; minimum daily, 0.30 cfs Aug. 18-22, 1965, regulation by construction work above station.

REMARKS.--Records good. Flow partly regulated since November 1948 by Vail Lake (see sta. no. 11-0425). Pumping above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	3.0	4.2	4.0	3.4	2.8	3.0	2.4	2.2	2.2	1.8	3.8
2	2.7	3.0	4.0	4.0	3.2	2.8	4.2	2.4	2.2	2.2	1.8	3.8
3	2.7	3.0	4.0	4.0	3.2	2.8	2.7	2.4	2.4	2.2	1.8	3.8
4	2.7	3.0	4.0	4.0	3.2	2.7	2.7	2.4	2.6	2.2	1.8	3.4
5	2.7	3.2	4.0	4.0	3.2	2.7	2.7	2.4	2.6	2.2	1.8	3.4
6	2.7	3.2	4.0	4.0	3.2	2.7	2.7	2.4	2.6	2.2	1.8	3.4
7	2.7	3.2	4.0	4.0	3.2	2.7	2.7	2.4	2.6	2.8	1.8	3.4
8	2.6	3.4	4.0	4.0	3.2	2.0	2.7	2.6	2.7	2.2	1.8	3.4
9	2.6	3.4	4.0	3.8	3.2	8.9	2.7	2.6	2.7	2.1	1.9	3.4
10	2.6	3.4	3.8	3.8	3.2	4.0	2.8	2.4	2.4	2.0	1.9	3.4
11	2.6	3.4	3.8	3.8	3.2	3.2	2.7	2.6	2.6	2.1	1.9	3.6
12	2.6	3.4	3.8	3.8	3.2	3.0	2.7	3.0	2.6	2.1	1.9	3.6
13	2.6	3.4	4.2	3.8	3.4	2.8	2.7	3.0	2.6	2.4	2.0	3.6
14	2.6	3.4	4.2	3.8	3.4	2.8	2.7	3.0	2.2	2.4	2.1	3.6
15	2.6	3.4	4.2	3.8	3.4	2.8	2.7	3.0	1.9	2.1	2.1	3.6
16	2.6	3.4	4.2	3.8	3.4	2.8	2.7	3.0	1.9	2.4	2.2	3.6
17	2.6	3.4	4.4	3.8	3.4	3.0	2.7	2.8	1.9	2.4	2.6	3.6
18	2.6	3.4	8.7	3.8	3.4	3.0	2.7	2.8	1.9	2.4	3.2	3.6
19	2.6	8.8	24	3.8	3.4	2.8	2.6	2.6	1.9	2.4	3.0	3.6
20	2.7	6.8	12	3.8	3.4	2.7	2.6	2.6	1.8	2.4	3.2	4.0
21	2.7	6.8	5.3	3.8	3.2	2.7	2.6	2.6	1.9	2.4	3.6	4.0
22	2.8	5.6	4.6	3.8	3.2	2.7	2.6	2.6	1.9	2.1	3.6	4.0
23	3.0	4.4	4.4	3.6	3.2	2.7	2.6	2.6	1.9	2.1	3.6	4.0
24	3.0	4.2	4.4	3.6	3.2	3.0	2.6	2.6	2.1	2.4	3.6	4.0
25	3.0	4.0	4.2	3.6	3.0	2.8	2.6	2.6	2.2	2.4	3.4	4.0
26	3.2	4.0	4.2	3.6	3.0	2.8	2.6	2.6	2.4	2.4	3.0	3.8
27	3.2	4.0	4.2	4.2	3.0	2.8	2.6	2.4	2.7	2.4	3.4	3.6
28	3.2	3.8	4.2	4.2	3.0	2.7	2.6	2.4	2.6	2.6	3.8	3.4
29	3.0	3.8	4.2	3.4	2.8	2.6	2.6	2.4	2.2	2.1	4.0	3.4
30	2.8	4.4	4.2	3.4	-----	2.6	2.4	2.4	2.2	2.1	4.0	3.4
31	2.8	-----	4.0	3.4	-----	2.6	-----	2.4	-----	2.1	3.8	-----
TOTAL	85.5	119.6	161.4	118.2	93.4	111.0	81.5	80.4	68.4	70.5	82.2	109.2
MEAN	2.76	3.99	5.21	3.81	3.22	3.58	2.72	2.59	2.28	2.27	2.65	3.64
MAX	3.2	8.8	24	4.2	3.4	20	4.2	3.0	2.7	2.8	4.0	4.0
MIN	2.6	3.0	3.8	3.4	2.8	2.6	2.4	2.4	1.8	2.0	1.8	3.4
AC-FT	170	237	320	234	185	220	162	159	136	140	163	217

CAL YR 1967 TOTAL 1,824.8

MEAN 5.00

MAX 234

MIN 2.4

AC-FT 3,620

WTR YR 1968 TOTAL 1,181.3

MEAN 3.23

MAX 24

MIN 1.8

AC-FT 2,340

SANTA MARGARITA RIVER BASIN

11-0445. SANTA MARGARITA RIVER NEAR FALLBROOK, CALIF.

LOCATION.--Lat 33°23'54", long 117°15'44", in NE¼SE¼NE¼ 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 1968. Monthly discharge only for October to November 1924, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Concrete-road control since October 1955. Datum of gage is 267.96 ft above mean sea level (levels by Bureau of Reclamation). Prior to Oct. 1, 1955, graphic water-stage recorder at site 1.7 miles upstream at different datum. Records equivalent except those for extreme low flows, Oct. 1, 1955, to Mar. 2, 1965, at present site and datum.

AVERAGE DISCHARGE.--24 years (1924-48), 35.4 cfs (25,630 acre-ft per year), 20 years (1948-68), 9.30 cfs (6,730 acre-ft per year); median of yearly mean discharges (1924-48), 17 cfs (12,300 acre-ft per year); (1948-68), 4.8 cfs (3,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 157 cfs Mar. 8 (gage height, 5.32 ft); no flow July 22 to Aug. 18, 1924-68: Maximum discharge, 33,100 cfs Feb. 16, 1927 (gage height, 15.6 ft, site and datum then in use), from rating curve extended above 8,800 cfs on basis of slope-area measurement of maximum flow; no flow at times in recent years.

REMARKS.--Records good. Flow partly regulated since November 1948 by Vail Lake (see sta. no. 11-0425). Several small diversions above station for irrigation. The Fallbrook Public Utility District reports no water pumped during year from a well in the streambed 2.1 miles upstream from the station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.4	2.1	5.5	4.8	3.8	3.1	1.9	1.0	.54	0	1.7
2	1.3	1.6	2.5	5.6	5.3	3.8	6.4	1.7	1.0	.50	0	1.7
3	1.3	1.8	3.0	5.1	5.3	3.6	5.6	1.8	.94	.46	0	1.6
4	1.3	1.8	3.5	4.8	5.1	3.2	4.2	2.0	.92	.42	0	1.5
5	1.2	1.8	4.0	4.7	5.0	3.1	3.8	1.8	.93	.38	0	1.5
6	1.2	2.0	4.5	4.7	5.0	3.3	3.7	1.8	.96	.35	0	1.4
7	1.2	1.9	5.0	4.8	5.0	3.7	3.6	1.7	1.1	.33	0	1.3
8	1.2	2.0	5.0	4.7	5.1	3.4	3.6	1.7	1.4	.30	0	1.2
9	1.2	2.0	5.0	4.8	5.1	2.1	3.4	1.8	1.6	.27	0	1.1
10	1.1	1.9	4.8	4.8	5.4	1.1	2.8	1.8	1.4	.25	0	.98
11	1.1	1.8	4.9	4.8	5.3	7.1	3.0	1.8	1.1	.23	0	1.0
12	1.1	1.8	5.2	4.7	5.3	5.9	3.1	2.0	.85	.21	0	1.2
13	1.1	1.7	6.3	4.5	6.1	5.3	3.1	2.3	.77	.19	0	1.3
14	1.1	1.7	6.9	4.5	6.0	5.1	3.0	2.1	.72	.18	0	1.3
15	.96	1.8	6.3	4.6	5.6	4.9	2.9	1.9	.68	.16	0	1.4
16	.92	1.5	6.3	4.8	5.3	4.7	3.1	1.9	1.0	.15	0	1.5
17	.77	1.2	7.1	4.8	5.3	4.8	3.2	1.9	.67	.14	0	1.4
18	.77	1.2	9.6	4.7	5.3	4.8	3.3	1.7	.68	.13	0	1.6
19	.84	2.0	19	4.5	5.3	4.4	3.2	1.4	.78	.12	.06	1.7
20	.94	4.2	23	4.5	5.1	3.9	3.2	1.2	1.6	.11	.98	1.7
21	1.1	3.4	14	4.6	5.4	3.8	3.2	1.4	.80	.10	.97	1.8
22	1.3	3.3	8.8	4.5	5.1	3.7	3.0	1.6	.47	0	1.1	1.9
23	1.4	2.7	7.5	4.2	5.3	3.5	2.8	1.6	.36	0	1.2	1.5
24	1.4	2.1	6.9	4.0	4.9	3.3	2.3	1.5	.33	0	1.3	1.2
25	1.4	1.9	6.6	4.0	4.5	3.5	2.3	1.4	.33	0	1.2	1.0
26	1.5	1.8	6.3	4.2	4.3	3.2	2.3	1.2	.38	0	1.1	1.2
27	1.6	1.8	6.2	4.8	4.3	3.0	2.5	1.2	.48	0	.99	1.4
28	1.8	1.9	5.9	5.6	4.3	2.8	2.5	1.0	.56	0	.78	1.6
29	1.7	2.0	5.6	5.1	4.1	2.7	2.5	.92	.66	0	1.3	1.9
30	1.4	2.0	5.5	4.6	-----	2.6	2.3	.90	.58	0	1.4	2.0
31	1.3	-----	5.6	4.7	-----	2.7	-----	.83	-----	0	1.7	-----
TOTAL	37.80	60.0	212.9	146.2	147.9	176.2	97.0	49.75	25.05	5.52	14.08	43.58
MEAN	1.22	2.00	6.87	4.72	5.10	5.68	3.23	1.60	.84	.18	.45	1.45
MAX	1.8	4.2	23	5.6	6.1	34	6.4	2.3	1.6	.54	1.7	2.0
MIN	.77	1.2	2.1	4.0	4.1	2.6	2.3	.83	.33	0	0	.98
AC-FT	75	119	422	290	293	349	192	99	50	11	28	86

CAL YR 1967 TOTAL 3,007.95 MEAN 8.24 MAX 502 MIN .04 AC-FT 5,970
WTR YR 1968 TOTAL 1,015.98 MEAN 2.78 MAX 34 MIN 0 AC-FT 2,020

11-0460. SANTA MARGARITA RIVER AT YSIDORA, CALIF.

LOCATION.--Lat 33°14'38", long 117°22'56", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.11 S., R.5 W., 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 1968.

GAGE.--Graphic 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.--45 years, 26.6 cfs (19,260 acre-ft per year); median of yearly mean discharges, 8.0 cfs (5,800 acre-ft per year).

EXTREMES.--No flow during year.

1923-68: Maximum discharge, 33,600 cfs Feb. 16, 1927 (gage height, 18.00 ft, site and datum then in use), on basis of slope-area measurement of maximum flow; no flow for part of most years.

REMARKS.--No flow since July 15, 1967. Flow partly regulated by Vail Lake since November 1948 (see sta. no. 11-0425). Diversions for irrigation on Rancho California (formerly Santa Margarita Ranch and Pauba Ranch). Conservation pools, 300 ft upstream, detain low flow. AVERAGE DISCHARGE represents flow to ocean during period of record, regardless of upstream development. Discharge for the calendar year 1967 is as follows: Maximum daily, 645 cfs; minimum, zero; mean, 8.28 cfs; total, 5,990 acre-ft.

SAN JUAN CREEK BASIN

11-0465. 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 1968. Combined records of creek and diversion, October 1954 to September 1968.

GAGE.--Digital water-stage recorder on creek; digital water-stage recorder and Parshall flume on diversion. Altitude of gage is 150 ft (from topographic map). Prior to Feb. 28, 1934, at site 2.5 miles downstream at different datum. Feb. 28, 1934, to Dec. 10, 1938, at present site at different datum. Dec. 11, 1938, to Dec. 17, 1941, at present site at datum 2.00 ft higher. Dec. 17, 1941, to Mar. 31, 1966, at present site and datum.

AVERAGE DISCHARGE (creek only).--40 years, 11.7 cfs (8,470 acre-ft per year); median of yearly mean discharges, 2.7 cfs (2,000 acre-ft per year).
(combined).--14 years, 8.79 cfs (6,360 acre-ft per year); median of yearly mean discharges, 3.0 cfs (2,200 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 366 cfs Mar. 8 (gage height, 3.13 ft); no flow May 30 to Sept. 30.

1929-68: 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, 366 cfs Mar. 8; no flow for many days.

1954-68: Maximum discharge, 9,000 cfs Dec. 6, 1966; no flow for many days in 1961-68.

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. Records of suspended-sediment loads for the water year 1968 are published in Part 2 of this report.

COOPERATION.--Twenty-one discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.2	15	6.4	3.9	2.6	3.2	.81				
2	1.5	1.3	9.0	5.4	4.1	2.6	7.0	.79				
3	1.4	1.4	7.6	5.7	4.5	2.9	3.4	.82				
4	1.5	1.8	6.5	5.1	4.4	2.9	2.7	.81				
5	1.4	2.2	5.8	5.2	4.3	2.6	2.1	.73				
6	1.4	2.4	5.8	6.3	4.2	2.6	1.9	.68				
7	1.3	2.8	6.2	6.6	4.2	2.9	1.9	.65				
8	1.4	3.0	6.7	6.3	3.9	87	2.2	.61				
9	1.4	3.0	5.6	6.1	3.6	43	2.7	.53				
10	1.1	3.1	5.6	5.8	3.7	12	1.4	.49				
11	1.2	3.1	5.4	5.4	3.7	7.6	1.2	.45				
12	1.1	3.2	5.3	4.9	3.4	6.3	1.3	.47				
13	1.1	3.0	5.5	5.1	5.2	6.5	1.5	.46				
14	1.1	2.9	5.2	5.5	4.8	5.7	1.9	.42				
15	1.1	2.7	5.0	5.2	4.7	4.8	1.9	.42				
16	.97	2.5	5.3	4.8	4.8	4.8	1.9	.36				
17	.89	2.4	5.8	4.9	4.5	5.5	1.5	.30				
18	.83	2.4	17	4.8	4.7	5.1	1.1	.28				
19	.78	33	32	4.7	4.3	4.0	1.2	.26				
20	.85	48	26	4.9	3.4	3.4	1.5	.22				
21	.91	38	15	5.2	3.7	2.9	1.6	.22				
22	.96	29	9.9	4.8	3.7	2.0	1.2	.19				
23	.99	12	8.1	4.2	3.6	2.1	.93	.18				
24	1.1	8.2	7.7	3.8	3.4	2.4	.84	.18				
25	1.1	7.1	6.8	2.4	3.4	2.5	.81	.15				
26	1.2	7.0	6.4	1.9	3.3	2.1	.74	.10				
27	1.3	6.4	5.9	2.8	2.9	2.0	.83	.09				
28	1.3	6.8	5.9	3.4	2.9	2.2	.80	.06				
29	1.4	6.9	5.9	2.0	2.6	2.2	.79	.02				
30	1.3	10	6.4	2.6	-----	2.7	.80	0				
31	1.2	-----	6.4	4.0	-----	3.2	-----	0				
TOTAL	36.78	256.8	270.7	146.2	113.8	241.1	52.84	11.75	0	0	0	0
MEAN	1.19	8.56	8.73	4.72	3.92	7.78	1.76	.38	0	0	0	0
MAX	1.7	48	32	6.6	5.2	87	7.0	.82	0	0	0	0
MIN	.78	1.2	5.0	1.9	2.6	2.0	.74	0	0	0	0	0
AC-FT	73	509	537	290	226	478	105	23	0	0	0	0
CAL YR 1967	TOTAL 6,253.24		MEAN 17.1		MAX 800		MIN .36		AC-FT 12,400			
NTR YR 1968	TOTAL 1,129.97		MEAN 3.09		MAX 87		MIN 0		AC-FT 2,240			

Peak discharge (base, 200 cfs).--Mar. 8 (1345 hrs) 366 cfs (3.13 ft).

SAN JUAN CREEK BASIN

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11-0465; SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO, CALIF.--Continued

Combined discharge, in cubic feet per second, of San Juan Creek and Capistrano Water Co.'s canal near San Juan Capistrano, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.9	15	6.4	4.3	2.8	3.6	2.9	.02	0	0	0
2	2.5	3.3	9.0	5.4	4.4	2.8	7.2	2.4	0	0	0	0
3	2.0	3.7	7.6	5.7	4.8	3.2	3.5	2.3	0	0	0	0
4	2.1	4.1	6.5	5.1	4.6	3.2	2.8	2.2	0	0	0	0
5	2.0	3.9	5.8	5.2	4.5	2.8	2.4	1.8	0	0	0	0
6	2.0	4.1	5.8	6.3	4.4	2.8	2.5	1.5	0	0	0	0
7	2.0	4.3	6.2	6.6	4.4	3.1	2.5	1.4	0	0	0	0
8	2.2	4.1	6.7	6.3	4.1	88	2.7	1.2	0	0	0	.01
9	2.2	3.9	5.6	6.1	3.8	43	3.4	.84	0	0	0	.01
10	2.0	4.0	5.6	5.8	3.8	12	2.7	.69	0	0	.02	.02
11	2.5	4.1	5.4	5.4	3.8	7.6	2.5	.68	0	0	.03	.02
12	2.6	4.3	5.3	4.9	3.6	6.3	2.5	1.0	0	0	0	0
13	2.2	4.1	5.5	5.1	5.4	6.5	2.8	.88	0	.01	.02	0
14	2.6	4.1	5.2	5.5	5.0	5.7	3.3	.75	0	0	0	0
15	2.7	3.8	5.0	5.2	4.9	4.8	3.3	.61	0	0	0	0
16	2.3	3.5	5.3	4.8	5.0	4.8	3.3	.39	0	0	0	0
17	2.0	3.2	5.8	4.9	4.7	5.5	2.8	.32	0	0	0	0
18	1.7	3.4	17	4.8	4.9	5.1	2.3	.29	.01	0	0	0
19	1.4	34	32	4.7	4.5	4.0	2.4	.26	0	0	0	0
20	1.2	48	26	4.9	3.6	3.9	2.8	.22	.01	0	0	0
21	2.2	38	15	5.2	4.0	3.9	3.0	.22	0	0	0	0
22	2.7	29	9.9	4.8	4.0	3.0	2.4	.19	.01	0	0	.01
23	2.9	12	8.1	4.2	3.9	3.1	2.0	.18	0	0	0	0
24	2.6	8.2	7.7	3.8	3.7	3.4	1.8	.18	0	0	.03	0
25	2.9	7.1	6.8	3.9	3.7	3.5	1.8	.15	0	0	.03	0
26	3.7	7.0	6.4	4.0	3.6	3.1	2.1	.10	0	0	0	0
27	3.4	6.4	5.9	4.5	3.2	3.0	2.4	.09	0	0	0	0
28	3.4	6.8	5.9	5.0	3.2	3.2	2.1	.06	0	0	0	0
29	3.6	6.9	5.9	4.5	2.9	3.2	2.1	.02	0	0	0	0
30	3.2	10	6.4	4.3	-----	3.5	2.4	0	0	0	0	0
31	3.0	-----	6.4	4.5	-----	3.8	-----	0	-----	0	.02	-----
TOTAL	76.8	282.2	270.7	157.8	120.7	254.6	83.4	23.82	0.05	0.01	0.15	0.07
MEAN	2.48	9.41	8.73	5.09	4.16	8.21	2.78	.77	.002	.0003	.005	.002
MAX	3.7	48	32	6.6	5.4	88	7.2	2.9	.02	.01	.03	.02
MIN	1.2	2.9	5.0	3.8	2.9	2.8	1.8	0	0	0	0	0
AC-FT	152	560	537	313	239	505	165	47	.10	.02	.3	.1

CAL YR 1967 TOTAL 6,482.41 MEAN 17.8 MAX 800 MIN .38 AC-FT 12,860
WTR YR 1968 TOTAL 1,270.30 MEAN 3.47 MAX 88 MIN 0 AC-FT 2,520

Peak discharge (base, 200 cfs).--Same as that for creek.

SAN JUAN CREEK BASIN

11-0470. ARROYO TRABUCO NEAR SAN JUAN CAPISTRANO, CALIF.

LOCATION.--Lat 33°31'36", long 117°40'08", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.7 S., R.8 W., 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 1968. Prior to October 1956, published as Trabuco Creek near San Juan Capistrano.

GAGE.--Graphic water-stage recorder. Altitude of gage is 180 ft (from topographic map).

AVERAGE DISCHARGE (combined).--38 years, 4.67 cfs (3,380 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

EXTREMES.--Maximum discharge during year, 16 cfs Nov. 21 (gage height, 2.48 ft); no flow for many days. 1930-68: Maximum discharge, 9,240 cfs Feb. 6, 1937; no flow at times in each year.

REMARKS.--No regulation above station. Diversion to spreading grounds by Orange County Flood Control District, at site 0.8 mile upstream, began in February 1966. No diversion during year. Records of suspended sediment loads for the water year 1968 are published in Part 2 of this report.

COOPERATION.--Records furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	0	4.2	1.2	.40	.30	.10	0	0	0	0	0
2	.60	0	2.0	1.6	.40	.30	.10	0	0	0	0	0
3	.60	0	1.6	1.8	.40	.20	0	0	0	.50	.10	0
4	.40	0	2.0	1.7	.40	.20	0	0	0	.60	.10	0
5	.40	0	1.8	1.7	.40	.30	0	0	.40	.50	.20	0
6	.40	0	1.7	1.8	.40	.40	0	0	0	.20	.20	0
7	.40	0	1.8	1.2	.40	.50	0	0	0	0	.20	0
8	.40	0	1.8	1.7	.40	4.6	0	0	0	0	.10	0
9	.50	0	.90	1.8	.50	4.0	0	0	0	0	0	.10
10	.50	.20	.90	1.8	.40	1.4	0	.30	0	0	0	.20
11	.60	.30	1.6	1.8	.40	2.0	0	.30	0	.40	0	.20
12	.60	.20	1.6	1.8	.50	0	0	0	0	.40	0	.30
13	.60	.20	1.4	1.6	.50	0	0	.30	0	0	0	.30
14	.60	.10	1.7	1.1	.50	0	0	0	0	0	0	.20
15	.70	0	1.8	1.6	.50	0	0	0	0	0	0	0
16	.60	0	1.8	1.1	.50	0	0	0	0	0	0	0
17	.60	0	1.1	1.1	.50	0	0	0	0	0	.10	0
18	.60	0	4.6	1.1	.50	0	0	.40	0	0	.10	0
19	.60	.10	3.8	1.0	.50	0	0	.40	0	.40	.10	0
20	.60	4.4	2.4	1.0	.60	0	0	0	0	0	0	0
21	.60	7.7	2.2	.90	.60	0	0	0	0	0	0	0
22	.60	7.4	2.2	.80	.70	0	0	0	0	0	0	0
23	.60	3.3	1.4	.70	.70	0	0	0	0	0	0	0
24	.60	3.2	1.4	.60	.70	0	0	0	0	0	0	0
25	.20	2.1	1.4	.50	.30	0	0	0	0	0	0	.20
26	0	1.9	1.8	.40	0	0	0	0	.30	0	0	.40
27	0	2.7	1.8	.40	0	0	0	0	0	0	0	.20
28	0	1.7	1.8	.40	.20	0	0	.20	.20	0	0	0
29	0	2.4	1.8	.40	.30	0	0	.10	0	0	0	0
30	0	3.3	1.2	.40	-----	0	0	0	0	0	0	0
31	0	-----	1.2	.40	-----	0	-----	0	-----	0	0	-----
TOTAL	13.50	41.20	58.70	35.40	12.60	14.20	0.20	2.00	0.90	3.00	1.20	2.10
MEAN	.44	1.37	1.89	1.14	.43	.46	.007	.065	.030	.097	.039	.070
MAX	.70	7.7	4.6	1.8	.70	4.6	.10	.40	.40	.60	.20	.40
MIN	0	0	.90	.40	0	0	0	0	0	0	0	0
AC-FT	27	82	116	70	25	28	.4	4.0	1.8	6.0	2.4	4.2
CAL YR 1967	TOTAL 2,486.50		MEAN 6.81		MAX 295		MIN 0		AC-FT 4,930			
WTR YR 1968	TOTAL 185.00		MEAN .51		MAX 7.7		MIN 0		AC-FT 367			

11-0475. 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 440 ft (from topographic map). Prior to July 1962, at different datum.

EXTREMES.--Maximum discharge during year, 75 cfs Mar. 8 (gage height, 1.68 ft); no flow for many days. 1930-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.10	.40	.30	.30	0	0	0	0	0	0	0
2	0	.10	0	.50	.20	0	.40	.40	1.1	0	0	0
3	.10	.10	0	.50	.20	0	0	.60	0	0	0	.30
4	0	0	.50	.10	.90	0	0	.80	0	0	0	.10
5	0	.10	.30	.10	.30	0	0	0	0	0	.30	0
6	0	0	0	.10	0	.10	0	0	0	0	0	0
7	0	0	0	.20	0	.10	0	0	0	0	0	0
8	0	0	0	.40	.10	5.3	0	0	0	0	0	0
9	.10	0	.20	.10	.10	0	0	0	0	0	0	0
10	.10	0	0	.10	0	0	0	0	0	0	0	0
11	0	0	.10	.10	.10	0	0	0	0	0	0	.10
12	0	0	0	.10	0	0	0	0	0	0	0	.10
13	0	0	0	.10	.10	.40	0	.10	0	0	0	0
14	.10	0	0	.20	0	.20	0	.70	0	0	1.0	0
15	0	0	0	.20	.10	.30	0	0	0	0	.80	0
16	0	0	0	.10	0	.30	0	0	0	0	0	0
17	.10	2.1	.20	.10	0	.30	0	0	0	0	0	0
18	0	.20	2.6	.20	0	.20	0	0	0	0	0	0
19	.20	7.6	1.0	.20	0	.30	0	0	0	0	0	0
20	.10	12	0	.20	.10	.30	0	0	0	0	.70	0
21	.10	19	.10	.20	0	.10	0	0	0	.70	0	0
22	.10	1.4	.10	.20	.30	.20	0	0	0	.40	0	0
23	0	.30	.20	.20	0	.20	.20	0	0	0	0	0
24	0	.80	.20	.20	0	.20	0	0	0	0	0	0
25	0	.80	.10	.10	0	.20	.10	0	0	0	.20	0
26	.20	.80	.10	.10	0	.10	.70	0	0	0	.20	0
27	.10	.80	.30	.20	0	.10	.40	0	0	0	0	0
28	0	.10	1.6	.40	0	0	1.3	0	0	0	.10	0
29	.20	.10	.90	.40	0	0	1.1	0	0	0	.20	0
30	0	1.0	.70	.40	-----	0	0	0	0	0	.10	.10
31	0	-----	1.4	.20	-----	0	-----	.20	-----	0	0	-----
TOTAL	1.50	47.40	11.00	6.50	2.80	8.90	4.20	2.80	1.1	1.10	3.60	0.70
MEAN	.048	1.58	.35	.21	.097	.29	.14	.090	.037	.036	.12	.023
MAX	.20	19	2.6	.50	.90	5.3	1.3	.80	1.1	.70	1.0	.30
MIN	0	0	0	.10	0	0	0	0	0	0	0	0
AC-FT	3.0	94	22	13	5.6	18	8.3	5.6	2.2	2.2	7.1	1.4
CAL YR 1967	TOTAL	122.40	MEAN	.34	MAX	47	MIN	0	AC-FT	243		
WTR YR 1968	TOTAL	91.60	MEAN	.25	MAX	19	MIN	0	AC-FT	182		

PETERS CANYON WASH BASIN

11-0485. 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 1968.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 102.86 ft above mean sea level (levels by Orange County Flood Control District). Prior to Nov. 9, 1965, graphic water-stage recorder.

AVERAGE DISCHARGE.--19 years, 2.12 cfs (1,530 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,880 cfs Nov. 21 (gage height, 5.42 ft); no flow Apr. 7, 10, 11. 1949-68: 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.--Two discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.52	.15	.12	.10	.11	3.6	.43	1.6	1.3	1.6	.25
2	.12	.52	.07	.30	.54	.34	5.6	.18	1.4	1.2	1.2	.94
3	.14	.44	.06	.90	.85	.38	.81	1.0	1.1	1.8	.86	1.2
4	.07	.19	.09	.86	.34	.59	.03	1.2	.84	1.7	1.2	1.3
5	0	.30	.08	.90	.61	1.4	.02	1.1	.62	1.6	1.1	1.4
6	.10	.15	.11	.76	.64	.70	.01	1.0	.52	1.5	1.3	1.7
7	.05	.44	.10	.11	.83	4.5	0	1.5	.52	1.4	1.3	1.7
8	.02	.44	.15	.56	1.1	103	.08	1.5	.52	1.4	1.8	1.5
9	.02	.15	.14	.65	.64	16	.05	1.5	.52	1.3	2.3	1.5
10	.12	.30	.14	.56	.44	7.6	0	1.4	.35	1.2	2.4	1.7
11	.15	.07	.17	.50	.45	2.8	0	1.2	.88	1.1	2.3	1.8
12	.13	.19	.56	.48	.62	.44	.80	2.0	1.1	1.1	2.5	1.7
13	.23	.02	.68	.30	.89	1.2	.92	1.6	1.1	1.0	2.6	.84
14	.12	.15	1.5	.20	2.4	.40	.72	.96	1.2	.94	3.0	.67
15	.47	.72	1.0	.40	.74	.59	1.1	.84	1.3	.90	3.0	.76
16	.38	.24	.54	.40	.72	.18	.43	.52	1.2	.82	4.0	.78
17	.05	.10	.50	.30	.38	.51	.44	1.4	1.7	.78	2.3	.87
18	.56	.10	113	.30	.46	.54	.28	.84	1.7	.73	2.5	1.1
19	.88	25	30	.30	.73	.55	.97	.44	1.1	.80	2.8	.82
20	.97	15	1.5	.20	.80	.39	.39	.72	2.4	.86	2.4	.68
21	.27	125	.54	.20	.87	.48	.63	1.2	2.1	.57	2.6	1.0
22	.66	2.1	.42	.20	.37	.66	1.5	1.2	2.0	.40	2.0	1.0
23	.49	.11	.25	.20	.48	.60	1.5	.96	2.5	.69	2.1	1.3
24	.71	.10	.20	.20	.27	1.7	1.9	1.6	2.2	.40	1.1	1.4
25	.77	.20	.15	.20	.12	1.6	2.5	1.2	2.4	.90	.30	1.1
26	.10	.07	.31	.20	.55	.60	2.2	1.6	3.2	.87	.39	1.3
27	.44	.13	.31	.10	.09	.67	1.7	1.4	3.2	1.1	.41	.73
28	.06	.21	.34	.10	.02	.54	1.6	1.8	2.1	1.2	.51	1.1
29	.02	.18	.16	.10	.11	.57	1.5	1.8	1.8	1.2	.71	.61
30	.15	6.7	.08	.10	-----	.49	.83	2.0	1.3	1.2	.40	.68
31	.24	-----	.11	.10	-----	.36	-----	1.8	-----	1.7	.17	-----
TOTAL	8.53	179.84	153.41	10.80	17.16	150.49	32.11	37.89	44.47	33.66	53.15	33.43
MEAN	.28	5.99	4.95	.35	.59	4.85	1.07	1.22	1.48	1.09	1.71	1.11
MAX	.97	125	113	.90	2.4	103	5.6	2.0	3.2	1.8	4.0	1.8
MIN	0	.02	.06	.10	.02	.11	0	.18	.35	.40	.17	.25
AC-FT	17	357	304	21	34	298	64	75	88	67	105	66
CAL YR 1967	TOTAL	1,016.01	MEAN	2.78	MAX	314	MIN	0	AC-FT	2,020		
WTR YR 1968	TOTAL	754.94	MEAN	2.06	MAX	125	MIN	0	AC-FT	1,500		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-21	1330	5.42	1,880	03-08	0745	3.97	840
12-18	1400	4.53	1,190				

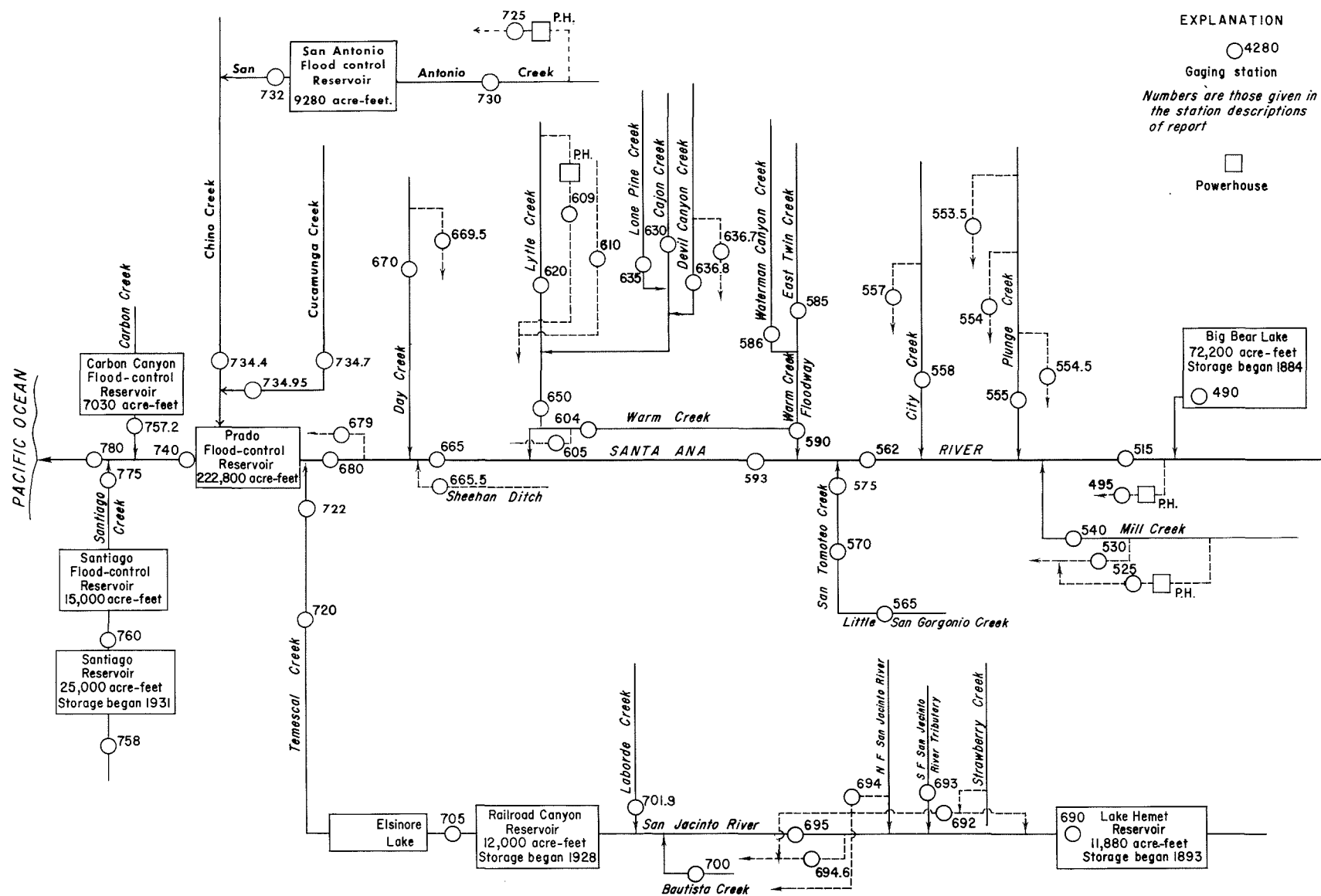


Figure 3-- Schematic diagram showing diversions and storage in Santa Ana River basin.

SANTA ANA RIVER BASIN

11-0490. BIG BEAR LAKE NEAR BIG BEAR LAKE, CALIF.

LOCATION.--Lat 34°14'20", long 116°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 7.5 miles upstream from mouth.

DRAINAGE AREA.--71.5 sq mi.

RECORDS AVAILABLE.--October 1950 to September 1968 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, 46,054 acre-ft May 1; minimum contents, 40,476 acre-ft Nov. 18.

1884-1968: 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. See schematic diagram of Santa Ana River basin.

COOPERATION.--Record of contents furnished by Bear Valley Mutual Water Co.

MONTH-END CONTENTS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

Month	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	41,672	-
Oct. 31.....	40,875	-797
Nov. 30.....	41,274	+399
Dec. 31.....	42,469	+1,195
Calendar year 1967.....	-	+10,016
Jan. 31.....	42,967	+498
Feb. 29.....	44,262	+1,295
Mar. 31.....	45,408	+1,146
Apr. 30.....	46,054	+646
May 31.....	45,457	-597
June 30.....	44,262	-1,195
July 31.....	43,266	-996
Aug. 31.....	42,270	-996
Sept. 30.....	40,476	-1,794
Water year 1967-68.....	-	-1,196

SANTA ANA RIVER BASIN

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11-0515. SANTA ANA RIVER NEAR MENTONE, CALIF.

LOCATION.--Lat 34°06'40", long 117°05'54", in NW¼NE¼SW¼ sec.4, T.1 S., R.2 W., 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 1968. 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.--Graphic water-stage recorder on river; graphic 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 1.5 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).--54 years (1914-68), 29.0 cfs (21,000 acre-ft per year); median of yearly mean discharges, 9.0 cfs (6,500 acre-ft per year).
(combined).--72 years, 80.1 cfs (57,990 acre-ft per year); median of yearly mean discharges, 68 cfs (49,200 acre-ft per year).

EXTREMES (river only).--Maximum discharge during year, 288 cfs Mar. 8 (gage height, 10.08 ft); no flow Sept. 29, 30.

1896-1968: 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, 288 cfs Mar. 8; minimum daily, 26 cfs Aug. 31 to Sept. 4. 1896-1968: Maximum discharge, 52,300 cfs Mar. 2, 1938; minimum daily, 3 cfs Nov. 21, 22, 1909.

REMARKS.--Records good. Flow partly regulated by Big Bear Lake (see sta. no. 11-0490). For records of combined discharge of Santa Ana River and Southern California Edison Co.'s canal below powerplant No. 2, which diverts above station, see following page. Bear Valley Mutual Water Company pumped 617 acre-ft into canal below canal gage. Prior to Oct. 1, 1952, pumped water entered canal above gage. See schematic diagram of Santa Ana River basin.

COOPERATION.--Eleven 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	5.6	6.0	8.4	5.7	7.0	6.6	4.1	2.4	.80	1.2	.40
2	9.2	5.4	31	8.4	5.1	6.0	23	4.1	2.4	.80	.80	.30
3	8.8	5.7	20	8.4	4.8	5.7	12	4.1	2.2	.80	.40	.40
4	8.8	5.4	7.0	8.4	4.8	5.1	9.7	4.1	2.2	.80	.40	.40
5	8.4	5.1	6.6	8.0	4.8	5.1	8.0	4.1	2.4	.90	.40	.30
6	8.4	5.4	6.3	7.7	4.8	5.7	7.7	4.1	2.5	.90	.40	.30
7	8.0	5.1	6.0	6.6	4.8	7.4	7.4	4.1	2.7	.80	4.3	.30
8	7.7	4.8	6.3	6.3	4.8	139	7.0	4.1	2.9	.60	9.7	.20
9	7.7	5.1	6.6	6.3	5.1	100	7.0	4.1	2.7	.60	6.8	.20
10	7.7	5.1	6.6	5.7	5.1	81	7.0	4.1	2.4	.60	1.4	.20
11	7.7	5.1	6.6	5.7	5.1	58	6.6	4.1	2.2	.60	1.1	.20
12	7.7	4.8	6.6	5.4	5.1	13	6.6	4.8	2.2	.60	1.0	.20
13	7.7	4.8	7.0	4.8	6.0	13	6.6	4.8	2.1	.60	.80	.20
14	7.7	5.1	6.0	4.8	6.0	12	6.3	4.3	2.1	.60	.80	.20
15	7.7	4.8	5.7	4.8	5.7	11	6.3	4.1	2.0	.60	.80	.20
16	7.7	4.8	5.7	4.6	5.4	9.7	6.3	4.1	1.9	.60	.60	.20
17	7.7	4.6	5.7	4.6	5.1	9.2	7.0	3.7	1.9	.60	.60	.10
18	7.7	4.3	17	4.1	5.1	8.8	6.6	3.5	1.7	.70	.70	.10
19	14	104	20	4.1	4.8	8.0	6.3	3.5	1.6	.80	.60	.10
20	19	106	13	4.1	4.8	7.4	5.7	3.5	1.5	.80	.60	.10
21	14	59	12	4.1	4.6	7.0	5.7	3.5	1.3	.80	.60	.10
22	7.0	46	12	4.1	4.6	7.0	5.4	3.3	1.3	.80	.70	.10
23	6.3	39	14	4.1	4.6	7.0	5.1	3.3	1.2	.80	.60	.10
24	5.4	27	14	4.1	4.3	6.3	5.1	3.1	1.2	3.4	.60	.10
25	5.1	7.7	14	4.1	3.9	6.0	5.1	2.9	1.1	.80	.40	.10
26	5.4	6.3	13	5.1	13	6.0	5.1	2.5	1.0	.60	.40	.10
27	5.4	15	11	7.4	36	8.0	5.1	2.5	1.0	.60	.40	.10
28	4.8	29	11	8.4	38	6.3	4.8	2.5	.90	.60	.40	.10
29	4.8	27	9.7	6.3	31	6.0	4.6	2.9	.80	.40	.40	0
30	5.1	52	9.2	6.3	-----	6.0	4.4	2.7	.70	.30	.40	0
31	5.1	-----	8.8	5.7	-----	5.7	-----	2.5	-----	9.7	.40	-----
TOTAL	270.7	609.0	378.4	180.9	242.9	583.4	210.1	113.1	54.50	32.90	38.70	5.40
MEAN	8.73	20.3	12.2	5.84	8.38	18.8	7.00	3.65	1.82	1.06	1.25	.18
MAX	33	106	60	8.4	38	139	23	4.8	2.9	9.7	9.7	.40
MIN	4.8	4.3	5.7	4.1	3.9	5.1	4.4	2.5	.70	.30	.40	0
AC-FT	537	1,210	751	359	482	1,160	417	224	108	65	77	11

CAL YR 1967 TOTAL 19,214.9 MEAN 52.6 MAX 318 MIN 4.3 AC-FT 38,110
WTR YR 1968 TOTAL 2,720.00 MEAN 7.43 MAX 139 MIN 0 AC-FT 5,400

PEAK DISCHARGE (BASE, 150 CFS)

† From floodmarks.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-19	2200	9 93	218	03-08	1100	10.08	288
11-30	1800	† 9.98	207				

SANTA ANA RIVER BASIN

11-0515. SANTA ANA RIVER NEAR MENTONE, CALIF.--Continued

Combined discharge, in cubic feet per second, of Santa Ana River and Southern California Edison Co.'s canal near Mentone, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	43	73	59	47	41	59	52	41	34	36	26
2	57	43	58	58	46	40	89	52	41	33	35	26
3	57	44	57	57	46	51	72	52	41	33	32	26
4	55	43	54	53	46	50	68	52	43	32	33	26
5	53	43	53	53	46	49	65	52	45	33	33	28
6	53	42	52	53	43	53	63	51	46	33	32	30
7	52	42	53	52	43	55	60	50	48	36	38	31
8	51	42	48	51	43	166	59	50	49	37	31	31
9	51	42	47	51	52	100	59	50	47	34	31	32
10	49	42	47	51	54	81	58	50	44	32	33	32
11	49	41	47	51	51	75	58	50	43	31	32	33
12	49	41	46	49	49	55	58	54	41	30	32	33
13	49	41	44	49	59	61	57	53	41	30	32	33
14	48	41	42	49	55	63	56	51	40	29	32	34
15	48	51	45	49	53	64	56	49	40	29	34	34
16	48	54	50	49	52	64	57	48	39	33	36	34
17	47	55	50	47	54	61	59	47	38	35	38	34
18	47	53	67	46	56	60	59	46	38	36	37	34
19	60	123	70	46	54	58	56	46	37	36	40	34
20	65	120	60	46	55	57	56	46	36	36	36	35
21	65	91	57	46	54	56	56	48	43	36	34	35
22	56	72	60	46	54	54	54	49	48	36	33	33
23	54	61	67	45	53	54	53	49	50	44	31	32
24	52	63	68	45	52	53	52	49	50	37	30	31
25	51	56	70	45	51	53	52	47	38	42	28	31
26	51	53	71	46	37	53	53	46	36	38	28	30
27	44	52	69	54	40	49	53	46	35	38	28	30
28	44	65	67	48	42	52	52	44	35	44	28	29
29	44	63	66	43	50	53	53	44	35	41	27	30
30	44	86	62	44	-----	53	51	44	35	35	27	30
31	43	-----	61	47	-----	54	-----	44	-----	35	26	-----
TOTAL	1,601	1,708	1,781	1,528	1,437	1,888	1,753	1,511	1,243	1,088	1,003	937
MEAN	51.6	56.9	57.5	49.3	49.6	60.9	58.4	48.7	41.4	35.1	32.4	31.2
MAX	65	123	73	59	59	166	89	54	50	44	40	35
MIN	43	41	42	43	37	40	51	44	35	29	26	26
AC-FT	3,180	3,390	3,530	3,030	2,850	3,740	3,480	3,000	2,470	2,160	1,990	1,860

CAL YR 1967 TOTAL 30,867 MEAN 84.6 MAX 318 MIN 41 AC-FT 61,220
WTR YR 1968 TOTAL 17,478 MEAN 47.8 MAX 166 MIN 26 AC-FT 34,670

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
11-19	2200		221	03-08	1100		288
11-30	1800		208				

SANTA ANA RIVER BASIN

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11-0540. MILL CREEK NEAR YUCAIPA, CALIF.

LOCATION.--Lat 34°05'27", long 117°02'12", in NW¼NE¼NE¼ sec.13, T.1 S., R.2 W., 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 1968. Monthly figures only for April and May 1923, published in WSP 1315-B. Prior to October 1954, published "near Craftonville."

GAGE.--Graphic water-stage recorder on creek; graphic water-stage recorder and sharp-crested weir on power canal No. 1; graphic 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).--40 years, 10.4 cfs (7,530 acre-ft per year); median of yearly mean discharges, 1.1 cfs (800 acre-ft per year).
(combined).--40 years, 31.1 cfs (22,520 acre-ft per year); median of yearly mean discharges, 21 cfs (15,200 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 324 cfs Nov. 19 (gage height, 8.28 ft); no flow for many days.

1919-38, 1947-68: 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, 331 cfs Nov. 19; minimum daily, 22 cfs Aug. 25, 26, Aug. 28 to Sept. 1, Sept. 25-28.

1919-38, 1947-68: Maximum discharge, 18,100 cfs Mar. 2, 1938; minimum daily, 2.7 cfs Feb. 23, 1949.

REMARKS.--Records poor. No regulation above station. Mill Creek power canals Nos. 1, 2, and 3 divert from points 100 ft, 3 miles, and 6 miles above station, respectively. Combined flow of Mill Creek and Mill Creek power canals Nos. 1, 2, and 3 is given on following page. See schematic diagram of Santa Ana River basin.

COOPERATION.--Water-stage recorder graph and five 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	0	14	0	0	0	25	1.7	.10	0	2.0	.10
2	17	0	3.5	11	.10	0	36	.90	.20	0	4.2	.10
3	4.0	0	0	9.3	.90	0	33	0	.10	0	6.3	.10
4	.20	0	0	4.0	1.1	0	15	.10	.10	.10	3.0	.10
5	.20	.20	0	0	1.1	0	.10	.10	.10	.10	3.0	.10
6	.20	0	0	0	1.3	.10	.10	0	.20	.10	3.1	.10
7	.20	0	0	0	.90	0	.10	.20	.20	.50	5.5	.10
8	2.0	0	0	0	1.6	38	.10	2.0	.10	.50	8.6	.10
9	2.0	0	0	0	.30	9.6	0	4.5	.10	0	3.7	.10
10	4.0	.30	.10	0	.20	2.6	0	0	.20	0	3.7	1.0
11	.40	0	.10	0	1.4	0	0	2.4	.20	.10	2.0	.10
12	0	0	0	.10	1.6	0	0	7.0	0	.10	1.0	.10
13	0	0	.20	.10	1.8	0	0	4.1	.10	.10	.10	.80
14	0	0	1.2	.10	.40	0	0	.10	.20	0	.70	.80
15	0	0	0	0	.10	0	0	.30	.50	0	.60	.80
16	0	0	0	0	0	0	0	0	.10	0	.80	1.0
17	0	0	0	0	1.0	0	0	0	0	0	.60	1.5
18	0	0	13	0	1.3	0	0	0	0	0	.80	.20
19	0	166	14	0	.30	0	0	1.6	0	0	1.0	0
20	0	95	6.2	0	0	0	0	3.5	0	0	1.0	0
21	.50	40	3.4	0	0	0	0	2.0	0	0	.10	0
22	0	31	.50	0	.10	0	0	0	0	0	.10	0
23	0	30	.60	0	0	0	0	0	0	8.0	.10	0
24	0	19	.70	0	.40	0	0	0	0	6.0	.10	0
25	0	8.0	0	0	.10	0	0	0	0	2.6	.10	1.0
26	.20	9.0	0	0	0	0	.10	0	0	1.2	.20	1.0
27	0	9.0	0	2.0	0	0	.10	0	0	.10	.10	1.0
28	0	9.4	0	0	0	0	0	0	0	5.8	.10	.10
29	0	7.6	.10	0	0	0	0	0	0	20	.10	.10
30	0	15	.70	.60	-----	0	.80	0	0	17	.10	.10
31	0	-----	2.8	0	-----	0	-----	0	-----	14	.10	-----
TOTAL	46.90	439.50	61.10	27.20	16.00	50.30	110.40	30.50	2.50	76.30	52.90	10.50
MEAN	1.51	14.7	1.97	.88	.55	1.62	3.68	.98	.083	2.46	1.71	.35
MAX	21	166	14	11	1.8	38	36	7.0	.50	20	8.6	1.5
MIN	0	0	0	0	0	0	0	0	0	0	.10	0
AC-FT	93	872	121	54	32	100	219	61	5.0	151	105	21
CAL YR 1967	TOTAL 5,765.40			MEAN 15.8		MAX 166		MIN 0		AC-FT 11,440		
WTR YR 1968	TOTAL 924.10			MEAN 2.52		MAX 166		MIN 0		AC-FT 1,830		

Peak discharge (base, 50 cfs).--Nov. 19 (0930 hrs) 324 cfs (8.28 ft); Mar. 8 (0730 hrs) 122 cfs (7.75 ft).

SANTA ANA RIVER BASIN

11-0540. MILL CREEK NEAR YUCAIPA, CALIF.--Continued

Combined discharge, in cubic feet per second, of Mill Creek and Mill Creek power canals Nos. 1, 2, and 3 near Yucaipa, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	26	33	30	29	30	34	34	33	28	29	22
2	29	26	29	29	29	30	36	35	32	28	30	24
3	33	26	29	30	29	30	33	35	32	28	31	24
4	32	26	28	29	29	30	34	34	32	28	30	24
5	32	26	28	29	29	30	36	36	32	28	30	23
6	29	26	28	29	28	33	34	33	33	28	29	23
7	28	26	27	29	28	33	34	36	33	30	28	23
8	28	27	27	29	30	65	35	36	34	29	27	24
9	28	27	27	29	31	34	35	36	32	27	28	24
10	28	27	27	29	30	34	34	35	31	26	28	24
11	28	27	27	29	30	35	34	35	30	26	27	23
12	28	27	27	28	30	33	35	37	30	25	26	23
13	28	26	28	28	33	34	35	37	30	25	25	23
14	28	26	28	28	30	33	35	36	31	25	25	23
15	28	26	27	28	31	33	35	35	32	25	25	23
16	28	27	28	28	29	33	35	35	31	25	25	23
17	28	27	28	28	31	33	35	34	29	24	24	23
18	27	28	38	28	31	32	35	34	29	24	25	23
19	27	178	34	28	30	32	35	35	30	24	24	24
20	27	95	29	27	30	31	35	36	28	24	24	24
21	27	46	29	27	30	31	35	34	28	24	24	24
22	28	31	29	27	30	31	35	33	28	24	23	24
23	28	30	30	27	30	31	34	34	28	24	23	23
24	28	30	31	27	30	31	34	34	28	24	23	23
25	28	29	31	27	30	31	34	34	28	27	22	22
26	28	29	31	27	30	32	34	33	28	29	22	22
27	28	29	31	34	30	32	34	34	29	30	23	22
28	27	32	31	31	31	33	34	32	29	31	22	22
29	27	30	30	29	30	33	34	33	29	31	22	23
30	26	37	30	29	-----	33	34	33	28	30	22	23
31	26	-----	30	29	-----	33	-----	32	-----	30	22	-----
TOTAL	875	1,073	910	886	868	1,029	1,036	1,070	907	831	788	695
MEAN	28.2	35.8	29.4	28.6	29.9	33.2	34.5	34.5	30.2	26.8	25.4	23.2
MAX	33	178	38	34	33	65	36	37	34	31	31	24
MIN	26	26	27	27	28	30	33	32	28	24	22	22
AC-FT	1,740	2,130	1,800	1,760	1,720	2,040	2,050	2,120	1,800	1,650	1,560	1,380
CAL YR 1967	TOTAL 19,231		MEAN 52.7		MAX 178		MIN 26		AC-FT 38,140			
WTR YR 1968	TOTAL 10,968		MEAN 30.0		MAX 178		MIN 22		AC-FT 21,750			

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
11-19	0930		331	03-08	0730		147
11-30	1600		72	07-28	2000		52
12-18	1630		59				

11-0555. PLUNGE CREEK NEAR EAST HIGHLANDS, CALIF.

LOCATION.--Lat 34°07'06", long 117°08'27", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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.

RECORDS AVAILABLE.--January 1919 to September 1968; combined records of creek and diversions, March 1951 to September 1968.

GAGE.--Graphic water-stage recorder and since December 1938 broad-crested weir on creek; digital water-stage recorder and weir on upper diversion; graphic water-stage recorder and concrete-lined canal on middle diversion; graphic water-stage recorder and sharp-crested weir on lower diversion. Altitude of gage is 1,590 ft (from topographic map). Prior to Oct. 1, 1964, graphic water-stage recorder on upper diversion.

AVERAGE DISCHARGE (creek only).--49 years, 5.62 cfs (4,070 acre-ft per year); median of yearly mean discharges, 3.6 cfs (2,600 acre-ft per year).
(combined).--17 years, 6.19 cfs (4,480 acre-ft per year); median of yearly mean discharges, 3.9 cfs (2,800 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 190 cfs Mar. 8 (gage height, 1.50 ft); no flow for many days.

1919-68: 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, 191 cfs Mar. 8; minimum daily, 0.70 cfs for some days.

1951-68: Maximum discharge, 4,770 cfs Dec. 6, 1966; no flow Nov. 12, 1964, Sept. 29, 1965.

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. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.20	14	5.4	4.0	1.4	2.2	.20	.30			0
2	.30	.20	7.8	5.2	3.4	1.4	14	.20	.20			0
3	.20	.20	5.7	5.2	3.2	1.4	4.7	.20	.10			0
4	.20	.20	4.7	4.7	3.2	1.4	4.2	.20	.10			0
5	.20	.20	4.2	4.7	3.2	1.4	4.2	.20	.10			0
6	.20	.20	4.0	4.4	2.8	2.0	3.2	.20	.20			0
7	.20	.20	4.0	4.2	2.8	3.0	2.4	.20	.20			0
8	.20	.10	3.7	4.2	2.8	73	1.3	.10	.20			0
9	.20	.10	3.4	4.2	3.2	29	1.0	.10	.10			0
10	.20	.10	3.4	4.2	2.8	17	.90	.10	.10			0
11	.20	.10	3.2	4.4	2.4	15	.90	.10	.10			0
12	.20	.20	3.2	4.2	2.4	14	1.0	.10	0			0
13	.20	.10	3.2	4.0	3.7	12	1.0	.10	0			0
14	.20	.20	3.0	4.2	4.2	10	1.0	.10	0			0
15	.20	.10	3.2	4.0	4.4	9.0	.90	.10	0			0
16	.20	0	3.4	4.2	5.0	8.4	.90	.10	0			0
17	.20	0	3.7	4.2	5.2	8.1	.80	.10	0			0
18	.20	0	9.7	4.0	5.0	7.5	.80	.10	0			0
19	.20	28	12	4.0	4.2	6.9	.80	.10	0			.20
20	.20	47	8.4	3.7	4.0	6.3	.80	.10	0			.20
21	.20	17	7.5	3.7	4.0	5.7	.80	.10	0			.40
22	.20	6.6	7.5	3.7	4.0	5.4	.70	.10	0			.40
23	.20	4.4	8.4	3.7	3.2	5.0	.60	.10	0			.30
24	.30	3.4	9.4	3.0	2.8	4.7	.10	.20	0			.30
25	.20	2.8	9.4	2.0	2.6	4.4	.10	.20	0			.30
26	.20	2.6	9.0	2.0	2.0	4.0	.10	.20	0			.20
27	.20	2.4	8.1	5.2	2.0	3.0	.20	.20	0			.10
28	.20	6.0	7.2	6.0	1.8	3.0	.20	.20	0			0
29	.20	4.2	6.9	4.0	1.4	2.8	.20	.20	0			0
30	.20	37	6.3	3.4	-----	2.2	.20	.20	0			0
31	.30	-----	5.4	4.0	-----	2.0	-----	.10	-----			-----
TOTAL	6.60	163.80	193.0	128.0	95.7	270.4	50.20	4.50	1.70	0	0	2.40
MEAN	.21	5.46	6.23	4.13	3.30	8.72	1.67	.15	.057	0	0	.080
MAX	.30	47	14	6.0	5.2	73	14	.20	.30	0	0	.40
MIN	.20	0	3.0	2.0	1.4	1.4	.10	.10	0	0	0	0
AC-FT	13	325	383	254	190	536	100	8.9	3.4	0	0	4.8

CAL YR 1967 TOTAL 4,000.70 MEAN 11.0 MAX 160 MIN 0 AC-FT 7,940
WTR YR 1968 TOTAL 916.30 MEAN 2.50 MAX 73 MIN 0 AC-FT 1,820

PEAK DISCHARGE (BASE, 130 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
11-20	0500	1.42	158	03-08	0800	1.50	190
11-30	1700	1.47	178				

SANTA ANA RIVER BASIN

11-0555. PLUNGE CREEK NEAR EAST HIGHLANDS, CALIF.--Continued

Combined discharge, in cubic feet per second, of Plunge Creek and diversions
near East Highlands, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.4	14	5.4	4.0	4.4	5.0	3.2	2.5	1.4	1.0	.90
2	2.1	1.4	7.8	5.2	3.9	4.4	15	3.4	2.4	1.2	1.0	.90
3	1.9	1.4	5.7	5.2	4.2	4.2	4.8	3.5	2.2	1.2	1.0	.90
4	1.9	1.5	4.7	4.7	4.2	4.1	4.3	3.5	2.3	1.1	.90	1.0
5	1.9	1.5	4.2	4.7	4.3	4.0	4.3	3.5	2.5	1.1	.90	.90
6	1.9	1.5	4.0	4.4	4.2	4.7	4.8	3.6	2.7	1.2	.90	.70
7	1.8	1.5	4.0	4.2	4.1	5.7	5.5	3.4	2.9	1.5	1.0	.70
8	1.8	1.4	3.7	4.2	4.1	74	4.1	3.3	3.1	1.6	.90	.70
9	1.7	1.4	3.4	4.2	4.5	29	3.8	3.3	3.0	1.1	.90	.70
10	1.7	1.3	3.4	4.2	4.5	17	3.6	3.3	2.6	.90	.90	.70
11	1.7	1.3	3.2	4.4	4.3	15	3.6	3.4	2.3	1.1	.80	.70
12	1.6	1.4	3.2	4.2	4.3	14	3.5	4.6	2.1	1.1	.80	.70
13	1.6	1.3	3.2	4.0	6.0	12	3.5	4.9	2.1	1.1	.90	.70
14	1.6	1.4	3.0	4.2	6.6	10	3.5	4.0	2.0	1.1	1.0	.70
15	1.6	1.4	3.2	4.0	5.3	9.0	3.4	3.6	1.9	1.1	1.0	.90
16	1.6	1.6	3.4	4.2	5.0	8.4	3.6	3.4	1.8	1.1	1.0	.90
17	1.6	1.6	3.7	4.2	5.2	8.1	3.8	3.2	1.8	1.0	1.1	.70
18	1.5	1.6	9.7	4.0	5.0	7.5	3.7	3.2	1.6	1.0	1.1	.70
19	1.6	31	12	4.0	4.8	6.9	3.6	3.2	1.5	.90	1.1	.90
20	1.4	47	8.4	3.7	4.9	6.3	3.6	3.2	1.4	.90	1.1	1.0
21	1.5	17	7.5	3.7	4.9	5.7	3.6	3.2	1.5	.90	1.1	1.2
22	1.6	6.6	7.5	3.7	4.9	5.4	3.4	3.2	1.4	.80	1.0	1.2
23	1.6	4.4	8.4	3.7	4.7	5.0	3.3	3.3	1.4	.80	.90	1.1
24	1.6	3.4	9.4	3.5	4.7	4.7	3.6	3.2	1.5	.80	.90	1.0
25	1.5	2.8	9.4	3.6	4.4	4.4	3.5	3.1	1.5	.90	.90	1.0
26	1.5	2.6	9.0	3.7	3.8	4.8	3.4	2.9	1.4	.80	.90	.80
27	1.5	2.4	8.1	6.2	4.7	4.4	3.5	2.7	1.5	.90	.90	.80
28	1.5	6.0	7.2	6.4	5.0	4.4	3.2	2.6	1.5	1.1	.90	.70
29	1.5	4.2	6.9	4.5	4.5	4.7	3.2	2.5	1.5	1.5	.70	.70
30	1.5	37	6.3	3.8	-----	4.8	3.2	2.6	1.5	1.1	.80	.80
31	1.5	-----	5.4	4.0	-----	4.5	-----	2.6	-----	1.0	.80	-----
TOTAL	51.4	190.3	193.0	134.1	135.0	301.5	124.9	102.6	59.4	33.30	29.10	25.30
MEAN	1.66	6.34	6.23	4.33	4.66	9.73	4.16	3.31	1.98	1.07	.94	.84
MAX	2.1	47	14	6.4	6.6	74	15	4.9	3.1	1.6	1.1	1.2
MIN	1.4	1.3	3.0	3.5	3.8	4.0	3.2	2.5	1.4	.80	.70	.70
AC-FT	102	377	383	266	268	598	248	204	118	66	58	50
CAL YR 1967	TOTAL 4,629.6			MEAN 12.7		MAX 160		MIN 1.3		AC-FT 9,180		
WTR YR 1968	TOTAL 1,379.90			MEAN 3.77		MAX 74		MIN .70		AC-FT 2,740		

PEAK DISCHARGE (BASE, 130 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-20	0500		158	03-08	0800		191
11-30	1700		178				

11-0558. CITY CREEK NEAR HIGHLAND, CALIF.

LOCATION.--Lat 34°08'38", long 117°11'16", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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.

RECORDS AVAILABLE.--October 1919 to September 1968; combined records of creek and canal, June 1924 to September 1968.

GAGE.--Digital water-stage recorder on creek; digital water-stage recorder on canal. Altitude of gage is 1,580 ft (from topographic map). Prior to Mar. 1, 1939, graphic water-stage recorder at site a quarter of a mile downstream at different datum. Mar. 1, 1939, to Oct. 1, 1964, at present site and datum. May 27, 1924, to Apr. 13, 1966, graphic water-stage recorder on canal.

AVERAGE DISCHARGE (creek only).--49 years, 7.80 cfs (5,650 acre-ft per year); median of yearly mean discharges, 5.0 cfs (3,600 acre-ft per year).
(combined).--44 years, 9.40 cfs (6,810 acre-ft per year); median of yearly mean discharges, 6.4 cfs (4,600 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 217 cfs Nov. 20 (gage height, 3.12 ft); minimum daily, 0.05 cfs Sept. 24-28.

1919-68: 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, 217 cfs Nov. 20; minimum daily, 0.61 cfs Sept. 11.
1924-68: 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. See schematic diagram of Santa Ana River basin. Combined discharge of City Creek and canal is given on following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.3	16	8.6	7.5	2.5	5.9	1.7	1.2	.21	.10	.10
2	1.4	1.2	11	8.6	7.6	2.5	10	1.8	1.1	.20	.10	.10
3	1.4	1.3	9.6	8.4	7.5	2.5	4.8	1.7	.99	.17	.10	.11
4	1.4	1.3	8.6	8.3	7.2	2.3	4.4	1.7	1.0	.17	.11	.11
5	1.5	1.4	8.3	8.2	7.1	2.4	4.2	1.7	1.1	.16	.11	.10
6	1.4	1.4	5.7	7.9	6.9	2.7	3.9	1.8	1.2	.17	.11	.11
7	1.3	1.1	2.4	7.8	6.9	2.7	3.9	1.7	1.3	.19	.11	.10
8	1.3	.91	2.3	7.7	6.9	44	3.8	1.6	1.3	.19	.11	.09
9	1.3	.75	2.1	7.6	7.3	15	4.0	1.6	1.2	.17	.10	.09
10	1.3	.72	1.9	7.2	7.2	11	4.5	1.6	.89	.16	.10	.06
11	1.3	.69	1.9	7.5	7.1	9.9	5.2	1.7	.46	.16	.10	.06
12	1.3	.69	1.9	7.2	6.9	9.1	5.4	2.4	.55	.28	.10	.06
13	1.3	.66	2.1	7.1	8.9	9.0	5.5	3.2	.41	.32	.10	.06
14	1.3	.65	2.1	6.9	8.9	8.6	5.4	2.2	.39	.14	.11	.06
15	1.3	.68	2.1	6.9	8.1	8.1	4.3	1.9	.36	.14	.12	.08
16	1.3	.69	3.8	6.9	7.8	7.7	2.9	1.85	.36	.13	.12	.07
17	1.3	.69	6.5	6.9	7.8	7.6	3.8	1.7	.57	.13	.12	.07
18	1.3	.69	12	6.6	7.7	7.3	3.9	1.6	.49	.12	.12	.06
19	1.3	11	13	6.6	7.4	6.2	2.9	1.6	.30	.12	.12	.06
20	1.3	63	11	6.6	7.2	4.7	3.1	1.5	.25	.12	.12	.07
21	1.3	19	10	6.5	7.2	4.6	3.3	1.6	.24	.12	.12	.07
22	1.4	13	10	6.4	7.1	4.5	3.0	1.7	.23	.13	.12	.07
23	1.4	9.8	11	6.0	5.3	4.7	2.8	1.8	.24	.10	.11	.06
24	1.3	8.8	12	6.1	3.4	4.8	2.9	1.7	.26	.10	.10	.05
25	1.3	8.1	12	4.5	3.1	4.9	2.8	1.6	.26	.10	.10	.05
26	1.3	7.8	12	1.9	2.9	4.8	2.8	1.4	.26	.12	.10	.05
27	1.3	7.5	11	7.9	2.7	4.8	2.9	1.3	.25	.11	.10	.05
28	1.4	9.2	10	9.5	2.5	4.7	2.6	1.3	.25	.12	.10	.05
29	1.3	8.5	9.8	7.8	2.6	4.6	2.2	1.2	.26	.11	.10	.06
30	1.3	27	9.3	7.7	-----	4.5	1.7	1.2	.26	.10	.10	.06
31	1.3	-----	8.9	7.7	-----	4.0	-----	1.2	-----	.10	.10	-----
TOTAL	41.3	209.52	240.3	221.5	186.7	216.7	118.8	52.5	17.93	4.66	3.33	2.19
MEAN	1.33	6.98	7.75	7.15	6.44	6.99	3.96	1.69	.60	.15	.11	.073
MAX	1.5	63	16	9.5	8.9	44	10	3.2	1.3	.32	.12	.11
MIN	1.3	.65	1.9	1.9	2.5	2.3	1.7	1.2	.23	.11	.10	.05
AC-FT	82	416	477	439	370	430	236	104	36	9.8	6.6	4.3

CAL YR 1967 TOTAL 5,436.82 MEAN 14.9 MAX 140 MIN .65 AC-FT 10,780
WTR YR 1968 TOTAL 1,315.43 MEAN 3.59 MAX 63 MIN .05 AC-FT 2,610

Peak discharge (base, 150 cfs).--Nov. 20 (0315 hrs) 217 cfs (3.12 ft).

SANTA ANA RIVER BASIN

11-0558. CITY CREEK NEAR HIGHLAND, CALIF.--Continued

Combined discharge, in cubic feet per second, of City Creek and City Creek Water Co.'s Canal near Highland, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	4.3	16	8.6	7.5	6.5	8.3	5.6	3.6	2.2	2.0	.94
2	5.2	4.4	11	8.6	7.6	6.5	14	5.9	3.2	2.0	1.8	1.0
3	5.2	4.5	9.6	8.4	7.5	6.5	10	5.9	3.0	1.9	1.6	1.3
4	5.2	4.6	8.6	8.3	7.2	6.2	9.3	5.9	3.3	1.7	1.5	1.7
5	5.4	4.9	8.3	8.2	7.1	6.3	8.7	6.0	3.9	1.6	1.4	1.3
6	4.9	4.9	8.9	7.9	6.9	7.9	8.2	6.2	4.3	1.7	1.4	1.0
7	4.6	4.9	9.9	7.8	6.9	9.2	7.7	5.9	4.8	2.2	1.6	.86
8	4.5	4.9	9.5	7.7	6.9	52	7.3	5.8	5.1	2.7	1.4	.80
9	4.5	5.0	9.2	7.6	7.3	18	7.0	5.7	4.8	2.1	1.3	.72
10	4.3	5.0	8.9	7.2	7.2	12	6.4	5.7	4.4	1.6	1.3	.64
11	4.2	4.9	8.8	7.5	7.1	10	5.4	6.0	3.9	1.4	1.2	.61
12	4.2	4.9	8.8	7.2	6.9	9.4	5.6	8.5	3.4	1.2	1.2	.65
13	4.2	4.8	8.9	7.1	8.9	9.2	5.7	8.9	3.4	1.1	1.2	.65
14	4.2	4.8	8.8	6.9	8.9	8.6	5.5	6.8	3.4	1.4	1.5	.80
15	4.0	5.0	8.9	6.9	8.1	8.1	5.9	5.9	3.3	1.6	1.7	1.3
16	4.1	5.0	9.3	6.9	7.8	8.0	6.8	5.5	3.1	1.6	1.8	1.5
17	4.2	5.1	8.8	6.9	7.8	8.4	6.5	5.2	2.6	1.5	2.0	.92
18	4.1	5.3	17	6.6	7.7	7.6	6.2	4.8	2.4	1.3	2.0	.78
19	4.1	16	16	6.6	7.4	8.1	6.4	4.6	2.3	1.2	1.7	.94
20	4.2	63	11	6.6	7.2	8.4	6.4	4.5	2.2	1.3	1.8	1.2
21	4.5	19	10	6.5	7.2	8.2	6.4	4.7	2.0	1.2	2.0	1.4
22	4.9	13	10	6.4	7.1	7.9	6.0	5.1	1.9	.88	1.7	1.1
23	4.7	9.8	11	6.0	7.0	7.7	5.6	5.2	2.0	1.3	1.4	.80
24	4.5	8.8	12	6.1	7.5	7.1	5.8	5.0	2.4	1.3	1.1	.71
25	4.5	8.1	12	6.9	7.2	7.2	5.7	4.7	2.5	1.3	1.2	.66
26	4.6	7.8	12	8.0	7.0	7.1	5.8	4.1	2.3	1.2	1.2	.62
27	4.5	7.5	11	10	6.9	7.0	5.9	3.8	2.2	1.3	1.2	.62
28	4.7	9.2	10	9.5	6.7	6.8	5.4	3.7	2.2	3.8	1.1	.73
29	4.4	8.5	9.8	7.8	6.6	6.7	5.2	3.7	2.7	4.2	1.1	.97
30	4.5	27	9.3	7.7	-----	6.8	5.5	3.9	2.7	2.6	.99	1.3
31	4.3	-----	8.9	7.7	-----	7.0	-----	4.0	-----	2.1	.99	-----
TOTAL	140.9	284.9	322.2	232.1	213.1	296.4	204.6	167.2	93.3	54.48	45.38	28.52
MEAN	4.55	9.50	10.4	7.49	7.35	9.56	6.82	5.39	3.11	1.76	1.46	.95
MAX	5.5	63	17	10	8.9	52	14	8.9	5.1	4.2	2.0	1.7
MIN	4.0	4.3	8.3	6.0	6.6	6.2	5.2	3.7	1.9	.88	.99	.61
AC-FT	279	565	639	460	423	588	406	332	185	108	90	57

CAL YR 1967 TOTAL 6,587.1 MEAN 18.0 MAX 146 MIN 4.0 AC-FT 13,070
WTR YR 1968 TOTAL 2,083.08 MEAN 5.69 MAX 63 MIN .61 AC-FT 4,130

Peak discharge (base, 150 cfs).--Nov. 20 (0315 hrs) 217 cfs.

11-0562. SANTA ANA RIVER AT WATERMAN AVENUE, AT SAN BERNARDINO, CALIF.

LOCATION.--Lat 34°04'14", long 117°16'41", in San Bernardino Grant, 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.

RECORDS AVAILABLE.--October 1954 to December 1961, January 1964 to September 1968. 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.--Graphic water-stage recorder. Altitude of gage is 995 ft (from topographic map). Prior to Jan. 21, 1964, at different datum.

AVERAGE DISCHARGE.--11 years (1954-61, 1964-68), 8.39 cfs (6,070 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 872 cfs Mar. 8 (gage height, 3.53 ft), on basis of slope-conveyance measurement of maximum flow; no flow for most of year.

1928-37, 1954-61, 1964-68: Maximum discharge, 17,200 cfs Nov. 22, 1965 (gage height, 7.94 ft), from rating curve extended above 560 cfs on basis of slope-area measurement for station at Colton; no flow for most of each year.

Maximum discharge known, 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 sta. no. 11-0490). Natural flow of stream affected by ground-water withdrawals and diversions for domestic use and irrigation above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	0	1.5	3.0		0	13	3.8	.10	1.5	1.7	1.3
2	0	2.0	0	3.0		0	.79	4.8	.10	.50	1.0	1.3
3	0	3.0	0	6.0		0	0	2.1	0	1.4	1.7	1.3
4	0	3.0	0	5.0		0	0	4.5	.40	4.1	1.0	.60
5	0	3.0	1.9	4.0		0	0	2.8	.10	1.5	1.5	.40
6	0	2.0	1.9	2.0		2.7	0	.60	.40	1.9	.80	1.3
7	0	3.0	6.2	1.0		3.6	0	0	3.1	7.2	.50	1.0
8	0	3.0	6.2	0		91	0	0	5.3	3.1	.30	.80
9	0	3.0	8.3	0		3.9	0	0	0	1.7	.80	.60
10	0	3.0	12	0		0	0	0	0	0	.60	.40
11	0	2.0	13	0		0	0	0	0	.60	.30	.20
12	0	0	21	0		0	0	0	0	1.3	.20	.40
13	0	0	16	0		0	1.9	.80	0	1.7	.10	.20
14	0	0	6.2	0		.30	11	5.2	0	2.1	.10	0
15	0	3.5	2.1	0		0	.60	9.3	0	2.1	.10	0
16	0	1.9	8.3	0		0	17	10	0	3.1	.10	0
17	0	1.7	11	0		0	.80	10	0	2.0	.10	0
18	2.0	4.2	29	0		0	.60	3.1	0	1.2	.10	0
19	2.0	53	14	0		0	.50	2.5	0	1.4	.10	0
20	2.0	59	10	0		0	.40	2.0	0	1.6	.10	0
21	1.0	42	8.0	0		0	.40	1.5	0	2.0	.10	0
22	2.0	6.2	7.5	0		0	1.7	1.0	.20	1.4	.10	2.5
23	3.0	.20	7.0	0		0	5.2	.80	5.4	1.2	.10	0
24	2.0	0	6.0	0		0	.20	2.3	4.4	1.0	0	0
25	0	0	6.0	0		0	0	.60	1.9	.80	0	0
26	0	0	5.0	0		0	.30	0	2.8	0	0	0
27	0	0	5.0	2.0		0	10	0	1.6	5.2	0	.60
28	1.0	0	5.0	10		0	5.2	0	1.8	21	.40	.60
29	1.0	0	4.0	0		0	0	0	8.3	6.2	1.0	.10
30	0	8.6	4.0	0	-----	0	0	.60	6.2	11	1.0	.40
31	0	-----	4.0	0	-----	0	-----	.40	-----	4.2	1.0	-----
TOTAL	17.0	207.30	230.1	36.0	0	101.50	69.59	68.70	42.10	94.00	14.90	14.00
MEAN	.55	6.91	7.42	1.16	0	3.27	2.32	2.22	1.40	3.03	.48	.47
MAX	3.0	59	29	10	0	91	17	10	8.3	21	1.7	2.5
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	34	411	456	71	0	201	138	136	84	186	30	28
CAL YR 1967 TOTAL	1,088.70											
WTR YR 1968 TOTAL	895.19											
MEAN	2.98											
MAX	59											
MIN	0											
AC-FT	2,160											
AC-FT	1,780											

Peak discharge (base, 350 cfs).--Nov. 19 (2100 hrs) 515 cfs (2.98 ft); Mar. 8 (0700 hrs) 872 cfs (3.53 ft).

SANTA ANA RIVER BASIN

11-0565. LITTLE SAN GORGONIO CREEK NEAR BEAUMONT, CALIF.

LOCATION.--Lat 34°01'45", long 116°56'40", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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 1968.

GAGE.--Graphic water-stage recorder and concrete control. Altitude of gage is 4,320 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 0.095 cfs (69 acre-ft per year).

EXTREMES.--Maximum discharge during year, 96 cfs Mar. 8 (gage height, 1.80 ft), from rating curve extended above 32 cfs as explained below; no flow for much of year.
1948-68: Maximum discharge, 319 cfs Aug. 23, 1955 (gage height, 2.18 ft), from rating curve extended above 32 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. No regulation above station. Several small diversions above station for irrigation. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	.40	.10	.30	.50	.30	.60	.20	.20	.10		
2	.80	.40	.20	.30	.40	.30	.60	.20	.20	0		
3	.80	.40	.10	.20	.40	.30	.30	.20	.20	0		
4	.80	.30	.10	.20	.30	.30	.30	.20	.20	0		
5	.80	.30	.10	.20	.30	.30	.20	.20	.20	0		
6	.70	.30	.10	.20	.30	.90	.20	.20	.20	.10		
7	.70	.30	.10	.20	.30	.50	.20	.20	.20	.10		
8	.70	.30	.20	.20	.30	13	.20	.20	.20	0		
9	.70	.30	.30	.20	.30	1.0	.20	.20	.20	0		
10	.70	.30	.20	.20	.30	.50	.20	.20	.20	0		
11	.60	.30	.20	.20	.30	.30	.20	.20	.20	0		
12	.60	.30	.30	.30	.30	.30	.20	.30	.20	0		
13	.60	.30	.30	.20	.30	.40	.20	.30	.20	0		
14	.60	.30	.40	.20	.40	.30	.20	.30	.10	0		
15	.60	.30	.40	.20	.40	.30	.20	.30	.10	0		
16	.50	.40	.40	.20	.30	.30	.20	.20	.10	0		
17	.50	.50	.60	.20	.30	.30	.20	.20	.10	0		
18	.50	.60	1.6	.20	.30	.30	.20	.20	.10	0		
19	.40	19	1.6	.20	.30	.30	.20	.20	.10	0		
20	.40	2.1	1.0	.20	.30	.30	.20	.20	.10	0		
21	.40	.70	1.0	.20	.30	.30	.20	.20	.10	0		
22	.50	.30	1.0	.20	.30	.30	.20	.20	.10	0		
23	.50	.30	1.0	.20	.30	.30	.20	.20	.10	.10		
24	.50	.30	1.0	.30	.30	.30	.20	.20	.10	0		
25	.50	.30	.70	.30	.30	.30	.20	.20	0	0		
26	.50	.30	.70	.30	.30	.30	.20	.20	0	0		
27	.50	.30	.50	.60	.30	.30	.20	.20	0	0		
28	.60	.60	.30	.60	.30	.30	.20	.20	.10	.50		
29	.60	.20	.20	.50	.30	.30	.20	.20	.10	.10		
30	.40	.70	.20	.50	-----	.30	.20	.20	.10	.10		
31	.40	-----	.20	.60	-----	.30	-----	.20	-----	0		-----
TOTAL	18.20	31.40	15.10	8.60	9.30	23.80	7.00	6.60	4.00	1.10	0	0
MEAN	.59	1.05	.49	.28	.32	.77	.23	.21	.13	.036	0	0
MAX	.80	19	1.6	.60	.50	13	.60	.30	.20	.50	0	0
MIN	.40	.20	.10	.20	.30	.30	.20	.20	0	0	0	0
AC-FT	36	62	30	17	18	47	14	13	7.9	2.2	0	0
CAL YR 1967	TOTAL 154.20		MEAN .42	MAX 19	MIN 0	AC-FT 306						
WTR YR 1968	TOTAL 125.10		MEAN .34	MAX 19	MIN 0	AC-FT 248						

Peak discharge (base, 10 cfs).--Nov. 19 (0900 hrs) 77 cfs (1.74 ft); Mar. 8 (0730 hrs) 96 cfs (1.80 ft).

Note.--No gage-height record Oct. 1-17, Jan. 31 to Feb. 29, Mar. 9-25.

11-0570. SAN TIMOTEO CREEK NEAR REDLANDS, CALIF.

LOCATION.--Lat 34°01'59", long 117°12'29", in NE¼NE¼NE¼ 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 1968.

GAGE.--Graphic 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.--42 years, 1.38 cfs (999 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,130 cfs Mar. 8 (gage height, 3.79 ft); no flow for most of year. 1926-68: 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. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0			0	0					
2		0	0			0	.10					
3		0	0			0	0					
4		0	0			0	0					
5		0	0			0	0					
6		0	0			0	0					
7		0	0			0	0					
8		0	0			196	0					
9		0	0			0	0					
10		0	0			0	0					
11		0	0			0	0					
12		0	0			0	0					
13		0	0			0	0					
14		0	0			0	0					
15		0	0			0	0					
16		0	0			0	0					
17		0	0			0	0					
18		0	19			0	0					
19		50	2.3			0	0					
20		2.5	0			0	0					
21		8.9	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	0					
30		0	0		-----	0	0					
31		-----	0		-----	0	-----		-----			-----
TOTAL	0	61.4	21.3	0	0	196	0.10	0	0	0	0	0
MEAN	0	2.05	.69	0	0	6.32	.003	0	0	0	0	0
MAX	0	50	19	0	0	196	.10	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	122	42	0	0	389	.2	0	0	0	0	0
CAL YR 1967	TOTAL 365.90		MEAN 1.00		MAX 161		MIN 0		AC-FT 726			
WTR YR 1968	TOTAL 278.80		MEAN .76		MAX 196		MIN 0		AC-FT 553			

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-19	1700	2.34	316	03-08	0845	3.79	1,130
11-21	1530	2.03	197				

SANTA ANA RIVER BASIN

11-0575. SAN TIMOTEO CREEK NEAR LOMA LINDA, CALIF.

LOCATION.--Lat 34°03'49", long 117°16'19", in San Bernardino Grant, on right bank 50 ft downstream from west bound lane of Interstate Highway 10, and 0.8 mile northwest of Loma Linda, San Bernardino County.

DRAINAGE AREA.--125 sq mi.

RECORDS AVAILABLE.--October 1954 to September 1965, February 1968 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 1,040 ft (from topographic map). Prior to February 1968, at site 0.5 mile downstream at different datum.

AVERAGE DISCHARGE.--11 years (1954-65), 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 period February to September, 1,090 cfs Mar. 8 (gage height, 3.68 ft), on basis of computation of maximum flow in concrete-lined channel; no flow for several days.
1954-65, February to September 1968: Maximum discharge, 1,090 cfs Mar. 8, 1968 (gage height, 3.68 ft), on basis of computation of maximum flow in concrete-lined channel; no flow for several days in 1968.

REMARKS.--Records fair. No regulation above station. Natural flow affected by pumping and return flow from irrigated areas.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					.10	.30	3.7	0	0	3.2	.30	.30
2					.20	.40	7.2	0	0	2.8	.30	.30
3					.10	.50	1.5	.20	.70	2.8	.40	.30
4					0	.40	3.4	.10	1.0	3.6	.40	.30
5					0	.20	2.1	0	1.0	2.0	.70	.30
6					.30	2.2	.90	.10	1.0	2.8	1.2	.30
7					.10	3.2	1.4	.50	.40	5.2	1.0	.30
8					.10	188	.60	.40	.30	5.8	1.8	.30
9					.20	0	.40	.20	.70	9.6	7.1	.30
10					.20	0	.80	.70	.80	9.6	4.6	.30
11					.40	0	.70	1.2	.80	8.6	2.8	.30
12					.50	.50	.80	1.8	1.2	6.4	0	.30
13					.20	.20	.40	1.8	2.4	5.2	1.0	.30
14					.10	.10	.80	.80	2.8	8.6	2.0	.30
15					.20	.10	1.2	.80	3.3	7.8	2.3	.30
16					.20	0	1.0	1.5	3.2	6.4	1.3	.30
17					.20	.50	1.7	2.8	4.2	6.4	.10	.30
18					.20	1.0	1.2	.40	4.6	5.8	.80	.30
19					.30	.80	.80	.70	2.7	1.6	1.1	.40
20					.30	1.0	.70	1.0	3.6	4.1	4.2	.40
21					.30	.10	1.5	2.8	3.6	1.2	4.6	.40
22					.20	0	1.2	1.7	1.2	.90	2.4	.50
23					.10	0	2.0	1.7	.90	.70	1.9	.50
24					.10	0	1.8	.20	3.6	.50	1.0	.50
25					.10	0	3.2	0	2.0	.20	3.0	.60
26					0	.40	2.5	.10	.20	.70	1.0	.60
27					.10	1.0	.20	0	.80	.50	.80	.60
28					0	1.0	.10	0	.80	.20	.60	.60
29					.10	.20	0	0	1.2	.10	.30	.70
30					-----	.70	0	0	2.4	0	.30	.80
31		-----			-----	1.0	-----	.10	-----	0	.30	-----
TOTAL					4.90	203.80	43.80	21.60	51.40	113.30	49.60	12.00
MEAN					.17	6.57	1.46	.70	1.71	3.65	1.60	.40
MAX					.50	188	7.2	2.8	4.6	9.6	7.1	.80
MIN					0	0	0	0	0	0	0	.30
AC-FT					9.7	404	87	43	102	225	98	24

11-0585, EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CALIF.

LOCATION.--Lat 34°10'45", long 117°15'53", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ 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.

RECORDS AVAILABLE.--December 1919 to September 1968. Prior to October 1952, published as Strawberry Creek near Arrowhead Springs.

GAGE.--Digital water-stage recorder and broad-crested weir since September 1938. Altitude of gage is 1,590 ft (from topographic map). Prior to Feb. 23, 1965, graphic water-stage recorder.

AVERAGE DISCHARGE.--48 years (1920-68), 4.32 cfs (3,130 acre-ft per year); median of yearly mean discharges, 2.8 cfs (2,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 101 cfs Mar. 8 (gage height, 3.04 ft); minimum daily, 0.53 cfs July 24, 25, Aug. 10.

1919-68: 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. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.8	6.8	4.0	3.1	2.1	4.3	2.0	.83	.77	.82	.66
2	2.3	1.8	6.0	4.0	3.1	2.0	5.5	2.1	.77	.75	.79	.67
3	2.3	1.9	5.2	3.9	3.0	2.3	3.3	2.3	.83	.76	.70	.75
4	2.2	1.9	4.5	3.6	2.9	2.5	3.0	2.3	.77	.74	.60	.77
5	2.5	1.9	4.7	3.6	2.9	3.2	2.9	2.5	.71	.69	.64	.72
6	2.0	1.9	4.5	3.4	3.0	3.9	2.9	2.4	.83	.76	.59	.68
7	2.1	1.9	3.8	3.3	3.0	4.5	3.0	2.4	.97	.90	.58	.65
8	1.9	1.9	3.2	3.3	3.1	2.9	3.6	2.4	.97	.91	.56	.65
9	1.9	1.9	3.0	3.3	3.4	8.4	2.6	2.1	.83	.79	.54	.64
10	1.8	1.9	3.1	3.3	3.7	5.7	2.5	2.1	.71	.67	.53	.64
11	1.8	1.8	3.0	3.4	3.2	4.8	2.5	2.3	.65	.63	.54	.65
12	1.8	1.8	3.0	3.2	3.1	4.3	2.7	3.5	.65	.58	.54	.69
13	1.8	1.8	3.0	3.2	3.9	4.4	2.7	3.9	.65	.58	.58	.66
14	1.8	1.8	2.8	3.2	3.9	4.0	2.7	2.7	.65	.62	.62	.64
15	1.6	1.8	3.0	3.2	3.5	3.7	2.7	2.2	1.3	.60	.67	.67
16	1.7	1.8	3.3	3.3	3.3	3.6	3.0	1.9	1.2	.60	.73	.67
17	1.8	1.9	3.2	3.3	2.9	4.0	3.1	1.8	1.2	.59	.77	.68
18	1.8	1.9	7.4	3.3	2.9	3.4	2.9	1.6	1.3	.63	.88	.69
19	1.9	6.5	9.9	3.3	2.9	3.2	2.8	1.5	1.2	.58	.80	.71
20	1.9	1.7	7.9	3.2	2.9	3.1	2.9	1.6	1.1	.58	.90	.71
21	1.9	8.5	7.0	3.2	2.8	3.0	3.0	1.7	.97	.55	.91	.73
22	2.0	5.3	6.2	3.0	2.8	2.9	2.7	1.9	.90	.55	.80	.66
23	2.1	4.2	5.7	2.9	2.6	2.9	2.5	1.9	.91	.57	.68	.62
24	2.0	4.5	5.4	3.0	2.4	2.9	2.4	1.9	1.0	.53	.64	.63
25	1.8	4.1	5.0	3.1	2.2	2.7	2.3	1.7	.90	.53	.67	.61
26	1.8	4.3	4.8	3.2	2.1	2.6	2.3	1.5	.87	.63	.62	.62
27	1.9	4.1	4.5	5.1	2.2	2.5	2.4	1.4	.82	.66	.63	.61
28	1.9	4.8	4.5	3.5	2.2	2.4	2.2	1.4	.82	.79	.63	.67
29	1.6	4.4	4.3	3.4	2.1	2.3	2.0	1.5	.99	1.1	.64	.68
30	1.6	1.3	4.2	3.2	-----	2.3	1.9	.83	.81	1.0	.62	.71
31	1.7	-----	4.2	3.3	-----	2.4	-----	1.6	-----	.89	.63	-----
TOTAL	59.6	114.1	147.1	105.2	85.1	131.0	85.3	62.93	27.11	21.53	20.85	20.14
MEAN	1.92	3.80	4.75	3.39	2.93	4.23	2.84	2.03	.90	.69	.67	.67
MAX	2.5	1.7	9.9	5.1	3.9	2.9	5.5	3.9	1.3	1.1	.91	.77
MIN	1.6	1.8	2.8	2.9	2.1	2.0	1.9	.83	.65	.53	.53	.61
AC-FT	118	226	292	209	169	260	169	125	54	43	41	40

CAL YR 1967 TOTAL 2,243.5 MEAN 6.15 MAX 67 MIN 1.6 AC-FT 4,450
WTR YR 1968 TOTAL 879.96 MEAN 2.40 MAX 29 MIN .53 AC-FT 1,750

PEAK DISCHARGE (BASE, 40 CFS)

DATE	TIME	GAGE HEIGHT	DISCHARGE
11-20	0130	2.70	47
11-30	1500	2.68	44
03-08	0615	3.04	101

SANTA ANA RIVER BASIN

11-0586, WATERMAN CANYON CREEK NEAR ARROWHEAD SPRINGS, CALIF.

LOCATION.--Lat 34°11'35", long 117°16'25", in NE¼NW¼NW¼ sec.11, T.1 N., R.4 W., on left bank 0.8 mile north-west 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 1968.

GAGE.--Digital 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. Prior to Apr. 15, 1966, graphic water-stage recorder.

AVERAGE DISCHARGE.--50 years (1912-14, 1920-68), 2.47 cfs (1,790 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 235 cfs Mar. 8 (gage height, 3.55 ft); minimum daily, 0.23 cfs Aug. 12. 1919-68: Maximum discharge, 2,350 cfs Mar. 2, 1938, based on rainfall-runoff studies; no flow at times in most years.

REMARKS.--Records good. No regulation above station. One small diversion for domestic use above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.85	3.1	1.9	1.8	1.5	9.8	1.2	.75	.77	.34	.60
2	1.2	.90	2.0	1.9	1.8	1.5	3.4	1.3	.65	.72	.38	.60
3	1.2	.91	1.8	2.0	1.7	1.4	2.0	1.4	.64	.60	.37	.60
4	1.3	.92	1.6	1.9	1.7	1.4	1.9	1.4	.76	.53	.32	.60
5	1.3	1.0	1.6	1.9	1.6	1.4	1.9	1.4	.92	.55	.32	.60
6	1.1	1.0	1.6	1.8	1.5	2.0	1.9	1.4	1.0	.64	.31	.60
7	1.0	.98	1.5	1.8	1.5	3.4	1.8	1.3	1.1	.69	.29	.60
8	.96	.98	1.5	1.8	1.5	21	1.7	1.4	1.2	.50	.26	.60
9	.94	.98	1.5	1.8	1.6	4.7	1.7	1.3	1.0	.41	.25	.60
10	.87	1.0	1.5	1.8	1.8	3.2	1.6	1.4	.87	.35	.24	.60
11	.86	.96	1.4	1.8	1.6	2.7	1.6	1.4	.76	.32	.25	.50
12	.84	.96	1.5	1.7	1.6	2.7	1.7	1.9	.72	.29	.23	.50
13	.83	.92	1.5	1.7	2.8	3.2	1.7	2.0	.71	.34	.30	.50
14	.82	.93	1.5	1.7	2.4	2.2	1.6	1.5	.71	.35	.39	.50
15	.81	.97	1.6	1.7	1.9	2.1	1.6	1.4	.65	.42	.39	.50
16	.80	.98	1.6	1.7	1.8	2.1	1.7	1.3	.62	.42	.46	.50
17	.78	1.0	1.6	1.7	1.8	3.2	1.7	1.2	.62	.33	.49	.50
18	.81	1.0	4.7	1.7	1.8	2.2	1.7	1.1	.61	.29	.42	.50
19	.84	14	3.4	1.7	1.7	2.1	1.7	1.0	.58	.27	.39	.50
20	.84	14	2.7	1.7	1.7	1.9	1.7	1.0	.56	.25	.50	.50
21	.95	4.6	2.5	1.7	1.7	1.8	1.7	1.1	.52	.24	.57	.50
22	1.0	2.4	2.3	1.6	1.7	1.8	1.6	1.2	.48	.24	.60	.50
23	.96	1.9	2.4	1.6	1.7	1.8	1.6	1.1	.53	.24	.60	.50
24	.96	1.7	2.4	1.6	1.6	1.8	1.6	1.1	.61	.25	.60	.50
25	.96	1.6	2.2	1.6	1.5	1.7	1.5	1.0	.60	.27	.60	.50
26	.99	1.5	2.1	1.7	1.5	1.7	1.4	.87	.62	.26	.60	.50
27	.94	1.5	2.0	3.7	1.5	1.7	1.5	.76	.61	.34	.60	.50
28	.98	1.5	2.0	2.6	1.5	1.6	1.3	.75	.74	.52	.60	.50
29	.94	1.5	1.9	2.1	1.5	1.6	1.3	.78	.97	.48	.60	.50
30	.91	10	2.0	2.0	-----	1.6	1.3	.87	.89	.40	.60	.50
31	.85	-----	2.0	2.0	-----	4.7	-----	.84	-----	.37	.60	-----
TOTAL	29.84	73.44	63.0	57.9	49.8	87.7	59.2	37.67	22.00	12.65	13.47	16.00
MEAN	.96	2.45	2.03	1.87	1.72	2.83	1.97	1.22	.73	.41	.43	.53
MAX	1.3	14	4.7	3.7	2.8	21	9.8	2.0	1.2	.77	.60	.60
MIN	.78	.85	1.4	1.6	1.5	1.4	1.3	.75	.48	.24	.23	.50
AC-FT	59	146	125	115	99	174	117	75	44	25	27	32

CAL YR 1967 TOTAL 1,397.65 MEAN 3.83 MAX 38 MIN .78 AC-FT 2,770
WTR YR 1968 TOTAL 522.67 MEAN 1.43 MAX 21 MIN .23 AC-FT 1,040

PEAK DISCHARGE (BASE, 35 CFS)

Note.--No gage-height record Aug. 22 to Sept. 30.

DATE	TIME	GAGE HEIGHT	DISCHARGE
11-19	1215	3.08	110
11-30	1315	2.76	54
03-08	0500	3.55	235

11-0590. WARM CREEK FLOODWAY AT SAN BERNARDINO, CALIF.

LOCATION (revised).--Lat 34°05'45", long 117°16'30", in San Bernardino Grant, on left bank 0.4 mile upstream from Mill Street, and 1.8 miles upstream from mouth, San Bernardino County. Prior to Dec. 21, 1967, at site 0.4 mile downstream.

DRAINAGE AREA.--47.8 sq mi (revised).

RECORDS AVAILABLE.--January 1961 to September 1968. Prior to October 1965, published as "near San Bernardino."

GAGE.--Graphic water-stage recorder. Altitude of gage is 1,000 ft (from topographic map). Prior to Dec. 21, 1967, at site 0.4 mile downstream at different datum.

EXTREMES.--Maximum discharge during year, 505 cfs Mar. 8 (gage height, 3.75 ft); no flow for most of year. 1961-68: Maximum discharge, 5,390 cfs Dec. 5, 1966 (gage height, 7.25 ft, site and datum then in use), on basis of field estimate of maximum flow; no flow for most of each year.

REMARKS.--Records fair. Flow partly regulated by percolation basins. Del Rosa Water Co. diverts from East Twin Creek for domestic use and irrigation. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	2.6	.10	.60	0	20	0	0	0	0	.10
2		0	1.2	.90	0	0	35	0	0	0	0	0
3		0	.40	.90	0	0	1.8	0	0	0	0	0
4		0	.20	0	0	.20	1.8	0	.50	0	0	0
5		0	0	0	0	0	.40	0	.80	0	0	0
6		0	0	0	0	7.2	.10	0	0	0	0	0
7		0	.70	0	0	13	0	0	0	0	0	0
8		0	1.0	0	0	113	0	0	0	0	0	0
9		0	0	0	.60	3.8	0	.40	0	.10	0	0
10		0	.40	0	.20	2.6	0	0	0	0	0	.30
11		0	.20	.40	0	1.0	0	0	0	0	.10	.50
12		0	0	0	0	1.0	0	.50	0	0	0	.50
13		0	0	0	5.1	1.2	0	.80	0	0	0	.50
14		0	0	0	.80	.80	.10	0	0	0	.20	0
15		0	0	0	.40	.50	0	0	0	0	0	0
16		0	0	0	.10	.50	0	0	0	0	0	.50
17		0	0	0	0	.10	.90	0	0	.10	0	0
18		0	0	0	0	.40	0	0	0	0	0	0
19		30	0	0	0	.10	0	0	0	0	0	0
20		64	0	0	0	0	0	0	0	0	0	0
21		24	2.0	0	0	0	0	0	0	0	0	0
22		5.0	1.2	0	0	0	0	.30	0	0	.10	0
23		2.6	1.0	0	0	0	0	0	0	0	0	0
24		1.8	.50	0	0	0	0	0	0	0	.90	0
25		0	.30	.10	0	0	0	0	0	0	.10	0
26		0	.20	.20	0	0	0	0	0	0	0	0
27		0	.20	12	0	0	0	.90	0	0	0	0
28		1.6	.10	2.6	0	0	0	1.2	0	2.3	.10	0
29		0	.10	1.4	0	0	0	.50	0	0	0	0
30		21	.10	.80	-----	0	0	0	0	0	0	0
31		-----	.10	1.0	-----	0	-----	0	-----	0	0	-----
TOTAL	0	150.0	12.50	20.40	7.80	145.40	60.10	4.60	1.30	2.50	1.50	2.40
MEAN	0	5.00	.40	.66	.27	4.69	2.00	.15	.043	.081	.048	.080
MAX	0	64	2.6	12	5.1	113	35	1.2	.80	2.3	.90	.50
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	298	25	40	15	288	119	9.1	2.6	5.0	3.0	4.8
CAL YR 1967	TOTAL	2,391.10	MEAN	6.55	MAX	814	MIN	0	AC-FT	4,740		
WTR YR 1968	TOTAL	408.50	MEAN	1.12	MAX	113	MIN	0	AC-FT	810		

SANTA ANA RIVER BASIN

11-0593. SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CALIF.

LOCATION.--Lat 34°04'05", long 117°17'36", in San Bernardino Grant, on downstream side of E Street bridge, 0.8 mile downstream from San Timoteo Creek, 1 mile upstream from Warm Creek, and 3 miles south of San Bernardino, San Bernardino County.

DRAINAGE AREA.--528 sq mi.

RECORDS AVAILABLE.--March 1939 to September 1954, October 1966 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 970 ft (from topographic map). Prior to Nov. 10, 1950, water-stage recorder at right bank at datum 10.00 ft higher. Nov. 11, 1950 to Sept. 30, 1954, water-stage recorders on both banks at datum 10.00 ft higher.

AVERAGE DISCHARGE.--15 years (1939-54), 12.5 cfs (9,050 acre-ft per year); median of yearly mean discharges, 6.9 cfs (5,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,110 cfs Mar. 8; maximum gage height, 6.90 ft Nov. 19; minimum daily, 9.7 cfs Oct. 16, Feb. 25.

1939-54, 1966-68: Maximum stage recorded, 16.50 ft (present datum) Jan. 23, 1943, maximum discharge uncertain; no flow for many days prior to 1967.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (see sta. no. 11-0490.). Natural flow of stream affected by ground-water withdrawals and diversions for domestic use and irrigation above station. Effluent from sewage reclamation plant causes sustained flow since station was last operated. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	15	18	13	11	45	16	12	16	15	13
2	11	13	13	18	13	11	50	17	12	16	15	16
3	11	14	12	18	12	11	16	14	14	16	15	16
4	11	15	12	18	11	11	17	16	13	15	15	16
5	13	15	14	18	11	11	30	14	14	15	15	16
6	13	15	14	15	11	21	13	13	13	15	15	16
7	11	14	19	15	11	32	12	13	15	15	14	16
8	10	17	19	14	11	293	13	12	17	17	16	16
9	10	17	20	14	11	24	12	13	12	21	16	16
10	10	18	24	14	12	13	11	13	14	14	14	16
11	10	18	25	14	12	13	13	13	13	14	12	16
12	10	12	33	14	15	13	13	13	14	15	12	16
13	11	13	28	14	18	13	14	16	15	16	12	16
14	13	14	18	14	13	13	23	18	15	13	12	16
15	11	14	14	14	12	13	15	22	15	16	12	15
16	9.7	14	20	14	11	14	28	24	14	18	14	16
17	11	14	23	14	11	14	15	25	17	16	15	15
18	11	16	40	14	11	13	14	16	17	16	14	15
19	11	140	42	14	11	14	14	15	15	16	16	15
20	11	130	24	14	11	14	13	16	16	16	17	15
21	17	80	22	14	11	16	13	16	16	15	16	15
22	22	20	21	14	11	16	15	15	14	15	16	15
23	22	15	20	14	11	16	19	14	18	15	16	15
24	17	15	18	14	11	13	14	15	21	13	16	15
25	12	15	18	14	9.7	13	16	13	16	13	15	15
26	12	12	17	13	10	13	15	12	18	12	16	15
27	12	13	17	26	11	14	22	14	18	13	16	15
28	13	13	17	38	11	13	15	14	17	32	16	15
29	13	12	17	13	11	13	13	13	22	19	16	15
30	12	99	17	13	-----	13	12	12	20	21	15	15
31	12	-----	17	13	-----	13	-----	20	-----	16	15	-----
TOTAL	385.7	829	630	488	337.7	725	535	477	467	500	459	462
MEAN	12.4	27.6	20.3	15.7	11.6	23.4	17.8	15.4	15.6	16.1	14.8	15.4
MAX	22	140	42	38	18	293	50	25	22	32	17	16
MIN	9.7	12	12	13	9.7	11	11	12	12	12	12	13
AC-FT	765	1,640	1,250	968	670	1,440	1,060	946	926	992	910	916

CAL YR 1967 TOTAL 8,934.3 MEAN 24.5 MAX 1,000 MIN 6.4 AC-FT 17,720
WTR YR 1968 TOTAL 6,295.4 MEAN 17.2 MAX 293 MIN 9.7 AC-FT 12,490

Peak discharge (base, 400 cfs).--Nov. 19 (2200 hrs) 500 cfs (estimated) (6.90 ft); Mar. 8 (0800 hrs) 1,110 cfs (6.37 ft).

Note.--No gage-height record or stage-discharge relation indefinite Nov. 19, 20, 30, Dec. 5-17, Apr. 1 to June 25.

SANTA ANA RIVER BASIN

169

11-0604. 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.

RECORDS AVAILABLE.--February 1964 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 975 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 350 cfs Mar. 8 (gage height, 4.98 ft), on basis of sf slope-conveyance measurement of maximum flow; no flow for most of year.
1964-68: 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 poor. At times discharge diverted above station to Warm Creek floodway. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0		0	7.2			0		
2		0	0	0		0	5.6			0		
3		0	0	0		0	0			0		
4		0	0	0		0	0			0		
5		0	0	0		0	0			0		
6		0	0	0		0	0			0		
7		0	0	0		.10	0			0		
8		0	0	0		44	0			0		
9		0	0	0		0	0			0		
10		0	0	0		0	0			0		
11		0	0	0		0	0			0		
12		0	0	0		0	0			0		
13		0	0	0		0	0			0		
14		0	0	0		0	0			0		
15		0	0	0		0	0			0		
16		0	0	0		0	0			0		
17		0	0	0		0	.40			0		
18		0	13	0		0	0			0		
19		6.2	0	0		0	0			0		
20		19	0	0		0	0			0		
21		14	0	0		0	0			0		
22		0	0	0		0	0			0		
23		0	0	0		0	0			0		
24		0	0	0		0	0			0		
25		0	0	0		0	0			0		
26		0	0	0		0	0			0		
27		0	0	3.5		0	0			0		
28		0	0	0		0	0			.10		
29		0	0	0		0	0			0		
30		8.3	0	0	-----	0	0			0		
31		-----	0	0	-----	0	-----		-----	0		-----
TOTAL	0	47.5	13	3.5	0	44.10	13.20	0	0	0.10	0	0
MEAN	0	1.58	.42	.11	0	1.42	.44	0	0	.003	0	0
MAX	0	19	13	3.5	0	44	7.2	0	0	.10	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	94	26	6.9	0	87	26	0	0	.2	0	0
CAL YR 1967	TOTAL	241.30	MEAN	.66	MAX	48	MIN	0	AC-FT	479		
WTR YR 1968	TOTAL	121.40	MEAN	.33	MAX	44	MIN	0	AC-FT	241		

SANTA ANA RIVER BASIN

11-0605. 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 1968. Published with station Warm Creek near Colton, October 1950 to September 1961.

GAGE.--Graphic water-stage recorder. Altitude of gage is 965 ft (from topographic map).

EXTREMES.--1920-68: Maximum daily discharge, 25 cfs Mar. 2, 1938; no flow at times in most years.

REMARKS.--Records good. Canal diverts water from right bank of Warm Creek 1.6 miles northeast of Colton for irrigation in vicinity of Colton, Riverside and Corona. All flow passing station this year was pumped from ground-water basin. Pumping began in 1931. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	12		0	2.4	12	4.8	12	3.5	12	15	11
2	8.7	12		0	2.4	12	2.2	13	2.2	12	15	11
3	8.7	12		0	2.4	12	2.2	13	6.3	11	13	11
4	9.5	12		0	2.4	12	2.2	13	12	11	11	11
5	12	12		0	6.8	13	2.2	7.8	12	11	11	11
6	12	12		0	13	13	2.2	2.2	12	11	11	11
7	12	12		0	12	13	2.2	2.4	12	11	11	11
8	12	12		0	12	3.1	2.2	2.4	12	11	11	11
9	12	12		0	12	0	2.2	2.4	12	11	11	11
10	12	12		0	12	0	2.2	3.3	12	11	11	11
11	12	12		0	12	0	7.1	3.5	12	12	11	11
12	12	12		0	12	0	14	3.5	11	12	11	11
13	10	12		0	12	0	13	11	12	12	11	11
14	12	12		0	12	0	12	14	12	12	11	11
15	12	12		0	9.6	0	12	13	12	12	11	11
16	12	12		0	5.9	0	13	13	12	12	11	11
17	12	12		0	12	0	13	13	12	12	12	11
18	12	12		0	12	0	13	13	12	12	12	11
19	12	7.1		0	12	0	13	13	12	12	12	11
20	12	2.2		.30	12	.30	13	5.6	12	12	12	11
21	12	1.2		0	12	1.7	13	2.4	12	12	12	11
22	12	0		3.7	12	2.0	13	2.4	12	12	12	11
23	12	0		10	12	2.0	13	2.4	12	12	12	11
24	12	0		11	12	2.0	13	2.4	12	12	12	11
25	12	0		12	7.8	2.0	13	2.4	12	11	11	11
26	12	0		11	2.0	2.2	13	2.4	12	11	11	11
27	12	0		5.7	1.8	2.2	13	2.2	12	12	11	11
28	12	0		2.4	1.8	2.2	13	2.2	12	12	11	11
29	12	0		2.4	5.2	2.2	12	2.2	12	12	11	11
30	12	0		2.4	-----	2.2	12	2.2	12	12	11	11
31	12	-----		2.4	-----	2.2	-----	4.7	-----	14	11	-----
TOTAL	358.8	226.5	0	63.30	255.5	113.30	275.7	202.0	335.0	364	359	330
MEAN	11.6	7.55	0	2.04	8.81	3.65	9.19	6.52	11.2	11.7	11.6	11.0
MAX	12	12	0	12	13	13	14	14	12	14	15	11
MIN	8.7	0	0	0	1.8	0	2.2	2.2	2.2	11	11	11
AC-FT	712	449	0	126	507	225	547	401	664	722	712	655
CAL YR 1967	TOTAL 2,192.90			MEAN 6.01		MAX 12		MIN 0		AC-FT 4,350		
WTR YR 1968	TOTAL 2,883.10			MEAN 7.88		MAX 15		MIN 0		AC-FT 5,720		

11-0620. LYTLE CREEK NEAR FONTANA, CALIF.

LOCATION.--Lat 34°12'44", long 117°27'26", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.2 N., R.6 W., 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 1968. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to September 1968 (published as "at mouth of canyon near Rialto" 1898-1899, 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.--Graphic water-stage recorder on creek and dual arch-culvert control (since 1964), effective at higher stages; graphic 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).--50 years, 11.3 cfs (8,180 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).
(combined).--65 years, 41.1 cfs (29,760 acre-ft per year); median of yearly mean discharges, 33 cfs (23,900 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 336 cfs Nov. 19 (gage height, 5.96 ft); no flow May 5 to July 27, July 29 to Sept. 30.
1918-68: 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, 341 cfs Nov. 19; minimum daily, 18 cfs for several days.
1898-99, 1904-68: Maximum discharge, 25,200 cfs Mar. 2, 1938; minimum daily, 6.0 cfs Nov. 7, 1963.

REMARKS.--Records good except those for March 7-19, which are poor. No regulation above station. Southern California Edison Co.'s Lytle Creek conduit diverts 2.3 miles upstream for power development, and Fontana Union Water Co. collects water from an infiltration line upstream for irrigation. See schematic diagram of Santa Ana River basin. For records of combined discharge of Lytle Creek and diversions, see following page.

COOPERATION.--Records of discharge through infiltration line furnished by Fontana Union Water Co.; water-stage recorder graph for Lytle Creek conduit furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	28	71	7.3	2.8	1.4	6.2	.70		0		
2	33	28	59	8.2	2.6	1.4	7.7	.60		0		
3	33	28	53	10	2.4	1.2	4.9	.60		0		
4	33	28	40	11	2.4	1.0	3.4	.30		0		
5	33	26	36	12	2.4	1.0	2.4	0		0		
6	34	26	36	10	2.4	1.0	2.2	0		0		
7	34	26	36	6.3	2.2	3.0	2.6	0		0		
8	34	26	36	5.8	2.2	100	2.2	0		0		
9	34	26	36	5.8	2.2	15	2.2	0		0		
10	32	26	34	5.3	3.1	4.6	2.2	0		0		
11	32	26	30	5.3	3.1	4.2	1.8	0		0		
12	32	26	29	4.9	3.1	3.6	1.8	0		0		
13	30	26	29	4.9	3.1	3.4	2.0	0		0		
14	30	26	29	4.6	3.1	3.1	2.0	0		0		
15	30	26	29	4.2	3.6	3.1	1.4	0		0		
16	30	26	29	4.2	4.2	2.8	1.4	0		0		
17	30	26	29	4.2	4.2	2.8	1.4	0		0		
18	29	26	68	4.2	4.2	2.6	1.4	0		0		
19	28	133	64	3.9	3.6	2.6	1.4	0		0		
20	29	91	62	3.6	3.4	2.6	1.4	0		0		
21	29	74	62	3.4	3.4	2.6	1.4	0		0		
22	29	56	62	3.1	3.4	2.6	1.4	0		0		
23	29	46	50	3.9	2.8	2.6	1.4	0		0		
24	29	46	48	3.4	1.8	2.6	1.4	0		0		
25	29	38	48	2.8	1.6	2.6	1.4	0		0		
26	29	34	30	2.8	1.4	2.6	1.4	0		0		
27	28	36	14	4.0	1.4	2.6	1.2	0		0		
28	28	36	9.9	5.3	1.4	2.4	1.2	0		1.7		
29	28	36	7.3	3.6	1.4	2.2	1.0	0		0		
30	28	72	7.3	3.4	-----	2.0	.80	0		0		
31	28	-----	7.3	3.1	-----	2.0	-----	0	-----	0	-----	
TOTAL	947	1,174	1,180.8	164.5	78.9	187.2	64.60	2.20	0	1.7	0	0
MEAN	30.5	39.1	38.1	5.31	2.72	6.04	2.15	.071	0	.055	0	0
MAX	34	133	71	12	4.2	100	7.7	.70	0	1.7	0	0
MIN	28	26	7.3	2.8	1.4	1.0	.80	0	0	0	0	0
AC-FT	1,880	2,330	2,340	326	157	371	128	4.4	0	3.4	0	0

CAL YR 1967 TOTAL 15,269.8 MEAN 41.8 MAX 299 MIN 7.3 AC-FT 30,290
WTR YR 1968 TOTAL 3,800.90 MEAN 10.4 MAX 133 MIN 0 AC-FT 7,540

Peak discharge (base, 200 cfs).--Nov. 19 (1330 hrs) 336 cfs (5.96 ft); Mar. 8 (1000 hrs) 300 cfs (5.90 ft, from floodmarks).

SANTA ANA RIVER BASIN

11-0620, LYTLE CREEK NEAR FONTANA, CALIF.--Continued

Combined discharge, in cubic feet per second, of Lytle Creek,
Southern California Edison Co.'s Lytle Creek conduit, and Fontana
Union Water Co.'s infiltration line, near Fontana, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	33	76	37	32	30	33	27	23	19	19	18
2	38	33	64	33	31	30	33	27	22	19	19	19
3	38	33	58	30	31	30	30	27	22	19	19	19
4	38	33	45	30	30	30	28	27	22	19	19	19
5	38	31	41	32	30	30	29	28	22	19	19	19
6	39	31	41	34	30	30	28	25	23	20	18	19
7	39	31	41	36	30	32	28	26	23	20	18	18
8	39	31	41	36	30	111	27	27	24	20	18	18
9	39	31	41	35	31	30	27	27	23	19	19	18
10	37	31	39	35	33	34	27	27	22	18	19	18
11	37	31	35	35	33	34	26	27	22	18	19	18
12	37	31	34	35	33	33	26	27	22	19	19	18
13	35	31	34	35	33	33	27	27	22	19	19	18
14	35	31	34	33	33	32	27	27	22	19	19	18
15	35	31	34	33	33	32	26	26	22	19	19	19
16	35	31	34	33	34	32	26	26	22	19	19	18
17	35	31	34	33	34	32	26	26	22	19	19	18
18	34	31	73	32	34	31	26	25	22	19	19	18
19	33	138	69	33	33	31	26	25	21	19	19	19
20	34	96	67	32	33	31	26	25	21	19	19	19
21	34	79	67	33	33	31	25	25	21	19	19	19
22	34	61	67	32	33	31	25	25	21	19	19	19
23	34	51	57	31	32	31	27	24	21	19	20	19
24	34	51	53	31	32	31	29	24	20	19	19	19
25	34	43	53	32	31	30	28	24	20	19	19	19
26	34	39	42	32	31	29	28	23	20	19	19	19
27	33	41	38	34	31	29	28	23	20	19	21	19
28	33	41	37	35	31	28	28	23	20	22	19	19
29	33	41	37	33	31	27	28	23	20	20	18	19
30	33	77	37	33	-----	27	27	23	20	19	18	19
31	33	-----	37	33	-----	27	-----	23	-----	19	18	-----
TOTAL	1,102	1,324	1,460	1,031	926	1,029	825	789	647	594	586	558
MEAN	35.5	44.1	47.1	33.3	31.9	33.2	27.5	25.5	21.6	19.2	18.9	18.6
MAX	39	138	76	37	34	111	33	28	24	22	21	19
MIN	33	31	34	30	30	27	25	23	20	18	18	18
AC-FT	2,190	2,630	2,900	2,040	1,840	2,040	1,640	1,560	1,280	1,180	1,160	1,110
CAL YR 1967	TOTAL 22,975		MEAN 62.9		MAX 304		MIN 31		AC-FT 45,570			
WTR YR 1968	TOTAL 10,871		MEAN 29.7		MAX 138		MIN 18		AC-FT 21,560			

Peak discharge (base, 200 cfs).--Nov. 19 (1330 hrs) 341 cfs; Mar. 8 (1000 hrs) 305 cfs.

SANTA ANA RIVER BASIN

173

11-0630. CAJON CREEK NEAR KEENBROOK, CALIF.

LOCATION.--Lat 34°16'01", long 117°27'33", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.2 N., R.6 W., on left bank 1,300 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 2,630 ft (from topographic map). Prior to Oct. 24, 1935, at site 1,000 ft downstream at different datum. Oct. 24, 1935, to Jan. 26, 1966, at site 300 ft upstream at datum 6.68 ft higher. Aug. 22, 1962, to Jan. 26, 1967, digital water-stage recorder.

AVERAGE DISCHARGE.--48 years (1920-68), 8.64 cfs (6,280 acre-ft per year); median of yearly mean discharges, 5.5 cfs (4,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 469 cfs Nov. 19 (gage height, 5.08 ft); minimum daily, 2.3 cfs June 19 to July 27.

1919-68: Maximum discharge, 14,500 cfs Mar. 2, 1938 (gage height, 26.0 ft, present datum, at site then in use), result of slope-area measurement of maximum flow; minimum, 0.05 cfs June 25, 1920.

REMARKS.--Records fair. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.8	10	6.8	6.5	6.0	8.6	3.6	3.4	2.3	2.5	2.6
2	4.0	4.0	7.1	6.8	5.6	6.0	6.8	3.6	3.2	2.3	2.5	2.6
3	4.0	4.0	6.8	6.8	6.2	6.0	4.8	3.6	3.2	2.3	2.5	2.6
4	4.0	4.0	6.5	6.8	6.2	6.0	4.6	3.6	3.0	2.3	2.5	2.6
5	4.0	4.0	6.2	6.5	6.2	6.2	4.6	3.6	3.0	2.3	2.5	2.6
6	4.0	4.0	5.9	6.5	6.2	6.8	4.6	3.6	3.0	2.3	2.5	2.6
7	4.0	4.0	5.6	6.5	6.2	6.8	4.6	3.6	3.0	2.3	2.5	2.6
8	3.8	4.0	5.4	6.5	5.9	16	4.8	3.6	2.8	2.3	2.5	2.6
9	3.6	4.0	5.1	6.8	11	8.2	4.4	3.6	2.8	2.3	2.5	2.6
10	3.6	4.2	5.1	6.8	20	8.2	4.4	3.8	2.5	2.3	2.5	2.6
11	3.6	4.2	5.6	6.5	7.8	8.2	4.2	3.8	2.5	2.3	2.6	2.6
12	3.6	4.2	5.9	6.5	7.8	8.5	4.2	3.8	2.5	2.3	2.6	2.6
13	3.6	4.2	5.9	7.1	19	8.9	4.0	3.8	2.5	2.3	2.6	2.6
14	3.6	4.2	5.9	6.8	10	10	4.0	3.8	2.6	2.3	2.6	2.6
15	3.6	4.2	5.9	6.5	8.0	9.7	4.0	3.8	2.5	2.3	2.6	2.6
16	3.6	4.0	5.9	5.9	7.0	8.5	3.8	3.8	2.5	2.3	2.6	2.6
17	3.6	4.0	6.5	6.5	6.6	7.8	3.8	3.8	2.5	2.3	2.6	2.6
18	3.6	4.2	43	6.2	6.4	7.1	3.8	3.8	2.5	2.3	2.6	2.6
19	3.6	118	16	6.8	6.3	6.2	3.8	3.8	2.3	2.3	2.6	2.6
20	3.8	53	10	7.4	6.2	5.9	3.8	3.8	2.3	2.3	2.6	2.6
21	3.8	34	8.9	7.8	6.2	5.9	3.8	3.8	2.3	2.3	2.8	2.6
22	3.8	9.7	7.8	8.2	6.1	5.6	3.8	3.8	2.3	2.3	2.6	2.6
23	3.8	6.8	7.4	7.8	6.0	5.6	3.6	3.8	2.3	2.3	2.6	2.6
24	3.8	6.5	8.5	7.8	6.0	5.6	3.6	3.8	2.3	2.3	2.6	2.6
25	4.0	6.8	7.1	7.8	6.0	5.6	3.6	3.8	2.3	2.3	2.6	2.6
26	4.0	6.2	6.8	7.8	6.0	5.4	3.6	3.8	2.3	2.3	2.6	2.6
27	4.0	5.6	6.8	19	6.0	5.1	3.6	3.8	2.3	2.3	2.6	2.6
28	4.0	5.4	6.8	8.5	6.0	5.4	3.6	3.6	2.3	2.5	2.6	2.6
29	3.8	4.8	6.8	6.8	6.0	5.1	3.6	3.6	2.3	2.5	2.6	2.6
30	3.8	20	6.8	6.8	-----	5.1	3.6	3.6	2.3	2.5	2.6	2.6
31	3.8	-----	6.8	6.5	-----	5.1	-----	3.6	-----	2.5	2.6	-----
TOTAL	117.8	350.0	254.8	227.8	219.4	216.5	128.0	115.2	77.6	72.1	79.8	78.0
MEAN	3.80	11.7	8.22	7.35	7.57	6.98	4.27	3.72	2.59	2.33	2.57	2.60
MAX	4.0	118	43	19	20	16	8.6	3.8	3.4	2.5	2.8	2.6
MIN	3.6	3.8	5.1	5.9	5.6	5.1	3.6	3.6	2.3	2.3	2.5	2.6
AC-FT	234	694	505	452	435	429	254	229	154	143	158	155
CAL YR 1967	TOTAL 3,938.1			MEAN 10.8	MAX 230	MIN 3.0	AC-FT 7,810					
WTR YR 1968	TOTAL 1,937.0			MEAN 5.29	MAX 118	MIN 2.3	AC-FT 3,840					

Peak discharge (base, 140 cfs).--Nov. 19 (1330 hrs) 469 cfs (5.08 ft); Dec. 18 (1230 hrs) 150 cfs (4.10 ft).

SANTA ANA RIVER BASIN

11-0635. LONE PINE CREEK NEAR KEENBROOK, CALIF.

LOCATION.--Lat 34°15'59", long 117°27'47", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.2 N., R.6 W., 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 1968.

GAGE.--Graphic 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, graphic 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.--37 years (1920-38, 1949-68), 1.14 cfs (825 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

EXTREMES.--Maximum discharge during year, 186 cfs Nov. 19 (gage height, 3.57 ft); minimum daily, 0.50 cfs Sept. 22-30.

1919-38, 1949-68: 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. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	.70	1.0	1.0	.70	.80	1.0	.90	.80	.80	.70	.60
2	.80	.70	1.0	1.0	.70	.80	1.0	.90	.80	.60	.70	.60
3	.80	.70	1.0	1.0	.70	.80	1.0	.90	.80	.60	.70	.60
4	.80	.70	1.0	1.0	.70	.70	1.0	.90	.80	.60	.70	.60
5	.80	.70	1.0	1.0	.70	.80	1.0	.90	.80	.60	.70	.60
6	.80	.70	1.0	1.0	.80	.80	1.0	.90	.80	.70	.70	.60
7	.80	.70	1.0	1.0	.80	.90	1.0	.90	.80	.70	.70	.60
8	.80	.70	1.0	1.0	.80	5.8	.90	.90	.80	.70	.70	.60
9	.80	.70	1.0	1.0	.80	.80	.90	.90	.80	.70	.70	.60
10	.80	.80	1.0	.90	.80	.80	.90	.90	.80	.70	.70	.60
11	.80	.90	1.0	.90	.80	.80	.90	.80	.80	.70	.70	.60
12	.80	.90	1.0	.90	.80	.80	.90	.80	.80	.70	.70	.60
13	.80	.90	1.0	.80	.80	.80	.90	.80	.80	.70	.70	.60
14	.80	.90	1.0	.70	.80	.80	.90	.80	.80	.70	.70	.60
15	.80	.90	1.0	.70	.80	.80	.90	.80	.80	.70	.70	.60
16	.80	.90	1.2	.70	.80	.80	.90	.80	.80	.70	.70	.60
17	.80	.90	1.2	.70	.80	.80	1.0	.80	.80	.70	.70	.60
18	.80	.90	3.1	.70	.80	.80	1.0	.80	.80	.70	.70	.60
19	.80	1.8	1.2	.70	.80	.80	1.0	.80	.80	.70	.70	.60
20	.80	5.7	1.0	.70	.80	.80	1.0	.80	.80	.70	.70	.60
21	.80	2.3	1.0	.70	.80	.80	1.0	.80	.80	.70	.70	.60
22	.80	1.0	1.0	.70	.80	.80	.90	.80	.80	.70	.70	.50
23	.80	.90	1.0	.70	.80	.80	.90	.80	.80	.70	.60	.50
24	.80	.80	1.0	.70	.80	.80	.90	.80	.90	.70	.60	.50
25	.80	.80	1.0	.70	.80	.80	.90	.80	.90	.70	.60	.50
26	.80	.80	1.0	.70	.80	.80	.90	.80	.90	.70	.60	.50
27	.80	.80	1.0	.80	.80	.80	.90	.80	.90	.70	.60	.50
28	.80	.90	1.0	.80	.80	.80	.90	.80	.90	.70	.60	.50
29	.80	.90	1.0	.80	.80	.80	.90	.80	.90	.70	.60	.50
30	.80	1.4	1.0	.80	-----	.80	.90	.80	.80	.70	.60	.50
31	.80	-----	1.0	.70	-----	.80	-----	.80	-----	.70	.60	-----
TOTAL	24.80	48.60	33.7	25.50	22.70	29.80	28.20	25.80	24.60	21.40	20.80	17.10
MEAN	.80	1.62	1.09	.82	.78	.96	.94	.83	.82	.69	.67	.57
MAX	.80	18	3.1	1.0	.80	5.8	1.0	.90	.90	.80	.70	.60
MIN	.80	.70	1.0	.70	.70	.70	.90	.80	.80	.60	.60	.50
AC-FT	49	96	67	51	45	59	56	51	49	42	41	34

CAL YR 1967 TOTAL 440.20 MEAN 1.21 MAX 23 MIN .70 AC-FT 873
WTR YR 1968 TOTAL 323.00 MEAN .88 MAX 18 MIN .50 AC-FT 641

Peak discharge (base, 80 cfs).--Nov. 19 (1315 hrs) 186 cfs (3.57 ft).

11-0636.8. 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 1968. Monthly figures only for January 1914, published in WSP 1315-B.

GAGE.--Graphic 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).--49 years (1913-14, 1920-68), 1.60 cfs (1,160 acre-ft per year); median of yearly mean discharges, 0.7 cfs (510 acre-ft per year).
(combined).--35 years (1913-14, 1934-68), 3.25 cfs (2,350 acre-ft per year); median of yearly mean discharges, 2.2 cfs (1,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,430 cfs Nov. 19 (gage height, 5.22 ft), on basis of slope-area measurement of maximum flow; minimum daily, 0.10 cfs June 13-25, Aug. 20-27.
1913-14, 1919-68: 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. See schematic diagram of Santa Ana River basin.

COOPERATION.--Records of diversion furnished by city of San Bernardino.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.20	5.6	.80	2.1	.60	1.0	.30	.50	4.9	.50	.30
2	.20	.20	4.7	.70	1.3	.60	1.0	.30	.40	5.8	.40	.30
3	.20	.20	4.1	.60	1.3	.50	.90	.30	.40	6.0	.40	.60
4	.20	.20	2.5	.60	1.3	.50	.80	.30	.30	5.8	.40	.40
5	.20	.20	1.7	.60	1.1	.80	.60	.30	.30	4.8	.40	.30
6	.20	.20	1.7	.60	1.0	1.6	.60	.30	.20	4.6	.40	.40
7	.20	.20	2.1	.60	1.0	3.4	.60	.30	.30	4.0	.40	.60
8	.20	.20	2.2	.50	1.0	14	.60	.30	.80	3.5	.40	.40
9	.20	.20	1.3	.40	1.0	6.1	.60	.30	.20	3.3	.40	.40
10	.20	.20	1.4	1.0	1.4	3.8	.60	.30	.20	3.0	.40	.40
11	.20	.20	1.3	1.1	1.1	2.6	.70	.30	.20	2.9	.20	.40
12	.20	.20	1.1	.60	1.1	1.5	.70	.60	.20	2.7	.20	.40
13	.20	.20	.60	.80	2.0	2.6	.60	.70	.10	2.5	.40	.50
14	.20	.20	1.5	1.0	2.1	2.6	.60	.40	.10	2.4	.40	.50
15	.20	.20	1.5	.80	1.6	1.1	.60	.20	.10	2.3	.40	.50
16	.20	.20	.60	.60	1.4	1.1	.60	.20	.10	2.2	.50	.40
17	.20	.20	.60	.80	1.4	4.4	.60	.20	.10	2.2	.60	.40
18	.20	.20	6.8	.70	1.0	2.1	.60	.20	.10	2.1	.50	.50
19	.20	78	5.8	.70	.80	2.0	.60	.20	.10	2.2	.30	.70
20	.20	16	3.5	.70	.80	1.4	.60	.20	.10	2.2	.10	.40
21	.20	7.1	3.0	.50	1.0	1.0	.60	.20	.10	2.4	.10	.50
22	.20	5.4	2.5	.60	.80	.80	.60	.20	.10	2.4	.10	.60
23	.20	3.7	1.5	.50	.50	.80	.60	.20	.10	2.1	.10	.60
24	.20	4.1	1.6	.80	.50	.80	.60	.20	.10	1.1	.10	.90
25	.20	3.4	1.5	.80	.50	.80	.60	.20	.10	1.1	.10	.80
26	.20	3.5	1.3	1.0	.50	.90	.50	.20	.20	.90	.10	.80
27	.20	3.8	1.2	5.1	.50	.70	.40	.20	.60	.80	.10	.80
28	.20	2.7	.90	3.0	.60	.70	.40	.20	1.2	1.0	.20	1.0
29	.20	1.7	.80	2.7	.60	.70	.40	.20	3.0	.80	.60	1.3
30	.20	9.4	.80	1.7	-----	1.0	.40	.30	3.1	.60	.40	1.3
31	.30	-----	.80	2.0	-----	.80	-----	.50	-----	.60	.30	-----
TOTAL	6.40	142.40	66.50	32.90	31.30	62.30	18.60	8.80	13.40	83.20	9.90	17.40
MEAN	.21	4.75	2.15	1.06	1.08	2.01	.62	.28	.45	2.68	.32	.58
MAX	.30	78	6.8	5.1	2.1	14	1.0	.70	3.1	6.0	.60	1.3
MIN	.20	.20	.60	.40	.50	.50	.40	.20	.10	.60	.10	.30
AC-FT	13	282	132	65	62	124	37	17	27	165	20	35
(a)	152	367	228	172	152	249	166	156	132	230	85	86
CAL YR 1967	TOTAL	1,417.50		MEAN	3.88	MAX 78	MIN .20	AC-FT	2,810	AC-FT a	4,590	
WTR YR 1968	TOTAL	493.10		MEAN	1.35	MAX 78	MIN .10	AC-FT	978	AC-FT a	2,180	

Peak discharge (base, 25 cfs).--Nov. 19 (1400 hrs) 1,430 cfs (5.22 ft); Mar. 8 (0500 hrs) 62 cfs (2.67 ft).

a Combined discharge, in acre-ft, of Devil Canyon Creek and city of San Bernardino diversion.

SANTA ANA RIVER BASIN

11-0650. 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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 974.67 ft above mean sea level (Corps of Engineers bench-mark).

AVERAGE DISCHARGE.--11 years, 3.44 cfs (2,490 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).

EXTREMES.--Maximum discharge during year, 730 cfs Mar. 8 (gage height, 2.59 ft); no flow for most of year. 1957-68: Maximum discharge, 14,800 cfs Dec. 29, 1965 (gage height, 12.40 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. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	0	0	4.0			0		
2		0	0	0	0	0	.10			0		
3		0	0	1.0	0	0	0			0		
4		0	0	0	0	0	0			0		
5		0	0	0	0	0	0			0		
6		0	0	0	0	0	0			0		
7		0	0	0	0	.70	0			0		
8		0	0	0	0	230	0			0		
9		0	0	0	0	0	0			0		
10		0	0	0	0	0	0			0		
11		0	0	0	0	0	0			0		
12		0	0	0	0	0	0			0		
13		0	0	0	.10	0	0			0		
14		0	0	0	0	0	0			0		
15		0	0	0	0	0	0			0		
16		0	0	0	0	0	0			0		
17		0	0	0	0	0	.20			0		
18		0	12	0	0	0	0			0		
19		49	8.5	0	0	0	0			0		
20		99	0	0	0	0	0			0		
21		2.5	0	0	0	0	0			0		
22		0	0	0	0	0	0			0		
23		0	0	0	0	0	0			0		
24		0	0	0	0	0	0			0		
25		0	0	0	0	0	0			0		
26		0	0	0	0	0	0			0		
27		0	0	3.8	0	0	0			0		
28		0	0	0	0	0	0			.10		
29		0	0	0	0	0	0			0		
30		39	0	0	-----	0	0			0		
31		-----	0	0	-----	0	-----		-----	0		-----
TOTAL	0	189.5	20.5	4.8	0.10	230.70	4.30	0	0	0.10	0	0
MEAN	0	6.32	.66	.15	.003	7.44	.14	0	0	.003	0	0
MAX	0	99	12	3.8	.10	230	4.0	0	0	.10	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	376	41	9.5	.2	458	8.5	0	0	.2	0	0

CAL YR 1967 TOTAL 1,131.40 MEAN 3.10 MAX 416 MIN 0 AC-FT 2,240
WTR YR 1968 TOTAL 450.00 MEAN 1.23 MAX 230 MIN 0 AC-FT 893

SANTA ANA RIVER BASIN

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11-0665. SANTA ANA RIVER AT RIVERSIDE NARROWS, NEAR ARLINGTON, CALIF.

LOCATION.--Lat 33°57'53", long 117°27'55", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.2 S., R.6 W., 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.

RECORDS AVAILABLE.--October 1927 to September 1968. Monthly discharge only for October 1927 to January 1929, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Datum of gage is 666.87 ft above mean sea level (levels by Riverside County Engineer). Prior to Nov. 15, 1943, at site 1.25 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. Jan. 8, 1963, to Jan. 18, 1967, digital water-stage recorder.

EXTREMES.--Maximum discharge during year, 4,360 cfs Mar. 8 (gage height, 7.14 ft); minimum daily, 34 cfs Nov. 12.

1927-68: Maximum discharge, 100,000 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 11 cfs Oct. 17, 26, 1966.

Flood of Jan. 22, 1862, 320,000 cfs result of slope-conveyance measurement at site 9.3 miles upstream. Stage at that site was 5 ft higher than that of Mar. 2, 1938.

REMARKS.--Records good. Flow partly regulated by Big Bear Lake (see sta. no. 11-0490). 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. In 1968 releases were continuous. See schematic diagram of Santa Ana River basin. Records of chemical analyses for the water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	39	70	42	47	45	76	52	53	46	41	41
2	44	39	50	46	46	44	173	52	43	45	40	41
3	44	39	49	46	46	42	65	51	45	46	40	41
4	43	38	51	46	43	45	49	49	44	45	39	43
5	42	35	51	46	46	45	49	47	43	45	40	43
6	41	38	50	44	46	48	54	51	45	45	41	43
7	41	38	70	43	46	56	51	49	48	44	42	43
8	39	38	60	44	45	945	55	49	46	44	41	45
9	42	38	60	45	45	50	54	50	44	44	41	45
10	42	38	60	44	44	48	55	50	46	43	41	45
11	42	36	63	45	41	51	55	48	46	43	42	46
12	41	34	63	45	45	50	54	45	46	42	45	45
13	41	38	62	44	45	51	52	50	46	42	45	46
14	40	38	61	41	45	51	49	49	48	41	43	48
15	39	37	62	44	46	51	54	49	48	41	44	43
16	41	36	60	44	46	50	53	49	46	41	45	46
17	41	36	58	44	44	47	53	48	52	41	45	46
18	41	35	220	44	42	68	53	47	50	41	45	48
19	41	155	380	49	46	51	51	46	52	41	48	45
20	41	548	90	48	45	50	49	49	50	41	48	45
21	39	215	48	46	45	51	49	49	47	43	48	46
22	36	73	49	49	45	52	53	48	44	43	49	43
23	36	60	49	48	46	51	50	49	44	43	49	42
24	40	43	49	48	46	48	52	48	47	43	48	41
25	40	52	47	48	42	52	53	47	46	43	46	40
26	40	52	50	48	44	52	53	46	50	49	45	41
27	39	60	49	69	45	52	51	49	46	45	45	42
28	38	59	49	50	45	52	47	48	46	68	43	43
29	37	56	62	47	46	48	52	47	47	48	43	43
30	39	111	60	47	-----	48	52	44	47	43	43	42
31	38	-----	60	47	-----	44	-----	46	-----	43	42	-----
TOTAL	1,248	2,154	2,262	1,441	1,303	2,438	1,716	1,501	1,405	1,372	1,357	1,311
MEAN	40.3	71.8	73.0	46.5	44.9	78.6	57.2	48.4	46.8	44.3	43.8	43.7
MAX	44	548	380	69	47	945	173	52	53	68	49	48
MIN	36	34	47	41	41	42	47	44	43	41	39	40
AC-FT	2,480	4,270	4,490	2,860	2,580	4,840	3,400	2,980	2,790	2,720	2,690	2,600
CAL YR 1967	TOTAL 20,084		MEAN 55.0		MAX 1,000		MIN 19		AC-FT 39,840			
WTR YR 1968	TOTAL 19,508		MEAN 53.3		MAX 945		MIN 34		AC-FT 38,690			

PEAK DISCHARGE (BASE, 500 CFS)

Note.--Stage-discharge relation indefinite for most of year.

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
11-21	0900	5.99	2,430	03-08	0900	7.14	4,360
12-18	1900	4.89	1,160	04-02	0100	4.63	846

SANTA ANA RIVER BASIN

11-0665.5. SHEEHAN DITCH AT RIVERSIDE NARROWS, NEAR ARLINGTON, CALIF.

LOCATION.--Lat 33°57'52", long 117°27'54", in Jurupa Grant, on left bank of ditch near left side of Santa Ana River channel, under northbound lane of highway bridge on Pedley Road, 0.6 mile downstream from sewage disposal plant, and 3.2 miles northwest of Arlington, Riverside County.

RECORDS AVAILABLE.--October 1947 to September 1968. Monthly discharge only for October 1947 to September 1963, published in WSP 1928.

GAGE.--Digital water-stage recorder. Datum of gage is 673.16 ft above mean sea level (levels by Riverside County engineer). Prior to Oct. 1, 1963, graphic water-stage recorder.

EXTREMES.--No flow during year.

1947-68: Maximum daily discharge, 27 cfs Dec. 5, 1966; no flow at times in some years.

REMARKS.--No flow since May 25, 1967. Discharge reported herein is the effluent from city of Riverside sewage disposal plant and is used for irrigation of about 160 acres 1.5 miles downstream. Unused portion of flow is returned to the river. Releases to Sheehan ditch discontinued May 25, 1967, while new disposal plant being constructed. See schematic diagram of Santa Ana River basin.

11-0670. DAY CREEK NEAR ETIWANDA, CALIF.

LOCATION.--Lat 34°11'05", long 117°32'20", in NW¼NW¼SW¼ 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 1968. Combined records of creek and diversion, October 1950 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Broad-crested weir since September 1938 on creek (affected by debris at times); digital water-stage recorder and Parshall flume on diversion. Altitude of gage is 2,870 ft (from topographic map). Prior to Jan. 7, 1929, graphic water-stage recorder 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. Sept. 3, 1938, to Oct. 1, 1964, at present site and datum.

AVERAGE DISCHARGE (creek only).--41 years, 3.38 cfs (2,450 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).
(combined).--18 years, 3.61 cfs (2,610 acre-ft per year); median of yearly mean discharges, 2.4 cfs (1,700 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 346 cfs Nov. 19 (gage height, 2.91 ft); minimum daily, 0.28 cfs Sept. 26.
1927-68: 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, 346 cfs Nov. 19; minimum daily, 2.1 cfs Sept. 23, 25-27.
1950-68: Maximum discharge, 1,740 cfs Dec. 29, 1965; minimum daily, 0.30 cfs for 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. In addition, an infiltration gallery, unwatering the gravel in the bed of the stream at gaging station, produced 1,320 acre-ft during year. See schematic diagram of Santa Ana River basin. For records of combined discharge of creek and Etiwanda Water Co.'s diversion, see following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.0	7.4	3.0	1.3	1.7	3.0	.71	.71	.97	.35	.30
2	1.7	.97	6.4	3.0	1.3	1.7	2.9	.72	.69	.89	.33	.31
3	1.6	.91	6.0	2.9	1.3	1.7	2.3	.72	.74	.88	.33	.37
4	1.6	.91	5.6	2.8	1.3	1.6	2.0	.73	.78	.81	.33	.38
5	1.6	.90	5.6	2.8	1.3	1.6	1.9	.72	.83	.80	.33	.36
6	1.5	.94	5.4	2.8	1.3	1.7	1.9	.71	.85	.84	.33	.32
7	1.5	.93	5.4	2.6	1.3	1.9	2.4	.69	.88	.90	.33	.30
8	1.3	.93	5.1	2.6	1.2	7.9	3.2	.67	.86	.94	.33	.30
9	1.2	.92	5.1	2.6	1.4	5.8	3.1	.67	.84	.86	.33	.30
10	1.2	.94	4.8	2.6	1.9	5.1	3.1	.71	.83	.81	.32	.31
11	1.2	.94	4.5	2.6	1.8	4.3	3.0	.74	.87	.79	.32	.32
12	1.2	.99	4.5	2.4	1.7	3.4	3.0	.79	.86	.78	.32	.31
13	1.2	1.0	4.5	2.1	2.1	3.3	2.9	.82	.84	.78	.32	.32
14	1.2	1.1	4.4	2.2	2.4	3.1	2.9	.76	.84	.73	.32	.34
15	1.2	1.1	4.4	2.4	3.0	3.0	2.7	.72	.83	.77	.32	.32
16	1.1	1.1	4.1	2.5	2.6	2.8	2.6	.67	.82	.77	.31	.35
17	.96	.92	4.1	1.8	2.0	2.8	2.9	.67	.83	.76	.31	.34
18	.96	.97	4.8	1.2	2.0	2.6	2.6	.70	.83	.75	.31	.31
19	.96	21	4.6	1.2	1.9	2.5	2.5	.71	.89	.74	.31	.31
20	.96	9.4	4.2	1.2	1.9	2.3	2.4	.72	.89	.73	.31	.30
21	1.0	7.4	4.1	1.2	1.9	2.4	2.3	.73	.88	.73	.31	.30
22	1.1	6.7	4.1	1.1	1.9	2.4	2.3	.76	.88	.73	.31	.31
23	1.0	6.1	4.0	1.2	1.9	2.3	2.2	.76	.87	.72	.31	.32
24	.97	5.6	3.9	1.1	1.8	2.3	2.1	.72	.90	.72	.40	.33
25	.97	5.1	4.0	1.2	1.7	2.4	2.2	.67	.90	.73	.39	.29
26	1.0	4.5	4.0	1.2	1.7	2.4	2.1	.65	.90	.76	.38	.28
27	.96	4.2	4.0	1.6	1.7	2.4	1.8	.65	.96	.78	.39	.29
28	.97	4.2	4.2	1.6	1.7	2.4	.95	.65	.98	3.1	.37	.31
29	1.2	4.0	4.1	1.4	1.6	2.4	.90	.66	1.0	1.2	.30	.31
30	1.5	7.2	3.5	1.4	-----	2.4	.77	.67	1.0	.49	.31	.33
31	1.2	-----	3.0	1.4	-----	2.3	-----	.71	-----	.38	.31	-----
TOTAL	37.81	102.87	143.8	61.7	50.9	86.9	70.92	21.98	25.78	26.64	10.24	9.54
MEAN	1.22	3.43	4.64	1.99	1.76	2.80	2.36	.71	.86	.86	.33	.32
MAX	1.8	21	7.4	3.0	3.0	7.9	3.2	.82	1.0	3.1	.40	.38
MIN	.96	.90	3.0	1.1	1.2	1.6	.77	.65	.69	.38	.30	.28
AC-FT	75	204	285	122	101	172	141	44	51	53	20	19

CAL YR 1967 TOTAL 2,047.38 MEAN 5.61 MAX 89 MIN .90 AC-FT 4,060
WTR YR 1968 TOTAL 649.08 MEAN 1.77 MAX 21 MIN .28 AC-FT 1,290

Peak discharge (base, 25 cfs).--Nov. 19 (1300 hrs) 346 cfs (2.91 ft); July 28 (1745 hrs) 53 cfs (2.20 ft).

SANTA ANA RIVER BASIN

11-0670. DAY CREEK NEAR ETIWANDA, CALIF.--Continued

Combined discharge, in cubic feet per second, of Day Creek and Etiwanda Water Co.'s diversion near Etiwanda, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	3.9	8.2	4.1	3.7	3.6	4.7	3.2	3.0	2.9	3.1	2.4
2	4.8	3.9	7.1	4.1	3.6	3.6	4.7	3.2	2.9	2.8	3.0	2.4
3	4.7	3.8	6.6	4.0	3.6	3.5	3.9	3.3	3.0	2.8	2.9	2.7
4	4.7	3.8	6.2	3.9	3.6	3.4	3.5	3.3	3.1	2.6	2.8	2.6
5	4.7	3.9	6.2	3.9	3.6	3.4	3.4	3.4	3.3	2.6	2.8	2.5
6	4.6	3.9	5.9	3.9	3.6	3.5	3.4	3.4	3.4	2.7	2.8	2.3
7	4.5	3.8	5.9	3.7	3.6	3.9	3.8	3.3	3.6	2.8	2.8	2.2
8	4.3	3.8	5.6	3.7	3.5	8.7	4.6	3.3	3.6	2.8	2.7	2.2
9	4.2	3.8	5.6	3.7	3.8	5.8	4.5	3.4	3.4	2.7	2.7	2.2
10	4.2	3.8	5.3	3.6	4.5	5.1	4.5	3.3	3.2	2.5	2.7	2.2
11	4.2	3.7	5.0	3.6	4.3	5.1	4.3	3.4	3.2	2.5	2.6	2.2
12	4.2	3.7	5.0	3.4	4.2	5.2	4.3	3.9	3.2	2.5	2.6	2.2
13	4.2	3.6	5.0	3.7	4.8	5.1	4.2	3.9	3.1	2.5	2.7	2.2
14	4.1	3.7	4.9	3.4	5.1	4.9	4.1	3.7	3.0	2.4	2.8	2.3
15	4.0	3.7	5.0	3.5	4.0	4.7	3.9	3.4	3.0	2.6	2.8	2.5
16	3.9	3.7	4.7	3.4	4.2	4.5	3.9	3.3	2.9	2.5	2.8	2.4
17	3.8	3.7	4.6	3.6	4.4	4.6	4.3	3.2	3.0	2.5	2.9	2.3
18	3.7	3.8	5.4	3.6	4.3	4.3	3.9	3.2	2.9	2.4	2.8	2.3
19	3.7	2.2	5.2	3.6	4.2	4.2	3.8	3.1	3.0	2.3	2.8	2.3
20	3.7	9.5	4.7	3.6	4.2	3.9	3.7	3.2	3.0	2.3	2.9	2.5
21	3.8	7.5	4.6	3.6	4.1	4.0	3.5	3.3	2.9	2.3	3.0	2.4
22	3.9	6.8	4.6	3.5	4.1	4.0	3.5	3.5	2.9	2.3	2.8	2.3
23	3.9	6.1	4.5	3.5	4.0	3.8	3.4	3.4	2.9	2.3	2.6	2.1
24	3.8	5.7	4.4	3.4	3.8	3.8	3.3	3.3	3.0	2.3	2.6	2.2
25	3.8	5.5	4.5	3.5	3.7	3.9	3.3	3.2	2.9	2.3	2.6	2.1
26	3.9	5.1	4.5	3.5	3.7	3.9	3.2	3.0	2.8	2.4	2.6	2.1
27	3.8	4.7	4.3	4.4	3.7	3.9	3.2	3.0	3.0	2.5	2.5	2.1
28	3.8	4.8	4.2	4.2	3.7	3.8	3.6	2.9	3.0	4.5	2.5	2.2
29	4.1	4.5	4.1	3.9	3.6	3.8	3.4	3.1	3.2	3.2	2.4	2.3
30	4.2	8.2	4.2	3.8	-----	3.9	3.3	3.1	3.1	3.7	2.4	2.3
31	4.0	-----	4.1	3.8	-----	3.8	-----	3.1	-----	3.3	2.3	-----
TOTAL	128.1	158.4	160.1	115.1	115.2	133.6	115.1	102.3	92.5	82.8	84.3	69.0
MEAN	4.13	5.28	5.16	3.71	3.97	4.31	3.84	3.30	3.08	2.67	2.72	2.30
MAX	4.9	22	8.2	4.4	5.1	8.7	4.7	3.9	3.6	4.5	3.1	2.7
MIN	3.7	3.6	4.1	3.4	3.5	3.4	3.2	2.9	2.8	2.3	2.3	2.1
AC-FT	254	314	318	228	229	265	228	203	183	164	167	137

CAL YR 1967 TOTAL 3,076.2 MEAN 8.43 MAX 89 MIN 1.5 AC-FT 6,100
WTR YR 1968 TOTAL 1,356.5 MEAN 3.71 MAX 22 MIN 2.1 AC-FT 2,690

Peak discharge (base, 25 cfs).--Same as observed.

11-0680. SANTA ANA RIVER AT AUBURNDALE BRIDGE, NEAR CORONA, CALIF.

LOCATION.--Lat 33°55'25", long 117°35'50", in La Sierra (Yorba) Grant, on downstream end of first pier south of north end of 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 1966 (irrigation seasons only); October 1966 to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 514.0 ft above mean sea level. 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. Sept. 12, 1961, to Oct. 6, 1966, at site on right bank at different datum.

EXTREMES.--Maximum discharge during year, 3,100 cfs Mar. 8 (gage height, 7.60 ft); minimum daily, 18 cfs July 12.

1966-68: Maximum discharge, 15,000 cfs Dec. 7, 1966 (gage height, 9.60 ft), on basis of maximum flow for upstream station at Riverside Narrows; minimum daily, 14 cfs July 28-31.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (see sta. no. 11-0490). 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. See schematic diagram of Santa Ana River basin. Records of chemical analyses for the water year 1968 are published in Part 2 of this report.

COOPERATION.--Thirty-seven discharge measurements furnished by Orange County Flood Control District.

DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Oct. 9	2.77	Apr. 18	3.42	June 17	2.28	Aug. 22	2.21
Nov. 7	5.96	25	3.08	July 5	2.25	28	1.81
Jan. 2	3.00	30	2.93	11	1.85	Sept. 5	1.96
Feb. 2	3.81	May 7	2.55	23	1.80	12	2.16
Mar. 27	3.34	13	2.28	Aug. 1	1.67	18	2.63
Apr. 4	3.08	22	2.08	7	1.90	25	1.92
10	3.18	June 6	2.23	14	1.35		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	35	59	32	37	36	65	41	41	30	36	22
2	26	35	38	37	43	39	88	41	41	26	28	20
3	26	35	38	36	45	35	60	41	40	25	30	20
4	26	35	38	32	38	36	55	41	40	25	31	20
5	25	35	35	49	38	35	55	41	40	24	30	20
6	25	36	37	50	35	36	54	41	40	23	31	20
7	25	37	38	47	35	40	50	41	40	23	31	20
8	25	37	38	48	35	665	50	40	40	24	28	20
9	26	42	38	49	35	190	50	40	40	22	25	20
10	35	42	38	44	35	55	50	40	39	21	24	20
11	28	36	38	45	35	50	50	40	37	20	23	22
12	26	36	38	48	35	53	50	40	36	18	22	23
13	26	37	38	50	38	55	50	40	35	19	22	23
14	28	37	38	44	38	58	50	40	35	20	20	24
15	26	38	38	47	38	54	50	40	34	23	20	25
16	26	37	38	48	38	53	50	40	33	26	20	26
17	26	32	38	53	38	45	49	41	33	24	20	31
18	25	28	64	54	38	58	48	41	33	25	20	36
19	24	80	407	48	38	50	46	41	33	23	23	32
20	23	406	210	48	38	49	45	41	33	24	23	28
21	23	185	120	50	38	47	45	41	33	24	23	28
22	25	105	39	53	38	48	43	41	32	28	25	25
23	26	50	32	53	38	48	43	41	32	25	25	24
24	28	44	33	55	38	50	42	41	32	25	26	23
25	28	44	33	49	38	52	43	41	32	25	26	22
26	28	50	32	52	38	57	42	41	32	26	25	22
27	28	44	33	55	38	59	42	41	32	28	25	23
28	28	50	35	70	33	59	42	41	32	37	23	24
29	28	46	33	60	36	59	42	41	32	50	23	25
30	28	82	33	40	-----	60	41	41	32	38	24	26
31	30	-----	35	40	-----	59	-----	41	-----	34	23	-----
TOTAL	825	1,836	1,802	1,486	1,085	2,290	1,490	1,262	1,064	805	775	714
MEAN	26.6	61.2	58.1	47.9	37.4	73.9	49.7	40.7	35.5	26.0	25.0	23.8
MAX	35	406	407	70	45	665	88	41	41	50	36	36
MIN	23	28	32	32	33	35	41	40	32	18	20	20
AC-FT	1,640	3,640	3,570	2,950	2,150	4,540	2,960	2,500	2,110	1,600	1,540	1,420
CAL YR 1967	TOTAL 16,764		MEAN 45.9		MAX 680		MIN 14		AC-FT 33,250			
WTR YR 1968	TOTAL 15,434		MEAN 42.2		MAX 665		MIN 18		AC-FT 30,610			

SANTA ANA RIVER BASIN

11-0690. LAKE HEMET NEAR IDYLLWILD, CALIF.

LOCATION.--Lat 33°39'55", long 116°42'20", in NE $\frac{1}{4}$ 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 1968.

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, 7,842 acre-ft May 13 to June 18 (elevation, 4,321.50 ft); minimum, 6,486 acre-ft Nov. 17-20 (elevation, 4,316.50 ft).
1961-68: Maximum contents, 9,774 acre-ft June 17, 19-24, 1967 (elevation, 4,327.58 ft); minimum, 264 acre-ft Nov. 19, 1962, Nov. 19, 1963 (elevation, 4,266.9 ft).

REMARKS.--Lake is formed by single-arch dam. Dam was completed to a height of 110 ft in 1893; raised to 122.5 ft in 1895, and to 135 ft in 1923. Capacity table is dated February 1932 (furnished by Lake Hemet Municipal Water District). Lowest sluice gate silted (elevation, 4,222.6 ft). Capacity below spillway level (elevation, 4,333.0 ft), 11,882 acre-ft. Water is released from lake to South Fork San Jacinto River for domestic use and irrigation in the Hemet-San Jacinto Valley. See schematic diagram of Santa Ana River basin.

COOPERATION.--Elevations furnished by Lake Hemet Municipal Water District.

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	4,320.33	7,510	-
Oct. 31.....	4,317.83	6,833	-677
Nov. 30.....	4,317.08	6,636	-197
Dec. 31.....	4,318.17	6,923	+287
Calendar year 1967.....	-	-	-405
Jan. 31.....	4,319.00	7,145	+222
Feb. 29.....	4,319.75	7,349	+204
Mar. 31.....	4,320.50	7,557	+208
Apr. 30.....	4,321.25	7,769	+212
May 31.....	4,321.50	7,842	+73
June 30.....	4,320.83	7,649	-193
July 31.....	4,319.75	7,349	-300
Aug. 31.....	4,318.42	6,990	-359
Sept. 30.....	4,317.00	6,615	-375
Water year 1967-68.....	-	-	-895

^a Elevation at 0800 hours.

11-0695. SAN JACINTO RIVER NEAR SAN JACINTO, CALIF.

LOCATION.--Lat 33°44'15", long 116°49'35", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ 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 1968; combined records of river and diversions, October 1948 to September 1968. Monthly discharge only for October 1920 and July to September 1926, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder on river; graphic water-stage recorder on lower canal; digital water-stage recorder on upper canal; staff gage on pipeline. Datum of gage is 1,982.75 ft above mean sea level (Corps of Engineers benchmark). Prior to Feb. 15, 1927, graphic 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, graphic water-stage recorder at same site at different datum. Feb. 7, 1937, to Jan. 23, 1948, staff gage at same site at various datums. Oct. 1, 1947, to Oct. 1, 1964, graphic water-stage recorder on upper canal.

AVERAGE DISCHARGE (river only).--47 years (1920-26, 1927-68), 16.7 cfs (12,090 acre-ft per year); median of yearly mean discharges, 5.8 cfs (4,200 acre-ft per year).
(combined).--20 years (1948-68), 16.5 cfs (11,950 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, 118 cfs Mar. 8 (gage height, 4.24 ft); no flow for many days.

1920-68: 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, 151 cfs Apr. 2; minimum daily, 2.3 cfs Dec. 3.

1948-68: Maximum discharge, 6,310 cfs Nov. 22, 1965; no flow at times in 1951, 1952, and 1957.

REMARKS.--Records fair. Flow partly regulated by Lake Hemet (see sta. no. 11-0690). Lake Hemet Municipal Water District's upper and lower canals divert water above station for irrigation. Fairview Land and Water Co.'s pipeline diverts water above station for domestic use. Diversion above station began prior to 1920. See schematic diagram of Santa Ana River basin. For records of combined daily discharge of San Jacinto River and diversions, see following page.

COOPERATION.--Records of Fairview Land and Water Co.'s pipeline furnished by Lake Hemet Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.10	3.2	15	5.0	1.0	.30	.10	0	0	0	.20
2	.50	.10	.10	14	5.8	.10	39	.10	0	0	0	.20
3	.50	.10	.10	12	7.8	.10	19	.10	0	0	0	.20
4	.50	.10	.10	7.2	7.8	.10	10	.10	0	0	0	.20
5	.40	.20	.10	4.5	7.2	.10	4.5	.10	0	0	0	.20
6	.40	.10	.10	1.6	6.0	.10	2.0	.10	0	0	0	.20
7	.40	.10	.10	1.2	5.8	.70	.70	.10	0	0	0	.20
8	.30	.10	.10	1.0	5.5	37	.20	.10	0	0	0	.10
9	.30	.10	.10	1.0	6.3	17	.10	.10	0	0	0	0
10	.30	.10	.10	1.0	6.9	9.6	0	.10	0	0	0	0
11	.30	.10	.10	1.0	7.2	5.5	0	.10	0	0	0	0
12	.30	.10	2.8	.80	6.9	1.5	0	.70	0	0	0	0
13	.30	.10	.10	.80	9.2	.20	0	1.8	0	0	0	0
14	.30	.10	.10	.70	8.8	.10	.10	.10	0	0	0	0
15	.20	.10	.10	.50	7.8	.10	.40	.10	0	0	0	0
16	.20	.10	.10	.70	6.6	.10	2.0	.10	0	0	0	0
17	.30	.10	.10	.50	6.9	.10	9.0	.10	0	0	0	0
18	.20	.10	6.0	.40	8.5	.10	.90	0	0	0	0	0
19	.20	4.9	12	.30	7.5	.10	.10	0	0	0	0	0
20	.20	10	10	.20	6.3	.10	.10	0	0	0	0	0
21	.20	3.9	8.5	.20	5.5	.10	.10	0	0	0	0	0
22	.20	2.0	9.2	.20	4.3	.10	.20	0	0	0	.10	0
23	.20	.40	12	.10	4.0	.10	.20	0	0	0	.10	0
24	.20	.20	14	.10	3.6	.10	.20	0	.10	0	.10	0
25	.20	.10	18	.10	3.2	.10	.10	0	.10	0	.20	0
26	.20	.10	22	.10	3.0	.10	.10	0	0	0	.20	0
27	.20	.10	24	5.5	3.2	.10	.10	0	.10	0	.20	0
28	.20	.10	23	5.7	3.0	0	.10	0	.10	9.6	.20	0
29	.20	.10	22	3.1	2.9	0	.10	0	.10	.20	.20	0
30	.20	.50	19	5.0	-----	.10	.10	0	0	0	.20	0
31	.10	-----	18	4.8	-----	.10	-----	0	-----	0	.20	-----
TOTAL	8.80	24.30	225.20	89.30	172.5	74.60	89.70	4.00	0.50	9.80	1.70	1.50
MEAN	.28	.81	7.26	2.88	5.95	2.41	2.99	.13	.017	.32	.055	.050
MAX	.60	10	24	15	9.2	37	39	1.8	.10	9.6	.20	.20
MIN	.10	.10	.10	.10	2.9	0	0	0	0	0	0	0
AC-FT	17	48	447	177	342	148	178	7.9	1.0	19	3.4	3.0

CAL YR 1967 TOTAL 5,098.80 MEAN 14.0 MAX 196 MIN 0 AC-FT 10,110
WTR YR 1968 TOTAL 701.90 MEAN 1.92 MAX 39 MIN 0 AC-FT 1,390

Peak discharge (base, 100 cfs).--Mar. 8 (1230 hrs) 118 cfs (4.24 ft); Apr. 2 (1630 hrs) 112 cfs (4.21 ft).

SANTA ANA RIVER BASIN

11-0695. SAN JACINTO RIVER NEAR SAN JACINTO, CALIF.--Continued

Combined discharge, in cubic feet per second, of San Jacinto River,
Lake Hemet Water Co.'s upper and lower canals, and Fairview Land and
Water Co.'s pipeline, near San Jacinto, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	11	5.8	16	12	9.1	10	15	7.8	6.3	6.2	4.9
2	11	11	2.4	16	12	7.1	63	14	7.3	6.0	5.7	4.8
3	11	11	2.3	19	14	6.7	49	14	6.9	5.8	5.4	5.1
4	10	11	3.4	19	14	6.1	40	14	7.1	5.9	5.9	5.4
5	11	12	3.4	18	14	5.9	35	14	7.4	6.1	6.0	5.2
6	14	12	3.3	12	13	6.2	34	13	7.6	7.0	6.0	4.9
7	13	12	3.3	14	13	11	33	13	8.6	8.6	6.6	4.8
8	12	12	3.5	14	12	59	32	12	9.5	10	6.4	4.6
9	12	12	3.1	13	14	40	30	12	8.9	9.2	6.0	4.4
10	12	12	3.1	12	16	29	27	12	7.9	7.4	5.6	4.4
11	12	10	3.0	11	16	20	24	12	6.9	6.7	5.4	4.3
12	12	10	8.1	11	15	18	22	16	6.1	6.3	5.4	3.8
13	12	10	9.0	11	17	16	21	28	5.6	6.2	5.6	3.8
14	12	9.1	10	11	17	19	20	18	5.2	6.4	5.9	4.2
15	12	9.1	11	11	16	16	19	14	4.3	6.4	5.6	4.5
16	12	9.0	10	13	14	14	20	13	3.5	6.1	5.6	4.4
17	12	8.9	10	12	15	14	26	12	3.1	5.8	5.5	4.1
18	11	8.9	15	10	17	14	19	11	3.2	5.8	5.8	4.4
19	11	14	20	9.6	17	16	17	11	2.9	5.6	5.7	4.6
20	11	17	10	9.5	16	13	16	11	5.1	5.5	5.9	4.9
21	11	20	8.7	8.8	16	13	16	11	6.4	5.4	5.9	4.8
22	12	12	9.4	9.3	14	14	16	10	6.7	5.5	5.9	4.2
23	12	4.0	12	7.7	13	13	15	12	6.9	7.2	5.6	3.8
24	12	3.5	14	8.5	13	13	15	11	7.6	8.2	5.4	3.7
25	12	3.4	18	7.6	12	13	14	10	7.5	7.2	5.6	3.8
26	12	3.4	22	4.8	12	14	14	9.9	7.2	6.5	5.5	3.5
27	11	3.4	24	9.7	12	11	14	9.2	7.3	6.4	5.4	3.3
28	12	3.4	23	12	12	10	13	8.8	7.1	17	5.3	3.4
29	11	3.4	22	11	11	9.9	12	8.9	7.5	8.1	5.2	3.7
30	10	3.4	19	12	-----	10	16	8.8	7.1	7.2	5.0	3.9
31	11	-----	18	12	-----	10	-----	8.6	-----	7.0	5.2	-----
TOTAL	359	281.9	329.8	365.5	409	471.0	702	387.2	196.2	218.8	176.2	129.6
MEAN	11.6	9.40	10.6	11.8	14.1	15.2	23.4	12.5	6.54	7.06	5.68	4.32
MAX	14	20	24	19	17	59	63	28	9.5	17	6.6	5.4
MIN	10	3.4	2.3	4.8	11	5.9	10	8.6	2.9	5.4	5.0	3.3
AC-FT	712	559	654	725	811	934	1,390	768	389	434	349	257
CAL YR 1967	TOTAL 11,528.7		MEAN 31.6		MAX 229		MIN 2.3		AC-FT 22,870			
WTR YR 1968	TOTAL 4,026.2		MEAN 11.0		MAX 63		MIN 2.3		AC-FT 7,990			

Peak discharge (base, 100 cfs).--Mar. 8 (1230 hrs) 146 cfs; Apr. 2 (1680 hrs) 151 cfs.

11-0700. BAUTISTA CREEK NEAR HEMET, CALIF.

LOCATION.--Lat 33°41'40", long 116°51'00", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.35, T.5 S., R.1 E., 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 2,250 ft (from topographic map).

AVERAGE DISCHARGE.--21 years, 0.491 cfs (355 acre-ft per year); median of yearly mean discharges, 0.02 cfs (14 acre-ft per year).

EXTREMES.--Maximum discharge during year, 13 cfs Dec. 18 (gage height, 2.82 ft); no flow for most of year. 1947-68: Maximum discharge, 1,440 cfs Apr. 3, 1958 (gage height, 4.65 ft); no flow for most of each year.

REMARKS.--Records fair. No regulation above station. One diversion above station for irrigation of about 15 acres. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0			0	0					
2		0	0			0	.40					
3		0	0			0	0					
4		0	0			0	0					
5		0	0			0	0					
6		0	0			0	0					
7		0	0			0	0					
8		0	0			1.1	0					
9		0	0			0	0					
10		0	0			0	0					
11		0	0			0	0					
12		0	0			0	0					
13		0	0			0	0					
14		0	0			0	0					
15		0	0			0	0					
16		0	0			0	0					
17		0	0			0	0					
18		0	3.7			0	0					
19		0	2.7			0	0					
20		0	0			0	0					
21		.10	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	0					
30		0	0		----	0	0					
31		-----	0		-----	0	-----		-----		-----	
TOTAL	0	0.10	6.4	0	0	1.1	0.40	0	0	0	0	0
MEAN	0	.003	.21	0	0	.036	.013	0	0	0	0	0
MAX	0	.10	3.7	0	0	1.1	.40	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	.2	13	0	0	2.2	.8	0	0	0	0	0

CAL' YR 1967 TOTAL 101.20 MEAN .28 MAX 29 MIN 0 AC-FT 201
WTR YR 1968 TOTAL 8.00 MEAN .022 MAX 3.7 MIN 0 AC-FT 16

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

SANTA ANA RIVER BASIN

11-0705. SAN JACINTO RIVER NEAR ELSINORE, CALIF.

LOCATION.--Lat 33°39'51", long 117°17'35", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.9, T.6 S., R.4 W., 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 1968. Monthly figures 1927-50, adjusted for diversion, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Altitude of gage is 1,270 ft (from topographic map). Prior to Feb. 13, 1916, staff gage at site 0.7 mile downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, staff gage at present site at different datum.

EXTREMES.--Maximum discharge during year, 34 cfs Nov. 19 (gage height, 3.28 ft); no flow for most of year. 1916-68: Maximum discharge, 16,000 cfs Feb. 17, 1927 (gage height, 11.8 ft), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow for several months in most years.

REMARKS.--Records good. Flow partly regulated by Lake Hemet (see sta. no. 11-0690) and regulated since 1928 by Railroad Canyon Reservoir (capacity, 12,000 acre-ft) 2.1 miles above station. Diversion for irrigation and domestic use above Railroad Canyon Reservoir. Temescal Water Co. diverted 1,087 acre-ft during year from Railroad Canyon Reservoir for irrigation below station in vicinity of Corona. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	2.1		0						
2		0	0	2.1		0						
3		0	0	2.2		0						
4		0	0	2.1		0						
5		0	0	2.1		0						
6		0	0	2.1		0						
7		0	0	2.1		0						
8		0	0	2.1		.10						
9		0	0	2.0		.10						
10		0	0	2.1		0						
11		0	0	.70		.10						
12		0	0	.10		0						
13		.10	.10	.10		0						
14		0	.10	.10		0						
15		0	.10	.40		0						
16		0	.10	.40		0						
17		0	.10	.20		0						
18		0	.10	1.0		0						
19		6.1	.20	1.8		0						
20		7.1	1.3	.50		0						
21		1.8	1.6	.10		0						
22		.50	1.6	.10		0						
23		.10	1.6	.10		0						
24		0	1.6	.20		0						
25		0	1.6	5.4		0						
26		0	1.8	.40		0						
27		0	1.8	.20		0						
28		0	1.8	.10		0						
29		0	1.8	0		0						
30		0	2.0	0	-----	0						
31		-----	2.0	0	-----	0	-----		-----			-----
TOTAL	0	15.70	21.30	32.90	0	0.30	0	0	0	0	0	0
MEAN	0	.52	.69	1.06	0	.010	0	0	0	0	0	0
MAX	0	7.1	2.0	5.4	0	.10	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	31	42	65	0	.6	0	0	0	0	0	0
CAL YR 1967	TOTAL	285.00	MEAN	.78	MAX	9.9	MIN	0	AC-FT	565		
WTR YR 1968	TOTAL	70.20	MEAN	.19	MAX	7.1	MIN	0	AC-FT	139		

11-0720. TEMESCAL CREEK NEAR CORONA, CALIF.

LOCATION.--Lat 33°50'29", long 117°30'37", in El Sobrante de San Jacinto Grant, on right 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 1968. Monthly discharge only for the period October 1927 to January 1929, published in WSP 1315-B.

GAGE.--Graphic 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.--41 years, 2.74 cfs (1,980 acre-ft per year); median of yearly mean discharges, 0.08 cfs (58 acre-ft per year).

EXTREMES.--Maximum discharge during year, 576 cfs Mar. 8 (gage height, 8.54 ft), from rating curve extended above 83 cfs on basis of slope-area measurement at gage height, 9.45 ft); no flow June 13 to Sept. 30, 1927-68: Maximum discharge, 14,900 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow at times in most years.

REMARKS.--Records poor. Flow regulated by several storage reservoirs. Many diversions above station for irrigation. At infrequent times Metropolitan Water District of Southern California wastes from Lake Mathews into creek. See schematic diagram of Santa Ana River basin. Records of chemical analyses for the water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.50	1.2	2.6	1.6	.90	6.6	.80	.10			
2	.30	.50	1.3	2.6	1.6	.90	3.9	.80	.10			
3	.30	.50	1.4	2.6	1.6	.90	2.8	.90	.10			
4	.30	.50	1.6	2.6	1.7	.80	2.6	.90	.10			
5	.30	.50	1.6	2.6	1.7	.80	2.6	1.0	.10			
6	.30	.40	1.6	2.4	1.7	.80	2.6	1.0	.10			
7	.30	.40	1.6	2.4	1.7	.80	2.4	1.0	.10			
8	.30	.40	1.6	2.6	1.6	147	2.2	1.0	.10			
9	.30	.40	1.6	2.6	1.5	4.1	2.2	.90	.10			
10	.30	.40	1.6	2.4	1.5	3.7	2.2	.90	.10			
11	.30	.40	1.6	2.2	1.4	2.1	2.2	.90	.10			
12	.30	.40	1.6	2.2	1.3	2.0	2.1	.90	.10			
13	.30	.40	1.6	2.2	1.3	2.0	2.0	.90	0			
14	.30	.40	1.6	2.2	1.3	2.0	1.7	.90	0			
15	.30	.40	1.6	2.2	1.3	2.0	1.5	.90	0			
16	.30	.40	1.6	2.2	1.2	2.0	1.4	.80	0			
17	.30	.40	1.6	2.1	1.2	2.0	1.3	.80	0			
18	.30	.40	2.4	2.1	1.2	2.0	1.3	.70	0			
19	.30	5.0	36	2.0	1.2	2.0	1.2	.60	0			
20	.30	10	4.3	2.0	1.2	1.8	1.1	.50	0			
21	.40	17	2.8	1.8	1.2	1.8	1.0	.50	0			
22	.40	2.4	2.7	1.8	1.2	1.8	1.0	.30	0			
23	.40	1.3	2.7	1.8	1.1	1.8	1.0	.30	0			
24	.40	1.2	2.7	1.7	1.1	1.8	1.0	.30	0			
25	.40	1.1	2.6	1.7	1.0	1.8	.90	.20	0			
26	.50	.90	2.6	1.7	1.0	1.8	.90	.20	0			
27	.50	1.0	2.6	1.7	1.0	1.7	.90	.20	0			
28	.50	1.1	2.6	1.7	1.0	1.7	.90	.20	0			
29	.50	1.2	2.6	1.6	.90	1.7	.80	.20	0			
30	.50	1.4	2.6	1.6	-----	1.7	.80	.10	0			
31	.50	-----	2.6	1.6	-----	1.7	-----	.10	-----			
TOTAL	11.00	51.30	119.7	65.5	38.30	199.90	55.10	19.70	1.20	0	0	0
MEAN	.35	1.71	3.86	2.11	1.32	6.45	1.84	.64	.040	0	0	0
MAX	.50	17	36	2.6	1.7	147	6.6	1.0	.10	0	0	0
MIN	.30	.40	1.2	1.6	.90	.80	.80	.10	0	0	0	0
AC-FT	22	102	237	130	76	397	109	39	2.4	0	0	0
CAL YR 1967	TOTAL 716.70			MEAN 1.96		MAX 36	MIN .20	AC-FT 1,420				
WTR YR 1968	TOTAL 561.70			MEAN 1.53		MAX 147	MIN 0	AC-FT 1,110				

SANTA ANA RIVER BASIN

11-0722, TEMESCAL CREEK AT CORONA, CALIF.

LOCATION.--Lat 33°53'46", long 117°34'50", in La Sierra Grant, on right bank 0.25 mile downstream from Lincoln Avenue and 1.0 mile northwest of Corona, Riverside County.

DRAINAGE AREA.--249 sq mi (not including 768 sq mi above Elsinore Lake).

RECORDS AVAILABLE.--December 1967 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 550 ft (from topographic map).

EXTREMES.--Maximum discharge during period December to September, 774 cfs Mar. 8 (gage height, 4.27 ft), from rating curve extended above 230 cfs on basis of slope-area measurement of maximum flow; no flow for some days.

Flood of Mar. 2, 1938, 14,900 cfs, result of slope-area measurement at site 3 miles upstream.

REMARKS.--Records good. Flow regulated by Elsinore Lake and several storage reservoirs. Many diversions for irrigation. Prior to July 22, 1968, effluent from city of Corona disposal plant was released to creek at site 0.5 mile upstream. Records of chemical analyses for the water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, PERIOD DECEMBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			—	3.2	3.0	2.8	14	4.0	3.0	3.4	0	0
2			—	3.2	3.0	2.8	10	4.0	3.0	3.4	0	.10
3			—	3.2	3.0	2.8	2.8	4.0	3.0	3.4	0	0
4			—	3.2	3.2	2.8	2.8	4.0	3.0	3.4	0	.20
5			—	3.2	3.4	2.6	2.8	4.0	3.0	3.4	.20	.10
6			—	3.2	3.7	2.6	2.8	4.0	2.8	3.4	0	0
7			—	3.2	3.7	7.2	3.0	4.0	3.0	3.4	.10	0
8			—	3.2	3.4	221	3.0	3.7	3.0	3.4	.10	0
9			—	2.8	3.2	3.4	3.4	3.7	3.0	3.4	0	0
10			—	3.2	4.0	2.4	4.0	3.7	3.0	3.4	0	0
11			—	3.0	3.8	2.4	3.4	4.0	3.2	3.4	0	0
12			—	2.8	3.7	2.4	3.7	4.0	3.2	3.4	0	0
13			—	2.6	4.0	2.4	3.4	3.7	3.2	3.4	.10	0
14			2.4	2.6	3.7	2.4	3.2	3.7	3.2	3.4	.10	0
15			2.4	2.8	3.7	2.4	3.0	3.7	3.2	3.4	0	0
16			2.4	2.6	3.7	2.6	3.0	3.7	3.2	3.4	0	0
17			2.6	2.6	3.4	2.6	3.0	3.4	3.2	3.4	.10	0
18			36	2.8	3.4	2.8	3.2	3.2	3.4	3.2	.10	0
19			45	2.8	3.4	2.8	3.4	3.0	3.4	3.2	.20	0
20			4.3	2.8	3.4	2.8	3.4	3.4	3.2	3.2	.10	0
21			2.8	2.8	3.2	2.8	3.7	2.8	3.2	3.2	0	0
22			2.8	2.6	3.2	2.6	3.7	3.0	3.2	1.7	0	0
23			2.8	2.6	3.2	2.4	4.0	3.0	3.2	.30	.10	.10
24			2.8	3.0	3.2	2.4	3.7	3.0	3.7	.30	0	0
25			2.8	3.7	3.2	2.4	3.7	3.2	3.4	.10	0	0
26			2.6	3.7	3.0	2.4	3.7	3.2	3.4	0	0	0
27			2.8	10	3.0	2.6	3.7	3.2	3.4	0	0	0
28			3.0	3.7	3.0	2.8	3.7	3.0	3.2	.10	0	0
29			3.0	3.2	3.0	3.2	4.0	3.0	3.0	0	0	0
30			3.2	3.2	-----	3.7	4.0	3.0	3.7	0	0	0
31		-----	3.2	3.7	-----	2.2	-----	3.0	-----	0	0	-----
TOTAL			—	101.2	97.8	305.5	119.2	108.3	95.6	73.10	1.20	0.50
MEAN			—	3.26	3.37	9.85	3.97	3.49	3.19	2.36	.039	.017
MAX			—	10	4.0	221	14	4.0	3.7	3.4	.20	.20
MIN			—	2.6	3.0	2.2	2.8	2.8	2.8	0	0	0
AC-FT			—	201	194	606	236	215	190	145	2.4	1.0

11-0730. SAN ANTONIO CREEK NEAR CLAREMONT, CALIF.

LOCATION.--Lat 34°12'58", long 117°40'04", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.36, T.2 N., R.8 W., 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 1968; combined records of creek and conduit, March 1901 to December 1916 (fragmentary, published as "near Upland"), January 1917 to September 1968.

GAGE.--Digital water-stage recorder; broad-crested weir since January 1939 on creek; graphic water-stage recorder and sharp-crested weir on conduit; graphic water-stage recorder and combination rectangular-V-notch weir on river pickup. Datum of gage is 3,397 ft above mean sea level. 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, graphic water-stage recorder at site 50 ft downstream at different datum. Jan. 10, 1939, to Jan. 31, 1963, at present site and datum.

AVERAGE DISCHARGE (creek only).--51 years (1917-68), 9.02 cfs (6,530 acre-ft per year); median of yearly mean discharges, 2.3 cfs (1,700 acre-ft per year).

(combined).--63 years (1901-2, 1903-4, 1905-9, 1910-15, 1916-68), 21.7 cfs (15,710 acre-ft per year); median of yearly mean discharges, 16 cfs (11,600 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 105 cfs Nov. 19 (gage height, 2.38 ft); minimum daily, 0.24 cfs Aug. 12.

1917-68: 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, 128 cfs Mar. 8; minimum daily, 1.4 cfs Aug. 5.

1917-68: Maximum discharge, 21,400 cfs Mar. 2, 1938; minimum daily, 0.30 cfs Dec. 8-19, 1954, Dec. 12-17, 1963.

REMARKS.--Records (creek) fair, (combined) good. No regulation above station. See schematic diagram of Santa Ana River basin. For records of combined discharge of San Antonio Creek and Southern California Edison Co.'s Sierra conduit, which diverts above station, see following page.

COOPERATION.--Twelve 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	1.1	8.1	1.8	1.8	1.2	9.3	1.3	1.1	1.3	1.8	.45
2	.90	1.1	2.2	1.7	1.6	1.2	7.3	1.7	1.2	1.3	1.7	.44
3	.90	1.2	2.4	1.6	1.6	1.1	6.1	1.7	1.4	1.3	1.6	.53
4	.90	1.2	2.1	1.5	1.6	1.1	5.3	1.8	1.5	1.1	1.5	.56
5	.90	1.2	2.0	1.5	1.5	1.0	1.1	1.7	1.5	1.2	1.4	.49
6	.90	1.2	2.0	1.5	1.5	1.1	1.1	1.7	1.6	1.2	1.1	.40
7	.90	1.3	2.0	1.5	1.4	1.3	1.1	1.7	1.7	1.2	.27	.38
8	.90	1.6	2.0	1.4	1.4	22	1.1	1.7	1.7	1.2	.27	.38
9	.90	1.5	1.9	1.4	1.5	5.3	1.1	2.1	1.7	1.1	.26	.37
10	.90	1.3	1.7	1.4	1.8	4.3	1.3	1.7	1.6	.93	.26	.36
11	.90	1.3	1.7	1.4	1.8	3.7	1.3	1.7	1.5	.87	.25	.36
12	.90	1.2	1.9	1.4	1.7	3.3	1.3	1.8	1.5	.74	.24	.35
13	.90	1.1	1.8	1.4	2.3	9.7	1.3	1.7	1.4	.69	.25	.36
14	.90	1.1	1.7	1.4	2.7	11	1.3	1.7	1.3	.71	.38	.40
15	.90	1.1	1.8	1.4	2.2	8.9	1.3	1.7	1.3	.65	.60	.45
16	.90	1.1	1.7	1.4	2.1	8.4	1.5	1.6	1.3	.64	.68	.46
17	.90	1.1	1.9	1.4	2.0	7.3	1.5	1.6	1.2	.60	.78	.41
18	.85	1.2	1.8	1.5	1.9	3.3	1.4	1.5	1.2	.57	.81	.42
19	.95	9.4	1.7	1.5	1.9	2.3	1.4	1.3	1.2	.53	.78	.47
20	.96	19	1.6	1.5	1.8	2.0	1.3	1.2	1.2	.50	.83	.61
21	.96	10	1.6	1.5	1.7	1.7	1.3	1.1	1.2	.48	.80	.65
22	1.1	6.0	1.7	1.5	1.6	1.5	1.3	1.2	1.2	.48	.68	.56
23	1.1	4.0	1.7	1.5	1.5	1.4	1.3	1.2	1.1	.50	.68	.52
24	1.1	3.0	1.9	1.5	1.4	1.3	1.3	1.1	1.2	.53	.64	.48
25	1.1	2.0	2.0	1.5	1.4	1.2	1.3	1.0	1.2	.54	.63	.45
26	1.2	2.0	1.9	1.7	1.4	1.1	1.3	.98	1.2	.54	.64	.42
27	1.2	2.0	1.9	2.7	1.4	1.1	1.3	.87	1.2	.56	.70	.43
28	1.2	1.9	1.9	2.3	1.3	1.0	1.3	.85	1.3	7.1	.43	.43
29	1.2	1.8	1.9	2.0	1.3	1.0	1.3	1.2	1.3	18	.43	.50
30	1.1	9.9	1.9	2.0	-----	.90	1.3	1.1	1.3	6.3	.43	.58
31	1.1	-----	1.8	2.0	-----	.90	-----	1.1	-----	2.6	.43	-----
TOTAL	30.42	92.9	64.2	49.8	49.1	112.60	61.4	44.60	40.3	55.96	22.25	13.67
MEAN	.98	3.10	2.07	1.61	1.69	3.63	2.05	1.44	1.34	1.81	.72	.46
MAX	1.2	19	8.1	2.7	2.7	22	9.3	2.1	1.7	18	1.8	.65
MIN	.85	1.1	1.6	1.4	1.3	.90	1.1	.85	1.1	.48	.24	.35
AC-FT	60	184	127	99	97	223	122	88	80	111	44	27

CAL YR 1967 TOTAL 5,410.32 MEAN 14.8 MAX 910 MIN .85 AC-FT 10,730
WTR YR 1968 TOTAL 637.20 MEAN 1.74 MAX 22 MIN .24 AC-FT 1,260

Peak discharge (base, 50 cfs).--Nov. 19 (1700 hrs) 105 cfs (2.38 ft); Mar. 8 (0430 hrs) 101 cfs (1.95 ft).

SANTA ANA RIVER BASIN

11-0730. SAN ANTONIO CREEK NEAR CLAREMONT, CALIF.--Continued

Combined discharge, in cubic feet per second, of San Antonio Creek and Southern California Edison Co.'s
Sierra conduit near Claremont, Calif., water year October 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	14	22	16	16	17	24	20	17	15	1.8	9.8
2	16	14	17	16	15	18	20	21	17	14	1.9	10
3	16	14	18	16	15	18	21	21	17	14	1.6	10
4	16	14	18	16	15	20	21	21	16	14	1.5	10
5	16	14	18	16	14	20	20	21	16	14	1.4	9.9
6	16	14	18	16	14	21	19	21	17	14	5.9	9.8
7	16	14	18	16	14	21	19	20	17	14	12	9.9
8	16	14	18	16	14	43	20	21	17	14	12	9.9
9	16	14	17	16	14	26	20	21	17	14	12	9.9
10	16	13	17	16	16	25	20	21	17	14	11	9.9
11	16	13	17	16	15	25	20	21	16	14	11	9.9
12	16	13	17	16	15	24	20	21	16	14	11	9.8
13	16	13	17	16	16	27	20	20	16	14	11	9.9
14	16	13	17	16	18	24	20	21	16	14	10	9.9
15	16	13	17	16	16	22	21	20	15	14	10	9.8
16	15	13	16	16	17	21	22	20	15	14	10	10
17	15	13	16	15	17	20	22	21	15	14	10	9.9
18	15	13	17	16	16	16	21	20	15	14	10	9.9
19	15	21	17	16	16	16	21	19	15	13	10	9.9
20	15	30	16	16	16	16	21	19	15	12	10	10
21	15	23	16	16	17	16	21	19	14	12	10	10
22	15	20	16	16	17	16	21	19	15	12	10	10
23	15	17	17	16	16	15	20	18	15	12	10	10
24	15	16	17	16	17	15	20	18	15	13	10	10
25	15	15	17	16	17	15	21	18	15	13	10	10
26	15	16	17	16	17	14	21	18	15	13	10	9.6
27	14	16	16	18	17	14	21	18	15	13	10	9.6
28	14	17	16	16	17	14	21	18	14	18	9.8	9.6
29	14	17	16	15	17	15	21	18	14	20	9.8	9.7
30	14	23	16	15	-----	15	21	17	14	6.5	9.8	9.8
31	14	-----	16	15	-----	15	-----	17	-----	2.6	10	-----
TOTAL	476	474	528	494	461	604	620	608	468	413.1	273.5	296.4
MEAN	15.4	15.8	17.0	15.9	15.9	19.5	20.7	19.6	15.6	13.3	8.82	9.88
MAX	17	30	22	18	18	43	24	21	17	20	12	10
MIN	14	13	16	15	14	14	19	17	14	2.6	1.4	9.6
AC-FT	944	940	1,050	980	914	1,200	1,230	1,210	928	819	542	588
CAL YR 1967	TOTAL 12,481.0		MEAN 34.2		MAX 105		MIN 9.6		AC-FT 24,760			
WTR YR 1968	TOTAL 5,716.0		MEAN 15.6		MAX 43		MIN 1.4		AC-FT 11,340			

Peak discharge (base, 50 cfs).--Nov. 19 (1700 hrs) 113 cfs; Mar. (0430 hrs) 128 cfs.

11-0732. SAN ANTONIO CREEK BELOW SAN ANTONIO DAM, CALIF.

LOCATION.--Lat 34°09'26", long 117°40'50", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 2,093.94 ft above mean sea level (Corps of Engineers benchmark).

AVERAGE DISCHARGE.--6 years, 5.86 cfs (4,240 acre-ft per year).

EXTREMES.--Maximum discharge during year, 601 cfs Jan. 2 (gage height, 2.73 ft); no flow for most of year. 1962-68: Maximum discharge, 3,900 cfs Dec. 6, 1966 (gage height, unknown), on basis of gate openings at dam; no flow for most of each year.

REMARKS.--Records good. Flow regulated by San Antonio flood-control reservoir (capacity, 9,110 acre-ft). Water diverted out of basin for power, domestic use, and irrigation. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	0		0	2.1			0	0	
2			0	14		0	.20			0	0	
3			0	0		0	.10			0	0	
4			0	0		0	.10			0	0	
5			0	0		0	.10			0	5.8	
6			0	0		0	.10			0	8.1	
7			0	0		0	.20			0	.40	
8			0	0		.10	.40			0	.20	
9			0	0		.20	.70			0	.20	
10			0	0		.20	2.8			0	.20	
11			0	0		.20	.70			0	.20	
12			0	0		.20	0			0	.20	
13			0	0		.20	0			0	0	
14			0	0		.20	0			0	0	
15			0	0		.10	0			0	0	
16			0	0		.10	0			0	0	
17			0	0		.10	0			0	0	
18			0	0		0	0			0	0	
19			0	0		0	0			0	0	
20			0	0		0	0			0	0	
21			0	0		0	0			0	0	
22			0	0		0	0			0	0	
23			0	0		0	0			0	0	
24			0	0		0	0			0	0	
25			0	0		0	0			0	0	
26			0	0		0	0			0	0	
27			1.8	0		0	0			0	0	
28			17	0		3.5	0			0	0	
29			18	0		7.6	0			.20	0	
30			.90	0	-----	5.5	0			0	0	
31		-----	0	0	-----	4.4	-----		-----	0	0	-----
TOTAL	0	0	37.70	14	0	22.60	7.50	0	0	0.20	15.30	0
MEAN	0	0	1.22	.45	0	.73	.25	0	0	.007	.49	0
MAX	0	0	18	14	0	7.6	2.8	0	0	.20	8.1	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	75	28	0	45	15	0	0	.4	30	0
CAL YR 1967	TOTAL	3,446.80	MEAN	9.44	MAX	55	MIN	0	AC-FT	6,840		
WTR YR 1968	TOTAL	97.30	MEAN	.27	MAX	18	MIN	0	AC-FT	193		

SANTA ANA RIVER BASIN

11-0734.4. CHINO CREEK NEAR CHINO, CALIF.

LOCATION.--Lat 33°56'22", long 117°38'58", in El Rincon Grant, on first pier from right bank on downstream side of Euclid Avenue bridge, 5.6 miles southeast of Chino, San Bernardino County.

DRAINAGE AREA.--107 sq mi.

RECORDS AVAILABLE.--January to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 500 ft (from topographic map).

EXTREMES.--Maximum discharge during period January to September, 6,000 cfs Mar. 8 (gage height, 8.20 ft, from inside gage, 9.48 ft, from profile of floodmarks), from rating curve extended above 11 cfs on basis of computation of maximum flow at contracted opening; no flow for some days.

REMARKS.--Records good below 15 cfs and poor above. Flow partly regulated by San Antonio flood-control reservoir (capacity, 9,110 acre-ft). Natural streamflow affected by extensive ground-water withdrawals, diversions for power, domestic use and irrigation, and return flow from irrigated areas. See schematic diagram of Santa Ana River basin. Records of chemical analyses for the water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, PERIOD JANUARY TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				.40	.70	1.7	32	1.5	1.0	.20	0	0
2				.40	.60	2.6	14	1.7	.60	.40	.20	0
3				.40	1.0	1.8	3.6	1.8	.60	.50	.20	0
4				.40	1.0	.70	3.0	1.4	.90	.20	.20	0
5				.40	.10	.90	2.6	1.4	1.1	.20	0	0
6				.30	.20	8.7	2.6	1.2	1.4	.40	.20	1.4
7				.30	.20	36	2.4	1.1	1.4	1.6	1.1	3.3
8				.30	.20	220	2.1	1.1	2.1	1.1	.50	2.2
9				.30	1.6	12	2.4	2.9	2.2	1.4	.30	.20
10				.40	3.5	7.2	2.4	2.1	2.5	1.8	.60	.50
11				.40	.40	6.0	2.4	.60	3.4	2.8	.50	1.7
12				.40	.20	5.7	2.3	.90	3.4	2.2	.30	2.6
13				.40	8.5	8.5	2.7	.70	2.6	.40	.40	2.8
14				.40	18	6.4	2.6	2.3	2.2	.40	.10	3.4
15				.40	1.2	4.6	1.8	1.9	2.0	.10	1.5	.60
16				.40	1.2	4.4	1.6	1.2	2.0	0	1.5	1.7
17				.20	1.2	4.2	2.4	2.3	1.2	1.7	1.0	3.0
18				.50	1.0	4.0	3.4	.40	1.4	1.5	2.0	2.6
19				.60	1.3	3.8	2.4	.20	2.6	.90	0	2.1
20				.60	1.7	3.3	1.8	1.2	2.3	1.8	0	2.4
21				.60	1.0	2.7	1.8	1.6	1.6	.20	.10	2.0
22				.10	2.0	3.0	1.6	.40	.40	.90	.20	1.8
23				.10	2.6	2.8	1.6	.30	.40	.80	0	.60
24				0	1.6	1.8	1.2	.40	1.2	.80	0	.50
25				.60	2.6	2.1	1.4	.90	1.2	.80	0	.60
26				.30	1.0	2.8	1.2	.80	1.8	.60	0	.10
27				49	2.6	2.8	1.4	.60	2.1	1.1	0	0
28				13	1.4	3.2	1.8	.60	2.0	5.5	0	0
29				1.3	1.5	3.0	1.0	1.6	1.6	3.5	0	0
30				.40	-----	2.6	1.0	2.1	.60	0	0	0
31		-----		2.2	-----	2.3	-----	1.4	-----	.10	0	-----
TOTAL	—	—	—	75.50	60.10	371.60	104.5	38.60	49.80	33.90	10.90	36.10
MEAN				2.44	2.07	12.0	3.48	1.25	1.66	1.09	.35	1.20
MAX				49	18	220	32	2.9	3.4	5.5	2.0	3.4
MIN				0	.10	.70	1.0	.20	.40	0	0	0
AC-FT				150	119	737	207	77	99	67	22	72

11-0734.7. CUCAMONGA CREEK NEAR UPLAND, CALIF.

LOCATION.--Lat 34°10'26", long 117°37'51", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.17, T.1 N., R.7 W., 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 1968. Monthly discharge only for October to December 1928, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Broad-crested weir since December 1938. Datum of gage is 2,367 ft above mean sea level. Prior to Jan. 17, 1935, and Apr. 15, 1935, to Nov. 11, 1936, graphic water-stage recorder 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. Dec. 14, 1938, to Jan. 31, 1963, at present site and datum.

AVERAGE DISCHARGE.--41 years, 7.07 cfs (5,120 acre-ft per year); median of yearly mean discharges, 5.0 cfs (3,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 196 cfs Nov. 19 (gage height, 3.12 ft); minimum daily, 2.2 cfs Sept. 26.
1927-68: Maximum discharge, 10,300 cfs Mar. 2, 1938, based on rainfall-runoff study; minimum daily, 0.30 cfs Oct. 5, 6, 1962.

REMARKS.--Records fair. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	4.6	11	5.6	5.6	6.4	8.0	5.1	3.4	3.5	2.6	2.5
2	6.0	4.7	10	5.3	5.6	6.2	7.0	5.2	3.5	3.4	2.5	2.4
3	6.0	4.6	9.8	5.6	5.5	5.8	6.5	5.2	3.5	3.3	2.5	2.8
4	6.0	4.7	9.1	6.0	5.6	5.9	6.4	5.4	3.7	3.2	2.5	2.7
5	6.0	4.9	8.8	5.9	5.5	5.9	6.4	5.8	3.9	3.1	2.4	2.5
6	5.8	4.9	8.4	5.8	5.5	5.9	6.4	5.7	4.1	3.3	2.4	2.4
7	5.7	4.8	8.1	5.7	5.7	6.5	6.4	5.8	4.6	3.5	2.5	2.4
8	5.6	4.8	7.7	5.6	5.6	16	6.3	5.9	4.5	3.7	2.5	2.3
9	5.6	4.8	7.4	5.6	6.5	11	6.2	5.7	4.5	3.3	2.5	2.3
10	5.6	4.9	7.1	5.7	7.2	10	6.0	5.7	4.2	3.1	2.5	2.3
11	5.6	4.8	6.9	5.9	6.8	9.8	6.0	5.8	4.2	3.0	2.5	2.3
12	5.6	4.8	6.7	5.9	6.9	8.3	5.9	6.1	4.0	3.0	2.5	2.3
13	5.6	4.7	6.5	5.9	8.1	8.3	5.8	6.0	4.0	3.0	2.6	2.3
14	5.6	4.8	6.3	5.8	6.4	7.7	5.1	5.8	3.9	3.1	2.5	2.5
15	5.6	4.9	6.1	5.9	6.0	7.6	5.0	5.7	3.9	3.2	2.5	2.7
16	5.4	5.0	6.0	5.9	5.7	7.4	4.9	5.2	4.1	3.2	2.7	2.6
17	5.2	5.0	5.8	5.6	5.7	7.4	5.2	5.1	4.3	3.2	2.8	2.4
18	5.0	5.1	7.0	5.6	5.9	7.2	4.9	5.3	4.3	3.1	2.8	2.4
19	4.9	27	6.6	5.6	5.6	6.9	4.8	5.0	4.3	3.0	2.7	2.5
20	4.7	37	6.5	5.6	5.6	6.8	5.0	5.2	4.4	2.9	2.9	2.7
21	4.8	27	6.5	5.6	5.9	6.5	5.2	5.4	4.4	2.9	2.8	2.8
22	5.0	13	7.1	5.6	5.9	6.3	5.5	5.3	4.4	2.8	2.6	2.6
23	5.0	10	7.2	5.8	6.2	6.3	5.4	5.2	4.2	2.9	2.3	2.3
24	4.8	9.3	6.9	5.9	6.2	6.2	5.5	5.1	4.3	2.9	2.3	2.3
25	4.8	8.5	6.7	5.9	6.1	6.4	5.5	4.7	4.4	2.9	2.3	2.3
26	5.0	8.0	5.9	6.1	6.4	6.3	5.2	4.3	4.3	2.9	2.3	2.2
27	4.8	7.5	6.1	7.1	6.5	6.2	5.1	4.1	4.0	3.0	2.4	2.3
28	4.9	7.5	6.1	5.8	6.7	6.4	4.6	4.1	4.1	4.5	2.6	2.3
29	4.7	7.0	5.9	5.6	6.5	6.3	4.7	3.9	4.2	3.8	2.6	2.5
30	4.5	11	5.9	5.4	-----	6.3	5.1	3.8	3.7	2.9	2.4	2.7
31	4.6	-----	5.6	5.3	-----	6.1	-----	3.5	-----	2.6	2.3	-----
TOTAL	164.4	259.6	221.7	178.6	177.4	226.3	170.0	160.1	123.3	98.2	78.3	73.6
MEAN	5.30	8.65	7.15	5.76	6.12	7.30	5.67	5.16	4.11	3.17	2.53	2.45
MAX	6.0	37	11	7.1	8.1	16	8.0	6.1	4.6	4.5	2.9	2.8
MIN	4.5	4.6	5.6	5.3	5.5	5.8	4.6	3.5	3.4	2.6	2.3	2.2
AC-FT	326	515	440	354	352	449	337	318	245	195	155	146

CAL YR 1967 TOTAL 4,882.8 MEAN 13.4 MAX 101 MIN 4.5 AC-FT 9,680
WTR YR 1968 TOTAL 1,931.5 MEAN 5.28 MAX 37 MIN 2.2 AC-FT 3,830

Peak discharge (base, 80 cfs).--Nov. 19 (1100 hrs) 196 cfs (3.12 ft).

SANTA ANA RIVER BASIN

11-0734.95. CUCAMONGA CREEK NEAR MIRA LOMA, CALIF.

LOCATION.--Lat 33°58'58", long 117°35'55", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.22, T.2 S., R.7 W., on right levee 200 ft upstream from Merrill Avenue and 4.6 miles west of Mira Loma.

DRAINAGE AREA.--75.8 sq mi.

RECORDS AVAILABLE.--January to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 655.3 ft above mean sea level.

EXTREMES.--Maximum discharge during period January to September, 920 cfs Mar. 8 (gage height, 3.28 ft, from profile of floodmarks), on basis of slope-area measurement of maximum flow; no flow for most of period.

REMARKS.--Records poor. Flood flows not materially affected by percolation basins in headwater areas. Extensive ground-water withdrawals for municipal supply and irrigation. See schematic diagram of Santa Ana River basin. Records of chemical analyses for the water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, PERIOD JANUARY TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				—	0	0						
2				—	0	0						
3				—	0	0						
4				—	0	0						
5				—	0	0						
6				—	0	0						
7				—	0	0						
8				—	0	116						
9				—	0	0						
10				—	0	0						
11				—	0	0						
12				—	0	0						
13				—	0	0						
14				—	0	0						
15				—	0	0						
16				—	0	0						
17				—	0	0						
18				—	.10	0						
19				—	0	0						
20				—	0	0						
21				—	0	0						
22				—	0	0						
23				0	0	0						
24				0	0	0						
25				0	0	0						
26				0	0	0						
27				0	0	0						
28				.10	0	0						
29				0	0	0						
30				0	-----	0						
31		-----		0	-----	0	-----		-----			-----
TOTAL	—	—	—	—	0.10	116	0	0	0	0	0	0
MFAN					.003	3.74	0	0	0	0	0	0
MAX					.10	116	0	0	0	0	0	0
MIN					0	0	0	0	0	0	0	0
AC-T					.2	230	0	0	0	0	0	0

11-0740. 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, not including 768 sq mi above Lake Elsinore.

RECORDS AVAILABLE.--May 1930 to November 1939 (irrigation seasons only), March 1940 to September 1968. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.--Graphic 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, 968 cfs Mar. 8 (gage height, 4.16 ft); minimum daily, 16 cfs Aug. 26.

1940-68: 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 sta. no. 11-0490). Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, and return flow from irrigated areas. Santa Ana River Development Co. pumps water from wells in Prado Reservoir into conduit which passes through dam and is released to river immediately downstream from gage. No water pumped in 1968. See schematic diagram of Santa Ana River basin. Records of chemical analyses for the water year 1968 are published in Part 2 of this report.

COOPERATION.--Seventeen discharge measurements and records of bypass flow furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	32	157	62	65	50	77	55	46	37	31	17
2	35	37	70	68	62	53	315	53	41	40	25	17
3	34	43	63	85	63	52	101	53	41	38	25	17
4	32	44	60	72	63	50	80	50	41	29	25	20
5	32	45	58	68	62	52	73	50	41	27	22	25
6	31	46	62	65	60	53	68	50	43	31	25	22
7	28	48	62	63	60	66	67	50	45	33	25	21
8	32	48	63	67	58	680	67	49	46	33	22	21
9	32	50	55	67	63	942	62	52	46	31	21	21
10	34	48	53	67	72	903	62	56	45	25	22	20
11	34	45	56	70	68	846	58	53	45	21	22	20
12	32	44	58	67	67	655	58	53	44	21	21	20
13	31	48	58	63	70	106	56	53	43	22	22	18
14	31	49	53	62	97	91	58	53	41	22	20	20
15	28	49	53	65	80	82	56	53	43	25	22	25
16	25	45	55	65	72	78	58	53	43	25	31	25
17	27	44	55	65	70	75	56	49	43	25	27	25
18	31	34	154	63	68	78	58	48	45	25	25	31
19	32	118	510	62	68	82	60	44	45	21	25	29
20	32	572	350	60	70	68	58	43	44	21	27	29
21	32	473	97	63	70	68	53	43	40	22	25	29
22	35	386	77	63	65	72	53	44	40	25	21	29
23	35	107	70	63	62	70	53	44	37	25	21	22
24	37	84	68	63	62	70	52	45	38	20	18	22
25	34	82	65	58	62	70	50	40	41	21	17	29
26	38	67	65	63	62	70	53	38	43	21	16	29
27	38	63	65	98	62	70	53	38	43	22	19	33
28	38	56	65	177	53	65	53	38	40	38	17	27
29	35	52	65	84	53	68	53	38	40	54	17	33
30	31	93	63	72	-----	70	53	38	40	44	17	33
31	32	-----	62	73	-----	65	-----	41	-----	35	17	-----
TOTAL	1,015	2,952	2,867	2,203	1,909	5,820	2,074	1,467	1,273	879	690	729
MEAN	32.7	98.4	92.5	71.1	65.8	188	69.1	47.3	42.4	28.4	22.3	24.3
MAX	38	572	510	177	97	942	315	56	46	54	31	33
MIN	25	32	53	58	53	50	50	38	37	20	16	17
AC-FT	2,010	5,860	5,690	4,370	3,790	11,540	4,110	2,910	2,520	1,740	1,370	1,450
CAL YR 1967	TOTAL 25,635		MEAN 70.2		MAX 830		MIN 15		AC-FT 50,850			
WTR YR 1968	TOTAL 23,878		MEAN 65.2		MAX 942		MIN 16		AC-FT 47,360			

SANTA ANA RIVER BASIN

11-0757.2. CARBON CREEK BELOW CARBON CANYON DAM, CALIF.

LOCATION.--Lat 33°54'50", long 117°50'30", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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.

RECORDS AVAILABLE.--October 1961 to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 398.29 ft above mean sea level, datum of 1929 (Corps of Engineers benchmark).

AVERAGE DISCHARGE.--7 years, 0.277 cfs (201 acre-ft per year).

EXTREMES.--Maximum discharge during year, 77 cfs Nov. 20 (gage height, 0.82 ft); no flow for most of year.
1961-68: Maximum discharge, 220 cfs Dec. 1, 1965 (gage height, 1.17 ft); no flow for most of each year.

REMARKS.--Records good. Flow regulated by Carbon Canyon flood-control reservoir (capacity, 7,030 acre-ft). No diversion above station. See schematic diagram of Santa Ana River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0		1.4	0						
2		0	0		0	0						
3		0	0		0	0						
4		0	4.8		0	0						
5		0	.20		0	0						
6		0	0		0	0						
7		0	0		0	0						
8		0	0		0	.10						
9		0	0		0	0						
10		0	0		0	0						
11		0	0		0	18						
12		0	0		0	24						
13		0	0		0	7.4						
14		0	0		.10	18						
15		0	0		0	2.5						
16		0	0		0	.20						
17		0	0		0	0						
18		.30	.40		0	0						
19		2.4	.70		0	0						
20		40	.40		0	0						
21		6.2	.30		0	0						
22		.10	.20		0	0						
23		.10	.20		0	0						
24		0	.20		0	0						
25		0	.20		0	0						
26		0	.20		0	0						
27		0	8.1		0	0						
28		0	8.2		0	0						
29		5.3	.10		0	0						
30		1.8	0		-----	0						
31		-----	0		-----	0	-----		-----			-----
TOTAL	0	56.20	24.20	0	1.50	70.20	0	0	0	0	0	0
MEAN	0	1.87	.78	0	.052	2.26	0	0	0	0	0	0
MAX	0	40	8.2	0	1.4	24	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	111	48	0	3.0	139	0	0	0	0	0	0
CAL YR 1967	TOTAL	146.30	MEAN	.40	MAX	40	MIN	0	AC-FT	290		
WTR YR 1968	TOTAL	152.10	MEAN	.42	MAX	40	MIN	0	AC-FT	302		

11-0758. SANTIAGO CREEK AT MODJESKA, CALIF.

LOCATION.--Lat 33°42'32", long 117°38'05", in SE¼NW¼ 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,258.77 ft above mean sea level, datum of 1929. Prior to Mar. 31, 1966, graphic water-stage recorder.

AVERAGE DISCHARGE.--7 years, 4.22 cfs (3,060 acre-ft per year).

EXTREMES.--Maximum discharge during year, 211 cfs Mar. 8 (gage height, 2.93 ft); no flow Nov. 1-16, July 2 to Sept. 30.

1961-68: Maximum discharge, 1,500 cfs Nov. 22, 1965 (gage height, 6.60 ft), from rating curve extended above 200 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--Records fair. Slight regulation by Modjeska Reservoir on Harding Creek. No diversion above station. See schematic diagram of Santa Ana River basin.

COOPERATION.--Ten discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	0	3.5	1.2	2.5	1.3	2.7	1.2	.63	.02		
2	.19	0	2.8	1.2	2.1	1.2	6.1	1.2	.54	0		
3	.19	0	2.5	1.2	2.0	1.2	4.3	1.3	.47	0		
4	.19	0	2.1	1.2	1.8	1.1	3.5	1.4	.52	0		
5	.15	0	1.8	1.2	1.7	1.0	3.0	1.4	.46	0		
6	.11	0	1.4	1.3	1.5	.97	3.0	1.4	.45	0		
7	.10	0	1.3	1.4	1.4	1.2	2.8	1.4	.46	0		
8	.09	0	1.5	1.5	1.3	59	2.5	1.4	.41	0		
9	.09	0	1.2	1.6	1.3	21	2.2	1.4	.34	0		
10	.09	0	1.0	1.6	1.5	12	2.5	1.3	.45	0		
11	.08	0	.99	2.9	1.3	8.3	2.5	1.3	.51	0		
12	.06	0	.93	3.6	1.3	7.0	2.4	1.5	.52	0		
13	.06	0	.94	1.7	1.4	6.2	2.5	1.8	.50	0		
14	.05	0	.90	1.6	1.5	5.7	2.4	1.8	.49	0		
15	.05	0	.88	1.5	1.4	4.9	2.0	1.5	.44	0		
16	.04	0	.91	1.5	1.3	4.4	2.0	1.3	.40	0		
17	.04	.02	1.1	1.4	1.3	4.2	2.2	1.1	.37	0		
18	.03	.04	5.6	1.5	1.3	3.9	2.0	1.1	.30	0		
19	.01	2.3	9.7	1.6	1.1	3.6	1.8	1.1	.28	0		
20	.01	4.3	8.2	1.5	1.1	3.2	1.7	.97	.23	0		
21	.03	3.8	6.6	1.5	1.1	3.0	1.7	1.0	.18	0		
22	.03	2.9	5.5	1.4	1.2	2.9	1.6	1.0	.14	0		
23	.03	2.2	5.0	1.4	1.1	2.7	1.5	1.1	.12	0		
24	.03	1.8	4.5	1.4	1.2	2.6	1.5	1.2	.12	0		
25	.03	1.5	3.5	1.4	1.2	2.5	1.3	1.1	.09	0		
26	.04	1.4	2.7	1.4	1.3	2.5	1.4	1.0	.07	0		
27	.03	1.3	2.5	1.8	1.3	2.5	1.7	.92	.06	0		
28	.03	1.3	2.2	2.8	1.4	2.4	1.6	.82	.05	0		
29	.01	1.1	1.9	2.3	1.3	2.4	1.5	.87	.04	0		
30	.01	2.6	1.6	2.2	-----	2.3	1.3	.78	.03	0		
31	.01	-----	1.4	2.3	-----	2.2	-----	.72	-----	0		-----
TOTAL	2.12	26.56	86.65	52.1	41.2	179.37	69.2	37.38	9.67	0.02	0	0
MEAN	.068	.89	2.80	1.68	1.42	5.79	2.31	1.21	.32	.0006	0	0
MAX	.21	4.3	9.7	3.6	2.5	59	6.1	1.8	.63	.02	0	0
MIN	.01	0	.88	1.2	1.1	.97	1.3	.72	.03	0	0	0
AC-FT	4.2	53	172	103	82	356	137	74	19	.04	0	0

CAL YR 1967 TOTAL 2,556.76 MEAN 7.00 MAX 114 MIN 0 AC-FT 5,070
WTR YR 1968 TOTAL 504.27 MEAN 1.38 MAX 59 MIN 0 AC-FT 1,000

Peak discharge (base, 100 cfs).--Mar. 8 (0830 hrs) 211 cfs (2.93 ft).

SANTA ANA RIVER BASIN

11-0760. SANTIAGO CREEK AT SANTIAGO DAM, NEAR VILLA PARK, CALIF.

LOCATION.--Lat 33°47'10", long 117°43'33", near west corner of lot 70 of Lomas de Santiago Grant, 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 1968.

GAGE.--Staff gage read on last day of each month. Datum of gage is at mean sea level.

AVERAGE DISCHARGE.--36 years, 16.0 cfs (11,580 acre-ft per year); median of yearly mean discharges, 9.5 cfs (6,900 acre-ft per year).

REMARKS.--Records of total inflow represent all water reaching Santiago Reservoir, including precipitation on the reservoir and supplemental Colorado River water delivered through aqueduct of Metropolitan Water District of Southern California. Total inflow computed on basis of records of storage, release (draft), spill, leakage and evaporation. Monthly evaporation from lake surface computed on basis of evaporation from class A pan using coefficient of 0.80. Records of net inflow exclude supplemental water from Colorado River. Dam was completed in December 1931. Area and capacity tables for the reservoir are dated December 1930. Capacity of reservoir at spillway level (gage height, 790.0 ft), 25,000 acre-ft. Dead storage below lowest outlet included in these records. Minor diversions in basin above this reservoir. See schematic diagram of Santa Ana River basin.

COOPERATION.--Reservoir operation records and related data furnished by Serrano and Carpenter Irrigation Districts and Irvine Co.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

Month	Elevation (feet) a	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Evapo- ration (acre- feet)	Spill waste, and leakage (acre- feet)	Total inflow (acre- feet)	Colorado River water imported (acre- feet)	Net inflow (acre- feet)
Santiago Reservoir									
Sept. 30.....	781.2	20,007	-	-	-	-	-	-	-
Oct. 31.....	779.1	18,916	-1,091	1,291	281	0	481	128	353
Nov. 30.....	777.9	18,310	-606	1,037	124	0	555	78	477
Dec. 31.....	777.6	18,160	-150	479	132	0	461	68	393
Calendar year 1967..	-	-	+399	12,691	2,564	0	15,654	1,277	14,377
Jan. 31.....	776.1	17,414	-746	994	138	0	386	62	324
Feb. 29.....	773.9	16,363	-1,051	1,285	99	0	333	77	256
Mar. 31.....	774.2	16,503	+140	752	184	0	1,076	64	1,012
Apr. 30.....	771.8	15,401	-1,102	1,502	216	0	616	96	520
May 31.....	767.7	13,563	-1,838	2,293	215	0	670	119	551
June 30.....	767.8	13,607	+44	2,480	236	0	2,760	2,218	542
July 31.....	768.5	13,918	+311	2,619	266	0	3,196	2,871	325
Aug. 31.....	764.8	12,321	-1,597	1,736	259	0	398	123	275
Sept. 30.....	761.1	10,888	-1,433	2,011	197	0	775	495	280
Water year 1967-68..	-	-	-9,119	18,479	2,347	0	11,707	6,399	5,308

a Elevation at 1700 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of net inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

SANTA ANA RIVER BASIN

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11-0775. SANTIAGO CREEK AT SANTA ANA, CALIF.

LOCATION.--Lat 33°46'09", long 117°52'54", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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 1968. Monthly discharge only October to December 1928, published in WSP 1315-B.

GAGE.--Graphic 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.--40 years, 3.95 cfs (2,870 acre-ft per year); median of yearly mean discharges, 0.7 cfs (510 acre-ft per year).

EXTREMES.--Maximum discharge during year, 610 cfs Nov. 19 (gage height, 4.15 ft); no flow for most of year. 1928-68; 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 good. Flow regulated by Santiago Reservoir (see sta. no. 11-0760). Diversions above station by Irvine Co. and Serrano and Carpenter Irrigation Districts. In each winter season, some water originally diverted from Santa Ana River by Santa Ana Valley Irrigation Co.'s canal is occasionally wasted into Santiago Creek 3 miles above station. See schematic diagram of Santa Ana River basin.

COOPERATION.--Five discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.20	0	0	0	14					
2		0	0	0	0	0	1.9					
3		0	0	0	0	0	0					
4		0	0	0	0	0	0					
5		0	0	0	0	0	0					
6		0	0	0	0	0	0					
7		0	0	0	0	8.9	0					
8		0	0	0	0	114	0					
9		0	0	0	0	0	0					
10		0	0	0	0	0	0					
11		.40	0	0	0	0	0					
12		0	0	0	0	0	0					
13		0	0	0	4.0	0	0					
14		0	0	0	4.1	0	0					
15		0	0	0	0	0	0					
16		0	0	0	0	0	0					
17		.50	0	0	0	0	0					
18		.60	33	0	0	0	0					
19		90	18	0	0	0	0					
20		.50	.10	0	0	0	0					
21		37	0	0	0	0	0					
22		0	0	0	0	0	0					
23		0	0	0	0	0	0					
24		0	0	0	0	0	0					
25		0	0	0	0	0	0					
26		0	0	.20	0	0	0					
27		0	0	8.2	0	0	0					
28		0	0	1.3	0	0	0					
29		0	0	0	0	0	0					
30		11	0	0	-----	0	0					
31		-----	0	0	-----	0	-----					
TOTAL	0	140.00	51.30	9.70	8.1	122.9	15.9	0	0	0	0	0
MEAN	0	4.67	1.65	.31	.28	3.96	.53	0	0	0	0	0
MAX	0	90	33	8.2	4.1	114	14	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	278	102	19	16	244	32	0	0	0	0	0
CAL YR 1967	TOTAL	445.80		MEAN	1.22	MAX	90	MIN	0	AC-FT	884	
WTR YR 1968	TOTAL	347.90		MEAN	.95	MAX	114	MIN	0	AC-FT	690	

SANTA ANA RIVER BASIN

11-0780. SANTA ANA RIVER AT SANTA ANA, CALIF.

LOCATION.--Lat 33°44'56", long 117°54'30", in NW¼SW¼SE¼ sec.10, T.5 S., R.10 W., 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 Lake Elsinore).

RECORDS AVAILABLE.--January 1923 to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 71.20 ft above mean sea level (Orange County benchmark). 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); 28 years (1940-68), 14.3 cfs (10,350 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,470 cfs Mar. 8 (gage height, 2.76 ft); no flow for most of year. 1923-68: 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 sta. no. 11-0490), and Santiago Reservoir (see sta. no. 11-0760). Discharge up to 100 cfs can be diverted from Carbon Creek to Coyote Creek, 1.5 miles upstream from mouth of Carbon Creek. See schematic diagram of Santa Ana River basin.

COOPERATION.--Four discharge measurements furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		.10	.10	.10	0	0	39	.10			0	
2		.10	0	0	0	0	8.1	.10			0	
3		.10	0	0	0	0	.10	.10			0	
4		.10	0	0	0	0	.10	.10			0	
5		.10	0	0	0	0	.10	.10			.10	
6		.10	0	0	0	0	.10	.10			.10	
7		.10	0	0	0	8.0	.10	.10			0	
8		.20	.10	0	0	805	.10	.10			0	
9		.20	0	0	.10	464	.10	.10			0	
10		.10	0	0	0	426	.10	.10			0	
11		.10	0	0	0	237	.10	.10			0	
12		.10	0	0	0	333	.10	.10			0	
13		.10	0	0	1.1	193	.10	.10			0	
14		.10	0	0	14	23	.10	.10			0	
15		.10	0	0	0	.30	.10	.10			0	
16		.10	0	0	0	.20	.10	.10			0	
17		.10	0	0	0	.10	.10	.10			0	
18		.10	73	0	0	0	.10	.10			0	
19		315	89	0	0	0	.10	.10			0	
20		22	123	0	0	0	.10	.10			0	
21		240	82	0	0	0	.10	.10			0	
22		40	.20	0	0	0	.10	.10			0	
23		58	.20	0	0	0	.10	.10			0	
24		2.9	0	0	0	0	.10	0			0	
25		.70	.30	0	0	0	.10	0			0	
26		.50	0	0	0	0	.10	0			0	
27		.50	0	50	0	0	.10	0			0	
28		.70	0	0	0	0	.10	0			0	
29		.40	0	0	0	.50	.10	0			0	
30		29	0	0	-----	.10	.10	0			0	
31		-----	.10	.50	-----	.30	-----	0	-----		0	-----
TOTAL	0	711.70	368.00	50.60	15.20	2,490.50	49.90	2.30	0	0	0.20	0
MEAN	0	23.7	11.9	1.63	.52	80.3	1.66	.074	0	0	.007	0
MAX	0	315	123	50	14	805	39	.10	0	0	.10	0
MIN	0	.10	0	0	0	0	.10	0	0	0	0	0
AC-FT	0	1,410	730	100	30	4,940	99	4.6	0	0	.4	0
CAL YR 1967	TOTAL	4,917.20	MEAN	13.5	MAX	965	MIN	0	AC-FT	9,750		
WTR YR 1968	TOTAL	3,688.40	MEAN	10.1	MAX	805	MIN	0	AC-FT	7,320		

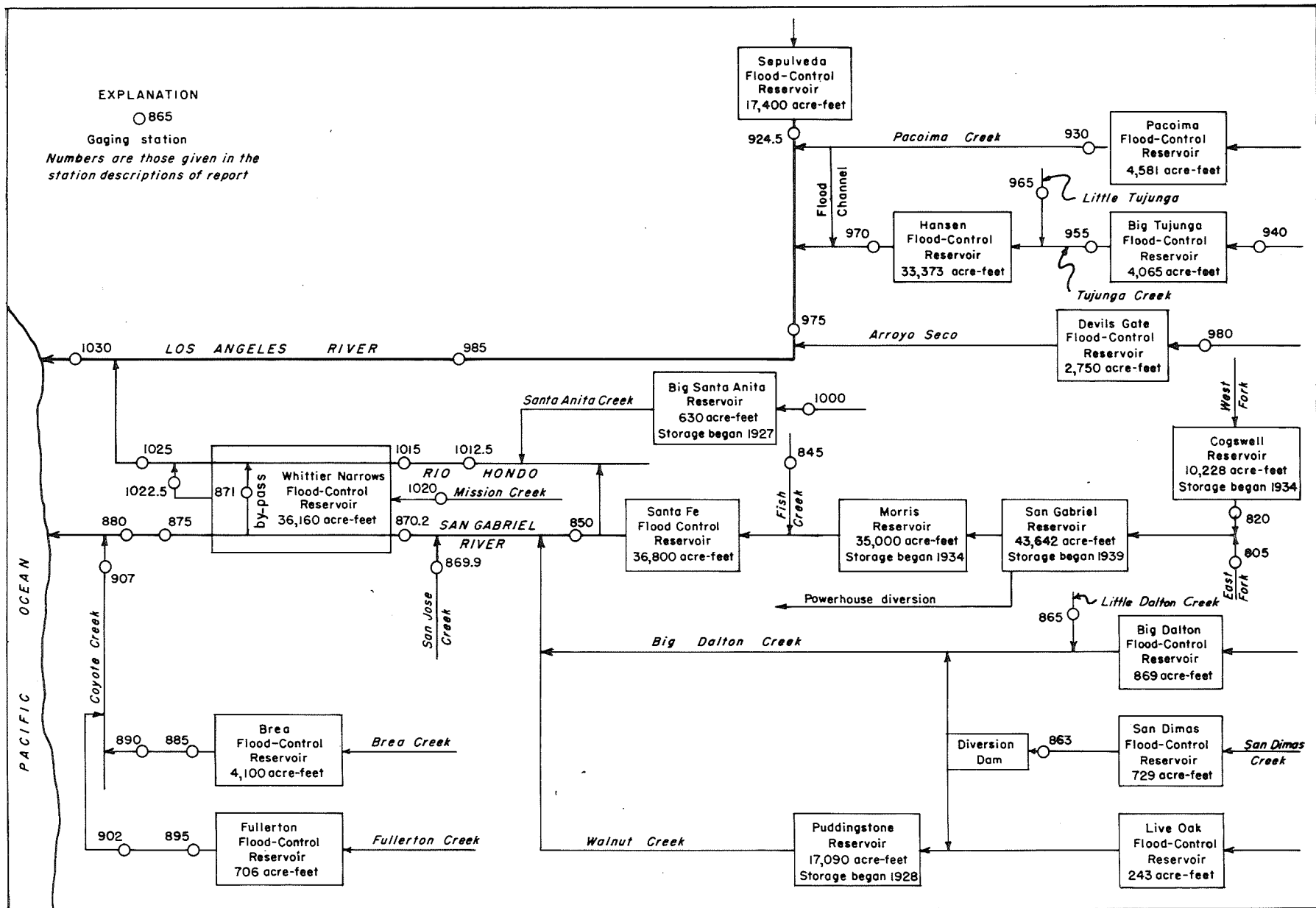


Figure 4.--Schematic diagram showing diversions and storage in San Gabriel and Los Angeles River basins.

SAN GABRIEL RIVER BASIN

11-0805. EAST FORK SAN GABRIEL RIVER NEAR CAMP BONITA, CALIF.

LOCATION.--Lat 34°14'09", long 117°48'18", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.2 N., R.9 W., 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 1968. Prior to 1940, published as San Gabriel River near Camp Bonita.

GAGE.--Graphic 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.--35 years (1933-68), 67.0 cfs (45,510 acre-ft per year); median of yearly mean discharges, 43 cfs (31,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 693 cfs Nov. 19 (gage height, 9.85 ft); minimum daily, 14 cfs Sept. 25-27.

1932-68: Maximum discharge, 46,000 cfs Mar. 2, 1938, from rating curve extended above 21,300 cfs (computed by Geological Survey); minimum, 1.5 cfs Oct. 1, 1934.

REMARKS.--No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	28	66	51	44	77	74	53	40	27	23	18
2	34	28	59	51	44	74	73	54	38	25	21	18
3	33	29	55	51	44	69	66	53	34	25	19	20
4	34	28	54	50	45	68	66	50	35	26	18	20
5	34	28	51	49	44	68	66	51	35	29	18	17
6	34	27	49	49	44	69	66	50	36	28	18	16
7	31	27	48	48	44	72	62	50	38	27	18	17
8	31	28	45	48	44	174	61	49	39	24	19	17
9	30	28	45	45	52	98	61	49	40	25	17	17
10	31	28	45	42	78	83	58	48	37	25	16	17
11	32	27	44	41	72	75	57	49	35	25	16	17
12	32	26	44	41	64	77	58	51	34	25	17	17
13	32	26	41	40	82	77	57	50	34	25	16	17
14	31	26	40	39	92	71	55	48	33	23	16	16
15	29	26	41	38	81	71	58	48	33	24	17	16
16	29	26	40	39	78	71	62	45	32	23	17	16
17	29	27	41	40	78	72	65	45	32	22	17	15
18	29	27	58	40	81	71	62	45	32	21	17	15
19	29	239	59	39	83	69	59	42	31	20	19	15
20	29	156	51	39	83	68	58	44	31	22	19	15
21	29	127	48	39	83	68	57	45	30	21	19	15
22	28	96	46	36	81	65	55	45	29	22	19	15
23	28	68	49	35	80	64	53	45	29	22	20	15
24	28	54	51	38	81	64	54	44	28	23	19	15
25	28	49	55	36	81	64	53	42	28	22	17	14
26	28	46	58	39	81	64	53	41	29	20	18	14
27	27	45	59	61	83	62	53	41	30	17	19	14
28	27	49	59	50	83	61	51	40	30	26	19	15
29	28	45	57	46	80	61	51	40	29	38	18	15
30	29	84	54	42	-----	59	51	40	28	34	19	15
31	28	-----	54	45	-----	59	-----	40	-----	27	17	-----
TOTAL	935	1,548	1,566	1,347	2,010	2,265	1,775	1,437	989	763	562	483
MEAN	30.2	51.6	50.5	43.5	69.3	73.1	59.2	46.4	33.0	24.6	18.1	16.1
MAX	34	239	66	61	92	174	74	54	40	38	23	20
MIN	27	26	40	35	44	59	51	40	28	17	16	14
AC-FT	1,850	3,070	3,110	2,670	3,990	4,490	3,520	2,850	1,960	1,510	1,110	958
CAL YR 1967	TOTAL 46,999		MEAN 129		MAX 485		MIN 26		AC-FT 93,220			
WTR YR 1968	TOTAL 15,680		MEAN 42.8		MAX 239		MIN 14		AC-FT 31,100			

11-0820. WEST FORK SAN GABRIEL RIVER AT CAMP RINCON, CALIF.

LOCATION.--Lat 34°14'28", long 117°51'45", in SE¼ sec.19, T.2 N., R.9 W., on right bank 0.2 mile upstream from Camp Rincon, 0.5 miles downstream from North Fork, and 6 miles downstream from Cogswell Dam.

DRAINAGE AREA.--104 sq mi.

RECORDS AVAILABLE.--October 1927 to September 1968.

GAGE.--Graphic 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 1.5 miles downstream at different datum. Aug. 27, 1938, to July 3, 1941, at datum 6.41 ft higher.

AVERAGE DISCHARGE.--41 years, 63.0 cfs (45,610 acre-ft per year); median of yearly mean discharges, 32 cfs (23,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,440 cfs Nov. 19 (gage height, 12.21 ft); minimum daily, 12 cfs Sept. 10-13, 26.

1927-68: 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, 9,999 acre-ft). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	69	160	94	46	50	50	26	23	20	17	14
2	74	69	146	91	45	48	52	27	23	18	16	14
3	74	65	142	88	45	48	41	27	23	17	15	15
4	74	33	142	76	43	48	36	27	23	16	15	15
5	74	31	133	48	41	48	35	27	23	16	15	15
6	74	31	115	48	41	48	35	27	23	17	15	14
7	74	31	43	48	41	56	35	26	24	17	17	14
8	71	31	42	46	43	203	33	25	26	17	16	14
9	71	31	88	46	61	91	33	26	26	17	16	13
10	74	31	88	45	76	71	33	27	24	17	15	12
11	74	31	88	45	60	64	33	27	23	16	14	12
12	74	31	88	45	57	62	35	30	22	16	14	12
13	67	31	86	45	84	64	35	29	22	17	14	12
14	71	31	70	43	102	60	35	28	20	17	15	13
15	71	31	45	38	86	55	33	27	20	17	15	14
16	69	33	45	38	74	55	35	26	20	17	16	14
17	69	33	46	38	71	55	35	25	20	17	17	14
18	66	35	63	38	69	57	33	23	20	17	17	13
19	66	453	67	38	62	50	31	22	20	17	17	14
20	69	254	62	38	64	48	31	22	20	17	17	14
21	69	502	60	38	64	50	30	23	20	17	17	14
22	71	559	60	38	62	48	29	24	20	16	16	14
23	71	331	64	38	57	45	28	24	19	16	15	14
24	71	179	64	36	57	43	30	27	19	16	15	13
25	71	165	62	36	55	40	29	26	20	16	15	13
26	71	151	62	37	55	38	28	25	20	15	15	12
27	69	142	62	71	53	36	28	24	20	15	15	13
28	69	133	62	58	53	35	29	24	20	16	15	13
29	69	126	65	48	53	35	29	23	20	17	14	14
30	69	181	97	46	-----	33	28	24	20	17	14	15
31	69	-----	94	48	-----	31	-----	24	-----	17	14	-----
TOTAL	2,196	3,854	2,511	1,530	1,720	1,715	1,007	792	643	518	478	407
MEAN	70.8	128	81.0	49.4	59.3	55.3	33.6	25.5	21.4	16.7	15.4	13.6
MAX	74	559	160	94	102	203	52	30	26	20	17	15
MIN	66	31	42	36	41	31	28	22	19	15	14	12
AC-FT	4,360	7,640	4,980	3,030	3,410	3,400	2,000	1,570	1,280	1,030	948	807
CAL YR 1967	TOTAL 50,648			MEAN 139	MAX 926	MIN 31	AC-FT 100,500					
WTR YR 1968	TOTAL 17,371			MEAN 47.5	MAX 559	MIN 12	AC-FT 34,450					

SAN GABRIEL RIVER BASIN

11-0845. FISH CREEK NEAR DUARTE, CALIF.

LOCATION.--Lat 34°10'00", long 117°55'25", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 1968.

GAGE.--Digital water-stage recorder and broad-crested weir since July 1917, restored in December 1938. Datum of gage is 905.9 ft above mean sea level. 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. Prior to Mar. 30, 1966, graphic water-stage recorders used.

AVERAGE DISCHARGE.--51 years (1917-68), 3.94 cfs (2,850 acre-ft per year); median of yearly mean discharges, 2.2 cfs (1,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 282 cfs Nov. 19 (gage height, 3.87 ft); minimum daily, 0.35 cfs Aug. 25.

1916-68: Maximum discharge, 2,250 cfs Dec. 29, 1965 (gage height, 6.80 ft), from rating curve extended above 1,100 cfs on basis of slope-area measurement at gage height 6.78 ft; maximum gage height, about 14.5 ft Feb. 11, 1959 (from debris wave); no flow at times in some years.

REMARKS.--Records good. No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.6	6.2	3.2	2.9	2.6	4.6	1.7	1.2	.77	.59	.68
2	2.1	1.7	5.1	3.2	2.7	2.8	4.3	1.8	1.2	.72	.58	.76
3	2.1	1.7	4.3	3.0	2.4	2.7	2.7	1.9	1.1	.67	.49	.85
4	2.1	1.7	3.8	2.8	2.3	2.7	2.4	1.7	1.3	.71	.46	.97
5	2.1	1.8	3.6	2.8	2.2	2.9	2.3	1.8	1.6	.76	.46	.88
6	2.0	1.9	3.4	2.7	2.1	3.3	2.3	1.7	1.5	.75	.47	.86
7	1.9	1.8	3.3	2.6	2.0	5.5	2.3	1.6	1.5	.78	.57	.80
8	1.8	1.7	3.2	2.5	1.9	44	2.1	1.6	1.6	.74	.49	.76
9	1.9	1.7	3.1	2.4	3.4	7.8	1.8	1.6	1.5	.66	.45	.73
10	1.9	1.8	2.8	2.8	3.0	5.8	1.7	1.6	1.3	.57	.44	.72
11	1.8	1.7	2.7	3.2	2.3	5.5	1.7	1.5	1.1	.55	.45	.83
12	1.8	1.6	2.6	2.5	2.4	4.4	1.9	1.8	1.1	.49	.47	.85
13	1.8	1.5	2.5	2.4	5.5	3.8	1.9	1.8	1.0	.54	.54	.87
14	1.8	1.5	2.7	2.3	6.8	3.4	1.8	1.6	.99	.65	.60	.95
15	1.6	1.6	2.7	2.3	5.1	2.9	1.8	1.4	.88	.72	.61	1.2
16	1.6	1.7	2.7	2.4	4.3	2.8	2.0	1.4	.84	.70	.68	1.2
17	1.6	1.7	2.8	2.2	4.5	2.7	1.8	1.3	.85	.66	.84	1.1
18	1.6	1.9	6.4	2.1	4.1	2.5	1.7	1.2	.87	.61	.77	1.0
19	1.5	32	6.7	2.0	3.9	2.3	1.6	1.2	.73	.54	.61	1.1
20	1.5	9.5	6.2	2.0	4.1	2.2	1.8	1.2	.70	.53	.66	1.3
21	1.7	18	4.7	1.9	4.0	2.1	1.8	1.3	.65	.52	.65	1.2
22	1.9	8.0	4.3	1.9	3.8	2.2	1.6	1.4	.62	.54	.55	1.0
23	1.8	5.9	4.0	1.9	3.5	2.2	1.5	1.4	.58	.52	.47	.90
24	1.7	4.2	4.0	1.8	3.4	2.3	1.4	1.4	.70	.53	.39	.96
25	1.7	3.4	3.9	1.9	3.1	2.2	1.3	1.2	.76	.52	.35	.93
26	2.0	3.0	3.7	2.0	2.6	2.4	1.3	1.2	.73	.51	.43	.93
27	1.9	2.8	3.6	6.6	2.9	2.3	1.5	1.1	.75	.53	.48	.96
28	1.9	3.1	3.5	4.9	2.7	2.3	1.4	1.2	.84	.62	.51	1.1
29	1.9	2.7	3.4	3.5	2.5	2.3	1.6	1.2	.96	.62	.59	1.2
30	1.7	11	3.3	3.1	-----	2.4	1.7	1.2	.92	.65	.62	1.2
31	1.6	-----	3.3	3.7	-----	2.5	-----	1.3	-----	.60	.66	-----
TOTAL	56.5	134.2	118.5	84.6	96.4	137.8	59.6	45.3	30.37	19.28	16.93	28.79
MEAN	1.82	4.47	3.82	2.73	3.32	4.45	1.99	1.46	1.01	.62	.55	.96
MAX	2.2	32	6.7	6.6	6.8	44	4.6	1.9	1.6	.78	.84	1.3
MIN	1.5	1.5	2.5	1.8	1.9	2.1	1.3	1.1	.58	.49	.35	.68
AC-FT	112	266	235	168	191	273	118	90	60	38	34	57

CAL YR 1967 TOTAL 3,502.6 MEAN 9.60 MAX 156 MIN 1.5 AC-FT 6,950
WTR YR 1968 TOTAL 828.27 MEAN 2.26 MAX 44 MIN .35 AC-FT 1,640

Peak discharge (base, 60 cfs).--Nov. 19 (0930 hrs) 282 cfs (3.87 ft); Mar. 8 (0545 hrs) 142 cfs (3.24 ft).

SAN GABRIEL RIVER BASIN

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11-0850. SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CALIF.

LOCATION.--Lat 34°06'44", long 117°58'07", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ 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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 400.00 ft above mean sea level (levels by Corps of Engineers).

EXTREMES.--Maximum discharge during year, 30 cfs Nov. 29 (gage height, 10.44 ft); no flow for most of year.
1942-68: Maximum discharge, 11,100 cfs Nov. 23, 1965 (gage height, 17.14 ft); no flow for several months of each year.

REMARKS.--Records good. Flow regulated by Cogswell and San Gabriel flood-control reservoirs (combined capacity, 53,870 acre-ft), Morris Reservoir (capacity, 35,000 acre-ft), Santa Fe flood-control reservoir (capacity, 36,800 acre-ft). Diversions above station for irrigation, power development, and ground-water replenishment. At times, water diverted above station to headwaters of Rio Hondo. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Los Angeles County Flood Control District reports no water diverted to Rio Hondo during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0								
2		0	0	0								
3		0	0	0								
4		0	2.8	0								
5		0	0	0								
6		0	0	0								
7		0	0	0								
8		0	0	.70								
9		0	0	0								
10		0	0	0								
11		0	0	0								
12		0	0	0								
13		0	0	0								
14		0	0	0								
15		0	0	0								
16		0	0	0								
17		0	0	0								
18		0	0	0								
19		0	0	0								
20		0	0	0								
21		0	0	0								
22		0	0	0								
23		0	0	0								
24		0	0	0								
25		0	0	0								
26		0	0	0								
27		0	0	0								
28		0	0	0								
29		2.0	0	0								
30		0	0	0	----							
31		-----	0	0	-----		-----		-----			-----
TOTAL	0	2.0	2.8	0.70	0	0	0	0	0	0	0	0
MEAN	0	.067	.090	.023	0	0	0	0	0	0	0	0
MAX	0	2.0	2.8	.70	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	4.0	5.6	1.4	0	0	0	0	0	0	0	0
CAL YR 1967	TOTAL	18,928.80	MEAN	51.9	MAX	597	MIN	0	AC-FT	37,540		
WTR YR 1968	TOTAL	5.50	MEAN	.015	MAX	2.8	MIN	0	AC-FT	11		

SAN GABRIEL RIVER BASIN

11-0863. SAN DIMAS CREEK BELOW SAN DIMAS DAM, CALIF.

LOCATION.--Lat 34°09'10", long 117°46'18", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1968. Prior to October 1956 monthly discharge only, published in WSP 1735.

GAGE.--Graphic 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, 48 cfs Nov. 3 (gage height, 1.10 ft); no flow Apr. 2, June 7. 1951-68: Maximum discharge, 1,190 cfs Dec. 6, 1966 (gage height, 4.31 ft); no flow for part of most years.

REMARKS.--Flow regulated by San Dimas flood-control reservoir (capacity, 1,129 (revised) acre-ft) and at times by old water tunnel 150 ft upstream. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	14	9.1	4.7	11	3.2	.10	.10	.10	.10	.10	.10
2	8.4	27	8.4	5.8	7.6	3.2	0	.10	.10	.10	.10	.10
3	8.4	38	8.4	12	3.5	3.2	.10	.10	.60	.10	.10	.10
4	10	45	8.0	15	3.5	3.2	.10	.10	1.2	.10	.10	.10
5	11	45	7.7	14	3.3	3.2	.10	.10	1.2	.10	.10	.10
6	11	30	6.6	12	3.0	3.2	.10	.10	.80	.10	.10	.10
7	11	14	8.4	7.4	2.8	3.3	.10	.10	0	.10	.10	.10
8	11	14	11	6.3	2.6	3.6	.10	.10	.10	.10	.10	.10
9	10	13	9.4	7.0	2.8	8.9	.10	.10	.10	.10	.10	.10
10	10	12	9.1	9.4	2.8	13	.10	.10	.10	.10	.10	.10
11	10	10	9.1	5.3	2.8	13	.10	.10	.10	.10	.10	.10
12	9.8	8.0	8.8	4.1	2.8	13	.10	.10	.10	.10	.10	.10
13	9.8	7.0	7.7	11	2.8	12	.10	9.0	.10	.10	.10	.10
14	9.8	6.6	7.4	7.0	6.1	8.4	.10	14	.10	.10	.10	.10
15	9.8	6.3	7.4	5.8	11	7.7	.10	13	.10	.10	.10	.10
16	9.4	6.0	7.0	5.8	11	7.0	.10	13	.10	.10	.10	.10
17	9.5	5.8	6.0	5.5	9.8	7.0	.10	13	.10	.10	.10	.10
18	9.1	5.8	5.5	5.0	8.8	7.0	.10	13	.10	.10	.10	.10
19	6.3	5.5	5.5	5.0	8.4	7.0	.10	12	.10	.10	.10	.10
20	.20	12	10	5.0	8.0	6.6	.10	12	.10	.10	.10	.10
21	.20	20	12	5.0	8.0	6.6	.10	12	.10	.10	.10	.10
22	.20	17	9.1	4.7	8.0	3.8	.10	12	.10	.10	.10	.10
23	.20	12	8.8	1.6	8.0	.10	.10	8.1	.10	.10	.10	.10
24	.20	11	8.4	1.3	8.0	.10	.10	.10	.10	.10	.10	.10
25	.20	10	7.4	3.5	8.0	.10	.10	.10	.10	.10	.10	.10
26	.20	10	6.6	3.5	5.6	.10	.10	.10	.10	.10	.10	.10
27	.20	9.8	6.6	3.7	3.2	.10	.10	.10	.10	.10	.10	.10
28	.20	9.4	6.0	3.5	3.2	.10	.10	.10	.10	.10	.10	.10
29	.20	9.1	5.8	3.5	3.2	.10	.10	.10	.10	.10	.10	.10
30	.20	9.4	5.5	9.3	-----	.10	.10	.10	.10	.10	.10	.10
31	.20	-----	5.0	12	-----	.10	-----	.10	-----	.10	.10	-----
TOTAL	185.10	442.7	241.7	204.7	169.6	148.00	2.90	133.10	6.30	3.10	3.10	3.00
MEAN	5.97	14.8	7.80	6.60	5.85	4.77	.097	4.29	.21	.10	.10	.10
MAX	11	45	12	15	11	13	.10	14	1.2	.10	.10	.10
MIN	.20	5.5	5.0	1.3	2.6	.10	0	.10	0	.10	.10	.10
AC-FT	367	878	479	406	336	294	5.8	264	13	6.2	6.2	6.0
CAL YR 1967	TOTAL 5,279.80			MEAN 14.5	MAX 130	MIN .10	AC-FT 10,470					
WTR YR 1968	TOTAL 1,543.30			MEAN 4.22	MAX 45	MIN 0	AC-FT 3,060					

11-0865. LITTLE DALTON CREEK NEAR GLENDORA, CALIF.

LOCATION.--Lat 34°10'03", long 117°50'15", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1968. January 1929 to November 1938, at site 0.8 mile downstream; records not equivalent because diversion was not included.

GAGE.--Graphic 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.--30 years, 0.730 cfs (528 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

EXTREMES.--Maximum discharge during year, 49 cfs Mar. 8 (gage height, 1.63 ft); no flow May 27-29, June 11 to Sept. 30.
1938-68: 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. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.20	1.0	.40	.50	.50	2.2	.20	.20			
2	.40	.10	.80	.40	.50	.50	1.6	.20	.10			
3	.40	.10	.60	.40	.30	.30	.70	.30	.10			
4	.40	.10	.70	.40	.30	.30	.70	.30	.10			
5	.30	.30	.80	.40	.30	.30	.60	.30	.20			
6	.30	.40	.70	.30	.30	.30	.60	.30	.20			
7	.30	.30	.60	.30	.30	2.0	.40	.30	.20			
8	.30	.30	.60	.30	.40	9.4	.30	.30	.20			
9	.40	.20	.60	.30	.70	1.1	.20	.30	.20			
10	.40	.20	.50	.30	.70	.90	.20	.30	.10			
11	.50	.20	.50	.40	.60	.90	.20	.20	0			
12	.50	.20	.60	.40	.70	1.4	.20	.30	0			
13	.50	.20	.60	.40	2.0	2.0	.20	.30	0			
14	.40	.30	.60	.40	1.2	1.1	.20	.20	0			
15	.30	.30	.60	.40	.80	1.2	.20	.20	0			
16	.30	.30	.70	.40	.70	1.1	.20	.20	0			
17	.10	.30	.70	.50	.80	1.1	.20	.20	0			
18	.10	.30	2.0	.50	.80	.70	.20	.20	0			
19	.10	11	1.8	.50	.80	.60	.20	.20	0			
20	.10	2.1	.90	.40	.90	.60	.20	.20	0			
21	.20	4.1	.80	.40	.80	.50	.20	.30	0			
22	.30	1.6	.60	.30	.80	.30	.20	.30	0			
23	.30	.90	.50	.30	.80	.30	.20	.30	0			
24	.30	.60	.50	.30	.70	.20	.20	.20	0			
25	.30	.50	.50	.30	.70	.40	.20	.20	0			
26	.30	.50	.50	.30	.60	.40	.20	.10	0			
27	.30	.50	.50	.90	.60	.40	.20	0	0			
28	.30	.60	.50	1.2	.50	.30	.20	0	0			
29	.30	.70	.50	.80	.50	.30	.20	0	0			
30	.30	2.8	.40	.60	-----	.30	.20	.10	0			
31	.20	-----	.40	.70	-----	.30	-----	.20	-----			
TOTAL	9.70	30.20	21.60	13.90	19.70	30.00	11.50	6.70	1.60	0	0	0
MEAN	.31	1.01	.70	.45	.68	.97	.38	.22	.053	0	0	0
MAX	.50	11	2.0	1.2	2.0	9.4	2.2	.30	.20	0	0	0
MIN	.10	.10	.40	.30	.30	.20	.20	0	0	0	0	0
AC-FT	19	60	43	28	39	60	23	13	3.2	0	0	0
CAL YR 1967	TOTAL 940.70			MEAN 2.58		MAX 25	MIN .10	AC-FT 1,870				
WTR YR 1968	TOTAL 144.90			MEAN .40		MAX 11	MIN 0	AC-FT 287				

SAN GABRIEL RIVER BASIN

11-0869.9, 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 1968.

GAGE.--Graphic 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, 10,100 cfs Mar. 8 (gage height, 6.73 ft); minimum daily, 6.4 cfs Oct. 19.

1964-68: Maximum discharge, 10,200 cfs Jan. 24, 1967 (gage height, 6.80 ft, from outside gage); no flow for some days in some years.

REMARKS.--No regulation above station. One small diversion for ground-water recharge. At times effluent from city of Pomona's sewage reclamation plant is released to creek above Spadra and at Lemon Street. The 200 cfs bypass from San Jose flood channel to the original San Jose Creek channel has been closed since Oct. 1, 1964. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	7.7	14	13	11	9.3	75	8.5	8.9	8.9	8.5	10
2	12	8.1	11	14	11	9.3	44	8.9	8.9	9.3	7.7	10
3	10	8.1	9.3	16	11	9.3	10	9.3	8.9	9.3	8.1	10
4	10	8.9	8.9	10	11	9.3	9.3	9.3	9.3	8.9	8.5	10
5	10	9.3	8.5	11	11	9.3	8.9	8.5	8.9	9.3	8.1	9.3
6	11	10	8.5	11	11	33	8.9	8.5	10	8.9	8.5	10
7	10	9.3	8.9	9.3	10	148	8.9	8.5	11	8.9	11	10
8	10	8.9	11	10	10	2,180	8.9	8.9	8.9	9.3	8.5	12
9	10	9.3	8.1	10	17	19	9.3	8.5	8.9	9.3	8.9	12
10	10	8.9	7.7	11	13	14	9.3	8.5	8.9	8.9	8.9	12
11	10	8.9	7.7	20	6.8	14	10	8.9	8.9	8.9	10	10
12	10	9.3	8.1	11	6.8	13	9.3	8.5	8.5	9.3	8.9	9.3
13	10	8.5	8.5	11	78	38	8.9	8.5	8.9	8.9	9.3	9.3
14	8.9	10	8.5	10	52	16	8.5	8.5	8.9	8.5	8.1	10
15	8.5	10	8.9	10	11	13	8.9	8.1	8.9	8.5	9.3	10
16	8.1	10	8.9	12	10	15	8.5	7.2	8.9	8.9	10	10
17	7.7	9.3	9.3	9.3	10	16	7.2	7.7	10	7.7	8.9	10
18	6.8	11	720	8.9	10	14	8.5	7.2	8.5	8.9	9.3	12
19	6.4	592	210	9.3	9.3	18	7.7	8.1	8.5	8.9	8.9	12
20	6.8	349	15	10	9.3	12	7.7	8.1	8.5	8.1	8.5	12
21	7.2	583	8.9	10	9.3	12	7.7	8.5	8.9	7.7	8.9	12
22	6.8	13	10	10	9.3	12	8.1	8.1	10	8.5	8.9	13
23	7.2	11	10	10	9.3	12	8.5	8.1	9.3	8.9	8.9	12
24	7.2	9.3	10	10	9.3	12	8.5	8.5	8.5	8.5	8.9	11
25	7.7	8.5	10	10	9.3	12	8.5	8.5	8.1	8.5	9.3	12
26	8.1	8.1	12	9.3	9.3	12	8.9	8.5	8.5	8.5	9.3	12
27	9.3	8.1	10	101	10	12	8.5	8.9	8.9	7.7	9.3	12
28	9.3	8.9	10	41	10	12	8.5	8.9	8.9	21	9.3	12
29	8.9	8.5	11	15	9.3	12	8.5	9.3	8.9	10	11	9.3
30	8.1	313	13	15	-----	12	8.9	9.3	8.9	7.7	12	12
31	8.1	-----	14	38	-----	12	-----	9.3	-----	8.9	11	-----
TOTAL	276.1	2,077.9	1,219.7	496.1	404.3	2,741.5	362.3	264.1	270.0	283.5	284.7	327.2
MEAN	8.91	69.3	39.3	16.0	13.9	88.4	12.1	8.52	9.00	9.15	9.18	10.9
MAX	12	592	720	101	78	2,180	75	9.3	11	21	12	13
MIN	6.4	7.7	7.7	8.9	6.8	9.3	7.2	7.2	8.1	7.7	7.7	9.3
AC-FT	548	4,120	2,420	984	802	5,440	719	524	536	562	565	649
CAL YR 1967	TOTAL	11,776.3	MEAN	32.3	MAX	2,290	MIN	6.4	AC-FT	23,360		
WTR YR 1968	TOTAL	9,007.4	MEAN	24.6	MAX	2,180	MIN	6.4	AC-FT	17,870		

11-0870.2. 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, 1.25 miles upstream from axis of Whittier Narrows Dam, and 1.8 miles south of El Monte, Los Angeles County.

DRAINAGE AREA.--353 sq mi.

RECORDS AVAILABLE.--October 1955 to September 1957, October 1963 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 220 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 14,200 cfs Mar. 8 (gage height, 7.85 ft); minimum daily, 5.0 cfs Oct. 25.

1955-57, 1963-68: Maximum discharge, 17,300 cfs Jan. 24, 1967 (gage height, 8.25 ft), from rating curve extended above 7,100 cfs on basis of flood-routing study; no flow for part of most years.

REMARKS.--Records good. Flow regulated by San Gabriel, Cogswell, and Santa Fe flood-control reservoirs (combined capacity, 90,670 acre-ft), several small flood-control reservoirs (combined capacity, 19,100 acre-ft), and Morris Reservoir (capacity, 35,000 acre-ft). Many diversions above station for irrigation, power development, and ground-water replenishment. Colorado River water released to the San Gabriel River at a site 4.2 miles upstream from gage and 460 ft downstream from San Bernardino Road for ground-water replenishment. Los Angeles County Flood Control District reports no water diverted from San Gabriel River below Santa Fe Dam to Rio Hondo during year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of Colorado River water released to river and releases from Puddingstone reservoir furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.0	16	11	10	9.0	146	11	5.5	9.0	84	90
2	14	7.0	10	11	9.0	9.0	76	11	5.5	9.0	84	90
3	10	8.0	10	36	9.0	9.0	16	11	5.5	9.0	84	90
4	6.0	9.0	15	10	9.0	9.0	14	11	6.0	9.0	84	90
5	6.0	9.0	9.0	10	9.0	9.0	13	11	6.0	9.0	81	93
6	6.0	9.0	9.0	10	9.0	38	13	11	7.0	9.0	84	93
7	6.0	9.0	10	10	9.0	227	13	11	12	8.0	97	90
8	6.0	9.0	16	10	10	3,550	12	11	10	9.0	84	87
9	6.0	8.0	10	11	33	26	12	11	10	10	84	90
10	6.0	7.0	8.0	11	26	13	12	11	10	10	84	90
11	6.0	8.0	10	31	12	10	12	10	10	10	87	90
12	6.0	8.0	12	11	10	10	12	10	10	10	87	90
13	6.0	7.0	10	11	247	43	12	10	10	10	87	90
14	6.0	9.0	15	11	105	22	12	9.0	10	10	87	90
15	6.0	9.0	16	10	13	14	12	9.0	10	10	87	87
16	6.0	9.0	11	12	10	14	12	9.0	10	9.0	90	87
17	6.0	9.0	11	11	10	26	11	8.0	10	8.0	87	87
18	5.5	9.0	1,230	11	10	13	11	8.0	10	9.0	87	87
19	5.5	1,140	346	11	10	18	11	8.0	10	9.0	87	87
20	5.5	565	22	11	11	13	11	8.0	11	7.0	87	90
21	5.5	1,390	13	11	11	13	11	7.0	11	6.0	87	90
22	5.5	29	14	11	11	13	11	7.0	11	6.0	87	90
23	5.5	15	13	11	11	13	10	7.0	11	7.0	87	87
24	5.5	12	11	11	10	14	10	7.0	10	71	87	90
25	5.0	14	10	11	10	14	11	7.0	9.0	84	87	90
26	5.5	13	10	10	10	14	11	7.0	9.0	84	87	93
27	8.0	13	9.0	163	11	15	11	7.0	9.0	87	87	97
28	8.0	22	9.0	44	9.0	15	10	5.5	8.0	103	90	97
29	8.0	11	10	13	9.0	13	10	5.5	8.0	90	90	90
30	7.0	638	11	10	-----	12	11	5.5	8.0	84	93	87
31	7.0	-----	11	34	-----	12	-----	5.5	-----	84	93	-----
TOTAL	208.0	4,012.0	1,917.0	589	663.0	4,230.0	549	270.0	272.5	889.0	2,698	2,699
MEAN	6.71	134	61.8	19.0	22.9	136	18.3	8.71	9.08	28.7	87.0	90.0
MAX	14	1,390	1,230	163	247	3,550	146	11	12	103	97	97
MIN	5.0	7.0	8.0	10	9.0	9.0	10	5.5	5.5	6.0	81	87
AC-FT	413	7,960	3,800	1,170	1,320	8,390	1,090	536	541	1,760	5,350	5,350
AC-FT a	6,150	6,650	6,050	5,360	3,590	1,870	2,860	2,300	0	0	0	2,110
AC-FT b	0	0	0	0	0	0	0	0	0	1,700	6,240	6,050
CAL YR 1967	TOTAL 23,866.0			MEAN 65.4		MAX 3,590	MIN 5.0	AC-FT 47,340	a 67,930		b 0	
WTR YR 1968	TOTAL 18,996.5			MEAN 51.9		MAX 3,550	MIN 5.0	AC-FT 37,680	a 36,940		b 13,990	

a Colorado River water released to San Gabriel River at site 4.2 miles upstream.

b Water, in acre-ft, released downstream from Walnut Creek to San Gabriel River from Puddingstone reservoir.

SAN GABRIEL RIVER BASIN

11-0871. RIO HONDO FLOOD-FLOW CHANNEL AT WHITTIER NARROWS DAM, CALIF.

LOCATION.--Lat 34°01'27", long 118°04'10", in La Merced Grant, on upstream side of left abutment of Rosemead Boulevard bridge, 1,100 ft north of axis of Whittier Narrows Dam, 2.2 miles northeast of Montebello, Los Angeles County.

RECORDS AVAILABLE.--October 1965 to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 196.90 ft above mean sea level (Corps of Engineers benchmark).

EXTREMES.--Maximum discharge during year, 14,100 cfs (elevation, 204.00 ft); no flow for most of year.
1965-68: Maximum discharge, 16,500 cfs Jan. 24, 1967 (elevation, 204.35 ft, from outside staff); no flow most of each year.

REMARKS.--Records good. Flow regulated by operation of gates on San Gabriel River side of dam. Flow reported herein is San Gabriel River water passed to the Rio Hondo. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Six discharge measurements furnished by Los Angeles County Flood Control District; one furnished by Corps of Engineers.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEARS OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	12	9.6	14	0	22					
2		0	0	13	8.9	.20	95					
3		0	0	11	9.6	7.6	.20					
4		0	0	11	8.9	6.9	0					
5		0	.10	8.9	8.9	6.2	0					
6		0	1.6	12	8.9	6.9	0					
7		0	5.0	11	9.6	14	0					
8		0	7.0	9.8	7.6	3,370	0					
9		0	7.4	15	12	23	0					
10		0	7.4	14	11	6.2	0					
11		0	8.6	14	12	5.7	0					
12		0	8.6	16	12	5.7	0					
13		0	9.2	13	18	5.7	0					
14		0	11	14	172	10	0					
15		0	11	13	.40	5.7	0					
16		0	10	11	6.4	5.7	0					
17		0	10	9.6	12	5.7	0					
18		0	877	9.6	7.6	2.4	0					
19		568	290	8.9	8.2	0	0					
20		302	30	9.6	9.6	0	0					
21		1,000	.20	8.9	7.6	0	0					
22		21	0	11	6.9	0	0					
23		0	0	11	7.6	0	0					
24		0	0	9.6	7.6	0	0					
25		0	0	9.6	7.6	0	0					
26		0	0	11	6.9	0	0					
27		0	0	8.2	6.9	0	0					
28		0	0	56	6.2	0	0					
29		0	5.2	7.0	.20	0	0					
30		347	12	16	-----	0	0					
31		-----	11	14	-----	0	-----					
TOTAL	0	2,238	1,334.30	396.3	415.10	3,487.60	117.20	0	0	0	0	0
MEAN	0	74.6	43.0	12.8	14.3	113	3.91	0	0	0	0	0
MAX	0	1,000	877	56	172	3,370	95	0	0	0	0	0
MIN	0	0	0	7.0	.20	0	0	0	0	0	0	0
AC-FT	0	4,440	2,650	786	823	6,920	232	0	0	0	0	0
CAL YR 1967	TOTAL	6,245.30	MEAN	17.1	MAX	2,650	MIN	0	AC-FT	12,390		
WTR YR 1968	TOTAL	7,988.50	MEAN	21.8	MAX	3,370	MIN	0	AC-FT	15,840		

11-0875. SAN GABRIEL RIVER AT PICO, CALIF.

LOCATION.--Lat 34°00'23, 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 1968. Since 1954, Colorado River water released to San Gabriel River above station. Records since 1954 not equivalent.

GAGE.--Graphic water-stage recorder. Datum of gage is 172.50 ft above mean sea level. 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 daily discharge during year, 222 cfs Nov. 21; minimum daily, 3.2 cfs Oct. 16-22. 1928-68: Maximum discharge, 22,700 cfs Mar. 2, 1938; no flow for periods in most years.

REMARKS.--Flow regulated by Cogswell Reservoir since 1934 and San Gabriel flood-control reservoir since 1939 (combined capacity, 53,870 acre-ft), 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 and water from Pudingstone reservoir for ground-water replenishment (see sta. no. 11-0870.2). During the year, no water was diverted from the San Gabriel River below Santa Fe Dam; 15,840 acre-ft was diverted from above Whittier Narrows Dam to Rio Hondo. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	3.4	73	14	17	25	28	20	14	20	93	81
2	4.4	3.4	25	15	16	23	45	19	14	14	97	84
3	4.4	3.4	23	31	16	18	35	19	14	14	93	81
4	4.5	3.4	23	17	16	16	26	18	14	14	92	87
5	4.5	3.5	20	11	16	17	20	18	14	13	89	87
6	4.3	3.5	24	9.0	16	25	18	17	14	13	92	88
7	4.1	3.5	20	13	16	40	20	17	14	12	97	85
8	3.8	3.5	25	15	17	90	22	16	14	12	90	88
9	3.6	3.5	14	9.9	22	45	21	16	14	11	92	92
10	3.5	3.7	9.9	9.0	32	41	21	16	13	11	88	110
11	3.4	3.8	9.9	25	23	35	21	16	13	11	88	127
12	3.3	4.0	11	14	17	33	21	16	13	11	91	122
13	3.3	4.1	11	9.0	38	37	20	16	13	11	94	122
14	3.3	4.3	11	9.0	58	45	19	16	13	11	108	122
15	3.3	4.5	27	9.0	40	39	20	16	13	11	114	122
16	3.2	4.6	20	13	28	34	22	16	14	11	114	123
17	3.2	4.6	9.0	16	16	33	21	16	14	11	114	123
18	3.2	4.6	85	14	16	32	21	15	15	11	120	111
19	3.2	201	104	15	16	31	19	15	15	11	120	103
20	3.2	193	65	16	16	30	20	15	15	11	120	93
21	3.2	222	45	16	17	25	21	15	15	12	125	89
22	3.2	106	32	14	16	23	21	15	14	12	120	89
23	3.3	26	31	11	18	21	21	15	13	12	120	86
24	3.3	25	28	13	17	22	21	15	12	70	120	89
25	3.3	31	27	13	16	23	21	15	12	119	120	86
26	3.3	34	28	11	16	23	22	14	11	119	121	87
27	3.3	36	29	39	17	23	22	14	11	122	121	100
28	3.3	39	20	52	19	23	22	14	18	137	121	124
29	3.3	40	13	35	22	22	23	14	38	122	97	118
30	3.4	95	13	11	-----	20	21	14	38	101	84	118
31	3.4	-----	14	22	-----	21	-----	14	-----	89	81	-----
TOTAL	110.3	1,117.3	889.8	520.9	610	935	675	492	459	1,159	3,236	3,037
MEAN	3.56	37.2	28.7	16.8	21.0	30.2	22.5	15.9	15.3	37.4	104	101
MAX	4.5	222	104	52	58	90	45	20	38	137	125	127
MIN	3.2	3.4	9.0	9.0	16	16	18	14	11	11	81	81
AC-FT	219	2,220	1,760	1,030	1,210	1,850	1,340	976	910	2,300	6,420	6,020
CAL YR 1967	TOTAL	17,510.4	MEAN	48.0	MAX	1,250	MIN	3.2	AC-FT	34,730		
WTR YR 1968	TOTAL	13,241.3	MEAN	36.2	MAX	222	MIN	3.2	AC-FT	26,260		

SAN GABRIEL RIVER BASIN

11-0880. SAN GABRIEL RIVER AT SPRING STREET, NEAR LOS ALAMITOS, CALIF.

LOCATION.--Lat 33°48'43", long 118°05'24", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.24, T.4 S., R.12 W., 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.

DRAINAGE AREA.--472 sq mi.

RECORDS AVAILABLE.--October 1927 to September 1951, October 1952 to September 1968. Monthly discharge only for October 1927 to September 1936, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Datum of gage is 11.87 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to October 1952, at datum 4.82 ft higher, and October 1952 to Nov. 17, 1964, at site 455 ft downstream at datum 0.38 ft higher.

AVERAGE DISCHARGE.--40 years, 21.9 cfs (15,850 acre-ft per year); median of yearly mean discharges, 3.3 cfs (2,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3,280 cfs Nov. 21 (gage height, 5.42 ft); no flow for some days. 1936-51, 1952-68: Maximum discharge, 27,000 cfs (estimated) Mar. 2, 1938; no flow for several months in each year.

REMARKS.--Flow regulated by San Gabriel flood-control reservoir since 1939 and Cogswell flood-control reservoir since 1934 (combined capacity, 53,870 acre-ft), 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. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	80	2.7	.20	.10	30	.50	.30	.30	.20	.30
2	0	.10	27	1.8	.20	.10	56	.30	.50	.50	.20	.20
3	0	.10	6.2	1.4	.10	.20	24	.30	.30	.50	.20	.30
4	0	.10	5.3	1.2	.10	.30	16	.50	.30	.50	.20	.10
5	0	.30	5.9	1.4	.10	.10	25	.50	.30	1.2	.30	.10
6	0	.10	4.3	1.2	.10	.30	8.2	1.4	.30	.50	.30	.10
7	0	.30	61	.30	.10	82	2.9	.30	.50	1.2	.30	.10
8	0	.10	10	.10	.10	476	2.0	1.2	.50	.20	.30	.10
9	0	.20	3.4	.10	3.8	26	1.2	.10	1.4	.20	1.4	.10
10	.20	.30	2.3	.10	1.6	16	.50	.10	1.2	.30	1.8	.10
11	.10	.20	1.2	2.7	.20	11	.30	.20	.50	.20	1.6	.10
12	.10	.50	.10	0	1.6	10	.10	.10	1.4	.20	1.4	.10
13	.20	.50	0	0	12	23	.10	.20	1.2	.50	1.4	.10
14	.10	.10	0	0	2.2	18	.10	.10	1.2	.10	1.4	.10
15	.10	.10	0	0	2.9	19	.10	.10	.50	.10	1.2	.30
16	0	.10	0	0	5.3	15	.10	.30	1.2	1.2	.50	.20
17	.10	.30	0	0	10	13	.20	.20	1.2	.30	.50	.10
18	.10	1.2	282	0	5.3	10	1.2	2.5	.50	.50	1.2	.20
19	.10	127	133	.10	4.6	10	3.1	1.2	1.2	.30	.50	.30
20	.10	200	51	.10	2.7	10	3.1	.50	.30	.20	.50	.30
21	.10	847	30	.30	2.2	7.7	2.7	.20	.50	.30	.20	.50
22	.10	101	15	.30	.20	6.2	2.3	.20	.30	.50	.30	1.2
23	.10	26	9.8	.30	.10	4.0	1.6	.50	1.2	1.4	.30	.30
24	.10	4.0	6.7	.30	.10	2.9	1.4	1.2	.30	1.2	.30	1.6
25	.10	2.0	6.2	.30	.20	2.2	.50	.50	.50	.30	.30	1.4
26	0	1.4	5.6	.20	.20	1.6	.50	1.2	.50	.20	.30	.20
27	0	.50	5.0	17	.20	1.8	.20	.50	.20	.20	.30	.20
28	.10	2.2	5.0	2.3	.20	2.2	.20	.50	.20	.20	.50	.20
29	.10	1.4	4.0	.10	.10	2.5	.30	.30	.10	.20	.50	.10
30	0	158	3.7	.10	-----	2.2	.30	.30	.30	.20	.50	.20
31	.10	-----	3.7	13	-----	1.6	-----	.30	-----	.20	.50	-----
TOTAL	2.10	1,475.20	767.40	47.40	56.70	775.00	184.20	16.30	18.90	13.90	19.40	9.20
MEAN	.068	49.2	24.8	1.53	1.96	25.0	6.14	.53	.63	.45	.63	.31
MAX	.20	847	282	17	12	476	56	2.5	1.4	1.4	1.8	1.6
MIN	0	.10	0	0	.10	.10	.10	.10	.10	.10	.20	.10
AC-FT	4.2	2,930	1,520	94	112	1,540	365	32	37	28	38	18
CAL YR 1967	TOTAL	7,867.70		MEAN	21.6	MAX	1,090	MIN	0	AC-FT	15,610	
WTR YR 1968	TOTAL	3,385.70		MEAN	9.25	MAX	847	MIN	0	AC-FT	6,720	

11-0885. BREA CREEK BELOW DAM, NEAR FULLERTON, CALIF.

LOCATION.--Lat 33°53'16", long 117°55'32", in NE¼NE¼NE¼ 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.

RECORDS AVAILABLE.--January 1942 to September 1968.

GAGE.--Graphic 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.--26 years, 0.791 cfs (573 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

EXTREMES.--Maximum discharge during year, 376 cfs Mar. 8 (gage height, 5.12 ft); no flow for some days. 1942-68: 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. Since August 1966, low flow mostly the result of irrigation waste water from golf course 0.75 mile upstream. See schematic diagram of San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	.90	.20	.20	.30	2.0	.20	.20	.20	.30	.20
2	.10	.10	.20	.20	.10	.20	3.1	.20	.20	.20	.30	.20
3	.10	.10	.10	.20	.10	.20	.60	.20	.20	.20	.30	.20
4	.10	.10	.10	.10	.10	.20	.40	.10	.10	.30	.30	.20
5	.10	.10	.10	.10	.10	.20	.20	.10	.20	.20	.20	.20
6	.10	.10	.10	.10	.20	.80	.20	.20	.10	.20	.20	.20
7	.10	.10	.40	.20	.20	6.9	.10	.20	.20	.30	.20	.20
8	.10	.10	.70	.10	.10	226	.30	.20	.20	.30	.30	.10
9	.10	.10	.10	.20	.60	2.1	.20	.20	.30	.20	.20	.10
10	.10	.10	.10	.10	.10	1.2	.10	.20	.20	.20	.20	.10
11	.10	.10	.10	.20	.10	.60	.20	.20	.10	.20	.20	.10
12	.10	.10	.10	.10	.10	.40	.20	.20	.20	.20	.20	.20
13	0	.10	.10	.10	1.0	.90	.10	.20	.10	.20	.20	.20
14	0	.10	.20	.10	1.0	.60	.20	.20	.10	.20	.20	.10
15	0	.10	.10	.10	.20	.20	.20	.20	.10	.20	.20	.10
16	0	.10	.10	.20	.20	.30	.10	.20	.10	.10	.20	.20
17	0	.10	.10	.20	.20	.40	.20	.20	.10	.20	.20	.20
18	.10	.40	83	.10	.20	.10	.20	.10	.10	.20	.30	.10
19	.10	53	9.2	.20	.20	.50	.20	.20	.20	.20	.20	.20
20	.10	1.6	1.6	.20	.30	.20	.10	.20	.20	.20	.20	.20
21	0	36	.80	.20	.20	.20	.20	.20	.20	.20	.20	.10
22	0	.60	.40	.20	.20	.20	.20	.10	.20	.20	.20	.10
23	0	.10	.10	.10	.10	.20	.20	.10	.20	.20	.20	.10
24	0	.10	.10	.20	.10	.20	.10	.10	.20	.20	.20	.10
25	0	.10	.10	.20	.20	.20	.20	.20	.20	.20	.20	.10
26	.10	0	.20	.50	.20	.20	.20	.20	.10	.30	.20	.10
27	0	.10	.20	2.0	.10	.20	.20	.20	.20	.20	.20	.10
28	0	.10	.20	.90	.20	.20	.20	.20	.20	.20	.20	.10
29	.10	0	.20	.20	.80	.20	.20	.10	.20	.30	.30	.10
30	.10	15	.20	.20	-----	.20	.20	.10	.10	.20	.20	.10
31	.10	-----	.10	1.0	-----	.20	-----	.20	-----	.30	.20	-----
TOTAL	1.90	108.80	100.00	8.70	7.40	244.50	10.80	5.40	5.00	6.70	6.90	4.30
MEAN	.061	3.63	3.23	.28	.26	7.89	.36	.17	.17	.22	.22	.14
MAX	.10	53	83	2.0	1.0	226	3.1	.20	.30	.30	.30	.20
MIN	0	0	.10	.10	.10	.10	.10	.10	.10	.10	.20	.10
AC-FT	3.8	216	198	17	15	485	21	11	9.9	13	14	8.5
CAL YR 1967	TOTAL 773.90			MEAN 2.12		MAX 172	MIN 0	AC-FT 1,540				
WTR YR 1968	TOTAL 510.40			MEAN 1.39		MAX 226	MIN 0	AC-FT 1,010				

SAN GABRIEL RIVER BASIN

11-0890. BREA CREEK AT FULLERTON, CALIF.

LOCATION.--Lat 33°52'25", long 117°55'30", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.28, T.3 S., R.10 W., between Malden Avenue and Spadra Road at Fullerton.

DRAINAGE AREA.--23.6 sq mi.

RECORDS AVAILABLE.--October 1930 to September 1968.

GAGE.--Graphic 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.--38 years, 1.19 cfs (862 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

EXTREMES.--Maximum discharge during year, 556 cfs Mar. 8 (gage height, 1.70 ft); no flow for some days. 1930-68: Maximum discharge, 3,700 cfs Mar. 14, 1941 (gage height, 5.45 ft); no flow for some days in each year.

REMARKS.--Flow regulated by Brea flood-control reservoir since January 1942 (capacity, 4,100 acre-ft). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.90	1.6	.60	1.2	0	17	.30	.30	.60	.30	0
2	1.3	1.0	.90	.20	.70	0	16	.30	.30	.60	.30	0
3	1.2	1.1	0	0	.90	0	1.9	.30	.30	.30	.30	1.4
4	1.2	.90	0	0	.90	.60	1.6	.30	.30	.30	0	1.9
5	1.2	.90	0	0	.60	.60	1.2	.30	.30	.30	.60	1.9
6	1.2	1.2	0	0	.60	4.3	1.2	.30	0	.30	1.8	1.5
7	1.2	1.0	.50	0	.60	23	1.2	.30	0	.30	1.8	1.2
8	1.3	.70	2.5	.60	.60	244	.60	.30	0	.50	1.5	1.8
9	1.6	.60	0	.60	1.2	6.0	.30	.60	0	0	1.2	1.5
10	1.5	.70	0	.60	.90	2.2	.30	.30	0	0	1.5	1.5
11	1.2	.60	0	.90	.60	1.9	.30	.60	0	0	1.0	1.2
12	1.4	.60	0	.60	.60	1.6	.30	.60	0	0	1.2	.90
13	1.2	.60	0	.60	9.0	3.4	.30	.30	0	0	1.2	.90
14	1.2	.60	0	.60	3.9	1.9	.30	.30	0	0	1.5	.60
15	1.2	.60	0	.60	.60	.90	.30	.30	.30	0	1.2	.30
16	1.4	.60	0	.70	.60	1.2	.30	.30	.30	0	1.5	.30
17	1.4	.60	0	.60	.60	1.6	.30	.30	.30	.10	1.2	.90
18	1.2	1.8	68	.60	.30	.60	.30	.30	.30	0	.90	1.6
19	1.4	68	31	.60	.30	1.6	.30	.30	.30	0	.60	1.6
20	1.2	8.2	1.9	.30	.90	.90	.30	.30	0	0	1.2	.90
21	.90	54	1.5	.30	.60	.90	.30	.60	0	0	.90	1.7
22	.90	1.9	1.2	.60	.30	.90	.30	.60	0	0	.60	1.7
23	.90	.50	.60	.60	.30	.60	.30	.60	0	0	1.0	1.3
24	1.0	.50	.60	.60	.30	.60	.30	.30	0	0	1.2	1.1
25	.90	.30	.60	.60	.30	1.2	.30	.30	0	1.2	.90	.60
26	.70	.30	.60	3.6	0	1.6	.30	.60	0	.30	.60	.60
27	.60	.30	.70	15	0	1.6	.30	.30	0	.30	.30	.60
28	.60	.30	.60	3.7	0	1.6	.30	.30	.30	.90	0	.60
29	.60	.30	.60	1.2	.30	1.6	.30	.30	.30	.90	0	.60
30	.90	34	.60	.60	-----	1.6	.30	.30	.30	.30	0	.60
31	1.0	-----	.60	3.2	-----	1.6	-----	.30	-----	.30	0	-----
TOTAL	34.10	183.60	114.60	38.70	27.70	310.10	47.30	11.70	3.90	7.50	26.30	31.30
MEAN	1.10	6.12	3.70	1.25	.96	10.0	1.58	.38	.13	.24	.85	1.04
MAX	1.6	68	68	15	9.0	244	17	.60	.30	1.2	1.8	1.9
MIN	.60	.30	0	0	0	0	.30	.30	0	0	0	0
AC-FT	68	364	227	77	55	615	94	23	7.7	15	52	62
CAL YR 1967	TOTAL 1,116.30		MEAN 3.06		MAX 134		MIN 0		AC-FT 2,210			
WTR YR 1968	TOTAL 836.80		MEAN 2.29		MAX 244		MIN 0		AC-FT 1,660			

11-0895. FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA, CALIF.

LOCATION.--Lat 33°53'45", long 117°53'07", in NE¼NW¼SW¼ sec.24, T.3 S., R.10 W., on left bank of outlet channel of Fullerton Dam, 1.6 miles southeast of Brea.

DRAINAGE AREA.--4.94 sq mi. o

RECORDS AVAILABLE.--October 1941 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 250 ft (from topographic map). V-notch sharp-crested weir used Oct. 25, 1946, to Feb. 2, 1958.

AVERAGE DISCHARGE.--13 years (1941-54), 0.190 cfs (135 acre-ft per year); median of yearly discharges, 0.02 cfs (14 acre-ft per year); 14 years (1954-68), 0.413 cfs (299 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

EXTREMES.--Maximum discharge during year, 28 cfs Mar. 8 (gage height, 0.92 ft); no flow for most of year. 1941-68: 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). Small tributary formerly entering below station diverted into reservoir since December 1954. See schematic diagram of San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	0	0	.40					
2		0	0	0	0	0	1.0					
3		0	0	0	0	0	0					
4		0	0	0	0	0	0					
5		0	0	0	0	0	0					
6		0	0	0	0	0	0					
7		0	0	0	0	.80	0					
8		0	.10	0	0	23	0					
9		0	0	0	0	21	0					
10		0	0	0	0	7.3	0					
11		0	0	0	0	0	0					
12		0	0	0	0	0	0					
13		0	0	0	.40	0	0					
14		0	0	0	.30	0	0					
15		0	0	0	0	0	0					
16		0	0	0	0	0	0					
17		0	0	0	0	0	0					
18		0	9.2	0	0	0	0					
19		1.8	9.2	0	0	0	0					
20		.30	.10	0	0	0	0					
21		3.5	0	0	0	0	0					
22		1.5	0	0	0	0	0					
23		0	0	0	0	0	0					
24		0	0	0	0	0	0					
25		0	0	0	0	0	0					
26		0	0	0	0	0	0					
27		0	0	.50	0	0	0					
28		0	0	.10	0	0	0					
29		0	0	0	0	0	0					
30		6.5	0	0	-----	0	0					
31		-----	0	0	-----	0	-----					
TOTAL	0	13.60	18.60	0.60	0.70	52.10	1.40	0	0	0	0	0
MEAN	0	.45	.60	.019	.024	1.68	.047	0	0	0	0	0
MAX	0	6.5	9.2	.50	.40	23	1.0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	27	37	1.2	1.4	103	2.8	0	0	0	0	0
CAL YR 1967	TOTAL	162.00		MEAN .44	MAX 57	MIN 0	AC-FT 321					
WTR YR 1968	TOTAL	87.00		MEAN .24	MAX 23	MIN 0	AC-FT 173					

SAN GABRIEL RIVER BASIN

11-0902. FULLERTON CREEK AT RICHMAN AVENUE, AT FULLERTON, CALIF.

LOCATION.--Lat 33°51'45", long 117°55'55", in NW¼SW¼SE¼ sec.33, T.3 S., R.10 W., on right bank 125 ft east of Richman Avenue, in Fullerton.

DRAINAGE AREA.--12.1 sq mi.

RECORDS AVAILABLE.--October 1959 to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 126.4 ft above mean sea level (levels by Orange County Flood Control District).

AVERAGE DISCHARGE.--9 years, 1.18 cfs (854 acre-ft per year).

EXTREMES.--Maximum discharge during year, 622 cfs Mar. 8 (gage height, 4.40 ft); no flow for many days.

1959-68: Maximum discharge, 719 cfs Nov. 7, 1966 (gage height, 4.71 ft); no flow for many days in each year.

REMARKS.--Flow regulated by Fullerton flood-control reservoir (capacity, 706 acre-ft). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Orange County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	.50	0	0	2.0	12	.10	.20	.10	.10	0
2	.10	.10	0	0	.10	.10	4.1	.10	.30	.10	.10	0
3	.10	.10	0	2.7	0	.10	.10	.20	.60	.10	.10	.10
4	.10	.10	0	0	0	.70	.10	.20	.10	.10	0	0
5	.10	.10	0	0	0	.90	.10	.10	.10	.10	.20	.10
6	.10	.10	0	0	.10	.50	.10	.10	.10	.10	0	0
7	.10	.10	1.3	0	.10	31	.10	.10	.10	.10	0	0
8	.10	.10	.40	0	.10	153	.10	.10	.10	.30	0	0
9	.10	.10	0	0	1.1	21	.10	.10	.10	.60	0	.10
10	.10	.10	0	0	.10	5.6	.30	.10	.40	1.5	.10	.10
11	.10	.10	0	.40	.10	6.2	.20	.10	.10	.40	0	.10
12	.10	.10	0	0	.10	.10	.10	.20	.20	.60	.10	0
13	.10	.10	0	0	17	1.7	.10	.10	.10	.60	.10	0
14	.10	.10	0	0	.90	.10	.10	.10	.10	.20	0	.10
15	.10	.10	0	0	.10	0	.10	.10	.10	.20	0	0
16	.20	.10	0	0	0	.90	.10	.20	.10	.40	0	0
17	.30	.20	.10	0	.10	.50	.40	.10	.10	.40	.10	.10
18	.20	3.4	49	.10	0	0	.10	.10	.10	.40	0	0
19	.10	50	26	.10	.10	0	.10	.10	.10	.50	0	0
20	.10	7.2	.10	0	.10	.10	.20	.10	.10	.40	0	0
21	.10	59	0	0	.10	.10	.30	.10	.10	.10	0	0
22	.10	5.0	0	0	.10	.10	.50	.10	.10	.30	0	.10
23	.10	.40	0	.10	.10	.10	1.3	.10	.10	.10	0	.30
24	.10	.30	0	0	.10	.10	1.2	.10	.10	0	0	0
25	.50	0	0	0	.10	.10	1.6	.10	1.0	0	0	0
26	.50	0	.10	3.0	.10	.10	.60	.10	1.3	0	0	0
27	.50	0	.10	12	0	.10	.20	.10	1.6	.20	0	0
28	.50	1.4	.10	.40	.10	.10	.20	.10	.90	.10	0	0
29	.50	0	0	.10	1.8	.10	.10	.40	.30	.10	0	0
30	.50	49	0	.70	-----	.10	.10	.30	.10	.10	0	0
31	.40	-----	0	1.6	-----	.10	-----	.20	-----	.10	0	-----
TOTAL	6.20	177.50	77.70	21.20	22.60	225.60	24.70	4.10	8.80	8.50	0.90	1.10
MEAN	.20	5.92	2.51	.68	.78	7.28	.82	.13	.29	.27	.029	.037
MAX	.50	59	49	12	17	153	12	.40	1.6	1.5	.20	.30
MIN	.10	0	0	0	0	0	.10	.10	.10	0	0	0
AC-FT	12	352	154	42	45	447	49	8.1	17	17	1.8	2.2
CAL YR 1967	TOTAL 745.70			MEAN 2.04		MAX 150		MIN 0		AC-FT 1,480		
WTR YR 1968	TOTAL 578.90			MEAN 1.58		MAX 153		MIN 0		AC-FT 1,150		

SAN GABRIEL RIVER BASIN

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11-0907. COYOTE CREEK AT LOS ALAMITOS, CALIF.

LOCATION.--Lat 33°48'38", long 118°04'28", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.19, T.4 S., R.11 W., 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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 7.37 ft above mean sea level (levels by Los Angeles County Flood Control District).

AVERAGE DISCHARGE.--5 years, 25 cfs (18,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 6,970 cfs Mar. 8 (gage height, 4.55 ft); minimum daily, 1.6 cfs Oct. 18, Nov. 3.

1963-68: Maximum discharge, 6,970 cfs Mar. 8, 1968 (gage height, 4.55 ft); no flow Jan. 25, Feb. 15-17, 1964.

REMARKS.--Flows up to 100 cfs can be diverted from present Carbon Creek channel to Coyote Creek through the original Carbon Creek channel. No regulation or diversion above station. AVERAGE DISCHARGE represents flow to ocean during period of record, regardless of upstream development. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	2.0	20	3.3	7.1	11	184	5.9	10	4.6	5.9	7.1
2	3.3	2.5	5.0	3.3	5.9	7.7	181	7.1	9.5	5.0	6.5	5.9
3	3.8	1.6	3.3	7.7	4.6	8.3	11	5.5	12	5.5	8.9	8.9
4	3.3	2.0	2.9	3.3	4.6	8.9	5.9	5.5	11	5.5	11	7.1
5	3.8	2.0	4.2	3.3	5.0	11	5.9	5.5	10	5.9	9.5	5.0
6	4.6	2.5	4.6	2.9	4.2	105	5.9	5.5	7.7	8.3	10	5.9
7	4.2	2.5	13	3.3	3.3	278	5.5	5.5	7.7	6.5	37	5.5
8	4.2	2.5	43	3.8	2.9	2,350	5.5	5.5	7.1	6.5	5.5	6.5
9	2.0	2.9	4.6	3.8	53	64	5.9	5.5	7.7	5.5	7.7	5.9
10	2.9	2.9	3.3	3.8	16	27	5.9	5.5	10	5.9	9.5	7.1
11	3.3	2.9	3.0	25	3.8	13	7.1	7.1	10	6.5	9.5	5.9
12	3.3	2.9	2.5	4.2	3.8	13	8.3	7.1	10	5.9	9.5	5.9
13	3.3	3.3	2.9	3.3	82	40	4.6	7.1	11	5.5	11	5.9
14	2.5	3.3	2.9	3.3	87	12	4.2	7.7	13	7.7	14	5.0
15	2.0	3.8	2.9	3.3	7.7	7.1	4.2	6.5	12	10	11	5.5
16	2.0	3.3	2.9	5.5	5.0	8.3	4.2	5.5	11	8.9	8.9	5.9
17	2.5	3.3	3.3	4.2	20	39	4.2	5.9	11	9.5	7.1	6.5
18	1.6	2.9	848	3.8	5.9	11	4.2	5.5	8.9	7.7	9.5	5.9
19	2.5	708	442	3.8	5.9	8.3	5.5	5.5	7.7	8.9	9.5	5.9
20	2.9	156	24	2.5	5.9	8.3	8.9	6.5	5.9	10	8.9	5.9
21	4.2	1,250	5.9	3.3	7.1	8.3	9.5	5.9	7.7	8.9	4.6	5.5
22	3.8	42	2.9	2.9	5.9	16	7.7	7.1	5.9	8.3	5.5	5.9
23	3.8	3.3	3.3	2.5	6.5	8.3	5.5	6.5	7.1	9.5	4.6	6.5
24	3.3	3.3	3.3	2.9	12	7.7	5.5	7.1	7.1	8.9	4.6	7.1
25	2.9	2.9	3.3	2.9	6.5	7.1	8.3	6.5	7.7	9.5	4.2	5.0
26	3.8	2.5	3.3	2.9	5.9	5.9	6.5	6.5	8.3	9.5	7.1	4.6
27	3.8	3.3	4.2	131	8.3	6.5	5.5	7.7	7.1	10	5.0	5.0
28	3.8	4.2	3.8	47	6.5	6.5	5.5	6.5	5.0	29	4.2	5.0
29	3.3	2.5	3.3	4.6	8.3	6.5	5.5	7.7	4.2	4.6	5.0	7.1
30	3.3	441	3.3	6.5	-----	6.5	5.5	8.3	4.2	4.6	8.9	5.9
31	2.0	-----	3.3	54	-----	7.7	-----	10	-----	4.6	10	-----
TOTAL	99.3	2,668.1	1,478.2	357.9	400.6	3,117.9	536.9	201.2	257.5	247.2	274.1	180.8
MEAN	3.20	88.9	47.7	11.5	13.8	101	17.9	6.49	8.58	7.97	8.84	6.03
MAX	4.6	1,250	848	131	87	2,350	184	10	13	29	37	8.9
MIN	1.6	1.6	2.5	2.5	2.9	5.9	4.2	5.5	4.2	4.6	4.2	4.6
AC-FT	197	5,290	2,930	710	795	6,180	1,060	399	511	490	544	359
CAL YR 1967	TOTAL 12,437.3			MEAN 34.1		MAX 1,840	MIN 1.4			AC-FT 24,670		
WTR YR 1968	TOTAL 9,819.7			MEAN 26.8		MAX 2,350	MIN 1.6			AC-FT 19,480		

LOS ANGELES RIVER BASIN

11-0924.5. LOS ANGELES RIVER AT SEPULVEDA DAM, CALIF.

LOCATION.--Lat 34°09'42", long 118°27'57", in Ex Mission de San Fernando Grant, 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 1968. 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, 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.--Graphic water-stage recorder. Datum of gage is 652.7 ft above mean sea level. Prior to Aug. 23, 1941, at site 1 mile downstream at different datum; Aug. 23, 1941, to Sept. 30, 1950, at site 900 ft downstream at different datum; Oct. 1, 1950, to Aug. 29, 1953, at site 800 ft upstream at datum 5.99 ft higher.

AVERAGE DISCHARGE.--38 years (1929-37, 1938-68), 25.8 cfs (18,680 acre-ft per year); median of yearly mean discharges, 19 cfs (13,800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 11,300 cfs Mar. 8 (gage height, 9.91 ft); minimum daily, 3.8 cfs Apr. 7.

1929-37, 1938-68: Maximum discharge, 13,000 cfs Dec. 29, 1965 (gage height, 10.98 ft); no flow Sept. 19, 20, 1930.

Flood of Mar. 2, 1938, amounted to 12,000 cfs (estimated).

REMARKS.--Records good. Flow regulated since December 1941 by Sepulveda flood-control reservoir (capacity, 17,400 acre-ft). Some diversion above station. City of Los Angeles at times discharges imported Owens River water into Los Angeles River from upstream distributing reservoirs. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Nine discharge measurements furnished by Los Angeles County Flood Control District. Records of released water from reservoirs furnished by City of Los Angeles.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	30	36	31	7.9	5.0	224	8.5	6.9	7.9	7.4	7.4
2	5.9	28	28	28	8.5	4.6	37	8.5	7.9	10	7.9	7.4
3	7.4	28	24	30	8.5	4.6	4.6	8.5	9.7	10	7.9	7.9
4	7.9	28	23	30	6.4	4.6	5.0	8.5	10	10	10	7.9
5	9.1	28	24	33	6.4	6.9	5.0	8.5	7.4	10	14	9.1
6	9.1	26	25	32	5.9	5.4	4.2	8.5	6.4	10	8.5	11
7	10	26	36	32	5.9	690	3.8	8.5	6.4	9.7	225	13
8	11	25	30	32	5.9	2,720	5.0	8.5	5.4	9.7	4.2	13
9	11	26	22	33	68	29	5.0	8.5	6.9	9.7	4.2	12
10	12	26	23	47	14	8.5	5.9	9.7	7.4	9.7	4.2	9.1
11	17	26	23	74	5.0	16	6.9	10	10	9.7	4.2	9.7
12	28	24	25	5.9	5.4	5.4	7.4	19	10	9.1	4.2	10
13	25	24	24	5.0	121	164	6.9	9.1	10	9.1	4.2	11
14	24	24	22	5.0	8.5	16	6.9	9.1	9.1	7.9	4.2	9.1
15	22	28	23	5.0	5.0	11	6.9	9.7	9.1	7.9	5.0	9.7
16	24	28	24	5.0	5.4	12	6.9	12	9.1	7.9	4.6	10
17	27	28	23	5.0	98	16	10	14	9.1	7.9	4.6	16
18	26	28	510	5.4	6.4	9.1	5.4	14	10	7.4	4.2	9.1
19	26	1,300	119	5.4	5.4	10	4.2	13	10	7.4	4.6	9.1
20	25	853	38	5.4	5.4	9.7	5.9	14	9.1	7.4	5.4	9.1
21	26	4,110	27	9.9	5.0	9.7	5.9	15	10	6.9	5.4	8.5
22	26	987	24	9.0	4.6	9.7	5.9	14	12	6.9	6.4	7.4
23	25	42	25	5.9	5.0	8.5	5.9	12	9.1	6.9	7.4	7.4
24	26	30	25	6.4	5.0	7.9	6.4	13	8.5	6.9	7.4	7.4
25	25	27	25	7.4	5.0	8.5	6.9	15	9.1	6.9	6.4	8.5
26	26	25	26	7.6	5.0	8.4	7.9	20	9.7	7.4	7.4	8.5
27	27	26	26	217	5.0	6.9	7.9	16	9.7	7.4	9.1	8.5
28	30	30	27	20	4.6	6.9	9.1	16	8.5	7.9	9.1	7.4
29	27	26	27	6.9	4.6	6.4	8.5	10	7.9	7.9	9.7	6.4
30	28	644	32	6.9	-----	5.9	8.5	7.4	7.9	7.9	8.5	6.4
31	32	-----	32	174	-----	5.4	-----	7.4	-----	7.9	7.4	-----
TOTAL	630.8	8,581	1,399	920.1	446.7	3,832.0	439.8	355.9	262.3	259.3	422.7	277.0
MEAN	20.3	286	45.1	29.7	15.4	124	14.7	11.5	8.74	8.36	13.6	9.23
MAX	32	4,110	510	217	121	2,720	224	20	12	10	225	16
MIN	5.4	24	22	5.0	4.6	4.6	3.8	7.4	5.4	6.9	4.2	6.4
AC-FT	1,250	17,020	2,770	1,820	886	7,600	872	706	520	514	838	549
(a)	831	1,060	1,220	369	0	0	0	0	0	0	0	0
CAL YR 1967	TOTAL 20,189.0		MEAN 55.3		MAX 4,110	MIN 4.6		AC-FT 40,040		AC-FT 3,920		
WTR YR 1968	TOTAL 17,826.6		MEAN 48.7		MAX 4,110	MIN 3.8		AC-FT 35,360		AC-FT 3,480		

a Release, in acre-feet, from city of Los Angeles distributing reservoirs. This is included in flow that passes station.

11-0930. PACOIMA CREEK NEAR SAN FERNANDO, CALIF.

LOCATION.--Lat 34°20'07", long 118°23'50", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.3 N., R.15 W., 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 1968.

GAGE.--Graphic water-stage recorder. 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.--51 years (1917-68), 8.87 cfs (6,420 acre-ft per year); median of yearly mean discharges, 4.2 cfs (3,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 106 cfs Nov. 22 (gage height, 1.26 ft); no flow for much of year. 1916-68: Maximum discharge, 2,440 cfs Mar. 3, 1938; no flow for several months in most years.

REMARKS.--Flow regulated since February 1929 by Pacoima flood-control reservoir (capacity, 4,453 (revised) acre-ft). Flow passing over Pacoima Dam spillway enters creek below station. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	.10	1.6	7.5	13	0	.10		0
2		0	0	12	.10	.20	.30	13	0	0		0
3		0	0	20	.10	.20	.20	12	0	0		0
4		0	0	20	.10	.10	.20	10	0	0		0
5		0	0	16	8.7	.10	.10	10	8.9	0		0
6		0	0	13	13	.10	.10	10	14	0		0
7		0	.80	13	13	.10	.10	10	5.3	0		0
8		0	2.5	13	13	.10	.10	10	.20	0		0
9		1.3	2.5	12	13	.10	.10	10	.20	0		0
10		3.7	2.5	12	13	.10	.10	10	9.0	0		0
11		3.8	2.5	14	13	8.3	.10	10	15	0		0
12		3.8	2.5	14	13	12	.10	10	15	0		0
13		2.9	2.5	14	12	6.3	.10	10	15	0		0
14		2.2	2.5	14	9.8	7.0	.10	9.9	14	0		0
15		2.2	2.5	11	9.8	12	.10	9.4	14	0		0
16		2.2	2.5	9.8	9.8	12	.10	9.4	14	0		0
17		2.2	2.5	9.8	9.8	12	.10	5.7	14	0		0
18		2.2	2.6	9.8	9.8	9.9	.10	.20	19	0		8.6
19		1.8	1.3	9.8	9.8	8.9	.10	.20	21	0		14
20		.70	1.2	9.8	9.8	8.9	.10	.10	21	0		14
21		18	2.0	9.8	9.8	8.8	.10	.10	7.2	0		14
22		83	2.0	9.8	9.8	8.7	8.2	.10	13	0		14
23		102	2.0	9.8	9.6	8.8	13	0	13	0		14
24		68	2.0	9.6	9.6	8.9	13	0	13	0		13
25		0	2.0	9.6	9.6	8.9	13	.10	13	0		13
26		0	9.1	6.5	9.6	9.1	13	.10	13	0		13
27		0	17	.30	9.4	9.1	13	.10	13	0		13
28		0	19	.20	8.9	9.1	13	0	4.7	0		13
29		0	7.5	.10	4.7	9.1	13	0	.20	0		13
30		0	0	.10	-----	9.1	13	0	.10	0		13
31		-----	0	.10	-----	9.1	-----	0	-----	0		-----
TOTAL	0	300.00	93.50	302.90	261.70	198.70	122.10	173.40	289.80	0.10	0	169.6
MEAN	0	10.0	3.02	9.77	9.02	6.41	4.07	5.59	9.66	.003	0	5.65
MAX	0	102	19	20	13	12	13	13	21	.10	0	14
MIN	0	0	0	0	.10	.10	.10	0	0	0	0	0
AC-FT	0	595	185	601	519	394	242	344	575	.2	0	336
CAL YR 1967	TOTAL	10,505.60	MEAN	28.8	MAX	151	MIN	0	AC-FT	20,840		
WTR YR 1968	TOTAL	1,911.80	MEAN	5.22	MAX	102	MIN	0	AC-FT	3,790		

LOS ANGELES RIVER BASIN

11-0934.9. NORTH FORK MILL CREEK NEAR LA CANADA, CALIF.

LOCATION.--Lat 34°19'03", long 118°08'00", in Angeles National Forest on right upstream end of culvert on Angeles Forest Highway, 0.2 mile west of Hidden Springs, and 8.8 miles northeast of La Canada, Los Angeles County.

DRAINAGE AREA.--5.79 sq mi.

RECORDS AVAILABLE.--Water years 1960-66 (annual maximum), June 1966 to September 1968.

GAGE.--Graphic water-stage recorder with rain-gage attachment. Altitude of gage is 3,060 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 43 cfs Nov. 19 (gage height, 2.82 ft); no flow for many days.
1960-68: Maximum discharge, 480 cfs Dec. 29, 1965 (gage height, 13.2 ft from crest-stage gage, 9.4 ft for recording gage), from rating curve extended above 10 cfs on basis of computation of flow through culverts at gage-heights 4.00 and 9.4 ft; no flow at times in each year.

REMARKS.--Records poor except those above 10 cfs, which are good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	1.0	1.6	1.2	1.1	1.1	2.8	.70	.40	.10	0	
2	.70	1.0	1.2	1.2	1.0	1.0	2.0	.70	.20	.10	0	
3	.60	1.1	1.1	1.2	1.0	1.0	1.8	.80	.30	0	0	
4	.60	1.1	1.1	1.2	1.0	.90	1.8	.80	.50	0	0	
5	.60	1.1	1.1	1.2	1.0	.90	1.6	.90	.80	0	0	
6	.60	1.0	1.1	1.1	1.0	.90	1.6	.80	.80	0	0	
7	.60	1.1	1.1	1.1	1.0	2.5	1.6	.80	.60	.10	0	
8	.60	1.0	1.1	1.1	1.0	11	1.6	1.0	.50	.10	0	
9	.60	1.1	1.1	1.1	1.2	4.2	1.6	.90	.50	.10	0	
10	.60	1.1	1.1	1.4	1.0	3.2	1.6	.90	.40	.10	0	
11	.60	1.0	1.1	1.8	1.0	2.2	1.6	1.0	.30	0	0	
12	.60	.80	1.1	1.6	.90	2.1	1.6	1.1	.20	0	0	
13	.60	.80	1.1	1.6	1.8	2.2	1.4	1.1	.40	0	0	
14	.60	.80	.90	1.6	2.2	2.0	1.4	1.1	.20	0	0	
15	.50	.90	.90	1.4	1.8	1.6	1.1	.90	.20	0	0	
16	.40	.80	1.0	1.2	1.8	2.0	1.1	.90	.10	0	.10	
17	.80	.90	1.8	1.2	1.8	2.0	1.0	.80	.10	0	.10	
18	.70	1.8	1.8	1.2	1.6	1.8	.90	.80	.10	0	.10	
19	.60	21	2.0	1.2	1.4	2.0	.80	.80	.10	0	.10	
20	.60	5.0	1.4	1.2	1.4	2.0	.80	.80	0	0	.10	
21	.70	15	1.2	1.2	1.4	1.8	.80	1.1	0	0	.10	
22	.80	4.9	1.2	1.2	1.2	2.0	.80	1.1	0	0	.10	
23	.80	2.2	1.2	1.2	1.1	2.0	.80	1.1	0	0	.10	
24	.90	1.4	1.2	1.2	1.1	1.8	.80	1.1	0	0	0	
25	.90	1.0	1.2	1.2	1.1	2.0	.80	.90	0	0	0	
26	1.0	.90	1.2	1.8	1.1	1.8	.80	.70	0	0	0	
27	1.1	.80	1.2	1.8	1.0	1.8	.80	.60	0	0	0	
28	1.1	.80	1.2	1.2	1.0	2.0	.80	.60	.10	0	0	
29	1.1	.60	1.2	1.1	1.0	2.2	.80	.60	.10	.10	0	
30	1.1	1.8	1.2	1.0	-----	2.2	.70	.70	.10	0	0	
31	1.0	-----	1.2	1.2	-----	2.0	-----	.60	-----	0	0	-----
TOTAL	22.70	73.80	37.90	39.9	36.00	68.20	37.60	26.70	7.00	0.70	0.80	0
MEAN	.73	2.46	1.22	1.29	1.24	2.20	1.25	.86	.23	.023	.026	0
MAX	1.1	21	2.0	1.8	2.2	11	2.8	1.1	.80	.10	.10	0
MIN	.40	.60	.90	1.0	.90	.90	.70	.60	0	0	0	0
AC-FT	45	146	75	79	71	135	75	53	14	1.4	1.6	0
CAL YR 1967	TOTAL	1,203.30	MEAN	3.30	MAX	23	MIN	.40	AC-FT	2,390		
WTR YR 1968	TOTAL	351.30	MEAN	.96	MAX	21	MIN	0	AC-FT	697		

11-0940. 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 2,650 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 8.10 cfs (5,860 acre-ft per year); median of yearly mean discharges, 2.7 cfs (2,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 748 cfs Nov. 19 (gage height, 7.84 ft); minimum daily, 0.60 cfs for some days.

1948-68: Maximum discharge, 6,550 cfs Dec. 29, 1965 (gage height, 13.75 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. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	2.4	22	13	14	11	18	6.6	3.7	1.3	.90	.70
2	3.4	2.5	17	13	14	11	22	6.6	3.6	1.3	.90	.70
3	3.4	2.5	14	12	14	11	18	6.6	3.4	1.2	.90	.70
4	3.2	2.6	14	11	14	10	14	6.6	3.7	1.2	.90	.70
5	3.1	2.6	13	11	13	9.7	13	6.1	4.2	1.1	.90	.60
6	3.1	2.7	13	11	13	9.4	12	6.1	4.2	1.1	.90	.60
7	3.1	2.7	13	11	13	11	12	6.3	4.3	1.0	.90	.60
8	3.1	2.8	12	11	13	76	11	6.3	4.2	1.0	.80	.60
9	3.1	3.0	12	11	16	35	10	6.6	3.4	1.0	.80	.60
10	3.1	3.0	11	11	19	28	9.4	6.6	3.4	.90	.80	.60
11	3.1	2.8	10	11	18	21	9.4	6.8	3.1	.90	.80	.60
12	3.1	2.7	9.4	10	18	19	9.4	6.8	3.0	.90	.80	.60
13	3.0	2.6	9.1	10	23	18	9.4	6.8	2.7	.90	.90	.60
14	3.0	2.6	8.8	10	24	18	9.1	6.8	2.7	.80	1.0	.60
15	3.0	2.5	8.8	10	21	17	9.4	6.6	2.5	.80	1.0	.70
16	2.8	2.5	8.8	10	19	16	9.4	6.3	2.4	.80	1.1	.70
17	2.8	2.6	9.1	10	18	15	9.7	6.3	2.2	.70	1.1	.70
18	2.7	2.7	12	10	17	15	9.7	6.3	2.1	.70	1.1	.70
19	2.7	285	12	9.7	16	14	9.4	6.1	2.0	.70	1.1	.70
20	2.7	105	12	9.4	15	13	9.4	6.1	1.8	.70	1.1	.70
21	2.7	345	11	9.1	15	12	9.1	6.1	1.7	.70	1.1	.70
22	2.6	122	12	8.8	15	12	8.8	6.1	1.7	.60	1.0	.70
23	2.5	41	12	8.8	14	13	8.6	6.1	1.7	.60	.90	.70
24	2.4	26	14	8.8	13	13	8.6	6.1	1.6	.60	.80	.70
25	2.4	22	16	8.8	13	12	8.3	5.5	1.5	.60	.70	.70
26	2.4	20	18	9.1	12	12	8.3	4.9	1.5	.60	.60	.70
27	2.4	19	18	16	12	12	8.0	4.5	1.5	.60	.60	.80
28	2.4	18	18	16	12	12	7.3	4.2	1.5	1.2	.60	.80
29	2.4	18	16	15	12	12	7.3	4.0	1.4	1.2	.60	.90
30	2.4	33	15	14	-----	12	6.8	3.8	1.4	.90	.60	.90
31	2.4	-----	14	14	-----	12	-----	3.7	-----	.80	.70	-----
TOTAL	88.1	1,101.8	405.0	343.5	450	512.1	314.8	184.3	78.1	27.40	26.90	20.60
MEAN	2.84	36.7	13.1	11.1	15.5	16.5	10.5	5.95	2.60	.88	.87	.69
MAX	3.6	345	22	16	24	76	22	6.8	4.3	1.3	1.1	.90
MIN	2.4	2.4	8.8	8.8	12	9.4	6.8	3.7	1.4	.60	.60	.60
AC-FT	175	2,190	803	681	893	1,020	624	366	155	54	53	41
CAL YR 1967	TOTAL 9,095.6		MEAN 24.9		MAX 345		MIN 2.4		AC-FT 18,040			
WTR YR 1968	TOTAL 3,552.60		MEAN 9.71		MAX 345		MIN .60		AC-FT 7,050			

LOS ANGELES RIVER BASIN

11-0955. TUJUNGA CREEK NEAR SUNLAND, CALIF.

LOCATION.--Lat 34°18'02", long 118°16'04", near center of SW¼ 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 1968.

GAGE.--Graphic 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.--51 years, 26.4 cfs (19,110 acre-ft per year); median of yearly mean discharges, 14 cfs (10,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 410 cfs Nov. 21 (gage height, 8.31 ft); minimum daily, 1.3 cfs Sept. 11, 12.

1916-68: Maximum discharge, 50,000 cfs (estimated) Mar. 2, 1938; minimum, 0.10 cfs at times in some years.

REMARKS.--Flow regulated since July 1931 by Big Tujunga flood-control reservoir (capacity, 3,819 (revised) acre-ft). Several small diversions above station for irrigation. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	18	33	63	38	24	18	13	9.0	36	3.6	2.0
2	24	11	32	59	37	23	17	13	7.9	10	3.6	2.0
3	24	10	31	54	37	23	15	13	7.2	6.5	3.4	2.0
4	24	9.6	30	46	36	23	13	13	7.2	5.2	3.4	2.6
5	24	9.6	29	37	28	23	13	14	7.2	4.2	3.4	2.2
6	24	9.3	26	34	21	24	13	13	7.2	4.2	3.2	1.9
7	24	9.3	26	32	22	28	13	13	7.2	4.2	3.4	1.8
8	24	9.3	24	28	22	72	13	14	7.2	4.2	3.4	1.7
9	24	9.0	23	21	23	34	13	13	7.2	4.0	3.2	1.6
10	23	9.0	23	22	24	31	13	14	9.0	3.4	3.0	1.5
11	22	9.0	23	22	23	29	12	14	13	3.0	2.8	1.3
12	22	9.0	23	20	23	27	13	14	13	2.8	2.8	1.3
13	22	8.6	23	19	31	26	12	14	13	2.8	2.8	1.4
14	22	8.6	22	20	32	25	12	13	13	3.0	2.8	1.5
15	22	8.6	22	20	28	25	12	13	13	3.2	3.0	1.7
16	21	8.2	23	19	27	25	12	12	13	3.2	3.0	1.7
17	20	8.6	24	19	27	25	11	12	12	3.0	3.0	1.7
18	20	8.6	33	19	27	24	11	12	12	2.8	3.0	1.7
19	20	102	26	19	26	24	12	12	37	2.6	2.8	1.8
20	20	101	26	19	26	24	12	11	67	2.6	2.8	1.8
21	20	258	25	20	26	23	13	12	61	2.4	3.0	1.9
22	20	275	24	20	25	18	14	11	46	2.4	3.0	1.7
23	21	251	23	20	24	13	14	11	44	2.4	2.8	1.6
24	20	193	22	20	24	13	14	11	58	2.4	2.6	1.5
25	20	130	22	20	24	12	14	10	72	2.4	2.6	1.4
26	20	121	22	21	24	12	14	10	70	3.0	2.6	1.4
27	20	103	22	29	25	12	14	10	60	2.6	2.0	1.6
28	20	69	22	29	24	12	13	10	70	2.6	1.9	1.6
29	18	48	32	29	24	12	13	10	89	3.2	2.0	1.8
30	18	52	66	38	-----	12	13	10	14	4.0	2.0	1.9
31	19	-----	65	40	-----	12	-----	10	-----	3.6	2.0	-----
TOTAL	666	1,876.3	867	878	778	710	396	375	866.3	141.9	88.9	51.6
MEAN	21.5	62.5	28.0	28.3	26.8	22.9	13.2	12.1	28.9	4.58	2.87	1.72
MAX	24	275	66	63	38	72	18	14	89	36	3.6	2.6
MIN	18	8.2	22	19	21	12	11	10	7.2	2.4	1.9	1.3
AC-FT	1,320	3,720	1,720	1,740	1,540	1,410	785	744	1,720	281	176	102

CAL YR 1967 TOTAL 17,846.3 MEAN 48.9 MAX 293 MIN 8.2 AC-FT 35,400
WTR YR 1968 TOTAL 7,695.0 MEAN 21.0 MAX 275 MIN 1.3 AC-FT 15,260

11-0965. LITTLE TUJUNGA CREEK NEAR SAN FERNANDO, CALIF.

LOCATION.--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 1968. Monthly discharge for April 1931, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Concrete control since May 1940. Datum of gage is 1,068.39 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Nov. 30, 1964, at datum 0.5 ft lower.

AVERAGE DISCHARGE.--40 years, 2.31 cfs (1,670 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

EXTREMES.--Maximum discharge during year, 112 cfs Nov. 19 (gage height, 3.23 ft); no flow for most of year. 1928-68: Maximum discharge, 8,500 cfs (estimated) Mar. 2, 1938; no flow for several months each year.

REMARKS.--No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	2.7	0	0	0	1.1					
2		0	1.8	0	0	0	1.6					
3		0	1.4	0	0	0	1.1					
4		0	1.3	0	0	0	.20					
5		0	1.4	0	0	0	.50					
6		0	1.4	0	0	0	.50					
7		0	1.3	0	0	.40	.40					
8		0	1.1	0	0	25	0					
9		0	.90	0	0	6.5	0					
10		0	.80	0	0	4.1	0					
11		0	.80	0	0	2.2	0					
12		0	.80	0	0	2.7	0					
13		0	1.1	0	.20	2.3	0					
14		0	1.6	0	0	1.3	0					
15		0	.20	0	0	1.6	0					
16		0	.30	0	0	1.8	0					
17		0	.40	0	0	1.9	0					
18		0	1.7	0	0	1.0	0					
19		27	1.5	0	0	.70	0					
20		16	1.1	0	0	.30	0					
21		43	1.0	0	0	.10	0					
22		16	.80	0	0	.10	0					
23		3.9	.40	0	0	0	0					
24		2.9	.10	0	0	.10	0					
25		.90	0	0	0	.10	0					
26		.60	0	0	0	0	0					
27		.60	0	3.6	0	0	0					
28		.60	0	.60	0	0	0					
29		.30	0	0	0	0	0					
30		11	0	0	-----	0	0				0	
31		-----	0	1.0	-----	0	-----		-----		0	-----
TOTAL	0	122.80	25.90	5.20	0.20	52.20	5.40	0	0	0	0	0
MEAN	0	4.09	.84	.17	.007	1.68	.18	0	0	0	0	0
MAX	0	43	2.7	3.6	.20	25	1.6	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	244	51	10	.4	104	11	0	0	0	0	0
CAL YR 1967	TOTAL	1,557.50	MEAN	4.27	MAX	60	MIN	0	AC-FT	3,090		
WTR YR 1968	TOTAL	211.70	MEAN	.58	MAX	43	MIN	0	AC-FT	420		

LOS ANGELES RIVER BASIN

11-0970. 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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Graphic 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.--Maximum discharge during year, 372 cfs Nov. 21 (gage height, 1.68 ft); no flow for most of year. 1940-68: Maximum discharge, 5,130 cfs Dec. 22, 1966 (gage height, 4.78 ft); no flow for parts of each year.

Maximum discharge known since May 1932, 54,000 cfs (estimated) Mar. 2, 1938.

REMARKS.--Records good. Flow regulated since July 1931 by Big Tujunga flood-control reservoir (capacity, 4,240 acre-ft) and since September 1940 by Hansen flood-control reservoir (capacity, 33,373 acre-ft). Several small diversions for domestic use and irrigation. Water reported herein is that which passed Hansen Dam. Los Angeles County Flood Control District diverted water from outlet channel upstream from gage to spreading grounds during year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0					0		0			
2		0					0		0			
3		0					0		0			
4		0					0		0			
5		0					0		0			
6		0					0		0			
7		0					0		0			
8		0					0		0			
9		0					0		0			
10		0					0		0			
11		0					0		.10			
12		0					0		0			
13		0					0		0			
14		0					0		0			
15		0					0		0			
16		0					0		0			
17		0					0		0			
18		0					0		0			
19		0					0		0			
20		0					0		0			
21		3.9					0		0			
22		0					0		0			
23		0					0		0			
24		0					0		0			
25		0					16		0			
26		0					0		0			
27		0					0		0			
28		0					0		0			
29		0					0		0			
30		0					0		0			
31		-----			-----		-----		-----			-----
TOTAL	0	3.9	0	0	0	0	16	0	0.10	0	0	0
MEAN	0	.13	0	0	0	0	.53	0	.003	0	0	0
MAX	0	3.9	0	0	0	0	16	0	.10	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	7.7	0	0	0	0	32	0	.2	0	0	0
(a)	0	4,030	929	1,620	0	1,180	1,010	900	900	202	0	0
CAL YR 1967	TOTAL	2,656.70	MEAN	7.28	MAX	165	MIN	0	AC-FT	5.270	a	38,080
WTR YR 1968	TOTAL	20.00	MEAN	.055	MAX	16	MIN	0	AC-FT	40	a	9,870

a Combined discharge, in acre-ft of creek and diversion.

11-0975. LOS ANGELES RIVER AT LOS ANGELES, CALIF.

LOCATION.--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 1968.

GAGE.--Graphic 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.--39 years, 60.6 cfs (43,870 acre-ft per year); median of yearly mean discharges, 35 cfs (25,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 30,900 cfs Mar. 8 (gage height, 9.84 ft); minimum daily, 3.4 cfs Oct. 23.

1929-68: Maximum discharge, 67,000 cfs Mar. 2, 1938; no flow at times in some years.

REMARKS.--Flow regulated since September 1940 by Hansen flood-control reservoir and since December 1941 by Sepulveda flood-control reservoir (combined capacity, 49,400 acre-ft) and several small flood-control reservoirs. City of Los Angeles at times discharges imported Owens River water into Los Angeles River from upstream distributing reservoirs. Excess treated sewage effluent from Los Angeles Bureau of Sanitation is released to channel about 8 miles upstream. Many diversions above station for domestic use and irrigation. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	5.8	74	13	21	19	553	7.7	7.7	8.2	6.7	5.8
2	9.8	6.7	42	13	9.2	15	154	7.7	7.2	11	7.7	5.4
3	7.2	7.2	34	15	8.7	12	15	9.2	8.7	8.7	7.7	6.2
4	6.2	8.2	27	12	14	11	5.8	6.2	10	9.8	6.2	7.7
5	4.6	8.7	18	13	9.8	12	5.0	7.7	10	9.2	9.2	7.7
6	4.6	7.7	21	14	11	44	5.4	8.7	9.8	9.8	6.7	7.7
7	4.6	12	19	12	12	848	3.8	8.2	8.2	9.2	276	8.2
8	3.8	8.7	60	14	13	4,780	5.4	13	7.7	10	21	6.2
9	4.2	9.2	18	14	145	64	6.7	10	6.2	11	18	7.2
10	6.2	9.8	20	12	89	25	6.2	8.7	7.7	10	10	7.2
11	5.4	10	20	152	15	27	7.7	8.7	8.2	9.2	5.8	13
12	7.2	11	20	16	16	20	7.2	27	14	8.7	5.4	6.7
13	5.4	12	19	7.7	541	315	5.0	18	10	8.2	7.7	6.2
14	5.0	11	19	7.2	58	49	4.6	18	9.8	5.4	6.7	5.8
15	4.6	12	27	7.2	20	20	5.4	8.7	8.7	5.0	7.7	5.4
16	4.6	13	26	7.2	11	26	6.2	11	5.8	6.2	7.2	6.2
17	5.4	12	23	6.2	122	59	5.4	10	6.2	6.7	6.2	7.7
18	5.4	11	1,150	6.2	27	14	7.7	8.7	7.7	6.2	5.4	8.7
19	5.8	3,360	360	6.7	12	10	6.2	8.2	8.2	6.2	6.2	7.7
20	5.4	1,840	53	6.7	9.2	12	5.8	8.2	7.7	7.2	6.2	7.2
21	4.2	7,190	34	6.2	11	9.2	5.4	9.2	7.7	5.0	7.2	6.2
22	3.8	2,060	17	10	13	7.2	7.7	7.2	8.7	5.4	7.7	5.8
23	3.4	72	20	9.2	11	5.8	14	7.2	8.7	6.2	6.2	6.7
24	3.8	28	20	11	6.7	5.4	6.7	7.7	8.2	6.7	5.8	7.2
25	4.6	19	19	12	8.2	5.8	18	9.2	8.2	6.7	5.0	9.2
26	3.8	17	20	14	15	6.7	9.2	7.7	7.7	6.2	4.6	8.7
27	3.8	17	29	574	14	7.7	6.7	14	10	6.7	7.2	9.8
28	5.8	19	20	85	10	7.2	5.0	19	8.7	5.4	7.7	9.8
29	5.4	14	20	16	14	7.7	6.2	13	10	6.2	7.2	8.7
30	5.8	1,260	18	14	-----	7.7	8.2	8.7	7.2	6.7	8.2	9.8
31	6.7	-----	15	295	-----	5.8	-----	7.2	-----	6.2	7.2	-----
TOTAL	163.7	16,072.0	2,282	1,401.5	1,266.8	6,458.2	908.6	323.7	254.6	233.3	507.7	225.8
MEAN	5.28	536	73.6	45.2	43.7	208	30.3	10.4	8.49	7.53	16.4	7.53
MAX	9.8	7,190	1,150	574	541	4,780	553	27	14	11	276	13
MIN	3.4	5.8	15	6.2	6.7	5.4	3.8	6.2	5.8	5.0	4.6	5.4
AC-FT	325	31,880	4,530	2,780	2,510	12,810	1,800	642	505	463	1,010	448
CAL YR 1967	TOTAL 42,578.5		MEAN 117		MAX 7,190	MIN 3.1	AC-FT 84,450					
WTR YR 1968	TOTAL 30,097.9		MEAN 82.2		MAX 7,190	MIN 3.4	AC-FT 59,700					

LOS ANGELES RIVER BASIN

11-0980. ARROYO SECO NEAR PASADENA, CALIF.

LOCATION.--Lat 34°13'20", long 118°10'36", in NW¼NW¼NE¼ sec.31, T.2 N., R.12 W., 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 1968.

GAGE.--Graphic 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.--54 years (1913-15, 1916-68), 8.80 cfs (6,370 acre-ft per year); median of yearly mean discharges, 4.7 cfs (3,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,720 cfs Nov. 19 (gage height, 4.99 ft), from rating curve extended above 1,100 cfs; minimum daily, 1.1 cfs Sept. 25-27.
1910-68: Maximum discharge, 8,620 cfs Mar. 2, 1938 (gage height, 9.42 ft, present datum), on basis of slope-area measurement of maximum flow; no flow at times in some years.

REMARKS.--Records good. Minor regulation by debris dam 1.5 miles upstream. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Eight discharge measurements furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	3.0	18	7.1	7.1	6.6	14	5.1	4.0	2.3	1.9	1.7
2	4.2	3.2	14	7.1	6.6	6.6	12	5.7	3.7	2.1	1.7	1.7
3	4.2	3.4	12	7.1	6.3	6.6	8.7	6.0	3.7	2.1	1.7	1.9
4	4.2	3.4	12	6.8	6.3	6.3	8.2	5.7	3.7	1.9	1.7	1.9
5	4.2	3.4	11	6.3	6.8	5.7	7.9	6.3	4.0	1.9	1.5	1.9
6	4.2	3.4	11	6.3	6.6	6.3	7.6	7.1	4.0	1.9	1.5	1.7
7	3.5	3.4	11	6.3	6.3	10	7.5	6.8	4.0	2.1	1.9	1.5
8	3.4	3.4	10	6.8	6.3	74	7.6	6.6	4.0	2.3	1.5	1.3
9	3.4	3.4	9.3	6.3	12	19	6.3	6.6	4.0	2.1	1.5	1.3
10	3.7	3.2	9.3	7.1	10	14	6.2	6.3	3.7	1.9	1.3	1.3
11	3.4	3.2	8.7	8.2	8.2	13	6.0	6.6	3.2	1.7	1.3	1.3
12	3.4	3.2	8.7	6.0	7.9	12	6.3	7.1	3.2	1.5	1.3	1.3
13	3.4	3.2	7.9	6.8	17	14	6.3	7.1	3.0	1.7	1.5	1.3
14	3.4	3.2	7.6	6.3	23	12	6.0	6.0	2.7	1.9	1.7	1.5
15	3.4	3.4	7.9	6.3	13	11	6.0	5.2	2.5	2.1	1.7	1.7
16	3.4	3.4	7.9	6.6	11	11	6.3	4.7	2.5	1.9	1.9	1.9
17	3.4	3.7	7.9	7.5	11	11	6.3	4.4	2.3	1.7	2.1	1.7
18	3.7	3.4	18	6.3	9.0	11	6.0	4.4	2.3	1.5	1.9	1.5
19	3.7	290	14	6.8	10	10	5.7	4.0	2.3	1.7	1.7	1.9
20	3.7	68	10	6.8	10	10	5.7	4.0	2.3	1.7	1.9	1.9
21	3.4	126	9.9	7.3	9.9	9.9	5.7	4.0	2.3	1.7	1.9	1.9
22	3.4	58	9.6	6.8	9.9	9.9	5.7	4.4	2.3	1.7	1.7	1.7
23	3.4	28	9.9	6.6	9.6	9.6	5.2	4.7	2.3	1.7	1.5	1.5
24	3.4	21	9.9	6.6	9.3	9.3	5.2	4.7	2.3	1.7	1.3	1.3
25	3.4	18	9.6	6.6	8.5	8.7	5.2	4.2	2.5	1.7	1.3	1.1
26	3.4	17	10	7.4	8.2	8.7	5.4	4.0	2.5	1.9	1.3	1.1
27	3.4	16	9.6	16	7.6	8.2	5.7	3.7	2.3	1.9	1.3	1.1
28	3.2	16	8.7	10	7.4	7.9	5.2	3.7	2.3	1.9	1.3	1.5
29	3.2	13	8.5	8.0	6.8	7.6	5.0	3.7	2.5	1.9	1.3	1.7
30	3.0	25	7.9	7.1	-----	7.9	5.0	4.0	2.5	1.9	1.3	1.7
31	3.0	-----	7.4	8.2	-----	7.9	-----	4.0	-----	1.9	1.5	-----
TOTAL	110.3	755.9	317.2	225.4	271.6	365.7	199.9	160.8	88.9	57.9	48.9	46.8
MEAN	3.56	25.2	10.2	7.27	9.37	11.8	6.66	5.19	2.96	1.87	1.58	1.56
MAX	4.2	290	18	16	23	74	14	7.1	4.0	2.3	2.1	1.9
MIN	3.0	3.0	7.4	6.0	6.3	5.7	5.0	3.7	2.3	1.5	1.3	1.1
AC-FT	219	1,500	629	447	539	725	397	319	176	115	97	93

CAL YR 1967 TOTAL 7,597.4

WTR YR 1968 TOTAL 2,649.3

MEAN 20.8

MEAN 7.24

MAX 290

MAX 290

MIN 3.0

MIN 1.1

AC-FT 15,070

AC-FT 5,250

Peak discharge (base, 150 cfs).--Nov. 19 (0430 hrs) 1,720 cfs (4.99 ft); Mar. 8 (0530 hrs) 192 cfs (2.74 ft).

11-0985. LOS ANGELES RIVER NEAR DOWNEY, CALIF.

LOCATION.--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 1968.

GAGE.--Graphic 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.--40 years, 97.4 cfs (70,510 acre-ft per year); median of yearly mean discharges, 60 cfs (43,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 37,400 cfs Mar. 8 (gage height, 7.20 ft); minimum daily, 13 cfs Oct. 7-9, 14-17.

1928-68: 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. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	16	188	27	54	40	605	21	30	21	20	16
2	18	18	66	26	37	35	332	21	26	25	21	16
3	14	18	51	30	31	30	43	23	30	25	20	18
4	14	18	45	26	32	29	24	19	31	23	19	18
5	14	18	36	27	29	30	23	19	30	21	21	19
6	14	18	35	29	28	77	22	24	28	23	24	18
7	13	20	47	26	28	1,090	18	27	29	20	226	18
8	13	18	95	28	31	6,720	19	31	27	23	43	15
9	13	17	29	28	179	178	22	26	24	23	30	17
10	16	17	31	27	130	26	19	25	29	23	25	19
11	14	15	36	155	29	23	23	25	30	20	22	22
12	15	16	35	27	29	26	23	40	35	22	18	17
13	15	18	32	18	424	305	21	36	24	22	24	15
14	13	19	35	18	130	90	18	36	23	18	23	17
15	13	20	40	18	32	23	20	25	24	19	27	14
16	13	22	39	20	21	34	22	29	18	23	25	16
17	13	22	35	19	120	111	20	29	18	23	22	18
18	14	19	1,810	17	63	31	21	24	21	22	21	19
19	15	4,000	449	18	28	29	19	21	22	21	20	19
20	18	1,990	93	17	26	25	19	21	22	22	22	20
21	15	9,410	50	16	28	26	18	22	23	20	24	18
22	14	2,570	34	21	28	28	23	20	24	20	35	16
23	14	125	40	21	28	24	34	19	22	23	31	16
24	22	79	40	23	20	20	24	20	23	23	29	17
25	22	39	38	27	19	19	31	20	22	22	24	19
26	17	34	40	38	35	24	22	21	23	22	23	19
27	18	34	59	619	36	22	15	30	26	19	18	19
28	18	45	41	181	27	22	14	36	26	28	21	19
29	16	35	40	34	28	21	16	28	27	18	20	15
30	16	1,520	35	28	-----	23	20	24	20	19	22	17
31	17	-----	30	335	-----	19	-----	27	-----	19	19	-----
TOTAL	476	20,210	3,674	1,944	1,730	9,200	1,550	789	757	672	939	526
MEAN	15.4	674	119	62.7	59.7	297	51.7	25.5	25.2	21.7	30.3	17.5
MAX	22	9,410	1,810	619	424	6,720	605	40	35	28	226	22
MIN	13	15	29	16	19	19	14	19	18	18	18	14
AC-FT	944	40,090	7,290	3,860	3,430	18,250	3,070	1,560	1,500	1,330	1,860	1,040
CAL YR 1967	TOTAL 56,900		MEAN 156		MAX 9,410		MIN 13		AC-FT 112,900			
WTR YR 1968	TOTAL 42,467		MEAN 116		MAX 9,410		MIN 13		AC-FT 84,230			

LOS ANGELES RIVER BASIN

11-1000. SANTA ANITA CREEK NEAR SIERRA MADRE, CALIF.

LOCATION.--Lat 34°11'30", long 118°00'59", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,475.3 ft above mean sea level (levels by U.S. Forest Service). Prior to Mar. 2, 1938, at 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. Prior to Jan. 31, 1963, graphic water-stage recorder.

AVERAGE DISCHARGE.--52 years, 6.00 cfs (4,340 acre-ft per year); median of yearly mean discharges, 3.5 cfs (2,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 396 cfs Nov. 19 (gage height, 3.98 ft); minimum daily, 0.96 cfs Sept. 26.

1916-68: Maximum discharge, 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 fair. Debris dams above station built in December 1959 cause little or no regulation. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	3.0	11	4.0	4.0	4.2	6.8	2.8	2.8	2.2	1.4	1.4
2	4.0	3.0	9.6	4.1	3.8	4.2	7.1	2.8	2.6	2.0	1.4	1.5
3	4.0	3.1	9.1	4.1	3.7	4.1	4.9	2.9	2.6	1.9	1.3	1.7
4	4.0	3.1	8.1	4.0	3.7	4.1	4.1	2.9	2.8	1.8	1.2	1.7
5	4.0	3.1	7.8	3.2	3.6	4.0	4.0	3.1	3.2	1.8	1.3	1.6
6	3.9	3.2	7.4	2.8	3.7	4.2	4.1	3.1	3.0	1.9	1.3	1.4
7	3.7	3.2	7.0	2.8	3.7	6.7	4.0	3.2	3.2	1.9	1.6	1.3
8	3.6	3.1	6.7	2.9	3.6	55	4.0	3.2	3.3	1.9	1.4	1.2
9	3.6	3.0	6.4	2.8	4.6	16	4.0	3.2	3.2	1.8	1.3	1.1
10	3.5	3.0	6.0	3.2	4.2	11	4.0	3.3	2.9	1.7	1.2	1.1
11	3.5	2.9	5.7	3.8	4.0	8.7	4.2	3.4	2.7	1.7	1.2	1.2
12	3.4	2.9	5.4	3.2	4.0	7.3	4.1	3.6	2.6	1.6	1.4	1.2
13	3.4	2.8	5.1	3.0	5.7	7.3	4.2	3.6	2.5	1.7	1.5	1.2
14	3.4	2.8	4.8	2.9	6.4	6.7	4.1	3.5	2.5	1.7	1.6	1.3
15	3.2	2.9	5.0	2.9	5.5	6.4	4.1	3.1	2.4	1.7	1.5	1.5
16	3.2	2.9	5.2	2.9	5.1	6.2	4.3	2.5	2.3	1.7	1.7	1.5
17	3.2	3.0	5.3	2.9	5.4	6.0	4.4	2.6	2.3	1.7	1.8	1.4
18	3.1	3.1	8.1	2.8	5.1	5.8	4.3	2.4	2.3	1.6	1.9	1.3
19	3.1	46	9.3	2.7	4.8	5.6	4.2	2.3	2.2	1.5	1.7	1.5
20	3.2	28	7.6	2.7	4.9	5.4	4.1	2.4	2.2	1.5	1.8	1.6
21	3.3	45	6.2	2.7	4.7	5.2	4.1	2.7	2.2	1.5	1.7	1.5
22	3.5	28	5.1	2.6	4.6	5.1	3.6	2.8	2.2	1.5	1.6	1.3
23	3.4	16	4.9	2.6	4.4	5.0	3.3	2.9	2.2	1.5	1.4	1.2
24	3.3	10	4.7	2.5	4.1	4.8	3.2	2.8	2.3	1.5	1.3	1.1
25	3.3	8.0	4.6	2.5	4.2	4.7	3.2	2.8	2.3	1.4	1.4	1.0
26	3.4	6.6	4.5	2.9	4.2	4.6	3.2	2.7	2.3	1.3	1.4	.96
27	3.3	5.4	4.4	6.9	4.2	4.5	3.4	2.6	2.3	1.4	1.4	1.0
28	3.3	6.0	4.3	5.9	4.6	4.5	3.5	2.6	2.3	1.4	1.4	1.1
29	3.3	5.6	4.2	4.6	4.3	4.4	3.4	2.7	2.5	1.5	1.3	1.3
30	3.2	14	4.1	3.7	-----	4.3	3.0	2.9	2.3	1.4	1.3	1.4
31	3.1	-----	4.0	4.9	-----	4.3	-----	2.9	-----	1.5	1.4	-----
TOTAL	107.5	272.7	191.6	105.5	128.8	230.3	122.9	90.3	76.5	51.2	45.1	39.56
MEAN	3.47	9.09	6.18	3.40	4.44	7.43	4.10	2.91	2.55	1.65	1.45	1.32
MAX	4.1	46	11	6.9	6.4	55	7.1	3.6	3.3	2.2	1.9	1.7
MIN	3.1	2.8	4.0	2.5	3.6	4.0	3.0	2.3	2.2	1.3	1.2	.96
AC-FT	213	541	380	209	255	457	244	179	152	102	89	78

CAL YR 1967 TOTAL 6,216.3 MEAN 17.0 MAX 181 MIN 2.8 AC-FT 12,330
WTR YR 1968 TOTAL 1,461.96 MEAN 3.99 MAX 55 MIN .96 AC-FT 2,900

Peak discharge (base, 40 cfs).--Nov. 19 (1245 hrs) 396 cfs (3.98 ft); Mar. 8 (0415 hrs) 164 cfs (2.73 ft).

LOS ANGELES RIVER BASIN

229

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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 217.8 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 23.4 cfs (16,940 acre-ft per year); median of yearly mean discharges, 12 cfs (8,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 6,430 cfs Mar. 8, (gage height, 4.31 ft); minimum daily, 1.1 cfs for a few days.

1956-68: Maximum discharge, 8,150 cfs Jan. 6, 1959 (gage height, 4.90 ft, from floodmarks); no flow for some days in most years.

REMARKS.--Records good. Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs (combined capacity, 1,700 acre-ft), and Sierra Madre, Las Flores, and Rubio debris basins. Many diversions above station for domestic use and irrigation. Los Angeles County Flood Control District reports no water diverted from San Gabriel River below Santa Fe Dam to Rio Hondo during year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Six discharge measurements and records of diversion furnished by the Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	3.4	2.1	1.6	1.4	2.3	305	2.7	2.5	2.5	3.1	1.9
2	8.2	3.6	1.6	1.7	1.4	1.1	18	2.1	2.5	2.3	3.6	2.9
3	13	3.6	1.4	2.4	1.4	1.4	2.9	2.1	3.6	2.5	3.4	3.8
4	13	3.8	1.6	1.6	1.2	1.7	1.9	1.4	2.9	3.6	3.1	3.6
5	17	3.8	2.1	1.6	1.9	2.5	1.9	1.2	3.9	3.8	2.9	3.6
6	10	3.8	1.9	3.6	1.9	7.4	1.6	1.7	2.3	3.8	2.7	4.6
7	7.6	3.6	6.7	3.6	1.9	500	1.4	1.7	5.2	3.4	2.5	4.1
8	8.2	4.1	3.4	2.3	2.1	1,320	2.5	1.7	2.1	3.4	2.9	4.1
9	8.8	4.4	1.7	2.7	78	2.5	3.6	2.5	2.1	2.9	4.1	4.6
10	8.2	3.8	1.7	2.9	5.2	1.4	3.1	2.1	2.5	3.4	2.1	5.6
11	7.4	3.8	2.3	9.7	2.1	1.9	4.4	1.7	2.7	3.4	2.1	5.0
12	4.1	3.4	2.5	1.7	7.3	1.9	3.6	2.3	3.6	3.8	3.6	4.6
13	3.1	3.1	1.7	1.6	28	21	2.9	2.7	3.6	3.6	3.8	4.1
14	3.1	3.8	1.9	2.3	6.5	2.5	1.2	1.7	5.4	3.6	2.9	3.6
15	2.5	4.1	1.7	3.4	1.4	1.9	3.5	2.1	11	3.6	2.7	3.3
16	2.9	3.8	1.7	4.6	1.6	4.0	3.8	2.3	9.4	4.4	3.1	3.1
17	3.1	3.8	2.5	3.1	4.0	4.8	3.1	2.5	12	3.1	3.6	2.9
18	3.1	14	455	1.9	1.1	1.4	3.6	2.1	11	3.1	3.1	2.7
19	2.5	1,160	151	1.9	1.4	3.0	4.2	1.4	8.4	3.4	3.8	2.9
20	3.6	476	2.5	1.7	1.9	4.7	2.3	2.9	7.3	4.8	2.9	2.7
21	3.4	820	2.1	1.9	1.4	5.1	1.6	4.8	6.9	2.7	2.3	2.7
22	3.4	6.4	1.9	2.3	1.4	5.3	2.1	3.6	9.1	2.9	2.9	2.9
23	3.4	1.6	1.7	2.3	1.9	5.2	2.3	3.1	9.7	3.1	3.1	2.9
24	3.8	1.7	2.1	2.9	2.3	1.7	2.1	3.6	11	4.6	3.4	2.9
25	3.1	1.7	1.9	2.7	1.9	6.2	3.1	3.1	9.7	2.9	3.1	3.3
26	3.4	1.2	2.5	14	2.7	5.3	2.7	2.1	8.0	4.6	3.1	3.1
27	3.6	1.7	2.5	132	4.1	2.9	1.9	2.9	7.9	3.6	2.5	3.1
28	4.4	17	3.1	3.1	2.5	2.5	1.7	3.6	5.8	6.5	2.7	2.9
29	3.8	12	2.9	1.9	1.7	1.9	2.1	2.9	3.1	3.4	3.1	2.7
30	3.6	303	1.7	1.7	-----	1.7	2.5	1.9	1.7	3.6	3.1	2.5
31	3.6	-----	1.6	16	-----	1.5	-----	3.6	-----	3.4	3.1	-----
TOTAL	177.1	2,880.0	671.0	236.7	171.6	1,926.7	396.6	76.1	176.9	109.7	94.4	102.7
MEAN	5.71	96.0	21.6	7.64	5.92	62.2	13.2	2.45	5.90	3.54	3.05	3.42
MAX	17	1,160	455	132	78	1,320	305	4.8	12	6.5	4.1	5.6
MIN	2.5	1.2	1.4	1.6	1.1	1.1	1.2	1.2	1.7	2.3	2.1	1.9
AC-FT	351	5,710	1,330	469	340	3,820	787	151	351	218	187	204
CAL YR 1967	TOTAL 11,968.30		MEAN 32.8		MAX 1,610		MIN .70		AC-FT 23,740			
WTR YR 1968	TOTAL 7,019.5		MEAN 19.2		MAX 1,320		MIN 1.1		AC-FT 13,920			

LOS ANGELES RIVER BASIN

11-1015. RIO HONDO NEAR MONTEBELLO, CALIF.

LOCATION.--Lat 34°02'00", 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 1968.

GAGE.--Graphic 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, 7,900 cfs Mar. 8 (gage height, 11.70 ft); minimum daily, 5.3 cfs Feb. 25, Sept. 1.

1928-68: Maximum discharge, 28,000 cfs Mar. 2, 1938 (gage height, 18.69 ft, present datum), from rating curve extended above 9,000 cfs on basis of slope-area measurement and runoff from contributing stream; no flow for some days in 1964, 1965.

REMARKS.--Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs (combined capacity, 1,700 acre-ft) and Sierra Madre, Las Flores, and Rubio debris basins. Many diversions above station for domestic use and irrigation. At times flow is diverted from San Gabriel River below Santa Fe Dam to Rio Hondo above station. Since 1957, imported Colorado River water has been released to Rio Hondo 1.6 miles above station for ground-water recharge. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	162	9.4	131	119	155	271	137	220	120	9.0	5.3
2	156	162	7.7	137	119	175	106	107	220	235	9.4	5.6
3	160	160	7.3	135	121	177	130	59	225	235	9.4	6.6
4	160	156	8.0	137	123	179	126	8.0	228	235	10	78
5	160	154	9.0	137	121	182	126	8.0	230	248	11	196
6	150	152	70	137	126	192	124	60	225	235	8.0	200
7	142	152	151	137	131	475	123	112	238	235	17	186
8	142	148	139	137	130	1,490	121	111	230	235	9.4	184
9	150	148	124	120	196	18	135	111	133	235	13	173
10	156	146	114	70	16	10	150	111	9.4	160	9.4	162
11	156	146	114	70	8.5	109	152	111	9.4	8.0	9.0	164
12	158	146	128	104	13	212	150	118	9.0	9.0	9.4	173
13	154	144	142	99	64	152	150	124	8.5	10	9.9	182
14	156	111	112	99	22	93	148	113	9.0	9.0	9.9	191
15	152	9.0	69	99	7.7	196	150	129	13	8.5	9.0	196
16	150	9.0	146	99	7.3	214	152	158	13	8.0	8.0	170
17	137	68	146	106	11	210	154	160	15	7.5	8.0	12
18	139	142	584	119	5.6	65	154	160	14	7.3	7.0	107
19	144	1,130	176	121	79	15	156	164	12	7.7	8.0	215
20	182	544	15	123	122	13	154	158	11	9.9	7.7	205
21	232	1,030	8.0	121	8.5	12	154	166	11	7.3	7.7	203
22	245	23	8.5	123	7.0	12	154	166	13	7.3	7.3	205
23	228	12	7.7	119	6.0	12	154	164	102	7.3	7.7	171
24	250	11	7.7	114	5.6	9.0	156	164	242	8.5	7.0	160
25	194	9.9	7.7	118	5.3	48	160	152	235	7.3	6.3	160
26	152	7.7	66	109	55	116	162	150	235	9.9	7.3	168
27	154	8.0	133	193	133	114	175	117	238	9.0	7.0	171
28	156	37	130	15	135	118	173	8.4	162	14	7.0	179
29	156	70	130	9.9	137	116	168	89	13	9.4	7.7	184
30	158	437	131	49	-----	111	164	150	9.0	10	7.7	133
31	158	-----	130	144	-----	109	-----	188	-----	11	6.6	-----
TOTAL	5,145	5,634.6	3,031.0	3,431.9	2,034.5	5,109.0	4,552	3,733.4	3,332.3	2,358.9	270.8	4,545.5
MEAN	166	188	97.8	111	70.2	165	152	120	111	76.1	8.74	152
MAX	250	1,130	584	193	196	1,490	271	188	242	248	17	215
MIN	137	7.7	7.3	9.9	5.3	9.0	106	8.0	8.5	7.3	6.3	5.3
AC-FT	10,200	11,180	6,010	6,810	4,040	10,130	9,030	7,410	6,610	4,680	537	9,020
(a)	9,490	4,620	4,140	5,780	3,260	5,700	8,040	6,950	5,930	4,100	0	8,510

CAL YR 1967 TOTAL 43,059.1

MEAN 118

MAX 2,120

MIN 4.1

AC-FT 85,410

a 34,320

WTR YR 1968 TOTAL 43,178.9

MEAN 118

MAX 1,490

MIN 5.3

AC-FT 85,640

a 66,520

a Colorado River water, in acre-feet, released to Rio Hondo via Alhambra Wash, at site 1.6 miles upstream.

11-1020. MISSION CREEK NEAR MONTEBELLO, CALIF.

LOCATION.--Lat 34°01'45", long 118°04'07", 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 1968. Yearly estimate for 1938, published in WSP 1315-B. Prior to October 1944, published as Rio Hondo Slough near Montebello.

GAGE.--Graphic water-stage recorder. Datum of gage is 187.7 ft above mean sea level. Prior to Nov. 3, 1938, at datum 6.30 ft higher.

AVERAGE DISCHARGE.--39 years, 11.9 cfs (8,620 acre-ft per year); median of yearly mean discharges, 12 cfs (8,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 31 cfs Mar. 8 (gage height, 8.34 ft); minimum daily, 0.80 cfs Oct. 23. 1929-68: Maximum discharge not determined, occurred Mar. 2, 1938; no flow at times in some years.

REMARKS.--Flow is almost entirely from ground-water seepage. Flow partially regulated above station by Legg Lake. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	1.0	8.4	6.5	7.5	6.4	7.1	5.2	3.7	2.4	1.6	1.4
2	6.1	1.1	6.5	6.5	7.5	6.3	9.6	5.0	3.7	2.7	1.5	1.4
3	5.7	1.1	5.8	6.4	7.5	6.1	8.7	4.9	3.6	2.8	1.5	1.5
4	5.4	1.2	5.5	6.3	7.6	5.5	8.1	4.8	3.6	2.7	1.6	1.5
5	5.3	1.2	5.3	6.2	7.4	6.4	7.8	4.7	3.7	2.7	1.6	1.6
6	5.3	1.4	5.3	5.9	7.3	6.1	7.6	4.7	3.8	2.6	1.6	1.6
7	5.3	1.5	5.4	5.9	7.3	6.4	7.4	4.8	3.9	2.5	1.6	1.6
8	5.2	1.6	5.5	5.9	7.3	25	7.3	4.8	4.0	2.4	1.6	1.9
9	4.8	1.7	5.4	6.0	7.4	21	7.0	4.9	4.1	2.4	1.6	1.7
10	4.2	1.7	5.4	6.0	7.4	13	6.7	4.9	3.8	2.4	1.6	1.7
11	5.0	1.8	5.7	6.0	7.0	9.8	6.7	4.9	3.4	2.4	1.6	1.7
12	7.0	1.7	5.8	6.0	6.9	9.1	6.5	5.0	3.2	2.4	1.6	1.8
13	5.9	1.8	5.8	6.0	6.5	9.2	6.6	5.1	3.0	2.2	1.6	1.8
14	5.4	1.8	5.9	6.2	7.0	9.1	6.7	5.0	3.0	1.9	1.6	1.8
15	4.9	1.6	5.9	6.3	6.9	8.9	6.9	4.9	2.7	1.8	1.6	1.9
16	4.4	1.6	5.9	6.3	7.0	8.9	6.9	4.8	2.7	1.6	1.7	2.1
17	3.4	1.6	6.0	6.4	7.0	8.8	6.9	4.7	2.6	1.6	1.7	1.9
18	3.0	1.8	9.3	6.2	7.1	8.7	6.8	4.5	2.5	1.8	1.7	1.9
19	2.7	2.4	13	6.2	7.2	8.3	6.7	4.5	2.6	2.0	1.7	2.4
20	2.4	2.4	10	6.3	7.3	8.0	6.6	4.3	2.5	2.0	1.7	2.9
21	1.6	4.4	8.2	6.3	7.3	7.7	6.5	4.2	2.4	1.9	1.6	2.9
22	1.0	9.6	7.5	6.3	7.1	7.5	6.3	4.1	2.2	1.8	1.6	2.8
23	.80	6.4	7.3	6.3	7.0	7.3	6.2	4.1	2.1	2.3	1.6	2.8
24	.90	4.9	7.0	6.3	7.0	7.2	6.0	4.0	2.3	2.2	1.6	2.7
25	.90	4.4	6.9	6.3	6.8	7.2	5.9	3.8	2.4	1.9	1.6	2.6
26	.90	4.4	7.0	6.3	6.6	7.1	5.8	3.7	2.5	1.8	1.6	2.7
27	.90	4.2	7.0	6.4	6.4	6.9	5.6	3.6	2.5	1.8	1.5	2.6
28	1.0	4.6	6.8	7.0	6.3	6.8	5.5	3.5	2.4	1.8	1.3	2.7
29	1.0	4.6	6.7	6.7	6.3	6.6	5.4	3.3	2.4	1.7	1.3	2.8
30	1.0	7.2	6.5	6.8	-----	7.2	5.2	3.5	2.3	1.6	1.3	3.0
31	1.0	-----	6.5	7.4	-----	7.4	-----	3.7	-----	1.6	1.2	-----
TOTAL	108.60	86.7	209.2	195.6	204.9	269.9	203.0	137.9	89.6	65.7	48.5	63.7
MEAN	3.50	2.89	6.75	6.31	7.07	8.71	6.77	4.45	2.99	2.12	1.56	2.12
MAX	7.0	9.6	13	7.4	7.6	25	9.6	5.2	4.1	2.8	1.7	3.0
MIN	.80	1.0	5.3	5.9	6.3	5.5	5.2	3.3	2.1	1.6	1.2	1.4
AC-FT	215	172	415	388	406	535	403	274	178	130	96	126

CAL YR 1967 TOTAL 1,541.00 MEAN 4.22 MAX 13 MIN .60 AC-FT 3,060
WTR YR 1968 TOTAL 1,683.30 MEAN 4.60 MAX 25 MIN .80 AC-FT 3,340

LOS ANGELES RIVER BASIN

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 1968.

GAGE.--Graphic water-stage recorder and Parshall flume. Datum of gage is 187.1 ft above mean sea level (Corps of Engineers Survey). Prior to May 8, 1968, graphic water-stage recorder.

EXTREMES.--Maximum daily discharge during year, 3.3 cfs July 2; no flow for many days.
1955-68: Maximum daily discharge, 18 cfs Jan. 6, 1959; no flow for many days in most years.

REMARKS.--Records fair. Flow is almost entirely from ground-water seepage. Flow regulated or diverted above station at Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Seven discharge measurements furnished by Los Angeles County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.4	0	.40	.20	.20			0	2.5	1.2	.79
2	1.8	1.4	0	.40	.20	.20			0	3.3	1.3	.86
3	1.7	1.5	0	.40	.20	.20			0	2.0	1.4	.80
4	1.7	1.5	0	.40	.30	.20			0	2.0	1.5	.80
5	1.7	1.6	0	.40	.20	.10			0	2.0	1.6	1.2
6	1.6	1.6	.20	.50	.20	.20			.14	1.9	1.5	1.3
7	1.5	1.7	.30	.50	.10	.20			0	1.9	1.6	1.3
8	1.4	1.8	.20	.50	.10	.70			0	2.1	1.6	1.3
9	1.3	1.7	.20	.50	.20	.40			0	2.1	1.7	1.3
10	1.3	1.8	.30	.50	.10	.30			0	2.1	1.7	1.1
11	1.3	1.8	.40	.50	.20	.30			0	2.0	1.8	.65
12	1.4	1.8	.50	.50	.20	.30			0	1.7	1.8	.70
13	1.5	1.8	.50	.50	.20	.30			0	1.6	2.0	.66
14	1.5	1.9	.40	.50	.20	.30			0	1.4	1.9	.60
15	1.5	1.9	.30	.40	.20	.40			0	.91	1.9	.88
16	1.6	2.0	.40	.30	.20	.40			0	.43	1.9	1.5
17	1.6	2.0	.40	.30	.40	.40			.17	1.3	1.8	1.2
18	1.6	2.2	.50	.30	.40	.30			.10	1.2	1.7	1.1
19	1.5	1.8	.40	.30	.30	.20			.04	1.6	1.7	1.5
20	1.5	0	.30	.30	.40	.40			.02	1.6	1.4	2.2
21	1.5	0	.20	.30	.40	1.2			.01	1.7	1.3	2.4
22	1.3	0	.20	.30	.40	.50			.02	1.8	1.2	2.1
23	1.4	0	.20	.30	.20	.10			.03	2.2	1.2	2.0
24	1.2	.90	.20	.30	.20	.10			0	1.9	1.1	1.8
25	1.2	1.7	.20	.30	.20	.10			2.9	2.1	.77	1.7
26	1.2	1.7	.30	.20	.20	.10			2.6	2.3	.80	1.8
27	1.1	1.7	.30	.20	.30	.10			1.9	2.0	.77	1.9
28	1.2	1.5	.30	.20	.30	.10			2.5	1.7	.68	1.8
29	1.4	1.3	.40	.20	.30	.10			2.2	1.4	.69	1.8
30	1.4	.60	.40	.20	-----	.10			2.0	1.5	.66	1.8
31	1.4	-----	.40	.20	-----	.20	-----		-----	1.4	.61	-----
TOTAL	45.0	42.60	8.40	11.10	7.00	8.70	0	0	14.63	55.64	42.78	40.84
MEAN	1.45	1.42	.27	.36	.24	.28	0	0	.49	1.79	1.38	1.36
MAX	1.8	2.2	.50	.50	.40	1.2	0	0	2.9	3.3	2.0	2.4
MIN	1.1	0	0	.20	.10	.10	0	0	0	.43	.61	.60
AC-FT	89	85	17	22	14	17	0	0	29	110	85	81
CAL YR 1967	TOTAL 446.70			MEAN 1.22	MAX 2.4	MIN 0	AC-FT 886					
WTR YR 1968	TOTAL 276.69			MEAN .76	MAX 3.3	MIN 0	AC-FT 549					

11-1023. RIO HONDO BELOW WHITTIER NARROWS DAM, CALIF.

LOCATION.--Lat 34°01'00", long 118°05'15", in Paso de Bartolo Grant, on right levee, 0.25 mile upstream from Beverly Boulevard, 0.4 mile downstream from axis of Whittier Narrows Dam, and 1.0 mile northeast of Montebello, Los Angeles County.

RECORDS AVAILABLE.--October 1966 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 175 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 17,600 cfs Mar. 8 (gage height, 9.23 ft), from rating curve extended as explained below; no flow July 29-31.

1966-68: Maximum discharge, 19,100 cfs Jan. 24, 1967 (gage height, 9.73 ft), from rating curve extended above 6,000 cfs on basis of computation of maximum flow in concrete lined channel; no flow at times in each year.

REMARKS.--Records good. Flow regulated by Whittier Narrows flood-control reservoir (capacity, 36,160 acre-ft). There are several small flood-control reservoirs (combined capacities, 1,700 acre-ft) and several small debris basins above Whittier Narrows Dam. Many diversions for domestic use and irrigation. At times flow is diverted from San Gabriel River to Rio Hondo from sites below Santa Fe Dam and above Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River basins.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	184	281	148	131	154	229	102	233	89	11	67
2	184	184	59	154	131	184	234	91	226	212	30	67
3	184	184	51	166	131	184	131	71	240	212	30	67
4	191	184	47	160	121	141	126	24	233	219	30	130
5	191	172	40	160	116	148	126	24	233	219	30	240
6	184	172	86	160	121	154	126	62	233	219	30	228
7	172	178	180	160	136	278	126	121	200	219	15	184
8	178	178	160	160	136	4,760	121	116	198	226	24	184
9	184	178	140	154	227	426	131	133	133	226	30	184
10	191	178	140	119	67	67	142	131	16	174	30	160
11	191	178	140	109	59	90	126	131	10	15	30	148
12	198	184	155	142	59	178	126	131	10	3.6	34	154
13	191	184	170	136	85	190	126	136	36	2.3	34	160
14	184	164	165	136	216	106	126	131	36	3.6	30	172
15	172	53	110	142	47	191	126	111	34	2.3	10	172
16	178	16	190	142	47	198	131	160	36	2.3	3.6	161
17	166	103	190	154	59	94	172	154	40	28	3.6	3.2
18	68	172	1,030	160	44	44	166	160	40	28	3.6	77
19	156	1,110	481	160	86	40	125	160	40	28	2.3	191
20	160	658	416	160	144	40	131	69	40	28	1.3	198
21	205	2,140	67	160	55	40	136	180	44	30	2.3	191
22	219	267	51	166	51	40	148	211	44	28	2.3	191
23	205	189	47	166	47	40	64	154	101	28	1.1	178
24	219	47	44	160	44	40	86	182	247	15	3.6	184
25	199	40	40	160	44	62	125	160	240	2.3	3.6	219
26	172	44	74	104	80	116	138	160	247	2.3	2.4	219
27	172	47	142	196	142	111	142	147	247	2.3	1.4	219
28	166	67	142	113	154	111	142	24	158	1.3	2.3	198
29	166	101	148	47	154	116	131	72	6.8	0	32	205
30	166	470	154	78	-----	116	136	160	6.8	0	59	175
31	172	-----	154	131	-----	116	-----	204	-----	0	55	-----
TOTAL	5,562	8,026	5,294	4,463	2,934	8,575	4,095	3,872	3,608.6	2,265.3	577.4	4,926.2
MEAN	179	268	171	144	101	277	137	125	120	73.1	18.6	164
MAX	219	2,140	1,030	196	227	4,760	234	211	247	226	59	240
MIN	68	16	40	47	44	40	64	24	6.8	0	1.1	3.2
AC-FT	11,030	15,920	10,500	8,850	5,820	17,010	8,120	7,680	7,160	4,490	1,150	9,770
CAL YR 1967	TOTAL 55,550.2		MEAN 152		MAX 5,060		MIN 6.8		AC-FT 110,200			
WTR YR 1968	TOTAL 54,198.50		MEAN 148		MAX 4,760		MIN 0		AC-FT 107,500			

LOS ANGELES RIVER BASIN

11-1025. RIO HONDO NEAR DOWNEY, CALIF.

LOCATION.--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 1968.

GAGE.--Graphic 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, 17,900 cfs Mar. 8 (gage height, 8.80 ft); no flow for many days. 1928-68: 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 debris basins above Whittier Narrows Dam. Many diversions above station for domestic use and irrigation. At times, flow is diverted from San Gabriel River below Santa Fe Dam and above Whittier Narrows Dam to Rio Hondo above station. Since 1937 much of the flow in Rio Hondo has been diverted to percolation basin from a site 5.5 miles upstream. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.20	.20	0	.30	1.0	76	2.8	4.4	0	.30	0
2	.30	.30	0	0	.30	.30	20	2.8	1.8	0	.30	0
3	.10	.30	0	0	.30	.30	.40	2.8	2.0	.30	.30	0
4	0	.30	0	0	.30	.30	.40	.30	2.0	.30	.30	0
5	0	.50	1.4	0	.30	.30	.40	.30	.20	1.4	.20	0
6	0	1.0	.40	0	.30	17	.40	0	0	.50	.30	.30
7	0	.30	2.7	0	.30	196	.40	0	.20	1.0	1.0	1.8
8	0	.30	2.2	0	4.0	4,300	.30	0	.20	.50	.20	.20
9	.20	.20	0	0	15	1.0	.30	0	0	.30	.30	.30
10	.30	0	0	0	1.4	1.0	.30	0	0	.50	.30	.30
11	.30	0	0	4.2	.30	1.0	.30	.30	.50	.10	.30	.20
12	.20	0	0	.30	.30	1.0	.30	.30	1.8	.10	.30	.20
13	.20	0	0	.20	11	25	.30	.20	.30	0	.30	.20
14	.30	0	0	.20	1.8	1.0	.20	0	0	0	.20	.20
15	.30	0	0	.20	.30	1.0	.20	0	.20	0	.20	.20
16	.20	0	0	.30	.30	3.1	.10	0	0	.20	.30	0
17	.20	0	0	.30	2.0	1.0	0	0	0	0	.20	.20
18	.30	0	1,100	.30	.30	.80	0	.10	0	0	.20	.20
19	.10	577	77	1.0	.30	.70	0	0	0	0	0	.30
20	0	101	0	.30	.30	.50	.10	0	.10	0	0	.30
21	0	2,370	0	.30	.30	.40	.20	0	.10	0	0	.30
22	0	24	0	.30	.30	.30	.30	0	0	0	0	1.0
23	.20	0	0	.30	.30	.20	.30	0	.20	0	0	.30
24	.30	0	0	.30	.30	.10	.40	0	0	0	0	.30
25	.30	0	0	.50	.30	0	.50	.10	0	0	0	.30
26	.30	0	0	3.0	.30	0	.80	.20	0	0	0	.30
27	.30	0	0	34	1.0	0	1.1	.20	0	.20	0	.30
28	.30	.10	0	1.4	1.0	0	1.4	1.4	0	7.2	0	.20
29	.20	0	0	.30	.50	0	1.7	.20	0	.30	0	0
30	.20	158	0	.30	-----	0	2.0	1.8	0	.30	0	0
31	.20	-----	0	21	-----	0	-----	3.6	-----	.20	0	-----
TOTAL	5.60	3,233.50	1,183.90	69.00	43.70	4,553.30	109.10	17.40	14.00	13.40	5.50	7.90
MEAN	.18	108	38.2	2.23	1.51	147	3.64	.56	.47	.43	.18	.26
MAX	.30	2,370	1,100	34	15	4,300	76	3.6	4.4	7.2	1.0	1.8
MIN	0	0	0	0	.30	0	0	0	0	0	0	0
AC-FT	11	6,410	2,350	137	87	9,030	216	35	28	27	11	16
CAL YR 1967	TOTAL	12,327.70	MEAN	33.8	MAX	5,120	MIN	0	AC-FT	24,450		
WTR YR 1968	TOTAL	9,256.30	MEAN	25.3	MAX	4,300	MIN	0	AC-FT	18,360		

11-1030. LOS ANGELES RIVER AT LONG BEACH, CALIF.

LOCATION.--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 1968.

GAGE.--Graphic 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.--39 years (1929-68), 143 cfs (103,500 acre-ft per year); median of yearly mean discharges, 95 cfs (68,800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 48,900 cfs Mar. 8 (gage height, 10.49 ft); minimum daily, 18 cfs Oct. 9.

1928-68: 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. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	29	298	32	83	44	865	31	30	24	30	22
2	30	29	68	31	40	43	708	31	25	30	31	20
3	31	30	63	39	34	35	49	34	29	31	30	24
4	28	30	63	35	38	34	32	30	38	29	26	26
5	25	28	54	34	34	38	27	24	34	30	24	27
6	21	28	57	37	36	83	23	30	34	30	33	26
7	22	33	50	34	37	1,310	22	34	32	26	320	30
8	20	31	148	33	47	13,200	23	37	26	29	82	24
9	18	28	40	35	266	327	30	33	21	33	50	24
10	26	29	36	32	282	56	28	34	22	33	39	33
11	27	26	37	250	41	57	32	32	26	31	29	38
12	29	25	40	61	36	62	32	32	32	33	27	36
13	28	24	36	34	519	565	30	52	31	33	33	28
14	24	28	35	29	381	212	24	43	27	27	32	29
15	20	27	41	27	49	48	24	32	28	26	30	23
16	20	26	42	30	38	50	33	35	21	31	31	24
17	21	26	41	30	174	166	32	37	22	30	30	28
18	23	23	3,410	27	102	42	31	34	26	30	25	29
19	25	4,760	856	30	43	48	30	29	27	26	25	27
20	28	2,230	147	26	34	39	29	30	26	26	30	29
21	25	13,600	60	24	34	35	27	35	29	24	31	29
22	21	3,120	43	28	37	33	29	32	32	21	41	23
23	21	176	48	38	36	27	40	30	30	26	42	24
24	32	81	47	38	34	24	36	32	30	27	42	24
25	32	49	47	39	31	23	40	33	34	28	37	27
26	28	39	49	42	41	32	49	33	35	29	35	28
27	26	42	68	807	47	33	29	38	32	28	27	30
28	29	84	50	454	48	32	23	45	31	65	30	28
29	26	48	44	56	36	31	24	39	30	27	30	20
30	24	1,840	39	42	-----	32	30	30	25	30	34	22
31	28	-----	34	510	-----	30	-----	28	-----	30	28	-----
TOTAL	789	26,569	6,091	2,964	2,658	16,791	2,431	1,049	865	923	1,334	802
MEAN	25.5	886	196	95.6	91.7	542	81.0	33.8	28.8	29.8	43.0	26.7
MAX	32	13,600	3,410	807	519	13,200	865	52	38	65	320	38
MIN	18	23	34	24	31	23	22	24	21	21	24	20
AC-FT	1,560	52,700	12,080	5,880	5,270	33,300	4,820	2,080	1,720	1,830	2,650	1,590
CAL YR 1967	TOTAL 85,295		MEAN 234		MAX 13,600	MIN 18		AC-FT 169,200				
WTR YR 1968	TOTAL 63,266		MEAN 173		MAX 13,600	MIN 18		AC-FT 125,500				

BALLONA CREEK BASIN

11-1035. BALLONA CREEK NEAR CULVER CITY, CALIF.

LOCATION.--Lat 33°59'54", long 118°24'05", in La Ballona Grant, 500 ft upstream from Sawtelle Boulevard Bridge, 1.7 miles south of Culver City, Los Angeles County, and 4.1 miles upstream from mouth.

DRAINAGE AREA.--89.5 sq mi, excludes that of Sepulveda Creek. Prior to January 1951, 111 sq mi, change due to tributary channel realignment.

RECORDS AVAILABLE.--February 1928 to September 1968 (after December 1950, flow of Sepulveda Creek excluded).

GAGE.--Graphic water-stage recorder. Datum of gage is 11.98 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to May 14, 1936, at site 1 mile downstream at different datum. May 14, 1936, to Oct. 3, 1961, at datum 0.72 ft lower and Oct. 24, 1961, to Aug. 10, 1967, at datum 0.92 ft lower at site 500 ft downstream.

AVERAGE DISCHARGE.--22 years (1928-50), 35.2 cfs (25,480 acre-ft per year); 18 years (1950-68), 41.0 cfs (29,680 acre-ft per year); median of yearly mean discharges, 34 cfs (24,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 32,500 cfs Nov. 21 (gage height, 14.89 ft); minimum daily, 8.2 cfs Nov. 11.

1928-68: Maximum discharge, 32,500 cfs Nov. 21, 1967 (gage height, 14.89 ft); no flow in parts of some years.

REMARKS.--No regulation above station. City of Los Angeles at times discharges imported Owens River water from several distribution reservoirs into the creek above station. Some small pumping diversions above station for irrigation.

COOPERATION.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	23	11	11	13	317	12	18	12	20	21
2	12	12	18	12	12	12	55	12	18	12	19	20
3	12	12	13	14	11	12	13	15	20	14	16	22
4	12	11	12	11	11	14	12	11	21	11	16	20
5	12	8.8	18	11	13	14	12	11	21	12	16	22
6	12	12	13	11	15	13	11	15	22	12	16	23
7	11	12	49	14	13	1,530	11	15	17	11	63	20
8	10	11	22	15	13	2,060	12	16	16	15	19	19
9	11	10	10	14	72	14	14	15	14	17	19	25
10	13	11	9.4	12	14	11	12	15	15	16	17	22
11	13	8.2	10	63	10	12	15	12	15	13	17	23
12	12	9.4	9.4	14	14	12	13	11	15	13	18	22
13	14	10	8.8	12	147	184	12	10	17	11	19	23
14	12	11	11	12	13	13	11	11	16	11	18	19
15	11	11	12	12	11	12	13	12	15	14	20	18
16	12	11	10	12	11	29	12	13	14	15	21	23
17	11	10	9.4	12	67	18	12	12	17	17	19	22
18	12	10	1,460	11	12	11	11	14	16	19	23	22
19	12	940	213	11	15	11	12	13	13	16	32	22
20	12	459	13	12	17	12	11	14	14	15	27	23
21	12	6,350	12	11	17	12	11	12	14	12	27	17
22	11	226	12	11	16	12	13	13	12	19	20	20
23	12	12	10	11	16	12	14	13	12	18	20	21
24	14	12	11	12	16	11	17	13	13	20	18	22
25	14	11	11	12	15	11	16	11	14	19	14	21
26	11	11	11	57	15	13	13	14	15	20	20	21
27	13	12	12	323	14	12	13	20	12	19	17	20
28	11	15	12	13	14	13	12	20	13	20	21	19
29	10	12	13	11	13	13	16	18	12	19	21	17
30	12	713	11	11	-----	12	12	16	10	17	22	20
31	12	-----	12	120	-----	11	-----	18	-----	18	18	-----
TOTAL	369	8,964.4	2,071.0	888	638	4,139	728	427	461	477	653	629
MEAN	11.9	299	66.8	28.6	22.0	134	24.3	13.8	15.4	15.4	21.1	21.0
MAX	14	6,350	1,460	323	147	2,060	317	20	22	20	63	25
MIN	10	8.2	8.8	11	10	11	11	10	10	11	14	17
AC-FT	732	17,780	4,110	1,760	1,270	8,210	1,440	847	914	946	1,300	1,250
CAL YR 1967	TOTAL 25,125.6		MEAN 68.8		MAX 6,350		MIN 6.7		AC-FT 49,840			
WTR YR 1968	TOTAL 20,444.4		MEAN 55.9		MAX 6,350		MIN 8.2		AC-FT 40,550			

11-1040. TOPANGA CREEK NEAR TOPANGA BEACH, CALIF.

LOCATION.--Lat 34°03'52", 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 1968.

GAGE.--Graphic 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.--37 years, 4.89 cfs (3,540 acre-ft per year); median of yearly mean discharges, 1.7 cfs (1,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 567 cfs Mar. 8 (gage height, 4.99 ft); minimum daily, 0.10 cfs for many days.

1930-38, 1939-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	4.7	1.0	1.0	.70	13	.70	.30	.20	.20	.20
2	.20	.20	2.1	.90	.90	.70	5.0	.70	.30	.20	.20	.10
3	.20	.20	1.7	.90	.90	.70	2.0	.70	.40	.20	.20	.10
4	.30	.20	1.5	.90	.80	.70	1.8	.70	.40	.20	.20	.20
5	.20	.20	1.4	.90	.80	.70	1.5	.60	.40	.20	.20	.20
6	.20	.20	1.4	.90	.80	.70	1.4	.70	.40	.20	.20	.20
7	.20	.20	1.8	.90	.80	41	1.3	.70	.50	.20	.40	.20
8	.20	.20	1.3	.90	.80	186	1.2	.60	.40	.20	.30	.20
9	.20	.20	1.1	.90	1.2	14	1.0	.50	.40	.20	.30	.10
10	.20	.20	.90	1.0	1.0	8.2	.90	.60	.30	.20	.30	.10
11	.20	.20	.90	1.3	.90	5.5	.90	.70	.30	.20	.20	.10
12	.20	.20	.90	.90	.90	4.4	.90	.60	.30	.20	.20	.10
13	.20	.20	.80	.70	1.8	6.2	.90	.50	.30	.20	.20	.10
14	.20	.20	.80	.70	1.0	3.4	.90	.50	.30	.20	.20	.10
15	.20	.20	.80	.80	.90	2.8	.90	.40	.30	.20	.20	.10
16	.20	.20	.80	.80	.80	2.6	.90	.40	.30	.20	.20	.10
17	.10	.20	.80	.80	1.9	2.5	.90	.40	.30	.20	.20	.10
18	.10	.20	41	.70	1.2	2.3	.90	.40	.30	.20	.20	.10
19	.10	15	10	.70	1.0	2.1	.90	.40	.30	.20	.20	.10
20	.10	18	4.7	.70	.90	2.0	.90	.50	.20	.20	.20	.10
21	.10	112	3.4	.70	.90	1.8	.90	.50	.20	.20	.10	.10
22	.20	54	2.6	.90	.90	1.7	.90	.50	.20	.20	.10	.10
23	.20	4.7	2.1	.70	.90	1.5	.70	.50	.20	.20	.10	.10
24	.20	2.3	2.0	.70	.90	1.5	.70	.50	.30	.20	.10	.10
25	.20	1.3	1.8	.80	.90	1.5	.70	.40	.30	.20	.10	.10
26	.20	.90	1.5	.80	.80	1.4	.70	.40	.30	.20	.10	.10
27	.20	.80	1.3	5.6	.80	1.3	.80	.30	.30	.20	.10	.10
28	.20	.70	1.3	2.6	.90	1.2	.70	.40	.30	.20	.10	.10
29	.20	.60	1.3	1.0	.80	1.1	.70	.40	.30	.20	.10	.10
30	.20	25	1.1	.90	-----	1.1	.70	.30	.30	.20	.10	.10
31	.20	-----	1.1	1.8	-----	1.1	-----	.30	-----	.20	.20	-----
TOTAL	5.80	238.90	98.90	33.80	28.10	302.40	45.60	15.80	9.40	6.20	5.70	3.60
MEAN	.19	7.96	3.19	1.09	.97	9.75	1.52	.51	.31	.20	.18	.12
MAX	.30	112	41	5.6	1.9	186	13	.70	.50	.20	.40	.20
MIN	.10	.20	.80	.70	.80	.70	.70	.30	.20	.20	.10	.10
AC-FT	12	474	196	67	56	600	90	31	19	12	11	7.1
CAL YR 1967	TOTAL	2,260.20	MEAN	6.19	MAX	569	MIN	.10	AC-FT	4,480		
WTR YR 1968	TOTAL	794.20	MEAN	2.17	MAX	186	MIN	.10	AC-FT	1,580		

MALIBU CREEK BASIN

11-1055. MALIBU CREEK AT CRATER CAMP, NEAR CALABASAS, CALIF.

LOCATION.--Lat 34°04'40", long 118°42'03", in SW $\frac{1}{4}$ sec.18, T.1 S., R.17 W., 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 1968.

GAGE.--Graphic 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.--37 years, 18.3 cfs (13,250 acre-ft per year); median of yearly mean discharges, 6.4 cfs (4,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3,830 cfs Mar. 8 (gage height, 9.31 ft); minimum daily, 1.0 cfs July 29, 30, Aug. 28, 29.

1931-68: Maximum discharge, 20,600 cfs Dec. 29, 1965 (gage height, 17.27 ft), from rating curve extended above 6,000 cfs on basis of slope-area measurement of maximum flow; 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.3	47	18	5.9	4.3	19	4.1	3.8	2.3	1.7	1.2
2	1.8	1.4	35	19	5.6	4.1	27	4.5	4.1	2.3	1.8	1.2
3	1.7	1.4	31	48	5.6	4.5	20	4.3	3.9	2.1	1.6	1.2
4	1.8	1.3	30	18	5.2	4.8	19	4.7	3.6	2.3	1.7	1.2
5	1.8	1.3	28	25	5.2	4.3	14	4.3	3.1	2.9	1.6	1.3
6	1.7	1.3	28	25	5.2	4.1	11	3.8	3.1	2.4	2.0	1.2
7	1.6	1.2	27	15	5.2	53	11	4.1	3.2	2.4	1.4	1.2
8	1.3	1.1	26	12	5.2	1,350	9.3	4.5	3.1	2.1	1.3	1.3
9	1.3	1.2	19	13	5.0	198	8.5	4.1	3.1	2.0	1.4	1.4
10	1.3	1.2	14	9.3	5.6	87	9.3	4.1	2.9	1.8	1.3	1.3
11	1.6	1.3	14	17	6.1	58	7.8	4.3	2.9	1.7	1.4	1.4
12	1.7	1.4	14	19	6.3	43	6.7	4.5	2.9	1.4	1.6	1.4
13	1.6	1.7	13	19	7.0	54	6.7	4.1	3.1	1.6	1.6	1.6
14	1.6	1.6	12	19	6.7	59	6.5	4.1	3.1	1.7	1.4	1.8
15	1.6	1.7	12	18	14	43	6.7	3.9	2.9	1.6	1.3	2.1
16	1.4	1.4	12	14	34	33	7.2	4.3	2.8	1.6	1.4	1.8
17	1.4	1.4	12	14	8.9	34	7.4	4.5	2.6	1.4	1.4	2.1
18	1.3	1.7	109	14	6.3	31	7.0	4.1	2.6	1.6	1.4	1.7
19	1.3	71	54	12	6.1	28	6.5	4.5	2.4	1.7	1.3	2.0
20	1.1	278	35	7.0	6.1	25	6.5	4.8	2.6	1.6	1.3	1.8
21	1.1	980	28	6.1	5.6	21	7.4	5.0	2.4	1.3	1.2	1.7
22	1.2	588	28	5.9	5.4	19	6.7	4.8	2.4	1.4	1.2	1.4
23	1.2	89	27	5.9	5.0	19	6.1	5.0	3.1	1.4	1.1	1.4
24	1.2	38	22	5.4	4.8	19	5.6	4.8	2.6	1.6	1.1	1.2
25	1.2	26	20	6.7	4.8	19	5.0	4.5	2.6	1.6	1.2	1.2
26	1.2	27	20	12	4.7	19	4.7	4.3	2.4	1.6	1.1	1.1
27	1.3	29	19	43	4.3	17	5.0	4.3	2.6	1.4	1.1	1.2
28	1.3	28	24	37	4.1	14	4.7	4.3	2.3	1.2	1.0	1.3
29	1.3	24	15	7.8	4.5	14	4.5	4.1	2.3	1.0	1.0	1.4
30	1.3	75	19	6.3	-----	14	3.9	4.1	2.4	1.0	1.2	1.4
31	1.3	-----	18	6.5	-----	13	-----	3.9	-----	1.3	1.2	-----
TOTAL	44.3	2,277.9	812	497.9	198.4	2,310.1	270.7	134.7	86.9	53.3	42.3	43.5
MEAN	1.43	75.9	26.2	16.1	6.84	74.5	9.02	4.35	2.90	1.72	1.36	1.45
MAX	1.8	980	109	48	34	1,350	27	5.0	4.1	2.9	2.0	2.1
MIN	1.1	1.1	12	5.4	4.1	4.1	3.9	3.8	2.3	1.0	1.0	1.1
AC-FT	88	4,520	1,610	988	394	4,580	537	267	172	106	84	86

CAL YR 1967 TOTAL 12,127.5 MEAN 33.2 MAX 2,710 MIN 1.1 AC-FT 24,050
WTR YR 1968 TOTAL 6,772.0 MEAN 18.5 MAX 1,350 MIN 1.0 AC-FT 13,430

11-1085. SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CALIF.

LOCATION.--Lat 34°23'55", 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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 794.93 ft above mean sea level, datum of 1929.

AVERAGE DISCHARGE.--16 years, 17.1 cfs (12,380 acre-ft per year); median of yearly mean discharges, 7.2 cfs (5,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,840 cfs Nov. 19 (gage height, 7.53 ft); minimum daily, 0.60 cfs Aug. 13 to Sept. 28.

1952-68: Maximum discharge, 32,000 cfs Dec. 29, 1965 (gage height, 11.50 ft), on basis of slope-area measurement of maximum flow; no flow at times in some years.

REMARKS.--Records poor. No regulation above station. Flow affected by pumping from wells along stream for irrigation.

COOPERATION.--Water-stage recorder graph and 44 discharge measurements furnished by Ventura County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	3.4	68	25	26	19	21	7.2	2.6	2.8	1.0	.60
2	1.8	3.1	52	25	26	19	43	7.1	2.6	3.0	1.0	.60
3	2.0	2.9	28	25	25	18	24	7.0	2.3	3.0	1.0	.60
4	2.0	3.1	20	24	25	17	21	7.0	2.3	2.7	1.0	.60
5	2.2	2.9	19	24	26	16	18	7.0	2.6	2.3	1.0	.60
6	2.2	3.4	18	23	27	15	17	6.9	3.0	2.3	1.0	.60
7	2.4	3.7	18	23	27	46	16	6.8	3.0	2.0	1.0	.60
8	2.6	4.0	18	22	27	262	15	6.7	3.7	2.0	1.0	.60
9	2.6	3.7	18	22	26	78	14	6.6	3.7	2.0	1.0	.60
10	2.6	3.1	18	21	26	55	13	6.4	3.7	1.7	.90	.60
11	2.9	3.1	17	21	26	32	12	6.3	3.7	1.7	.80	.60
12	2.9	2.9	17	21	26	32	11	6.2	3.6	2.0	.70	.60
13	2.9	2.9	17	21	25	43	11	6.1	3.6	2.0	.60	.60
14	2.8	3.4	17	21	39	41	11	6.0	3.5	1.7	.60	.60
15	2.6	4.6	17	21	32	35	10	5.7	3.4	1.7	.60	.60
16	2.6	4.6	17	21	32	32	10	5.4	3.3	1.3	.60	.60
17	2.6	4.6	16	20	24	31	10	5.2	3.3	1.3	.60	.60
18	2.9	5.3	106	20	28	29	9.8	5.0	3.3	1.3	.60	.60
19	3.1	283	50	20	35	28	9.6	4.7	3.3	1.3	.60	.60
20	2.6	102	40	20	30	26	9.4	4.5	3.2	1.3	.60	.60
21	2.4	535	35	20	28	25	9.2	4.4	3.2	1.3	.60	.60
22	3.1	194	30	20	27	25	9.0	4.4	3.2	1.3	.60	.60
23	3.1	78	28	21	26	24	8.8	4.4	3.1	1.3	.60	.60
24	3.7	55	26	20	25	24	8.7	4.4	3.0	1.3	.60	.60
25	4.3	37	25	23	23	23	8.6	3.7	3.0	1.3	.60	.60
26	4.0	28	25	23	22	23	8.4	3.7	3.0	1.2	.60	.60
27	3.7	21	25	28	21	22	8.2	3.7	2.9	1.1	.60	.60
28	3.4	20	25	30	20	21	8.0	3.7	2.9	1.1	.60	.60
29	2.9	18	25	32	20	20	7.6	3.7	2.8	1.1	.60	.70
30	2.4	151	25	30	-----	20	7.4	3.0	2.8	1.1	.60	.80
31	3.1	-----	25	28	-----	20	-----	3.0	-----	1.0	.60	-----
TOTAL	86.2	1,586.7	885	715	770	1,121	389.7	165.9	93.6	52.5	22.80	18.30
MEAN	2.78	52.9	28.5	23.1	26.6	36.2	13.0	5.35	3.12	1.69	.74	.61
MAX	4.3	535	106	32	39	262	43	7.2	3.7	3.0	1.0	.80
MIN	1.8	2.9	16	20	20	15	7.4	3.0	2.3	1.0	.60	.60
AC-FT	171	3,150	1,760	1,420	1,530	2,220	773	329	186	104	45	36

CAL YR 1967 TOTAL 20,408.9 MEAN 55.9 MAX 1,850 MIN 1.8 AC-FT 40,480
WTR YR 1968 TOTAL 5,906.70 MEAN 16.1 MAX 535 MIN .60 AC-FT 11,720

Peak discharge (base, 750 cfs).--Nov. 19 (0400 hrs) 2,840 cfs (7.53 ft); Nov. 30 (1300 hrs) 1,360 cfs (6.27 ft).

SANTA CLARA RIVER BASIN

11-1096. PIRU CREEK ABOVE LAKE PIRU, CALIF.

LOCATION.--Lat 34°31'40", long 118°45'21", in SE¼SW¼ 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,063.62 ft above mean sea level (levels by Ventura County Water Resources Division). Prior to May 11, 1966, graphic water-stage recorder.

AVERAGE DISCHARGE.--13 years, 41.6 cfs (30,120 acre-ft per year); median of yearly mean discharges, 15 cfs (10,900 acre-ft per year).

EXTREMES.--Maximum discharge during year, 912 cfs Nov. 20 (gage height, 4.67 ft); minimum daily, 0.01 cfs Sept. 26, 27.

1955-68: 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 most years.

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

COOPERATION.--Three discharge measurements furnished by the Ventura County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	5.8	82	26	24	25	42	15	5.8	1.2	.22	.08
2	6.2	6.0	59	26	23	24	47	15	4.7	.91	.20	.07
3	5.9	6.3	49	26	23	23	34	14	4.3	.84	.17	.12
4	5.9	6.5	43	24	22	22	30	15	4.4	.73	.15	.09
5	5.9	7.1	41	24	23	22	27	15	4.7	.66	.16	.06
6	5.5	7.7	39	24	23	22	26	15	5.6	.68	.16	.04
7	5.3	7.6	37	24	22	45	25	14	5.7	.61	.21	.04
8	5.4	7.5	36	23	22	183	24	14	5.7	.69	.17	.07
9	5.5	7.8	34	24	24	102	23	14	5.6	.69	.17	.07
10	4.8	7.8	33	25	25	61	22	14	5.2	.62	.24	.05
11	4.7	7.8	32	25	25	49	22	14	4.5	.55	.24	.04
12	4.7	8.2	31	24	25	43	22	15	3.8	.48	.28	.02
13	4.7	8.6	30	23	43	52	22	15	3.6	.37	.27	.03
14	4.6	8.1	27	23	39	50	22	14	3.2	.38	.27	.03
15	4.8	8.4	26	23	33	43	21	13	3.0	.39	.29	.05
16	4.9	8.9	30	23	31	39	21	12	2.9	.45	.28	.03
17	4.1	9.1	29	22	33	38	22	12	2.5	.45	.20	.02
18	3.9	9.6	42	22	34	36	21	11	2.4	.35	.13	.02
19	4.0	81	47	21	37	34	21	9.8	2.3	.31	.16	.05
20	4.1	391	39	21	34	33	21	9.7	2.1	.28	.19	.06
21	4.4	580	32	21	32	31	21	9.7	1.8	.28	.13	.14
22	5.1	410	29	21	31	30	20	10	1.4	.28	.15	.06
23	5.2	147	30	21	30	30	19	9.9	1.2	.21	.13	.02
24	4.7	81	31	21	20	29	18	9.6	1.2	.21	.11	.03
25	5.0	60	30	20	28	28	18	8.5	1.3	.22	.08	.02
26	5.0	49	30	20	27	27	17	7.7	1.3	.21	.09	.01
27	5.0	43	29	25	27	26	16	7.1	1.1	.21	.13	.01
28	5.1	42	29	31	26	25	16	7.0	1.2	.22	.08	.04
29	5.6	37	28	23	25	24	15	6.2	1.3	.23	.05	.02
30	5.7	156	28	22	-----	24	15	6.4	1.3	.22	.05	.02
31	5.6	-----	26	23	-----	24	-----	6.5	-----	.23	.08	-----
TOTAL	157.5	2,215.8	1,108	721	820	1,244	690	359.1	95.2	14.17	5.24	1.41
MEAN	5.08	73.9	35.7	23.3	28.3	40.1	23.0	11.6	3.17	.46	.17	.047
MAX	6.2	580	82	31	43	183	47	15	5.8	1.2	.29	.14
MIN	3.9	5.8	26	20	22	22	15	6.2	1.1	.21	.05	.01

CAL YR 1967 TOTAL 27,875.7 MEAN 76.4 MAX 864 MIN 3.1
WTR YR 1968 TOTAL 7,431.42 MEAN 20.3 MAX 580 MIN .01

Peak discharge (base, 800 cfs).--Nov. 20 (0900 hrs) 912 cfs (4.67 ft).

11-1097. LAKE PIRU NEAR PIRU, CALIF.

LOCATION.--Lat 34°27'52", long 118°44'57", in Temescal Grant, at Santa Felicia Dam on Piru Creek, on left bank 1,000 ft upstream from left end of dam, 0.5 mile downstream from Santa Felicia Canyon, and 4.2 miles north-east of Piru, Ventura County.

DRAINAGE AREA.--425 sq mi.

RECORDS AVAILABLE.--May 1955 to September 1968.

GAGE.--Staff gage read once daily. Datum of gage is mean sea level (levels by United Water Conservation District). Prior to Jan. 27, 1956, reference point at intake tower at same datum.

EXTREMES.--Maximum contents observed during year, 37,056 acre-ft Apr. 3 (elevation, 990.10 ft); minimum contents, 24,799 acre-ft Nov. 1-19 (elevation, 972.90 ft).
1955-68: Maximum contents observed, 78,483 acre-ft May 19, 1958 (elevation, 1,035.30 ft); lake dry Oct. 25 to Nov. 20, 1961.

REMARKS.--Lake is formed by earthfill dam. Storage began May 20, 1955. Capacity table is based on surveys made in 1949 and 1956. Dead storage below two 24-inch sluice gates (elevation, 880.0 ft), 74 acre-ft, included in contents. Capacity below spillway level (elevation, 1,055.0 ft), 101,225 acre-ft. Water is released from outlet to Piru Creek for ground-water recharge, domestic use and irrigation on the Oxnard plain.

COOPERATION.--Elevations furnished by United Water Conservation District.

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	974.90	26,121	-
Oct. 31.....	972.95	24,832	-1,289
Nov. 30.....	978.70	28,714	+3,882
Dec. 31.....	982.25	31,224	+2,510
Calendar year 1967.....	-	-	+8,565
Jan. 31.....	984.30	32,711	+1,487
Feb. 29.....	986.50	34,336	+1,625
Mar. 31.....	989.75	36,788	+2,452
Apr. 30.....	989.20	36,369	-419
May 31.....	986.60	34,410	-1,959
June 30.....	983.35	32,018	-2,392
July 31.....	979.60	29,343	-2,675
Aug. 31.....	975.55	26,558	-2,785
Sept. 30.....	974.60	25,922	-636
Water year 1967-68.....	-	-	-199

^a Elevation at 0730 hours.

SANTA CLARA RIVER BASIN

11-1098. PIRU CREEK BELOW SANTA FELICIA DAM, CALIF.

LOCATION.--Lat 34°27'37", long 118°45'04", in Temescal Grant, on right bank 750 ft downstream from Santa Felicia Dam, 1 mile upstream from Lime Canyon, and 4 miles northeast of Piru, Ventura County.

DRAINAGE AREA.--425 sq mi.

RECORDS AVAILABLE.--October 1955 to September 1968.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 858.8 ft above mean sea level (levels by United Water Conservation District). Supplemental water-stage recorder at site 1.5 miles downstream. Prior to May 10, 1966, graphic water-stage recorder.

EXTREMES.--Maximum daily discharge during year, 192 cfs Oct. 1, 2; no flow Jan. 24-31, Feb. 1, 2.
1955-68: Maximum discharge, 544 cfs Aug. 18, 1958 (gage height, 3.66 ft); no flow at times in most years.

REMARKS.--Records good. Flow regulated by Lake Piru (see sta. no. 11-1097.). No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	5.1	.27	.20	.10	2.5	.36	39	39	42	46	5.6
2	192	5.1	.25	.20	0	2.0	.33	40	39	42	46	5.6
3	53	5.1	.23	.20	0	1.4	25	40	39	42	46	5.4
4	6.5	5.1	.22	.20	1.4	1.4	42	40	40	42	46	4.7
5	6.2	5.1	.20	.20	2.6	5.5	42	40	40	43	46	4.8
6	6.2	5.1	.21	.21	2.5	7.7	42	39	40	43	46	4.8
7	6.2	5.1	.21	.21	2.5	7.8	42	39	40	43	46	4.9
8	6.2	5.1	.20	.21	2.5	3.4	37	40	40	43	46	4.8
9	6.2	4.8	.21	.22	2.5	.20	30	40	40	43	46	4.8
10	5.9	4.8	.20	.23	2.5	.20	31	40	41	43	46	8.2
11	5.9	4.8	.20	.21	2.5	.20	31	40	41	44	46	7.5
12	5.6	4.8	.21	.20	2.5	.20	31	40	41	44	46	5.9
13	5.6	4.8	.24	.19	2.2	.21	29	40	41	44	46	5.9
14	5.4	4.8	.25	.18	1.6	.20	30	40	41	44	46	6.0
15	5.4	4.8	.22	.19	1.7	.20	30	39	41	44	46	6.2
16	5.4	4.8	.20	.19	1.8	.20	30	39	41	45	46	6.0
17	5.4	4.8	.21	.20	1.8	.20	30	40	41	45	46	6.2
18	5.1	4.8	.26	.21	1.9	.21	30	40	41	45	46	6.2
19	5.4	5.1	.24	.21	1.9	.20	30	40	41	45	60	6.5
20	5.4	5.1	.23	.21	1.9	.20	29	39	41	45	67	6.3
21	5.4	5.1	.23	.20	2.0	.20	29	39	41	45	67	6.2
22	5.3	4.8	.22	.19	2.0	.20	29	40	43	45	67	6.2
23	6.5	4.8	.21	.22	2.1	.20	29	39	43	45	67	6.2
24	6.2	4.2	.22	0	2.2	.20	29	39	43	46	67	5.9
25	5.9	4.2	.20	0	1.9	.20	29	39	43	46	67	5.9
26	5.6	4.2	.20	0	1.9	.20	29	39	43	46	67	6.2
27	5.6	4.2	.20	0	1.9	.19	28	39	43	46	27	6.3
28	5.6	3.6	.20	0	1.9	.18	28	39	42	46	5.6	6.2
29	5.6	1.5	.20	0	1.9	.43	37	39	42	46	5.9	6.3
30	5.6	.40	.21	0	-----	.28	39	39	42	46	5.9	6.4
31	5.4	-----	.20	0	-----	.35	-----	39	-----	46	5.6	-----
TOTAL	598.3	136.00	6.75	4.68	54.20	36.75	897.69	1,224	1,233	1,374	1,407.0	178.1
MEAN	19.3	4.53	.22	.15	1.87	1.19	29.9	39.5	41.1	44.3	45.4	5.94
MAX	192	5.1	.27	.23	2.6	7.8	42	40	43	46	67	8.2
MIN	5.1	.40	.20	0	0	.18	.33	39	39	42	5.6	4.7
CAL YR 1967	TOTAL 27,290.96	MEAN 74.8	MAX 192	MIN 0								
WTR YR 1968	TOTAL 7,150.47	MEAN 19.5	MAX 192	MIN 0								

11-1105. HOPPER CREEK NEAR PIRU, CALIF.

LOCATION.--Lat 34°24'03", long 118°49'32", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.25, T.4 N., R.19 W., 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 1968.

GAGE.--Graphic water-stage recorder. Concrete control since October 1967. Altitude of gage is 590 ft (from topographic map).

AVERAGE DISCHARGE.--36 years, 4.90 cfs (3,550 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 450 cfs Nov. 20 (gage height, 3.45 ft); no flow for many days. 1930-32, 1933-36, 1937-68: 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.--Records furnished by Ventura County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	.20	9.9	1.9	1.8	1.4	8.0	.60	.10			
2	.60	.20	5.0	1.9	1.6	1.4	8.4	.70	.10			
3	.60	.30	3.6	1.8	1.6	1.2	2.2	.70	0			
4	.70	.40	3.2	1.8	1.5	1.1	1.6	.80	.10			
5	.60	.40	3.0	1.8	1.5	1.1	1.4	.90	.10			
6	.50	.50	2.6	1.8	1.5	1.2	1.2	.90	.10			
7	.40	.50	2.6	1.8	1.5	24	1.1	.80	.10			
8	.50	.50	2.4	1.9	1.5	75	1.0	.90	.10			
9	.60	.50	2.0	1.9	1.8	7.6	1.0	1.1	.10			
10	.60	.50	2.0	2.4	1.8	4.1	.90	1.1	0			
11	.50	.50	2.0	2.2	1.6	3.0	.80	1.1	0			
12	.40	.50	2.0	1.9	1.6	2.8	1.0	1.1	0			
13	.40	.50	1.9	1.8	6.4	6.0	1.1	1.1	0			
14	.50	.50	2.4	1.8	6.1	4.6	1.1	1.0	0			
15	.40	.50	1.9	1.8	2.6	3.0	1.0	.90	0			
16	.30	.50	1.9	1.8	2.2	2.6	1.1	.80	0			
17	.30	.50	1.9	1.8	2.9	2.4	1.2	.70	0			
18	.30	.60	9.8	1.6	3.2	2.0	1.1	.60	0			
19	.20	54	7.5	1.5	2.0	1.9	1.1	.50	0			
20	.20	131	3.4	1.5	1.9	1.8	1.1	.40	0			
21	.20	139	2.6	1.5	1.8	1.6	1.1	.60	0			
22	.20	33	2.2	1.5	1.6	1.5	1.0	.70	0			
23	.20	5.9	2.0	1.5	1.5	1.5	.90	.60	0			
24	.20	3.6	2.0	1.5	1.4	1.5	.80	.50	0			
25	.30	2.8	2.0	1.5	1.4	1.5	.70	.40	0			
26	.30	2.2	2.0	1.6	1.4	1.4	.70	.30	0			
27	.30	1.8	1.9	3.6	1.5	1.2	.70	.20	0			
28	.30	1.8	1.9	3.8	1.4	1.1	.70	0	0			
29	.30	1.6	1.8	2.0	1.2	1.1	.60	0	0			
30	.20	80	1.8	1.6	-----	1.1	.50	.10	0			
31	.20	-----	1.8	2.2	-----	1.2	-----	.20	-----			
TOTAL	12.10	464.80	93.0	59.0	59.8	162.9	45.10	20.30	0.80	0	0	0
MEAN	.39	15.5	3.00	1.90	2.06	5.25	1.50	.65	.027	0	0	0
MAX	.80	139	9.9	3.8	6.4	75	8.4	1.1	.10	0	0	0
MIN	.20	.20	1.8	1.5	1.2	1.1	.50	0	0	0	0	0
AC-FT	24	922	184	117	119	323	89	40	1.6	0	0	0

CAL YR 1967 TOTAL 3,993.70 MEAN 10.9 MAX 469 MIN .20 AC-FT 7,920
WTR YR 1968 TOTAL 917.80 MEAN 2.51 MAX 139 MIN 0 AC-FT 1,820

PEAK DISCHARGE (BASE, 90 CFS)

DATE	TIME	GAGE HEIGHT	DISCHARGE
11-20	0530	3.45	450
11-30	0730	3.12	289
03-07	2200	3.00	214

SANTA CLARA RIVER BASIN

11-1115. SESPE CREEK NEAR WHEELER SPRINGS, CALIF.

LOCATION.--Lat 34°34'40", long 119°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 1968. Monthly discharge only for January to July 1948 and yearly estimate for water year 1948 (incomplete), published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Datum of gage is 3,500.65 ft above mean sea level (levels by Ventura County Water Resources Division).

AVERAGE DISCHARGE.--21 years (1947-68), 8.60 cfs (6,230 acre-ft per year); median of yearly mean discharges, 2.6 cfs (1,900 acre-ft per year).

EXTREMES.--Maximum discharge during year, 179 cfs Mar. 8 (gage height, 4.47 ft); no flow for many days. 1948-68: Maximum discharge, 3,840 cfs Dec. 6, 1966 (gage height, 9.85 ft); no flow for many days in most years.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	.90	2.3	1.4	1.8	2.4	4.7	1.6	.60	.20	.10	.10
2	.80	.90	1.9	1.4	1.8	2.4	4.2	1.6	.60	.10	.10	.10
3	.80	.90	1.9	1.4	1.8	2.4	3.9	1.4	.60	.10	.10	.10
4	.80	.90	1.8	1.6	1.6	2.4	3.2	1.4	.60	.10	.10	.10
5	.80	.90	1.8	1.6	1.6	2.4	3.0	1.4	.60	0	.10	.10
6	.80	1.1	1.8	1.6	1.6	2.4	2.8	1.4	.60	0	0	.10
7	.80	1.1	1.8	1.6	1.6	5.1	2.8	1.4	.60	0	0	.10
8	.80	1.1	1.8	1.6	1.6	2.8	2.6	1.4	.60	0	0	.10
9	.70	1.1	1.8	1.6	1.6	8.8	2.6	1.4	.60	0	0	0
10	.70	1.1	1.8	1.6	1.6	5.6	2.6	1.4	.60	0	0	0
11	.70	1.2	1.8	1.6	1.6	4.9	2.4	1.4	.50	0	0	0
12	.70	1.3	1.8	1.6	1.6	4.4	2.4	1.6	.50	0	0	0
13	.60	1.3	1.4	1.6	2.6	5.5	2.3	1.8	.40	0	.10	0
14	.60	1.3	1.4	1.6	2.4	4.7	2.3	1.8	.40	0	.10	0
15	.60	1.4	1.3	1.4	2.3	4.4	2.3	1.6	.40	0	.10	0
16	.60	1.4	1.2	1.4	2.1	4.4	2.3	1.4	.30	0	0	0
17	.60	1.4	1.1	1.4	3.0	4.2	2.3	1.4	.30	0	0	0
18	.60	1.4	1.4	1.4	2.8	4.2	2.3	1.3	.30	0	0	0
19	.60	10	1.4	1.4	2.6	3.9	2.3	1.3	.30	0	.10	0
20	.60	19	1.4	1.4	2.4	3.9	2.3	1.3	.30	0	.10	0
21	.60	65	1.4	1.6	2.3	3.7	2.3	1.2	.30	0	.20	0
22	.60	6.9	1.6	1.6	2.3	3.7	2.3	1.4	.30	0	.20	0
23	.70	3.5	1.6	1.6	2.3	3.7	2.3	1.4	.30	0	.10	0
24	.70	2.6	1.6	1.6	2.3	3.5	2.3	1.3	.40	.10	.10	0
25	.70	2.4	1.6	1.8	2.3	3.5	2.1	1.2	.30	0	.10	0
26	.80	2.3	1.6	1.8	2.4	3.2	1.9	1.1	.30	0	.10	0
27	.80	2.1	1.6	1.9	2.4	3.2	1.8	1.1	.20	0	0	0
28	.80	2.1	1.4	1.9	2.4	3.0	1.8	1.1	.10	0	0	0
29	.90	2.3	1.4	1.8	2.4	2.8	1.8	.80	.20	.10	0	0
30	.90	4.8	1.4	1.8	-----	2.8	1.8	.80	.20	.10	0	.10
31	.90	-----	1.4	1.8	-----	2.8	-----	.60	-----	.10	0	-----
TOTAL	22.50	143.70	49.5	49.4	61.1	142.3	76.0	41.30	12.30	0.90	1.80	0.90
MEAN	.73	4.79	1.60	1.59	2.11	4.59	2.53	1.33	.41	.029	.058	.030
MAX	.90	65	2.3	1.9	3.0	28	4.7	1.8	.60	.20	.20	.10
MIN	.60	.90	1.1	1.4	1.6	2.4	1.8	.60	.10	0	0	0
AC-FT	45	285	98	98	121	282	151	82	24	1.8	3.6	1.8

CAL YR 1967 TOTAL 7,122.90 MEAN 19.5 MAX 350 MIN .60 AC-FT 14,130
WTR YR 1968 TOTAL 601.70 MEAN 1.64 MAX 65 MIN 0 AC-FT 1,190

Peak discharge (base, 50 cfs).--Nov. 21 (1315 hrs) 179 cfs (4.47 ft); Mar. 8 (1030 hrs) 52 cfs (3.49 ft).

SANTA CLARA RIVER BASIN

245

11-1130. SESPE CREEK NEAR FILLMORE, CALIF.

LOCATION.--Lat 34°27'03", long 118°55'30", in NE¼NW¼NE¼ sec.12, T.4 N., R.20 W., 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 1968; combined records of creek and canal, October 1927 to September 1968. Published as "at Sespe", prior to 1935.

GAGE.--Graphic water-stage recorder on creek; graphic 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, graphic water-stage recorder, at site 3 miles downstream at different datum. Nov. 5, 1934, to Mar. 2, 1938, graphic water-stage recorder at same site at different datum (destroyed by flood; re-established 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).--43 years, 93.2 cfs (67,470 acre-ft per year); median of yearly mean discharges, 48 cfs (34,800 acre-ft per year).
(combined).--41 years, 98.6 cfs (71,400 acre-ft per year); median of yearly mean discharges, 49 cfs (35,500 acre-ft per year).

EXTREMES (creek only).--Maximum discharge during year, 1,940 cfs Nov. 21 (gage height, 6.70 ft); minimum daily, 0.10 cfs Aug. 1 to Sept. 30.

1927-68: 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, 1,940 cfs Nov. 21; minimum daily, 3.9 cfs Sept. 10-12.

1927-68: 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 one mile upstream since September 1911. Records of suspended-sediment loads for the water year 1968 are published in Part 2 of this report. For records of combined discharge of Sespe Creek and Fillmore Irrigation Co.'s canal, see following page.

COOPERATION.--One discharge measurement furnished by Ventura County Flood Control District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	5.0	129	37	36	36	53	14	2.2	.40	.10	.10
2	6.1	5.0	81	37	36	36	49	14	1.8	.40	.10	.10
3	5.5	5.0	66	37	36	35	40	14	2.3	.40	.10	.10
4	5.5	5.0	58	35	35	34	35	14	1.2	.40	.10	.10
5	5.5	5.0	54	35	34	34	35	14	1.2	.30	.10	.10
6	5.5	5.0	51	35	34	34	34	14	.90	.30	.10	.10
7	5.5	5.0	49	35	34	103	33	12	.90	.30	.10	.10
8	5.5	5.0	48	35	34	530	32	12	.90	.30	.10	.10
9	5.8	5.0	46	35	36	191	31	12	.90	.20	.10	.10
10	5.5	5.0	44	35	36	127	28	12	1.0	.20	.10	.10
11	4.8	4.8	41	35	35	110	28	12	.90	.20	.10	.10
12	4.8	5.2	41	35	36	106	28	12	.80	.20	.10	.10
13	4.8	6.1	40	35	67	133	28	12	.80	.20	.10	.10
14	4.8	6.1	39	35	54	125	27	12	.80	.20	.10	.10
15	4.8	5.5	40	34	44	112	26	12	.80	.20	.10	.10
16	4.5	5.5	40	32	42	104	26	11	.80	.20	.10	.10
17	4.5	5.0	41	32	66	96	26	11	.60	.20	.10	.10
18	4.8	6.1	67	30	66	88	26	9.8	.50	.20	.10	.10
19	4.8	97	62	30	58	79	26	9.4	.50	.20	.10	.10
20	4.8	401	53	30	51	71	26	9.4	.40	.20	.10	.10
21	4.5	966	46	30	48	63	26	8.2	.40	.20	.10	.10
22	4.5	345	44	30	47	55	23	8.2	.40	.20	.10	.10
23	4.5	116	43	30	46	50	21	8.2	.40	.20	.10	.10
24	4.5	74	42	30	43	46	20	6.8	.40	.20	.10	.10
25	4.5	59	41	30	42	41	18	6.4	.40	.20	.10	.10
26	4.5	50	41	30	42	37	18	6.4	.40	.20	.10	.10
27	4.8	43	39	36	41	37	17	5.8	.40	.20	.10	.10
28	4.8	43	39	40	40	36	16	5.0	.40	.20	.10	.10
29	5.0	42	39	38	38	36	15	4.8	.40	.20	.10	.10
30	5.3	338	37	36	-----	36	14	4.8	.40	.20	.10	.10
31	5.0	-----	37	36	-----	35	-----	5.0	-----	.20	.10	-----
TOTAL	156.1	2,668.3	1,538	1,050	1,257	2,656	825	312.2	24.20	7.40	3.10	3.00
MEAN	5.04	88.9	49.6	33.9	43.3	85.7	27.5	10.1	.81	.24	.10	.10
MAX	6.4	966	129	40	67	530	53	14	2.3	.40	.10	.10
MIN	4.5	4.8	37	30	34	34	14	4.8	.40	.20	.10	.10
AC-FT	310	5,290	3,050	2,080	2,490	5,270	1,640	619	48	15	6.2	6.0

CAL YR 1967 TOTAL 59,789.9 MEAN 164 MAX 3,300 MIN 4.5 AC-FT 118,600
WTR YR 1968 TOTAL 10,500.30 MEAN 28.7 MAX 966 MIN .10 AC-FT 20,830

Peak discharge (base, 1,300 cfs).--Nov. 21 (1200 hrs) 1,940 cfs (6.70 ft).

SANTA CLARA RIVER BASIN

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 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	12	130	39	36	40	56	24	13	7.0	4.9	4.4
2	14	12	82	39	36	40	49	24	12	6.7	4.9	4.5
3	14	12	67	39	37	39	40	24	12	6.4	4.8	4.6
4	14	12	59	37	36	39	35	24	11	6.1	4.7	4.6
5	14	12	55	37	37	39	35	24	12	5.9	4.7	4.6
6	13	12	52	37	39	39	34	24	12	5.9	4.6	4.5
7	13	12	50	37	39	106	33	23	12	5.9	4.9	4.2
8	13	12	49	37	39	530	32	23	12	5.9	4.8	4.1
9	12	12	47	37	38	191	31	23	12	6.0	4.5	4.0
10	12	13	45	36	37	127	32	21	12	5.6	4.4	3.9
11	13	13	43	37	36	111	34	20	11	5.5	4.4	3.9
12	13	11	43	38	37	107	35	20	11	5.3	4.5	3.9
13	13	11	42	38	68	134	35	20	10	5.3	4.7	4.0
14	13	11	41	38	55	126	34	21	9.9	5.3	4.8	4.2
15	12	12	41	36	45	113	33	21	9.6	5.6	4.9	4.5
16	12	12	41	34	42	105	32	20	9.2	5.9	5.1	4.6
17	12	14	42	34	66	97	33	20	8.8	5.9	5.3	4.6
18	12	14	67	32	66	90	32	18	8.7	5.6	5.2	4.4
19	12	97	62	32	58	83	31	17	8.4	5.5	5.1	4.5
20	12	401	54	32	51	76	31	17	7.9	5.5	5.0	4.8
21	13	966	47	32	48	68	31	16	7.6	5.2	4.8	4.6
22	13	345	45	32	49	60	30	17	7.2	5.2	4.8	4.4
23	13	117	44	32	47	55	29	17	7.0	5.1	4.5	4.1
24	13	75	43	32	44	50	29	17	7.1	5.1	4.3	4.0
25	13	60	42	32	43	46	28	16	7.1	5.0	4.3	4.0
26	13	51	42	31	42	42	28	16	7.1	5.0	4.2	4.0
27	13	44	41	36	41	42	27	14	7.1	4.9	4.4	4.0
28	13	44	42	40	42	41	26	14	7.1	5.0	4.4	4.1
29	11	43	42	38	42	40	25	14	7.2	5.1	4.1	4.3
30	11	338	40	36	-----	41	24	14	7.1	5.0	4.2	4.6
31	12	-----	40	36	-----	40	-----	15	-----	5.0	4.3	-----
TOTAL	395	2,800	1,580	1,103	1,296	2,757	984	598	286.1	172.4	144.5	128.9
MEAN	12.7	93.3	51.0	35.6	44.7	88.9	32.8	19.3	9.54	5.56	4.66	4.30
MAX	14	966	130	40	68	530	56	24	13	7.0	5.3	4.8
MIN	11	11	40	31	36	39	24	14	7.0	4.9	4.1	3.9
AC-FT	783	5,550	3,130	2,190	2,570	5,470	1,950	1,190	567	342	287	256

CAL YR 1967 TOTAL 61,666 MEAN 169 MAX 3,300 MIN 11 AC-FT 122,300
WTR YR 1968 TOTAL 12,244.9 MEAN 33.5 MAX 966 MIN 3.9 AC-FT 24,290

Peak discharge (base, 1,300 cfs).--(1200 hrs) 1,940 cfs.

11-1135. SANTA PAULA CREEK NEAR SANTA PAULA, CALIF.

LOCATION.--Lat 34°23'44", long 119°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.

DRAINAGE AREA.--40.0 sq mi.

RECORDS AVAILABLE.--October 1927 to September 1968. March 1912 to September 1913, at site 2.5 miles upstream; records not equivalent.

GAGE.--Digital water-stage recorder and concrete diversion dam control. Altitude of gage is 650 ft (from topographic map). Oct. 1, 1927, to Feb. 19, 1931, graphic water-stage recorder at site 500 ft downstream at different datum. Feb. 20, 1931, to Aug. 7, 1962, at present site and datum. Aug. 8, 1962, to Dec. 5, 1963, digital recorder at present site and datum. Dec. 6, 1963, to July 29, 1965, at site 50 ft upstream at present datum.

AVERAGE DISCHARGE.--41 years, 18.7 cfs (13,540 acre-ft per year); median of yearly mean discharges, 9.1 cfs (6,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 345 cfs Nov. 21 (gage height, 3.97 ft); minimum daily, 0.78 cfs Sept. 10.

1927-68: Maximum discharge, 13,500 cfs Mar. 2, 1938 (gage height, 10.56 ft), from rating curve extended above 2,300 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 60 acres by Santa Paula Water Works began prior to October 1927; 364 acre-ft was diverted during year.

COOPERATION.--Record of diversion furnished by Santa Paula Water Works.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	6.5	94	11	9.5	11	68	9.5	4.8	3.9	1.7	1.8
2	8.4	6.5	32	11	9.1	11	37	10	4.5	3.9	1.8	2.2
3	8.4	6.5	17	11	8.9	10	15	10	4.5	3.7	2.0	1.7
4	9.3	6.5	14	11	8.6	10	14	10	4.3	3.7	2.2	1.7
5	8.8	6.5	14	10	8.5	10	13	10	5.2	3.7	2.2	1.9
6	8.1	6.0	13	10	8.8	11	13	8.4	5.5	3.7	1.9	2.2
7	8.4	6.0	13	9.5	8.9	59	12	7.6	5.4	3.7	2.3	2.6
8	9.1	6.0	12	9.0	8.8	140	11	7.9	5.8	3.8	1.9	1.6
9	7.6	6.0	11	8.6	9.7	81	11	8.1	5.2	3.5	1.8	.84
10	7.1	6.0	11	9.7	9.6	78	10	7.6	4.8	3.2	1.6	.78
11	6.7	5.5	11	9.4	9.4	69	11	8.0	4.7	3.0	1.7	1.0
12	6.4	5.5	10	8.9	9.6	43	11	8.1	4.6	3.0	1.8	1.2
13	6.5	5.5	9.5	8.8	16	47	11	7.8	4.5	3.1	1.8	1.4
14	6.5	5.5	9.0	8.5	18	37	11	8.1	4.4	3.7	1.9	1.6
15	6.6	5.5	9.5	8.4	16	27	11	7.6	4.4	3.8	2.3	1.9
16	6.4	5.0	10	8.4	15	25	11	7.2	4.4	3.3	2.7	1.9
17	6.7	5.0	11	8.4	47	23	11	6.5	4.3	2.9	2.8	1.7
18	6.2	5.0	25	8.3	45	19	10	5.9	4.2	2.8	2.8	1.7
19	6.1	40	16	8.3	29	19	9.5	5.6	4.2	2.5	2.8	2.2
20	6.2	25	12	8.1	20	16	9.0	5.4	4.1	2.5	2.5	2.3
21	6.7	154	11	8.5	17	15	8.4	5.6	4.1	2.7	2.7	2.3
22	7.2	92	11	8.3	15	14	8.1	6.1	4.0	2.3	2.7	2.3
23	7.1	16	11	11	14	14	7.9	5.9	4.0	2.1	2.4	1.6
24	7.0	6.3	10	12	12	13	7.7	5.4	4.1	1.9	2.5	1.2
25	7.2	5.3	10	13	12	12	9.2	5.1	4.1	2.1	2.6	1.3
26	7.4	5.6	10	14	12	12	10	4.8	3.9	2.2	2.5	1.3
27	7.5	6.1	10	21	12	11	12	4.2	3.8	2.0	2.1	1.5
28	7.4	8.8	11	12	12	10	9.4	4.3	4.0	2.0	2.2	1.4
29	7.4	9.2	11	10	11	10	9.2	4.9	4.3	2.1	1.9	1.6
30	6.8	187	11	9.9	-----	13	9.4	5.8	4.2	2.0	1.9	1.8
31	6.7	-----	11	11	-----	32	-----	5.5	-----	1.7	1.6	-----
TOTAL	227.3	660.3	471.0	317.0	432.4	902	400.8	216.9	134.3	90.5	67.6	50.52
MEAN	7.33	22.0	15.2	10.2	14.9	29.1	13.4	7.00	4.48	2.92	2.18	1.68
MAX	9.4	187	94	21	47	140	68	10	5.8	3.9	2.8	2.6
MIN	6.1	5.0	9.0	8.1	8.5	10	7.7	4.2	3.8	1.7	1.6	.78
AC-FT	451	1,310	934	629	858	1,790	795	430	266	180	134	100
CAL YR 1967	TOTAL 15,850.5	MEAN 43.4	MAX 487	MIN 5.0	AC-FT 31,440							
WTR YR 1968	TOTAL 3,970.62	MEAN 10.8	MAX 187	MIN .78	AC-FT 7,880							

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
11-21	1045	3.97	345	03-08	0415	3.39	298
11-30	1045	3.14	266				

SANTA CLARA RIVER BASIN

11-1139.2. SANTA CLARA RIVER AT SATICOY, CALIF.

LOCATION.--Lat 34°16'29", long 119°08'11", in Santa Clara Del Norte Grant, on third pier from left levee of bridge on State Highway 118, 0.9 mile southeast of Saticoy, Ventura County.

DRAINAGE AREA.--1,595 sq mi.

RECORDS AVAILABLE.--October 1927 to September 1932, October 1949 to September 1968. Published as "at Montalvo", prior to 1968. Monthly discharge only for 1950-67 published in 1968 report.

GAGE.--Graphic water-stage recorder. Datum of gage is 102.40 ft above mean sea level (Ventura County Flood Control District benchmark). Prior to October 1967, at site 3.9 miles downstream at different datums.

AVERAGE DISCHARGE.--24 years, 72.6 cfs (52,560 acre-ft per year); median of yearly mean discharges, 17 cfs (12,300 acre-ft per year).

EXTREMES.--Maximum and minimum discharges for the water years 1951-68 are contained in the following table:

Water year	Date	Maximum discharge (cfs)	Gage height (feet)	Minimum discharge (cfs)
1950	Feb. 6, 1950	2,280	6.55	0
1951	-	0	-	0
1952	Jan. 15, 1952	45,000	12.15	0
1953	-	-	-	0
1954	-	-	-	0
1955	May. 1, 1955	500	-	0
1956	Jan. 26, 1956	5,500	-	0
1957	Jan. 13, 1957	3,780	7.60	0
1958	Apr. 3, 1958	52,200	11.03	0
1959	Feb. 16, 1959	11,000	7.62	0
1960	Feb. 2, 1960	408	4.61	0
1961	Nov. 7, 1960	216	4.43	0
1962	Feb. 11, 1962	47,700	10.09	0
1963	Feb. 10, 1963	5,060	7.65	0
1964	Apr. 1, 1964	2,350	7.09	0
1965	Apr. 10, 1965	3,360	7.43	0
1966	Dec. 29, 1965	51,900	10.40	0
1967	Dec. 6, 1966	35,000	10.17	0
1968	Nov. 21, 1967	a 4,000	unknown	0

a Estimated.

Note.--Prior to 1968 at site 3.9 miles downstream at different datums.

1927-32, 1949-68: Maximum discharge, 52,200 cfs Apr. 3, 1958 (gage height, 11.03 ft, site and datum then in use); no flow for most of each year.

REMARKS.--Records poor prior to Jan. 23 and fair thereafter. Flow partly regulated since May 1955 by Lake Piru (see sta. no. 11-1097). Natural flow affected by ground-water withdrawals, diversions, municipal use, and ground-water replenishment. Diversion to spreading grounds and for irrigation in Pleasant Valley, at site 2.0 miles upstream. AVERAGE DISCHARGE represents flow to the ocean regardless of upstream development. Records of suspended-sediment loads for the water year 1968 are published in Part 2 of this report.

COOPERATION.--Records 1950-67 furnished by Ventura County Flood Control District; reviewed by Geological Survey. Records of diversion furnished by United Water Conservation District.

MONTHLY AND YEARLY DISCHARGE IN ACRE-FEET

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Annual
1950	0	0	80	680	4,690	0	0	0	0	0	0	0	5,450
1951	0	0	0	0	0	0	0	0	0	0	0	0	0
1952	0	0	637	111,100	3,260	64,270	12,390	260	0	0	0	0	192,000
1953	0	3.0	2,530	770	2.2	0	1.0	0	0	0	0	0	3,310
1954	0	0	0	3,010	4,710	4,480	166	0	0	0	0	0	12,370
1955	0	0	0	108	54	0	26	758	0	0	0	0	945
1956	0	0	0	14,190	0	0	0	0	0	0	0	0	14,190
1957	0	0	0	3,460	1,440	716	0	0	0	0	0	0	5,620
1958	0	0	12,920	779	49,130	56,110	158,800	734	16	8.5	6.3	4.0	278,500
1959	6.1	4.6	6	2,070	17,210	17	8.3	4.8	0	0	0	0	19,320
1960	0	0	0	58	216	6.1	51	0	0	0	0	0	331
1961	0	456	2.4	0	0	0	0	0	0	0	0	0	459
1962	0	114	1,260	6.5	220,900	2,190	18	0	0	0	0	0	224,500
1963	0	0	0	0	5,450	732	30	0	1.2	0	0	0	6,220
1964	0	815	0	1,220	.8	228	2,460	0	0	0	0	0	4,720
1965	0	1.6	3,230	0	0	1.6	4,360	0	0	0	0	0	7,590
1966	0	95,400	54,570	1,860	492	0	0	0	0	0	0	0	152,300
1967	0	3,500	49,700	12,230	0	13,580	31,940	3,270	0	0	0	0	114,200

SANTA CLARA RIVER BASIN

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11-1139.2. SANTA CLARA RIVER AT SATICOY, CALIF.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 to SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	3.0	3.0	4.9	.60	0	.40	0	.10		
2		0	3.0	3.0	5.2	.60	60	.10	0	.70		
3		0	3.0	3.0	2.4	.40	0	.10	0	.50		
4		0	3.0	3.0	2.1	.30	0	0	0	.60		
5		0	3.0	3.0	1.9	.30	0	0	.50	0		
6		0	3.0	3.0	1.6	.30	0	0	.40	0		
7		0	3.0	3.0	2.1	141	0	0	.20	0		
8		0	3.0	3.0	2.1	1,390	0	.80	.20	0		
9		0	3.0	3.0	2.1	168	0	.40	.40	0		
10		0	3.0	3.0	1.9	3.9	.10	.30	0	0		
11		0	3.0	3.0	2.2	1.6	.10	.20	.20	0		
12		0	3.0	3.0	2.2	2.0	.10	.20	.50	0		
13		0	3.0	3.0	99	3.4	.10	.60	0	0		
14		0	3.0	3.0	20	1.0	.10	1.0	0	0		
15		0	3.0	3.0	.80	.60	.10	.60	.10	0		
16		0	3.0	3.0	.70	.40	.10	1.3	0	0		
17		0	3.0	3.0	4.6	.20	.10	.80	0	0		
18		0	3.0	3.0	2.1	0	.10	.60	0	0		
19		200	3.0	3.0	1.2	0	.10	.30	0	0		
20		400	3.0	3.0	.70	0	.10	.10	0	0		
21		1,500	3.0	3.0	.60	0	.10	.60	0	0		
22		500	3.0	3.0	.40	0	.10	.70	.20	0		
23		150	3.0	3.0	.40	0	.10	.60	.20	0		
24		10	3.0	3.1	.40	0	.20	.70	0	0		
25		5.0	3.0	2.6	.40	0	.10	.40	0	0		
26		4.0	3.0	3.1	.40	0	.10	.40	0	0		
27		3.0	3.0	4.2	.50	0	.30	0	.40	0		
28		3.0	3.0	4.9	.60	0	.20	.20	.10	0		
29		3.0	3.0	3.4	.60	0	0	.60	.50	0		
30		5.0	3.0	2.8	-----	0	0	.50	.10	0		
31		-----	3.0	3.4	-----	0	-----	0	-----	0		
TOTAL	0	2,783.0	93.0	96.5	164.10	1,714.60	62.30	12.50	4.00	1.90	0	0
MEAN	0	92.8	3.00	3.11	5.66	55.3	2.08	.40	.13	.061	0	0
MAX	0	1,500	3.0	4.9	99	1,390	60	1.3	.50	.70	0	0
MIN	0	0	3.0	2.6	.40	0	0	0	0	0	0	0
AC-FT	0	5,520	184	191	325	3,400	124	25	7.9	3.8	0	0
CAL YR 1967	TOTAL	33,651.50	MEAN	92.2	MAX	3,500	MIN	0	AC-FT	66,750		
WTR YR 1968	TOTAL	4,931.90	MEAN	13.5	MAX	1,500	MIN	0	AC-FT	9,780		

Note.--No gage-height record Oct. 1 to Jan. 23.

VENTURA RIVER BASIN

11-1145. MATILIJA CREEK ABOVE RESERVOIR, NEAR MATILIJA HOT SPRINGS, CALIF.

LOCATION (revised).--Lat 34°29'39", long 119°19'46", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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. Prior to Oct. 1, 1967, at site 300 ft upstream.

DRAINAGE AREA.--50.7 sq mi.

RECORDS AVAILABLE.--May 1948 to September 1968. Published as "near Matilija" prior to October 1953.

GAGE.--Digital water-stage recorder. Datum of gage is 1,157.98 ft above mean sea level (levels by Ventura County Flood Control District). May 27, 1948, to Feb. 16, 1965, graphic water-stage recorder. Prior to Oct. 1, 1967, at site 300 ft upstream at datum 2.22 ft higher.

AVERAGE DISCHARGE.--20 years, 21.3 cfs (15,420 acre-ft per year); median of yearly mean discharges, 8.6 cfs (6,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 149 cfs Mar. 8 (gage height, 2.48 ft); minimum daily, 0.70 cfs Sept. 4.

1948-68: 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, 0.30 cfs Oct. 17-20, 25, 27, 1951.

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

COOPERATION.--Twelve discharge measurements furnished by Ventura County Flood Control District; one discharge measurement furnished by Ventura River Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	6.5	16	10	10	8.4	21	8.1	4.7	2.9	2.1	1.9
2	8.2	6.5	14	10	9.6	9.7	21	8.1	4.1	2.4	2.2	1.6
3	8.2	6.2	14	10	9.7	9.3	16	8.1	4.2	2.2	2.1	1.3
4	8.2	6.2	14	10	9.6	9.3	15	8.1	4.9	2.1	1.9	.70
5	8.2	6.5	13	10	9.7	9.3	14	8.1	5.0	2.2	2.2	.78
6	8.0	6.5	12	10	9.7	9.3	13	8.1	4.9	2.1	2.2	.78
7	8.0	6.5	11	10	9.7	21	13	8.1	5.2	2.1	2.1	1.1
8	8.0	6.5	11	10	9.7	117	12	8.1	5.4	2.3	2.1	1.8
9	8.0	6.5	11	10	9.6	54	12	8.1	5.3	2.2	2.1	1.6
10	8.0	6.5	11	10	9.7	43	12	8.1	5.1	2.2	2.1	1.8
11	7.8	6.2	10	10	9.5	30	11	8.1	4.2	2.4	2.1	1.8
12	7.8	6.2	10	10	9.4	22	11	8.0	3.8	2.6	2.1	1.8
13	7.8	6.2	10	10	12	23	12	7.7	3.6	2.6	2.0	1.8
14	7.8	6.2	10	10	10	21	11	7.6	3.3	2.6	2.2	1.8
15	7.8	6.2	9.7	10	9.6	20	10	7.4	3.0	2.5	2.3	1.8
16	7.6	6.2	9.7	10	9.4	18	10	7.3	3.1	2.5	2.3	1.5
17	7.6	6.2	9.7	10	14	18	11	6.8	3.0	2.5	2.3	1.4
18	7.6	6.8	12	10	13	17	11	6.2	2.9	2.5	2.3	2.1
19	7.6	14	12	10	12	17	10	6.2	2.9	2.5	2.3	2.1
20	7.6	15	12	10	12	16	10	6.0	2.9	2.5	2.3	2.3
21	7.4	46	12	9.9	12	15	10	6.2	2.7	2.5	2.3	2.3
22	7.4	25	11	9.9	11	15	9.3	6.3	2.5	2.5	2.3	2.4
23	7.4	19	10	9.9	11	14	9.1	5.9	2.6	2.5	2.0	2.0
24	7.4	15	10	9.9	11	14	8.7	6.1	2.7	2.4	1.9	1.9
25	7.4	14	10	9.9	11	14	9.2	5.7	2.8	2.4	2.0	2.0
26	7.2	13	10	9.8	10	13	8.5	5.2	2.9	2.3	2.0	1.9
27	7.2	11	10	9.8	10	13	8.2	5.0	3.0	2.1	2.0	2.1
28	7.2	11	10	9.8	10	13	7.6	4.8	3.1	1.8	1.9	2.0
29	7.2	11	10	9.8	9.7	13	8.1	5.1	3.3	1.7	1.8	1.8
30	7.2	20	10	9.8	-----	13	8.1	5.3	3.3	1.9	1.8	1.8
31	7.0	-----	10	9.8	-----	13	-----	5.1	-----	2.1	1.8	-----
TOTAL	238.0	328.6	345.1	308.3	303.6	642.3	342.8	213.0	110.4	72.1	65.1	51.96
MEAN	7.68	11.0	11.1	9.95	10.5	20.7	11.4	6.87	3.68	2.33	2.10	1.73
MAX	8.2	46	16	10	14	117	21	8.1	5.4	2.9	2.3	2.4
MIN	7.0	6.2	9.7	9.8	9.4	8.4	7.6	4.8	2.5	1.7	1.8	.70

CAL YR 1967 TOTAL 14,108.30 MEAN 38.7 MAX 613 MIN 6.2
HTR YR 1968 TOTAL 3,021.26 MEAN 8.25 MAX 117 MIN .70

Peak discharge (base, 200 cfs).--No peak above base.

11-1155. MATILIJA CREEK AT MATILIJA HOT SPRINGS, CALIF.

LOCATION.--Lat 34°28'58", long 119°18'03", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.5 N., R.23 W., 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 1968. Combined monthly records for creek and diversion, May 1951 to September 1968. Prior to October 1953, published as "at Matilija."

GAGE.--Graphic 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, 269 cfs Oct. 11 (gage height, 3.65 ft); minimum daily, 0.60 cfs Dec. 15.

1927-68: Maximum discharge, 15,900 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 0.10 cfs for several days in some years of regulated flow.

REMARKS.--Records good. Flow regulated March 1948 to March 1964 and partly regulated since March 1964; water diverted at dam by Matilija conduit to Ventura River basin and Ojai Valley for irrigation since May 1951. Ventura River Municipal Water District reports no diversion during year.

COOPERATION.--Two discharge measurements furnished by Ventura River Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	6.6	20	4.1	3.7	8.7	16	7.0	6.0	5.0	4.4	4.1
2	8.7	6.2	17	4.4	3.3	8.7	16	7.0	6.0	5.0	4.4	4.3
3	8.7	6.6	15	4.8	2.8	8.7	15	7.0	6.0	5.0	4.6	4.1
4	8.7	6.2	15	4.8	2.7	8.5	12	7.0	5.8	5.0	4.6	4.0
5	9.0	6.2	13	4.8	2.7	7.7	12	7.0	5.8	5.0	4.4	4.0
6	9.3	6.2	13	4.8	2.7	6.6	12	7.0	5.8	5.0	4.4	4.1
7	9.3	6.2	14	4.8	2.7	9.3	12	7.0	5.8	5.0	4.4	4.1
8	9.3	6.2	14	4.8	2.7	9.9	12	7.0	5.8	5.0	4.3	4.1
9	9.0	6.2	13	4.8	2.7	9.3	12	7.0	5.8	5.0	4.3	4.1
10	76	6.0	13	5.0	2.9	9.3	12	7.0	5.8	5.0	4.3	4.0
11	69	6.0	13	5.0	2.9	8.7	11	7.0	5.6	5.0	4.4	4.0
12	69	6.2	13	4.8	2.9	8.5	9.0	7.0	5.4	5.0	4.3	4.0
13	4.3	10	13	4.6	8.5	8.5	9.0	7.0	5.4	5.0	4.3	4.0
14	4.3	13	7.3	4.6	18	18	9.0	7.0	5.4	5.0	4.3	4.0
15	4.3	7.0	.60	4.6	13	21	7.7	7.0	5.4	5.0	4.3	4.0
16	4.4	5.0	3.4	4.6	13	21	6.4	7.0	5.4	5.0	4.3	2.7
17	4.3	6.4	3.7	4.6	13	21	6.4	6.8	5.4	5.0	4.3	1.4
18	4.3	6.8	4.4	4.6	13	20	6.6	6.8	5.4	5.0	4.3	1.3
19	4.4	11	4.4	4.6	13	20	6.8	6.8	5.4	5.0	4.3	1.4
20	4.4	14	4.1	4.6	13	19	7.0	6.8	5.4	5.0	4.3	1.4
21	4.6	25	4.3	4.6	13	18	7.0	6.8	5.2	5.0	4.3	1.4
22	5.2	23	4.4	4.4	13	18	7.0	6.8	5.2	5.0	4.3	1.4
23	5.2	16	4.4	4.4	13	17	7.0	6.8	5.2	4.8	4.3	1.4
24	15	28	5.0	4.3	13	17	7.0	6.8	5.2	4.8	4.3	1.4
25	17	22	5.6	4.1	13	16	7.0	6.8	5.0	4.8	4.3	1.8
26	8.0	17	71	3.8	11	16	7.0	6.8	5.0	4.8	4.3	2.7
27	8.0	41	41	4.3	8.7	16	7.0	6.6	5.0	4.6	4.3	2.7
28	8.0	13	8.4	4.1	8.7	16	7.0	6.0	5.0	4.4	4.4	2.7
29	8.2	13	1.5	4.0	8.7	16	7.0	6.0	5.0	4.3	4.4	2.7
30	7.2	15	4.3	4.1	-----	16	7.0	6.0	5.0	4.3	4.3	2.7
31	6.2	-----	4.3	4.0	-----	16	-----	6.0	-----	4.4	4.1	-----
TOTAL	422.3	361.0	368.10	139.8	241.3	434.4	279.9	210.6	163.6	151.2	134.5	90.0
MEAN	13.6	12.0	11.9	4.51	8.32	14.0	9.33	6.79	5.45	4.88	4.34	3.00
MAX	76	41	71	5.0	18	21	16	7.0	6.0	5.0	4.6	4.3
MIN	4.3	5.0	.60	3.8	2.7	6.6	6.4	6.0	5.0	4.3	4.1	1.3
AC-FT	838	716	730	277	479	862	555	418	325	300	267	179
CAL YR 1967	TOTAL 16,660.50		MEAN 45.6		MAX 289		MIN .60		AC-FT 33,050			
WTR YR 1968	TOTAL 2,996.70		MEAN 8.19		MAX 76		MIN .60		AC-FT 5,940			

VENTURA RIVER BASIN

11-1160. NORTH FORK MATILIJA CREEK AT MATILIJA HOT SPRINGS, CALIF.

LOCATION.--Lat 34°29'33", long 119°18'20", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ 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.--5.6 sq mi.

RECORDS AVAILABLE.--October 1928 to September 1932, October 1933 to September 1968. Prior to October 1953, published as "at Matilija".

GAGE.--Graphic water-stage recorder. Concrete control since September 1966. Datum of gage is 1,142.02 ft above mean sea level (levels by Ventura County Flood Control District). Prior to Nov. 12, 1948, at site 0.3 mile downstream at different datum.

AVERAGE DISCHARGE.--39 years, 8.87 cfs (6,420 acre-ft per year); median of yearly mean discharges, 3.9 cfs (2,800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 68 cfs Nov. 21 (gage height, 1.99 ft); minimum daily, 0.60 Aug. 28-30, Sept. 9-12, 25, 26.

1928-32, 1933-68: Maximum discharge, 5,580 cfs Mar. 2, 1938; minimum daily, 0.10 cfs for several days in some years.

REMARKS.--No regulation or diversion above station.

COOPERATION.--Records furnished by Ventura County Flood Control District, and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	3.1	5.4	3.7	3.7	3.4	7.6	2.4	1.7	1.2	.80	.80
2	3.7	2.8	5.1	3.7	3.7	3.4	5.4	2.4	1.5	1.2	.80	.80
3	3.7	2.8	4.8	3.7	3.7	3.1	4.4	2.4	1.3	1.0	.80	.80
4	3.7	2.8	4.4	3.7	3.7	3.1	4.0	2.4	1.3	1.0	.80	.80
5	3.4	3.1	4.4	3.7	3.7	3.1	3.7	2.4	1.5	1.0	.80	.80
6	3.1	3.1	4.4	3.7	3.7	3.1	3.7	2.4	1.5	1.2	.70	.70
7	2.8	2.8	4.4	3.7	3.7	9.9	3.4	2.4	1.7	1.2	.70	.70
8	2.8	2.8	4.4	3.7	3.7	30	3.4	2.1	1.7	1.3	.70	.70
9	2.8	2.8	4.0	3.7	3.7	12	3.4	2.1	1.7	1.3	.70	.60
10	2.8	2.8	4.0	4.0	3.7	7.4	3.1	2.1	1.5	1.3	.70	.60
11	3.1	2.8	4.0	3.7	3.7	6.2	3.1	2.1	1.3	1.3	.70	.60
12	3.1	2.8	4.0	3.7	4.0	5.8	3.1	2.1	1.3	1.2	.80	.60
13	3.1	2.8	4.0	3.7	7.4	6.2	3.1	2.4	1.2	1.2	1.0	.70
14	3.1	2.8	4.0	3.7	5.1	5.4	2.8	2.4	1.2	1.2	1.0	.80
15	2.8	2.8	4.0	3.7	4.8	5.1	2.8	2.1	1.2	1.2	1.0	1.0
16	2.8	3.1	4.0	3.7	4.8	4.8	2.8	1.9	1.2	1.2	1.0	1.0
17	2.8	3.1	4.0	3.7	5.8	4.8	2.8	1.9	1.0	1.0	1.2	.80
18	3.1	3.4	5.8	3.7	5.4	4.4	2.8	1.7	1.0	.80	1.0	.80
19	3.1	6.6	5.4	3.7	5.1	4.0	2.8	1.7	.80	.80	1.0	1.0
20	3.1	8.4	5.1	3.7	4.8	4.0	2.8	1.7	.80	.80	1.0	1.0
21	3.4	22	5.1	3.7	4.4	4.0	2.8	1.9	.70	.80	1.0	1.0
22	3.4	7.9	4.8	3.7	4.4	4.0	2.8	1.9	.70	.80	.80	.80
23	3.4	5.8	4.8	3.7	4.0	3.7	2.6	1.7	.80	.80	.70	.70
24	3.4	5.1	4.4	3.7	4.0	3.7	2.6	1.7	1.0	.80	.70	.70
25	3.4	4.4	4.4	3.7	3.7	3.7	2.4	1.5	1.0	.80	.70	.60
26	3.4	4.0	4.4	3.7	3.7	3.7	2.4	1.3	1.0	.80	.70	.60
27	3.4	4.0	4.4	5.4	3.7	3.4	2.4	1.5	1.0	.80	.70	.70
28	3.4	4.0	4.0	4.8	3.7	3.4	2.4	1.5	1.2	.80	.60	.70
29	3.4	4.0	4.0	4.0	3.7	3.1	2.4	1.5	1.2	1.0	.60	.80
30	3.4	7.0	4.0	3.7	-----	3.1	2.4	1.7	1.2	.80	.60	1.0
31	3.1	-----	4.0	4.4	-----	3.4	-----	1.9	-----	.80	.70	-----
TOTAL	99.7	135.7	137.9	118.8	123.2	168.4	96.2	61.2	36.20	31.40	25.00	23.20
MEAN	3.22	4.52	4.45	3.83	4.25	5.43	3.21	1.97	1.21	1.01	.81	.77
MAX	3.7	22	5.8	5.4	7.4	30	7.6	2.4	1.7	1.3	1.2	1.0
MIN	2.8	2.8	4.0	3.7	3.7	3.1	2.4	1.3	.70	.80	.60	.60
AC-FT	198	269	274	236	244	334	191	121	72	62	50	46
CAL YR 1967	TOTAL 6,396.60		MEAN 17.5		MAX 28		MIN 0		AC-FT 12,690			
WTR YR 1968	TOTAL 1,056.90		MEAN 2.89		MAX 30		MIN .60		AC-FT 2,100			

Peak discharge (base, 40 cfs).--Nov. 21 (1130 hrs) 68 cfs (1.99 ft); Mar. 8 (0345 hrs) 66 cfs (1.98 ft).

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 1968.

GAGE.--Graphic 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, 101 cfs Oct. 10 (gage height, 1.96 ft); no flow for many days.
1959-68: Maximum discharge, 7,900 cfs Dec. 29, 1965 (gage height, 7.20 ft), from rating curve extended above 65 cfs on basis of slope-area measurement at gage-height 7.1 ft; no flow for several months in most years.

REMARKS.--Records good. Flow regulated by Matilija Reservoir (see sta. no. 11-1150). Flows up to 500 cfs diverted since May 1959 at Robles diversion dam to Casitas Reservoir on Coyote Creek. Flow reported herein is that released through gates in Robles diversion dam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.7	9.6	6.3	5.7	10	11	3.3	1.6	.20	0	0
2	4.2	5.2	8.9	5.2	5.7	9.6	11	3.3	1.4	.10	0	0
3	4.7	5.7	8.9	5.2	4.7	9.6	11	4.2	1.4	.10	0	0
4	4.7	6.3	8.9	5.2	3.7	9.6	11	4.2	1.0	.10	0	0
5	4.2	6.3	8.9	5.7	3.7	9.6	11	6.3	.90	.10	0	0
6	4.2	6.3	8.9	5.7	3.7	9.6	11	4.7	.90	.10	0	0
7	3.7	6.9	8.9	5.7	3.7	11	10	3.7	.90	.20	0	0
8	3.3	7.5	8.9	5.7	3.7	12	10	3.7	.90	.20	0	0
9	3.7	7.5	8.2	6.3	3.7	11	10	3.7	1.0	.20	0	0
10	4.4	6.9	8.2	6.9	3.7	10	9.6	3.7	.90	.20	0	0
11	.10	6.9	8.2	6.9	4.2	10	9.6	4.2	.70	.20	0	0
12	0	6.9	8.2	4.8	4.2	13	10	4.7	.70	.30	0	.10
13	2.7	8.2	8.9	3.7	6.3	9.6	10	4.7	.70	.30	0	.70
14	3.3	10	8.9	3.7	16	10	10	4.7	1.0	.20	0	.30
15	3.0	7.5	7.4	4.7	15	10	10	4.2	1.0	.30	0	.10
16	2.6	5.2	5.2	5.2	14	10	10	3.7	.70	.30	0	.30
17	2.3	5.7	5.2	4.7	15	10	8.9	3.3	.70	.30	0	.30
18	2.3	6.3	8.2	5.2	15	10	8.2	3.7	.60	.10	0	.10
19	2.3	14	8.2	5.2	14	10	8.2	3.3	.30	0	0	0
20	2.3	18	8.2	5.2	14	9.6	7.5	2.3	.10	0	0	0
21	2.6	12	7.5	5.2	14	9.6	7.5	2.3	.10	0	0	0
22	2.6	9.6	6.9	5.2	14	9.6	6.3	2.6	.10	0	0	0
23	2.6	13	6.3	5.2	14	9.6	4.2	2.3	.30	0	0	0
24	9.9	12	5.7	5.2	14	9.6	3.7	1.8	.30	0	0	0
25	21	12	5.7	5.2	14	10	3.7	1.8	.20	0	0	0
26	8.9	11	6.9	5.2	14	10	3.7	1.8	.20	0	0	0
27	8.2	11	7.5	6.3	12	10	4.2	1.6	.20	0	0	0
28	7.5	10	7.5	8.2	11	10	4.2	1.4	.20	.10	0	0
29	6.9	10	7.9	6.3	11	10	3.3	1.4	.20	0	0	0
30	6.3	9.6	5.2	5.7	-----	10	3.0	1.4	.30	0	0	0
31	4.2	-----	6.3	5.7	-----	10	-----	1.4	-----	0	0	-----
TOTAL	142.40	262.2	238.3	170.6	277.7	312.6	241.8	99.4	19.50	3.60	0	1.90
MEAN	4.59	8.74	7.69	5.50	9.58	10.1	8.06	3.21	.65	.12	0	.063
MAX	21	18	9.6	8.2	16	13	11	6.3	1.6	.30	0	.70
MIN	0	4.7	5.2	3.7	3.7	9.6	3.0	1.4	.10	0	0	0
AC-FT	282	520	473	338	551	620	480	197	39	7.1	0	3.8
CAL YR 1967	TOTAL 3,254.20		MEAN 8.92		MAX 49		MIN 0		AC-FT 6,450			
WTR YR 1968	TOTAL 1,770.00		MEAN 4.84		MAX 21		MIN 0		AC-FT 3,510			

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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 307.25 ft above mean sea level (levels by Ventura County Flood Control District). Prior to Jan. 30, 1962, at datum 0.30 ft higher.

AVERAGE DISCHARGE.--19 years, 6.78 cfs (4,910 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 388 cfs Mar. 8 (gage height, 6.10 ft); no flow Sept. 4-30.
1949-68: Maximum discharge, 7,280 cfs Dec. 6, 1966 (gage height, 11.02 ft), from rating curve extended above 2,000 cfs; no flow for several months in each year.

REMARKS.--No regulation above station; pumping from wells along creek for irrigation.

COOPERATION.--Records furnished by Ventura County Flood Control District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	2.9	6.8	3.6	4.6	3.8	19	3.5	1.8	1.0	.15	.05
2	3.8	2.9	5.4	3.6	4.3	3.3	9.2	3.5	1.6	.80	.15	.03
3	3.7	2.9	4.6	3.6	4.0	3.1	5.7	3.5	1.6	.80	.15	.03
4	3.7	2.9	4.3	3.6	4.3	3.1	4.8	3.2	1.6	.80	.20	0
5	3.6	2.9	4.3	3.8	4.6	3.3	4.6	3.2	1.6	.80	.20	0
6	3.6	2.9	4.0	3.8	4.8	3.6	4.6	3.2	1.4	.70	.20	0
7	3.5	2.9	4.0	3.8	5.1	6.4	4.6	3.2	1.4	.70	.20	0
8	3.5	2.9	4.0	4.0	5.4	126	4.6	3.2	1.3	.70	.20	0
9	3.4	2.9	3.8	4.0	5.4	20	4.3	3.2	1.3	.70	.20	0
10	3.4	2.9	3.8	5.1	6.0	12	4.3	3.2	1.3	.70	.20	0
11	3.4	2.9	3.8	5.4	6.0	8.8	4.3	3.0	1.3	.60	.30	0
12	3.4	2.9	3.8	4.6	6.0	7.2	4.3	3.0	1.1	.60	.30	0
13	3.3	2.9	3.8	4.3	7.6	12	4.2	3.0	1.1	.60	.30	0
14	3.3	2.9	3.8	4.0	5.4	7.2	4.2	3.0	1.1	.50	.30	0
15	3.3	2.9	3.8	4.0	4.8	6.4	4.2	2.8	1.1	.50	.30	0
16	3.3	2.9	3.8	4.0	4.6	6.0	4.2	2.8	1.1	.50	.30	0
17	3.2	2.9	3.6	4.0	9.2	5.7	4.2	2.6	1.1	.50	.30	0
18	3.2	2.9	10	4.0	6.4	5.4	4.0	2.6	1.1	.40	.20	0
19	3.2	49	8.0	4.0	5.4	5.1	4.0	2.4	1.1	.40	.20	0
20	3.2	29	5.1	4.0	5.1	5.1	4.0	2.4	1.1	.35	.20	0
21	3.1	75	4.0	4.0	4.8	4.8	4.0	2.4	1.1	.35	.15	0
22	3.1	11	3.8	4.0	4.6	4.8	3.8	2.4	1.1	.30	.15	0
23	3.1	6.8	3.8	4.0	4.3	4.8	3.8	2.4	1.1	.30	.15	0
24	3.1	5.4	3.6	4.0	4.0	4.8	3.8	2.2	1.1	.30	.15	0
25	3.0	4.6	3.6	4.0	3.8	4.8	3.8	2.0	1.0	.30	.15	0
26	3.0	4.3	3.8	4.3	3.8	4.8	3.8	1.8	1.0	.20	.10	0
27	3.0	3.6	3.6	6.4	3.8	4.8	3.5	1.8	1.0	.20	.10	0
28	3.0	3.3	3.6	5.7	3.8	4.6	3.5	1.8	1.0	.20	.07	0
29	2.9	3.6	3.6	4.8	3.6	4.3	3.5	1.8	1.0	.20	.07	0
30	2.9	21	3.6	4.6	-----	4.6	3.5	1.8	1.0	.20	.07	0
31	2.9	-----	3.6	5.4	-----	4.6	-----	1.8	-----	.20	.05	-----
TOTAL	101.9	268.8	135.1	132.4	145.5	362.8	144.3	82.7	36.5	15.40	5.76	0.11
MEAN	3.29	8.96	4.36	4.27	5.02	11.7	4.81	2.67	1.22	.50	.19	.004
MAX	3.8	75	10	6.4	9.2	126	19	3.5	1.8	1.0	.30	.05
MIN	2.9	2.9	3.6	3.6	3.6	3.1	3.5	1.8	1.0	.20	.05	0
AC-FT	202	533	268	263	289	720	286	164	72	31	11	.2

CAL YR 1967 TOTAL 6,065.9 MEAN 16.6 MAX 794 MIN 2.9 AC-FT 12,030
WTR YR 1968 TOTAL 1,431.27 MEAN 3.91 MAX 126 MIN 0 AC-FT 2,840

Peak discharge (base, 200 cfs).--Nov. 21 (1300 hrs) 340 cfs (6.02 ft); Mar. 8 (0200 hrs) 388 cfs (6.10 ft).

VENTURA RIVER BASIN

255

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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 560 ft (from topographic map). Prior to Feb. 8, 1965, graphic water-stage recorder.

AVERAGE DISCHARGE.--10 years, 3.92 cfs (2,840 acre-ft per year); median of yearly mean discharges, 1.3 cfs (940 acre-ft per year).

EXTREMES.--Maximum discharge during year, 426 cfs Mar. 8 (gage height, 5.04 ft); minimum daily, 0.13 cfs Sept. 26, 27.
1958-68: Maximum discharge, 4,470 cfs Nov. 24, 1965 (gage height, 9.10 ft), from rating curve extended above 2,100 cfs 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.94	.56	2.4	1.5	1.7	1.4	2.7	.95	.53	.30	.20	.20
2	.94	.56	2.2	1.6	1.6	1.4	3.1	.96	.46	.28	.20	.19
3	.89	.56	2.0	1.5	1.6	1.4	1.9	.98	.46	.27	.20	.21
4	.89	.60	1.8	1.5	1.5	1.3	1.6	.91	.48	.27	.20	.22
5	.86	.60	1.8	1.5	1.5	1.3	1.5	.94	.46	.26	.20	.21
6	.85	.65	1.7	1.5	1.5	1.3	1.4	.92	.46	.27	.20	.19
7	.85	.66	1.7	1.5	1.4	23	1.4	.92	.47	.28	.20	.18
8	.84	.65	1.7	1.5	1.4	153	1.3	.93	.47	.28	.19	.17
9	.84	.64	1.6	1.5	1.4	25	1.3	.92	.46	.27	.18	.15
10	.83	.63	1.6	1.8	1.4	11	1.2	.85	.44	.25	.18	.15
11	.82	.64	1.6	1.7	1.4	6.3	1.2	.85	.42	.23	.20	.15
12	.80	.64	1.5	1.6	1.5	3.6	1.2	.84	.39	.23	.22	.16
13	.78	.65	1.6	1.6	1.6	3.6	1.1	.83	.39	.23	.23	.16
14	.72	.65	1.6	1.4	1.7	2.9	1.1	.83	.39	.24	.24	.18
15	.68	.65	1.6	1.4	1.6	2.6	1.2	.77	.39	.25	.24	.20
16	.64	.66	1.6	1.4	1.6	2.4	1.1	.76	.39	.25	.26	.20
17	.64	.66	1.6	1.4	3.5	2.2	1.1	.74	.39	.22	.26	.18
18	.64	.70	2.2	1.4	2.8	2.0	1.1	.73	.38	.20	.24	.16
19	.64	1.1	2.5	1.4	2.3	1.9	1.1	.73	.38	.20	.23	.18
20	.64	1.3	2.2	1.4	2.0	1.8	1.1	.68	.37	.20	.22	.19
21	.64	16	2.0	1.4	1.8	1.7	1.1	.69	.33	.19	.21	.17
22	.64	4.2	1.9	1.3	1.7	1.6	1.1	.66	.33	.19	.23	.15
23	.60	2.4	1.9	1.3	1.6	1.6	1.1	.65	.33	.17	.21	.14
24	.60	2.0	1.8	1.3	1.6	1.5	1.1	.64	.35	.17	.20	.14
25	.60	1.8	1.7	1.3	1.5	1.5	1.1	.62	.35	.17	.20	.14
26	.60	1.7	1.6	1.3	1.5	1.4	1.0	.55	.35	.18	.20	.13
27	.60	1.6	1.6	1.6	1.4	1.4	1.0	.55	.34	.18	.20	.13
28	.60	1.6	1.6	1.9	1.4	1.4	.99	.56	.35	.17	.20	.15
29	.56	1.6	1.6	1.5	1.4	1.4	.97	.57	.32	.17	.20	.16
30	.56	3.3	1.6	1.5	-----	1.4	.95	.56	.30	.17	.20	.17
31	.56	-----	1.5	1.7	-----	1.4	-----	.55	-----	.18	.21	-----
TOTAL	22.29	49.96	55.3	46.2	48.9	265.7	39.11	23.64	11.93	6.92	6.55	5.11
MEAN	.72	1.67	1.78	1.49	1.69	8.57	1.30	.76	.40	.22	.21	.17
MAX	.94	16	2.5	1.9	3.5	153	3.1	.98	.53	.30	.26	.22
MIN	.56	.56	1.5	1.3	1.4	1.3	.95	.55	.30	.17	.18	.13

CAL YR 1967 TOTAL 2,537.35 MEAN 6.95 MAX 16 MIN 0
WTR YR 1968 TOTAL 581.61 MEAN 1.59 MAX 153 MIN .13

Peak discharge (base, 150 cfs).--Mar. 8 (0400 hrs) 426 cfs (5.04 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 610 ft (from topographic map).

AVERAGE DISCHARGE.--10 years, 3.64 cfs (2,640 acre-ft per year); median of yearly mean discharges, 1.1 cfs (800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 192 cfs Mar. 8 (gage height, 3.17 ft); no flow June 25 to Sept. 30. 1958-68: Maximum discharge, 2,670 cfs Nov. 24, 1965 (gage height, 8.12 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurement of maximum flow; no flow for part of each year. Flood of Mar. 2, 1938, 3,780 cfs, result of slope-area measurement at site 2.0 miles downstream.

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

COOPERATION.--Three discharge measurements furnished by Ventura River Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	1.8	.70	.60	.80	2.1	.30	.10			
2	.10	.10	1.4	.80	.50	.80	2.3	.30	.10			
3	.10	.10	1.1	1.1	.40	.70	1.4	.30	.20			
4	.10	.10	1.0	1.0	.40	.60	1.1	.30	.20			
5	.20	.20	.90	1.1	.40	.60	1.1	.30	.20			
6	.20	.20	.90	1.1	.40	.60	1.1	.30	.20			
7	.20	.20	.90	1.1	.40	9.6	1.0	.30	.20			
8	.20	.30	.90	1.1	.40	63	.90	.30	.20			
9	.20	.30	.90	1.1	.40	7.1	.80	.30	.20			
10	.20	.20	.90	1.4	.40	4.3	.70	.30	.20			
11	.20	.20	.80	1.5	.40	3.3	.70	.30	.20			
12	.20	.20	.80	1.4	.40	2.9	.70	.30	.10			
13	.10	.20	.80	1.2	.70	3.5	.70	.30	.10			
14	.10	.20	.80	1.1	.60	2.9	.70	.30	.10			
15	.10	.20	.80	1.0	.80	2.7	.60	.30	.10			
16	.10	.20	.80	1.0	.80	2.5	.50	.30	.10			
17	.10	.30	.80	1.0	1.8	2.3	.40	.30	.10			
18	.10	.40	2.0	.90	1.6	2.0	.40	.30	.10			
19	.10	1.6	2.0	.60	1.5	2.0	.40	.20	.10			
20	.10	1.5	1.4	.60	1.4	1.8	.40	.20	.10			
21	.10	6.6	1.2	.60	1.4	1.6	.40	.20	.10			
22	.10	2.0	1.1	.60	1.2	1.5	.40	.20	.10			
23	.10	1.1	1.1	.60	1.1	1.4	.40	.20	.10			
24	.10	1.0	1.0	.60	1.1	1.4	.30	.20	.10			
25	.10	1.0	.90	.60	1.1	1.2	.30	.10	0			
26	.10	1.1	.80	.60	1.0	1.2	.30	.10	0			
27	.20	1.6	.80	1.4	1.1	1.1	.30	.10	0			
28	.20	1.6	.90	1.2	1.1	1.1	.30	.10	0			
29	.20	1.8	.90	1.0	.90	1.0	.30	.10	0			
30	.20	3.3	.70	.80	-----	1.0	.30	.20	0			
31	.10	-----	.70	.70	-----	1.0	-----	.20	-----			---
TOTAL	4.30	27.90	31.80	29.20	24.30	127.50	21.30	7.50	3.30	0	0	0
MEAN	.14	.93	1.03	.94	.84	4.11	.71	.24	.11	0	0	0
MAX	.20	6.6	2.0	1.5	1.8	63	2.3	.30	.20	0	0	0
MIN	.10	.10	.70	.60	.40	.60	.30	.10	0	0	0	0
AC-FT	8.5	55	63	58	48	253	42	15	6.6	0	0	0

CAL YR 1967 TOTAL 2,612.50 MEAN 7.16 MAX 436 MIN 0 AC-FT 5,180

WTR YR 1968 TOTAL 277.10 MEAN .76 MAX 63 MIN 0 AC-FT 550

Peak discharge (base, 150 cfs).--Mar. 8 (0430 hrs) 192 cfs (3.17 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 1968; combined records of river and diversion, October 1932 to September 1968.

GAGE.--Graphic water-stage recorder on river; digital water-stage recorder and Parshall flume on diversion. Datum of gage is 201.23 ft above mean sea level (Ventura County Flood Control bench mark). 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. Prior to Feb. 8, 1965, graphic water-stage recorder on diversion.

AVERAGE DISCHARGE (river only).--41 years (1911-13, 1929-68), 52.6 cfs (38,080 acre-ft per year); median of yearly mean discharges, 23 cfs (16,700 acre-ft per year).
(combined).--36 years, 61.7 cfs (44,670 acre-ft per year); median of yearly mean discharges, 25 cfs (18,100 acre-ft per year).

EXTREMES (river only).--Maximum discharge during year, 665 cfs Mar. 8 (gage height, 11.61 ft); no flow Aug. 12 to Sept. 30.

1911-14, 1929-68: 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, 671 cfs Mar. 8; minimum daily, 1.7 cfs Sept. 9.

1932-68: Maximum discharge, 39,200 cfs Mar. 2, 1938; minimum daily, 0.10 cfs Sept. 3, 4, 13, 1961.

REMARKS.--Records good. Flow partly regulated since March 1948 by Matilija Reservoir and since October 1959 by Casitas Reservoir (capacity, 267,000 acre-ft). Water diverted since May 1951 through pipeline at dam (Matilija Reservoir) to Ojai Valley for irrigation. Water diverted to Casitas Reservoir on Coyote Creek since January 1959. Diversion by city of Ventura for municipal supply began prior to 1911. AVERAGE DISCHARGE (river only) represents flow to ocean, regardless of upstream development. For records of combined discharge of river and Ventura City diversion, see following page.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	6.7	11	10	6.0	8.5	32	8.2	4.0	2.2	.20	
2	5.4	5.4	4.8	6.3	5.4	10	42	10	3.2	2.2	.10	
3	5.6	5.0	6.7	4.4	6.7	12	15	11	3.7	1.7	.10	
4	6.0	5.4	6.7	6.7	9.8	8.8	16	11	3.7	.50	.10	
5	5.0	5.6	5.0	7.5	9.8	5.2	16	11	3.2	1.3	.10	
6	4.0	5.6	4.8	5.6	7.5	5.2	17	7.9	3.9	.40	.10	
7	4.2	5.6	5.6	7.9	5.6	99	17	8.2	3.0	.20	.10	
8	4.4	4.2	6.3	11	5.6	287	14	7.9	3.7	.20	.10	
9	5.0	4.0	7.5	9.0	6.0	48	7.1	9.0	5.0	.20	.10	
10	5.4	9.0	9.4	8.0	6.7	34	9.8	9.8	11	.10	.10	
11	5.6	10	7.1	8.4	8.2	24	13	10	3.0	.10	.10	
12	4.4	8.6	7.1	4.8	11	21	11	11	1.6	.10	0	
13	4.8	6.3	6.7	8.4	11	30	6.0	9.8	1.3	.40	0	
14	5.4	4.8	6.3	12	7.6	23	8.2	7.5	.90	.40	0	
15	5.6	4.4	7.1	7.7	5.0	20	6.0	8.2	.70	.60	0	
16	5.6	4.2	9.8	6.7	7.1	16	9.4	7.1	1.2	.30	0	
17	5.4	4.2	13	7.5	19	17	10	5.0	2.2	1.2	0	
18	4.8	6.5	25	5.6	15	17	11	7.1	2.8	.50	0	
19	4.2	41	18	5.6	10	17	9.4	8.6	2.4	.40	0	
20	3.7	33	6.0	7.1	6.0	17	9.8	8.2	1.1	.30	0	
21	6.3	101	6.3	9.8	6.6	17	10	7.9	.70	.30	0	
22	7.5	17	5.6	7.2	8.9	16	9.8	6.5	3.0	.50	0	
23	7.5	6.7	6.3	6.0	6.6	15	6.3	3.2	5.6	.60	0	
24	6.3	7.1	8.6	6.0	8.5	16	4.4	3.4	2.2	.50	0	
25	4.8	6.3	9.8	6.3	11	18	4.8	4.4	.20	.40	0	
26	5.0	7.5	6.7	7.1	8.3	16	8.2	9.0	.20	.30	0	
27	5.6	7.9	5.6	15	6.3	14	9.4	9.4	.20	.20	0	
28	7.1	6.3	6.7	11	5.2	13	9.4	2.6	.20	.20	0	
29	6.0	5.4	6.3	7.4	5.6	14	8.6	1.3	.30	.20	0	
30	6.0	33	6.3	6.0	-----	15	7.1	2.6	1.1	.20	0	
31	6.3	-----	8.2	7.5	-----	14	-----	3.7	-----	.20	0	-----
TOTAL	168.9	377.7	250.3	239.5	236.0	887.7	357.7	230.5	75.30	16.90	1.20	0
MEAN	5.45	12.6	8.07	7.73	8.14	28.6	11.9	7.44	2.51	.55	.039	0
MAX	7.5	101	25	15	19	287	42	11	11	2.2	.20	0
MIN	3.7	4.0	4.8	4.4	5.0	5.2	4.4	1.3	.20	.10	0	0
AC-FT	335	749	496	475	468	1,760	709	457	149	34	2.4	0

CAL YR 1967 TOTAL 9,295.4 MEAN 25.5 MAX 1,440 MIN 1.7 AC-FT 18,440

WTR YR 1968 TOTAL 2,841.70 MEAN 7.76 MAX 287 MIN 0 AC-FT 5,640

Peak discharge (base, 500 cfs).--Mar. 8 (0300 hrs) 665 cfs (11.61 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 1967 to September 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	16	22	18	17	17	39	18	14	9.6	11	4.7
2	17	15	18	18	14	17	51	19	13	9.8	9.6	3.3
3	15	15	18	16	15	17	24	19	13	14	8.6	7.6
4	16	15	18	17	20	18	24	19	14	12	9.1	8.5
5	17	15	17	18	22	17	23	20	13	9.0	9.0	6.9
6	16	14	17	17	20	16	24	18	14	10	4.2	8.4
7	14	15	17	17	17	108	23	18	13	10	8.1	9.1
8	14	15	17	16	15	293	23	18	13	9.6	11	5.0
9	15	13	17	16	13	54	21	18	13	10	11	1.7
10	15	15	17	20	14	40	20	18	17	10	9.0	6.4
11	16	15	16	21	18	33	21	18	13	9.8	8.0	9.3
12	15	15	17	16	21	31	22	19	14	10	8.4	8.9
13	15	16	16	18	22	37	21	19	13	10	9.7	8.6
14	15	16	16	16	17	31	21	17	13	9.0	9.3	7.5
15	14	15	17	16	10	28	21	17	10	9.4	10	6.7
16	15	15	17	18	11	27	20	17	10	8.8	8.8	7.2
17	15	15	18	18	25	27	20	15	11	12	6.6	8.0
18	15	14	30	18	26	26	21	16	11	12	5.6	7.7
19	17	44	28	18	21	26	20	17	14	11	8.7	7.3
20	14	38	22	18	14	25	18	17	14	9.9	10	7.4
21	14	108	20	18	16	25	21	16	9.3	9.0	10	7.2
22	14	29	19	17	17	24	20	16	7.6	8.0	9.8	7.0
23	15	21	17	17	13	24	19	14	12	12	9.6	6.8
24	16	19	18	17	16	23	17	14	12	10	9.4	6.7
25	14	17	19	17	22	23	17	14	11	10	8.1	6.5
26	15	18	18	18	19	22	19	15	12	9.8	8.0	6.4
27	15	18	18	21	17	22	19	17	12	10	9.2	6.1
28	15	17	18	18	16	22	19	14	8.1	8.6	4.7	6.3
29	15	17	17	17	17	22	19	12	8.1	9.0	4.8	6.2
30	15	38	17	18	-----	22	18	13	8.5	9.9	8.7	6.0
31	14	-----	18	20	-----	22	-----	13	-----	9.9	6.7	-----
TOTAL	470	653	574	548	505	1,139	665	515	360.6	312.1	264.7	205.4
MEAN	15.2	21.8	18.5	17.7	17.4	36.7	22.2	16.6	12.0	10.1	8.54	6.85
MAX	18	108	30	21	26	293	51	20	17	14	11	9.3
MIN	14	13	16	16	10	16	17	12	7.6	8.0	4.2	1.7
AC-FT	932	1,300	1,140	1,090	1,000	2,260	1,320	1,020	715	619	525	407
CAL YR 1967	TOTAL 18,443		MEAN 50.5		MAX 1,450	MIN 13		AC-FT 36,580				
WTR YR 1968	TOTAL 6,211.8		MEAN 17.0		MAX 293	MIN 1.7		AC-FT 12,320				

Peak discharge (base, 500 cfs).--Mar. 8 (0300 hrs) 671 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 130 ft (from topographic map). Prior to July 1, 1958, at datum 2.00 ft higher.

AVERAGE DISCHARGE.--27 years, 1.87 cfs (1,350 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

EXTREMES.--Maximum discharge during year, 120 cfs Mar. 8 (gage height, 4.00 ft); no flow for most of year. 1941-68: Maximum discharge, 2,720 cfs Dec. 6, 1966 (gage height, 8.60 ft), from rating curve extended above 810 cfs; 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	0	0	.90			0		
2		0	0	0	0	0	.40			0		
3		0	0	0	0	0	0			.20		
4		0	0	0	0	0	0			0		
5		0	0	0	0	0	0			0		
6		0	0	0	0	0	0			0		
7		0	0	0	0	2.9	0			0		
8		0	0	0	1.6	38	0			0		
9		0	0	0	3.6	5.0	0			0		
10		0	0	0	3.4	3.8	0			0		
11		0	0	0	3.0	.60	0			0		
12		0	0	0	2.6	.20	0			0		
13		.10	0	0	.20	.90	0			0		
14		0	0	0	0	.30	0			0		
15		0	0	0	0	.10	0			0		
16		0	0	0	0	0	0			0		
17		0	0	0	.20	0	0			0		
18		0	0	0	0	0	0			0		
19		.10	.10	0	0	0	0			0		
20		0	0	0	0	0	0			0		
21		2.9	0	0	0	0	0			0		
22		0	0	0	0	0	0			0		
23		0	0	0	0	0	0			0		
24		0	0	0	0	0	0			0		
25		0	0	0	0	0	0			0		
26		0	0	0	0	0	0			0		
27		0	0	.10	0	0	0			0		
28		0	0	.10	0	0	0			0		
29		0	0	0	0	0	0			0		
30		0	0	0	-----	0	0			0		
31		-----	0	0	-----	0	-----		-----	0		-----
TOTAL	0	3.10	0.10	0.20	14.60	51.80	1.30	0	0	0.20	0	0
MEAN	0	.10	.003	.007	.50	1.67	.043	0	0	.007	0	0
MAX	0	2.9	.10	.10	3.6	38	.90	0	0	.20	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	6.2	.2	.4	29	103	2.6	0	0	.4	0	0

CAL YR 1967 TOTAL 1,114.80 MEAN 3.05 MAX 362 MIN 0 AC-FT 2,210
WTR YR 1968 TOTAL 71.30 MEAN .19 MAX 38 MIN 0 AC-FT 141

Peak discharge (base, 25 cfs).--Mar. 8 (0300 hrs) 120 cfs (4.00 ft).

ATASCADERO CREEK BASIN

11-1200. ATASCADERO CREEK NEAR GOLETA, CALIF.

LOCATION (revised).--Lat 34°25'28", long 119°48'40", in La Goleta Grant, on downstream side of center pier of county road bridge 400 ft downstream from Maria Ygnacio Creek, 1.3 miles upstream from mouth, and 1.3 miles southeast of Goleta, Santa Barbara County. Prior to Dec. 14, 1967, at site 275 ft downstream.

DRAINAGE AREA.--18.8 sq mi.

RECORDS AVAILABLE.--October 1941 to September 1968. Prior to October 1947, published as Alascadero Creek near Goleta.

GAGE.--Graphic water-stage recorder. Altitude of gage is 20 ft (from topographic map). Prior to Dec. 14, 1967, at site 275 ft downstream at same datum.

AVERAGE DISCHARGE.--27 years, 3.06 cfs (2,220 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).

EXTREMES.--Maximum discharge during year, 460 cfs Mar. 7 (gage height, 9.32 ft), on basis of slope-conveyance measurement of maximum flow; no flow for many days.

1941-68: Maximum discharge, 5,000 cfs (estimated) Jan. 24, 1967 (gage height, 12.80 ft), from discharge in main channel plus overflow; 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.70	0	.10	0	12	0	.10	.10	0	.20
2	0	0	0	0	0	0	7.6	0	.10	0	0	.20
3	0	0	0	0	0	0	1.1	0	.30	0	0	.10
4	0	0	0	0	0	0	.80	0	.60	0	0	.10
5	0	0	.50	0	0	0	.70	0	.30	0	0	.10
6	0	0	.30	0	0	0	.70	.10	.30	0	0	.10
7	0	0	.20	0	0	78	.60	.20	.30	0	0	0
8	0	0	.20	0	0	94	.50	.20	.30	0	0	0
9	0	0	.10	0	0	7.9	.40	.50	.20	0	0	0
10	0	0	.10	3.7	0	.40	.30	.40	.30	0	0	0
11	0	0	0	2.9	0	.70	.30	.20	.30	0	0	0
12	0	0	0	.30	.40	.20	.30	.20	.40	0	0	0
13	0	0	0	.10	2.3	31	.20	.20	.50	0	0	0
14	0	0	0	.10	1.9	.40	.20	.20	.50	0	0	.10
15	0	0	0	.10	.10	.10	.10	.20	.50	0	0	.10
16	0	0	0	.10	.10	0	0	.20	.50	0	0	0
17	0	0	0	.10	38	0	0	.20	.40	0	0	.10
18	0	.50	16	0	2.2	0	0	.30	.30	0	0	.20
19	0	21	14	0	.30	0	0	.70	.20	0	0	.30
20	0	14	.50	0	.20	10	0	.70	.10	0	0	.30
21	0	49	.10	0	.10	10	0	.40	0	0	0	.30
22	0	2.0	.10	0	.10	.30	0	.40	0	0	0	.20
23	0	.30	.10	0	.10	.30	0	.30	0	0	0	.20
24	0	.10	.10	0	.10	.20	0	.20	0	0	0	.10
25	0	.10	.10	0	.10	.20	0	.20	0	0	0	.10
26	0	0	.10	0	.10	.10	0	.40	0	0	0	.10
27	0	0	.10	14	.10	.10	0	.30	0	0	0	.20
28	.10	0	0	1.6	.10	.10	0	.10	0	0	0	.20
29	.10	0	0	0	.10	.10	0	.30	0	0	0	.40
30	.10	46	0	.60	-----	.10	0	.10	0	0	0	.30
31	0	-----	0	4.9	-----	.10	-----	.10	-----	0	.10	-----
TOTAL	0.30	133.00	33.30	28.50	46.50	234.30	25.80	7.30	6.50	0.10	0.10	4.00
MEAN	.010	4.43	1.07	.92	1.60	7.56	.86	.24	.22	.003	.003	.13
MAX	.10	49	16	14	38	94	12	.70	.60	.10	.10	.40
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	.6	264	66	57	92	465	51	14	13	.2	.2	7.9
CAL YR 1967	TOTAL	2,312.80	MEAN	6.34	MAX	963	MIN	0	AC-FT	4,590		
WTR YR 1968	TOTAL	519.70	MEAN	1.42	MAX	94	MIN	0	AC-FT	1,030		

PEAK DISCHARGE (BASE. 70 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-21	1200	7.60	160	03-07	2400	9.32	460
11-30	0600	7.92	250	03-13	0830	7.22	110
02-17	0800	7.73	112	03-21	0030	7.09	90

SAN JOSE CREEK BASIN

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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 1968.

GAGE.--Digital water-stage recorder and concrete low-water control since October 1962. Datum of gage is 95.61 ft above mean sea level (levels by Santa Barbara County Road Department). Prior to Dec. 24, 1955, at datum 5.50 ft higher. Dec. 24, 1955, to Jan. 10, 1960, at datum 1.5 ft higher. Prior to Apr. 18, 1966, graphic water-stage recorder.

AVERAGE DISCHARGE.--27 years, 1.72 cfs (1,250 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).

EXTREMES.--Maximum discharge during year, 121 cfs Mar. 8 (gage height, 3.25 ft); no flow for several days. 1941-68: 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.28	.96	.37	.42	.37	6.4	.37	.21	.08	.06	0
2	.25	.28	.44	.39	.37	.37	3.4	.37	.21	.06	.04	.02
3	.25	.28	.63	.42	.37	.38	1.2	.37	.23	.06	0	.07
4	.22	.28	1.0	.42	.37	.44	.79	.28	.23	.06	.04	.08
5	.25	.28	1.2	.42	.37	.42	.64	.28	.20	.10	.04	.07
6	.25	.28	.91	.42	.32	.49	.58	.28	.17	.10	.04	.03
7	.22	.28	.96	.42	.32	12	.54	.25	.16	.14	.04	.03
8	.19	.28	.79	.43	.32	25	1.7	.27	.18	.16	.02	.04
9	.19	.28	.80	.42	.37	1.9	2.9	.28	.22	.16	.02	.03
10	.19	.28	.67	.57	.37	.95	2.6	.28	.20	.12	.02	.02
11	.19	.28	.69	.68	.37	.63	2.6	.28	.16	.12	.04	.07
12	.28	.28	.65	.56	.37	.52	2.3	.30	.13	.10	.04	.08
13	.28	.28	.60	.49	.37	5.3	2.3	.33	.09	.10	.02	.06
14	.32	.28	.56	.46	.37	2.1	2.3	.25	.08	.12	.01	.06
15	.28	.35	.60	.46	.28	.97	2.3	.20	.08	.14	.02	.09
16	.22	.37	.55	.48	.22	1.0	2.3	.23	.08	.14	.04	.10
17	.16	.37	.54	.48	3.0	1.1	1.8	.23	.08	.08	.06	.06
18	.16	.36	1.3	.48	1.5	.93	.37	.26	.08	.08	.06	.08
19	.16	2.6	1.6	.45	.90	.76	.37	.24	.10	.06	.06	.08
20	.16	1.6	.97	.38	.48	.64	.39	.22	.10	.04	.04	.08
21	.16	4.8	.88	.27	.42	.64	.37	.17	.10	.04	.04	.06
22	.19	1.9	.60	.36	.37	.60	.36	.18	.09	.04	.04	.01
23	.28	.67	.33	.37	.32	.60	.34	.16	.09	.04	.02	.01
24	.22	.60	.33	.37	.25	.60	.30	.16	.10	.04	.04	0
25	.22	.51	.29	.37	.22	.58	.33	.16	.12	.06	.04	0
26	.28	.48	.24	.37	.28	.54	.36	.16	.12	.06	.02	.01
27	.28	.43	.48	.41	.42	.54	.37	.16	.12	.06	.02	.03
28	.28	.38	.42	.48	.42	.50	.37	.16	.12	.06	.04	.09
29	.28	.41	.39	.50	.37	.48	.41	.15	.12	.04	.01	.10
30	.28	4.5	.37	.50	-----	.49	.37	.17	.10	.06	0	.10
31	.28	-----	.37	.54	-----	.59	-----	.22	-----	.06	0	-----
TOTAL	7.22	24.25	21.12	13.74	14.53	62.43	41.36	7.42	4.07	2.58	0.98	1.56
MEAN	.23	.81	.68	.44	.50	2.01	1.38	.24	.14	.083	.032	.052
MAX	.32	4.8	1.6	.68	3.0	.25	6.4	.37	.23	.16	.06	.10
MIN	.16	.28	.24	.27	.22	.37	.30	.15	.08	.04	0	0
AC-FT	14	48	42	27	29	124	82	15	8.1	5.1	1.9	3.1

CAL YR 1967 TOTAL 1,338.95 MEAN 3.67 MAX 346 MIN .06 AC-FT 2,660
WTR YR 1968 TOTAL 201.26 MEAN .55 MAX 25 MIN 0 AC-FT 399

Peak discharge (base, 100 cfs).--Mar. 8 (0115 hrs) 121 cfs (3.25 ft).

GAVIOTA CREEK BASIN

11-1205.5. GAVIOTA CREEK NEAR GAVIOTA, CALIF.

LOCATION.--Lat 34°29'16", long 120°13'34", in Nuestra Senora Del Refugio Grant, on left bank, 1.6 miles upstream from mouth, and 1.3 miles northwest of Gaviota, Santa Barbara County.

DRAINAGE AREA.--18.8 sq mi.

RECORDS AVAILABLE.--October 1966 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 100 ft (from topographic map). Prior to July 16, 1968, graphic water-stage recorder.

EXTREMES.--Maximum discharge during year, 94 cfs Mar. 13 (gage height, 3.53 ft); no flow July 10-12, Sept. 10, 24, 25.

1966-68: Maximum discharge, 4,000 cfs Jan. 24, 1967 (gage height, 8.40 ft), from rating curve extended above 450 cfs on basis of slope-area measurement of maximum flow; no flow July 10-12, Sept. 10, 24, 25, 1968.

REMARKS.--Records good. No regulation. Small pumping for domestic and resort use.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.40	.80	.80	.80	.80	4.8	.60	.30	.10	.06	.04
2	.60	.30	.50	.80	.80	.80	3.4	.60	.40	.10	.06	.05
3	.50	.30	.50	.80	.80	.80	1.5	.60	.40	.10	.08	.07
4	.50	.40	.50	.80	.80	.60	1.2	.60	.40	.10	.10	.07
5	.50	.40	2.2	.80	.80	.60	1.1	.60	.40	.10	.13	.05
6	.40	.40	.60	.80	1.7	.60	1.0	4.9	.40	.10	.13	.03
7	.40	.50	.60	.80	.80	8.9	.80	.80	.40	.10	.13	.02
8	.40	.50	.50	.80	.80	9.8	.80	.80	.40	.10	.13	.02
9	.50	.50	.50	.80	.80	3.4	.60	.60	.40	.10	.05	.01
10	.40	.50	.50	1.2	.80	1.8	.60	.50	.40	0	.07	0
11	.40	.50	.50	1.0	.80	1.5	.60	.40	.40	0	.10	.02
12	.40	.60	.50	.80	1.5	1.2	.60	.60	.40	0	.09	.02
13	.40	.60	.50	.80	1.2	15	.60	.50	.40	.10	.08	.02
14	.40	.60	.50	.80	1.1	2.4	.60	.50	.40	.10	.07	.03
15	.40	.60	.60	.80	1.0	1.6	.80	.40	.40	.10	.08	.04
16	.40	.60	.60	.80	1.1	2.1	.80	.30	.20	.10	.08	.06
17	.40	.60	.60	.80	4.9	1.5	.80	.20	.20	.10	.07	.07
18	.30	.80	4.1	.80	1.4	1.4	.60	.20	.30	.10	.06	.07
19	.30	2.0	1.2	.80	1.4	1.2	.60	.20	.40	.07	.06	.07
20	.40	1.5	.80	.80	1.2	1.1	.60	.20	.40	.05	.04	.04
21	.40	4.6	.60	.80	1.1	1.1	.60	.20	.40	.04	.04	.03
22	.40	.80	.60	.80	1.0	1.0	.60	.20	.40	.04	.05	.01
23	.40	.60	.50	.80	1.0	1.0	.60	.20	.40	.04	.03	.01
24	.40	.60	.50	.80	1.0	1.0	.60	.20	.20	.02	.03	0
25	.40	.60	.50	.80	1.0	.80	.60	.30	.10	.02	.05	0
26	.40	.60	.50	.80	1.0	.80	.60	.20	.10	.03	.05	.01
27	.40	.60	.60	1.4	.80	.80	.60	.20	.10	.04	.01	.02
28	.40	.60	.60	1.0	.80	.80	.60	.20	.10	.04	.01	.02
29	.40	.80	.60	1.4	.80	.80	.60	.20	.10	.04	.02	.05
30	.40	5.4	.60	1.0	-----	.80	.60	.20	.10	.04	.06	.06
31	.40	-----	.60	1.2	-----	.80	-----	.20	-----	.06	.08	-----
TOTAL	13.00	27.80	23.30	27.40	33.00	66.80	28.40	16.40	9.40	2.03	2.10	1.01
MEAN	.42	.93	.75	.88	1.14	2.15	.95	.53	.31	.066	.068	.034
MAX	.60	5.4	4.1	1.4	4.9	15	4.8	4.9	.40	.10	.13	.07
MIN	.30	.30	.50	.80	.80	.60	.60	.20	.10	0	.01	0
AC-FT	26	55	46	54	65	133	56	33	19	4.0	4.2	2.0

CAL YR 1967 TOTAL 2,122.20

MEAN 5.81

MAX 954

MIN .30

AC-FT 4,210

WTR YR 1968 TOTAL 250.64

MEAN .68

MAX 15

MIN 0

AC-FT 497

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

JALAMA CREEK BASIN

263

11-1206. JALAMA CREEK NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°30'50", long 120°29'02", in San Julian Grant, on downstream side of right bridge pier on Jalama Road, 0.6 mile downstream from Gasper Creek, 1.4 miles upstream from mouth, and 8.9 miles southwest of Lompoc, Santa Barbara County.

DRAINAGE AREA.--20.5 sq mi.

RECORDS AVAILABLE.--September 1965 to September 1968.

GAGE.--Graphic water-stage recorder and concrete control. Altitude of gage is 80 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 23 cfs Mar. 13 (gage height, 3.26 ft); no flow Oct. 8-22, May 24 to Sept. 30.

1965-68: Maximum discharge, 1,710 cfs Jan. 2⁴, 1967 (gage height, 8.05 ft); no flow for many days in most years.

REMARKS.--Records good. No regulation or diversion above station. Some pumping from wells for irrigation of about 400 acres.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	.30	.30	.70	.50	1.0	.10				
2	.10	.10	.20	.30	.70	.50	2.0	.10				
3	.10	.10	.20	.30	.60	.50	.80	.10				
4	.10	.10	.20	.30	.60	.50	.60	.10				
5	.10	.10	.20	.30	.60	.50	.60	.10				
6	.10	.10	.20	.30	.80	.50	.50	.10				
7	.10	.10	.20	.30	.80	1.0	.40	.10				
8	0	.10	.20	.30	.80	3.0	.40	.10				
9	0	.10	.20	.30	.80	1.5	.40	.10				
10	0	.10	.20	.40	.80	.90	.30	.10				
11	0	.10	.20	.80	.80	.80	.30	.10				
12	0	.20	.20	.40	.80	.70	.30	.10				
13	0	.30	.20	.40	1.4	11	.40	.10				
14	0	.30	.20	.40	1.1	2.2	.40	.10				
15	0	.30	.30	.40	.90	1.2	.40	.10				
16	0	.30	.30	.40	.80	1.1	.30	.10				
17	0	.30	.30	.40	2.2	1.2	.30	.10				
18	0	.30	1.1	.40	1.4	.90	.30	.10				
19	0	.70	.70	.40	.90	.80	.30	.10				
20	0	.70	.40	.40	.80	.70	.30	.10				
21	0	.80	.30	.40	.80	.60	.30	.10				
22	0	.50	.30	.40	.70	.60	.30	.10				
23	.10	.40	.20	.40	.70	.60	.20	.10				
24	.10	.30	.20	.40	.70	.60	.20	0				
25	.10	.30	.20	.40	.70	.60	.20	0				
26	.10	.30	.20	.40	.70	.50	.10	0				
27	.10	.30	.20	.70	.70	.40	.10	0				
28	.10	.30	.20	.80	.70	.40	.10	0				
29	.10	.30	.20	.70	.50	.40	.10	0				
30	.10	.80	.20	.60	-----	.40	.10	0				
31	.10	-----	.20	.90	-----	.40	-----	0	-----			-----
TOTAL	1.60	8.80	8.40	13.60	24.50	35.50	12.00	2.30	0	0	0	0
MEAN	.052	.29	.27	.44	.84	1.15	.40	.074	0	0	0	0
MAX	.10	.80	1.1	.90	2.2	11	2.0	.10	0	0	0	0
MIN	0	.10	.20	.30	.50	.40	.10	0	0	0	0	0
AC-FT	3.2	17	17	27	49	70	24	4.6	0	0	0	0

CAL YR 1967 TOTAL 758.60 MEAN 2.08 MAX 303 MIN 0 AC-FT 1,500
WTR YR 1968 TOTAL 106.70 MEAN .29 MAX 11 MIN 0 AC-FT 212

Peak discharge (base, 150 cfs).--No peak above base.

SANTA YNEZ RIVER BASIN

11-1210. SANTA YNEZ RIVER AT JAMESON LAKE, NEAR MONTECITO, CALIF.

LOCATION.--Lat 34°29'32", long 119°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 1968. Prior to October 1938, published as "at Juncal Reservoir, near Montecito."

GAGE.--Water-stage recorder on lake; digital 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. Prior to Apr. 15, 1966, graphic water-stage recorder on outlet conduit.

AVERAGE DISCHARGE.--37 years (1931-68), 5.50 cfs (3,980 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 1967 TO SEPTEMBER 1968

Month	Gage height (feet) ^a	Contents (acre-feet)	Change in Contents (acre-feet)	Draft (acre-feet)	Spill and Release (acre-feet)	Evapo-ration (acre-feet)	Total inflow (acre-feet)	Rain on reser-voir (acre-feet)	Net discharge (acre-feet)
Jameson Lake									
Sept. 30.....	2,220.53	6,133	-	-	-	-	-	-	-
Oct. 31.....	2,218.95	5,919	-214	198	0	31	15	0	15
Nov. 30.....	2,218.53	5,863	-56	144	0	12	100	42	58
Dec. 31.....	2,218.36	5,841	-22	97	0	3	78	5	73
Calendar year 1967	-	-	-769	1,494	6,114	391	7,230	377	6,853
Jan. 31.....	2,218.30	5,833	-8	105	0	6	103	21	82
Feb. 29.....	2,218.50	5,859	+26	87	0	13	126	17	109
Mar. 31.....	2,219.56	6,001	+142	97	0	25	264	38	226
Apr. 30.....	2,219.10	5,939	-62	157	0	34	129	20	109
May 31.....	2,217.65	5,747	-192	276	0	a 44	128	0	128
June 30.....	2,215.45	5,463	-284	310	0	a 50	76	0	76
July 31.....	2,213.32	5,195	-268	273	0	57	62	0	62
Aug. 31.....	2,211.08	4,919	-276	264	0	50	38	0	38
Sept. 30.....	2,208.86	4,658	-261	251	0	39	29	0	29
Water year 1967-68	-	-	-1,475	2,259	0	364	1,148	143	1,005

^a Gage height at 2400 hours.

a Partly estimated.

Note.--For months when inflow to the lake was small and other quantities were large, discordant figures of net discharge may appear. This arises primarily from the difficulty of computing net discharge as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

11-1220. SANTA YNEZ RIVER ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA, CALIF.

LOCATION.--Lat 34°31'37", long 119°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 1968. 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; digital water-stage recorder and sharp-crested weir on diversion. Spill and release measured at river gaging station below dam (see sta. no. 11-1230). 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. Prior to Apr. 15, 1966, graphic water-stage recorder on diversion.

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 sta. no. 11-1210).

COOPERATION.--Reservoir-operation records and related data furnished by city of Santa Barbara.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

Month	Elevation (feet) ^a	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Spill and release (acre- feet)	Evapo- ration (acre- feet)	Total inflow (acre- feet)	Rain on reservoir (acre- feet)	Net inflow (acre- feet)
Gibraltar Reservoir									
Sept. 30.....	1,396.76	13,504	-	-	-	-	-	-	-
Oct. 31.....	1,395.17	12,873	-631	629	9	149	156	0	156
Nov. 30.....	1,395.85	13,140	+267	368	3	59	697	129	568
Dec. 31.....	1,396.03	13,211	+71	606	6	16	699	47	652
Calendar year 1967..	-	-	-1,421	6,047	85,935	1,586	92,147	973	91,174
Jan. 31.....	1,396.06	13,223	+12	665	8	24	709	70	639
Feb. 29.....	1,397.24	13,698	+475	417	9	41	942	44	898
Mar. 31.....	1,399.95	14,833	+1,135	490	894	99	2,618	121	2,497
Apr. 30.....	1,399.79	14,765	-68	609	346	162	1,049	60	989
May 31.....	1,398.61	14,265	-500	676	6	195	377	0	377
June 30.....	1,396.53	13,412	-853	664	49	240	100	0	100
July 31.....	1,393.98	12,414	-998	706	67	226	1	0	1
Aug. 31.....	1,391.40	11,465	-949	688	6	201	-54	0	-54
Sept. 30.....	1,388.83	10,578	-887	708	0	151	-28	0	-28
Water year 1967-68..	-	-	-2,926	7,226	1,403	1,563	7,266	471	6,795

^a Elevation at 1800 hours.

^b Evaporation for May and June partly estimated.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of net inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

SANTA YNEZ RIVER BASIN

11-1230. SANTA YNEZ RIVER BELOW GIBALTAR DAM, NEAR SANTA BARBARA, CALIF.

LOCATION.--Lat 34°31'28", long 119°41'11", 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 1968 (monthly discharge only prior to October 1941).

GAGE.--Graphic water-stage recorder; graphic water-stage recorder and combination sharp-crested weir on "release to river" gage. Datum of gage is 1,227 ft above mean sea level. Graphic water-stage recorder on Gibraltar Reservoir used as supplementary gage. Prior to Apr. 17, 1952, graphic 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, graphic water-stage recorder, at same site at datum 5.00 ft higher.

EXTREMES.--Maximum discharge during year, 618 cfs Apr. 2 (gage height, 8.12 ft), from rating curve extended above 1,200 cfs on basis of computation of maximum flow over dam and flow through partly opened gates; no flow for many days.

1920-68: 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 sta. nos. 11-1210, 11-1220). City of Santa Barbara diverted 7,226 acre-ft during the water year from Gibraltar Reservoir; Montecito County Water District diverted 2,259 acre-ft during the water year from Jameson Lake.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.10	.10	.20	.10	22	.10	.10	2.7	.55	
2	.10	0	.10	.10	.20	.10	51	.10	.10	2.7	.55	
3	.10	0	.10	.10	.20	0	21	.10	0	2.7	.55	
4	.10	0	.10	.10	.20	0	15	.10	0	2.7	.55	
5	.10	0	.10	.10	.20	0	9.8	.10	0	2.7	.55	
6	.20	0	.10	.10	.20	.10	8.4	.10	0	2.7	.21	
7	.20	0	.10	.10	.20	.20	7.0	.10	0	2.7	.11	
8	.20	0	.10	.10	.20	.30	6.0	.10	0	1.8	.07	
9	.20	0	.10	.10	.20	30	4.4	.10	0	.55	.05	
10	.20	0	.10	.10	.20	55	3.7	.10	0	.55	0	
11	.20	0	.10	.10	.20	46	3.2	.10	0	.55	0	
12	.20	0	.10	.10	.20	44	2.7	.10	0	.55	0	
13	.20	0	.10	.10	.20	54	2.5	.10	0	.52	0	
14	.20	0	.10	.10	.20	55	2.4	.10	0	.52	0	
15	.20	0	.10	.10	.20	45	2.3	.10	0	.50	0	
16	.20	0	.10	.10	.20	37	2.0	.10	0	.58	0	
17	.20	0	.10	.10	.20	34	1.7	.10	0	.71	0	
18	.20	0	.10	.10	.20	22	1.5	.10	0	.55	0	
19	.20	.10	.10	.10	.10	9.8	1.3	.10	0	.55	0	
20	.20	.20	.10	.10	.10	9.8	1.1	.10	0	.60	0	
21	.20	.40	.10	.10	.10	6.4	.90	.10	.90	.58	0	
22	.10	.10	.10	.10	.10	.10	.80	.10	2.4	.58	0	
23	.10	.10	.10	.10	.10	.10	.70	.10	2.7	.58	0	
24	.10	.10	.10	.10	.10	.10	.60	.10	2.7	.58	0	
25	.10	.10	.10	.20	.10	.10	.50	.10	2.7	.58	0	
26	.10	.10	.10	.20	.10	.10	.40	.10	2.7	.58	0	
27	.10	.10	.10	.20	.10	.10	.30	.10	2.7	.58	0	
28	.10	0	.10	.20	.10	.20	.30	.10	2.6	.58	0	
29	.10	0	.10	.20	.10	.30	.30	.10	2.6	.58	0	
30	.10	.30	.10	.20	-----	.30	.20	.10	2.6	.55	0	
31	0	-----	.10	.20	-----	.40	-----	.10	-----	.55	0	-----
TOTAL	4.50	1.60	3.10	3.80	4.70	450.60	174.00	3.10	24.80	33.75	3.19	0
MEAN	.15	.053	.10	.12	.16	14.5	5.80	.10	.83	1.09	.10	0
MAX	.20	.40	.10	.20	.20	55	51	.10	2.7	2.7	.55	0
MIN	0	0	.10	.10	.10	0	.20	.10	0	.50	0	0
AC-FT	8.9	3.2	6.2	7.5	9.3	894	345	6.2	49	67	6.3	0
CAL YR 1967	TOTAL	43,429.00	MEAN	119	MAX	2,880	MIN	0	AC-FT	86,140		
WTR YR 1968	TOTAL	707.14	MEAN	1.93	MAX	55	MIN	0	AC-FT	1,400		

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Datum of gage is 787.8 ft above mean sea level, datum of 1929.

EXTREMES.--Maximum discharge during year, 85 cfs Mar. 8 (gage height, 6.16 ft); no flow for most of year.

1947-68: Maximum discharge, 33,000 cfs Jan. 15, 1952 (gage height, 15.6 ft), from rating curve extended above 9,200 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 sta. nos. 11-1210., 11-1220.). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Low flow affected by intermittent pumping for irrigation from infiltration gallery in river bed at station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	12	3.5	7.1	3.2	18	0				
2		0	8.9	3.5	6.5	3.2	41	0				
3		0	6.0	3.2	5.5	2.9	30	0				
4		0	5.5	3.2	5.0	2.9	25	0				
5		0	5.0	3.2	4.6	2.9	20	0				
6		0	4.6	3.2	4.2	2.6	15	.20				
7		0	4.2	2.9	3.8	14	13	.10				
8		0	4.6	2.9	3.8	70	12	0				
9		0	3.8	2.9	3.8	37	11	0				
10		0	2.9	2.9	3.8	49	9.5	0				
11		0	2.9	3.5	3.5	51	8.3	0				
12		0	2.9	3.5	3.5	43	7.1	0				
13		0	2.9	3.5	4.2	61	6.5	0				
14		0	3.2	3.5	4.6	59	6.5	0				
15		0	3.2	3.2	3.8	51	5.5	0				
16		0	2.9	2.9	3.5	45	5.0	0				
17		0	2.3	2.9	11	37	3.8	0				
18		0	5.4	2.9	14	33	2.9	0				
19		0	8.9	2.9	11	27	3.2	0				
20		0	8.9	2.9	8.3	18	3.2	0				
21		5.9	7.1	2.9	7.1	16	2.9	0				
22		7.1	6.0	2.6	6.0	15	2.3	0				
23		2.0	5.5	2.3	5.5	10	2.0	0				
24		.60	5.0	2.3	5.0	7.1	1.4	0				
25		.10	4.6	2.3	4.6	6.0	1.0	0				
26		0	4.2	2.6	4.2	5.5	.70	0				
27		0	4.2	6.5	4.2	5.0	.60	0				
28		0	4.2	12	3.8	3.5	1.4	0				
29		0	4.2	10	3.5	2.3	1.0	0				
30		9.1	4.2	7.7	-----	2.3	0	0				
31		-----	3.8	7.1	-----	3.2	-----	0	-----			-----
TOTAL	0	24.80	154.0	121.4	159.4	688.6	259.80	0.30	0	0	0	0
MEAN	0	.83	4.97	3.92	5.50	22.2	8.66	.010	0	0	0	0
MAX	0	9.1	12	12	14	70	41	.20	0	0	0	0
MIN	0	0	2.3	2.3	3.5	2.3	0	0	0	0	0	0
AC-FT	0	49	305	241	316	1,370	515	.6	0	0	0	0
CAL YR 1967	TOTAL	54,902.00	MEAN	150	MAX	4,120	MIN	0	AC-FT	108,900		
WTR YR 1968	TOTAL	1,408.30	MEAN	3.85	MAX	70	MIN	0	AC-FT	2,790		

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Graphic 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.--27 years, 13.5 cfs (9,770 acre-ft per year); median of yearly mean discharges, 6.0 cfs (4,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 472 cfs Mar. 8 (gage height, 6.34 ft); no flow July 11 to Sept. 30. 1941-68: Maximum discharge, 5,800 cfs Dec. 6, 1966 (gage height, 10.30 ft), from rating curve extended above 2,100 cfs; no flow at times in 1953-68.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	.40	13	5.9	9.7	6.4	9.0	5.4	.90	.10		
2	1.5	.30	7.6	5.9	8.3	6.4	18	5.4	.60	.10		
3	1.3	.30	6.4	5.9	7.6	5.9	12	5.4	.60	.10		
4	1.3	.40	5.9	5.9	7.0	5.4	11	5.4	.60	.10		
5	1.3	.50	5.9	5.9	7.0	5.4	10	5.4	.60	.10		
6	1.3	.60	6.4	5.9	5.9	5.4	10	5.4	.60	.10		
7	1.3	.60	6.4	5.9	5.9	32	9.0	4.9	.60	.10		
8	1.3	.60	7.0	5.4	5.9	275	9.0	4.0	.60	.10		
9	1.3	.60	6.4	5.4	5.9	48	8.3	4.0	.60	.10		
10	1.3	.60	5.9	6.4	5.4	25	7.6	4.0	.50	0		
11	1.2	.60	5.9	16	5.4	16	7.6	4.0	.30	0		
12	1.0	.60	5.4	11	5.4	13	7.6	4.0	.30	0		
13	.90	.60	5.4	9.0	6.4	16	7.6	4.0	.20	0		
14	.90	.60	4.9	8.3	5.9	15	7.6	3.6	.20	0		
15	.90	.60	4.9	7.6	5.4	12	7.6	3.6	.20	0		
16	.90	.60	4.9	7.6	5.4	11	7.6	3.3	.20	0		
17	.90	.60	4.9	7.0	22	12	7.6	3.0	.20	0		
18	.90	.80	6.4	7.0	28	11	7.6	2.6	.20	0		
19	.90	4.4	12	6.4	16	10	7.6	2.4	.20	0		
20	.90	12	9.7	6.4	13	10	7.6	2.4	.20	0		
21	.90	15	8.3	6.4	11	9.7	7.6	2.1	.20	0		
22	.90	16	7.6	5.9	9.7	9.7	7.6	2.1	.20	0		
23	.90	8.3	7.0	5.9	9.0	9.7	7.0	2.1	.20	0		
24	.90	5.9	6.4	5.4	8.3	9.0	7.0	2.1	.20	0		
25	.80	4.9	6.4	5.4	7.0	9.0	6.4	2.1	.20	0		
26	.80	4.4	6.4	5.4	7.0	9.0	6.4	1.9	.20	0		
27	.80	4.0	5.9	8.3	7.0	8.3	5.9	1.2	.20	0		
28	.60	4.0	5.9	9.7	7.0	8.3	5.9	1.0	.20	0		
29	.60	4.0	5.9	7.0	7.0	8.3	5.4	.90	.20	0		
30	.60	9.0	5.9	7.0	-----	7.6	5.4	.90	.10	0		
31	.60	-----	5.9	9.0	-----	7.6	-----	.90	-----	0		
TOTAL	31.20	101.80	206.9	220.2	254.5	637.1	244.5	99.50	10.30	0.90	0	0
MEAN	1.01	3.39	6.67	7.10	8.78	20.6	8.15	3.21	.34	.029	0	0
MAX	1.5	16	13	16	28	275	18	5.4	.90	.10	0	0
MIN	.60	.30	4.9	5.4	5.4	5.4	5.4	.90	.10	0	0	0
AC-FT	62	202	410	437	505	1,260	485	197	20	1.8	0	0

CAL YR 1967 TOTAL 2,387.90 MEAN 6.54 MAX 366 MIN .30 AC-FT 4,740
WTR YR 1968 TOTAL 1,806.90 MEAN 4.94 MAX 275 MIN 0 AC-FT 3,580

Peak discharge (base, 100 cfs).--Mar. 8 (0830 hrs) 472 cfs (6.34 ft).

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 1968. 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 benchmark).

EXTREMES.--Maximum contents during year, 191,564 acre-ft Oct. 1 (elevation, 745.59 ft); minimum, 160,871 acre-ft Sept. 30 (elevation, 734.57 ft).
1952-68: Maximum contents, 206,894 acre-ft Mar. 13, 1967 (elevation, 750.65 ft); minimum, since initial filling in April 1958, 117,872 acre-ft Nov. 13, 1965 (elevation 716.63 ft).

REMARKS.--Reservoir is formed by earthfill dam. Storage began November 1952. Capacity table is based on surveys made in January 1953. Dead storage below outlet gate to river (elevation, 600 ft), 3,114 acre-ft, included in contents. Capacity below sill of inlet to Tecolote Tunnel (elevation, 660 ft), 32,514 acre-ft; below spillway level (elevation, 720 ft), 125,292 acre-ft; below top of 4 radial gates (elevation, 750 ft), 204,874 acre-ft. Water is released from outlet to Santa Ynez River to satisfy downstream water rights. Water diverted to Tecolote Tunnel for use by city of Santa Barbara and nearby communities, to Santa Ynez River Water Conservation District, and to Cachuma Recreation Area.

COOPERATION.--Reservoir elevations and diversion figures furnished by Bureau of Reclamation.

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

Date	Elevation (feet) ^a	Contents (acre-feet)	Change in contents (acre-feet)	Total Diversions (acre-feet)
Sept. 30.....	745.61	191,622	-	-
Oct. 31.....	744.65	188,809	-2,813	1,547
Nov. 30.....	744.21	187,529	-1,280	1,482
Dec. 31.....	744.05	187,062	-467	344
Calendar year 1967.....	-	-	-17,536	17,003
Jan. 31.....	743.86	186,513	-549	319
Feb. 29.....	743.84	186,455	-58	360
Mar. 31.....	744.33	187,877	+1,422	860
Apr. 30.....	743.63	185,850	-2,027	1,182
May 31.....	742.03	181,270	-4,580	2,891
June 30.....	740.17	176,044	-5,226	3,248
July 31.....	738.18	170,558	-5,486	3,645
Aug. 31.....	736.22	165,257	-5,301	3,546
Sept. 30.....	734.57	160,871	-4,386	2,902
Water year 1967-68.....	-	-	-30,751	22,226

^a 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 1968.

GAGE.--Graphic 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, 208 cfs Mar. 31 (gage height, 3.16 ft); no flow for many days. 1928-31, 1932-68: 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. Flow regulated by Jameson Lake since December 1930, Gibraltar Reservoir, and Lake Cachuma since November 1952 (see sta. nos. 11-1210., 11-1220., 11-1255.). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and to the Santa Ynez valley for municipal supply. Some water pumped from wells along river banks for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	0	12	5.7	14	14	42	19	8.9	10	10	7.1
2	4.4	0	10	14	14	14	19	19	8.9	14	10	7.4
3	0	0	10	15	14	14	7.1	19	11	14	11	8.0
4	0	0	9.3	15	14	16	6.2	19	16	14	11	8.0
5	0	0	5.9	16	14	18	5.9	19	16	14	10	8.0
6	0	0	5.9	16	14	18	7.1	17	17	14	5.8	8.0
7	0	0	5.9	16	14	17	5.6	12	17	14	5.4	7.8
8	0	0	5.9	12	14	7.4	10	12	17	14	5.4	8.0
9	0	0	5.9	5.4	14	2.8	19	12	17	7.4	5.5	6.7
10	0	0	5.9	4.4	14	1.8	20	12	16	7.4	5.5	2.5
11	0	0	5.6	4.2	14	2.4	25	13	9.3	7.1	5.7	1.9
12	0	0	3.8	3.8	17	4.0	40	13	9.3	6.8	5.6	1.9
13	0	0	3.4	3.8	21	6.8	76	12	9.3	7.1	6.0	1.8
14	0	0	3.6	3.8	17	3.2	92	7.1	9.3	7.4	6.2	1.7
15	0	0	3.6	4.7	11	1.8	28	6.5	9.7	8.1	6.0	1.9
16	0	0	3.6	10	10	2.4	16	6.2	9.7	12	5.8	2.0
17	2.3	0	4.0	11	12	4.4	31	5.9	10	12	5.3	1.6
18	5.6	0	4.0	11	10	4.6	31	5.9	13	12	4.8	1.3
19	6.2	0	2.4	11	10	4.6	31	6.2	13	12	4.4	1.2
20	6.2	0	1.2	11	7.1	4.9	31	7.7	13	12	1.2	1.4
21	6.2	10	.10	11	6.5	4.9	31	13	13	12	.05	2.0
22	5.9	12	0	12	6.2	6.8	20	14	13	12	0	2.0
23	5.4	12	0	13	5.9	4.6	6.5	14	14	12	0	1.9
24	0	12	0	14	5.6	4.9	5.4	14	14	12	0	.84
25	0	12	1.5	13	5.6	4.9	4.9	14	12	12	0	.12
26	0	12	8.1	13	6.8	5.9	4.9	14	9.7	12	0	0
27	0	12	8.1	14	10	9.7	4.9	12	9.7	12	3.0	0
28	0	11	8.5	14	11	22	4.9	9.3	8.9	13	5.2	0
29	0	11	8.5	14	14	39	9.2	12	8.9	13	6.0	0
30	0	12	8.5	14	-----	40	19	9.3	8.5	11	6.4	0
31	0	-----	13	14	-----	54	-----	9.3	-----	11	6.8	-----
TOTAL	48.4	116	168.20	339.8	340.7	358.8	653.6	378.4	362.1	351.3	158.15	95.06
MEAN	1.56	3.87	5.43	11.0	11.7	11.6	21.8	12.2	12.1	11.3	5.10	3.17
MAX	6.2	12	13	16	21	54	92	19	17	14	11	8.0
MIN	0	0	0	3.8	5.6	1.8	4.9	5.9	8.5	6.8	0	0
AC-FT	96	230	334	674	676	712	1,300	751	718	697	314	189
CAL YR 1967	TOTAL	68,226.10	MEAN	187	MAX	4,040	MIN	0	AC-FT	135,300		
WTR YR 1968	TOTAL	3,370.51	MEAN	9.21	MAX	92	MIN	0	AC-FT	6,690		

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 1968. Monthly discharge only for January 1941 and yearly estimate for water year 1941 (incomplete) published in WSP 1315-B.

GAGE.--Graphic 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.--28 years, 3.16 cfs (2,290 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

EXTREMES.--Maximum discharge during year, 88 cfs Mar. 8 (gage height, 2.76 ft); no flow for most of year. 1940-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						0						
2						0						
3						0						
4						0						
5						0						
6						0						
7						0						
8						14						
9						.20						
10						0						
11						0						
12						0						
13						2.9						
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	0	17.10	0	0	0	0	0	0
MEAN	0	0	0	0	0	.55	0	0	0	0	0	0
MAX	0	0	0	0	0	14	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	34	0	0	0	0	0	0
CAL YR 1967	TOTAL 1,045.20		MEAN 2.86		MAX 123		MIN 0		AC-FT 2,070			
WTR YR 1968	TOTAL 17.10		MEAN .047		MAX 14		MIN 0		AC-FT 34			

Peak discharge (base, 50 cfs).--Mar. 8 (0900 hrs) 88 cfs (2.76 ft).

SANTA YNEZ RIVER BASIN

11-1284. ALISAL CREEK NEAR SOLVANG, CALIF.

LOCATION.--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 mile southwest of Solvang, Santa Barbara County.

DRAINAGE AREA.--12.2 sq mi.

RECORDS AVAILABLE.--October 1954 to September 1955, October 1955 to September 1956 (monthly discharge only), October 1956 to September 1968.

GAGE.--Graphic 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.--14 years, 5.39 cfs (3,900 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 30 cfs Mar. 13 (gage height, 2.67 ft); no flow Oct. 1 to Mar. 7, Mar. 11, 12, May 2 to Sept. 30.

1954-68: Maximum discharge, 4,280 cfs Jan. 24, 1967 (gage height, 10.50 ft), 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. At times waste irrigation water pumped from Santa Ynez River causes minor flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						0	3.0	.10				
2						0	2.7	0				
3						0	1.4	0				
4						0	1.2	0				
5						0	1.1	0				
6						0	1.0	0				
7						0	.90	0				
8						8.0	.80	0				
9						1.3	.60	0				
10						.30	.50	0				
11						0	.50	0				
12						0	.50	0				
13						11	.40	0				
14						4.1	.40	0				
15						2.3	.40	0				
16						1.8	.40	0				
17						1.8	.40	0				
18						1.4	.40	0				
19						1.3	.40	0				
20						1.2	.40	0				
21						1.2	.40	0				
22						1.1	.30	0				
23						1.0	.30	0				
24						1.0	.30	0				
25						1.0	.30	0				
26						1.2	.10	0				
27						1.2	.10	0				
28						1.2	.10	0				
29						1.2	.10	0				
30						1.1	.10	0				
31		-----			-----	1.1	-----	0	-----			-----
TOTAL	0	0	0	0	0	46.80	19.50	0.10	0	0	0	0
MEAN	0	0	0	0	0	1.51	.65	.003	0	0	0	0
MAX	0	0	0	0	0	11	3.0	.10	0	0	0	0
MIN	0	0	0	0	0	0	.10	0	0	0	0	0
AC-FT	0	0	0	0	0	93	39	.2	0	0	0	0

CAL YR 1967 TOTAL 3,191.80 MEAN 8.74 MAX 915 MIN 0 AC-FT 6,330
WTR YR 1968 TOTAL 66.40 MEAN .18 MAX 11 MIN 0 AC-FT 132

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

SANTA YNEZ RIVER BASIN

273

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 1968.

GAGE.--Digital 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 Sept. 30, 1968, graphic water-stage recorder at datum 2.00 ft higher. Prior to May 12, 1966, graphic water-stage recorder.

EXTREMES.--Maximum discharge during year, 76 cfs Apr. 14 (gage height, 3.36 ft); no flow for much of year. 1928-36, 1946-68: 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 sta. nos. 11-1210., 11-1220., 11-1255.). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Some water for irrigation pumped from wells along banks of river in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	5.4	16	19	14	54	1.4	.49			
2	0	0	5.4	13	20	15	44	1.8	.53			
3	0	0	5.9	14	20	15	29	2.9	.67			
4	0	0	6.0	15	20	16	22	4.7	.50			
5	0	0	7.7	16	20	17	18	6.7	.18			
6	0	0	7.2	17	20	19	18	8.2	.05			
7	0	0	7.8	17	19	22	17	8.1	0			
8	0	0	8.4	17	20	38	15	7.0	0			
9	0	0	8.4	11	20	23	16	6.5	0			
10	0	0	8.7	13	20	17	20	6.6	0			
11	0	0	9.3	12	20	15	21	6.8	0			
12	0	0	9.4	11	20	13	27	5.9	0			
13	0	0	9.3	11	24	27	41	7.2	0			
14	0	0	9.1	11	25	19	67	6.0	0			
15	0	0	9.0	11	21	16	51	5.1	.02			
16	0	0	8.8	11	18	15	24	4.5	.02			
17	0	0	8.9	12	22	15	21	3.4	0			
18	0	0	11	13	18	14	23	2.3	0			
19	0	0	11	15	16	14	22	1.8	0			
20	0	0	9.7	16	15	14	22	1.5	0			
21	0	0	9.4	16	14	14	21	1.9	0			
22	0	0	9.3	17	12	14	21	1.6	0			
23	0	0	9.2	17	12	14	13	1.5	0			
24	0	0	8.9	19	12	14	7.9	.86	0			
25	0	0	8.9	19	11	13	5.6	.70	0			
26	0	0	9.5	19	11	13	4.7	.62	0			
27	0	0	9.0	19	11	13	3.8	.15	0			
28	0	3.0	9.5	19	12	13	3.4	.12	0			
29	0	5.1	11	19	13	19	2.5	0	0			
30	0	6.5	13	19	-----	32	2.1	.26	0			
31	23	-----	13	19	-----	38	-----	.50	-----			-----
TOTAL	23	14.6	277.1	474	505	555	657.0	106.61	2.46	0	0	0
MEAN	.74	.49	8.94	15.3	17.4	17.9	21.9	3.44	.082	0	0	0
MAX	23	6.5	13	19	25	38	67	8.2	.67	0	0	0
MIN	0	0	5.4	11	11	13	2.1	0	0	0	0	0
AC-FT	46	29	550	940	1,000	1,100	1,300	211	4.9	0	0	0
CAL YR 1967	TOTAL	71,391.14	MEAN	196	MAX	4,300	MIN	0	AC-FT	141,600		
WTR YR 1968	TOTAL	2,614.77	MEAN	7.14	MAX	67	MIN	0	AC-FT	5,190		

SANTA YNEZ RIVER BASIN

11-1298. ZACA CREEK NEAR BUELLTON, CALIF.

LOCATIONN.--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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 471.54 ft above mean sea level.

AVERAGE DISCHARGE.--5 years, 0.213 cfs (154 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1.0 cfs Mar. 13 (gage height, 2.15 ft); no flow for most of year.
1963-68: Maximum discharge, 191 cfs Dec. 6, 1966 (gage height, 4.70 ft); no flow for most of each year.

REMARKS.--Records good. Slight regulation by Zaca Lake. Some pumping from wells along stream for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						0						
2						0						
3						0						
4						0						
5						0						
6						0						
7						0						
8						.10						
9						0						
10						0						
11						0						
12						0						
13						.20						
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	0	0.30	0	0	0	0	0	0
MEAN	0	0	0	0	0	.010	0	0	0	0	0	0
MAX	0	0	0	0	0	.20	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	.6	0	0	0	0	0	0

CAL YR 1967 TOTAL 291.50 MEAN .80 MAX 19 MIN 0 AC-FT 578
WTR YR 1968 TOTAL .30 MEAN .0008 MAX .20 MIN 0 AC-FT .6

Peak discharge (base, 10 cfs).--No peak above base.

SANTA YNEZ RIVER BASIN

275

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; October 1965 to September 1968 (wading stages only).

GAGE.--Digital 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. Prior to May 12, 1966, graphic water-stage recorder.

REMARKS.--Records good. This is a project station. Discharge above wading stages not reported herein. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (see sta. nos. 11-1210., 11-1220., 11-1255.). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Some water pumped from wells along banks of river for irrigation in valley upstream. Records of sediment data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	3.5	7.8	8.4	19	18	53	5.7	.38			
2	0	3.4	7.7	8.6	20	18	55	5.0	.35			
3	0	3.4	7.7	8.8	20	18	38	4.2	.41			
4	0	3.4	7.7	9.0	20	19	28	3.7	.50			
5	0	3.7	7.8	9.6	21	18	23	3.4	.42			
6	0	3.8	7.7	9.8	21	18	19	3.9	.35			
7	0	3.8	7.4	10	21	21	17	4.1	.44			
8	0	4.0	7.4	11	22	34	16	3.7	.40			
9	0	4.0	7.4	11	22	32	14	3.4	.50			
10	0	4.0	7.5	12	22	22	13	3.0	.44			
11	0	4.0	7.7	11	23	19	13	2.7	.46			
12	0	4.3	7.8	11	23	18	13	2.4	.44			
13	0	4.5	8.0	11	24	25	19	2.3	.42			
14	0	4.7	8.1	11	27	26	44	2.2	.44			
15	0	4.6	8.1	11	28	21	62	1.8	.38			
16	0	4.9	8.1	11	27	20	36	1.6	.70			
17	.12	4.8	7.8	11	30	18	22	1.5	.98			
18	.77	5.5	8.5	11	30	18	22	1.3	.68			
19	1.2	6.5	8.8	11	28	17	23	1.3	.54			
20	1.3	6.7	8.5	11	27	16	22	1.3	.36			
21	1.5	7.1	8.2	12	26	16	22	1.1	.20			
22	1.8	7.1	8.2	13	25	16	22	1.1	.16			
23	2.0	6.8	8.4	13	25	16	20	.91	.07			
24	2.3	7.0	8.2	13	23	16	15	.94	.07			
25	2.4	7.0	8.3	14	22	16	11	.76	.04			
26	2.6	7.5	8.3	15	22	16	8.9	.63	.03			
27	2.5	6.9	8.3	16	20	16	7.7	.60	0			
28	2.6	7.1	8.3	17	19	16	7.2	.47	0			
29	2.9	7.4	8.4	17	19	15	6.9	.38	0			
30	3.1	8.2	8.0	18	-----	16	6.8	.38	0			
31	3.3	-----	8.1	19	-----	24	-----	.41	-----			-----
TOTAL	30.39	159.6	248.2	375.2	676	599	679.5	66.18	10.16	0	0	
MEAN	.98	5.32	8.01	12.1	23.3	19.3	22.7	2.13	.34	0	0	
MAX	3.3	8.2	8.8	19	30	34	62	5.7	.98	0	0	
MIN	0	3.4	7.4	8.4	19	15	6.8	.38	0	0	0	
AC-FT	60	317	492	744	1,340	1,190	1,350	131	20	0	0	

SANTA YNEZ RIVER BASIN

11-1315. SANTA YNEZ RIVER AT COOPER'S REEF, NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°36'48", long 120°21'20", near boundary of Canada de Salsipuedes Grant, 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 200 ft (from topographic map). Prior to Dec.7, 1962, graphic water-stage recorder.

EXTREMES.--Maximum discharge during year, 129 cfs Apr. 15 (gage height, 2.49 ft); minimum daily, 0.04 cfs Aug. 12 to Sept. 30.

1954-68: Maximum discharge, 10,200 cfs Jan. 24, 1967 (gage height, 12.25 ft), from rating curve extended above 5,100 cfs; no flow for several months in some years.

REMARKS.--Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see sta. nos. 11-1210., 11-1220., 11-1255.). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.49	.37	7.8	23	24	40	6.7	1.9	.57	.10	.04
2	.20	.42	.36	8.2	24	24	102	5.8	1.9	.57	.09	.04
3	.22	.47	.31	8.6	25	25	76	5.9	2.0	.52	.10	.04
4	.22	.59	.35	6.3	26	28	52	5.5	2.1	.50	.09	.04
5	.21	.56	.48	7.2	27	27	34	5.2	1.9	.50	.08	.04
6	.22	.45	.35	9.3	27	25	27	5.0	1.8	.41	.06	.04
7	.21	.98	.42	8.3	30	35	25	4.7	1.5	.40	.06	.04
8	.21	.41	.49	8.4	30	55	22	4.4	1.4	.40	.06	.04
9	.23	.43	.30	8.7	29	92	20	4.2	1.2	.38	.06	.04
10	.23	.45	.32	10	30	77	19	4.0	1.2	.35	.05	.04
11	.41	.41	.36	9.7	31	47	17	3.8	1.1	.35	.05	.04
12	.15	.41	.36	10	33	24	15	3.6	1.1	.31	.04	.04
13	.19	.42	.41	11	34	33	14	3.4	.94	.28	.04	.04
14	.20	.38	.41	12	38	45	28	3.2	.92	.27	.04	.04
15	.20	.40	1.1	11	39	36	106	3.2	.93	.24	.04	.04
16	.20	.37	2.1	11	37	32	84	3.0	.92	.25	.04	.04
17	.20	.36	2.5	12	42	30	48	3.0	.81	.20	.04	.04
18	.20	.36	4.2	12	38	27	24	2.8	.70	.18	.04	.04
19	.20	.43	6.1	12	38	24	23	2.8	.61	.17	.04	.04
20	.20	.44	4.3	12	34	24	25	2.6	.60	.14	.04	.04
21	.20	.61	3.4	13	29	24	26	2.6	.56	.17	.04	.04
22	.20	.66	4.3	14	26	23	24	2.4	.58	.20	.04	.04
23	.19	.65	5.4	15	25	22	24	2.4	.57	.17	.04	.04
24	.20	.64	5.7	17	24	22	18	2.2	.64	.17	.04	.04
25	.20	.50	6.1	17	21	19	14	2.2	.58	.17	.04	.04
26	.26	.27	7.0	17	22	18	12	2.0	.56	.15	.04	.04
27	.19	.29	7.1	19	23	18	10	2.0	.60	.15	.04	.04
28	.39	.29	7.2	21	21	16	10	1.8	.53	.13	.04	.04
29	.76	.33	7.6	21	22	16	8.7	1.7	.53	.13	.04	.04
30	.61	.39	7.5	23	-----	15	7.8	1.8	.56	.12	.04	.04
31	.56	-----	7.1	22	-----	16	-----	2.0	-----	.11	.04	-----
TOTAL	8.08	13.86	93.99	394.5	848	943	955.5	105.9	31.24	8.66	1.60	1.20
MEAN	.26	.46	3.03	12.7	29.2	30.4	31.9	3.42	1.04	.28	.052	.040
MAX	.76	.98	7.6	23	42	92	106	6.7	2.1	.57	.10	.04
MIN	.15	.27	.30	6.3	21	15	7.8	1.7	.53	.11	.04	.04
AC-FT	16	27	186	782	1,680	1,870	1,900	210	62	17	3.2	2.4

CAL YR 1967 TOTAL 87,362.79 MEAN 239 MAX 5,330 MIN .15 AC-FT 173,300

WTR YR 1968 TOTAL 3,405.53 MEAN 9.30 MAX 106 MIN .04 AC-FT 6,750

SANTA YNEZ RIVER BASIN

277

11-1325. SALSIPUEDES CREEK NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°35'20", long 120°24'27", in W½ 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 1968.

GAGE.--Digital water-stage recorder and concrete low-water control. Altitude of gage is 240 ft (from topographic map). Prior to Sept. 29, 1962, graphic water-stage recorder.

AVERAGE DISCHARGE.--27 years, 8.05 cfs (5,830 acre-ft per year); median of yearly mean discharges, 3.3 cfs (2,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 165 cfs Mar. 13 (gage height, 2.56 ft); no flow Sept. 20-24, 27.
1941-68: Maximum discharge, 11,400 cfs Mar. 15, 1952 (gage height, 20.8 ft); no flow at times in some years.

REMARKS.--Records good. No regulation above station. Small diversions for irrigation above station. Records of sediment data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.59	.45	2.7	1.5	2.3	1.2	4.5	.64	.35	.14	.09	.04
2	.59	.45	1.7	1.6	1.9	1.1	5.9	.62	.26	.04	.09	.04
3	.59	.45	1.4	1.6	1.9	.98	2.2	.65	.19	.04	.09	.04
4	.59	.41	1.2	1.6	1.9	.87	1.8	.70	.20	.03	.09	.03
5	.59	.39	1.6	1.6	1.9	.81	1.7	.70	.21	.03	.09	.03
6	.59	.43	1.6	1.6	1.9	.71	1.6	.68	.20	.05	.09	.03
7	.59	.40	1.4	1.7	1.9	2.2	1.7	.65	.21	.07	.06	.03
8	.59	.47	1.3	1.8	1.9	14	1.4	.69	.21	.06	.06	.03
9	.52	.58	1.2	1.9	1.9	2.0	1.4	.65	.21	.07	.06	.02
10	.54	.75	1.2	2.2	1.9	1.0	1.4	.75	.15	.06	.04	.02
11	.55	.74	1.2	2.9	1.9	.74	1.4	.74	.15	.05	.04	.02
12	.59	.73	1.3	1.8	2.0	.73	1.4	.81	.16	.04	.04	.02
13	.65	.81	1.3	1.6	2.9	28	1.5	.86	.19	.05	.04	.02
14	.76	.82	1.4	1.6	2.8	3.5	1.5	.94	.16	.04	.04	.02
15	.60	.97	1.4	1.6	2.4	1.8	1.6	.83	.21	.04	.04	.02
16	.42	1.0	1.3	1.9	2.4	1.7	1.4	.83	.22	.07	.04	.02
17	.44	1.0	1.4	1.9	7.4	2.6	1.4	.73	.21	.18	.04	.01
18	.47	1.2	6.0	1.9	4.2	1.7	1.6	.60	.21	.23	.04	.02
19	.52	2.0	3.3	1.9	2.6	1.3	1.6	.29	.21	.15	.04	.02
20	.52	3.2	2.0	1.9	2.4	1.2	1.5	.27	.21	.13	.04	0
21	.55	3.4	1.5	1.9	2.2	1.4	1.0	.27	.19	.12	.04	0
22	.57	2.6	1.4	1.9	2.0	1.3	1.0	.27	.18	.14	.04	0
23	.54	1.5	1.4	1.9	1.9	1.4	.96	.27	.14	.16	.04	0
24	.47	1.2	1.4	1.9	1.9	1.5	1.0	.25	.16	.13	.04	0
25	.55	.98	1.4	1.9	1.8	1.5	1.0	.23	.16	.13	.04	.01
26	.78	1.1	1.4	1.9	1.6	1.4	.97	.31	.18	.15	.04	.01
27	.76	1.0	1.4	2.5	1.6	1.6	1.0	.33	.21	.15	.04	0
28	.57	1.2	1.1	2.5	1.6	1.6	.88	.38	.15	.14	.04	.01
29	.30	1.2	1.1	1.8	1.4	1.6	.63	.37	.16	.10	.04	.01
30	.32	7.1	1.2	1.7	-----	1.7	.61	.36	.16	.10	.04	.01
31	.40	-----	1.4	2.4	-----	1.8	-----	.36	-----	.10	.04	-----
TOTAL	17.11	38.53	50.6	58.4	66.4	84.94	47.55	17.03	5.81	2.99	1.60	0.53
MEAN	.55	1.28	1.63	1.88	2.29	2.74	1.59	.55	.19	.097	.052	.018
MAX	.78	7.1	6.0	2.9	7.4	28	5.9	.94	.35	.23	.09	.04
MIN	.30	.39	1.1	1.5	1.4	.71	.61	.23	.14	.03	.04	0
AC-FT	34	76	100	116	132	168	94	34	12	5.9	3.2	1.1

CAL YR 1967 TOTAL 3,220.98 MEAN 8.82 MAX 1,470 MIN .30 AC-FT 6,390
WTR YR 1968 TOTAL 391.49 MEAN 1.07 MAX 28 MIN 0 AC-FT 777

Peak discharge (base, 100 cfs).--Mar. 13 (0800 hrs) 165 cfs (2.56 ft).

SANTA YNEZ RIVER BASIN

11-1330. SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°38'21", long 120°25'39", in Canada de Salsipuedes Grant, 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 90 ft (from topographic map). Prior to Mar. 23, 1953, at site 700 ft upstream at different datum. Mar. 23, 1953, to Feb. 10, 1962, at site 500 ft upstream at datum 5.00 ft higher, and Feb. 11, 1962, to Sept. 30, 1965, at datum 3.00 ft higher. Sept. 30, 1965, to Aug. 17, 1967, at same site at datum 3.00 ft higher. Since October 1960, supplemental gage at site 0.5 mile downstream at different datum.

EXTREMES.--Maximum discharge during year, 146 cfs Mar. 13 (gage height, 4.73 ft); no flow July 27, 28, Aug. 5 to Sept. 30.

1952-63, 1964-68: Maximum discharge, 16,000 cfs Jan. 25, 1967 (gage height, 12.70 ft), from supplemental gage; no flow at times in each year.

REMARKS.--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir and since November 1952 by Lake Cachuma (see sta. nos. 11-1210., 11-1220., 11-1255.). Water diverted out of Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.80	1.4	7.8	20	19	14	6.6	1.2	.80	.10	
2	1.0	.80	1.5	7.2	20	19	45	5.4	1.0	.60	.10	
3	1.0	.80	1.6	7.5	20	19	53	4.0	.90	.50	.10	
4	1.0	.80	1.6	7.8	21	19	43	2.9	.90	.50	.10	
5	1.0	.80	1.6	7.8	21	20	37	2.4	1.0	.80	0	
6	1.0	.80	1.6	8.2	21	20	31	2.4	1.0	.80	0	
7	1.0	.80	1.6	8.8	22	23	27	2.1	.80	.80	0	
8	1.0	.80	1.6	8.8	22	48	25	1.7	1.4	.90	0	
9	1.2	.80	1.6	9.1	22	45	23	1.5	.90	.80	0	
10	1.2	.80	1.7	9.8	22	49	20	1.3	.90	.50	0	
11	1.2	.80	1.9	11	22	40	18	1.3	.90	.30	0	
12	1.0	.80	1.9	12	23	34	17	2.0	.90	.20	0	
13	1.0	.80	1.9	11	23	58	16	2.0	1.0	.40	0	
14	1.0	.80	1.9	11	24	43	15	1.7	.90	.30	0	
15	1.0	.80	1.9	12	24	40	27	1.2	.90	.30	0	
16	1.0	.80	2.0	12	25	37	58	1.0	.80	.20	0	
17	.90	.80	2.0	11	25	37	45	1.3	.80	.30	0	
18	.90	.80	2.1	11	26	31	33	1.4	.80	.20	0	
19	.80	.90	3.5	11	28	28	27	1.4	.80	.30	0	
20	.80	.90	2.7	12	27	25	27	1.2	.80	.40	0	
21	.80	1.0	3.3	12	25	22	27	.80	.80	.50	0	
22	.80	.90	3.5	13	25	20	26	.60	.80	.60	0	
23	.80	.90	3.8	13	24	18	26	.60	.80	.30	0	
24	.80	1.0	5.2	13	22	17	25	1.0	.80	.30	0	
25	.80	1.0	5.4	14	21	16	22	1.0	.80	.10	0	
26	.80	1.0	5.6	14	20	15	17	1.0	.80	.10	0	
27	.80	1.0	6.1	18	19	14	13	1.0	.80	0	0	
28	.80	1.0	6.3	20	20	13	9.8	1.0	.80	0	0	
29	.80	1.0	6.3	19	19	11	8.5	.60	.80	.10	0	
30	.80	1.2	6.6	19	-----	11	7.8	.90	.80	.10	0	
31	.80	-----	6.6	20	-----	11	-----	.80	-----	.10	0	-----
TOTAL	28.80	26.20	96.3	371.8	653	822	783.1	54.10	26.60	12.10	0.40	0
MEAN	.93	.87	3.11	12.0	22.5	26.5	26.1	1.75	.89	.39	.013	0
MAX	1.2	1.2	6.6	20	28	58	58	6.6	1.4	.90	.10	0
MIN	.80	.80	1.4	7.2	19	11	7.8	.60	.80	0	0	0
AC-FT	57	52	191	737	1,300	1,630	1,550	107	53	24	.8	0
CAL YR 1967	TOTAL 79,421.10		MEAN 218		MAX 8,220		MIN .80		AC-FT 157,500			
WTR YR 1968	TOTAL 2,874.40		MEAN 7.85		MAX 58		MIN 0		AC-FT 5,700			

SANTA YNEZ RIVER BASIN

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11-1345. SANTA YNEZ RIVER AT 13TH STREET, NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°40'06", long 120°28'29", in Lompoc Grant, 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 60 ft (from topographic map). Prior to Nov. 27, 1956, at various sites within 300 ft at same datum. Nov. 27, 1956, to Oct. 1, 1962, at datum 6.00 ft higher. Oct. 1, 1962, to Oct. 1, 1966, at datum 5.00 ft higher.

EXTREMES.--Maximum discharge during year, 51 cfs Mar. 13 (gage height, 5.03 ft); no flow for most of year. 1954-68: Maximum discharge, 15,000 cfs Jan. 25, 1967 (gage height, 15.60 ft from floodmarks), on basis of maximum discharge for station at Pine Canyon; no flow for several months in each year.

REMARKS.--Records good. This is a project station. Discharge above wading stages generally not reported herein. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see sta. nos. 11-1210., 11-1220., 11-1255.). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along bank of river for irrigation in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					0	.90	7.5					
2					0	.40	10					
3					0	.20	24					
4					0	0	22					
5					0	0	19					
6					0	0	12					
7					0	1.1	6.8					
8					0	18	5.2					
9					0	22	3.4					
10					0	24	2.1					
11					0	20	2.1					
12					0	15	1.6					
13					0	28	.10					
14					0	25	0					
15					0	20	.80					
16					0	18	19					
17					4.8	16	22					
18					15	11	20					
19					9.1	5.9	12					
20					7.1	4.2	8.4					
21					7.1	3.0	4.8					
22					6.1	3.0	6.8					
23					4.6	2.6	6.6					
24					4.2	2.6	6.8					
25					3.3	1.9	6.6					
26					2.1	.90	3.9					
27					2.0	.40	0					
28					.90	.40	0					
29					.80	0	0					
30					-----	0	0					
31					-----	0	-----		-----			-----
TOTAL	0	0	0	0	67.10	244.50	233.50	0	0	0	0	0
MEAN	0	0	0	0	2.31	7.89	7.78	0	0	0	0	0
MAX	0	0	0	0	15	28	24	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	133	485	463	0	0	0	0	0
CAL YR 1967	TOTAL	75,015.20	MEAN	206	MAX	8,230	MIN	0	AC-FT	148,800		
WTR YR 1968	TOTAL	545.10	MEAN	1.49	MAX	28	MIN	0	AC-FT	1,080		

SANTA YNEZ RIVER BASIN

11-1350. SANTA YNEZ RIVER AT PINE CANYON, NEAR LOMPOC, CALIF.

LOCATION.--Lat 34°40'20", long 120°29'30", in Lompoc Grant, 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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Altitude of gage is 55 ft (from topographic map). Prior to Aug. 24, 1964, graphic water-stage recorder at different datum. Aug. 24, 1964, to Feb. 16, 1965, at present datum.

EXTREMES.--Maximum discharge during year, 131 cfs Mar. 13 (gage height, 4.52 ft); minimum daily, 0.02 cfs Aug. 26.

1941-46, 1964-68: Maximum discharge, 32,000 cfs (based on station near Lompoc) Jan. 23, 1943 (gage height, 21.0 ft, datum then in use, from high-water marks); no flow at times in some years.

REMARKS.--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see sta. nos. 11-1210., 11-1220., 11-1255.). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara and Goleta for municipal supply. Water pumped from wells along bank for irrigation in valley upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.7	5.1	2.2	2.6	2.5	1.9	.69	1.4	.29	.07	.19
2	1.5	1.7	2.4	2.5	2.3	2.6	1.0	.77	1.2	.45	.07	.17
3	1.6	1.7	2.3	2.3	2.3	2.5	16	.68	1.4	.29	.17	.34
4	1.2	1.6	2.4	2.4	2.2	2.6	16	.61	1.4	.30	.11	.44
5	1.3	1.6	3.8	2.5	2.4	2.6	11	.55	1.3	.13	.06	.31
6	1.5	1.9	2.1	2.4	2.5	2.4	7.9	.84	1.1	.21	.12	.23
7	1.4	1.9	2.5	2.4	2.4	8.5	5.7	.67	1.1	.19	.15	.17
8	1.3	1.8	2.0	2.7	2.3	27	4.8	.61	.98	.23	.12	.27
9	1.6	1.6	1.9	2.3	2.4	22	3.2	.62	.83	.46	.11	.17
10	1.6	1.6	1.8	2.4	2.4	22	1.9	.91	.80	.48	.11	.35
11	1.5	1.5	2.0	2.6	2.3	19	.53	.72	.91	.46	.17	.29
12	1.6	1.3	2.1	2.4	.55	13	.21	.77	.80	.30	.08	.23
13	1.6	1.5	2.0	2.2	.68	51	.31	1.1	.68	.30	.22	.36
14	1.6	1.4	2.0	2.3	.59	34	.34	1.2	.50	.16	.13	.28
15	1.4	1.3	2.2	2.7	1.1	22	.34	1.1	.37	.09	.15	.28
16	1.7	1.2	2.3	2.6	1.4	20	12	1.1	.26	.24	.20	.24
17	1.4	1.2	2.1	2.6	18	17	16	1.1	.17	.22	.23	.35
18	1.4	3.1	15	2.4	6.7	14	11	1.3	.30	.18	.12	.36
19	1.5	7.9	8.1	2.4	6.1	10	7.2	1.3	.31	.13	.10	.29
20	1.6	5.3	3.7	2.5	5.3	8.2	6.1	1.4	.32	.13	.24	.23
21	1.4	9.3	2.5	2.3	5.2	7.0	4.9	1.4	.33	.08	.15	.23
22	1.3	2.6	2.5	3.5	4.4	5.8	4.9	1.4	.35	.04	.11	.23
23	1.5	1.9	2.3	2.5	4.2	4.8	5.0	1.6	.22	.14	.11	.14
24	1.1	1.5	2.4	2.6	3.6	4.0	5.5	1.5	.29	.14	.11	.25
25	1.2	1.7	2.0	2.6	2.7	3.5	5.2	1.2	.40	.08	.07	.20
26	2.6	1.6	2.2	2.5	2.3	2.4	2.9	1.2	.36	.06	.02	.22
27	2.0	2.0	2.5	11	2.2	1.9	1.1	1.6	.42	.08	.13	.25
28	1.9	3.8	2.4	3.7	2.4	1.9	.98	1.6	.54	.07	.12	.30
29	1.8	1.7	2.3	3.1	2.5	2.1	1.2	1.6	.48	.05	.16	.31
30	1.8	17	2.1	2.9	-----	1.9	.91	1.4	.42	.16	.08	.19
31	1.7	-----	2.1	8.0	-----	1.9	-----	1.5	-----	.13	.14	-----
TOTAL	47.8	85.9	93.1	93.5	96.02	340.1	156.02	34.04	19.94	6.27	3.93	7.87
MEAN	1.54	2.86	3.00	3.02	3.31	11.0	5.20	1.10	.66	.20	.13	.26
MAX	2.6	17	15	11	18	51	16	1.6	1.4	.48	.24	.44
MIN	1.1	1.2	1.8	2.2	.55	1.9	.21	.55	.17	.04	.02	.14
AC-FT	95	170	185	185	190	675	309	68	40	12	7.8	16

CAL YR 1967 TOTAL 77,749.98 MEAN 213 MAX 8,230 MIN 0 AC-FT 154,200
WTR YR 1968 TOTAL 984.49 MEAN 2.69 MAX 51 MIN .02 AC-FT 1,950

11-1361. SAN ANTONIO CREEK NEAR CASMALIA, CALIF.

LOCATION.--Lat 34°46'56", long 120°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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 160 ft (from topographic map). Prior to June 27, 1958, graphic water-stage recorder at datum 2.00 ft higher. June 27, 1958, to Sept. 28, 1962, at present datum.

AVERAGE DISCHARGE.--13 years, 5.17 cfs (3,740 acre-ft per year); median of yearly mean discharges, 2.9 cfs (2,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 32 cfs Mar. 13 (gage height, 3.72 ft); minimum daily, 0.24 cfs Aug. 26.

1955-68: Maximum discharge, 1,300 cfs Feb. 19, 1962 (gage height, 9.35 ft); minimum daily, 0.10 cfs June 19, 20, 1957.

REMARKS.--Records good. No regulation above station. Flow affected by pumping from wells along stream for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.88	.64	1.8	1.5	2.6	2.3	2.3	1.0	.71	.53	.48	.31
2	.85	.61	1.2	1.5	2.3	2.3	7.2	1.0	.69	.59	.50	.31
3	.83	.57	1.0	1.5	2.1	2.2	4.3	.99	.71	.58	.51	.38
4	.88	.58	.95	1.5	2.1	2.2	2.9	.98	.70	.53	.46	.36
5	.81	.58	.92	1.6	2.0	2.1	2.6	.94	.66	.52	.50	.39
6	.76	.60	1.0	1.5	2.1	2.1	2.3	.97	.67	.52	.46	.34
7	.79	.70	1.1	1.5	2.1	3.0	2.0	.96	.65	.50	.46	.29
8	.60	.59	1.1	1.6	2.2	10	1.8	.95	.64	.50	.47	.31
9	.72	.56	1.0	1.6	2.2	5.1	1.7	1.0	.78	.71	.44	.31
10	.69	.65	.98	1.8	2.3	3.2	1.4	.92	.65	.52	.44	.36
11	.73	.67	1.0	2.4	2.3	2.7	1.3	.89	.61	.52	.44	.36
12	.72	.61	1.0	2.2	2.5	2.3	1.3	.93	.65	.55	.44	.36
13	.82	.64	1.1	2.0	3.2	16	1.4	.94	.63	.52	.46	.38
14	.73	.65	1.2	2.0	3.7	7.5	1.4	1.0	.67	.54	.48	.35
15	.68	.68	1.4	2.0	3.0	3.6	1.3	1.0	.64	.53	.40	.32
16	.66	.63	1.3	1.9	2.7	3.3	1.4	1.0	.57	.53	.46	.30
17	.74	.59	1.3	1.9	6.0	4.4	1.4	.97	.61	.50	.42	.36
18	.62	.68	2.6	1.7	4.6	3.3	1.2	.97	.64	.50	.40	.37
19	.64	.96	3.5	1.7	3.1	2.7	1.2	.93	.63	.48	.42	.42
20	1.1	1.3	2.7	1.8	2.6	2.4	1.2	.93	.56	.49	.47	.42
21	.70	1.6	1.9	1.7	2.6	2.2	1.2	.91	.62	.51	.36	.42
22	.70	1.5	1.6	1.7	2.4	2.1	1.2	.89	.58	.49	.36	.36
23	.72	1.0	1.4	1.7	2.4	2.1	1.1	.84	.56	.53	.34	.35
24	.70	.86	1.4	1.7	2.3	2.0	1.1	.80	.58	.54	.31	.33
25	.82	.83	1.4	1.8	2.3	2.0	1.1	.79	.60	.51	.29	.36
26	.72	.82	1.5	1.8	2.1	1.9	1.1	.76	.62	.51	.29	.40
27	.76	.80	1.4	2.1	2.3	1.9	1.0	.76	.63	.52	.24	.41
28	.69	.74	1.4	2.7	2.4	1.9	1.0	.70	.57	.50	.34	.42
29	.69	.76	1.4	2.2	2.4	1.8	1.1	.68	.56	.49	.37	.47
30	.64	2.4	1.3	2.1	-----	1.8	.99	.67	.54	.48	.33	.49
31	.63	-----	1.4	3.2	-----	1.9	-----	.72	-----	.47	.36	-----
TOTAL	23.02	24.80	44.25	57.9	76.9	104.3	52.49	27.79	18.93	16.21	12.70	11.01
MEAN	.74	.83	1.43	1.87	2.65	3.36	1.75	.90	.63	.52	.41	.37
MAX	1.1	2.4	3.5	3.2	6.0	16	7.2	1.0	.78	.71	.51	.49
MIN	.60	.56	.92	1.5	2.0	1.8	.99	.67	.54	.47	.24	.29
AC-FT	46	49	88	115	153	207	104	55	38	32	25	22

CAL YR 1967 TOTAL 995.37

WTR YR 1968 TOTAL 470.30

MEAN 2.73

MEAN 1.29

MAX 62

MAX 16

MIN .56

MIN .24

AC-FT 1,970

AC-FT 933

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

SAN ANTONIO CREEK BASIN

11-1361.5. SAN ANTONIO CREEK TRIBUTARY NEAR CASMALIA, CALIF.

LOCATION.--Lat 34°48'45", long 120°31'30", in Todos Santos Y San Antonio Grant, on right bank at culvert under Lompoc-Casmalia Road, 1.8 miles south of Casmalia, Santa Barbara County.

DRAINAGE AREA.--0.28 sq mi.

RECORDS AVAILABLE.--Water years 1960-64 (annual maximum), August 1964 to September 1968.

GAGE.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 480 ft (from topographic map). Sept. 18, 1959, to Aug. 20, 1964, crest-stage gage only at same site and datum.

EXTREMES.--Maximum discharge during year, 0.4 cfs Mar. 18 (gage height, 4.67 ft, from floodmarks); no flow all year including maximum day, which was less than 0.05 cfs.

1959-68: Maximum discharge, 8.4 cfs Feb. 10, 1962 (gage height, 5.51 ft, from crest-stage gage), by computation of maximum flow through culvert; no flow for most of each year.

REMARKS.--No flow since Apr. 21, 1967. No regulation or diversion above station.

CAL YR 1967 TOTAL .30 MEAN .0008 MAX .20 MIN 0 AC-FT .6

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 1968.

GAGE.--Graphic 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.

AVERAGE DISCHARGE.--5 years, 0.029 cfs (21 acre-ft per year).

EXTREMES.--No flow during year.

1959-68: Maximum discharge, 208 cfs Dec. 6, 1966 (gage height, 6.47 ft), based on computation of maximum flow through culvert; no flow for most of each year.

REMARKS.--No flow since Dec. 6, 1966. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 1.9; December, 0.3; January, 0.3; February, 0.5; March, 1.1; April, 0.4; the water year, 4.5.

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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 760 ft (from topographic map). Prior to October 1959, staff gage at different site and datum.

AVERAGE DISCHARGE.--11 years, 18.7 cfs (13,540 acre-ft per year); median of yearly mean discharges, 2.5 cfs (1,800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 226 cfs Nov. 22 (gage height, 5.08 ft); no flow July 19 to Sept. 30. 1903-05, 1959-68: Maximum discharge observed, 10,000 cfs (estimated) 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	.90	4.9	2.1	2.0	1.2	2.5	.70	.30	.10		
2	9.3	.90	3.6	2.0	1.8	1.0	4.3	.60	.20	.10		
3	5.8	.90	2.9	1.5	1.4	1.0	4.6	.70	.20	.10		
4	1.6	.90	3.1	1.5	1.2	1.0	3.3	.70	.30	.10		
5	1.4	.90	3.8	1.5	1.2	1.0	2.7	.70	.40	.10		
6	1.1	.90	3.3	1.4	1.2	1.0	2.5	.70	.40	.10		
7	.90	.90	3.1	1.4	1.2	2.3	2.3	.70	.40	.10		
8	.80	.90	2.9	1.4	1.2	19	2.0	.70	.40	.10		
9	.80	.90	2.7	1.4	1.2	42	1.8	.60	.30	.10		
10	.80	.90	2.3	1.6	1.2	28	1.5	.60	.30	.10		
11	.70	.90	2.0	1.8	1.1	11	1.2	.60	.30	.10		
12	.70	.90	2.0	1.6	1.0	7.3	1.1	.60	.30	.10		
13	.70	.90	2.0	1.5	1.6	11	1.1	.60	.20	.10		
14	.70	.90	2.0	1.2	2.1	11	1.1	.60	.20	.10		
15	.70	.90	1.8	1.2	2.1	6.9	1.0	.50	.20	.10		
16	.60	.90	2.0	1.2	2.0	6.5	1.0	.50	.20	.10		
17	.60	.90	2.0	1.2	2.3	6.9	1.0	.40	.20	.10		
18	.60	1.0	3.1	1.2	2.5	5.2	.90	.40	.20	.10		
19	.60	1.2	4.9	1.2	2.5	4.3	.90	.50	.20	0		
20	.60	1.4	4.0	1.2	2.1	3.6	.90	.40	.20	0		
21	.70	1.5	3.3	1.2	2.1	3.3	.80	.50	.20	0		
22	.70	18	3.1	1.2	2.0	3.1	.80	.50	.10	0		
23	.70	45	2.7	1.2	1.8	2.9	.80	.40	0	0		
24	.80	8.5	2.5	1.2	1.8	2.7	.80	.40	0	0		
25	.80	5.8	2.3	1.2	1.6	2.5	.80	.40	.10	0		
26	.80	4.6	2.1	1.2	1.5	2.3	.80	.40	.10	0		
27	.80	3.6	2.1	1.5	1.5	2.1	.70	.40	.10	0		
28	.80	3.3	2.1	1.8	1.5	2.1	.70	.30	.10	0		
29	.90	3.1	2.1	1.6	1.4	2.0	.70	.30	.10	0		
30	.90	5.2	2.1	1.6	-----	2.0	.70	.40	.10	0		
31	.90	-----	2.1	2.0	-----	2.0	-----	.40	-----	0		-----
TOTAL	53.80	117.50	84.9	44.8	48.1	198.2	45.30	16.20	6.30	1.80	0	0
MEAN	1.74	3.92	2.74	1.45	1.66	6.39	1.51	.52	.21	.058	0	0
MAX	16	45	4.9	2.1	2.5	42	4.6	.70	.40	.10	0	0
MIN	.60	.90	1.8	1.2	1.0	1.0	.70	.30	0	0	0	0
AC-FT	107	233	168	89	95	393	90	32	13	3.6	0	0

CAL YR 1967 TOTAL 10,755.90 MEAN 29.5 MAX 679 MIN .60 AC-FT 21,330
WTR YR 1968 TOTAL 616.90 MEAN 1.69 MAX 45 MIN 0 AC-FT 1,220

Peak discharge (base, 200 cfs).--Nov. 22 (2030 hrs) 226 cfs (5.08 ft).

SANTA MARIA RIVER BASIN

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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 650 ft (from topographic map). Prior to Oct. 1, 1966, at datum 2.00 ft higher.

AVERAGE DISCHARGE.--9 years, 5.28 cfs (3,820 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2.6 cfs Mar. 13 (gage height, 1.66 ft); no flow all year except Mar. 13.

1959-68: Maximum discharge, 8,500 cfs Dec. 6, 1966 (gage height, 10.30 ft), on basis of slope-area measurement of maximum flow; no flow for all or part of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						0						
2						0						
3						0						
4						0						
5						0						
6						0						
7						0						
8						0						
9						0						
10						0						
11						0						
12						0						
13						.10						
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	0	0.10	0	0	0	0	0	0
MEAN	0	0	0	0	0	.003	0	0	0	0	0	0
MAX	0	0	0	0	0	.10	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	.2	0	0	0	0	0	0

CAL YR 1967 TOTAL 5,814.40 MEAN 15.9 MAX 462 MIN 0 AC-FT 11,530
 WTR YR 1968 TOTAL .10 MEAN .0003 MAX .10 MIN 0 AC-FT

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

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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 640 ft (from topographic map).

AVERAGE DISCHARGE.--9 years, 12.6 cfs (9,120 acre-ft per year).

EXTREMES.--Maximum discharge during year, 104 cfs Mar. 8 (gage height, 5.69 ft); minimum daily, 0.10 cfs for several days.

1959-68: Maximum discharge, 14,300 cfs Dec. 6, 1966 (gage height, 14.55 ft, from profile of floodmarks), on basis of slope-area measurement of maximum flow; no flow for many days in most years.

REMARKS.--Records good. No regulation above station. Some diversions by pumping for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.2	1.2	.70	1.0	1.3	2.7	.60	.50	.60	.10	.20
2	1.6	1.2	1.0	.70	1.2	1.3	5.4	.70	.50	.60	.10	.20
3	1.6	1.2	1.0	.60	1.2	1.3	6.3	.70	.50	.60	.10	.20
4	1.6	1.2	1.0	.60	1.2	1.5	5.0	.70	.50	.60	.10	.20
5	1.6	1.2	1.2	.60	1.2	1.8	3.6	.90	.50	.50	.10	.20
6	1.6	1.2	1.0	.60	1.2	2.0	3.2	.90	.50	.50	.20	.20
7	1.5	1.2	1.0	.60	1.2	3.2	2.7	.90	.40	.40	.10	.20
8	1.5	1.2	1.0	.60	1.2	12	2.2	.90	.40	.40	.10	.50
9	1.3	1.2	1.0	.60	1.2	17	2.0	.90	.40	.40	.10	.40
10	1.3	1.2	1.0	1.0	1.2	4.2	2.0	.90	.40	.30	.10	.20
11	1.2	1.2	1.0	.90	1.2	2.2	2.0	.90	.40	.30	.10	.20
12	.80	1.2	1.2	.80	1.2	1.5	1.8	1.0	.30	.20	.10	.20
13	.60	1.2	1.2	.80	1.2	4.6	1.6	1.2	.60	.30	.10	.20
14	.60	1.2	1.0	.80	1.0	5.0	1.6	1.2	1.0	.30	.10	.10
15	.50	1.2	1.0	.80	1.0	5.0	1.6	.90	.60	.40	.10	.20
16	.50	1.2	1.0	.80	1.0	4.6	1.6	1.0	.50	.40	.10	.20
17	.50	1.2	1.2	.80	1.2	4.6	1.6	1.2	.40	.40	.10	.10
18	.50	1.2	2.0	.80	1.2	5.8	1.6	1.2	.40	.40	.10	.20
19	.50	1.2	1.6	.90	1.2	5.0	1.6	1.5	.50	.40	.10	.20
20	.50	1.0	1.5	.90	1.2	4.2	1.6	1.8	.50	.40	.20	.10
21	.50	1.2	1.5	1.0	1.2	3.6	1.6	2.2	.90	.40	.30	.10
22	.60	1.0	1.5	1.0	1.2	3.6	1.6	1.6	.60	.40	.30	.10
23	.70	1.0	1.3	1.0	1.2	3.6	1.8	1.5	.50	.40	.30	.10
24	.90	1.0	.80	1.2	1.2	3.2	1.8	1.0	.70	.40	.30	.20
25	1.0	1.0	.90	1.2	1.2	3.0	1.8	.80	.60	.40	.30	.20
26	1.0	1.0	.90	1.2	1.3	3.0	1.6	.70	.60	.50	.20	.20
27	1.0	1.0	.90	1.3	1.3	2.4	1.0	.70	.60	.50	.20	.20
28	1.2	1.0	.90	1.3	1.3	2.2	.70	.70	.60	.40	.20	.20
29	1.2	1.2	.80	1.2	1.3	2.2	.60	.70	.60	.30	.20	.20
30	1.2	1.5	.80	1.2	-----	2.2	.60	.70	.60	.20	.20	.20
31	1.2	-----	.80	1.2	-----	2.2	-----	.60	-----	.10	.20	-----
TOTAL	31.90	34.7	34.20	27.70	34.4	119.3	64.80	31.20	16.10	12.40	4.90	5.90
MEAN	1.03	1.16	1.10	.89	1.19	3.85	2.16	1.01	.54	.40	.16	.20
MAX	1.6	1.5	2.0	1.3	1.3	17	6.3	2.2	1.0	.60	.30	.50
MIN	.50	1.0	.80	.60	1.0	1.3	.60	.60	.30	.10	.10	.10
AC-FT	63	69	68	55	68	237	129	62	32	25	9.7	12

CAL YR 1967 TOTAL 14,154.50 MEAN 38.8 MAX 645 MIN .50 AC-FT 28,080
WTR YR 1968 TOTAL 417.50 MEAN 1.14 MAX 17 MIN .10 AC-FT 828

Peak discharge (base, 40 cfs).--Mar. 8 (1630 hrs) 104 cfs (5.69 ft).

SANTA MARIA RIVER BASIN

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.--1,133 sq mi (revised).

RECORDS AVAILABLE.--October 1958 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 390 ft (from topographic map). Prior to July 11, 1968, graphic water-stage recorder.

EXTREMES --Maximum discharge during year, 189 cfs Nov. 19 (gage height, 4.53 ft); no flow July 18 to Sept. 30. 1958-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	171	153	125	129	129	5.1	2.4	.40	.20		
2	76	171	133	125	129	129	10	2.2	.40	.20		
3	76	167	133	125	127	129	16	1.9	.40	.20		
4	82	165	131	125	127	129	14	1.5	.90	.20		
5	127	165	133	125	127	129	14	1.4	2.0	.20		
6	129	163	131	125	127	129	14	1.2	2.3	.20		
7	127	163	131	125	127	127	13	1.0	2.2	.20		
8	127	163	129	125	127	35	7.0	3.0	2.7	.20		
9	127	161	127	125	127	7.6	15	16	1.9	.20		
10	127	161	127	125	127	13	14	16	2.2	.20		
11	129	161	127	125	127	4.8	14	12	1.8	.16		
12	129	161	127	125	127	3.4	15	13	1.5	.17		
13	129	159	127	125	129	5.4	14	12	11	.18		
14	136	159	127	125	129	3.8	14	4.2	7.3	.16		
15	171	159	127	129	127	2.7	12	1.4	8.8	.16		
16	171	159	131	129	127	2.8	13	1.0	8.8	.11		
17	171	161	131	129	110	2.6	12	.70	10	.06		
18	171	175	131	129	22	2.0	11	.60	6.1	0		
19	171	131	128	129	6.7	2.4	6.4	.60	1.5	0		
20	171	28	107	129	4.0	121	3.4	5.8	.60	0		
21	171	101	109	127	29	119	2.3	2.4	.40	0		
22	171	102	121	127	127	119	1.6	1.1	.30	0		
23	157	102	121	127	127	117	1.5	.70	.30	0		
24	155	109	119	127	127	115	5.1	.50	.30	0		
25	155	129	119	127	127	113	5.1	.40	.30	0		
26	155	127	119	129	127	111	4.8	.50	.30	0		
27	155	127	119	129	127	125	4.4	1.2	.30	0		
28	155	141	123	129	127	93	3.8	1.1	.30	0		
29	155	145	127	129	129	17	3.4	.80	.20	0		
30	155	161	127	129	-----	5.4	3.0	.50	.20	0		
31	159	-----	125	129	-----	4.8	-----	.50	-----	0		
TOTAL	4,345	4,347	3,920	3,933	3,229.7	2,046.7	271.9	107.60	75.70	3.00	0	0
MEAN	140	145	126	127	111	66.0	9.06	3.47	2.52	.097	0	0
MAX	171	175	153	129	129	129	16	16	11	.20	0	0
MIN	55	28	107	125	4.0	2.0	1.5	.40	.20	0	0	0
AC-FT	8,620	8,620	7,780	7,800	6,410	4,060	539	213	150	6.0	0	0
CAL YR 1967	TOTAL 50,472.30		MEAN 138		MAX 380		MIN 0		AC-FT 100,100			
WTR YR 1968	TOTAL 22,279.60		MEAN 60.9		MAX 175		MIN 0		AC-FT 44,190			

SANTA MARIA RIVER BASIN

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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 1968. 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.--Digital water-stage recorder. Datum of gage is 624.30 ft above mean sea level, datum of 1929 (Corps of Engineers bench-mark). Prior to Aug. 24, 1951, graphic water-stage recorder 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. Aug. 24, 1951, to Dec. 7, 1962, at present site and datum.

AVERAGE DISCHARGE.--25 years, 31.2 cfs (22,590 acre-ft per year); median of yearly mean discharges, 15 cfs (10,900 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,690 cfs Mar. 8 (gage height, 6.88 ft); no flow Nov. 11-18. 1929-33, 1943-68: Maximum discharge, 23,200 cfs Dec. 6, 1966 (gage height, 15.75 ft), from rating curve extended above 1,700 cfs on basis of slope-area measurements at gage heights 10.08 and 15.75 ft; no flow Nov. 11-18, 1967.

Flood of Mar. 2, 1938, 11,000 cfs (gage height, 8.1 ft from high-water mark in gage well, at site in use 1929-33), from rating curve extended above 2,800 cfs.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	7.9	34	13	18	20	20	9.2	3.8	1.1	.70	.40
2	25	6.7	12	12	14	22	68	9.2	2.7	1.0	.60	.40
3	20	6.1	8.2	12	12	22	42	9.4	2.2	.90	.70	.40
4	18	6.2	6.7	12	11	23	29	9.4	3.0	.90	.60	.50
5	92	6.3	6.2	12	11	26	24	9.6	4.4	1.1	.60	.50
6	159	6.4	6.1	11	11	30	20	9.7	3.2	.60	.50	.50
7	124	6.3	6.3	11	9.5	50	17	8.5	3.2	.70	.50	.50
8	106	6.4	7.0	11	9.4	500	17	8.5	5.1	1.0	.50	.50
9	94	6.2	6.5	10	9.1	150	17	8.5	6.2	2.7	.40	.50
10	82	2.9	6.4	10	8.9	105	17	8.0	4.8	.90	.40	.50
11	73	0	6.3	11	8.2	53	17	8.0	5.1	.50	.50	.50
12	67	0	6.1	11	8.6	41	16	8.5	4.8	.40	.50	.50
13	60	0	6.7	11	10	66	16	9.6	4.8	.50	.50	.50
14	54	0	6.0	11	12	67	16	9.6	4.1	.50	.40	.50
15	47	0	4.9	9.9	9.9	52	16	8.0	3.0	.50	.40	.50
16	44	0	4.1	9.2	9.4	45	16	7.5	3.0	.40	.40	.60
17	40	0	3.6	9.7	17	50	16	6.6	2.7	.40	.50	.60
18	37	0	6.8	9.8	96	39	15	5.8	2.2	.40	.50	.60
19	34	25	23	9.8	47	38	15	5.1	2.1	.40	.50	.60
20	31	42	21	9.3	32	29	14	4.8	1.9	.40	.50	.60
21	29	150	16	9.2	27	23	14	4.4	1.7	.40	.50	.60
22	26	130	15	8.2	24	20	12	4.4	1.6	.50	.40	.60
23	23	45	14	7.8	20	21	12	4.4	2.5	.70	.40	.60
24	22	33	14	7.1	17	21	11	4.4	2.2	.30	.40	.60
25	20	25	14	7.2	16	22	10	5.1	2.1	.40	.40	.60
26	18	22	13	7.6	15	23	9.1	3.0	1.6	.40	.40	.60
27	15	20	12	13	15	23	8.6	4.0	1.4	.40	.40	.60
28	14	19	12	20	17	20	8.8	1.2	1.4	.60	.40	.60
29	11	17	12	16	18	18	8.4	2.7	1.2	.60	.40	.60
30	10	54	12	14	-----	18	9.2	3.2	1.2	.40	.40	.60
31	9.2	-----	12	17	-----	18	-----	4.1	-----	.50	.40	-----
TOTAL	1,427.2	643.4	333.9	342.8	533.0	1,655	531.1	204.4	89.2	20.50	14.70	16.20
MEAN	46.0	21.4	10.8	11.1	18.4	53.4	17.7	6.59	2.97	.66	.47	.54
MAX	159	150	34	20	96	500	68	9.7	6.2	2.7	.70	.60
MIN	9.2	0	3.6	7.1	8.2	18	8.4	1.2	1.2	.30	.40	.40
AC-FT	2,830	1,280	662	680	1,060	3,280	1,050	405	177	41	29	32
CAL YR 1967	TOTAL 39,510.80	MEAN 108	MAX 1,370	MIN 0	AC-FT 78,370							
WTR YR 1968	TOTAL 5,811.40	MEAN 15.9	MAX 500	MIN 0	AC-FT 11,530							

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-21	1900	6.05	920	03-08	0900	6.88	1,690
11-30	1400	4.99	205				

SANTA MARIA RIVER BASIN

11-1390. LA BREA CREEK NEAR SISQUOC, CALIF.

LOCATION.--Lat 34°51'10", long 120°11'55", in SE $\frac{1}{4}$ 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.--93.5 sq mi (revised).

RECORDS AVAILABLE.--October 1943 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 550 ft (from topographic map).

AVERAGE DISCHARGE.--25 years, 5.12 cfs (3,710 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

EXTREMES.--Maximum discharge during year, 332 cfs Mar. 8 (gage height, 3.64 ft); no flow Oct. 1 to Mar. 7, Apr. 17 to Sept. 30.
1943-68: Maximum discharge, 11,200 cfs Dec. 6, 1966 (gage height, 8.23 ft), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow for most of each year.

REMARKS.--Records 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						0	1.9					
2						0	7.1					
3						0	3.9					
4						0	2.3					
5						0	1.8					
6						0	1.2					
7						0	.90					
8						104	.40					
9						29	.20					
10						10	.10					
11						5.1	.10					
12						1.9	.10					
13						8.3	.10					
14						8.8	.10					
15						6.8	.10					
16						6.8	.10					
17						6.0	0					
18						5.1	0					
19						4.2	0					
20						3.7	0					
21						3.2	0					
22						2.7	0					
23						2.3	0					
24						2.1	0					
25						1.8	0					
26						1.5	0					
27						1.2	0					
28						1.2	0					
29						1.2	0					
30						1.2	0					
31		-----			-----	1.2	-----		-----			-----
TOTAL	0	0	0	0	0	219.3	20.40	0	0	0	0	0
MEAN	0	0	0	0	0	7.07	.68	0	0	0	0	0
MAX	0	0	0	0	0	104	7.1	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	435	40	0	0	0	0	0
CAL YR 1967	TOTAL 7,802.10		MEAN 21.4		MAX 502		MIN 0		AC-FT 15,480			
WTR YR 1968	TOTAL 239.70		MEAN .65		MAX 104		MIN 0		AC-FT 475			

Peak discharge (base, 30 cfs).--Mar. 8 (0830 hrs) 322 cfs (3.64 ft).

11-1393.5. FOXEN CREEK NEAR SISQUOC, CALIF.

LOCATION.--Lat 34°48'58", long 120°13'26", in La Laguna Grant, on left upstream wingwall to culvert on Foxen Canyon road, 3.0 miles upstream from mouth and 3.7 miles southeast of Sisquoc, Santa Barbara County.

DRAINAGE AREA.--16.8 sq mi.

RECORDS AVAILABLE.--September 1965 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 650 ft (from topographic map). Prior to July 11, 1968, graphic water-stage recorder.

EXTREMES.--Maximum discharge during year, 2.3 cfs Mar. 8 (gage height, 1.27 ft); no flow Oct. 1 to Nov. 2, July 6, 7, 10.
1965-68: Maximum discharge, 5.7 cfs Apr. 21, 1967 (gage height, 1.33 ft), from rating curve extended above 2.1 cfs; no flow for many days each year.

REMARKS.--Records good. Small diversion dam for irrigation of about 160 acres above gage. Some pumping from wells along stream above gage.

REVISIONS (water year).--1967 report: 1966 (M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	0	.10	.10	.20	.10	.30	.10	.10	.10	.04	.04
2	.10	0	.10	.10	.20	.10	.30	.10	.10	.10	.04	.04
3	0	.10	.10	.10	.20	.10	.20	.10	.10	.10	.04	.04
4	0	.10	.10	.10	.20	.10	.20	.10	.10	.10	.04	.04
5	0	.10	.10	.10	.10	.10	.20	.10	.10	.10	.03	.04
6	0	.10	.10	.10	.10	.10	.20	.10	.10	0	.04	.04
7	0	.10	.10	.10	.10	.30	.20	.10	.10	0	.03	.04
8	0	.10	.10	.10	.10	.60	.20	.10	.10	.10	.03	.04
9	0	.10	.10	.10	.10	.20	.20	.10	.10	.10	.03	.04
10	0	.10	.10	.20	.20	.10	.20	.10	.10	0	.03	.04
11	0	.10	.10	.20	.20	.10	.20	.10	.10	.05	.04	.04
12	0	.10	.10	.20	.20	.10	.20	.10	.10	.05	.05	.04
13	0	.10	.10	.10	.20	.30	.20	.10	.10	.06	.05	.04
14	0	.10	.10	.10	.20	.10	.20	.10	.10	.07	.04	.04
15	0	.10	.10	.10	.20	.10	.20	.10	.10	.07	.03	.04
16	0	.10	.10	.10	.20	.10	.20	.10	.10	.07	.03	.04
17	0	.10	.10	.10	.30	.10	.10	.10	.10	.05	.03	.03
18	0	.10	.20	.10	.20	.10	.10	.10	.10	.04	.03	.03
19	0	.20	.20	.10	.20	.10	.10	.10	.10	.04	.04	.04
20	0	.30	.10	.10	.20	.10	.10	.10	.10	.04	.05	.04
21	0	.20	.10	.10	.20	.10	.10	.10	.10	.04	.05	.04
22	0	.10	.10	.10	.20	.10	.10	.10	.10	.04	.06	.04
23	0	.10	.10	.10	.10	.10	.10	.10	.10	.05	.05	.04
24	0	.10	.10	.10	.10	.10	.10	.10	.10	.05	.04	.04
25	0	.10	.10	.20	.10	.10	.10	.10	.10	.05	.04	.04
26	0	.10	.10	.20	.10	.10	.10	.10	.10	.05	.04	.04
27	0	.10	.10	.30	.10	.10	.10	.10	.10	.04	.05	.04
28	0	.10	.10	.20	.10	.10	.10	.10	.10	.04	.05	.04
29	0	.10	.10	.20	.10	.10	.10	.10	.10	.04	.04	.04
30	0	.20	.10	.20	-----	.10	.10	.10	.10	.04	.04	.04
31	0	-----	.10	.20	-----	.10	-----	.10	-----	.04	.04	-----
TOTAL	0.20	3.30	3.30	4.20	4.70	4.10	4.80	3.10	3.00	1.72	1.24	1.18
MEAN	.007	.11	.11	.14	.16	.13	.16	.10	.10	.056	.040	.039
MAX	.10	.30	.20	.30	.30	.60	.30	.10	.10	.10	.06	.04
MIN	0	0	.10	.10	.10	.10	.10	.10	.10	0	.03	.03
AC-FT	.4	6.6	6.6	8.3	9.3	8.1	9.5	6.2	6.0	3.4	2.5	2.3

CAL YR 1967 TOTAL 67.00
WTR YR 1968 TOTAL 34.84

MEAN .18
MEAN .095

MAX 3.7
MAX .60

MIN 0
MIN 0

AC-FT 133
AC-FT 69

SANTA MARIA RIVER BASIN

11-1395. TEPUSQUET CREEK NEAR SISQUOC, CALIF.

LOCATION.--Lat 34°52'20", long 120°14'35", in NE¼ 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.--28.7 sq mi.

RECORDS AVAILABLE.--October 1943 to September 1968.

GAGE.--Digital water-stage recorder. Concrete control since July 1957. Altitude of gage is 500 ft (from topographic map). Prior to Dec. 9, 1948, graphic water-stage recorder at datum 0.9 ft higher. Dec. 9, 1948, to Sept. 23, 1962, at present datum.

AVERAGE DISCHARGE.--25 years, 1.20 cfs (869 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1.3 cfs Mar. 8 (gage height, 2.33 ft); no flow Aug. 2.
1943-68: Maximum discharge, 788 cfs Dec. 6, 1966 (gage height, 5.48 ft), from rating curve extended above 220 cfs on basis of computation of maximum flow at contracted opening; no flow at times in some years.

REMARKS.--Records 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.27	.35	.33	.33	.42	.72	.76	.46	.12	.08	.07
2	.41	.28	.35	.33	.32	.40	.63	.72	.45	.20	0	.08
3	.42	.29	.34	.33	.32	.39	.60	.67	.45	.18	.02	.10
4	.42	.28	.34	.33	.32	.38	.60	.70	.44	.15	.02	.13
5	.39	.27	.36	.33	.33	.40	.62	.69	.46	.13	.02	.12
6	.38	.27	.35	.33	.34	.38	.61	.64	.47	.09	.04	.06
7	.37	.28	.36	.32	.33	.47	.63	.65	.46	.16	.04	.07
8	.37	.30	.35	.33	.32	.61	.62	.66	.47	.21	.05	.09
9	.37	.31	.35	.33	.35	.43	.57	.61	.46	.18	.07	.12
10	.37	.31	.36	.33	.35	.41	.59	.62	.40	.11	.06	.14
11	.33	.29	.36	.33	.35	.38	.67	.65	.43	.10	.07	.15
12	.33	.30	.36	.33	.36	.40	.66	.64	.39	.03	.07	.16
13	.33	.31	.37	.33	.38	.69	.65	.64	.30	.09	.09	.19
14	.33	.31	.37	.33	.38	.51	.67	.63	.37	.08	.10	.11
15	.32	.31	.33	.33	.38	.50	.72	.64	.36	.12	.10	.11
16	.30	.31	.33	.33	.38	.53	.77	.62	.36	.07	.09	.04
17	.30	.33	.33	.33	.38	.49	.77	.61	.36	.09	.03	.14
18	.31	.33	.35	.33	.38	.50	.79	.62	.36	.08	.04	.14
19	.31	.37	.33	.33	.38	.53	.79	.57	.32	.05	.02	.08
20	.32	.36	.32	.33	.38	.53	.81	.56	.34	.07	.08	.03
21	.29	.36	.32	.33	.38	.50	.82	.59	.29	.09	.08	.03
22	.30	.34	.31	.33	.38	.49	.74	.60	.28	.12	.04	.03
23	.31	.32	.31	.33	.40	.49	.72	.56	.26	.10	.04	.03
24	.32	.32	.32	.33	.40	.42	.74	.57	.25	.09	.07	.05
25	.32	.32	.32	.33	.40	.45	.72	.57	.22	.05	.08	.03
26	.32	.34	.32	.33	.40	.50	.71	.43	.25	.06	.02	.04
27	.31	.34	.32	.33	.40	.50	.71	.46	.26	.11	.03	.06
28	.30	.35	.33	.33	.42	.48	.68	.45	.26	.12	.02	.07
29	.30	.35	.33	.33	.43	.52	.69	.52	.23	.10	.08	.08
30	.30	.40	.32	.33	-----	.54	.74	.47	.20	.10	.08	.06
31	.29	-----	.31	.35	-----	.60	-----	.47	-----	.11	.05	-----
TOTAL	10.45	9.52	10.47	10.24	10.67	14.84	20.76	18.59	10.61	3.36	1.68	2.61
MEAN	.34	.32	.34	.33	.37	.48	.69	.60	.35	.11	.054	.087
MAX	.42	.40	.37	.35	.43	.69	.82	.76	.47	.21	.10	.19
MIN	.29	.27	.31	.32	.32	.38	.57	.43	.20	.03	0	.03
AC-FT	21	19	21	20	21	29	41	37	21	6.7	3.3	5.2
CAL YR 1967	TOTAL 996.53		MEAN 2.73		MAX 80		MIN .27		AC-FT 1,980			
WTR YR 1968	TOTAL 123.80		MEAN .34		MAX .82		MIN 0		AC-FT 246			

Peak discharge (base, 150 cfs).--No peak above base.

SANTA MARIA RIVER BASIN

291

11-1400. SISQUOC RIVER NEAR GAREY, CALIF.

LOCATION.--Lat 34°53'38", long 120°18'20", in SW $\frac{1}{4}$ sec.36, T.10 N., R.33 W., near right bank on downstream side of county road bridge, 0.6 mile northeast of Garey, and 3.7 miles downstream from Tepusquet Creek.

DRAINAGE AREA.--471 sq mi (revised).

RECORDS AVAILABLE.--October 1940 to September 1968. Records for water year 1941 incomplete, yearly estimate and monthly discharge only for October 1940 and January 1941, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Datum of gage is 354.8 ft above mean sea level (Santa Barbara County bench-mark). Prior to Aug. 27, 1954, at site 3 miles upstream at different datum. Aug. 27, 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. October 1, 1959, to Dec. 30, 1965, at datum 6.00 ft higher. Since Oct. 1, 1959, supplemental gage near left bank at same datum.

AVERAGE DISCHARGE.--28 years, 32.3 cfs (23,380 acre-ft per year); median of yearly mean discharges, 6.5 cfs (4,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,280 cfs Mar. 8 (gage height, 7.47 ft); no flow for most of year. 1940-68: Maximum discharge, 22,600 cfs Dec. 6, 1966 (gage height, 13.5 ft), 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 stream for irrigation of about 7,000 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	.10	35	0	4.0	0	0					
2	18	.10	.20	0	2.4	0	35					
3	12	.10	2.3	0	0	0	17					
4	10	0	0	0	0	0	5.1					
5	9.4	0	0	0	0	0	2.8					
6	8.6	0	0	0	0	0	1.3					
7	7.1	.10	0	0	0	0	.40					
8	6.4	0	0	0	0	601	0					
9	4.0	.10	0	.10	0	95	0					
10	3.0	0	0	0	0	44	0					
11	2.1	0	0	.20	0	38	0					
12	1.4	0	0	0	0	30	0					
13	1.1	0	0	0	.40	50	0					
14	.60	.10	0	0	.10	50	0					
15	0	0	0	0	0	40	0					
16	.50	0	0	0	0	30	0					
17	.60	0	0	0	2.3	20	0					
18	.90	0	1.9	0	14	10	0					
19	.80	0	9.6	0	14	6.4	0					
20	.20	29	9.4	0	6.4	3.0	0					
21	0	75	3.6	0	2.8	1.9	0					
22	0	120	1.2	0	1.6	.40	0					
23	0	28	0	.10	0	0	0					
24	0	12	0	.40	0	0	0					
25	0	6.4	0	.20	0	0	0					
26	.10	5.0	0	.30	0	0	0					
27	.10	4.0	0	1.3	0	0	0					
28	.10	3.0	0	3.6	0	0	0					
29	.10	1.0	0	4.0	0	0	0					
30	.10	42	0	3.2	-----	0	0					
31	.10	-----	0	3.2	-----	0	-----					
TOTAL	120.30	326.00	63.20	16.60	48.00	1,019.70	61.60	0	0	0	0	0
MEAN	3.88	10.9	2.04	.54	1.66	32.9	2.05	0	0	0	0	0
MAX	33	120	35	4.0	14	601	35	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	239	647	125	33	95	2,020	122	0	0	0	0	0
CAL YR 1967	TOTAL	32,870.40	MEAN	90.1	MAX	1,420	MIN	0	AC-FT	65,200		
WTR YR 1968	TOTAL	1,655.40	MEAN	4.52	MAX	601	MIN	0	AC-FT	3,280		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-21	2100	6.95	786	03-08	0700	7.47	2,280
11-30	2100	6.70	430	04-02	1700	6.95	1,100

SANTA MARIA RIVER BASIN

11-1410. SANTA MARIA RIVER AT GUADALUPE, CALIF.

LOCATION.--Lat 34°58'35", long 120°34'15", in Guadalupe Grant, on downstream side of seventh 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.--1,741 sq mi (revised).

RECORDS AVAILABLE.--October 1940 to September 1968. Monthly discharge only, October 1940 to January 1941, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder and supplemental gage near right bank. Datum of gage is 64.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1934 (Corps of Engineers bench mark). Prior to Aug. 11, 1955, at site 100 ft upstream at same datum.

AVERAGE DISCHARGE.--28 years, 29.3 cfs (21,210 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 300 cfs Mar. 9 (gage height, 4.80 ft), on basis of slope-conveyance measurement of maximum flow; no flow for most of year.

1940-68: Maximum discharge, 32,800 cfs Jan. 16, 1952 (gage height, 8.18 ft); no flow for several months of each year.

REMARKS.--Records poor. Flow of Cuyama River regulated since February 1959 by Twitchell Reservoir (capacity, 240,000 acre-ft). Several small surface diversions and extensive pumping from wells for irrigation along stream above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0				0						
2		0				0						
3		0				0						
4		0				0						
5		0				0						
6		3.5				0						
7		0				0						
8		0				0						
9		0				49						
10		0				0						
11		0				0						
12		0				0						
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	-----		-----			-----
TOTAL	0	3.5	0	0	0	49	0	0	0	0	0	0
MEAN	0	.12	0	0	0	1.58	0	0	0	0	0	0
MAX	0	3.5	0	0	0	49	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	6.9	0	0	0	97	0	0	0	0	0	0
CAL YR 1967	TOTAL	4,116.20	MEAN	11.3	MAX	600	MIN	0	AC-FT	8,160		
WTR YR 1968	TOTAL	52.50	MEAN	.14	MAX	49	MIN	0	AC-FT	104		

11-1411.5. ARROYO GRANDE ABOVE PHOENIX CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°11'03", long 120°26'11", in Arroyo Grande Grant on right bank at county road bridge 100 ft upstream from Phoenix Creek, 8.8 miles northeast of Arroyo Grande, San Luis Obispo County.

DRAINAGE AREA.--13.4 sq mi.

RECORDS AVAILABLE.--June 1967 to September 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 550 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 28 cfs Jan. 15 (gage height, 2.43 ft); minimum daily, 0.43 cfs July 7.

1967-68: Maximum discharge, 28 cfs Jan. 15, 1968 (gage height, 2.43 ft); minimum daily, 0.43 cfs July 7, 1968.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures and total sediment loads for the 1968 water year are published in Part 2 of this report.

COOPERATION.--Three discharge measurements furnished by county of San Luis Obispo.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.0	2.1	1.7	1.9	1.7	3.3	1.2	.77	.84	.60	.71
2	1.2	1.2	2.0	1.7	2.0	1.5	2.7	1.3	.77	.79	.61	.74
3	1.2	1.3	2.0	1.6	2.0	1.4	1.6	1.4	.76	.70	.61	.82
4	1.2	1.3	2.0	1.7	2.0	1.4	1.5	1.3	.82	.68	.62	.84
5	1.2	1.4	3.0	1.6	2.0	1.4	1.5	1.4	.88	.61	.62	.89
6	1.2	1.4	2.4	1.7	1.9	1.3	1.5	1.2	.80	.52	.62	.86
7	1.2	1.4	2.5	1.7	2.2	3.1	1.5	1.2	.81	.43	.61	.87
8	1.1	1.5	2.2	1.7	2.2	4.5	1.4	1.2	.85	.61	.62	.88
9	1.1	1.5	1.8	1.7	2.2	1.8	1.3	1.2	.91	.64	.62	.75
10	1.1	1.4	1.8	3.6	2.1	1.8	1.3	1.2	.83	.57	.64	.77
11	1.1	1.5	1.8	2.6	2.0	1.8	1.3	1.2	.82	.55	.66	.80
12	1.1	1.5	1.8	1.9	2.1	2.0	1.4	1.3	.82	.54	.69	.80
13	1.1	1.5	1.8	1.8	2.7	5.5	1.4	1.3	.77	.58	.71	.81
14	1.1	1.6	1.7	1.8	2.4	2.4	1.4	1.3	.75	.61	.70	.81
15	1.1	1.6	1.8	2.6	2.2	2.2	1.4	1.1	.73	.62	.69	.71
16	1.1	1.8	1.8	1.8	2.3	2.4	1.4	1.1	.63	.59	.70	.71
17	1.2	1.8	1.8	1.8	5.6	2.2	1.4	1.0	.68	.56	.71	.73
18	1.1	2.0	3.3	1.8	2.8	1.8	1.3	1.0	.69	.56	.70	.75
19	1.2	2.3	3.7	1.8	2.3	1.8	1.3	1.0	.66	.56	.72	.80
20	1.2	2.0	2.1	1.8	2.1	1.8	1.2	.99	.62	.56	.74	.80
21	1.3	2.2	2.0	1.8	2.1	1.7	1.2	1.0	.65	.57	.71	.68
22	1.2	2.0	1.8	1.8	2.0	1.7	1.2	.98	.69	.57	.66	.63
23	1.1	1.8	1.8	1.8	1.8	1.7	1.2	.97	.67	.57	.66	.65
24	1.1	1.8	1.8	1.8	1.8	1.7	1.2	.93	.74	.57	.67	.66
25	1.1	1.8	1.8	1.8	1.8	1.7	1.2	.92	.82	.58	.67	.65
26	1.1	1.8	1.8	1.8	1.8	1.6	1.2	.88	.83	.58	.67	.68
27	1.1	1.8	1.8	2.3	1.7	1.6	1.3	.77	.83	.58	.67	.65
28	1.1	1.9	1.8	2.0	1.7	1.6	1.3	.76	.88	.60	.66	.70
29	.99	2.0	1.8	1.8	1.7	1.4	1.2	.77	.85	.61	.66	.78
30	1.0	3.2	1.8	1.9	-----	1.4	1.2	.80	.83	.60	.69	.80
31	1.0	-----	1.8	2.4	-----	1.5	-----	.80	-----	.60	.71	-----
TOTAL	35.09	51.3	63.4	59.6	63.4	61.4	43.3	33.47	23.16	18.55	20.62	22.73
MEAN	1.13	1.71	2.05	1.92	2.19	1.98	1.44	1.08	.77	.60	.67	.76
MAX	1.3	3.2	3.7	3.6	5.6	5.5	3.3	1.4	.91	.84	.74	.89
MIN	.99	1.0	1.7	1.6	1.7	1.3	1.2	.76	.62	.43	.60	.63
AC-FT	70	102	126	118	126	122	86	66	46	37	41	45

CAL YR 1967 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1968 TOTAL 496.02 MEAN 1.36 MAX 5.6 MIN .43 AC-FT 984

Peak discharge (base, 20 cfs).--Jan. 15 (1100 hrs) 28 cfs (2.43 ft).

ARROYO GRANDE BASIN

11-1411.6. WITTENBERG CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°12'54", long 120°27'21", on north boundary of Arroyo Grande Grant, on right bank 0.2 mile upstream from Huffs Hole Creek, and 9.1 miles northeast of Arroyo Grande, San Luis Obispo County.

DRAINAGE AREA.--3.43 sq mi.

RECORDS AVAILABLE.--August 1967 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 550 ft (from topographic map).

EXTREMES.--1967: No flow August and September.

1967-68: Maximum discharge during water year, 44 cfs Dec. 5 (gage height, 2.62 ft); no flow most of the year.

REMARKS.--Records good. Regulation due to road construction above station; small diversions above station for domestic use.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0		0	0	.85					
2		0	0		0	0	.20					
3		0	0		0	0	0					
4		0	0		0	0	0					
5		0	2.4		0	0	0					
6		0	0		0	0	0					
7		0	.05		0	6.2	0					
8		0	0		0	.55	0					
9		0	0		0	0	0					
10		0	0		0	0	0					
11		0	0		0	0	0					
12		0	0		0	0	0					
13		0	0		0	5.2	0					
14		0	0		0	0	0					
15		0	0		0	0	0					
16		0	0		0	.34	0					
17		0	0		0	0	0					
18		0	.58		0	0	0					
19		1.2	.75		0	0	0					
20		.07	0		0	0	0					
21		1.3	0		0	0	0					
22		0	0		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	0		0	0	0					
28		0	0		0	0	0					
29		0	0		0	0	0					
30		6.7	0		-----	0	0					
31		-----	0		-----	0	-----		-----			-----
TOTAL	0	9.27	3.78	0	0	12.29	1.05	0	0	0	0	0
MEAN	0	.31	.12	0	0	.40	.035	0	0	0	0	0
MAX	0	6.7	2.4	0	0	6.2	.85	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	18	7.5	0	0	24	2.1	0	0	0	0	0
CAL YR 1967	TOTAL -		MEAN -		MAX -		MIN -		AC-FT -			
WTR YR 1968	TOTAL 26.39		MEAN .072		MAX 6.7		MIN 0		AC-FT 52			

11-1412.8. LOPEZ CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°13'48", long 120°28'22", in SE¼NE¼ sec.16, T.31 S., R.14 E., on right bank 0.7 mile upstream from unnamed tributary, 3.2 miles upstream from mouth, and 9.2 miles northeast of Arroyo Grande.

DRAINAGE AREA.--21.4 sq mi.

RECORDS AVAILABLE.--July 1967 to September 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 540 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 32 cfs Mar. 8 (gage height, 2.79 ft); minimum daily, 1.2 cfs Sept. 24-27.

1967-68: Maximum discharge, 32 cfs Mar. 8, 1968 (gage height, 2.79 ft); minimum daily, 1.2 cfs Sept. 24-27, 1968.

REMARKS.--Records excellent. Small diversions above station for domestic use. Records of water temperatures and total sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	3.9	6.4	4.8	6.0	5.0	9.7	4.4	3.3	2.4	2.0	1.6
2	4.7	4.1	5.8	4.7	5.6	4.9	12	4.2	3.2	2.5	2.0	1.7
3	4.8	4.2	5.5	4.5	5.5	4.7	8.3	4.3	3.2	2.3	2.0	1.6
4	4.7	4.2	5.5	4.5	5.4	4.7	7.2	4.3	3.2	2.2	2.1	1.7
5	4.3	4.4	6.7	4.5	5.3	4.5	6.8	4.3	3.3	2.1	2.0	1.8
6	4.2	4.5	6.1	4.5	5.3	4.5	6.6	4.4	3.2	2.1	2.0	1.7
7	4.1	4.5	6.1	4.5	5.0	5.9	6.6	4.3	3.1	2.3	2.0	1.6
8	4.2	4.5	6.1	4.5	5.0	25	6.3	4.3	3.1	2.5	2.0	1.6
9	4.1	4.5	5.8	4.5	5.0	14	6.4	4.1	3.1	2.3	2.0	1.5
10	4.0	4.7	5.2	5.9	5.0	9.8	6.3	4.0	3.0	2.2	2.0	1.3
11	4.0	4.5	5.2	6.3	5.0	8.5	5.9	4.0	3.0	2.1	2.0	1.5
12	4.1	4.7	5.1	5.6	5.0	7.6	5.8	4.1	2.9	2.0	2.0	1.5
13	3.9	4.7	5.0	5.2	5.2	19	5.9	4.2	2.8	2.2	2.0	1.5
14	3.8	4.5	5.0	5.1	5.3	14	5.7	4.3	2.6	2.3	2.0	1.5
15	3.8	4.7	5.0	5.0	5.1	11	5.5	4.0	2.6	2.3	2.2	1.3
16	3.9	4.7	4.8	4.9	5.1	10	5.5	3.9	2.6	2.2	2.1	1.3
17	3.9	4.7	4.8	4.8	7.8	10	5.3	3.8	2.6	2.2	2.0	1.3
18	3.8	5.4	6.4	4.8	8.4	9.0	5.1	3.9	2.6	2.0	2.0	1.3
19	3.8	6.4	6.6	4.7	6.9	8.3	5.4	3.9	2.5	1.8	2.0	1.3
20	3.9	5.7	6.0	4.6	6.1	7.9	5.4	3.9	2.3	1.8	2.0	1.3
21	4.0	5.7	5.6	4.5	5.8	7.8	5.6	3.8	2.1	2.0	2.0	1.3
22	4.1	5.3	5.3	4.5	5.5	7.3	5.4	3.8	2.0	2.0	1.8	1.3
23	3.7	5.1	5.2	4.5	5.3	7.2	5.4	3.9	1.9	2.0	1.8	1.3
24	3.7	5.0	5.1	4.5	5.3	6.9	5.0	3.9	2.0	2.0	1.7	1.2
25	3.8	5.0	5.0	4.5	5.1	6.8	4.8	3.8	2.2	2.0	1.9	1.2
26	3.7	5.0	5.0	4.5	5.0	6.9	4.7	3.7	2.2	2.0	1.8	1.2
27	3.7	5.3	4.9	5.1	4.7	6.6	4.8	3.5	2.3	2.0	1.8	1.2
28	3.7	5.3	4.8	5.1	4.7	6.5	4.7	3.4	2.3	2.0	1.6	1.3
29	3.8	5.3	4.8	4.9	5.0	6.3	4.6	3.4	2.2	2.0	1.5	1.5
30	3.8	8.0	4.8	4.9	-----	6.1	4.4	3.4	2.2	2.0	1.7	1.5
31	3.8	-----	4.8	6.5	-----	6.1	-----	3.4	-----	2.0	1.6	-----
TOTAL	124.5	148.5	168.4	151.4	159.4	262.8	181.1	122.6	79.6	65.8	59.6	42.9
MEAN	4.02	4.95	5.43	4.88	5.50	8.48	6.04	3.95	2.65	2.12	1.92	1.43
MAX	4.8	8.0	6.7	6.5	8.4	25	12	4.4	3.3	2.5	2.2	1.8
MIN	3.7	3.9	4.8	4.5	4.7	4.5	4.4	3.4	1.9	1.8	1.5	1.2
AC-FT	247	295	334	300	316	521	359	243	158	131	118	85

CAL YR 1967 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1968 TOTAL 1,566.6 MEAN 4.28 MAX 25 MIN 1.2 AC-FT 3,110

PEAK DISCHARGE (BASE, 20 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
03-08	0230	2.79	32	04-01	2045	2.62	20
03-13	0945	2.76	29				

ARROYO GRANDE BASIN

11-1414. TAR SPRING CREEK NEAR ARROYO GRANDE, CALIF.

LOCATION.--Lat 35°07'52", long 120°32'03", in Santa Manuela Grant, on right bank 1.0 mile upstream from mouth, and 3.5 miles east of Arroyo Grande, San Luis Obispo County.

DRAINAGE AREA.--17.8 sq mi.

RECORDS AVAILABLE.--August 1967 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 200 ft (from topographic map).

EXTREMES.--1967: No flow August to September.

1967-68: Maximum discharge during water year, 4.7 cfs Nov. 30 (gage height, 2.43 ft); no flow for several months.

REMARKS.--Records good. No regulation; some diversion above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.70	.60	.64	.34	.41	.14				
2		0	.70	.60	.64	.30	.47	.27				
3		0	.70	.60	.73	.26	.44	.05				
4		0	.70	.60	.64	.17	.44	.01				
5		0	1.4	.59	.64	.29	.44	.03				
6		0	1.1	.40	.64	.28	.43	.05				
7		0	.90	.33	.68	.45	.41	.08				
8		0	.64	.30	.73	.65	.34	.10				
9		0	.64	.38	.73	.60	.28	.13				
10		0	.64	.36	.60	.64	.21	.03				
11		0	.63	.45	.41	.67	.09	.02				
12		0	.63	.50	.35	.64	.23	0				
13		0	.63	.50	.41	1.2	.31	.05				
14		0	.62	.50	.52	.71	.16	0				
15		0	.62	.50	.64	.68	.20	.03				
16		0	.65	.50	.60	.72	.14	0				
17		0	.62	.50	.78	.69	.21	0				
18		0	.96	.50	.78	.68	.17	0				
19		.34	1.1	.50	.78	.65	.21	0				
20		0	.71	.50	.78	.63	.13	0				
21		1.2	.70	.49	.80	.61	.12	0				
22		.61	.70	.34	.74	.66	.09	0				
23		.60	.65	.34	.66	.62	.09	0				
24		.62	.60	.32	.64	.58	.09	0				
25		.69	.60	.52	.45	.50	.15	0				
26		.70	.62	.56	.36	.30	.06	0				
27		.70	.60	.60	.42	.28	.02	0				
28		.74	.60	.57	.51	.27	.14	0				
29		.77	.60	.60	.42	.27	.16	0				
30		1.4	.60	.64	-----	.24	.11	0				
31		-----	.60	.64	-----	.33	-----	0	-----			-----
TOTAL	0	8.37	22.16	15.33	17.72	15.91	6.75	0.99	0	0	0	0
MEAN	0	.28	.71	.49	.61	.51	.23	.032	0	0	0	0
MAX	0	1.4	1.4	.64	.80	1.2	.47	.27	0	0	0	0
MIN	0	0	.60	.30	.35	.17	.02	0	0	0	0	0
AC-FT	0	17	44	30	35	32	13	2.0	0	0	0	0

CAL YR 1967 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1968 TOTAL 87.23 MEAN .24 MAX 1.4 MIN 0 AC-FT 173

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

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 1968. Records for water year 1940 incomplete, yearly estimate published in WSP 1315-B.

GAGE.--Digital water-stage recorder 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, graphic water-stage recorder at datum 0.50 ft higher. July 10, 1947 to Sept. 5, 1962, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--29 years, 19.4 cfs (14,040 acre-ft per year); median of yearly mean discharges, 8.0 cfs (5,800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 57 cfs Sept. 3 (gage height, 2.24 ft); minimum daily, 0.04 cfs Aug. 28, 29.

1939-68: Maximum discharge, 5,400 cfs Dec. 6, 1966 (gage height, 12.88 ft); no flow for several days in some years.

REMARKS.--Records fair. Regulation due to construction of Lopez Dam 7.8 miles upstream. 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	5.0	8.5	8.6	3.6	6.1	9.7	6.4	9.6	1.5	.65	.07
2	11	4.5	8.1	8.5	3.8	7.8	14	5.5	16	.69	.57	.07
3	11	3.8	7.7	8.0	3.5	8.1	14	5.8	.32	.64	.16	2.7
4	11	3.5	7.6	7.8	3.9	7.3	12	5.6	.26	.28	.29	.39
5	12	5.0	9.1	7.7	3.6	7.0	11	7.6	.28	.56	.89	.23
6	11	5.1	9.2	7.7	3.1	8.4	10	6.7	.40	.30	.42	.22
7	11	3.5	8.8	7.7	3.0	9.8	9.3	5.5	.43	1.1	.32	.30
8	9.7	3.7	6.6	7.7	3.1	13	8.8	5.3	.63	.63	.16	.46
9	9.6	7.1	7.7	7.9	4.1	9.6	7.5	5.5	1.4	.62	.13	.44
10	9.9	5.3	9.8	8.8	5.0	7.7	7.2	6.3	1.2	1.3	.09	.22
11	10	5.3	9.3	11	5.7	7.7	6.6	4.6	.64	.73	.10	.22
12	11	5.6	9.1	11	5.7	9.7	7.3	4.9	1.0	.52	.09	.39
13	11	4.8	7.5	11	5.6	15	7.6	5.4	1.5	.25	.08	.41
14	8.2	5.6	6.3	11	5.5	16	8.9	5.5	.70	.78	.07	.24
15	9.0	7.0	7.8	11	5.2	14	10	5.1	.31	.75	.07	.40
16	9.1	5.6	7.6	11	5.2	13	8.5	4.5	.66	.65	.07	.58
17	8.8	4.0	7.6	11	7.5	13	8.4	5.5	.98	.51	.07	.49
18	7.4	7.5	9.5	11	7.8	12	8.4	5.1	.87	.31	.06	1.3
19	7.0	9.2	11	11	7.0	11	9.0	6.1	1.5	.26	.11	1.1
20	6.6	7.5	10	9.8	6.9	10	9.5	2.8	1.1	.21	.15	.60
21	7.3	9.3	10	11	6.5	9.7	10	2.5	.50	.22	.13	.89
22	7.3	8.6	9.9	11	5.8	9.0	9.4	3.8	.38	.23	.07	.75
23	6.8	8.4	8.1	11	4.9	7.4	7.4	2.4	.61	.22	.06	.48
24	6.8	8.4	6.2	11	5.2	9.9	7.9	1.2	.80	.20	.09	.24
25	6.2	8.5	7.2	10	5.5	8.4	6.2	1.1	.73	.17	1.2	.23
26	6.5	8.5	10	4.8	4.6	7.3	5.2	.81	.56	.11	1.9	.23
27	4.7	8.2	10	4.5	3.5	5.1	5.5	.31	.41	.11	.40	.23
28	5.8	8.5	9.0	3.8	6.6	6.1	6.5	.44	.50	.11	.04	.25
29	5.3	8.5	8.5	3.7	8.0	5.7	6.1	.45	1.0	.41	.04	1.2
30	5.0	8.4	8.0	3.7	-----	6.4	5.2	.37	1.0	.74	.11	1.6
31	4.3	-----	8.5	3.8	-----	7.2	-----	.98	-----	.24	.06	-----
TOTAL	261.3	193.9	264.2	267.5	149.4	288.4	257.1	124.06	46.27	15.35	8.65	16.93
MEAN	8.43	6.46	8.52	8.63	5.15	9.30	8.57	4.00	1.54	.50	.28	.56
MAX	12	9.3	11	11	8.0	16	14	7.6	16	1.5	1.9	2.7
MIN	4.3	3.5	6.2	3.7	3.0	5.1	5.2	.31	.26	.11	.04	.07
AC-FT	518	385	524	531	296	572	510	246	92	30	17	34

CAL YR 1967 TOTAL 14,810.4 MEAN 40.6 MAX 765 MIN 3.5 AC-FT 29,380
WTR YR 1968 TOTAL 1,893.06 MEAN 5.17 MAX 16 MIN .04 AC-FT 3,750

SANTA ROSA CREEK BASIN

299

11-1422. SANTA ROSA CREEK NEAR CAMBRIA, CALIF.

LOCATION.--Lat 35°34'35", long 120°59'50", in NE $\frac{1}{4}$ 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 264.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 12, 1963, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--11 years, 9.15 cfs (6,620 acre-ft per year); median of yearly mean discharges, 6.0 cfs (4,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 152 cfs Mar. 13 (gage height, 4.11 ft); no flow June 25 to Sept. 30. 1957-68: Maximum discharge, 2,520 cfs Feb. 1, 1960 (gage height, 10.36 ft), from rating curve extended above 930 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.05	.60	.70	2.2	1.4	6.3	.75	.12			
2	.14	.03	.43	.70	1.7	1.4	6.2	.77	.13			
3	.14	.03	.40	.70	1.5	1.3	3.6	.73	.14			
4	.14	.04	.55	.70	1.4	1.2	3.1	.72	.16			
5	.16	.03	1.0	.70	1.4	1.1	2.8	.67	.16			
6	.16	.03	.50	.70	1.4	1.1	2.6	.61	.17			
7	.16	.03	.60	.80	1.3	1.8	2.4	.60	.17			
8	.16	.03	.50	.85	1.3	11	2.2	.52	.21			
9	.14	.03	.40	1.5	1.3	3.7	2.0	.53	.22			
10	.14	.03	.40	7.0	1.3	2.6	1.9	.46	.23			
11	.14	.03	.40	4.0	1.3	2.2	1.8	.44	.23			
12	.06	.03	.40	1.9	1.3	2.1	1.8	.53	.23			
13	.06	.03	.41	1.7	1.5	56	1.8	.54	.20			
14	.06	.03	.58	1.4	1.4	11	1.7	.65	.17			
15	.06	.03	.60	1.4	1.3	6.2	1.7	.52	.16			
16	.06	.03	.70	1.4	1.3	7.5	1.8	.46	.15			
17	.06	.03	.90	1.4	44	6.4	1.5	.38	.14			
18	.06	.03	1.5	1.3	18	4.8	1.4	.30	.13			
19	.06	.20	1.1	1.3	5.9	4.1	1.4	.28	.11			
20	.06	.14	.80	1.2	4.4	3.6	1.4	.26	.07			
21	.06	.12	.70	1.2	3.7	3.3	1.4	.27	.05			
22	.06	.09	.70	1.1	3.1	2.9	1.3	.25	.04			
23	.06	.08	.70	1.0	2.6	2.7	1.2	.25	.02			
24	.06	.08	.70	1.0	2.3	2.5	1.2	.25	.01			
25	.06	.08	.70	1.0	2.0	2.4	1.2	.24	0			
26	.06	.08	.70	1.1	1.8	2.4	.97	.22	0			
27	.06	.08	.70	1.5	1.7	2.3	1.1	.19	0			
28	.06	.12	.70	1.5	1.7	2.1	1.0	.16	0			
29	.06	.40	.70	1.3	1.5	2.3	.87	.14	0			
30	.06	1.0	.70	1.4	-----	2.3	.80	.13	0			
31	.06	-----	.70	6.2	-----	2.4	-----	.13	-----			
TOTAL	2.82	3.04	20.47	49.65	115.6	158.1	60.44	12.95	3.42	0	0	0
MEAN	.091	.10	.66	1.60	3.99	5.10	2.01	.42	.11	0	0	0
MAX	.16	1.0	1.5	7.0	44	56	6.3	.77	.23	0	0	0
MIN	.06	.03	.40	.70	1.3	1.1	.80	.13	0	0	0	0
AC-FT	5.6	6.0	41	98	229	314	120	26	6.8	0	0	0

CAL YR 1967 TOTAL 4,526.70 MEAN 12.4 MAX 418 MIN .03 AC-FT 8,980
WTR YR 1968 TOTAL 426.49 MEAN 1.17 MAX 56 MIN 0 AC-FT 846

Peak discharge (base, 450 cfs).--No peak above base.

ARROYO DE LA CRUZ BASIN

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.

RECORDS AVAILABLE.--October 1950 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 22 ft (from topographic map). Prior to Dec. 14, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--18 years, 51.7 cfs (37,430 acre-ft per year); median of yearly mean discharges, 42 cfs (30,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 924 cfs Feb. 17 (gage height, 4.84 ft); no flow most of the year. 1950-68: Maximum discharge, 35,200 cfs Dec. 6, 1966 (gage height, 15.27 ft), from rating curve extended above 7,600 cfs on basis of slope-area measurements at gage heights 12.40 and 15.27 ft; no flow for several months in each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.28	13	8.5	33	.56				
2			0	.20	9.5	7.8	49	.52				
3			0	.16	7.9	7.1	22	.48				
4			0	.08	6.9	6.4	15	.44				
5			0	0	5.9	5.9	12	.44				
6			0	0	5.2	5.2	10	.40				
7			0	0	4.5	6.2	9.3	.36				
8			0	0	4.3	118	8.0	.16				
9			0	0	4.0	36	7.2	.14				
10			0	171	3.6	22	6.3	.14				
11			0	50	3.4	17	5.7	.12				
12			0	20	3.1	14	5.2	.08				
13			0	13	4.3	178	5.0	.08				
14			0	11	8.3	64	4.6	.06				
15			0	9.1	7.9	38	4.1	.02				
16			0	8.0	7.6	82	3.9	0				
17			0	7.0	414	66	3.4	0				
18			0	6.2	134	44	3.0	0				
19			0	5.5	51	33	2.6	0				
20			2.0	5.0	33	28	2.5	0				
21			4.7	4.6	26	23	2.2	0				
22			3.8	4.1	21	20	2.1	0				
23			2.8	3.7	18	17	1.6	0				
24			2.0	3.4	15	16	1.5	0				
25			1.4	3.4	13	15	1.3	0				
26			1.2	3.1	12	13	1.2	0				
27			.84	3.3	11	12	1.1	0				
28			.56	3.1	10	10	.68	0				
29			.44	4.1	9.3	9.7	.60	0				
30			.40	4.4	-----	8.8	.60	0				
31		-----	.32	13	-----	8.6	-----	0	-----			-----
TOTAL	0	0	20.46	356.72	866.7	940.2	224.68	4.00	0	0	0	0
MEAN	0	0	.66	11.5	29.9	30.3	7.49	.13	0	0	0	0
MAX	0	0	4.7	171	414	178	49	.56	0	0	0	0
MIN	0	0	0	0	3.1	5.2	.60	0	0	0	0	0
AC-FT	0	0	41	708	1,720	1,860	446	7.9	0	0	0	0

CAL YR 1967 TOTAL 20,543.52 MEAN 56.3 MAX 2,370 MIN 0 AC-FT 40,750
WTR YR 1968 TOTAL 2,412.76 MEAN 6.59 MAX 414 MIN 0 AC-FT 4,790

Peak discharge (base, 2,500 cfs).--No peak above base.

BIG SUR RIVER BASIN

301

11-1430. BIG SUR RIVER NEAR BIG SUR, CALIF.

LOCATION.--Lat 36°14'45", long 121°46'20", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.29, T.19 S., R.2 E., on right bank at downstream side of bridge, 0.4 mile upstream from Post Creek, and 2.6 miles southeast of town of Big Sur.

DRAINAGE AREA.--46.5 sq mi.

RECORDS AVAILABLE.--March 1950 to September 1968. Prior to October 1959, published as Sur River at Big Sur.

GAGE.--Digital 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. Oct. 1, 1951, to Apr. 18, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--18 years, 89.3 cfs (64,650 acre-ft per year); median of yearly mean discharges, 68 cfs (49,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,230 cfs Jan. 30 (gage height, 6.25 ft); minimum daily, 7.7 cfs Sept. 10, 14, 22, 23.

1950-68: 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 fair. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	21	34	21	165	54	68	27	19	12	11	9.0
2	24	20	27	20	115	52	62	26	18	12	10	8.5
3	23	20	26	20	84	50	53	27	19	12	10	8.4
4	24	22	32	19	74	46	50	27	18	12	9.7	8.7
5	25	22	105	19	61	45	48	27	19	11	9.6	9.2
6	24	22	44	18	55	44	46	26	20	11	10	9.2
7	24	22	55	18	52	56	44	25	20	11	9.9	8.4
8	23	22	45	18	48	116	42	26	20	12	10	8.1
9	23	22	30	18	45	74	40	26	20	11	10	7.8
10	23	21	24	151	43	64	39	26	19	11	9.8	7.7
11	24	19	22	81	40	59	37	25	18	11	9.8	7.9
12	23	20	21	51	39	60	37	26	18	11	9.5	8.0
13	23	20	20	34	38	125	37	28	17	11	9.6	8.0
14	23	23	20	30	38	92	36	33	17	11	10	7.7
15	22	22	19	76	37	83	35	28	15	12	10	8.1
16	22	22	18	59	77	122	35	27	15	13	9.4	8.0
17	22	21	18	43	441	123	35	25	16	12	9.0	7.8
18	22	22	106	34	250	111	34	25	15	11	8.9	7.8
19	23	22	74	28	168	103	33	25	14	11	10	8.0
20	21	22	58	21	142	94	33	25	14	11	12	8.2
21	21	22	52	19	123	85	32	25	13	11	11	7.8
22	22	22	43	18	103	78	31	25	13	10	11	7.7
23	22	21	36	17	89	73	31	25	13	11	11	7.7
24	21	21	34	17	81	68	30	24	13	11	10	7.8
25	21	20	31	16	73	65	30	24	13	10	9.5	8.0
26	20	19	29	16	67	62	29	23	13	11	11	8.4
27	21	19	27	18	64	58	29	22	13	11	10	8.2
28	20	20	26	17	60	55	29	21	13	11	10	8.3
29	19	28	24	52	56	53	28	20	12	11	10	8.4
30	20	56	23	510	-----	51	27	20	12	11	9.8	9.0
31	20	-----	22	409	-----	50	-----	19	-----	11	9.4	-----
TOTAL	688	675	1,145	1,888	2,728	2,271	1,140	778	479	348	310.9	245.8
MEAN	22.2	22.5	36.9	60.9	94.1	73.3	38.0	25.1	16.0	11.2	10.0	8.19
MAX	25	56	106	510	441	125	68	33	20	13	12	9.2
MIN	19	19	18	16	37	44	27	19	12	10	8.9	7.7
AC-FT	1,360	1,340	2,270	3,740	5,410	4,500	2,260	1,540	950	690	617	488

CAL YR 1967 TOTAL 54,939 MEAN 151 MAX 1,680 MIN 18 AC-FT 109,000
WTR YR 1968 TOTAL 12,696.7 MEAN 34.7 MAX 510 MIN 7.7 AC-FT 25,180

Peak discharge (base, 700 cfs).--Jan. 30 (2115 hrs) 1,230 cfs (6.25 ft).

CARMEL RIVER BASIN

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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 270 ft (from topographic map). Prior to Apr. 21, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--11 years, 63.6 cfs (46,040 acre-ft per year); median of yearly mean discharges, 37 cfs (26,800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 224 cfs Jan. 30 (gage height, 3.95 ft); no flow Oct. 1 to Dec. 1, June 4 to Sept. 30.

1957-68: Maximum discharge, 7,100 cfs Apr. 2, 1958 (gage height, 10.50 ft); no flow at times in each year.

Flood of Dec. 23, 1955, reached a stage of 11.7 ft from floodmarks (discharge, 6,930 cfs on basis of slope-area measurement of maximum flow).

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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	.85	115	14	57	3.7	.10			
2			.42	.74	104	1.0	61	2.9	.05			
3			.55	.47	80	.74	43	1.9	.02			
4			.61	.55	66	.74	32	1.1	0			
5			1.3	.64	55	.64	13	1.2	0			
6			.84	.85	44	.34	23	1.0	0			
7			.78	.85	39	.34	30	.97	0			
8			.67	.55	35	.34	19	.77	0			
9			.57	1.0	32	12	3.8	.62	0			
10			.47	1.1	29	23	2.3	.60	0			
11			.54	1.0	27	22	9.2	.65	0			
12			.39	.89	25	23	15	.76	0			
13			.31	.81	25	77	11	.81	0			
14			.31	1.3	24	63	9.3	.90	0			
15			.30	1.2	22	53	9.7	1.3	0			
16			.32	1.0	22	65	9.2	2.1	0			
17			.33	.79	95	88	14	1.3	0			
18			.82	.60	138	84	12	1.1	0			
19			1.4	.60	91	76	13	.89	0			
20			1.2	.78	74	68	12	.66	0			
21			.85	.76	60	63	11	.81	0			
22			.64	.45	59	57	8.8	.72	0			
23			.64	.48	41	50	8.5	.59	0			
24			.64	.61	33	46	7.6	.52	0			
25			.55	.60	30	43	7.0	.43	0			
26			.64	.61	26	40	6.1	.47	0			
27			.55	.83	23	28	6.1	.44	0			
28			.55	.91	20	7.1	7.3	.37	0			
29			.55	.97	28	6.2	5.9	.29	0			
30			.64	46	-----	4.5	4.3	.20	0			
31		-----	.74	118	-----	6.1	-----	.15	-----			
TOTAL	0	0	19.12	186.79	1,462	1,023.04	471.1	30.22	0.17	0	0	0
MEAN	0	0	.62	6.03	50.4	33.0	15.7	.97	.006	0	0	0
MAX	0	0	1.4	118	138	88	61	3.7	.10	0	0	0
MIN	0	0	0	.45	20	.34	2.3	.15	0	0	0	0
AC-FT	0	0	38	370	2,900	2,030	934	60	.3	0	0	0

CAL YR 1967 TOTAL 47,783.66 MEAN 131 MAX 1,950 MIN 0 AC-FT 94,780
WTR YR 1968 TOTAL 3,192.44 MEAN 8.72 MAX 138 MIN 0 AC-FT 6,330

Peak discharge (base, 1,000 cfs).--No peak above base.

CARMEL RIVER BASIN

303

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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 45 ft (from topographic map). Prior to Nov. 15, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--6 years, 74.4 cfs (53,860 acre-ft per year).

EXTREMES.--Maximum discharge during year, 140 cfs Feb. 18 (gage height, 3.82 ft); no flow May 23 to Sept. 30. 1962-68: Maximum discharge, 7,420 cfs Dec. 6, 1966 (gage height, 12.26 ft), from rating curve extended above 3,000 cfs; maximum gage height, 14.72 ft Jan. 31, 1963; no flow at times in each year.

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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	1.8	2.3	80	46	29	2.2				
2	.18	.20	1.6	2.3	93	25	62	2.0				
3	.20	.20	1.4	2.3	75	19	48	1.8				
4	.18	.20	1.7	2.3	59	16	42	1.6				
5	.20	.25	.97	2.3	48	15	30	1.3				
6	.20	.30	.63	2.0	43	14	23	1.2				
7	.20	.31	.65	1.6	37	13	28	.72				
8	.10	.37	.57	1.4	34	12	28	.64				
9	.10	.34	.50	1.4	32	11	19	.56				
10	.10	.36	.50	2.3	31	19	13	.50				
11	.18	.32	.41	1.9	30	24	11	.50				
12	.14	.41	.44	1.1	29	27	8.8	.50				
13	.12	.57	.41	1.2	28	58	9.7	.56				
14	.10	.69	.63	1.4	27	81	9.2	.89				
15	.10	.73	.74	3.0	25	69	7.8	.98				
16	.10	.95	.70	3.0	24	75	8.3	.44				
17	.10	1.0	.68	2.6	40	107	8.3	.39				
18	.10	1.0	1.1	2.7	130	107	9.2	.26				
19	.10	1.1	1.2	2.7	110	98	9.2	.19				
20	.10	1.1	1.7	2.9	90	88	9.7	.02				
21	.10	1.1	1.6	3.0	86	82	9.2	.02				
22	.10	1.1	1.5	3.4	71	75	8.8	.02				
23	.10	1.1	1.6	3.4	61	69	7.5	0				
24	.10	1.1	1.6	3.4	55	62	6.6	0				
25	.16	1.0	1.8	3.6	52	58	5.5	0				
26	.20	1.0	1.9	4.1	49	54	4.4	0				
27	.20	1.1	2.1	4.9	46	49	4.0	0				
28	.20	1.2	2.1	5.2	43	33	3.3	0				
29	.12	1.6	2.1	5.2	43	26	3.3	0				
30	.11	2.4	2.1	6.4	-----	21	3.1	0				
31	.20	-----	2.2	64	-----	19	-----	0	-----			-----
TOTAL	4.39	23.30	38.93	149.3	1,571	1,472	468.9	17.29	0	0	0	0
MEAN	.14	.78	1.26	4.82	54.2	47.5	15.6	.56	0	0	0	0
MAX	.20	2.4	2.2	64	130	107	62	2.2	0	0	0	0
MIN	.10	.20	.41	1.1	24	11	3.1	0	0	0	0	0
AC-FT	8.7	46	77	296	3,120	2,920	930	34	0	0	0	0

CAL YR 1967 TOTAL 58,967.89 MEAN 162 MAX 2,460 MIN .10 AC-FT 117,800
WTR YR 1968 TOTAL 3,745.11 MEAN 10.2 MAX 130 MIN 0 AC-FT 7,430

Peak discharge (base, 1,200 cfs).--No peak above base.

ARROYO DEL REY BASIN

11-1433. ARROYO DEL REY AT DEL REY OAKS, CALIF.

LOCATION.--Lat 36°35'47", long 121°50'50", in Noche Buena Grant on right bank at culvert on Rosita Avenue, at Del Rey Oaks, Monterey County, and 1,000 ft upstream from State Highway 1.

DRAINAGE AREA.--14.3 sq mi.

RECORDS AVAILABLE.--October 1966 to September 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 15 ft (from topographic map).

EXTREMES.--Maximum discharge during year, 7.2 cfs Nov. 29 (gage height, 2.22 ft); minimum daily, 0.01 cfs for many days.

1966-68: Maximum discharge, 31 cfs Apr. 23, 1967 (gage height, 2.63 ft), from rating curve extended above 4 cfs; no flow at times.

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

REVISIONS.--Revised figures of discharge, in cubic feet per second, in the 1967 water year, superseding figures published in 1967 report, are given herewith:

March 31, 1967..... 0.31

Month	Cfs-days	Mean	Max	Min	Acre-feet
March 1967	11.86	0.38	0.31	0	24
Wtr yr 1967	192.59	24	20	0	382

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.06	.17	.12	.38	.13	.42	.06	.02	.02	.01	.02
2	.04	.06	.12	.12	.33	.12	.17	.06	.02	.02	.01	.02
3	.04	.06	.09	.09	.24	.13	.13	.05	.02	.02	.01	.01
4	.06	.06	.17	.09	.20	.12	.11	.05	.02	.02	.01	.02
5	.06	.05	.17	.09	.20	.12	.09	.06	.02	.02	.01	.02
6	.06	.05	.12	.09	.24	.12	.09	.05	.02	.02	.01	.01
7	.06	.05	.24	.09	.24	.20	.08	.05	.02	.02	.02	.01
8	.06	.05	.14	.09	.20	.33	.09	.05	.03	.02	.02	.02
9	.06	.05	.12	.09	.20	.20	.09	.04	.03	.02	.02	.02
10	.06	.05	.12	.49	.20	.14	.09	.04	.03	.01	.02	.02
11	.06	.05	.09	.14	.17	.17	.09	.05	.02	.02	.02	.02
12	.05	.05	.09	.12	.24	.33	.09	.06	.02	.02	.02	.02
13	.05	.08	.08	.12	.17	.38	.09	.05	.02	.02	.02	.02
14	.05	.08	.06	.43	.17	.20	.09	.05	.02	.02	.02	.02
15	.04	.05	.06	.60	.14	.14	.09	.04	.02	.02	.02	.02
16	.05	.05	.06	.38	.24	.43	.08	.04	.02	.02	.02	.03
17	.06	.05	.17	.24	.33	.43	.09	.05	.02	.02	.02	.02
18	.08	.05	.49	.20	.24	.33	.09	.04	.02	.02	.02	.02
19	.08	.06	.61	.17	.20	.21	.09	.05	.02	.02	.03	.01
20	.09	.05	.33	.17	.20	.14	.09	.04	.02	.02	.02	.01
21	.09	.05	.20	.17	.28	.11	.09	.04	.02	.02	.02	.01
22	.09	.05	.20	.17	.20	.09	.08	.04	.02	.02	.02	.02
23	.09	.05	.14	.14	.18	.10	.08	.04	.02	.01	.02	.02
24	.09	.05	.14	.14	.15	.09	.08	.03	.02	.01	.02	.02
25	.09	.05	.12	.14	.15	.09	.06	.02	.02	.01	.02	.02
26	.08	.05	.12	.14	.14	.09	.06	.02	.02	.01	.02	.02
27	.08	.08	.12	.38	.12	.09	.06	.02	.02	.01	.02	.02
28	.08	.08	.12	.33	.12	.12	.06	.02	.01	.01	.02	.02
29	.08	.24	.12	.28	.14	.13	.06	.02	.02	.01	.02	.02
30	.06	.28	.12	.61	-----	.13	.06	.02	.01	.01	.02	.03
31	.06	-----	.12	.68	-----	.14	-----	.02	-----	.01	.02	-----
TOTAL	2.03	2.09	5.02	7.11	6.01	5.55	2.94	1.27	0.61	0.52	0.57	0.56
MEAN	.066	.070	.16	.23	.21	.18	.098	.041	.020	.017	.018	.019
MAX	.09	.28	.61	.68	.38	.43	.42	.06	.03	.02	.03	.03
MIN	.03	.05	.06	.09	.12	.09	.06	.02	.01	.01	.01	.01
AC-FT	4.0	4.2	10	14	12	11	5.8	2.5	1.2	1.0	1.1	1.1

CAL YR 1967 TOTAL 188.37 MEAN .52 MAX 20 MIN 0 AC-FT 374
WTR YR 1968 TOTAL 34.28 MEAN .094 MAX .68 MIN .01 AC-FT 68

Peak discharge (base, 5 cfs).--Nov. 29 (1815 hrs) 7.2 cfs (2.22 ft).

11-1435. SALINAS RIVER NEAR POZO, CALIF.

LOCATION.--Lat 35°18'20", long 120°24'20", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,347.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Jan. 6, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--26 years, 14.4 cfs (10,430 acre-ft per year); median of yearly mean discharges, 7.0 cfs (5,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 28 cfs Mar. 13 (gage height, 3.10 ft); minimum daily, 0.10 cfs Sept. 4-28.

1942-68: Maximum discharge, 14,100 cfs Dec. 6, 1966 (gage height, 14.23 ft), from rating curve extended above 4,800 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records fair. No regulation or diversion above station. Water is stored in Santa Margarita Lake below station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.60	1.5	2.0	2.4	1.4	7.3	2.7	1.6	.68	.28	.20
2	.57	.60	1.4	2.0	3.3	1.2	8.1	2.7	1.6	.67	.30	.20
3	.72	.60	1.4	1.8	3.0	1.0	7.4	2.7	1.6	.65	.30	.20
4	.82	.60	1.3	1.7	2.8	.81	6.4	2.7	1.5	.56	.30	.10
5	.75	.70	1.7	1.6	2.9	.74	5.3	2.7	1.5	.55	.30	.10
6	.69	.70	1.5	1.6	2.7	.68	4.7	2.7	1.6	.53	.30	.10
7	.62	.70	2.8	1.7	2.5	.96	4.3	2.7	1.5	.51	.40	.10
8	.55	.85	2.7	1.5	2.4	3.5	4.1	2.7	1.5	.50	.40	.10
9	.53	.88	2.9	1.7	2.4	8.3	4.0	2.7	1.5	.54	.40	.10
10	.52	.89	2.8	2.1	2.3	5.6	3.8	2.7	1.5	.51	.40	.10
11	.51	.97	2.7	2.1	2.3	4.9	3.7	2.5	1.4	.42	.40	.10
12	.55	1.1	2.5	2.0	2.3	4.6	3.7	2.7	1.4	.40	.40	.10
13	.64	1.1	2.4	2.0	2.3	14	3.6	2.7	1.3	.35	.40	.10
14	.61	1.1	2.2	1.9	2.0	7.2	3.6	2.7	1.1	.38	.40	.10
15	.60	1.2	2.1	1.6	1.8	5.7	3.5	2.7	1.1	.41	.40	.10
16	.60	1.2	1.9	1.4	2.0	6.3	3.5	2.5	1.1	.44	.40	.10
17	.60	1.2	1.8	1.5	2.1	11	3.2	2.5	1.1	.35	.40	.10
18	.60	1.4	2.5	1.8	1.8	11	3.2	2.4	1.1	.31	.50	.10
19	.60	1.6	2.7	2.2	1.7	9.8	3.2	2.4	1.0	.31	.50	.10
20	.60	1.8	1.9	2.6	1.5	8.4	3.2	2.4	.98	.30	.50	.10
21	.70	1.7	1.7	2.6	1.5	7.4	3.2	2.4	.85	.26	.50	.10
22	.70	1.6	1.6	2.6	1.2	6.8	3.1	2.2	.80	.26	.50	.10
23	.70	1.5	1.7	2.8	1.3	6.8	3.1	2.2	.77	.25	.50	.10
24	.70	1.6	1.7	3.5	1.0	6.1	3.1	2.2	.79	.27	.40	.10
25	.70	1.6	1.8	3.6	1.1	5.5	3.0	2.1	.72	.32	.40	.10
26	.70	1.6	1.8	3.6	.90	5.1	3.0	2.0	.74	.31	.30	.10
27	.70	1.6	1.8	3.7	1.3	4.7	3.0	1.8	.76	.31	.30	.10
28	.70	1.7	2.2	3.4	1.0	4.5	3.0	1.8	.77	.30	.30	.10
29	.70	2.0	2.3	3.6	1.2	4.3	2.9	1.7	.70	.34	.20	.20
30	.70	2.6	2.2	3.8	-----	4.2	2.9	1.7	.68	.32	.20	.20
31	.70	-----	2.2	3.5	-----	4.2	-----	1.7	-----	.31	.20	-----
TOTAL	19.88	37.29	63.7	73.5	57.00	166.69	120.1	74.3	34.56	12.62	11.48	3.50
MEAN	.64	1.24	2.05	2.37	1.97	5.38	4.00	2.40	1.15	.41	.37	.12
MAX	.82	2.6	2.9	3.8	3.3	14	8.1	2.7	1.6	.68	.50	.20
MIN	.50	.60	1.3	1.4	.90	.68	2.9	1.7	.68	.25	.20	.10
AC-FT	39	74	126	146	113	331	238	147	69	25	23	6.9

CAL YR 1967 TOTAL 13,632.03 MEAN 37.3 MAX 984 MIN .34 AC-FT 27,040
WTR YR 1968 TOTAL 674.62 MEAN 1.84 MAX 14 MIN .10 AC-FT 1,340

Peak discharge (base, 300 cfs).--No peak above base.

Note.--No gage-height record Aug. 2 to Sept. 30.

SALINAS RIVER BASIN

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 1968. Prior to October 1961 low-water records only. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital 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, graphic water-stage recorder at site 250 ft downstream at datum 11.83 ft lower. Dec. 8, 1961, to Jan. 6, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years (1961-68), 0.25 cfs (181 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3.8 cfs Mar. 13 (gage height, 3.81 ft); minimum daily, 0.02 cfs July 17-19.

1961-68: Maximum discharge, 199 cfs Dec. 6, 1966 (gage height, 5.11 ft), from rating curve extended above 30 cfs on basis of slope-area measurement of maximum flow.

1942-68: No flow at times.

REMARKS.--Records good. Small diversions above station for irrigation and stock reservoir.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.17	.23	.29	.16	.24	.70	.24	.11	.04	.03	.05
2	.11	.17	.22	.29	.14	.23	.33	.24	.09	.05	.04	.05
3	.12	.18	.22	.30	.13	.22	.25	.26	.09	.05	.05	.04
4	.12	.19	.23	.30	.15	.24	.24	.27	.09	.07	.09	.03
5	.11	.20	.39	.30	.14	.24	.24	.27	.09	.04	.06	.03
6	.11	.21	.24	.31	.13	.28	.25	.26	.09	.04	.06	.03
7	.11	.22	.24	.32	.13	.64	.24	.19	.07	.05	.04	.04
8	.12	.20	.22	.33	.13	.33	.24	.11	.07	.05	.07	.04
9	.13	.20	.22	.34	.13	.20	.23	.10	.07	.06	.05	.03
10	.15	.20	.22	.48	.12	.22	.23	.10	.06	.06	.09	.04
11	.14	.21	.22	.30	.13	.21	.23	.10	.06	.06	.04	.04
12	.15	.21	.22	.29	.13	.20	.23	.11	.05	.06	.07	.04
13	.16	.22	.22	.30	.17	.87	.24	.11	.04	.07	.10	.06
14	.17	.21	.22	.31	.18	.20	.24	.14	.05	.07	.08	.06
15	.17	.22	.23	.31	.20	.22	.24	.16	.05	.07	.09	.06
16	.17	.22	.24	.29	.21	.25	.24	.18	.03	.03	.06	.06
17	.18	.22	.22	.30	.28	.23	.23	.19	.03	.02	.05	.05
18	.16	.26	.40	.29	.20	.22	.23	.20	.03	.02	.05	.06
19	.17	.48	.38	.27	.19	.22	.24	.21	.04	.02	.06	.07
20	.17	.40	.26	.28	.18	.22	.24	.21	.04	.05	.06	.08
21	.18	.30	.25	.25	.22	.22	.24	.21	.04	.03	.07	.11
22	.19	.26	.25	.24	.20	.22	.24	.22	.03	.04	.07	.11
23	.20	.23	.25	.24	.21	.22	.23	.22	.04	.08	.11	.11
24	.20	.22	.25	.20	.20	.22	.23	.19	.04	.04	.12	.11
25	.20	.22	.25	.20	.20	.23	.24	.19	.03	.07	.05	.11
26	.20	.22	.27	.17	.22	.22	.24	.19	.03	.08	.05	.11
27	.21	.22	.29	.28	.20	.22	.25	.15	.04	.03	.05	.11
28	.21	.23	.26	.18	.23	.22	.24	.15	.04	.04	.05	.11
29	.21	.24	.25	.14	.22	.22	.23	.14	.04	.06	.04	.10
30	.20	.44	.26	.17	-----	.22	.24	.12	.04	.09	.04	.11
31	.20	-----	.29	.22	-----	.23	-----	.12	-----	.04	.04	-----
TOTAL	5.02	7.17	7.91	8.49	5.13	8.12	7.69	5.55	1.62	1.58	1.93	2.05
MEAN	.16	.24	.26	.27	.18	.26	.26	.18	.054	.051	.062	.068
MAX	.21	.48	.40	.48	.28	.87	.70	.27	.11	.09	.12	.11
MIN	.10	.17	.22	.14	.12	.20	.23	.10	.03	.02	.03	.03
AC-FT	10	14	16	17	10	16	15	11	3.2	3.1	3.8	4.1

CAL YR 1967 TOTAL 145.71 MEAN .40 MAX 33 MIN .08 AC-FT 289
 WTR YR 1968 TOTAL 62.26 MEAN .17 MAX .87 MIN .02 AC-FT 124

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

11-1445. SANTA MARGARITA LAKE NEAR POZO, CALIF.
(Formerly published as Salinas Reservoir near Pozo)

LOCATION.--Lat 35°20'15", long 120°30'05", in NW¼NW¼ 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 1968. Prior to October 1967, published as Salinas Reservoir near Pozo.

GAGE.--Graphic 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, 22,800 acre-ft Oct. 1-4; maximum elevation, 1,296.65 ft Oct. 1; minimum content, 17,100 acre-ft Sept. 30.

1941-68: Maximum contents, 34,600 acre-ft Dec. 6, 1966 (elevation, 1,310.85 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-FT)

1,220.3	0	1,245	2,100	1,270	8,650	1,295	21,700
1,225	210	1,250	3,000	1,275	10,600	1,300	25,200
1,230	510	1,255	4,100	1,280	12,800	1,310	33,700
1,235	880	1,260	5,400	1,285	15,300	1,320	44,400
1,240	1,400	1,265	6,900	1,290	18,300	1,325	50,400

CONTENTS, IN ACRE-FEET, AT 2400 HOURS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22,800	22,100	21,900	21,800	21,700	21,700	22,100	21,800	21,100	20,100	18,900	18,000
2	22,800	22,100	21,900	21,800	21,700	21,700	22,100	21,700	21,000	20,100	18,900	17,900
3	22,800	22,000	21,900	21,800	21,700	21,600	22,100	21,700	21,000	20,000	18,900	17,900
4	22,800	22,000	21,900	21,800	21,700	21,600	22,100	21,700	21,000	20,000	18,800	17,900
5	22,700	22,000	21,900	21,800	21,700	21,600	22,100	21,700	20,900	20,000	18,800	17,900
6	22,700	22,000	21,900	21,800	21,700	21,600	22,100	21,700	20,900	19,900	18,800	17,800
7	22,700	22,000	21,900	21,800	21,700	21,700	22,100	21,700	20,900	19,900	18,700	17,800
8	22,700	22,000	21,900	21,800	21,700	21,800	22,100	21,600	20,800	19,800	18,700	17,800
9	22,600	22,000	21,900	21,800	21,700	21,800	22,100	21,600	20,800	19,800	18,700	17,700
10	22,600	22,000	21,900	21,800	21,700	21,800	22,100	21,600	20,800	19,800	18,700	17,700
11	22,600	21,900	21,900	21,800	21,700	21,800	22,100	21,600	20,700	19,700	18,600	17,700
12	22,600	21,900	21,900	21,800	21,700	21,800	22,000	21,500	20,700	19,700	18,600	17,700
13	22,500	21,900	21,900	21,800	21,700	21,900	22,000	21,500	20,700	19,600	18,600	17,600
14	22,500	21,900	21,800	21,800	21,700	21,900	22,000	21,500	20,600	19,600	18,500	17,600
15	22,500	21,900	21,800	21,800	21,700	22,000	22,000	21,500	20,600	19,600	18,500	17,600
16	22,500	21,900	21,800	21,800	21,700	22,000	22,000	21,500	20,600	19,500	18,500	17,500
17	22,400	21,800	21,800	21,800	21,700	22,000	22,000	21,500	20,600	19,500	18,400	17,500
18	22,400	21,900	21,900	21,800	21,700	22,000	22,000	21,400	20,500	19,500	18,400	17,500
19	22,400	21,900	21,900	21,700	21,700	22,000	22,000	21,400	20,500	19,400	18,400	17,500
20	22,300	22,000	21,900	21,700	21,700	22,000	22,000	21,400	20,500	19,400	18,400	17,400
21	22,300	22,000	21,900	21,700	21,700	22,000	22,000	21,400	20,400	19,300	18,300	17,400
22	22,300	21,900	21,900	21,700	21,700	22,000	21,900	21,300	20,400	19,300	18,300	17,400
23	22,300	21,900	21,800	21,700	21,700	22,000	21,900	21,300	20,400	19,300	18,300	17,400
24	22,300	21,900	21,800	21,700	21,700	22,000	21,900	21,300	20,300	19,200	18,200	17,300
25	22,200	21,900	21,800	21,700	21,700	22,000	21,900	21,300	20,300	19,200	18,200	17,300
26	22,200	21,900	21,800	21,700	21,700	22,000	21,900	21,200	20,300	19,200	18,200	17,300
27	22,200	21,900	21,800	21,700	21,700	22,000	21,800	21,200	20,200	19,100	18,100	17,200
28	22,200	21,900	21,800	21,700	21,700	22,000	21,800	21,200	20,200	19,100	18,100	17,200
29	22,100	21,900	21,800	21,700	21,700	22,000	21,800	21,200	20,200	19,000	18,100	17,200
30	22,100	21,900	21,800	21,700	-----	22,000	21,800	21,100	20,100	19,000	18,000	17,100
31	22,100	-----	21,800	21,700	-----	22,000	-----	21,100	-----	19,000	18,000	-----

(a)	1,295.58	1,295.32	1,295.16	1,295.06	1,294.96	1,295.40	1,295.12	1,294.13	1,292.75	1,291.09	1,289.50	1,288.07
(b)	-800	-200	-100	-100	0	+300	-200	-700	-1,000	-1,100	-1,000	-900
(c)	428	332	256	291	278	307	344	472	524	540	515	476
Max	22,800	22,100	21,900	21,800	21,700	22,000	22,100	21,800	21,100	20,100	18,900	18,000
Min	22,100	21,800	21,800	21,700	21,700	21,600	21,800	21,100	20,100	19,000	18,000	17,100

Cal yr 1967..... b -3,300 c 3,350
Wat yr 1968..... b -5,800 c 4,760

a Elevation, in feet, at end of month.

b Change in contents in acre-feet.

c Diversion, in acre-feet, for municipal supply; furnished by county of San Luis Obispo.

SALINAS RIVER BASIN

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 south-east of Santa Margarita.

DRAINAGE AREA.--114 sq mi.

RECORDS AVAILABLE.--July 1942 to September 1968.

GAGE.--Digital 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. Prior to Oct. 10, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--26 years, 14.1 cfs (10,210 acre-ft per year).

EXTREMES.--Maximum discharge during year, 50 cfs Apr. 25 (gage height, 1.23 ft); no flow for many days. 1942-68: Maximum discharge, 11,900 cfs Dec. 6, 1966 (gage height, 12.45 ft), from rating curve extended above 3,100 cfs on basis of computation of flow over dam; no flow at times.

REMARKS.--Records good. Flow regulated by Santa Margarita Lake beginning in 1941 and water diverted to Camp San Luis Obispo and city of San Luis Obispo (see sta. no. 11-1445.).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	2.1	.01	.01	.23	0	.55	0		0	.55	0
2	.40	1.5	.01	.01	.17	0	1.3	0		0	.29	0
3	.40	.90	.02	.01	.41	0	2.1	0		0	.01	0
4	.40	.90	.01	.01	.48	0	2.3	.01		0	0	0
5	.40	.55	.17	.01	.48	0	2.1	.02		0	0	0
6	.40	.04	.12	.01	.48	0	1.8	.02		0	0	0
7	.40	.02	.04	.01	.48	.07	1.3	.02		.07	0	0
8	.40	.02	.04	.01	.48	.48	1.2	.01		.35	0	0
9	.40	.01	.01	.01	.48	.41	1.0	.01		.55	0	0
10	.48	0	.01	.10	.35	.29	.90	0		.55	0	0
11	.90	0	.01	.10	.29	.23	.80	0		.55	0	0
12	1.5	.01	.01	.10	.35	.29	.80	.01		.55	0	0
13	.90	0	.01	.10	.41	.80	.80	.04		.55	0	0
14	1.0	0	.01	.10	.35	.41	.62	.07		.55	0	0
15	1.8	0	.01	.10	.29	.41	.55	0		.62	0	0
16	3.0	0	.01	.12	.23	.41	.55	0		.62	0	0
17	3.0	0	.01	.12	.41	.41	.55	0		.62	0	0
18	4.8	0	.01	.04	0	.29	.48	0		.62	0	0
19	5.8	.48	.01	.04	0	.29	.48	0		.62	0	0
20	5.8	.29	.01	.07	0	.29	.48	0		.62	0	0
21	7.4	.07	.01	.02	0	.29	.23	0		.62	0	0
22	2.7	.01	.01	.02	0	.29	.23	0		.62	0	0
23	1.8	0	.01	.02	0	.12	.04	0		.70	0	0
24	2.1	0	.01	.02	0	.07	0	0		.70	0	0
25	2.1	0	.01	.01	0	.12	4.4	0		.80	0	0
26	2.1	0	.01	.01	0	.12	.90	0		.80	0	0
27	1.8	0	.01	.12	0	.12	.23	0		.62	0	0
28	1.6	0	.01	.23	0	.12	.04	0		.55	0	.01
29	2.1	0	.01	.04	0	.12	.01	0		.55	0	.04
30	2.1	.17	.01	.04	-----	.12	0	0		.55	0	.07
31	2.1	-----	.01	.48	-----	.12	-----	0	-----	.55	0	-----
TOTAL	60.48	7.07	0.65	2.09	6.37	6.69	26.74	0.21	0	14.50	0.85	0.12
MEAN	1.95	.24	.021	.067	.22	.22	.89	.007	0	.47	.027	.004
MAX	7.4	2.1	.17	.48	.48	.80	4.4	.07	0	.80	.55	.07
MIN	.40	0	.01	.01	0	0	0	0	0	0	0	0
AC-FT	120	14	1.3	4.2	13	13	53	.4	0	29	1.7	.2

CAL YR 1967 TOTAL 21,369.60 MEAN 58.5 MAX 1,370 MIN 0 AC-FT 42,390
WTR YR 1968 TOTAL 125.77 MEAN .34 MAX 7.4 MIN 0 AC-FT 250

Note.--No gage-height record Dec. 12 to Jan. 16.

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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 980 ft (from topographic map). Prior to Jan. 4, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--19 years, 13.1 cfs (9,480 acre-ft per year); median of yearly mean discharges, 8.9 cfs (6,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 196 cfs Mar. 13 (gage height, 3.78 ft); no flow for several months. 1949-68: Maximum discharge, 5,070 cfs Dec. 6, 1966 (gage height, 9.58 ft), from rating curve extended above 1,500 cfs on basis of slope-area measurement at gage height 9.56 ft; no flow for several months in each year.

REMARKS.--Records good. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.20	.30	2.1	1.7	5.4	.95	.44			
2		0	.20	.30	1.4	1.6	12	.95	.41			
3		0	.16	.30	1.1	1.5	6.5	.96	.38			
4		0	.20	.30	.91	1.4	4.7	.96	.38			
5		0	.47	.30	.81	1.3	3.9	.95	.41			
6		0	.22	.30	.79	1.3	3.3	.90	.38			
7		0	.28	.30	.70	2.2	2.8	.83	.38			
8		0	.21	.35	.71	21	2.4	.82	.38			
9		.05	.20	.38	.70	9.0	2.2	.86	.41			
10		.13	.20	1.2	.70	5.7	2.0	.82	.38			
11		.10	.20	2.0	.70	4.2	1.9	.81	.38			
12		.10	.20	.64	.70	3.4	1.8	.82	.34			
13		.11	.20	.42	.89	80	1.7	.86	.31			
14		.10	.20	.40	.76	23	1.6	.97	.29			
15		.10	.20	.38	.70	13	1.5	.81	.18			
16		.10	.20	.30	.86	14	1.4	.75	.08			
17		.10	.20	.30	36	15	1.4	.73	.04			
18		.10	.55	.30	27	11	1.2	.66	.02			
19		.21	.48	.30	11	7.9	1.2	.67	.01			
20		.15	.34	.30	6.7	6.6	1.2	.63	0			
21		.12	.31	.36	5.2	5.6	1.2	.60	0			
22		.10	.31	.40	4.2	5.0	1.1	.60	0			
23		.10	.31	.40	3.5	4.6	1.0	.62	0			
24		.10	.30	.40	3.0	4.1	1.0	.66	0			
25		.10	.30	.40	2.6	3.8	.98	.64	0			
26		.10	.30	.40	2.3	3.4	.96	.57	0			
27		.10	.30	.58	2.1	3.2	.97	.51	0			
28		.10	.30	.53	1.9	2.9	.95	.48	0			
29		.15	.30	.50	1.8	2.8	.91	.48	0			
30		.40	.30	.80	-----	2.6	.96	.48	0			
31		-----	.30	4.3	-----	2.5	-----	.44	-----			-----
TOTAL	0	2.72	8.44	18.44	121.83	265.3	70.13	22.79	5.60	0	0	0
MEAN	0	.091	.27	.59	4.20	8.56	2.34	.74	.19	0	0	0
MAX	0	.40	.55	4.3	36	80	12	.97	.44	0	0	0
MIN	0	0	.16	.30	.70	1.3	.91	.44	0	0	0	0
AC-FT	0	5.4	17	37	242	526	139	45	11	0	0	0
CAL YR 1967	TOTAL	9,130.39	MEAN	25.0	MAX	1,290	MIN	0	AC-FT	18,110		
WTR YR 1968	TOTAL	515.25	MEAN	1.41	MAX	80	MIN	0	AC-FT	1,020		

Peak discharge (base, 600 cfs).--No peak above base.

SALINAS RIVER BASIN

11-1470.4. SANTA RITA CREEK TRIBUTARY NEAR TEMPLETON, CALIF.

LOCATION.--Lat 35°32'03", long 120°50'47", in Asuncion Grant on downstream pier of highway bridge, 0.2 mile downstream from unnamed tributary, and 8.6 miles west of Templeton, San Luis Obispo County.

DRAINAGE AREA.--2.95 sq mi.

RECORDS AVAILABLE.--August 1967 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,178.36 ft above mean sea level, datum of 1929.

EXTREMES.--1967: No flow August to September.

1967-68: Maximum discharge during water year, 80 cfs Feb. 17 (gage height, 3.89 ft); no flow for several months.

REMARKS.--Records good. No regulation; small diversions above station for irrigation. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	.35	.27	3.1	.07				
2				0	.22	.27	2.0	.07				
3				0	.16	.22	.79	.07				
4				0	.13	.21	.61	.08				
5				0	.11	.21	.55	.09				
6				0	.10	.21	.47	.08				
7				0	.08	3.1	.42	.07				
8				0	.08	10	.37	.06				
9				0	.06	2.2	.32	.06				
10				4.9	.05	1.3	.30	.06				
11				1.4	.05	.97	.30	.05				
12				.18	.05	.88	.30	.05				
13				0	.14	31	.26	.05				
14				0	.12	5.7	.23	.08				
15				0	.07	3.5	.24	.05				
16				0	.09	7.9	.26	.03				
17				0	29	4.4	.25	.03				
18				0	6.4	3.0	.19	.02				
19				0	2.5	2.2	.18	.02				
20				0	1.5	1.7	.18	.02				
21				0	1.2	1.4	.18	.01				
22				0	.87	1.2	.15	0				
23				0	.67	.98	.12	0				
24				0	.53	.86	.12	0				
25				0	.45	.75	.12	0				
26				0	.37	.67	.10	0				
27				0	.33	.60	.09	0				
28				0	.30	.55	.08	0				
29				0	.30	.43	.08	0				
30				1.4	-----	.42	.08	0				
31		-----		2.8	-----	.42	-----	0	-----			-----
TOTAL	0	0	0	10.68	46.28	87.52	12.44	1.12	0	0	0	0
MEAN	0	0	0	.34	1.60	2.82	.41	.036	0	0	0	0
MAX	0	0	0	4.9	29	31	3.1	.09	0	0	0	0
MIN	0	0	0	0	.05	.21	.08	0	0	0	0	0
AC-FT	0	0	0	21	92	174	25	2.2	0	0	0	0
CAL YR 1967	TOTAL -		MEAN -		MAX -		MIN -		AC-FT -			
WTR YR 1968	TOTAL 158.04		MEAN .43		MAX 31		MIN 0		AC-FT 313			

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

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 1968.

GAGE.--Digital water-stage recorder with rain-gage attachment. Altitude of gage is 860 ft (from topographic map). Prior to Apr. 7, 1966, graphic water-stage recorder at same site and datum. Auxiliary tipping-bucket rain gage 5.3 miles west of gage. Altitude of gage is 1,270 ft (from topographic map).

AVERAGE DISCHARGE.--7 years, 13.5 cfs (9,770 acre-ft per year).

EXTREMES.--Maximum discharge during year, 144 cfs Mar. 13 (gage height, 4.92 ft); no flow for several months. 1961-68: Maximum discharge, 3,680 cfs Dec. 6, 1966 (gage height, 10.53 ft), from rating curve extended above 1,300 cfs; no flow for several months in each year.

REMARKS.--Records good. Some regulation and pumping above station. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.35	.13	2.6	2.3	8.5	.70	.09			
2	0	0	.22	.11	1.5	2.3	11	.70	.09			
3	0	0	.19	.11	1.2	2.1	5.3	.61	.08			
4	0	0	.19	.09	1.0	2.1	3.6	.60	.08			
5	0	0	1.9	.09	.80	2.1	3.1	.60	.06			
6	0	0	.41	.09	.80	2.0	2.7	.58	.06			
7	.26	0	.54	.09	.80	3.1	2.3	.51	.05			
8	.16	0	.35	.09	.80	23	2.2	.47	.05			
9	.05	0	.26	.09	1.0	6.6	2.1	.42	.04			
10	.04	0	.20	5.5	1.0	3.6	2.0	.41	.04			
11	.04	0	.17	5.1	1.0	2.7	1.9	.41	.03			
12	.03	0	.16	1.2	1.0	2.3	1.9	.43	.02			
13	.02	0	.16	.60	1.7	55	1.9	.52	0			
14	.01	0	.16	.30	1.9	19	1.9	.65	0			
15	0	0	.16	.22	1.7	11	1.8	.50	0			
16	0	0	.16	.22	1.7	17	1.7	.40	0			
17	0	0	.19	.22	36	16	1.6	.33	0			
18	0	0	2.3	.19	18	9.8	1.3	.29	0			
19	0	0	2.3	.19	5.2	7.6	1.3	.26	0			
20	0	0	1.3	.19	3.2	6.9	1.3	.26	0			
21	0	0	1.0	.19	2.6	5.7	1.3	.24	0			
22	0	0	.60	.19	2.2	5.0	1.3	.23	0			
23	0	0	.47	.19	2.1	4.0	1.2	.27	0			
24	0	.05	.47	.19	2.1	3.6	1.2	.26	0			
25	0	.04	.30	.19	2.1	3.3	1.2	.22	0			
26	0	.05	.22	.19	2.1	3.0	1.2	.19	0			
27	0	.05	.16	.35	2.1	2.9	.91	.16	0			
28	0	.08	.16	.47	2.2	2.8	.86	.13	0			
29	0	.09	.16	.47	2.3	2.6	.76	.11	0			
30	0	1.7	.13	.47	-----	2.3	.70	.11	0			
31	0	-----	.13	9.8	-----	2.3	-----	.09	-----			-----
TOTAL	0.61	2.06	15.47	27.52	102.70	234.0	70.03	11.66	0.69	0	0	0
MEAN	.020	.069	.50	.89	3.54	7.55	2.33	.38	.023	0	0	0
MAX	.26	1.7	2.3	9.8	36	55	11	.70	.09	0	0	0
MIN	0	0	.13	.09	.80	2.0	.70	.09	0	0	0	0
AC-FT	1.2	4.1	31	55	204	464	139	23	1.4	0	0	0
(a)	.2	3.8	-	3.1	1.8	3.3	1.6	.1	0	0	0	0
(b)	.2	2.1	4.1	4.0	2.6	4.5	1.6	.3	0	0	0	0
CAL YR 1967 TOTAL	7,278.37											
MEAN	19.9											
MAX	654											
MIN	0											
AC-FT	14,440											
WTR YR 1968 TOTAL	464.74											
MEAN	1.27											
MAX	55											
MIN	0											
AC-FT	922											

Peak discharge (base, 600 cfs).--No peak above base.

a Precipitation, in inches.

b Precipitation, in inches, at auxiliary gage.

SALINAS RIVER BASIN

11-1476. HUERHUERO CREEK NEAR CRESTON, CALIF.

LOCATION.--Lat 35°35'00", long 120°33'15", in NE $\frac{1}{4}$ 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 930 ft (from topographic map).

AVERAGE DISCHARGE.--10 years, 1.43 cfs (1,040 acre-ft per year); median of yearly mean discharges, 0.085 cfs (62 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1.2 cfs Mar. 13 (gage height, 1.72 ft); no flow for several months. 1958-68: Maximum discharge, 1,640 cfs Dec. 6, 1966 (gage height, 7.51 ft); no flow for several months in each year.

REMARKS.--Records good. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	.20	.20	.30	.20				
2				0	.20	.20	.30	.20				
3				0	.20	.20	.30	.20				
4				0	.20	.20	.20	.20				
5				0	.20	.20	.10	.30				
6				0	.20	.20	.10	.20				
7				0	.20	.20	.10	.20				
8				0	.20	.30	.10	.10				
9				0	.20	.20	.10	.10				
10				0	.20	.10	.10	.10				
11				0	.20	.10	.10	.10				
12				0	.20	.10	.10	.10				
13				0	.30	.40	.10	.10				
14				0	.20	.20	.10	.10				
15				0	.20	.20	.10	.10				
16				0	.20	.20	.10	.10				
17				0	.40	.20	.10	.10				
18				0	.30	.20	.10	.10				
19				0	.20	.20	.10	0				
20				0	.20	.10	.10	0				
21				0	.20	.10	.10	0				
22				0	.20	.10	.10	0				
23				0	.20	.20	.10	0				
24				0	.20	.20	.10	0				
25				0	.20	.20	.10	0				
26				0	.20	.20	.10	0				
27				0	.20	.10	.10	0				
28				0	.20	.10	.10	0				
29				0	.20	.10	.10	0				
30				0	-----	.10	.10	0				
31		-----		.30	-----	.10	-----	0	-----			-----
TOTAL	0	0	0	0.30	6.20	5.40	3.70	2.60	0	0	0	0
MEAN	0	0	0	.010	.21	.17	.12	.084	0	0	0	0
MAX	0	0	0	.30	.40	.40	.30	.30	0	0	0	0
MIN	0	0	0	0	.20	.10	.10	0	0	0	0	0
AC-FT	0	0	0	.6	12	11	7.3	5.2	0	0	0	0

CAL YR 1967 TOTAL 3,368.00 MEAN 9.23 MAX 176 MIN 0 AC-FT 6,680
WTR YR 1968 TOTAL 18.20 MEAN .050 MAX .40 MIN 0 AC-FT 36

Peak discharge (base, 40 cfs).--No peak above base.

11-1478. CHOLAME CREEK NEAR SHANDON, CALIF.

LOCATION.--Lat 35°41'20", long 120°20'03", in SE $\frac{1}{4}$ sec.3, T.26 S., R.15 E., 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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 1,069.0 ft above mean sea level (planetable survey).

AVERAGE DISCHARGE.--10 years, 2.08 cfs (1,500 acre-ft per year); median of yearly mean discharges, 3.8 cfs (2,800 acre-ft per year).

EXTREMES.--No flow during year.

1958-68: Maximum discharge, 6,100 cfs Dec. 6, 1966 (gage height, 10.45 ft); no flow for many months in each year.

REMARKS.--No flow since Apr. 30, 1967. No regulation; small diversions above station for irrigation. Figures for calendar year 1967 are as follows: Total, 680.1 cfs; mean, 1.86 cfs; maximum, 147 cfs; minimum, zero; acre-ft, 1,350.

SALINAS RIVER BASIN

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 1968. Prior to October 1962, published as Estrella Creek near Estrella.

GAGE.--Graphic water-stage recorder and concrete control. Datum of gage is 671.59 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--14 years, 13.5 cfs (9,770 acre-ft per year); median of yearly mean discharges, 2.8 cfs (2,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 35 cfs Nov. 30 (gage height, 2.23 ft); no flow for several months. 1954-68: Maximum discharge, 17,600 cfs Dec. 6, 1966 (gage height, 9.20 ft in gage well, 9.8 ft from outside high-water marks), from rating curve extended above 2,000 cfs on basis of slope-area measurements at gage heights 7.20 and 9.20 ft; no flow for several months in each year.

REMARKS.--Records good. No regulation; pumpage from wells along river for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	.20	.90	6.1	4.7	2.8					
2		0	0	1.4	6.1	4.7	4.0					
3		0	0	.80	6.1	4.0	3.4					
4		0	0	.80	6.1	4.0	3.4					
5		0	0	1.1	5.4	4.0	2.8					
6		0	.40	1.1	5.4	4.0	2.8					
7		0	.20	1.7	4.7	4.0	2.2					
8		0	0	1.7	4.7	5.4	2.2					
9		0	0	2.2	4.7	6.1	1.7					
10		0	0	2.8	4.7	6.8	1.4					
11		0	0	2.8	4.7	5.4	1.4					
12		0	0	2.8	4.7	5.4	1.4					
13		0	0	2.8	5.4	6.1	1.4					
14		0	0	2.8	5.4	6.8	1.1					
15		0	0	2.8	6.1	6.8	.50					
16		0	0	2.8	6.1	6.8	.50					
17		0	0	2.8	6.8	5.4	.50					
18		.80	0	3.4	6.8	5.4	.50					
19		.50	0	2.8	6.8	4.7	.60					
20		.40	0	2.8	6.8	4.7	.50					
21		0	0	2.8	6.1	4.0	.40					
22		0	0	2.8	5.4	3.4	.10					
23		0	0	2.8	5.4	2.8	0					
24		0	0	3.4	5.4	3.4	0					
25		0	0	3.4	5.4	2.8	0					
26		0	0	4.0	4.7	2.8	0					
27		0	0	4.7	4.7	2.8	0					
28		0	0	5.4	4.7	2.2	0					
29		0	.20	5.4	4.7	1.7	0					
30		5.8	.40	5.4	-----	1.7	0					
31		-----	.40	6.1	-----	1.7	-----					
TOTAL	0	7.50	1.80	89.30	160.1	134.5	35.60	0	0	0	0	0
MEAN	0	.25	.058	2.88	5.52	4.34	1.19	0	0	0	0	0
MAX	0	5.8	.40	6.1	6.8	6.8	4.0	0	0	0	0	0
MIN	0	0	0	.80	4.7	1.7	0	0	0	0	0	0
AC-FT	0	15	3.6	177	318	267	71	0	0	0	0	0

CAL YR 1967 TOTAL 7,229.10 MEAN 19.8 MAX 794 MIN 0 AC-FT 14,340
WTR YR 1968 TOTAL 428.80 MEAN 1.17 MAX 6.8 MIN 0 AC-FT 851

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 NW $\frac{1}{4}$ 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 1968. Records for February to April 1901, published in WSP 66 and 75, have been found to be unreliable and should not be used.

GAGE.--Digital water-stage recorder. Altitude of gage is 860 ft (from topographic map). Prior to Sept. 27, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--13 years, 151 cfs (109,300 acre-ft per year); median of yearly mean discharges, 116 cfs (84,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,270 cfs Feb. 17 (gage height, 6.23 ft); no flow Oct. 1 to Nov. 29, June 19 to Sept. 30.
1955-68: 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 good. No storage or diversion above station. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

REVISIONS (water year).--1962 report: 1961. Revised figures of discharge, in cubic feet per second, in the 1967 water year, superseding figures published in 1967 report, are given herewith:

Jan. 21, 1967..... 701

MONTH	TOTAL	MEAN	MAX	MIN	AC-FT
January 1967.....	27,876	899	9,950	30	55,290
Wtr yr 1967.....	122,535.55	336	19,800	0	243,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	2.4	13	123	37	86	14	3.2			
2		0	1.0	13	81	34	155	13	2.8			
3		0	.72	12	61	31	90	12	2.3			
4		0	2.6	11	51	29	71	12	2.3			
5		0	49	11	44	27	63	12	2.0			
6		0	28	11	38	26	56	12	2.0			
7		0	25	11	34	33	50	11	2.0			
8		0	41	11	31	201	46	11	2.0			
9		0	20	11	29	135	42	11	1.7			
10		0	15	151	27	91	38	11	1.7			
11		0	13	153	25	72	36	10	1.3			
12		0	11	71	24	63	34	9.8	1.1			
13		0	9.4	49	27	545	32	12	.88			
14		0	8.1	38	27	269	31	20	.72			
15		0	7.8	34	23	180	29	20	.53			
16		0	8.0	31	79	200	27	15	.35			
17		0	8.4	28	812	210	26	12	.16			
18		0	82	24	412	162	24	11	.03			
19		0	90	22	206	133	23	10	0			
20		0	57	21	147	111	23	9.3	0			
21		0	40	20	119	94	22	8.4	0			
22		0	31	19	99	81	21	8.4	0			
23		0	26	18	80	71	21	8.4	0			
24		0	22	17	69	65	20	7.8	0			
25		0	20	17	60	58	20	7.8	0			
26		0	19	15	54	53	18	7.1	0			
27		0	18	16	49	48	17	5.9	0			
28		0	17	18	45	44	17	5.4	0			
29		0	15	18	41	40	16	4.4	0			
30		2.8	14	27	-----	39	15	4.0	0			
31		-----	13	309	-----	36	-----	3.6	-----			
TOTAL	0	2.8	714.42	1,220	2,917	3,218	1,169	319.3	27.07	0	0	0
MEAN	0	.093	23.0	39.4	101	104	39.0	10.3	.90	0	0	0
MAX	0	2.8	90	309	812	545	155	20	3.2	0	0	0
MIN	0	0	.72	11	23	26	15	3.6	0	0	0	0
AC-FT	0	5.6	1,420	2,420	5,790	6,380	2,320	633	54	0	0	0
CAL YR 1967	TOTAL	85,195.77	MEAN	233	MAX	9,950	MIN	0	AC-FT	169,000		
WTR YR 1968	TOTAL	9,587.59	MEAN	26.2	MAX	812	MIN	0	AC-FT	19,020		

Peak discharge (base, 4,000 cfs).--No peak above base.

SALINAS RIVER BASIN

11-1494. NACIMIENTO RIVER BELOW NACIMIENTO DAM, NEAR BRADLEY, CALIF.

LOCATION.--Lat 35°45'41", long 120°51'16", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.25 S., R.10 E., 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 597 ft above mean sea level (Corps of Engineers benchmark). Prior to Sept. 14, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--11 years, 244 cfs (176,600 acre-ft per year), unadjusted.

EXTREMES.--Maximum discharge during year, 540 cfs July 15-20 (gage height, 5.28 ft); minimum daily, 0.75 cfs Dec. 11.

1957-68: Maximum discharge, 5,220 cfs Apr. 7, 1958 (gage height, 10.28 ft); no flow for many days in each year except 1964, 1966-68.

REMARKS.--Records good. Flow regulated by Nacimiento Dam (usable capacity, 340,000 acre-ft). No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	298	237	14	13	109	88	525	428	488	520	476
2	36	298	237	14	13	212	85	484	428	488	520	476
3	36	298	237	14	13	212	85	396	428	488	515	476
4	106	298	148	14	12	212	84	392	428	488	510	476
5	185	298	5.7	14	12	212	84	388	388	484	505	476
6	185	298	2.4	14	12	277	85	408	340	484	505	476
7	185	298	1.7	14	12	352	85	348	340	484	505	476
8	185	298	1.3	14	12	348	199	348	340	484	505	476
9	185	298	1.1	14	12	348	348	348	340	484	496	476
10	185	298	.85	14	12	348	348	348	340	484	496	476
11	185	298	.75	14	12	344	344	348	388	484	492	476
12	185	298	12	14	12	344	344	348	424	484	496	452
13	185	148	14	14	12	188	340	380	424	484	496	428
14	185	8.0	14	14	11	148	337	432	424	484	488	428
15	185	6.0	14	14	11	348	333	432	420	510	488	432
16	185	5.4	14	14	12	348	333	404	420	540	488	412
17	185	2.2	14	14	12	348	193	344	420	535	488	360
18	185	1.6	14	15	11	344	88	344	420	535	484	356
19	185	2.2	15	14	11	207	132	344	420	535	484	356
20	185	1.5	14	14	10	104	188	344	420	535	484	352
21	185	1.2	14	14	10	104	185	344	420	535	484	352
22	185	65	14	14	10	104	185	344	420	535	492	352
23	185	237	14	14	10	102	255	380	420	530	484	330
24	185	237	14	14	10	101	316	428	448	530	484	274
25	246	240	14	14	10	101	388	432	492	530	484	274
26	298	240	14	14	11	101	456	432	492	525	484	274
27	298	240	14	14	11	98	452	428	492	525	484	274
28	298	240	14	14	11	90	448	428	488	525	480	274
29	298	229	14	13	11	88	444	428	488	525	476	274
30	298	237	14	13	-----	88	505	428	488	525	476	270
31	298	-----	14	13	-----	88	-----	428	-----	525	476	-----
TOTAL	5,948	5,717.1	1,151.80	432	331	6,418	7,757	12,205	12,628	15,792	15,269	11,760
MEAN	192	191	37.2	13.9	11.4	207	259	394	421	509	493	392
MAX	298	298	237	15	13	352	505	525	492	540	520	476
MIN	36	1.2	.75	13	10	88	84	344	340	484	476	270
AC-FT	11,800	11,340	2,280	857	657	12,730	15,390	24,210	25,050	31,320	30,290	23,330
CAL YR 1967	TOTAL 138,333.70			MEAN 379	MAX 3,160	MIN .75	AC-FT 274,400					
WTR YR 1968	TOTAL 95,408.90			MEAN 261	MAX 540	MIN .75	AC-FT 189,200					

11-1496.5. SULPHUR SPRINGS CANYON NEAR JOLON, CALIF.

LOCATION.--Lat 36°01'10", long 121°14'15", in Hunter Liggett Military Reservation, on right bank at culvert on Sulphur Springs road, 4.8 miles northwest of Jolon, Monterey County.

DRAINAGE AREA.--5.16 sq mi.

RECORDS AVAILABLE.--Water years 1961-67 (annual maximum), October 1967 to September 1968.

GAGE.--Graphic water-stage recorder with rain-gage attachment and crest-stage gage. Altitude of gage is 1,070 ft (from topographic map). Sept. 3, 1960, to Nov. 7, 1967, crest-stage gage at same site and datum.

EXTREMES.--No flow during year.

1960-68: Maximum discharge, 372 cfs Dec. 6, 1966 (gage height, 9.22 ft), from theoretical rating for flow through culvert.

REMARKS.--Records good. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: October, 0.2; November, 1.3; December, 1.2; January, 1.6; February, 1.6; March, 2.6; April, 0.2; May, 0.1; the water year, 8.8.

SALINAS RIVER BASIN

11-1499. SAN ANTONIO RIVER NEAR LOCKWOOD, CALIF.

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

DRAINAGE AREA.--223 sq mi.

RECORDS AVAILABLE.--October 1965 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 800.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 31, 1967, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 511 cfs Feb. 17 (gage height, 2.33 ft); no flow for several months. 1965-68: Maximum discharge, 11,000 cfs Dec. 6, 1966 (gage height, 9.2 ft from floodmarks), from rating curve extended above 1,200 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

REMARKS.--Records fair. No regulation; some pumping above station. Records of water temperatures and total-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	11	89	30	29	12	3.1			
2			0	12	63	32	59	12	2.6			
3			0	12	48	27	42	11	1.8			
4			0	11	43	30	35	11	.89			
5			0	12	34	23	33	10	.15			
6			0	11	30	21	32	10	.04			
7			0	11	25	25	31	10	0			
8			0	11	23	96	30	10	0			
9			0	12	21	107	28	9.6	0			
10			0	15	21	73	27	9.2	0			
11			0	63	18	55	26	9.0	0			
12			0	46	16	48	25	9.0	0			
13			0	32	18	136	24	10	0			
14			0	27	16	127	22	11	0			
15			0	25	15	92	22	12	0			
16			0	18	21	82	21	10	0			
17			0	16	261	118	20	9.3	0			
18			0	14	278	89	19	8.5	0			
19			3.2	14	158	83	18	7.7	0			
20			16	14	100	69	18	7.1	0			
21			20	14	78	58	17	6.8	0			
22			20	14	69	52	17	6.6	0			
23			18	14	61	46	16	6.2	0			
24			18	12	54	41	15	5.8	0			
25			16	14	48	37	15	5.6	0			
26			16	14	45	31	15	6.5	0			
27			15	12	41	32	14	6.1	0			
28			15	10	39	34	14	5.2	0			
29			15	14	36	33	13	4.1	0			
30			14	18	-----	32	13	3.4	0			
31		-----	12	154	-----	26	-----	3.0	-----			-----
TOTAL	0	0	198.2	677	1,769	1,785	710	257.7	8.58	0	0	0
MEAN	0	0	6.39	21.8	61.0	57.6	23.7	8.31	.29	0	0	0
MAX	0	0	20	154	278	136	59	12	3.1	0	0	0
MIN	0	0	0	10	15	21	13	3.0	0	0	0	0
AC-FT	0	0	393	1,340	3,510	3,540	1,410	511	17	0	0	0

CAL YR 1967 TOTAL 33,833.60 MEAN 92.7 MAX 2,600 MIN 0 AC-FT 67,110
WTR YR 1968 TOTAL 5,405.48 MEAN 14.8 MAX 278 MIN 0 AC-FT 10,720

Peak discharge (base, 350 cfs).--Feb. 17 (1900 hrs) 511 cfs (2.33 ft).

Note.--No gage-height record Apr. 5 to May 24.

11-1505. SALINAS RIVER NEAR BRADLEY, CALIF.

LOCATION.--Lat 35°55'40", long 120°52'00", in NE $\frac{1}{4}$ sec.15, T.23 S., R.10 E., 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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 442.69 ft above mean sea level (levels by Corps of Engineers). Prior to Dec. 2, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--20 years, 378 cfs (273,700 acre-ft per year), unadjusted.

EXTREMES.--Maximum discharge during year, 1,070 cfs Dec. 7 (gage height, 5.79 ft); minimum daily, 12 cfs Nov. 21, 22.

1948-68: Maximum discharge, 34,000 cfs Dec. 7, 1966 (gage height, 16.2 ft from floodmarks); no flow at times in 1951, 1954-55, 1957.

REMARKS.--Records fair. Flow partly regulated by Santa Margarita Lake (see sta. no. 11-1445.), Nacimiento Reservoir beginning in November 1956 (usable capacity, 340,000 acre-ft), and San Antonio Reservoir beginning in October 1965 (usable capacity, 350,000 acre-ft). Several small diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	179	163	19	17	20	81	527	433	476	548	500
2	45	184	160	20	17	83	88	555	429	500	619	500
3	44	184	166	19	15	137	91	513	429	509	646	500
4	44	184	170	18	15	191	82	475	434	513	597	500
5	96	191	124	19	16	256	93	459	431	504	589	500
6	152	191	55	18	16	269	90	442	413	491	594	500
7	156	191	264	18	16	365	83	429	386	484	597	500
8	152	191	114	18	15	411	68	397	373	481	578	500
9	152	191	47	21	15	406	252	393	360	480	564	500
10	156	188	37	23	15	406	350	397	355	464	570	500
11	157	195	30	21	15	395	360	404	357	469	577	500
12	152	198	27	32	16	385	360	408	394	472	582	480
13	149	198	27	21	16	395	370	394	413	475	576	460
14	146	137	28	20	17	177	380	415	407	480	577	450
15	140	33	27	20	17	296	385	449	401	479	564	450
16	134	27	26	19	18	390	385	456	398	502	559	450
17	130	18	27	18	20	406	385	428	398	533	547	400
18	134	16	29	17	19	416	228	381	403	536	542	390
19	134	16	28	18	18	416	115	369	404	535	553	390
20	134	13	27	18	19	232	153	356	415	530	556	390
21	134	12	26	17	18	140	180	355	413	522	545	390
22	137	12	25	16	17	121	170	361	418	518	537	380
23	134	30	24	16	17	115	159	361	427	506	529	380
24	134	137	22	16	17	110	292	397	426	517	519	320
25	130	156	22	16	17	98	332	425	437	513	544	320
26	156	163	22	17	17	93	428	448	464	518	542	320
27	168	170	21	18	18	85	473	444	474	519	524	320
28	172	170	20	18	20	68	473	457	487	515	512	320
29	173	170	19	17	20	76	479	459	482	530	498	320
30	173	170	18	17	-----	68	485	458	489	533	500	320
31	173	-----	18	17	-----	65	-----	443	-----	534	500	-----
TOTAL	4,136	3,915	1,813	582	493	7,091	7,870	13,255	12,550	15,638	17,285	12,750
MEAN	133	131	58.5	18.8	17.0	229	262	428	418	504	558	425
MAX	173	198	264	32	20	416	485	555	489	536	646	500
MIN	44	12	18	16	15	20	68	355	355	464	498	320
AC-FT	8,200	7,770	3,600	1,150	978	14,060	15,610	26,290	24,890	31,020	34,280	25,290
CAL YR 1967	TOTAL	246,976		MEAN	677	MAX	4,820	MIN	12	AC-FT	489,900	
WTR YR 1968	TOTAL	97,378		MEAN	266	MAX	646	MIN	12	AC-FT	193,100	

SALINAS RIVER BASIN

11-1513. SAN LORENZO CREEK BELOW BITTERWATER CREEK, NEAR KING CITY, CALIF.

LOCATION.--Lat 36°16'05", long 121°03'55", in NE¼ sec.23, T.19 S., R.8 E., on right bank 1.3 miles downstream from Bitterwater Creek, 5 miles northeast of King City, and 10 miles upstream from mouth.

DRAINAGE AREA.--233 sq mi.

RECORDS AVAILABLE.--October 1958 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 431.64 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Apr. 24, 1967, graphic or digital water-stage recorder at site 500 ft upstream at datum 5.00 ft higher.

AVERAGE DISCHARGE.--10 years, 6.36 cfs (4,600 acre-ft per year); median of yearly mean discharges, 3.5 cfs (2,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 48 cfs Mar. 14 (gage height, 4.55 ft); minimum daily, 0.07 cfs Oct. 25. 1958-68: Maximum discharge, 3,630 cfs Dec. 6, 1966 (gage height, 9.74 ft, site and datum then in use); no flow for many days in 1961.

REMARKS.--Records good. No regulation; small diversions above station.

REVISIONS (water years).--1962 report: 1961. 1965 report: 1964.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.10	2.1	1.3	1.9	1.6	1.4	.24	.27	.17	.17	.14
2	.10	.10	1.8	1.3	1.7	.94	2.9	.25	.26	.17	.18	.17
3	.10	.10	1.5	1.3	1.5	.80	3.6	.26	.28	.16	.17	.18
4	.10	.10	1.4	1.2	1.3	.61	2.4	.24	.29	.15	.18	.19
5	.16	.18	1.7	1.2	1.1	.71	1.6	.23	.30	.17	.19	.19
6	.18	.11	2.1	1.3	1.3	.74	1.2	.23	.31	.17	.18	.20
7	.17	.10	2.9	1.3	1.2	.98	.95	.24	.30	.17	.19	.20
8	.13	.12	2.6	1.2	.95	1.2	.85	.24	.27	.16	.20	.21
9	.13	.20	2.4	1.3	1.0	1.1	.81	.25	.26	.15	.20	.21
10	.20	.20	2.1	1.4	.92	1.1	.71	.25	.26	.13	.21	.23
11	.20	.18	2.0	1.3	.99	.94	.62	.24	.25	.13	.22	.22
12	.20	.20	1.7	1.2	.96	1.0	.57	.24	.24	.14	.21	.22
13	.20	.20	1.5	1.2	1.1	3.2	.48	.24	.22	.14	.23	.22
14	.20	.20	1.4	1.2	1.2	9.0	.44	.25	.21	.14	.23	.21
15	.17	.37	1.5	1.3	1.1	2.5	.43	.24	.18	.14	.21	.22
16	.19	.30	1.6	1.3	1.3	1.5	.37	.24	.17	.14	.22	.22
17	.20	.30	1.5	1.1	1.9	1.2	.33	.24	.17	.14	.23	.22
18	.16	.38	2.0	1.1	1.8	2.0	.35	.23	.16	.13	.21	.24
19	.16	.62	2.6	1.1	2.2	1.4	.33	.22	.15	.15	.22	.24
20	.19	.63	2.2	1.2	2.0	.97	.38	.22	.15	.16	.22	.23
21	.11	.46	1.6	1.2	1.6	.84	.36	.21	.15	.16	.22	.22
22	.10	.48	1.5	1.2	1.4	.77	.32	.21	.16	.17	.21	.21
23	.10	.51	1.5	1.2	1.1	.72	.32	.20	.17	.18	.20	.19
24	.12	.50	1.4	1.1	1.1	.73	.30	.21	.18	.16	.19	.18
25	.07	.52	1.5	1.2	1.1	.75	.30	.21	.19	.17	.18	.16
26	.10	.57	1.5	1.1	1.2	.68	.26	.20	.20	.18	.19	.15
27	.10	.57	1.5	1.2	1.1	.61	.25	.21	.20	.16	.18	.14
28	.10	.62	1.4	1.2	.99	.64	.25	.22	.19	.18	.15	.14
29	.10	.70	1.4	1.0	.98	.72	.25	.24	.19	.18	.14	.13
30	.10	1.5	1.4	1.3	-----	.70	.25	.25	.18	.16	.12	.15
31	.10	-----	1.4	1.5	-----	.62	-----	.27	-----	.16	.13	-----
TOTAL	4.34	11.12	54.7	38.0	37.99	41.27	23.58	7.22	6.51	4.87	5.98	5.83
MEAN	.14	.37	1.76	1.23	1.31	1.33	.79	.23	.22	.16	.19	.19
MAX	.20	1.5	2.9	1.5	2.2	9.0	3.6	.27	.31	.18	.23	.24
MIN	.07	.10	1.4	1.0	.92	.61	.25	.20	.15	.13	.12	.13
AC-FT	8.6	22	109	75	75	82	47	14	13	9.7	12	12

CAL YR 1967 TOTAL 6,855.81 MEAN 18.8 MAX 664 MIN .07 AC-FT 13,600
WTR YR 1968 TOTAL 241.41 MEAN .66 MAX 9.0 MIN .07 AC-FT 479

Peak discharge (base, 250 cfs).--No peak above base.

SALINAS RIVER BASIN

321

11-1518.7. ARROYO SECO NEAR GREENFIELD, CALIF.

LOCATION.--Lat 36°14'15", long 121°28'50", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.19 S., R.4 E., 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 780 ft (from topographic map). Prior to Oct. 1, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years, 122 cfs (88,320 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,870 cfs Jan. 30 (gage height, 5.77 ft); no flow Aug. 17.
1961-68: Maximum discharge, 15,200 cfs Dec. 6, 1966 (gage height, 12.50 ft); no flow at times.

REMARKS.--Records fair. No regulation; small diversion for fishponds above station by pumping. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

REVISIONS (water year).--1967 report: 1966.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	9.1	37	26	177	51	71	23	11	2.5	.04	.35
2	11	9.1	26	25	119	49	85	22	10	2.6	.04	.29
3	14	9.1	24	24	97	45	61	23	9.9	2.6	.03	.29
4	16	9.3	24	24	78	43	55	23	9.5	2.5	.04	.29
5	15	9.9	87	24	70	41	51	24	9.3	2.2	.03	.29
6	14	11	46	24	63	40	49	22	9.7	1.9	.03	.26
7	14	11	50	24	58	51	47	22	11	1.6	.03	.23
8	12	11	49	24	54	183	46	22	11	1.2	.02	.23
9	11	12	32	24	50	97	45	21	11	1.2	.02	.23
10	11	13	28	119	48	76	44	21	11	.89	.02	.23
11	10	14	26	90	45	68	42	20	11	.61	.02	.20
12	10	13	24	53	43	65	40	21	10	.47	.01	.18
13	9.8	13	22	40	42	351	39	23	9.6	.36	.01	.18
14	9.5	15	22	36	39	166	38	32	8.8	.33	.01	.17
15	8.9	16	22	46	38	134	36	25	7.7	.30	.01	.17
16	8.9	16	22	45	174	189	35	23	7.3	.27	.01	.17
17	9.3	16	22	39	558	183	34	21	7.5	.27	0	.20
18	9.0	17	81	37	305	152	33	20	6.9	.22	.01	.20
19	9.1	19	70	34	189	131	32	19	6.1	.19	.01	.23
20	8.9	20	67	32	143	114	32	19	5.7	.17	.01	.26
21	9.0	19	39	31	120	104	31	19	5.1	.15	.02	.26
22	8.7	19	34	30	101	94	30	19	4.5	.12	.41	.26
23	8.8	19	33	29	89	83	29	19	4.6	.09	.50	.38
24	8.6	18	32	27	78	77	28	19	4.4	.06	.41	.44
25	8.3	18	32	27	72	73	27	18	4.3	.06	.47	.55
26	8.4	18	31	26	68	69	26	17	3.9	.06	.41	.70
27	8.1	17	30	27	63	64	25	16	3.5	.06	.35	.70
28	8.3	17	29	28	59	60	26	15	3.3	.04	.32	.50
29	8.7	19	27	41	55	57	25	14	3.0	.04	.32	.44
30	9.4	40	26	450	-----	54	23	13	2.6	.04	.41	.50
31	9.0	-----	26	530	-----	51	-----	12	-----	.04	.35	-----
TOTAL	316.7	467.5	1,120	2,036	3,095	3,015	1,185	627	223.2	23.14	4.37	9.38
MEAN	10.2	15.6	36.1	65.7	107	97.3	39.5	20.2	7.44	.75	.14	.31
MAX	16	40	87	530	558	351	85	32	11	2.6	.50	.70
MIN	8.1	9.1	22	24	38	40	23	12	2.6	.04	0	.17
AC-FT	628	927	2,220	4,040	6,140	5,980	2,350	1,240	443	46	8.7	19

CAL YR 1967 TOTAL 80,562.9 MEAN 221 MAX 4,250 MIN 6.9 AC-FT 159,800
WTR YR 1968 TOTAL 12,122.29 MEAN 33.1 MAX 558 MIN 0 AC-FT 24,040

Peak discharge (base, 1,500 cfs).--Jan. 30 (2245 hrs) 1,870 cfs (5.77 ft).

SALINAS RIVER BASIN

11-1520. ARROYO SECO NEAR SOLEDAD, CALIF.

LOCATION.--Lat 36°16'50", long 121°19'20", in SW¼ 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 1968. Records for water year 1902 incomplete, yearly estimate published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 342.20 ft above mean sea level (Corps of Engineers bench-mark). Prior to June 16, 1929, staff gage, and June 16, 1929, to Dec. 2, 1941, graphic water-stage recorder at site 1 mile upstream at different datum. Dec. 3, 1941, to Sept. 30, 1959, graphic water-stage recorder at datum 2.00 ft higher, Oct. 1, 1959, to Oct. 17, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--67 years, 159 cfs (115,100 acre-ft per year); median of yearly mean discharges, 122 cfs (88,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,000 cfs Jan. 31 (gage height, 8.30 ft); no flow July 5 to Sept. 30. 1901-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	7.0	51	28	202	60	66	23	5.4	.19		
2	7.5	7.1	34	28	135	57	95	24	5.0	.13		
3	9.0	7.1	26	27	107	54	68	23	4.0	.07		
4	10	7.5	23	27	90	51	60	23	4.0	.04		
5	12	8.0	56	26	79	49	55	23	3.7	0		
6	11	8.4	77	26	72	48	54	22	3.5	0		
7	10	8.4	34	25	66	51	51	21	3.7	0		
8	9.5	8.6	51	25	61	145	48	21	4.2	0		
9	9.0	8.7	38	25	57	125	46	20	4.3	0		
10	8.5	7.2	30	44	54	92	44	19	4.3	0		
11	8.0	11	27	140	51	79	44	19	4.0	0		
12	7.5	10	24	67	48	74	42	18	3.6	0		
13	7.5	9.5	23	51	46	282	41	20	3.1	0		
14	7.0	9.7	20	44	45	187	40	24	2.6	0		
15	7.0	11	21	45	43	148	39	26	2.5	0		
16	6.6	12	22	56	89	158	37	21	2.1	0		
17	6.2	12	23	48	481	205	37	20	1.9	0		
18	6.2	13	40	43	329	164	36	18	1.7	0		
19	6.2	15	42	40	203	146	35	16	1.5	0		
20	6.1	18	54	37	160	131	35	15	1.3	0		
21	6.6	17	44	35	138	119	35	14	1.2	0		
22	6.8	14	36	33	120	108	33	14	.93	0		
23	6.9	14	35	32	105	99	32	14	.76	0		
24	7.1	15	34	30	94	92	32	13	.66	0		
25	7.5	14	33	30	86	85	31	12	.47	0		
26	7.2	14	33	29	78	79	30	12	.42	0		
27	7.5	14	33	29	73	74	29	10	.36	0		
28	7.4	14	32	31	68	70	28	9.0	.45	0		
29	7.2	16	30	33	64	66	27	8.0	.38	0		
30	7.0	31	29	167	-----	61	26	5.4	.25	0		
31	7.0	-----	29	748	-----	59	-----	5.8	-----	0		
TOTAL	241.0	362.2	1,124	2,049	3,244	3,218	1,276	533.2	72.28	0.43	0	0
MEAN	7.77	12.1	36.3	66.1	112	104	42.5	17.2	2.41	.014	0	0
MAX	12	31	82	748	481	282	95	26	5.4	.19	0	0
MIN	6.1	7.0	20	25	43	48	26	5.4	.25	0	0	0
AC-FT	478	718	2,230	4,060	6,430	6,380	2,530	1,060	143	.9	0	0

CAL YR 1967 TOTAL 80,827.2 MEAN 221 MAX 5,010 MIN 5.0 AC-FT 160,300
WTR YR 1968 TOTAL 12,120.11 MEAN 33.1 MAX 748 MIN 0 AC-FT 24,040

Peak discharge (base, 2,500 cfs).--No peak above base.

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 El 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 1968. Records for water year 1930 incomplete, yearly estimate published in WSP 1315-B. Published as "near Salinas" 1900-1901.

GAGE.--Digital 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. July 29, 1940, to Feb. 7, 1967, graphic water-stage recorder at same site and datum. Mar. 17, 1941, to June 30, 1961, supplementary wire-weight or staff gages and since July 1, 1961, auxiliary graphic water-stage recorder at site 80 ft upstream at same datum.

AVERAGE DISCHARGE.--39 years (1929-68), 386 cfs (279,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 135 cfs Dec. 10 (gage height, 6.39 ft); minimum daily, 0.50 cfs Aug. 28.

1900-1901, 1929-68: 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. Large withdrawals from ground water and small surface-water diversions for municipal use and irrigation of about 95,000 acres above station. Low flow represents waste water from Spreckels sugar refinery and Alisal sewage disposal plant. Flow partly regulated by Nacimiento Reservoir beginning in November 1956 (usable capacity, 340,000 acre-ft) and San Antonio Reservoir beginning in October 1965 (usable capacity, 350,000 acre-ft). Records of chemical analyses for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	68	68	10	3.9	2.8	3.4	2.5	2.2	6.9	2.6	.59
2	45	75	74	9.7	3.5	3.2	2.7	2.6	2.6	6.8	2.7	.59
3	34	81	79	9.2	3.4	3.5	2.2	2.3	2.8	6.5	2.9	.68
4	26	86	85	8.5	3.2	3.5	2.2	2.2	2.8	6.4	2.7	.68
5	22	90	89	8.1	3.2	3.2	2.2	2.2	3.1	6.7	2.5	.86
6	17	95	92	7.8	3.2	2.6	2.2	2.0	3.1	6.2	3.3	.95
7	13	100	97	7.1	3.2	2.7	2.1	1.8	3.0	6.3	3.6	.95
8	11	104	80	6.7	3.3	3.1	2.2	1.7	3.3	6.5	3.6	1.1
9	9.5	108	68	6.4	3.3	2.3	2.2	1.5	3.3	7.0	3.6	1.4
10	9.2	110	121	5.9	3.3	2.1	2.2	1.3	3.4	7.6	2.7	1.8
11	8.5	113	102	5.5	3.2	2.2	2.2	1.4	3.6	7.1	2.5	2.0
12	9.1	116	81	5.1	3.2	3.6	2.2	1.3	2.6	7.0	2.7	2.2
13	10	122	66	4.8	3.1	3.8	2.1	1.1	2.6	6.4	2.5	2.2
14	11	124	56	4.6	3.0	2.5	2.1	1.1	2.6	5.9	2.5	2.3
15	12	122	49	4.4	3.0	2.2	2.1	.98	3.1	5.8	1.8	2.3
16	12	112	44	4.1	3.3	4.0	2.1	.86	3.9	5.6	1.3	2.3
17	13	84	39	3.9	3.5	3.5	2.1	.88	4.5	5.5	1.3	2.3
18	14	64	40	3.7	3.1	4.5	2.1	.87	5.1	4.7	1.3	2.3
19	15	54	41	3.5	3.2	2.9	2.2	.92	3.0	5.2	2.0	2.3
20	16	45	34	3.3	3.2	61	2.4	1.1	4.1	4.6	2.4	2.3
21	17	38	28	3.1	3.6	76	2.3	1.1	4.1	3.0	2.5	2.2
22	19	32	24	3.0	3.1	81	2.5	.99	4.6	4.1	2.5	2.2
23	20	26	20	2.9	3.0	59	2.6	1.0	4.7	3.1	2.7	2.2
24	23	21	19	2.7	3.2	44	2.7	.95	4.4	3.0	2.4	2.2
25	24	16	17	2.6	3.1	34	2.6	1.0	5.2	3.0	2.2	2.2
26	26	13	16	2.5	3.1	27	2.5	1.2	6.0	3.1	2.4	2.2
27	28	12	15	2.5	2.7	21	2.4	1.3	5.9	1.0	1.1	2.2
28	31	23	14	2.5	2.7	14	2.4	1.5	6.4	1.8	.50	2.2
29	35	37	13	2.7	2.7	9.4	2.6	1.5	6.2	2.9	.59	2.2
30	47	55	12	3.1	-----	5.4	2.7	1.3	6.0	3.1	.59	2.2
31	59	-----	11	5.6	-----	3.3	-----	1.2	-----	2.4	.59	-----
TOTAL	682.3	2,146	1,594	155.5	92.5	519.4	70.5	43.65	118.2	155.2	68.57	54.10
MEAN	22.0	71.5	51.4	5.02	3.19	16.8	2.35	1.41	3.94	5.01	2.21	1.80
MAX	59	124	121	10	3.9	81	3.4	2.6	6.4	7.6	3.6	2.3
MIN	8.5	12	11	2.5	2.7	2.1	2.1	.86	2.2	1.0	.50	.59
AC-FT	1,350	4,260	3,160	308	183	1,030	140	87	234	308	136	107
CAL YR 1967	TOTAL	234,302.3	MEAN	642	MAX	4,440	MIN	8.5	AC-FT	464,700		
WTR YR 1968	TOTAL	5,699.92	MEAN	15.6	MAX	124	MIN	.50	AC-FT	11,310		

SALINAS RIVER BASIN

11-1525.4. EL TORO CREEK NEAR SPRECKELS, CALIF.

LOCATION.--Lat 36°35'00", long 121°42'50", in El Toro Grant, 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 1968. Prior to October 1962, published as Toro Creek near Spreckels.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 210 ft (from topographic map). Prior to Feb. 8, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years, 0.38 cfs (275 acre-ft per year).

EXTREMES.--Maximum discharge during year, 9.5 cfs Mar. 12 (gage height, 3.60 ft); no flow for several days. 1961-68: Maximum discharge, 131 cfs Apr. 21, 1967 (gage height, 4.56 ft), from rating curve extended above 32 cfs; no flow for many days in each year.

REMARKS.--Records good. No regulation or diversion above station except for minor stock ponds.

REVISIONS (water year).--1964 report: 1962(M).

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.08	.10	.10	.04	.39	.06	.04	.05	.03	.03
2	0	.01	.04	.10	.10	.04	.13	.06	.04	.05	.03	.02
3	.01	.01	.04	.10	.10	.04	.10	.06	.04	.05	.03	.02
4	.01	.02	.04	.10	.10	.06	.08	.06	.03	.05	.03	.02
5	.01	.02	.12	.10	.10	.06	.08	.07	.04	.05	.03	.02
6	.01	.02	.03	.10	.10	.06	.08	.06	.04	.05	.03	.02
7	0	.02	.13	.10	.10	.08	.08	.08	.04	.04	.03	.02
8	0	.02	.07	.10	.10	.12	.08	.06	.04	.05	.03	.02
9	0	.02	.04	.10	.10	.08	.11	.07	.04	.05	.03	.02
10	.01	.02	.04	.13	.10	.10	.08	.08	.04	.04	.03	0
11	.01	.02	.04	.10	.10	.08	.08	.08	.04	.04	.03	.01
12	.01	.02	.04	.10	.10	1.1	.08	.09	.04	.03	.04	.01
13	.01	.03	.04	.10	.04	.73	.08	.09	.03	.03	.04	.02
14	0	.02	.04	.12	.04	.16	.08	.09	.03	.03	.03	.02
15	0	.03	.04	.69	.04	.11	.08	.07	.03	.03	.03	.02
16	0	.02	.04	.20	.04	1.3	.08	.07	.03	.03	.03	.01
17	0	.02	.04	.20	.14	.51	.05	.07	.04	.02	.03	.01
18	0	.02	.61	.16	.06	.21	.05	.06	.05	.02	.03	0
19	0	.03	.46	.10	.04	.15	.06	.06	.05	.02	.03	.01
20	.01	.02	.12	.10	.03	.17	.06	.08	.05	.02	.03	.01
21	.01	.02	.10	.10	.19	.16	.07	.06	.04	.02	.03	.01
22	.01	.02	.10	.10	.04	.15	.06	.06	.05	.03	.03	.01
23	.01	.02	.10	.10	.04	.13	.05	.06	.06	.03	.02	.01
24	.01	.03	.10	.10	.03	.11	.05	.05	.05	.03	.02	.01
25	.01	.03	.10	.10	.03	.13	.05	.05	.05	.03	.03	.01
26	.01	.02	.10	.10	.03	.11	.05	.05	.04	.03	.03	.01
27	.01	.02	.10	.22	.04	.11	.06	.05	.05	.03	.02	.02
28	.01	.03	.10	.19	.04	.11	.07	.05	.05	.03	.02	.02
29	.01	.29	.11	.10	.04	.11	.06	.05	.05	.03	.02	.02
30	.01	.77	.10	.87	-----	.09	.06	.05	.04	.03	.02	.02
31	.01	-----	.10	.38	-----	.08	-----	.04	-----	.03	.03	-----
TOTAL	0.21	1.65	3.21	5.26	2.11	6.49	2.49	1.99	1.26	1.07	0.89	0.45
MEAN	.007	.055	.10	.17	.073	.21	.083	.064	.042	.035	.029	.015
MAX	.01	.77	.61	.87	.19	1.3	.39	.09	.06	.05	.04	.03
MIN	0	.01	.03	.10	.03	.04	.05	.04	.03	.02	.02	0
AC-FT	.4	3.3	6.4	10	4.2	13	4.9	4.0	2.5	2.1	1.8	.9

CAL YR 1967 TOTAL 439.60 MEAN 1.20 MAX 78 MIN 0 AC-FT 872
WTR YR 1968 TOTAL 27.08 MEAN .074 MAX 1.3 MIN 0 AC-FT 54

PEAK DISCHARGE (BASE, 5 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	2115	3.54	6.4	03-16	1000	3.54	7.5
03-12	2145	3.60	9.5				

PAJARO RIVER BASIN

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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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 390 ft (from topographic map). Prior to Apr. 19, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years, 3.69 cfs (2,670 acre-ft).

EXTREMES.--Maximum discharge during year, 3.0 cfs Mar. 13 (gage height, 1.59 ft); no flow for several months. 1961-68: Maximum discharge, 3,490 cfs Jan. 31, 1963 (gage height, 6.85 ft), from rating curve extended above 560 cfs; 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.01	.04	.02	.23	.27	.44	.13	.02			
2	.02	.01	.02	.02	.20	.26	.41	.11	.02			
3	.02	.01	.02	.02	.17	.23	.52	.10	.01			
4	.01	.01	.03	.02	.15	.21	.51	.10	.02			
5	.02	.02	.15	.02	.13	.23	.46	.10	.02			
6	.02	.02	.06	.02	.15	.21	.41	.08	.02			
7	.01	.02	.09	.02	.13	.25	.42	.07	.02			
8	.01	.02	.05	.02	.13	.31	.41	.06	.02			
9	.01	.02	.04	.02	.13	.32	.38	.06	.03			
10	.01	.02	.03	.07	.13	.38	.37	.05	.02			
11	.01	.02	.03	.03	.13	.34	.34	.05	.02			
12	0	.02	.02	.03	.13	.31	.34	.05	.02			
13	0	.02	.04	.02	.13	1.1	.34	.07	.02			
14	0	.02	.05	.02	.12	1.6	.30	.06	.02			
15	0	.02	.05	.05	.11	.94	.33	.04	.02			
16	0	.02	.05	.03	.26	.98	.30	.04	.02			
17	0	.02	.06	.03	1.0	1.9	.28	.04	.02			
18	0	.02	.09	.02	1.1	1.1	.24	.03	.02			
19	0	.03	.04	.02	.58	.80	.24	.03	.02			
20	0	.03	.03	.02	1.4	.67	.24	.03	.02			
21	0	.03	.03	.02	1.4	.59	.23	.03	.01			
22	0	.03	.02	.02	.90	.52	.21	.02	0			
23	0	.03	.02	.02	.64	.47	.23	.02	0			
24	0	.03	.02	.02	.54	.42	.21	.02	0			
25	.01	.03	.02	.02	.47	.40	.21	.02	0			
26	.01	.03	.02	.02	.41	.37	.19	.02	0			
27	.01	.04	.02	.02	.37	.34	.17	.02	0			
28	.01	.04	.02	.02	.33	.33	.15	.02	0			
29	.01	.07	.02	.02	.30	.30	.13	.02	0			
30	.01	.13	.02	.07	-----	.34	.13	.02	0			
31	.01	-----	.02	.48	-----	.34	-----	.02	-----			-----
TOTAL	0.21	0.84	1.22	1.25	11.87	16.83	9.14	1.53	0.41	0	0	0
MEAN	.007	.028	.039	.040	.41	.54	.30	.049	.014	0	0	0
MAX	.02	.13	.15	.48	1.4	1.9	.52	.13	.03	0	0	0
MIN	0	.01	.02	.02	.11	.21	.13	.02	0	0	0	0
AC-FT	.4	1.7	2.4	2.5	24	33	18	3.0	.8	0	0	0

CAL YR 1967 TOTAL 2,709.69 MEAN 7.42 MAX 439 MIN 0 AC-FT 5,370
WTR YR 1968 TOTAL 43.30 MEAN .12 MAX 1.9 MIN 0 AC-FT 86

Peak discharge (base, 150 cfs).--No peak above base.

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 450 ft downstream from private road bridge, and 3.3 miles northeast of Dunneville, San Benito County.

DRAINAGE AREA.--146 sq mi.

RECORDS AVAILABLE.--October 1939 to September 1968. Monthly discharge only prior to January 1940, published in WSP 1315-B.

GAGE.--Digital 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. Aug. 19, 1960, to Dec. 18, 1966, graphic water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--29 years, 32.0 cfs (23,170 acre-ft per year).

EXTREMES.--Maximum discharge during year, 8.6 cfs Oct. 3 (gage height, 4.02 ft); no flow for several months. 1940-68: 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 good. Flow regulated by Pacheco Lake (capacity, 6,150 acre-ft). Small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	4.1	1.2									
2	7.8	4.1	1.2									
3	8.1	3.4	1.2									
4	7.7	2.6	1.2									
5	7.9	2.6	1.5									
6	7.1	2.5	1.2									
7	6.2	1.9	1.2									
8	5.7	2.1	1.0									
9	5.6	2.3	.94									
10	5.6	2.2	.88									
11	5.6	2.5	.88									
12	5.2	2.9	.76									
13	5.2	2.8	.83									
14	5.1	3.4	1.3									
15	4.8	3.5	1.3									
16	4.6	3.4	1.2									
17	4.5	3.5	1.1									
18	4.6	3.2	1.4									
19	4.5	3.2	1.0									
20	4.7	3.1	.70									
21	4.6	2.8	.48									
22	5.0	2.2	.38									
23	5.0	2.1	.44									
24	4.9	2.0	.45									
25	4.6	1.9	.34									
26	4.8	1.8	.13									
27	4.8	1.7	0									
28	4.5	1.7	0									
29	4.5	1.5	0									
30	4.0	1.4	0									
31	4.1	-----	0		-----		-----		-----			-----
TOTAL	169.1	78.4	24.21	0	0	0	0	0	0	0	0	0
MEAN	5.45	2.61	.78	0	0	0	0	0	0	0	0	0
MAX	8.1	4.1	1.5	0	0	0	0	0	0	0	0	0
MIN	4.0	1.4	0	0	0	0	0	0	0	0	0	0
AC-FT	335	156	48	0	0	0	0	0	0	0	0	0
CAL YR 1967	TOTAL	23,588.81	MEAN	64.6	MAX	2,430	MIN	0	AC-FT	46,790		
WTR YR 1968	TOTAL	271.71	MEAN	.74	MAX	8.1	MIN	0	AC-FT	539		

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 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 445 ft (from topographic map). Prior to May 26, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--17 years, 15.0 cfs (10,860 acre-ft per year); median of yearly mean discharges, 12 cfs (8,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 43 cfs Mar. 20 (gage height, 1.67 ft); minimum daily, 0.12 cfs Feb. 12-15.

1951-68: 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 sta. no. 11-1534.8). No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	8.4	2.4	1.9	1.9	.27	13	2.4	20	30	28	25
2	9.2	8.4	2.4	1.9	1.8	.20	13	2.4	20	29	28	25
3	9.3	8.5	2.4	1.9	1.7	.77	9.2	2.4	20	29	28	25
4	9.3	8.6	2.4	1.9	1.7	1.7	8.7	2.4	20	29	28	25
5	9.3	8.6	2.4	1.9	1.5	1.9	7.8	2.5	20	29	28	26
6	9.3	8.5	2.4	1.9	1.3	2.0	6.7	2.4	20	29	28	26
7	9.3	8.4	2.4	1.9	.90	2.1	6.3	2.4	21	29	28	26
8	9.2	8.3	2.4	1.9	.59	2.1	5.3	2.5	21	29	28	26
9	9.1	8.1	2.4	1.9	.40	2.0	5.1	2.6	21	29	28	26
10	9.1	8.4	2.4	2.1	.24	1.6	5.3	2.6	21	29	28	26
11	9.1	5.2	2.4	2.0	.18	1.5	5.2	6.1	21	29	28	26
12	9.1	2.6	2.6	2.0	.12	1.7	4.0	8.6	20	29	28	26
13	9.3	2.4	2.7	2.0	.12	1.6	4.7	8.6	20	29	28	25
14	9.6	2.4	2.7	2.0	.12	1.8	4.4	8.6	20	29	27	20
15	9.6	2.4	2.9	2.0	.12	1.7	4.6	8.6	20	29	27	13
16	9.6	2.4	2.6	2.0	.26	1.8	4.1	8.6	20	29	27	13
17	9.6	2.2	2.3	2.0	.25	3.2	5.1	10	20	29	27	13
18	9.6	2.4	2.2	1.9	.28	18	3.5	14	20	29	27	12
19	9.1	2.4	2.2	1.9	.28	24	2.4	14	20	29	27	12
20	9.1	2.4	2.2	1.9	.28	30	3.1	14	20	29	27	12
21	9.1	2.4	2.2	2.0	.28	23	3.2	14	20	29	27	12
22	9.1	2.4	2.0	2.0	.31	18	3.2	14	21	29	26	12
23	9.1	2.4	2.0	2.0	.21	16	2.9	14	21	29	26	12
24	9.1	2.4	1.9	2.0	.27	17	3.5	14	21	28	26	12
25	9.1	2.4	1.9	2.0	.27	15	3.0	14	23	28	25	12
26	9.1	2.4	1.9	2.0	.28	14	2.9	17	26	28	25	12
27	9.0	2.5	1.9	2.0	.28	12	2.6	21	28	28	25	12
28	9.1	2.6	1.9	2.0	.28	11	2.4	19	30	28	25	12
29	8.4	2.6	1.9	2.0	.28	10	2.5	19	30	28	25	12
30	8.4	2.4	1.9	3.8	-----	9.2	2.5	19	30	28	25	12
31	8.4	-----	1.9	2.2	-----	8.6	-----	19	-----	28	25	-----
TOTAL	283.9	135.5	70.2	62.9	16.50	253.74	150.2	309.7	655	892	833	548
MEAN	9.16	4.52	2.26	2.03	.57	8.19	5.01	9.99	21.8	28.8	26.9	18.3
MAX	9.6	8.6	2.9	3.8	1.9	30	13	21	30	30	28	26
MIN	8.4	2.2	1.9	1.9	.12	.20	2.4	2.4	20	28	25	12
AC-FT	563	269	139	125	33	503	298	614	1,300	1,770	1,650	1,090

CAL YR 1967: TOTAL 10,966.4 MEAN 30.0 MAX 882 MIN 1.8 AC-FT 21,750
WTR YR 1968: TOTAL 4,210.64 MEAN 11.5 MAX 30 MIN .12 AC-FT 8,350

PAJARO RIVER BASIN

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 downstream 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 123.88 ft above mean sea level (levels by Corps of Engineers). Prior to Sept. 30, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--9 years, 34.3 cfs (24,830 acre-ft per year).

EXTREMES.--Maximum discharge during year, 91 cfs Jan. 31 (gage height, 2.80 ft); minimum daily, 0.42 cfs

Aug. 12.

1959-68: 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 good prior to June 1, poor thereafter. Flow regulated by Pacheco Lake (capacity, 6,150 acre-ft), Chesbro Reservoir (see sta. no. 11-1534.8.) and San Felipe Lake. Many diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	7.5	13	14	18	15	18	11	8.0	3.0	2.0	2.2
2	5.9	7.6	9.9	15	16	13	18	11	8.7	3.1	3.4	5.4
3	6.1	8.5	11	14	15	13	14	12	9.4	2.8	6.2	3.6
4	5.0	8.4	12	14	14	14	14	13	8.7	3.0	4.3	3.0
5	5.3	8.2	18	14	14	15	14	13	7.1	2.6	2.6	2.2
6	5.5	8.5	12	15	14	14	16	14	5.7	2.6	1.6	2.2
7	5.8	8.9	17	15	13	15	16	14	5.4	2.4	1.1	2.6
8	5.6	8.7	16	15	13	31	16	14	4.8	2.2	.90	2.0
9	5.4	8.8	11	16	14	21	15	13	4.6	2.2	.84	2.8
10	5.8	9.5	11	22	13	17	15	13	3.8	2.9	.84	5.1
11	5.7	9.8	12	12	13	16	15	14	3.6	4.1	.54	5.7
12	5.4	9.7	15	8.8	13	16	13	14	3.4	6.1	.42	3.8
13	5.4	10	18	8.7	13	28	12	11	3.2	8.4	.54	3.2
14	5.7	10	21	8.9	13	22	12	9.9	3.4	6.3	2.2	1.7
15	6.0	9.8	23	10	12	20	12	12	3.6	5.0	.90	1.8
16	6.2	10	24	9.1	16	26	12	10	3.4	6.5	2.4	1.6
17	6.7	10	24	8.5	20	24	13	11	3.6	4.3	.78	1.5
18	7.4	10	23	8.4	18	20	12	13	3.4	2.9	.60	2.0
19	8.4	10	16	8.3	16	18	13	12	4.3	2.8	.60	4.6
20	9.2	9.7	12	8.4	17	18	12	11	5.1	1.9	.66	2.6
21	9.6	9.9	10	8.8	19	19	11	9.3	5.6	1.8	.72	1.6
22	8.9	10	9.7	8.7	17	20	11	8.9	6.2	1.8	2.4	1.7
23	8.6	10	11	8.5	16	18	10	8.4	7.0	2.8	1.8	1.5
24	8.8	10	11	8.6	15	17	11	8.1	6.2	1.9	3.6	2.0
25	9.0	10	12	9.0	14	17	11	9.5	7.0	1.7	1.8	1.7
26	9.0	10	12	9.1	14	19	10	9.3	7.7	2.9	2.2	1.8
27	9.4	11	12	9.3	14	18	10	8.7	5.3	2.7	1.8	1.6
28	9.4	12	12	9.3	16	17	11	9.0	6.2	1.2	1.2	1.7
29	8.5	12	13	9.1	16	17	11	9.6	4.5	1.2	.90	2.7
30	7.3	16	13	14	-----	17	13	9.8	3.2	2.8	1.4	1.7
31	6.9	-----	13	43	-----	15	-----	9.7	-----	3.4	2.2	-----
TOTAL	218.6	294.5	447.6	382.5	436	570	391	346.2	162.1	99.3	53.44	77.6
MEAN	7.05	9.82	14.4	12.3	15.0	18.4	13.0	11.2	5.40	3.20	1.72	2.59
MAX	9.6	16	24	43	20	31	18	14	9.4	8.4	6.2	5.7
MIN	5.0	7.5	9.7	8.3	12	13	10	8.1	3.2	1.2	.42	1.5
AC-FT	434	584	888	759	865	1,130	776	687	322	197	106	154

CAL YR 1967 TOTAL 44,080.0 MEAN 121 MAX 1,960 MIN 3.2 AC-FT 87,430
WTR YR 1968 TOTAL 3,478.84 MEAN 9.51 MAX 43 MIN .42 AC-FT 6,900

Peak discharge (base, 300 cfs).--No peak above base.

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 1968.

GAGE.--Digital water-stage recorder with rain-gage attachment. Datum of gage is 486.47 ft above mean sea level, datum of 1929. Prior to Aug. 10, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years, 26.5 cfs (19,190 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,160 cfs Jan. 30; minimum daily, 0.12 cfs Sept. 28.
1961-68: Maximum discharge, 6,580 cfs Oct. 13, 1962 (gage height, 13.18 ft); no flow July 12 to Oct. 22, 1961, Oct. 1, 1964.

REMARKS.--Records fair. Minor regulation and diversion above station affects low flows. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.19	2.9	2.9	45	13	15	4.6	2.4	.53	.37	.34
2	1.5	.35	2.3	3.0	32	11	12	4.4	2.3	.58	.36	.40
3	1.8	.80	2.1	2.9	28	10	10	4.4	2.0	.74	.28	.29
4	1.5	.93	4.4	2.9	24	10	9.1	4.4	2.1	.53	.42	.28
5	1.7	1.2	18	2.9	20	9.6	11	4.1	2.2	.47	.55	.26
6	1.4	1.2	4.5	2.9	18	9.3	10	3.7	2.3	.38	.42	.25
7	.83	.98	9.8	2.9	15	11	9.8	3.6	2.2	.59	.44	.31
8	1.4	1.1	5.7	2.8	12	28	9.3	4.0	2.1	.75	.21	.33
9	.81	1.3	3.9	2.8	12	16	8.6	3.8	1.8	.87	.23	.32
10	.98	1.2	3.4	14	11	13	8.2	3.7	1.6	.51	.25	.36
11	1.0	.77	3.2	3.9	10	12	7.9	3.9	1.7	.67	.28	.43
12	.80	.76	2.9	3.5	9.3	19	7.5	4.1	1.6	.75	.38	.33
13	1.0	1.1	3.5	3.2	9.2	54	7.5	4.3	1.9	.48	.46	.27
14	.85	2.0	4.0	3.0	8.9	94	7.0	4.3	1.6	.49	.62	.28
15	1.1	1.6	4.5	5.0	8.4	53	6.4	3.6	1.8	.52	.59	.31
16	1.1	1.1	4.6	4.0	35	82	6.6	3.5	1.6	.85	.62	.37
17	.69	.89	5.0	3.2	56	54	6.4	3.3	1.3	.66	.34	.32
18	1.0	.88	16	2.8	37	43	5.7	3.4	1.2	.45	.36	.31
19	.92	1.3	8.6	2.7	24	35	5.9	3.4	1.0	.69	.42	.27
20	.60	1.3	5.9	2.6	38	28	5.9	3.3	.65	.38	.93	.26
21	.79	1.1	4.8	2.6	33	25	5.7	3.2	.98	.50	.82	.24
22	.29	1.4	4.0	2.5	27	23	5.3	3.3	.95	.38	.64	.23
23	.57	1.4	3.8	2.4	24	21	5.1	3.2	1.1	.65	.74	.19
24	.33	1.2	3.6	2.3	22	19	5.3	3.1	1.1	.32	.56	.19
25	.21	1.3	3.5	2.2	20	18	5.1	2.9	.98	.46	.62	.24
26	.50	1.4	3.4	2.2	19	17	5.0	2.9	.92	.49	.45	.24
27	.77	1.3	3.3	2.3	18	16	4.6	2.3	.97	.39	.40	.16
28	.63	1.4	3.2	2.5	17	14	4.6	2.1	1.1	.56	.52	.12
29	1.2	2.6	3.0	10	15	14	4.5	2.3	.53	.30	.38	.20
30	.91	4.7	3.0	960	-----	10	4.6	2.4	.45	.48	.36	.25
31	.55	-----	3.0	170	-----	10	-----	2.3	-----	.43	.36	-----
TOTAL	28.93	38.75	153.8	1,232.9	647.8	791.9	219.6	107.8	44.43	16.85	14.38	8.35
MEAN	.93	1.29	4.96	39.8	22.3	25.5	7.32	3.48	1.48	.54	.46	.28
MAX	1.8	4.7	18	960	56	94	15	4.6	2.4	.87	.93	.43
MIN	.21	.19	2.1	2.2	8.4	9.3	4.5	2.1	.45	.30	.21	.12
AC-FT	57	77	305	2,450	1,280	1,570	436	214	88	33	29	17
(a)	0	1.9	3.5	7.2	2.0	-	-	.1	0	0	0	0

CAL YR 1967 TOTAL 19,075.14 MEAN 52.3 MAX 2,500 MIN .19 AC-FT 37,830
WTR YR 1968 TOTAL 3,305.49 MEAN 9.03 MAX 960 MIN .12 AC-FT 6,560

Peak discharge (base, 800 cfs).--Jan. 30 (1715 hrs) 2,160 cfs.

a Precipitation, in inches.

Note.--Stage-discharge relation indefinite Jan. 5 to Feb. 7.

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 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 360 ft (from topographic map). Prior to Feb. 28, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--9 years, 3.30 cfs (2,390 acre-ft per year).

EXTREMES.--Maximum discharge during year, 121 cfs Feb. 20 (gage height, 4.14 ft); no flow Sept. 17-19, 22-30. 1959-68: 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 good. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	2.0	.40	.77	2.8	1.8	3.2	.61	.35	.30	.04	.03
2	.40	.24	.24	.82	2.0	1.8	2.3	.62	.34	.27	.04	.03
3	.30	.20	.21	.77	1.7	1.7	1.9	.63	.31	.25	.04	.06
4	.25	.22	.42	.76	1.5	1.6	1.8	.64	.33	.25	.04	.03
5	.24	.25	1.5	.80	1.4	1.5	1.7	.61	.36	.21	.03	.05
6	.24	.25	.38	.80	1.2	1.5	1.7	.59	.35	.10	.02	.05
7	.25	.24	2.7	.80	1.2	2.0	1.5	.55	.33	.10	.02	.06
8	.24	.21	.57	.80	1.1	8.5	1.5	.55	.31	.10	.03	.06
9	.23	.21	.32	.80	1.1	3.7	1.3	.55	.30	.10	.03	.03
10	.24	.18	.27	6.1	1.1	2.8	1.2	.55	.28	.08	.02	.02
11	.29	.19	.27	1.7	1.0	2.5	1.1	.55	.26	.06	.02	.02
12	.28	.22	.31	1.1	1.0	3.5	1.1	.60	.25	.04	.04	.02
13	.26	.25	.31	.90	1.0	23	1.0	.63	.22	.04	.08	.02
14	.25	.50	.27	.94	1.0	14	.98	.62	.19	.04	.03	.02
15	.24	.34	.30	2.5	1.0	8.2	.98	.61	.18	.04	.04	.02
16	.23	.30	.33	1.6	2.4	13	.94	.60	.20	.04	.04	.01
17	.22	.27	.34	1.2	4.7	8.9	.86	.60	.29	.05	.07	0
18	.22	.27	1.8	1.0	3.5	6.7	.86	.58	.31	.04	.03	0
19	.24	.23	2.2	.92	2.5	5.7	.86	.53	.34	.03	.06	0
20	.23	.21	1.5	.80	31	4.7	.82	.53	.32	.03	.08	.01
21	.25	.20	.99	.79	16	4.0	.74	.55	.25	.03	.04	.01
22	.26	.20	.80	.74	8.6	3.4	.74	.53	.20	.04	.04	0
23	.26	.17	.80	.74	5.4	3.0	.70	.52	.20	.04	.02	0
24	.26	.17	.80	.74	4.0	2.7	.66	.52	.19	.04	.02	0
25	.26	.17	.74	.74	3.2	2.4	.65	.51	.24	.07	.03	0
26	.26	.16	.74	.74	2.7	2.3	.60	.47	.34	.05	.03	0
27	.25	.16	.74	.96	2.4	2.1	.56	.44	.39	.05	.03	0
28	.25	.26	.74	.83	2.2	2.0	.45	.37	.39	.04	.03	0
29	.24	.55	.74	.80	2.0	2.0	.44	.37	.35	.04	.02	0
30	.21	1.1	.74	12	-----	1.8	.48	.37	.36	.04	.02	0
31	.21	-----	.74	8.6	-----	1.8	-----	.40	-----	.07	.03	-----
TOTAL	7.84	9.92	23.21	53.56	110.7	144.6	33.62	16.80	8.73	2.68	1.11	0.55
MEAN	.25	.33	.75	1.73	3.82	4.66	1.12	.54	.29	.087	.036	.018
MAX	.40	2.0	2.7	12	31	23	3.2	.64	.39	.30	.08	.06
MIN	.21	.16	.21	.74	1.0	1.5	.44	.37	.18	.03	.02	0
AC-FT	16	20	46	106	220	287	67	33	17	5.3	2.2	1.1

CAL YR 1967 TOTAL 2,766.80 MEAN 7.58 MAX 300 MIN .11 AC-FT 5,490
WTR YR 1968 TOTAL 413.32 MEAN 1.13 MAX 31 MIN 0 AC-FT 820

Peak discharge (base, 150 cfs).--No peak above base.

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 southwest 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 190 ft (from topographic map). Prior to Feb. 28, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--9 years, 30.2 cfs (21,860 acre-ft per year).

EXTREMES.--Maximum discharge during year, 560 cfs Jan. 30 (gage height, 5.90 ft); no flow for many days. 1959-68: Maximum discharge, 9,490 cfs Feb. 1, 1963 (gage height, 17.66 ft), from rating curve extended above 3,300 cfs; no flow for many days in each year.

REMARKS.--Records good. Flow regulated by Uvas Reservoir (see sta. no. 11-1540.2). Diversion above station for irrigation and municipal supply of city of Gilroy.

REVISIONS (water year).--1967 report: 1963.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	4.7		0	31	4.9	12	0	6.7	.07	6.5	5.2
2	1.7	4.4		0	16	4.7	15	0	5.0	.15	5.6	5.2
3	3.0	4.2			9.4	3.5	11	0	3.6	.30	5.2	5.2
4	1.5	4.4		0	6.8	3.2	9.5	0	2.8	.37	5.2	5.6
5	.20	4.9		0	5.6	3.0	8.6	0	2.5	.61	5.4	5.6
6	0	5.4		0	4.7	2.5	7.9	0	2.2	.57	5.6	5.4
7	0	5.4		0	3.5	2.7	7.3	0	1.7	.52	5.9	5.4
8	0	4.4		0	3.0	26	6.7	0	1.5	.53	6.2	5.2
9	0	4.2		0	2.5	20	5.8	0	1.2	.72	7.4	5.2
10	0	4.9		0	1.9	12	5.0	0	1.1	.63	7.4	4.9
11	0	5.2		0	1.5	7.4	4.3	0	1.2	.37	6.8	4.9
12	0	3.2		0	1.4	7.1	3.9	0	.65	.41	6.5	5.2
13	0	.42		.10	1.2	95	3.6	0	.08	.23	6.2	5.4
14	0	.04		.20	.92	99	3.6	0	.03	.21	6.2	5.9
15	0	0		.50	.63	73	3.4	0	.02	.49	6.8	4.4
16	0	0		.40	1.4	88	3.6	.26	.01	.94	6.8	1.2
17	0	0		.20	8.7	78	3.6	2.9	0	1.8	6.8	.07
18	0	0		.15	7.0	56	4.1	3.5	0	1.4	7.1	0
19	0	0		.10	12	44	4.9	3.6	0	.31	7.4	0
20	0	0		0	63	36	3.8	4.1	0	.01	7.4	0
21	0	0		0	53	31	2.5	4.4	0	-0	7.4	0
22	.04	0		0	41	26	2.0	5.4	0	0	6.8	0
23	.37	0		0	29	22	1.6	7.5	0	.02	6.8	0
24	.82	0		0	22	18	1.3	7.6	0	.08	6.2	0
25	1.2	0		0	16	16	1.1	7.6	0	.95	6.2	0
26	1.7	0		0	12	15	.89	7.7	0	2.3	6.8	0
27	2.3	0		0	9.4	15	.37	8.6	0	4.4	6.2	0
28	3.2	0		0	7.4	13	.09	8.0	0	4.9	5.9	0
29	3.5	0		0	5.6	12	0	7.0	0	6.2	4.9	0
30	5.2	0		51	-----	11	0	6.8	.01	7.1	4.9	0
31	4.7	-----		97	-----	9.6	-----	6.8	-----	7.4	4.9	-----
TOTAL	31.33	55.76	0	149.65	377.55	854.6	137.45	91.76	30.30	43.99	195.4	79.97
MEAN	1.01	1.86	0	4.83	13.0	27.6	4.58	2.96	1.01	1.42	6.30	2.67
MAX	5.2	5.4	0	97	63	99	15	8.6	6.7	7.4	7.4	5.9
MIN	0	0	0	0	.63	2.5	0	0	0	0	4.9	0
AC-FT	62	111	0	297	749	1,700	273	182	60	87	388	159

CAL YR 1967 TOTAL 35,889.81 MEAN 98.3 MAX 3,910 MIN 0 AC-FT 71,190
WTR YR 1968 TOTAL 2,047.76 MEAN 5.60 MAX 99 MIN 0 AC-FT 4,060

Note.--No gage-height record Dec. 11 to Jan. 19.

PAJARO RIVER BASIN

11-1564.5. WILLOW CREEK TRIBUTARY NEAR SAN BENITO, CALIF.

LOCATION.--Lat 36°35'25", long 121°11'45", in NW $\frac{1}{4}$ sec.34, T.15 S., R.7 E., on left bank at culvert on State Highway 25, 300 ft upstream from mouth, and 9.1 miles northwest of San Benito.

DRAINAGE AREA.--1.24 sq mi.

RECORDS AVAILABLE.--Water years 1961-64 (annual maximum), July 1964 to September 1968.

GAGE.--Graphic water-stage recorder with rain-gage attachment and crest-stage gage. Altitude of gage is 1,000 ft (from topographic map). Aug. 31, 1960, to July 9, 1964, crest-stage gage at same site and datum.

EXTREMES.--1964: No flow during July to September.

1964-65: Maximum discharge during water year, 0.38 cfs Apr. 9 (gage height, 0.21 ft); no flow for most of year.

1965-66: No flow during water year.

1966-67: Maximum discharge during water year, 0.34 cfs Jan. 21 (gage height, 0.19 ft); no flow for most of year.

1967-68: Maximum discharge during water year, 0.20 cfs Jan. 30 (gage height, 0.12 ft); no flow for most of year.

1960-68: Maximum discharge, 4.7 cfs Feb. 9, 1962 (gage height, 1.05 ft).

1964-68: No flow for most of each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEARS OCTOBER 1964 TO SEPTEMBER 1968

Apr. 8, 1965..... 0.04
Apr. 9, 1965..... .01
Mar. 12, 1968..... .02
Mar. 13, 1968..... .01

MONTH	CFS-DAYS	MEAN	MAX	MIN	AC-FT
April 1965.....	0.05	0.0017	0.04	0	0.10
WTR YR 1965.....	.05	.0001	.04	0	.10
CAL YR 1965.....	.05	.0001	.05	0	.10
WTR YR 1966.....	0	0	0	0	0
CAL YR 1966.....	0	0	0	0	0
WTR YR 1967.....	0	0	0	0	0
CAL YR 1967.....	0	0	0	0	0
March 1968.....	.03	.0010	.02	0	.06
WTR YR 1968.....	.03	.0001	.02	0	.06

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

PRECIPITATION, IN INCHES, WATER YEARS OCTOBER 1964 TO SEPTEMBER 1968

MONTH	1965	1966	1967	1968
October.....	1.6	0	0	1.1
November.....	2.5	7.0	2.0	.6
December.....	4.7	2.9	3.5	1.3
January.....	1.3	1.3	3.9	1.3
February.....	.3	.7	.3	.7
March.....	2.0	.1	2.5	1.7
April.....	2.4	.1	3.8	.4
May.....	0	0	.1	0
June.....	0	0	0	0
July.....	.2	.4	0	0
August.....	.2	0	0	0
September.....	0	.1	.1	0
The water year.....	15.2	12.6	16.2	7.1

11-1565. SAN BENITO RIVER NEAR WILLOW CREEK SCHOOL, CALIF.

LOCATION.--Lat 36°36'34", long 121°12'07", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.21, T.15 S., R.7 E., on left bank 1.3 miles downstream from Willow Creek, 0.9 mile northwest of Willow Creek School, and 10 miles northwest of San Benito.

DRAINAGE AREA.--249 sq mi.

RECORDS AVAILABLE.--October 1939 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 927.89 ft above mean sea level, unadjusted. Prior to Jan. 28, 1948, graphic water-stage recorder at site 0.9 mile downstream at different datum. Jan. 28, 1948, to Nov. 10, 1955, graphic water-stage recorder at present site and datum. Nov. 11, 1955, to Sept. 30, 1965, graphic water-stage recorder at site 0.9 mile downstream at different datum. Oct. 1, 1965, to Apr. 5, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--29 years, 22.5 cfs (16,290 acre-ft per year); median of yearly mean discharges, 12 cfs (8,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 45 cfs Nov. 30 (gage height, 5.00 ft); maximum gage height, 5.13 ft May 14; minimum daily discharge, 0.03 cfs Sept. 30.
1939-68: Maximum discharge, 8,210 cfs Apr. 3, 1958 (gage height, 8.35 ft, site and datum then in use), from rating curve extended above 600 cfs on basis of slope-area measurement of maximum flow; no flow at times. Flood of February 1938, reached a stage of about 9.0 ft from floodmarks.

REMARKS.--Records good. Flow regulated by Hernandez Dam beginning in December 1961 (capacity, 18,700 acre-ft). Small diversion above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	12	41	5.7	7.0	2.4	3.5	1.6	.31	.14	.15	.08
2	49	12	32	5.7	6.2	2.4	4.9	15	.23	.14	.14	.07
3	49	12	29	4.9	5.5	2.2	3.8	20	.23	.14	.14	.09
4	49	12	16	5.2	5.5	2.2	2.9	23	.23	.15	.14	.09
5	49	12	14	4.9	4.7	2.2	2.4	24	.23	.15	.14	.10
6	36	12	13	4.8	4.0	2.2	2.4	24	.17	.15	.14	.10
7	22	12	12	4.7	3.6	3.5	2.0	26	.17	.16	.13	.10
8	20	12	12	4.7	3.8	5.1	2.2	28	.17	.16	.14	.10
9	18	12	9.5	5.0	3.6	4.0	2.0	29	.12	.16	.14	.10
10	16	12	8.8	5.7	3.5	3.3	2.0	31	.12	.17	.14	.10
11	15	12	8.2	5.9	3.3	2.7	2.0	34	.12	.17	.16	.10
12	12	12	7.3	5.3	3.5	4.0	2.0	36	.12	.18	.19	.10
13	12	5.0	6.2	5.5	3.6	8.9	2.0	39	.12	.20	.23	.10
14	10	5.0	4.7	5.3	4.5	6.9	2.0	42	.12	.23	.22	.09
15	8.9	5.0	4.8	5.9	4.0	6.2	1.6	37	.12	.24	.19	.10
16	7.7	18	5.5	5.5	4.0	6.0	1.6	28	.12	.25	.19	.10
17	6.6	19	5.2	5.3	5.1	6.0	1.4	18	.12	.24	.19	.07
18	4.9	19	10	5.3	4.7	6.0	1.4	14	.10	.27	.18	.08
19	5.2	21	14	5.5	4.2	5.3	1.4	10	.10	.28	.19	.09
20	5.4	22	8.7	5.3	3.6	4.9	1.2	9.2	.11	.27	.21	.10
21	5.8	22	7.5	5.3	3.5	4.7	1.2	7.2	.11	.26	.20	.10
22	6.1	26	6.9	5.5	3.5	4.4	1.2	6.4	.11	.28	.18	.10
23	6.4	26	6.4	5.3	3.3	4.0	1.2	5.5	.12	.29	.13	.09
24	12	25	6.1	4.9	3.1	4.0	1.1	5.1	.12	.30	.10	.09
25	12	25	5.6	4.9	2.7	3.6	1.1	4.4	.12	.29	.10	.07
26	12	26	5.4	4.9	2.6	3.6	1.1	3.6	.12	.27	.09	.06
27	12	26	5.1	5.3	2.6	3.3	1.1	3.1	.13	.26	.09	.06
28	12	26	4.9	5.3	2.5	2.7	.92	2.2	.13	.31	.09	.06
29	12	28	4.9	5.3	2.4	2.4	.92	1.6	.13	.25	.08	.07
30	12	38	5.0	5.5	-----	2.2	.92	1.1	.14	.16	.08	.03
31	12	-----	5.2	7.7	-----	2.0	-----	.78	-----	.15	.09	-----
TOTAL	559.0	526.0	324.9	166.0	114.1	123.3	55.46	529.78	4.36	6.67	4.58	2.59
MEAN	18.0	17.5	10.5	5.35	3.93	3.98	1.85	17.1	.15	.22	.15	.086
MAX	49	38	41	7.7	7.0	8.9	4.9	42	.31	.31	.23	.10
MIN	4.9	5.0	4.7	4.7	2.4	2.0	.92	.78	.10	.14	.08	.03
AC-FT	1,110	1,040	644	329	226	245	110	1,050	8.7	13	9.1	5.1
CAL YR 1967	TOTAL 15,344.7		MEAN 42.0		MAX 170		MIN 2.4		AC-FT 30,440			
WTR YR 1968	TOTAL 2,416.74		MEAN 6.60		MAX 49		MIN .03		AC-FT 4,790			

PAJARO RIVER BASIN

11-1567. PESCADERO CREEK NEAR PAICINES, CALIF.

LOCATION.--Lat 36°41'40", long 121°18'35", in SE $\frac{1}{4}$ sec.21, T.14 S., R.6 E., 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 1968.

GAGE.--Digital water-stage recorder and, since Sept. 10, 1963, concrete control. Altitude of gage is 720 ft (from topographic map). Prior to Oct. 18, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--9 years, 0.92 cfs (666 acre-ft per year).

EXTREMES.--Maximum discharge during year, 11 cfs Jan. 30 (gage height, 5.31 ft); minimum daily, 0.06 cfs Aug. 11.

1959-68: Maximum discharge, 68 cfs Apr. 23, 1967 (gage height, 5.87 ft); from rating curve extended above 6 cfs; no flow at times.

REMARKS.--Records good. No regulation; large ground-water withdrawals above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.0	2.1	2.6	2.8	2.1	2.7	.66	.64	.36	.41	.65
2	2.1	2.1	1.7	2.6	2.8	2.0	2.5	.51	.79	.30	.34	.65
3	2.1	2.1	2.1	2.6	2.6	2.0	2.3	.61	.86	.20	.21	.65
4	2.4	2.3	2.1	2.5	2.6	2.1	2.4	.69	.80	.23	.53	.65
5	2.4	2.4	2.8	2.6	2.6	2.1	2.1	1.1	.86	.17	.51	.65
6	2.4	2.2	2.4	2.6	2.6	2.1	2.0	.98	.93	.20	.33	.62
7	2.1	2.2	3.0	2.5	2.6	2.0	1.9	.54	.82	.32	.25	.65
8	2.1	2.1	2.6	2.6	2.6	2.6	1.9	.61	.94	.41	.33	.67
9	2.1	1.8	2.5	2.6	2.6	1.9	1.9	.82	1.0	.41	.33	.66
10	2.1	2.1	2.5	3.8	2.4	1.7	1.9	1.3	.94	.41	.24	.60
11	2.1	2.1	2.6	3.0	2.1	1.7	1.7	1.3	.91	.21	.06	.54
12	2.1	1.8	2.6	2.7	2.1	2.0	1.6	1.0	.86	.24	.22	.48
13	2.1	1.8	2.5	2.6	2.5	3.6	1.6	1.0	.81	.30	.40	.38
14	2.1	2.1	2.5	2.8	2.7	2.3	1.7	1.1	.80	.69	.48	.32
15	1.8	1.9	2.6	4.2	2.3	2.4	1.5	1.1	.58	.59	.52	.56
16	1.8	2.1	2.6	3.1	2.4	3.4	1.4	1.1	.70	.27	.62	.55
17	1.8	2.1	2.6	2.9	2.6	2.9	1.3	1.0	.60	.56	.61	.45
18	1.8	2.4	5.3	2.6	2.3	2.5	1.1	.97	.77	.37	.61	.47
19	2.0	2.3	4.4	2.6	2.1	2.3	1.1	.98	.72	.08	.63	.46
20	2.0	2.3	3.0	2.6	2.5	2.2	1.2	1.1	.45	.09	.50	.53
21	2.4	2.1	3.0	2.6	2.6	2.1	1.7	1.0	.53	.19	.65	.52
22	2.3	2.1	2.6	2.6	2.3	2.1	1.4	.99	.53	.37	.68	.50
23	2.3	2.1	2.6	2.6	1.8	2.1	1.2	.91	.34	.39	.65	.50
24	2.2	2.1	2.6	2.6	1.8	2.1	1.3	.89	.55	.39	.65	.49
25	2.0	2.0	2.6	2.6	1.8	2.1	.97	1.1	.35	.44	.65	.46
26	2.1	2.1	2.6	2.6	2.0	2.0	.93	1.0	.45	.52	.65	.46
27	2.2	1.8	2.6	3.1	2.0	2.0	1.2	1.0	.30	.47	.65	.47
28	2.2	2.1	2.6	2.7	1.9	2.0	1.1	.98	.41	.30	.65	.50
29	2.2	2.4	2.6	2.6	2.1	2.0	1.3	.75	.37	.57	.65	.58
30	2.1	3.4	2.6	3.5	-----	2.1	.75	.78	.28	.49	.65	.59
31	2.0	-----	2.6	3.9	-----	2.1	-----	.53	-----	.49	.65	-----
TOTAL	65.5	64.4	83.5	87.5	68.1	68.6	47.65	28.40	19.89	11.03	15.31	16.26
MEAN	2.11	2.15	2.69	2.82	2.35	2.21	1.59	.92	.66	.36	.49	.54
MAX	2.4	3.4	5.3	4.2	2.8	3.6	2.7	1.3	1.0	.69	.68	.67
MIN	1.8	1.8	1.7	2.5	1.8	1.7	.75	.51	.28	.08	.06	.32
AC-FT	130	128	166	174	135	136	95	56	39	22	30	32

CAL YR 1967 TOTAL 1,270.30 MEAN 3.48 MAX 60 MIN .40 AC-FT 2,520
WTR YR 1968 TOTAL 576.14 MEAN 1.57 MAX 5.3 MIN .06 AC-FT 1,140

Peak discharge (base, 10 cfs).--Jan. 30 (2300 hrs) 11 cfs (5.31 ft).

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 1968. Yearly estimate only for 1940 and monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital 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). Prior to Jan. 4, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--29 years, 12.8 cfs (9,270 acre-ft per year), unadjusted.

EXTREMES.--Maximum discharge during year, 420 cfs Dec. 3 (gage height, 4.50 ft); minimum daily, 0.20 cfs Sept. 12. 1939-68: 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 good. 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 year).--1963 report: 1962.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.4	2.4	2.8	2.2	1.6	.83	.66	1.2	1.1	.52	.47
2	2.2	2.3	3.1	2.8	2.2	1.7	.82	.66	1.2	1.1	.51	.47
3	2.2	2.4	12	2.8	2.2	1.7	.82	.66	1.1	1.1	.52	.47
4	2.2	2.4	9.3	2.8	2.2	1.7	.82	.66	1.1	1.0	.56	.42
5	2.2	2.4	9.3	2.8	2.5	1.7	.82	.60	1.1	.99	.58	.42
6	2.2	2.3	8.4	2.8	3.2	1.7	.90	.62	1.1	.92	.59	.43
7	2.2	2.3	6.9	2.6	3.0	1.7	1.2	.60	1.2	1.1	.60	.26
8	2.2	2.3	6.2	2.6	2.8	1.7	1.4	.60	1.2	1.1	.57	.21
9	1.6	2.2	5.4	2.6	2.6	1.7	1.5	.76	1.2	1.0	.51	.26
10	.93	2.2	4.8	2.7	2.5	1.7	1.5	1.3	1.0	1.1	.60	.24
11	.71	2.2	4.7	2.6	2.3	1.7	1.5	1.4	.53	1.1	.60	.24
12	1.0	2.2	4.6	2.7	2.2	1.8	1.4	1.4	.50	1.1	.61	.20
13	3.5	2.2	4.3	2.7	2.2	1.8	1.4	1.3	.43	1.2	.58	.21
14	4.1	2.2	4.2	2.6	2.2	1.7	1.4	1.2	.42	1.2	.57	.24
15	4.1	2.2	4.1	2.6	2.1	1.7	1.4	1.2	.41	1.1	.56	.24
16	4.1	2.2	3.5	2.6	2.1	1.8	1.5	1.2	.42	.75	.56	.24
17	3.3	2.2	3.5	2.6	2.1	1.7	1.5	1.2	.85	.73	.54	.23
18	2.7	2.2	3.5	2.6	2.1	1.7	1.5	1.1	.99	.69	.52	.27
19	2.6	2.2	3.4	2.6	2.0	1.2	1.5	1.2	.97	.66	.54	.30
20	2.6	2.2	3.3	2.6	2.0	.46	1.2	1.2	.96	.69	.54	.32
21	2.6	2.2	3.3	2.4	1.9	1.2	1.1	1.2	.94	.58	.49	.31
22	2.6	2.2	3.3	2.4	1.9	1.4	1.0	1.2	.85	.66	.51	.32
23	2.6	2.2	3.0	2.4	1.7	1.5	1.0	1.2	.42	.65	.51	.37
24	2.5	2.2	3.0	2.4	1.7	1.6	1.0	1.2	.39	.65	.51	.39
25	2.6	2.2	3.0	2.4	1.7	1.7	1.2	1.2	.38	.57	.55	.40
26	2.6	2.2	3.0	2.4	1.7	1.4	1.2	1.2	.76	.57	.50	.39
27	2.6	2.2	3.0	2.4	1.7	.95	.63	1.2	1.0	.56	.51	.40
28	2.4	2.2	3.0	2.4	1.6	.82	.60	1.2	1.0	.56	.52	.49
29	2.4	2.4	3.0	2.4	1.6	.85	.61	1.2	1.1	.53	.52	.49
30	2.4	2.4	2.8	2.3	-----	.97	.95	1.2	1.1	.43	.53	.49
31	2.4	-----	2.8	2.2	-----	.79	-----	1.2	-----	.52	.51	-----
TOTAL	76.54	67.6	140.1	79.6	62.2	45.64	34.20	32.72	25.82	26.01	16.84	10.19
MEAN	2.47	2.25	4.52	2.57	2.14	1.47	1.14	1.06	.86	.84	.54	.34
MAX	4.1	2.4	12	2.8	3.2	1.8	1.5	1.4	1.2	1.2	.61	.49
MIN	.71	2.2	2.4	2.2	1.6	.46	.60	.60	.38	.43	.49	.20
AC-FT	152	134	278	158	123	91	68	65	51	52	33	20

CAL YR 1967 TOTAL 8,017.99 MEAN 22.0 MAX 532 MIN .25 AC-FT 15,900
WTR YR 1968 TOTAL 617.46 MEAN 1.69 MAX 12 MIN .20 AC-FT 1,220

Peak discharge (base, 450 cfs).--No peak above base.

PAJARO RIVER BASIN

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 mile downstream from Tres Pinos Creek, 2.7 miles west of Tres Pinos, and 4.8 miles southeast of Hollister.

DRAINAGE AREA.--586 sq mi.

RECORDS AVAILABLE.--October 1949 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 370 ft (from topographic map). Prior to Jan. 19, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--19 years, 24.2 cfs (17,520 acre-ft per year); median of yearly mean discharges, 7.5 cfs (5,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 62 cfs Oct. 6, 7 (gage height, 4.16 ft); no flow for several days. 1949-68: Maximum discharge, 11,600 cfs Apr. 3, 1958 (gage height, 16.30 ft), from rating curve extended above 1,200 cfs on basis of flood-routing study; no flow at times.

REMARKS.--Records good. Flow regulated by Hernandez 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	15	31	11	13	5.6	1.1	.10	.02	.05	.01	.03
2	25	15	19	11	12	5.8	1.6	.04	.02	.05	.01	.04
3	26	15	13	10	11	5.4	1.1	.01	.03	.05	.01	.03
4	44	16	20	10	11	5.4	.25	.01	.03	.04	.01	.02
5	60	16	22	10	10	5.4	.10	.01	.03	.03	.01	.02
6	59	17	20	10	9.4	5.4	.03	.01	.03	.04	.01	.02
7	49	20	20	10	8.3	6.4	0	7.6	.04	.04	.01	.03
8	22	22	20	10	7.3	8.5	0	9.4	.04	.03	.02	.04
9	18	24	19	10	7.3	8.3	0	12	.04	.03	.02	.04
10	13	17	17	11	7.3	7.0	0	14	.04	.03	.01	.03
11	11	17	16	12	7.0	6.6	0	17	.05	.03	.02	.03
12	9.6	11	16	11	7.3	6.6	.01	23	.04	.03	.03	.03
13	8.8	7.3	15	10	7.3	10	0	23	.04	.02	.04	.02
14	8.3	7.0	14	9.9	8.5	10	.01	28	.04	.02	.03	.02
15	7.3	7.0	13	12	8.4	8.3	.02	28	.05	.02	.03	.02
16	6.6	9.6	13	12	8.2	8.3	.05	28	.05	.02	.03	.01
17	6.3	19	13	11	8.2	9.4	.08	22	.05	.02	.03	0
18	6.0	20	16	10	7.9	8.6	.08	9.9	.05	.02	.03	0
19	6.0	22	22	9.6	7.3	7.6	.10	5.1	.06	.01	.03	0
20	6.3	22	20	9.6	7.3	7.0	.18	1.9	.06	.01	.03	.01
21	6.0	24	18	9.6	7.6	6.7	.18	.48	.06	.02	.03	.01
22	6.3	24	16	9.6	7.3	5.8	.25	.18	.06	.01	.03	.01
23	6.3	25	14	9.4	6.8	5.8	.18	.42	.06	.01	.03	.01
24	6.0	26	13	9.1	6.3	5.6	.18	.19	.06	.01	.03	0
25	10	26	13	9.1	6.3	4.3	.18	.05	.05	.01	.03	0
26	16	26	13	9.1	6.1	5.4	.18	.02	.05	.01	.03	0
27	16	26	12	9.6	5.8	3.4	.10	.02	.05	.01	.03	0
28	17	27	11	9.9	6.1	3.8	.18	.02	.05	.01	.03	0
29	16	28	11	9.4	6.0	3.3	.25	.02	.05	.01	.02	.01
30	16	35	11	9.4	-----	1.5	.10	.02	.04	.01	.02	.01
31	15	-----	11	15	-----	.10	-----	.02	-----	.01	.02	-----
TOTAL	547.8	585.9	502	319.3	232.3	191.30	6.49	230.52	1.34	0.71	0.72	0.49
MEAN	17.7	19.5	16.2	10.3	8.01	6.17	.22	7.44	.045	.023	.023	.016
MAX	60	35	31	15	13	10	1.6	28	.06	.05	.04	.04
MIN	6.0	7.0	11	9.1	5.8	.10	0	.01	.02	.01	.01	0
AC-FT	1,090	1,160	996	633	461	379	13	457	2.7	1.4	1.4	1.0
CAL YR 1967	TOTAL	14,954.02	MEAN	41.0	MAX	872	MIN	0	AC-FT	29,660		
WTR YR 1968	TOTAL	2,618.87	MEAN	7.16	MAX	60	MIN	0	AC-FT	5,190		

PAJARO RIVER BASIN

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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 1968. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "near Chittenden."

GAGE.--Digital 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 graphic 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. May 13, 1949, to Sept. 30, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--29 years, 140 cfs (101,400 acre-ft per year); median of yearly mean discharges, 72 cfs (52,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 205 cfs Jan. 31 (gage height, 4.13 ft); minimum daily, 0.64 cfs Aug. 12.

1939-68: Maximum discharge, 24,000 cfs Dec. 24, 1955 (gage height, 32.46 ft), from rating curve extended above 8,300 cfs on basis of slope-conveyance study; maximum gage height, 33.11 ft Apr. 3, 1958; no flow at times in July, August 1948.

Flood in February 1938, reached a stage of 31.3 ft from floodmarks.

REMARKS.--Records fair. Flow regulated by Hernandez Reservoir (capacity, 18,700 acre-ft), Pacheco Lake (capacity, 6,150 acre-ft), Chesbro Reservoir (see sta. no. 11-1534.8.), Uvas Reservoir (see sta. no. 11-1540.2.), and San Felipe Lake. Many diversions above station for irrigation. Records of chemical analyses for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	24	21	23	85	36	44	18	14	5.8	3.4	2.5
2	5.8	26	17	22	59	34	55	18	14	5.2	3.1	2.8
3	6.2	28	17	21	49	32	49	18	12	4.6	4.4	3.4
4	6.6	30	19	21	42	32	43	18	12	4.4	4.4	4.1
5	6.3	31	34	21	38	33	40	19	12	4.4	3.8	4.4
6	6.0	32	28	21	36	33	39	18	11	4.6	3.1	4.4
7	5.9	30	25	21	33	33	39	18	10	4.4	2.5	3.6
8	5.8	29	25	22	32	62	39	19	9.7	3.8	1.6	2.5
9	9.0	29	20	24	32	75	38	19	9.7	3.1	1.4	2.5
10	11	28	12	27	31	57	37	20	10	2.7	1.3	2.9
11	10	27	15	34	31	48	32	18	10	3.1	.80	2.7
12	9.7	26	17	28	30	45	30	19	10	3.8	.64	4.1
13	9.4	13	20	25	30	78	29	19	9.0	4.9	.80	4.6
14	10	14	21	25	30	143	28	18	7.0	6.6	1.6	4.4
15	12	15	24	28	30	124	28	17	6.0	6.9	2.3	3.8
16	11	15	26	29	32	110	29	17	5.0	6.6	2.7	3.4
17	10	16	27	27	35	149	28	18	4.5	6.0	2.7	2.7
18	10	18	28	26	40	104	27	18	4.0	5.8	2.5	2.5
19	11	19	36	25	44	84	28	19	4.5	5.2	2.0	2.3
20	15	20	32	25	72	73	29	20	5.0	4.9	2.5	2.5
21	18	17	16	25	95	66	27	19	5.8	4.1	3.8	2.5
22	19	18	17	25	83	61	26	18	6.3	3.6	5.2	2.3
23	17	18	18	25	66	57	24	18	6.9	3.4	4.1	1.8
24	17	16	20	25	56	53	24	18	7.6	3.4	3.4	1.6
25	19	17	22	25	49	50	23	15	8.0	3.6	2.9	1.0
26	20	18	23	26	45	47	22	15	8.0	4.1	2.9	1.4
27	23	18	24	29	40	46	20	16	8.0	4.6	2.7	1.6
28	25	20	22	30	38	45	19	16	7.6	4.1	3.4	1.8
29	26	21	20	40	37	43	18	16	6.6	3.6	2.7	1.4
30	26	27	22	43	-----	42	17	15	6.3	3.4	2.3	1.2
31	25	-----	25	142	-----	40	-----	15	-----	3.6	2.4	-----
TOTAL	410.7	660	693	930	1,320	1,935	931	549	250.5	138.3	83.34	82.7
MEAN	13.2	22.0	22.4	30.0	45.5	62.4	31.0	17.7	8.35	4.46	2.69	2.76
MAX	26	32	36	142	95	149	55	20	14	6.9	5.2	4.6
MIN	5.0	13	12	21	30	32	17	15	4.0	2.7	.64	1.0
AC-FT	815	1,310	1,370	1,840	2,620	3,840	1,850	1,090	497	274	165	164
CAL YR 1967	TOTAL	93,478.5	MEAN	256	MAX	4,580	MIN	4.1	AC-FT	185,400		
WTR YR 1968	TOTAL	7,983.54	MEAN	21.8	MAX	149	MIN	.64	AC-FT	15,840		

PAJARO RIVER BASIN

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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 310 ft (from topographic map). Prior to June 30, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--11 years, 8.43 cfs (6,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 200 cfs Jan. 30 (gage height, unknown); no flow for several days. 1957-68: Maximum discharge, 1,970 cfs Apr. 2, 1958 (gage height, 7.55 ft), from rating curve extended above 450 cfs on basis of estimate of maximum flow over dam; maximum gage height, 7.62 ft Jan. 31, 1963; no flow at times.

REMARKS.--Records good. No regulation; Watsonville Water Works can divert up to 8.0 cfs daily above station for municipal supply, domestic use, and irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.12	1.6	.22	18	4.8	8.5	1.0	.18	.09	.07	0
2	.18	.14	0	.72	6.5	3.7	6.4	.90	.20	.09	.07	1.2
3	.64	.14	0	1.0	5.0	3.1	4.2	.90	.20	.10	.07	.04
4	.02	.14	3.9	.21	3.6	2.8	3.6	1.1	.16	.07	.06	.04
5	.03	.14	12	.14	2.9	2.7	3.4	1.2	.20	.09	.06	.04
6	.08	.14	3.8	.12	2.5	2.6	3.6	1.2	.20	.08	.06	.03
7	.08	.56	13	.12	2.3	6.0	3.0	1.1	.16	.10	.07	0
8	.07	1.0	4.2	.12	2.2	15	2.6	.72	.14	.09	.07	0
9	.07	.18	1.4	.12	2.1	6.8	2.4	.72	.14	.08	.07	0
10	.02	.18	.56	16	2.0	5.3	3.2	.80	.18	.08	.06	.02
11	.02	.03	.50	5.9	2.0	6.5	2.2	.72	.15	.09	.03	.03
12	.02	.03	1.5	2.2	1.9	8.0	2.1	1.0	.13	.08	.03	.03
13	.02	0	1.4	1.5	1.9	54	2.1	1.6	.14	.06	.02	.02
14	.01	2.4	1.6	2.2	1.9	30	1.9	1.8	.12	.06	.02	0
15	.02	0	1.0	9.8	1.9	21	1.8	1.4	.10	.08	.02	.03
16	.01	0	1.0	6.2	3.5	35	1.8	1.1	.10	.10	.03	.06
17	.01	.02	1.4	2.5	11	22	1.6	.80	.12	.10	.01	.02
18	.01	.02	9.4	2.0	7.4	17	1.1	.72	.13	.09	0	.08
19	.01	0	7.3	1.8	5.8	14	1.4	.80	.11	.09	.11	.06
20	.02	0	4.4	1.7	76	12	1.5	.72	.10	.08	.06	.06
21	.09	0	2.1	1.6	28	10	1.4	.72	.12	.08	.08	0
22	.10	.01	1.6	1.5	16	9.1	1.3	.64	.09	.08	.07	0
23	.10	0	1.5	1.5	12	8.5	1.3	.56	.13	.08	.07	.02
24	.11	0	1.2	1.5	9.7	8.2	1.4	.44	.11	.08	.05	.02
25	.32	0	.90	1.5	8.5	7.6	1.1	.44	.13	.09	.06	.02
26	.10	0	.72	1.5	7.9	7.6	1.1	.39	.10	.09	.06	.05
27	.12	.20	.80	1.6	7.6	7.0	1.2	.32	.12	.08	.06	.04
28	.12	.90	.80	1.5	7.0	5.9	1.1	.25	.12	.08	.08	.02
29	.32	2.8	1.0	2.5	6.2	5.0	1.0	.20	.09	.08	.10	.05
30	.14	5.0	.24	100	-----	4.5	.90	.16	.10	.07	.09	.08
31	.12	-----	.21	35	-----	4.2	-----	.16	-----	.07	0	-----
TOTAL	3.00	14.15	81.03	204.27	263.3	349.9	70.20	24.58	4.07	2.58	1.71	2.06
MEAN	.097	.47	2.61	6.59	9.08	11.3	2.34	.79	.14	.083	.055	.069
MAX	.64	5.0	13	100	76	54	8.5	1.8	.20	.10	.11	1.2
MIN	.01	0	0	.12	1.9	2.6	.90	.16	.09	.06	0	0
AC-FT	6.0	28	161	405	522	694	139	49	8.1	5.1	3.4	4.1

CAL YR 1967 TOTAL 5,561.10 MEAN 15.2 MAX 464 MIN 0 AC-FT 11,030
WTR YR 1968 TOTAL 1,020.85 MEAN 2.79 MAX 100 MIN 0 AC-FT 2,020

Peak discharge (base, 300 cfs).--No peak above base.

Note.--No gage-height record Jan. 17 to Feb. 21.

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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 80 ft (from topographic map). Prior to Dec. 3, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--12 years, 12.6 cfs (9,120 acre-ft per year).

EXTREMES.--Maximum discharge during year, 405 cfs Jan. 30 (gage height, 4.98 ft); no flow Sept. 23-26, 30. 1956-68: Maximum discharge, 2,680 cfs Apr. 2, 1958 (gage height, 12.59 ft), from rating curve extended above 830 cfs on basis of contracted-opening measurement at gage height 15.6 ft; no flow at times. Flood of Dec. 22, 1955, reached a stage of 15.6 ft from floodmarks (discharge, 3,620 cfs on basis of contracted-opening measurement of maximum flow).

REMARKS.--Records fair. No regulation; Watsonville Water Works can divert up to 8.0 cfs daily above station for municipal supply, domestic use, and irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.09	.09	.13	21	1.1	7.2	.35	.25	.09	.09	.18
2	.16	.08	.04	.13	9.9	.85	5.4	.35	.23	.39	.06	.15
3	.16	.09	.03	.11	6.2	.57	4.5	.37	.18	.67	.07	.15
4	.13	.13	.13	.11	5.0	.39	3.8	.47	.19	.30	.05	.11
5	.19	.13	13	.11	3.5	.29	3.4	.63	.19	.27	.07	.11
6	.09	.11	1.3	.11	2.6	.23	3.2	.43	.24	.22	.06	.09
7	.08	.11	13	.13	2.0	.88	2.9	.40	.23	.20	.06	.08
8	.06	.10	4.1	.11	1.4	14	2.7	.40	.30	.18	.05	.11
9	.08	.10	.90	.13	1.1	3.3	2.4	.40	.20	.18	.05	.18
10	.08	.09	.44	23	.97	1.3	3.0	.40	.20	.16	.06	.12
11	.08	.11	.39	6.2	.89	.83	2.4	.36	.20	.16	.04	.13
12	.06	.09	.39	1.6	.80	8.7	2.0	.37	.21	.14	.04	.09
13	.06	.13	.44	1.0	.73	71	1.6	.38	.13	.12	.06	.11
14	.05	.19	.57	1.1	.64	75	1.4	.37	.13	.13	.05	.06
15	.04	.08	.64	8.7	.59	48	1.2	.36	.11	.12	.04	.04
16	.34	.08	.64	5.8	1.9	60	1.1	.36	.12	.11	.06	.02
17	.16	.06	.64	2.8	11	46	.95	.34	.11	.13	.05	.02
18	.03	.06	5.0	1.8	8.0	33	.80	.34	.13	.10	.04	.08
19	.07	.05	5.8	1.1	11	23	.70	.36	.13	.30	.06	.09
20	.13	.04	2.5	.80	70	17	.60	.36	.11	.27	.04	.28
21	1.3	.04	.90	.64	40	13	.52	.32	.11	.11	.03	.02
22	.08	.03	.44	.57	22	11	.45	.38	.10	.11	.03	.01
23	.16	.04	.19	.50	15	9.5	.39	.33	.10	.13	.04	0
24	.22	.04	.11	.50	9.2	9.0	.35	.32	.10	.11	.02	0
25	.22	.03	.11	.57	5.5	8.5	.56	.31	.10	.10	.02	0
26	.22	.03	.11	.57	3.6	7.9	.41	.82	.12	.11	.02	0
27	.19	.03	.11	.72	2.8	7.0	.38	.80	.15	.20	.04	.01
28	.16	.05	.13	.64	2.5	6.0	.36	.37	.13	.09	.06	.01
29	.16	.22	.13	.72	1.5	5.1	.37	.26	.15	.08	.04	.01
30	.13	.34	.13	114	-----	4.5	.35	.23	.10	.09	.09	0
31	.13	-----	.13	64	-----	4.1	-----	.25	-----	.10	.19	-----
TOTAL	5.21	2.77	52.53	238.40	261.32	491.04	55.39	12.19	4.75	5.47	1.68	2.26
MEAN	.17	.092	1.69	7.69	9.01	15.8	1.85	.39	.16	.18	.054	.075
MAX	1.3	.34	13	114	70	75	7.2	.82	.30	.67	.19	.28
MIN	.03	.03	.03	.11	.59	.23	.35	.23	.10	.08	.02	0
AC-FT	10	5.5	104	473	518	974	110	24	9.4	11	3.3	4.5

CAL YR 1967 TOTAL 9,122.71 MEAN 25.0 MAX 873 MIN .03 AC-FT 18,090
WTR YR 1968 TOTAL 1,133.01 MEAN 3.10 MAX 114 MIN 0 AC-FT 2,250

Peak discharge (base, 600 cfs).--No peak above base.

Note.--No gage-height record Mar. 21 to Apr. 23.

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 1968. 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, 7,620 acre-ft Mar. 20 (elevation, 525.5 ft); minimum observed, 1,020 acre-ft Sept. 30 (elevation, 487.5 ft). Maximum contents observed during period 1955-68, 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 rockfill dam completed in 1955. Capacity, 7,500 acre-ft between elevations 465 (elevation of outlet gates) and 525 ft (crest of spillway). Reservoir is used for flood control and water released down Llagas Creek for irrigation. Record of contents furnished by 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 1968. 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, 7,930 acre-ft Apr. 9 (elevation, 470.5 ft); minimum observed, 1,360 acre-ft Sept. 30 (elevation, 428.2 ft). Maximum contents observed during period 1957-68, 11,030 acre-ft Mar. 16, 1967 (elevation, 490.5 ft); no contents May 18 to Nov. 30, 1961.

Reservoir is formed by earth- and rockfill dam completed in 1957. Capacity, 10,000 acre-ft between elevations 410 (hydraulic gate valves) and 487.5 ft (crest of spillway). Water released down Uvas Creek for irrigation; at times, diverted into Llagas Creek 3.6 miles below Chesbro Reservoir for ground-water recharge by percolation. Record of contents furnished by South Santa Clara Valley Water Conservation District.

Month-end contents, in acre-feet (including momentary storage above spillway crest), water year October 1967 to September 1968

Date	Chesbro Reservoir	Uvas Reservoir
Sept. 30.....	5,700	3,860
Oct. 31.....	5,060	2,710
Nov. 30.....	4,800	2,220
Dec. 31.....	4,750	2,190
Jan. 31.....	4,620	4,610
Feb. 29.....	6,970	5,800
Mar. 31.....	7,500	7,710
Apr. 30.....	7,500	7,930
May 31.....	7,020	6,880
June 30.....	5,580	5,410
July 31.....	3,910	3,970
Aug. 31.....	2,120	2,420
Sept. 30.....	1,000	1,330

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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 10 ft (from topographic map). Prior to May 10, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--10 years, 6.97 cfs (5,050 acre-ft per year); median of yearly mean discharges, 4.8 cfs (3,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 846 cfs Jan. 30 (gage height, 7.39 ft, from highwater mark in gage well); minimum, 0.52 cfs Aug. 23, 25-28.
1958-68: Maximum discharge, 2,110 cfs Jan. 31, 1963 (gage height, 10.82 ft), from rating curve extended above 980 cfs; no flow July 1-3, 1966.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.2	2.4	2.9	10	4.0	6.3	1.9	1.4	1.1	.82	.68
2	1.7	1.1	2.0	3.1	7.0	3.8	4.6	1.9	1.3	1.1	.84	.68
3	2.0	1.1	2.4	2.9	5.8	3.7	4.0	2.0	1.3	1.1	.78	.68
4	1.8	1.2	4.3	2.9	5.0	3.6	3.8	2.0	1.3	1.2	.80	.68
5	1.8	1.2	6.6	3.1	4.4	3.5	3.6	2.0	1.3	1.1	.80	.68
6	1.8	1.3	2.9	3.1	4.0	3.7	3.4	2.0	1.3	1.1	.81	.68
7	1.7	1.3	8.0	3.1	3.6	5.3	3.2	2.0	1.3	1.1	.74	.68
8	1.5	1.2	3.4	3.4	3.3	8.5	3.0	1.9	1.3	1.1	.73	.68
9	1.4	1.2	2.4	3.4	3.1	4.6	2.9	1.8	1.3	.97	.67	.74
10	1.5	1.2	2.2	10	2.9	4.0	2.8	1.8	1.3	.95	.66	.74
11	1.5	1.2	2.0	4.6	2.8	3.7	2.7	1.8	1.3	.92	.55	.77
12	1.4	1.2	2.9	3.1	2.7	10	2.6	1.8	1.2	.90	.56	.76
13	1.4	1.3	6.3	2.6	2.6	56	2.5	1.8	1.2	.89	.69	.77
14	1.4	2.1	9.0	3.4	2.6	33	2.4	2.0	1.2	.80	.81	.77
15	1.4	1.6	10	6.6	2.5	18	2.4	1.7	1.1	.82	.74	.77
16	1.3	1.4	10	4.0	8.0	30	2.3	1.6	1.1	.82	.81	.68
17	1.3	1.3	11	3.1	25	21	2.2	1.6	1.1	.83	.89	.68
18	1.3	1.3	15	2.6	15	13	2.2	1.6	1.1	.84	.86	.68
19	1.3	1.3	10	2.4	8.2	10	2.1	1.6	1.1	.75	.77	.77
20	1.3	1.3	4.0	2.2	15	8.5	2.1	1.6	1.1	.76	.68	.86
21	1.3	1.3	3.4	2.2	14	7.1	2.1	1.5	1.1	.81	.59	.86
22	1.3	1.3	3.1	2.0	10	6.6	2.1	1.6	.96	.87	.59	.77
23	1.3	1.2	2.9	2.0	8.5	6.3	2.1	1.5	.96	.90	.52	.86
24	1.3	1.1	2.9	2.0	7.0	5.6	2.0	1.5	1.1	.85	.59	.86
25	1.2	1.1	2.9	2.0	5.6	5.3	2.0	1.6	1.2	.86	.52	.86
26	1.2	1.1	2.9	2.0	5.0	5.0	2.0	1.5	1.2	.86	.52	.86
27	1.2	1.1	2.9	2.2	4.7	4.6	2.0	1.5	1.2	.86	.52	.86
28	1.2	1.3	2.9	2.6	4.5	4.3	2.0	1.4	1.3	.87	.52	.86
29	1.2	2.5	2.9	4.0	4.3	4.3	2.0	1.4	1.1	.82	.59	.86
30	1.2	3.2	2.9	200	-----	4.0	1.9	1.3	1.1	.77	.59	.86
31	1.2	-----	2.9	45	-----	4.0	-----	1.4	-----	.76	.59	-----
TOTAL	44.1	41.2	149.4	338.5	197.1	305.0	81.3	52.6	35.82	28.38	21.15	22.94
MEAN	1.42	1.37	4.82	10.9	6.80	9.84	2.71	1.70	1.19	.92	.68	.76
MAX	2.0	3.2	15	200	25	56	6.3	2.0	1.4	1.2	.89	.86
MIN	1.2	1.1	2.0	2.0	2.5	3.5	1.9	1.3	.96	.75	.52	.68
AC-FT	87	82	296	671	391	605	161	104	71	56	42	46

CAL YR 1967 TOTAL 4,900.5 MEAN 13.4 MAX 558 MIN 1.1 AC-FT 9,720
WTR YR 1968 TOTAL 1,317.49 MEAN 3.60 MAX 200 MIN .52 AC-FT 2,610

Peak discharge (base, 100 cfs).--Jan. 30 (time unknown) 846 cfs (7.39 ft).

Note.--No gage-height record Jan. 30 to Mar. 5.

SOQUEL CREEK BASIN

11-1598. WEST BRANCH SOQUEL CREEK NEAR SOQUEL, CALIF.

LOCATION.--Lat 37°03'05", long 121°56'20", in NW $\frac{1}{4}$ 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 220 ft (from topographic map). Prior to May 5, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--10 years, 11.6 cfs (8,400 acre-ft per year); median of yearly mean discharge, 9.2 cfs (6,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,290 cfs Jan. 30 (gage height, 6.65 ft); minimum, 0.55 cfs Sept. 21. 1958-68: Maximum discharge, 4,530 cfs Jan. 24, 1967 (gage height, 11.47 ft, from highwater mark in well), from rating curve extended above 740 cfs on basis of slope-area measurement at gage height 7.96 ft; minimum, 0.40 cfs July 16, 1961.

REMARKS.--Records good. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.6	3.5	2.7	18	7.8	20	4.3	2.7	1.8	1.1	.90
2	1.9	1.5	2.7	2.7	15	7.5	13	4.3	2.7	1.7	1.3	.85
3	2.4	1.6	3.1	2.7	12	7.3	11	4.3	2.5	1.8	1.1	.93
4	2.0	1.6	5.7	2.7	10	7.3	10	4.0	2.3	1.7	1.2	.99
5	1.8	1.8	18	2.7	8.8	7.2	9.5	4.0	2.3	1.8	1.2	1.0
6	1.8	1.9	3.3	2.7	7.6	7.2	8.9	4.0	2.3	1.7	1.3	1.1
7	1.7	1.9	15	2.7	7.0	9.1	8.2	3.8	2.3	1.7	1.4	1.1
8	1.6	1.9	3.6	2.7	6.7	16	7.8	3.6	2.3	1.7	1.5	1.2
9	1.6	1.8	2.9	2.7	6.4	8.7	7.3	3.4	2.3	1.8	1.5	1.1
10	1.5	1.9	2.6	45	6.0	7.6	7.0	3.4	2.4	1.8	1.4	1.0
11	1.4	1.9	2.5	7.4	5.6	7.0	6.7	3.4	2.5	1.5	1.1	1.0
12	1.4	1.7	2.5	5.5	5.4	34	6.6	3.6	2.5	1.5	1.3	1.0
13	1.4	2.1	3.2	4.6	5.4	60	6.4	6.6	2.5	1.4	1.3	1.1
14	1.3	3.3	4.5	5.5	5.8	129	6.3	5.2	2.4	1.4	1.3	1.1
15	1.3	2.3	4.9	20	5.3	38	6.1	4.0	2.4	1.4	1.3	1.1
16	1.6	2.1	5.3	7.0	31	58	6.0	3.6	2.1	1.3	1.3	1.0
17	1.4	2.0	6.5	5.8	58	36	5.8	3.4	2.1	1.3	1.3	1.0
18	1.4	2.0	26	5.2	27	25	5.7	3.2	2.1	1.3	1.3	.90
19	1.5	2.0	7.1	4.6	18	20	5.7	3.2	2.2	1.3	1.4	.90
20	1.4	2.0	5.0	4.3	32	18	5.6	3.0	2.3	1.1	1.3	1.0
21	1.4	2.0	4.4	4.0	32	17	5.5	2.7	2.3	1.1	1.1	.90
22	1.4	1.9	3.8	4.0	22	16	5.5	2.7	2.2	1.3	1.4	.90
23	1.4	1.8	3.8	3.8	18	15	5.5	2.7	2.2	1.3	1.3	.85
24	1.4	1.6	3.6	3.8	14	13	5.2	2.7	1.8	1.4	1.2	.85
25	1.5	1.6	3.4	3.8	11	13	5.3	2.7	1.9	1.3	1.2	.85
26	1.6	1.6	3.4	3.6	9.8	12	5.2	2.7	2.0	1.3	1.1	.90
27	1.5	1.7	3.0	4.0	9.0	12	4.9	2.7	2.1	1.3	1.1	.90
28	1.4	2.0	2.9	4.3	8.4	11	4.6	2.7	2.1	1.3	1.3	.90
29	1.4	4.1	2.7	53	8.1	11	4.6	2.7	2.1	1.1	1.1	.90
30	1.4	5.1	2.7	487	-----	11	4.6	2.7	1.9	1.1	1.1	1.0
31	1.5	-----	2.7	49	-----	11	-----	2.7	-----	1.1	.90	-----
TOTAL	48.0	62.3	164.3	759.5	423.3	652.7	214.5	108.0	67.8	44.6	38.70	29.22
MEAN	1.55	2.08	5.30	24.5	14.6	21.1	7.15	3.48	2.26	1.44	1.25	.97
MAX	2.4	5.1	26	487	58	129	20	6.6	2.7	1.8	1.5	1.2
MIN	1.3	1.5	2.5	2.7	5.3	7.0	4.6	2.7	1.8	1.1	.90	.85
AC-FT	95	124	326	1,510	840	1,290	425	214	134	88	77	58

CAL YR 1967 TOTAL 8,052.3 MEAN 22.1 MAX 990 MIN 1.3 AC-FT 15,970
WTR YR 1968 TOTAL 2,612.92 MEAN 7.14 MAX 487 MIN .85 AC-FT 5,180

Peak discharge (base, 300 cfs).--Jan. 30 (1715 hrs) 1,290 cfs (6.65 ft); Mar. 14 (0600 hrs) 368 cfs (4.92 ft).

11-1600. SOQUEL CREEK AT SOQUEL, CALIF.

LOCATION.--Lat 36°59'29", long 121°57'17", in NE $\frac{1}{4}$ sec.10, T.11 S., R.1 W., 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 21.38 ft above mean sea level, datum of 1929. Prior to July 8, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--17 years, 42.3 cfs (30,620 acre-ft per year); median of yearly mean discharges, 28 cfs (20,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,190 cfs Jan. 30 (gage height, 9.07 ft); minimum daily, 1.0 cfs Sept. 24-26.

1951-68: Maximum discharge, 15,800 cfs Dec. 23, 1955 (gage height, 22.33 ft), from rating curve extended above 2,900 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.10 cfs Aug. 12, 19, 1964.

REMARKS.--Records good. No regulation; small diversion above station for irrigation. Records of water temperatures for the water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	3.0	13	5.5	55	22	47	10	5.8	2.6	2.1	1.3
2	4.9	3.0	8.8	6.2	38	21	39	10	5.8	2.8	2.0	1.3
3	6.2	3.2	9.4	6.5	31	19	29	10	5.8	2.8	2.0	1.3
4	5.8	3.5	18	6.8	27	19	27	10	5.8	2.8	1.7	1.4
5	5.5	3.8	43	6.8	26	19	26	10	5.8	2.8	1.8	1.6
6	5.2	4.0	13	7.4	24	18	24	10	5.8	2.7	1.9	1.7
7	4.9	4.0	34	8.4	22	23	23	10	5.8	2.7	1.7	1.8
8	4.3	4.3	16	8.4	21	47	22	10	5.8	2.6	1.7	1.7
9	4.3	4.3	11	10	21	24	21	10	6.2	2.6	1.6	1.8
10	4.3	4.0	9.6	71	20	21	19	9.6	5.8	2.6	1.6	1.4
11	4.3	4.0	8.8	25	20	19	18	9.6	4.9	2.3	1.6	1.4
12	4.3	4.3	7.8	17	19	89	18	9.2	5.2	2.3	1.3	1.5
13	4.0	5.2	7.4	14	19	172	17	12	4.9	2.6	1.4	1.4
14	3.8	10	8.8	16	19	233	17	11	4.9	2.4	1.7	1.5
15	3.5	7.8	9.2	32	18	84	16	8.1	4.6	2.3	1.7	1.7
16	3.0	5.8	8.4	22	48	139	16	7.8	4.3	2.6	1.5	1.6
17	3.0	5.5	10	17	123	100	14	7.4	4.0	2.4	1.4	1.6
18	2.8	5.5	27	15	56	79	14	7.1	4.0	2.3	1.2	1.6
19	2.8	5.5	15	14	37	66	14	7.1	4.0	2.2	1.8	1.5
20	3.0	4.9	9.6	13	103	56	14	7.1	3.8	2.5	1.8	1.5
21	3.0	4.6	8.1	12	105	49	13	7.1	3.8	2.6	1.8	1.3
22	3.2	4.6	7.1	12	68	44	13	7.1	3.5	2.5	1.8	1.1
23	3.2	4.6	6.5	11	51	42	12	7.1	3.5	2.4	1.7	1.1
24	3.5	4.6	6.2	11	42	38	12	6.8	3.5	2.3	1.6	1.0
25	3.5	4.3	5.8	11	35	34	12	6.5	3.2	2.4	1.4	1.0
26	3.5	4.3	5.5	11	30	30	11	6.8	3.2	2.4	1.4	1.0
27	3.5	4.3	5.2	12	27	27	11	6.5	3.5	2.2	1.4	1.1
28	3.5	5.5	5.2	14	25	25	11	6.5	3.2	2.3	1.3	1.3
29	3.5	14	4.9	49	23	24	10	6.5	3.2	2.2	1.1	1.5
30	3.2	18	4.6	882	-----	23	10	5.8	2.6	2.2	1.1	1.3
31	3.0	-----	8.1	186	-----	22	-----	6.2	-----	2.2	1.2	-----
TOTAL	120.8	164.4	355.0	1,533.0	1,153	1,628	550	258.9	136.2	76.6	49.3	42.3
MEAN	3.90	5.48	11.5	49.5	39.8	52.5	18.3	8.35	4.54	2.47	1.59	1.41
MAX	6.2	18	43	882	123	233	47	12	6.2	2.8	2.1	1.8
MIN	2.8	3.0	4.6	5.5	18	18	10	5.8	2.6	2.2	1.1	1.0
AC-FT	240	326	704	3,040	2,290	3,230	1,090	514	270	152	98	84

CAL YR 1967 TOTAL 24,306.7 MEAN 66.6 MAX 2,330 MIN 2.2 AC-FT 48,210
WTR YR 1968 TOTAL 6,067.5 MEAN 16.6 MAX 882 MIN 1.0 AC-FT 12,030

Peak discharge (base, 750 cfs).--Jan. 30 (1900 hrs) 2,190 cfs (9.07 ft).

SAN LORENZO RIVER BASIN

11-1603. ZAYANTE CREEK AT ZAYANTE, CALIF.

LOCATION.--Lat 37°05'10", long 122°02'45", in SE $\frac{1}{4}$ sec.2, T.10 S., R.2 W., 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 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 390 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 10.0 cfs (7,240 acre-ft per year); median of yearly mean discharges, 6.5 cfs (4,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,240 cfs Jan. 30 (gage height, 5.20 ft); minimum daily, 0.30 cfs Sept. 16-18.

1957-68: Maximum discharge, 3,700 cfs Apr. 2, 1958 (gage height, 7.70 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurement of maximum flow; no flow at times, caused by filling of pools upstream.

REMARKS.--Records good. No known regulation; only small diversion above station for individual use.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.0	4.2	1.8	19	7.8	11	2.8	1.8	1.1	.57	.41
2	1.4	1.0	2.2	1.9	12	7.6	7.8	2.8	1.7	1.1	.53	.38
3	1.6	1.0	2.8	1.8	9.8	6.5	7.0	2.8	1.8	1.0	.53	.38
4	1.3	1.1	5.1	1.8	8.1	6.3	6.8	2.8	1.7	1.0	.53	.46
5	1.4	1.2	8.8	1.8	7.6	6.0	6.5	2.6	1.7	.92	.53	.46
6	1.4	1.2	2.8	1.8	6.8	5.8	6.3	2.5	1.7	.82	.53	.46
7	1.3	1.1	7.2	1.8	6.3	7.8	5.8	2.4	1.7	.82	.52	.41
8	1.2	1.1	3.0	1.8	5.8	10	5.8	2.4	1.7	.87	.53	.41
9	1.2	1.1	2.6	1.9	5.6	6.3	5.6	2.4	1.7	.82	.53	.38
10	1.2	1.1	2.4	13	5.5	5.8	5.5	2.3	1.7	.78	.50	.38
11	1.2	1.1	2.3	4.4	5.3	5.5	5.5	2.3	1.6	.71	.50	.38
12	1.2	1.1	2.1	3.3	5.1	8.8	5.1	2.4	1.6	.71	.50	.36
13	1.2	1.2	2.2	3.3	4.9	23	5.1	3.2	1.5	.68	.50	.30
14	1.2	1.6	2.6	4.4	4.7	30	4.7	2.9	1.4	.64	.50	.36
15	1.1	1.2	2.6	7.8	4.7	20	4.6	2.5	1.4	.68	.53	.36
16	1.1	1.2	2.7	5.5	41	35	4.4	2.4	1.5	.64	.50	.30
17	1.1	1.2	2.8	4.9	71	24	4.4	2.3	1.5	.68	.50	.30
18	1.1	1.2	6.2	4.4	28	19	4.1	2.3	1.5	.71	.50	.30
19	1.1	1.2	4.4	4.4	18	16	4.1	2.2	1.5	.71	.57	.36
20	1.1	1.2	2.9	4.1	19	14	4.1	2.2	1.4	.68	.64	.38
21	1.1	1.2	2.7	3.8	22	13	4.1	2.2	1.3	.64	.64	.36
22	1.1	1.2	2.5	3.7	18	12	3.8	2.2	1.3	.64	.64	.36
23	1.1	1.2	2.4	3.6	15	12	3.7	2.1	1.2	.60	.60	.36
24	1.1	1.2	2.3	3.6	13	10	3.7	2.1	1.3	.60	.57	.38
25	1.1	1.2	2.2	3.3	11	9.8	3.6	2.1	1.4	.64	.53	.43
26	1.1	1.2	2.1	3.3	10	9.0	3.3	2.0	1.4	.60	.53	.41
27	1.1	1.2	2.0	3.9	9.4	8.6	3.3	2.0	1.4	.60	.50	.38
28	1.1	1.2	2.0	4.4	9.0	8.1	3.3	2.0	1.4	.60	.50	.38
29	1.1	4.2	2.0	22	8.1	7.8	3.3	1.9	1.1	.62	.50	.50
30	1.1	6.0	1.9	474	-----	7.6	3.0	1.9	1.1	.57	.46	.68
31	1.1	-----	1.8	63	-----	7.0	-----	1.9	-----	.57	.43	-----
TOTAL	36.7	42.9	95.8	664.5	403.7	370.1	149.3	72.9	45.0	22.75	16.44	11.77
MEAN	1.18	1.43	3.09	21.4	13.9	11.9	4.98	2.35	1.50	.73	.53	.39
MAX	1.6	6.0	8.8	474	71	35	11	3.2	1.8	1.1	.64	.68
MIN	1.1	1.0	1.8	1.8	4.7	5.5	3.0	1.9	1.1	.57	.43	.30
AC-FT	73	85	190	1,320	801	734	296	145	89	45	33	23

CAL YR 1967 TOTAL 7,569.7 MEAN 20.7 MAX 1,080 MIN 1.0 AC-FT 15,010
WTR YR 1968 TOTAL 1,931.86 MEAN 5.28 MAX 474 MIN .30 AC-FT 3,830

Peak discharge (base, 450 cfs).--Jan. 30 (1230 hrs) 1,240 cfs (5.20 ft).

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 217.0 ft above mean sea level (levels by Topographic Division). Prior to Apr. 23, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--32 years, 133 cfs (96,290 acre-ft per year); median of yearly mean discharges, 92 cfs (66,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 8,720 cfs Jan. 30 (gage height, 13.14 ft); minimum daily, 12 cfs for several days.

1937-68: Maximum discharge, 30,400 cfs Dec. 23, 1955 (gage height, 22.55 ft), from rating curve extended above 11,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.8 cfs (regulated) June 25, 1939; minimum daily, 7.5 cfs July 1, 1939.

REMARKS.--Records good. Flow regulated by Loch Lomond Reservoir since 1961 (capacity, 8,400 acre-ft). Many small diversions above station for domestic supply. Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	21	40	29	324	117	174	48	30	17	16	14
2	29	21	30	29	200	111	131	49	28	17	16	14
3	31	21	46	28	150	103	113	49	29	17	15	14
4	31	22	111	28	128	98	103	49	28	20	15	15
5	26	23	194	28	112	95	98	47	30	20	14	14
6	25	24	52	28	101	93	95	45	30	19	14	14
7	25	24	123	28	92	110	90	44	30	18	14	16
8	25	24	57	28	86	153	86	44	30	19	13	14
9	24	24	43	29	82	101	82	42	30	19	13	14
10	25	24	38	303	79	94	79	40	28	18	15	13
11	25	24	36	84	75	89	78	41	28	18	15	13
12	24	23	34	53	72	168	79	41	29	17	15	13
13	23	25	30	44	69	337	80	61	27	17	15	13
14	23	35	30	65	68	483	75	64	26	18	16	14
15	22	30	31	100	65	300	73	46	25	18	15	14
16	22	26	30	66	438	503	72	43	23	19	15	13
17	22	25	30	53	940	382	73	41	23	19	16	13
18	22	25	115	49	444	288	72	40	23	18	12	18
19	22	26	63	43	272	234	68	38	23	18	15	12
20	22	24	44	41	349	199	67	34	22	19	15	14
21	23	24	38	39	328	174	64	36	22	19	15	12
22	23	24	36	37	275	160	62	36	21	19	15	12
23	23	24	34	36	238	160	60	34	20	19	14	14
24	23	24	34	35	192	141	58	33	23	18	13	14
25	23	24	32	34	169	132	57	34	24	18	13	12
26	22	23	32	33	152	128	55	30	20	18	13	13
27	22	23	30	36	140	122	53	29	19	18	14	12
28	23	25	30	38	131	118	52	29	19	18	14	13
29	22	41	29	259	123	112	52	28	18	18	14	14
30	21	57	29	3,610	-----	107	50	28	16	17	14	14
31	21	-----	29	863	-----	104	-----	30	-----	16	14	-----
TOTAL	738	780	1,530	6,176	5,894	5,516	2,351	1,253	744	563	447	409
MEAN	23.8	26.0	49.4	199	203	178	78.4	40.4	24.8	18.2	14.4	13.6
MAX	31	57	194	3,610	940	503	174	64	30	20	16	18
MIN	21	21	29	28	65	89	50	28	16	16	12	12
AC-FT	1,460	1,550	3,030	12,250	11,690	10,940	4,660	2,490	1,480	1,120	887	811

CAL YR 1967: TOTAL 75,797

MEAN 208

MAX 6,350

MIN 21

AC-FT 150,300

WTR YR 1968: TOTAL 26,401

MEAN 72.1

MAX 3,610

MIN 12

AC-FT 52,370

Peak discharge (base, 1,400 cfs).--Jan. 30 (1300 hrs) 8,720 cfs (13.14 ft).

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 1968 (discontinued).

GAGE.--Digital 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, graphic 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. July 28, 1952, to Nov. 2, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--19 years, 19.6 cfs (14,190 acre-ft per year); median of yearly mean discharges, 16 cfs (11,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 984 cfs Jan. 30 (gage height, 8.68 ft); minimum daily, 0.93 cfs Sept. 1.

1940-43, 1952-68: 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, 0.10 cfs Aug. 18, 1954, Sept. 17, 1955.

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

REVISIONS (water year).--1967 report: 1961.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.5	4.4	2.9	33	14	38	3.7	2.0	1.4	1.3	.93
2	2.0	1.4	3.1	2.9	22	13	14	3.6	1.9	1.4	1.3	1.1
3	2.3	1.5	8.8	2.9	17	12	9.8	3.8	1.9	1.4	1.1	1.1
4	1.8	1.4	11	2.9	14	11	9.0	3.8	1.8	1.4	1.1	1.3
5	1.6	1.5	22	2.9	12	10	8.3	3.8	1.9	1.3	1.3	1.3
6	1.6	2.0	4.3	2.9	10	10	7.5	3.5	2.0	1.3	1.3	1.3
7	1.5	2.0	35	2.9	9.4	15	7.2	3.4	1.8	1.3	1.3	1.5
8	1.3	1.9	7.7	3.1	8.7	34	6.8	3.5	1.7	1.3	1.2	1.1
9	1.4	2.0	5.3	2.9	8.0	20	6.5	3.3	1.8	1.3	1.2	1.2
10	1.5	2.0	4.6	38	7.7	14	6.2	3.3	1.8	1.3	1.1	1.3
11	1.5	1.8	4.4	9.1	7.5	10	5.9	3.2	1.8	1.3	1.1	1.3
12	1.5	2.0	4.1	6.1	7.2	79	5.7	3.3	1.8	1.2	1.2	1.3
13	1.4	3.1	4.7	5.4	6.8	219	5.7	5.9	1.9	1.2	1.3	1.3
14	1.5	5.3	5.0	8.3	6.6	179	5.4	4.2	1.8	1.1	1.4	1.3
15	1.5	2.4	5.6	23	6.4	86	5.4	3.3	1.7	1.2	1.4	1.3
16	1.6	2.3	4.6	8.5	25	152	5.4	3.0	1.6	1.2	1.3	1.2
17	1.6	2.2	5.0	6.1	95	85	5.1	2.9	1.8	1.2	1.0	1.2
18	1.5	2.4	21	5.2	60	55	5.1	2.9	1.8	1.1	1.2	1.2
19	1.5	2.4	10	4.6	32	40	4.8	2.8	2.0	1.1	3.3	1.2
20	1.4	2.4	5.8	4.1	60	29	5.1	2.9	1.8	1.1	2.0	1.2
21	1.6	2.2	4.7	4.0	50	23	4.8	2.9	1.7	1.1	1.4	1.1
22	1.8	2.2	4.0	3.9	38	19	4.5	2.8	1.4	1.3	1.5	1.1
23	1.6	2.1	3.7	3.7	30	18	4.2	2.8	1.5	1.2	1.3	1.1
24	1.8	2.3	3.6	3.5	25	14	4.2	2.7	1.6	1.3	1.2	1.1
25	1.8	2.2	3.5	3.5	20	12	4.2	2.7	1.6	1.4	1.3	1.1
26	1.6	2.4	3.3	3.5	18	11	4.2	2.4	1.6	1.4	1.2	1.0
27	1.6	2.5	3.3	4.6	17	9.6	4.0	2.3	1.6	1.2	1.2	1.0
28	1.5	3.2	3.2	4.4	16	9.0	3.8	1.9	1.5	1.3	1.2	1.0
29	1.5	15	3.3	53	15	8.3	3.9	2.0	1.4	1.3	1.2	1.0
30	1.5	11	3.2	351	-----	7.9	3.7	1.9	1.2	1.5	1.1	1.0
31	1.5	-----	3.1	100	-----	7.9	-----	2.0	-----	1.4	1.1	-----
TOTAL	49.4	88.6	219.3	679.8	677.3	1,226.7	208.4	96.5	51.7	39.5	41.1	35.13
MEAN	1.55	2.95	7.07	21.9	23.4	39.6	6.95	3.11	1.72	1.27	1.33	1.17
MAX	2.3	15	39	351	95	219	38	5.9	2.0	1.5	3.3	1.5
MIN	1.3	1.4	3.1	2.9	6.4	7.9	3.7	1.9	1.2	1.1	1.0	.93
AC-FT	98	176	435	1,350	1,340	2,430	413	191	103	78	82	70

CAL YR 1967 TOTAL 10,021.9 MEAN 27.5 MAX 1,250 MIN 1.3 AC-FT 19,880
WTR YR 1968 TOTAL 3,413.43 MEAN 9.33 MAX 351 MIN .93 AC-FT 6,770

Peak discharge (base, 600 cfs).--Jan. 30 (1715 hrs) 984 cfs (8.68 ft).

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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 30 ft (from topographic map). Prior to July 9, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--10 years, 25.3 cfs (18,320 acre-ft per year); median of yearly mean discharges, 17 cfs (12,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 995 cfs Jan. 30 (gage height, 5.18 ft); minimum daily, 0.82 cfs Sept. 24, 25, 27.

1958-68: Maximum discharge, 1,970 cfs Feb. 13, 1962 (gage height, 9.36 ft), from rating curve extended above 650 cfs on basis of slope-area measurement at gage height 7.35 ft; minimum daily, 0.3 cfs for several days in 1961.

REMARKS.--Records good except those above 600 cfs, which are fair. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.2	4.7	5.8	94	43	40	14	7.5	3.7	2.0	1.4
2	3.4	2.2	3.6	5.8	68	38	35	14	7.1	3.7	2.0	1.3
3	4.4	2.2	4.3	5.6	56	36	30	14	7.1	3.7	1.9	1.3
4	3.2	2.2	16	5.8	47	34	29	14	6.8	3.7	1.8	1.5
5	3.1	2.3	23	5.8	42	32	28	13	7.5	3.6	1.7	1.5
6	3.1	2.5	11	5.8	37	30	27	13	7.8	3.6	1.7	1.4
7	2.9	2.6	17	5.8	33	30	26	12	7.8	3.6	1.6	1.3
8	2.8	2.5	12	5.8	30	35	25	12	7.5	3.4	1.5	1.3
9	2.6	2.4	8.7	6.3	28	29	24	12	7.1	3.4	1.5	1.2
10	2.6	2.4	7.5	40	27	27	23	12	6.8	3.5	1.5	1.1
11	2.6	2.4	6.5	21	27	26	23	12	6.5	3.4	1.4	1.1
12	2.6	2.4	6.8	14	25	55	22	12	6.5	3.1	1.4	1.1
13	2.6	2.5	6.3	11	23	110	21	14	6.3	3.0	1.7	1.1
14	2.6	3.1	6.3	11	23	100	20	14	6.0	3.1	1.9	1.3
15	2.5	2.9	6.5	26	21	75	20	13	6.0	3.1	1.9	1.3
16	2.6	2.8	6.5	21	66	110	19	11	5.6	3.0	1.7	1.0
17	2.4	2.8	8.4	16	293	130	19	11	5.6	2.9	1.6	.97
18	2.4	2.8	14	14	157	95	18	10	5.6	2.7	1.5	1.0
19	2.4	2.6	13	12	101	75	18	10	5.4	2.5	2.2	.97
20	2.5	2.8	11	11	225	60	18	9.7	5.4	2.4	2.4	.97
21	2.5	2.6	9.4	10	184	54	17	9.4	5.4	2.5	2.0	.98
22	2.6	2.5	8.4	9.4	138	51	16	9.4	5.1	2.5	1.9	.90
23	2.6	2.5	8.1	9.1	112	50	16	9.1	4.9	2.5	1.7	.85
24	2.6	2.5	7.8	8.7	84	45	16	9.1	4.9	2.3	1.6	.82
25	2.4	2.5	7.1	8.4	70	43	16	9.7	4.9	2.4	1.6	.82
26	2.4	2.3	6.8	8.4	60	40	15	8.4	4.9	2.4	1.6	.83
27	2.4	2.3	6.3	8.7	53	38	15	8.1	4.7	2.3	1.5	.82
28	2.6	3.1	6.3	8.7	48	35	14	8.1	4.4	2.3	1.4	.89
29	2.5	3.4	6.0	14	45	33	14	7.8	3.9	2.3	1.3	.95
30	2.2	5.6	6.0	440	-----	32	14	7.8	3.7	2.1	1.3	1.1
31	2.2	-----	5.8	197	-----	31	-----	7.8	-----	2.1	1.4	-----
TOTAL	83.1	79.9	271.1	971.9	2,217	1,622	638	341.4	178.7	90.8	52.2	33.07
MEAN	2.68	2.66	8.75	31.4	76.4	52.3	21.3	11.0	5.96	2.93	1.68	1.10
MAX	4.4	5.6	23	440	293	130	40	14	7.8	3.7	2.4	1.5
MIN	2.2	2.2	3.6	5.6	21	26	14	7.8	3.7	2.1	1.3	.82
AC-FT	165	158	538	1,930	4,400	3,220	1,270	677	354	180	104	66

CAL YR 1967 TOTAL 18,423.4 MEAN 50.5 MAX 1,190 MIN 2.2 AC-FT 36,540
WTR YR 1968 TOTAL 6,579.17 MEAN 18.0 MAX 440 MIN .82 AC-FT 13,050

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-30	1130	5.18	995	02-20	0500	2.88	324
02-17	1200	3.36	486				

PESCADERO CREEK BASIN

11-1625. PESCADERO CREEK NEAR PESCADERO, CALIF.

LOCATION.--Lat 37°15'40", long 122°19'40", in SW $\frac{1}{4}$ 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 62.3 ft above mean sea level, datum of 1929. Prior to Nov. 8, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--17 years, 40.4 cfs (29,250 acre-ft per year); median of yearly mean discharges, 24 cfs (17,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,740 cfs Jan. 30 (gage height, 11.65 ft); minimum daily, 0.95 cfs Sept. 29.

1951-68: Maximum discharge, 9,420 cfs Dec. 23, 1955 (gage height, 21.27 ft), from rating curve extended above 2,700 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records good. Minor regulation from swimming pools in San Mateo County Memorial Park and Portola State Park during summer months. Small diversions above station by pumping. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

REVISIONS (water year).--1962 report: 1961.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	3.8	21	5.4	152	31	63	11	6.3	3.5	2.4	3.3
2	3.0	3.8	15	5.4	99	29	56	9.8	7.3	3.4	2.3	3.8
3	6.0	3.8	14	5.4	71	26	38	9.4	6.3	3.5	2.3	5.9
4	5.0	3.8	43	5.2	52	25	32	9.9	6.2	3.4	2.7	1.5
5	3.8	3.5	60	5.2	43	24	30	10	6.4	3.3	2.8	1.4
6	3.8	3.8	15	5.2	36	22	28	9.5	4.0	3.2	2.4	1.4
7	3.5	3.8	21	5.0	31	23	25	8.8	6.0	3.1	2.3	1.3
8	3.5	3.8	14	5.0	29	35	24	9.1	6.0	3.0	2.3	1.3
9	3.5	3.3	9.5	5.2	26	26	22	8.8	5.9	2.9	2.0	5.0
10	3.8	3.5	7.1	93	25	23	21	8.6	5.8	2.8	1.8	1.9
11	4.0	3.3	6.3	53	23	21	20	9.3	5.6	2.6	2.1	1.4
12	4.0	3.3	5.6	29	22	62	19	11	5.5	2.6	2.2	1.3
13	4.0	3.5	5.2	21	20	191	18	12	5.4	2.6	2.4	1.5
14	4.2	5.2	5.6	21	20	161	18	15	5.3	2.7	3.2	1.8
15	4.2	5.6	5.6	62	18	131	17	11	5.2	3.2	4.1	1.7
16	4.5	3.5	6.0	46	38	187	17	9.6	5.1	3.3	4.3	1.7
17	4.5	3.3	6.3	32	144	218	16	9.1	5.0	3.0	3.4	1.5
18	7.1	3.0	13	25	104	165	16	8.5	4.9	2.8	2.8	1.2
19	4.0	3.3	14	21	68	121	15	8.2	4.8	2.6	4.0	1.0
20	3.8	3.5	7.0	18	136	94	15	8.2	4.5	2.4	5.4	1.0
21	3.8	3.3	6.0	16	136	71	15	8.4	4.4	2.3	5.1	1.1
22	3.8	3.8	5.8	14	106	61	14	8.1	4.3	2.4	3.8	1.1
23	3.8	3.5	5.8	12	82	56	13	7.6	4.4	2.5	3.8	1.0
24	3.5	3.3	5.8	11	67	48	14	7.3	4.6	2.6	3.6	.96
25	3.3	3.3	5.8	10	55	44	13	8.8	4.5	2.6	3.1	.97
26	3.5	3.3	5.6	10	47	40	13	8.6	4.1	2.6	3.0	1.0
27	3.3	3.3	5.6	12	42	37	12	7.8	3.7	2.6	3.1	.99
28	3.3	4.5	5.6	14	38	34	12	4.4	3.9	2.6	2.9	.96
29	4.0	12	5.6	32	34	31	12	5.9	3.8	2.7	2.9	.95
30	3.8	26	5.4	1,250	-----	29	12	6.4	3.6	2.7	3.2	1.2
31	3.8	-----	5.4	372	-----	27	-----	6.2	-----	2.7	3.2	-----
TOTAL	122.4	140.7	356.6	2,221.0	1,764	2,093	640	276.3	152.8	88.2	94.9	51.13
MEAN	3.95	4.69	11.5	71.6	60.8	67.5	21.3	8.91	5.09	2.85	3.06	1.70
MAX	7.1	26	60	1,250	152	218	63	15	7.3	3.5	5.4	5.9
MIN	2.3	3.0	5.2	5.0	18	21	12	4.4	3.6	2.3	1.8	.95
AC-FT	243	279	707	4,410	3,500	4,150	1,270	548	303	175	188	101

CAL YR 1967 TOTAL 23,976.4 MEAN 65.7 MAX 2,300 MIN 1.8 AC-FT 47,560
WTR YR 1968 TOTAL 8,001.03 MEAN 21.9 MAX 1,250 MIN .95 AC-FT 15,870

Peak discharge (base, 500 cfs).--Jan. 30 (1015 hrs) 2,740 cfs (11.65 ft).

PESCADERO CREEK BASIN

349

11-1625.4. BUTANO CREEK NEAR PESCADERO, CALIF.

LOCATION.--Lat 37°14'01", long 122°21'56", in Butano Grant, on right bank 0.15 mile below unnamed tributary, and 1.7 miles southeast of Pescadero, San Mateo County.

DRAINAGE AREA.--18.3 sq mi.

RECORDS AVAILABLE.--Occasional low-flow measurements, water years 1957, 1959-62, and annual maximum, water years 1959-62. June 1962 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 70 ft (from topographic map). February 1957 to June 22, 1962, crest-stage gage at site 250 ft downstream at same datum. June 23, 1962, to Sept. 28, 1965, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 1,070 cfs Jan. 30 (gage height, 14.70 ft); minimum daily, 0.71 cfs Sept. 27.

1959-68: Maximum discharge, 1,600 cfs Feb. 13, 1962 (gage height, 10.04 ft, crest-stage gage, from flood-marks), by slope-area measurement of maximum flow.

1962-68: No flow July 29 to Aug. 1, 1964.

REMARKS.--Records good. No regulation; small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.8	5.6	2.7	79	25	52	8.3	3.9	3.0	1.5	1.4
2	2.6	1.8	3.3	2.7	54	23	39	7.8	4.1	2.6	1.6	.94
3	4.2	1.8	3.9	12	41	21	30	7.6	3.8	2.7	1.9	.91
4	2.7	1.7	15	11	33	20	26	7.6	3.5	2.8	1.7	.84
5	2.5	1.9	60	10	27	19	24	7.7	3.9	2.8	1.7	.84
6	2.4	2.0	9.2	9.1	24	18	23	7.1	3.9	2.5	1.8	.84
7	2.3	1.9	17	8.3	21	20	21	7.0	3.9	2.9	1.7	.78
8	2.3	1.9	9.1	8.1	19	27	19	7.1	3.7	2.7	1.5	.92
9	2.3	1.9	6.1	7.8	18	19	18	6.9	4.1	2.5	1.9	.84
10	2.4	1.9	4.5	7.4	17	17	17	6.9	3.8	2.4	1.8	.84
11	2.3	1.9	3.8	7.3	15	16	16	7.2	3.6	2.2	1.7	.80
12	2.1	1.9	3.3	8.0	14	47	16	7.5	3.5	2.2	1.8	1.0
13	2.0	1.9	3.1	364	14	93	15	7.9	3.4	2.3	1.8	1.5
14	1.9	3.9	2.9	192	13	73	14	7.5	3.3	2.5	2.2	1.5
15	1.9	2.7	2.8	84	12	59	13	6.6	3.4	2.6	2.1	1.7
16	1.7	2.2	2.8	57	31	89	13	6.4	3.4	2.4	1.6	1.1
17	1.8	2.1	3.0	11	83	92	12	6.0	3.3	2.4	1.5	.95
18	1.7	2.0	11	8.4	65	71	12	5.5	3.1	2.4	1.6	1.0
19	1.8	2.0	8.7	7.0	47	56	12	5.7	3.2	2.0	2.2	.94
20	1.9	1.9	6.0	6.3	100	47	11	5.5	3.1	1.9	2.2	.80
21	1.8	1.9	4.7	5.8	90	41	11	5.3	3.1	2.1	1.7	.77
22	2.0	1.9	4.2	5.1	71	36	10	5.0	3.0	2.0	1.4	1.1
23	2.0	1.8	3.6	4.9	58	34	10	4.6	3.3	1.8	1.3	.93
24	2.0	1.8	3.4	4.7	49	30	10	4.6	3.2	1.8	1.2	.74
25	2.0	1.8	3.3	4.5	42	27	9.7	5.6	2.9	2.2	1.5	.76
26	1.9	1.7	3.1	4.5	37	25	9.4	5.0	3.0	2.1	1.3	.81
27	1.9	1.8	3.0	5.1	33	22	9.2	4.6	3.0	1.9	1.1	.71
28	1.9	3.2	3.0	4.9	30	21	8.9	4.5	3.1	2.0	1.1	1.1
29	1.9	3.7	2.8	9.7	27	19	9.0	4.3	3.1	1.9	.88	1.1
30	1.7	8.4	2.7	449	-----	18	8.7	4.3	3.1	1.7	.85	1.1
31	1.8	-----	2.7	154	-----	17	-----	3.9	-----	1.9	1.1	-----
TOTAL	65.6	69.1	217.6	1,476.3	1,164	1,142	498.9	191.5	102.7	71.2	49.23	29.56
MEAN	2.12	2.30	7.02	47.6	40.1	36.8	16.6	6.18	3.42	2.30	1.59	.99
MAX	4.2	8.4	60	449	100	93	52	8.3	4.1	3.0	2.2	1.7
MIN	1.7	1.7	2.7	2.7	12	16	8.7	3.9	2.9	1.7	.85	.71
AC-FT	130	137	432	2,930	2,310	2,270	990	380	204	141	98	59

CAL YR 1967 TOTAL 11,226.1 MEAN 30.8 MAX 1,040 MIN 1.6 AC-FT 22,270
WTR YR 1968 TOTAL 5,077.69 MEAN 13.9 MAX 449 MIN .71 AC-FT 10,070

Peak discharge (base, 170 cfs).--Dec. 5 (0245 hrs) 247 cfs (7.70 ft); Jan. 30 (1000 hrs) 1,070 cfs (14.70 ft).

PURISIMA CREEK BASIN

11-1626. PURISIMA CREEK NEAR HALF MOON BAY, CALIF.

LOCATION.--Lat 37°26'06", long 122°22'23", in Canada de Verde y Arroyo de la Purisima Grant, 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 380 ft (from topographic map). Prior to Sept. 7, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--10 years, 2.91 cfs (2,110 acre-ft per year).

EXTREMES.--Maximum discharge during year, 40 cfs Jan. 30 (gage height, 4.04 ft); minimum daily, 0.36 cfs Sept. 24.

1958-68: Maximum discharge, 343 cfs Jan. 21, 1967 (gage height, 5.42 ft), from rating curve extended above 140 cfs on basis of slope-area measurement at gage height 5.28 ft; minimum daily, 0.20 cfs Dec. 28, 29, 1959, Sept. 3-5, 1961.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.86	1.1	.92	8.0	3.4	4.4	1.5	1.0	.76	.66	.44
2	1.8	.85	1.0	.92	5.6	3.1	3.6	1.5	1.0	.83	.69	.42
3	1.3	.84	2.5	.92	4.3	2.9	3.3	1.5	1.0	.84	.62	.42
4	1.1	.92	2.7	.92	3.4	2.7	3.2	1.5	1.0	.86	.56	.53
5	1.2	.96	3.5	.92	2.9	2.6	3.1	1.5	1.1	.82	.60	.39
6	1.1	1.0	1.7	.92	2.5	2.6	2.8	1.5	1.1	.81	.67	.41
7	1.1	1.0	2.3	.92	2.2	3.2	2.7	1.5	1.1	.81	.64	.44
8	1.1	1.0	1.6	.92	2.1	4.3	2.6	1.5	1.1	.80	.61	.41
9	1.0	1.0	1.3	.98	2.1	3.5	2.5	1.3	1.0	.76	.61	.41
10	1.0	1.0	1.2	5.2	2.0	3.2	2.4	1.3	1.0	.71	.61	.39
11	1.0	1.0	1.1	2.2	1.9	2.9	2.3	1.5	1.0	.69	.61	.39
12	1.0	.97	1.1	1.6	1.8	7.3	2.3	1.5	1.0	.69	.57	.51
13	1.0	.93	1.1	1.4	1.8	15	2.2	1.6	1.0	.76	.66	.56
14	1.0	1.2	1.2	2.5	1.6	13	2.1	1.6	.95	.83	.72	.51
15	1.0	1.0	1.2	8.3	1.6	11	2.1	1.5	.92	.84	.69	.55
16	1.0	.98	1.2	4.7	2.1	13	2.0	1.3	.92	.79	.68	.43
17	1.0	.92	1.5	2.9	3.7	13	1.9	1.3	.92	.76	.66	.40
18	1.0	.92	2.5	2.2	3.8	12	1.9	1.2	.92	.75	.65	.45
19	1.0	.93	2.2	1.8	4.3	9.8	1.9	1.2	.91	.70	.90	.50
20	1.0	.92	1.9	1.5	19	8.2	1.9	1.2	.84	.68	.73	.48
21	1.0	.92	1.6	1.3	16	6.9	1.8	1.2	.84	.68	.54	.43
22	1.0	.90	1.4	1.3	12	6.5	1.8	1.2	.84	.69	.58	.41
23	1.1	.84	1.3	1.1	9.3	5.9	1.8	1.1	.84	.68	.59	.39
24	1.1	.84	1.2	1.1	7.3	5.4	1.8	1.1	.89	.76	.58	.36
25	1.1	.85	1.2	1.1	6.1	4.9	1.7	1.5	.85	.76	.57	.38
26	1.1	.84	1.1	1.0	5.4	4.5	1.6	1.2	.84	.76	.48	.39
27	1.1	.95	1.0	1.1	4.7	4.1	1.6	1.1	.90	.73	.48	.41
28	1.0	1.0	1.0	1.2	4.2	3.8	1.6	1.1	.84	.68	.50	.41
29	1.0	2.4	1.0	1.4	3.8	3.6	1.6	1.1	.83	.68	.47	.42
30	.94	1.4	1.0	29	-----	3.4	1.5	1.0	.79	.67	.42	.45
31	.91	-----	.98	17	-----	3.2	-----	1.0	-----	.68	.39	-----
TOTAL	33.15	30.14	46.68	99.24	145.5	188.9	68.0	41.1	28.24	23.26	18.74	13.09
MEAN	1.07	1.00	1.51	3.20	5.02	6.09	2.27	1.33	.94	.75	.60	.44
MAX	1.8	2.4	3.5	29	19	15	4.4	1.6	1.1	.86	.90	.56
MIN	.91	.84	.98	.92	1.6	2.6	1.5	1.0	.79	.67	.39	.36
AC-FT	66	60	93	197	289	375	135	82	56	46	37	26

CAL YR 1967 TOTAL 2,457.27

WTR YR 1968 TOTAL 736.04

MEAN 6.73

MEAN 2.01

MAX 176

MAX 29

MIN .80

MIN .36

AC-FT 4,870

AC-FT 1,460

Peak discharge (base, 30 cfs).--Jan. 30 (0630 hrs) 40 cfs (4.04 ft).

PILARCITOS CREEK BASIN

351

11-1626.3. PILARCITOS CREEK AT HALF MOON BAY, CALIF.

LOCATION.--Lat 37°28'07", long 122°26'08", on north boundary of Miramontes Grant, on left bank 0.2 mile downstream from State Highway 1, 0.5 mile northwest of town of Half Moon Bay, San Mateo County, and 1.0 mile upstream from mouth.

DRAINAGE AREA.--27.2 sq mi.

RECORDS AVAILABLE.--July 1966 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 23.59 ft above mean sea level, datum of 1929. Prior to July 2, 1968, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 1,290 cfs Jan. 30 (gage height, 11.20 ft); no flow for many days. 1966-68: Maximum discharge, 1,290 cfs Jan. 30, 1968 (gage height, 11.20 ft); no flow for many days in each year.

REMARKS.--Records good. Flow slightly regulated by storage in Pilarcitos Lake (capacity, 3,100 acre-ft, majority of water imported for domestic use). Small diversions for irrigation above station by pumping.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.33	6.7	2.3	55	15	22	2.6	1.4	.30	.49	
2	2.6	.68	7.8	2.0	39	13	15	3.0	1.4	.55	.33	
3	2.6	.90	10	2.0	37	12	13	3.0	1.4	.83	.68	
4	2.0	1.2	12	2.3	23	11	12	3.8	1.4	.53	.68	
5	2.0	1.2	7.2	2.3	19	11	11	3.0	1.7	.52	.49	
6	2.0	1.4	3.8	2.0	15	10	10	2.6	1.7	1.2	.33	
7	1.7	1.4	8.3	2.0	13	14	9.0	2.3	1.2	2.3	.33	
8	2.3	1.2	3.8	2.0	12	28	8.4	2.3	1.2	2.9	0	
9	2.0	1.2	2.6	2.3	11	16	8.4	2.3	1.2	2.6	0	
10	1.4	1.4	2.6	2.7	9.6	13	6.7	2.6	.90	2.2	0	
11	1.2	1.7	2.3	8.4	8.4	12	5.2	3.0	.49	1.9	0	
12	1.4	1.7	2.0	5.7	7.8	148	5.2	3.0	.49	1.7	0	
13	1.7	1.7	1.7	4.7	7.2	197	4.7	3.0	.49	2.5	0	
14	.68	2.0	1.7	10	6.7	108	4.2	2.6	.90	2.5	0	
15	3.2	2.0	1.7	32	6.2	68	4.2	2.0	.18	1.9	0	
16	2.3	1.7	2.3	19	12	103	4.2	1.7	.49	1.0	0	
17	1.2	1.7	3.0	12	16	74	4.2	1.7	.33	.57	0	
18	.90	1.7	7.2	9.6	14	55	3.8	1.7	.33	.13	0	
19	1.2	2.3	4.2	7.2	14	46	3.8	1.7	.68	0	.49	
20	1.4	1.7	3.4	6.7	71	37	3.8	1.7	.90	0	.90	
21	1.4	1.4	3.0	5.7	60	32	3.4	1.7	.68	0	.49	
22	1.4	.90	3.0	5.2	49	29	3.0	1.4	.18	0	.04	
23	1.4	.49	3.4	4.7	42	28	3.4	1.3	0	0	0	
24	1.4	.49	3.0	4.7	34	24	3.4	1.4	.33	0	0	
25	1.4	.49	3.4	4.7	28	23	3.0	1.7	0	.34	0	
26	1.4	.33	3.0	4.7	24	21	3.0	1.6	0	.26	0	
27	.90	.90	2.6	5.7	20	18	3.8	1.5	0	0	0	
28	.68	1.4	2.3	7.2	18	17	3.4	1.5	0	0	0	
29	.49	5.6	2.0	7.2	17	16	3.8	1.5	.20	.68	0	
30	.18	5.7	2.0	415	-----	15	2.3	1.5	.20	.49	0	
31	.04	-----	2.3	121	-----	14	-----	1.4	-----	.68	0	-----
TOTAL	44.65	46.81	124.3	747.3	688.9	1,228	191.3	66.1	20.37	28.58	5.25	0
MEAN	1.44	1.56	4.01	24.1	23.8	39.6	6.38	2.13	.68	.92	.17	0
MAX	3.2	5.7	12	415	71	197	22	3.8	1.7	2.9	.90	0
MIN	.04	.33	1.7	2.0	6.2	10	2.3	1.3	0	0	0	0
AC-FT	89	93	247	1,480	1,370	2,440	379	131	40	57	10	0
CAL YR 1967	TOTAL	6,902.96	MEAN	18.9	MAX	652	MIN	.04	AC-FT	13,690		
WTR YR 1968	TOTAL	3,191.56	MEAN	8.72	MAX	415	MIN	0	AC-FT	6,330		

PEAK DISCHARGE (BASE, 200 CFS, revised)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	0530	11.20	1,290	03-16	0830	5.34	301
03-12	1800	6.50	480				

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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 12.53 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Tipping-bucket rain gage 2.5 miles upstream.

AVERAGE DISCHARGE.--5 years, 5.56 cfs (4,030 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,260 cfs Jan. 30 (gage height, 8.32 ft); minimum daily, 0.10 cfs Nov. 13.

1963-68: Maximum discharge, 1,260 cfs Jan. 30, 1968 (gage height, 8.32 ft); no flow Oct. 5, 26, 1963.

REMARKS.--Records good except those below 5.0 cfs, which are poor. Low flow affected by return flow from urban irrigation. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	.32	.92	1.2	9.5	2.5	43	1.4	.92	1.8	2.5	1.4
2	22	.32	.92	.92	13	2.5	2.9	1.4	1.2	.92	4.0	1.8
3	1.1	.30	62	1.2	4.0	2.5	2.1	1.4	.92	1.2	5.3	1.4
4	1.0	.28	47	1.4	3.0	2.5	2.1	1.4	1.8	1.2	4.6	1.4
5	2.3	.26	9.8	1.4	2.1	7.0	2.1	2.1	2.1	1.4	2.5	.73
6	.92	.24	1.4	2.1	1.8	9.7	2.1	2.1	2.1	1.2	2.1	.92
7	.92	.22	32	2.1	1.8	46	2.1	1.8	2.1	1.8	4.0	2.1
8	.73	.20	1.2	1.8	1.8	7.5	2.1	2.1	1.8	.92	4.0	2.5
9	.73	.18	1.2	1.8	1.8	2.1	2.1	2.1	1.4	.92	1.8	1.8
10	.57	.16	1.2	87	1.8	2.1	2.1	2.1	.92	.92	1.8	1.8
11	.55	.14	1.2	1.8	1.8	1.8	2.1	2.1	1.2	1.4	2.1	1.8
12	.53	.12	.92	1.8	1.8	126	2.5	2.5	1.2	2.5	1.8	2.5
13	.51	.10	.73	3.4	1.8	20	2.5	15	1.2	1.8	3.0	1.8
14	.50	17	.92	60	2.1	12	2.1	1.8	1.8	1.8	4.0	3.0
15	.50	.15	.92	23	2.1	4.0	1.4	1.8	2.1	1.8	5.3	1.4
16	.48	.14	1.2	2.5	38	71	2.1	1.4	2.1	2.1	4.0	1.2
17	.48	.13	30	2.1	23	9.7	1.8	1.8	1.2	2.5	5.3	1.4
18	.46	.12	18	2.5	3.0	4.6	1.3	1.8	1.8	2.5	4.0	2.1
19	.44	.24	3.3	2.1	45	3.4	1.1	2.1	1.2	2.5	2.5	1.8
20	.44	.33	4.8	2.1	21	3.0	1.1	1.8	1.2	2.5	1.8	.57
21	.33	.33	1.4	2.5	34	3.0	1.2	1.8	1.8	2.5	1.8	.73
22	.33	.33	1.4	2.5	12	6.6	1.0	1.2	2.1	1.4	1.4	.73
23	.44	.33	1.4	1.8	7.3	3.4	1.0	.92	.92	1.2	1.8	.73
24	.43	.44	1.4	1.8	4.0	3.0	1.0	1.4	1.8	1.4	1.8	.92
25	.42	.44	1.2	1.8	3.4	7.0	1.2	1.8	1.8	2.5	1.8	.73
26	.41	.44	1.2	2.5	4.0	2.1	1.2	.92	1.8	4.0	1.4	.73
27	.40	1.9	.92	14	3.4	2.1	1.5	.57	3.0	2.5	1.8	.73
28	.40	.44	.92	5.3	3.0	2.1	1.2	.57	4.0	2.1	1.4	.92
29	.38	26	.92	94	3.0	1.8	1.1	.57	4.6	2.1	1.8	.73
30	.36	19	.92	198	-----	2.1	1.4	.92	4.6	4.0	1.8	.73
31	.34	-----	.92	21	-----	2.1	-----	.92	-----	3.4	1.8	-----
TOTAL	40.13	70.60	232.23	547.42	254.3	375.2	92.5	61.59	56.68	60.78	85.0	41.10
MEAN	1.29	2.35	7.49	17.7	8.77	12.1	3.08	1.99	1.89	1.96	2.74	1.37
MAX	22	26	62	198	45	126	43	15	4.6	4.0	5.3	3.0
MIN	.33	.10	.73	.92	1.8	1.8	1.0	.57	.92	.92	1.4	.57
AC-FT	80	140	461	1,090	504	744	183	122	112	121	169	82
(a)	.6	-	-	6.2	2.1	3.6	.6	.2	0	0	0	0

CAL YR 1967 TOTAL 3,130.26

MEAN 8.58

MAX 462

MIN .10

AC-FT 6,210

WTR YR 1968 TOTAL 1,917.53

MEAN 5.24

MAX 198

MIN .10

AC-FT 3,800

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-17	2200	6.75	701	03-16	0630	7.45	924
01-30	0100	8.32	1,260	04-01	0730	6.60	656
03-12	1700	6.58	650				

a Precipitation, in inches.

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.--0.79 sq mi (revised).

RECORDS AVAILABLE.--February 1965 to September 1968.

GAGE.--Graphic 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 year, 389 cfs Jan. 30 (gage height, 16.42 ft), from rating curve extended above 72 cfs on basis of indirect measurements of theoretical flow through culvert; no flow at times.

1965-68: Maximum discharge, 389 cfs Jan. 30, 1968 (gage height, 16.42 ft), from rating curve extended above 72 cfs on basis of indirect measurements of theoretical flow through culvert; no flow at times in each year.

REMARKS.--Records good. No regulation or diversion above station. Records of suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.07	.02	.35	.82	.07	7.2	.04	.07	.25	.25	.07
2	6.5	.07	.05	.35	1.9	.12	.25	.04	.07	.07	.18	.12
3	.02	.04	13	.35	.25	.12	.07	.02	.25	.18	.25	.25
4	.01	.01	7.5	.35	.18	.12	.07	.04	.48	.07	.18	.25
5	.02	.01	.18	.35	.18	.82	.12	.02	.25	.12	.12	.18
6	.01	0	0	.48	.18	1.4	.12	.12	.25	.12	.12	.12
7	.01	0	13	.35	.18	7.2	.12	.12	.35	.18	.18	.18
8	.01	0	0	.35	.12	.64	.18	.07	.25	.18	.18	.12
9	.02	0	0	.64	.12	.18	.18	.18	.25	.25	.18	.18
10	.04	0	0	22	.12	.07	.18	.02	.35	.25	.18	.12
11	.07	0	0	.02	.18	.02	.07	.04	.35	.25	.18	.18
12	.07	0	0	.01	.18	27	.04	.01	.35	.25	.12	.12
13	.07	0	.01	.34	.18	2.2	.12	4.0	.48	.18	.18	.12
14	.12	5.5	.01	14	.18	3.3	.12	.07	.48	.48	.18	.18
15	.35	.01	0	3.8	.25	.25	.02	.07	.48	.48	.12	.12
16	.18	.01	0	.18	8.9	23	.01	.12	.35	.25	.12	.18
17	.18	.02	7.3	.02	4.2	3.0	.01	.07	.35	.25	.12	.18
18	.12	.04	2.2	.02	.18	1.2	.02	.12	.48	.25	.18	.12
19	.18	.04	.82	.02	7.7	.64	.02	.18	.48	.25	.18	.15
20	.18	.04	.87	.04	1.8	.48	.18	.12	.48	.25	.18	.15
21	.18	.04	.07	.12	5.0	.35	.12	.12	.48	1.8	.18	.15
22	.04	.04	.07	.12	1.5	.18	.12	.18	.64	.25	.12	.15
23	.02	.02	.07	.12	.18	.18	.12	.12	.12	.25	.18	.15
24	.07	.04	.07	.12	.12	.12	.18	.12	.35	.25	.18	.15
25	.12	.04	.07	.18	.12	1.0	.18	.25	.18	.35	.18	.15
26	.04	.04	.07	.18	.25	.12	.12	.12	.25	.25	.18	.15
27	.04	.18	.12	.99	.25	.12	.12	.07	.35	.25	.18	.15
28	.07	.18	.18	.68	.25	.12	.12	.04	.25	.35	.18	.15
29	0	7.6	.25	24	.07	.25	.07	.12	.18	.25	.18	.15
30	.01	5.8	.35	60	-----	.25	.04	.18	.07	.12	.18	.15
31	.04	-----	.25	2.6	-----	.07	-----	.12	-----	.12	.18	-----
TOTAL	8.80	19.84	46.53	133.13	35.54	74.59	10.29	6.91	9.72	8.80	5.30	4.59
MEAN	.28	.66	1.50	4.29	1.23	2.41	.34	.22	.32	.28	.17	.15
MAX	6.5	7.6	13	60	8.9	27	7.2	4.0	.64	1.8	.25	.25
MIN	0	0	0	.01	.07	.02	.01	.01	.07	.07	.12	.07
AC-FT	17	39	92	264	70	148	20	14	19	17	11	9.1

CAL YR 1967 TOTAL 625.47 MEAN 1.71 MAX 113 MIN 0 AC-FT 1,240
WTR YR 1968 TOTAL 364.04 MEAN .99 MAX 60 MIN 0 AC-FT 722

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-03	-	-	220	03-16	0630	13.51	356
01-30	0115	16.42	389				

REDWOOD CREEK BASIN

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 83.92 ft above mean sea level, datum of 1929. Prior to May 25, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--9 years, 0.86 cfs (623 acre-ft per year).

EXTREMES.--Maximum discharge during year, 177 cfs Jan. 30 (gage height, 4.88 ft); no flow Aug. 22-24, 30, Sept. 1.

1959-68: 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.03	.27	.13	2.0	.45	6.7	.26	.08	.11	.03	0
2	.05	.03	.06	.17	1.5	.40	1.1	.21	.09	.06	.04	.01
3	.05	.03	1.2	.18	1.2	.37	.65	.20	.09	.07	.05	.03
4	.04	.04	5.9	.17	1.0	.38	.57	.21	.09	.06	.06	.04
5	.04	.03	7.5	.17	.70	.38	.63	.20	.13	.05	.05	.03
6	.05	.03	.30	.15	.77	.45	.51	.21	.14	.05	.05	.03
7	.03	.02	1.5	.16	.64	1.5	.47	.20	.13	.05	.04	.03
8	.03	.03	.30	.17	.54	2.7	.46	.20	.12	.05	.05	.02
9	.03	.03	.25	.18	.48	.55	.43	.18	.10	.05	.06	.03
10	.03	.03	.25	9.1	.45	.43	.42	.19	.11	.11	.04	.02
11	.03	.03	.22	.75	.44	.41	.45	.24	.07	.16	.03	.03
12	.04	.03	.22	.53	.42	12	.44	.20	.12	.13	.03	.03
13	.04	.03	.20	.40	.41	4.6	.42	.24	.13	.11	.03	.04
14	.04	.10	.20	3.1	.38	5.5	.47	.18	.13	.13	.03	.04
15	.17	.04	.20	3.7	.37	1.8	.44	.17	.16	.05	.02	.04
16	.27	.03	.20	.74	2.5	15	.42	.16	.12	.03	.03	.04
17	.03	.03	6.0	.46	2.5	8.0	.42	.14	.14	.03	.01	.03
18	.03	.03	3.0	.40	.88	3.5	.43	.13	.08	.04	.01	.03
19	.03	.04	1.0	.37	1.2	1.0	.43	.13	.11	.04	.02	.03
20	.02	.04	.38	.29	1.9	.89	.43	.15	.14	.04	.01	.04
21	.03	.04	.26	.28	1.3	.74	.42	.13	.20	.06	.01	.04
22	.03	.04	.28	.27	.76	.85	.41	.13	.33	.11	0	.04
23	.03	.04	.21	.26	.65	.82	.39	.13	.12	.09	0	.04
24	.02	.04	.17	.26	.58	.70	.37	.12	.11	.16	0	.03
25	.02	.05	.16	.27	.53	.67	.95	.10	.13	.16	.01	.03
26	.03	.04	.21	.27	.50	.62	.54	.13	.22	.19	.02	.03
27	.03	.04	.17	.39	.53	.58	.34	.14	.16	.19	.02	.02
28	.03	.05	.14	.26	.48	.56	.29	.16	.22	.19	.02	.04
29	.03	1.2	.12	2.3	.45	.56	.30	.10	.32	.12	.02	.03
30	.03	.99	.13	70	-----	.54	.24	.08	.22	.04	0	.03
31	.02	-----	.13	10	-----	.53	-----	.10	-----	.06	.03	-----
TOTAL	1.38	3.23	31.13	105.88	26.06	67.48	20.54	5.12	4.31	2.79	0.82	0.92
MEAN	.045	.11	1.00	3.42	.90	2.18	.68	.17	.14	.090	.027	.031
MAX	.27	1.2	7.5	70	2.5	15	6.7	.26	.33	.19	.06	.04
MIN	.02	.02	.06	.13	.37	.37	.24	.08	.07	.03	0	0
AC-FT	2.7	6.4	62	210	52	134	41	10	8.6	5.5	1.6	1.8
CAL YR 1967	TOTAL	736.82	MEAN	2.02	MAX	211	MIN	0	AC-FT	1,460		
WTR YR 1968	TOTAL	269.66	MEAN	.74	MAX	70	MIN	0	AC-FT	535		

PEAK DISCHARGE (BASE, 50 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-04	2215	3.85	100	01-30	0445	4.88	177
01-10	0630	3.16	60	03-16	0900	4.17	122

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 1968.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 146.18 ft above mean sea level, datum of 1929. Prior to July 12, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--10 years, 0.14 cfs (101 acre-ft per year).

EXTREMES.--Maximum discharge during year, 52 cfs Dec. 4 (gage height, 2.78 ft); minimum daily, 0.01 cfs Nov. 16, 23, 24, Dec. 14-16.

1958-68: Maximum discharge, 87 cfs Jan. 24, 1967 (gage height, 3.38 ft); no flow at times.

Flood of Apr. 2, 1958, reached a stage of about 4.2 ft from floodmarks.

REMARKS.--Records good except those below 1.0 cfs, which are fair. Low flow affected by runoff from golf course irrigation and flushing of regulating ponds. Except for storm periods, all low flow affected by imported water.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.02	.04	.02	.29	.04	2.6	.06	.05	.05	.05	.05
2	.02	.02	.02	.02	.15	.04	.09	.05	.05	.04	.05	.05
3	.02	.02	.54	.02	.10	.04	.06	.05	.98	.05	.14	.06
4	.02	.02	2.6	.02	.07	.04	.05	.05	.06	.07	.04	.05
5	.02	.03	.41	.02	.07	.04	.05	.04	.07	.09	.04	.04
6	.02	.02	.05	.02	.07	.26	.25	.05	.07	.05	.05	.05
7	.02	.02	.57	.03	.06	1.1	.05	.04	.05	.06	.04	.04
8	.02	.02	.04	.02	.07	.43	.05	.04	.04	.07	.05	.04
9	.02	.02	.03	.03	.05	.06	.05	.05	.04	.07	.05	.04
10	.02	.02	.03	2.3	.04	.04	.06	.04	.04	.08	.04	.05
11	.02	.02	.03	.08	.04	.04	.06	.05	.04	.07	.04	.07
12	.02	.02	.02	.04	.05	3.8	.05	.05	.04	.05	.04	.05
13	.02	.07	.02	.04	.04	.54	.05	.17	.05	.04	.04	.05
14	.02	.23	.01	1.6	.05	1.0	.05	.05	.05	.04	.04	.04
15	.02	.02	.01	.51	.05	.14	.05	.04	.05	.10	.03	.05
16	.02	.01	.01	.06	.43	1.8	.04	.04	.05	.05	.04	.07
17	.02	.02	1.8	.05	.25	.30	.05	.04	.06	.05	.03	.04
18	.02	.02	1.0	.04	.06	.11	.05	.05	.05	.05	.04	.08
19	.02	.02	.31	.04	.40	.08	.05	.05	.06	.05	.08	.03
20	.02	.02	.10	.04	.13	.06	.15	.05	.08	.05	.04	.04
21	.02	.02	.04	.04	.21	.06	.05	.05	.05	.05	.04	.03
22	.02	.02	.04	.04	.06	.17	.05	.04	.05	.06	.03	.03
23	.02	.01	.04	.04	.06	.07	.05	.04	.05	.05	.06	.03
24	.02	.01	.04	.04	.05	.06	.07	.04	.06	.05	.04	.04
25	.02	.02	.04	.04	.05	.05	.06	.05	.05	.05	.05	.05
26	.02	.02	.04	.14	.05	.05	.06	.04	.05	.05	.06	.05
27	.02	.03	.04	.14	.04	.05	.06	.09	.05	.04	.04	.06
28	.02	.10	.04	.04	.04	.05	.05	.04	.05	.04	.03	.04
29	.02	1.1	.02	1.3	.04	.05	.06	.04	.05	.05	.03	.05
30	.02	.58	.04	12	-----	.05	.07	.04	.05	.06	.04	.05
31	.04	-----	.02	.44	-----	.05	-----	.05	-----	.05	.04	-----
TOTAL	0.64	2.57	8.04	19.26	3.07	10.67	4.49	1.58	2.49	1.73	1.43	1.42
MEAN	.021	.086	.26	.62	.11	.34	.15	.051	.083	.056	.046	.047
MAX	.04	1.1	2.6	12	.43	3.8	2.6	.17	.98	.10	.14	.08
MIN	.02	.01	.01	.02	.04	.04	.04	.04	.04	.04	.03	.03
AC-FT	1.3	5.1	16	38	6.1	21	8.9	3.1	4.9	3.4	2.8	2.8

CAL YR 1967 TOTAL 147.93 MEAN .41 MAX 45 MIN 0 AC-FT 293
WTR YR 1968 TOTAL 57.39 MEAN .16 MAX 12 MIN .01 AC-FT 114

PEAK DISCHARGE (BASE, 25 CFS, revised)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-04	2215	2.78	52	01-30	0415	2.74	50
12-17	2230	2.57	40				

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 1968. Prior to October 1962, published as "below Ladera dam-site."

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 177.47 ft above mean sea level, datum of 1929. Prior to Dec. 27, 1962, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years, 14.6 cfs (10,570 acre-ft per year).

EXTREMES.--Maximum discharge during year, 946 cfs Jan. 30 (gage height, 8.00 ft); minimum daily, 0.02 cfs for many days.

1961-68: Maximum discharge, 2,890 cfs Jan. 21, 1967 (gage height, 14.81 ft); maximum gage height, 16.04 ft Jan. 31, 1963; no flow at times.

REMARKS.--Records good. Flow regulated by Searsville Lake (capacity, 952 acre-ft). Small diversions from Searsville Lake for irrigation on Stanford University campus.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.03	.45	.18	32	5.4	51	.36	.97	.03	.03	.03
2	.05	.03	.36	.16	12	4.9	26	.28	1.0	.02	.03	.03
3	.04	.03	.26	.16	6.2	4.2	12	.24	1.1	.03	.05	.02
4	.04	.03	5.5	.16	8.8	3.4	8.5	.32	1.1	.03	.04	.02
5	.05	.04	19	.17	7.5	1.0	6.9	.32	1.1	.02	.05	.03
6	.04	.04	.75	.18	6.7	1.0	6.4	.36	1.1	.02	.04	.04
7	.03	.04	3.4	.18	5.9	1.5	5.6	.36	1.0	.02	.04	.03
8	.04	.04	.59	.21	4.6	10	4.9	.32	.21	.02	.03	.03
9	.04	.04	.27	.26	1.7	6.9	3.6	.36	.14	.02	.03	.03
10	.04	.04	.20	17	1.5	6.2	1.3	.41	.10	.02	.03	.04
11	.04	.04	.17	2.1	1.7	5.4	1.3	12	.08	.02	.03	.04
12	.04	.04	.16	.70	1.9	62	1.5	.97	.04	.02	.03	.04
13	.03	.04	.12	.52	1.9	102	2.7	.51	.06	.03	.03	.04
14	.03	.04	.12	2.1	2.8	76	2.7	.56	.06	.03	.06	.03
15	.03	.04	.11	26	3.2	36	2.5	.51	.04	.02	.05	.04
16	.03	.04	.11	7.7	8.2	98	1.7	.51	.05	.03	.04	.03
17	.03	.04	.10	5.5	19	80	.89	.56	.03	.03	.04	.03
18	.04	.04	10	3.8	11	39	.82	.51	.06	.02	.04	.03
19	.04	.04	2.0	3.0	7.5	26	.82	.62	.19	.12	.05	.03
20	.04	.04	.68	2.4	67	12	.68	.56	.06	.10	.03	.04
21	.04	.03	.46	2.0	40	11	.75	.51	.13	.02	.03	.04
22	.04	.02	.32	1.7	23	11	.62	.51	.11	.03	.02	.05
23	.04	.02	.28	1.5	15	16	.56	.46	.08	.04	.02	.04
24	.04	.02	.28	1.4	11	9.8	.51	.41	.04	.05	.02	.03
25	.04	.02	.24	1.2	8.8	9.2	.51	.41	.03	.03	.03	.04
26	.05	.02	.24	1.1	7.2	8.2	.46	.46	.03	.04	.03	.04
27	.03	.04	.24	1.2	6.7	6.9	.41	.46	.02	.04	.03	.04
28	.03	.07	.21	2.6	7.5	9.2	.46	1.0	.02	.04	.03	.04
29	.03	.07	.21	6.9	6.7	8.5	.46	1.0	.02	.04	.03	.04
30	.03	.05	.21	573	-----	6.7	.41	1.0	.04	.03	.03	.04
31	.03	-----	.18	130	-----	5.6	-----	.97	-----	.02	.03	-----
TOTAL	1.16	1.12	47.22	795.08	337.0	683.0	146.96	27.83	9.01	1.03	1.07	1.05
MEAN	.037	.037	1.52	25.6	11.6	22.0	4.90	.90	.30	.033	.035	.035
MAX	.05	.07	19	573	67	102	51	12	1.1	.12	.06	.05
MIN	.03	.02	.10	.16	1.5	1.0	.41	.24	.02	.02	.02	.02
AC-FT	2.3	2.2	94	1,580	668	1,350	291	55	18	2.0	2.1	2.1

CAL YR 1967 TOTAL 11,965.66 MEAN 32.8 MAX 1,930 MIN .02 AC-FT 23,730
WTR YR 1968 TOTAL 2,051.53 MEAN 5.61 MAX 573 MIN .02 AC-FT 4,070

Peak discharge (base, 600 cfs).--Jan. 30 (0815 hrs) 946 cfs (8.00 ft).

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 115.75 ft above mean sea level, datum of 1929. Prior to June 21, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--29 years, 17.2 cfs (12,450 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,130 cfs Jan. 30 (gage height, 4.60 ft); no flow Aug. 3-5, 7. 1930-41, 1950-68: Maximum discharge, 5,560 cfs Dec. 22, 1955 (gage height, 13.60 ft); no flow at times in each year.

REMARKS.--Records good. Flow regulated by Searsville Lake (capacity, 952 acre-ft). Diversions of 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.24	.24	.08	28	3.0	66	.10	.08	.05	.05	.06
2	.36	.18	.14	.08	9.3	3.0	31	.10	.08	.06	.04	.05
3	.43	.18	.30	.08	1.5	2.5	11	.08	.08	.06	0	.07
4	.10	.08	.99	.08	3.5	2.0	7.0	.08	.08	.07	0	.08
5	.30	.08	6.5	.08	2.6	.51	5.8	.10	.12	.05	0	.08
6	.10	.04	.30	.08	1.8	.24	5.3	.14	.24	.08	.02	.08
7	.10	.06	.60	.08	1.1	1.3	4.5	.14	.24	.08	0	.10
8	.10	.14	.89	.08	.79	11	3.6	.14	.18	.10	.02	.10
9	.18	.06	.60	.08	.30	5.3	1.6	.10	.14	.08	.04	.10
10	.30	.08	.51	13	.18	4.9	.30	.14	.14	.10	.03	.08
11	.30	.06	.51	.36	.18	3.5	.24	6.3	.10	.09	.04	.08
12	.30	.06	6.6	.10	.18	60	.24	1.3	.06	.09	.04	.08
13	.36	.24	.10	.08	.18	118	.69	.14	.03	.14	.07	.06
14	.73	.43	.06	1.3	.18	95	.79	.14	.02	.18	.06	.08
15	1.8	.18	.04	15	.18	47	.60	.10	.02	.15	.04	.06
16	2.0	.24	.06	.82	2.9	140	.30	.10	.02	.07	.03	.06
17	2.6	.18	.08	.24	12	101	.24	.10	.03	.03	.03	.06
18	2.6	.14	3.8	.18	5.1	43	.24	.10	.03	.02	.06	.04
19	3.0	.14	.36	.14	3.1	26	.24	.10	.03	.03	.06	.04
20	3.7	.18	.10	.14	62	14	.24	.10	.04	.03	.06	.03
21	3.7	.18	.08	.14	35	8.5	.24	.10	.05	.02	.08	.03
22	3.9	.14	.10	.10	19	11	.30	.10	.06	.01	.09	.03
23	3.9	.18	.14	.10	11	16	.36	.10	.07	.02	.08	.03
24	3.7	.18	.18	.08	8.4	11	.36	.10	.06	.03	.07	.03
25	3.9	.24	.14	.08	6.4	8.4	.36	.10	.07	.04	.08	.03
26	3.9	.18	.14	.10	4.9	6.4	.36	.06	.08	.04	.08	.03
27	3.9	.24	.24	.24	3.9	4.5	.14	.06	.07	.03	.08	.03
28	1.2	.51	.18	.30	3.3	7.4	.10	.08	.02	.03	.08	.03
29	.06	1.7	.06	2.6	3.0	7.2	.14	.08	.04	.06	.07	.03
30	.06	1.2	.06	674	-----	5.1	.10	.08	.04	.06	.05	.03
31	.08	-----	.08	168	-----	4.1	-----	.08	-----	.04	.06	-----
TOTAL	48.02	7.74	24.18	877.82	229.97	770.85	142.38	10.54	2.32	1.94	1.51	1.69
MEAN	1.55	.26	.78	28.3	7.93	24.9	4.75	.34	.077	.063	.049	.056
MAX	3.9	1.7	6.6	674	62	140	66	6.3	.24	.18	.09	.10
MIN	.06	.04	.04	.08	.18	.24	.10	.06	.02	.01	0	.03
AC-FT	95	15	48	1,740	456	1,530	282	21	4.6	3.9	3.0	3.4

CAL YR 1967 TOTAL 14,472.64 MEAN 39.7 MAX 2,360 MIN 0 AC-FT 28,710
WTR YR 1968 TOTAL 2,118.96 MEAN 5.79 MAX 674 MIN 0 AC-FT 4,200

Peak discharge (base, 700 cfs).--Jan. 30 (0600 hrs) 1,130 cfs (4.60 ft).

MATADERO CREEK BASIN

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 22.07 ft above mean sea level, datum of 1929. Prior to Sept. 25, 1958, graphic water-stage recorder at site 150 ft downstream at different datum. Sept. 25, 1958, to Sept. 12, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--16 years, 1.35 cfs (977 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).

EXTREMES.--Maximum discharge during year, 490 cfs Jan. 30 (gage height, 3.65 ft, from outside highwater marks), from rating curve extended above 150 cfs on basis of step backwater computations at gage heights, 3.68 and 5.33 ft; minimum daily, 0.02 cfs Feb. 25, 1968.

1952-68: Maximum discharge, 854 cfs Dec. 22, 1955 (gage height, 9.60 ft), from rating curve extended above 390 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 9.88 ft Dec. 23, 1955, site and datum then in use (backwater from culvert); no flow at times.

REMARKS.--Records good except those above 200 cfs, which are fair. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.17	.17	.08	3.4	.06	33	.08	.12	.10	.12	.05
2	.04	.17	.06	.10	1.4	.06	1.6	.14	.12	.12	.12	.04
3	.04	.24	5.9	.10	.78	.06	.45	.12	.12	.10	.08	.03
4	.05	.17	6.8	.08	.45	.06	.24	.10	.14	.08	.12	.03
5	.05	.12	2.1	.08	.28	.06	.17	.10	.10	.10	.10	.03
6	.05	.06	.14	.10	.17	.95	.08	.08	.14	.10	.17	.04
7	.06	.06	2.4	.10	.10	6.1	.08	.12	.45	.08	.12	.05
8	.06	.06	.10	.10	.10	8.9	.06	.08	.24	.08	.14	.06
9	.06	.08	.08	.12	.08	.12	.08	.10	.14	.12	.14	.07
10	.08	.06	.08	17	.05	.08	.08	.12	.14	.12	.12	.08
11	.08	.06	.10	.12	.04	.08	.08	.10	.14	.12	.10	.03
12	.08	.08	.12	.05	.06	25	.06	.08	.14	.12	.08	.03
13	.08	.10	.14	.06	.06	8.8	.05	.14	.14	.08	.12	.08
14	.06	.86	.14	6.0	.05	16	.04	.12	.14	.10	.12	.06
15	.05	.06	.12	2.9	.05	2.1	.05	.08	.14	.10	.12	.08
16	.05	.06	.10	.10	2.1	32	.06	.10	.14	.12	.12	.06
17	.10	.08	4.7	.08	.33	5.1	.06	.12	.12	.10	.12	.10
18	.08	.04	6.5	.06	.06	1.6	.06	.12	.14	.14	.12	.12
19	.08	.04	1.1	.06	1.2	.78	.06	.14	.10	.14	.12	.10
20	.08	.05	.26	.08	.68	.52	.05	.12	.17	.10	.08	.08
21	.08	.04	.14	.10	.17	.33	.08	.14	.17	.12	.06	.12
22	.17	.05	.10	.10	.04	.71	.10	.12	.14	.10	.06	.12
23	.17	.08	.08	.10	.03	.24	.10	.12	.14	.14	.06	.12
24	.17	.06	.08	.12	.03	.08	.08	.12	.12	.12	.04	.14
25	.14	.06	.08	.10	.02	.06	.08	.10	.14	.10	.04	.10
26	.17	.06	.10	.29	.03	.06	.10	.10	.17	.12	.04	.10
27	.20	.21	.10	1.2	.04	.06	.06	.08	.17	.10	.06	.10
28	.17	.57	.08	.10	.05	.08	.10	.24	.17	.10	.06	.10
29	.14	8.7	.08	10	.06	.08	.08	.12	.10	.12	.06	.10
30	.17	2.6	.08	203	-----	.08	.10	.10	.10	.14	.08	.10
31	.14	-----	.08	15	-----	.08	-----	.12	-----	.14	.05	-----
TOTAL	2.99	15.05	32.11	257.48	11.91	110.29	37.29	3.52	4.50	3.42	2.94	2.32
MEAN	.097	.50	1.04	8.31	.41	3.56	1.24	.11	.15	.11	.095	.077
MAX	.20	8.7	6.8	203	3.4	32	33	.24	.45	.14	.17	.14
MIN	.04	.04	.06	.05	.02	.06	.04	.08	.10	.08	.04	.03
AC-FT	5.9	30	64	511	24	219	74	7.0	8.9	6.8	5.8	4.6

CAL YR 1967 TOTAL 1,287.75 MEAN 3.53 MAX 307 MIN 0 AC-FT 2,550
WTR YR 1968 TOTAL 483.82 MEAN 1.32 MAX 203 MIN .02 AC-FT 960

Peak discharge (base, 200 cfs, revised).--Jan. 30 (0600 hrs) 490 cfs (3.65 ft).

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 1968. 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, 3,080 acre-ft Apr. 15 (elevation, 528.02 ft); minimum observed, 380 acre-ft Nov. 29 (elevation, 479.28 ft).

1935-68: Maximum contents observed, 4,100 acre-ft Dec. 26, 1955 (elevation, 538.61 ft); maximum elevation, 539.70 ft Mar. 16, 1967; no contents for part of most years.

REMARKS.--Reservoir is formed by earthfill dam completed in 1936. Capacity, 3,860 acre-ft between elevations 444.9 (invert of outlet tunnel) and 537.14 ft (crest of spillway). Water released down Stevens Creek for irrigation and ground-water recharge by percolation.

COOPERATION.--Record of contents furnished by Santa Clara Valley Water Conservation District.

Month-end contents, in acre-feet (including momentary storage above spillway crest), water year October 1967 to September 1968

Date	Contents
Sept. 30.....	720
Oct. 31.....	421
Nov. 30.....	397
Dec. 31.....	505
Jan. 31.....	1,630
Feb. 29.....	2,180
Mar. 31.....	2,970
Apr. 30.....	3,010
May 31.....	2,880
June 30.....	2,410
July 31.....	1,690
Aug. 31.....	1,200
Sept. 30.....	660

Note.--Contents at 0800 hours on first day of following month.

GUADALUPE RIVER BASIN

11-1669. ALAMITOS CREEK NEAR NEW ALMADEN, CALIF.

LOCATION.--Lat 37°13'21", long 121°51'00", in Pueblo Lands of San Jose Grant, 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.--31.8 sq mi (revised).

RECORDS AVAILABLE.--April 1958 to September 1968.

GAGE.--Graphic water-stage recorder. Altitude of gage is 247 ft (from topographic map). Prior to July 15, 1958, staff gage at same site and datum. July 15, 1958, to Nov. 2, 1965, graphic water-stage recorder and Nov. 2, 1965 to July 10, 1968, digital water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--10 years, 16.5 cfs (11,950 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,110 cfs Jan. 30 (gage height, 4.26 ft); no flow Sept. 29. 1958-68: Maximum discharge, 4,300 cfs Apr. 2, 1958 (gage height, 9.67 ft), from rating curve extended above 710 cfs on basis of slope-area measurement at gage height 7.98 ft; no flow at times in each year.

REMARKS.--Records fair. Flow regulated by Calero (see sta. no. 11-1667.4.) and Almaden (see sta. no. 11-1666.7.) Reservoirs; water released during summer. Small diversions above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	11	7.0	9.5	18	8.0	5.5	9.3	24	19	23	21
2	18	12	6.0	9.5	9.5	6.5	3.5	9.3	23	18	23	22
3	24	14	5.5	9.0	7.0	10	3.4	9.3	23	20	23	21
4	23	13	5.0	10	5.5	17	3.2	9.3	21	20	23	19
5	20	13	4.5	13	4.5	20	3.2	9.3	7.5	20	23	18
6	18	12	7.0	16	3.5	27	3.1	9.6	23	20	20	18
7	10	13	12	16	3.0	15	3.0	10	24	20	18	18
8	10	14	13	16	6.0	3.5	2.9	24	26	19	18	17
9	12	14	13	17	11	3.2	2.9	26	30	18	18	16
10	10	15	13	12	13	3.0	2.9	27	30	20	18	16
11	14	15	13	5.0	11	7.0	5.8	34	30	20	18	16
12	14	15	12	6.0	8.0	8.5	9.3	37	30	24	18	14
13	15	15	11	11	6.0	3.0	12	40	30	23	14	12
14	14	15	11	12	5.5	3.0	12	35	30	24	12	12
15	14	15	11	5.0	5.0	2.8	11	28	30	25	12	12
16	13	15	12	3.0	4.5	2.6	12	27	30	20	12	12
17	13	16	13	5.0	3.5	2.5	12	25	31	20	13	11
18	13	17	14	3.0	3.2	7.6	12	16	30	19	13	11
19	17	17	8.0	5.0	3.1	12	12	15	18	18	14	12
20	17	17	8.5	11	3.0	12	10	15	14	17	14	12
21	18	18	9.0	12	3.0	10	9.0	14	30	18	14	12
22	19	17	9.5	12	3.0	10	8.2	20	34	18	10	12
23	14	18	9.5	12	8.0	7.0	8.2	20	35	19	2.7	12
24	9.0	17	9.5	11	12	6.2	7.6	21	35	20	2.1	9.1
25	9.0	18	9.5	12	12	6.2	7.2	24	27	22	1.8	1.4
26	9.0	17	9.6	12	10	6.0	6.8	25	13	24	3.2	.22
27	9.2	18	9.5	13	9.5	6.0	6.8	26	14	24	8.6	.02
28	9.5	18	9.5	13	9.5	5.8	6.8	25	21	24	11	.01
29	10	19	9.5	12	9.0	3.8	6.8	24	21	24	15	0
30	12	13	9.5	279	-----	3.8	9.3	24	20	23	20	.61
31	11	-----	9.5	57	-----	4.5	-----	24	-----	23	21	-----
TOTAL	431.7	461	303.6	639.0	209.8	243.5	218.4	662.1	754.5	643	456.4	357.36
MEAN	13.9	15.4	9.79	20.6	7.23	7.85	7.28	21.4	25.2	20.7	14.7	11.9
MAX	24	19	14	279	18	27	12	40	35	25	23	22
MIN	9.0	11	4.5	3.0	3.0	2.5	2.9	9.3	7.5	17	1.8	0
AC-FT	856	914	602	1,270	416	483	433	1,310	1,500	1,280	905	709

CAL YR 1967 TOTAL 13,584.70 MEAN 37.2 MAX 1,310 MIN .40 AC-FT 26,940
WTR YR 1968 TOTAL 5,380.36 MEAN 14.7 MAX 279 MIN 0 AC-FT 10,670

Note.--No gage-height record Feb. 1 to Mar. 1.

GUADALUPE RIVER BASIN

361

11-1676.6. ROSS CREEK AT SAN JOSE, CALIF.

LOCATION.--Lat 37°14'56", long 121°54'45", in SE¼ sec.12, T.8 S., R.1 W., on right bank at south city limits of San Jose, 200 ft upstream from Harwood Avenue, and 600 ft downstream from Lone Hill Creek.

DRAINAGE AREA.--5.72 sq mi (revised).

RECORDS AVAILABLE.--October 1961 to September 1968.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 204.4 ft above mean sea level (levels by Santa Clara County Flood Control and Water Conservation District). Prior to Apr. 13, 1965, graphic water-stage recorder and Apr. 13, 1965, to Mar. 10, 1966, digital water-stage recorder, at site 500 ft upstream at different datum.

AVERAGE DISCHARGE.--7 years, 2.84 cfs (2,060 acre-ft per year).

EXTREMES.--Maximum discharge during year, 763 cfs Jan. 30 (gage height, 6.62 ft); no flow Oct. 6, 7, 11-14. 1961-68: Maximum discharge, 763 cfs Jan. 30, 1968 (gage height, 6.62 ft); no flow for many days in each year.

REMARKS.--Records good. Water imported from South Bay Aqueduct and released into creek 1.5 miles above station totaled 2,660 acre-ft for the 1968 water year. During periods of high flows, no water imported.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	5.7	2.9	4.4	7.7	4.2	12	5.3	.06	3.5	2.7	3.6
2	8.0	5.7	5.7	4.4	3.7	3.7	2.2	5.3	.07	3.3	2.8	3.5
3	6.0	5.7	5.1	4.4	2.2	3.7	4.0	5.3	.03	3.5	2.8	3.6
4	4.8	5.7	8.7	2.9	1.5	3.7	4.0	5.3	.04	3.5	2.8	3.5
5	.06	6.0	4.6	.86	.94	3.7	4.0	5.3	0	3.5	3.0	3.6
6	0	5.7	3.5	4.2	.58	3.7	4.0	5.3	2.9	3.5	2.8	3.5
7	0	5.7	11	4.2	.47	12	3.7	5.3	7.3	3.5	2.8	3.5
8	.03	5.7	6.4	4.0	2.6	5.3	3.7	5.1	7.3	5.5	2.8	3.5
9	.03	6.0	6.4	4.2	4.8	.07	3.7	5.3	7.3	7.4	2.8	3.5
10	.03	6.0	6.4	20	4.6	0	4.4	5.3	7.0	7.4	2.8	3.5
11	0	6.0	6.0	.86	4.6	.94	6.4	5.3	7.0	7.6	2.7	3.5
12	0	6.0	5.7	4.0	4.6	27	7.7	5.1	7.3	7.7	2.7	1.9
13	0	4.0	6.0	4.0	4.8	6.0	7.7	9.1	7.3	7.7	2.9	.48
14	0	1.0	6.0	5.1	4.4	14	7.7	5.3	7.0	7.7	3.3	3.7
15	.02	.47	6.0	2.8	4.2	2.4	6.4	5.1	3.5	4.1	3.2	3.6
16	1.9	6.0	5.7	4.4	24	17	3.7	5.1	3.5	.48	3.2	3.6
17	7.3	8.0	8.7	4.2	3.7	3.3	3.7	5.7	3.7	2.9	3.2	3.6
18	7.7	6.4	4.6	4.2	.86	1.8	3.7	5.7	3.5	5.2	3.2	3.6
19	7.7	6.4	2.4	4.2	.58	1.1	3.7	5.7	3.5	5.3	3.2	3.6
20	7.7	6.4	5.1	4.2	.94	.71	3.7	5.7	3.5	5.2	3.1	3.6
21	7.7	6.0	4.6	4.2	1.1	1.9	3.7	5.7	3.5	5.3	3.3	3.6
22	7.7	4.8	4.6	4.2	.20	3.1	3.7	5.3	3.5	5.2	3.3	3.6
23	7.7	6.4	4.6	4.2	.07	4.8	4.2	5.7	3.5	5.2	3.2	3.6
24	8.0	3.1	4.6	4.4	.03	4.6	4.0	5.7	3.5	5.3	3.2	3.5
25	8.0	.47	4.6	4.6	.02	4.4	5.3	5.7	3.5	5.1	3.2	3.4
26	8.0	6.4	4.4	4.6	.01	4.4	5.3	5.7	3.3	5.1	3.2	3.5
27	7.0	5.1	1.8	6.0	.01	4.4	5.3	5.7	3.1	5.2	3.2	3.6
28	5.3	4.2	2.4	5.1	.52	4.2	5.3	5.7	3.5	5.2	3.3	3.6
29	5.3	13	1.3	40	4.2	4.0	5.3	5.7	3.5	5.1	1.8	3.6
30	5.7	2.9	4.2	216	-----	4.2	5.3	5.7	3.7	5.1	1.1	3.5
31	5.7	-----	4.2	18	-----	4.0	-----	4.2	-----	4.1	3.5	-----
TOTAL	135.07	160.94	158.2	402.82	87.93	158.32	147.5	171.4	116.40	154.38	91.1	101.98
MEAN	4.36	5.36	5.10	13.0	3.03	5.11	4.92	5.53	3.88	4.98	2.94	3.40
MAX	8.0	13	11	216	24	27	12	9.1	7.3	7.7	3.5	3.7
MIN	0	.47	1.3	.86	.01	0	2.2	4.2	0	.48	1.1	.48
AC-FT	268	319	314	799	174	314	293	340	231	306	181	202

CAL YR 1967 TOTAL 2,095.30 MEAN 5.74 MAX 208 MIN 0 AC-FT 4,160
WTR YR 1968 TOTAL 1,886.04 MEAN 5.15 MAX 216 MIN 0 AC-FT 3,740

Peak discharge (base, 150 cfs).--Dec. 4 (2330 hrs) 243 cfs (4.60 ft); Jan. 30 (0945 hrs) 763 cfs (6.62 ft).

GUADALUPE RIVER BASIN

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 1968. Yearly estimate for water year 1930 (incomplete) and monthly discharge only for June to September 1944, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Altitude of gage is 420 ft (from topographic map). Prior to Oct. 1, 1943, graphic 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. May 1944 to July 10, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--30 years, 47.1 cfs (34,100 acre-ft per year), adjusted for diversion.

EXTREMES.--Maximum discharge during year, 204 cfs Jan. 30 (gage height, 5.15 ft); minimum daily, 0.38 cfs Jan. 24.

1929-44, 1953-68: 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 (see sta. no. 11-1679.8.) and Lake Elsmar (see sta. no. 11-1679.5.). Several diversions for irrigation above station and diversion by San Jose Water Works.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	26	37	.76	3.8	27	4.2	33	29	11	3.4	17
2	70	26	36	.78	.83	5.1	3.5	33	40	11	2.9	17
3	70	31	26	.78	.59	5.1	2.8	33	40	9.8	3.1	18
4	75	36	13	.81	.49	5.1	2.8	22	34	10	2.6	20
5	82	36	6.6	.83	.44	5.1	2.8	16	29	9.1	3.4	25
6	54	45	3.2	.71	.48	4.9	2.8	16	29	8.9	5.1	25
7	42	52	2.3	.62	.44	5.5	2.6	14	22	8.4	5.5	25
8	40	52	1.8	.58	.53	5.7	6.6	14	18	7.8	5.7	25
9	25	51	1.6	.64	4.7	4.9	15	14	19	6.5	5.3	27
10	21	62	1.5	2.9	4.2	4.7	26	14	19	4.1	7.0	28
11	34	79	1.4	1.1	4.0	4.7	24	14	18	4.1	15	27
12	27	92	1.4	.85	3.9	6.8	19	14	18	4.1	20	33
13	37	91	1.4	.75	3.7	7.0	19	14	30	4.1	21	41
14	69	90	1.3	1.0	3.7	7.1	19	13	49	4.1	21	40
15	78	88	1.2	1.4	3.7	4.7	18	13	56	4.1	21	40
16	50	73	.94	.95	7.3	6.5	18	13	54	4.0	20	40
17	36	52	1.0	.66	6.4	3.4	24	12	75	4.0	20	53
18	35	51	1.7	.54	3.8	3.2	32	13	64	3.9	21	47
19	35	51	1.2	.49	3.7	3.1	32	12	51	4.0	21	44
20	35	83	1.0	.52	62	3.0	29	12	52	4.0	21	51
21	34	140	.93	.48	68	2.9	26	12	55	3.7	21	49
22	33	135	.86	.46	52	2.8	26	8.3	56	4.1	21	51
23	30	19	.82	.45	52	2.8	21	4.9	55	9.4	21	38
24	27	21	.82	.38	36	2.8	14	4.9	45	15	21	6.5
25	27	20	.78	.40	28	2.8	17	4.9	26	15	21	12
26	26	19	.74	.42	27	2.6	17	4.9	20	15	20	16
27	26	19	.70	.44	27	2.6	17	8.2	12	8.2	18	21
28	26	60	.64	.54	34	2.6	17	16	11	4.3	17	18
29	26	90	.64	10	43	2.5	16	17	11	4.1	17	18
30	26	38	.66	74	-----	2.6	26	11	11	3.4	17	15
31	26	-----	.70	13	-----	2.6	-----	19	-----	3.4	17	-----
TOTAL	1,293	1,728	149.83	118.24	581.73	152.2	500.1	450.1	1,048	212.6	456.0	887.5
MEAN	41.7	57.6	4.83	3.81	20.1	4.91	16.7	14.5	34.9	6.86	14.7	29.6
MAX	82	140	37	74	68	27	32	33	75	15	21	53
MIN	21	19	.64	.38	.44	2.5	2.6	4.9	11	3.4	2.6	6.5
AC-FT	2,560	3,430	297	235	1,150	302	992	893	2,080	422	904	1,760
(a)	884	612	64	101	874	1,020	725	1,010	1,270	1,460	1,390	853

CAL YR 1967	TOTAL 26,959.33	MEAN 73.9	MAX 2,430	MIN .64	AC-FT 53,470	a 14,050
WTR YR 1968	TOTAL 7,577.30	MEAN 20.7	MAX 140	MIN .38	AC-FT 15,030	a 10,260

a 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.--144 sq mi (revised).

RECORDS AVAILABLE.--October 1929 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B. Prior to 1945, published as Guadalupe Creek at San Jose.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 72.00 ft above mean sea level (levels by Corps of Engineers). Prior to Nov. 1, 1965, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 5,170 cfs Jan. 30 (gage height, 9.28 ft); minimum daily, 0.17 cfs Sept. 25.

1929-68: Maximum discharge, 9,150 cfs Apr. 2, 1958 (gage height, 16.55 ft); no flow for many days in each year except 1968.

REMARKS.--Records good. Flow regulated by Calero, Almaden, Guadalupe and Lexington Reservoirs, and Lake Elman, given elsewhere in this report, with water released during summer for percolation in spreading basins on tributaries. Diversions by San Jose Water Works for urban use (see sta. no. 11-1680.). Diversion of 3,280 acre-ft into Alamitos Percolation Ponds from Coyote Creek basin during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	.41	10	2.0	134	.42	69	.22	.33	.42	1.6	1.3
2	.85	.51	5.1	2.1	87	.41	14	.23	.30	.48	2.3	3.6
3	.76	.55	15	2.1	19	.35	1.8	.31	.35	.52	3.2	5.3
4	.71	.52	20	2.9	13	.44	.89	.98	.57	1.4	2.0	4.8
5	.77	.55	85	2.7	9.1	.41	.80	1.2	.30	2.5	1.6	1.9
6	.71	.55	3.5	1.6	1.9	1.3	.77	1.0	.33	2.1	3.5	1.3
7	.63	1.1	20	.35	.88	36	.63	1.0	.38	2.5	1.9	1.1
8	.58	.72	3.7	3.5	.74	71	.56	.49	.27	2.0	.76	.80
9	.70	.55	2.8	1.7	2.0	2.7	.69	.41	.36	2.0	.75	.92
10	.74	.53	2.3	90	6.2	.74	.56	.33	.52	1.6	.46	1.0
11	.67	.57	2.2	4.4	11	.53	.47	.28	.29	.43	2.5	.92
12	.74	.70	1.8	2.7	4.8	122	.58	.26	.35	3.1	9.9	1.5
13	.70	4.8	1.9	5.5	2.7	81	.50	8.5	.31	1.7	8.4	2.5
14	.77	3.9	2.4	10	3.6	101	1.0	5.1	2.0	.76	5.1	1.5
15	.69	1.9	2.7	28	1.4	25	1.6	2.7	1.4	1.0	.69	1.7
16	.72	1.1	2.1	2.3	81	72	1.2	2.0	.46	1.3	1.7	2.3
17	.71	.87	4.4	1.1	22	35	.59	2.4	.34	.49	.42	1.6
18	.67	1.1	55	1.1	7.3	14	.56	1.1	.27	.35	.56	1.3
19	.66	1.2	9.1	1.1	6.9	3.9	.58	.74	.40	.32	1.2	1.2
20	.63	.92	2.8	.94	7.4	4.4	.42	.66	.38	.33	2.3	.79
21	.41	.92	3.3	.92	8.9	4.2	.35	.60	.32	.24	18	.49
22	.36	.92	2.6	.92	2.9	3.9	.36	.55	.29	.38	3.1	.26
23	.41	1.2	2.5	.92	.52	4.1	.45	.58	.28	.84	1.5	.27
24	.76	2.7	2.3	2.6	.88	.92	.43	.59	1.1	.49	1.7	.22
25	1.2	2.4	2.1	3.3	.34	.58	.43	2.1	9.1	.40	1.1	.17
26	.84	1.5	2.2	1.1	.36	.45	.34	5.0	5.6	.32	1.3	.37
27	.92	2.9	2.1	6.3	.44	.40	.25	.57	2.8	.34	1.6	.48
28	.87	9.4	2.1	3.9	.48	.43	.24	.60	1.1	.28	1.2	.54
29	.54	60	2.2	95	.43	.53	.35	.39	.37	.89	.69	.35
30	.50	38	2.1	2,650	-----	.71	.34	.32	.32	1.3	.89	.28
31	.45	-----	2.1	460	-----	.71	-----	.41	-----	1.9	1.5	-----
TOTAL	21.22	142.99	277.4	3,391.05	437.17	589.53	100.74	41.62	31.19	32.68	83.42	40.76
MEAN	.68	4.77	8.95	109	15.1	19.0	3.36	1.34	1.04	1.05	2.69	1.36
MAX	1.2	60	85	2,650	134	122	69	8.5	9.1	3.1	18	5.3
MIN	.36	.41	1.8	.35	.34	.35	.24	.22	.27	.24	.42	.17
AC-FT	42	284	550	6,730	867	1,170	200	83	62	65	165	81
CAL YR 1967	TOTAL	32,304.08	MEAN	88.5	MAX	4,660	MIN	0	AC-FT	64,070		
WTR YR 1968	TOTAL	5,189.77	MEAN	14.2	MAX	2,650	MIN	.17	AC-FT	10,290		

GUADALUPE RIVER BASIN

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 miles 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 1968. Prior to October 1951, published as Campbell Creek at Saratoga.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 500 ft (from topographic map). Prior to Apr. 13, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--35 years, 9.54 cfs (6,910 acre-ft per year), adjusted for diversion.

EXTREMES.--Maximum discharge during year, 598 cfs Jan. 30 (gage height, 4.48 ft); minimum daily, 0.02 cfs July 18, Aug. 10, 11.

1933-68: 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 at times.

REMARKS.--Records good. Water is diverted for municipal use by San Jose Water Works at diversion dam above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.09	1.1	.41	24	.50	8.8	.30	1.4	.25	.10	.09
2	.26	.11	.14	.16	16	.51	3.1	.37	.92	.29	.13	.13
3	.64	.09	3.0	.16	12	.43	.95	.51	.93	.21	.13	.11
4	.12	.15	9.6	.13	7.5	.39	.57	.30	.41	.44	.32	.21
5	.15	.22	14	.22	4.9	.46	.57	.54	.46	.59	.26	.27
6	.15	.17	2.9	.24	2.7	.56	.57	.70	.51	.10	.18	.52
7	.11	.09	5.9	.33	2.4	3.4	.51	.49	.51	.07	.07	.54
8	.15	.15	1.9	.99	3.6	4.7	.35	.28	.38	.08	.14	.53
9	.13	.13	.70	.27	.95	.50	.40	.48	.89	.07	.03	.45
10	.12	.12	.34	14	.64	.38	.40	.21	1.3	.10	.02	.40
11	.07	.14	.23	3.7	.57	.65	.40	.36	1.2	.10	.02	.44
12	.09	.26	.22	.91	.51	8.4	.51	.43	.94	.08	.03	.49
13	.09	.50	.70	.31	.51	8.4	.35	2.4	.68	.14	.10	.41
14	.15	.48	.46	1.4	.45	12	.35	2.2	.65	.17	.05	.42
15	.13	.10	.23	6.3	.45	6.8	.45	.61	.42	.17	.05	.45
16	.52	.14	.20	2.1	10	20	.57	.34	.45	.02	.05	.37
17	.37	.17	.42	.22	16	17	.26	.44	.58	.09	.07	.33
18	.69	.21	5.2	.25	10	11	.40	.28	.86	.09	.05	.31
19	.09	.21	2.4	.22	6.2	7.5	.35	.38	2.6	.11	.05	.32
20	.08	.19	.33	.26	7.2	5.4	.35	.46	1.0	.20	.06	.33
21	.09	.10	.25	.18	7.2	4.5	.45	.25	.66	.41	.10	.38
22	.09	.07	.22	.21	4.2	4.2	.64	.25	.80	.16	.32	.44
23	.13	.09	.20	.16	4.0	4.9	.22	.25	.89	.26	.10	.40
24	.07	.11	.21	.18	3.1	2.6	.35	.43	2.2	.28	.08	.36
25	.06	.09	.25	.25	2.9	2.1	.51	.19	.57	.34	.12	.40
26	.11	.12	.26	.27	2.2	1.8	.35	.33	.41	.22	.09	.43
27	.09	.10	.20	.51	1.3	1.4	.35	.89	.24	.31	.25	.52
28	.10	.27	.20	.65	1.1	.95	.40	.33	.43	.23	.19	.68
29	.09	1.0	.20	51	.79	.73	.51	.61	.49	.08	.07	1.1
30	.07	2.6	.17	328	-----	.36	.51	.39	.24	.18	.15	.86
31	.09	-----	.24	71	-----	.37	-----	.43	-----	.26	.11	-----
TOTAL	5.25	8.27	52.37	484.99	153.37	132.89	24.50	16.43	24.02	6.10	3.49	12.69
MEAN	.17	.28	1.69	15.6	5.29	4.29	.82	.53	.80	.20	.11	.42
MAX	.69	2.6	14	328	24	20	8.8	2.4	2.6	.59	.32	1.1
MIN	.06	.07	.14	.13	.45	.36	.22	.19	.24	.02	.02	.09
AC-FT	10	16	104	962	304	264	49	33	48	12	6.9	25
(a)	72	73	103	109	279	316	261	149	103	104	72	11

CAL YR 1967 TOTAL 5,186.16

MEAN 14.2

MAX 333

MIN 0

AC-FT 10,290

a 2,170

WTR YR 1968 TOTAL 924.37

MEAN 2.53

MAX 328

MIN .02

AC-FT 1,830

a 1,650

Peak discharge (base, 110 cfs).--Jan. 30 (1115 hrs) 598 cfs (4.48 ft).

a Diversion, in acre-feet, furnished by San Jose Water Works.

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, 11.9 sq mi (revised). Records available, January 1936 to September 1968. 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, 1,770 acre-ft May 10 (elevation, 603.64 ft); no contents Oct. 9-16. Maximum contents observed during period 1936-68, 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, 1966-67.

Reservoir is formed by earthfill 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, 6.96 sq mi (revised). Records available, January 1936 to September 1968. 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, 8,440 acre-ft Apr. 1 (elevation, 477.86 ft); minimum observed, 1,650 acre-ft Sept. 30 (elevation, 441.95 ft). Maximum contents observed during period 1936-68, 10,520 acre-ft Apr. 7, 1967 (elevation, 485.21 ft); no contents for part of each year except 1942-45, 1963-68.

Reservoir is formed by earthfill 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 ft (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, 5.97 sq mi (revised). Records available, January 1936 to September 1968. 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, 2,710 acre-ft Apr. 12 (elevation, 604.96 ft); minimum observed, 323 acre-ft Sept. 30 (elevation, 545.81 ft). Maximum contents observed during period 1936-68, 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, 1966-68.

Reservoir is formed by earthfill dam completed in 1936. Capacity, 3,460 acre-ft between elevations 506.8 (invert of outlet tunnel) and 617.0 ft (crest of spillway). Water released down Guadalupe Creek for irrigation and ground-water recharge by percolation. Record of contents furnished by Santa Clara Valley Water Conservation District.

11-1679.5. LAKE ELSMAN.--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, 9.79 sq mi (revised). Records available, February 1951 to September 1968. 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, 5,250 acre-ft Apr. 24 (elevation, 1,100.8 ft); minimum observed, 1,010 acre-ft Dec. 12 (elevation, 1,031.9 ft). Maximum contents observed during period 1951-68, 6,640 acre-ft Jan. 31, 1963 (elevation, 1,115.1 ft); minimum observed, 107 acre-ft Dec. 29, 1956 (elevation, 996.8 ft).

Reservoir is formed by earthfill dam completed in 1951; topped by a 2-foot inflatable surcharge dam since 1956. Usable capacity, 6,280 acre-ft between elevations 944 (elevation of outlet gates) and 1,112 ft (top of 2-foot inflatable surcharge dam). Dead storage, 60 acre-ft. Water released down Los Gatos Creek for domestic and industrial use. Record of contents furnished by San Jose Water Works.

11-1679.8. LEXINGTON RESERVOIR.--Lat 37°12'06", long 121°59'17", in 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 1968. 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, 8,060 acre-ft Apr. 8 (elevation, 608.80 ft); minimum observed, 530 acre-ft Dec. 4 (elevation, 544.14 ft). Maximum contents observed during period 1952-68, 23,190 acre-ft Mar. 16, 1967 (elevation, 654.00 ft); no contents for part of each year except 1963, 1966-68.

Reservoir is formed by earthfill dam completed in 1952. Capacity, 21,430 acre-ft between elevations 519 (invert at outlet tunnel) and 650 ft (crest of spillway). Dead storage, 31 acre-ft. Water released down Los Gatos Creek for irrigation and ground-water recharge by percolation. Record of contents furnished by Santa Clara Valley Water Conservation District.

Month-end contents, in acre-feet (including momentary storage above spillway crest), water year October 1967 to September 1968

Date	Almaden Reservoir a	Calero Reservoir a	Guadalupe Reservoir a	Lake Elisman b	Lexington Reservoir a
Sept. 30.....	730	7,420	884	2,030	6,900
Oct. 31.....	51	6,920	405	1,520	4,280
Nov. 30.....	140	5,920	398	1,120	723
Dec. 31.....	310	5,380	390	1,120	1,210
Jan. 31.....	1,580	5,650	1,610	2,320	5,720
Feb. 29.....	927	7,180	2,080	3,310	6,190
Mar. 31.....	1,200	8,440	2,670	4,790	7,880
Apr. 30.....	1,730	7,900	2,640	5,220	7,280
May 31.....	1,520	6,640	2,670	4,910	6,600
June 30.....	929	5,270	2,200	4,050	4,560
July 31.....	852	3,700	2,350	2,900	4,160
Aug. 31.....	770	2,600	1,900	1,840	3,190
Sept. 30.....	615	1,650	295	1,150	1,150

a Contents at 0800 hours on first day of following month.

b Contents at 0800 hours on last day of month.

COYOTE CREEK BASIN

11-1698. COYOTE CREEK NEAR GILROY, CALIF.

LOCATION.--Lat 37°04'40", long 121°29'36", in 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 790 ft (from topographic map). Prior to Nov. 14, 1963, graphic water-stage recorder at site 0.4 mile downstream at different datum. Nov. 14, 1963 to June 30, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--8 years, 38.3 cfs (27,730 acre-ft per year).

EXTREMES.--Maximum discharge during year, 700 cfs Jan. 30 (gage height, 6.00 ft); no flow Oct. 1 to Dec. 20, Aug. 9 to Sept. 30.
1960-68: Maximum discharge, 10,100 cfs Jan. 31, 1963 (gage height, 12.60 ft, site and datum then in use), from rating curve extended above 3,200 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	1.4	42	5.1	8.1	1.4	.42	.08	.03	
2			0	1.4	27	4.5	15	1.2	.42	.10	.02	
3			0	1.2	18	3.9	10	1.2	.42	.11	.02	
4			0	1.2	12	3.6	8.1	1.2	.38	.11	.02	
5			0	1.2	9.0	3.4	6.5	1.1	.38	.11	.02	
6			0	1.2	6.9	3.1	5.4	1.1	.38	.10	.01	
7			0	1.2	5.8	3.6	4.8	.98	.38	.10	.01	
8			0	1.2	4.8	21	4.5	.90	.38	.10	.01	
9			0	1.2	4.2	18	4.5	.90	.35	.10	0	
10			0	3.6	3.6	11	3.9	.82	.35	.10	0	
11			0	7.3	3.4	7.7	3.9	.82	.35	.10	0	
12			0	4.8	2.8	7.3	3.6	.74	.31	.10	0	
13			0	3.4	2.8	33	3.4	.67	.31	.10	0	
14			0	3.1	2.8	73	3.1	.61	.28	.10	0	
15			0	5.8	2.6	65	2.8	.56	.25	.10	0	
16			0	8.1	3.9	63	2.6	.61	.25	.10	0	
17			0	5.8	26	92	2.6	.61	.22	.10	0	
18			0	4.2	32	48	2.2	.61	.20	.10	0	
19			0	3.6	21	31	2.2	.56	.17	.10	0	
20			0	3.1	53	20	2.2	.56	.15	.10	0	
21			.56	2.8	50	15	2.0	.51	.13	.09	0	
22			1.6	2.6	37	11	2.0	.46	.13	.10	0	
23			1.6	2.4	26	9.0	2.0	.51	.13	.09	0	
24			1.6	2.2	18	7.7	2.2	.56	.13	.08	0	
25			1.6	2.2	14	6.9	2.2	.51	.12	.06	0	
26			1.6	2.2	9.9	6.5	2.0	.51	.12	.04	0	
27			1.6	2.2	8.1	5.8	2.0	.51	.10	.04	0	
28			1.6	2.4	6.9	5.4	1.7	.51	.10	.03	0	
29			1.4	2.6	5.8	5.1	1.6	.46	.10	.03	0	
30			1.4	146	-----	5.1	1.4	.46	.08	.03	0	
31		-----	1.4	206	-----	5.1	-----	.46	-----	.03	0	-----
TOTAL	0	0	15.96	437.6	459.3	599.8	118.5	22.61	7.49	2.63	0.14	0
MEAN	0	0	.51	14.1	15.8	19.3	3.95	.73	.25	.085	.005	0
MAX	0	0	1.6	206	53	92	15	1.4	.42	.11	.03	0
MIN	0	0	0	1.2	2.6	3.1	1.4	.46	.08	.03	0	0
AC-FT	0	0	32	868	911	1,190	235	45	15	5.2	.3	0

CAL YR 1967 TOTAL 31,750.56 MEAN 87.0 MAX 2,240 MIN 0 AC-FT 62,980
WTR YR 1968 TOTAL 1,664.03 MEAN 4.55 MAX 206 MIN 0 AC-FT 3,300

Peak discharge (base, 1,000 cfs).--No peak above base.

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 1968. 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.--Digital water-stage recorder and concrete control. Altitude of gage is 375 ft (from topographic map). Prior to Mar. 1, 1950, staff gages and graphic water-stage recorders at various sites within 1.4 miles upstream at different datums. Prior to July 2, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--62 years, 65.6 cfs (47,490 acre-ft per year).

EXTREMES.--Maximum discharge during year, 112 cfs June 25, 28-31, July 1 (gage height, 2.65 ft); minimum daily, 3.0 cfs Mar. 29.

1902-12, 1916-68: Maximum discharge, 25,000 cfs probably Mar. 7, 1911 (record furnished by Duryea, Haehl and Gilman); no flow at times.

REMARKS.--Records good. Flow regulated by Coyote (see sta. no. 11-1698.8.) and Anderson (see sta. no. 11-1699.2.) Lakes; water released during summer. Water is diverted to Main Avenue percolation ponds by Santa Clara Valley Water Conservation District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	36	13	8.0	4.8	4.0	4.2	45	61	112	68	68
2	73	38	11	8.7	4.6	4.0	7.8	45	63	104	68	68
3	68	40	11	12	4.6	4.0	12	45	66	92	68	42
4	63	41	11	13	4.6	4.0	14	43	66	90	68	14
5	63	41	7.3	14	4.6	4.2	15	43	68	90	68	12
6	63	41	4.0	14	4.6	3.5	14	43	68	90	66	14
7	61	43	4.0	14	4.6	3.4	14	40	68	90	68	35
8	59	45	3.8	14	4.2	4.0	15	40	68	90	66	26
9	57	45	3.8	14	4.2	4.0	15	40	68	89	66	24
10	61	45	3.8	14	4.2	4.0	16	40	66	68	66	28
11	61	43	3.8	14	4.2	4.0	17	40	66	81	68	37
12	57	43	3.6	14	4.2	4.0	17	40	66	90	66	37
13	59	40	3.6	14	4.2	4.0	17	40	66	86	68	35
14	59	26	3.8	14	4.2	4.0	18	40	66	86	68	35
15	59	28	4.0	8.6	4.2	4.2	18	40	66	87	68	35
16	57	28	4.0	14	4.2	4.2	20	52	66	86	68	33
17	55	28	4.2	14	4.2	4.2	23	59	66	84	68	34
18	55	28	4.6	14	4.2	4.2	29	59	68	78	68	40
19	47	26	4.2	14	4.2	4.2	32	59	68	73	68	46
20	41	26	4.2	14	4.2	4.2	34	59	68	68	71	46
21	38	26	4.2	14	4.2	4.2	34	61	80	68	68	46
22	38	26	4.0	14	4.2	4.2	35	63	104	67	68	46
23	38	26	4.2	14	4.2	4.2	35	63	107	62	66	46
24	38	25	4.2	14	4.2	4.6	35	63	109	56	68	43
25	38	25	4.2	14	4.0	4.6	35	63	112	69	68	38
26	38	25	6.4	14	4.0	4.6	35	63	112	68	66	36
27	38	25	8.0	14	4.0	3.3	38	63	109	66	66	36
28	38	25	8.0	14	4.0	3.1	40	63	112	67	68	37
29	38	21	8.0	9.2	4.0	3.0	40	61	112	65	68	37
30	36	16	8.0	6.0	-----	4.0	43	63	112	66	66	37
31	35	-----	8.0	5.2	-----	4.2	-----	63	-----	68	66	-----
TOTAL	1,604	971	179.9	392.7	123.8	124.3	722.0	1,601	2,397	2,456	2,093	1,111
MEAN	51.7	32.4	5.80	12.7	4.27	4.01	24.1	51.6	79.9	79.2	67.5	37.0
MAX	73	45	13	14	4.8	4.6	43	63	112	112	71	68
MIN	35	16	3.6	5.2	4.0	3.0	4.2	40	61	56	66	12
AC-FT	3,180	1,930	357	779	246	247	1,430	3,180	4,750	4,870	4,150	2,200
(a)	109	441	439	326	151	320	92	326	447	468	427	95

CAL YR 1967 TOTAL 13,646.40 MEAN 37.4 MAX 96 MIN .10 AC-FT 27,070 a 2,510
WTR YR 1968 TOTAL 13,775.7 MEAN 37.6 MAX 112 MIN 3.0 AC-FT 27,320 a 3,640

a Diversion, in acre-feet, to Main Avenue percolation ponds, furnished by Santa Clara Valley Water Conservation District.

COYOTE CREEK BASIN

11-1721. UPPER PENITENCIA CREEK AT SAN JOSE, CALIF.

LOCATION.--Lat 37°23'43", long 121°49'38", on north boundary of San Jose Pala Grant, 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 1968.

GAGE.--Digital water-stage recorder and, since Sept. 12, 1963, concrete control. Datum of gage is 265.30 ft above mean sea level, datum of 1929. Prior to Aug. 3, 1962, graphic water-stage recorder at site 0.4 mile downstream at different datum. Aug. 3, 1962, to June 30, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years, 4.15 cfs (3,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 298 cfs Jan. 30 (gage height, 4.53 ft); minimum daily, 0.06 cfs June 29.

1961-68: Maximum discharge, 1,500 cfs Jan. 21, 1967 (gage height, 6.24 ft in gage well; 7.8 ft from outside gage), from rating curve extended above 270 cfs on basis of slope-area measurement of maximum flow; no flow at times in most years.

Maximum discharge known since at least 1935, 2,100 cfs Apr. 2, 1958, from information furnished by Santa Clara Valley Water Conservation District.

REMARKS.--Records fair. Flow partly regulated by Cherry Flat Reservoir (capacity, 500 acre-ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	.36	1.1	.98	13	1.4	3.5	.58	.23	.59	.20	.20
2	.46	.41	.98	.98	8.0	1.3	3.2	.52	.17	.57	.27	.20
3	.58	.41	1.3	.98	5.5	1.3	2.1	.52	.17	.48	.21	.41
4	.58	.46	1.7	.98	4.6	1.3	1.9	.58	.14	.53	.24	.27
5	.52	.52	2.6	.98	3.6	1.3	1.7	.52	.20	.59	.21	.24
6	.52	.52	1.3	.98	2.9	1.3	1.5	.46	.17	.55	.23	.25
7	.46	.52	1.7	.98	2.5	1.8	1.7	.46	.20	.44	.27	.27
8	.41	.52	1.3	.98	2.2	5.0	1.5	.46	.23	.43	.17	.27
9	.41	.58	1.1	.98	2.1	2.4	1.3	.46	.23	.56	.20	.27
10	.41	.58	1.1	1.8	1.8	1.8	1.3	.46	.20	.49	.17	.20
11	.41	.58	.98	1.3	1.7	1.5	1.1	.52	.14	.56	.23	.17
12	.41	.58	.88	1.2	1.7	2.6	1.1	.52	.14	.55	.20	.23
13	.36	.72	.80	1.1	1.5	13	1.1	.65	.14	.56	.27	.23
14	.36	.58	.80	1.6	1.5	11	.98	1.2	.12	.42	.31	.14
15	.36	.72	.88	2.2	1.3	8.3	.98	.80	.10	.51	.27	.23
16	.36	.72	.88	1.8	2.1	15	.98	.52	.12	.59	.23	.20
17	.36	.72	1.1	1.5	2.2	20	.98	.46	.12	.66	.20	.14
18	.31	.80	2.5	1.3	1.9	12	.88	.46	.10	.78	.23	.13
19	.36	.58	1.8	1.2	1.7	7.6	.80	.41	.08	.71	.27	.19
20	.36	.41	1.4	1.2	1.9	6.0	.88	.41	.08	.79	.23	.23
21	.36	.46	1.2	1.1	2.2	4.8	.80	.41	.07	.57	.31	.17
22	.41	.46	1.1	1.1	2.2	4.1	.80	.41	.07	.65	.31	.21
23	.41	.80	1.1	1.1	2.1	3.4	.80	.36	.07	.79	.23	.15
24	.41	.80	.98	1.1	1.9	3.1	.80	.36	.10	.53	.23	.10
25	.41	.72	.98	1.1	1.8	2.7	.72	.36	.07	.39	.23	.15
26	.41	.72	.98	1.1	1.7	2.5	.72	.36	.08	.17	.23	.12
27	.31	.80	.98	1.3	1.7	2.4	.65	.31	.08	.18	.17	.19
28	.41	.72	.98	1.2	1.5	2.2	.65	.27	.07	.23	.23	.14
29	.36	1.3	.98	1.3	1.5	2.1	.58	.27	.06	.20	.12	.20
30	.31	1.1	.98	96	-----	1.9	.58	.23	.17	.13	.14	.20
31	.36	-----	.98	40	-----	1.8	-----	.20	-----	.22	.14	-----
TOTAL	12.68	19.17	37.44	171.42	80.3	146.9	36.58	14.51	3.92	15.42	6.95	6.10
MEAN	.41	.64	1.21	5.53	2.77	4.74	1.22	.47	.13	.50	.22	.20
MAX	.58	1.3	2.6	96	13	20	3.5	1.2	.23	.79	.31	.41
MIN	.31	.36	.80	.98	1.3	1.3	.58	.20	.06	.13	.12	.10
AC-FT	25	38	74	340	159	291	73	29	7.8	31	14	12
CAL YR 1967	TOTAL 4,160.29	MEAN 11.4	MAX 260	MIN .30	AC-FT 8,250							
WTR YR 1968	TOTAL 551.39	MEAN 1.51	MAX 96	MIN .06	AC-FT 1,090							

Peak discharge (base, 90 cfs).--Jan. 30 (1900 hrs) 298 cfs (4.53 ft).

RESERVOIRS IN COYOTE CREEK BASIN, CALIF.

11-1698.5. COYOTE LAKE.--Lat 37°07'06", long 121°32'55", in SE $\frac{1}{4}$ 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 1968. 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, 16,850 acre-ft Oct. 1 (elevation, 764.04 ft); minimum observed, 3,200 acre-ft Sept. 30 (elevation, 728.31 ft). Maximum contents observed during period 1936-68, 28,120 acre-ft Dec. 8, 1950 (elevation, 782.5 ft); no contents at times.

Reservoir is formed by rock- and earthfill dam completed in 1936. Capacity, 24,510 acre-ft between elevations 693.3 (invert of outlet tunnel) and 777 ft (crest of spillway). Water released down Coyote Creek for storage in Anderson Lake. Record of contents furnished by Santa Clara 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 1968. 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, 51,090 acre-ft Apr. 2 (elevation, 585.82 ft); minimum observed, 29,520 acre-ft Sept. 4 (elevation, 555.08 ft). Maximum contents during period 1950-68, 95,990 acre-ft Apr. 3, 1958 (elevation, 628.67 ft from floodmarks); no contents at times in 1960-62.

Reservoir is formed by earth- and rockfill dam completed in 1950. Capacity, 91,310 acre-ft between elevations 439 (invert of outlet tunnel) and 625 ft (crest of spillway). Water released down Coyote Creek for irrigation and ground-water recharge by percolation. Record of contents furnished by Santa Clara Valley Water Conservation District.

Month-end contents, in acre-feet (including momentary storage above spillway crest), water year October 1967 to September 1968

Date	Coyote Lake	Anderson Lake
Sept. 30.....	16,850	50,400
Oct. 31.....	15,540	48,400
Nov. 30.....	14,130	47,340
Dec. 31.....	12,800	47,960
Jan. 31.....	12,360	49,020
Feb. 29.....	12,110	50,160
Mar. 31.....	12,770	51,020
Apr. 30.....	12,480	49,750
May 31.....	12,110	45,540
June 30.....	11,560	39,760
July 31.....	10,910	34,160
Aug. 31.....	9,840	29,900
Sept. 30.....	2,880	33,410

Note.--Contents at 0800 hours on first day of following month.

ALAMEDA CREEK BASIN

11-1760. ARROYO MOCHO NEAR LIVERMORE, CALIF.

LOCATION.--Lat 37°37'35", long 121°42'13", NW¼SE¼ 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 1968. Records for water year 1914 incomplete, yearly estimate and monthly discharge only for some months, published in WSP 1315-B.

GAGE.--Digital water-stage recorder, and since Aug. 5, 1964, concrete control. Datum of gage is 746.49 ft above mean sea level, datum of 1929. 1912 to October 1914, graphic water-stage recorder at present site at different datum. November 1914 to Sept. 30, 1930, graphic water-stage recorder at site 1 mile upstream at different datum. Jan. 9, 1964, to July 3, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--23 years, 3.98 cfs (2,880 acre-ft per year); median of yearly mean discharges, 2.3 cfs (1,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 168 cfs Jan. 30 (gage height, 4.46 ft); no flow July 20 to Sept. 30. 1912-30, 1963-68: Maximum discharge recorded, 1,250 cfs Jan. 22, 1967 (gage height, 5.90 ft), from rating curve extended above 460 cfs; maximum daily discharge, 1,000 cfs Jan. 25, 1914 (estimated); no flow for parts of most years.

Flood of Dec. 23, 1955, discharge 1,880 cfs (by slope-area measurement of maximum flow).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.14	.64	.72	16	.94	1.3	.33	.22	.01		
2	.11	.14	.82	.82	16	.94	2.2	.33	.22	.01		
3	.11	.11	.72	.94	8.6	.82	1.6	.33	.18	.02		
4	.11	.11	.72	.94	4.4	.82	1.3	.33	.18	.02		
5	.11	.14	1.2	.82	3.0	1.1	1.3	.33	.14	.02		
6	.11	.14	1.6	.82	2.2	1.1	1.2	.33	.14	.02		
7	.14	.14	1.2	.82	1.6	1.2	1.2	.33	.14	.03		
8	.14	.14	1.2	.84	1.3	3.5	1.1	.33	.11	.03		
9	.14	.14	1.1	.72	1.2	3.2	.94	.35	.11	.03		
10	.14	.14	.94	1.3	.94	2.2	.82	.40	.11	.02		
11	.14	.14	.82	2.2	.94	1.8	.72	.40	.11	.02		
12	.14	.14	.72	2.0	.82	1.4	.72	.40	.08	.01		
13	.14	.18	.72	1.8	.82	3.2	.72	.40	.08	.01		
14	.11	.22	.64	1.8	.82	3.2	.72	.48	.06	.01		
15	.11	.27	.64	2.4	.72	2.6	.64	.48	.04	.01		
16	.11	.27	.64	2.8	.82	3.0	.64	.56	.04	.01		
17	.11	.27	.67	2.4	5.6	7.3	.64	.56	.04	.01		
18	.11	.27	1.5	2.0	6.1	6.1	.64	.56	.04	.01		
19	.08	.27	2.4	1.8	4.1	3.8	.56	.56	.04	.01		
20	.08	.27	1.3	1.6	3.2	2.8	.48	.48	.04	0		
21	.11	.27	.94	1.3	3.0	2.4	.56	.48	.02	0		
22	.11	.27	.82	1.2	2.6	2.2	.56	.40	.02	0		
23	.11	.33	.82	1.1	2.0	1.8	.56	.33	.02	0		
24	.14	.33	.72	1.1	1.8	1.6	.56	.33	.02	0		
25	.14	.27	.72	1.1	1.4	1.6	.40	.33	.02	0		
26	.14	.27	.72	.94	1.2	1.4	.40	.27	.02	0		
27	.14	.27	.72	.94	1.2	1.3	.40	.22	.02	0		
28	.14	.27	.72	1.2	1.1	1.3	.40	.18	.02	0		
29	.14	.40	.72	1.3	1.1	1.2	.33	.18	.01	0		
30	.11	.56	.72	47	-----	1.2	.33	.21	.01	0		
31	.14	-----	.72	37	-----	1.1	-----	.27	-----	0		-----
TOTAL	3.77	6.88	28.53	123.72	94.58	68.12	23.94	11.47	2.30	0.31	0	0
MEAN	.12	.23	.92	3.99	3.26	2.20	.80	.37	.077	.010	0	0
MAX	.14	.56	2.4	47	16	7.3	2.2	.56	.22	.03	0	0
MIN	.08	.11	.64	.72	.72	.82	.33	.18	.01	0	0	0
AC-FT	7.5	14	57	245	188	135	47	23	4.6	.6	0	0

CAL YR 1967: TOTAL 2,911.98

MEAN 7.98

MAX 299

MIN .08

AC-FT 5,780

WTR YR 1968: TOTAL 363.62

MEAN .99

MAX 47

MIN 0

AC-FT 721

Peak discharge (base, 90 cfs).--Jan. 30 (1830 hrs) 168 cfs (4.46 ft).

11-1762. ARROYO MOCHO NEAR PLEASANTON, CALIF.

LOCATION.--Lat 37°41'26", long 121°52'20", in Santa Rita Grant, on right bank 0.3 mile upstream from Santa Rita Road, 0.8 mile downstream from Arroyo Las Positas, and 2 miles north of Pleasanton, Alameda County. Prior to July 8, 1968, at site 0.3 mile downstream.

DRAINAGE AREA.--141 sq mi; at former site, 143 sq mi.

RECORDS AVAILABLE.--September 1962 to September 1968.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 319.51 ft above mean sea level, datum of 1929. Prior to May 11, 1964, graphic water-stage recorder and May 11, 1964, to Oct. 30, 1967, digital water-stage recorder at site 0.4 mile downstream at different datum. Dec. 8, 1967, to July 7, 1968, wire-weight gage at bridge 0.3 mile downstream at different datum.

AVERAGE DISCHARGE.--6 years, 15.4 cfs (11,150 acre-ft per year).

EXTREMES.--Maximum discharge during year, 505 cfs Jan. 30 (gage height, 31.00 ft from high-water mark); no flow for many days.
1962-68: Maximum discharge, 1,760 cfs Feb. 1, 1963 (gage height, 3.60 ft, site and datum then in use), from rating curve extended above 58 cfs on basis of slope-area measurement of maximum flow; no flow for many days in each year.

REMARKS.--Records fair. No regulation; low flow represents waste water from Livermore sewage disposal plant.

COOPERATION.--Wire-weight gage readings furnished by Alameda County Flood Control and Water Conservation District.

REVISIONS (water years).--1964 report: 1962-63.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	4.5	.85	18	4.6	15	2.4	5.8	.13	1.8	1.1
2		0	2.5	.85	7.0	3.8	8.6	4.4	5.2	.02	2.2	.92
3		0	1.5	1.4	3.4	2.4	4.1	3.0	6.8	0	1.9	2.2
4		0	1.2	1.4	1.4	5.9	5.3	2.7	4.8	0	.81	2.8
5		0	.80	.02	1.8	2.1	4.6	3.0	6.2	.60	.46	3.5
6		0	.60	.35	.60	4.6	4.6	2.1	6.0	1.4	1.7	4.5
7		0	.30	3.0	5.4	12	7.0	1.8	5.2	1.4	1.5	2.5
8		0	.08	.35	4.1	37	2.1	1.4	6.4	.60	1.0	1.8
9		0	.06	.85	3.8	12	1.6	2.1	4.8	.82	3.5	1.8
10		0	.04	8.1	2.1	7.5	2.1	3.8	5.9	.96	5.9	2.6
11		0	.02	.85	1.6	8.1	2.1	3.4	5.8	0	3.7	2.7
12		0	.01	1.8	1.4	10	1.6	3.8	2.4	0	3.5	.61
13		0	0	.85	1.8	34	4.4	5.2	4.4	0	4.0	1.4
14		0	0	1.4	3.0	15	3.0	4.6	4.1	0	4.6	1.8
15		0	0	9.2	4.1	8.5	3.8	4.4	1.6	0	3.5	1.6
16		0	.02	12	12	15	5.2	13	3.4	2.0	4.0	.05
17		0	.35	.13	14	16	1.4	3.4	.01	2.5	2.6	0
18		0	6.2	1.1	4.1	8.6	2.1	1.1	1.8	2.7	1.6	0
19		0	.35	.85	1.4	4.6	2.4	6.0	.03	1.7	2.1	0
20		0	.13	1.1	2.1	.35	2.4	8.1	.13	1.6	2.5	0
21		0	.60	.85	4.4	5.8	4.8	5.0	.01	.97	2.3	.72
22		0	.13	.35	2.1	6.7	2.7	7.2	0	.39	2.3	.86
23		0	.01	1.4	.85	5.6	5.0	7.2	0	.15	2.1	.57
24		0	.13	7.5	.85	4.8	1.8	7.5	0	1.0	2.2	1.6
25		0	.01	.03	1.1	7.5	2.4	3.0	0	2.1	2.2	1.5
26		0	0	.60	1.6	4.1	3.4	5.0	0	1.9	1.9	1.7
27		0	.01	5.2	2.1	.13	.85	8.8	0	1.1	2.0	2.4
28		0	.02	3.4	3.8	3.8	2.4	6.7	.01	.65	2.2	2.5
29		0	.01	1.8	3.8	3.4	3.0	1.8	.13	0	1.8	.55
30		5.0	.85	175	-----	2.4	2.1	.85	.13	1.1	1.5	2.1
31		-----	.13	97	-----	3.8	-----	3.4	-----	1.8	.86	-----
TOTAL	0	5.0	20.56	339.58	113.70	260.08	111.85	136.15	81.05	27.59	74.23	46.38
MEAN	0	.17	.66	11.0	3.92	8.39	3.73	4.39	2.70	.89	2.39	1.55
MAX	0	5.0	6.2	175	18	37	15	13	6.8	2.7	5.9	4.5
MIN	0	0	0	.02	.60	.13	.85	.85	0	0	.46	0
AC-FT	0	9.9	41	674	226	516	222	270	161	55	147	92

CAL YR 1967 TOTAL 3,861.00 MEAN 10.6 MAX 545 MIN 0 AC-FT 7,660
WTR YR 1968 TOTAL 1,216.17 MEAN 3.32 MAX 175 MIN 0 AC-FT 2,410

Peak discharge (base, 150 cfs).--Jan. 30 (2100 hrs) 505 cfs (31.00 ft).

Note.--No gage-height record Oct. 31 to Dec. 11.

ALAMEDA CREEK BASIN

11-1764. ARROYO VALLE ABOVE LANG CANYON, NEAR LIVERMORE, CALIF.

LOCATION.--Lat 37°33'00", long 121°39'57", in SE $\frac{1}{4}$ sec.29, T.4 N., R.3 E., 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 800 ft (from topographic map). Prior to Dec. 27, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--5 years, 22.4 cfs (16,220 acre-ft per year).

EXTREMES.--Maximum discharge during year, 492 cfs Jan. 30 (gage height, 4.35 ft); no flow July 2 to Sept. 30, 1963-68; Maximum discharge, 5,080 cfs Jan. 21, 1967 (gage height, 8.14 ft), from rating curve extended above 2,000 cfs; no flow at times in each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.04	1.1	1.7	42	5.7	7.1	2.2	.53	.01		
2	.02	.04	.90	1.7	38	5.3	9.5	2.0	.46	0		
3	.02	.05	.83	1.7	24	5.0	7.3	1.9	.41	0		
4	.02	.05	1.5	1.6	16	4.7	6.1	1.8	.41	0		
5	.02	.07	5.0	1.5	12	4.8	5.5	1.7	.40	0		
6	.02	.08	2.4	1.5	9.9	4.8	5.1	1.6	.45	0		
7	.03	.09	2.6	1.5	8.0	5.1	4.7	1.5	.35	0		
8	.03	.09	3.3	1.5	7.2	12	4.6	1.5	.30	0		
9	.03	.11	2.3	1.5	6.7	12	4.3	1.5	.30	0		
10	.04	.11	1.8	2.6	6.1	8.5	4.2	1.5	.21	0		
11	.04	.11	1.6	3.4	5.5	6.9	3.9	1.4	.21	0		
12	.03	.12	1.5	2.8	5.2	7.2	3.7	1.5	.21	0		
13	.03	.15	1.4	2.2	5.1	15	3.6	1.9	.18	0		
14	.03	.22	1.2	2.4	5.9	16	3.4	2.5	.16	0		
15	.03	.21	1.2	4.0	5.5	14	3.3	2.3	.12	0		
16	.03	.18	1.2	4.0	7.2	33	3.3	1.9	.11	0		
17	.03	.18	1.2	2.8	22	73	3.2	1.6	.10	0		
18	.02	.26	3.7	2.6	21	34	3.4	1.4	.09	0		
19	.02	.29	6.2	2.2	12	21	3.4	1.3	.07	0		
20	.02	.28	3.9	2.0	18	15	3.4	1.4	.06	0		
21	.03	.25	3.0	2.0	17	12	3.3	1.4	.05	0		
22	.03	.23	2.5	1.8	14	11	3.2	1.4	.05	0		
23	.03	.29	2.3	1.7	12	9.6	3.1	1.3	.04	0		
24	.04	.30	2.4	1.7	10	8.8	3.0	1.2	.03	0		
25	.04	.30	2.8	1.7	9.3	8.1	2.9	1.2	.03	0		
26	.04	.32	2.3	1.7	8.5	7.8	2.8	1.1	.03	0		
27	.04	.32	2.1	2.0	7.8	7.0	2.7	1.0	.03	0		
28	.04	.45	1.9	1.8	7.3	6.4	2.5	.90	.02	0		
29	.04	.59	1.8	2.2	6.7	6.1	2.4	.77	.02	0		
30	.04	1.3	1.8	239	-----	5.8	2.2	.68	.02	0		
31	.04	-----	1.8	119	-----	5.6	-----	.59	-----	0		-----
TOTAL	0.93	7.08	69.53	419.8	369.9	391.2	121.1	45.94	5.45	0.01	0	0
MEAN	.030	.24	2.24	13.5	12.8	12.6	4.04	1.48	.18	.0003	0	0
MAX	.04	1.3	6.2	239	42	73	9.5	2.5	.53	.01	0	0
MIN	.01	.04	.83	1.5	5.1	4.7	2.2	.59	.02	0	0	0
AC-FT	1.8	14	138	833	734	776	240	91	11	.02	0	0

CAL YR 1967 TOTAL 20,151.61 MEAN 55.2 MAX 1,830 MIN 0 AC-FT 39,970
WTR YR 1968 TOTAL 1,430.94 MEAN 3.91 MAX 239 MIN 0 AC-FT 2,840

Peak discharge (base, 350 cfs).--Jan. 30 (1715 hrs) 492 cfs (4.35 ft).

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, 1.3 miles downstream from Del Valle Dam, 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 1968. Monthly discharge only for some periods, published in WSP 1315-B. Published as Arroyo del Valle near Livermore, 1912-29.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 510.44 ft above mean sea level, datum of 1929. Prior to November 1914, at site 900 ft upstream at different datum. Nov. 1, 1914, to Sept. 30, 1930, at site 300 ft upstream at different datum. Oct. 1, 1957, to July 9, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--29 years, 29.6 cfs (21,430 acre-ft per year); median of yearly mean discharges, 20 cfs (14,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 252 cfs Jan. 31 (gage height, 3.70 ft); no flow for several months. 1912-30, 1957-68: 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. Flow regulated by Del Valle Reservoir beginning in September 1968 (capacity, 77,100 acre-ft). No diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	0	.05	2.0	68	7.7	6.5	1.6	.05			
2	.05	0	.02	1.8	46	7.3	8.2	1.6	0			
3	.05	0	0	2.0	42	6.5	9.4	1.6	0			
4	.05	0	.05	1.8	32	5.7	7.3	1.6	0			
5	.05	0	.14	1.6	21	5.7	6.5	1.6	0			
6	.09	0	.09	1.6	16	5.7	5.7	1.6	0			
7	.05	0	.09	1.6	13	6.1	5.3	1.1	0			
8	.02	0	.09	1.6	10	8.8	5.0	.66	0			
9	.02	0	.05	1.6	8.8	13	4.2	.66	0			
10	.05	0	.09	2.7	7.7	12	3.9	.66	0			
11	.02	0	.14	3.6	7.3	9.3	4.2	.54	0			
12	0	0	.20	3.6	6.9	12	3.6	.54	0			
13	.02	0	.20	3.9	6.5	13	3.6	.54	0			
14	0	0	.20	3.9	6.1	16	3.3	.66	0			
15	0	0	.27	5.3	6.5	17	3.0	.44	0			
16	0	0	.27	5.0	6.9	18	2.4	.44	0			
17	0	0	.27	5.7	10	54	1.6	.35	0			
18	0	0	1.4	5.0	22	54	1.5	.35	0			
19	0	0	2.0	3.9	23	38	2.1	.35	0			
20	0	0	2.0	4.0	18	27	2.3	.35	0			
21	0	0	1.8	6.1	22	20	2.3	.35	0			
22	0	0	1.8	4.2	20	16	2.3	.35	0			
23	0	0	1.8	4.2	18	13	2.3	.35	0			
24	0	0	1.1	2.5	14	11	2.3	.27	0			
25	0	0	.20	2.5	12	9.9	2.3	.27	0			
26	0	0	.27	2.3	10	8.8	2.3	.20	0			
27	0	0	3.5	2.5	9.9	8.2	2.0	.20	0			
28	0	0	3.0	2.7	8.8	7.7	2.0	.20	0			
29	0	.02	2.5	2.7	8.2	7.3	1.8	.20	0			
30	0	.05	2.3	64	-----	6.9	1.8	.09	0			
31	0	-----	1.8	234	-----	6.5	-----	.09	-----			
TOTAL	0.49	0.07	27.69	389.9	500.6	452.1	111.0	19.81	0.05	0	0	0
MEAN	.016	.002	.89	12.6	17.3	14.6	3.70	.64	.002	0	0	0
MAX	.09	.05	3.5	234	68	54	9.4	1.6	.05	0	0	0
MIN	0	0	0	1.6	6.1	5.7	1.5	.09	0	0	0	0
AC-FT	1.0	.1	55	773	993	897	220	39	.10	0	0	0
CAL YR 1967	TOTAL	21,280.45	MEAN	58.3	MAX	2,210	MIN	0	AC-FT	42,210		
WTR YR 1968	TOTAL	1,501.71	MEAN	4.10	MAX	234	MIN	0	AC-FT	2,980		

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 311.80 ft above mean sea level, datum of 1929. Prior to May 2, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--11 years, 27.7 cfs (20,050 acre-ft per year); median of yearly mean discharges, 17 cfs (12,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 351 cfs Jan. 31 (gage height, 8.16 ft); no flow for several months. 1957-68: Maximum discharge, 11,300 cfs Apr. 3, 1958 (gage height, 25.36 ft); no flow for several months in each year.

REMARKS.--Records fair. Flow regulated by Del Valle Reservoir beginning in September 1968 (capacity, 77,100 acre-ft). Pumping for irrigation above station during periods of low flow. Flow from upstream gravel operations reaches station at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0		0	145	2.6	7.3					
2	0	0		0	48	3.4	3.4					
3	0	0		0	39	2.6	4.2					
4	0	0		0	35	3.3	4.2					
5	0	0		0	19	1.5	4.9					
6	0	2.0		0	9.8	1.3	7.7					
7	0	0		0	7.6	1.9	7.9					
8	2.2	0		0	6.0	5.3	3.6					
9	3.6	0		0	5.3	6.0	1.8					
10	.12	0		0	7.9	9.7	.08					
11	.53	0		0	9.2	7.6	.77					
12	.98	0		0	5.5	8.8	.90					
13	0	0		0	3.6	11	.30					
14	.50	0		0	3.9	8.7	.78					
15	3.4	0		0	4.2	12	1.1					
16	3.3	0		0	3.6	19	0					
17	0	0		0	4.2	33	0					
18	0	0		0	6.0	72	0					
19	0	0		0	15	41	0					
20	0	0		0	14	27	0					
21	0	0		1.5	12	19	0					
22	0	0		2.8	11	14	0					
23	0	0		0	8.3	14	0					
24	0	0		0	12	12	0					
25	0	0		0	9.7	7.9	0					
26	0	0		0	5.9	7.2	0					
27	0	0		0	4.4	4.9	0					
28	0	0		0	3.9	3.4	0					
29	0	0		0	3.4	2.9	0					
30	1.6	0		27	-----	7.6	0					
31	0	-----		288	-----	7.6	-----		-----			-----
TOTAL	16.23	2.0	0	319.3	462.4	378.2	48.93	0	0	0	0	0
MEAN	.52	.067	0	10.3	15.9	12.2	1.63	0	0	0	0	0
MAX	3.6	2.0	0	288	145	72	7.9	0	0	0	0	0
MIN	0	0	0	0	3.4	1.3	0	0	0	0	0	0
AC-FT	32	4.0	0	633	917	750	97	0	0	0	0	0
CAL YR 1967	TOTAL	23,809.63	MEAN	65.2	MAX	2,790	MIN	0	AC-FT	47,230		
WTR YR 1968	TOTAL	1,227.06	MEAN	3.35	MAX	288	MIN	0	AC-FT	2,430		

LOCATION.--Lat 37°35'14", long 121°57'35", in NW $\frac{1}{4}$ 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.

RECORDS AVAILABLE.--January 1891 to September 1968. 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.--Digital water-stage recorder and concrete control. Datum of gage is 85.66 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 graphic water-stage recorder thereafter at site 4.5 miles upstream at different datum. Oct. 1, 1916, to Dec. 17, 1923, graphic water-stage recorder at site 800 ft upstream at different datum. Dec. 18, 1923, to Apr. 7, 1962, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 2,260 cfs Jan. 30 (gage height, 6.23 ft); minimum daily, 2.9 cfs Oct. 15.

1891-1968: Maximum discharge, 29,000 cfs Dec. 23, 1955 (gage height, 14.9 ft); no flow at times except in 1963-68.

REMARKS.--Records good. Flow regulated by Calaveras Reservoir (usable capacity, 96,800 acre-ft, most of which is diverted for San Francisco water supply) beginning in 1916 although dam not completed until 1925, by San Antonio Reservoir beginning in February 1965 (capacity, 51,000 acre-ft), and by Del Valle Reservoir beginning in September 1968 (capacity, 77,100 acre-ft). Natural flow of stream affected by imported water from Delta-Mendota Canal beginning in 1962. Other diversions from ground water basin for irrigation of 9,000 acres above station. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	66	30	54	224	57	84	49	36	60	57	61
2	21	53	12	58	109	86	53	52	37	60	57	59
3	22	53	9.1	66	73	78	32	52	36	58	58	57
4	21	54	16	66	61	70	55	51	37	58	57	57
5	20	54	53	80	50	60	63	53	37	56	59	60
6	20	54	42	84	33	55	76	53	36	56	57	64
7	20	54	78	80	26	51	78	52	43	58	54	66
8	20	53	107	80	25	94	75	39	63	57	53	67
9	19	45	100	76	23	36	70	39	63	56	54	66
10	20	24	100	88	20	27	68	40	63	56	55	65
11	18	23	100	39	24	43	73	39	62	57	59	63
12	18	22	100	15	23	73	90	42	62	55	57	58
13	17	23	98	20	19	187	71	42	58	57	57	54
14	5.2	40	100	70	17	82	68	43	57	58	58	26
15	2.9	40	98	94	47	54	64	41	46	57	59	25
16	3.5	39	80	36	60	102	55	54	46	56	58	27
17	19	42	68	20	78	154	54	53	44	56	58	35
18	21	41	78	19	37	116	53	53	51	56	59	35
19	70	41	28	12	70	88	54	53	52	57	58	34
20	78	42	18	68	61	68	61	53	52	58	58	34
21	80	64	40	68	63	53	80	52	51	59	60	34
22	80	53	53	68	123	45	88	52	52	58	59	34
23	76	68	53	70	53	43	70	52	52	57	58	33
24	55	47	53	68	82	42	68	51	52	57	58	21
25	64	9.9	53	68	82	48	66	54	51	58	58	17
26	84	47	53	55	84	43	66	40	53	59	57	20
27	78	70	34	12	45	37	68	14	55	60	58	20
28	80	71	47	13	34	32	68	11	63	59	56	23
29	80	75	53	11	63	20	68	7.8	63	57	57	23
30	80	63	54	748	-----	34	61	19	62	56	58	18
31	80	-----	54	604	-----	66	-----	25	-----	56	61	-----
TOTAL	1,293.6	1,430.9	1,862.1	2,910	1,709	2,044	2,000	1,330.8	1,535	1,777	1,782	1,256
MEAN	41.7	47.7	60.1	93.9	58.9	65.9	66.7	42.9	51.2	57.3	57.5	41.9
MAX	84	75	107	748	224	187	90	54	63	60	61	67
MIN	2.9	9.9	9.1	11	17	20	32	7.8	36	55	53	17
AC-FT	2,570	2,840	3,690	5,770	3,390	4,050	3,970	2,640	3,040	3,520	3,530	2,490
CAL YR 1967: TOTAL	71,188.4			MEAN 195	MAX 6,700	MIN 2.9	AC-FT 141,200					
WTR YR 1968: TOTAL	20,930.4			MEAN 57.2	MAX 748	MIN 2.9	AC-FT 41,510					

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 1968.

GAGE.--Graphic 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.--12 years, 1.35 cfs (977 acre-ft per year); median of yearly mean discharges, 1.0 cfs (724 acre-ft per year).

EXTREMES.--Maximum discharge during year, 79 cfs Jan. 30 (gage height, 2.5 ft, from outside highwater marks); no flow for several months.
1916-19, 1959-68: 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 fair. No regulation or diversion above station.

REVISIONS (water years).--1963 report: 1962(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	8.9	.89	4.8	.03				
2				0	5.9	.79	2.9	.04				
3				0	4.0	.74	1.7	.03				
4				0	3.2	.61	1.3	.04				
5				0	2.6	.61	1.0	.04				
6				0	1.8	.57	.79	.03				
7				0	1.3	1.1	.65	.01				
8				0	1.1	5.7	.61	0				
9				0	.89	1.9	.46	0				
10				0	.74	1.3	.37	0				
11				0	.79	1.0	.37	.02				
12				0	.65	5.3	.37	.05				
13				0	.49	20	.31	.09				
14				0	.40	12	.25	.06				
15				0	.31	7.0	.25	0				
16				0	.37	29	.19	0				
17				0	.49	32	.19	0				
18				0	.49	13	.14	0				
19				0	.46	8.0	.14	0				
20				0	4.0	6.0	.14	0				
21				0	8.5	5.0	.11	0				
22				0	2.0	4.0	.11	0				
23				0	1.6	3.0	.07	0				
24				0	1.4	2.6	.07	0				
25				0	1.3	2.4	.07	0				
26				0	1.2	2.2	.07	0				
27				0	1.1	1.7	.04	0				
28				0	1.0	1.5	.03	0				
29				0	1.0	1.3	.04	0				
30				40	-----	1.1	.02	0				
31		-----		19	-----	1.0	-----	0	-----			-----
TOTAL	0	0	0	59	57.98	173.31	17.56	0.44	0	0	0	0
MEAN	0	0	0	1.90	2.00	5.59	.59	.014	0	0	0	0
MAX	0	0	0	40	8.9	32	4.8	.09	0	0	0	0
MIN	0	0	0	0	.31	.57	.02	0	0	0	0	0
AC-FT	0	0	0	117	115	344	35	.9	0	0	0	0
CAL YR 1967	TOTAL 1,475.70			MEAN 4.04	MAX 136	MIN 0	AC-FT 2,930					
WTR YR 1968	TOTAL 308.29			MEAN .84	MAX 40	MIN 0	AC-FT 612					

PEAK DISCHARGE (BASE, 40 CFS)

Note.--No gage-height record Jan. 30.

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-30	0600	2.5	79	03-16	1430	2.41	63
03-12	2330	2.28	43				

11-1807. PATTERSON CREEK AT UNION CITY, CALIF.

LOCATION.--Lat 37°55'09", long 122°02'50", in Portero de Los Cerritos Grant, on right bank 0.2 mile upstream from bridge on State Highway 17 (Nimitz Freeway), 0.1 mile below effluence, and 2.0 miles southwest of Decoto District in Union City, Alameda County.

RECORDS AVAILABLE.--October 1958 to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 4.13 ft above mean sea level, datum of 1929. Prior to Oct. 26, 1966, at site 0.2 mile downstream at same datum.

AVERAGE DISCHARGE.--10 years, 38.6 cfs (27,950 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,110 cfs Jan. 30 (gage height, 9.08 ft); no flow for part of year. 1958-68: Maximum discharge, 10,500 cfs Feb. 1, 1963 (gage height, 20.4 ft, from floodmarks); no flow for most of each year.

REMARKS.--Records good except those for period of backwater from temporary dams, which are poor. This stream is a distributary of Alameda Creek. See REMARKS for Alameda Creek at Union City.

REVISIONS (water year).--1964 report: 1963.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	287	.01	7.4	.09	.04			
2		0	0	0	112	.01	3.2	.05	.03			
3		0	.50	0	51	.01	2.8	.03	.04			
4		0	2.0	0	45	1.5	.54	.03	.04			
5		0	.10	0	16	4.2	.12	.03	.04			
6		0	.10	0	6.5	4.2	.08	.03	.05			
7		0	.10	0	3.2	4.8	.02	.03	.04			
8		0	.10	0	2.6	88	.01	.03	.03			
9		0	.10	0	2.2	79	.01	.03	.03			
10		0	.10	1.0	3.1	.94	.01	.03	.03			
11		0	.10	1.0	3.6	.06	.01	.03	.02			
12		0	.10	0	2.5	9.3	.47	.04	.02			
13		0	.10	0	1.6	116	5.1	.03	.02			
14		0	.10	0	1.7	116	6.5	.03	.02			
15		0	.10	0	1.9	64	3.0	.03	.02			
16		0	.10	0	2.4	63	.12	.03	.02			
17		0	.10	0	2.8	123	.03	.03	.02			
18		0	.10	0	3.0	116	.01	.03	.02			
19		0	.10	0	2.1	88	.01	.04	.02			
20		0	.10	0	6.0	30	0	.04	.02			
21		0	.10	0	6.9	10	0	.03	.01			
22		0	.10	0	5.7	4.2	0	.03	.01			
23		0	.10	0	4.2	5.1	.02	.03	.01			
24		0	.10	.01	2.2	3.2	.11	.04	.01			
25		0	.10	.01	3.6	2.0	.11	.04	.01			
26		0	.10	0	2.7	1.9	.07	.04	.01			
27		0	.10	.02	1.8	1.9	.07	.04	.01			
28		0	.10	.04	.12	.98	.05	.04	.01			
29		0	.10	.04	.03	2.2	.06	.04	0			
30		2.0	.10	752	-----	3.0	.09	.04	0			
31		-----	.10	714	-----	4.1	-----	.04	-----			
TOTAL	0	2.0	5.20	1,468.12	583.45	946.61	30.02	1.12	0.65	0	0	0
MEAN	0	.067	.17	47.4	20.1	30.5	1.00	.036	.022	0	0	0
MAX	0	2.0	2.0	752	287	123	7.4	.09	.05	0	0	0
MIN	0	0	0	0	.03	.01	0	.03	0	0	0	0
AC-FT	0	4.0	10	2,910	1,160	1,880	60	2.2	1.3	0	0	0
CAL YR 1967	TOTAL	58,371.90	MEAN	160	MAX	6,200	MIN	0	AC-FT	115,800		
WTR YR 1968	TOTAL	3,037.17	MEAN	8.30	MAX	752	MIN	0	AC-FT	6,020		

Note.--Backwater from temporary dams Nov. 30 to Jan. 15.

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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 0.40 ft above mean sea level, datum of 1929.

AVERAGE DISCHARGE.--10 years, 1.72 cfs (1,250 acre-ft per year).

EXTREMES.--Maximum discharge during year, 37 cfs Apr. 21 (gage height, 9.87 ft); no flow for most of year.
1958-68: Maximum discharge, 1,770 cfs Feb. 1, 1963 (gage height, 19.25 ft, from floodmarks); no flow for most of each year.

REMARKS.--Records fair. Flow completely regulated by gates at Patterson Creek since October 1966. For total flow in Alameda Creek, add flow of Patterson Creek at Union City (see REMARKS for Alameda Creek near Niles). Diversion of 26,440 acre-ft to percolation ponds during the year between stations near Niles and at Union City; additional percolation to ground water by placing check dams in channel during summer months.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0			0					
2				0			0					
3				0			0					
4				0			0					
5				0			0					
6				0			0					
7				0			0					
8				0			0					
9				0			0					
10				0			0					
11				0			0					
12				0			0					
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			12					
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				2.9	-----		0					
31		-----		1.0	-----		-----		-----			-----
TOTAL	0	0	0	3.9	0	0	12	0	0	0	0	0
MEAN	0	0	0	.13	0	0	.40	0	0	0	0	0
MAX	0	0	0	2.9	0	0	12	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	7.7	0	0	24	0	0	0	0	0
CAL YR 1967	TOTAL	134.30		MEAN .37	MAX 52	MIN 0		AC-FT 266				
WTR YR 1968	TOTAL	15.90		MEAN .043	MAX 12	MIN 0		AC-FT 32				

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital 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. Oct. 9, 1946, to Oct. 22, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--23 years, 13.9 cfs (10,060 acre-ft per year); median of yearly mean discharges, 6.9 cfs (5,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 315 cfs Jan. 30 (gage height, 7.19 ft); minimum daily, 0.03 cfs Aug. 6, 11.

1939-40, 1946-68: Maximum discharge, 7,460 cfs Oct. 13, 1962 (gage height, 19.73 ft from floodmarks), from rating curve extended above 2,700 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 20.82 ft from floodmarks, Dec. 22, 1955; no flow at times.

REMARKS.--Records good. Flow partly regulated by 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.15	1.3	10	23	8.9	20	2.1	.76	.06	.09	.36
2	2.6	.18	.42	10	17	8.9	13	2.6	.87	.07	.09	.38
3	2.7	.15	4.0	10	12	8.3	9.4	2.6	.82	.09	.07	.38
4	1.8	.18	5.2	6.2	9.5	7.6	7.1	2.6	1.1	.07	.05	.40
5	2.5	.23	5.6	.07	7.2	6.9	7.1	2.8	1.6	.05	.04	.40
6	1.9	.35	.86	.06	6.4	7.3	6.6	2.8	1.6	.04	.03	.42
7	1.7	.35	4.4	.06	6.1	12	5.6	2.1	1.1	.04	.05	.42
8	.83	.32	.96	.08	5.7	27	4.7	2.6	.88	.05	.12	.42
9	1.3	.34	.71	.10	5.7	9.4	4.4	2.6	.63	.06	.20	.42
10	2.4	.42	.63	15	5.7	8.0	3.4	3.0	.32	.05	.04	.42
11	2.6	.37	.66	.45	6.2	7.5	3.2	4.0	.64	.05	.03	.42
12	.05	.37	.95	.14	6.1	32	3.2	3.7	.26	.05	.09	.42
13	2.3	.76	1.1	.11	6.0	63	3.2	7.1	.24	.05	.13	.42
14	14	1.7	1.9	7.8	5.4	46	3.2	4.7	.30	.05	.14	.51
15	13	.46	2.5	11	4.8	25	3.2	3.2	.33	.06	.12	.86
16	13	.35	2.7	1.1	13	73	3.0	2.8	.26	.05	.15	3.3
17	12	.28	3.4	.40	13	49	3.0	2.8	.22	.04	.16	6.9
18	11	.63	17	.29	7.9	30	2.8	2.6	.19	.05	.15	7.4
19	8.9	.58	7.1	.29	11	24	4.0	2.6	.19	.04	.30	8.4
20	.21	.55	1.3	.25	66	20	4.4	2.8	.18	.04	.24	10
21	.18	.42	2.4	.26	76	18	3.7	2.6	.22	.04	.24	10
22	.21	.26	2.6	.24	35	17	3.0	2.6	.19	.04	.24	11
23	.36	.25	2.6	.32	26	16	2.8	2.6	.19	.05	.23	7.0
24	.30	.30	3.2	.21	18	13	2.8	2.4	.19	.07	.24	2.1
25	.25	.31	2.8	.26	13	14	2.6	3.4	.18	.07	.24	2.4
26	.25	.28	3.2	.27	11	13	2.1	2.8	.19	.05	.25	2.4
27	.25	.33	8.4	1.3	11	12	1.9	2.4	.15	.07	.24	2.6
28	.25	.48	10	.78	10	12	1.9	1.9	.16	.06	.28	2.4
29	.25	3.7	9.2	1.4	9.5	12	1.7	1.7	.11	.07	.24	2.1
30	.18	5.6	7.7	138	-----	12	1.9	.76	.08	.06	.24	2.1
31	.15	-----	9.3	59	-----	11	-----	.66	-----	.08	.33	-----
TOTAL	98.62	20.65	124.09	275.44	447.2	623.8	138.9	85.92	14.15	1.72	5.06	86.75
MEAN	3.18	.69	4.00	8.89	15.4	20.1	4.63	2.77	.47	.056	.16	2.89
MAX	14	5.6	17	138	76	73	20	7.1	1.6	.09	.33	11
MIN	.05	.15	.42	.06	4.8	6.9	1.7	.66	.08	.04	.03	.36
AC-FT	196	41	246	546	887	1,240	276	170	.28	3.4	10	172

CAL YR 1967 TOTAL 9,924.32 MEAN 27.2 MAX 1,340 MIN .05 AC-FT 19,680
WTR YR 1968 TOTAL 1,922.30 MEAN 5.25 MAX 138 MIN .03 AC-FT 3,810

Peak discharge (base, 350 cfs).--No peak above base.

SAN LORENZO CREEK BASIN

11-1810.4. SAN LORENZO CREEK AT SAN LORENZO, CALIF.

LOCATION.--Lat 37°41'03", long 122°08'20", in San Lorenzo (Soto) Grant, on left bank 400 ft downstream from Washington Avenue bridge in San Lorenzo, Alameda County, and 1.6 miles upstream from mouth.

DRAINAGE AREA.--44.6 sq mi.

RECORDS AVAILABLE.--October 1967 to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 6.13 ft above mean sea level (levels by Alameda County Flood Control and Water Conservation District).

EXTREMES.--Maximum discharge during year, 1,410 cfs Jan. 30 (gage height, 5.84 ft); minimum daily, 0.54 cfs June 28.

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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.1	2.2	19	30	13	59	2.6	1.1	1.1	1.1	1.5
2	2.3	1.1	.87	19	23	12	20	2.7	1.3	1.3	1.2	1.8
3	3.2	1.1	4.3	18	18	11	16	3.0	1.5	1.6	1.3	2.0
4	2.2	1.0	17	16	15	10	15	3.2	1.5	1.4	1.1	1.1
5	2.6	1.1	21	1.8	13	11	14	3.3	1.7	1.4	.93	1.1
6	2.6	1.0	3.7	1.6	10	12	12	3.2	1.9	1.4	.87	1.2
7	2.0	1.1	24	1.6	9.2	47	11	3.2	2.0	1.7	.81	1.4
8	1.4	1.1	2.4	1.6	8.5	74	9.6	3.2	2.0	1.7	.75	1.5
9	1.3	1.1	1.8	1.5	8.5	16	8.5	3.2	2.2	1.3	1.1	2.4
10	2.2	1.1	1.6	102	8.5	16	7.2	3.2	2.0	1.5	.74	1.4
11	1.9	.93	1.5	4.2	8.8	14	6.9	3.6	2.6	1.6	.59	1.4
12	1.8	.93	1.4	2.2	7.4	132	6.4	3.6	2.2	1.9	.64	1.6
13	1.9	4.7	1.1	2.0	8.3	88	6.1	9.8	2.7	2.0	.93	1.6
14	10	7.6	.93	64	7.2	54	5.3	6.9	2.4	2.1	.93	2.9
15	10	1.7	.69	64	6.1	29	5.3	6.1	2.2	2.1	1.1	2.9
16	10	1.4	.59	8.8	36	102	4.6	6.1	1.8	2.1	1.2	4.4
17	8.1	1.3	10	3.6	16	44	4.4	6.1	1.6	2.1	1.2	4.8
18	8.1	2.5	25	2.6	9.2	34	2.5	6.1	1.4	2.1	1.4	5.8
19	8.0	2.4	5.6	2.1	34	28	3.0	5.5	1.3	2.2	4.6	7.1
20	1.4	2.3	2.4	1.8	72	25	3.0	5.3	1.2	2.4	1.6	10
21	.93	1.3	2.5	1.7	116	23	3.2	5.0	1.1	2.7	1.3	9.6
22	1.1	.93	4.8	1.8	41	28	2.6	4.8	1.1	2.9	1.5	10
23	1.2	1.1	4.8	1.8	28	24	2.3	2.5	1.0	2.9	1.5	9.7
24	1.1	1.1	4.8	1.8	23	20	2.2	2.4	.87	2.9	1.6	2.7
25	1.1	1.1	4.8	2.2	16	21	2.2	4.6	.81	2.4	1.7	3.3
26	1.1	1.0	4.8	2.2	15	19	2.1	1.9	.69	2.4	2.4	4.2
27	1.2	2.7	8.4	18	14	19	2.0	1.7	.69	2.6	2.0	4.4
28	1.1	1.5	20	3.0	13	19	2.0	1.3	.54	2.7	2.0	4.8
29	1.2	2.4	20	16	13	18	2.2	1.5	.59	2.0	2.3	4.2
30	1.1	6.0	20	526	-----	16	2.4	.81	.93	1.7	2.2	5.3
31	1.1	-----	19	73	-----	16	-----	1.0	-----	1.1	1.7	-----
TOTAL	94.83	55.69	241.98	984.9	627.7	995	243.0	117.41	44.92	61.3	44.29	116.1
MEAN	3.06	1.86	7.81	31.8	21.6	32.1	8.10	3.79	1.50	1.98	1.43	3.87
MAX	10	7.6	25	526	116	132	59	9.8	2.7	2.9	4.6	10
MIN	.93	.93	.59	1.5	6.1	10	2.0	.81	.54	1.1	.59	1.1
AC-FT	188	110	480	1,950	1,250	1,970	482	233	89	122	88	230

CAL YR 1967 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1968 TOTAL 3,627.12 MEAN 9.91 MAX 526 MIN .54 AC-FT 7,190

Peak discharge (base, 850 cfs).--Jan. 10 (0530 hrs) 990 cfs (5.40 ft); Jan. 30 (0230 hrs) 1,410 cfs (5.84 ft).

CASTRO CREEK BASIN

381

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.--8.69 sq mi (revised).

RECORDS AVAILABLE.--July 1964 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 20.62 ft above mean sea level, datum of 1929. Prior to May 8, 1968, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 246 cfs Jan. 30 (gage height, 6.48 ft); no flow for many days.
1964-68: Maximum discharge, 622 cfs Jan. 21, 1967 (gage height, 9.65 ft); no flow for many days in each year.

REMARKS.--Records good. Minor storage in Lake Anza and Jewel Lake. No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	8.6	0	6.3	8.2	5.1	.35				
2	.72	0	2.1	0	5.5	7.3	2.6	.31				
3	0	0	9.1	0	3.4	6.8	2.2	.27				
4	0	0	15	0	2.5	6.3	1.9	.27				
5	.15	0	9.1	0	2.0	5.9	1.8	.31				
6	0	0	5.3	0	1.5	2.2	1.6	.27				
7	0	0	11	0	1.4	4.7	1.6	.20				
8	0	0	5.1	0	1.6	4.6	1.6	.20				
9	0	0	4.8	0	1.6	2.4	1.5	.15				
10	0	0	.62	14	1.5	4.4	1.4	.15				
11	0	0	0	0	1.5	3.6	1.3	.17				
12	0	0	0	0	1.5	61	1.2	.15				
13	0	0	0	0	1.4	41	1.3	.40				
14	0	0	0	6.8	1.3	32	1.1	.20				
15	0	0	0	7.6	1.2	12	1.1	.13				
16	0	0	0	.05	7.0	37	1.0	.13				
17	0	0	2.8	0	12	10	1.0	.17				
18	0	0	1.1	0	3.4	8.5	.92	.15				
19	0	0	.40	0	18	6.5	.92	.13				
20	0	0	.02	0	46	5.3	1.2	.11				
21	0	0	0	0	32	4.8	.92	.07				
22	0	0	0	0	13	4.1	.76	.03				
23	0	0	0	0	9.0	3.8	.69	.02				
24	0	0	0	0	7.3	3.4	.84	.01				
25	0	0	0	0	6.8	3.0	.69	.15				
26	0	0	0	0	5.3	2.8	.62	.11				
27	0	0	0	2.0	5.4	2.6	.92	.01				
28	0	0	0	.04	7.1	2.4	.69	0				
29	0	2.0	0	20	8.5	2.4	.45	0				
30	0	7.4	0	91	-----	2.2	.40	0				
31	0	-----	0	16	-----	2.2	-----	0	-----			-----
TOTAL	0.87	9.4	75.04	157.49	215.0	303.4	39.32	4.62	0	0	0	0
MEAN	.028	.31	2.42	5.08	7.41	9.79	1.31	.15	0	0	0	0
MAX	.72	7.4	15	91	46	61	5.1	.40	0	0	0	0
MIN	0	0	0	0	1.2	2.2	.40	0	0	0	0	0
AC-FT	1.7	19	149	312	426	602	78	9.2	0	0	0	0
CAL YR 1967	TOTAL	2,582.11	MEAN	7.07	MAX	426	MIN	0	AC-FT	5,120		
WTR YR 1968	TOTAL	805.14	MEAN	2.20	MAX	91	MIN	0	AC-FT	1,600		

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	0330	6.48	246	03-12	2000	6.46	244
02-20	0030	5.69	173	03-16	0730	5.60	166

RHEEM CREEK BASIN

11-1820.3. RHEEM CREEK AT SAN PABLO, CALIF.

LOCATION.--Lat 37°58'38", long 122°21'10", in San Pablo Grant, on left bank 50 ft downstream from Santa Fe Railway bridge at San Pablo, Contra Costa County, and 0.7 mile upstream from mouth.

DRAINAGE AREA.--1.09 sq mi.

RECORDS AVAILABLE.--December 1960 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 13.63 ft above mean sea level (Corps of Engineers benchmark). Prior to Aug. 13, 1965, graphic water-stage recorder at site 0.2 mile upstream at datum 7.74 ft higher. Aug. 13 to Dec. 15, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years (1961-68), 1.30 cfs (941 acre-ft per year).

EXTREMES.--Maximum discharge during year, 417 cfs Jan. 29 (gage height, 6.58 ft), from rating curve extended above 150 cfs; minimum daily, 0.03 cfs Sept. 3.
1960-68: Maximum discharge, 346 cfs Jan. 20, 1964 (gage height, 3.54 ft, site and datum then in use), from rating curve extended above 150 cfs on basis of slope-area measurements at gage heights 3.30 and 3.54 ft; no flow at times.

REMARKS.--Records good. Low flow affected by return flow from industrial waste, leakage and infrequent releases from off stream North Reservoir.

REVISIONS (water year).--1962 report: 1961(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	.06	.16	.10	1.8	.36	3.2	.29	.18	.14	.09	.04
2	1.7	.22	.07	.10	1.5	.34	.34	.15	.14	.09	.08	.04
3	.11	.11	3.0	.12	.62	.30	.22	.14	.28	.15	.09	.03
4	.08	.08	10	.10	.44	.29	.26	.13	.12	.11	.05	.04
5	.86	.16	2.2	.20	.34	.62	.22	.16	.14	.18	.07	.04
6	.21	.07	.14	.19	.28	.60	.22	.17	.17	.13	.12	.05
7	.08	.06	5.0	.12	.26	3.7	.22	.17	.22	.08	.09	.04
8	.08	.10	.16	.13	.24	.79	.23	.16	.20	.07	.09	.06
9	.07	.12	.10	.20	.24	.29	.23	.14	.14	.07	.10	.04
10	.07	.18	.08	16	.23	.25	.21	.17	.10	.20	.07	.06
11	.06	.07	.09	.24	.22	.24	.19	.17	.12	.11	.06	.07
12	.08	.06	.08	.14	.21	30	.22	.14	.17	.19	.06	.04
13	.19	.19	.06	.30	.20	11	.22	.42	.20	.16	.11	.09
14	.18	3.3	.06	12	.20	3.7	.21	.13	.19	.06	.07	.06
15	.08	.07	.06	3.8	.26	1.7	.18	.14	.16	.08	.11	.05
16	.07	.06	.06	.53	8.2	15	.15	.25	.12	.10	.08	.06
17	.12	.05	6.0	.24	11	1.2	.12	.26	.17	.15	.07	.11
18	.11	.26	1.4	.19	.72	.94	.18	.20	.17	.16	.06	.11
19	.10	2.1	.19	.16	21	.67	.19	.13	.20	.12	.35	.10
20	.10	.07	.11	.17	4.9	.44	.18	.14	.17	.07	.05	.11
21	.09	.05	.10	.15	11	.38	.18	.15	.18	.06	.04	.05
22	.07	.04	.10	.16	1.5	.47	.15	.15	.19	.06	.04	.04
23	.07	.04	.10	.14	.87	.61	.14	.12	.15	.11	.06	.05
24	.07	.04	.10	.12	.60	.36	.21	.17	.19	.09	.09	.12
25	.08	.04	.10	.15	.51	.36	.21	.31	.19	.18	.05	.18
26	.16	.04	.10	.21	.43	.32	.29	.14	.15	.14	.04	.13
27	.11	.44	.10	3.5	.38	.30	.20	.16	.13	.09	.07	.07
28	.09	.08	.10	1.0	.36	.30	.19	.23	.13	.08	.09	.08
29	.07	3.2	.10	44	.33	.30	.19	.17	.16	.10	.10	.06
30	.05	2.6	.10	36	-----	.30	.33	.12	.13	.17	.09	.04
31	.05	-----	.10	2.3	-----	.29	-----	.14	-----	.13	.06	-----
TOTAL	5.35	13.96	30.12	122.76	68.84	76.42	9.28	5.52	4.96	3.63	2.60	2.06
MEAN	.17	.47	.97	3.96	2.37	2.47	.31	.18	.17	.12	.084	.069
MAX	1.7	3.3	10	44	21	30	3.2	.42	.28	.20	.35	.18
MIN	.05	.04	.06	.10	.20	.24	.12	.12	.10	.06	.04	.03
AC-FT	11	28	60	243	137	152	18	11	9.8	7.2	5.2	4.1

CAL YR 1967 TOTAL 617.25 MEAN 1.69 MAX 103 MIN .04 AC-FT 1,220
WTR YR 1968 TOTAL 345.50 MEAN .94 MAX 44 MIN .03 AC-FT 685

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-17	2145	4.92	198	02-21	0230	4.86	190
01-29	2330	6.58	417	03-12	1730	4.97	202
02-19	2200	4.73	175	03-16	0630	5.44	257

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 1968. Monthly discharge only for water years 1939-59, published in WSP 1735.

GAGE.--Graphic water-stage recorder and concrete control. Altitude of gage is 170 ft (from topographic map).

AVERAGE DISCHARGE.--29 years (1939-68), 3.55 cfs (2,570 acre-ft per year); median of yearly mean discharges, 1.7 cfs (1,200 acre-ft per year).

EXTREMES.--Maximum discharge during year, 312 cfs Jan. 30 (gage height, 4.36 ft); no flow Aug. 4-11. 1938-68: Maximum discharge, 1,660 cfs Apr. 2, 1958 (gage height, 11.63 ft); no flow at times.

REMARKS.--No storage or diversion above station except for minor stock ponds.

COOPERATION.--Records furnished by East Bay Municipal Utility District and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.33	.65	.53	4.4	1.8	3.2	.94	.46	.16	.02	.08
2	.42	.37	.72	.53	4.4	1.7	3.0	.90	.44	.19	.03	.10
3	.63	.37	.63	.51	2.8	1.6	2.3	.90	.45	.23	.01	.10
4	.44	.42	1.0	.51	2.2	1.6	2.2	.90	.46	.19	.01	.12
5	.40	.48	2.2	.51	1.8	1.5	2.1	.90	.51	.14	0	.13
6	.37	.48	.66	.53	1.6	1.3	1.9	.94	.48	.13	0	.12
7	.31	.42	1.0	.53	1.5	2.1	1.8	.84	.44	.17	0	.10
8	.29	.37	.63	.53	1.4	2.7	1.7	.87	.39	.21	0	.08
9	.29	.39	.58	.55	1.3	1.5	1.7	.90	.42	.19	0	.07
10	.29	.42	.55	1.1	1.3	1.3	1.6	.87	.42	.16	0	.06
11	.29	.51	.55	1.1	1.2	1.2	1.6	.90	.42	.14	0	.06
12	.27	.61	.53	.72	1.2	74	1.6	.90	.37	.13	.03	.06
13	.27	.66	.53	.66	1.2	55	1.5	1.0	.27	.14	.02	.06
14	.23	.81	.44	1.5	1.1	65	1.4	.98	.27	.15	.08	.07
15	.17	.55	.48	4.8	1.2	10	1.3	.90	.35	.15	.03	.07
16	.15	.53	.53	1.1	2.6	69	1.3	.84	.29	.14	.02	.04
17	.16	.48	.68	.81	5.0	10	1.2	.81	.29	.12	.01	.04
18	.21	.53	1.6	.75	2.3	6.1	1.2	.81	.29	.08	.01	.03
19	.25	.55	.66	.66	36	5.0	1.2	.84	.35	.04	.03	.04
20	.27	.53	.60	.60	23	4.4	1.2	.87	.35	.05	.03	.04
21	.29	.51	.55	.60	16	4.0	1.1	.81	.29	.04	.33	.04
22	.37	.46	.55	.58	5.7	3.9	1.1	.84	.25	.07	.29	.04
23	.37	.48	.55	.55	4.2	3.6	1.1	.78	.21	.06	.14	.04
24	.35	.53	.55	.55	3.3	3.3	1.1	.78	.21	.13	.09	.04
25	.33	.53	.53	.58	2.6	3.2	1.1	.84	.17	.14	.09	.04
26	.35	.48	.53	.58	2.3	3.0	1.0	.75	.29	.10	.09	.04
27	.35	.53	.53	.69	2.2	2.7	.90	.69	.33	.08	.08	.04
28	.33	.60	.53	.69	2.1	2.6	.86	.60	.27	.08	.08	.04
29	.32	.97	.51	4.5	1.8	2.5	.94	.55	.23	.08	.06	.04
30	.27	.87	.51	107	-----	2.3	.94	.55	.16	.04	.04	.07
31	.27	-----	.51	26	-----	2.2	-----	.51	-----	.02	.04	-----
TOTAL	9.64	15.77	21.07	170.75	137.7	350.1	45.14	25.51	10.13	3.75	1.66	1.90
MEAN	.31	.53	.68	5.51	4.75	11.3	1.50	.82	.34	.12	.054	.063
MAX	.63	.97	2.2	107	36	74	3.2	1.0	.51	.23	.33	.13
MIN	.15	.33	.44	.51	1.1	1.2	.86	.51	.16	.02	0	.03
AC-FT	19	31	42	339	273	694	90	51	20	7.4	3.3	3.8

CAL YR 1967 TOTAL 2,887.97 MEAN 7.91 MAX 422 MIN .08 AC-FT 5,730
WTR YR 1968 TOTAL 793.12 MEAN 2.17 MAX 107 MIN 0 AC-FT 1,570

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	0230	4.36	312	03-12	2015	4.11	272
02-19	2200	3.92	241	03-16	0845	4.05	262

ARROYO DEL HAMBRE BASIN

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.--15.1 sq mi (revised).

RECORDS AVAILABLE.--October 1964 to September 1968.

GAGE.--Digital 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). Prior to May 5, 1966, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 201 cfs Jan. 30 (gage height, 3.51 ft); minimum daily, 0.02 cfs

Aug. 22-24.

1964-68: Maximum discharge, 1,020 cfs Jan. 21, 1967 (gage height, 9.00 ft), from rating curve extended above 150 cfs on basis of computation of flow over dam at gage height 6.63 ft; no flow at times.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.14	.61	.77	4.1	1.8	8.1	.73	.40	.12	.07	.04
2	2.3	.13	.45	.71	3.5	1.6	3.0	.75	.35	.14	.07	.04
3	.47	.10	1.0	.64	2.3	1.7	2.3	.75	.35	.16	.06	.04
4	.22	.12	7.1	.52	2.0	1.9	2.4	.81	.30	.16	.06	.05
5	.74	.20	3.2	.45	1.8	2.2	2.2	.77	.30	.09	.07	.06
6	.19	.17	.77	.48	1.6	2.1	2.1	.73	.25	.03	.07	.07
7	.16	.16	2.0	.51	1.5	3.2	2.1	.69	.22	.03	.06	.05
8	.17	.18	.72	.52	1.4	2.8	2.0	.75	.18	.04	.07	.06
9	.20	.18	.54	.59	1.3	1.7	2.0	.70	.14	.04	.05	.07
10	.20	.19	.52	19	1.3	1.5	2.0	.70	.20	.04	.04	.06
11	.21	.28	.53	1.1	1.3	1.4	1.8	.70	.13	.03	.05	.07
12	.18	.24	.47	.86	1.3	36	1.7	.70	.16	.03	.05	.07
13	.18	.36	.36	1.1	1.3	28	1.6	.70	.21	.03	.05	.04
14	.12	1.6	.42	7.1	1.2	32	1.6	.70	.22	.03	.05	.05
15	.20	.18	.48	6.7	1.2	7.1	1.5	.70	.22	.03	.05	.04
16	.16	.17	.52	1.4	4.5	26	1.4	.70	.19	.03	.03	.04
17	.16	.16	2.6	1.0	4.5	7.9	1.3	.65	.14	.03	.03	.04
18	.19	.17	2.5	.86	1.7	4.8	1.3	.65	.11	.04	.03	.05
19	.19	.48	.74	.85	10	4.1	1.4	.65	.12	.04	.06	.05
20	.19	.21	.74	.81	18	3.7	1.3	.65	.22	.04	.03	.08
21	.17	.26	.68	.78	7.5	3.3	1.3	.60	.16	.04	.64	.09
22	.22	.27	.73	.77	3.3	3.3	1.2	.60	.18	.05	.02	.09
23	.21	.32	.76	.75	2.6	3.1	1.2	.60	.19	.06	.02	.09
24	.22	.36	.77	.74	2.2	2.9	1.2	.60	.14	.06	.02	.11
25	.21	.38	.73	.76	2.0	3.0	1.2	.60	.18	.06	.03	.09
26	.22	.38	.68	1.1	1.9	2.8	.97	.55	.19	.06	.04	.10
27	.15	.62	.67	1.5	1.9	2.7	.84	.50	.23	.06	.04	.12
28	.13	.51	.73	.80	1.8	2.6	.91	.50	.20	.05	.03	.13
29	.13	3.4	.69	13	1.7	2.5	.81	.45	.20	.06	.03	.11
30	.12	2.1	.71	68	-----	2.5	.79	.45	.18	.06	.03	.11
31	.12	-----	.76	7.5	-----	2.3	-----	.40	-----	.07	.03	-----
TOTAL	8.41	14.02	34.18	141.67	90.7	202.5	53.52	20.03	6.26	1.81	1.98	2.11
MEAN	.27	.47	1.10	4.57	3.13	6.53	1.78	.65	.21	.058	.064	.070
MAX	2.3	3.4	7.1	68	18	36	8.1	.81	.40	.16	.64	.13
MIN	.08	.10	.36	.45	1.2	1.4	.79	.40	.11	.03	.02	.04
AC-FT	17	28	68	281	180	402	106	40	12	3.6	3.9	4.2

CAL YR 1967 TOTAL 3,043.84 MEAN 8.34 MAX 459 MIN .06 AC-FT 6,040

WTR YR 1968 TOTAL 577.19 MEAN 1.58 MAX 68 MIN .02 AC-FT 1,140

Peak discharge (base, 150 cfs, revised).--Jan. 30 (0115 hrs) 201 cfs (3.51 ft).

PACHECO CREEK BASIN

385

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 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 530 ft (from topographic map). Prior to May 6, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--16 years, 2.75 cfs (1,990 acre-ft per year); median of yearly mean discharges, 1.3 cfs (940 acre-ft per year).

EXTREMES.--Maximum discharge during year, 131 cfs Jan. 30 (gage height, 3.25 ft); no flow for many days. 1952-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	.09	.55	.31	3.1	2.5	2.6	.62	.29	0		
2	.28	.09	.36	.31	2.7	2.3	1.9	.62	.27	0		
3	.48	.07	1.3	.26	2.3	1.9	1.7	.62	.28	.01		
4	.22	.09	1.5	.26	1.6	1.9	1.6	.62	.30	.02		
5	.26	.18	1.7	.26	1.4	1.7	1.7	.65	.38	0		
6	.22	.22	.48	.26	1.1	1.7	1.6	.60	.37	.01		
7	.14	.22	1.0	.26	1.1	2.1	1.4	.57	.32	0		
8	.11	.22	.55	.31	1.1	4.0	1.4	.58	.28	0		
9	.11	.22	.36	.31	1.0	2.1	1.3	.59	.26	.01		
10	.11	.22	.31	4.0	1.0	2.1	1.3	.60	.26	0		
11	.14	.22	.31	.62	1.0	1.7	1.3	.63	.28	0		
12	.14	.22	.26	.42	1.0	6.7	1.1	.66	.26	0		
13	.11	.31	.26	.42	.89	9.9	1.1	1.5	.23	.01		
14	.09	.48	.26	1.7	.89	7.6	1.1	.76	.18	.01		
15	.05	.36	.26	4.2	.79	4.6	1.1	.63	.16	.01		
16	.04	.31	.42	1.0	2.4	11	1.1	.57	.12	.01		
17	.05	.31	.48	.55	6.1	5.7	1.0	.55	.10	0		
18	.05	.31	1.3	.48	2.5	4.6	1.0	.53	.09	0		
19	.07	.31	.70	.42	3.8	3.7	1.0	.55	.08	0		
20	.09	.42	.42	.42	18	3.5	.89	.55	.06	0		
21	.11	.36	.36	.42	22	3.1	.89	.50	.04	0		
22	.18	.31	.36	.36	7.8	2.9	.89	.51	.02	0		
23	.18	.26	.36	.31	5.7	2.9	.89	.49	.02	0		
24	.18	.31	.31	.31	4.3	2.7	.89	.49	.01	0		
25	.14	.36	.31	.36	3.7	2.7	.79	.60	0	0		
26	.31	.31	.31	.36	3.3	2.5	.70	.46	0	0		
27	.18	.31	.31	.48	2.9	2.3	.62	.40	0	0		
28	.14	.55	.31	.48	2.7	2.1	.62	.37	0	0		
29	.14	.75	.26	.58	2.5	1.9	.62	.32	0	0		
30	.09	1.5	.26	56	-----	1.7	.62	.32	0	0		
31	.09	-----	.31	7.8	-----	1.7	-----	.31	-----	0		-----
TOTAL	4.59	9.89	16.24	84.23	108.67	107.8	34.72	17.77	4.66	0.09	0	0
MEAN	.15	.33	.52	2.72	3.75	3.48	1.16	.57	.16	.003	0	0
MAX	.48	1.5	1.7	56	22	11	2.6	1.5	.38	.02	0	0
MIN	.04	.07	.26	.26	.79	1.7	.62	.31	0	0	0	0
AC-FT	9.1	20	32	167	216	214	69	35	9.2	.2	0	0

CAL YR 1967 TOTAL 1,995.02 MEAN 5.47 MAX 282 MIN .04 AC-FT 3,960
WTR YR 1968 TOTAL 388.66 MEAN 1.06 MAX 56 MIN 0 AC-FT 771

Peak discharge (base, 100 cfs).--Jan. 30 (0500 hrs) 131 cfs (3.25 ft).

PACHECO CREEK BASIN

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 1968.

GAGE.--Digital water-stage recorder and, since Dec. 4, 1962, concrete control. Altitude of gage is 170 ft (from topographic map). Prior to Jan. 29, 1968, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--16 years, 14.2 cfs (10,280 acre-ft per year); median of yearly mean discharges, 6.5 cfs (4,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,040 cfs Jan. 30 (gage height, 5.71 ft); minimum daily, 0.94 cfs Sept. 28.

1952-68: 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.6	7.8	3.4	13	7.1	13	2.4	1.8	1.4	1.4	1.2
2	3.0	1.6	4.2	3.4	12	6.8	8.1	2.3	1.8	1.4	1.6	1.4
3	3.8	1.9	7.2	2.6	9.2	6.3	6.7	2.4	1.9	1.5	1.4	1.2
4	3.0	2.0	14	2.5	7.4	6.2	6.4	2.3	2.0	1.5	1.4	1.3
5	3.0	2.1	14	2.8	6.6	6.2	6.2	2.4	1.9	1.4	1.4	1.3
6	2.8	2.1	6.0	2.6	6.2	6.0	5.7	2.4	2.0	1.3	1.3	1.3
7	2.1	2.2	7.4	2.5	5.8	8.0	5.6	2.3	2.0	1.3	1.3	1.3
8	2.0	1.9	5.7	2.6	5.7	21	5.9	2.4	2.0	1.3	1.3	1.3
9	2.4	1.9	3.6	2.6	5.5	7.8	5.3	2.4	1.9	1.4	1.3	1.2
10	2.0	1.8	2.8	52	5.4	6.6	4.4	2.5	2.0	1.4	1.3	1.1
11	1.9	1.7	2.6	6.5	5.3	6.1	3.8	2.4	1.9	1.4	1.2	1.2
12	1.9	1.8	2.5	4.1	5.3	35	3.6	2.3	1.9	1.4	1.1	1.2
13	1.8	1.9	2.4	4.0	5.1	68	3.4	3.8	1.9	1.3	1.3	1.1
14	1.6	2.2	2.4	11	5.1	32	3.2	5.4	2.0	1.7	1.4	1.1
15	1.5	2.6	2.5	43	5.0	14	3.2	3.1	1.9	1.5	1.5	1.1
16	1.5	2.5	2.6	7.5	31	51	3.2	2.9	1.8	1.6	1.8	1.1
17	1.6	2.1	3.1	4.7	38	22	3.1	2.9	1.7	1.5	1.7	1.1
18	1.8	2.2	13	4.1	14	13	3.2	2.6	1.7	1.6	1.3	1.1
19	1.6	2.1	6.5	4.0	12	11	3.3	2.5	1.7	1.5	1.5	1.0
20	1.6	2.4	4.0	4.0	63	9.7	3.3	2.5	1.7	1.4	1.7	1.0
21	1.7	2.4	3.0	4.0	65	8.8	3.3	2.4	1.6	1.2	1.7	1.0
22	2.0	2.1	2.6	3.6	20	8.6	3.4	2.3	1.7	1.3	1.4	.99
23	2.0	2.0	2.6	3.5	13	9.0	3.5	2.2	1.9	1.4	1.5	1.0
24	1.9	1.9	2.5	3.5	10	7.8	3.7	2.2	1.4	1.4	1.3	.99
25	1.7	2.0	2.5	3.4	9.2	7.8	3.3	2.1	1.5	1.4	1.3	1.0
26	1.6	1.8	2.4	3.6	8.5	7.8	3.3	2.0	1.6	1.4	1.3	1.0
27	1.6	1.9	2.2	4.1	8.0	7.1	2.9	2.0	1.6	1.3	1.2	1.0
28	1.6	2.1	2.2	4.0	7.9	7.3	2.7	2.0	1.7	1.3	1.3	.94
29	1.9	3.2	2.1	7.8	7.4	6.8	2.5	2.0	1.5	1.3	1.2	.96
30	1.9	7.7	2.9	432	-----	6.5	2.5	1.9	1.4	1.3	1.2	.99
31	1.6	-----	3.2	52	-----	6.2	-----	1.9	-----	1.4	1.1	-----
TOTAL	62.2	67.7	142.5	691.4	409.6	427.5	131.7	77.2	53.4	43.5	42.7	33.47
MEAN	2.01	2.26	4.60	22.3	14.1	13.8	4.39	2.49	1.78	1.40	1.38	1.12
MAX	3.8	7.7	14	432	65	68	13	5.4	2.0	1.7	1.8	1.4
MIN	1.5	1.6	2.1	2.5	5.0	6.0	2.5	1.9	1.4	1.2	1.1	.94
AC-FT	123	134	283	1,370	812	848	261	153	106	86	85	66

CAL YR 1967 TOTAL 12,549.0 MEAN 34.4 MAX 2,640 MIN 1.5 AC-FT 24,890
WTR YR 1968 TOTAL 2,182.87 MEAN 5.96 MAX 432 MIN .94 AC-FT 4,330

Peak discharge (base, 500 cfs).--Jan. 30 (0515 hrs) 1,040 cfs (5.71 ft).

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 1968 (discontinued).

GAGE.--Digital water-stage recorder. Datum of gage is 102.71 ft above mean sea level, datum of 1929. Prior to June 20, 1957, graphic water-stage recorder at site 0.6 mile upstream at different datum. June 20, 1957, to Oct. 5, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--16 years, 28.2 cfs (20,420 acre-ft per year); median of yearly mean discharges, 14 cfs (10,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,970 cfs Jan. 30 (gage height, 5.46 ft); minimum daily, 1.6 cfs Sept. 22.

1952-68: 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. Flow slightly regulated by storage in Lafayette Reservoir (capacity, 4,240 acre-ft). Some small diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.8	19	6.9	35	16	41	9.3	5.9	4.8	3.3	3.3
2	23	4.3	13	6.9	31	16	17	8.0	6.4	4.8	3.4	3.3
3	11	4.0	50	5.8	24	14	13	7.8	6.5	4.3	2.7	3.6
4	6.1	3.7	83	6.0	18	14	13	8.1	6.9	5.0	2.7	3.8
5	11	4.2	62	6.9	16	16	13	7.9	7.2	5.8	2.7	3.8
6	6.8	4.8	21	7.3	14	14	11	7.9	6.4	4.5	3.1	3.3
7	5.2	4.3	44	6.4	13	27	12	7.5	6.8	3.7	3.1	2.9
8	5.0	4.0	22	6.4	12	47	11	8.1	6.3	4.1	2.9	2.5
9	6.2	3.8	23	6.9	12	18	11	7.9	5.7	4.3	3.1	2.7
10	5.4	3.3	21	231	11	15	11	7.7	5.9	4.6	3.3	2.7
11	4.3	3.8	21	17	10	14	11	7.8	5.9	4.7	2.9	2.7
12	4.2	3.6	19	9.8	10	139	10	7.8	7.3	4.4	3.3	2.7
13	4.1	5.4	17	11	10	147	9.3	12	6.2	3.0	3.6	2.9
14	3.6	8.8	17	61	10	103	9.0	13	6.7	2.9	4.0	2.7
15	3.4	5.0	17	126	9.9	39	9.1	8.2	5.7	3.3	3.8	2.9
16	3.5	4.6	17	19	70	125	8.7	8.0	5.6	3.9	3.8	2.2
17	3.8	4.3	32	11	96	51	8.7	7.8	5.5	3.5	3.1	2.2
18	4.1	4.6	75	15	31	30	9.0	7.4	5.1	3.8	4.3	2.5
19	3.6	5.0	24	8.5	54	24	9.2	7.1	6.9	3.9	6.6	2.2
20	3.7	5.6	20	8.2	165	22	9.0	7.5	6.9	3.1	5.6	2.3
21	4.0	4.8	17	7.8	150	20	9.5	7.7	6.9	2.6	3.8	1.9
22	4.2	10	17	7.5	51	20	9.5	7.3	6.2	2.7	3.1	1.6
23	4.4	4.3	16	7.2	33	19	9.7	7.5	5.6	2.9	3.2	1.7
24	4.3	4.3	17	7.9	26	18	10	7.0	6.0	3.0	3.1	1.9
25	4.3	4.3	16	7.0	22	19	9.8	7.5	5.4	3.1	2.9	2.2
26	4.4	3.6	14	7.3	23	18	9.6	6.6	5.0	3.4	3.3	2.3
27	3.8	6.6	6.2	8.7	21	16	9.1	6.9	5.0	3.1	3.6	2.3
28	3.8	11	6.2	8.1	19	16	8.3	7.4	5.0	2.9	3.8	2.2
29	3.7	27	5.6	53	17	15	8.5	6.8	4.8	3.6	4.3	1.9
30	3.0	49	6.2	920	-----	15	10	5.9	4.6	3.8	4.8	1.8
31	3.4	-----	6.6	109	-----	13	-----	6.3	-----	2.9	3.6	-----
TOTAL	165.1	215.8	744.8	1,720.5	1,013.9	1,080	340.0	243.7	180.3	116.4	110.9	77.0
MEAN	5.33	7.19	24.0	55.5	35.0	34.8	11.3	7.86	6.01	3.75	3.58	2.57
MAX	23	49	83	920	165	147	41	13	7.3	5.8	6.6	3.8
MIN	3.0	3.3	5.6	5.8	9.9	13	8.3	5.9	4.6	2.6	2.7	1.6
AC-FT	327	428	1,480	3,410	2,010	2,140	674	483	358	231	220	153

CAL YR 1967 TOTAL 22,447.2 MEAN 61.5 MAX 4,370 MIN 3.0 AC-FT 44,520
WTR YR 1968 TOTAL 6,008.4 MEAN 16.4 MAX 920 MIN 1.6 AC-FT 11,920

Peak discharge (base, 900 cfs).--Jan. 10 (0615 hrs) 1,260 cfs (4.77 ft); Jan. 30 (0445 hrs) 1,970 cfs (5.46 ft).

NAPA RIVER BASIN

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 173.17 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Nov. 22, 1958, graphic water-stage recorder at datum 1.00 ft higher. Nov. 22, 1958, to Sept. 25, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--32 years, 89.3 cfs (64,650 acre-ft per year); median of yearly mean discharges, 69 cfs (50,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 4,970 cfs Jan. 29 (gage height, 9.85 ft); no flow Sept. 28-30. 1929-32, 1939-68: Maximum discharge, 12,600 cfs Dec. 22, 1955 (gage height, 16.17 ft, present datum); no flow at times.

REMARKS.--Records good. No regulation; small diversions above station for irrigation. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.7	90	8.2	351	122	74	15	6.9	1.4	.95	.86
2	2.2	1.7	80	8.1	344	110	54	15	6.4	1.1	.72	1.3
3	5.3	1.8	110	7.9	251	98	46	15	6.0	.81	.66	1.5
4	3.6	1.5	86	7.7	193	90	42	15	5.7	1.2	.90	1.6
5	2.7	1.6	153	8.1	159	79	40	15	5.5	1.1	1.5	1.6
6	2.3	1.7	29	7.9	129	73	36	12	5.1	.93	1.3	1.6
7	2.1	1.8	116	7.9	108	70	34	10	5.7	1.0	1.0	1.6
8	2.0	2.2	41	8.1	97	68	33	9.7	4.9	1.2	1.7	1.5
9	1.7	3.1	19	10	85	59	30	9.9	4.1	.90	2.7	1.5
10	1.9	4.3	14	950	73	54	29	11	3.5	.53	1.9	1.6
11	2.0	3.2	11	139	65	52	28	10	3.2	.59	.99	1.7
12	2.0	3.0	9.6	67	59	291	28	9.6	3.1	.82	.87	1.9
13	1.9	3.5	9.1	53	53	386	26	12	3.1	.57	.83	2.1
14	1.7	6.8	10	267	48	327	24	15	3.2	.45	1.2	2.4
15	1.6	7.2	15	885	44	258	24	12	3.2	.31	1.9	2.1
16	1.7	5.0	11	267	57	951	24	11	3.2	.29	2.1	1.9
17	1.7	4.2	11	145	193	522	22	10	2.1	.23	2.1	1.8
18	1.8	4.5	40	95	129	329	21	9.3	1.1	.17	2.4	1.7
19	1.8	4.6	25	71	810	236	21	9.2	1.0	.42	2.5	1.4
20	2.1	4.4	19	57	1,200	181	21	9.4	.70	.69	2.9	.76
21	2.3	4.4	14	50	1,020	147	19	9.0	.45	1.2	4.0	.51
22	2.3	4.5	12	42	602	125	17	8.9	.91	.93	3.3	.31
23	2.0	4.7	11	36	442	108	17	9.4	.82	.77	2.1	.24
24	2.0	4.8	10	33	326	95	18	9.4	1.3	.52	1.8	.21
25	1.8	5.0	10	31	254	87	17	10	1.4	.58	1.7	.17
26	1.8	4.9	9.3	28	211	79	18	9.5	1.5	.50	1.5	.12
27	1.8	5.0	8.7	25	177	70	17	8.5	1.6	.66	1.3	.01
28	1.8	5.2	8.7	25	153	64	16	8.1	1.9	.81	.89	0
29	1.8	9.6	8.4	1,980	134	58	16	7.9	1.5	.72	.91	0
30	1.8	71	8.3	2,010	-----	53	17	7.5	1.5	.84	1.0	0
31	1.7	-----	8.2	641	-----	49	-----	7.2	-----	.94	1.0	-----
TOTAL	64.8	186.9	1,007.3	7,970.9	7,767	5,291	829	330.5	90.58	23.18	50.62	33.99
MEAN	2.09	6.23	32.5	257	268	171	27.6	10.7	3.02	.75	1.63	1.13
MAX	5.3	71	153	2,010	1,200	951	74	15	6.9	1.4	4.0	2.4
MIN	1.6	1.5	8.2	7.7	44	49	16	7.2	.45	.17	.66	0
AC-FT	129	371	2,000	15,810	15,410	10,490	1,640	656	180	46	100	67

CAL YR 1967 TOTAL 48,647.60 MEAN 133 MAX 8,380 MIN .90 AC-FT 96,490
WTR YR 1968 TOTAL 23,645.77 MEAN 64.6 MAX 2,010 MIN 0 AC-FT 46,900

PEAK DISCHARGE (BASE, 2,300 CFS)
DATE TIME G.HT. DISCHARGE DATE TIME G.HT. DISCHARGE
01-10 0645 7.65 3,000 02-19 2330 7.80 3,190
01-29 2200 9.85 4,970

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 24.74 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 2, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--12 years, 149 cfs (107,900 acre-ft per year).

EXTREMES.--Maximum discharge during year, 8,620 cfs Jan. 29 (gage height, 18.65 ft); minimum daily, 0.20 cfs Sept. 30.

1929-32, 1959-68: Maximum discharge, 16,900 cfs Jan. 31, 1963 (gage height, 27.59 ft); no flow at times.

REMARKS.--Records good. Flow slightly regulated by Lake Hennessey beginning in December 1945 (capacity, 31,000 acre-ft). Numerous diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	6.3	104	8.1	849	363	200	37	15	1.9	1.9	2.1
2	4.0	5.3	138	8.0	803	333	198	35	15	2.5	1.8	1.9
3	5.8	5.3	144	7.9	677	303	170	34	15	2.2	1.8	1.7
4	6.3	5.3	160	7.8	527	290	158	35	15	2.3	1.7	1.4
5	6.3	5.3	248	7.7	443	273	150	37	12	2.2	1.8	1.3
6	5.3	5.3	76	7.7	378	255	140	34	11	8.6	1.9	1.7
7	4.8	5.3	166	7.8	440	248	132	29	10	2.8	1.6	2.0
8	4.8	5.3	95	7.8	310	253	126	28	11	7.7	1.6	1.5
9	4.8	5.3	51	10	285	228	118	27	7.4	2.6	1.8	1.3
10	4.3	5.3	36	1,100	260	208	110	28	6.7	2.2	1.8	1.4
11	4.8	6.3	26	328	245	198	106	28	3.5	2.2	1.6	.65
12	4.3	5.8	20	174	230	528	102	27	4.7	3.2	2.3	.48
13	4.3	5.3	17	138	218	1,020	96	34	4.9	2.9	3.2	.42
14	4.3	6.3	15	148	205	821	87	42	6.0	2.7	2.9	.26
15	4.0	7.4	18	1,140	145	691	86	35	7.3	2.7	3.1	.54
16	4.0	7.9	16	476	238	1,720	82	31	7.4	2.6	2.6	.90
17	3.8	4.8	15	230	579	1,140	76	26	8.5	1.9	2.1	.77
18	4.8	7.4	68	148	413	789	79	19	6.4	1.2	2.4	.51
19	5.3	7.4	53	132	842	555	77	14	3.0	.90	4.5	.83
20	4.0	7.4	35	93	2,400	497	76	18	2.8	1.3	7.9	1.2
21	4.3	6.8	28	79	1,890	422	71	21	1.9	.90	4.7	.89
22	4.8	7.9	19	69	1,280	370	65	25	1.2	1.3	4.0	.86
23	5.8	7.4	16	58	1,000	335	60	25	2.2	1.7	3.7	.87
24	5.8	7.4	15	52	779	305	63	24	1.8	2.2	3.3	.86
25	5.8	7.4	14	49	649	288	59	26	2.1	2.5	2.5	1.7
26	5.8	7.9	13	47	551	268	55	24	1.3	1.8	2.6	1.3
27	5.8	7.9	11	42	479	245	48	22	1.0	1.9	2.8	1.2
28	5.3	8.4	8.9	40	428	235	47	19	1.2	2.1	2.2	.67
29	4.3	12	8.6	2,960	383	210	43	18	1.2	3.0	2.1	.37
30	4.3	30	8.4	4,250	-----	200	40	18	1.4	2.4	2.7	.20
31	4.8	-----	8.2	1,360	-----	185	-----	19	-----	2.1	2.3	-----
TOTAL	150.3	223.1	1,651.1	13,185.8	17,926	13,776	2,920	839	187.9	78.50	83.2	31.78
MEAN	4.85	7.44	53.3	425	618	444	97.3	27.1	6.26	2.53	2.68	1.06
MAX	6.3	30	248	4,250	2,400	1,720	200	42	15	8.6	7.9	2.1
MIN	3.5	4.8	8.2	7.7	145	185	40	14	1.0	.90	1.6	.20
AC-FT	298	443	3,270	26,150	35,560	27,320	5,790	1,660	373	156	165	63

CAL YR 1967 TOTAL 108,630.0 MEAN 298 MAX 12,100 MIN 2.0 AC-FT 215,500
WTR YR 1968 TOTAL 51,052.68 MEAN 139 MAX 4,250 MIN .20 AC-FT 101,300

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	1230	10.94	3,040	02-20	0300	12.24	3,870
01-29	2330	18.65	8,620	03-16	1230	10.78	2,950

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 166.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to July 24, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--10 years, 8.85 cfs (6,410 acre-ft per year); median of yearly mean discharges, 6.50 cfs (4,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,140 cfs Jan. 29 (gage height, 8.99 ft), from rating curve extended above 330 cfs as explained below; no flow for many days.
1958-68: Maximum discharge, 1,450 cfs Jan. 5, 1965 (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 in each year.

REMARKS.--Records good. Small storage and release affects summer flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.07	.83	.45	30	17	5.0	.40	.13	.03		
2	.02	.07	.61	.45	28	16	4.6	.32	.20	.03		
3	.02	.07	4.3	.42	22	15	4.1	.35	.26	.03		
4	.03	.07	2.2	.42	15	14	3.6	.29	.24	.03		
5	.06	.07	7.8	.42	12	13	3.3	.35	.24	.02		
6	.07	.07	1.4	.42	11	13	2.9	.35	.24	.02		
7	.07	.06	9.6	.42	9.2	12	2.4	.16	.29	.02		
8	.07	.06	2.4	.42	8.2	12	2.1	.13	.29	.02		
9	.07	.07	1.3	.45	7.1	11	1.6	.18	.26	.02		
10	.06	.08	.83	45	6.2	10	1.5	.22	.24	0		
11	.07	.10	.66	7.4	5.6	9.2	1.3	.12	.22	0		
12	.06	.15	.61	3.6	4.8	73	1.1	.29	.20	0		
13	.06	.18	.71	2.4	4.2	52	.90	.35	.16	0		
14	.07	.20	.49	7.1	3.5	48	.77	.42	.13	0		
15	.06	.22	.49	30	3.3	35	.66	.16	.11	0		
16	.07	.24	.49	12	11	114	.61	.18	.09	0		
17	.07	.26	.53	6.7	22	50	.53	.20	.09	0		
18	.06	.26	5.8	4.6	13	37	.45	.22	.07	0		
19	.06	.26	3.1	3.3	90	28	.38	.35	.06	0		
20	.05	.29	1.5	2.6	76	23	.35	.32	.06	0		
21	.05	.32	1.1	2.1	99	19	.30	.24	.05	0		
22	.05	.32	.97	1.6	51	18	.23	.20	.04	0		
23	.04	.32	.77	1.5	39	17	.20	.13	.03	0		
24	.04	.29	.66	1.3	30	15	.23	.15	.03	0		
25	.03	.29	.61	1.4	25	14	.25	.29	.03	0		
26	.03	.29	.53	1.1	23	11	.30	.35	.03	0		
27	.04	.29	.49	1.1	22	8.9	.35	.29	.03	0		
28	.05	.29	.49	.97	20	8.5	.40	.24	.03	0		
29	.05	.71	.45	254	18	7.4	.40	.29	.02	0		
30	.06	1.1	.45	114	-----	6.4	.36	.20	.03	0		
31	.06	-----	.45	44	-----	5.5	-----	.08	-----	0		-----
TOTAL	1.60	7.07	52.62	551.64	709.1	732.9	41.17	7.82	3.90	0.22	0	0
MEAN	.052	.24	1.70	17.8	24.5	23.6	1.37	.25	.13	.007	0	0
MAX	.07	1.1	9.6	254	99	114	5.0	.42	.29	.03	0	0
MIN	0	.06	.45	.42	3.3	5.5	.20	.08	.02	0	0	0
AC-FT	3.2	14	104	1,090	1,410	1,450	82	16	7.7	.4	0	0

CAL YR 1967 TOTAL 6,621.83 MEAN 18.1 MAX 918 MIN 0 AC-FT 13,130
WTR YR 1968 TOTAL 2,108.04 MEAN 5.76 MAX 254 MIN 0 AC-FT 4,180

PEAK DISCHARGE (BASE, 400 CFS, revised)
DATE TIME G.HT. DISCHARGE DATE TIME G.HT. DISCHARGE
01-29 2200 8.99 1,140 03-16 0630 6.55 630
02-19 - - 500

11-4585. SONOMA CREEK AT AGUA CALIENTE, CALIF.

LOCATION.--Lat 38°19'24", long 122°29'36", in Agua Caliente Grant on left bank 150 ft upstream from bridge, and 0.4 mile west of Agua Caliente, Sonoma County.

DRAINAGE AREA.--58.3 sq mi.

RECORDS AVAILABLE.--February 1955 to September 1968. Prior to October 1966, published as "at Boyes Hot Springs."

GAGE.--Digital water-stage recorder. Altitude of gage is 120 ft (from topographic map). Prior to Mar. 30, 1965, graphic water-stage recorder, and Mar. 30, 1965 to July 24, 1967, digital water-stage recorder at site 0.8 mile downstream at different datum.

AVERAGE DISCHARGE.--13 years, 69.2 cfs (50,100 acre-ft per year); median of yearly mean discharges, 56 cfs (40,540 acre-ft per year).

EXTREMES.--Maximum discharge during year, 5,750 cfs Jan. 29 (gage height, 11.5 ft, from outside highwater marks); minimum daily, 0.15 cfs Sept. 28.
1955-68: Maximum discharge, 8,880 cfs Dec. 22, 1955 (gage height, 17.10 ft, site and datum then in use), from rating curve extended above 4,100 cfs on basis of slope-area measurement of maximum flow; no flow at times.

REMARKS.--Records poor. No regulation; some diversion above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.0	18	4.5	460	82	58	11	4.2	1.8	1.1	.93
2	3.1	2.1	16	4.4	250	73	50	10	4.2	1.6	1.2	.96
3	4.4	2.0	50	4.2	180	64	46	10	4.2	1.5	1.3	.97
4	2.8	2.4	91	4.1	150	56	44	9.9	4.1	1.4	1.3	.92
5	3.0	2.7	94	4.1	130	51	40	9.6	3.9	1.3	1.2	.96
6	2.9	2.8	30	4.0	100	47	38	9.0	3.7	1.3	1.0	.94
7	2.6	2.7	129	3.9	90	43	35	8.2	3.6	1.4	.74	.91
8	2.2	2.7	22	3.9	77	41	33	7.8	3.5	1.4	.85	.90
9	2.2	3.0	10	9.8	66	39	30	7.5	3.4	1.5	.90	.90
10	2.0	3.1	7.5	620	58	36	28	7.4	3.3	1.5	.95	.90
11	2.1	3.0	6.3	150	52	34	27	7.6	3.3	1.4	1.1	.98
12	2.2	3.0	5.2	50	45	300	26	8.0	3.2	1.4	1.1	.82
13	2.3	3.3	4.3	32	41	270	25	8.0	3.1	1.4	1.0	.80
14	2.0	6.8	4.3	100	37	195	24	7.6	3.0	1.3	1.1	.82
15	1.9	5.0	4.1	530	30	140	23	7.0	2.9	1.3	1.0	1.0
16	1.8	4.7	4.3	190	36	690	22	6.6	2.8	1.3	.97	.79
17	1.9	4.7	5.3	90	110	390	21	6.3	2.8	1.3	.93	.70
18	2.0	5.2	36	52	78	250	20	6.0	2.7	1.3	.90	.50
19	2.1	6.2	18	38	850	185	19	5.6	2.7	1.3	.90	.40
20	2.1	6.4	13	29	720	145	18	5.4	2.6	1.2	1.2	.81
21	2.2	6.6	10	24	810	120	17	5.3	2.5	1.2	1.7	.88
22	2.6	7.0	8.8	20	480	100	16	5.2	2.4	1.2	2.3	.78
23	2.6	7.5	7.8	17	300	88	16	5.1	2.4	1.2	1.7	.64
24	2.5	7.8	7.1	16	210	77	15	5.1	2.3	1.2	1.4	.53
25	2.4	8.0	6.6	13	160	71	14	5.0	2.1	1.2	1.1	.43
26	2.3	8.2	6.1	11	135	66	13	4.8	2.0	1.2	1.0	.30
27	2.1	8.5	5.7	11	110	60	12	4.7	1.9	1.1	.90	.21
28	2.3	11	5.4	11	105	56	12	4.6	1.7	1.1	.88	.15
29	2.3	21	5.0	1,500	95	51	11	4.5	1.6	1.1	.93	.17
30	2.0	24	4.8	850	-----	48	11	4.4	1.4	1.1	.98	.20
31	1.8	-----	4.6	540	-----	45	-----	4.3	-----	1.1	.99	-----
TOTAL	72.7	183.4	640.2	4,936.9	5,965	3,913	764	211.5	87.5	40.6	34.62	21.20
MEAN	2.35	6.11	20.7	159	206	126	25.5	6.82	2.92	1.31	1.12	.71
MAX	4.4	24	129	1,500	850	690	58	11	4.2	1.8	2.3	1.0
MIN	1.8	2.0	4.1	3.9	30	34	11	4.3	1.4	1.1	.74	.15
AC-FT	144	364	1,270	9,790	11,830	7,760	1,520	420	174	81	69	42

CAL YR 1967 TOTAL 38,392.2 MEAN 105 MAX 6,190 MIN 1.4 AC-FT 76,150
WTR YR 1968 TOTAL 16,870.62 MEAN 46.1 MAX 1,500 MIN .15 AC-FT 33,460

PEAK DISCHARGE (BASE, 1,400 CFS)
DATE TIME G.HT. DISCHARGE DATE TIME G.HT. DISCHARGE
01-10 0500 - 3,000 02-19 2200 - 2,800
01-29 2200 11.5 5,750 03-16 0615 - 2,900

Note.--No gage-height record Dec. 19 to Jan. 21, Jan. 29 to Sept. 30.

NOVATO CREEK BASIN

11-4595. NOVATO CREEK AT NOVATO, CALIF.

LOCATION.--Lat 38°06'28", long 122°34'44", in Novato Grant, on left bank in Novato, Marin County, 100 ft upstream from 7th Street Bridge.

DRAINAGE AREA.--17.6 sq mi.

RECORDS AVAILABLE.--October 1946 to September 1968. Records of diversions for water years 1952-53, estimated. Prior to October 1966 published as "near Novato."

GAGE.--Digital water-stage recorder. Altitude of gage is 30 ft (from topographic map). Prior to Aug. 23, 1967, graphic water-stage recorder at site 0.6 mile upstream at different datum.

AVERAGE DISCHARGE.--22 years, 11.2 cfs (8,110 acre-ft per year), adjusted for diversion.

EXTREMES.--Maximum discharge during year, 530 cfs Jan. 29 (gage height, 6.10 ft); no flow for many days.
1946-68: Maximum discharge, 1,330 cfs Jan. 20, 1964 (gage height, 8.74 ft, site and datum then in use); no flow for many days in each year.

REMARKS.--Records good. Flow regulated by Stafford Lake beginning Dec. 1, 1951 (capacity, 4,500 acre-ft since Oct. 18, 1954); contents, 3,000 acre-ft Sept. 30, 1967, and 2,460 acre-ft Sept. 30, 1968. Diversion from Stafford Lake for municipal water supply began Apr. 25, 1952, and amounted to 2,490 acre-ft for the 1968 water year.

COOPERATION.--Record of diversions furnished by North Marin County Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.30	.30	.09	30	7.2	6.0	.85	.64	.20	.17	
2	2.5	.30	.09	.09	33	6.3	4.0	.85	.57	.17	.17	
3	1.6	.26	3.0	.09	24	5.8	3.6	.85	.50	.32	.20	
4	4.0	.30	5.3	.26	19	5.5	3.4	.85	.57	.23	.20	
5	1.4	.34	1.6	.08	17	5.0	3.4	.85	.50	.27	.17	
6	.46	.30	.18	.08	15	4.8	3.0	.85	.50	.27	.13	
7	.38	.14	8.5	.09	13	10	3.0	.78	.57	.27	.06	
8	.38	.10	.18	.34	11	5.8	3.0	.92	.50	.27	0	
9	.38	.14	.10	1.6	10	4.5	2.6	.92	.43	.32	0	
10	.38	.14	.09	40	9.3	4.0	2.4	1.1	.50	.32	0	
11	.38	.10	.09	1.2	9.0	3.6	2.2	1.3	.50	.32	.06	
12	.38	.10	.09	.71	8.3	91	2.2	1.2	.43	.23	0	
13	.42	1.1	.10	1.1	7.6	38	2.0	2.0	.32	.23	.11	
14	.38	1.6	.14	17	6.9	25	1.8	1.3	.37	.23	.11	
15	.46	.09	.18	9.7	6.5	27	1.8	1.3	.37	.27	0	
16	.50	.07	.26	5.0	41	99	1.8	1.2	.27	.17	0	
17	.50	.07	1.9	1.5	52	66	1.8	1.2	.27	.17	0	
18	.34	.09	1.6	.92	20	44	1.8	1.0	.32	.15	0	
19	.38	.26	.10	.78	57	33	2.0	1.0	.27	.04	0	
20	.38	.10	.08	.64	51	25	1.6	1.0	.23	0	0	
21	.38	.08	.07	.57	91	20	1.3	1.0	.23	0	0	
22	.34	.09	.06	.57	39	17	1.3	.92	.23	0	0	
23	.34	.10	.06	.50	25	15	1.5	.85	.32	0	0	
24	.38	.14	.07	.64	19	12	1.5	.92	.32	0	0	
25	.38	.18	.06	.71	15	11	1.3	.92	.27	.43	0	
26	.30	.18	.07	.71	13	8.6	1.6	.78	.32	.57	0	
27	.34	.18	.07	.78	11	7.2	1.5	.78	.32	.32	0	
28	.30	.26	.08	1.1	12	5.8	1.3	.71	.27	.20	0	
29	.34	2.3	.08	178	8.6	5.0	1.5	.71	.23	.32	.57	
30	.26	3.5	.08	102	-----	4.3	.92	.64	.23	.17	0	
31	.30	-----	.08	43	-----	4.3	-----	.57	-----	.17	0	-----
TOTAL	19.72	12.91	24.66	409.85	674.2	620.7	67.12	30.12	11.37	6.63	1.95	0
MEAN	.64	.43	.80	13.2	23.2	20.0	2.24	.97	.38	.21	.063	0
MAX	4.0	3.5	8.5	178	91	99	6.0	2.0	.64	.57	.57	0
MIN	.26	.07	.06	.08	6.5	3.6	.92	.57	.23	0	0	0
AC-FT	39	26	49	813	1,340	1,230	133	60	23	13	3.9	0

CAL YR 1967 TOTAL 7,534.25 MEAN 20.6 MAX 750 MIN 0 AC-FT 14,940
WTR YR 1968 TOTAL 1,879.23 MEAN 5.13 MAX 178 MIN 0 AC-FT 3,730

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 10.60 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 11, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--17 years, 26.2 cfs (18,970 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,700 cfs Jan. 29 (gage height, 12.69 ft); minimum daily, 0.16 cfs Nov. 16, 17.
1951-68: Maximum discharge, 3,620 cfs Dec. 22, 1955 (gage height, 17.45 ft), from rating curve extended above 1,600 cfs; no flow at times.

REMARKS.--Records good. Flow regulated by Phoenix Lake (capacity, 612 acre-ft). Diversion on tributary above station by Marin Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.0	.92	3.1	86	13	35	4.0	1.2	.96	.52	.42
2	1.7	1.0	.44	3.1	82	12	27	3.7	1.2	.97	.50	.48
3	1.3	.82	24	3.1	71	11	23	3.4	1.2	1.0	.46	.48
4	.67	.80	47	3.1	55	10	20	2.9	1.3	.92	.47	.42
5	2.1	.83	25	3.1	46	9.0	18	2.9	1.3	.84	.45	.49
6	.69	.69	4.7	3.1	38	8.6	17	2.9	1.3	.80	.41	.57
7	.58	.66	37	3.1	31	26	15	2.6	1.2	.80	.36	.59
8	.44	.69	6.2	3.1	27	15	14	1.9	1.0	.85	.38	.54
9	.44	1.0	4.7	11	24	14	16	2.4	1.0	.80	.38	.59
10	.56	1.3	4.4	235	20	16	12	2.6	.80	.84	.37	.65
11	.60	1.3	4.4	39	18	45	11	2.4	.80	.76	.36	.87
12	.53	1.3	3.7	21	17	170	11	2.9	.80	.76	.48	1.0
13	.52	3.1	3.7	17	15	500	10	2.9	.69	.78	.64	1.1
14	.52	5.8	3.4	90	13	340	9.5	2.6	.60	.80	.67	.95
15	.45	.19	3.4	135	13	200	9.0	2.6	.60	.81	.57	1.0
16	.40	.16	3.4	54	181	135	8.5	2.6	.60	.82	.50	.96
17	.38	.16	28	31	553	110	8.0	2.4	.69	.80	.48	.92
18	.34	.28	18	22	178	95	7.5	2.4	.58	.72	.47	.64
19	.37	.38	5.8	16	176	80	7.5	2.1	.84	.66	.89	.82
20	.41	.23	4.4	11	178	66	6.6	1.9	.92	.63	.56	.82
21	.39	.28	3.7	9.5	208	58	6.6	1.7	.98	.58	.57	.97
22	.38	.38	3.7	8.0	121	50	6.2	1.9	.92	.57	.54	.94
23	.45	.52	3.6	6.6	78	45	6.2	1.7	1.1	.57	.39	.83
24	.60	.80	3.4	5.8	46	40	5.4	1.5	1.1	.47	.33	.71
25	.53	.92	3.4	5.4	34	36	8.0	1.9	.99	.42	.35	.67
26	.76	.92	3.4	5.8	26	33	4.7	1.5	.99	.43	.37	.30
27	.92	1.3	3.4	8.5	21	31	4.7	1.3	1.1	.41	.41	.32
28	.99	1.7	3.4	20	18	28	4.4	1.3	1.1	.41	.36	.34
29	1.0	15	3.1	780	15	26	4.4	1.3	.92	.44	.36	.45
30	1.0	6.2	3.1	415	-----	24	4.0	1.3	.97	.47	.34	.57
31	.93	-----	3.1	138	-----	26	-----	1.2	-----	.54	.33	-----
TOTAL	21.95	49.71	269.86	2,109.4	2,389	2,272.6	340.2	70.7	28.79	21.63	14.27	20.41
MEAN	.71	1.66	8.71	68.0	82.4	73.3	11.3	2.28	.96	.70	.46	.68
MAX	2.1	15	47	780	553	500	35	4.0	1.3	1.0	.89	1.1
MIN	.34	.16	.44	3.1	13	8.6	4.0	1.2	.58	.41	.33	.30
AC-FT	44	99	535	4,180	4,740	4,510	675	140	57	43	28	40

CAL YR 1967 TOTAL 12,205.37 MEAN 33.4 MAX 1,900 MIN .16 AC-FT 24,210
WTR YR 1968 TOTAL 7,608.52 MEAN 20.8 MAX 780 MIN .16 AC-FT 15,090

Peak discharge (base, 1,000 cfs).--Jan. 29 (2200 hrs) 1,700 cfs (12.69 ft).

Note.--No gage-height record Mar. 9 to Apr. 9.

ARROYO CORTE MADERA DEL PRESIDIO BASIN

11-4601. ARROYO CORTE MADERA DEL PRESIDIO AT MILL VALLEY, CALIF.

LOCATION.--Lat 37°53'50", long 122°32'06", in Sausalito Grant, on right bank near south boundary of town of Mill Valley 1 mile upstream from mouth.

DRAINAGE AREA.--4.69 sq mi.

RECORDS AVAILABLE.--October 1965 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1.85 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Nov. 9, 1967, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 303 cfs Jan. 29 (gage height, 5.17 ft); no flow for several days. 1965-68: Maximum discharge, 682 cfs Jan. 20, 1967 (gage height, 6.96 ft); minimum daily, no flow for several days in 1968.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	.82	1.9	.51	11	5.9	4.2	1.5	.66	.14	.19	.06
2	.58	.58	1.5	.58	16	5.1	3.0	1.5	.66	.14	.19	.05
3	.58	.51	3.0	.58	18	4.4	2.8	1.5	.66	.14	.19	.05
4	.51	.37	8.2	.66	12	4.2	2.7	1.5	.74	.14	.19	.14
5	.66	.37	3.4	.66	8.9	4.4	2.5	1.4	.74	.14	.09	.19
6	.66	.37	1.3	.58	6.7	4.8	2.4	1.4	.74	.09	.05	.19
7	.51	.37	5.3	.51	5.3	7.9	2.3	1.3	.74	.09	.05	.09
8	.44	.31	1.6	.58	4.6	5.9	2.3	1.3	.74	.14	.09	.05
9	.44	.31	1.2	1.1	4.2	4.6	2.1	1.3	.66	.14	.05	.05
10	.44	.25	1.0	19	4.0	4.2	2.1	1.3	.66	.05	.02	.10
11	.37	.31	.82	3.4	3.4	4.2	2.0	1.3	.51	.05	.04	.07
12	.51	.51	.66	2.1	3.2	30	2.0	1.4	.44	0	.02	.14
13	.58	.82	.66	1.9	2.8	35	2.1	1.4	.37	0	.16	.25
14	.51	2.7	.58	12	2.7	20	2.0	1.4	.31	0	.09	.37
15	.51	.66	.66	17	2.5	14	2.0	1.3	.31	0	.25	.44
16	.51	.51	.66	6.7	14	18	1.9	1.2	.31	0	.05	.31
17	.58	.51	2.0	4.0	66	13	1.7	1.1	.31	0	.02	.14
18	.66	.51	3.8	2.8	30	11	1.7	1.1	.25	0	0	.14
19	.66	1.0	1.5	2.4	50	8.9	1.9	1.1	.37	0	1.7	.31
20	.66	.66	1.3	2.0	82	7.2	1.9	1.1	.44	0	.58	.37
21	.66	.44	1.1	1.6	97	6.2	1.7	1.0	.44	0	.51	.19
22	.91	.51	.91	1.5	35	5.6	1.7	1.0	.25	.14	.37	.09
23	.91	1.0	.82	1.3	20	5.3	1.6	1.1	.19	.14	.31	0
24	.91	1.0	.74	1.2	16	4.6	1.7	2.8	.25	.20	.25	.02
25	.91	1.0	.66	1.2	12	5.1	1.6	2.8	.31	.20	.14	0
26	.91	1.0	.66	1.2	10	4.2	1.6	1.2	.31	.19	.14	.14
27	1.0	1.6	.58	2.0	8.6	4.0	1.5	1.0	.31	.19	.09	.19
28	.91	1.7	.58	2.3	7.2	3.8	1.5	.91	.37	.18	.14	.09
29	.82	2.8	.44	45	6.4	3.6	1.7	.91	.19	.18	.03	.09
30	.91	4.4	.37	48	-----	3.2	1.6	.74	.09	.17	.02	.14
31	.82	-----	.37	18	-----	3.0	-----	.74	-----	.19	.06	-----
TOTAL	20.78	27.90	48.27	202.36	559.5	261.3	61.8	40.60	13.33	3.04	6.08	4.46
MEAN	.67	.93	1.56	6.53	19.3	8.43	2.06	1.31	.44	.098	.20	.15
MAX	1.0	4.4	8.2	48	97	35	4.2	2.8	.74	.20	1.7	.44
MIN	.37	.25	.37	.51	2.5	3.0	1.5	.74	.09	0	0	0
AC-FT	41	55	96	401	1,110	518	123	81	26	6.0	12	8.9

CAL YR 1967 TOTAL 3,736.07 MEAN 10.2 MAX 455 MIN .25 AC-FT 7,410

WTR YR 1968 TOTAL 1,249.42 MEAN 3.41 MAX 97 MIN 0 AC-FT 2,480

Peak discharge (base, 220 cfs).--Jan. 29 (2215 hrs) 303 cfs (5.17 ft); Feb. 19 (2200 hrs) 257 cfs (4.91 ft).

BOLINAS LAGOON BASIN

395

11-4601.6. MORSES CREEK AT BOLINAS, CALIF.

LOCATION.--Lat 37°55'09", long 122°40'09", in Las Baulines Grant on right bank at mouth, 7 ft upstream from culvert on State Highway 1, 1.0 mile northeast of Bolinas, Marin County.

DRAINAGE AREA.--0.70 sq mi.

RECORDS AVAILABLE.--May 1967 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 3.85 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

EXTREMES.--Maximum discharge during year, 5.0 cfs Feb. 21 (gage height, 2.51 ft); no flow for many days. 1967-68: Maximum discharge, 5.0 cfs Feb. 21, 1968 (gage height, 2.51 ft); no flow for many days in each year.

REMARKS.--Records good. No regulation; small diversion above station for domestic use. Records of suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0		.15	0	1.5	.37	.17	.02				
2	0		.14	0	1.5	.30	.10	.02				
3	.02		.15	0	1.8	.22	.07	.02				
4	.07		.22	0	1.7	.20	.06	.02				
5	.02		.47	0	1.5	.18	.04	.04				
6	0		.47	0	1.2	.15	.02	.04				
7	0		.47	0	1.1	.20	.02	.02				
8	0		.42	0	.96	.17	.02	.02				
9	0		.30	0	.86	.12	.02	.02				
10	0		.22	.77	.83	.09	.02	.02				
11	0		.12	.83	.80	.06	.04	.02				
12	0		.01	.75	.77	.50	.02	.02				
13	0	0	.65	.77	1.2	.02	.02	.02				
14	0	0	.67	.75	1.2	.02	.02	.02				
15	0	0	1.5	.72	.93	.02	.02	.02				
16	0	0	1.2	.75	.99	.02	.02	.02				
17	0	0	.99	2.4	.96	.02	.02	.02				
18	0	.18	.93	2.6	.86	.02	.01	.01				
19	0	.37	.86	2.6	.75	.01	.01	.01				
20	0	.28	.80	3.4	.62	.01	.01	.01				
21	0	.15	.77	3.8	.52	.01	.01	.01				
22	0	.02	.70	2.3	.45	.01	.01	.01				
23	0	0	.62	1.7	.37	.02	.01	.01				
24	0	0	.52	1.4	.30	.02	.01	.01				
25	0	0	.47	1.1	.30	.02	.02	.02				
26	0	0	.45	.80	.24	.02	.02	.02				
27	0	0	.42	.67	.20	.01	.02	.02				
28	0	0	.42	.55	.17	.01	.02	.02				
29	0	0	1.1	.42	.14	.02	.01	.01				
30	0	0	2.6	-----	.14	.02	.01	.01				
31	0	-----	0	2.0	-----	.12	-----	0	-----			-----
TOTAL	0.11	0	4.14	20.02	41.25	13.02	0.90	0.55	0	0	0	0
MEAN	.004	0	.13	.65	1.42	.42	.030	.018	0	0	0	0
MAX	.07	0	.47	2.6	3.8	1.2	.17	.04	0	0	0	0
MIN	0	0	0	0	.42	.06	.01	0	0	0	0	0
AC-FT	.2	0	8.2	40	82	26	1.8	1.1	0	0	0	0

CAL YR 1967 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1968 TOTAL 79.99 MEAN .22 MAX 3.8 MIN 0 AC-FT 159

Peak discharge (base, 5 cfs).--Feb. 21 (0730 hrs) 5.0 cfs (2.51 ft).

BOLINAS LAGOON BASIN

11-4601.7. PINE CREEK AT BOLINAS, CALIF.

LOCATION.--Lat 37°55'07", long 122°41'31", in Las Baulines Grant, on right bank 100 ft upstream from highway bridge, 0.4 mile upstream from mouth, and 0.9 mile north of Bolinas, Marin County.

DRAINAGE AREA.--7.83 sq mi.

RECORDS AVAILABLE.--May 1967 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 5.65 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Feb. 20, 1968, at datum 0.70 ft higher. Float-operated rain gage 2.1 miles north of gage.

EXTREMES.--Maximum discharge during year, 235 cfs Feb. 19 (gage height, 4.80 ft, present datum); no flow Sept. 22.

1967-68: Maximum discharge, 235 cfs Feb. 19, 1968 (gage height, 4.80 ft, present datum); no flow Sept. 22, 1968.

REMARKS.--Records poor. No regulation; some small diversions above station for domestic use. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.76	3.8	1.1	16	14	7.6	2.7	1.4	.40	.40	.16
2	1.1	.84	2.5	.98	22	13	6.8	2.7	1.4	.43	.21	.23
3	1.0	.76	5.0	1.0	26	12	6.4	2.8	1.4	.50	.35	.18
4	1.0	.76	10	1.1	18	11	6.4	2.8	1.4	.44	.21	.21
5	1.0	1.1	6.0	1.1	14	11	6.2	2.5	1.4	.50	.21	.21
6	1.0	.80	2.7	.95	11	9.8	6.0	2.4	1.4	.25	.35	.18
7	1.0	.60	7.0	.90	8.2	12	5.8	2.3	1.3	.60	.21	.07
8	1.0	.50	2.7	1.0	7.0	11	5.8	2.3	1.3	.92	.35	.14
9	.92	.42	2.2	3.5	6.2	9.5	5.4	2.3	1.3	.54	.35	.16
10	.92	.39	1.9	25	5.4	8.8	5.4	2.3	1.3	.25	.18	.10
11	.84	.60	1.6	5.2	4.7	8.3	5.2	2.2	1.3	.21	.25	.18
12	.76	.84	1.5	3.8	4.4	40	5.0	2.2	1.2	.19	.40	.10
13	.76	1.3	1.5	3.4	3.7	42	4.8	2.3	1.2	.18	.40	.14
14	.68	3.9	1.8	6.9	3.4	24	4.8	2.2	1.1	.16	.40	.21
15	.60	1.2	1.4	21	3.1	18	4.8	2.1	1.1	.15	.23	.12
16	.60	.90	1.5	11	6.9	32	4.6	2.0	1.1	.15	.21	.10
17	.68	.80	1.7	8.2	64	23	4.0	2.0	1.1	.14	.30	.03
18	.68	1.0	4.4	7.8	43	20	4.0	1.9	1.1	.14	.30	.07
19	.68	1.5	2.8	7.8	56	16	4.0	2.0	1.2	.13	.83	.05
20	.42	1.1	2.2	7.4	45	14	3.9	2.0	.83	.13	.65	.05
21	.84	.85	1.8	6.6	87	13	3.9	2.0	.65	.13	.50	.05
22	1.1	1.0	1.6	6.2	56	12	3.6	1.9	.98	.12	.35	0
23	1.2	1.3	1.4	5.8	45	12	3.4	1.8	.75	.15	.18	.05
24	1.1	1.6	1.2	5.8	37	11	3.4	1.8	.83	.21	.21	.10
25	1.0	1.8	1.1	5.8	32	11	3.3	2.5	.98	.25	.30	.07
26	1.1	2.1	1.1	5.4	24	9.8	3.1	1.6	.90	.25	.14	.03
27	1.1	2.4	1.0	5.8	20	9.0	3.1	1.5	.98	.30	.21	.05
28	.92	3.0	1.1	5.8	17	8.5	3.0	1.5	.98	.40	.10	.16
29	1.0	4.2	1.3	24	15	8.0	2.8	1.4	.98	.40	.12	.23
30	.84	6.2	1.4	48	-----	7.6	2.8	1.4	.90	.23	.12	.16
31	.76	-----	1.2	25	-----	7.2	-----	1.4	-----	.30	.07	-----
TOTAL	27.70	44.52	78.4	263.33	701.0	458.5	139.3	64.8	33.76	9.15	9.09	3.59
MEAN	.89	1.48	2.53	8.49	24.2	14.8	4.64	2.09	1.13	.30	.29	.12
MAX	1.2	6.2	10	48	87	42	7.6	2.8	1.4	.92	.83	.23
MIN	.42	.39	1.0	.90	3.1	7.2	2.8	1.4	.65	.12	.07	0
AC-FT	55	88	156	522	1,390	909	276	129	67	18	18	7.1
(a)	.8	2.8	2.4	5.2	7.7	4.4	.2	1.3	0	0	.8	.6

CAL YR 1967 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1968 TOTAL 1,833.14 MEAN 5.01 MAX 87 MIN 0 AC-FT 3,640

Peak discharge (base, 150 cfs).--Feb. 19 (2315 hrs) 235 cfs (4.08 ft).

a Precipitation, in inches.

Note.--No gage-height record Nov. 6 to Dec. 13.

WALKER CREEK BASIN

397

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 southeast of Tomales, Marin County.

DRAINAGE AREA.--37.1 sq mi.

RECORDS AVAILABLE.--June 1959 to September 1968.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 56.74 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 14, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--9 years, 36.0 cfs (26,060 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3,610 cfs Jan. 29 (gage height, 19.47 ft), from rating curve extended above 630 cfs; no flow for several months.
1959-68: Maximum discharge, 5,420 cfs Jan. 5, 1966 (gage height, 22.23 ft); no flow for several months in each year.

REMARKS.--Records good. No regulation; small diversions above station for irrigation and stock watering.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.18	1.7	1.2	153	45	29	2.6	.51	.09		
2	.12	.18	1.4	1.2	145	35	31	2.6	.51	.09		
3	.06	.15	9.0	1.0	126	27	22	2.6	.58	.09		
4	0	.18	6.9	1.0	100	24	19	2.6	.65	.06		
5	.03	.18	7.8	1.0	81	22	18	2.6	.65	.06		
6	0	.21	3.9	1.0	65	20	16	2.4	.58	.06		
7	0	.18	20	1.0	53	20	14	2.2	.51	.06		
8	0	.24	10	1.2	44	22	13	2.0	.44	.06		
9	0	.24	6.0	2.2	34	22	11	2.0	.44	.06		
10	.03	.21	2.9	228	28	18	9.6	1.8	.37	.06		
11	.03	.18	2.4	80	24	17	8.8	1.8	.44	.09		
12	.03	.17	2.0	44	21	247	8.8	1.8	.37	.06		
13	.06	.24	1.7	33	19	270	8.0	2.0	.27	.06		
14	.06	1.5	1.7	117	16	161	7.2	1.8	.21	.06		
15	.06	.75	1.6	257	13	126	6.8	1.6	.18	.03		
16	.06	.55	1.8	127	31	436	6.0	1.4	.15	.03		
17	.06	.38	2.3	83	238	235	5.7	1.4	.12	0		
18	.09	.34	15	59	144	160	5.4	1.2	.12	0		
19	.12	.42	6.8	43	386	123	5.4	1.2	.12	0		
20	.15	.41	4.2	34	626	95	5.1	1.2	.12	0		
21	.18	.37	2.8	28	766	75	4.8	1.0	.09	0		
22	.21	.29	2.4	24	351	66	4.2	.93	.09	0		
23	.21	.26	2.2	20	222	64	4.2	.86	.09	0		
24	.18	.28	2.0	18	164	49	3.9	.86	.09	0		
25	.18	.34	1.8	16	127	45	3.9	1.6	.06	0		
26	.21	.36	1.8	15	102	37	3.3	1.0	.09	0		
27	.21	.38	1.6	16	84	31	3.0	.86	.06	0		
28	.21	.45	1.6	16	69	28	3.0	.79	.06	0		
29	.21	.88	1.4	456	55	26	3.0	.72	.06	0		
30	.18	3.1	1.4	922	-----	23	2.8	.65	.06	0		
31	.15	-----	1.2	256	-----	21	-----	.58	-----	0		-----
TOTAL	3.09	13.60	129.3	2,902.8	4,287	2,590	285.9	48.65	8.09	1.02	0	0
MEAN	.10	.45	4.17	93.6	148	83.5	9.53	1.57	.27	.033	0	0
MAX	.21	3.1	20	922	766	436	31	2.6	.65	.09	0	0
MIN	0	.15	1.2	1.0	13	17	2.8	.58	.06	0	0	0
AC-FT	6.1	27	256	5,760	8,500	5,140	567	97	16	2.0	0	0

CAL YR 1967 TOTAL 19,858.84 MEAN 54.4 MAX 3,560 MIN 0 AC-FT 39,390
WTR YR 1968 TOTAL 10,269.45 MEAN 28.1 MAX 922 MIN 0 AC-FT 20,370

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-29	2345	19.47	3,610	03-16	0700	13.03	1,300
02-21	0500	14.70	1,790				

Note.--No gage-height record Nov. 11 to Dec.18.

SALMON CREEK BASIN

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 81.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

AVERAGE DISCHARGE.--6 years, 19.0 cfs (13,760 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,370 cfs Feb. 19 (gage height, 15.19 ft); no flow for many days. 1962-68: Maximum discharge, 1,960 cfs Jan. 5, 1966 (gage height, 18.89 ft), from rating curve extended above 800 cfs; no flow for many days in each year.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL %	AUG	SEP
1	.66	.22	3.2	1.1	56	17	24	2.1	.14	.08	.18	0
2	1.1	.24	1.6	1.1	101	14	16	1.8	.24	.09	.33	0
3	3.7	.26	16	.98	77	12	9.5	2.1	.36	.20	.34	0
4	2.8	.26	11	.90	44	11	8.0	2.1	.34	.26	.10	.04
5	.98	.39	12	.90	31	11	7.3	2.1	.34	.26	.19	.08
6	.73	.57	4.2	.98	23	10	6.5	1.9	.33	.19	.19	.14
7	.71	.57	19	.98	19	21	6.0	1.5	.31	.22	.09	.11
8	.57	.66	5.8	1.1	16	21	5.5	1.5	.14	.28	.05	.10
9	.47	1.2	3.3	2.3	14	13	5.0	1.5	.17	.39	.04	.07
10	.39	1.1	2.3	190	12	10	4.6	1.7	.14	.44	.02	.07
11	.39	.90	1.9	25	10	9.4	4.5	1.6	.10	.47	.02	.03
12	.44	.83	1.5	12	9.3	178	4.3	1.6	.13	.55	.01	.01
13	.35	1.1	1.2	11	8.1	133	4.0	1.8	.23	.28	0	0
14	.28	4.9	1.2	235	7.4	59	3.7	1.8	0	.34	0	.02
15	.22	1.7	1.4	185	6.7	37	3.7	1.3	.07	.22	0	0
16	.13	.83	1.4	50	48	248	3.4	1.4	.02	.10	0	0
17	.18	.61	1.6	27	330	78	3.2	1.1	.02	.06	0	0
18	.17	.52	14	19	82	46	3.0	1.0	.12	.03	0	0
19	.23	.57	6.3	16	506	32	3.0	1.1	.29	0	0	0
20	.35	.57	3.4	14	329	24	2.9	1.2	.35	0	.57	0
21	.44	.57	2.6	12	344	20	2.8	1.1	.29	0	.52	0
22	.57	.39	2.2	10	186	20	2.6	1.1	.18	0	.28	0
23	.57	.35	1.9	8.9	109	20	2.4	.95	.15	0	.21	0
24	.57	.35	1.8	8.1	67	15	2.5	1.0	.12	0	.20	0
25	.57	.39	1.6	7.4	45	16	2.5	2.4	.15	0	.12	0
26	.53	.39	1.5	6.7	33	13	2.4	1.4	.30	0	.14	0
27	.48	.44	1.4	8.3	27	11	2.1	.96	.39	0	.15	0
28	.57	.62	1.3	9.2	22	9.4	2.0	.81	.34	0	.13	0
29	.44	2.3	1.2	305	19	8.4	2.2	.65	.17	0	.06	0
30	.35	5.2	1.1	310	-----	7.6	2.2	.56	.08	0	0	0
31	.26	-----	1.1	99	-----	7.0	-----	.20	-----	.01	.02	-----
TOTAL	20.20	29.00	130.0	1,578.94	2,581.5	1,131.8	151.8	43.33	6.01	4.47	3.96	0.67
MEAN	.65	.97	4.19	50.9	89.0	36.5	5.06	1.40	.20	.14	.13	.022
MAX	3.7	5.2	19	310	506	248	24	2.4	.39	.55	.57	.14
MIN	.13	.22	1.1	.90	6.7	7.0	2.0	.20	0	0	0	0
AC-FT	40	58	258	3,130	5,120	2,240	301	86	12	8.9	7.9	1.3
CAL YR 1967	TOTAL 8,530.27			MEAN 23.4	MAX 955	MIN .07	AC-FT 16,920					
WTR YR 1968	TOTAL 5,681.68			MEAN 15.5	MAX 506	MIN 0	AC-FT 11,270					

Peak discharge (base, 750 cfs).--Feb. 19 (2300 hrs) 1,370 cfs (15.19 ft); Mar. 16 (0645 hrs) 785 cfs (11.25 ft).

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 1968; discontinued as a continuous-record station; converted to a crest-stage partial record station.

GAGE.--Digital water-stage recorder. Datum of gage is 799.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 23, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--5 years, 24.3 cfs (17,590 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,060 cfs Jan. 9 (gage height, 6.13 ft); no flow for many days.
1963-68: Maximum discharge, 4,400 cfs Dec. 22, 1964 (gage height, 11.71 ft); no flow for several months in each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	6.3	.65	70	22	12	2.3	.50			
2	0	0	4.5	.55	169	19	9.4	1.9	.50			
3	0	0	44	.40	101	17	8.5	1.9	.55			
4	0	0	40	.35	66	16	8.5	1.7	.45			
5	0	.01	52	.30	47	16	7.7	1.6	.45			
6	0	.01	15	.30	36	15	7.3	1.6	.50			
7	0	.01	58	.25	29	16	7.0	1.7	.45			
8	0	.11	16	1.5	23	14	6.6	1.6	.35			
9	0	.20	9.8	64	19	13	6.3	1.6	.25			
10	0	.40	7.3	250	16	12	5.9	1.6	.19			
11	0	.40	5.2	64	14	11	5.9	1.4	.19			
12	0	.40	4.3	44	12	62	5.2	1.4	.17			
13	0	.55	3.5	62	11	56	4.5	2.3	.17			
14	0	8.5	3.0	449	9.4	62	4.5	2.0	.15			
15	0	2.5	2.3	285	9.4	43	4.5	1.6	.15			
16	0	1.6	1.5	143	13	183	4.3	1.6	.13			
17	0	1.2	3.5	83	25	104	4.0	1.4	.12			
18	0	1.1	49	58	17	60	4.0	1.2	.11			
19	0	1.1	17	43	264	42	4.0	1.4	.10			
20	0	.83	11	34	204	32	3.5	1.7	.10			
21	0	.70	8.5	29	215	26	3.5	1.6	.08			
22	0	.65	7.0	24	122	23	3.3	1.5	.07			
23	0	.60	6.3	21	113	20	3.3	1.2	.07			
24	0	.60	6.6	18	83	17	3.0	1.2	.06			
25	0	.60	5.2	16	60	17	3.0	1.7	.05			
26	0	.60	4.5	15	44	15	2.8	1.2	.03			
27	0	1.1	3.8	14	35	14	2.5	.96	.02			
28	0	1.6	3.3	27	29	12	2.5	.70	0			
29	0	11	2.8	281	25	12	2.5	.65	0			
30	.01	11	2.0	162	-----	11	2.3	.60	0			
31	.03	-----	1.1	85	-----	9.8	-----	.55	-----			
TOTAL	0.04	47.37	404.3	2,275.30	1,880.8	991.8	152.3	45.36	5.96	0	0	0
MEAN	.001	1.58	13.0	73.4	64.9	32.0	5.08	1.46	.20	0	0	0
MAX	.03	11	58	449	264	183	12	2.3	.55	0	0	0
MIN	0	0	1.1	.25	9.4	9.8	2.3	.55	0	0	0	0
AC-FT	.08	94	802	4,510	3,730	1,970	302	90	12	0	0	0
CAL YR 1967	TOTAL	9,469.98	MEAN	25.9	MAX	628	MIN	0	AC-FT	18,780		
WTR YR 1968	TOTAL	5,803.23	MEAN	15.9	MAX	449	MIN	0	AC-FT	11,510		

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-09	2400	6.13	1,060	01-29	1815	5.10	620
01-14	1315	5.86	942	02-19	1915	5.33	712

RUSSIAN RIVER BASIN

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 611.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to October 1952, staff gage at bridge 0.6 mile downstream at different datum. Oct. 1, 1952, to Feb. 16, 1959, graphic water-stage recorder at datum 2.00 ft higher. Feb. 17, 1959, to Sept. 30, 1961, graphic water-stage recorder at datum 1.00 ft higher. Oct. 1, 1961 to Nov. 20, 1967, graphic water-stage recorder at same datum.

AVERAGE DISCHARGE.--18 years, 169 cfs (122,400 acre-ft per year); median of yearly mean discharges, 149 cfs (108,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 4,920 cfs Jan. 14 (gage height, 8.30 ft); minimum daily, 0.02 cfs Aug. 1-20.

1911-13, 1952-68: 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 fair except for period of no gage-height record, which are poor. No regulation; small diversions above station for irrigation. Records of water temperatures, suspended-sediment loads and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	2.8	27	16	433	137	92	11	8.0	.41	.02	.13
2	.51	2.8	4.4	17	1,110	121	83	11	9.0	.37	.02	.12
3	.80	2.8	266	17	644	111	81	11	10	.33	.02	.11
4	1.3	2.8	245	17	398	101	72	12	7.2	.30	.02	.10
5	1.3	2.8	451	17	287	103	61	14	8.0	.27	.02	.09
6	2.1	2.8	113	18	224	96	57	15	8.8	.25	.02	.08
7	1.3	2.8	408	18	178	113	54	16	8.0	.22	.02	.07
8	1.3	2.8	126	18	151	108	52	14	7.2	.20	.02	.06
9	1.3	2.1	64	58	131	92	52	13	6.5	.19	.02	.06
10	1.3	2.1	47	1,500	118	83	50	13	5.8	.18	.02	.06
11	1.3	2.1	38	310	103	78	48	12	5.2	.16	.02	.05
12	1.3	2.1	32	187	87	338	46	15	4.1	.14	.02	.05
13	2.1	2.1	25	190	83	366	44	25	3.7	.13	.02	.05
14	2.1	6.8	19	2,070	79	398	41	20	3.3	.11	.02	.05
15	2.1	2.1	16	1,870	74	262	39	17	3.0	.10	.02	.04
16	1.3	2.1	16	903	103	1,120	38	15	2.6	.09	.02	.04
17	1.3	2.1	18	487	151	666	33	13	2.1	.08	.02	.04
18	1.3	2.1	323	294	115	398	30	10	1.9	.08	.02	.04
19	2.1	2.1	134	224	1,470	280	31	12	1.7	.07	.02	.04
20	2.1	2.1	65	184	1,770	214	27	18	1.5	.06	.02	.04
21	2.1	2.1	48	151	1,490	178	25	14	1.3	.06	.03	.04
22	1.3	2.1	40	134	910	157	22	12	1.2	.05	3.6	.04
23	1.3	2.1	36	126	674	169	21	10	1.1	.05	2.0	.04
24	2.1	2.1	34	115	464	137	20	11	.98	.04	1.2	.03
25	2.1	2.1	30	108	334	140	19	15	.82	.04	.70	.03
26	.80	2.1	26	103	262	118	17	14	.73	.04	.40	.03
27	.80	2.1	22	96	214	105	16	12	.66	.03	.26	.03
28	.80	1.3	18	144	181	98	13	11	.60	.03	.20	.03
29	1.3	10	16	1,570	155	94	11	10	.51	.03	.18	.03
30	1.3	34	16	1,530	-----	85	11	9.4	.45	.03	.16	.03
31	2.1	-----	16	590	-----	79	-----	8.6	-----	.03	.14	-----
TOTAL	44.53	112.3	2,739.4	13,082	12,393	6,545	1,206	414.0	115.95	4.17	9.27	1.65
MEAN	1.44	3.74	88.4	422	427	211	40.2	13.4	3.87	.13	.30	.055
MAX	2.1	34	451	2,070	1,770	1,120	92	25	10	.41	3.6	.13
MIN	.32	1.3	4.4	16	74	78	11	8.6	.45	.03	.02	.03
AC-FT	88	223	5,430	25,950	24,580	12,980	2,390	821	230	8.3	18	3.3

CAL YR 1967 TOTAL 55,678.13 MEAN 153 MAX 3,890 MIN .10 AC-FT 110,400
WTR YR 1968 TOTAL 36,667.27 MEAN 100 MAX 2,070 MIN .02 AC-FT 72,730

PEAK DISCHARGE (BASE, 4,000 CFS)
DATE TIME G.H.T. DISCHARGE DATE TIME G.H.T. DISCHARGE
01-10 0215 7.64 4,330 02-19 2100 7.35 4,070
01-14 1500 8.30 4,920

Note.--No gage-height record May 7 to Sept. 30.

11-4615. EAST FORK RUSSIAN RIVER NEAR CALPELLA, CALIF.

LOCATION.--Lat 39°14'48", long 123°07'45", in NW¼ sec.18, T.16 N., R.11 W., on left bank 0.1 mile downstream from Cold Creek, and 3.9 miles east of Calpella.

DRAINAGE AREA.--92.2 sq mi.

RECORDS AVAILABLE.--October 1941 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Datum of gage is 787.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to May 28, 1957, at site 1.3 miles downstream at different datum. May 28, 1957, to May 19, 1964, graphic water-stage recorder and May 20, 1964, to Apr. 5, 1966, digital water-stage recorder at site 0.4 mile downstream at same datum.

AVERAGE DISCHARGE.--27 years, 332 cfs (240,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 5,880 cfs Jan. 14 (gage height, 15.76 ft); minimum daily, 33 cfs June 18.
1941-68: Maximum discharge, 18,700 cfs Dec. 22, 1964 (gage height, 20.21 ft); minimum daily, 3.8 cfs Oct. 30, 31, 1959.

REMARKS.--Records good. Flow greatly affected by diversion from Eel River through Potter Valley powerhouse (see sta. no. 11-4710.). Small diversion for irrigation above station. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	328	302	160	304	584	410	388	97	97	198	192	224
2	203	302	171	304	1,240	400	380	62	93	200	196	196
3	182	279	454	295	681	395	375	53	90	196	190	188
4	182	216	351	304	534	393	373	60	85	194	192	194
5	184	218	455	304	479	398	347	75	81	200	194	182
6	182	216	287	304	445	390	370	84	75	202	194	176
7	181	216	483	304	419	405	368	81	69	194	182	182
8	178	216	341	273	403	408	347	66	63	180	162	190
9	178	182	288	366	390	395	360	53	62	178	170	192
10	199	170	299	1,300	385	388	330	59	70	204	190	190
11	295	168	297	385	377	388	325	53	58	202	190	194
12	302	170	281	320	367	695	300	66	37	204	192	212
13	304	173	302	466	359	667	250	97	38	206	184	214
14	304	191	302	2,520	349	672	250	110	35	212	192	214
15	304	184	302	1,370	341	524	250	104	40	212	190	218
16	302	171	304	785	372	1,480	244	97	40	206	216	226
17	297	166	309	496	427	748	244	91	36	212	210	224
18	302	164	451	424	380	575	232	91	33	210	226	224
19	297	167	364	388	1,890	506	230	91	34	210	230	220
20	295	166	320	372	1,170	468	160	91	94	210	238	196
21	302	166	315	364	1,330	445	114	88	108	208	254	202
22	302	159	318	354	830	433	104	97	122	204	226	216
23	306	164	313	343	768	438	97	93	122	188	226	214
24	309	162	311	338	586	415	104	96	146	188	224	210
25	302	163	309	333	518	425	108	96	190	188	222	196
26	147	166	309	330	483	405	100	93	190	188	222	196
27	288	162	306	325	447	395	88	85	194	190	222	196
28	306	118	299	361	423	395	91	81	200	182	224	208
29	304	177	292	2,110	423	393	94	85	200	188	214	228
30	304	189	302	1,230	-----	385	85	102	200	192	200	228
31	299	-----	304	659	-----	380	-----	99	-----	186	222	-----
TOTAL	8,168	5,663	9,899	18,331	17,400	15,214	7,108	2,596	2,902	6,132	6,386	6,150
MEAN	263	189	319	591	600	491	237	83.7	96.7	198	206	205
MAX	328	302	483	2,520	1,890	1,480	388	110	200	212	254	228
MIN	147	118	160	273	341	380	85	53	33	178	162	176
AC-FT	16,200	11,230	19,630	36,360	34,510	30,180	14,100	5,150	5,760	12,160	12,670	12,200
CAL YR 1967	TOTAL 144,884		MEAN 397		MAX 3,680		MIN 118		AC-FT 287,400			
WTR YR 1968	TOTAL 105,949		MEAN 289		MAX 2,520		MIN 33		AC-FT 210,100			

PEAK DISCHARGE (BASE, 3,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	0200	13.63	4,100	01-29	2000	13.38	3,900
01-14	1500	15.76	5,880	02-19	2000	12.85	3,480

RUSSIAN RIVER BASIN

11-4618. LAKE MENDOCINO NEAR UKIAH, CALIF.

LOCATION.--Lat 39°11'53", long 123°10'50", in Yokayo Rancho Grant, in intake tower 30 ft upstream from Coyote Dam on East Fork Russian River and 3.6 miles northeast of Ukiah, Mendocino County.

DRAINAGE AREA.--105 sq mi.

RECORDS AVAILABLE.--October 1965 to September 1968. Records prior to October 1965 in files of Corps of Engineers.

GAGE.--Graphic water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

EXTREMES.--Maximum contents during year, 80,600 acre-ft May 26, 27 (elevation, 742.23 ft); minimum, 59,300 acre-ft Sept. 8, 9 (elevation, 729.52 ft).

1965-68: Maximum contents, 90,400 acre-ft Jan. 6, 1966 (elevation, 747.76 ft); minimum, 52,600 acre-ft Nov. 22, 1965 (elevation, 725.20 ft).

REMARKS.--Reservoir is formed by earthfill dam; storage began in November 1958. Capacity, 122,900 acre-ft between elevations 637.0 (invert of outlet tunnel) and 764.8 ft (spillway crest) above mean sea level. Storage affected by diversions from Eel River through Potter Valley powerhouse (see sta. no. 11-4710.). Water is released down East Fork Russian River for irrigation and recreation use. Records given herein represent total contents. Records of water temperatures and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FEET)

637	135	660	2,110	685	10,900	720	45,000
640	250	665	3,190	690	13,700	730	60,100
645	535	670	4,590	695	17,100	740	76,900
650	900	675	6,280	700	21,100	750	94,600
655	1,380	680	8,430	710	31,620	765	122,900

CONTENTS, IN ACRE-FEET, AT 2400 HOURS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74,900	69,600	66,600	72,000	72,000	71,800	73,100	80,200	79,900	70,900	63,600	60,300
2	74,700	69,500	66,500	72,100	73,100	71,800	73,500	80,200	79,700	70,700	63,300	60,100
3	74,400	69,400	67,300	72,000	71,900	71,800	73,900	-	79,400	70,400	63,100	60,000
4	74,000	69,000	67,800	71,900	70,400	71,800	74,500	-	79,200	70,200	62,800	59,800
5	73,600	68,900	68,300	71,900	67,500	71,900	75,000	80,200	78,900	70,000	62,500	59,700
6	73,200	68,700	68,600	71,800	63,300	71,900	75,600	80,200	78,600	69,800	62,400	59,500
7	72,900	68,800	69,200	71,700	61,400	72,000	76,300	80,300	78,400	69,600	62,200	59,400
8	72,500	68,100	69,500	71,600	62,200	72,000	76,800	80,200	78,200	69,300	61,900	59,300
9	72,200	67,900	69,700	71,900	62,900	72,000	77,400	80,200	77,900	69,000	61,700	59,300
10	71,800	67,900	69,900	71,400	63,600	72,000	77,900	-	77,700	68,800	61,500	59,400
11	71,700	67,800	70,200	67,600	64,300	72,000	78,300	-	77,500	68,600	61,300	59,400
12	71,700	67,700	70,300	67,100	65,000	72,700	78,900	80,000	77,200	64,400	61,100	59,600
13	71,500	67,800	70,500	67,600	65,700	73,200	78,900	80,100	76,900	68,100	60,900	59,700
14	71,400	67,900	70,700	73,200	66,400	73,200	79,200	80,100	76,600	67,900	60,700	59,800
15	71,400	67,900	70,900	74,500	67,100	73,100	79,400	80,200	76,300	67,700	60,500	59,900
16	71,300	67,800	71,100	71,600	67,800	76,100	79,600	80,200	75,900	67,500	60,400	60,100
17	71,200	67,700	71,400	71,000	68,700	77,100	79,800	-	75,500	67,300	60,200	60,300
18	71,000	67,600	71,600	62,100	69,500	75,700	80,000	-	75,000	67,200	60,100	60,200
19	70,900	67,500	71,000	60,200	73,700	72,500	-	80,300	74,500	67,000	60,100	60,200
20	70,800	67,400	70,300	61,000	75,900	71,400	-	80,300	74,100	66,800	60,100	60,100
21	70,800	67,400	70,000	61,700	75,700	71,500	80,200	80,400	73,700	66,600	60,300	60,100
22	70,600	67,200	70,100	62,400	74,600	71,600	80,200	80,400	73,300	66,400	60,300	60,100
23	70,600	67,200	70,400	63,000	75,100	71,700	80,100	80,400	72,800	66,100	60,400	60,100
24	70,600	67,000	70,700	63,700	76,600	71,600	80,100	80,500	72,500	65,800	60,400	60,200
25	70,400	67,000	71,000	64,300	77,800	71,700	80,100	80,500	72,300	65,600	60,500	60,100
26	70,100	66,900	71,100	65,000	77,100	71,700	-	80,600	72,000	65,300	60,500	60,000
27	69,900	66,800	71,100	65,600	74,600	71,700	-	80,600	71,800	65,000	60,600	59,900
28	69,800	66,600	71,200	66,600	72,400	71,600	80,200	80,500	71,600	64,700	60,600	59,800
29	69,700	66,600	71,300	71,300	71,700	71,900	80,200	80,400	71,300	64,400	60,600	59,700
30	69,700	66,700	71,600	73,800	-----	72,300	80,200	80,300	71,200	64,200	60,500	59,700
31	69,600	-----	71,800	72,500	-----	72,700	-----	80,200	-----	63,900	60,400	-----
(a)	735.91	734.14	737.18	737.65	737.16	737.72	742.05	742.02	736.83	732.38	730.20	729.79
(b)	-5,500	-2,900	+5,100	+700	-800	+1,000	+7,500	0	-9,000	-7,300	-3,500	-700
MAX	74,900	69,600	71,800	73,800	77,800	77,100	80,200	80,600	79,900	70,900	63,600	60,300
MIN	69,600	66,600	66,500	60,200	61,400	71,400	73,100	80,000	71,200	63,900	60,100	59,300

CAL YR 1967 b +7,800
WTR YR 1968 b -15,400

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

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 1968.

GAGE.--Digital water-stage recorder and concrete control. Datum of gage is 614.41 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to October 1951, staff gage at site half a mile upstream at different datum. October 1951 to June 1956, graphic water-stage recorder at site 1.0 mile upstream at different datum. Nov. 15, 1957, to Aug. 2, 1962, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 3,020 cfs Jan. 10 (gage height, 6.44 ft); minimum daily, 9.5 cfs Jan. 24.

1911-13, 1951-56, 1957-66 (prior to regulation by Lake Mendocino): Maximum discharge, 13,300 cfs Dec. 21, 1955 (gage height, 16.86 ft, site and datum then in use), from rating curve extended above 1,700 cfs on basis of maximum flow at station upstream which was defined to 8,600 cfs; no flow Aug. 13-15, 1913.

1957-68: Maximum discharge, 6,780 cfs Dec. 30, 1964 (gage height, 10.82 ft); minimum daily, 2.9 cfs Jan. 5, 1966.

REMARKS.--Records good. Flow affected by diversion from Eel River through Potter Valley powerhouse (see sta. no. 11-4710.) and since November 1958 by storage in Lake Mendocino (see sta. no. 11-4618.). Small diversions above station for irrigation. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	315	330	172	162	972	351	141	76	159	269	302	230
2	315	335	172	248	618	350	144	76	158	280	310	230
3	315	336	172	305	1,160	350	144	77	160	280	310	229
4	315	335	172	305	1,160	351	92	76	160	280	310	228
5	315	336	172	305	1,790	353	56	76	159	271	298	228
6	315	336	172	305	2,470	354	57	76	162	264	275	211
7	315	336	174	305	1,250	354	58	75	161	264	260	204
8	315	336	176	305	21	354	59	74	159	264	260	204
9	315	244	176	305	20	354	63	76	159	264	260	157
10	315	179	176	1,630	20	354	65	76	159	264	260	133
11	315	179	176	2,240	20	354	66	76	162	264	260	133
12	320	178	176	534	20	354	77	76	162	264	260	133
13	313	176	176	300	20	452	100	76	162	264	260	133
14	310	176	173	104	20	684	100	78	182	264	260	135
15	310	176	172	894	20	612	100	78	193	274	260	133
16	310	176	172	2,140	20	280	100	77	193	280	260	133
17	310	176	172	2,270	20	285	102	74	213	279	260	151
18	315	176	432	2,850	20	1,190	102	72	224	288	260	180
19	277	174	684	1,340	22	1,860	103	70	244	285	237	190
20	315	172	684	19	336	936	104	69	256	270	224	193
21	315	172	444	19	1,480	390	104	66	274	268	207	193
22	312	172	228	19	1,420	378	104	58	285	284	183	193
23	316	172	133	13	546	378	106	61	285	295	180	193
24	316	172	133	9.5	18	378	106	61	285	304	179	120
25	316	172	133	15	18	384	89	63	267	310	176	220
26	318	172	224	15	732	384	73	62	252	310	176	220
27	317	172	305	15	1,430	384	72	61	252	310	193	224
28	320	172	224	16	1,310	384	75	62	252	310	204	224
29	325	172	162	17	684	232	76	99	252	297	222	224
30	325	172	162	16	-----	141	76	123	252	290	234	202
31	328	-----	162	1,120	-----	141	-----	145	-----	290	230	-----
TOTAL	9,753	6,582	7,061	18,140.5	17,637	14,106	2,714	2,365	6,243	8,700	7,570	5,581
MEAN	315	219	228	585	608	455	90.5	76.3	208	281	244	186
MAX	328	336	684	2,850	2,470	1,860	144	145	285	310	310	230
MIN	277	172	133	9.5	18	141	56	58	158	264	176	120
AC-FT	19,340	13,060	14,010	35,980	34,980	27,980	5,380	4,690	12,380	17,260	15,010	11,070
CAL YR 1967	TOTAL	134,095.7	MEAN	367	MAX	3,980	MIN	4.7	AC-FT	266,000		
WTR YR 1968	TOTAL	106,452.5	MEAN	291	MAX	2,850	MIN	9.5	AC-FT	211,100		

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.

DRAINAGE AREA.--362 sq mi.

RECORDS AVAILABLE.--October 1939 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 497.61 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Sept. 9, 1943, wire-weight gage and Sept. 9, 1943, to Feb. 15, 1963, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--29 years, 707 cfs (511,800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 10,900 cfs Jan. 14 (gage height, 14.47 ft); minimum daily, 80 cfs May 18, 23, 24.

1939-68: Maximum discharge, 45,000 cfs Dec. 22, 1955 (gage height, 27.00 ft); minimum daily, 26 cfs Dec. 18, 1943, June 26, 1949.

Flood in December 1937 reached a stage of 30.0 ft from floodmarks.

REMARKS.--Records good. Small diversions for irrigation 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 (see sta. no. 11-4618.). Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	354	353	289	263	2,440	850	473	118	166	246	271	240
2	372	350	254	292	2,830	770	441	114	172	257	280	243
3	366	353	775	374	2,800	710	411	110	177	257	280	240
4	364	353	581	378	2,310	675	381	108	175	260	283	240
5	375	357	1,240	381	2,410	670	292	105	177	257	283	240
6	367	353	503	381	3,080	650	263	103	175	246	268	235
7	360	357	1,030	381	2,360	710	249	100	172	246	246	212
8	357	360	543	385	665	705	238	96	170	246	246	210
9	353	330	392	426	538	640	225	93	170	243	243	191
10	350	249	336	4,180	477	610	215	90	168	243	240	140
11	352	240	311	3,290	430	596	210	90	166	243	240	133
12	353	240	292	1,220	392	1,220	203	90	163	243	243	131
13	352	235	277	795	360	1,420	220	96	159	243	243	127
14	353	268	265	4,830	336	1,710	217	101	163	246	246	129
15	353	240	257	4,980	320	1,490	217	94	186	249	246	129
16	352	235	254	4,130	381	2,850	220	87	191	251	246	127
17	353	235	257	3,870	481	2,090	215	83	195	249	249	129
18	353	235	882	3,640	426	2,060	212	80	212	251	249	146
19	326	233	978	2,560	2,040	2,720	203	81	217	257	249	163
20	349	233	840	680	4,770	1,980	195	84	233	240	240	168
21	360	233	690	524	3,720	1,010	191	84	238	243	240	170
22	362	233	437	453	4,760	876	186	83	249	249	198	172
23	360	230	301	403	2,390	855	182	80	251	260	188	177
24	361	230	280	350	1,580	780	179	80	254	265	186	133
25	362	230	268	327	1,090	775	172	84	249	274	186	163
26	357	230	295	304	1,160	750	142	85	235	274	186	188
27	353	230	396	292	2,110	715	133	85	235	277	193	193
28	353	230	364	320	2,010	690	127	83	235	280	215	195
29	353	251	274	3,990	1,570	615	123	90	238	277	220	198
30	353	301	265	3,520	-----	465	121	133	240	268	238	195
31	353	-----	263	2,340	-----	441	-----	144	-----	268	238	-----
TOTAL	11,041	8,207	14,389	50,259	50,236	33,098	6,856	2,954	6,031	7,908	7,379	5,357
MEAN	356	274	464	1,621	1,732	1,068	229	95.3	201	255	238	179
MAX	375	360	1,240	4,980	4,770	2,850	473	144	254	280	283	243
MIN	326	230	254	263	320	441	121	80	159	240	186	127
AC-FT	21,900	16,280	28,540	99,690	99,640	65,650	13,600	5,860	11,960	15,690	14,640	10,630

CAL YR 1967 TOTAL 280,239 MEAN 768 MAX 12,200 MIN 97 AC-FT 555,800
WTR YR 1968 TOTAL 203,715 MEAN 557 MAX 4,980 MIN 80 AC-FT 404,100

Peak discharge (base, 9,600 cfs).--Jan. 14 (1900 hrs) 10,900 cfs (14.47 ft).

11-4630. RUSSIAN RIVER NEAR CLOVERDALE, CALIF.

LOCATION.--Lat 38°52'55", long 123°03'15", in SW $\frac{1}{4}$ sec.14, T.12 N., R.11 W., on left bank at Lambert Ranch, 400 ft downstream from Cummysky Creek, and 5 miles northwest of Cloverdale.

DRAINAGE AREA.--502 sq mi.

RECORDS AVAILABLE.--July 1951 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 373.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Sept. 23, 1963, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--17 years, 965 cfs (698,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 11,800 cfs Jan. 14 (gage height, 15.86 ft); minimum daily, 97 cfs May 29.

1951-68: Maximum discharge, 55,200 cfs Dec. 22, 1964 (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, 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 (see sta no. 11-4618.). Records of water temperatures, suspended-sediment loads and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	328	335	270	231	3,430	1,080	542	164	182	231	232	209
2	347	335	231	231	3,780	970	506	158	193	246	242	211
3	355	330	1,210	310	3,720	890	446	152	198	247	243	209
4	350	330	776	320	2,950	849	420	151	196	246	246	208
5	348	330	2,100	325	2,740	834	360	146	196	248	246	210
6	347	330	950	325	3,510	801	340	141	198	234	236	212
7	346	325	1,750	325	3,020	920	320	135	197	233	220	194
8	346	330	1,000	325	872	980	310	130	195	232	217	190
9	346	325	650	410	665	808	295	125	201	228	209	187
10	345	231	490	5,230	576	760	284	120	199	228	209	146
11	345	209	400	3,970	512	728	275	115	195	227	207	131
12	345	204	340	1,670	470	1,960	268	120	194	226	208	124
13	345	209	295	956	439	2,310	272	130	187	228	210	119
14	346	275	279	6,130	409	2,500	272	143	185	229	211	117
15	345	222	266	7,600	386	2,140	265	132	199	232	211	116
16	345	204	256	5,060	500	4,270	268	121	205	233	212	116
17	345	200	255	4,470	864	3,340	262	114	208	231	213	113
18	345	200	880	4,150	624	2,610	257	105	219	225	215	129
19	342	195	1,080	3,280	3,210	3,310	251	105	219	232	218	149
20	319	195	848	790	6,180	2,660	242	115	229	218	216	153
21	344	195	736	534	5,360	1,340	234	110	234	217	225	157
22	348	191	470	429	5,380	1,110	230	114	250	218	197	157
23	340	191	335	366	3,120	1,080	224	105	258	229	182	160
24	339	191	295	313	2,010	918	222	105	262	232	177	151
25	337	191	275	280	1,500	865	219	108	256	240	175	119
26	336	191	260	253	1,380	826	199	108	236	243	175	167
27	336	191	350	237	2,400	776	189	110	232	244	174	171
28	336	191	350	285	2,290	728	181	101	231	249	189	173
29	335	218	265	7,900	1,810	664	175	97	226	245	191	170
30	335	270	245	6,410	-----	518	168	141	229	232	205	174
31	335	-----	236	3,220	-----	476	-----	164	-----	234	208	-----
TOTAL	10,601	7,334	18,143	66,335	64,107	44,021	8,496	3,885	6,409	7,237	6,519	4,842
MEAN	342	244	585	2,140	2,211	1,420	283	125	214	233	210	161
MAX	355	335	2,100	7,900	6,180	4,270	542	164	262	249	246	212
MIN	319	191	231	231	386	476	168	97	182	217	174	113
AC-FT	21,030	14,550	35,990	131,600	127,200	87,310	16,850	7,710	12,710	14,350	12,930	9,600
CAL YR 1967	TOTAL 355,291		MEAN 973		MAX 16,800	MIN 116		AC-FT 704,700				
WTR YR 1968	TOTAL 247,929		MEAN 677		MAX 7,900	MIN 97		AC-FT 491,800				

Peak discharge (base, 13,000 cfs).--No peak above base.

RUSSIAN RIVER BASIN

11-4632. BIG SULPHUR CREEK NEAR CLOVERDALE, CALIF.

LOCATION.--Lat 38°49'21", long 122°59'07", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.11 N., R.10 W., 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 392.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Sept. 23, 1963, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--11 years, 185 cfs (133,900 acre-ft per year); median of yearly mean discharges, 168 cfs (122,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 9,200 cfs Jan. 29 (gage height, 12.10 ft); minimum daily, 4.4 cfs Sept. 27-29.

1957-68: Maximum discharge, 15,700 cfs Dec. 22, 1964 (gage height, 15.08 ft), from rating curve extended above 4,100 cfs on basis of slope-area measurement at gage height 16.8 ft; minimum daily, 1.8 cfs Sept. 24, Oct. 20, 1964.

Flood of Dec. 22, 1955, reached a stage of 16.8 ft from floodmarks, present datum (discharge, 20,000 cfs on basis of slope-area measurement of maximum flow).

REMARKS.--Records fair. No regulation or diversion above station. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

REVISIONS (water years).--1965 report: 1958-63, 1964(M).

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	7.4	53	43	696	220	200	48	25	9.8	5.6	5.8
2	22	6.0	33	42	828	200	170	47	24	9.8	5.6	5.9
3	41	6.7	680	42	642	185	145	46	24	10	5.6	5.6
4	23	6.0	782	41	496	170	132	46	24	9.8	5.6	6.1
5	26	6.0	531	40	424	155	120	45	23	9.2	5.0	6.1
6	19	6.0	142	40	376	140	117	44	24	8.0	5.0	6.8
7	15	6.0	546	40	340	148	112	43	23	8.0	4.7	6.7
8	13	8.8	189	40	312	142	108	43	22	8.0	4.7	6.5
9	12	12	120	41	284	128	100	42	20	8.0	4.7	6.6
10	12	12	89	842	260	120	95	41	19	7.4	4.7	6.6
11	10	11	73	1,090	240	116	91	42	20	7.4	4.7	6.1
12	9.5	11	58	304	225	482	88	45	19	7.4	5.0	5.7
13	8.1	13	52	186	210	480	84	48	18	7.4	5.6	6.0
14	6.7	88	48	1,010	195	504	81	49	17	7.4	6.2	6.4
15	7.4	35	47	1,190	183	376	77	46	16	8.0	6.2	6.5
16	6.7	20	46	700	242	1,150	73	44	16	7.4	6.8	5.9
17	6.0	15	45	404	544	635	71	40	16	7.4	6.2	5.0
18	6.0	13	141	296	380	440	68	37	16	6.8	6.2	4.7
19	6.0	13	104	244	1,020	356	66	36	15	6.2	7.4	4.7
20	6.0	12	74	204	1,170	300	64	36	15	6.2	14	5.0
21	6.0	11	62	177	1,370	264	62	35	14	6.2	24	5.0
22	9.5	11	56	150	800	240	61	34	12	6.2	13	5.0
23	10	10	52	136	610	220	59	34	12	5.6	9.2	5.0
24	9.5	9.5	52	126	460	200	57	34	11	6.2	7.4	4.7
25	8.1	9.5	50	118	400	180	56	35	10	6.2	7.4	4.7
26	8.1	8.8	48	112	340	170	55	34	11	5.0	7.4	4.7
27	8.1	8.1	46	107	280	150	54	31	11	5.0	7.4	4.4
28	8.1	8.1	45	157	260	133	52	29	9.8	4.7	7.4	4.4
29	7.4	77	44	5,350	240	118	50	27	9.8	5.0	6.8	4.4
30	7.4	79	43	2,490	-----	108	49	26	9.8	5.0	5.6	4.7
31	7.4	-----	43	1,090	-----	100	-----	25	-----	5.0	5.0	-----
TOTAL	354.5	539.9	4,394	16,852	13,827	8,330	2,617	1,212	506.4	219.7	220.1	165.7
MEAN	11.4	18.0	142	544	477	269	87.2	39.1	16.9	7.09	7.10	5.52
MAX	41	88	782	5,350	1,370	1,150	200	49	25	10	24	6.8
MIN	6.0	6.0	33	40	183	100	49	25	9.8	4.7	4.7	4.4
AC-FT	703	1,070	8,720	33,430	27,430	16,520	5,190	2,400	1,000	436	437	329

CAL YR 1967 TOTAL 70,404.2 MEAN 193 MAX 5,590 MIN 4.2 AC-FT 139,600
WTR YR 1968 TOTAL 49,238.3 MEAN 135 MAX 5,350 MIN 4.4 AC-FT 97,660

Peak discharge (base, 3,200 cfs).--Jan. 10 (2145 hrs) 4,650 cfs (9.29 ft); Jan. 29 (1830 hrs) 9,200 cfs (12.10 ft).

Note.--No gage-height record Mar. 24 to May 22.

RUSSIAN RIVER BASIN

407

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 188.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Dec. 20, 1960, crest-stage gage only at site 700 ft upstream at different datum. Dec. 20, 1960, to Oct. 13, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years (1961-68), 81.8 cfs (59,220 acre-ft per year).

EXTREMES.--Maximum discharge during year, 4,670 cfs Jan. 10 (gage height, 13.52 ft); no flow Aug. 7-9, 14.
1958-68: Maximum discharge, 8,920 cfs Dec. 22, 1964 (gage height, 17.56 ft).
1960-68: No flow for many days in 1964 and 1968.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.8	12	10	273	91	63	16	5.9	1.2	.94	.25
2	4.3	2.7	7.1	9.8	319	81	50	15	5.6	1.4	.98	.52
3	7.6	2.7	179	9.3	237	74	43	15	5.6	1.7	.34	.95
4	4.3	2.8	208	9.0	179	68	39	15	5.8	1.9	.97	.24
5	4.5	3.1	168	8.8	143	65	37	15	5.6	1.8	.47	.16
6	3.8	3.1	42	8.5	115	61	34	14	5.5	1.3	.12	1.5
7	3.4	3.3	345	8.3	99	63	33	13	4.9	1.2	0	.77
8	3.3	3.9	67	8.5	87	59	32	13	4.5	.74	0	.25
9	3.1	4.3	38	29	78	50	30	13	4.3	.67	0	.40
10	3.3	3.8	27	1,150	71	46	29	13	4.1	.59	.02	.21
11	3.1	3.8	21	159	65	43	28	12	4.2	.58	.26	.03
12	3.0	3.6	16	88	60	343	27	12	4.0	1.2	.08	.03
13	3.0	4.9	15	77	55	373	26	14	4.1	.33	.02	.02
14	2.7	16	14	527	51	370	25	15	3.7	.59	0	.47
15	2.4	7.3	13	608	47	226	25	12	2.4	.64	.02	.77
16	2.7	5.1	12	325	65	729	24	11	2.9	.48	.03	.27
17	2.7	4.3	17	181	252	335	22	11	2.9	.27	.01	.03
18	2.7	4.1	72	119	125	226	22	10	2.7	.28	.02	.02
19	2.7	4.3	35	90	810	168	21	10	2.5	.18	1.0	.05
20	2.7	3.8	26	73	685	133	21	10	2.5	.03	2.0	.77
21	2.8	3.8	21	62	866	112	20	9.7	2.2	.03	3.2	1.1
22	3.1	3.1	18	52	436	102	19	10	1.5	.21	3.0	.90
23	3.1	3.4	17	45	365	91	19	9.5	1.8	.29	2.3	.72
24	3.1	3.6	16	41	262	79	19	9.2	1.7	.63	1.9	.45
25	3.0	3.8	14	38	202	72	18	10	.97	.45	1.8	.60
26	3.0	3.6	13	36	160	65	17	9.0	1.1	.42	1.8	.13
27	2.8	3.8	12	33	132	59	16	8.1	1.3	1.9	1.0	.01
28	2.8	4.3	12	41	113	54	16	7.7	1.3	.32	1.4	.04
29	2.7	19	11	1,810	100	50	16	6.9	.89	.09	1.2	.08
30	2.5	18	10	1,080	-----	46	16	6.5	1.2	.15	.33	.12
31	2.7	-----	10	434	-----	43	-----	6.5	-----	.21	.23	-----
TOTAL	98.1	156.1	1,488.1	7,170.2	6,452	4,377	807	352.1	97.66	21.78	25.44	11.86
MEAN	3.16	5.20	48.0	231	222	141	26.9	11.4	3.26	.70	.82	.40
MAX	7.6	19	345	1,810	866	729	63	16	5.9	1.9	3.2	1.5
MIN	1.2	2.7	7.1	8.3	47	43	16	6.5	.89	.03	0	.01
AC-FT	195	310	2,950	14,220	12,800	8,680	1,600	698	194	43	50	24

CAL YR 1967 TOTAL 34,463.07

MEAN 94.4

MAX 3,750

MIN .31

AC-FT 68,360

WTR YR 1968 TOTAL 21,057.34

MEAN 57.5

MAX 1,810

MIN 0

AC-FT 41,770

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	0315	13.52	4,670	02-19	2100	12.09	3,560
01-29	2030	11.79	3,350	03-16	0615	10.20	2,350

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 1968; discontinued as a continuous-record station; converted to a crest-stage partial record station.

GAGE.--Digital water-stage recorder. Datum of gage is 343.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Oct. 25, 1957, to Sept. 30, 1962, crest-stage gage only, at site 75 ft downstream at same datum. Oct. 1, 1963, to Nov. 8, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--5 years, 23.5 cfs (17,010 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,020 cfs Jan. 10 (gage height, 5.27 ft); no flow for many days. 1955-68: Maximum discharge, 5,780 cfs Jan. 5, 1965 (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. 1963-68: No flow at times in each year.

REMARKS.--Records good. Small diversions above station for irrigation and stock ponds.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.22	1.9	3.1	103	26	17	3.6	.84	.48	.04	.01
2	.77	.22	.95	3.1	100	23	16	3.6	.78	.48	.04	.02
3	1.0	.20	98	2.9	80	20	13	4.2	.66	.38	.04	.02
4	.67	.22	80	2.9	59	19	12	4.2	.66	.48	.07	.03
5	.77	.26	55	2.9	47	18	11	3.9	.66	.72	.07	.06
6	.67	.28	17	2.9	39	15	10	3.9	.66	.72	.04	.06
7	.57	.26	80	2.9	33	15	9.5	3.1	.60	.78	.01	.07
8	.52	.24	26	2.9	29	15	9.1	2.7	.60	.90	.03	.07
9	.52	.39	16	9.1	27	12	8.4	2.5	.54	.78	0	.07
10	.52	.33	12	362	24	11	8.0	2.5	.54	.43	0	.05
11	.52	.36	9.1	70	22	11	7.6	2.5	.48	.48	0	.03
12	.52	.36	6.8	35	20	115	7.6	2.5	.48	.31	.20	.02
13	.47	.47	5.7	28	18	127	6.8	2.5	.43	.18	.20	.02
14	.42	3.0	5.7	168	17	93	6.5	3.1	.43	.13	.10	.04
15	.42	.83	5.3	229	15	69	6.1	2.7	.38	.13	.05	.04
16	.30	.57	5.3	94	18	253	6.1	2.3	.34	.43	.02	.01
17	.30	.47	5.7	53	66	124	5.3	2.0	.34	.48	0	0
18	.36	.57	28	36	45	76	4.9	1.7	.34	.20	0	0
19	.33	.67	16	29	289	54	4.9	1.7	.31	.14	.10	0
20	.42	.57	11	25	283	42	4.9	1.7	.31	.11	.14	0
21	.62	.57	8.7	22	268	35	4.6	1.4	.34	.08	.22	0
22	.52	.47	7.2	19	147	30	4.6	1.3	.36	.07	.18	0
23	.52	.57	6.1	16	106	27	4.2	1.3	.38	.05	.11	0
24	.52	.57	5.3	15	77	24	3.9	1.3	.40	.06	.10	0
25	.47	.67	4.9	14	59	22	3.9	1.2	.42	.11	.10	0
26	.57	.57	4.6	13	47	20	3.9	1.3	.43	.18	.13	0
27	.47	.57	3.9	12	38	18	3.4	1.2	.43	.11	.10	0
28	.39	.72	3.6	12	33	17	3.1	.90	.45	.05	.10	0
29	.30	2.3	3.4	562	29	16	3.1	.90	.46	.14	.05	0
30	.24	4.3	3.4	434	-----	14	3.4	.84	.47	.05	.01	0
31	.20	-----	3.1	185	-----	14	-----	.90	-----	.04	0	-----
TOTAL	15.36	21.80	539.65	2,465.7	2,138	1,375	212.8	69.44	14.52	9.68	2.25	0.62
MEAN	.50	.73	17.4	79.5	73.7	44.4	7.09	2.24	.48	.31	.073	.021
MAX	1.0	4.3	98	562	289	253	17	4.2	.84	.90	.22	.07
MIN	.20	.20	.95	2.9	15	11	3.1	.84	.31	.04	0	0
AC-FT	30	43	1,070	4,890	4,240	2,730	422	138	29	19	4.5	1.2
CAL YR 1967	TOTAL	10,699.83	MEAN	29.3	MAX	1,360	MIN	.20	AC-FT	21,220		
WTR YR 1968	TOTAL	6,864.82	MEAN	18.8	MAX	562	MIN	0	AC-FT	13,620		

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	0330	5.27	1,020	02-19	2045	5.21	968
01-29	1815	5.11	897				

RUSSIAN RIVER BASIN

409

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Datum of gage is 77.01 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

AVERAGE DISCHARGE.--29 years, 1,393 cfs (1,008,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 25,000 cfs Jan. 29 (gage height, 15.01 ft); minimum daily, 110 cfs May 29.
1939-68: Maximum discharge, 71,300 cfs Dec. 23, 1964 (gage height, 27.00 ft); maximum gage height, 30.0 ft Feb. 28, 1940; minimum daily discharge, 38 cfs July 2, 1950.
Flood in December 1937 reached a stage of 30.8 ft from floodmarks.

REMARKS.--Records good. Several small diversions for irrigation above station. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (see sta. no. 11-4618.). Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	316	355	415	390	5,530	1,940	1,100	252	165	188	222	222
2	335	355	385	385	5,530	1,660	1,310	245	170	191	218	229
3	375	355	1,530	395	5,560	1,490	950	242	170	202	232	229
4	365	360	1,960	450	4,460	1,380	850	239	163	212	240	229
5	370	365	3,430	462	3,890	1,310	750	230	166	212	246	232
6	365	365	1,650	468	4,180	1,250	644	221	168	212	246	236
7	360	365	2,930	468	4,170	1,260	592	218	168	207	240	240
8	355	375	1,800	468	2,580	1,430	557	213	168	204	218	218
9	350	370	1,120	510	1,780	1,220	522	208	168	207	215	185
10	350	350	850	8,330	1,540	1,100	494	205	163	204	215	170
11	350	300	676	5,040	1,350	1,030	468	200	168	193	215	160
12	350	280	578	3,230	1,200	2,440	444	198	156	186	215	159
13	350	277	508	1,960	1,080	5,360	426	198	152	188	218	151
14	345	360	462	5,290	970	4,600	415	190	145	196	222	147
15	345	380	432	12,600	870	3,960	405	185	142	202	222	150
16	345	316	410	7,250	970	7,150	395	180	145	202	212	151
17	350	288	405	5,770	2,470	6,230	385	175	154	202	229	151
18	345	288	730	4,940	2,110	4,350	370	170	156	196	330	151
19	345	277	1,510	4,390	3,540	4,530	365	165	163	193	286	155
20	335	270	1,240	2,430	11,100	4,220	355	160	168	199	243	163
21	340	266	1,130	1,670	9,000	2,830	345	155	176	193	258	165
22	355	259	910	1,370	7,600	2,360	330	150	186	193	282	168
23	360	259	684	1,130	5,180	2,220	325	144	196	193	243	170
24	360	259	536	950	4,030	1,940	312	138	204	202	215	173
25	360	259	487	830	2,920	1,760	308	132	212	210	204	170
26	360	263	450	720	2,380	1,660	296	126	207	215	202	161
27	360	263	462	652	2,820	1,530	284	120	196	226	199	175
28	360	266	508	675	3,000	1,420	270	114	191	229	193	180
29	350	288	480	14,900	2,760	1,320	263	110	186	236	196	183
30	355	400	410	15,400	-----	1,120	256	140	186	232	199	183
31	355	-----	395	7,280	-----	930	-----	155	-----	226	212	-----
TOTAL	10,916	9,433	29,473	110,803	104,570	77,000	14,786	5,578	5,158	6,351	7,087	5,456
MEAN	352	314	951	3,574	3,606	2,484	493	180	172	205	229	182
MAX	375	400	3,430	15,400	11,100	7,150	1,310	252	212	236	330	240
MIN	316	259	385	385	870	930	256	110	142	186	193	147
AC-FT	21,650	18,710	58,460	219,800	207,400	152,700	29,330	11,060	10,230	12,600	14,060	10,820
CAL YR 1967	TOTAL 559,378		MEAN 1,533		MAX 28,400		MIN 222		AC-FT 1,110,000			
WTR YR 1968	TOTAL 386,611		MEAN 1,056		MAX 15,400		MIN 110		AC-FT 766,800			

Peak discharge (base, 19,000 cfs).--Jan. 29 (2400 hrs) 25,000 cfs (15.01 ft).

RUSSIAN RIVER BASIN

11-4640.5. DRY CREEK TRIBUTARY NEAR HOPLAND, CALIF.

LOCATION.--Lat 38°53'10", long 123°09'15", in sec.13, T.12 N., R.12 W., on right bank at culvert on State Highway No. 128, 6.5 miles southwest of Hopland.

DRAINAGE AREA.--1.27 sq mi.

RECORDS AVAILABLE.--Water years 1959-67 (annual maximum), October 1967 to September 1968.

GAGE.--Graphic water-stage recorder and crest-stage gage. Altitude of gage is 800 ft (from topographic map). Oct. 15, 1958, to Sept. 6, 1967, crest-stage gage only at datum 5.39 ft higher. Tipping-bucket rain gage at site 300 ft southeast.

EXTREMES.--Maximum discharge during year, 110 cfs Jan. 14 (gage height, 2.24 ft); no flow for several months. 1959-68: Maximum discharge, 430 cfs Dec. 22, 1964 (gage height, 7.41 ft), by computation of maximum flow through culvert.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	0	10	1.6	1.8	.07	.03			
2		0	0	0	18	1.5	.97	.07	.03			
3		0	3.0	0	11	1.1	.64	.07	.03			
4		0	1.0	0	8.2	1.1	.47	.06	.02			
5		0	2.0	0	6.5	.97	.31	.06	.02			
6		0	.97	0	5.6	1.1	.31	.06	0			
7		0	4.6	0	5.0	1.5	.27	.02	0			
8		0	1.5	0	4.4	1.3	.27	.03	0			
9		0	1.1	4.0	4.1	.97	.25	.03	0			
10		0	.80	7.8	3.9	.97	.23	.03	0			
11		0	.47	0	3.4	.64	.21	.03	0			
12		0	.31	0	3.2	11	.19	.03	0			
13		0	.14	0	3.0	7.1	.17	.05	0			
14		0	.47	32	2.5	8.0	.15	.03	0			
15		0	.47	24	2.5	5.3	.13	.02	0			
16		0	.31	6.5	4.1	16	.11	.02	0			
17		0	.64	4.7	7.5	7.8	.11	.03	0			
18		0	2.3	.31	5.3	5.3	.11	.03	0			
19		0	1.6	.02	27	3.6	.15	.03	0			
20		0	1.1	.02	20	3.0	.10	.03	0			
21		0	.31	.09	21	2.7	.10	.03	0			
22		0	.09	.97	13	2.5	.08	.04	0			
23		0	.09	1.1	10	2.3	.08	.03	0			
24		0	.07	1.3	6.2	2.0	.07	.03	0			
25		0	.07	1.3	4.1	1.6	.05	.03	0			
26		0	.04	1.6	3.0	1.5	.04	.03	0			
27		0	.04	1.5	1.8	1.3	.03	.04	0			
28		0	.04	2.1	1.8	1.1	.02	.04	0			
29		0	.02	43	1.8	.97	.05	.04	0			
30		.48	0	20	-----	.80	.07	.03	0			
31		-----	0	12	-----	.31	-----	.03	-----			
TOTAL	0	0.48	23.55	164.31	217.9	96.93	7.54	1.17	0.13	0	0	0
MEAN	0	.016	.76	5.30	7.51	3.13	.25	.038	.004	0	0	0
MAX	0	.48	4.6	43	27	16	1.8	.07	.03	0	0	0
MIN	0	0	0	0	1.8	.31	.02	.02	0	0	0	0
AC-FT	0	1.0	47	326	432	192	15	2.3	.3	0	0	0
(in)	2.2	3.7	5.6	11.7	6.2	5.0	.7	.5	0	0	1.1	.1
CAL YR 1967 TOTAL -				MEAN -	MAX -	MIN -	AC-FT -					
WTR YR 1968 TOTAL 512.01				MEAN 1.40	MAX 43	MIN 0	AC-FT 1,020					

Peak discharge (base, 75 cfs).--Jan. 14 (1300 hrs) 110 cfs (2.24 ft); Jan. 29 (1800 hrs) 98 cfs (2.04 ft).

a Precipitation, in inches.

RUSSIAN RIVER BASIN

411

11-4645. DRY CREEK NEAR CLOVERDALE, CALIF.

LOCATION.--Lat 38°44'59", long 123°05'28", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.5, T.10 N., R.11 W., 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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 304.04 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Apr. 9, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--27 years, 154 cfs (111,500 acre-ft per year); median of yearly mean discharges, 140 cfs (101,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 4,480 cfs Jan. 29 (gage height, 8.71 ft); minimum daily 0.26 cfs Sept. 19.

1941-68: Maximum discharge, 18,100 cfs Dec. 22, 1964 (gage height, 18.09 ft); minimum, 0.10 cfs several days in 1944, 1949, 1951-53, 1962, 1964.

Flood in December 1937 reached a stage of about 18 ft from floodmarks.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.1	47	22	462	168	130	27	11	3.0	.88	.31
2	11	3.1	28	20	772	153	98	27	11	2.5	1.1	.30
3	15	3.1	434	19	538	135	84	26	11	3.0	1.2	.40
4	4.3	3.1	305	18	380	125	78	26	10	3.5	1.2	.46
5	6.0	3.4	346	17	294	121	74	25	10	3.5	1.1	.43
6	4.3	3.4	158	16	239	113	69	24	11	3.0	.93	.36
7	3.4	3.4	450	16	205	123	66	23	10	3.5	.78	.41
8	3.7	4.6	198	18	178	119	63	22	9.5	3.0	.70	.46
9	3.7	5.2	128	121	160	102	60	22	9.0	3.0	.71	.49
10	3.7	4.3	86	1,510	145	93	57	22	8.5	3.0	.47	.34
11	3.4	4.3	61	286	128	88	56	21	8.0	2.2	.46	.30
12	3.4	4.0	52	173	119	559	54	21	7.5	2.3	.46	.28
13	3.4	7.8	41	175	111	498	51	24	7.0	2.4	.46	.29
14	3.4	80	33	1,780	102	468	50	24	6.5	2.3	.51	.29
15	3.4	27	30	1,630	93	334	47	21	6.0	2.1	.42	.29
16	3.1	14	28	732	199	956	46	20	6.0	2.1	.37	.28
17	3.1	9.6	34	350	435	566	44	19	6.0	2.0	.35	.27
18	2.8	8.2	245	249	270	385	43	18	6.0	2.0	.36	.27
19	3.1	7.8	164	202	1,320	298	41	18	5.5	1.8	.93	.26
20	3.1	7.3	112	168	1,600	246	40	18	3.5	1.8	2.5	.27
21	3.4	7.3	78	143	1,290	208	39	18	2.0	1.9	9.8	.27
22	3.4	6.9	58	121	804	184	38	17	3.5	1.8	7.1	.28
23	3.4	6.9	51	107	604	173	36	16	2.5	1.9	4.7	.28
24	3.4	6.9	49	98	440	148	36	17	3.0	1.8	3.5	.28
25	3.4	6.9	43	91	346	135	34	20	3.0	2.1	2.9	.29
26	3.4	6.9	39	85	298	121	34	17	3.5	1.8	2.7	.30
27	3.4	6.9	33	84	239	111	32	16	3.0	1.7	1.3	.35
28	3.1	7.3	29	107	211	103	31	15	3.0	1.9	.77	.35
29	3.1	49	27	2,530	184	97	29	13	2.5	1.8	.41	.36
30	3.1	66	24	1,730	-----	90	28	12	3.0	1.3	.35	.36
31	3.1	-----	22	700	-----	85	-----	12	-----	.83	.32	-----
TOTAL	125.1	377.7	3,433	13,318	12,166	7,105	1,588	621	192.0	70.83	49.74	9.88
MEAN	4.04	12.6	111	430	420	229	52.9	20.0	6.40	2.28	1.60	.33
MAX	15	80	450	2,530	1,600	956	130	27	11	3.5	9.8	.49
MIN	1.6	3.1	22	16	93	85	28	12	2.0	.83	.32	.26
AC-FT	248	749	6,810	26,420	24,130	14,090	3,150	1,230	381	140	99	20

CAL YR 1967 TOTAL 55,460.6 MEAN 152 MAX 5,350 MIN 1.4 AC-FT 110,000
WTR YR 1968 TOTAL 39,056.25 MEAN 107 MAX 2,530 MIN .26 AC-FT 77,470

PEAK DISCHARGE (BASE, 3,300 CFS)
DATE TIME G.HT. DISCHARGE DATE TIME G.HT. DISCHARGE
01-10 0215 8.16 3,880 01-29 1900 8.71 4,480
01-14 1645 8.31 4,040

RUSSIAN RIVER BASIN

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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 159.40 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 1, 1964, at datum 1.00 ft higher.

AVERAGE DISCHARGE.--9 years, 285 cfs (206,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 8,530 cfs Jan. 29 (gage height, 10.58 ft); minimum daily, 0.12 cfs Sept. 30.

1959-68: Maximum discharge, 32,400 cfs Jan. 31, 1963 (gage height, 17.50 ft, present datum); no flow at times.

REMARKS.--Records good except those for period of no gage-height record, which are fair. No regulation; small diversion above station for orchard irrigation in summer. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

REVISIONS (water years).--1965 report: 1962(M), 1963(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	4.6	66	37	1,180	424	252	48	18	3.3	.56	.50
2	3.2	4.6	37	36	1,560	368	240	47	18	3.2	.49	.35
3	4.0	4.6	827	33	1,340	330	202	47	16	3.4	.44	.24
4	4.1	4.6	535	32	1,060	309	186	47	16	3.5	.41	.24
5	4.3	4.6	820	31	870	294	176	47	15	3.5	.36	.35
6	4.2	4.6	230	31	720	270	164	46	15	3.3	.34	.35
7	4.1	4.6	941	31	605	252	152	46	15	3.0	.30	.24
8	4.1	4.6	300	31	516	252	144	44	15	2.7	.27	.35
9	4.0	4.6	188	44	456	226	138	40	14	2.5	.25	.35
10	4.3	4.9	140	2,450	388	206	130	39	13	2.2	.24	.30
11	4.1	4.9	100	630	336	192	118	38	12	2.0	.22	.27
12	4.0	4.9	80	351	312	639	116	37	12	1.8	.20	.25
13	4.1	6.2	66	309	300	1,340	116	37	12	1.7	.17	.23
14	4.1	58	52	2,250	279	1,090	108	39	10	1.6	.16	.22
15	4.1	39	50	2,740	270	924	94	39	9.0	1.7	.15	.22
16	4.3	25	49	1,400	546	1,740	91	38	8.7	1.7	.14	.21
17	4.3	20	49	870	1,290	1,590	85	38	8.4	1.6	.13	.19
18	4.3	16	273	625	967	1,090	82	37	8.0	1.5	.14	.18
19	4.3	13	222	456	2,220	864	79	35	8.4	1.4	.20	.17
20	4.1	12	160	357	3,100	685	79	30	8.0	1.3	1.3	.17
21	4.1	12	120	282	2,500	555	73	32	7.4	1.2	1.7	.16
22	4.1	9.3	97	238	1,740	460	72	32	6.0	1.1	1.5	.16
23	4.3	8.4	82	216	1,310	424	70	32	4.8	1.0	.77	.15
24	4.3	8.0	73	194	1,040	351	70	30	3.9	.90	.95	.15
25	4.3	7.7	67	176	852	315	68	32	4.4	.86	.77	.15
26	4.3	7.7	60	168	720	279	68	33	5.0	.80	.64	.14
27	4.3	7.4	55	166	615	258	60	29	4.6	.75	.64	.13
28	4.3	7.4	50	183	525	232	55	27	4.1	.70	.64	.13
29	4.3	16	45	4,240	468	218	50	25	3.5	.66	.50	.13
30	4.3	78	42	3,750	-----	210	49	24	3.3	.65	.64	.12
31	4.6	-----	38	1,770	-----	200	-----	21	-----	.61	.64	-----
TOTAL	128.0	407.2	5,914	24,127	28,085	16,587	3,387	1,136	298.5	56.13	15.86	6.80
MEAN	4.13	13.6	191	778	968	535	113	36.6	9.95	1.81	.51	.23
MAX	4.6	78	941	4,240	3,100	1,740	252	48	18	3.5	1.7	.50
MIN	2.8	4.6	37	31	270	192	49	21	3.3	.61	.13	.12
AC-FT	254	808	11,730	47,860	55,710	32,900	6,720	2,250	592	111	31	13
CAL YR 1967	TOTAL 120,351.0			MEAN 330		MAX 11,900		MIN 1.9		AC-FT 238,700		
WTR YR 1968	TOTAL 80,148.49			MEAN 219		MAX 4,240		MIN .12		AC-FT 159,000		

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	0400	9.04	6,100	01-29	2200	10.58	8,530
01-14	1900	8.47	5,360	02-19	2200	8.52	5,420

Note.--No gage-height record June 22 to Aug. 19.

RUSSIAN RIVER BASIN

413

11-4658. SANTA ROSA CREEK NEAR SANTA ROSA, CALIF.

LOCATION.--Lat 38°27'25", long 122°37'50", in Los Guillicos Grant, 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 318.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 30, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--9 years, 16.2 cfs (11,730 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,040 cfs Jan. 10 (gage height, 8.93 ft); minimum daily, 0.04 cfs Sept. 18.

1959-68: 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.

REMARKS.--Records good. No regulation; pumping for irrigation above station during periods of low flow.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.42	3.8	1.5	44	20	14	3.6	1.6	.31	.27	.23
2	.72	.36	2.2	1.5	44	17	12	3.6	1.5	.22	.30	.20
3	1.3	.42	17	1.5	37	16	10	3.4	1.5	.15	.32	.22
4	.66	.42	24	1.4	30	14	10	3.4	1.5	.18	.32	.24
5	.84	.48	20	1.4	26	14	9.2	3.4	1.6	.15	.30	.25
6	.72	.54	4.0	1.4	21	13	8.4	3.3	1.6	.10	.21	.24
7	.54	.54	28	1.4	18	12	8.0	3.1	1.5	.14	.17	.25
8	.54	.60	6.4	1.4	16	12	7.5	3.1	1.3	.20	.22	.24
9	.48	.72	3.8	1.8	14	10	7.2	3.4	1.2	.21	.22	.22
10	.48	.72	2.8	212	13	9.6	7.0	3.4	1.2	.19	.25	.24
11	.48	.66	2.4	23	12	8.8	6.7	3.4	1.2	.15	.27	.22
12	.42	.66	2.5	12	11	65	6.7	3.4	1.2	.14	.26	.20
13	.36	1.0	3.1	9.6	10	59	6.2	4.0	1.1	.12	.26	.22
14	.36	2.7	3.4	65	9.2	44	5.9	4.0	1.1	.27	.24	.24
15	.28	1.6	4.0	137	8.4	33	5.7	3.4	1.1	.31	.27	.40
16	.28	1.1	4.0	42	9.6	157	5.7	3.1	1.0	.27	.25	.22
17	.28	1.1	4.2	24	24	75	5.4	3.0	.90	.28	.25	.05
18	.28	1.3	10	16	16	51	5.2	2.8	.84	.25	.24	.04
19	.30	1.4	5.2	13	174	38	5.2	2.7	.84	.24	.24	.06
20	.30	1.4	3.6	10	163	31	5.0	2.8	.78	.26	.31	.30
21	.36	1.4	3.0	8.8	172	27	4.8	2.7	.75	.32	.36	.40
22	.42	1.6	2.7	7.2	90	24	4.6	2.5	.68	.29	.55	.35
23	.42	1.6	2.4	6.4	69	21	4.4	2.5	.62	.32	.41	.30
24	.48	1.7	2.2	5.9	51	20	4.4	2.4	.57	.32	.25	.20
25	.48	1.7	1.9	5.4	39	18	4.2	2.8	.58	.33	.21	.23
26	.48	1.7	1.8	5.2	33	16	4.2	2.4	.60	.33	.18	.16
27	.42	1.8	1.7	4.8	28	15	4.0	2.1	.51	.29	.19	.06
28	.48	2.5	1.7	5.0	25	14	4.0	1.9	.37	.26	.16	.08
29	.42	6.4	1.6	294	22	13	3.8	1.8	.23	.28	.18	.09
30	.42	7.0	1.5	243	-----	12	3.6	1.7	.10	.24	.18	.05
31	.42	-----	1.5	77	-----	11	-----	1.6	-----	.26	.22	-----
TOTAL	14.78	45.54	176.4	1,239.6	1,229.2	890.4	193.0	90.7	29.57	7.38	8.06	6.20
MEAN	.48	1.52	5.69	40.0	42.4	28.7	6.43	2.93	.99	.24	.26	.21
MAX	1.3	7.0	28	294	174	157	14	4.0	1.6	.33	.55	.40
MIN	.28	.36	1.5	1.4	8.4	8.8	3.6	1.6	.10	.10	.16	.04
AC-FT	29	90	350	2,460	2,440	1,770	383	180	59	15	16	12
CAL YR 1967	TOTAL 8,365.18		MEAN 22.9		MAX 1,000		MIN .07		AC-FT 16,590			
WTR YR 1968	TOTAL 3,930.83		MEAN 10.7		MAX 294		MIN .04		AC-FT 7,800			

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	0400	8.93	1,040	02-19	2145	7.22	516
01-29	2130	8.28	834	03-16	0630	7.23	519

RUSSIAN RIVER BASIN

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 1968 in reports of Geological Survey. October 1949 to September 1964 available in files of district office.

GAGE.--Graphic 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, 59.0 ft Feb. 20.
1949-68: Maximum elevation, 73.3 ft Dec. 23, 1964.

REMARKS.--The laguna is a natural water channel and overflow basin connecting Santa Rosa Creek, Mark West Creek, and other smaller creeks with Russian River. During floods directions of flow may be either to or from Russian River and the laguna acts as a natural regulator of floods on lower Russian River.

ELEVATION, IN FEET, AT 2400 HOURS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-	51.0	54.1	51.8	51.6	50.5			-	
2			-	51.0	53.9	51.7	51.6	50.5			-	
3			-	51.0	53.5	51.7	51.6	50.5			-	
4			-	51.0	53.0	51.6	51.5	50.5			-	
5			-	51.0	52.5	51.6	51.5	50.4			-	
6			-	50.9	52.1	51.6	51.4	50.4			-	
7			-	50.9	51.9	51.6	51.4	50.4			-	
8			-	50.9	51.7	51.5	51.3	50.4			-	
9			-	51.3	51.7	51.5	51.3	50.3			-	
10			-	54.6	51.7	51.5	51.3	50.3			-	
11			-	53.4	51.7	51.4	51.3	50.3			-	
12			-	52.5	51.7	54.2	51.2	50.3			-	
13			-	52.0	51.6	54.9	51.2	50.3			-	
14			-	54.8	51.6	54.1	51.2	50.2			-	
15			51.3	55.4	51.5	53.3	51.1	50.2			-	
16			51.3	54.0	51.6	56.2	51.1	50.2			-	
17			51.3	53.0	53.2	55.0	51.1	50.2			-	
18			51.4	52.2	53.0	53.6	51.0	50.2			-	
19			51.3	51.8	57.6	52.8	51.0	50.1			-	
20			51.3	51.8	57.7	52.3	50.9	50.1			-	
21			51.3	51.7	57.0	52.0	50.9	50.1			50.3	
22			51.2	51.7	55.4	52.0	50.9	50.0			-	
23			51.2	51.6	54.4	51.8	50.8	-			-	
24			-	51.6	53.5	51.7	50.8	-			-	
25			-	51.5	52.8	51.7	50.8	-			-	
26			-	51.5	52.4	51.7	50.7	-			-	
27			-	51.4	52.1	51.6	50.7	-			-	
28			-	51.5	51.9	51.6	50.6	-			-	
29			-	56.1	51.8	51.6	50.6	-			-	
30			51.1	58.3	-----	51.5	50.6	-			-	
31		-----	51.1	55.8	-----	51.5	-----	-	-----		-	-----

RUSSIAN RIVER BASIN

415

11-4670. RUSSIAN RIVER NEAR GUERNEVILLE, CALIF.

LOCATION.--Lat 38°30'00", long 122°56'05", in NE $\frac{1}{4}$ 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 1968. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "at Guerneville."

GAGE.--Digital water-stage recorder. Datum of gage is 17.25 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 1, 1954, wire-weight gage at bridge 5.3 miles downstream at datum 8.58 ft lower. Oct. 1, 1954, to Sept. 19, 1966, graphic water-stage recorder at same site and datum. Supplementary graphic water-stage recorder 2.1 miles downstream used during periods of low flow 1948-54.

AVERAGE DISCHARGE.--29 years, 2,221 cfs (1,608,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 40,600 cfs Jan. 30 (gage height, 32.22 ft); minimum daily, 77 cfs May 29.

1939-68: Maximum discharge, 93,400 cfs Dec. 23, 1964 (gage height, 49.6 ft from floodmarks); maximum gage height, 49.7 ft Dec. 23, 1955, from floodmarks; minimum daily discharge, 52 cfs May 30, 1964.

REMARKS.--Records good. Many diversions above station for irrigation. Flow also affected by diversion into basin (see REMARKS for East Fork Russian River stations), since November 1958 by storage in Lake Mendocino (see sta. no. 11-4618.), and by diversion at Wohler pumping plant beginning in May 1959. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

COOPERATION.--One discharge measurement furnished by Sonoma County Flood Control and Water Conservation District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	285	325	457	429	9,510	3,540	1,620	380	116	154	188	176
2	310	319	439	415	8,900	2,900	1,930	367	126	154	188	186
3	361	315	1,140	404	9,040	2,570	1,460	352	138	161	189	184
4	380	319	2,710	450	7,410	2,390	1,320	335	155	172	202	187
5	377	328	4,200	472	6,320	2,230	1,230	325	155	179	205	194
6	378	331	2,390	480	6,060	2,140	1,120	310	158	179	202	196
7	364	328	3,560	480	5,910	2,100	1,050	290	163	186	194	199
8	361	341	2,860	484	4,570	2,270	988	280	160	182	183	199
9	358	351	1,530	520	3,130	2,080	933	270	160	180	176	189
10	350	348	1,140	11,600	2,660	1,900	888	260	155	178	173	199
11	351	292	948	8,000	2,360	1,790	842	250	153	172	178	216
12	353	247	804	5,150	2,140	3,300	805	242	148	160	180	183
13	346	235	700	3,090	1,950	9,550	773	235	142	148	178	170
14	345	327	628	5,690	1,810	7,440	744	230	138	152	178	138
15	331	390	572	20,700	1,610	6,610	719	224	131	162	180	133
16	329	352	528	11,600	1,930	11,000	687	218	131	162	178	147
17	321	299	492	8,400	5,880	11,200	669	210	133	157	181	142
18	319	268	760	6,880	5,340	7,000	645	202	133	155	173	110
19	322	264	1,480	6,060	6,340	6,010	626	196	138	154	202	97
20	322	254	1,360	4,250	23,200	5,430	599	183	145	154	217	105
21	306	241	1,180	2,670	18,200	4,080	572	185	152	159	235	136
22	331	229	1,060	2,180	14,000	3,200	544	178	155	157	267	132
23	339	226	856	1,880	9,930	2,970	517	175	166	155	246	133
24	334	223	700	1,680	7,640	2,580	500	163	176	156	213	131
25	336	217	620	1,560	5,870	2,300	484	173	180	165	198	127
26	331	214	564	1,450	4,800	2,130	460	170	181	174	190	110
27	333	214	532	1,360	4,630	1,940	446	163	175	180	179	117
28	335	217	568	1,320	4,760	1,780	408	96	162	184	169	132
29	330	241	568	15,100	4,320	1,660	401	77	151	192	163	144
30	339	359	480	35,500	-----	1,530	390	91	155	196	162	153
31	350	-----	450	15,900	-----	1,370	-----	110	-----	188	160	-----
TOTAL	10,527	8,614	36,276	176,154	190,220	118,990	24,370	6,940	4,531	5,207	5,927	4,665
MEAN	340	287	1,170	5,682	6,559	3,838	812	224	151	168	191	156
MAX	380	390	4,200	35,500	23,200	11,200	1,930	380	181	196	267	216
MIN	285	214	439	404	1,610	1,370	390	77	116	148	160	97
AC-FT	20,880	17,090	71,950	349,400	377,300	236,000	48,340	13,770	8,990	10,330	11,760	9,250
CAL YR 1967	TOTAL 906,409			MEAN 2,483		MAX 54,600	MIN 185	AC-FT 1,798,000				
WTR YR 1968	TOTAL 592,421			MEAN 1,619		MAX 35,500	MIN 77	AC-FT 1,175,000				

PEAK DISCHARGE (BASE, 23,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-15	0845	24.81	23,600	02-20	0800	26.17	26,300
01-30	0645	32.22	40,600				

GUALALA RIVER BASIN

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 1966.

GAGE.--Digital water-stage recorder. Datum of gage is 43.63 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Aug. 30, 1962, graphic water-stage recorder at site 1,700 ft upstream at different datum. Aug. 30, 1962, to June 15, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--18 years, 415 cfs (300,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 15,200 cfs Jan. 10 (gage height, 13.44 ft); minimum daily, 4.3 cfs Aug. 14, 17, 18.

1950-68: 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. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	9.6	165	50	987	388	263	79	28	13	5.4	8.0
2	20	9.6	87	48	1,280	350	256	77	28	13	5.4	8.5
3	30	9.6	1,630	44	1,140	304	192	77	28	13	5.4	8.5
4	16	9.6	978	43	843	273	178	77	26	13	5.3	8.0
5	17	9.6	1,610	41	644	263	170	77	26	12	5.2	8.5
6	18	9.6	460	40	508	242	158	73	25	12	5.1	9.1
7	17	10	1,800	38	406	288	145	63	25	11	5.0	9.1
8	16	13	578	43	350	312	135	56	24	11	4.8	9.1
9	15	19	292	128	335	242	128	54	23	11	4.6	8.5
10	14	17	186	5,560	312	217	123	56	20	11	4.5	8.0
11	13	15	150	1,020	284	204	118	52	20	10	4.5	7.5
12	13	13	120	606	266	2,260	115	54	22	10	4.5	7.5
13	12	14	97	502	245	2,200	113	57	22	9.9	4.4	7.5
14	14	204	83	2,980	224	1,170	113	59	22	9.7	4.3	8.0
15	11	77	73	3,190	204	810	110	50	20	9.4	4.4	8.5
16	10	40	69	1,550	400	2,720	108	48	20	9.1	4.4	7.5
17	10	29	69	924	2,090	1,660	105	48	19	8.9	4.3	6.4
18	10	25	496	592	1,050	1,040	103	44	20	8.8	4.3	6.4
19	10	24	335	418	3,200	716	101	44	19	8.5	5.0	5.9
20	10	20	204	325	4,210	550	99	46	20	8.0	18	5.9
21	11	18	160	292	3,480	460	97	44	20	7.7	42	5.4
22	14	17	130	263	2,150	418	95	43	20	7.4	30	5.4
23	14	15	110	231	1,490	418	93	40	18	7.0	22	5.4
24	13	14	97	207	1,100	345	91	40	17	6.6	15	5.9
25	12	14	89	195	843	320	91	52	17	6.4	11	5.4
26	12	13	81	186	692	296	87	46	16	6.3	11	5.4
27	12	15	73	186	578	270	87	40	16	6.3	10	5.4
28	11	18	67	186	502	242	85	36	16	6.3	10	5.4
29	11	165	63	5,000	436	217	83	33	15	6.0	9.6	5.4
30	10	214	57	3,660	-----	201	83	32	13	5.6	9.6	5.4
31	10	-----	54	1,570	-----	186	-----	30	-----	5.4	8.5	-----
TOTAL	411.9	1,080.6	10,463	30,118	30,249	19,582	3,725	1,627	625	283.3	287.5	210.9
MEAN	13.3	36.0	338	972	1,043	632	124	52.5	20.8	9.14	9.27	7.03
MAX	30	214	1,800	5,560	4,210	2,720	263	79	28	13	42	9.1
MIN	5.9	9.6	54	38	204	186	83	30	13	5.4	4.3	5.4
AC-FT	817	2,140	20,750	59,740	60,000	38,840	7,390	3,230	1,240	562	570	418

CAL YR 1967 TOTAL 144,402.5 MEAN 396 MAX 17,100 MIN 2.1 AC-FT 286,400
WTR YR 1968 TOTAL 98,663.2 MEAN 270 MAX 5,560 MIN 4.3 AC-FT 195,700

Peak discharge (base, 10,000 cfs).--Jan. 10 (0500 hrs) 15,200 cfs (13.44 ft); Feb. 19 (2315 hrs) 10,300 cfs (11.24 ft).

GARCIA RIVER BASIN

417

11-4676. GARCIA RIVER NEAR POINT ARENA, CALIF.

LOCATION.--Lat 38°55'35", long 123°37'45", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.12 N., R.16 W., 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 55.31 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. July 17, 1951, to Jan. 31, 1956, crest-stage only, at site 15 ft upstream at different datum.

AVERAGE DISCHARGE.--6 years, 316 cfs (228,800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 8,020 cfs Jan. 14; minimum daily, 13 cfs Oct. 1. 1951-56, 1962-68: Maximum discharge, 28,700 cfs Jan. 4, 1966 (gage height, 16.41 ft), from rating curve extended above 9,600 cfs on basis of slope-area measurement at gage height 15.11 ft. A discharge of 10.1 cfs was measured on Sept. 25, 1951.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	16	240	52	659	335	240	67	38	23	18	17
2	47	15	167	49	691	308	218	67	38	23	17	17
3	55	16	1,020	46	685	283	191	66	38	22	17	17
4	21	15	581	43	600	261	179	66	37	22	17	16
5	24	16	776	42	519	258	170	64	37	22	17	17
6	26	16	344	40	453	243	158	64	37	22	17	16
7	25	16	1,060	38	403	313	151	61	37	21	17	16
8	24	24	469	42	371	304	144	61	35	21	17	16
9	21	38	295	207	344	261	139	60	34	21	17	16
10	20	28	212	3,070	322	243	134	58	33	21	17	16
11	18	24	170	803	299	225	127	58	31	21	17	16
12	18	22	141	535	279	548	120	60	31	20	17	15
13	17	22	117	502	265	995	115	61	30	20	17	16
14	16	362	102	3,920	250	789	108	63	29	20	17	17
15	16	164	90	3,430	240	639	104	58	29	20	17	17
16	16	88	82	1,460	313	1,400	102	55	29	20	17	16
17	16	65	85	843	724	1,140	98	45	29	20	16	15
18	15	56	349	607	548	859	94	51	28	19	16	15
19	15	48	283	475	1,540	672	92	48	27	19	17	15
20	15	43	212	403	2,300	548	90	52	27	19	26	15
21	18	39	170	358	1,900	464	87	49	26	19	82	15
22	24	35	141	322	1,410	431	85	51	26	19	39	15
23	21	33	122	286	1,050	431	82	46	26	19	25	14
24	18	31	106	268	811	362	80	45	26	18	22	14
25	18	30	96	250	652	340	80	54	25	18	20	14
26	17	28	87	240	542	308	78	48	24	18	20	14
27	17	28	78	236	464	265	75	45	24	18	19	14
28	17	42	72	265	407	236	73	43	24	18	19	14
29	17	188	66	2,080	367	218	72	42	23	18	18	14
30	16	299	61	1,870	-----	206	69	40	23	18	18	14
31	17	-----	57	939	-----	191	-----	39	-----	18	17	-----
TOTAL	638	1,847	7,851	23,721	19,408	14,076	3,555	1,687	901	617	647	463
MEAN	20.6	61.6	253	765	669	454	119	54.4	30.0	19.9	20.9	15.4
MAX	55	362	1,060	3,920	2,300	1,400	240	67	38	23	82	17
MIN	13	15	57	38	240	191	69	39	23	18	16	14
AC-FT	1,270	3,660	15,570	47,050	38,500	27,920	7,050	3,350	1,790	1,220	1,280	918

CAL YR 1967 TOTAL 124,685 MEAN 342 MAX 10,000 MIN 13 AC-FT 247,300
WTR YR 1968 TOTAL 75,411 MEAN 206 MAX 3,920 MIN 13 AC-FT 149,600

Peak discharge (base, 5,000 cfs).--Jan. 10 (0300 hrs) 7,030 cfs (10.10 ft); Jan. 14 (1900 hrs) 8,020 cfs (10.53 ft).

NAVARRO RIVER BASIN

11-4678. RANCHERIA CREEK NEAR BOONVILLE, CALIF.

LOCATION.--Lat 38°59'35", long 123°26'00", in SE $\frac{1}{4}$ 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 1968 (discontinued).

GAGE.--Digital water-stage recorder. Datum of gage is 450.81 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Sept. 30, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--9 years, 139 cfs (100,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3,960 cfs Jan. 14 (gage height, 11.13 ft); minimum daily, 1.5 cfs, Aug. 15.

1959-68: Maximum discharge, 20,000 cfs Dec. 22, 1964 (gage height, 20.52 ft), from rating curve extended above 4,200 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.80 cfs Sept. 16-19, 1964.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	4.4	42	33	435	160	118	26	12	4.5	2.1	2.9
2	25	4.4	29	31	588	150	100	25	12	4.4	2.0	3.0
3	8.6	4.4	500	29	486	138	86	25	11	4.2	2.0	3.0
4	5.3	4.4	370	28	387	130	79	25	11	4.4	1.9	2.9
5	7.7	4.7	441	28	324	128	74	24	11	4.0	1.8	2.9
6	7.4	4.4	203	28	265	122	70	24	10	4.0	1.9	3.0
7	6.2	4.0	637	27	225	153	68	22	11	3.9	1.9	3.0
8	5.3	5.3	203	29	198	149	64	22	10	3.9	1.9	2.8
9	5.0	5.3	118	145	175	122	61	22	8.6	3.5	1.8	2.8
10	4.5	5.0	90	1,250	163	110	59	21	9.5	3.3	1.7	2.8
11	4.5	4.7	74	363	146	102	56	21	9.2	3.3	1.7	2.8
12	4.5	4.5	64	233	134	486	54	21	9.2	3.3	1.7	2.7
13	4.4	6.8	55	249	124	479	50	24	9.2	3.2	1.6	2.6
14	4.4	64	48	1,940	114	456	48	26	9.2	3.2	1.6	2.7
15	4.4	18	45	1,410	106	357	46	21	8.6	3.0	1.5	2.6
16	4.2	9.5	42	712	183	788	44	20	8.3	2.9	1.6	2.5
17	4.2	7.1	48	465	373	549	41	18	8.6	2.3	1.6	2.5
18	4.2	5.9	226	354	269	399	38	17	8.3	2.6	1.7	2.6
19	4.2	5.3	128	283	877	309	36	17	7.7	2.7	2.2	2.5
20	4.2	5.0	94	245	995	255	35	19	7.4	2.7	7.0	2.4
21	4.4	4.5	77	218	812	215	34	19	7.1	2.6	21	2.4
22	5.6	4.4	68	195	560	193	33	16	6.5	2.6	8.6	2.4
23	5.3	4.2	61	173	438	175	32	16	6.5	2.5	5.3	2.4
24	5.0	4.2	56	158	354	150	30	15	6.5	2.5	4.2	2.3
25	4.7	4.0	49	150	294	140	29	17	6.2	2.4	3.7	2.3
26	4.5	4.0	46	142	250	126	29	16	5.9	2.4	3.7	2.3
27	4.5	4.2	43	138	218	118	28	15	5.0	2.3	3.5	2.3
28	4.5	4.4	40	217	195	108	27	14	5.3	2.1	3.5	2.2
29	4.5	20	38	1,790	175	100	26	13	4.5	2.2	3.3	2.2
30	4.4	55	36	1,200	-----	94	26	12	5.0	2.3	3.2	2.2
31	4.4	-----	34	602	-----	86	-----	12	-----	2.2	2.9	-----
TOTAL	172.8	286.0	4,005	12,865	9,863	7,047	1,521	605	250.3	95.4	104.1	78.0
MEAN	5.57	9.53	129	415	340	227	50.7	19.5	8.34	3.08	3.36	2.60
MAX	25	64	637	1,940	995	788	118	26	12	4.5	21	3.0
MIN	2.8	4.0	29	27	106	86	26	12	4.5	2.1	1.5	2.2
AC-FT	343	567	7,940	25,520	19,560	13,980	3,020	1,200	496	189	206	155
CAL YR 1967	TOTAL 54,107.7		MEAN 148		MAX 3,860		MIN 2.8		AC-FT 107,300			
WTR YR 1968	TOTAL 36,892.6		MEAN 101		MAX 1,940		MIN 1.5		AC-FT 73,180			

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	0300	9.44	2,350	01-29	1900	10.37	3,170
01-14	1545	11.13	3,960				

11-4678.5. SODA CREEK TRIBUTARY NEAR BOONVILLE, CALIF.

LOCATION.--Lat 39°01'32", long 123°17'25", in SE $\frac{1}{4}$ sec.33, T.14 N., R.13 W., on right bank at culvert, 70 ft 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 1968; discontinued as a continuous-record station; converted to a crest-stage partial record station.

GAGE.--Graphic water-stage recorder with rain-gage attachment and crest-stage gage. Datum of gage is 1,551.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Aug. 23, 1961, to Sept. 2, 1964, crest-stage gage only at same site and datum.

EXTREMES.--Maximum discharge during year, 50 cfs Jan. 29 (gage height, 6.13 ft); no flow for several months. 1961-68: Maximum discharge, 394 cfs Dec. 22, 1964 (gage height, 21.03 ft from floodmarks), by computation of maximum flow through culvert and over road embankment. 1964-68: 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	.02	.11	8.3	5.9	1.2	.06	.08			
2	0	0	.02	.11	8.0	6.1	.75	.06	.08			
3	.06	0	2.1	.11	7.6	5.9	.66	.04	.08			
4	.01	0	1.4	.11	6.3	5.6	.58	.04	.06			
5	.08	.01	1.7	.11	6.1	5.4	.58	.04	.06			
6	.02	0	1.2	.08	5.4	5.0	.50	.04	.06			
7	.02	0	3.2	.08	4.8	5.4	.43	.02	.04			
8	.02	.04	2.4	.08	4.1	5.0	.43	.04	.04			
9	.01	.01	1.7	.29	4.1	4.6	.36	.04	.04			
10	.02	.01	1.2	5.2	3.5	4.4	.36	.04	.04			
11	0	.01	.60	1.9	3.5	4.3	.36	.04	.04			
12	.01	.01	.45	1.3	3.5	8.3	.29	.04	.04			
13	0	.08	.17	1.3	3.4	8.5	.24	.11	.04			
14	.01	.15	.60	1.4	3.4	9.0	.24	.08	.02			
15	0	0	.52	1.5	3.2	8.1	.19	.08	.02			
16	0	0	.50	9.0	3.2	15	.15	.08	.01			
17	0	0	.75	7.1	4.1	14	.15	.08	0			
18	0	0	1.7	6.3	3.9	11	.15	.11	0			
19	0	0	1.1	5.6	21	9.4	.19	.11	.01			
20	0	0	.62	5.0	22	8.1	.15	.11	0			
21	.04	0	.48	4.8	20	7.1	.15	.15	0			
22	.02	0	.40	4.6	16	6.5	.11	.11	0			
23	.02	0	.36	4.1	14	5.9	.11	.08	0			
24	.02	0	.29	3.9	11	5.2	.11	.08	0			
25	.01	0	.24	3.7	9.2	4.0	.08	.08	0			
26	.02	0	.19	3.7	8.1	2.0	.08	.08	0			
27	.01	0	.11	3.5	7.1	1.7	.06	.08	0			
28	.02	0	.11	4.8	6.5	1.3	.04	.11	0			
29	.01	0	.11	18	5.9	1.2	.06	.11	0			
30	.01	.48	.11	16	-----	.97	.06	.11	0			
31	0	-----	.11	9.4	-----	.86	-----	.08	-----			-----
TOTAL	0.44	0.80	24.46	149.28	227.2	185.73	8.82	2.33	0.76	0	0	0
MEAN	.014	.027	.79	4.82	7.83	5.99	.29	.075	.025	0	0	0
MAX	.08	.48	3.2	18	22	15	1.2	.15	.08	0	0	0
MIN	0	0	.02	.08	3.2	.86	.04	.02	0	0	0	0
AC-FT	.9	1.6	.49	296	451	368	17	4.6	1.5	0	0	0
(a)	2.5	4.1	6.4	10.1	5.3	5.2	.7	1.1	0	0	1.5	.4

CAL YR 1967 TOTAL 739.50 MEAN 2.03 MAX 51 MIN 0 AC-FT 1,470
WTR YR 1968 TOTAL 599.82 MEAN 1.64 MAX 22 MIN 0 AC-FT 1,190

Peak discharge (base, 80 cfs).--No peak above base.

a Precipitation, in inches.

Note.--No gage-height record Nov. 23 to Dec. 22.

NAVARRO RIVER BASIN

11-4680. NAVARRO RIVER NEAR NAVARRO, CALIF.

LOCATION.--Lat 39°10'15", long 123°39'55", in SE $\frac{1}{4}$ sec.7, T.15 N., R.16 W., 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 6.65 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 16, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--18 years, 507 cfs (367,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 11,300 cfs Jan. 14 (gage height, 19.90 ft); minimum daily, 7.2 cfs Aug. 12-16.

1950-68: Maximum discharge, 64,500 cfs Dec. 22, 1955 (gage height, 40.60 ft), from rating curve extended above 19,000 cfs on basis of slope-area measurement of maximum flow; minimum, 4.7 cfs Aug. 26, 27, 1959. Flood in December 1937, reached a stage of 38.2 ft from floodmarks.

REMARKS.--Records fair. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	19	227	66	1,450	484	338	79	38	17	9.2	14
2	18	18	128	63	1,880	437	383	75	42	16	9.2	13
3	52	18	816	60	1,500	395	314	73	39	16	8.6	13
4	37	18	604	57	1,200	362	281	72	39	15	8.6	13
5	34	19	1,480	54	1,000	355	263	70	38	12	8.0	13
6	33	19	548	52	840	347	245	69	39	13	9.2	13
7	28	19	1,170	51	700	347	227	67	38	14	8.6	13
8	25	20	600	51	570	404	212	66	38	15	8.0	12
9	23	23	347	69	500	335	200	64	35	14	8.0	12
10	21	24	245	3,400	420	296	190	66	33	13	7.6	12
11	20	23	183	1,400	350	278	180	64	32	13	7.6	12
12	19	21	148	730	310	952	170	64	32	13	7.2	12
13	16	22	123	630	280	1,730	160	70	32	13	7.2	12
14	19	99	107	7,000	250	1,500	153	81	30	12	7.2	13
15	18	130	93	4,500	240	1,240	145	72	29	12	7.2	13
16	18	66	87	2,450	390	2,930	138	66	29	13	7.2	12
17	18	45	84	1,570	950	2,720	133	63	28	12	7.6	12
18	18	36	344	1,060	1,100	1,890	128	58	27	12	7.6	12
19	17	32	464	788	2,150	1,400	123	58	26	12	8.0	11
20	18	30	305	616	4,100	1,040	119	63	25	11	12	12
21	21	28	224	504	2,200	832	115	63	23	11	28	12
22	24	26	175	428	1,450	696	109	63	22	11	57	12
23	24	25	145	371	1,100	684	105	58	21	11	36	12
24	23	24	125	326	880	548	103	54	21	11	28	10
25	22	23	113	293	700	504	99	60	21	10	23	11
26	20	23	101	278	640	444	95	57	19	12	21	10
27	20	24	91	278	550	401	93	54	19	11	20	9.8
28	21	28	84	281	540	371	87	49	18	9.8	18	9.2
29	20	63	78	3,930	530	359	85	46	17	9.8	16	9.2
30	19	175	73	5,510	-----	335	82	43	17	9.2	16	9.8
31	19	-----	69	2,220	-----	311	-----	40	-----	9.2	15	-----
TOTAL	696	1,140	9,381	39,086	28,770	24,927	5,075	1,947	867	383.0	441.8	354.0
MEAN	22.5	38.0	303	1,261	992	804	169	62.8	28.9	12.4	14.3	11.8
MAX	52	175	1,480	7,000	4,100	2,930	383	81	42	17	57	14
MIN	11	18	69	51	240	278	82	40	17	9.2	7.2	9.2
AC-FT	1,380	2,260	18,610	77,530	57,060	49,440	10,070	3,860	1,720	760	876	702

CAL YR 1967 TOTAL 178,667.9 MEAN 490 MAX 12,000 MIN 7.3 AC-FT 354,400
WTR YR 1968 TOTAL 113,067.8 MEAN 309 MAX 7,000 MIN 7.2 AC-FT 224,300

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-14	2230	19.90	11,300	02-20	-	18.83	10,100
01-29	2345	18.63	9,890				

ALBION RIVER BASIN

421

11-4680.1. ALBION RIVER NEAR COMPTCHE, CALIF.

LOCATION.--Lat 39°15'40", long 123°37'00", in SW $\frac{1}{4}$ sec.11, T.16 N., R.16 W., 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 106.59 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 1, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years, 18.0 cfs (13,030 acre-ft per year).

EXTREMES.--Maximum discharge during year, 615 cfs Jan. 14 (gage height, 6.70 ft, from highwater mark); minimum daily, 0.02 cfs Aug. 7-12.

1961-68: Maximum discharge, 2,390 cfs Jan. 4, 1966 (gage height, 9.98 ft), from rating curve extended above 480 cfs on basis of slope-area measurement at gage height 9.50 ft; no flow at times.

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

REVISIONS (water years).--1965 report: 1962-64.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.08	3.3	3.9	63	18	15	1.5	.36	.08	.03	.06
2	.35	.08	2.2	3.7	84	16	12	1.5	.36	.08	.03	.06
3	.22	.08	19	3.6	69	13	9.9	1.4	.38	.08	.03	.06
4	.08	.08	17	3.6	55	12	8.8	1.4	.37	.08	.03	.06
5	.27	.09	29	3.6	45	13	8.1	1.3	.37	.08	.03	.06
6	.12	.09	11	3.6	34	12	7.2	1.3	.39	.07	.03	.06
7	.08	.09	32	3.6	28	15	6.6	1.2	.35	.07	.02	.07
8	.06	.11	12	4.3	22	12	6.2	1.2	.31	.07	.02	.08
9	.06	.13	6.4	12	18	10	5.6	1.2	.27	.07	.02	.09
10	.05	.12	4.8	140	16	8.9	5.1	1.2	.25	.06	.02	.07
11	.06	.12	4.0	48	14	8.1	4.7	1.1	.23	.06	.02	.07
12	.05	.12	3.5	21	13	87	4.4	1.2	.21	.06	.02	.06
13	.05	.23	3.2	19	12	98	3.9	1.7	.20	.05	.03	.08
14	.05	2.1	3.0	190	11	77	3.6	1.5	.17	.06	.03	.18
15	.05	.57	2.6	210	12	56	3.4	1.2	.17	.05	.03	.23
16	.05	.33	2.4	170	12	157	3.1	1.0	.15	.05	.03	.22
17	.05	.24	3.8	93	12	140	2.9	.88	.14	.05	.03	.22
18	.05	.21	26	55	12	93	2.8	.77	.13	.05	.03	.16
19	.05	.20	18	37	62	62	2.7	.86	.12	.04	.04	.13
20	.05	.17	13	27	86	44	2.5	1.2	.12	.04	.12	.07
21	.13	.16	10	21	120	33	2.4	1.2	.11	.04	.76	.03
22	.20	.15	7.8	16	84	31	2.3	1.1	.10	.04	.44	.03
23	.11	.15	6.1	13	61	27	2.2	.81	.09	.04	.09	.03
24	.10	.14	5.6	11	47	20	2.2	.79	.09	.04	.08	.03
25	.09	.13	5.1	10	37	23	2.0	1.2	.09	.03	.09	.03
26	.08	.13	4.7	10	31	18	1.9	.92	.09	.04	.13	.03
27	.08	.15	4.4	13	27	15	1.9	.73	.09	.04	.20	.03
28	.09	.42	4.3	64	24	14	1.7	.64	.09	.04	.14	.03
29	.09	1.4	4.2	188	21	12	1.6	.56	.07	.03	.12	.03
30	.08	5.0	4.1	187	-----	11	1.6	.47	.08	.03	.09	.03
31	.08	-----	4.0	93	-----	10	-----	.43	-----	.03	.07	-----
TOTAL	3.00	13.07	276.5	1,677.9	1,132	1,166.0	138.3	33.46	5.95	1.65	2.85	2.39
MEAN	.097	.44	8.92	54.1	39.0	37.6	4.61	1.08	.20	.053	.092	.080
MAX	.35	5.0	32	210	120	157	15	1.7	.39	.08	.76	.23
MIN	.05	.08	2.2	3.6	11	8.1	1.6	.43	.07	.03	.02	.03
AC-FT	6.0	26	548	3,330	2,250	2,310	274	66	12	3.3	5.7	4.7

CAL YR 1967 TOTAL 6,997.22 MEAN 19.2 MAX 620 MIN .01 AC-FT 13,880

WTR YR 1968 TOTAL 4,453.07 MEAN 12.2 MAX 210 MIN .02 AC-FT 8,830

Peak discharge (base, 350 cfs).--Jan. 10 (time unknown) 400 cfs; Jan. 14 (time unknown) 615 cfs (6.70 ft).

Note.--No gage-height record Dec. 24 to Jan. 16.

BIG RIVER BASIN

11-4680.7. SOUTH FORK BIG RIVER NEAR COMPTCHE, CALIF.

LOCATION.--Lat 39°13'45", long 123°27'55", in sec.19, T.16 N., R.14 W., 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 500 ft (from topographic map). Prior to Oct. 7, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--8 years, 47.0 cfs (34,030 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,170 cfs Jan. 29 (gage height, 7.64 ft); minimum daily, 0.80 cfs July 31.

1960-68: Maximum discharge, 8,200 cfs Dec. 22, 1964 (gage height, 16.30 ft), from rating curve extended above 1,700 cfs on basis of slope-area measurement of maximum flow; minimum, 0.60 cfs for many days in September 1960.

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

REVISIONS (water year).--1962 report: 1961(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.5	15	12	155	54	34	7.4	3.5	1.8	.91	1.1
2	5.7	2.7	10	12	212	48	29	7.2	3.5	1.8	1.1	1.1
3	3.9	2.7	55	11	170	43	27	6.8	3.6	1.8	1.0	1.1
4	2.4	2.5	53	11	134	40	24	6.4	3.4	1.8	1.1	1.0
5	4.1	2.6	88	11	105	40	23	6.4	3.5	1.8	.98	1.0
6	2.6	2.7	34	11	83	37	21	5.9	3.6	1.7	1.0	1.0
7	2.1	2.8	79	11	68	38	20	5.9	3.4	1.7	.95	1.0
8	2.0	3.1	37	12	59	36	19	5.4	3.3	1.6	.94	1.0
9	1.9	3.2	26	33	52	33	18	5.3	3.1	1.6	.94	1.1
10	1.8	3.0	20	363	46	31	17	5.3	3.0	1.5	.89	1.0
11	1.8	3.0	17	98	41	29	16	5.2	3.0	1.5	.98	1.0
12	1.8	3.1	15	61	38	97	15	5.3	2.9	1.5	.94	.94
13	1.9	3.7	13	55	36	103	15	7.3	2.8	1.6	.98	.98
14	1.8	11	13	480	34	115	14	6.2	2.8	1.5	1.1	1.3
15	1.8	5.3	12	564	32	99	14	5.4	2.7	1.5	1.1	1.1
16	1.8	4.2	11	241	34	396	13	5.1	2.7	1.5	1.0	.99
17	1.8	3.7	13	141	35	294	12	4.9	2.6	1.5	.96	.97
18	1.9	3.6	70	91	32	198	12	4.7	2.5	1.4	1.0	.88
19	1.9	3.6	42	66	163	142	12	5.1	2.5	1.4	1.3	.88
20	2.0	3.3	31	53	252	108	11	5.7	2.4	1.3	2.1	.88
21	2.9	3.3	25	45	309	84	11	5.3	2.4	1.4	2.5	.88
22	3.3	3.3	21	40	200	71	11	4.9	2.2	1.3	2.1	.94
23	2.8	3.1	19	37	140	69	10	4.5	2.2	1.3	1.6	.88
24	2.5	3.1	17	34	108	54	9.7	4.4	2.2	1.2	1.3	.88
25	2.4	3.1	16	31	90	57	9.5	5.0	2.1	1.2	1.4	.88
26	2.4	3.1	15	31	76	49	9.1	4.5	2.0	1.2	1.6	.88
27	2.4	3.6	14	30	65	44	8.6	4.3	1.9	1.2	1.4	.88
28	2.8	4.1	14	56	62	40	8.3	4.2	1.9	1.0	1.2	.82
29	2.7	17	13	508	60	36	7.8	4.1	1.8	1.1	1.2	.88
30	2.6	23	13	458	-----	34	7.7	3.9	1.8	1.1	1.1	.88
31	2.5	-----	12	216	-----	31	-----	3.5	-----	.80	1.0	-----
TOTAL	75.8	139.0	833	3,823	2,891	2,550	458.7	165.5	81.3	44.60	37.67	29.12
MEAN	2.45	4.63	26.9	123	99.7	82.3	15.3	5.34	2.71	1.44	1.22	.97
MAX	5.7	23	88	564	309	396	34	7.4	3.6	1.8	2.5	1.3
MIN	1.5	2.5	10	11	32	29	7.7	3.5	1.8	.80	.89	.82
AC-FT	150	276	1,650	7,580	5,730	5,060	910	328	161	88	75	58

CAL YR 1967 TOTAL 18,993.3 MEAN 52.0 MAX 1,550 MIN 1.1 AC-FT 37,670
WTR YR 1968 TOTAL 11,128.69 MEAN 30.4 MAX 564 MIN .80 AC-FT 22,070

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	0100	7.17	978	01-29	1830	7.64	1,170
01-14	1600	7.50	1,110	03-16	0430	6.74	809

11-4685. NOYO RIVER NEAR FORT BRAGG, CALIF.

LOCATION (revised).--Lat 39°25'42", long 123°44'12", in NE $\frac{1}{4}$ sec.15, T.18 N., R.17 W., 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 11.73 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 17, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--17 years, 213 cfs (154,200 acre-ft per year); median of yearly mean discharges, 186 cfs (135,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3,480 cfs Feb. 20 (gage height, 12.76 ft); minimum daily, 0.80 cfs Sept. 12.

1951-68: Maximum discharge, 24,000 cfs Dec. 22, 1964 (gage height, 26.30 ft), from rating curve extended above 7,400 cfs on basis of slope-conveyance study; minimum daily, 0.80 cfs Sept. 12, 1968.

REMARKS.--Records fair. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

REVISIONS (water year).--1965 report: 1964.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	15	106	46	513	270	128	37	17	5.8	3.0	7.3
2	11	15	118	49	530	235	120	37	15	5.8	3.1	6.3
3	13	14	480	41	647	205	107	36	18	5.8	3.2	5.6
4	6.4	14	285	39	550	185	99	34	19	5.8	3.5	5.2
5	16	15	485	37	433	170	95	33	18	5.8	3.8	4.9
6	13	16	263	35	333	155	89	32	21	5.2	4.1	4.6
7	12	15	448	32	253	145	85	30	20	4.6	4.3	4.5
8	11	17	293	38	206	135	82	30	19	4.6	4.3	4.4
9	10	24	176	99	179	128	78	30	15	4.0	4.3	2.2
10	9.5	21	130	1,190	161	120	74	30	16	4.0	4.3	2.2
11	9.0	20	105	553	145	112	71	28	16	4.0	4.2	1.0
12	8.8	20	89	318	132	305	69	28	16	3.9	4.2	.80
13	8.6	21	79	250	121	440	66	31	15	3.7	4.2	2.2
14	8.5	80	73	1,020	114	388	62	32	16	3.6	4.2	6.4
15	8.4	40	66	2,280	105	343	59	26	17	3.5	4.2	3.4
16	8.3	34	62	1,140	100	702	57	23	18	3.4	4.3	3.6
17	8.2	29	66	684	108	853	55	19	13	3.4	4.2	3.3
18	8.2	26	156	473	102	662	54	19	11	3.3	4.3	2.6
19	8.1	23	183	343	868	495	52	19	13	3.2	4.7	2.7
20	8.0	21	144	255	2,470	383	50	30	11	3.2	6.5	2.4
21	10	19	127	202	1,560	300	50	28	10	3.2	25	2.5
22	30	18	106	172	1,260	250	48	30	9.2	3.1	16	2.9
23	24	17	92	147	985	220	46	25	9.2	3.0	13	2.0
24	21	16	83	130	800	189	46	24	9.2	3.0	12	2.3
25	19	15	75	120	641	192	44	34	9.2	3.0	13	2.3
26	17	15	70	112	515	181	43	32	8.1	3.0	20	1.8
27	16	16	66	108	428	163	41	26	8.1	3.0	17	2.1
28	22	25	62	109	360	152	37	25	7.0	3.0	14	2.3
29	20	100	58	538	310	141	40	20	6.4	2.9	12	2.8
30	18	130	55	1,200	-----	136	38	20	5.8	2.9	10	2.2
31	16	-----	51	739	-----	126	-----	17	-----	2.9	8.6	-----
TOTAL	403.0	851	4,652	12,499	14,929	8,481	1,985	865	406.2	119.6	243.5	98.80
MEAN	13.0	28.4	150	403	515	274	66.2	27.9	13.5	3.86	7.85	3.29
MAX	30	130	485	2,280	2,470	853	128	37	21	5.8	25	7.3
MIN	4.0	14	51	32	100	112	37	17	5.8	2.9	3.0	.80
AC-FT	799	1,690	9,230	24,790	29,610	16,820	3,940	1,720	806	237	483	196

CAL YR 1967 TOTAL 66,788.8

MEAN 183

MAX 3,240

MIN 4.0

AC-FT 132,500

WTR YR 1968 TOTAL 45,533.10

MEAN 124

MAX 2,470

MIN .80

AC-FT 90,310

Peak discharge (base, 2,400 cfs).--Jan. 14 (2400 hrs) 2,770 cfs (11.33 ft); Feb. 20 (0215 hrs) 3,480 cfs (12.76 ft).

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 mile downstream from Little Valley Creek, and 4.5 miles east of Fort Bragg.

DRAINAGE AREA.--12.5 sq mi.

RECORDS AVAILABLE.--October 1963 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 88.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 1, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--5 years, 18.4 cfs (13,320 acre-ft per year).

EXTREMES.--Maximum discharge during year, 397 cfs Jan. 14 (gage height, 4.74 ft); minimum daily, 0.03 cfs for several days.

1963-68: Maximum discharge, 2,000 cfs Dec. 21, 1964 (gage height, 8.55 ft); no flow at times.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.46	13	2.9	48	15	9.4	1.6	.64	.20	.05	.09
2	2.0	.58	18	2.7	56	14	8.4	1.4	.72	.16	.05	.09
3	1.7	.55	135	2.4	46	12	7.0	1.2	.81	.20	.03	.09
4	1.1	.50	72	2.3	38	9.8	6.1	1.7	.90	.20	.03	.09
5	3.2	.56	128	2.3	30	9.8	5.6	1.4	.90	.20	.03	.07
6	1.3	.52	46	2.3	23	9.1	4.9	1.3	1.0	.16	.05	.09
7	.72	.64	81	2.3	18	9.1	4.4	1.3	.81	.16	.05	.12
8	.50	.73	42	3.2	15	9.8	4.6	1.2	.64	.16	.05	.16
9	.40	.95	21	27	14	7.7	4.0	1.2	.56	.12	.05	.16
10	.35	.84	14	232	12	6.4	3.8	1.3	.56	.16	.05	.16
11	.35	.80	11	71	10	5.6	3.6	1.3	.56	.16	.03	.12
12	.30	.82	8.0	34	9.1	19	3.4	1.3	.56	.12	.03	.09
13	.30	.98	6.1	33	8.0	72	3.2	1.7	.50	.12	.03	.12
14	.30	10	5.1	169	7.3	40	2.9	1.6	.45	.12	.03	.20
15	.30	4.1	4.4	257	6.4	30	2.7	1.3	.45	.12	.03	.25
16	.30	2.4	4.0	110	6.7	78	2.7	1.1	.45	.09	.05	.16
17	.25	1.6	4.0	56	8.0	113	2.6	1.1	.40	.09	.05	.12
18	.25	1.2	13	36	6.7	69	2.4	1.0	.35	.09	.07	.09
19	.25	1.0	12	24	103	44	2.4	1.2	.35	.09	.09	.07
20	.26	.81	9.8	18	212	29	2.3	2.0	.30	.09	.12	.07
21	.30	.72	8.4	15	154	21	2.1	1.7	.30	.09	.25	.09
22	1.0	.64	7.0	12	122	17	2.1	1.6	.30	.07	.25	.09
23	.79	.56	6.1	10	88	18	2.0	1.2	.30	.07	.20	.05
24	.67	.50	5.4	8.7	63	14	2.1	1.2	.30	.07	.16	.03
25	.58	.50	4.9	8.0	45	22	2.0	2.4	.25	.07	.16	.03
26	.53	.50	4.4	7.7	32	17	1.8	2.1	.25	.05	.40	.03
27	.47	.56	4.0	12	24	14	1.8	1.6	.30	.05	.35	.03
28	.71	1.0	3.8	20	20	12	1.7	1.2	.25	.05	.25	.03
29	.62	12	3.4	120	17	11	1.6	1.1	.20	.03	.20	.03
30	.55	14	3.0	139	-----	9.4	1.6	.90	.20	.05	.16	.03
31	.50	-----	2.9	73	-----	8.4	-----	.81	-----	.05	.12	-----
TOTAL	20.97	61.02	700.7	1,512.8	1,242.2	766.1	105.2	43.01	14.56	3.46	3.47	2.85
MEAN	.68	2.03	22.6	48.8	42.8	24.7	3.51	1.39	.49	.11	.11	.095
MAX	3.2	14	135	257	212	113	9.4	2.4	1.0	.20	.40	.25
MIN	.12	.46	2.9	2.3	6.4	5.6	1.6	.81	.20	.03	.03	.03
AC-FT	42	121	1,390	3,000	2,460	1,520	209	85	29	6.9	6.9	5.7

CAL YR 1967 TOTAL 7,098.72 MEAN 19.4 MAX 429 MIN .06 AC-FT 14,080
WTR YR 1968 TOTAL 4,476.34 MEAN 12.2 MAX 257 MIN .03 AC-FT 8,880

Peak discharge (base, 500 cfs).--No peak above base.

11-4686. MIDDLE FORK TENMILE RIVER NEAR FORT BRAGG, CALIF.

LOCATION.--Lat 39°34'20", long 123°41'45", in NE¼NE¼ sec.25, T.20 N., R.17 W., on right bank 0.9 mile upstream from confluence with North Fork Tenmile River, and 10.4 miles northeast of Fort Bragg.

DRAINAGE AREA.--32.9 sq mi.

RECORDS AVAILABLE.--Occasional low-flow measurements, water years 1951-56, 1961. August 1964 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 53.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to July 20, 1967, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 1,100 cfs Jan. 15 (gage height, 7.38 ft); minimum daily, 2.4 cfs Sept. 29, 30.

1964-68: Maximum discharge, 5,670 cfs Dec. 21, 1964 (gage height, 15.34 ft); minimum daily, 2.3 cfs Sept. 12-19, 1964.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	5.8	54	15	201	88	52	15	9.0	4.8	3.0	3.5
2	16	5.8	70	14	239	78	46	14	9.5	4.8	3.1	3.5
3	17	5.8	369	13	251	68	42	14	10	4.8	3.1	3.5
4	9.0	5.4	288	13	219	62	39	14	10	4.8	3.0	3.5
5	17	6.2	387	12	175	60	36	14	10	4.6	3.0	3.5
6	10	5.8	175	12	142	54	34	14	10	4.6	3.0	3.5
7	7.8	5.8	308	11	115	51	33	12	10	4.4	2.8	3.5
8	6.6	7.4	177	12	96	46	31	12	9.0	4.4	3.0	3.3
9	6.2	8.2	109	58	82	42	30	12	8.6	4.4	3.0	3.3
10	5.8	7.4	69	602	73	39	29	11	8.6	4.2	2.8	3.1
11	5.4	7.0	50	247	65	36	28	11	8.2	4.1	2.8	3.1
12	5.4	7.0	39	151	58	123	26	11	8.6	4.1	2.8	3.0
13	5.0	7.4	31	126	53	141	25	13	8.2	4.1	3.0	3.1
14	5.0	47	27	420	48	147	24	16	7.8	4.1	3.1	4.1
15	5.0	23	24	894	43	136	23	14	7.4	3.9	3.1	3.3
16	4.8	15	22	482	43	295	23	12	7.4	3.9	3.0	3.1
17	4.8	12	22	280	43	339	22	10	7.0	3.9	2.8	3.0
18	4.8	9.5	73	189	39	263	21	10	7.0	3.9	3.0	3.0
19	4.8	8.6	67	141	239	197	21	10	6.6	3.7	3.5	2.7
20	4.8	8.2	56	108	583	154	20	14	6.2	3.7	6.6	2.7
21	8.6	7.8	44	84	527	124	20	13	6.2	3.5	16	2.7
22	12	7.4	37	71	482	105	19	14	5.8	3.5	7.0	2.7
23	8.6	7.0	32	59	429	90	18	12	5.8	3.3	4.8	2.7
24	7.4	6.6	29	49	330	77	18	11	5.8	3.3	4.2	2.5
25	7.0	6.6	26	43	249	99	18	16	5.4	3.3	4.6	2.5
26	6.6	6.2	24	41	191	84	17	14	5.4	3.3	9.0	2.5
27	6.2	6.6	22	39	153	76	16	12	5.4	3.3	5.8	2.5
28	7.4	7.8	20	47	124	68	16	12	5.0	3.1	4.6	2.5
29	7.0	51	19	258	103	62	15	11	5.0	3.1	4.2	2.4
30	6.6	64	17	411	-----	57	15	10	4.8	3.1	3.9	2.4
31	6.2	-----	16	275	-----	52	-----	9.5	-----	3.0	3.7	-----
TOTAL	233.2	379.3	2,703	5,177	5,395	3,313	777	387.5	223.7	121.0	131.3	90.7
MEAN	7.52	12.6	87.2	167	186	107	25.9	12.5	7.46	3.90	4.24	3.02
MAX	17	64	387	894	583	339	52	16	10	4.8	16	4.1
MIN	4.4	5.4	16	11	39	36	15	9.5	4.8	3.0	2.8	2.4
AC-FT	463	752	5,360	10,270	10,700	6,570	1,540	769	444	240	260	180

CAL YR 1967 TOTAL 26,431.1 MEAN 72.4 MAX 1,270 MIN 3.8 AC-FT 52,430
WTR YR 1968 TOTAL 18,931.7 MEAN 51.7 MAX 894 MIN 2.4 AC-FT 37,550

Peak discharge (base, 900 cfs, revised).--Jan. 10 (0100 hrs) 930 cfs (6.95 ft); Jan. 15 (0415 hrs) 1,100 cfs (7.38 ft).

MATTOLE RIVER BASIN

11-4690. MATTOLE RIVER NEAR PETROLIA, CALIF.

LOCATION.--Lat 40°18'42", long 124°15'48", in NW¼ sec.11, T.2 S., R.2 W., on right bank 0.2 mile upstream from Clear Creek, 1.5 miles southeast of Petrolia, and 1.7 miles upstream from North Fork. Prior to Oct. 27, 1967, at site 0.4 mile downstream.

DRAINAGE AREA.--240 sq mi, at former site 242 sq mi (revised).

RECORDS AVAILABLE.--October 1911 to December 1913, October 1950 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Altitude of gage is 40 ft (from topographic map). November 1911 to December 1913, staff or chain gages at several sites upstream within 0.3 mile of present site at various datums. Dec. 11, 1950, to July 14, 1955, graphic water-stage recorder at site 0.3 mile upstream at datum 7.48 ft higher. July 15, 1955, to Dec. 9, 1963, graphic water-stage recorder and Dec. 10, 1963, to Oct. 26, 1967, digital water-stage recorder at site 0.4 mile downstream at different datum.

AVERAGE DISCHARGE.--20 years, 1,331 cfs (963,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 33,700 cfs Jan. 15 (gage height, 17.70 ft); minimum daily, 37 cfs Sept. 28-30.

1911-13, 1950-68: Maximum discharge, 90,400 cfs Dec. 22, 1955 (gage height, 29.60 ft, site and datum then in use), from rating curve extended above 24,000 cfs on basis of slope-area measurement of maximum flow; minimum observed, 20 cfs Sept. 1, 2, 15-30, Oct. 27-31, 1913.

REMARKS.--Records good. Small diversions for irrigation above station. Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	63	841	291	3,230	1,600	794	219	153	73	51	82
2	244	58	1,230	282	5,410	1,410	733	213	150	71	52	75
3	583	56	2,480	271	6,840	1,250	659	209	148	69	50	71
4	213	55	4,560	271	4,770	1,140	617	203	145	70	50	68
5	293	59	4,320	267	3,430	1,160	590	197	140	67	48	65
6	231	58	2,180	261	2,650	1,050	558	189	139	65	49	63
7	144	55	4,480	261	2,090	1,000	520	185	134	63	48	60
8	106	80	2,510	262	1,690	917	497	181	128	63	48	60
9	87	130	1,700	3,300	1,460	832	476	175	124	61	50	58
10	73	103	1,220	8,240	1,260	760	455	173	120	59	50	57
11	66	88	900	3,550	1,110	700	435	171	119	59	50	54
12	62	79	700	2,240	991	2,450	419	170	115	59	52	54
13	60	115	590	3,780	895	2,740	400	181	111	59	52	52
14	57	1,600	520	19,800	804	4,760	379	190	110	60	54	59
15	56	543	470	20,700	695	4,060	371	169	105	59	57	56
16	56	298	435	7,950	682	4,950	361	160	98	58	57	52
17	54	218	450	4,910	1,540	4,600	346	155	96	57	55	47
18	54	180	680	3,300	1,370	3,710	333	152	93	57	56	45
19	53	157	860	2,410	2,410	2,930	331	179	88	54	60	44
20	54	138	770	1,900	6,440	2,340	311	270	87	52	130	42
21	59	123	580	1,570	5,490	1,870	302	268	83	53	249	41
22	83	115	510	1,310	7,680	1,600	289	262	80	53	139	41
23	100	108	475	1,140	7,050	1,460	282	215	78	52	100	40
24	80	102	455	996	5,690	1,220	281	185	77	54	82	39
25	64	98	430	876	4,220	1,890	270	235	75	53	140	39
26	62	92	415	800	3,280	1,560	258	267	71	52	280	37
27	60	94	390	759	2,660	1,320	250	228	72	54	239	37
28	75	118	365	1,210	2,200	1,170	241	200	75	53	176	37
29	80	1,220	340	3,820	1,830	1,050	236	181	73	52	132	37
30	74	1,090	318	5,130	-----	950	224	168	74	54	106	37
31	67	-----	302	3,500	-----	857	-----	158	-----	52	92	-----
TOTAL	3,392	7,293	36,476	105,357	89,867	59,306	12,218	6,108	3,161	1,817	2,854	1,549
MEAN	109	243	1,177	3,399	3,099	1,913	407	197	105	58.6	92.1	51.6
MAX	583	1,600	4,560	20,700	7,680	4,950	794	270	153	73	280	82
MIN	42	55	302	261	682	700	224	152	71	52	48	37
AC-FT	6,730	14,470	72,350	209,000	178,200	117,600	24,230	12,120	6,270	3,600	5,660	3,070
CAL YR 1967	TOTAL 398,527		MEAN 1,092		MAX 22,400		MIN 37		AC-FT 790,500			
WTR YR 1968	TOTAL 329,398		MEAN 900		MAX 20,700		MIN 37		AC-FT 653,400			

Peak discharge (base, 15,000 cfs).--Jan. 15 (0045 hrs) 33,700 cfs (17.70 ft).

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 1968. Month-end contents only for some periods, published in WSP 1315-B. Prior to October 1953, published as "at Hullville."

GAGE.--Graphic 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, 86,800 acre-ft May 29 (gage height, 1,910.00 ft); minimum, 11,000 acre-ft Nov. 28 (gage height, 1,853.82 ft).

1922-68: Maximum contents, 95,600 acre-ft May 13, 16, 1925 (gage height, 1,910.8 ft); maximum gage height, 1,911.84 ft Dec. 22, 1964, from floodmarks; minimum contents, 10 acre-ft Dec. 9, 10, 1931 (gage height, 1,822.5 ft).

REMARKS.--Reservoir is formed by concrete overflow type dam; storage began in December 1921. Usable capacity, 86,400 acre-ft between gage heights 1,822.4 (sill of outlet gate) and 1,910.0 ft (top of spillway gates); dead storage, 397 acre-ft; spillway at gage height 1,900.0 ft. Water is released down Eel River to Van Arsdale Reservoir, from which it is diverted through tunnel to Potter Valley powerhouse; part is then used for irrigation and remainder flows into East Fork Russian River. Records given herein represent total contents. Records of water temperatures and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

COOPERATION.--Record of contents furnished by Pacific Gas and Electric Co. in connection with a Federal Power Commission project.

CAPACITY TABLE (GAGE HEIGHT, IN FEET, AND CONTENTS, IN ACRE-FEET)

1,822.4	397	1,840	3,990	1,865	19,100	1,890	48,400
1,824	534	1,845	6,080	1,870	23,500	1,895	56,700
1,827	864	1,850	8,690	1,875	28,700	1,900	65,800
1,830	1,310	1,855	11,800	1,880	34,500	1,905	75,800
1,835	2,410	1,860	15,200	1,885	41,100	1,910	86,800

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400 HOURS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	33.0	18.5	12.5	23.2	67.2	67.2	75.6	82.8	86.5	81.6	68.0	55.2
2	32.8	17.8	15.3	23.2	69.0	67.1	75.8	83.1	86.5	81.3	67.6	54.7
3	32.7	17.2	18.6	23.1	68.5	67.0	76.1	83.2	86.6	80.9	67.2	54.3
4	32.4	16.7	21.8	22.7	68.0	66.9	76.4	83.5	86.6	80.5	66.7	53.9
5	32.1	16.3	22.9	22.2	67.8	67.1	76.8	83.6	86.6	80.1	66.3	53.6
6	31.9	15.9	23.5	22.0	67.9	67.4	77.0	83.8	86.5	79.7	65.8	53.1
7	31.7	15.5	24.2	21.6	67.9	67.9	77.2	84.0	86.5	79.3	65.3	52.7
8	31.3	15.4	24.7	21.1	67.7	68.4	77.4	84.1	86.5	78.9	64.9	52.2
9	31.1	15.3	25.0	23.9	67.6	68.8	77.6	84.3	86.5	78.4	64.4	51.8
10	30.7	15.3	25.0	29.4	67.5	69.1	77.8	84.4	86.4	78.0	64.0	51.4
11	30.4	15.2	25.0	31.0	67.4	69.4	78.0	84.5	86.4	77.6	63.6	50.9
12	29.9	15.1	24.8	32.3	67.2	71.4	78.3	84.7	86.4	77.2	63.1	50.5
13	29.4	15.0	24.7	33.9	67.2	73.3	78.6	84.9	86.4	76.7	62.7	50.0
14	28.7	14.8	24.7	54.9	67.1	75.0	78.9	85.0	86.3	76.2	62.3	49.6
15	28.3	14.7	24.5	67.1	67.0	75.2	79.1	85.2	86.3	75.8	61.8	49.2
16	27.9	14.5	24.5	69.0	67.6	76.2	79.3	85.3	86.3	75.4	61.4	48.7
17	27.5	14.3	24.4	68.3	69.0	75.7	79.5	85.4	86.2	74.9	61.0	48.3
18	27.1	14.0	24.4	67.7	68.3	75.4	79.7	85.5	86.1	74.4	60.6	47.9
19	26.2	13.8	24.3	67.4	72.8	75.4	79.9	85.7	85.9	74.0	60.1	47.4
20	25.2	13.5	24.1	67.2	70.9	75.3	80.2	85.8	85.7	73.6	59.8	47.0
21	24.4	13.2	24.0	67.0	70.7	75.1	80.4	86.0	85.4	73.0	59.4	46.6
22	24.0	12.9	23.9	66.9	69.8	75.0	80.7	86.1	85.1	72.6	59.1	46.2
23	23.5	12.7	23.9	66.7	69.3	74.8	81.0	86.2	84.9	72.1	58.7	45.7
24	22.9	12.4	23.8	66.6	68.7	74.9	81.2	86.3	84.5	71.6	58.3	45.3
25	22.2	12.1	23.7	66.5	68.3	75.5	81.5	86.4	84.1	71.2	58.0	44.9
26	21.9	11.8	23.6	66.4	67.9	75.7	81.7	86.6	83.7	70.7	57.6	44.5
27	21.3	11.6	23.5	66.3	67.7	75.6	81.9	86.7	83.3	70.3	57.3	44.1
28	20.7	11.5	23.5	66.4	67.4	75.6	82.1	86.7	83.0	69.8	56.9	43.9
29	20.1	11.5	23.4	67.9	67.2	75.6	82.4	86.7	82.5	69.4	56.5	43.6
30	19.5	11.8	23.4	67.5	-----	75.6	82.6	86.6	82.1	68.9	56.0	42.9
31	19.0	-----	23.3	67.3	-----	75.4	-----	86.6	-----	68.5	55.6	-----
(a)	1,864.96	1,855.00	1,880.75	1,900.79	1,900.77	1,904.80	1,908.13	1,909.91	1,907.89	1,901.40	1,894.40	1,886.27
(b)	-14,300	-7,200	+11,500	+44,000	-100	+8,200	+7,200	+4,000	-4,500	-13,600	-12,900	-12,700
MAX	33.0	18.5	25.0	69.0	72.8	76.2	82.6	86.7	86.6	81.6	68.0	55.2
MIN	19.0	11.5	12.5	21.1	67.0	66.9	75.6	82.8	82.1	68.5	55.6	42.9

CAL YR 1967 b -43,100

WTR YR 1968 b +9,600

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

EEL RIVER BASIN

11-4705. EEL RIVER BELOW SCOTT DAM, NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°24'30", long 122°58'15", in SE $\frac{1}{4}$ 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 1968. 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.--Digital water-stage recorder. Altitude of gage is 1,740 ft (from topographic map). Prior to Dec. 15, 1930, graphic water-stage recorder at datum 3.00 ft higher. Dec. 15, 1930, to Nov. 21, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--46 years, 528 cfs (382,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 10,000 cfs Feb. 20 (gage height, 13.76 ft); minimum daily, 35 cfs May 2.

1922-68: Maximum discharge, 56,300 cfs Dec. 22, 1964 (gage height, 24.24 ft from floodmarks), from rating curve extended above 9,400 cfs on basis of computed flow over Scott Dam at gage heights 18.50 and 21.85 ft; minimum daily, 0.1 cfs Sept. 8, 1924.

REMARKS.--Records good. Flow regulated by Lake Pillsbury (see sta. no. 11-4700.). No diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

COOPERATION.--Records furnished by Pacific Gas and Electric Co. and reviewed by Geological Survey.

REVISIONS (water years).--1967 report: 1963-64.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	321	99	301	814	924	496	59	75	229	239	233
2	191	321	99	301	1,820	835	426	35	61	229	287	233
3	178	284	103	306	2,540	760	347	38	72	229	237	235
4	178	237	105	312	1,870	697	248	56	70	229	237	237
5	178	231	112	314	1,550	593	237	48	67	229	237	237
6	178	233	138	317	1,500	408	254	48	62	229	235	246
7	176	231	186	314	1,530	317	254	48	60	229	235	250
8	176	207	183	312	1,410	306	260	48	60	229	235	250
9	176	165	209	317	1,290	278	254	48	61	229	235	250
10	274	165	250	252	1,230	260	231	48	61	228	235	246
11	326	163	258	102	1,110	256	228	49	61	228	235	244
12	323	162	272	162	999	258	186	48	61	231	233	244
13	323	163	295	170	919	222	159	49	61	233	239	242
14	321	163	303	138	874	394	157	50	61	231	242	240
15	326	157	303	153	805	975	157	49	61	231	240	240
16	326	150	303	2,250	929	1,720	159	49	61	252	240	240
17	323	150	303	2,200	2,130	1,800	160	51	61	264	240	235
18	323	148	306	1,530	2,200	1,260	162	52	61	256	239	237
19	321	148	280	1,130	4,460	1,030	163	52	131	252	239	240
20	319	147	280	897	7,420	901	106	53	170	250	237	239
21	321	147	293	785	5,820	897	99	53	167	250	235	235
22	323	148	306	678	4,250	826	99	53	163	250	233	235
23	321	156	317	593	3,370	789	99	53	163	244	233	235
24	319	154	317	530	2,620	649	99	63	188	242	233	237
25	229	154	317	487	2,020	552	99	51	228	242	233	239
26	226	153	317	446	1,620	627	99	50	228	242	231	239
27	321	126	317	416	1,360	701	81	50	228	240	231	242
28	319	99	317	400	1,160	675	63	49	228	240	231	244
29	323	99	310	720	1,020	656	53	72	228	240	231	244
30	328	99	303	1,450	-----	675	53	76	229	240	233	215
31	326	-----	303	999	-----	690	-----	76	-----	239	233	-----
TOTAL	8,552	5,281	7,804	19,282	60,640	21,931	5,488	1,624	3,488	7,386	7,303	7,183
MEAN	276	176	252	622	2,091	707	183	52.4	116	238	236	239
MAX	328	321	317	2,250	7,420	1,800	456	76	229	264	242	250
MIN	176	99	99	102	805	222	53	35	60	228	231	215
AC-FT	16,960	10,470	15,480	38,250	120,300	43,500	10,890	3,220	6,920	14,650	14,490	14,250
CAL YR 1967	TOTAL 257,925			MEAN 707		MAX 11,800		MIN 99		AC-FT 511,600		
WTR YR 1968	TOTAL 155,962			MEAN 426		MAX 7,420		MIN 35		AC-FT 309,300		

11-4710. POTTER VALLEY POWERHOUSE TAILRACE NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°21'42", long 123°07'38", in SW¼ sec. 6, T.17 N., R.11 W., on right bank 100 ft downstream from powerhouse of Pacific Gas and Electric Co., 1.8 miles southwest of Van Arsdale Dam, and 2.9 miles northwest of town of Potter Valley.

RECORDS AVAILABLE.--December 1909 to September 1968. 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.--Digital 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, graphic water-stage recorder, at site 50 ft upstream at different datum. Apr. 13, 1950, to Nov. 22, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--58 years (1910-68), 199 cfs (144,100 acre-ft per year).

EXTREMES.--1922-68: 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 sediment and turbidity data, water temperatures, and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

COOPERATION.--Records furnished by Pacific Gas and Electric Co. and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	309	318	109	310	303	306	304	83	100	206	211	213
2	173	317	126	310	303	304	304	69	71	206	211	213
3	162	284	315	306	303	303	304	62	73	206	211	212
4	164	218	266	312	303	303	304	70	73	206	211	213
5	166	218	293	312	303	302	284	71	73	208	211	213
6	166	217	263	312	302	302	307	72	72	207	211	214
7	163	218	315	312	300	304	307	72	72	206	207	212
8	162	214	316	270	300	310	286	69	67	205	187	214
9	162	164	276	316	303	310	304	67	67	196	210	215
10	213	151	302	293	309	310	266	70	71	205	223	215
11	313	151	302	303	307	310	269	70	70	208	222	215
12	313	155	283	273	307	310	232	70	66	212	218	216
13	313	158	312	307	307	306	188	70	64	212	210	213
14	315	188	313	304	304	300	188	72	65	213	215	212
15	315	163	315	306	300	300	185	74	65	214	212	212
16	313	156	316	303	300	299	184	68	65	214	208	214
17	312	146	313	303	300	297	184	68	66	218	208	216
18	312	146	299	306	300	297	176	68	68	222	211	212
19	312	149	312	309	302	296	177	70	79	222	213	206
20	314	152	302	309	303	296	94	79	136	219	231	211
21	317	148	313	309	307	296	94	75	138	216	242	212
22	317	146	316	307	313	297	91	71	142	216	208	212
23	317	148	313	309	309	297	93	70	142	215	208	211
24	315	147	312	307	302	297	94	72	183	213	208	210
25	276	150	312	304	303	297	98	70	208	213	208	211
26	155	150	312	304	307	297	91	68	208	212	207	211
27	299	137	309	303	306	299	91	68	206	211	207	212
28	315	95	300	303	297	304	91	62	205	211	217	211
29	315	183	300	303	309	309	91	103	206	211	210	212
30	314	146	304	303	-----	304	91	104	207	212	206	213
31	315	-----	310	303	-----	306	-----	106	-----	212	208	-----
TOTAL	8,227	5,333	9,049	9,431	8,812	9,368	5,772	2,283	3,328	6,547	6,570	6,376
MEAN	265	178	292	304	304	302	192	73.6	111	211	212	213
MAX	317	318	316	316	313	310	307	106	208	222	242	216
MIN	155	95	109	270	297	296	91	62	64	196	187	206
AC-FT	16,320	10,580	17,950	18,710	17,480	18,580	11,450	4,530	6,600	12,990	13,030	12,650
CAL YR 1967 TOTAL	105,826		MEAN 290		MAX 331		MIN 72		AC-FT 209,900			
WTR YR 1968 TOTAL	81,096		MEAN 222		MAX 318		MIN 62		AC-FT 160,900			

EEL RIVER BASIN

11-4715. EEL RIVER AT VAN ARSDALE DAM, NEAR POTTER VALLEY, CALIF.

LOCATION.--Lat 39°23'20", long 123°06'55", in NE $\frac{1}{4}$ 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 and Power Co.'s tailrace near Potter Valley), October 1922 to September 1968. 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.--Digital water-stage recorder. Altitude of gage is 1,400 ft (from topographic map). Nov. 18, 1909, to Mar. 3, 1927, recorder in reservoir 800 ft upstream from Van Arsdale Dam at different datum. Oct. 1, 1927, to Feb. 28, 1937, staff gage at present site and datum. Mar. 1, 1937, to July 28, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--59 years (1909-68), 621 cfs (449,600 acre-ft per year), combined flow of Eel River at Van Arsdale Dam and Potter Valley powerhouse tailrace.

EXTREMES.--Maximum discharge during year, 10,000 cfs Feb. 20 (gage height, 15.97 ft); minimum daily, 0.16 cfs May 13, 14.

1909-68: Maximum discharge, 64,100 cfs Dec. 22, 1964 (gage height, 33.9 ft from flood marks); no flow Nov. 1, 1945, Sept. 13, 14, 1953, Oct. 13, 14, Nov. 22, 26, Dec. 8, 9, 18, 19, 1965.

REMARKS.--Records good. Flow regulated by Lake Pillsbury (see sta. no. 11-4700.). Water is diverted from Van Arsdale Reservoir through tunnel to Potter Valley powerhouse (see sta. no. 11-4710.), after which part is used for irrigation and remainder flows into East Fork Russian River. Records given herein show only flow passing dam down Eel River.

COOPERATION.--Records furnished by Pacific Gas and Electric Co. and reviewed by Geological Survey.

REVISIONS (water year).--1966 report: 1965.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.8	1.1	11	779	818	294	1.2	1.9	4.2	4.5	4.0
2	40	1.5	3.8	7.8	2,100	705	159	1.0	1.6	4.2	4.7	3.8
3	22	1.4	208	10	2,930	592	134	1.2	1.8	4.2	4.7	3.5
4	10	11	130	13	2,140	493	56	3.5	1.9	4.2	4.7	3.4
5	13	1.8	239	13	1,740	402	3.5	4.2	2.0	4.2	4.7	2.9
6	6.5	1.6	1.9	13	1,640	201	2.6	2.4	2.2	4.2	4.7	2.3
7	7.5	1.6	215	13	1,650	106	1.3	2.2	2.2	4.2	4.7	2.0
8	9.3	1.6	16	55	1,570	90	14	1.6	1.7	4.2	4.7	2.4
9	8.7	1.2	1.7	100	1,390	56	4.2	1.9	1.7	4.2	5.3	2.8
10	22	1.5	1.4	936	1,300	23	6.7	1.9	2.2	4.2	4.9	2.9
11	8.5	5.9	1.6	50	1,130	15	3.1	1.9	1.3	3.8	4.5	2.9
12	6.4	4.9	6.9	5.5	967	171	2.0	1.9	1.2	3.7	4.2	3.1
13	5.2	2.5	5.8	134	852	188	5.1	.16	4.2	3.7	4.0	3.1
14	3.2	47	10	1,320	784	335	2.5	.16	4.2	3.5	4.0	3.1
15	2.8	1.3	7.2	1,310	689	942	2.5	2.3	1.7	3.4	4.0	3.1
16	5.4	1.4	4.7	2,460	801	1,900	2.3	1.7	1.6	3.2	4.0	3.1
17	4.7	1.4	11	2,480	2,070	2,060	1.8	1.9	1.6	3.5	4.0	2.9
18	3.1	1.7	105	1,680	2,320	1,360	1.5	2.3	1.6	4.0	4.0	2.5
19	2.3	2.4	25	1,170	4,390	1,080	3.4	3.1	1.8	4.2	4.3	2.4
20	2.1	1.5	1.4	864	7,960	846	2.2	5.9	3.2	4.2	4.7	2.6
21	1.8	1.1	1.6	664	6,230	807	2.0	1.7	3.8	4.2	4.2	2.5
22	1.8	1.3	1.5	493	4,430	725	1.5	1.9	4.0	4.3	3.8	2.3
23	1.9	1.3	18	380	3,500	659	1.9	1.8	4.2	4.3	3.8	1.8
24	1.9	1.7	37	298	2,780	503	2.4	2.3	3.5	4.5	3.8	1.7
25	1.6	2.9	69	242	2,140	367	2.6	2.5	3.2	4.5	4.0	1.6
26	11	1.8	63	199	1,680	397	2.2	2.2	3.2	4.5	4.3	1.3
27	16	3.1	58	164	1,380	493	3.5	1.9	3.1	4.5	4.3	1.2
28	1.9	1.8	56	144	1,150	453	1.9	1.6	4.2	4.5	4.2	1.6
29	1.4	2.6	44	655	948	411	1.8	4.2	4.2	4.5	4.0	2.5
30	2.2	.96	24	1,640	-----	420	1.6	2.2	4.2	4.5	4.0	3.2
31	3.6	-----	15	1,040	-----	434	-----	2.0	-----	4.5	4.0	-----
TOTAL	229.6	113.56	1,383.6	18,564.3	63,440	18,052	723.1	66.72	79.2	128.0	133.7	78.5
MEAN	7.41	3.79	44.6	599	2,188	582	24.1	2.15	2.64	4.13	4.31	2.62
MAX	40	47	239	2,480	7,960	2,060	294	5.9	4.2	4.5	5.3	4.0
MIN	1.4	.96	1.1	5.5	689	15	1.3	.16	1.2	3.2	3.8	1.2
AC-FT	455	225	2,740	36,820	125,800	35,810	1,430	132	157	254	265	156

CAL YR 1967 TOTAL 193,698.16 MEAN 531 MAX 13,300 MIN .96 AC-FT 384,200
WTR YR 1968 TOTAL 102,992.28 MEAN 281 MAX 7,960 MIN .16 AC-FT 204,300

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,591.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 23, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--5 years, 92.3 cfs (66,820 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,820 cfs Feb. 19 (gage height, 7.62 ft); no flow for many days.
1963-68: Maximum discharge, 16,500 cfs Dec. 22, 1964 (gage height, 15.92 ft), from rating curve extended above 4,000 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.15	13	9.5	352	83	43	6.9	2.2	.35		
2	.35	.10	17	8.1	930	67	36	6.9	2.2	.35		
3	.10	.10	230	6.9	590	54	32	6.9	2.5	.29		
4	0	.15	226	6.3	325	44	29	6.3	2.5	.23		
5	.35	.15	296	5.8	219	47	28	5.8	2.0	.18		
6	.10	.15	76	5.3	160	39	25	6.3	2.2	.09		
7	.05	.10	334	5.3	122	43	23	5.8	2.0	.05		
8	0	.25	83	6.3	97	36	21	5.8	2.0	.05		
9	.05	.20	43	114	81	30	21	5.3	1.7	0		
10	.05	.20	30	756	72	27	19	5.3	2.0	0		
11	0	.25	24	129	58	24	18	4.8	2.0	0		
12	0	.20	19	60	49	272	18	4.8	1.7	0		
13	0	.66	15	107	44	240	16	8.8	1.3	0		
14	0	5.5	11	1,270	38	300	15	9.5	1.5	0		
15	0	1.7	10	1,180	36	212	15	6.3	1.3	0		
16	0	.98	8.8	585	54	708	14	5.3	1.1	0		
17	0	.66	10	320	129	475	13	4.8	1.3	0		
18	0	.50	117	202	94	292	12	4.8	.93	0		
19	0	.45	65	142	1,380	202	12	5.3	.68	0		
20	0	.45	39	107	1,010	151	11	7.5	.93	0		
21	.15	.58	29	83	864	122	10	7.5	.93	0		
22	.10	.66	27	65	600	107	10	7.5	.80	0		
23	.10	.66	24	54	560	104	9.5	6.3	.80	0		
24	.10	.66	27	44	383	81	9.5	5.3	.68	0		
25	.10	.66	28	39	272	92	9.5	8.1	.58	0		
26	.10	.66	25	36	199	76	8.8	6.9	.49	0		
27	.10	.76	21	33	157	65	8.1	5.3	.49	0		
28	.15	.86	18	35	127	56	7.5	4.3	.49	0		
29	.10	17	15	555	102	49	7.5	3.8	.49	0		
30	.15	21	12	560	-----	44	7.5	3.1	.49	0		
31	.15	-----	10	356	-----	39	-----	2.8	-----	0		-----
TOTAL	2.35	56.40	1,902.8	6,885.5	9,104	4,181	508.9	184.1	40.28	1.59	0	0
MEAN	.076	1.88	61.4	222	314	135	17.0	5.94	1.34	.051	0	0
MAX	.35	21	334	1,270	1,380	708	43	9.5	2.5	.35	0	0
MIN	0	.10	8.8	5.3	36	24	7.5	2.8	.49	0	0	0
AC-FT	4.7	112	3,770	13,660	18,060	8,290	1,010	365	80	3.2	0	0

CAL YR 1967 TOTAL 31,790.94 MEAN 87.1 MAX 2,000 MIN 0 AC-FT 63,060
WTR YR 1968 TOTAL 22,866.92 MEAN 62.5 MAX 1,380 MIN 0 AC-FT 45,360

Peak discharge (base, 4,000 cfs).--No peak above base.

EEL RIVER BASIN

11-4721.5. EEL RIVER NEAR DOS RIOS, CALIF.

LOCATION.--Lat 39°37'30", long 123°20'25", in SW¼SW¼ sec.32, T.21 N., R.13 W., on left bank 1,100 ft upstream from Outlet Creek, and 6.3 miles south of Dos Rios.

DRAINAGE AREA.--528 sq mi.

RECORDS AVAILABLE.--October 1966 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,001.28 ft above mean sea level, datum of 1929. Prior to Apr. 7, 1967, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 16,500 cfs Feb. 20 (gage height, 15.22 ft), from rating curve extended above 5,500 cfs; minimum daily, 2.8 cfs Sept. 11, 12.

1966-68: Maximum discharge, 25,200 cfs Jan. 21, 1967 (gage height, 18.70 ft), from rating curve extended above 5,500 cfs; minimum daily, 2.8 cfs Sept. 13, 29, 30, 1967, Sept. 11, 12, 1968.

Flood of Dec. 22, 1964, reached a stage of 45.52 ft, from information by local resident (discharge, 120,000 cfs).

REMARKS.--Records good. Flow partly regulated by Lake Pillsbury (see sta. no. 11-4700.) and by diversion through Potter Valley powerhouse (see sta. no. 11-4710.). Records of chemical analyses, water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	6.5	108	73	1,880	1,220	686	62	37	12	7.2	5.3
2	20	5.8	298	65	4,280	1,060	370	60	33	12	6.9	4.1
3	59	6.5	1,900	59	4,930	916	385	58	33	10	6.5	3.7
4	41	7.2	1,800	54	3,260	793	258	55	33	9.1	6.3	3.2
5	31	6.5	2,530	56	2,480	730	220	54	33	8.6	5.8	3.7
6	27	7.9	832	52	2,190	509	171	53	33	9.2	5.8	3.3
7	24	10	2,210	52	2,110	350	157	54	33	8.6	5.8	3.0
8	15	7.9	799	52	1,940	298	150	53	31	8.6	5.2	3.0
9	12	8.6	270	637	1,750	246	153	50	31	8.4	5.6	3.5
10	13	7.9	178	4,500	1,620	202	136	49	25	7.6	6.8	3.0
11	13	7.2	133	1,480	1,450	174	126	47	29	7.2	5.6	2.8
12	27	7.2	105	610	1,270	1,140	123	47	27	7.2	5.7	2.8
13	13	7.9	83	716	1,130	1,340	117	55	27	6.8	5.8	3.3
14	9.3	96	73	5,000	1,030	1,440	111	72	27	6.5	5.8	5.3
15	8.6	86	68	5,800	929	1,470	102	69	28	6.9	5.8	5.3
16	7.9	31	63	4,800	962	3,760	99	56	31	7.2	4.8	5.1
17	7.2	22	61	3,300	2,000	3,640	96	49	27	7.2	4.9	5.8
18	5.8	17	786	2,110	2,650	2,200	93	46	24	7.2	6.4	5.4
19	7.2	13	526	1,370	6,960	1,800	88	44	22	7.2	7.4	5.1
20	7.2	12	199	870	13,100	1,360	88	66	20	7.2	23	4.5
21	7.9	10	129	550	10,100	1,240	88	68	18	7.2	40	4.4
22	10	9.3	105	380	7,660	1,130	83	69	16	7.5	32	4.4
23	9.3	8.6	108	251	5,860	1,030	78	60	17	7.2	18	4.4
24	8.6	8.6	146	172	4,110	962	78	53	18	7.2	11	4.4
25	7.9	8.6	178	141	3,300	786	75	56	18	7.2	9.6	5.1
26	7.2	7.9	192	123	2,600	773	75	55	17	7.9	12	5.1
27	6.5	7.9	167	122	2,100	786	70	50	15	7.2	12	4.8
28	7.9	9.3	143	133	1,800	767	68	46	11	6.6	11	4.2
29	17	73	129	2,900	1,600	712	65	41	10	7.2	9.3	3.7
30	12	126	108	3,650	-----	688	64	39	11	7.2	7.6	3.7
31	7.9	-----	86	2,380	-----	688	-----	38	-----	7.2	5.4	-----
TOTAL	453.4	643.3	14,513	42,458	97,051	34,210	4,473	1,674	735	244.3	305.0	125.4
MEAN	14.6	21.4	468	1,370	3,347	1,104	149	54.0	24.5	7.88	9.84	4.18
MAX	59	126	2,530	5,800	13,100	3,760	686	72	37	12	40	5.8
MIN	3.0	5.8	61	52	929	174	64	38	10	6.5	4.8	2.8
AC-FT	899	1,280	28,790	84,210	192,500	67,850	8,870	3,320	1,460	485	605	249

CAL YR 1967 TOTAL 360,906.3 MEAN 989 MAX 21,200 MIN 2.8 AC-FT 715,800
WTR YR 1968 TOTAL 196,885.4 MEAN 538 MAX 13,100 MIN 2.8 AC-FT 390,500

Peak discharge (base, 20,000 cfs).--No peak above base.

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,018.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to May 25, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--12 years, 421 cfs (304,800 acre-ft per year).

EXTREMES.--Maximum discharge during year, 9,420 cfs Feb. 19 (gage height, 11.40 ft); minimum daily, 0.45 cfs Aug. 11.

1956-68: Maximum discharge, 77,900 cfs Dec. 22, 1964 (gage height, 30.6 ft from floodmarks), from rating curve extended above 9,900 cfs on basis of slope-area measurement of maximum flow; no flow Aug. 15-17, 1959, Sept. 14, 15, 1967.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures, suspended-sediment loads, sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

REVISIONS (water years).--1965 report: 1958(M), 1960, 1963, 1964(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.1	184	54	1,180	298	158	30	14	2.0	.57	2.3
2	16	2.1	586	50	2,820	262	159	29	14	1.8	.59	2.0
3	35	1.9	2,020	45	1,910	229	140	29	15	1.7	.58	1.9
4	16	1.8	2,210	41	1,090	198	125	28	13	1.9	.71	1.8
5	20	1.7	2,190	38	682	226	116	27	12	1.9	.68	1.8
6	16	1.7	787	38	510	205	106	25	12	1.9	.57	1.7
7	12	1.7	2,040	35	395	208	96	25	11	1.7	.56	1.6
8	9.4	1.7	745	39	326	194	90	24	11	1.3	.57	1.6
9	7.2	2.5	346	925	282	162	84	23	11	1.3	.52	1.5
10	5.6	2.8	222	4,230	258	142	79	23	9.3	1.5	.49	1.4
11	4.7	2.6	162	1,530	219	129	74	23	8.5	1.4	.45	1.4
12	3.6	2.9	122	696	191	1,190	69	22	8.0	1.5	.47	1.4
13	3.0	3.7	88	808	171	1,240	63	27	7.7	1.6	.52	1.5
14	2.7	113	71	5,040	153	1,300	61	31	7.4	1.6	.68	1.9
15	2.8	58	60	5,750	140	787	59	30	6.8	2.0	.65	1.7
16	2.2	28	54	3,030	165	2,400	56	25	6.6	1.3	.61	1.7
17	2.1	19	56	1,720	362	1,870	54	23	6.5	1.3	.62	1.6
18	2.0	15	1,070	882	318	1,110	51	21	5.8	1.3	.79	1.5
19	1.9	13	668	544	3,960	696	49	21	5.1	1.2	1.6	1.5
20	1.8	11	326	385	4,300	510	47	28	4.7	1.0	10	1.4
21	3.2	8.9	219	310	3,680	410	45	32	4.2	.93	25	1.4
22	6.4	7.7	180	254	2,590	346	43	30	3.7	.96	12	1.4
23	5.7	7.7	168	215	2,070	362	41	26	3.4	.81	7.3	1.4
24	4.7	6.5	159	180	1,290	306	40	24	3.2	.91	5.3	1.4
25	5.0	5.3	142	162	858	395	40	29	2.5	.90	4.7	1.5
26	4.4	4.3	122	147	654	346	38	34	2.4	.76	6.5	1.4
27	3.8	4.3	103	147	500	270	36	28	2.1	.77	6.1	1.5
28	3.3	5.0	88	156	410	229	35	23	2.0	.69	4.7	1.5
29	2.8	219	77	2,860	342	203	32	20	1.9	.71	4.1	1.2
30	2.4	258	65	3,080	-----	182	31	18	1.9	.78	3.4	1.5
31	2.2	-----	60	1,780	-----	163	-----	15	-----	.67	2.8	-----
TOTAL	209.0	812.9	15,390	35,171	31,826	16,568	2,117	793	216.7	40.09	104.13	47.4
MEAN	6.74	27.1	496	1,135	1,097	534	70.6	25.6	7.22	1.29	3.36	1.58
MAX	35	258	2,210	5,750	4,300	2,400	159	34	15	2.0	25	2.3
MIN	1.1	1.7	54	35	140	129	31	15	1.9	.67	.45	1.2
AC-FT	415	1,610	30,530	69,760	63,130	32,860	4,200	1,570	430	80	207	94

CAL YR 1967 TOTAL 144,771.64 MEAN 397 MAX 9,760 MIN.0 AC-FT 287,200
WTR YR 1968 TOTAL 103,295.22 MEAN 282 MAX 5,750 MIN .45 AC-FT 204,900

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	0045	11.21	9,080	01-29	1815	10.63	8,030
01-14	1830	11.34	9,310	02-19	2015	11.40	9,420

EEL RIVER BASIN

11-4728. MIDDLE FORK EEL RIVER ABOVE BLACK BUTTE RIVER, NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'45", long 123°04'11", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.23 N., R.11 W., on left bank 1.2 miles upstream from Black Butte River and 9.8 miles northeast of Covelo.

DRAINAGE AREA.--204 sq mi.

RECORDS AVAILABLE.--October 1967 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,493.9 ft above mean sea level (levels by Topographic Division).

EXTREMES.--Maximum discharge during year, 21,000 cfs Feb. 19 (gage height, 7.39 ft); maximum gage height, 8.92 ft Jan. 14; minimum daily discharge, 8.9 cfs Aug. 12-17.

REMARKS.--Records fair. No regulation or diversion above station. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	15	51	291	235	1,680	1,190	333	125	33	10	19
2	105	14	424	243	1,890	1,390	920	331	120	31	10	17
3	112	14	2,080	198	3,000	1,220	704	337	112	30	9.9	15
4	53	14	1,940	180	2,230	1,140	650	340	105	29	9.8	14
5	40	14	1,630	159	1,860	1,180	595	333	100	27	9.7	13
6	35	14	418	145	1,690	920	525	305	98	26	9.6	12
7	29	14	740	140	1,990	736	492	294	96	25	9.5	12
8	24	13	345	148	1,830	615	484	275	92	24	9.5	11
9	21	16	287	474	1,390	530	516	265	87	23	9.4	11
10	19	17	310	4,800	1,250	466	590	255	81	22	9.2	11
11	18	17	282	2,860	972	427	644	245	76	21	9.0	10
12	17	17	260	2,150	810	780	595	235	72	20	8.9	10
13	15	17	215	5,200	619	662	504	225	69	19	8.9	9.8
14	15	890	174	12,400	554	728	463	250	66	18	8.9	11
15	14	177	177	6,170	418	680	449	230	64	18	8.9	13
16	13	85	177	2,760	760	1,270	418	215	61	17	8.9	14
17	12	58	162	2,100	2,780	1,080	375	200	58	17	8.9	13
18	12	45	187	1,250	2,740	800	346	195	56	16	9.0	12
19	12	41	150	720	6,860	674	337	195	53	15	9.8	11
20	12	37	135	619	8,420	688	325	370	51	15	26	10
21	15	33	103	880	8,460	712	313	290	49	14	130	10
22	28	32	121	1,010	6,700	688	303	245	47	14	93	10
23	27	30	159	860	8,020	680	299	215	45	13	60	10
24	23	28	215	810	5,700	720	294	185	43	13	43	10
25	21	27	430	730	3,340	1,640	294	170	41	12	36	10
26	19	25	830	602	2,190	1,500	302	165	39	12	38	10
27	18	26	1,460	412	2,000	1,180	315	158	37	11	38	9.9
28	17	28	1,020	315	2,030	1,240	316	150	36	11	35	9.8
29	17	70	637	467	1,850	1,570	325	145	35	11	29	9.7
30	17	65	436	375	-----	1,610	340	135	34	10	21	9.6
31	16	-----	340	300	-----	1,360	-----	130	-----	10	22	-----
TOTAL	805.0	1,893	15,895	49,768	82,588	30,566	14,223	7,416	2,048	577	748.8	347.8
MEAN	26.0	63.1	513	1,605	2,848	986	474	239	68.3	18.6	24.2	11.6
MAX	112	890	2,080	12,400	8,460	1,680	1,190	370	125	33	130	19
MIN	9.0	13	51	140	235	427	294	130	34	10	8.9	9.6
AC-FT	1,600	3,750	31,530	98,710	163,800	60,630	28,210	14,710	4,060	1,140	1,490	690

CAL YR 1967 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1968 TOTAL 206,875.6 MEAN 565 MAX 12,400 MIN 8.9 AC-FT 410,300

Peak discharge (base, 10,000 cfs).--Jan. 14 (1815 hrs) 19,500 cfs (8.92 ft); Feb. 19 (2330 hrs) 21,000 cfs (7.39 ft).

Note.--No gage-height record May 7 to Sept. 30.

11-4729. BLACK BUTTE RIVER NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'15", long 123°04'50", in SE $\frac{1}{4}$ sec.28, T.23 N., R.11 W., on right bank 10 ft upstream from highway bridge, 0.5 mile upstream from mouth, and 9.5 miles east of Covelo.

DRAINAGE AREA.--162 sq mi.

RECORDS AVAILABLE.--Occasional low-flow measurements, water years 1951-56 and annual maximum, water years 1954-57, October 1958 to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 1,456.71 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Sept. 10, 1953, to Sept. 30, 1957, crest-stage gage only at same site at different datum. Oct. 1, 1958, to Dec. 22, 1964, graphic water-stage recorder at site 0.1 mile upstream at same datum.

AVERAGE DISCHARGE.--10 years, 281 cfs (203,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 9,000 cfs Feb. 19 (gage height, unknown); minimum daily, 3.0 cfs Sept. 30.

1953-57, 1958-68: Maximum discharge, 29,000 cfs Dec. 22, 1964 (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.

1958-68: 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 site (discharge, 26,000 cfs).

REMARKS.--Records fair. No regulation or diversion above station. Records of chemical analyses, water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	7.1	19	56	458	760	410	113	44	13	5.6	7.7
2	9.3	6.8	26	46	1,690	600	385	106	44	13	5.6	6.8
3	52	6.8	313	37	1,260	500	355	106	43	12	5.3	6.2
4	21	6.8	422	32	875	460	330	106	42	12	5.3	6.2
5	16	6.5	334	28	853	440	297	104	42	11	5.0	5.9
6	15	6.5	93	23	990	425	254	95	42	11	4.7	5.9
7	13	6.5	260	23	864	395	234	84	42	11	4.5	5.3
8	11	6.5	128	26	820	365	210	82	39	11	4.5	5.3
9	10	6.5	93	150	820	330	199	79	39	10	4.5	5.0
10	9.4	6.8	100	1,020	800	300	199	79	37	9.9	4.5	4.7
11	9.4	6.8	86	143	702	275	203	75	35	9.4	4.2	4.7
12	9.0	6.8	78	111	614	1,400	199	73	34	9.0	4.2	4.7
13	7.7	7.4	64	374	614	660	193	77	33	8.6	4.2	5.0
14	7.4	166	43	4,610	590	700	176	86	32	8.6	4.0	5.9
15	7.1	38	50	3,620	508	510	170	75	29	8.6	4.2	5.9
16	6.8	19	50	1,520	1,200	2,300	159	62	29	8.6	4.2	5.6
17	6.8	13	46	675	1,600	1,150	156	62	26	8.1	4.5	5.3
18	6.8	11	69	508	1,050	920	143	59	26	8.1	5.0	4.7
19	6.5	11	52	515	3,800	700	143	59	24	8.1	6.5	4.5
20	6.5	9.9	43	558	2,850	610	140	113	22	7.7	12	4.0
21	7.1	9.9	40	550	3,370	550	125	75	21	7.4	27	3.7
22	13	9.0	41	360	2,950	525	123	88	20	7.1	22	3.7
23	13	8.1	55	321	3,170	410	118	72	20	6.8	15	3.7
24	10	7.7	93	260	2,440	500	115	62	19	6.5	12	3.7
25	9.0	7.4	176	250	1,890	645	108	75	18	6.2	11	3.7
26	8.1	7.4	213	240	1,560	555	106	69	16	6.2	13	3.7
27	7.4	7.4	246	215	1,260	460	106	59	15	6.2	15	3.7
28	7.4	8.6	184	360	1,010	415	106	58	15	6.2	11	3.3
29	7.4	35	133	688	978	450	106	54	14	5.9	10	3.3
30	7.4	31	89	550	-----	495	115	51	13	5.9	9.0	3.0
31	7.4	-----	69	456	-----	435	-----	48	-----	5.6	8.1	-----
TOTAL	332.1	487.2	3,708	18,325	41,586	19,240	5,683	2,406	875	268.7	255.6	144.8
MEAN	10.7	16.2	120	591	1,434	621	189	77.6	29.2	8.67	8.25	4.83
MAX	52	166	422	4,610	3,800	2,300	410	113	44	13	27	7.7
MIN	4.2	6.5	19	23	458	275	106	48	13	5.6	4.0	3.0
AC-FT	659	966	7,350	36,350	82,480	38,160	11,270	4,770	1,740	533	507	287
CAL YR 1967 TOTAL	114,305.5		MEAN 313		MAX 7,100	MIN 4.0	AC-FT 226,700					
WTR YR 1968 TOTAL	93,311.4		MEAN 255		MAX 4,610	MIN 3.0	AC-FT 185,100					

Peak discharge (base, 5,500 cfs).--Jan. 14 (1800 hrs) 8,300 cfs (20.00 ft); Feb. 19 (time unknown) 9,000 cfs.

Note.--No gage-height record Feb. 16-20, Mar. 1 to Apr. 2.

EEL RIVER BASIN

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,435.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 25, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--7 years, 81.9 cfs (59,290 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,320 cfs Jan. 14 (gage height, 7.63 ft); minimum daily, 0.18 cfs Aug. 7, 10-12.

1961-68: Maximum discharge, 11,300 cfs Dec. 22, 1964 (gage height, 14.25 ft), from rating curve extended above 1,900 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.06 cfs Sept. 14-16, 1967.

REMARKS.--Records good. No regulation or diversion above station. Records of suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

REVISIONS (water year).--1963 report: 1962(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	1.0	8.6	27	170	98	72	17	9.4	2.4	.42	1.8
2	4.6	1.0	126	23	700	83	64	16	9.1	2.2	.36	2.0
3	5.8	.90	309	20	410	72	55	16	9.1	2.2	.36	2.0
4	3.5	.90	327	18	270	66	51	16	8.8	2.1	.30	2.0
5	3.6	.90	205	17	200	69	45	16	8.8	2.1	.24	1.8
6	2.8	.90	75	16	170	59	42	15	8.8	1.9	.24	1.8
7	2.2	.90	156	15	142	55	39	14	8.6	1.6	.18	1.6
8	1.6	1.0	62	16	122	51	37	14	8.3	1.4	.30	1.4
9	1.4	1.2	47	172	108	44	35	13	7.0	1.4	.24	1.3
10	1.4	1.3	42	538	93	41	35	13	6.5	1.5	.18	1.3
11	1.3	1.3	39	94	83	38	37	12	6.2	1.5	.18	1.2
12	1.2	1.2	34	56	74	148	35	12	6.0	1.5	.18	1.2
13	1.2	1.5	27	321	66	110	32	14	5.6	1.4	.24	1.3
14	1.1	28	22	1,420	59	208	30	14	5.5	1.4	.24	1.5
15	1.0	6.8	21	1,050	54	146	30	12	5.5	1.3	.24	1.4
16	.90	4.3	20	610	50	330	28	11	5.1	1.3	.24	1.4
17	.90	2.2	19	270	108	203	25	11	4.9	1.3	.24	1.3
18	.80	1.9	32	176	72	154	23	10	4.4	1.2	.30	1.1
19	.80	1.6	22	128	620	128	22	11	4.3	1.1	.80	1.0
20	.80	1.4	18	104	470	116	22	22	4.1	1.1	9.4	1.0
21	1.2	1.4	16	89	580	104	20	17	4.0	.90	17	1.0
22	1.9	1.3	19	72	425	94	20	18	4.0	.80	8.3	1.1
23	1.6	1.2	30	64	370	94	19	15	3.5	.80	4.4	1.1
24	1.5	1.1	46	59	300	91	18	14	3.3	.70	3.0	1.0
25	1.3	1.1	65	54	240	138	18	20	3.0	.70	2.4	.96
26	1.2	1.0	68	51	200	110	17	15	2.8	.60	4.3	.91
27	1.2	1.4	68	48	162	98	17	14	2.7	.60	3.4	.84
28	1.2	1.5	59	46	136	98	17	12	2.7	.42	2.8	.81
29	1.2	13	46	203	112	102	17	12	2.7	.42	2.4	.74
30	1.2	15	38	250	-----	94	17	11	2.4	.36	2.0	.73
31	1.1	-----	30	160	-----	81	-----	10	-----	.42	1.7	-----
TOTAL	51.92	98.20	2,096.6	6,187	6,566	3,323	939	437	167.1	38.62	66.58	38.59
MEAN	1.67	3.27	67.6	200	226	107	31.3	14.1	5.57	1.25	2.15	1.29
MAX	5.8	28	327	1,420	700	330	72	22	9.4	2.4	17	2.0
MIN	.42	.90	8.6	15	50	38	17	10	2.4	.36	.18	.73
AC-FT	103	195	4,160	12,270	13,020	6,590	1,860	867	331	77	132	77

CAL YR 1967 TOTAL 25,995.02 MEAN 71.2 MAX 1,140 MIN .06 AC-FT 51,560
WTR YR 1968 TOTAL 20,009.61 MEAN 54.7 MAX 1,420 MIN .18 AC-FT 39,690

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-04	1745	5.84	1,200	02-02	-	-	1,400
01-10	0130	6.08	1,330	02-19	-	-	1,300
01-14	1745	7.63	2,320				

11-4736. SHORT CREEK NEAR COVELO, CALIF.

LOCATION.--Lat 39°49'50", long 123°10'56", 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,438.2 ft (revised) above mean sea level (levels by Topographic Division). Prior to June 25, 1966, graphic water-stage recorder at site 100 ft upstream at datum 1.03 ft lower.

AVERAGE DISCHARGE.--10 years, 22.6 cfs (16,360 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,300 cfs Jan. 14 (gage height, 6.69 ft); minimum daily, 0.05 cfs Sept. 6-8.

1958-68: Maximum discharge, 3,600 cfs Dec. 22, 1964 (gage height, 9.20 ft in gage well, 10.4 ft from outside floodmarks, site and datum then in use), from rating curve extended above 690 cfs on basis of slope-area measurement of Dec. 21, 1955; no flow at times.

Flood of Dec. 21, 1955, reached a stage of 10.56 ft from floodmarks (discharge, 3,780 cfs on basis of slope-area measurement of maximum flow).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.16	.15	3.3	140	21	11	3.1	1.4	.55	.14	.07
2	.23	.16	30	3.0	505	18	10	3.0	1.4	.52	.13	.06
3	.20	.16	176	2.6	266	15	8.9	2.9	1.4	.50	.12	.06
4	.19	.18	175	2.5	168	13	8.2	2.8	1.4	.45	.11	.06
5	.20	.19	47	2.4	129	14	7.9	2.8	1.3	.43	.10	.06
6	.20	.21	16	2.3	107	13	7.2	2.7	1.3	.42	.09	.05
7	.19	.20	70	2.2	82	12	7.0	2.6	1.3	.39	.09	.05
8	.19	.20	26	2.3	63	11	6.8	2.5	1.3	.39	.08	.05
9	.19	.20	15	123	48	9.5	6.3	2.4	1.2	.37	.08	.06
10	.19	.19	8.0	319	39	8.6	6.2	2.3	1.1	.36	.08	.06
11	.19	.20	6.0	83	32	8.6	5.8	2.2	1.0	.34	.08	.06
12	.15	.20	4.6	49	27	56	5.6	2.2	1.0	.34	.08	.06
13	.15	.21	4.0	172	22	56	5.4	2.3	.94	.32	.08	.06
14	.15	.18	3.5	869	20	195	5.0	2.4	.94	.32	.07	.07
15	.15	.18	3.2	450	15	106	5.0	2.3	.88	.30	.07	.06
16	.15	.19	3.0	250	25	236	5.0	2.3	.87	.29	.07	.06
17	.15	.18	3.0	130	77	160	4.7	2.1	.84	.26	.07	.06
18	.16	.18	20	75	45	92	4.7	2.1	.83	.25	.07	.07
19	.15	.18	13	47	376	83	4.7	2.1	.80	.24	.08	.07
20	.15	.18	7.5	31	259	74	4.4	2.3	.79	.24	.14	.07
21	.15	.18	5.0	21	312	61	4.3	2.1	.76	.23	.14	.07
22	.15	.18	4.7	15	187	48	4.3	2.2	.75	.23	.11	.07
23	.15	.17	8.0	13	171	39	4.1	2.1	.72	.22	.09	.07
24	.15	.17	13	12	113	31	4.0	2.0	.68	.22	.09	.06
25	.15	.17	14	10	77	60	3.8	2.0	.67	.20	.08	.06
26	.15	.16	11	9.5	54	40	3.7	2.0	.64	.20	.09	.07
27	.15	.12	8.3	8.9	36	27	3.7	1.9	.63	.19	.08	.07
28	.15	.12	6.3	8.6	30	34	3.5	1.7	.60	.19	.06	.07
29	.15	.17	4.8	161	25	13	3.5	1.6	.59	.17	.06	.07
30	.16	.17	3.9	201	-----	12	3.5	1.6	.56	.16	.06	.08
31	.16	-----	3.5	129	-----	12	-----	1.5	-----	.15	.06	-----
TOTAL	5.21	5.34	713.45	3,207.6	3,450	1,578.7	168.2	70.1	28.59	9.44	2.75	1.91
MEAN	.17	.18	23.0	103	119	50.9	5.61	2.26	.95	.30	.089	.064
MAX	.23	.21	176	869	505	236	11	3.1	1.4	.55	.14	.08
MIN	.15	.12	.15	2.2	15	8.6	3.5	1.5	.56	.15	.06	.05
AC-FT	10	11	1,420	6,360	6,840	3,130	334	139	57	19	5.5	3.8

CAL YR 1967 TOTAL 9,322.34 MEAN 25.5 MAX 440 MIN .09 AC-FT 18,490
WTR YR 1968 TOTAL 9,241.29 MEAN 25.2 MAX 869 MIN .05 AC-FT 18,330

PEAK DISCHARGE (BASE, 500 CFS)
DATE TIME G.HT. DISCHARGE DATE TIME G.HT. DISCHARGE
12-04 1815 5.81 686 02-02 0100 5.83 698
01-14 1645 6.69 1,300 02-19 2100 6.13 891

EEL RIVER BASIN

11-4737. MILL CREEK NEAR COVELO, CALIF.

LOCATION.--Lat 39°44'45", long 123°10'15", in SW $\frac{1}{4}$ sec.23, T.22 N., R.12 W., 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,280.55 ft above mean sea level, datum of 1929 (preliminary). Prior to Apr. 29, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--12 years, 150 cfs (108,600 acre-ft per year); median of yearly mean discharges, 120 cfs (86,900 acre-ft per year).

EXTREMES.--Maximum discharge during year, 4,150 cfs Jan. 10 (gage height, 10.57 ft); no flow for several months.

1956-68: Maximum discharge, 24,100 cfs Dec. 22, 1964 (gage height, 20.97 ft), from rating curve extended above 2,300 cfs on basis of slope-area measurement at gage heights 14.50 and 20.97 ft; no flow for several months in each year.

REMARKS.--Records fair. No regulation or diversion above station. Records of suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

REVISIONS (water years).--1963 report: 1960-62.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	0	5.6	393	170	78	13	3.5	1.2	.55	
2		0	6.9	4.3	2,140	152	71	12	3.3	1.2	.45	
3		0	687	3.3	952	137	66	12	3.3	1.2	.38	
4		0	748	2.4	499	131	62	11	3.3	1.2	.32	
5		0	629	2.2	382	137	58	10	3.3	1.2	.22	
6		0	105	2.1	350	125	55	9.4	3.1	1.2	.16	
7		0	608	1.9	291	125	52	8.9	2.9	1.2	.08	
8		0	119	2.8	248	115	49	8.3	2.8	1.2	0	
9		0	51	263	209	110	46	7.6	2.7	1.2	0	
10		0	33	1,550	181	105	43	7.4	2.5	1.1	0	
11		0	22	162	155	104	40	7.3	2.2	1.1	0	
12		0	14	70	138	444	38	7.0	2.1	1.0	0	
13		0	8.5	363	125	472	37	6.8	1.7	1.0	0	
14		0	5.3	2,570	110	860	35	7.2	1.8	1.0	0	
15		0	3.9	1,760	99	475	33	7.0	1.8	1.0	0	
16		0	2.2	714	138	1,020	32	6.8	1.7	1.0	0	
17		0	2.6	343	246	630	30	6.3	1.6	1.0	0	
18		0	117	227	162	400	29	6.0	1.5	1.0	0	
19		0	45	169	1,670	360	27	6.0	1.4	1.0	0	
20		0	19	137	1,310	320	26	6.2	1.3	1.0	0	
21		0	9.8	113	1,360	264	24	6.3	1.3	1.0	0	
22		0	6.9	96	853	208	23	6.0	1.3	1.0	0	
23		0	9.4	83	733	168	21	5.9	1.3	1.0	0	
24		0	25	76	489	140	20	5.6	1.3	.95	0	
25		0	41	71	358	260	19	5.6	1.3	.90	0	
26		0	37	68	291	153	18	5.4	1.3	.90	0	
27		0	29	65	244	125	17	5.0	1.3	.90	0	
28		0	21	64	209	150	15	4.7	1.2	.90	0	
29		0	13	729	185	97	14	4.3	1.2	.82	0	
30		.12	9.4	845	-----	89	13	4.0	1.2	.73	0	
31		-----	6.9	427	-----	84	-----	3.9	-----	.62	0	-----
TOTAL	0	0.12	3,434.8	10,989.6	14,520	8,130	1,091	222.9	60.5	31.72	2.16	0
MEAN	0	.004	111	355	501	262	36.4	7.19	2.02	1.02	.070	0
MAX	0	.12	748	2,570	2,140	1,020	78	13	3.5	1.2	.55	0
MIN	0	0	0	1.9	99	84	13	3.9	1.2	.62	0	0
AC-FT	0	.2	6,810	21,800	28,800	16,130	2,160	442	120	63	4.3	0

CAL YR 1967 TOTAL 57,084.75 MEAN 156 MAX 2,820 MIN 0 AC-FT 113,200
WTR YR 1968 TOTAL 38,482.80 MEAN 105 MAX 2,570 MIN 0 AC-FT 76,330

PEAK DISCHARGE (BASE, 3,000 CFS)
DATE TIME G.HT. DISCHARGE DATE TIME G.HT. DISCHARGE
12-04 2000 9.86 3,480 01-14 1900 10.50 4,080
01-10 0215 10.57 4,150 02-19 2130 10.27 3,860

EEL RIVER BASIN

439

11-4738. ELK CREEK NEAR HEARST, CALIF.

LOCATION.--Lat 39°38'57", long 123°07'12", in NE $\frac{1}{4}$ sec.30, T.21 N., R.11 W., 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 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 1,197.2 ft above mean sea level (levels by Topographic Division).

EXTREMES.--Maximum discharge during year, 4,210 cfs Jan. 14 (gage height, 12.51 ft); minimum daily, 1.7 cfs Aug. 5-8, Sept. 29, 30.

1964-68: Maximum discharge, 25,000 cfs Dec. 22, 1964 (gage height, 19.8 ft from floodmarks), from rating curve extended above 9,900 cfs on basis of slope-area measurement at gage height 19.8 ft; minimum daily, 0.10 cfs Sept. 24 to Oct. 11, 1964.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	4.0	30	49	243	280	184	42	23	6.0	2.1	3.7
2	17	3.8	38	46	708	229	163	42	22	6.0	2.1	3.5
3	36	3.8	930	35	624	207	150	42	22	6.0	1.9	3.5
4	9.4	3.8	617	31	425	196	141	40	21	6.0	1.8	3.3
5	8.5	3.8	704	30	316	192	132	40	19	6.0	1.7	3.1
6	6.7	3.8	151	28	321	169	113	39	21	5.6	1.7	2.9
7	5.5	3.8	648	27	285	157	108	39	21	5.2	1.7	2.7
8	4.9	3.8	160	27	247	150	103	37	19	4.9	1.7	2.5
9	4.7	4.0	87	194	224	132	101	36	18	4.6	1.8	2.5
10	4.6	4.2	76	1,100	203	108	101	33	18	4.6	1.8	2.4
11	4.6	4.2	59	192	184	101	105	35	17	4.3	1.8	2.4
12	4.6	4.2	54	105	160	420	106	35	16	4.3	1.8	2.2
13	4.4	5.2	48	180	141	321	98	39	16	4.0	1.9	2.2
14	4.4	26	35	1,970	124	343	83	43	15	4.0	2.2	2.2
15	4.4	37	33	1,280	108	270	77	36	14	4.0	2.2	2.2
16	4.2	17	31	592	271	976	72	32	13	4.0	2.2	2.1
17	4.2	13	30	365	709	576	66	31	11	3.7	2.2	2.1
18	4.0	11	76	238	458	419	59	27	11	3.7	2.2	2.1
19	4.0	9.9	51	242	1,470	343	56	28	11	3.7	2.7	1.9
20	4.0	9.0	33	184	1,180	321	52	77	10	3.5	4.2	1.9
21	4.6	8.5	28	169	1,260	305	49	52	9.5	3.3	16	2.1
22	4.6	7.9	27	163	1,010	270	46	52	8.9	3.1	16	2.1
23	4.7	7.9	31	121	1,090	265	45	49	8.3	3.1	8.3	2.1
24	4.6	7.6	46	113	1,370	220	45	48	7.8	2.9	6.5	1.9
25	4.4	7.6	76	115	624	300	43	52	7.4	2.9	5.6	1.9
26	4.4	7.3	85	101	525	290	43	45	6.5	2.7	6.9	1.9
27	4.2	7.9	103	91	419	233	42	42	6.0	2.5	6.0	1.8
28	4.0	7.9	85	98	365	220	42	35	6.0	2.4	5.2	1.8
29	4.0	75	74	766	321	203	42	30	6.0	2.4	4.9	1.7
30	4.0	55	59	523	-----	220	42	27	6.0	2.2	4.0	1.7
31	4.0	-----	54	275	-----	192	-----	26	-----	2.2	3.7	-----
TOTAL	190.0	367.9	4,559	9,450	15,385	8,628	2,509	1,231	410.4	123.8	124.8	70.4
MEAN	6.13	12.3	147	305	531	278	83.6	39.7	13.7	3.99	4.03	2.35
MAX	36	75	930	1,970	1,470	976	184	77	23	6.0	16	3.7
MIN	2.4	3.8	27	27	108	101	42	26	6.0	2.2	1.7	1.7
AC-FT	377	730	9,040	18,740	30,520	17,110	4,980	2,440	814	246	248	140
CAL YR 1967	TOTAL 74,363.9	MEAN 204	MAX 3,700	MIN 2.3	AC-FT 147,500							
WTR YR 1968	TOTAL 43,049.3	MEAN 118	MAX 1,970	MIN 1.7	AC-FT 85,390							

Peak discharge (base, 4,000 cfs).--Jan. 14 (1600 hrs) 4,210 cfs (12.51 ft).

EEL RIVER BASIN

11-4739, MIDDLE FORK EEL RIVER NEAR DOS RIOS, CALIF.

LOCATION.--Lat 39°42'23", long 123°19'27", in NE¼SE¼ sec.5, T.21 N., R.13 W., on right bank 0.6 mile upstream from Eastman Creek, 1.7 miles southeast of Dos Rios, and 1.9 miles upstream from mouth.

DRAINAGE AREA.--745 sq mi.

RECORDS AVAILABLE.--October 1965 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 901.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 11, 1967, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 40,000 cfs Jan. 14 (gage height, 21.54 ft); minimum daily, 13 cfs Aug. 12-14, 17, 18.

1965-68: Maximum discharge, 70,200 cfs Jan. 4, 1966 (gage height, 32.86 ft, from high-water marks); minimum daily, 13 cfs Aug. 12-14, 17, 18, 1968.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

REVISIONS (water year).--1967 report: 1966.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	38	210	652	2,100	2,850	1,740	567	283	82	18	35
2	39	39	213	592	8,350	2,450	1,540	566	263	76	18	31
3	163	38	4,500	526	8,320	2,100	1,410	568	249	70	17	28
4	123	37	3,640	466	4,970	1,800	1,280	575	242	68	17	26
5	80	37	6,110	445	3,930	1,600	1,190	568	223	64	16	24
6	67	37	1,250	420	3,930	1,390	1,100	526	220	58	15	22
7	59	37	3,500	375	3,980	1,250	986	489	216	56	15	22
8	53	37	1,220	395	3,650	1,130	931	462	204	54	15	20
9	47	37	749	826	3,430	1,060	934	444	191	48	15	19
10	43	38	658	11,000	3,300	980	996	436	182	47	14	19
11	40	39	646	2,350	3,000	930	1,080	426	179	44	14	19
12	40	39	616	1,360	2,740	2,080	1,060	410	169	42	13	19
13	40	40	538	2,860	2,660	3,900	942	406	153	40	13	15
14	39	677	410	24,300	2,580	4,700	833	435	149	39	13	20
15	39	484	380	25,400	2,300	3,900	799	385	143	39	14	25
16	37	234	332	9,720	2,680	9,000	756	356	140	38	14	26
17	37	183	360	5,480	5,510	7,000	698	345	133	38	13	24
18	37	160	640	3,650	5,330	5,400	643	340	130	37	13	23
19	36	148	544	2,740	12,600	4,000	614	346	126	34	17	21
20	36	138	395	2,080	20,600	3,100	591	662	121	33	49	19
21	38	131	352	1,890	15,900	2,600	564	533	117	31	263	19
22	41	127	304	1,740	12,100	2,100	529	506	115	30	206	19
23	50	122	380	1,630	12,700	1,800	504	426	110	28	124	19
24	50	118	562	1,520	9,100	1,650	502	391	108	26	90	18
25	45	114	910	1,440	6,700	2,080	494	397	105	25	72	18
26	44	110	1,300	1,320	5,200	2,190	505	389	99	24	74	18
27	41	110	1,870	1,220	4,200	1,830	531	364	95	22	75	18
28	41	116	1,600	1,070	3,750	1,750	525	354	92	20	69	16
29	41	190	1,160	3,490	3,400	1,980	535	337	89	20	55	17
30	40	304	870	6,400	-----	2,000	571	322	86	19	38	16
31	40	-----	721	2,820	-----	1,900	-----	305	-----	19	40	-----
TOTAL	1,549	3,959	36,940	120,177	179,010	82,500	25,383	13,636	4,732	1,271	1,439	635
MEAN	50.0	132	1,192	3,877	6,173	2,661	846	440	158	41.0	46.4	21.2
MAX	163	677	6,110	25,400	20,600	9,000	1,740	662	283	82	263	35
MIN	23	37	210	375	2,100	930	494	305	86	19	13	15
AC-FT	3,070	7,850	73,270	238,400	355,100	163,600	50,350	27,050	9,390	2,520	2,850	1,260

CAL YR 1967 TOTAL 587,816 MEAN 1,610 MAX 31,400 MIN 19 AC-FT 1,166,000
WTR YR 1968 TOTAL 471,231 MEAN 1,288 MAX 25,400 MIN 13 AC-FT 934,700

Peak discharge (base, 35,000 cfs).--Jan. 14 (2030 hrs) 40,000 cfs (21.54 ft).

11-4739.8. GOFORTH CREEK AT DOS RIOS, CALIF.

LOCATION.--Lat 39°42'45", long 123°20'29", in NE¼ sec.6, T.21 N., R.13 W., on left bank at culvert 150 ft upstream from Middle Fork Eel River, and 0.7 mile southeast of Dos Rios.

DRAINAGE AREA.--3.83 sq mi.

RECORDS AVAILABLE.--Water years 1963-65 (annual maximum), October 1965 to September 1968; discontinued as a continuous-record station; converted to a crest-stage partial record station.

GAGE.--Graphic water-stage recorder with rain-gage attachment and crest-stage gage. Datum of gage is 907.45 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Sept. 25, 1962, to Nov. 18, 1965, crest-stage gage only at same site and datum.

EXTREMES.--Maximum discharge during year, 346 cfs Dec. 4 (gage height, 14.30 ft), from rating curve extended above 95 cfs on basis of culvert computations at gage heights 14.15, 15.66, and 36.00 ft; minimum daily, 0.11 cfs Aug. 11, 12.

1962-68: Maximum discharge, 2,340 cfs Dec. 22, 1964 (gage height, 36.00 ft), by computation of maximum flow through culvert.

1965-68: Minimum daily discharge, 0.10 cfs for many days in 1966-67.

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

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.26	1.2	1.9	26	8.7	4.9	1.1	.76	.32	.20	.39
2	1.8	.26	12	1.7	84	7.8	3.7	1.2	.76	.32	.20	.39
3	.60	.26	35	1.7	36	7.2	3.7	1.2	.76	.32	.15	.39
4	.39	.26	56	1.6	23	6.6	3.7	1.1	.76	.32	.20	.39
5	.53	.26	19	1.6	19	6.9	3.4	.95	.76	.32	.15	.39
6	.32	.20	13	1.4	16	6.3	3.2	.95	.68	.32	.15	.32
7	.26	.20	32	1.4	13	6.0	2.8	.85	.68	.26	.15	.32
8	.26	.26	8.1	1.6	11	5.2	2.8	.85	.68	.26	.15	.32
9	.20	.26	5.2	38	9.0	4.9	2.6	.95	.60	.26	.15	.32
10	.20	.26	3.7	43	7.8	4.7	2.3	.95	.60	.26	.20	.39
11	.20	.26	3.0	11	7.2	4.4	2.3	.85	.60	.26	.11	.32
12	.26	.26	2.5	8.1	6.3	26	2.2	.85	.53	.26	.11	.32
13	.32	.44	2.3	36	6.0	17	2.0	.95	.46	.26	.20	.32
14	.32	1.9	2.0	110	5.2	33	2.0	.95	.46	.32	.20	.46
15	.32	.53	2.0	57	4.9	17	1.9	.95	.46	.39	.20	.46
16	.32	.46	1.9	29	5.2	40	1.7	.85	.46	.32	.20	.32
17	.26	.39	2.4	15	6.6	21	1.7	.76	.46	.32	.15	.32
18	.32	.39	7.8	11	4.7	17	1.7	.76	.39	.26	.20	.32
19	.39	.39	3.9	7.5	66	15	1.7	.85	.39	.20	.46	.26
20	.39	.32	2.8	6.3	35	13	1.6	1.1	.32	.26	5.0	.26
21	.53	.32	2.6	5.4	42	12	1.6	1.1	.32	.26	1.9	.26
22	.53	.32	2.8	4.7	29	11	1.6	.95	.32	.26	.85	.26
23	.39	.32	4.9	4.7	30	10	1.4	.85	.39	.32	.68	.26
24	.39	.32	5.2	4.4	20	9.0	1.4	.76	.32	.26	.53	.20
25	.39	.32	3.9	4.2	16	8.7	1.4	1.1	.26	.26	.53	.20
26	.39	.26	3.0	3.9	13	7.8	1.3	.85	.39	.26	.85	.20
27	.39	.39	2.6	3.7	12	7.2	1.2	.76	.32	.20	.53	.20
28	.32	.39	2.5	4.0	9.9	6.3	1.2	.68	.32	.20	.46	.20
29	.26	2.7	2.3	34	9.0	5.7	1.2	.68	.32	.26	.46	.20
30	.26	2.3	2.2	24	-----	5.2	1.2	.76	.39	.26	.46	.20
31	.26	-----	2.0	16	-----	4.7	-----	.76	-----	.20	.39	-----
TOTAL	11.97	15.46	249.8	493.8	572.8	355.3	65.4	28.22	14.92	8.55	16.17	9.16
MEAN	.39	.52	8.06	15.9	19.8	11.5	2.18	.91	.50	.28	.52	.31
MAX	1.8	2.7	56	110	84	40	4.9	1.2	.76	.39	5.0	.46
MIN	.20	.20	1.2	1.4	4.7	4.4	1.2	.68	.26	.20	.11	.20
AC-FT	24	31	495	979	1,140	705	130	56	30	17	32	18
(a)	3.2	3.9	8.7	12.8	5.0	5.4	.1	1.1	0	0	4.2	0

CAL YR 1967 TOTAL 2,748.33 MEAN 7.53 MAX 147 MIN .10 AC-FT 5,450
WTR YR 1968 TOTAL 1,841.55 MEAN 5.03 MAX 110 MIN .11 AC-FT 3,650

PEAK DISCHARGE (BASE, 100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	a	Precipitation, in inches.
12-04	1800	14.30	346	01-14	1300	13.25	234		
12-07	0030	12.75	186	02-02	1330	12.63	176		
01-09	2200	13.30	239	02-19	1830	12.65	178		

EEL RIVER BASIN

11-4745. NORTH FORK EEL RIVER NEAR MINA, CALIF.

LOCATION.--Lat 39°56'18", long 123°20'36", in SW $\frac{1}{4}$ sec.8, T.24 N., R.13 W., on right bank 0.2 mile upstream from county road bridge, 1.4 miles upstream from Asbill Creek, and 2 miles south of Mina.

DRAINAGE AREA.--248 sq mi.

RECORDS AVAILABLE.--August 1953 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,016.8 ft above mean sea level (levels by Topographic Division). Aug. 27, 1953, to Jan. 15, 1954, graphic water-stage recorder and Jan. 16 to June 22, 1954, wire-weight gage, at site 0.4 mile downstream at different datums. June 23, 1954, to Dec. 21, 1964, graphic water-stage recorder and Feb. 7 to July 8, 1965, staff gage at site 0.2 mile downstream at different datums. July 9, 1965, to Aug. 20, 1967, graphic water-stage recorder at site 0.6 mile downstream at datum 15.1 ft lower. Aug. 21, 1967, to Oct. 9, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--15 years, 628 cfs (454,700 acre-ft per year); median of yearly mean discharges, 550 cfs (398,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 21,000 cfs Jan. 14 (gage height, unknown); minimum daily, 1.3 cfs Sept. 6-13.

1953-68: Maximum discharge, 133,000 cfs Dec. 22, 1964 (gage height, 33.6 ft from floodmarks, site and datum then in use), from rating curve extended above 12,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.1 cfs Aug. 30, 31, 1959.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	8.3	185	151	750	700	359	74	39	8.3	3.5	2.0
2	62	5.0	1,160	147	9,000	555	341	72	38	8.3	3.5	2.0
3	61	2.8	6,040	112	5,180	450	281	69	40	7.2	3.5	2.0
4	38	5.0	3,920	109	2,800	383	253	67	39	7.2	3.5	1.7
5	33	5.0	4,610	104	2,500	406	230	66	37	7.2	3.5	1.5
6	31	5.0	1,180	95	2,560	362	210	63	40	7.2	2.8	1.3
7	24	5.0	3,430	90	2,350	331	190	63	39	6.1	2.8	1.3
8	18	5.0	1,120	95	1,900	290	181	61	35	6.1	2.8	1.3
9	14	7.2	595	402	1,550	250	169	58	31	6.1	2.8	1.3
10	12	8.3	430	6,660	1,250	223	157	56	30	6.1	2.8	1.3
11	9.4	2.8	338	1,960	1,000	205	150	54	28	6.1	2.8	1.3
12	8.3	2.8	266	1,010	840	540	142	54	26	5.0	2.8	1.3
13	7.2	6.1	208	2,800	720	1,590	135	61	25	5.0	2.8	1.3
14	6.1	314	145	11,000	645	2,850	126	78	24	5.0	2.8	2.2
15	5.0	101	143	8,300	545	2,270	120	62	23	5.0	2.8	6.1
16	3.5	63	122	4,540	695	2,680	117	56	21	5.0	3.5	9.4
17	2.8	46	115	2,790	1,650	3,150	113	52	19	5.0	5.0	7.2
18	2.8	36	238	1,910	1,120	2,160	109	50	17	5.0	7.2	6.1
19	2.8	31	181	1,130	4,590	1,570	106	52	17	5.0	10	5.0
20	2.2	27	153	816	7,230	1,140	102	95	16	5.0	20	5.0
21	5.0	24	131	655	6,100	912	100	78	15	5.0	49	3.5
22	19	23	124	505	4,940	768	96	84	14	5.0	41	3.5
23	29	20	193	398	4,620	675	94	70	13	5.0	14	3.5
24	20	19	320	338	3,430	560	93	62	12	5.0	9.4	3.5
25	15	17	485	299	2,560	954	90	63	12	3.5	8.3	3.5
26	12	17	434	272	1,850	918	88	65	11	3.5	15	3.5
27	9.4	17	470	255	1,400	695	84	57	10	3.5	25	3.5
28	9.4	25	345	243	1,090	565	80	52	9.4	3.5	18	3.5
29	9.4	280	263	756	876	500	76	46	9.4	3.5	12	2.8
30	12	318	185	1,410	-----	442	74	41	8.3	3.5	6.1	2.8
31	11	-----	167	852	-----	366	-----	41	-----	3.5	2.8	-----
TOTAL	502.6	1,446.3	27,696	50,204	75,741	29,460	4,466	1,922	698.1	165.4	291.8	94.2
MEAN	16.2	48.2	893	1,619	2,612	950	149	62.0	23.3	5.34	9.41	3.14
MAX	62	318	6,040	11,000	9,000	3,150	359	95	40	8.3	49	9.4
MIN	2.2	2.8	115	90	545	205	74	41	8.3	3.5	2.8	1.3
AC-FT	997	2,870	54,930	99,580	150,200	58,430	8,860	3,810	1,380	328	579	187

CAL YR 1967 TOTAL 218,348.8

MEAN 598

MAX 14,000

MIN 2.2

AC-FT 433,100

WTR YR 1968 TOTAL 192,687.4

MEAN 526

MAX 11,000

MIN 1.3

AC-FT 382,200

PEAK DISCHARGE (BASE, 8,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-04	2200	11.35	8,900	02-02	-	-	17,000
01-10	0500	13.77	14,800	02-20	0015	13.65	14,500
01-14	-	-	21,000				

Note.--No gage-height record Jan. 14.

11-4750. EEL RIVER AT FORT SEWARD, CALIF.

LOCATION.--Lat 40°13'05", long 123°37'54", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.8, T.3 S., R.5 E., on right bank at downstream side of bridge, 1.0 mile southeast of Fort Seward, 1.9 miles upstream from Dobbys Creek, and 11.8 miles northeast of Garberville.

DRAINAGE AREA.--2,107 sq mi.

RECORDS AVAILABLE.--September 1955 to September 1968. Prior to October 1965, published as "at Alderpoint."

GAGE.--Digital water-stage recorder. Datum of gage is 217.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Dec. 22, 1964, graphic water-stage recorder at site 7.5 miles upstream at datum 46.55 ft higher. Feb. 2 to Sept. 30, 1965, graphic water-stage recorder at site 7.7 miles upstream at datum 49.42 ft higher.

AVERAGE DISCHARGE.--13 years, 4,617 cfs (3,343,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 79,100 cfs Jan. 15 (gage height, 30.24 ft); minimum daily, 34 cfs Aug. 13-19.

1955-68: Maximum discharge, 561,000 cfs Dec. 22, 1964 (gage height, 87.2 ft from floodmarks, site and datum then in use), from rating curve extended above 110,000 cfs on basis of slope-area measurement at gage height 72.5 ft; minimum daily, 10 cfs Aug. 30 to Sept. 5, 1964.

REMARKS.--Records good. Flow slightly regulated by Lake Pillsbury (see sta. no. 11-4700.) and by diversion through Potter Valley powerhouse (see sta. no. 11-4710.). Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

REVISIONS (water year).--1966 report: 1965.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	98	1,140	1,320	8,800	5,730	3,770	925	435	113	50	99
2	118	97	1,520	1,170	18,700	5,150	3,530	910	414	112	50	87
3	190	94	14,400	1,020	23,700	4,620	2,990	900	405	110	48	87
4	310	92	10,100	890	16,300	4,210	2,690	885	399	109	48	85
5	510	90	18,200	800	12,500	4,040	2,490	880	369	107	48	82
6	380	90	7,000	750	10,800	4,000	2,290	855	351	106	46	72
7	275	90	11,400	694	10,100	3,530	2,100	770	345	105	44	70
8	195	88	6,980	658	8,930	3,120	2,040	720	342	104	42	66
9	143	88	3,850	2,520	7,800	2,780	1,950	686	318	84	42	64
10	122	88	2,650	28,600	7,180	2,470	1,910	658	300	81	42	60
11	123	88	2,170	12,500	6,550	2,250	1,910	646	285	81	42	58
12	123	88	1,800	6,030	5,750	4,220	1,920	634	272	81	41	54
13	123	93	1,490	6,830	5,400	9,250	1,850	646	258	81	34	54
14	123	336	1,210	33,400	4,980	10,800	1,700	686	252	81	34	52
15	122	1,300	972	61,700	4,580	9,550	1,620	702	246	80	34	52
16	119	622	895	28,800	4,410	14,500	1,540	634	242	80	34	52
17	119	342	855	19,700	6,630	16,200	1,460	578	226	76	34	52
18	118	246	2,370	13,500	9,850	11,100	1,340	547	222	76	34	52
19	115	200	3,590	9,220	14,600	8,530	1,280	540	214	76	34	52
20	115	174	2,090	7,180	47,200	6,700	1,220	606	194	72	44	52
21	118	158	1,460	6,100	35,600	5,800	1,170	1,070	186	70	147	52
22	118	144	1,190	5,400	30,100	5,250	1,110	875	171	68	501	52
23	117	137	1,150	4,750	26,900	4,850	1,040	800	167	66	390	52
24	117	128	1,460	4,230	22,100	4,290	996	686	162	62	252	48
25	114	122	1,910	3,900	16,000	4,710	960	630	158	60	179	44
26	114	115	2,530	3,470	12,100	5,550	935	642	155	58	158	42
27	107	114	2,870	3,240	9,610	4,600	925	622	141	58	146	42
28	105	118	3,000	3,050	7,950	4,300	935	570	119	58	144	42
29	102	230	2,400	6,750	6,630	4,080	915	529	115	58	137	41
30	98	1,250	1,910	18,600	-----	4,020	905	484	113	54	126	42
31	97	-----	1,546	11,900	-----	3,960	-----	459	-----	52	108	-----
TOTAL	4,726	6,920	116,102	308,672	401,750	184,160	51,491	21,775	7,576	2,479	3,113	1,759
MEAN	152	231	3,745	9,957	13,850	5,941	1,716	702	253	80.0	100	58.6
MAX	510	1,300	18,200	61,700	47,200	16,200	3,770	1,070	435	113	501	99
MIN	76	88	855	658	4,410	2,250	905	459	113	52	34	41
AC-FT	9,370	13,730	230,300	612,200	796,900	365,300	102,100	43,190	15,030	4,920	6,170	3,490

CAL YR 1967 TOTAL 1,573,076 MEAN 4,310 MAX 72,600 MIN 74 AC-FT 3,120,000

WTR YR 1968 TOTAL 1,110,523 MEAN 3,034 MAX 61,700 MIN 34 AC-FT 2,203,000

Peak discharge (base, 41,000 cfs).--Jan. 15 (0245 hrs) 79,100 cfs (30.24 ft); Feb. 20 (0615 hrs) 59,000 cfs (26.66 ft).

EEL RIVER BASIN

11-4755. SOUTH FORK EEL RIVER NEAR BRANSCOMB, CALIF.

LOCATION.--Lat 39°43'09", long 123°39'06", in NW $\frac{1}{4}$ sec.32, T.22 N., R.16 W., 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,383.63 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 1, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--22 years, 169 cfs (122,400 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,400 cfs Dec. 4 (gage height, 6.29 ft); minimum, 1.5 cfs Oct. 1. 1946-68: Maximum discharge, 20,100 cfs Dec. 22, 1955 (gage height, 16.20 ft), from rating curve extended above 4,600 cfs on basis of slope-area measurement of maximum flow; minimum, 0.90 cfs Sept. 7, 1966.

REMARKS.--Records excellent. No regulation or diversion above station. Records of water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	8.7	108	50	436	190	107	28	17	6.5	2.4	6.9
2	28	7.7	180	47	875	166	98	27	17	5.9	2.3	6.2
3	25	7.7	787	44	910	145	86	25	18	6.4	2.2	6.0
4	12	7.3	804	41	631	131	84	25	17	6.0	2.2	5.9
5	21	7.7	857	38	464	148	79	25	17	5.8	2.2	5.9
6	13	7.7	432	37	359	123	74	24	17	5.5	2.2	5.8
7	9.6	7.0	708	36	287	114	70	24	16	4.8	1.9	5.8
8	7.8	11	409	38	237	104	67	23	15	4.5	1.8	5.6
9	6.9	13	274	265	202	95	62	23	14	4.3	1.7	5.7
10	6.6	11	198	1,150	177	88	59	23	14	4.3	1.7	5.5
11	6.6	9.6	155	508	154	82	58	23	14	4.2	1.7	5.3
12	6.3	8.9	122	341	136	283	55	22	13	4.2	1.7	5.3
13	5.9	9.2	101	320	122	306	52	28	13	4.2	1.7	5.4
14	5.5	87	86	1,100	111	476	50	25	13	4.3	1.6	8.2
15	5.5	37	77	1,680	101	440	49	22	12	4.2	1.7	6.8
16	5.5	24	68	990	101	658	46	21	12	4.0	1.7	6.0
17	5.2	19	75	645	120	559	44	21	11	4.0	1.7	5.5
18	4.8	16	295	469	102	457	42	20	11	3.8	1.6	5.3
19	4.8	14	200	356	604	367	41	24	9.6	3.5	3.1	4.8
20	4.8	13	160	277	935	295	40	42	9.7	3.4	23	4.8
21	19	12	134	226	1,150	244	38	32	9.5	3.4	51	4.5
22	26	11	116	187	995	212	37	28	8.2	3.3	21	4.5
23	16	11	103	159	920	188	35	24	9.1	3.1	13	4.7
24	13	10	95	137	686	161	35	23	8.2	2.8	10	4.5
25	11	10	90	122	515	224	34	34	7.9	2.6	9.8	4.1
26	10	9.6	82	112	400	183	32	28	7.7	2.7	17	4.1
27	9.6	10	75	107	318	161	32	24	7.0	2.4	13	3.9
28	11	12	68	117	260	144	32	22	6.6	2.5	11	3.9
29	11	131	62	619	219	131	31	20	6.6	2.5	9.0	3.9
30	9.6	158	58	731	-----	120	30	19	6.8	2.4	8.0	3.9
31	9.1	-----	53	518	-----	110	-----	18	-----	2.4	7.2	-----
TOTAL	331.6	701.1	7,032	11,467	12,527	7,105	1,599	767	357.9	123.9	230.1	158.7
MEAN	10.7	23.4	227	370	432	229	53.3	24.7	11.9	4.00	7.42	5.29
MAX	28	158	857	1,680	1,150	658	107	42	18	6.5	51	8.2
MIN	1.5	7.0	53	36	101	82	30	18	6.6	2.4	1.6	3.9
AC-FT	658	1,390	13,950	22,740	24,850	14,090	3,170	1,520	710	246	456	315

CAL YR 1967	TOTAL	53,279.5	MEAN	146	MAX	2,470	MIN	1.3	AC-FT	105,700
WTR YR 1968	TOTAL	42,400.3	MEAN	116	MAX	1,680	MIN	1.5	AC-FT	84,100

PEAK DISCHARGE (BASE, 2,000 CFS)					
DATE	TIME	G.HT.	DISCHARGE	DATE	TIME
12-04	1945	6.29	2,400	01-15	0330
01-10	0030	5.86	2,060	06.02	2,190

11-4755.6, ELDER CREEK NEAR BRANSCOMB, CALIF.
(Hydrologic bench-mark station)

LOCATION.--Lat 39°43'47", long 123°38'34", in NW¼NE¼ sec.29, T.22 N., R.16 W., on right bank 0.2 mile upstream from mouth and 5.3 miles north of Branscomb.
Rain gage No. 1: Lat 39°43'50", long 123°38'07", in NW¼NW¼ sec.28, T.22 N., R.16 W., altitude, 1,440 ft at site 0.5 mile east of gaging station.
Rain gage No. 2: Lat 39°42'36", long 123°37'03", in NW¼SW¼ sec.34, T.22 N., R.16 W., altitude, 2,680 ft at site 2 miles southeast of gaging station.

DRAINAGE AREA.--6.50 sq mi.

RECORDS AVAILABLE.--October 1967 to September 1968.

GAGE.--Digital water-stage recorder and two recording and storage-type precipitation gages. Datum of gage is 1,391.08 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

EXTREMES.--Maximum discharge during year, 389 cfs Jan. 15 (gage height, 6.01 ft); minimum daily, 0.82 cfs Aug. 13.

Flood of Dec. 22, 1964, reached a stage of 11.41 ft, from floodmarks (discharge, 3,660 cfs, by slope-area measurement of maximum flow).

REMARKS.--Records good. No regulation; small diversion above station for domestic use. Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	2.2	10	11	56	38	21	6.3	3.8	1.8	.86	1.4
2	3.9	2.2	20	10	90	33	19	6.1	3.8	1.7	.86	1.3
3	2.8	2.2	39	10	150	29	17	6.0	3.8	1.7	.86	1.3
4	2.0	2.2	70	10	115	26	17	6.0	3.6	1.6	.86	1.2
5	3.3	2.2	81	9.1	87	27	16	5.8	3.6	1.5	.86	1.2
6	2.9	2.2	62	8.3	75	25	15	5.8	3.6	1.5	.86	1.2
7	2.5	2.2	102	8.0	64	22	14	5.6	3.6	1.4	.86	1.2
8	2.3	2.7	66	8.0	59	20	14	5.4	3.3	1.4	1.1	1.2
9	2.2	2.7	47	37	59	19	13	5.3	3.2	1.3	.94	1.2
10	1.8	2.6	34	136	52	17	13	5.2	3.1	1.3	.94	1.1
11	1.8	2.4	26	77	38	16	12	5.1	3.0	1.3	.86	1.2
12	1.7	2.4	21	55	33	36	12	5.0	2.9	1.3	.84	1.2
13	1.6	2.6	18	52	30	44	12	5.5	2.9	1.3	.82	1.3
14	1.5	9.8	16	185	27	85	11	5.2	2.9	1.3	1.1	1.4
15	1.5	5.6	14	315	24	89	10	5.0	2.8	1.3	1.1	1.3
16	1.4	4.1	13	198	24	101	10	4.9	2.7	1.3	1.1	1.2
17	1.3	3.4	14	130	27	98	10	4.7	2.6	1.3	1.0	1.1
18	1.3	3.1	22	90	24	85	9.6	4.6	2.4	1.2	1.0	1.1
19	1.2	2.8	20	76	67	69	9.3	5.1	2.3	1.2	1.5	1.1
20	1.2	2.7	17	56	126	58	8.9	6.4	2.3	1.2	3.9	1.1
21	3.1	2.6	15	49	163	49	8.6	5.6	2.3	1.1	5.6	1.1
22	3.1	2.4	14	41	150	44	8.3	5.1	2.2	1.1	4.1	1.1
23	2.8	2.3	13	38	138	38	7.8	4.7	2.2	1.0	2.5	1.1
24	2.4	2.3	13	38	111	33	7.8	4.7	2.2	.96	2.0	1.1
25	2.3	2.3	14	38	89	37	7.7	4.8	2.1	.91	1.9	1.1
26	2.2	2.2	15	38	70	31	7.3	4.8	2.0	1.0	2.3	1.0
27	2.2	2.3	15	38	59	29	7.3	4.6	1.8	1.0	2.1	1.0
28	2.3	3.1	14	38	50	26	7.1	4.3	1.8	1.0	1.9	.96
29	2.3	16	13	49	44	24	6.7	4.1	1.8	.94	1.7	.86
30	2.3	18	13	70	-----	23	6.5	4.0	1.8	.94	1.6	.86
31	2.2	-----	12	66	-----	21	-----	3.9	-----	.94	1.5	-----
TOTAL	66.30	115.8	863	1,984.4	2,101	1,292	338.9	159.6	82.4	38.79	49.42	34.48
MEAN	2.14	3.86	27.8	64.0	72.4	41.7	11.3	5.15	2.75	1.25	1.59	1.15
MAX	3.9	18	102	315	163	101	21	6.4	3.8	1.8	5.6	1.4
MIN	.90	2.2	10	8.0	24	16	6.5	3.9	1.8	.91	.82	.86
AC-FT	132	230	1,710	3,940	4,170	2,560	672	317	163	77	98	68
(a)	5.5	6.3	13.6	18.2	10.1	8.9	.1	2.3	0	0	4.2	.4
(b)	5.9	6.9	14.6	18.0	10.6	9.1	.4	2.5	.1	0	4.8	.4

CAL YR 1967 TOTAL - MEAN - MAX - MIN - AC-FT -
WTR YR 1968 TOTAL 7,126.09 MEAN 19.5 MAX 315 MIN .82 AC-FT 14,130

Peak discharge (base, 200 cfs).--Jan. 9 (2200 hrs) 210 cfs (5.46 ft); Jan. 15 (0400 hrs) 389 cfs (6.01 ft).

- a Precipitation, in inches, at rain gage No. 1.
- b Precipitation, in inches, at rain gage No. 2.

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,427.42 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 24, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--11 years, 148 cfs (107,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 4,070 cfs Dec. 4 (gage height, 11.08 ft); no flow Aug. 13.

1957-68: Maximum discharge, 14,500 cfs Dec. 22, 1964 (gage height, 21.3 ft from floodmarks), from rating curve extended above 4,300 cfs on basis of slope-area measurement at gage height 22.9 ft; no flow at times in 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 excellent. No regulation or diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	3.2	58	36	483	118	81	20	9.4	2.2	.16	1.5
2	23	3.2	179	34	1,560	103	74	20	9.7	2.4	.14	1.4
3	14	3.0	285	32	769	90	61	18	10	2.1	.10	1.4
4	6.9	3.0	768	30	462	84	64	18	10	2.0	.07	1.4
5	12	3.3	841	29	333	107	61	17	9.8	1.7	.10	1.5
6	7.2	3.3	343	28	253	87	57	17	10	2.0	.08	1.7
7	5.3	3.2	814	28	199	88	53	17	9.3	1.5	.07	1.7
8	4.6	3.5	263	32	165	76	51	17	8.9	1.1	.07	1.9
9	4.0	4.2	144	572	142	67	49	16	7.9	1.3	.09	1.8
10	3.8	4.2	103	1,250	126	61	46	16	6.9	1.1	.08	1.9
11	3.7	4.0	81	403	110	57	44	16	6.7	.87	.05	2.0
12	3.5	4.0	67	248	98	558	43	16	6.9	.87	.03	2.0
13	3.3	4.7	55	597	89	400	40	19	6.8	.97	0	2.1
14	3.2	55	49	1,180	81	659	38	19	7.0	.98	.04	3.1
15	3.0	14	44	1,100	75	393	37	18	6.9	1.0	.09	2.9
16	2.7	8.0	41	926	99	873	36	17	6.5	1.1	.08	2.2
17	2.6	6.7	72	544	165	497	34	16	6.4	1.0	.11	1.7
18	2.6	5.8	520	388	104	340	33	16	5.9	.99	.16	1.5
19	2.5	5.1	164	285	214	260	32	18	5.1	.70	1.3	1.4
20	2.5	4.7	103	217	340	212	31	21	4.9	.52	9.2	1.4
21	3.7	4.7	80	177	829	177	29	21	4.5	.45	52	1.5
22	6.7	4.6	72	149	758	161	28	20	3.9	.37	14	1.5
23	4.9	4.4	66	127	698	149	27	17	3.7	.31	6.6	1.5
24	4.2	4.2	63	113	456	125	27	16	3.8	.70	4.0	1.4
25	3.8	4.2	61	104	337	204	26	21	3.6	.80	4.1	1.3
26	3.7	4.2	58	99	251	140	25	18	2.8	.66	10	1.2
27	3.5	4.2	53	101	193	115	25	16	2.6	.45	6.2	1.1
28	3.7	4.9	49	108	158	101	23	14	2.4	.32	4.2	1.2
29	3.7	104	45	953	133	92	22	16	2.3	.30	3.2	2.2
30	3.5	108	41	694	-----	85	21	12	2.1	.31	2.3	2.0
31	3.2	-----	38	441	-----	79	-----	9.9	-----	.19	1.7	-----
TOTAL	155.41	393.5	5,620	11,025	9,680	6,558	1,218	532.9	186.7	31.26	120.32	51.4
MEAN	5.01	13.1	181	356	334	212	40.6	17.2	6.22	1.01	3.88	1.71
MAX	23	108	841	1,250	1,560	873	81	21	10	2.4	52	3.1
MIN	.41	3.0	38	28	75	57	21	9.9	2.1	.19	0	1.1
AC-FT	308	781	11,150	21,870	19,200	13,010	2,420	1,060	370	62	239	102

CAL YR 1967 TOTAL 48,636.68 MEAN 133 MAX 2,320 MIN .34 AC-FT 96,470
WTR YR 1968 TOTAL 35,572.49 MEAN 97.2 MAX 1,560 MIN 0 AC-FT 70,560

Peak discharge (base, 5,000 cfs).--No peak above base.

11-4758. SOUTH FORK EEL RIVER AT LEGGETT, CALIF.

LOCATION.--Lat 39°52'30", long 123°43'10", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.3, T.23 N., R.17 W., on right bank near Standish-Hickey State Park, 0.2 mile upstream from Rock Creek, and 0.5 mile northwest of Leggett.

DRAINAGE AREA.--248 sq mi.

RECORDS AVAILABLE.--October 1965 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 693.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

EXTREMES.--Maximum discharge during year, 16,000 cfs Jan. 15 (gage height, unknown); minimum daily, 21 cfs July 23, 24, 29, 30.

1965-68: Maximum discharge, 72,700 cfs Jan. 4, 1966 (gage height, 25.4 ft from floodmarks), from rating curve extended above 21,000 cfs on basis of slope-area measurement at gage height 26.13 ft; minimum daily, 15 cfs Oct. 15, 1966.

Flood of Dec. 22, 1964, reached a stage of 26.13 ft from floodmarks (discharge, 78,700 cfs by slope-area measurement of maximum flow).

REMARKS.--Records excellent. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	51	894	325	2,550	1,150	560	165	102	29	22	32
2	94	48	1,800	309	6,270	1,020	536	167	101	27	23	30
3	213	48	6,430	293	5,520	922	491	165	99	26	22	27
4	99	48	4,720	280	3,480	863	455	157	99	26	23	26
5	139	48	5,540	270	2,440	890	437	155	94	34	27	24
6	102	48	2,260	263	1,960	832	418	150	90	42	27	24
7	66	48	4,020	254	1,600	796	422	146	90	42	26	24
8	57	50	2,130	259	1,330	750	410	145	83	42	27	24
9	51	58	1,360	959	1,190	704	394	141	81	37	29	25
10	46	60	1,030	6,520	1,060	670	374	139	77	36	30	26
11	45	54	834	2,390	942	642	358	139	73	34	27	26
12	43	49	732	1,490	854	1,600	342	139	70	34	27	26
13	42	52	640	1,590	781	1,840	327	144	68	37	27	28
14	41	409	560	6,120	720	2,750	309	150	66	33	31	34
15	40	240	485	9,800	675	2,320	302	140	65	26	31	34
16	38	135	455	5,540	675	3,530	288	133	63	26	31	32
17	37	103	600	3,880	821	2,930	278	128	60	26	31	30
18	37	89	1,680	2,560	741	2,230	267	125	55	25	31	30
19	37	87	1,200	1,910	3,030	1,760	250	127	52	25	37	29
20	37	87	910	1,610	5,380	1,480	247	180	52	24	93	28
21	71	88	760	1,360	6,020	1,260	234	182	51	25	237	28
22	128	89	660	1,180	5,350	1,100	224	174	47	23	110	27
23	100	100	580	1,060	4,690	1,010	210	145	41	21	58	27
24	76	110	530	976	3,540	903	207	132	39	21	45	26
25	64	120	490	905	2,660	1,030	201	146	37	22	40	26
26	59	123	460	857	2,080	927	190	152	35	23	53	25
27	55	138	431	843	1,700	812	182	137	33	23	56	25
28	63	165	410	869	1,480	740	182	127	31	23	46	24
29	64	710	386	3,090	1,310	685	172	116	30	21	39	24
30	58	1,050	362	4,930	-----	635	167	113	30	21	36	23
31	54	-----	340	3,040	-----	595	-----	104	-----	23	32	-----
TOTAL	2,082	4,505	43,689	65,732	70,849	39,376	9,434	4,463	1,914	877	1,374	814
MEAN	67.2	150	1,409	2,120	2,443	1,270	314	144	63.8	28.3	44.3	27.1
MAX	213	1,050	6,430	9,800	6,270	3,530	560	182	102	42	237	34
MIN	26	48	340	254	675	595	167	104	30	21	22	23
AC-FT	4,130	8,940	86,660	130,400	140,500	78,100	18,710	8,850	3,800	1,740	2,730	1,610
CAL YR 1967	TOTAL 301,410		MEAN 826		MAX 14,000		MIN 22		AC-FT 597,800			
WTR YR 1968	TOTAL 245,109		MEAN 670		MAX 9,800		MIN 21		AC-FT 486,200			

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-04	2230	13.73	12,100	01-29	2230	11.95	8,010
01-10	0145	13.53	11,600	02-02	1900	12.17	8,470
01-15	-	-	16,000	02-19	2315	12.72	9,680

Note.--No gage-height record Jan. 15.

EEL RIVER BASIN

11-4759.4. EAST BRANCH SOUTH FORK EEL RIVER NEAR GARBERVILLE, CALIF.

LOCATION.--Lat 40°04'27", long 123°46'08", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.31, T.4 S., R.4 E., on left bank just upstream from Panther Canyon, 1.9 miles upstream from mouth, and 2.3 miles southeast of Garberville.

DRAINAGE AREA.--74.3 sq mi.

RECORDS AVAILABLE.--June 1966 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 385.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

EXTREMES.--Maximum discharge during year, 12,400 cfs Jan. 14 (gage height, 9.75 ft), from rating curve extended above 3,000 cfs; minimum daily, 2.8 cfs Sept. 30.
1966-68: Maximum discharge, 14,200 cfs Dec. 4, 1966 (gage height, 10.09 ft), from rating curve extended above 3,000 cfs; minimum daily, 2.8 cfs Sept. 30, 1968.

REMARKS.--Records excellent. No regulation; small diversion above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	8.5	155	25	590	282	123	31	18	9.6	4.5	7.0
2	86	7.5	1,130	24	3,410	250	120	30	18	9.6	4.5	7.0
3	76	7.5	2,360	22	1,670	218	108	30	18	9.6	4.5	6.5
4	35	7.5	1,390	20	899	198	105	30	18	9.6	4.0	6.0
5	78	7.5	1,290	22	688	226	100	28	18	9.6	3.5	6.0
6	41	7.5	535	21	524	192	92	28	18	9.6	3.5	6.0
7	25	7.5	1,280	19	400	186	84	28	18	9.6	3.5	5.5
8	21	9.6	361	19	346	165	80	27	18	9.2	3.5	5.0
9	16	9.6	191	2,000	306	150	76	26	17	8.0	3.5	4.5
10	15	9.6	121	2,160	278	138	72	25	17	8.0	3.5	4.5
11	10	8.8	96	578	246	133	67	24	16	8.0	3.5	4.5
12	10	8.5	78	358	218	1,020	66	24	17	7.5	3.5	4.5
13	10	15	58	754	201	727	63	32	16	8.0	3.5	4.5
14	9.6	173	44	8,110	186	1,150	60	33	15	7.0	3.5	5.5
15	9.3	56	38	5,300	174	670	58	27	14	7.0	4.0	5.5
16	8.8	33	34	2,020	177	1,450	56	25	14	6.5	4.0	5.5
17	8.5	23	40	917	234	833	54	24	13	6.5	4.0	5.0
18	8.0	17	253	476	198	545	52	24	13	6.5	4.0	4.5
19	7.5	14	124	302	2,480	382	50	25	13	6.5	5.0	4.5
20	7.5	12	82	238	1,630	317	49	39	13	6.5	11	4.5
21	9.6	10	67	192	2,400	283	46	37	13	6.5	25	4.0
22	14	9.3	60	162	1,740	228	45	37	12	6.0	20	4.0
23	13	9.3	58	138	1,580	200	44	31	12	6.0	9.7	3.5
24	11	8.8	59	123	917	170	44	27	12	6.0	9.8	3.5
25	9.6	8.0	55	115	716	218	43	30	11	6.0	8.3	3.5
26	9.2	8.0	51	105	536	206	42	32	10	5.5	14	3.5
27	8.8	21	46	103	435	173	40	28	10	5.5	12	3.5
28	11	31	39	168	362	155	38	25	9.6	5.5	11	3.5
29	12	205	35	1,810	318	143	35	24	9.6	5.0	9.7	3.0
30	10	284	31	926	-----	134	34	21	9.6	5.0	8.6	2.8
31	9.3	-----	28	518	-----	124	-----	18	-----	5.0	7.2	-----
TOTAL	604.8	1,037.0	10,189	27,745	23,859	11,266	1,946	870	430.8	224.4	219.8	141.3
MEAN	19.5	34.6	329	895	823	363	64.9	28.1	14.4	7.24	7.09	4.71
MAX	86	284	2,360	8,110	3,410	1,450	123	39	18	9.6	25	7.0
MIN	5.1	7.5	28	19	174	124	34	18	9.6	5.0	3.5	2.8
AC-FT	1,200	2,060	20,210	55,030	47,320	22,350	3,860	1,730	854	445	436	280
CAL YR 1967	TOTAL	78,798.3	MEAN	216	MAX	4,290	MIN	3.0	AC-FT	156,300		
WTR YR 1968	TOTAL	78,533.1	MEAN	215	MAX	8,110	MIN	2.8	AC-FT	155,800		

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-03	0045	8.11	5,240	01-29	1800	8.52	6,590
01-09	2030	9.54	11,300	02-02	1530	8.41	6,150
01-14	0800	9.75	12,400	02-19	2115	8.80	7,710

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 217.57 ft 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. Oct. 31, 1944, to Dec. 22, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--29 years, 1,822 cfs (1,319,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 34,100 cfs Jan. 15 (gage height, 18.39 ft); minimum daily, 40 cfs Sept. 30.

1940-68: Maximum discharge, 199,000 cfs Dec. 22, 1964 (gage height, 46.0 ft from floodmarks), from rating curve extended above 52,000 cfs on basis of slope-area measurement at gage height 42.7 ft; minimum observed, 9 cfs Oct. 17, 1944.

REMARKS.--Records excellent. Occasional storage and release for recreation use during summer months at Benbow Dam. No diversion above station. Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	92	1,270	652	4,730	2,070	1,130	342	204	87	55	71
2	153	88	1,950	638	10,200	1,830	1,110	333	198	88	54	65
3	440	84	9,300	617	12,000	1,640	1,030	322	193	84	54	62
4	322	81	5,950	604	7,310	1,500	1,100	311	192	84	54	58
5	286	79	8,700	586	5,400	1,550	937	298	190	82	54	55
6	270	79	3,950	574	4,230	1,490	888	294	187	81	53	55
7	196	76	6,310	556	3,420	1,390	839	287	184	81	53	54
8	150	81	3,800	562	2,840	1,270	799	278	178	78	53	54
9	123	90	2,340	2,450	2,420	1,170	763	272	173	69	53	53
10	107	99	1,690	12,800	2,120	1,100	730	253	165	64	53	51
11	97	101	1,370	5,510	1,870	1,050	699	253	161	68	53	60
12	94	99	1,160	3,260	1,670	2,740	667	253	152	68	53	76
13	86	114	1,030	3,900	1,530	4,600	638	273	152	65	53	95
14	82	624	934	19,300	1,410	5,820	611	287	151	67	53	110
15	79	680	862	25,300	1,310	5,210	587	265	148	67	55	82
16	78	386	798	12,900	1,290	6,700	568	255	145	67	56	62
17	74	267	782	7,410	1,630	6,070	548	244	143	64	54	55
18	73	208	1,880	5,230	1,610	4,700	532	239	137	60	56	53
19	71	178	1,860	3,880	4,870	3,690	515	240	129	59	60	61
20	67	158	1,390	2,980	11,700	2,950	501	279	127	62	65	49
21	74	140	1,180	2,420	11,700	2,460	484	320	119	62	138	48
22	125	130	1,080	2,010	10,500	2,110	463	342	104	59	298	47
23	173	125	1,030	1,690	9,450	1,930	450	295	118	59	190	47
24	153	116	998	1,480	6,960	1,690	438	240	113	58	145	45
25	123	110	958	1,320	5,320	1,950	422	224	108	56	110	43
26	107	105	918	1,200	4,190	1,910	409	237	104	55	123	43
27	97	110	862	1,180	3,350	1,600	395	229	97	56	138	43
28	97	133	806	1,570	2,780	1,460	381	204	94	56	125	42
29	103	415	750	5,070	2,350	1,350	367	226	90	55	114	41
30	105	1,640	708	9,500	-----	1,260	353	220	89	55	95	40
31	99	-----	673	5,790	-----	1,170	-----	211	-----	55	78	-----
TOTAL	4,153	6,688	67,289	142,939	140,160	77,430	19,354	8,326	4,345	2,071	2,648	1,720
MEAN	134	223	2,171	4,611	4,833	2,498	645	269	145	66.8	85.4	57.3
MAX	440	1,640	9,300	25,300	12,000	6,700	1,130	342	204	88	298	110
MIN	49	76	673	556	1,290	1,050	353	204	89	55	53	40
AC-FT	8,240	13,270	133,500	283,500	278,000	153,600	38,390	16,510	8,620	4,110	5,250	3,410
CAL YR 1967	TOTAL 607,106		MEAN 1,663		MAX 30,900		MIN 41		AC-FT 1,204,000			
WTR YR 1968	TOTAL 477,123		MEAN 1,304		MAX 25,300		MIN 40		AC-FT 946,400			

PEAK DISCHARGE (BASE, 15,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-10	0845	13.74	17,700	02-03	0130	12.84	15,100
01-15	0115	18.39	34,100	02-20	0415	13.23	16,200

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.

DRAINAGE AREA.--28.1 sq mi.

RECORDS AVAILABLE.--October 1960 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 269.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Dec. 22, 1964, graphic water-stage recorder, and Jan. 14 to Aug. 10, 1965, wire-weight gage at site 150 ft downstream at datum 8.90 ft lower.

AVERAGE DISCHARGE.--8 years, 116 cfs (83,980 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,710 cfs Jan. 14 (gage height, 10.71 ft); minimum daily, 2.1 cfs Sept. 17, 18.
1960-68: Maximum discharge, 6,520 cfs Dec. 22, 1964 (gage height, 20.6 ft from floodmarks, site and datum then in use), from rating curve extended above 2,100 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.90 cfs Oct. 20, 1964.

REMARKS.--Records good. Minor diversions above station for domestic use.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	4.9	58	124	520	148	81	20	9.6	4.9	4.3	2.8
2	6.0	4.6	172	119	1,080	133	72	20	10	4.6	4.3	2.3
3	22	4.3	167	116	990	120	68	19	11	5.2	4.3	2.5
4	17	4.3	587	112	684	112	61	18	10	5.5	4.0	2.3
5	15	4.6	430	111	541	111	58	18	11	4.9	4.0	3.1
6	14	4.3	338	109	395	100	52	19	11	4.9	4.0	3.1
7	10	4.3	496	109	328	93	49	17	10	4.9	4.3	2.5
8	8.2	13	365	112	210	85	46	16	9.1	4.9	4.3	2.8
9	6.7	8.7	300	499	181'	80	44	16	9.1	4.9	4.3	2.5
10	5.9	7.3	246	481	154	74	41	16	8.7	4.9	4.3	2.8
11	5.3	6.4	207	302	132	69	38	16	8.2	5.3	4.3	2.5
12	4.9	6.0	170	254	116	282	37	16	8.2	5.2	4.3	2.3
13	4.6	23	146	820	103	308	35	30	7.8	4.9	4.3	2.3
14	4.6	106	132	2,240	90	496	33	23	7.3	4.6	4.3	2.3
15	4.3	34	125	2,010	80	460	32	17	6.9	4.3	4.3	2.3
16	4.3	24	112	1,480	90	728	31	15	6.0	4.3	4.6	2.3
17	4.3	18	133	1,150	112	676	30	14	5.5	3.4	4.3	2.1
18	4.3	16	294	825	93	545	29	14	5.5	3.4	4.3	2.1
19	4.0	14	222	615	189	418	28	22	5.5	3.7	4.3	2.3
20	4.0	13	199	350	284	336	26	24	5.2	3.7	32	2.8
21	11	11	191	288	696	246	26	32	4.9	3.4	17	5.2
22	7.8	11	184	202	732	192	25	24	4.6	4.6	8.2	5.1
23	6.0	10	178	178	692	165	26	21	5.2	4.6	4.9	5.2
24	5.2	9.1	162	167	534	144	26	18	4.9	5.5	4.0	5.4
25	5.2	9.1	152	164	427	175	23	19	4.6	5.5	6.9	5.6
26	5.2	9.1	148	157	330	138	23	18	4.6	5.9	15	5.5
27	4.9	13	140	148	270	117	23	15	4.6	4.6	7.3	5.2
28	6.4	14	136	157	216	101	22	14	4.9	4.0	4.3	5.2
29	5.5	82	132	460	164	95	20	11	4.9	4.3	3.4	5.2
30	5.2	77	128	636	-----	87	20	11	5.2	4.0	3.1	4.8
31	5.2	-----	125	524	-----	80	-----	10	-----	4.3	3.1	-----
TOTAL	219.5	566.0	6,575	15,019	10,433	6,914	1,125	563	214.0	143.1	190.3	102.4
MEAN	7.08	18.9	212	484	360	223	37.5	18.2	7.13	4.62	6.14	3.41
MAX	22	106	587	2,240	1,080	728	81	32	11	5.9	32	5.6
MIN	2.5	4.3	58	109	80	69	20	10	4.6	3.4	3.1	2.1
AC-FT	435	1,120	13,040	29,790	20,690	13,710	2,230	1,120	424	284	377	203

CAL YR 1967 TOTAL 45,074.0 MEAN 123 MAX 2,000 MIN 1.6 AC-FT 89,400
NTR YR 1968 TOTAL 42,064.3 MEAN 115 MAX 2,240 MIN 2.1 AC-FT 83,430

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.FT.	DISCHARGE	DATE	TIME	G.FT.	DISCHARGE
12-04	1800	9.18	1,520	02-02	1700	9.19	1,520
01-09	2000	8.82	1,300	02-21	0330	8.31	1,030
01-14	0415	10.71	2,710	03-16	0530	8.41	1,080

11-4770. EEL RIVER AT SCOTIA, CALIF.
(International Hydrological Decade Station)

LOCATION.--Lat 40°29'30", long 124°05'55", in SW 1/4 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 1968. Monthly discharge only for some periods and yearly estimates for 1915-16, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 35.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to September 1934, staff gage, September 1934 to Dec. 12, 1940, wire-weight gage, and Dec. 12, 1940, to Oct. 14, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--58 years, 7,072 cfs (5,120,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 148,000 cfs Jan. 15 (gage height, 32.36 ft); minimum daily, 123 cfs Sept. 11.

1910-68: Maximum discharge, 752,000 cfs Dec. 23, 1964 (gage height, 72.0 ft from floodmarks), from rating curve extended above 220,000 cfs on basis of maximum flow at upstream stations; minimum observed, 10 cfs Aug. 12-14, 1924.

REMARKS.--Records good. Flow slightly regulated by Lake Pillsbury (see sta. no. 11-4700.) and by diversion through Potter Valley powerhouse (see sta. no. 11-4710.). Records of chemical analyses, water temperatures, suspended-sediment loads, and sediment and turbidity data for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	247	3,710	2,380	19,200	10,800	5,610	1,420	835	289	130	270
2	212	246	3,680	2,170	34,400	8,810	5,410	1,430	799	277	129	245
3	488	246	12,900	1,990	52,000	7,720	4,720	1,400	768	276	128	220
4	716	228	20,700	1,850	37,500	6,850	4,270	1,370	752	268	127	208
5	882	233	34,200	1,710	24,500	6,560	3,960	1,350	762	275	126	171
6	821	220	17,700	1,650	20,200	6,530	3,650	1,320	739	266	127	161
7	652	219	18,000	1,580	17,800	5,920	3,400	1,280	711	254	128	154
8	506	243	17,300	1,540	15,500	5,330	3,210	1,210	690	247	129	157
9	392	264	9,500	1,550	13,500	4,800	3,070	1,160	684	235	131	148
10	346	261	6,310	37,400	12,900	4,360	2,960	1,130	639	226	128	130
11	342	273	5,060	28,300	10,900	4,030	2,890	1,110	603	212	130	123
12	285	261	4,100	13,300	9,640	6,070	2,840	1,100	583	203	126	167
13	259	320	3,480	13,600	8,700	16,400	2,740	1,130	561	196	125	302
14	244	1,200	2,860	60,500	8,000	20,700	2,560	1,210	543	191	136	352
15	237	1,970	2,400	113,000	7,430	20,700	2,400	1,200	531	180	131	259
16	228	2,030	2,120	60,200	7,040	24,400	2,290	1,130	519	176	131	196
17	217	1,260	2,040	40,000	8,560	33,700	2,210	1,040	500	170	128	164
18	204	885	4,120	26,800	13,100	22,800	2,120	986	481	164	135	146
19	197	692	7,280	18,700	15,800	16,700	1,990	982	466	159	140	180
20	192	573	5,170	13,900	74,200	13,000	1,910	1,060	443	156	182	167
21	201	502	3,750	11,400	65,100	10,900	1,860	1,250	411	151	243	149
22	226	438	3,080	9,820	59,500	9,430	1,800	1,580	399	152	386	197
23	265	383	2,850	8,520	51,400	8,650	1,730	1,380	370	141	860	136
24	323	345	2,960	7,640	44,400	7,960	1,670	1,260	371	143	642	134
25	325	321	3,270	7,010	31,600	8,200	1,620	1,130	352	140	533	199
26	302	306	3,710	6,560	23,800	9,430	1,560	1,060	341	138	440	298
27	291	327	3,970	6,140	19,000	7,960	1,530	1,090	327	136	404	252
28	285	340	4,150	6,170	15,700	7,080	1,510	1,030	312	134	374	154
29	279	731	3,720	13,000	13,300	6,580	1,480	946	299	132	350	137
30	275	2,610	3,140	37,000	-----	6,330	1,430	921	298	131	315	134
31	261	-----	2,740	25,100	-----	6,070	-----	876	-----	130	290	-----
TOTAL	10,602	18,174	219,970	580,480	733,670	334,770	80,400	36,541	16,089	5,948	7,484	5,710
MEAN	342	606	7,096	18,730	25,300	10,800	2,680	1,179	536	192	241	190
MAX	882	2,610	34,200	113,000	74,200	33,700	5,610	1,580	835	289	860	352
MIN	149	219	2,040	1,540	7,040	4,030	1,430	876	298	130	125	123
AC-FT	21,030	36,050	436,300	1,151M	1,455M	664,000	159,500	72,480	31,910	11,800	14,840	11,330

CAL YR 1967 TOTAL 2,636,613 MEAN 7,224 MAX 130,000 MIN 130 AC-FT 5,230,000
WTR YR 1968 TOTAL 2,049,838 MEAN 5,601 MAX 113,000 MIN 123 AC-FT 4,066,000

Peak discharge (base, 72,000 cfs).--Jan. 15 (0715 hrs) 148,000 cfs (32.36 ft); Feb. 20 (1145 hrs) 90,000 cfs (26.22 ft).

EEL RIVER BASIN

11-4775. VAN DUZEN RIVER NEAR DINSMORES, CALIF.

LOCATION.--Lat 40°29'05", long 123°39'25", in NW¼ sec.7, T.1 N., R.5 E., 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.

RECORDS AVAILABLE.--August 1953 to September 1958, October 1963 to September 1968.

GAGE.--Digital water-stage recorder. 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, graphic water-stage recorder at site 1.7 miles upstream at different datum. Oct. 1, 1963, to Sept. 30, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--10 years, 367 cfs (265,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 9,240 cfs Jan. 15 (gage height, 11.18 ft); minimum daily, 2.5 cfs for several days.

1953-58, 1963-68: Maximum discharge, 27,000 cfs Dec. 22, 1964 (gage height, 22.5 ft from floodmarks), from rating curve extended above 10,000 cfs on basis of slope-area measurement of maximum flow; minimum, 1.8 cfs Aug. 29, 1958.

REMARKS.--Records excellent. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

REVISIONS (water year).--1965 report: 1964(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	9.8	63	228	248	354	315	62	33	12	3.1	9.6
2	19	9.8	306	203	1,490	312	294	60	32	12	3.1	8.9
3	72	9.5	1,550	172	1,950	288	260	58	31	12	3.1	8.0
4	36	8.5	1,710	155	1,170	309	235	55	30	11	3.1	6.7
5	30	8.4	1,470	141	864	285	218	54	29	10	3.1	5.7
6	27	8.4	505	132	846	260	198	51	29	9.7	2.9	5.7
7	21	8.4	695	121	837	235	177	49	28	9.1	3.1	5.5
8	17	9.4	407	130	730	208	166	47	26	5.1	3.1	5.1
9	15	10	327	892	654	183	156	46	25	3.8	3.1	5.1
10	12	12	318	2,450	589	170	153	44	24	6.2	2.9	4.9
11	11	13	285	846	530	654	154	42	23	6.8	2.5	4.4
12	9.8	12	258	505	459	746	144	42	23	7.0	2.5	4.4
13	9.1	12	213	2,100	430	595	133	47	22	7.0	2.5	4.4
14	8.5	251	167	7,470	393	778	123	49	22	7.9	2.5	6.2
15	7.3	101	155	5,350	357	828	117	44	21	8.4	2.5	5.5
16	6.4	59	143	2,180	414	1,270	111	40	20	8.4	2.5	5.1
17	6.1	43	134	1,440	965	1,090	103	38	19	7.8	2.5	5.1
18	5.7	35	153	891	695	723	96	38	18	7.7	3.0	5.1
19	5.7	29	130	612	2,270	545	91	42	17	7.0	3.1	5.1
20	5.5	26	114	491	2,650	450	87	83	17	6.8	4.2	5.1
21	9.5	23	107	426	3,190	386	83	75	16	6.2	15	5.1
22	15	20	104	382	2,560	375	79	81	16	5.7	21	4.9
23	19	20	107	348	2,500	375	75	64	15	5.6	19	4.3
24	17	19	176	318	1,940	351	75	54	15	5.1	15	3.8
25	14	18	280	294	1,410	1,110	71	53	14	4.9	13	3.6
26	12	17	382	278	928	600	70	55	13	4.2	15	3.1
27	9.9	17	422	265	654	459	68	50	12	3.8	18	3.1
28	9.8	19	389	238	491	414	67	45	12	3.8	17	2.9
29	9.8	54	348	273	393	396	64	40	12	3.8	14	2.5
30	9.8	88	294	285	-----	363	64	37	12	3.8	12	2.5
31	9.8	-----	255	255	-----	327	-----	35	-----	3.5	10	-----
TOTAL	462.8	970.2	11,967	29,871	32,607	15,439	4,047	1,580	626	216.1	227.4	151.4
MEAN	14.9	32.3	386	964	1,124	498	135	51.0	20.9	6.97	7.34	5.05
MAX	72	251	1,710	7,470	3,190	1,270	315	83	33	12	21	9.6
MIN	3.1	8.4	63	121	248	170	64	35	12	3.5	2.5	2.5
AC-FT	918	1,920	23,740	59,250	64,680	30,620	8,030	3,130	1,240	429	451	300

CAL YR 1967 TOTAL 94,805.6

MEAN 260

MAX 5,310

MIN 3.1

AC-FT 188,000

WTR YR 1968 TOTAL 98,164.9

MEAN 268

MAX 7,470

MIN 2.5

AC-FT 194,700

PEAK DISCHARGE (BASE, 3,400 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-04	1945	8.92	4,260	02-19	2300	9.54	5,630
01-15	0130	11.18	9,240				

11-4785. VAN DUZEN RIVER NEAR BRIDGEVILLE, CALIF.

LOCATION.--Lat 40°28'50", long 123°53'23", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.12, T.1 N., R.2 E., on left bank at downstream side of bridge on State Highway 36, 0.9 mile upstream from Grizzly Creek, and 5 miles west of Bridgeville.

DRAINAGE AREA.--222 sq mi.

RECORDS AVAILABLE.--October 1950 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 358.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Oct. 1 1965, graphic water-stage recorder at site 2.4 miles upstream at different datum.

AVERAGE DISCHARGE.--18 years, 873 cfs (632,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 20,700 cfs Jan. 15 (gage height, 15.86 ft); minimum daily, 9.7 cfs Oct. 1.

1950-68: Maximum discharge, 48,700 cfs Dec. 22, 1964 (gage height, 24.0 ft, present site and datum, from floodmarks), from rating curve extended above 20,000 cfs on basis of slope-area measurement at gage height 21.3 ft, former datum; minimum, 5.0 cfs Sept. 13, 1959.

REMARKS.--Records excellent. No storage or large diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	28	231	404	1,070	811	666	147	80	25	14	24
2	26	26	1,100	350	3,470	694	627	142	78	25	14	23
3	131	26	3,650	305	4,810	616	533	138	77	24	13	24
4	79	25	4,660	269	2,650	568	471	133	74	23	13	23
5	62	25	3,840	243	2,030	624	442	128	71	22	13	21
6	54	25	1,500	219	1,870	560	407	125	71	21	13	20
7	46	25	2,580	203	1,780	504	381	123	70	20	13	19
8	39	25	1,340	219	1,500	466	355	120	65	19	13	19
9	34	30	946	2,520	1,390	404	336	114	61	17	13	18
10	32	31	847	6,990	1,300	374	320	111	58	16	13	18
11	28	31	685	2,180	1,230	345	320	108	55	16	13	17
12	27	31	592	1,480	1,160	2,280	312	105	53	16	13	17
13	25	34	473	3,540	1,110	2,210	287	114	52	16	13	16
14	25	739	350	15,400	1,050	2,990	270	126	49	16	13	17
15	25	264	305	12,800	991	2,520	259	111	47	16	14	18
16	24	125	269	5,370	1,020	4,390	249	101	45	16	14	17
17	23	83	247	2,530	1,570	3,840	245	95	44	16	14	15
18	22	65	802	1,710	1,340	2,360	230	93	42	16	14	15
19	21	53	473	1,280	3,170	1,590	216	96	40	16	14	14
20	20	50	345	1,050	6,630	1,290	208	142	38	16	17	14
21	25	40	282	910	7,560	1,150	201	163	37	16	27	14
22	36	37	273	829	7,430	1,050	192	200	35	16	32	13
23	39	34	380	721	7,000	1,050	191	160	33	15	33	13
24	39	33	544	676	4,930	946	191	129	33	15	28	13
25	36	31	730	624	2,900	2,340	185	122	31	15	25	12
26	33	30	892	600	1,990	1,700	172	130	29	15	48	12
27	30	31	955	584	1,350	1,230	170	120	28	15	43	11
28	29	36	847	600	1,150	1,050	162	109	27	15	39	11
29	29	199	712	1,460	937	946	156	99	26	15	29	11
30	30	350	568	1,550	-----	901	151	92	26	15	28	10
31	29	-----	473	1,140	-----	766	-----	84	-----	14	25	-----
TOTAL	1,107.7	2,562	31,891	68,756	76,388	42,565	8,905	3,780	1,475	538	628	489
MEAN	35.7	85.4	1,029	2,218	2,634	1,373	297	122	49.2	17.4	20.3	16.3
MAX	131	739	4,660	15,400	7,560	4,390	666	200	80	25	48	24
MIN	9.7	25	231	203	937	345	151	84	26	14	13	10
AC-FT	2,200	5,080	63,250	136,400	151,500	84,430	17,660	7,500	2,930	1,070	1,250	970

CAL YR 1967 TOTAL 245,702.2 MEAN 673 MAX 13,100 MIN 9.4 AC-FT 487,300
WTR YR 1968 TOTAL 239,084.7 MEAN 653 MAX 15,400 MIN 9.7 AC-FT 474,200

Peak discharge (base, 15,000 cfs).--Jan. 15 (0130 hrs) 20,700 cfs (15.86 ft).

EEL RIVER BASIN

11-4790. YAGER CREEK NEAR CARLOTTA, CALIF.

LOCATION.--Lat 40°34'15", long 124°02'55", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.10, T.2 N., R.1 E., on right bank 0.8 mile upstream from Cooper Mill Creek, and 2.4 miles north of Carlotta.

DRAINAGE AREA.--127 sq mi.

RECORDS AVAILABLE.--August 1953 to October 1955, August 1956 to September 1960, August 1965 to September 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 200 ft (from topographic map). Aug. 18, 1953, to Dec. 22, 1955, graphic water-stage recorder at same site at different datum. Aug. 14, 1956, to Sept. 30, 1960, graphic water-stage recorder at site 0.2 mile downstream at different datum. Aug. 7, 1965, to Oct. 8, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--9 years, 343 cfs (248,300 acre-ft per year).

EXTREMES.--Maximum discharge during year, 4,450 cfs Jan. 15 (gage height, 8.13 ft); minimum daily, 4.0 cfs Aug. 19, Sept. 10-12.
1953-60, 1964-68: Maximum discharge, 30,000 cfs Dec. 22, 1964 (gage height, 19.9 ft from floodmarks), from rating curve extended above 250 cfs on basis of field estimate of maximum flow; minimum, 3.8 cfs Sept. 14, 1966.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	12	690	188	893	320	195	47	34	16	5.2	5.7
2	11	11	1,050	173	1,950	295	178	45	31	13	5.2	6.3
3	25	10	1,550	154	1,680	270	170	46	36	11	5.2	5.0
4	18	9.5	2,300	140	986	245	162	45	36	12	5.2	5.3
5	31	11	1,370	131	729	330	160	41	37	12	5.2	4.6
6	19	11	770	122	644	300	146	35	33	11	5.2	4.6
7	15	8.8	1,520	116	536	250	133	33	31	11	4.8	4.4
8	12	9.2	932	128	441	210	133	32	30	11	4.8	4.4
9	11	11	644	720	361	185	137	32	34	9.8	4.4	4.3
10	9.7	12	520	1,710	317	170	108	31	28	8.5	5.4	4.0
11	9.1	11	422	887	265	260	98	32	30	9.8	4.9	4.0
12	8.5	10	368	666	233	370	97	33	28	9.8	4.5	4.0
13	8.1	12	293	785	202	330	90	45	26	11	4.3	5.3
14	7.7	320	240	2,960	186	500	82	53	28	11	5.2	15
15	7.4	114	211	3,020	160	710	81	41	21	9.4	5.4	13
16	7.1	56	188	1,640	154	880	75	35	25	11	5.2	10
17	6.8	34	180	1,160	180	1,180	69	33	21	8.9	4.7	8.3
18	6.6	26	1,000	855	160	690	66	31	20	8.6	4.3	6.9
19	6.4	20	675	675	156	475	64	33	20	8.6	4.0	6.2
20	6.2	16	496	554	600	365	57	41	19	8.5	8.7	6.4
21	9.8	14	402	468	2,000	309	54	50	18	7.8	12	6.0
22	19	12	391	402	2,600	284	55	69	18	7.0	7.1	6.0
23	18	10	476	347	2,400	265	52	67	18	8.4	6.0	5.5
24	15	9.5	476	303	1,350	250	52	59	15	7.0	5.4	8.2
25	17	8.5	476	274	780	970	46	51	17	7.0	17	6.3
26	17	7.8	449	274	600	600	51	48	19	6.9	60	6.2
27	14	28	405	293	420	400	42	48	14	6.5	35	6.4
28	19	85	340	378	375	320	54	59	13	6.0	21	6.3
29	21	290	283	1,150	350	275	46	57	13	6.0	14	6.6
30	17	920	238	1,320	-----	244	48	53	14	6.0	9.2	6.1
31	13	-----	208	926	-----	216	-----	51	-----	5.9	6.6	-----
TOTAL	411.6	2,109.3	19,563	22,919	21,708	12,468	2,801	1,376	727	286.4	295.1	191.3
MEAN	13.3	70.3	631	739	749	402	93.4	44.4	24.2	9.24	9.52	6.38
MAX	31	920	2,300	3,020	2,600	1,180	195	69	37	16	60	15
MIN	6.2	7.8	180	116	154	170	42	31	13	5.9	4.0	4.0
AC-FT	816	4,180	38,800	45,460	43,060	24,730	5,560	2,730	1,440	568	585	379

CAL YR 1967 TOTAL 104,339.0 MEAN 286 MAX 4,160 MIN 5.2 AC-FT 207,000
WTR YR 1968 TOTAL 84,855.7 MEAN 232 MAX 3,020 MIN 4.0 AC-FT 168,300

Peak discharge (base, 4,000 cfs).--Jan. 15 (0315 hrs) 4,450 cfs (8.13 ft).

Note.--No gage-height record Feb. 20 to Apr. 4, July 18 to Sept. 2.

MAD RIVER BASIN

455

11-4804. RUTH RESERVOIR NEAR FOREST GLEN, CALIF.

LOCATION.--Lat 40°21'29", long 123°25'20", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.1 S., R.7 E., near center of Ruth Dam on Mad River 5.2 miles west of Forest Glen.

DRAINAGE AREA.--119 sq mi.

RECORDS AVAILABLE.--October 1966 to September 1968. Records prior to October 1966 in files of Humboldt Bay Municipal Water District.

GAGE.--Digital water-stage recorder. Datum of gage is at mean sea level (levels by Humboldt Bay Municipal Water District).

EXTREMES.--Maximum contents during year, 56,300 acre-ft Feb. 21 (elevation, 2,657.97 ft); minimum, 14,700 acre-ft Nov. 16 to Dec. 2 (elevation, 2,612.34 ft).

REMARKS.--Reservoir is formed by earthfill dam; storage began July 1961. Total capacity, 51,800 acre-ft at elevation 2,654.0 ft, crest of spillway. Water is released down Mad River for municipal use. Records given herein represent total contents.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FT)

2,595	6,670	2,615	16,500	2,635	32,500	2,655	52,900
2,600	8,520	2,620	20,100	2,640	37,300	2,660	56,700
2,605	10,700	2,625	23,900	2,645	42,300	2,665	65,000
2,610	13,300	2,630	27,800	2,650	47,400	2,670	72,300

CONTENTS, IN ACRE-FEET, AT 2400 HOURS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30,200	19,500	14,700	25,100	49,800	52,200	51,300	50,800	50,400	47,900	42,700	36,800
2	29,900	19,200	14,700	25,100	52,800	52,000	51,200	50,800	50,400	47,700	42,500	36,600
3	29,700	18,900	17,100	25,000	54,100	51,700	51,100	50,800	50,300	47,600	42,400	36,500
4	29,400	18,500	20,100	25,000	53,800	51,600	51,100	50,800	50,400	47,500	42,200	36,300
5	29,200	18,200	22,700	24,900	53,400	51,500	51,100	50,800	50,400	47,400	42,100	36,100
6	29,000	17,900	23,700	24,800	53,300	51,300	51,100	50,700	50,300	47,200	41,800	35,900
7	28,900	17,600	24,800	24,700	53,300	51,100	51,000	50,700	50,300	47,100	41,600	35,700
8	28,700	17,300	25,200	24,600	53,200	51,100	51,100	50,700	50,300	46,900	41,500	35,500
9	28,700	17,000	25,300	26,100	53,000	51,100	51,100	50,700	50,300	46,800	41,300	35,300
10	28,600	16,700	25,400	31,000	52,800	51,000	51,100	50,700	50,300	46,700	41,100	35,100
11	28,100	16,300	25,400	32,400	52,600	51,000	51,000	50,600	50,300	46,500	40,900	34,900
12	28,000	15,900	25,300	33,300	52,400	51,600	50,900	50,500	50,300	46,300	40,700	34,800
13	27,100	15,700	25,100	36,400	52,300	52,100	50,900	50,500	50,300	46,100	40,400	34,600
14	27,000	15,400	25,000	47,400	52,100	52,500	50,800	50,500	50,200	46,000	40,200	34,500
15	26,900	15,100	24,800	54,500	51,900	52,600	50,700	50,500	50,200	45,900	40,000	34,300
16	26,500	14,700	24,600	54,700	51,900	53,400	50,600	50,500	50,200	45,900	39,800	34,100
17	26,000	14,700	24,500	53,800	52,300	53,400	50,600	50,500	50,000	45,600	39,600	33,900
18	25,600	14,700	24,400	53,200	52,300	53,000	50,600	50,400	49,900	45,400	39,400	33,700
19	25,000	14,700	24,200	52,700	55,000	52,700	50,600	50,500	49,800	45,200	39,200	33,500
20	24,500	14,700	24,000	52,300	55,600	52,400	50,600	50,500	49,600	45,000	39,100	33,400
21	23,900	14,700	23,800	52,100	56,100	52,200	50,700	50,700	49,400	44,800	39,000	33,100
22	23,400	14,700	23,600	51,800	55,900	52,100	50,900	50,700	49,300	44,600	38,800	33,000
23	23,400	14,700	23,500	51,600	55,900	51,900	51,000	50,800	49,100	44,400	38,600	32,900
24	23,400	14,700	23,400	51,400	55,000	51,800	51,100	50,800	48,900	44,200	38,400	32,800
25	23,400	14,700	23,600	51,200	54,200	51,900	51,100	50,800	48,700	44,000	38,200	32,600
26	21,400	14,700	24,000	51,000	53,500	51,900	51,000	50,800	48,500	43,800	38,100	32,400
27	21,100	14,700	24,500	50,700	53,000	51,800	51,000	50,700	48,200	43,700	37,600	32,100
28	20,800	14,700	24,800	50,600	52,700	51,700	50,900	50,700	48,100	43,500	37,500	31,900
29	20,400	14,700	25,000	50,500	52,400	51,600	50,900	50,600	48,000	43,300	37,300	31,700
30	20,100	14,700	25,000	50,300	-----	51,500	50,800	50,500	48,000	43,100	37,100	31,500
31	19,800	-----	25,100	50,000	-----	51,400	-----	50,500	-----	42,900	37,000	-----
(a)	2,619.56	2,612.34	2,626.50	2,652.36	2,654.56	2,653.64	2,653.09	2,652.81	2,650.51	2,645.60	2,639.63	2,634.05
(b)	-10,600	-5,100	+10,400	+24,900	+2,400	-1,000	-600	-300	-2,500	-5,100	-5,900	-5,500
MAX	30,200	19,500	25,400	54,700	56,100	53,400	51,300	50,800	50,400	47,900	42,700	36,800
MIN	19,800	14,700	14,700	24,600	49,800	51,000	50,600	50,400	48,000	42,900	37,000	31,500

CAL YR 1967 b -22,200
WTR YR 1968 b +1,100

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

MAD RIVER BASIN

11-4805. MAD RIVER NEAR FOREST GLEN, CALIF.

LOCATION.--Lat 40°27'30", long 123°30'35", in SW $\frac{1}{4}$ sec.16, T.1 N., R.6 E., on right bank 0.7 mile downstream from Lamb Creek, and 11.1 miles (revised) northwest of Forest Glen.

DRAINAGE AREA.--143 sq mi.

RECORDS AVAILABLE.--June 1953 to September 1968.

GAGE.--Digital 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, graphic 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. June 18, 1956, to Sept. 6, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--15 years, 362 cfs (262,100 acre-ft per year).

EXTREMES.--Maximum discharge during year, 4,060 cfs Feb. 21 (gage height, 7.79 ft); minimum daily, 8.1 cfs June 12-14.

1953-68: Maximum discharge, 39,200 cfs Dec. 22, 1955 (gage height, 24.5 ft from floodmarks, present datum), from rating curve extended above 8,100 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.60 cfs Sept. 15, 1961.

REMARKS.--Records excellent. Flow regulated by Ruth Reservoir beginning in July 1961 (see sta. no. 11-4804.). No diversion above station. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

REVISIONS (water year).--1964 report: 1963.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	144	78	137	380	650	324	56	58	37	89	73
2	139	144	149	134	732	560	320	54	58	47	89	73
3	125	144	246	131	1,590	493	289	53	42	70	89	74
4	123	144	319	130	1,650	446	245	53	14	70	89	86
5	123	144	237	128	1,370	426	224	53	25	70	89	85
6	123	144	140	126	1,240	410	203	53	12	70	89	85
7	123	144	226	125	1,220	380	201	53	9.7	70	87	85
8	123	144	241	128	1,130	306	192	53	9.7	70	90	85
9	123	143	230	293	1,010	270	178	51	8.9	70	103	85
10	123	150	229	427	898	267	173	51	8.9	70	103	85
11	125	161	224	211	793	267	172	72	8.9	70	103	85
12	149	161	218	189	705	414	171	72	8.1	104	103	80
13	156	167	213	690	625	442	169	73	8.1	104	98	77
14	170	178	212	1,560	560	727	166	55	8.1	104	91	83
15	182	162	214	1,220	497	844	160	51	11	104	91	83
16	195	161	196	2,260	475	1,130	150	53	70	104	91	78
17	212	149	168	1,830	595	1,310	138	49	86	104	91	70
18	222	102	172	1,290	620	1,140	119	48	86	104	91	70
19	243	101	166	904	1,290	934	101	51	82	104	92	70
20	260	101	164	690	3,320	776	71	46	76	104	95	74
21	269	101	164	556	3,870	665	58	16	86	104	90	83
22	264	92	165	466	3,760	580	19	14	105	104	89	83
23	267	70	172	410	3,660	529	18	11	108	104	89	83
24	248	70	183	359	3,110	475	17	58	108	101	88	83
25	194	70	200	334	2,170	524	42	62	108	101	89	92
26	154	70	210	334	1,560	524	104	60	108	96	89	108
27	154	71	212	331	1,190	488	103	60	108	89	83	97
28	149	70	201	331	934	454	103	60	108	89	72	81
29	145	83	190	355	771	422	99	58	83	89	76	81
30	144	83	182	373	-----	362	83	58	38	89	83	81
31	144	-----	162	366	-----	327	-----	58	-----	89	80	-----
TOTAL	5,296	3,668	6,083	16,818	41,725	17,542	4,412	1,615	1,650.4	2,705	2,791	2,458
MEAN	171	122	196	543	1,439	566	147	52.1	55.0	87.3	90.0	81.9
MAX	269	178	319	2,260	3,870	1,310	324	73	108	104	103	108
MIN	123	70	78	125	380	267	17	11	8.1	37	72	70
AC-FT	10,500	7,280	12,070	33,360	82,760	34,790	8,750	3,200	3,270	5,370	5,540	4,880
CAL YR 1967	TOTAL 125,647		MEAN 344		MAX 6,130		MIN 58		AC-FT 249,200			
WTR YR 1968	TOTAL 106,763.4		MEAN 292		MAX 3,870		MIN 8.1		AC-FT 211,800			

11-4807.5. MAD RIVER NEAR KNEELAND, CALIF.

LOCATION.--Lat 40°45'50", long 123°53'20", in NW¼ sec.6, T.4 N., R.3 E., on left bank at mouth of Maple Creek, 30 ft upstream from bridge, and 5.4 miles east of Kneeland.

DRAINAGE AREA.--352 sq mi.

RECORDS AVAILABLE.--October 1965 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 329.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

EXTREMES.--Maximum discharge during year, 18,000 cfs Jan. 14 (gage height, 15.60 ft); minimum daily, 82 cfs June 16.

1965-68: Maximum discharge, 24,600 cfs Jan. 4, 1966 (gage height, 17.59 ft); minimum daily, 55 cfs Oct. 3-8, Nov. 5, 1966.

Flood of Dec. 22, 1964, reached a stage of 37.99 ft from floodmarks (discharge, 55,000 cfs).

REMARKS.--Records good. Flow regulated by Ruth Reservoir (see sta. no. 11-4804.). No diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	170	407	463	635	1,280	930	198	145	90	108	111
2	150	168	992	401	2,800	1,170	870	184	135	87	108	104
3	220	166	1,930	365	4,860	991	811	174	125	88	108	103
4	158	164	2,860	350	3,700	895	635	172	115	102	108	102
5	166	170	3,150	332	2,870	955	599	170	128	103	108	110
6	156	162	1,400	309	2,630	871	511	166	110	103	108	111
7	147	160	2,100	276	2,630	847	463	164	100	103	108	111
8	147	166	1,400	300	2,420	760	437	162	94	103	107	111
9	148	174	1,100	1,780	2,200	670	395	160	91	102	110	111
10	145	168	980	4,360	1,910	610	365	158	89	102	118	111
11	145	179	1,140	1,700	1,600	580	350	156	88	100	118	111
12	148	186	1,040	1,230	1,380	1,000	336	166	87	105	118	111
13	179	219	883	3,380	1,180	1,380	323	181	85	128	118	108
14	190	1,040	751	14,400	1,040	1,410	309	190	84	128	121	117
15	219	449	675	8,600	859	1,850	309	170	83	128	115	117
16	232	318	625	4,160	859	2,450	300	148	82	128	112	112
17	264	272	559	3,060	1,290	3,300	292	150	104	128	111	108
18	300	232	1,580	1,970	1,320	2,750	276	148	131	128	112	98
19	350	174	991	1,240	2,530	2,150	268	147	132	128	121	98
20	413	168	751	811	7,530	1,700	250	177	128	128	150	97
21	495	160	607	591	9,080	1,450	232	160	120	126	166	98
22	551	156	615	471	8,480	1,200	225	150	128	124	131	105
23	511	143	775	401	8,700	1,080	213	140	145	123	123	107
24	463	123	967	360	6,230	1,000	207	155	148	123	118	107
25	370	120	1,300	327	3,780	2,100	190	170	148	123	129	107
26	250	118	1,510	336	2,860	2,000	201	168	147	123	213	114
27	188	128	1,420	345	2,200	1,600	232	166	147	117	164	128
28	216	148	1,120	419	1,760	1,300	229	164	145	111	134	120
29	188	487	895	1,060	1,490	1,200	222	164	143	110	114	104
30	177	551	685	1,210	-----	1,100	213	162	126	110	111	103
31	172	-----	567	739	-----	1,000	-----	160	-----	110	114	-----
TOTAL	7,590	7,039	35,775	55,746	90,823	42,649	11,193	5,100	3,533	3,512	3,804	3,255
MEAN	245	235	1,154	1,798	3,132	1,376	373	165	118	113	123	109
MAX	551	1,040	3,150	14,400	9,080	3,300	930	198	148	128	213	128
MIN	132	118	407	276	635	580	190	140	82	87	107	97
AC-FT	15,050	13,960	70,960	110,600	180,100	84,590	22,200	10,120	7,010	6,970	7,550	6,460

CAL YR 1967 TOTAL 318,519 MEAN 873 MAX 13,900 MIN 89 AC-FT 631,800

WTR YR 1968 TOTAL 270,019 MEAN 738 MAX 14,400 MIN 82 AC-FT 535,600

Peak discharge (base, 12,000 cfs).--Jan. 14 (1115 hrs) 18,000 cfs (15.60 ft); Feb. 21 (0700 hrs) 12,500 cfs (13.76 ft).

MAD RIVER BASIN

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.

RECORDS AVAILABLE.--October 1910 to September 1913, August 1950 to September 1968. Monthly discharge only for some periods published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 12.79 ft 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, graphic water-stage recorder at site 0.6 mile upstream at datum 11.00 ft higher. July 24, 1956, to Apr. 9, 1965, graphic water-stage recorder at datum 5.00 ft higher. Apr. 10 to Sept. 9, 1965, graphic water-stage recorder at same site and datum. Aug. 29 to Oct. 26, 1961, auxiliary graphic water-stage recorder at site 0.5 mile downstream at different datum.

AVERAGE DISCHARGE.--21 years, 1,479 cfs (1,071,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 15,800 cfs Jan. 15 (gage height, 14.28 ft); minimum daily, 2.1 cfs June 13.

1910-13, 1950-68: Maximum discharge, 77,800 cfs Dec. 22, 1955 (gage height, 29.75 ft, present site and datum); minimum, 2.1 cfs June 13, 1968.

REMARKS.--Records good. Flow regulated by Ruth Reservoir beginning in July 1961 (see sta. no. 11-4804.). 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 1968 water year are published in Part 2 of this report.

REVISIONS (water years).--1964 report: 1963. 1965 report: 1964(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	107	630	580	1,860	2,010	981	208	72	35	22	31
2	92	104	810	493	2,870	1,740	953	167	66	18	19	43
3	188	105	1,960	454	5,090	1,510	866	155	68	34	21	49
4	120	100	2,570	383	4,430	1,360	770	157	66	44	24	48
5	107	101	5,250	359	3,560	1,400	732	135	61	54	24	46
6	98	101	1,910	342	3,240	1,270	605	125	56	51	18	35
7	86	91	3,770	283	3,190	1,160	556	128	53	37	25	30
8	75	92	2,530	304	2,870	981	493	113	44	23	8.5	27
9	87	107	1,450	1,090	2,560	848	454	113	40	14	8.9	26
10	73	96	1,200	5,070	2,210	765	422	105	34	13	15	23
11	69	92	1,230	2,430	1,850	732	394	105	11	13	20	21
12	66	104	1,310	1,460	1,630	1,180	373	112	3.6	13	21	19
13	71	131	1,210	2,400	1,500	1,800	356	145	2.1	23	25	27
14	95	1,240	650	8,950	1,320	1,810	342	145	6.8	31	27	41
15	105	545	585	12,200	1,170	2,310	329	118	6.8	30	29	41
16	128	287	625	7,400	1,070	3,070	316	95	6.8	29	18	32
17	141	205	515	5,190	1,230	4,580	301	93	6.6	28	12	38
18	163	159	800	3,820	1,380	3,740	283	83	47	30	16	29
19	177	106	1,320	2,740	1,670	2,940	265	84	60	30	31	17
20	202	77	918	2,040	6,120	2,260	254	135	54	31	37	14
21	280	79	754	1,710	8,530	1,790	239	142	44	32	65	14
22	345	62	660	1,480	10,400	1,520	226	159	43	29	47	16
23	298	83	726	1,250	10,800	1,370	210	145	48	38	36	20
24	280	48	824	1,130	9,130	1,230	196	107	58	40	29	18
25	276	42	995	1,020	6,140	2,690	179	93	54	40	42	18
26	190	41	1,200	981	4,650	2,430	165	112	52	40	161	20
27	121	43	1,280	1,050	3,700	1,760	194	125	50	40	115	33
28	214	77	1,130	1,130	2,840	1,460	201	112	45	33	70	39
29	163	529	967	2,570	2,340	1,270	192	99	47	24	45	29
30	120	946	782	3,500	-----	1,210	208	84	48	28	34	23
31	117	-----	660	2,400	-----	1,070	-----	75	-----	29	31	-----
TOTAL	4,625	5,900	41,221	76,209	109,350	55,266	12,055	3,774	1,253.7	954	1,096.4	867
MEAN	149	197	1,330	2,458	3,771	1,783	402	122	41.8	30.8	35.4	28.9
MAX	345	1,240	5,250	12,200	10,800	4,580	981	208	72	54	161	49
MIN	66	41	515	283	1,070	732	165	75	2.1	13	8.5	14
AC-FT	9,170	11,700	81,760	151,200	216,900	109,600	23,910	7,490	2,490	1,890	2,170	1,720
CAL YR 1967	TOTAL 382,278		MEAN 1,047		MAX 15,900		MIN 33		AC-FT 758,200			
WTR YR 1968	TOTAL 312,571.1		MEAN 854		MAX 12,200		MIN 2.1		AC-FT 620,000			

Peak discharge (base, 15,000 cfs).--Jan. 15 (1230 hrs) 15,800 cfs (14.28 ft).

LITTLE RIVER BASIN

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11-4812. LITTLE RIVER AT CRANNELL, CALIF.

LOCATION.--Lat 41°00'40", long 124°04'50", in NE $\frac{1}{4}$ 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.

RECORDS AVAILABLE.--October 1955 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 17.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Oct. 24, 1963, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--13 years, 134 cfs (97,010 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,970 cfs Jan. 15 (gage height, 6.42 ft); minimum daily, 3.0 cfs Aug. 18.

1955-68: Maximum discharge, 8,330 cfs Jan. 4, 1966 (gage height, 11.12 ft), from rating curve extended above 3,100 cfs on basis of slope-area measurement at gage height 11.06 ft; minimum daily, 2.8 cfs Oct. 20-22, 1964.

Flood of Jan. 17, 18, 1953, reached a stage of 15.7 ft, observed by an employee of Hammond Lumber Co.

REMARKS.--Records excellent. No storage or diversion above station.

REVISIONS (water years).--1964 report: 1956-63.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	9.0	127	36	236	114	75	23	24	8.8	4.2	7.0
2	9.7	8.2	210	35	208	102	66	22	23	8.8	4.2	7.0
3	14	7.5	257	33	194	87	65	21	24	8.8	4.2	6.6
4	10	7.0	378	31	159	79	63	21	23	8.8	4.2	6.2
5	13	7.0	546	30	139	106	63	21	28	8.6	4.2	6.2
6	9.3	7.0	244	29	123	99	56	20	28	8.2	4.2	6.2
7	7.3	6.8	461	29	110	82	53	19	24	8.2	3.8	6.2
8	6.6	10	239	36	96	71	50	19	21	8.1	3.8	6.2
9	6.2	17	145	135	89	64	47	18	20	7.6	3.4	5.8
10	6.0	12	99	453	82	58	45	18	18	7.4	3.8	5.4
11	5.8	11	76	212	76	56	44	19	17	7.0	3.8	5.4
12	5.8	9.8	61	151	71	115	42	19	16	7.9	3.4	5.4
13	5.5	18	52	203	67	117	40	75	15	8.6	3.4	6.2
14	5.4	274	46	1,010	63	155	38	47	14	7.8	4.3	14
15	5.3	58	42	1,730	59	156	38	29	13	6.9	4.5	12
16	5.0	31	38	648	57	205	36	24	13	6.6	4.1	8.2
17	5.0	22	38	385	62	465	34	22	13	6.5	3.8	8.2
18	4.9	19	182	259	57	273	33	20	12	6.3	3.0	7.6
19	5.0	15	164	198	114	186	33	28	12	6.3	5.4	7.0
20	5.2	12	123	161	252	145	32	74	12	6.3	10	6.2
21	11	11	113	139	781	120	31	67	11	5.8	11	5.6
22	20	11	96	122	1,010	106	30	53	11	5.4	7.0	5.0
23	20	10	83	105	963	96	30	41	11	6.0	5.8	4.7
24	12	9.4	70	88	484	85	31	35	10	5.4	5.0	4.3
25	16	9.4	61	79	306	369	28	35	9.8	5.4	19	4.1
26	13	8.8	54	84	219	217	27	40	9.4	5.4	46	3.9
27	10	13	49	91	171	158	26	50	9.7	5.0	23	3.7
28	55	26	45	129	146	128	25	39	9.1	4.9	14	3.6
29	24	142	43	377	126	110	24	33	8.8	4.6	11	3.5
30	13	197	40	425	-----	98	24	29	8.8	4.6	8.2	3.4
31	10	-----	37	316	-----	81	-----	26	-----	4.6	7.6	-----
TOTAL	345.5	998.9	4,219	7,759	6,520	4,303	1,229	1,007	468.6	210.6	243.3	184.8
MEAN	11.1	33.3	136	250	225	139	41.0	32.5	15.6	6.79	7.85	6.16
MAX	55	274	546	1,730	1,010	465	75	75	28	8.8	46	14
MIN	4.9	6.8	37	29	57	56	24	18	8.8	4.6	3.0	3.4
AC-FT	685	1,980	8,370	15,390	12,930	8,530	2,440	2,000	929	418	483	367

CAL YR 1967 TOTAL 36,246.0 MEAN 99.3 MAX 1,670 MIN 4.9 AC-FT 71,890

WTR YR 1968 TOTAL 27,488.7 MEAN 75.1 MAX 1,730 MIN 3.0 AC-FT 54,520

Peak discharge (base, 3,000 cfs).--No peak above base.

REDWOOD CREEK BASIN

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 left bank at upstream side of bridge on U.S. Highway 101 at Orick, 0.9 mile downstream from Prairie Creek.

DRAINAGE AREA.--278 sq mi.

RECORDS AVAILABLE.--September 1911 to September 1913, October 1953 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. 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. Oct. 1, 1953, to Feb. 1, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--17 years, 1,048 cfs (758,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 14,900 cfs Jan. 15 (gage height, 12.97 ft); minimum daily, 19 cfs Aug. 13.

1911-13, 1953-68: Maximum discharge, 50,500 cfs Dec. 22, 1964 (gage height, 24.0 ft from outside high-water marks); minimum, 10 cfs Sept. 22-24, 1911.

Flood of Jan. 18, 1953, reached a stage of 23.95 ft from floodmarks (discharge, 50,000 cfs).

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	68	579	251	1,760	1,420	1,010	229	196	67	31	56
2	56	61	743	223	2,300	1,300	940	224	194	67	31	58
3	102	54	1,450	198	3,440	1,180	827	223	194	67	31	53
4	92	51	1,930	171	2,500	1,090	758	216	197	67	29	49
5	110	50	4,260	156	1,990	1,260	735	206	198	63	28	49
6	74	48	1,680	138	1,800	1,150	691	200	201	59	24	49
7	54	47	2,680	129	1,630	1,050	654	201	199	61	22	49
8	45	68	1,660	156	1,450	960	622	201	193	59	21	49
9	37	110	990	255	1,310	851	588	202	182	56	21	46
10	35	87	707	2,650	1,190	815	562	193	168	53	21	43
11	31	79	530	2,070	1,080	779	535	191	165	51	21	43
12	31	70	435	1,460	960	1,090	511	193	159	51	21	43
13	29	83	356	1,890	870	1,270	485	250	156	54	19	58
14	27	1,400	300	6,540	788	1,440	455	262	150	56	20	120
15	26	572	264	12,100	716	1,550	433	229	144	53	24	100
16	24	287	235	6,540	672	2,110	422	203	135	52	25	82
17	22	180	219	4,430	734	2,620	400	190	135	51	23	62
18	21	132	970	3,500	734	2,300	367	179	132	50	22	61
19	21	107	752	2,810	842	1,960	367	203	177	46	44	53
20	21	90	530	2,460	2,130	1,540	356	375	123	44	85	48
21	42	76	441	2,190	4,430	1,370	340	417	104	44	149	43
22	148	67	389	1,980	7,580	1,180	329	385	97	44	101	40
23	121	61	441	1,840	8,150	1,110	325	322	94	44	63	37
24	87	56	485	1,700	5,220	1,170	325	281	90	44	48	35
25	92	51	478	1,580	3,440	2,430	307	264	87	44	212	32
26	82	47	478	1,340	2,500	2,160	290	264	81	44	805	30
27	64	63	485	920	2,080	1,670	274	271	79	44	447	28
28	334	135	441	930	1,730	1,530	264	258	74	42	199	27
29	199	551	389	1,750	1,480	1,340	264	235	70	38	110	25
30	115	842	330	2,700	-----	1,250	247	220	68	36	78	24
31	85	-----	282	1,960	-----	1,460	-----	209	-----	34	65	-----
TOTAL	2,251	5,593	25,909	67,017	65,506	44,405	14,683	7,496	4,242	1,585	2,840	1,492
MEAN	72.6	186	836	2,162	2,259	1,432	489	242	141	51.1	91.6	49.7
MAX	334	1,400	4,260	12,100	8,150	2,620	1,010	417	201	67	805	120
MIN	21	47	219	129	672	779	247	179	68	34	19	24
AC-FT	4,460	11,090	51,390	132,900	129,900	88,080	29,120	14,870	8,410	3,140	5,630	2,960

CAL YR 1967 TOTAL 311,033 MEAN 852 MAX 12,300 MIN 19 AC-FT 616,900
WTR YR 1968 TOTAL 243,019 MEAN 664 MAX 12,100 MIN 19 AC-FT 482,000

Peak discharge (base, 9,000 cfs).--Jan. 15 (0745 hrs) 14,900 cfs (12.97 ft); Feb. 22 (1645 hrs) 10,500 cfs (11.58 ft).

Note.--No gage-height record Aug. 29 to Sept. 30.

11-4895. ANTELOPE CREEK NEAR TENNANT, CALIF.

LOCATION.--Lat 41°32'45", long 121°55'05", in NW $\frac{1}{4}$ 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 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 5,080 ft (from topographic map). Prior to May 26, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--16 years, 36.6 cfs (26,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 133 cfs May 20 (gage height, 2.40 ft); maximum gage height, 3.26 ft Dec. 7 (backwater from ice); minimum daily discharge, 10 cfs Sept. 25-30.
1952-68: Maximum discharge, 638 cfs Dec. 22, 1964 (gage height, 4.00 ft), from rating curve extended above 240 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 4.31 ft Oct. 12, 1962; minimum daily discharge, 3.6 cfs Jan. 5, 1960.

REMARKS.--Records excellent except those for the winter period, which are poor. No storage or diversion above station.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	18	17	12	35	36	48	54	20	13	11
2	35	17	17	16	13	35	34	49	55	20	13	11
3	26	17	17	15	15	34	32	50	52	19	12	11
4	22	17	38	13	17	35	33	54	51	19	12	11
5	22	17	44	13	17	38	34	55	61	18	12	11
6	21	17	25	13	17	34	34	51	53	18	12	11
7	20	17	19	13	17	33	34	50	48	17	12	11
8	19	19	18	13	17	32	36	51	45	17	12	11
9	19	18	17	31	16	32	38	52	42	16	12	11
10	19	18	17	27	16	32	41	53	41	16	11	11
11	19	17	15	14	17	31	44	53	40	15	11	11
12	19	17	14	14	16	27	43	53	39	16	11	11
13	18	18	12	15	16	32	41	57	37	15	11	11
14	18	31	11	19	16	29	42	51	35	15	12	11
15	18	20	11	27	17	27	43	48	34	15	12	11
16	18	19	13	42	17	28	41	48	33	15	13	11
17	18	19	15	37	22	26	39	47	33	15	13	11
18	18	19	16	26	23	25	39	48	33	14	13	11
19	18	19	13	20	24	25	39	59	32	14	19	11
20	18	18	12	19	30	25	38	103	31	14	18	11
21	18	18	13	19	54	25	37	75	29	14	16	11
22	18	18	14	19	49	25	37	71	28	13	15	11
23	18	18	16	18	49	25	37	63	27	13	14	11
24	18	18	14	18	42	26	37	59	26	13	13	11
25	18	17	15	18	38	33	38	66	25	13	13	10
26	18	17	15	16	37	28	40	60	24	13	13	10
27	18	17	16	15	36	27	41	60	23	13	12	10
28	18	17	17	14	35	29	42	61	22	12	12	10
29	18	16	15	15	35	31	44	61	22	12	12	10
30	18	19	14	14	-----	32	47	57	21	12	12	10
31	18	-----	15	13	-----	35	-----	54	-----	12	11	-----
TOTAL	601	546	526	583	730	931	1,161	1,767	1,096	468	397	324
MEAN	19.4	18.2	17.0	18.8	25.2	30.0	38.7	57.0	36.5	15.1	12.8	10.8
MAX	35	31	44	42	54	38	47	103	61	20	19	11
MIN	18	16	11	13	12	25	32	47	21	12	11	10
AC-FT	1,190	1,080	1,040	1,160	1,450	1,850	2,300	3,500	2,170	928	787	643
CAL YR 1967	TOTAL 17,321		MEAN 47.5		MAX 303		MIN 11		AC-FT 34,360			
WTR YR 1968	TOTAL 9,130		MEAN 24.9		MAX 103		MIN 10		AC-FT 18,110			

Peak discharge (base, 100 cfs).--May 20 (0500 hrs) 133 cfs (2.40 ft).

KLAMATH RIVER BASIN

11-5107. KLAMATH RIVER BELOW JOHN C. BOYLE POWERPLANT, NEAR KENO, OREG.

LOCATION.--Lat 42°05'05", long 122°04'20", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.40 S., R.6 E., 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 1968. Prior to Oct. 1, 1961, published as "below Big Bend powerplant."

GAGE.--Digital water-stage recorder. Datum of gage is 3,274.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1956 (levels by Pacific Power and Light Co.). Prior to June 10, 1964, graphic water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--9 years, 1,723 cfs (1,247,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 2,760 cfs Mar. 22, '23 (gage height, 5.73 ft); minimum, 283 cfs Feb. 17; minimum daily, 317 cfs July 25.

1959-68: Maximum discharge, 8,830 cfs Feb. 1, 1965 (gage height, 8.55 ft); minimum, 283 cfs Feb. 17, 1968; minimum daily, 317 cfs July 25, 1968.

REMARKS.--Records excellent. Flow regulated by Upper Klamath Lake (see sta. no. 11-5070). Large diurnal fluctuation caused by John C. Boyle powerplant and 2 powerplants below Upper Klamath Lake. Large diversions for irrigation above station (see REMARKS for station at Keno, sta. no. 11-5095).

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,050	1,410	2,550	1,190	2,020	1,530	662	1,140	335	898	770	335
2	1,750	2,080	1,830	1,360	1,740	2,270	649	1,130	335	890	681	346
3	1,690	1,970	1,440	1,860	1,380	2,360	876	1,120	602	890	645	591
4	2,190	1,080	2,150	1,390	1,080	2,420	1,110	680	602	338	644	841
5	2,200	841	2,550	1,420	1,560	2,420	1,120	357	637	614	405	1,030
6	2,150	1,740	2,540	1,390	1,910	2,410	1,120	1,160	625	331	409	1,040
7	1,350	2,030	2,540	1,380	1,910	2,410	1,120	1,030	619	331	331	950
8	401	2,040	2,530	2,000	1,920	2,410	1,190	1,030	335	758	725	619
9	1,800	1,870	2,530	1,660	1,890	1,120	1,480	1,030	585	585	758	1,010
10	2,330	1,970	2,540	1,690	1,090	680	1,480	1,030	680	643	597	1,040
11	2,070	1,380	2,540	1,920	1,090	2,010	1,480	712	988	699	331	1,260
12	1,840	1,370	2,000	2,090	1,780	2,300	1,500	346	751	552	765	855
13	1,730	2,030	2,530	1,410	1,910	2,300	1,490	1,060	758	328	792	772
14	841	1,380	2,500	1,430	1,920	2,320	1,490	1,080	745	353	799	890
15	1,030	1,400	2,540	1,380	1,910	2,660	1,500	1,060	328	563	693	680
16	1,690	1,960	2,540	1,090	1,640	2,660	1,430	1,030	342	552	751	980
17	1,830	1,810	2,550	1,460	935	2,660	1,180	920	745	357	597	1,000
18	1,420	1,010	2,550	1,330	928	2,660	1,180	324	772	579	342	1,000
19	1,490	1,020	2,530	1,740	1,600	2,660	1,160	542	745	552	745	1,030
20	1,710	1,670	2,530	1,400	1,660	2,660	1,160	1,090	338	338	745	1,010
21	1,210	1,890	2,550	1,240	1,420	2,660	1,220	1,060	779	346	1,080	920
22	980	1,930	2,570	1,080	1,430	2,720	1,460	995	331	547	1,090	608
23	1,700	1,280	2,570	1,420	1,430	2,280	1,200	876	338	573	1,080	1,030
24	1,170	1,090	2,570	1,430	1,430	973	1,500	552	772	562	848	980
25	1,420	1,040	2,300	1,410	1,330	1,240	1,170	357	738	317	426	980
26	2,090	1,030	1,980	1,960	943	1,450	928	342	738	563	928	1,030
27	2,090	1,710	1,670	1,420	1,130	1,410	1,460	631	745	338	597	988
28	1,020	2,190	1,380	1,420	980	950	1,240	602	745	346	637	745
29	855	2,550	1,570	2,020	1,120	656	1,240	602	331	553	751	614
30	1,820	2,550	1,370	1,970	-----	725	1,230	602	328	804	656	1,180
31	1,420	-----	1,370	1,740	-----	656	-----	602	-----	994	597	-----
TOTAL	48,337	49,321	69,910	47,700	43,086	60,640	37,025	25,092	17,712	17,094	21,215	26,354
MEAN	1,559	1,644	2,255	1,539	1,486	1,956	1,234	809	590	551	684	878
MAX	2,330	2,550	2,570	2,090	2,020	2,720	1,500	1,160	988	994	1,090	1,260
MIN	401	841	1,370	1,080	928	656	649	324	328	317	331	335
AC-FT	95,870	97,830	138,700	94,610	85,460	120,300	73,440	49,770	35,130	33,910	42,080	52,270
CAL YR 1967	TOTAL 667,975		MEAN 1,830		MAX 5,980		MIN 356		AC-FT 1,325,000			
WTR YR 1968	TOTAL 463,486		MEAN 1,266		MAX 2,720		MIN 317		AC-FT 919,300			

11-5165.3. KLAMATH RIVER BELOW IRON GATE DAM, CALIF.

LOCATION.--Lat 41°55'40", long 122°26'35", in E½NE¼ 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.

DRAINAGE AREA.--4,630 sq mi, approximately.

RECORDS AVAILABLE.--October 1960 to September 1968.

GAGE.--Graphic water-stage recorder. Datum of gage is 2,162.44 ft above mean sea level (levels by Pacific Power and Light Co.).

AVERAGE DISCHARGE.--8 years, 2,070 cfs (1,499,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3,470 cfs Feb. 23 (gage height, 5.05 ft); minimum daily, 656 cfs June 2.

1960-68: Maximum discharge, 29,400 cfs Dec. 22, 1964 (gage height, 13.63 ft), from rating curve extended above 12,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 647 cfs Nov. 6, 1960, Sept. 24, Oct. 1, 1961.

REMARKS.--Records excellent. Complete regulation by Upper Klamath Lake (capacity, 584,000 acre-ft) and other smaller reservoirs; diversions above station. Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,310	1,700	2,670	1,860	1,850	1,900	1,320	1,040	808	701	743	1,040
2	1,310	1,700	2,700	1,860	1,860	2,030	1,310	995	656	701	736	1,040
3	1,310	1,700	2,640	1,860	1,850	2,860	1,310	995	674	708	736	1,040
4	1,310	1,710	2,760	1,860	1,840	2,890	1,320	1,020	680	708	736	1,040
5	1,400	1,710	2,930	1,860	1,840	2,930	1,320	1,020	722	701	736	1,040
6	1,720	1,710	2,720	1,860	1,840	2,900	1,310	1,020	715	729	729	1,030
7	1,720	1,710	2,840	1,850	1,840	2,870	1,310	1,010	722	722	729	1,020
8	1,720	1,760	2,860	1,850	1,840	2,830	1,300	1,020	715	736	729	1,040
9	1,710	1,770	2,910	1,900	1,850	2,830	1,310	1,020	708	743	736	1,040
10	1,700	1,770	2,900	1,890	1,850	2,860	1,310	1,020	708	743	736	1,040
11	1,710	1,770	2,840	1,860	1,840	2,940	1,310	1,030	715	743	736	1,040
12	1,710	1,770	2,840	1,860	1,830	3,010	1,310	1,030	715	743	736	1,060
13	1,710	1,770	2,930	1,890	1,830	3,030	1,310	1,030	715	743	736	1,060
14	1,720	1,790	3,070	1,990	1,830	3,040	1,310	1,020	715	743	743	1,050
15	1,730	1,790	2,940	1,930	1,830	2,930	1,310	1,020	715	736	750	1,040
16	1,720	1,790	2,530	1,910	1,830	3,050	1,300	1,020	715	743	750	1,040
17	1,720	1,780	2,860	1,890	1,830	2,970	1,310	1,020	715	743	757	1,040
18	1,720	1,780	3,170	1,880	1,820	3,000	1,310	1,020	708	743	757	1,050
19	1,720	1,790	3,000	1,880	1,820	2,970	1,310	1,020	715	743	757	1,060
20	1,720	1,800	2,980	1,880	1,830	2,960	1,310	1,020	708	743	757	1,050
21	1,730	1,820	3,000	1,860	1,760	2,910	1,300	1,020	722	743	757	1,050
22	1,730	1,820	3,010	1,860	1,860	2,640	1,290	1,020	701	736	757	1,050
23	1,720	1,820	3,000	1,880	3,110	1,850	1,290	1,020	701	743	757	1,060
24	1,720	1,820	3,000	1,860	2,580	1,840	1,300	1,020	694	743	757	1,060
25	1,720	1,820	3,030	1,860	2,190	1,810	1,310	1,010	694	743	764	1,060
26	1,710	1,820	2,890	1,850	1,940	1,700	1,300	1,010	694	743	757	1,050
27	1,710	1,820	1,910	1,840	1,920	1,380	1,300	1,010	701	743	757	1,050
28	1,710	1,820	1,890	1,840	1,910	1,330	1,290	1,010	694	736	757	1,050
29	1,710	1,930	1,880	1,810	1,900	1,330	1,290	1,020	694	736	750	1,060
30	1,700	2,600	1,880	1,850	-----	1,310	1,290	1,020	694	743	750	1,080
31	1,710	-----	1,880	1,850	-----	1,320	-----	1,020	-----	743	771	-----
TOTAL	51,260	54,160	84,460	57,980	55,920	76,220	39,170	31,570	21,233	22,767	23,159	31,430
MEAN	1,654	1,805	2,725	1,870	1,928	2,459	1,306	1,018	708	734	747	1,048
MAX	1,730	2,600	3,170	1,990	3,110	3,050	1,320	1,040	808	743	771	1,080
MIN	1,310	1,700	1,880	1,810	1,760	1,310	1,290	995	656	701	729	1,020
AC-FT	101,700	107,400	167,500	115,000	110,900	151,200	77,690	62,620	42,120	45,160	45,940	62,340
CAL YR 1967	TOTAL 783,904			MEAN 2,148		MAX 6,730		MIN 687		AC-FT 1,555,000		
WTR YR 1968	TOTAL 549,329			MEAN 1,501		MAX 3,170		MIN 656		AC-FT 1,090,000		

KLAMATH RIVER BASIN

11-5166. COTTONWOOD CREEK AT HORN BROOK, CALIF.

LOCATION.--Lat 41°55'00", long 122°33'45", in 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 1968.

GAGE.--Digital water-stage recorder and concrete control. Altitude of gage is 2,160 ft (from topographic map). Prior to Oct. 3, 1966, graphic water-stage recorder at same site and datum.

EXTREMES.--Maximum discharge during year, 1,700 cfs Feb. 23 (gage height, 6.10 ft); minimum daily, 0.08 cfs Aug. 12, 16, Sept. 4, 10.

1964-68: Maximum discharge, 5,480 cfs Dec. 22, 1964 (gage heights, 10.94 ft in gage well, 11.3 ft outside from floodmarks), from rating curve extended above 1,500 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.05 cfs Sept. 14-16, 1967.

REMARKS.--Records excellent except those for December, January and September, which are fair. Some diversion above station for irrigation. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	6.8	9.0	14	22	88	37	6.9	4.9	.97	.28	.12
2	3.4	6.4	10	15	69	82	38	7.2	4.7	.94	.29	.13
3	4.4	6.4	14	13	160	76	34	7.0	5.0	.89	.25	.11
4	3.8	6.4	31	12	105	74	33	8.3	4.8	.80	.18	.08
5	3.8	6.4	35	11	75	76	33	7.7	4.8	.78	.18	.09
6	3.6	6.4	19	13	66	67	33	6.5	4.9	.82	.19	.09
7	3.8	6.8	14	17	64	61	31	6.6	4.7	.57	.17	.10
8	4.1	6.8	14	14	62	56	30	6.2	4.4	.39	.20	.09
9	4.1	6.8	13	18	63	52	27	6.1	4.1	.35	.17	.09
10	3.8	7.0	13	26	68	49	25	5.6	4.0	.36	.11	.08
11	3.0	6.8	12	15	74	46	22	8.0	3.9	.36	.10	.11
12	2.8	6.8	10	16	70	53	23	6.3	3.7	.36	.08	.13
13	2.8	7.0	9.4	35	59	50	22	7.4	3.8	.36	.10	.18
14	2.9	10	8.8	143	49	48	22	6.8	3.7	.38	.12	.22
15	3.0	8.1	9.0	110	44	46	23	6.1	3.6	.40	.09	.17
16	3.1	7.7	11	71	47	52	22	5.8	3.5	.44	.08	.15
17	3.2	7.4	12	42	68	52	18	6.0	3.2	.48	.10	.16
18	2.7	7.4	11	33	80	52	18	5.2	2.9	.54	.15	.19
19	2.7	7.4	9.8	29	125	48	18	6.0	2.7	.38	.24	.19
20	2.8	7.4	9.4	28	180	44	17	7.3	2.4	.31	.21	.22
21	3.8	7.0	11	33	289	42	17	6.7	1.8	.30	.19	.34
22	5.1	7.0	12	45	503	40	16	6.4	1.7	.30	.17	.35
23	5.8	7.0	12	44	826	39	17	6.6	1.6	.27	.14	.35
24	5.6	7.0	11	41	287	39	15	6.7	1.4	.25	.12	.37
25	5.4	7.0	12	46	178	58	12	7.0	1.4	.23	.19	.37
26	5.1	7.0	13	34	139	48	10	6.9	1.1	.21	.30	.39
27	5.6	7.4	13	28	119	44	9.0	6.6	1.0	.19	.25	.38
28	6.8	7.4	13	25	103	40	7.4	5.8	.95	.16	.18	.40
29	6.4	9.6	12	28	95	40	6.2	5.4	.95	.14	.16	.44
30	6.4	10	11	26	-----	40	6.5	5.1	.96	.12	.12	.45
31	6.8	-----	13	23	-----	37	-----	5.0	-----	.10	.11	-----
TOTAL	126.82	218.6	407.4	1,048	4,089	1,639	642.1	201.2	92.56	13.15	5.22	6.54
MEAN	4.09	7.29	13.1	33.8	141	52.9	21.4	6.49	3.09	.42	.17	.22
MAX	6.8	10	35	143	826	88	38	8.3	5.0	.97	.30	.45
MIN	.22	6.4	8.8	11	22	37	6.2	5.0	.95	.10	.08	.08
AC-FT	252	434	808	2,080	8,110	3,250	1,270	399	184	26	10	13

CAL YR 1967 TOTAL 15,315.53 MEAN 42.0 MAX 1,110 MIN .05 AC-FT 30,380
 WTR YR 1968 TOTAL 8,489.59 MEAN 23.2 MAX 826 MIN .08 AC-FT 16,840

Peak discharge (base, 400 cfs).--Feb. 23 (0315 hrs) 1,700 cfs (6.10 ft).

11-5169. LITTLE SHASTA RIVER NEAR MONTAGUE, CALIF.

LOCATION.--Lat 41°45'11", long 122°17'42", in NW $\frac{1}{4}$ 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.

DRAINAGE AREA.--48.2 sq mi.

RECORDS AVAILABLE.--October 1957 to September 1968.

GAGE.--Graphic 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.--11 years, 16.5 cfs (11,950 acre-ft per year).

EXTREMES.--Maximum discharge during year, 180 cfs Feb. 23 (gage height, 2.91 ft); minimum daily, 2.2 cfs Sept. 5-11.

1957-68: Maximum discharge, 5,910 cfs Dec. 22, 1964 (gage height, 12.2 ft, present site and datum), from slope-area measurement of maximum flow; minimum daily, 0.60 cfs Jan. 4, 1966.

REMARKS.--No known diversion or regulation above station.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	4.9	4.6	4.0	5.2	24	20	9.9	5.6	3.6	3.2	2.6
2	5.2	4.9	4.6	4.0	5.2	19	20	9.5	5.6	3.4	3.2	2.6
3	6.4	4.9	4.6	4.0	5.5	19	15	9.1	5.9	3.4	3.2	2.6
4	5.8	4.9	4.6	4.0	6.1	18	15	9.1	5.6	3.4	2.8	2.4
5	6.1	4.9	4.3	4.0	6.4	20	16	8.7	9.1	3.2	2.8	2.2
6	6.1	4.9	4.3	4.0	7.3	16	15	8.7	8.3	3.0	2.8	2.2
7	5.5	4.9	4.3	4.0	8.2	15	14	8.7	6.2	3.0	2.8	2.2
8	5.2	4.9	4.3	4.0	8.7	13	15	8.7	5.6	3.0	3.2	2.2
9	5.2	4.9	4.3	4.0	9.2	12	16	8.3	5.6	3.0	3.0	2.2
10	4.6	4.9	4.3	4.0	9.6	11	17	7.9	5.4	2.8	2.8	2.2
11	4.6	4.9	4.3	4.0	10	11	18	9.1	5.4	2.8	2.6	2.2
12	4.6	4.9	4.3	4.0	9.6	11	16	8.7	5.1	2.8	2.6	2.4
13	4.6	4.9	4.3	4.0	7.8	10	14	9.9	5.1	2.8	2.6	2.6
14	4.6	6.1	4.3	6.9	6.9	12	14	11	5.1	2.8	3.2	3.0
15	4.6	5.8	4.3	14	6.9	10	14	9.1	5.1	3.0	2.8	2.8
16	4.6	5.5	4.3	12	6.1	11	14	8.3	4.8	3.0	3.2	2.6
17	4.6	5.2	4.3	13	7.3	11	12	7.9	4.8	3.0	2.8	2.4
18	4.6	4.9	4.0	13	11	12	12	7.5	4.8	3.0	3.6	2.4
19	4.6	4.9	4.0	5.8	16	11	12	8.3	4.5	3.0	5.4	2.4
20	4.6	4.9	4.0	6.1	28	11	11	12	4.2	3.0	5.1	2.6
21	5.2	4.9	4.0	7.8	68	11	11	11	4.2	2.8	4.0	2.6
22	5.5	4.6	4.0	12	114	12	11	12	4.2	2.8	3.6	2.4
23	5.2	4.6	4.0	10	141	13	11	9.5	4.2	2.8	3.4	2.4
24	4.9	4.6	4.0	9.2	74	14	11	8.7	4.2	2.8	3.2	2.4
25	4.6	4.6	4.0	8.2	46	23	10	8.3	4.2	2.8	3.2	2.4
26	4.6	4.6	4.0	7.3	37	18	10	7.5	3.8	2.8	3.8	2.8
27	4.6	4.6	4.0	6.9	33	15	10	7.1	3.8	2.6	3.2	2.6
28	5.8	4.6	4.0	6.1	29	15	10	6.5	3.8	2.6	3.0	2.8
29	5.8	4.6	4.0	5.8	26	17	10	6.2	3.8	2.6	2.8	2.8
30	5.5	4.6	4.0	5.5	-----	19	9.9	5.9	3.6	2.6	2.6	2.8
31	4.9	-----	4.0	5.2	-----	20	-----	5.9	-----	2.6	2.6	-----
TOTAL	157.6	147.3	130.3	206.8	749.0	454	403.9	269.0	151.6	90.8	99.1	74.8
MEAN	5.08	4.91	4.20	6.67	25.8	14.6	13.5	8.68	5.05	2.93	3.20	2.49
MAX	6.4	6.1	4.6	14	141	24	20	12	9.1	3.6	5.4	3.0
MIN	4.6	4.6	4.0	4.0	5.2	10	9.9	5.9	3.6	2.6	2.6	2.2
AC-FT	313	292	258	410	1,490	901	801	534	301	180	197	148

CAL YR 1967 TOTAL 8,735.6 MEAN 23.9 MAX 169 MIN 3.0 AC-FT 17,330
WTR YR 1968 TOTAL 2,934.2 MEAN 8.02 MAX 141 MIN 2.2 AC-FT 5,820

Note.--No gage-height record Nov. 25 to Jan. 13.

KLAMATH RIVER BASIN

11-5175. SHASTA RIVER NEAR YREKA, CALIF.

LOCATION.--Lat 41°49'30", long 122°35'40", in E½ 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 1968.

GAGE.--Digital water-stage recorder. Altitude of gage is 2,000 ft (from topographic map). Prior to Nov. 2, 1933, staff gage at same site and datum. Nov. 2, 1933, to Oct. 6, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--31 years (1933-41, 1945-68), 179 cfs (129,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 705 cfs Feb. 23 (gage height, 4.69 ft); minimum daily, 4.9 cfs July 19.

1933-41, 1944-68: Maximum discharge, 21,500 cfs Dec. 22, 1964 (gage heights, 12.92 ft in gage well, 13.85 ft from floodmarks), from rating curve extended above 4,100 cfs on basis of slope-area measurement of maximum flow; minimum, 3.4 cfs Aug. 13, 1939, when about 2 cfs was being diverted around gage.

REMARKS.--Records excellent. Flow partly regulated by Lake Dwinnell beginning in 1928; storage limited to 50,000 acre-ft. Many diversions above station for irrigation. Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	181	217	220	244	279	103	64	49	10	11	61
2	121	183	219	216	276	264	99	53	50	13	11	61
3	215	182	223	211	340	256	93	45	49	16	25	55
4	240	183	228	206	348	254	103	45	61	18	24	39
5	210	183	287	207	332	248	107	38	75	13	17	30
6	200	184	273	204	290	243	70	43	109	19	11	37
7	207	185	245	202	273	237	56	58	111	15	14	42
8	196	195	237	204	266	232	52	61	109	7.9	14	42
9	191	191	230	221	262	225	53	53	89	7.4	33	39
10	187	188	229	313	257	217	49	45	80	8.5	36	34
11	182	185	224	280	254	212	46	46	80	8.6	21	58
12	179	191	224	241	252	210	33	53	64	7.6	21	67
13	175	189	214	332	249	237	46	56	68	5.8	19	48
14	172	197	202	448	241	237	48	53	61	6.7	17	34
15	173	200	196	448	235	215	49	58	53	9.6	30	29
16	172	195	196	380	233	204	58	53	48	7.9	23	41
17	186	196	202	320	232	221	53	55	50	7.6	36	39
18	199	198	200	284	231	212	70	58	43	7.3	37	41
19	181	192	203	270	240	201	78	53	36	4.9	36	37
20	167	189	204	259	290	199	73	62	28	7.3	59	49
21	168	188	202	256	356	193	59	64	19	8.2	71	68
22	167	189	203	252	488	189	58	101	17	23	87	68
23	173	187	212	251	645	183	58	103	19	19	67	76
24	179	187	216	247	570	175	56	97	24	23	59	73
25	184	190	218	244	438	188	52	99	18	15	52	85
26	183	189	219	240	389	186	53	95	15	18	61	87
27	183	192	222	239	348	186	62	97	22	15	62	87
28	186	198	224	236	324	178	64	99	17	19	42	99
29	180	218	230	240	298	175	65	80	14	15	56	99
30	175	215	234	238	-----	151	62	59	14	10	61	97
31	177	-----	224	240	-----	111	-----	46	-----	8.2	59	-----
TOTAL	5,596	5,740	6,857	8,149	9,201	6,518	1,928	1,992	1,492	374.5	1,172	1,722
MEAN	181	191	221	263	317	210	64.3	64.3	49.7	12.1	37.8	57.4
MAX	240	218	287	448	645	279	107	103	111	23	87	99
MIN	88	181	196	202	231	111	33	38	14	4.9	11	29
AC-FT	11,100	11,390	13,600	16,160	18,250	12,930	3,820	3,950	2,960	743	2,320	3,420

CAL YR 1967 TOTAL 65,409 MEAN 179 MAX 761 MIN 14 AC-FT 129,700
WTR YR 1968 TOTAL 50,741.5 MEAN 139 MAX 645 MIN 4.9 AC-FT 100,600

Peak discharge (base, 400 cfs).--Jan. 14 (2000 hrs) 524 cfs (4.32 ft); Feb. 23 (2045 hrs) 705 cfs (4.69 ft).

11-5180.5. EAST FORK SCOTT RIVER AT CALLAHAN, CALIF.

LOCATION.--Lat 41°18'15", long 122°46'35", in SE¼NW¼ 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 1968.

GAGE.--Graphic 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.--9 years, 95.0 cfs (68,780 acre-ft per year).

EXTREMES.--Maximum discharge during year, 1,000 cfs Feb. 23 (gage height, 6.10 ft); minimum daily, 2.1 cfs Sept. 5, 6, 9-13.

1959-68: Maximum discharge, 7,480 cfs Dec. 22, 1964 (gage heights, 9.93 ft, in gage well, 9.73 ft, from floodmarks), from rating curve extended above 3,000 cfs on basis of slope-area measurements at gage heights 9.05 and 9.93 ft; minimum daily, 0.90 cfs Sept. 20, 21, 1962, Sept. 10-17, 1964.

REMARKS.--Records good, except those for Oct. 1 to Jan. 30, which are fair. Small diversions above station for irrigation.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	7.9	13	23	38	198	164	148	82	16	4.2	3.4
2	25	7.9	13	21	40	188	133	142	92	14	5.1	3.4
3	19	7.4	16	19	48	174	114	151	78	16	4.6	2.6
4	12	7.4	45	17	54	174	111	174	70	15	4.6	2.3
5	11	7.4	54	16	54	198	119	164	149	16	4.2	2.1
6	11	7.4	28	16	54	164	111	130	114	17	4.2	2.1
7	9.9	7.4	24	16	56	136	106	111	82	14	4.2	2.3
8	8.9	8.4	21	17	58	116	103	108	72	14	3.8	2.3
9	8.9	8.9	21	20	60	101	116	122	63	13	3.4	2.1
10	8.4	8.9	20	20	58	92	139	125	58	10	3.0	2.1
11	7.9	8.4	20	18	60	80	167	122	58	9.4	2.6	2.1
12	7.9	7.4	19	22	65	82	148	108	56	8.4	2.6	2.1
13	7.9	13	18	102	65	94	122	103	50	8.4	2.6	2.1
14	7.9	99	18	549	58	92	114	92	46	8.4	2.6	2.3
15	7.9	30	17	347	58	87	119	80	45	7.9	2.6	2.3
16	7.9	21	17	160	98	151	106	78	45	7.9	3.0	2.3
17	7.9	19	17	101	270	103	95	85	45	7.4	3.8	2.3
18	7.9	16	17	76	195	89	80	96	41	7.4	3.8	2.3
19	7.9	15	17	65	441	82	78	196	37	6.9	4.2	2.3
20	7.9	14	16	60	482	76	76	250	37	6.9	4.6	2.3
21	7.9	14	16	58	793	74	70	151	31	6.0	5.1	2.3
22	8.4	13	16	60	748	72	67	119	30	5.6	6.0	2.3
23	7.9	12	20	58	847	72	69	98	29	5.1	5.6	2.3
24	7.9	12	20	56	472	72	70	92	26	5.1	5.1	2.3
25	7.9	11	20	56	325	114	72	103	22	4.6	4.6	2.3
26	8.9	11	21	52	262	101	78	108	21	4.6	4.6	2.3
27	8.9	11	30	48	234	89	92	111	20	4.6	4.2	2.3
28	8.4	12	30	42	216	92	106	108	18	4.2	4.2	2.3
29	7.9	13	28	42	202	108	125	106	17	4.2	3.8	2.3
30	7.9	13	26	45	-----	127	154	94	16	4.2	3.8	2.3
31	7.9	-----	24	40	-----	148	-----	80	-----	4.2	3.8	-----
TOTAL	285.4	443.8	682	2,242	6,411	3,546	3,224	3,755	1,550	276.4	124.5	70.1
MEAN	9.21	14.8	22.0	72.3	221	114	107	121	51.7	8.92	4.02	2.34
MAX	25	99	54	549	847	198	167	250	149	17	6.0	3.4
MIN	2.4	7.4	13	16	38	72	67	78	16	4.2	2.6	2.1
AC-FT	566	880	1,350	4,450	12,720	7,030	6,390	7,450	3,070	548	247	139
CAL YR 1967	TOTAL 38,913.9	MEAN 107	MAX 1,160	MIN 2.4	AC-FT 77,180							
WTR YR 1968	TOTAL 22,610.2	MEAN 61.8	MAX 847	MIN 2.1	AC-FT 44,850							

PEAK DISCHARGE (BASE, 550 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-14	1500	5.89	811	02-23	0200	6.10	1,000
02-19	2200	5.84	856				

KLAMATH RIVER BASIN

11-5183.1. CEDAR GULCH NEAR CALLAHAN, CALIF.

LOCATION.--Lat 41°20'40", long 122°49'45", near center of sec.1, T.40 N., R.9 W., on left bank at culvert on county road, 2.9 miles northwest of Callahan.

DRAINAGE AREA.--0.99 sq mi.

RECORDS AVAILABLE.--Water years 1961-66 (annual maximum), February 1966 to September 1968.

GAGE.--Graphic water-stage recorder, crest-stage gages, and float-operated rain gage. Altitude of gage is 3,040 ft (from topographic map). Prior to Feb. 11, 1966, crest-stage gages only at same site and datum.

EXTREMES.--Maximum discharge during year, 8.0 cfs Feb. 23 (gage height, 6.08 ft); no flow for several months. 1960-68: Maximum discharge, 144 cfs Dec. 22, 1964 (gage height, 10.18 ft, from floodmarks), from rating curve extended above 7 cfs on basis of computations of flow through culvert at gage heights 6.15 ft, 8.25 ft, and 10.18 ft; no flow for several months each year.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0		0	0	.06	.30	.02	.21	.12			
2	.66		0	0	.33	.27	.02	.21	.12			
3	.03		0	0	.62	.24	.02	.24	.12			
4	.09		.19	0	.54	.21	.02	.24	.09			
5	.62		.27	0	.42	.18	.02	.24	.16			
6	.79		.16	0	.33	.18	.02	.24	.09			
7	.79		.14	0	.33	.16	.01	.24	.08			
8	.84		.12	0	.30	.14	.01	.24	.06			
9	.89		.09	.19	.30	.14	.01	.24	.04			
10	.89		.09	.50	.27	.12	0	.24	.02			
11	.94		.09	.24	.27	.09	0	.24	.02			
12	1.0		.09	.24	.24	.16	0	.24	.02			
13	.89		.08	.54	.24	.14	0	.24	.02			
14	.79		.08	2.0	.21	.12	0	.21	.02			
15	.74		.08	1.4	.16	.09	0	.18	.02			
16	.70		.08	.99	.16	.12	0	.16	.01			
17	.66		.08	.74	.21	.09	.01	.18	.01			
18	.62		.08	.58	.24	.09	.02	.18	.01			
19	.66		.06	.50	.42	.08	.03	.21	.01			
20	.66		.06	.42	.99	.08	.04	.21	0			
21	.79		.06	.33	1.9	.08	.04	.21	.01			
22	.79		.05	.21	3.1	.06	.06	.18	.01			
23	.12		.01	.21	3.9	.06	.08	.18	.01			
24	.04		0	.16	1.5	.06	.08	.16	0			
25	0		0	.16	.84	.09	.09	.16	0			
26	0		0	.16	.66	.08	.12	.16	0			
27	0		0	.09	.54	.06	.14	.16	0			
28	0		0	.06	.44	.04	.14	.16	0			
29	0		0	.06	.36	.03	.16	.16	0			
30	0		0	.06	-----	.02	.18	.16	0			
31	0	-----	0	.06	-----	.02	-----	.14	-----			
TOTAL	15.00	0	1.96	9.90	19.88	3.60	1.34	6.22	1.07	0	0	0
MEAN	.48	0	.063	.32	.69	.12	.045	.20	.036	0	0	0
MAX	1.0	0	.27	2.0	3.9	.30	.18	.24	.16	0	0	0
MIN	0	0	0	0	.06	.02	0	.14	0	0	0	0
AC-FT	30	0	3.9	20	39	7.1	2.7	12	2.1	0	0	0
(a)	1.40	1.24	3.51	2.39	2.34	.97	.03	.20	.60	0	.15	0

CAL YR 1967 TOTAL 79.36 MEAN .22 MAX 8.3 MIN 0 AC-FT 157
WTR YR 1968 TOTAL 58.97 MEAN .16 MAX 3.9 MIN 0 AC-FT 117

a Precipitation, in inches:

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 1968. Monthly discharge only October to December 1941, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 2,623.80 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1966, graphic water-stage recorder 400 ft downstream at datum 2.00 ft higher.

AVERAGE DISCHARGE.--27 years, 638 cfs (461,900 acre-ft per year); median of yearly mean discharges, 530 cfs (384,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 12,800 cfs Feb. 23 (gage height, 15.24 ft); minimum daily, 28 cfs Aug. 19.

1941-68: Maximum discharge, 54,600 cfs Dec. 22, 1964 (gage height, 25.34 ft, from floodmarks, site and datum then in use), from rating curve extended above 15,000 cfs on basis of slope-area measurement at 21.40 ft; minimum, 20 cfs Sept. 14, 15, 1955.

REMARKS.--Records good. Diversions for irrigation of about 30,000 acres above station. Records of chemical analyses for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	89	117	150	514	1,810	900	563	398	109	44	44
2	86	87	121	147	553	1,640	868	514	438	103	36	45
3	103	86	134	138	833	1,490	804	522	466	103	34	44
4	127	87	170	138	830	1,410	779	581	437	99	35	42
5	120	88	267	132	753	1,450	742	651	513	95	45	41
6	117	87	242	127	708	1,350	721	608	721	87	45	41
7	113	89	209	127	687	1,220	690	527	562	82	45	40
8	110	89	186	138	677	1,090	671	480	464	86	44	40
9	106	89	174	155	673	997	642	495	416	89	38	40
10	110	89	167	224	668	913	681	530	383	77	39	40
11	110	88	161	222	665	870	793	529	335	73	51	40
12	110	86	153	198	668	895	825	514	312	71	61	38
13	103	88	143	287	675	902	762	499	300	66	56	38
14	100	113	157	1,170	651	849	700	482	280	65	51	42
15	89	191	149	1,240	639	799	663	432	253	65	46	41
16	89	157	143	1,150	632	826	610	403	240	63	45	40
17	89	138	134	721	727	818	554	391	238	56	45	38
18	86	130	149	736	921	744	478	432	214	33	39	42
19	83	124	131	736	1,250	700	445	557	195	29	28	43
20	83	118	125	683	3,440	677	411	1,010	192	29	29	43
21	83	114	122	668	4,770	654	374	831	189	30	32	44
22	83	112	121	674	6,160	639	339	717	185	33	32	45
23	83	110	124	663	11,000	623	328	599	193	36	31	46
24	83	106	126	657	6,880	610	321	553	165	38	34	46
25	83	103	129	649	4,000	799	292	530	154	68	55	46
26	83	100	132	642	3,020	844	282	538	139	70	53	44
27	83	100	142	604	2,540	766	300	602	127	54	57	47
28	89	100	154	570	2,110	740	340	582	118	48	56	48
29	89	115	159	573	1,970	769	385	575	110	46	51	48
30	89	123	156	545	-----	836	505	545	108	46	49	51
31	89	-----	148	532	-----	859	-----	454	-----	45	46	-----
TOTAL	2,935	3,196	4,745	15,396	59,614	29,589	17,205	17,246	8,845	1,994	1,352	1,287
MEAN	94.7	107	153	497	2,056	954	574	556	295	64.3	43.6	42.9
MAX	127	191	267	1,240	11,000	1,810	900	1,010	721	109	61	51
MIN	64	86	117	127	514	610	282	391	108	29	28	38
AC-FT	5,820	6,340	9,410	30,540	118,200	58,690	34,130	34,210	17,540	3,960	2,680	2,550

CAL YR 1967 TOTAL 210,586 MEAN 577 MAX 5,760 MIN 24 AC-FT 417,700
WTR YR 1968 TOTAL 163,404 MEAN 446 MAX 11,000 MIN 28 AC-FT 324,100

Peak discharge (base, 2,300 cfs).--Feb. 20 (1015 hrs) 4,400 cfs (10.84 ft); Feb. 23 (1745 hrs) 12,800 cfs (15.24 ft).

KLAMATH RIVER BASIN

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Graphic water-stage recorder. Altitude of gage is 1,320 ft (from river-profile map). November 1912 to June 1925, staff gage at site 3.5 miles upstream at different datum.

AVERAGE DISCHARGE.--30 years, 4,044 cfs (2,928,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 23,400 cfs Feb. 23 (gage height, 13.20 ft); minimum daily, 906 cfs Aug. 13.

1912-25, 1951-68: Maximum discharge, 165,000 cfs Dec. 23, 1964 (gage height, 33.75 ft, from floodmarks), from rating curve extended above 25,000 cfs on basis of slope-area measurements at gage heights 20.1 and 29.2 ft; minimum daily, 320 cfs Nov. 25, 1917.

REMARKS.--Records good. Flow considerably regulated by reservoirs and powerplants above station. Large diversions above station for irrigation. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,600	2,180	3,150	2,540	3,070	5,680	3,380	2,640	2,030	1,040	924	984
2	1,790	2,170	3,260	2,530	3,260	5,380	3,350	2,350	1,860	1,030	942	1,190
3	1,920	2,170	3,350	2,480	4,260	5,560	3,180	2,330	1,820	1,030	912	1,200
4	1,850	2,170	3,470	2,460	4,240	5,760	3,120	2,420	1,790	1,030	918	1,190
5	1,850	2,180	4,040	2,460	4,000	5,760	3,100	2,500	1,830	1,020	912	1,180
6	2,070	2,180	3,660	2,440	3,830	5,590	3,000	2,420	2,110	1,010	912	1,180
7	2,220	2,180	3,690	2,440	3,770	5,360	2,900	2,340	2,030	1,020	912	1,160
8	2,220	2,200	3,540	2,460	3,730	5,140	2,860	2,290	1,880	1,000	912	1,170
9	2,200	2,280	3,560	2,610	3,700	4,980	2,830	2,290	1,750	996	924	1,180
10	2,190	2,270	3,560	3,000	3,690	4,840	2,910	2,330	1,660	990	918	1,180
11	2,190	2,270	3,540	2,850	3,660	4,790	3,080	2,360	1,600	984	912	1,170
12	2,180	2,270	3,450	2,710	3,630	4,960	3,120	2,340	1,520	984	912	1,180
13	2,180	2,280	3,420	2,980	3,580	5,010	3,010	2,320	1,460	984	906	1,220
14	2,150	2,470	3,520	5,640	3,520	4,980	2,910	2,250	1,440	972	912	1,200
15	2,150	2,460	3,480	8,800	3,440	4,840	2,850	2,170	1,390	972	912	1,180
16	2,150	2,410	3,380	6,340	3,370	4,840	2,780	2,120	1,350	972	912	1,190
17	2,150	2,370	3,130	4,820	3,520	4,930	2,700	2,110	1,330	972	912	1,190
18	2,160	2,350	3,660	4,050	3,980	4,720	2,610	2,150	1,310	960	930	1,200
19	2,160	2,330	3,610	3,700	4,660	4,660	2,590	2,350	1,280	942	948	1,200
20	2,150	2,300	3,550	3,520	7,670	4,600	2,540	3,000	1,240	936	954	1,220
21	2,180	2,330	3,510	3,470	9,290	4,530	2,480	2,840	1,220	936	960	1,230
22	2,220	2,340	3,520	3,560	12,100	4,500	2,400	2,610	1,220	936	990	1,240
23	2,180	2,340	3,550	3,580	22,000	3,760	2,410	2,480	1,200	948	984	1,240
24	2,180	2,340	3,580	3,550	15,600	3,470	2,400	2,360	1,170	948	960	1,230
25	2,190	2,330	3,590	3,520	10,200	4,080	2,360	2,340	1,140	948	996	1,240
26	2,190	2,320	3,630	3,450	8,240	4,000	2,370	2,330	1,100	974	1,120	1,250
27	2,180	2,320	3,130	3,310	7,200	3,690	2,410	2,390	1,090	966	1,020	1,240
28	2,250	2,320	2,680	3,200	6,530	3,310	2,460	2,380	1,080	954	966	1,240
29	2,230	2,450	2,660	3,200	6,010	3,330	2,530	2,340	1,060	942	960	1,250
30	2,200	2,780	2,610	3,160	-----	3,410	2,660	2,250	1,050	930	960	1,240
31	2,180	-----	2,560	3,120	-----	3,480	-----	2,130	-----	924	948	-----
TOTAL	65,710	69,360	105,040	107,950	175,750	143,940	83,300	73,530	44,010	30,250	29,260	35,964
MEAN	2,120	2,312	3,388	3,482	6,060	4,643	2,777	2,372	1,467	976	944	1,199
MAX	2,250	2,780	4,040	8,800	22,000	5,760	3,380	3,000	2,110	1,040	1,120	1,250
MIN	1,600	2,170	2,560	2,440	3,070	3,310	2,360	2,110	1,050	924	906	984
AC-FT	130,300	137,600	208,300	214,100	348,600	285,500	165,200	145,800	87,290	60,000	58,040	71,330
CAL YR 1967	TOTAL 1,320,320		MEAN 3,617		MAX 18,600		MIN 1,120		AC-FT 2,619,000			
WTR YR 1968	TOTAL 964,064		MEAN 2,634		MAX 22,000		MIN 906		AC-FT 1,912,000			

11-5215. INDIAN CREEK NEAR HAPPY CAMP, CALIF.

LOCATION.--Lat 41°50'50", long 123°23'10", in SE¼ 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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. 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. December 1956 to Oct. 7, 1964, and Dec. 31, 1964, to Feb. 24, 1965, graphic water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--14 years (1911-14, 1957-68), 425 cfs (307,700 acre-ft per year).

EXTREMES.--Maximum discharge during year, 8,600 cfs Feb. 23 (gage height, 18.40 ft); minimum daily, 41 cfs Sept. 29, 30.

1911-21, 1956-68: Maximum discharge, 39,000 cfs Dec. 22, 1964 (gage height, 36.59 ft, from floodmarks, in gage well), from rating curve extended above 4,800 cfs on basis of slope-area measurement at gage height 29.0 ft; minimum observed, 20 cfs Aug. 19 to Sept. 6, 1914.

Flood of Dec. 21, 1955, reached a stage of 29.0 ft, from floodmarks (discharge, 23,000 cfs on basis of slope-area measurement of peak flow).

REMARKS.--Records fair. Small diversions above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	66	75	174	313	938	599	346	198	81	56	52
2	176	62	112	158	457	802	568	330	214	80	55	50
3	159	61	135	152	904	773	520	344	214	78	54	49
4	90	60	800	147	700	729	497	370	187	77	53	49
5	93	59	545	138	569	707	476	348	177	75	53	48
6	77	59	180	128	523	630	444	306	167	73	52	48
7	68	61	164	122	546	573	427	286	159	71	52	48
8	63	66	152	128	545	515	418	283	151	70	52	47
9	60	70	142	335	544	476	432	288	144	70	51	47
10	59	69	116	403	544	448	488	284	141	68	50	47
11	58	65	111	289	523	429	425	282	140	67	48	46
12	58	60	102	243	493	498	380	274	132	67	48	45
13	56	109	89	1,080	467	464	345	275	126	67	48	49
14	56	362	81	4,580	428	555	320	250	123	66	52	57
15	55	225	77	4,820	396	572	340	230	123	66	51	56
16	54	150	75	1,620	379	744	310	224	120	65	50	53
17	54	127	79	831	571	682	280	236	118	64	51	51
18	54	101	83	586	719	569	262	247	113	63	56	51
19	55	90	72	464	1,800	514	260	353	111	63	61	52
20	55	86	68	421	2,320	485	255	407	107	62	60	52
21	95	81	67	430	3,230	476	241	362	103	61	58	50
22	84	76	67	495	4,530	472	231	315	99	60	56	49
23	74	74	73	484	5,890	488	236	288	98	59	54	48
24	68	70	78	451	2,780	510	239	263	94	59	54	47
25	74	67	89	433	1,900	1,160	250	267	91	58	80	46
26	71	66	138	409	1,530	771	263	290	89	57	153	45
27	67	66	283	382	1,300	643	285	281	87	56	91	44
28	159	70	303	358	1,130	615	314	257	85	56	69	42
29	100	110	279	355	995	632	350	242	84	55	62	41
30	79	80	231	335	-----	629	380	216	83	55	58	41
31	71	-----	190	318	-----	599	-----	201	-----	54	55	-----
TOTAL	2,396	2,768	5,056	21,269	37,026	19,098	10,835	8,945	3,878	2,023	1,843	1,450
MEAN	77.3	92.3	163	686	1,277	616	361	289	129	65.3	59.5	48.3
MAX	176	362	800	4,820	5,890	1,160	599	407	214	81	153	57
MIN	54	59	67	122	313	429	231	201	83	54	48	41
AC-FT	4,750	5,490	10,030	42,190	73,440	37,880	21,490	17,740	7,690	4,010	3,660	2,880
CAL YR 1967	TOTAL 128,465		MEAN 352		MAX 5,740		MIN 49		AC-FT 254,800			
WTR YR 1968	TOTAL 116,587		MEAN 319		MAX 5,890		MIN 41		AC-FT 231,200			

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-15	0215	17.00	7,300	02-23	0245	18.40	8,600
02-19	2045	12.84	4,090				

KLAMATH RIVER BASIN

11-5225. SALMON RIVER AT SOMESBAR, CALIF.

LOCATION.--Lat 41°22'40", long 123°28'35", in NE $\frac{1}{4}$ sec.3, T.11 N., R.6 E., on left bank at Somesbar, 1.0 mile upstream from mouth.

DRAINAGE AREA.--751 sq mi.

RECORDS AVAILABLE.--September 1911 to September 1915, October 1927 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital 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, October 1927 to Dec. 22, 1964, graphic water-stage recorder at site 0.5 mile upstream at datum 6.54 ft higher. July 30, 1965, to Oct. 19, 1967, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--45 years, 1,734 cfs (1,255,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 32,100 cfs Feb. 23 (gage height, 15.80 ft); minimum daily, 148 cfs Sept. 29, 30.

1911-15, 1927-68: Maximum discharge, 133,000 cfs Dec. 22, 1964 (gage height, 46.6 ft, present site and datum, from floodmarks), from rating curve extended above 33,000 cfs; minimum, 70 cfs Aug. 25, Sept. 4, 5, 1931.

REMARKS.--Records good. No storage or large diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	260	344	814	1,250	4,360	2,180	1,710	1,280	441	224	224
2	476	250	425	742	1,760	3,980	2,070	1,640	1,390	428	222	213
3	712	244	670	670	3,210	3,640	1,920	1,810	1,330	416	214	206
4	372	236	1,020	622	2,900	3,390	1,830	2,100	1,220	412	209	200
5	352	232	1,560	592	2,570	3,520	1,770	2,040	1,230	415	200	193
6	328	232	827	550	2,420	3,170	1,670	1,600	1,220	411	194	182
7	304	231	911	535	2,490	2,940	1,590	1,480	1,080	385	193	180
8	280	246	730	580	2,410	2,720	1,560	1,470	988	369	191	176
9	272	301	586	890	2,270	2,520	1,600	1,560	921	353	203	174
10	264	314	555	1,890	2,130	2,360	1,810	1,580	893	346	198	169
11	260	292	525	1,220	1,980	2,240	2,070	1,520	924	336	188	169
12	253	260	495	988	1,860	2,350	1,970	1,380	902	331	183	169
13	253	253	455	1,550	1,770	2,230	1,770	1,370	824	324	182	169
14	246	1,280	372	7,900	1,660	2,180	1,660	1,210	781	313	190	225
15	239	848	368	10,900	1,550	2,080	1,650	1,120	791	308	198	214
16	236	515	395	5,380	1,480	2,180	1,550	1,090	798	308	193	196
17	229	415	395	3,480	1,610	2,140	1,430	1,220	821	298	190	182
18	225	375	500	2,650	1,880	2,010	1,360	1,320	840	292	208	177
19	218	345	435	2,160	3,060	1,910	1,320	2,030	821	288	247	172
20	211	325	395	1,920	7,840	1,840	1,270	2,920	770	280	280	173
21	296	310	376	1,970	11,100	1,770	1,210	1,900	716	274	259	176
22	372	295	380	2,110	16,800	1,700	1,170	1,590	669	268	245	173
23	332	285	470	2,040	26,000	1,660	1,190	1,400	644	262	235	171
24	288	278	530	1,980	14,000	1,610	1,150	1,250	602	256	224	167
25	284	272	670	1,910	9,540	2,540	1,110	1,350	564	249	283	159
26	272	265	939	1,770	7,500	2,360	1,160	1,430	552	246	662	157
27	257	260	1,500	1,600	6,000	2,190	1,330	1,590	539	244	558	154
28	376	253	1,520	1,470	5,220	2,110	1,390	1,550	505	234	384	152
29	344	450	1,320	1,490	4,720	2,190	1,580	1,510	486	229	311	148
30	292	445	1,080	1,430	-----	2,230	1,830	1,350	459	228	266	148
31	270	-----	911	1,310	-----	2,180	-----	1,250	-----	224	245	-----
TOTAL	9,324	10,567	21,659	65,113	148,980	76,300	47,170	48,340	25,560	9,768	7,779	5,368
MEAN	301	352	699	2,100	5,137	2,461	1,572	1,559	852	315	251	179
MAX	712	1,280	1,560	10,900	26,000	4,360	2,180	2,920	1,390	441	662	225
MIN	211	231	344	535	1,250	1,610	1,110	1,090	459	224	182	148
AC-FT	18,490	20,960	42,960	129,100	295,500	151,300	93,560	95,880	50,700	19,370	15,430	10,650

CAL YR 1967 TOTAL 569,812 MEAN 1,561 MAX 17,700 MIN 185 AC-FT 1,130,000
WTR YR 1968 TOTAL 475,928 MEAN 1,300 MAX 26,000 MIN 148 AC-FT 944,000

Peak discharge (base, 10,000 cfs).--Jan. 15 (0815 hrs) 13,200 cfs (10.62 ft); Feb. 23 (0500 hrs) 32,100 cfs (15.80 ft).

11-5230. KLAMATH RIVER AT ORLEANS, CALIF.

LOCATION.--Lat 41°18'13", long 123°32'00", in SW¼NE¼ sec.31, T.11 N., R.6 E., on right bank at Orleans, 25 ft upstream from highway bridge, and 0.2 mile downstream from Cheenitch Creek.

DRAINAGE AREA.--8,500 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

RECORDS AVAILABLE.--October 1927 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1965, published as "at Somesbar."

GAGE.--Digital water-stage recorder. Datum of gage is 355.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Oct. 1, 1965, graphic water-stage recorder at site 6.7 miles upstream at datum 90.68 ft higher.

AVERAGE DISCHARGE.--41 years, 7,766 cfs (5,622,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 109,000 cfs Feb. 23 (gage height, 25.38 ft); minimum daily, 1,280 cfs Aug. 11-17.

1927-68: Maximum discharge, 307,000 cfs Dec. 22, 1964 (gage height, 76.5 ft from floodmarks, site and datum then in use), from rating curve extended above 80,000 cfs by slope-conveyance study; minimum daily, 320 cfs Aug. 25, Sept. 1, 1951.

REMARKS.--Records good. Flow considerably regulated by reservoirs and powerplants above station. Large diversions above station for irrigation. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,190	2,560	3,580	4,160	5,090	16,100	9,340	5,900	4,270	2,120	1,360	1,420
2	2,380	2,500	4,000	4,000	5,260	14,600	9,110	5,490	4,330	2,090	1,340	1,390
3	2,980	2,420	5,130	3,910	15,600	13,700	8,430	5,350	4,210	2,060	1,320	1,400
4	2,710	2,350	6,200	3,730	14,600	13,700	7,900	5,750	3,980	2,050	1,300	1,410
5	2,700	2,320	9,050	3,570	12,300	14,200	7,570	5,750	3,900	2,080	1,290	1,410
6	2,600	2,300	6,140	3,460	11,100	13,300	7,210	5,240	4,040	2,050	1,280	1,400
7	2,820	2,320	6,030	3,390	11,000	12,400	6,850	4,900	3,960	1,920	1,280	1,380
8	2,790	2,430	5,440	3,510	11,300	11,500	6,560	4,820	3,700	1,880	1,290	1,370
9	2,760	2,680	5,150	4,510	10,700	10,900	6,570	4,890	3,460	1,810	1,290	1,350
10	2,750	2,820	5,110	7,920	10,200	10,400	7,090	4,920	3,300	1,730	1,290	1,340
11	2,740	2,650	4,980	5,920	9,650	10,100	7,730	4,880	3,220	1,680	1,280	1,390
12	2,720	2,550	4,810	5,000	9,230	10,600	7,810	4,910	3,200	1,670	1,280	1,410
13	2,720	5,500	4,660	9,360	8,930	11,000	7,010	4,750	3,050	1,670	1,280	1,430
14	2,700	11,400	4,480	34,900	8,390	11,200	6,640	4,570	2,960	1,660	1,280	1,430
15	2,680	5,400	4,250	55,200	7,930	10,900	6,490	4,300	2,900	1,650	1,280	1,430
16	2,670	4,200	4,210	25,600	7,570	11,500	6,250	4,210	2,840	1,610	1,280	1,430
17	2,670	3,750	3,920	15,100	8,440	11,900	5,880	4,340	2,830	1,650	1,280	1,450
18	2,660	3,500	4,530	10,600	9,950	10,900	5,630	4,480	2,810	1,620	1,290	1,460
19	2,660	3,200	4,550	8,480	13,700	10,300	5,500	5,300	2,760	1,600	1,410	1,450
20	2,650	3,050	4,360	6,920	33,100	9,810	5,340	7,710	2,710	1,550	1,690	1,440
21	2,840	2,900	4,260	6,600	44,400	9,460	5,170	6,580	2,870	1,510	1,840	1,460
22	3,130	2,780	4,210	6,880	60,300	9,190	5,000	5,850	2,720	1,500	1,700	1,440
23	2,930	2,760	4,350	6,940	92,800	8,830	5,320	5,300	2,720	1,470	1,610	1,450
24	2,820	2,760	4,530	6,660	55,200	7,900	5,660	4,860	2,640	1,500	1,500	1,480
25	2,810	2,770	4,710	6,540	34,300	12,300	5,510	4,930	2,410	1,430	2,050	1,510
26	2,810	2,710	5,170	6,300	26,100	11,900	5,170	5,080	2,370	1,460	3,000	1,520
27	2,780	2,700	6,850	5,960	21,700	10,600	5,240	5,350	2,250	1,410	2,540	1,530
28	3,220	2,740	6,260	5,530	19,000	9,750	5,400	5,190	2,190	1,410	2,020	1,520
29	3,160	3,310	5,900	5,510	17,100	9,700	5,730	5,090	2,190	1,400	1,720	1,510
30	2,910	3,400	5,200	5,490	-----	9,700	6,010	4,770	2,160	1,410	1,580	1,520
31	2,740	-----	4,520	5,310	-----	9,420	-----	4,450	-----	1,380	1,490	-----
TOTAL	85,700	98,730	156,540	286,960	594,940	347,760	195,120	159,910	92,950	52,030	47,440	43,130
MEAN	2,765	3,291	5,050	9,257	20,520	11,220	6,504	5,158	3,098	1,678	1,530	1,438
MAX	3,220	11,400	9,050	55,200	92,800	16,100	9,340	7,710	4,330	2,120	3,000	1,530
MIN	2,190	2,300	3,580	3,390	5,090	7,900	5,000	4,210	2,160	1,380	1,280	1,340
AC-FT	170,000	195,800	310,500	569,200	1,180M	689,800	387,000	317,200	184,400	103,200	94,100	85,550

CAL YR 1967 TOTAL 2,898,000 MEAN 7,940 MAX 86,100 MIN 1,920 AC-FT 5,748,000
WTR YR 1968 TOTAL 2,161,210 MEAN 5,905 MAX 92,800 MIN 1,280 AC-FT 4,287,000

Peak discharge (base, 40,000 cfs).--Jan. 15 (0915 hrs) 69,400 cfs (20.43 ft); Feb. 23 (0915 hrs) 109,000 cfs (25.38 ft).

Note.--No gage-height record Aug. 1 to Sept. 9.

KLAMATH RIVER BASIN

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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 2,533.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. September 1957 to May 6, 1965, graphic water-stage recorder at present site and datum.

AVERAGE DISCHARGE.--11 years, 404 cfs (292,500 acre-ft per year).

EXTREMES.--Maximum discharge during year, 3,650 cfs Feb. 23 (gage height, 6.68 ft); minimum daily, 30 cfs Sept. 28-30.

1957-68: Maximum discharge, 20,800 cfs Dec. 22, 1964 (gage height, 12.30 ft, in gage well, 13.4 ft from floodmarks), from rating curve extended above 5,000 cfs on basis of slope-area measurement at gage height 9.91 ft; minimum daily, 27 cfs Nov. 3, 1966.

Flood of Dec. 22, 1955, reached a stage of 10.5 ft from floodmarks (discharge, 11,400 cfs).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	43	59	136	187	1,030	928	795	380	83	51	38
2	103	42	73	125	187	959	728	788	372	80	52	37
3	93	42	652	114	181	900	632	839	329	77	47	36
4	66	42	162	108	181	873	607	891	315	76	44	36
5	76	44	97	104	178	1,000	573	788	509	74	43	34
6	65	45	84	96	192	807	536	629	388	70	42	34
7	58	44	144	96	233	684	528	571	313	67	42	36
8	55	55	75	94	270	587	543	585	274	65	43	34
9	53	59	73	117	312	517	643	617	246	63	44	33
10	50	52	78	133	324	467	867	623	231	63	42	33
11	49	50	76	111	330	434	1,040	600	225	61	40	33
12	48	48	74	120	347	445	930	558	211	60	39	33
13	47	60	71	150	370	425	739	521	194	60	39	33
14	45	422	89	844	336	428	703	447	182	60	42	37
15	45	124	104	1,040	313	407	712	411	175	58	42	37
16	44	87	81	572	392	505	639	414	168	57	39	34
17	44	74	83	368	937	442	544	433	162	56	39	33
18	43	67	782	278	850	398	509	476	155	54	40	33
19	43	62	636	233	1,460	376	506	865	144	53	54	33
20	43	60	523	228	1,850	375	473	947	137	52	65	34
21	51	58	240	325	2,710	380	437	633	130	51	61	36
22	55	55	69	421	2,890	384	420	525	121	49	53	36
23	50	54	72	416	3,310	391	433	449	116	48	49	34
24	47	52	78	425	2,280	406	407	419	109	48	45	33
25	46	52	117	440	1,620	567	428	491	103	47	44	32
26	46	49	165	376	1,370	538	517	467	98	45	53	31
27	45	51	246	309	1,290	496	604	473	93	44	49	31
28	46	51	258	272	1,190	556	653	482	89	43	45	30
29	45	65	215	285	1,070	720	768	458	87	43	43	30
30	44	62	168	241	-----	839	849	401	86	43	40	30
31	43	-----	147	206	-----	903	-----	365	-----	43	39	-----
TOTAL	1,625	2,071	5,791	8,783	27,160	18,239	18,896	17,961	6,142	1,793	1,410	1,014
MEAN	52.4	69.0	187	283	937	588	630	579	205	57.8	45.5	33.8
MAX	103	422	782	1,040	3,310	1,030	1,040	947	509	83	65	38
MIN	37	42	59	94	178	375	407	365	86	43	39	30
AC-FT	3,220	4,110	11,490	17,420	53,870	36,180	37,480	35,630	12,180	3,560	2,800	2,010
CAL YR 1967	TOTAL 161,463		MEAN 442		MAX 3,550		MIN 34		AC-FT 320,300			
WTR YR 1968	TOTAL 110,885		MEAN 303		MAX 3,310		MIN 30		AC-FT 219,900			

Peak discharge (base, 1,900 cfs).--Feb. 23 (0600 hrs) 3,650 cfs (6.68 ft).

11-5254. CLAIR ENGLE LAKE NEAR LEWISTON, CALIF.

LOCATION.--Lat 40°48'05", long 122°45'44", in sec.15, T.34 N., R.8 W., 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 1968. Prior to October 1963 published as Trinity Lake near Lewiston.

GAGE.--Graphic 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, 2,139,300 acre-ft Apr. 16 (elevation, 2,350.36 ft); minimum, 1,387,900 acre-ft Sept. 30 (elevation, 2,293.60 ft).
1961-68: Maximum contents, 2,548,600 acre-ft Apr. 15, 1963 (elevation, 2,376.02 ft); minimum since lake first filled, 1,387,900 acre-ft Sept. 30, 1968 (elevation, 2,293.60 ft).

REMARKS.--The lake is formed by an earthfill dam completed in November 1960. Storage began Nov. 23, 1960. Usable capacity, 2,437,700 acre-ft between elevations 1,995.5 (elevation of invert of river outlets) and 2,370.0 ft (gross pool elevation) above mean sea level. Dead storage, 10,000 acre-ft. Records including extremes represent total contents at 2400 hrs.

COOPERATION.--Records furnished by Bureau of Reclamation.

CAPACITY TABLE (ELEVATION, IN FEET, AND CONTENTS, IN ACRE-FT)

1,960	670	2,100	162,200
1,970	1,890	2,140	292,900
1,980	4,130	2,190	529,600
2,000	12,400	2,250	955,100
2,020	26,400	2,310	1,583,600
2,040	47,000	2,380	2,617,000
2,070	92,900		

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400 HOURS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,963.4	1,814.5	1,747.4	1,695.3	1,739.6	1,984.7	2,095.6	2,103.8	2,016.7	1,843.9	1,613.9	1,447.1
2	1,961.1	1,811.7	1,746.9	1,693.8	1,741.0	1,990.7	2,099.5	2,102.6	2,013.0	1,836.9	1,606.2	1,444.5
3	1,956.8	1,809.0	1,746.3	1,692.1	1,741.5	1,996.5	2,103.0	2,101.4	2,008.4	1,830.5	1,598.3	1,442.4
4	1,952.1	1,806.5	1,746.0	1,690.4	1,742.1	2,001.6	2,106.3	2,100.0	2,003.6	1,824.1	1,590.3	1,440.3
5	1,947.5	1,803.9	1,744.7	1,689.2	1,742.7	2,007.7	2,108.9	2,098.0	1,999.9	1,817.6	1,582.3	1,438.4
6	1,942.5	1,801.4	1,744.1	1,688.3	1,743.5	2,012.5	2,111.4	2,095.4	1,995.1	1,810.7	1,574.3	1,436.4
7	1,937.7	1,798.9	1,742.1	1,687.3	1,744.4	2,016.6	2,114.1	2,092.6	1,990.2	1,803.5	1,566.8	1,434.6
8	1,933.2	1,796.6	1,740.2	1,686.5	1,746.0	2,019.8	2,116.9	2,089.9	1,985.0	1,796.0	1,559.4	1,432.4
9	1,928.0	1,794.3	1,738.0	1,688.4	1,747.4	2,022.6	2,119.8	2,087.4	1,979.6	1,788.4	1,551.7	1,429.9
10	1,923.2	1,791.9	1,735.9	1,687.3	1,749.3	2,025.1	2,123.7	2,084.6	1,974.3	1,781.0	1,543.8	1,427.6
11	1,918.4	1,789.4	1,733.9	1,686.5	1,750.9	2,027.2	2,127.9	2,081.8	1,968.5	1,772.9	1,536.0	1,425.5
12	1,913.7	1,786.9	1,731.6	1,685.8	1,752.8	2,031.2	2,131.5	2,077.9	1,962.5	1,764.9	1,528.2	1,423.3
13	1,908.6	1,785.3	1,729.1	1,687.4	1,754.4	2,034.0	2,134.0	2,074.8	1,956.9	1,757.0	1,520.0	1,421.0
14	1,904.1	1,787.0	1,726.4	1,700.2	1,756.0	2,036.8	2,136.6	2,071.1	1,951.5	1,749.2	1,511.6	1,418.5
15	1,898.8	1,785.3	1,723.9	1,711.4	1,757.6	2,039.3	2,138.3	2,067.2	1,946.2	1,741.5	1,503.7	1,417.0
16	1,893.9	1,783.1	1,721.5	1,716.7	1,760.5	2,043.4	2,139.3	2,063.4	1,941.0	1,733.8	1,495.8	1,415.4
17	1,888.9	1,780.8	1,720.4	1,719.3	1,769.0	2,046.3	2,138.6	2,060.0	1,935.7	1,726.8	1,489.6	1,413.6
18	1,883.7	1,778.4	1,718.5	1,721.0	1,776.1	2,049.1	2,137.4	2,056.9	1,930.3	1,719.3	1,482.7	1,411.1
19	1,878.8	1,776.0	1,716.1	1,721.7	1,794.3	2,051.9	2,134.4	2,058.1	1,924.2	1,711.7	1,477.7	1,408.4
20	1,873.8	1,773.3	1,714.2	1,722.5	1,813.1	2,054.4	2,130.9	2,057.6	1,918.2	1,704.5	1,474.9	1,406.2
21	1,869.3	1,771.0	1,712.1	1,723.9	1,838.6	2,056.8	2,127.6	2,055.0	1,912.1	1,697.0	1,472.5	1,403.9
22	1,864.6	1,768.4	1,709.6	1,725.7	1,867.9	2,059.0	2,124.3	2,051.5	1,905.4	1,689.6	1,470.0	1,401.8
23	1,859.6	1,765.7	1,707.5	1,727.7	1,904.4	2,061.0	2,120.7	2,047.6	1,899.2	1,682.1	1,467.9	1,400.1
24	1,854.6	1,763.3	1,705.4	1,729.4	1,926.1	2,063.2	2,117.2	2,044.0	1,892.8	1,674.2	1,465.4	1,398.0
25	1,849.7	1,760.5	1,703.6	1,731.4	1,940.2	2,066.8	2,114.1	2,041.0	1,886.6	1,666.3	1,463.1	1,395.9
26	1,844.6	1,758.0	1,702.1	1,732.7	1,951.8	2,069.9	2,111.3	2,037.8	1,879.8	1,658.5	1,460.8	1,393.8
27	1,839.0	1,755.4	1,701.2	1,733.8	1,961.7	2,073.0	2,109.0	2,034.9	1,872.6	1,651.0	1,459.0	1,392.4
28	1,834.5	1,752.9	1,701.0	1,735.9	1,970.3	2,076.3	2,107.2	2,031.9	1,865.0	1,643.6	1,456.9	1,391.2
29	1,829.4	1,751.8	1,699.6	1,737.8	1,977.7	2,080.6	2,105.7	2,028.6	1,857.4	1,636.2	1,454.5	1,389.6
30	1,824.2	1,749.8	1,698.5	1,738.2	-----	2,985.5	2,104.8	2,024.5	1,850.8	1,628.9	1,452.2	1,387.9
31	1,819.2	-----	1,696.9	1,738.7	-----	2,090.5	-----	2,020.5	-----	1,621.2	1,449.8	-----
(a)	2,328.07	2,322.91	2,318.89	2,322.07	2,339.40	2,347.10	2,348.06	2,342.35	2,330.38	2,313.00	2,298.95	2,293.60
(b)	-149.5	-69.4	-52.9	+41.8	+239.0	+112.8	+14.3	-84.3	-169.7	-229.6	-171.4	-61.9
(c)	2,000	590	-	-	-	1,520	4,840	5,200	7,390	8,300	4,970	4,120
MAX	1,963.4	1,814.5	1,747.4	1,738.7	1,977.7	2,090.5	2,139.3	2,103.8	2,016.7	1,843.9	1,613.9	1,447.1
MIN	1,819.2	1,749.8	1,696.9	1,685.8	1,739.6	1,984.7	2,095.6	2,020.5	1,850.8	1,621.2	1,449.8	1,387.9
CAL YR 1967		b -124.1		MAX 2,495.9	MIN 1,696.9							
WTR YR 1968		b -580.8		MAX 2,139.3	MIN 1,387.9							

a Elevation, in feet, at end of month.

b Change in contents, in thousands of acre-feet.

c Evaporation, in acre-feet.

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 1968.

GAGE.--Recorded powerplant output.

EXTREMES.--1963-68: Maximum daily discharge, 3,598 cfs for many days in June and July 1968; no flow May 6-9, 1963 and Oct. 25, 1966.

REMARKS.--Water is diverted from Trinity River at NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake (see sta. no. 11-3717.). See schematic diagram for Pit and McCloud River basins.

COOPERATION.--Records furnished by Bureau of Reclamation and rounded to meet Geological Survey editorial procedures.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2,500	2,470	1,310	1,160	732	845	480	3,260	3,520	3,570	3,580	1,320		
2	2,560	1,510	1,300	1,180	732	876	480	3,380	3,530	3,570	3,580	1,350		
3	2,570	1,360	1,290	1,160	750	830	471	3,450	3,570	3,510	3,580	1,030		
4	2,560	1,280	1,300	1,170	710	816	519	3,400	3,570	3,580	3,580	992		
5	2,490	1,290	1,290	964	722	807	568	3,400	3,520	3,600	3,570	988		
6	2,450	1,070	1,290	805	707	812	568	3,400	3,520	3,600	3,570	989		
7	2,520	1,300	1,290	802	692	809	612	3,370	3,560	3,600	3,570	952		
8	2,500	1,220	1,330	794	777	791	613	3,370	3,560	3,600	3,560	1,030		
9	2,510	1,170	1,310	797	699	825	924	3,440	3,540	3,600	3,560	965		
10	2,510	1,160	1,270	882	765	797	992	3,460	3,540	3,600	3,560	951		
11	2,510	1,180	1,220	815	772	778	999	3,470	3,540	3,600	3,560	976		
12	2,470	1,220	1,330	771	775	836	1,110	3,470	3,540	3,600	3,560	974		
13	2,440	1,220	1,310	780	763	874	1,250	3,480	3,540	3,600	3,550	968		
14	2,480	1,210	1,320	771	755	875	1,130	3,480	3,550	3,600	3,550	849		
15	2,530	1,170	1,270	810	751	869	1,340	3,500	3,570	3,600	3,550	780		
16	2,550	1,180	1,320	724	746	688	1,690	3,500	3,600	3,600	3,550	808		
17	2,470	1,200	1,260	709	778	665	2,180	3,400	3,600	3,590	3,090	889		
18	2,560	1,330	1,350	789	774	424	2,540	3,520	3,600	3,600	3,060	895		
19	2,560	1,230	1,290	766	794	502	3,220	3,440	3,600	3,590	2,950	925		
20	2,550	1,110	1,220	712	1,110	581	3,250	3,530	3,600	3,590	1,680	977		
21	2,470	1,110	1,350	722	945	285	3,290	3,540	3,600	3,590	1,360	948		
22	2,470	1,180	1,270	713	1,140	511	3,260	3,480	3,570	3,580	1,220	948		
23	2,490	1,230	1,200	732	1,110	466	3,260	3,470	3,560	3,590	1,300	948		
24	2,470	1,230	1,100	716	1,360	475	3,260	3,530	3,550	3,590	1,330	950		
25	2,470	1,230	1,130	721	1,140	429	3,260	3,550	3,570	3,590	1,160	1,150		
26	2,640	1,290	1,120	753	978	445	3,260	3,530	3,570	3,590	1,460	947		
27	2,540	1,300	1,120	718	795	429	3,260	3,500	3,570	3,590	1,300	600		
28	2,490	1,300	1,080	689	812	433	3,260	3,520	3,600	3,590	1,290	582		
29	2,510	1,300	1,210	748	789	447	3,260	3,510	3,600	3,580	1,350	525		
30	2,440	1,290	1,110	700	-----	480	3,260	3,520	3,600	3,590	1,340	757		
31	2,370	-----	1,180	738	-----	477	-----	3,520	-----	3,580	1,370	-----		
TOTAL	77,650	38,340	38,740	25,311	24,373	20,177	57,566	107,390	106,960	111,260	82,290	27,963		
MEAN	2,505	1,278	1,250	816	840	651	1,919	3,464	3,565	3,589	2,655	932		
MAX	2,640	2,470	1,350	1,180	1,360	876	3,290	3,550	3,600	3,600	3,580	1,350		
MIN	2,370	1,070	1,080	689	692	285	471	3,260	3,520	3,510	1,160	525		
AC-FT	154,000	76,050	76,840	50,200	48,340	40,020	114,200	213,000	212,200	220,700	163,200	55,460		
CAL YR 1967	TOTAL 645,712			MEAN 1,769			MAX 3,322			MIN 463			AC-FT 1,281,000	
WTR YR 1968	TOTAL 718,020			MEAN 1,962			MAX 3,600			MIN 285			AC-FT 1,424,000	

11-5255. TRINITY RIVER AT LEWISTON, CALIF.

LOCATION.--Lat 40°43'10", long 122°48'09", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.33 N., R.8 W., 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 1968.

GAGE.--Graphic water-stage recorder. 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, graphic water-stage recorder, at site 1.1 miles downstream at different datum. Oct. 1, 1958, to July 6, 1964, graphic water-stage recorder at site 0.8 mile downstream at different datum.

AVERAGE DISCHARGE.--57 years, 1,661 cfs (1,203,000 acre-ft per year) adjusted for storage, evaporation and diversion.

EXTREMES.--Maximum discharge during year, 273 cfs July 27 (gage height, 3.38 ft); minimum daily, 144 cfs Aug. 13. 1911-60 (prior to regulation by Trinity Lake): Maximum discharge, 71,600 cfs Dec. 22, 1955 (gage height, 27.3 ft, from floodmarks, site and datum then in use); minimum, 23 cfs July 30, 1924. 1961-68: Maximum discharge, 12,700 cfs Apr. 20, 1963 (gage height, 12.38 ft); minimum daily, 131 cfs May 4, 1963.

Flood of December 1861 reached a stage of 21.6 ft, from floodmarks, at site 1.1 miles downstream at different datum (discharge, not determined).

REMARKS.--Records excellent. Flow regulated by Clair Engle Lake (see sta. no. 11-5254) beginning in November 1960. Diversion to Judge Francis Carr Powerplant (see sta. no. 11-5254.3), began in April 1963. Small diversions above head of Trinity Lake for irrigation, power and placer mining. Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	236	248	180	161	155	164	155	157	150	155	195
2	166	256	208	161	164	155	161	155	157	150	155	203
3	188	256	210	161	161	155	161	153	155	153	155	203
4	210	259	212	161	161	153	161	153	155	153	158	203
5	210	256	205	161	161	157	161	153	155	153	158	200
6	210	259	212	161	159	157	161	155	157	150	160	203
7	210	259	210	159	159	157	161	155	157	150	160	203
8	212	259	210	159	161	157	161	155	155	150	160	203
9	212	259	210	161	159	157	159	157	155	150	160	203
10	212	259	208	161	161	157	161	157	157	150	160	203
11	212	262	208	159	159	157	159	157	157	150	160	203
12	212	262	210	161	159	159	161	157	159	150	158	203
13	212	262	208	166	159	161	161	159	159	150	144	203
14	212	262	208	172	159	159	159	157	159	153	153	203
15	195	262	205	168	157	159	161	157	159	153	158	206
16	205	262	205	166	157	159	161	159	159	153	158	200
17	205	262	205	166	157	159	161	157	157	153	155	187
18	205	262	205	164	157	159	159	155	157	150	155	200
19	202	259	205	161	164	159	157	157	155	153	158	200
20	202	262	205	161	161	159	159	157	155	153	160	203
21	202	262	205	161	159	159	159	157	153	153	158	203
22	202	266	205	161	168	159	157	155	153	153	158	203
23	205	266	205	161	164	159	159	157	153	153	158	206
24	205	266	205	161	159	159	157	157	153	153	155	203
25	205	266	208	161	155	161	157	155	153	153	155	203
26	205	266	208	159	150	161	155	155	153	155	155	203
27	208	266	210	159	153	161	155	155	153	250	153	200
28	208	266	210	161	155	161	155	155	153	180	153	203
29	210	262	208	161	157	164	155	155	153	158	153	200
30	205	262	210	161	-----	164	155	155	150	158	153	200
31	205	-----	210	161	-----	164	-----	155	-----	155	153	-----
TOTAL	6,313	7,823	6,481	5,036	4,616	4,922	4,773	4,831	4,663	4,848	4,844	6,051
MEAN	204	261	209	162	159	159	159	156	155	156	156	202
MAX	212	266	248	180	168	164	164	159	159	250	160	206
MIN	161	236	205	159	150	153	155	153	150	150	144	187
AC-FT	12,520	15,520	12,850	9,990	9,160	9,760	9,470	9,580	9,250	9,620	9,610	12,000
Mean a	313	382	598	1,659	5,155	2,669	2,395	2,332	991	145	104	163
Ac-ft a	19,240	22,710	36,760	102,000	296,500	164,100	142,500	143,400	58,990	8,930	6,420	9,670

CAL YR 1967 TOTAL 119,476 MEAN 327 MAX 2,620 MIN 134 AC-FT 236,900 MEAN a 2,029 AC-FT a 1,436,000
WTR YR 1968 TOTAL 65,201 MEAN 178 MAX 266 MIN 144 AC-FT 129,300 MEAN a 1,393 AC-FT a 1,011,000

a Adjusted for change in contents, diversion, and evaporation from Clair Engle Lake. Data furnished by U.S. Bureau of Reclamation.

KLAMATH RIVER BASIN

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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 Trinity River, 0.6 mile north of Helena, 1.0 mile upstream from mouth, and 6 miles northwest of Junction City.

DRAINAGE AREA.--151 sq mi.

RECORDS AVAILABLE.--August 1911 to September 1913, January 1957 to September 1968.

GAGE.--Graphic 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.--13 years, 411 cfs (297,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 10,300 cfs Feb. 22 (gage height, 18.12 ft); minimum daily, 21 cfs Sept. 28-30.

1911-13, 1957-68: Maximum discharge, 35,800 cfs Dec. 22, 1964 (gage height, 27.93 ft, from floodmarks), from rating curve extended above 7,300 cfs on basis of slope-area measurement of maximum flow; minimum daily, 7.5 cfs Sept. 26, 1964.

REMARKS.--No known regulation or diversion above station. Records of suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

COOPERATION.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	37	61	268	294	1,040	512	296	233	74	34	33
2	68	36	69	233	466	940	478	282	258	68	36	31
3	110	35	100	206	910	856	439	300	231	70	35	30
4	58	34	170	181	806	802	418	325	208	72	32	29
5	56	36	501	166	714	814	400	312	208	75	32	28
6	53	35	345	150	675	739	379	260	185	89	30	27
7	47	34	252	141	758	648	355	241	167	80	29	27
8	44	39	279	141	782	554	345	247	160	69	31	26
9	43	50	220	186	754	487	350	264	154	63	31	25
10	41	48	179	225	710	430	391	267	155	59	29	25
11	40	45	166	286	652	400	448	256	169	56	29	25
12	39	42	151	234	617	418	433	237	160	54	28	25
13	39	42	135	670	617	403	391	231	141	52	28	26
14	38	513	114	3,170	577	409	358	214	150	51	29	33
15	37	199	118	3,450	530	409	350	198	152	49	29	29
16	37	113	110	1,730	550	481	332	193	160	48	28	26
17	36	84	103	1,030	776	558	308	210	161	46	28	25
18	36	73	110	751	870	469	287	222	168	43	28	25
19	35	66	94	577	1,980	442	273	385	172	41	34	24
20	35	63	93	498	3,600	421	264	490	160	40	47	24
21	45	59	87	537	4,370	403	252	310	150	40	47	24
22	65	56	87	599	6,760	397	241	260	138	40	42	24
23	48	54	98	595	7,930	400	235	222	128	38	38	24
24	44	52	127	567	4,400	409	237	204	118	38	36	24
25	41	51	200	537	2,610	547	226	237	108	37	40	23
26	40	49	325	485	1,950	554	231	243	100	37	93	22
27	38	49	482	427	1,560	508	254	267	92	37	68	22
28	41	50	516	386	1,320	502	269	271	86	35	55	21
29	40	59	458	361	1,150	544	287	264	82	34	46	21
30	39	64	366	323	-----	561	315	231	78	34	40	21
31	37	-----	306	304	-----	530	-----	214	-----	33	36	-----
TOTAL	1,396	2,167	6,422	19,414	49,688	17,075	10,058	8,153	4,632	1,602	1,168	769
MEAN	45.0	72.2	207	626	1,713	551	335	263	154	51.7	37.7	25.6
MAX	110	513	516	3,450	7,930	1,040	512	490	258	89	93	33
MIN	26	34	61	141	294	397	226	193	78	33	28	21
AC-FT	2,770	4,300	12,740	38,510	98,550	33,870	19,950	16,170	9,190	3,180	2,320	1,530
CAL YR 1967	TOTAL 123,117		MEAN 337		MAX 3,720		MIN 26		AC-FT 244,200			
WTR YR 1968	TOTAL 122,544		MEAN 335		MAX 7,930		MIN 21		AC-FT 243,100			

KLAMATH RIVER BASIN

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital 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, graphic water-stage recorder, at site 2 miles upstream at different datum. Oct. 1, 1956, to Aug. 30, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--21 years, 2,296 cfs (1,662,000 acre-ft per year), unadjusted.

EXTREMES.--Maximum discharge during year, 20,100 cfs Feb. 23 (gage height, 15.64 ft); minimum daily, 228 cfs Aug. 14.

1931-40, 1956-68: Maximum discharge, 81,500 cfs Feb. 25, 1958 (gage height, 30.50 ft), from rating curve extended above 40,000 cfs on basis of slope-area measurement at gage height 43.2 ft; minimum, 82 cfs Aug. 31, 1939.

Flood of Dec. 22, 1955, reached a stage of 43.2 ft, from floodmarks (discharge, 172,000 cfs, on basis of slope-area measurement of maximum flow).

REMARKS.--Records excellent. Flow regulated by Clair Engle Lake beginning in November 1960 (see sta. no. 11-5254.). Small diversions above station for mining and irrigation. Records of suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	360	514	834	1,230	3,340	1,600	1,050	822	357	249	291
2	289	383	520	768	1,400	2,990	1,530	1,020	910	346	265	296
3	586	409	695	694	1,950	2,680	1,430	1,030	844	350	262	322
4	434	406	785	644	2,040	2,450	1,360	1,100	786	343	255	322
5	434	416	1,310	613	2,030	2,390	1,320	1,080	756	353	249	321
6	427	413	874	588	2,010	2,210	1,270	970	762	378	246	318
7	409	409	787	559	2,230	2,040	1,230	898	707	385	245	316
8	402	420	693	574	2,400	1,880	1,210	896	670	360	249	313
9	397	442	607	693	2,460	1,750	1,210	936	640	339	252	312
10	392	450	586	874	2,490	1,630	1,280	961	625	329	248	309
11	388	450	583	764	2,400	1,550	1,410	930	655	319	242	309
12	384	442	574	697	2,280	1,620	1,380	887	645	310	240	308
13	382	446	555	1,130	2,290	1,720	1,280	857	595	304	236	312
14	382	1,150	505	6,260	2,230	1,640	1,200	856	574	304	228	328
15	378	945	494	8,860	2,040	1,580	1,180	797	590	304	233	328
16	371	643	506	5,240	2,080	1,800	1,150	768	615	304	236	320
17	355	550	509	3,460	2,910	1,960	1,090	784	640	304	238	322
18	363	512	572	2,600	3,400	1,810	1,030	807	665	298	243	295
19	357	495	534	2,100	4,520	1,700	997	961	665	295	249	305
20	358	477	504	1,830	10,200	1,630	972	1,710	615	295	291	306
21	370	464	489	1,830	9,560	1,570	946	1,160	570	276	339	311
22	427	455	488	2,010	12,000	1,520	916	974	538	271	319	313
23	407	448	510	2,090	17,900	1,490	900	855	514	266	308	313
24	391	443	550	2,040	11,500	1,460	902	797	490	262	299	312
25	381	437	634	1,950	7,810	1,670	872	853	454	261	298	307
26	377	432	825	1,820	6,050	1,710	876	887	446	260	355	307
27	373	436	1,170	1,650	5,090	1,590	919	948	450	259	402	304
28	375	447	1,250	1,510	4,390	1,550	955	950	423	303	373	300
29	373	494	1,190	1,520	3,760	1,600	991	946	399	295	343	295
30	370	550	1,020	1,420	-----	1,660	1,070	867	374	258	318	291
31	365	-----	905	1,300	-----	1,620	-----	811	-----	250	303	-----
TOTAL	11,930	14,824	21,738	58,922	132,650	57,810	34,476	29,346	18,439	9,538	8,613	9,306
MEAN	385	494	701	1,901	4,574	1,865	1,149	947	615	308	278	310
MAX	586	1,150	1,310	8,860	17,900	3,340	1,600	1,710	910	385	402	328
MIN	233	360	488	559	1,230	1,460	872	768	374	250	228	291
AC-FT	23,660	29,400	43,120	116,900	263,100	114,700	68,380	58,210	36,570	18,920	17,080	18,460
CAL YR 1967	TOTAL 493,457			MEAN 1,352		MAX 11,400		MIN 230		AC-FT 978,800		
WTR YR 1968	TOTAL 407,592			MEAN 1,114		MAX 17,900		MIN 228		AC-FT 808,400		

KLAMATH RIVER BASIN

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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.

DRAINAGE AREA.--173 sq mi.

RECORDS AVAILABLE.--October 1927 to December 1928 (published as "near Denny"), June 1959 to September 1968.

GAGE.--Digital 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, graphic water-stage recorder at site 2.6 miles downstream at different datum. June 1, 1959, to July 23, 1965, graphic water-stage recorder on downstream side of bridge at same datum. July 24 to Nov. 4, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--10 years, 418 cfs (302,600 acre-ft per year).

EXTREMES.--Maximum discharge during year, 8,600 cfs Feb. 23 (gage height, 17.36 ft); minimum daily, 27 cfs Aug. 11, 13, 16.

1927-28, 1959-68: Maximum discharge, 60,000 cfs Dec. 22, 1964 (gage height, 38.7 ft from floodmarks), by field estimate of maximum flow; minimum daily, 18 cfs Oct. 5-7, 1961.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	46	67	296	404	906	507	238	127	62	32	36
2	50	44	93	264	517	797	483	230	126	61	31	32
3	165	43	180	235	762	744	446	232	126	60	30	32
4	66	43	322	214	774	701	424	244	118	58	29	30
5	75	43	434	197	757	693	408	233	120	57	28	29
6	50	43	218	184	767	624	387	217	118	56	30	29
7	46	43	210	173	836	581	366	201	111	53	30	29
8	47	49	165	183	839	521	356	193	106	51	30	29
9	47	58	141	306	809	478	355	193	103	50	29	28
10	43	58	152	521	766	448	365	189	99	49	30	29
11	39	56	151	374	709	421	384	184	99	48	27	30
12	39	52	144	313	661	465	367	178	99	47	28	29
13	39	52	128	486	624	434	339	182	95	47	27	32
14	37	319	111	2,460	588	427	322	174	95	47	28	42
15	36	138	106	2,950	547	413	316	164	93	47	28	39
16	35	82	102	1,510	519	499	309	156	92	47	27	33
17	35	64	101	1,040	581	524	292	156	89	47	28	32
18	35	55	128	829	610	486	280	156	87	45	28	31
19	34	50	102	722	1,170	452	271	191	84	43	38	30
20	34	46	94	651	2,270	445	264	216	80	43	51	30
21	66	44	89	657	3,100	435	255	188	80	43	51	30
22	73	42	92	689	5,580	419	248	180	78	42	45	31
23	58	39	131	680	6,640	418	247	166	75	40	39	32
24	52	38	186	661	3,430	392	240	160	74	39	37	32
25	49	38	304	638	2,250	623	233	165	72	38	47	33
26	49	35	433	597	1,750	603	228	159	69	37	98	32
27	46	38	580	539	1,420	559	229	161	68	36	59	32
28	58	43	570	499	1,210	540	230	152	66	35	49	30
29	56	101	499	490	1,020	552	236	147	65	33	43	30
30	50	88	400	461	-----	537	248	138	64	33	41	30
31	47	-----	331	430	-----	509	-----	130	-----	32	39	-----
TOTAL	1,591	1,890	6,764	20,249	41,910	16,646	9,635	5,673	2,778	1,426	1,157	943
MEAN	51.3	63.0	218	653	1,445	537	321	183	92.6	46.0	37.3	31.4
MAX	165	319	580	2,950	6,640	906	507	244	127	62	98	42
MIN	34	35	67	173	404	392	228	130	64	32	27	28
AC-FT	3,160	3,750	13,420	40,160	83,130	33,020	19,110	11,250	5,510	2,830	2,290	1,870
CAL YR 1967	TOTAL 125,961		MEAN 345		MAX 4,600	MIN 29		AC-FT 249,800				
WTR YR 1968	TOTAL 110,662		MEAN 302		MAX 6,640	MIN 27		AC-FT 219,500				

Peak discharge (base, 2,500 cfs).--Jan. 15 (0730 hrs) 3,610 cfs (13.03 ft); Feb. 23 (0500 hrs) 8,600 cfs (17.36 ft).

KLAMATH RIVER BASIN

11-5285. HAYFORK CREEK NEAR HYAMPOM, CALIF.

LOCATION.--Lat 40°37'35", long 123°28'00", in NW $\frac{1}{4}$ 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 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,270.67 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Sept. 7, 1966, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--15 years, 493 cfs (356,900 acre-ft per year).

EXTREMES.--Maximum discharge during year, 9,300 cfs Feb. 20 (gage height, 12.20 ft); minimum daily, 22 cfs Aug. 14.

1953-68: Maximum discharge, 28,800 cfs Dec. 22, 1964 (gage height, 19.14 ft), from rating curve extended above 6,700 cfs on basis of slope-area measurement at gage height 18.00 ft; minimum daily, 16 cfs Aug. 26, Sept. 27, Oct. 4, 5, 1964.

REMARKS.--Records excellent. No regulation; diversions for irrigation of about 700 acres above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	47	88	242	375	1,310	565	185	115	56	27	34
2	43	47	90	226	475	1,190	528	183	114	51	26	34
3	79	47	174	198	1,000	1,050	475	179	119	50	28	31
4	71	49	302	186	947	954	446	167	116	50	30	29
5	61	52	754	183	880	910	427	160	117	49	27	29
6	56	50	366	174	910	820	402	157	122	46	28	29
7	53	50	306	168	1,140	772	385	158	117	44	27	28
8	51	50	246	174	1,220	694	366	159	108	41	31	29
9	49	49	195	214	1,240	628	353	150	104	37	31	27
10	47	49	183	700	1,300	568	343	147	102	37	28	28
11	47	50	177	500	1,270	520	339	150	96	37	25	27
12	46	50	171	370	1,200	700	327	151	94	36	24	26
13	45	52	150	1,660	1,160	778	318	155	91	36	23	28
14	46	128	123	6,600	1,060	826	299	169	91	37	22	34
15	46	125	183	5,650	954	772	286	156	89	37	23	33
16	46	80	145	2,890	1,100	1,180	280	152	85	35	24	34
17	46	68	135	1,660	1,920	1,320	269	147	80	36	26	33
18	46	66	162	1,170	1,800	1,080	258	146	78	35	28	31
19	43	65	148	892	3,840	922	253	149	74	34	32	31
20	44	63	135	736	5,890	862	243	175	72	31	38	30
21	46	63	128	706	4,590	790	237	176	68	32	49	30
22	49	60	128	796	4,110	748	230	162	67	32	52	29
23	49	60	133	862	4,730	736	223	152	67	32	47	33
24	49	58	138	826	3,720	706	221	148	63	30	60	32
25	49	57	148	766	2,750	850	214	149	61	30	41	31
26	47	57	189	688	2,270	874	204	143	61	29	49	29
27	46	58	282	598	1,850	761	201	140	58	28	54	31
28	47	60	358	515	1,590	690	197	130	57	28	50	29
29	47	73	346	515	1,410	660	192	123	55	27	44	28
30	47	94	310	465	-----	644	186	120	55	26	40	27
31	47	-----	270	400	-----	594	-----	118	-----	26	37	-----
TOTAL	1,517	1,877	6,663	31,730	56,701	25,909	9,267	4,756	2,596	1,135	1,071	904
MEAN	48.9	62.6	215	1,024	1,955	836	309	153	86.5	36.6	34.5	30.1
MAX	79	128	754	6,600	5,890	1,320	565	185	122	56	60	34
MIN	29	47	88	168	375	520	186	118	55	26	22	26
AC-FT	3,010	3,720	13,220	62,940	112,500	51,390	18,380	9,430	5,150	2,250	2,120	1,790
CAL YR 1967	TOTAL 144,425			MEAN 396		MAX 7,530		MIN 26		AC-FT 286,500		
WTR YR 1968	TOTAL 144,126			MEAN 394		MAX 6,600		MIN 22		AC-FT 285,900		

Peak discharge (base, 4,000 cfs).--Jan. 14 (1230 hrs) 8,380 cfs (11.74 ft); Feb. 20 (0030 hrs) 9,300 cfs (12.20 ft).

11-5287. SOUTH FORK TRINITY RIVER BELOW HYAMPOM, CALIF.

LOCATION.--Lat 40°39'00", long 123°29'35", in NW¼SW¼ sec.10, T.3 N., R.6 E., on left bank 0.3 mile downstream from Big Creek, 3.0 miles northeast of Hyampom, and 3.5 miles downstream from Hayfork Creek.

DRAINAGE AREA.--764 sq mi.

RECORDS AVAILABLE.--October 1965 to September 1968.

GAGE.--Digital water-stage recorder. Datum of gage is 1,211.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

EXTREMES.--Maximum discharge during year, 32,000 cfs Jan. 14 (gage height, 18.50 ft), from rating curve extended above 11,000 cfs as explained below; minimum daily, 63 cfs Oct. 1.

1965-66: Maximum discharge, 32,000 cfs Jan. 29, 1967, Jan. 14, 1968 (gage height, 18.50 ft), from rating curve extended above 11,000 cfs on basis of flood-routing study at gage height 30.45 ft; minimum daily, 60 cfs Sept. 30, 1967.

Flood of Dec. 22, 1964, reached a stage of 30.45 ft from floodmarks (discharge, 88,000 cfs on basis of flood-routing study).

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	104	277	653	1,380	3,330	1,620	700	374	179	100	98
2	120	104	297	610	2,350	3,060	1,550	693	365	172	99	95
3	293	126	1,020	548	5,220	2,770	1,430	686	365	167	97	92
4	214	155	1,400	495	3,900	2,470	1,340	666	359	166	97	88
5	166	135	1,380	467	3,330	2,430	1,300	646	351	164	95	86
6	148	120	1,140	432	3,160	2,230	1,230	635	347	159	93	86
7	134	115	1,250	407	3,390	2,060	1,180	616	341	152	93	84
8	124	110	992	447	3,490	1,920	1,140	598	331	145	91	82
9	119	106	735	657	3,510	1,820	1,110	577	319	141	94	81
10	110	106	648	1,160	3,550	1,730	1,100	565	313	139	95	79
11	106	106	585	1,160	3,420	1,650	1,100	562	304	134	93	77
12	106	106	549	1,030	3,240	1,930	1,070	550	295	130	88	75
13	105	111	482	1,820	3,090	2,180	1,030	530	289	130	86	75
14	104	446	386	23,000	2,870	2,260	995	520	281	128	84	79
15	102	403	397	19,800	2,630	2,240	973	510	275	128	84	83
16	102	235	394	8,670	2,850	3,190	940	500	267	126	84	84
17	100	181	394	4,730	4,920	3,650	918	494	257	122	84	82
18	99	161	517	3,160	5,070	2,950	889	487	247	123	84	82
19	95	152	470	2,370	9,900	2,530	871	491	244	123	89	79
20	93	146	399	2,070	18,200	2,230	839	571	236	122	108	77
21	107	144	370	2,020	15,000	2,110	824	568	229	119	152	77
22	120	138	358	2,190	13,400	2,030	801	535	222	117	154	72
23	117	132	358	2,290	15,100	2,000	788	492	217	113	138	72
24	114	126	373	2,240	11,400	1,940	785	474	211	110	124	72
25	111	123	405	2,150	7,740	2,430	763	462	201	108	115	72
26	108	121	532	2,040	5,760	2,410	745	450	198	108	127	72
27	104	119	771	1,900	4,800	2,130	741	435	189	106	129	70
28	103	126	920	1,770	4,050	1,950	727	416	184	104	126	68
29	104	188	888	1,910	3,600	1,870	718	406	184	102	117	66
30	104	302	796	1,880	-----	1,810	706	400	181	102	110	64
31	104	-----	709	1,630	-----	1,690	-----	384	-----	102	103	-----
TOTAL	3,699	4,747	20,192	95,706	170,320	71,000	30,223	16,619	8,176	4,041	3,233	2,369
MEAN	119	158	651	3,087	5,873	2,290	1,007	536	273	130	104	79.0
MAX	293	446	1,400	23,000	18,200	3,650	1,620	700	374	179	154	98
MIN	63	104	277	407	1,380	1,650	706	384	181	102	84	64
AC-FT	7,340	9,420	40,050	189,800	337,800	140,800	59,950	32,960	16,220	8,020	6,410	4,700
CAL YR 1967	TOTAL 434,805		MEAN 1,191		MAX 24,500		MIN 60		AC-FT 862,400			
WTR YR 1968	TOTAL 430,325		MEAN 1,176		MAX 23,000		MIN 63		AC-FT 853,500			

Peak discharge (base, 8,600 cfs).--Jan. 14 (1300 hrs) 32,000 cfs (18.50 ft); Feb. 20 (0245 hrs) 25,500 cfs (16.80 ft).

KLAMATH RIVER BASIN

11-5298. WILLOW CREEK NEAR WILLOW CREEK, CALIF.

LOCATION.--Lat 40°56'50", long 123°39'35", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.7 N., R.5 E., on right bank 0.1 mile upstream from Boise Creek, 1.5 miles northwest of town of Willow Creek, and 1.8 miles upstream from mouth.

DRAINAGE AREA.--41.0 sq mi.

RECORDS AVAILABLE.--August 1959 to September 1968. Prior to October 1964, published as "at Willow Creek."

AVERAGE DISCHARGE.--9 years, 154 cfs (111,500 acre-ft per year).

GAGE.--Digital water-stage recorder. 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, graphic water-stage recorder at site 1.4 miles downstream at datum 85.55 ft lower.

EXTREMES.--Maximum discharge during year, 1,650 cfs Feb. 22 (gage height, 6.73 ft); minimum daily, 9.6 cfs Aug. 11-13.

1959-68: Maximum discharge, 17,000 cfs Dec. 22, 1964 (gage height, 20.6 ft, present datum, from flood-marks); minimum daily, 6.8 cfs Sept. 28, 29, 1965.

REMARKS.--Records fair. No regulation; small diversion for irrigation of about 40 acres above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	15	53	85	125	350	154	40	29	18	12	19
2	25	15	66	83	261	308	146	38	29	18	12	18
3	24	14	100	85	460	198	132	37	30	18	12	17
4	18	14	150	86	367	179	125	36	31	17	12	16
5	18	14	220	83	333	187	121	35	32	17	12	16
6	17	14	140	79	289	169	116	34	31	16	12	16
7	16	14	120	77	266	163	108	34	30	16	11	16
8	14	14	105	83	303	149	103	33	29	15	10	16
9	13	18	92	195	284	135	97	32	28	15	10	17
10	13	18	80	362	268	122	91	32	27	15	10	17
11	12	17	81	290	245	114	89	31	26	15	9.6	17
12	12	16	79	230	231	164	81	30	25	15	9.6	17
13	12	16	74	330	222	174	75	30	24	15	9.6	18
14	11	200	73	570	213	166	71	29	24	14	10	24
15	11	130	73	1,100	193	160	71	29	23	14	11	22
16	11	88	71	600	196	188	69	28	23	14	10	20
17	11	66	69	394	220	230	65	28	22	14	10	20
18	11	52	108	296	220	225	64	28	22	14	14	20
19	11	44	73	271	353	209	63	35	21	14	22	20
20	11	39	70	255	467	196	61	44	21	14	35	21
21	20	36	68	235	857	183	58	39	20	13	26	20
22	21	34	66	213	1,290	171	55	37	20	13	17	21
23	19	32	67	196	1,250	158	55	35	19	13	16	21
24	17	31	70	187	943	147	56	34	19	13	14	20
25	16	30	76	179	672	293	53	33	19	13	36	20
26	16	29	116	168	526	265	48	32	18	13	117	20
27	15	32	150	150	418	230	47	31	18	13	49	20
28	19	35	152	138	392	210	44	31	18	13	30	16
29	18	80	145	141	383	196	43	30	18	12	24	12
30	16	67	122	134	-----	185	41	30	18	12	20	13
31	15	-----	97	122	-----	168	-----	30	-----	12	19	-----
TOTAL	476	1,224	3,026	7,417	12,247	5,992	2,402	1,025	714	448	621.8	550
MEAN	15.4	40.8	97.6	239	422	193	80.1	33.1	23.8	14.5	20.1	18.3
MAX	25	200	220	1,100	1,290	350	154	44	32	18	117	24
MIN	11	14	53	77	125	114	41	28	18	12	9.6	12
AC-FT	944	2,430	6,000	14,710	24,290	11,880	4,760	2,030	1,420	889	1,230	1,090

CAL YR 1967 TOTAL 42,946

MEAN 118

MAX 1,710

MIN 10

AC-FT 85,180

WTR YR 1968 TOTAL 36,142.8

MEAN 98.8

MAX 1,290

MIN 9.6

AC-FT 71,690

Peak discharge (base, 1,200 cfs).--Jan. 15 (time unknown) 1,300 cfs; Feb. 22 (1000 hrs) 1,650 cfs (6.73 ft).

Note.--No gage-height record Nov. 9 to Dec. 9, May 5 to June 27.

11-5300. TRINITY RIVER AT HOOPA, CALIF.

LOCATION.--Lat 41°03'00", long 123°40'15", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.25, T.8 N., R.4 E., in Hoopa Valley Indian Reservation, on left bank at Hoopa 0.4 mile upstream from Supply Creek.

DRAINAGE AREA.--2,865 sq mi.

RECORDS AVAILABLE.--October 1911 to January 1914, October 1916 to September 1918, October 1931 to September 1968. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near Hoopa" 1931-64.

GAGE.--Digital water-stage recorder. 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, graphic water-stage recorder at site 2.5 miles upstream at datum 31.67 ft higher.

AVERAGE DISCHARGE.--41 years (1911-13, 1916-18, 1931-68), 5,352 cfs (3,875,000 acre-ft per year), unadjusted.

EXTREMES.--Maximum discharge during year, 51,300 cfs Feb. 23 (gage height, 32.36 ft); minimum, 319 cfs Aug. 13.

1911-14, 1916-18, 1931-68: Maximum discharge, 231,000 cfs Dec. 22, 1964 (gage height, 40.3 ft from floodmarks, site and datum then in use); minimum, 162 cfs Oct. 4, 1931.

REMARKS.--Records good. Flow regulated by Clair Engle Lake beginning in November 1960 (see sta. no. 11-5254.). Small diversions above station for mining and irrigation. Records of chemical analyses, water temperatures and suspended-sediment loads for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	328	651	1,210	2,490	3,930	6,430	3,200	2,460	1,370	680	347	518
2	570	642	1,260	2,260	5,220	6,030	3,050	2,360	1,410	630	350	481
3	1,410	688	2,440	2,030	10,800	5,600	3,000	2,320	1,450	630	360	502
4	1,270	698	4,290	1,880	9,800	5,200	2,900	2,380	1,320	620	357	513
5	1,010	712	7,170	1,780	8,700	4,900	2,780	2,370	1,250	630	344	512
6	934	731	4,090	1,670	8,340	4,600	2,650	2,210	1,210	650	331	498
7	840	707	3,850	1,540	8,840	4,300	2,550	2,050	1,150	670	333	490
8	775	730	3,100	1,610	9,200	3,900	2,500	1,950	1,060	640	332	485
9	732	794	2,220	2,260	9,010	3,700	2,500	2,000	994	600	354	482
10	709	826	1,900	6,640	8,890	3,500	2,700	2,050	914	570	353	473
11	686	826	1,800	5,080	8,400	3,200	2,900	2,000	906	560	341	475
12	671	794	1,740	3,620	7,800	2,900	2,700	1,890	906	540	332	472
13	660	794	1,650	5,040	7,500	3,530	2,530	1,890	898	530	319	483
14	648	2,530	1,330	25,800	7,160	3,350	2,460	1,840	826	520	334	561
15	643	2,770	1,380	45,100	6,590	3,350	2,400	1,750	794	510	332	581
16	640	1,440	1,370	30,300	6,430	3,910	2,300	1,650	794	495	340	540
17	602	1,070	1,390	18,800	8,890	5,090	2,230	1,650	830	480	348	538
18	611	898	1,960	12,200	11,500	4,170	2,150	1,700	880	470	372	515
19	608	810	1,790	8,700	13,700	3,580	2,100	1,850	920	465	461	488
20	602	762	1,530	7,100	36,700	3,240	2,000	2,500	990	455	612	494
21	742	722	1,400	6,460	33,800	3,010	2,000	2,800	990	445	772	501
22	881	690	1,350	6,460	37,000	2,800	2,100	2,500	950	435	730	506
23	850	666	1,420	6,410	44,900	2,690	2,200	2,000	930	430	638	503
24	766	642	1,570	6,050	30,300	2,560	2,300	1,690	910	410	584	504
25	732	626	1,830	5,620	21,700	3,410	2,360	1,650	900	390	630	503
26	700	610	2,450	4,970	15,900	3,440	2,350	1,700	880	365	1,020	492
27	673	626	3,400	4,650	12,100	3,250	2,380	1,710	870	360	953	487
28	731	690	3,950	4,250	9,320	3,150	2,400	1,650	850	420	802	479
29	726	1,070	3,800	4,470	7,580	3,200	2,390	1,620	770	420	698	465
30	692	1,390	3,190	4,880	-----	3,300	2,450	1,510	720	370	612	457
31	669	-----	2,760	4,200	-----	3,350	-----	1,410	-----	360	553	-----
TOTAL	23,111	27,605	74,590	244,320	410,000	118,640	74,530	61,110	29,642	15,750	15,244	14,998
MEAN	746	920	2,406	7,881	14,140	3,827	2,484	1,971	988	508	492	500
MAX	1,410	2,770	7,170	45,100	44,900	6,430	3,200	2,800	1,450	680	1,020	581
MIN	328	610	1,210	1,540	3,930	2,560	2,000	1,410	720	360	319	457
AC-FT	45,840	54,750	147,900	484,600	813,200	235,300	147,800	121,200	58,790	31,240	30,240	29,750

CAL YR 1967 TOTAL 1,420,547 MEAN 3,892 MAX 46,100 MIN 314 AC-FT 2,818,000
WTR YR 1968 TOTAL 1,109,540 MEAN 3,032 MAX 45,100 MIN 319 AC-FT 2,201,000

Peak discharge (base, 22,000 cfs).--Jan. 15 (0215 hrs) 50,500 cfs (32.20 ft); Feb. 23 (1145 hrs) 51,300 cfs (32.36 ft).

Note.--No gage-height record June 17 to Aug. 30.

KLAMATH RIVER BASIN

11-5301.5. MAREEP CREEK NEAR WEITCHPEC, CALIF.

LOCATION.--Lat 41°16'22", long 123°47'20", in Hoopa Valley Indian Reservation, on left bank 70 ft upstream from culvert on county highway, 7.3 miles northwest of Weitchpec, Humboldt County.

DRAINAGE AREA.--3.56 sq mi.

RECORDS AVAILABLE.--Water years 1962-66 (annual maximum), October 1966 to September 1968.

GAGE.--Graphic water-stage recorder with rain-gage attachment and crest-stage gage. Altitude of gage is 500 ft (from topographic map). Aug. 31, 1961 to Aug. 31, 1966, crest-stage gage at site 60 ft downstream at same datum.

EXTREMES.--Maximum discharge during year, 94 cfs Feb. 22 (gage height, 2.40 ft), from rating curve extended above 32 cfs; minimum daily, 1.5 cfs Oct. 16-20, Sept. 27-29.

1962-68: Maximum discharge, 890 cfs Dec. 22, 1964 (gage height, 58.64 ft, crest-stage gage), by computation of maximum flow through culvert.

1966-68: Minimum daily discharge, 1.1 cfs Oct. 10, 17-19, 1966.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.5	5.5	5.5	16	23	14	6.4	4.4	2.7	1.7	2.3
2	2.9	2.3	8.5	5.5	24	20	14	6.1	4.4	2.7	1.7	2.9
3	4.4	2.2	10	5.2	30	18	13	6.1	4.6	2.7	1.7	2.9
4	3.3	2.2	20	4.9	28	16	12	6.1	4.4	2.9	1.7	3.1
5	3.9	2.0	21	4.6	25	18	12	6.1	4.6	2.7	1.7	3.5
6	3.1	2.0	14	4.6	23	15	12	5.8	4.6	2.7	1.7	3.5
7	2.3	2.0	19	4.6	22	14	12	5.8	4.6	2.7	1.6	3.5
8	2.0	3.3	13	6.4	20	13	12	5.8	4.2	2.5	1.6	3.3
9	1.9	2.7	10	12	20	12	11	5.8	3.9	2.5	1.6	3.7
10	1.8	2.7	8.5	15	18	11	11	5.8	3.9	2.5	1.6	2.3
11	1.7	2.5	7.3	12	17	11	11	5.8	3.7	2.5	1.6	2.0
12	1.7	2.5	6.7	10	17	16	11	5.8	3.7	2.7	1.6	2.0
13	1.6	4.2	6.1	17	16	12	10	6.4	3.7	2.7	1.7	2.9
14	1.6	9.7	5.8	40	16	18	10	5.8	3.5	2.7	2.3	3.1
15	1.6	4.9	5.2	58	15	15	10	5.5	3.5	2.5	1.9	2.7
16	1.5	4.2	4.6	39	15	22	9.0	5.2	3.5	2.3	1.7	2.5
17	1.5	3.9	6.5	33	16	26	9.0	5.2	3.3	2.5	1.9	2.3
18	1.5	3.5	12	29	14	22	9.0	5.2	3.3	2.3	2.0	2.3
19	1.5	3.5	7.7	27	20	18	8.3	6.1	3.3	2.3	2.7	2.3
20	1.5	3.5	7.0	24	24	17	7.7	6.1	3.3	2.3	2.5	2.0
21	4.9	3.1	6.1	20	32	15	7.7	7.7	3.1	2.2	2.3	2.0
22	3.7	3.1	6.1	19	66	14	7.7	5.8	3.1	2.2	2.2	2.0
23	2.7	2.9	6.1	17	57	14	7.7	5.2	3.1	1.9	2.0	1.7
24	2.3	2.9	6.1	16	43	13	7.3	5.2	3.1	2.0	2.0	1.7
25	2.2	2.9	6.1	15	37	20	7.0	4.9	2.9	2.2	2.7	1.6
26	2.0	2.9	6.1	15	33	17	7.0	5.2	2.9	2.2	5.8	1.6
27	1.9	3.7	6.1	14	31	15	6.7	4.6	2.9	1.9	3.1	1.5
28	6.4	3.9	6.1	14	28	15	6.4	4.6	2.9	1.7	2.7	1.5
29	4.5	8.8	6.1	17	25	14	6.4	4.4	2.9	1.7	2.3	1.5
30	3.5	6.7	5.8	16	-----	14	6.4	4.2	2.9	1.7	2.2	1.7
31	2.9	-----	5.8	16	-----	14	-----	3.9	-----	1.7	2.2	-----
TOTAL	80.2	107.2	264.9	536.3	748	502	288.3	172.6	108.2	72.8	66.0	71.9
MEAN	2.59	3.57	8.55	17.3	25.8	16.2	9.61	5.57	3.61	2.35	2.13	2.40
MAX	6.4	9.7	21	58	66	26	14	7.7	4.6	2.9	5.8	3.7
MIN	1.5	2.0	4.6	4.6	14	11	6.4	3.9	2.9	1.7	1.6	1.5
AC-FT	159	213	525	1,060	1,480	996	572	342	215	144	131	143
(a)	2.3	5.4	8.2	13.3	6.9	6.8	.7	3.1	.1	0	3.5	.6

CAL YR 1967 TOTAL 3,516.8

MEAN 9.64

MAX 102

MIN 1.5

AC-FT 6,980

WTR YR 1968 TOTAL 3,018.4

MEAN 8.25

MAX 66

MIN 1.5

AC-FT 5,990

Peak discharge (base, 80 cfs).--Feb. 22 (0800 hrs) 94 cfs (2.40 ft).

a Precipitation, in inches.

Note.--No gage-height record Oct. 1 to Nov. 7.

KLAMATH RIVER BASIN

487

11-5303. BLUE CREEK NEAR KLAMATH, CALIF.

LOCATION.--Lat 41°27'00", long 123°53'40", in NE¼NW¼ sec.12, T.12 N., R.2 E., on left bank 600 ft downstream from West Fork, 3.0 miles upstream from mouth, and 9.2 miles southeast of Klamath.

DRAINAGE AREA.--120 sq mi.

RECORDS AVAILABLE.--September 1965 to September 1968.

GAGE.--Digital water-stage recorder. Elevation of gage is 140.65 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

EXTREMES.--Maximum discharge during year, 8,230 cfs Feb. 23 (gage height, 10.65 ft); minimum daily, 65 cfs Oct. 18-20.

1965-68: Maximum discharge, 25,100 cfs Jan. 6, 1966 (gage height, 15.97 ft from high-water marks), from rating curve extended above 1,600 cfs on basis of step-backwater computation at 21.55 ft; minimum daily, 43 cfs Nov. 1, 1965.

Flood of Dec. 22, 1964, reached a stage of 21.55 ft, from floodmarks (discharge, 48,000 cfs, by step-backwater computation).

REMARKS.--Records excellent. No regulation or diversion above station. Records of water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	111	283	408	740	952	720	269	255	133	82	102
2	158	102	390	378	1,560	872	708	263	250	130	81	95
3	175	96	877	354	2,920	784	660	256	251	128	81	91
4	129	91	1,540	327	2,070	696	612	255	233	126	79	87
5	149	89	1,970	312	1,630	744	590	248	226	126	79	84
6	113	86	990	293	1,510	648	560	240	221	123	79	80
7	93	83	1,060	295	1,460	618	525	233	213	120	78	77
8	84	133	728	387	1,390	580	505	227	206	119	77	76
9	77	175	575	738	1,300	540	486	221	200	115	77	74
10	75	202	505	1,100	1,190	523	478	217	194	113	76	73
11	74	173	452	679	1,060	509	464	216	190	111	75	72
12	73	146	408	573	970	629	441	212	187	114	74	70
13	71	151	372	800	904	672	417	262	182	116	74	85
14	70	894	339	2,000	816	971	403	232	178	111	85	150
15	68	405	309	5,800	744	1,110	395	214	174	109	83	178
16	68	263	288	2,510	708	1,310	380	206	170	107	78	150
17	66	209	290	1,910	848	1,420	366	199	166	105	77	130
18	65	179	438	1,450	912	1,140	353	196	162	102	87	113
19	65	161	351	1,240	1,460	943	345	247	159	100	104	106
20	65	147	324	1,060	2,270	804	334	414	157	98	102	99
21	300	137	298	942	4,070	720	325	481	154	97	88	94
22	235	128	324	868	5,350	684	316	424	153	95	82	90
23	194	122	369	804	6,200	678	321	344	151	93	78	87
24	141	117	399	754	3,840	672	314	302	148	92	75	84
25	135	112	455	700	2,710	1,830	299	338	146	91	175	81
26	119	108	555	667	1,990	1,450	295	383	143	91	439	79
27	108	119	660	634	1,580	1,180	291	395	140	90	239	76
28	354	123	618	604	1,330	989	286	346	139	87	180	73
29	200	435	560	686	1,150	944	281	312	137	85	155	71
30	149	353	482	752	-----	864	277	285	135	85	130	69
31	125	-----	434	734	-----	784	-----	268	-----	83	113	-----
TOTAL	3,890	5,650	17,643	30,759	54,682	27,260	12,747	8,705	5,420	3,295	3,382	2,796
MEAN	125	188	569	992	1,886	879	425	281	181	106	109	93.2
MAX	354	894	1,970	5,800	6,200	1,830	720	481	255	133	439	178
MIN	65	83	283	293	708	509	277	196	135	83	74	69
AC-FT	7,720	11,210	34,990	61,010	108,500	54,070	25,280	17,270	10,750	6,540	6,710	5,550
CAL YR 1967	TOTAL 218,002		MEAN 597		MAX 9,600		MIN 53		AC-FT 432,400			
WTR YR 1968	TOTAL 176,229		MEAN 482		MAX 6,200		MIN 65		AC-FT 349,500			

Peak discharge (base, 5,000 cfs).--Jan. 15 (time unknown) 7,400 cfs; Feb. 23 (0215 hrs) 8,230 cfs (10.65 ft).

Note.--No gage-height record Aug. 28 to Sept. 30.

KLAMATH RIVER BASIN

11-5305. KLAMATH RIVER NEAR KLAMATH, CALIF.
(International Hydrological Decade Station)

LOCATION.--Lat 41°30'45", long 123°58'30", in SW $\frac{1}{4}$ sec.17, T.13 N., R.2 E., 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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. 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. Nov. 4, 1950, to Sept. 30, 1964, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--34 years, 16,920 cfs (12,250,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 190,000 cfs Feb. 23 (gage height, 27.88 ft); minimum daily, 2,160 cfs Aug. 7, 8, 11, 13, Sept. 30.
1910-26, 1950-68: Maximum discharge, 557,000 cfs Dec. 23, 1964 (gage height, 55.3 ft from floodmarks), from rating curve extended above 230,000 cfs on basis of flood-routing study; minimum observed, 1,340 cfs July 31, Aug. 1, 1924.

REMARKS.--Records excellent. Flow considerably regulated by reservoirs and powerplants above station. Large diversions for irrigation above station. Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,720	3,800	6,730	9,460	15,900	34,800	19,400	10,800	6,900	3,500	2,270	2,630
2	2,880	3,740	7,250	8,950	18,700	31,900	18,900	10,400	6,850	3,460	2,250	2,530
3	4,540	3,700	10,300	8,350	34,000	29,100	17,900	9,880	6,880	3,400	2,300	2,610
4	4,340	3,660	15,000	7,930	33,000	27,600	17,000	10,100	6,600	3,320	2,270	2,650
5	3,800	3,660	26,700	7,600	28,600	27,400	16,600	10,200	6,280	3,300	2,220	2,590
6	3,760	3,680	18,400	7,380	26,100	26,400	16,100	9,790	6,350	3,240	2,270	2,630
7	3,760	3,680	16,600	7,130	25,700	25,100	15,500	9,080	6,300	3,200	2,160	2,580
8	3,760	3,760	14,600	7,500	25,800	23,500	15,000	8,700	6,080	3,180	2,160	2,550
9	3,760	4,160	11,900	8,700	25,100	22,000	14,800	8,550	5,630	3,160	2,180	2,530
10	3,760	4,560	10,700	19,000	24,500	20,800	14,800	8,450	5,340	2,980	2,210	2,530
11	3,760	4,580	9,820	18,300	23,400	19,800	15,600	8,450	5,160	2,920	2,160	2,520
12	3,800	4,400	9,280	13,300	22,300	20,600	15,700	8,230	5,140	2,880	2,180	2,510
13	3,900	4,300	8,800	15,600	21,300	23,500	15,000	8,180	5,040	2,880	2,160	2,540
14	3,880	32,000	8,230	49,400	20,200	23,700	14,400	8,080	4,880	2,860	2,210	2,810
15	3,840	25,000	7,950	115,000	19,000	24,700	14,000	7,630	4,780	2,880	2,220	2,840
16	3,820	12,500	7,780	78,600	18,000	25,700	13,700	7,080	4,760	2,860	2,210	2,800
17	3,800	10,800	7,630	50,300	19,300	30,200	13,200	6,980	4,720	2,870	2,210	2,780
18	3,780	8,400	9,370	36,600	25,200	27,700	12,700	7,050	4,580	2,840	2,260	2,280
19	3,800	5,700	9,550	28,600	26,200	25,300	12,300	7,680	4,520	2,780	2,440	2,240
20	3,760	4,260	8,730	23,900	60,900	23,600	11,900	11,900	4,460	2,740	2,700	2,250
21	4,100	4,180	8,130	21,300	74,400	22,400	11,700	12,600	4,320	2,600	2,800	2,250
22	4,600	4,100	7,950	20,700	104,000	21,500	11,300	11,000	4,200	2,540	2,790	2,440
23	4,380	4,060	8,050	20,700	159,000	20,600	10,900	9,100	4,120	2,530	2,640	2,640
24	4,320	4,020	8,350	19,700	129,000	19,200	10,900	8,280	4,060	2,500	2,560	2,620
25	4,060	3,980	8,780	18,800	86,800	24,000	10,500	8,080	4,020	2,490	3,010	2,680
26	4,000	3,940	9,760	18,000	64,300	27,200	10,400	8,250	3,900	2,620	4,450	2,390
27	3,900	3,920	12,200	17,000	52,500	23,600	10,300	8,680	3,820	2,900	4,380	2,400
28	4,480	4,100	13,400	15,700	45,000	21,700	10,300	8,380	3,800	2,800	3,520	2,480
29	4,520	5,650	12,900	16,400	38,900	20,700	10,300	8,180	3,620	2,740	3,130	2,240
30	4,100	7,480	11,700	18,500	-----	20,600	10,700	7,750	3,560	2,680	2,850	2,160
31	3,900	-----	10,500	16,800	-----	19,900	-----	7,280	-----	2,460	2,640	-----
TOTAL	121,580	195,770	337,040	725,200	1,267,1M	754,800	411,800	274,790	150,670	90,110	79,810	75,700
MEAN	3,922	6,526	10,870	23,390	43,690	24,350	13,730	8,864	5,022	2,907	2,575	2,523
MAX	4,600	32,000	26,700	115,000	159,000	34,800	19,400	12,600	6,900	3,500	4,450	2,840
MIN	2,720	3,660	6,730	7,130	15,900	19,200	10,300	6,980	3,560	2,460	2,160	2,160
AC-FT	241,200	388,300	668,500	1,438M	2,513M	1,497M	816,800	545,000	298,800	178,700	158,300	150,100

CAL YR 1967 TOTAL 5,389,770 MEAN 14,770 MAX 153,000 MIN 2,500 AC-FT 10,690,000

WTR YR 1968 TOTAL 4,484,370 MEAN 12,250 MAX 159,000 MIN 2,160 AC-FT 8,895,000

Peak discharge (base, 90,000 cfs).--Jan. 15 (1345 hrs) 126,000 cfs (22.64 ft); Feb. 23 (1015 hrs) 190,000 cfs (27.88 ft).

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 1968. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Digital water-stage recorder. Datum of gage is 89.61 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Feb. 10, 1965, graphic water-stage recorder at same site and datum.

AVERAGE DISCHARGE.--37 years, 3,747 cfs (2,713,000 acre-ft per year).

EXTREMES.--Maximum discharge during year, 77,800 cfs Feb. 23 (gage height, 28.72 ft); minimum daily, 273 cfs Oct. 19, 20.

1931-68: Maximum discharge, 228,000 cfs Dec. 22, 1964 (gage height, 48.5 ft from floodmarks), from rating curve extended above 69,000 cfs on basis of slope-area measurement at gage height 39.51 ft; minimum daily, 160 cfs Oct. 24, 25, 1964.

REMARKS.--Records excellent. No regulation or diversion above station. Records of chemical analyses and water temperatures for the 1968 water year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	672	2,960	1,860	5,990	3,880	3,610	1,030	1,260	483	323	365
2	607	556	5,200	1,710	16,800	3,440	3,050	1,010	1,230	471	323	350
3	1,170	477	9,220	1,560	31,300	3,070	2,550	978	1,230	470	322	335
4	568	433	13,000	1,430	16,600	2,750	2,350	975	1,130	465	320	325
5	725	409	16,300	1,360	11,100	3,260	2,340	959	1,060	453	320	320
6	521	388	7,220	1,300	8,140	3,190	2,140	924	1,020	442	319	318
7	417	373	8,650	1,280	6,960	3,000	1,990	886	958	437	313	310
8	369	695	5,490	1,940	5,980	2,720	1,890	855	911	428	308	305
9	343	1,380	3,850	7,460	5,220	2,480	1,810	836	868	418	305	300
10	324	1,620	3,400	9,790	4,560	2,260	1,790	820	830	415	304	300
11	318	1,560	2,980	5,380	4,020	2,050	1,770	810	813	406	298	300
12	317	1,180	2,570	4,020	3,610	4,290	1,660	797	786	417	295	298
13	306	982	2,160	11,400	3,300	6,190	1,550	1,020	760	432	295	310
14	301	5,510	1,830	27,200	2,960	8,300	1,470	903	740	418	317	572
15	289	3,120	1,680	49,700	2,680	7,900	1,440	797	718	408	330	632
16	285	2,000	1,480	23,300	2,520	8,380	1,380	759	690	402	312	508
17	280	1,500	1,430	14,200	3,340	9,220	1,330	737	667	394	305	424
18	274	1,220	2,640	8,100	3,810	6,840	1,270	730	648	388	320	385
19	273	1,040	2,230	6,010	7,640	5,220	1,230	993	632	378	370	373
20	273	922	1,930	4,960	13,700	4,160	1,190	2,720	612	377	449	360
21	891	832	1,720	4,530	30,600	3,540	1,160	3,060	600	371	378	348
22	1,260	745	2,020	4,130	38,300	3,140	1,130	2,600	581	364	324	333
23	1,040	690	2,510	3,620	55,600	2,940	1,160	1,930	584	359	309	323
24	785	650	2,750	3,220	23,700	2,810	1,140	1,630	568	353	300	318
25	710	609	2,920	2,890	13,800	11,100	1,080	1,870	549	353	730	308
26	623	552	3,250	2,720	8,670	8,960	1,060	2,340	531	352	1,580	303
27	560	632	3,760	2,470	6,640	6,480	1,050	2,680	521	347	1,200	295
28	3,080	808	3,350	2,340	5,360	4,830	1,040	2,100	508	342	725	288
29	1,680	4,340	2,830	3,520	4,480	4,170	1,020	1,740	496	335	532	285
30	1,120	3,820	2,340	5,260	-----	3,750	1,010	1,520	492	329	439	280
31	850	-----	2,070	5,130	-----	3,310	-----	1,360	-----	323	394	-----
TOTAL	20,901	39,715	125,740	223,790	347,380	147,630	48,660	42,369	22,993	12,330	13,359	10,471
MEAN	674	1,324	4,056	7,219	11,980	4,762	1,622	1,367	766	398	431	349
MAX	3,080	5,510	16,300	49,700	55,600	11,100	3,610	3,060	1,260	483	1,580	632
MIN	273	373	1,430	1,280	2,520	2,050	1,010	730	492	323	295	280
AC-FT	41,460	78,770	249,400	443,900	689,000	292,800	96,520	84,040	45,610	24,460	26,500	20,770
CAL YR 1967	TOTAL 1,233,265		MEAN 3,379		MAX 66,800		MIN 252		AC-FT 2,446,000			
WTR YR 1968	TOTAL 1,055,338		MEAN 2,883		MAX 55,600		MIN 273		AC-FT 2,093,000			

PEAK DISCHARGE (BASE, 36,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-15	0530	27.03	67,700	02-23	0400	28.72	77,800
02-02	2345	23.49	47,200				

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same or practically the same site.

Discharge measurements made at low-flow partial-record stations during water year 1968

Discharge measurements made at low-flow partial-record stations during water year 1968						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Salinas River basin						
11-1470.3	Cienega Creek near Templeton	Lat 35°31'39", long 120°51'23" in Asuncion Grant, 0.4 mile above mouth and 9.1 miles west of Templeton, San Luis Obispo County	2.51	1967-68	10-13-67 10-31-67 1-13-68 2-20-68 3-26-68 4-25-68 5-23-68 6-18-68 7-24-68	0.10 .09 .09 .30 1.04 .67 .44 .29 .17
11-1470.5	Santa Rita Creek tributary No. 2 near Templeton	Lat 35°32'15", long 120°50'16" in Asuncion Grant, 0.3 mile above mouth and 8.1 miles west of Templeton, San Luis Obispo County	1.35	1967-68	2-20-68 3-26-68 4-25-68 5-23-68 6-18-68 7-24-68	No flow. Do. Do. 0.03 No flow. Do.
11-1470.6	South Fork Santa Rita Creek near Templeton	Lat 35°30'48", long 120°48'01" in Asuncion Grant, 1.1 miles above mouth and 6.0 miles west of Templeton, San Luis Obispo County	3.02	1967-68	10-11-67 11-01-67 12-14-67 1-25-68 2-21-68 3-12-68 4-24-68 5-23-68 6-19-68	No flow. Do. Do. 0.07 .13 .08 .18 .11 .02

Crest-stage partial-record stations

As explained on page 11 the California district publishes annual maxima on small streams at about 304 sites in a separate publication Floods From Small Drainage Areas. In addition, discharge measurements are generally made in times of drought or flood to give better coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

The following table contains annual maximum discharges for crest-stage stations not included in the above-mentioned report. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations in Part 11 during water year 1968

Annual maximum discharge at crest-stage partial-record stations in part II during water year 1966							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Jacoby Creek basin							
11-4800.	Jacoby Creek near Freshwater	Lat 40°47'30", long 124°00'10", in NW¼ sec.30, T.5 N, R.2 E., 3.7 miles northeast of Freshwater.	6.07	1954-64† 1966-68	1-15-68	3.40	380
Klamath River basin							
11-5223.	South Fork Salmon River near Forks of Salmon	Lat 41°13'20", long 123°15'00", in SE¼ sec.30, T.39 N., R.12 W., on left bank 100 ft downstream from Methodist Creek and 4.5 miles southeast of town of Forks of Salmon.	252	1958-66† 1967-68	2-23-68	11.84	9,290
11-5284.	Hayfork Creek near Hayfork	Lat 40°31'10", long 123°05'05", in SW¼ sec.23, T.31 N., R.11 W., 5.8 miles southwest of Hayfork.	86.7	1956-66† 1967-68	2-23-68	10.70	3,530
Smith River basin							
11-5320.	South Fork Smith River near Crescent City	Lat 41°47'30", long 124°01'30", in SE¼ sec.11, T.16 N., R.1 E., 9.5 miles east of Crescent City.	295	1911-13† 1954-61† 1962-68	2-23-68	19.10	21,100

† Operated as a continuous-record gaging station.

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Discharge measurements made at miscellaneous sites

Discharge measurements made at miscellaneous sites						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Santa Ana River basin						
Santa Ana River	Pacific Ocean	Lat 33°56'43", long 117°33'30", in NE¼NE¼ sec.1, T.3 S., R.7 W., on left bank 300 ft downstream from Hamner Avenue bridge, 4.1 miles north of Corona and 5 miles upstream from Temescal Creek.	994	1930-60	8-14-68 8-22-68	19.8 25.5
Death Valley						
Grapevine Canyon at mouth near Scotty's Castle	Death Valley Wash	Lat 37°00'00", long 117°23'30", in S½sec.14, T.11 S., R.42 E., at canyon mouth 800 ft upstream from Ubehebe Crater Road and 1.25 miles northwest of Grapevine Ranger Station.	--	--	7-28-68	727
Audubon Creek basin						
Audubon Creek	Bolinas Lagoon	Lat 37°55'47", long 122°40'50", in Los Baulines Grant, at mouth 1.5 miles north of Bolinas, Marin County.	0.46	1967	10-09-67 11-06-67 12-13-67 1-12-68 1-30-68 2-21-68† 3-05-68 4-08-68 5-07-68 6-18-68 7-25-68 9-03-68	0.07 .07 .06 .09 1.77 13 .18 .13 .08 .01 .01 .01
Eel River basin						
Eel River	Pacific Ocean	In NW¼SE¼ sec.36, T.2 N., R.1 W., 800 ft above U.S. Highway 101, 1.0 miles northwest of Rio Del and 1.7 miles above Howe Creek.	--	--	10-03-67 10-16-67 10-30-67 6-04-68 6-17-68 6-28-68 7-19-68 8-19-68 9-17-68	444 240 270 721 492 279 206 139 191
Van Duzen River	Eel River	In SW¼SE¼ sec.23, T.2 N., R.1 W., 800 ft above Northwestern Pacific Railroad bridge, 0.8 mile above mouth and 2.7 miles southwest of Hydesville.	--	--	10-03-67 10-16-67 10-30-67 5-16-68 6-04-68 6-17-78 6-28-68 7-19-68 8-19-68 9-17-68	51.3 23.8 46.7 148 114 70.0 42.6 17.0 13.3 21.3
Eel River	Pacific Ocean	In NW¼SW¼ sec.28, T.3 N., R.1 W., 0.5 mile above Fern bridge and 2.2 miles northwest of Fortuna.	--	--	10-03-67 10-16-67 10-30-67 5-16-68 6-04-68 6-17-68 6-28-68 7-19-68 8-19-68 9-17-68	415 260 329 1,290 839 520 316 172 134 202

See footnote at end of table.

Discharge measurements made at miscellaneous sites--Continued:

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Klamath River basin						
Fall Creek	Klamath River	NE¼ sec.36, T.48 N., R.5 W., 1,500 ft upstream from mouth and 0.8 mile south of Fall Creek powerplant and Copco Post Office.	14.6	1928-59† 1964-67	10-02-67 9-03-68	45.2 *42.8
Bogus Creek	Klamath River	NE¼ sec.17, T.47 N., R.3 W., 0.5 mile downstream from Iron Gate Dam and 6.0 miles northeast of Hornbrook.	--	1965-67	10-12-67 9-03-68	17.8 *11.3
Beaver Creek	Klamath River	NE¼SW¼ sec.30, T.47 N., R.8 W., 1.9 miles upstream from mouth and 14.8 miles northwest of Yreka.	106	1953-58 1959-65† 1967	9-04-68	*21.9
South Fork Scott River	Scott River	SW¼SE¼ sec.20, T.40 N., R.8 W., opposite unnamed tributary, 1.1 miles southwest of Callahan and 1.5 miles above East Fork Scott River.	42.5	1958-60† 1964, 1966-67	9-05-68	*6.53
Moffett Creek	Scott River	SW¼NE¼ sec.27, T.44 N., R.8 W., 590 ft upstream from Soap Creek and 5.1 miles east of Fort Jones.	69.8	1958-67†	9-05-68	*.46
Etna Creek	Scott River	SE¼SW¼ sec.6, T.41 N., R.9 W., 0.1 mile below the mouth of Alder Creek and 2.7 miles southwest of Etna.	19.5	1966-67	9-05-68	*2.15
Elk Creek	Klamath River	NE¼ sec.36, T.16 N., R.7 E., 4.0 miles upstream from mouth and 4.0 miles south of Happy Camp.	90.4	1956-64† 1967	9-04-68	*31.8
Thompson Creek	Klamath River	SE¼ sec.17, T.17 N., R.5 W., 50 ft above highway bridge, 0.1 mile above mouth and 6.0 miles northeast of Happy Camp.	--	1966	10-12-67 9-04-68	16.3 *14.5
Coffee Creek	Trinity River	NW¼SW¼ sec.2, T.37 N., R.8 W., 0.75 mile upstream from Little Boulder Creek, 3.2 miles upstream from mouth and 8 miles northwest of new location of Trinity Center.	--	1957-66†	10-11-67	49.7
Browns Creek	Trinity River	NW¼SE¼ sec.10, T.32 N., R.10 W., 2 miles upstream from mouth and 2.1 miles west of Douglas City.	71.6	1957-67†	8-12-68	*6.69
Deadwood Creek	Trinity River	SW¼NW¼ sec.17, T.33 N., R.8 W., 400 ft above mouth and 0.8 mile northeast of Lewiston.	--	1965-67	10-02-67 9-03-68	1.70 *.30

‡ Peak flow.

† Operated as a continuous-record gaging station.

* Base flow.

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 Dec. 19, Jan. 24 to Mar. 8, Mar. 18 to Apr. 2, Apr. 3 to July 5, Sept. 3-30.

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 1968
(Measured previously 1938-67)

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Oct. 6	74.9	Dec. 15	187	Mar. 1	200	May 3	128	July 12	2.5
13	96.0	19	544	9	698	10	92.0	19	0
20	88.2	22	88.6	11	705	17	126	26	0
27	123	29	77.9	14	121	24	101	Aug. 2	0
Nov. 3	143	Jan. 5	85.1	15	111	31	101	16	0
10	198	12	106	22	137	June 7	160	30	0
17	199	19	101	29	280	14	61.1	Sept. 3	0
21	514	26	137	Apr. 5	204	21	52.9	6	71.1
22	469	Feb. 2	203	12	269	28	63.3	13	74.6
24	154	9	86.0	19	270	July 5	12.4	20	104
Dec. 1	264	16	129	26	144	8	9.17	27	17.8
8	185	23	122						

Santa Ana River, lat 33°50'55", long 117°50'05", in SW $\frac{1}{4}$ sec.4, T.4 S., R.9 W., at Jefferson Street Bridge, 1 mile north of Olive, water year 1968
(Measured previously 1938-67)

Oct. 6	0	Dec. 15	119	Feb. 23	93.9	May 3	40.0	July 12	0
13	0	22	0	Mar. 1	122	10	22.6	19	0
20	0	29	0	15	34.5	17	23.1	26	0
27	0	Jan. 5	0	22	78.7	24	10.4	Aug. 2	0
Nov. 3	0	12	0	29	203	31	19.2	16	0
10	0	19	0	Apr. 5	142	June 14	4.53	23	0
17	112	26	121	12	147	21	0	30	0
21	561	Feb. 2	159	19	64.0	28	0	Sept. 6	0
Dec. 1	249	9	73.7	26	18.1	July 5	0	13	0
8	120	16	94.9						

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 1968
(Measured previously 1938-67)

Oct. 6	0	Dec. 22	0	Feb. 23	0	May 17	0	July 26	0
13	0	29	0	Mar. 1	.5	24	0	Aug. 2	0
20	0	Jan. 5	0	22	0	31	0	16	0
27	0	12	0	29	0	June 7	0	23	0
Nov. 3	0	19	0	Apr. 5	0	21	0	30	0
10	0	26	0	12	25.5	28	0	Sept. 6	0
17	0	Feb. 2	0	19	0	July 5	0	13	0
21	303	9	0	May 3	0	12	0	20	0
Dec. 1	97.6	16	0	10	0	19	0	27	0
8	13.6								

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 1968
(Measured previously 1938-47, 50, 52, 54, 56, 58, 62-67)

NOTE.--During the year for each date listed above a no flow observation was made at this site except for storm periods in November and March.

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